INEQUALITY TRENDS IN SOUTH AFRICA

A multidimensional diagnostic of inequality

THE SOUTH AFRICA I KNOW, THE HOME I UNDERSTAND

stats sa
Department:
Statistics South Africa
REPUBLIC OF SOUTH AFRICA

SALDRU
Southern Africa Labour and Development Research Unit

AFD
AGENCE FRANÇAISE DE DÉVELOPPEMENT

ACEIR
African Centre of Excellence for Inequality Research

NDP 2030

Inequality Trends in South Africa

A multidimensional diagnostic of inequality

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Risenga Maluleke, Statistician-General

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For technical enquiries, please contact:

Werner Ruch
Tel: 012 406 3317
Email: wernerr@statssa.gov.za

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PREFACE

This report on inequality trends in South Africa is a joint publication produced by Statistics South Africa (Stats SA) in partnership with the Southern Africa Labour and Development Research Unit (SALDRU) based in the School of Economics at the University of Cape Town and the Agence Francaise de Développement (AFD) with partial funding support from the European Union (EU). The report presents a broad overview of various dimensions of inequality over the recent past, using a wide range of data sources. The primary data inputs sourced from data that were collected and released officially by Stats SA were the Income and Expenditure Survey (IES), Living Conditions Survey (LCS), General Household Survey (GHS), and Quarterly Labour Force Survey (QLFS). In addition to these official data sources, the report also utilized data from the National Income Dynamics Study (NIDS) and the Post-Apartheid Labour Market Series (PALMS) which is a harmonized data series of labour data based on several household surveys.

The report analyses and presents results of inequality measurements for household income and expenditure, assets, earnings, employment, education, health, access to basic services, and social mobility. This multidimensional approach to the profiling of inequality allows us to provide stakeholders and policymakers with new insights on the monumental inequality challenges still facing South Africa's young democracy. Where possible, we further disaggregate our estimates by population group, sex and/or geography. Thus, our results present evidence on both vertical and horizontal inequality. The economic inequality indicators in this report have mainly been derived using household expenditure data collected through a combination of the diary and recall methods; however, corresponding outputs have been generated using household income data and are provided in the annexures of this report. The report provides estimates at national and provincial levels, but also includes a few maps that draw on data from the Census 2011 to generate select indicators at lower geographic levels, namely at district and local municipal level.

Risenga Maluleke
Statistician-General

ACKNOWLEDGEMENTS

This report on inequality trends was borne out of a collaborative process between Statistics South Africa, the Southern Africa Labour Development Research Unit (SALDRU), and the Agence Française de Développement (AFD) Group. The partnership between our three organisations was fused together and cemented through our collective involvement in the recently established African Centre of Excellence for Inequality Research (ACEIR) which was founded in May 2017 and based at the University of Cape Town.

ACEIR strives to bring Africa's strongest researchers into partnerships with African governments and development institutions working in Africa to jointly provide the basis for strong, evidence-informed policy making on issues of poverty and inequality. This report represents an exemplar of such a partnership. In addition to South Africa, ACEIR has built strong nodes in Ghana and Kenya which are also working with their respective National Statistical Offices towards their own diagnostic reports on inequality. We hope that the publication of this report and the special partnership that we have enjoyed around its development will help catalyse and support similar processes in these nodes and elsewhere in Africa.

Beyond fulfilling Stats SA's strategic objective of ensuring an informed nation as outlined in the organisation's Strategic Plan for 2015/16 to 2019/20, the culmination of this report also represents the advancement of two other core strategic objectives of Stats SA, namely a) providing statistical leadership and b) building partnerships to advance and increase the use of statistics as evidence to inform policy processes. Partnering with AFD and SALDRU through bodies like ACEIR, further represents Stats SA's strong commitment to playing a leading role in the coordination of statistical development on the African continent.

The Agence Française de Développement (AFD) Group is a public institution that implements France's policy in the areas of development and international solidarity. Development is one of France's three pillars for external action, along with diplomacy and defence. Their mission is to contribute to the economic, social, and environmental progress of low and middle-income countries. It aims to fund, support and accelerate the transitions to a fairer and more sustainable world as envisioned through global frameworks like the Sustainable Development Goals (SDGs).

At the AFD, the fight to reduce inequality and strengthen the social fabric has become one of the five operational priorities of their Strategic Plan for 2018 to 2022. The organisation intends to be a "100% Paris Agreement" agency, on the one hand, in order to preserve the environmental commons, and a "100% social link" agency, on the other, so that all their interventions contribute to strengthening social cohesion. At a time when a great ecological transformation is finally being achieved, they believe the question of inequality must be forcefully raised anew. Since 2017, AFD implements the Research Facility for Inequalities, a delegated fund entrusted to them by the European Commission's Directorate-General for International Cooperation and Development (DEVCO), which allowed them to start more than 20 research projects, to support the launch of ACEIR, and the development of inequality diagnostics with their partner countries like South Africa.

SALDRU is a research institution based in the School of Economics at the University of Cape Town and aims to carry out applied empirical research and capacity building with an emphasis on poverty and inequality, labour markets, human capital and social policy. They played an instrumental role in not just the development of the report, but also providing extensive training and skill sharing

opportunities to the Stats SA team to improve our own internal capacity and skills. The ACEIR team in SALDRU also oversaw and coordinated the compilation of the Handbook on Inequality Measurement for Country Studies, a process that ran in parallel with the development of this Inequality Trends Report. This handbook provided technical and methodological guidance on the computation of inequality indicators and measures that will hopefully empower other countries to undertake such research and analysis.

The project team was led by Werner Ruch (Stats SA), Murray Leibbrandt (SALDRU & ACEIR) and Anda David (AFD). The team included Nozipho Shabalala (Stats SA), Muna Shifa (SALDRU & ACEIR), Kerotse Mmatli (Stats SA), Andrid Jumat (Stats SA), Vimal Ranchhod (SALDRU & ACEIR), Thapelo Tshabadira (Stats SA), Edward Mokoka (Stats SA), Olebogeng Mfoloe (Stats SA), Motshidisi Nthatisi (Stats SA), Mbalenhle Dube (Stats SA), Thabang Makgakga (Stats SA), Marcus Mahlangu (Stats SA) Takwanisa Machemedze (DataFirst & ACEIR), Haajirah Esau (SALDRU & ACEIR) and Davyson Chauke (Stats SA).

Within Stats SA, special thanks is given to both the Social Statistics and Labour Statistics chief directorates which provided critical support and guidance on parts of the report that utilized data from the General Household Survey and Quarterly Labour Force Survey to exam inequalities in the social domain and labour market, respectively. In particular, the team would like to thank Niël Roux and Malerato Mosiane for their time and expertise.

The photographs used in this report were sourced from Johnny Miller's *Unequal Scenes* collection (https://unequalscenes.com). A very special thanks is given to Mr Miller for allowing us the opportunity to showcase his striking visual images about spatial inequalities that still manifest across South Africa today. The juxtaposition of these salient images with the comprehensive findings outlined in the report only reinforces and reiterates the critical importance of this work as South Africa remains a very unequal country. The artwork and layout of the report was prepared by Mariëtte Keller from Stats SA's graphic design team.

CAUTIONARY NOTES

Readers are cautioned to take the following into consideration:

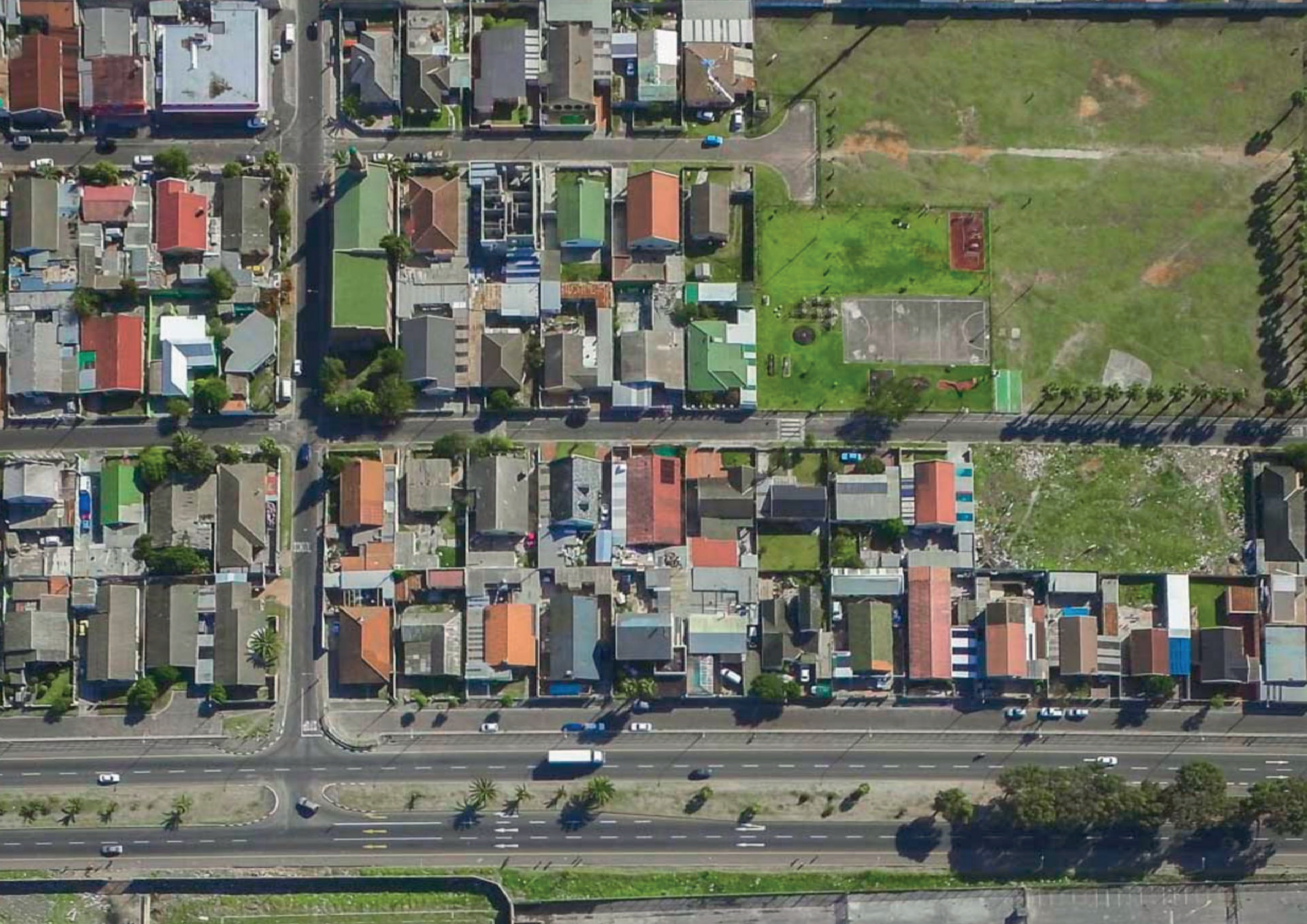
Rounding off

– Due to rounding, the displayed totals in the tables do not always match the sum of the displayed rows or columns

ABBREVIATIONS & ACRONYMS

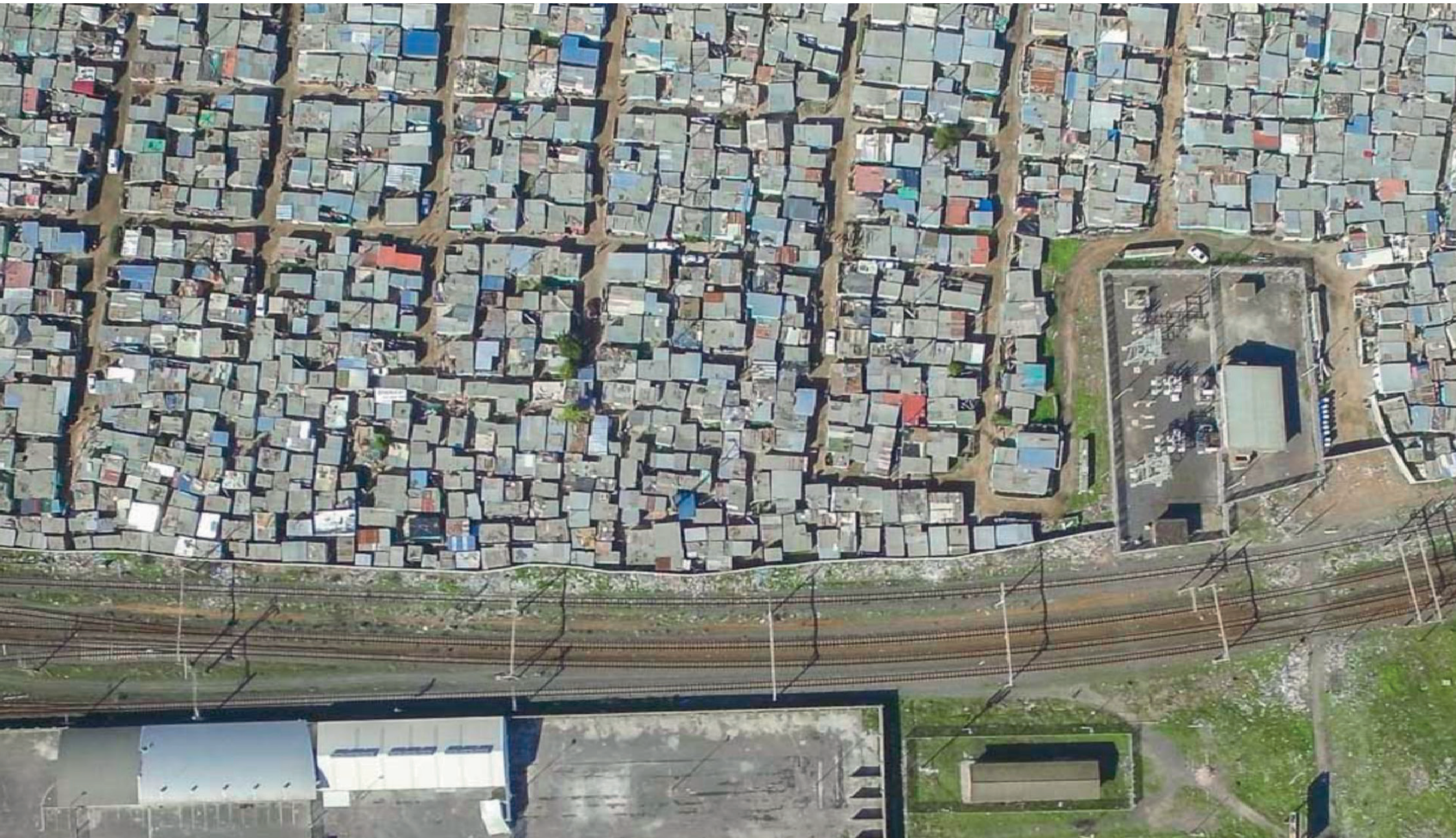
ACEIR	African Centre of Excellence for Inequality Research
AFD	Agence Francaise de Développement
AsgiSA	Accelerated and Shared Growth Initiative for South Africa
COICOP	Classification of Individual Consumption according to Purpose
CPI	Consumer Price Index
CSM	Continuing Sample Member
CV	Coefficient of Variation
DPME	Department of Planning, Monitoring and Evaluation
DTS	Domestic Tourism Survey
DU	Dwelling Unit
EU	European Union
FPL	Food Poverty Line
GE	General Entropy
GEAR	Growth, Employment and Redistribution
GHS	General Household Survey
HH	Household
IES	Income & Expenditure Survey
JSE	Johannesburg Stock Exchange
LBPL	Lower-bound Poverty Line
LCS	Living Conditions Survey
LFP	Labour Force Participation
LFS	Labour Force Survey
MDGs	Millennium Development Goals
NDP	National Development Plan
NEA	Not Economically Active
NIDS	National Income Dynamics Study
NGP	New Growth Path
NPC	National Planning Commission
NPLs	National Poverty Lines
NSOs	National Statistics Offices
OECD	Organisation for Economic Co-operation and Development
OHS	October Household Survey
PALMS	Post-Apartheid Labour Market Series
PPS	Probability Proportional to Size
PSLSD	Project for Statistics on Living Standards and Development Survey
PSU	Primary Sampling Unit
PTR	Poverty Trends Report
QLFS	Quarterly Labour Force Survey

RDP	Reconstruction and Development Programme
SALDRU	Southern Africa Labour and Development Research Unit
SAMPI	South African Multidimensional Poverty Index
SARB	South African Reserve Bank
SARS	South African Revenue Service
SDGs	Sustainable Development Goals
Stats SA	Statistics South Africa
TSM	Temporary Sample Member
TVET	Technical and Vocational Education and Training
UBPL	Upper-bound Poverty Line
UC PCA	Uncentred Principal Component Analysis
UN	United Nations
VoCS	Victims of Crime Survey
WHO	World Health Organisation



CHAPTER 1

INTRODUCTION AND BACKGROUND



"Our history has been a bitter one dominated by colonialism, racism, apartheid, sexism and repressive labour policies. The result is that poverty and degradation exist side by side with modern cities and a developed mining, industrial and commercial infrastructure. Our income distribution is racially distorted and ranks as one of the most unequal in the world – lavish wealth and abject poverty characterise our society…..the result is that in every sphere of our society – economic, social, political, moral, cultural, environmental – South Africans are confronted by serious problems. There is not a single sector of South African society, nor a person living in South Africa, untouched by the ravages of apartheid."

Reconstruction and Development Programme (1994)
Paragraphs 1.2.1 and 1.2.4

1.1 INTRODUCTION

Inequality in South Africa has long been recognized as one of the most salient features of our society. South Africa is consistently ranked as one of the most unequal countries in the world, an empirical fact that has its roots in the history of colonisation and apartheid. In addition to being extremely high, South African inequality appears to be remarkably persistent. Despite many efforts by government to reduce inequality since our democratic transition in 1994, progress has been limited.

Before embarking on any empirical analysis of inequality, one needs to determine the scope of the study. What dimensions of inequality are going to be included or excluded, who are the people who are going to be considered, are we going to analyse inequalities among individuals (vertical inequalities) or among groups (horizontal inequalities) or both, and what is the time period of interest? South Africa is fortunate amongst developing countries in that we have an abundance of nationally representative survey data on many different aspects of individual and household welfare. This enables us to conduct analyses in this report on multiple dimensions of inequality; including income, employment, earnings, assets, social mobility, health, education, and access to basic services and infrastructure.

Nonetheless, it is worthwhile to note that there are also other important dimensions and aspects of inequality that we do not speak to directly in this report. These include life expectancy and other health outcomes, social outcomes, measures of psychological well-being, and aspects of physical safety and crime. We also do not consider access to legal services or financial institutions. In addition, we do not consider inequality in terms of market power; a dimension that affects both the availability of employment and level of wages in the labour market, as well as the products and prices that individuals encounter when they wish to consume goods or services. Some of these omissions are due to data constraints, while others can be attributed to a decision to limit the scope of the report so that it would remain feasible given our resources.

Having acknowledged some of the limitations of this report, we can proceed to state precisely what we set out to achieve: We analyse and present results of inequality measurements for household income and expenditure, assets, earnings, employment, social mobility, access to education and healthcare, and access to basic services and infrastructure. Ultimately, the purpose of this report is to provide a broad overview of these various dimensions in terms of inequality over the recent past, using the latest available survey data. All of our results are based on nationally representative survey

data and our population of interest is thus, the set of people who reside in South Africa.[1] We also generate some comparable estimates using earlier data, which allows us to identify changes in key indicators over time. Where possible, we further disaggregate our estimates by population group, sex and/or geography. Thus, our results present evidence on both vertical and horizontal inequalities in South Africa.

1.2 MOTIVATION FOR THE REPORT

There is growing recognition that persistently high levels of inequality can have serious detrimental effects on a society and its economy. In their 2009 book *Spirit Level*, Wilkinson and Pickett provide a summary of several empirical investigations into how inequality correlates with multiple measures of social problems; including health problems, mortality, crime and substance abuse. Their argument is that the psycho-social stressors that are heightened due to high levels of inequality lead to a systemic breakdown in the social structure.

In addition to these direct effects on individual well-being, there are good reasons to be concerned about high levels of inequality when one is concerned about economic development more generally. Stiglitz's 2012 book was called *The Price of Inequality* and sought to show the very high consequences of inequalities of capital and wealth for the broader political economy of growth. High levels of inequality mean that large segments of a society may be excluded from economic opportunities, thus limiting both those individual's outcomes, as well as the aggregate performance of the economy. Such inequality of opportunities is not in line with the aspirations of post-apartheid South Africa as reflected in the Constitution and in the RDP which has been the lodestar of all policy development since 1994. It reflects a loss to society of potential and productivity. People who receive the best opportunities are the ones who are the richest, and these are not necessarily the same as the ones who are the most talented or who would make the best use of such opportunities.

Politically, small and very wealthy groups of elites can affect the policies that are implemented as to benefit themselves, in ways that can further limit the longer-term evolution of an economy. Even without these distortions, the breakdown in social cohesion that can arise from inequality can directly affect the capacity of a government to effectively govern.

For all of these reasons, it becomes clear why reducing inequality is such a critical task from a policy perspective. These arguments form the basis for the explicit recognition of the risks associated with high inequality, both in the United Nations' SDG Agenda, as well as South Africa's National Development Plan (NDP) (NPC, 2012).

Another key motivation that highlighted the need for such an examination of inequality was the sheer complexity inherent in inequality measurement and analysis. Often inequality is simply lumped together with poverty and the two are treated as interchangeable. While Stats SA has produced extensive work on poverty measurement in recent years through reports and tools like the Poverty Trends Report (PTR) (Stats SA, 2017), the South African Multidimensional Poverty Index (SAMPI) (Stats SA, 2014), the Poverty Map 2011 (Stats SA, 2018), and the National Poverty Lines (NPL) (Stats SA, 2019a; Stats SA, 2015; Stats SA, 2012), inequality has not received equal attention. Instead, inequality is often framed as a subset of the poverty discussion within some of these reports. While

[1] This includes people who are South African citizens or permanent residents, as well as people who are not, but who reside in the country at the time that the survey is undertaken.

the correlation between poverty and inequality is definitely strong and both can act to amplify each other, reducing poverty does not necessarily result in the reduction of inequality and thus, success in one area does not directly translate to success in the other.

As a hypothetical, let's assume that government could theoretically provide sufficient financial assistance to all poor households that would bring them out of poverty (i.e. above the poverty line). While this would help eliminate poverty in the country, the gaps between different groups could still remain the same (or even continue to grow) keeping inequality amongst South Africans high (whether that be in labour market outcomes, level of income, health status, etc.). Adding a couple of thousand rand to the monthly pocketbooks of the poor could elevate them above the poverty line and set them on a better life trajectory – which hopefully materializes in long-term benefit for the individual and their household – but it doesn't immediately result in greater equality between the outcomes of certain groups as underlying issues of inequality in the labour market and household economy remain stark and ultimately, hold back some of the wider developmental targets government has envisioned for the country starting with the RDP (ANC, 1994) and continuing with the current long-term plan for South Africa, the NDP (NPC, 2012) .

As will be shown in this report, inequality issues are deeply rooted in South Africa. Reducing them will require changes to the structure of the economy and the improvement in the quality of services government provides to ensure equal access, and importantly, equal positive outcomes in terms of health and education across the population. On an economic front, job creation and inclusive economic growth remain vital pillars towards achieving the country's long-term objectives around improving the lives of all South Africans, especially in the areas of poverty and inequality; which are enshrined as the two most fundamental reduction targets in the NDP (NPC, 2012) .

Internationally, the country's economy can be vulnerable to movements and shocks in the global market. Recent disruptions such as the ongoing US-China trade war has had a negative impact on both their economies which subsequently hurts the global economy given their economic size. Additionally, Brexit confusion continues to present risks for both the UK and EU economies, like France and Germany. China, Germany, the UK and US are among the largest trading partners for South Africa in terms of both imports and exports[2] and thus, these events all negatively impact on South Africa's economic outlook and ability to promote a job-fuelled economic expansion.

Domestically, South Africa's economy has unfortunately been fairly stagnant and anaemic since the fallout of the global financial crisis of 2007/08 and currently faces some of the strongest headwinds in its labour market – which is suffering from record-setting unemployment of 29,1% in the 3rd quarter of 2019 (Stats SA, 2019b). As stated in the NDP, targets for economic growth need to exceed 5% per annum over a sustained period of growth to allow for the programme of action laid out by government to be achieved. (NPC, 2012) Thus, until economic improvements occur domestically (with hopefully as little interference from negative changes and shocks in the global market), the challenges of inequality stemming from an unjust past will continue to anchor the country to an unequal future.

[2] According to trade statistics from the Department of Trade and Industry (DTI), China is South Africa's biggest trading partner accounting for 9,2% of the country's export market in 2018, followed by Germany (7,5%), the United States (6,7%) and United Kingdom (5,0%). These countries also represent South Africa's biggest importers with China (18,3%), Germany (9,9%), the US (5,9%) and UK (3,5%) accounting for well over a third of all imports to SA in 2018. (http://tradestats.thedti.gov.za/ReportFolders/reportFolders.aspx)

Thus, it is important to understand our delicate inequality situation in terms of household share and distribution of income and expenditure; ownership of assets; access to employment and dynamics in the labour market; social mobility; and the general inequality that exists in terms of access to and quality of services such as education, health, as well as basic services (e.g. electricity, water) and how these have changed over recent history and across the country. Reports such as those cited above and this one on inequality trends serve as inputs towards improved dialogue and evidence-based policy making on inequality issues that will hopefully lead to tangible gains on the ground, in the homes of all South Africans; regardless of one's sex, population group, province, settlement type, or past.

1.3 BRIEF LITERATURE REVIEW

The South African empirical literature on inequality measurement has become well-established over the past two decades and is fairly sophisticated by developing country standards.[3] In addition to well documented trends in income and earnings inequality, it has also branched out into multidimensional inequality measurement, and a lot of work has been done on decomposing inequality into its various constituent parts. These decompositions, when conducted on data from different points in time, allow researchers to determine the underlying changes that drive the trends in inequality that are observed. There have been further developments recently involving the use of tax data from the South African Revenue Service (SARS).[4]

A key body of research, which exists on its own merits but links up neatly with the inequality literature, has investigated the educational and health changes that have been happening in the South African population.[5] These changes then affect the way that the labour market functions, and thus have implications for wage and earnings inequality.

One additional way in which the South African research environment is blessed is in the availability of a nationally representative individual level longitudinal survey. The National Income Dynamics Study (NIDS) has completed five waves, beginning in 2008 and with an approximately biannual frequency, and had a sample of about 30 000 individuals in Wave 1. This enables researchers to look at the social and employment dynamics of individuals, and also allows for some types of research on social mobility that would otherwise be impossible.

One of the key findings in South Africa, which has been true for as long as we have had acceptable nationally representative data, is that income inequality is exceptionally high. From the first estimates based on the PSLSD 1993 survey up to Stats SA's most recent household expenditure survey the LCS 2014/15, the Gini coefficient of household per capita income is typically well above 0.6.[6] This easily places South Africa in the 'top 5' most unequal countries on a global scale. While there has been some debate about the precise levels of inequality, all researchers who work on this topic agree on the substantive point that inequality in South Africa is extremely high and has remained so since 1993.

[3] See Leibbrandt et al (2010) for a thorough analysis.

[4] This literature is discussed further in Section 4.2 below.

[5] See Spaull (2018) and Obuaku-Igwe (2015), respectively, for detailed reviews of educational and health inequalities in South Africa.

[6] For the three years presented by Hundenborn et al (2018), i.e. 1993, 2008 and 2014, it was in the range of 0,66 to 0,68. Using Stats SA's IES and LCS data series, the Gini coefficient ranged from 0,72 in 2006 to 0,67 in 2015.

In a recent paper, Wittenberg and Leibbrandt (2017) show how asset indices can be used to measure changes in inequality.[7] They find that a multidimensional index of asset inequality is decreased substantially between 1993 and 2008. At least some of this reflects the substantial increase in access to basic services and infrastructure that occurred for most South African households over this period.

A second key finding in this literature is the importance of the labour market in determining the overall levels of income inequality.[8] Decomposition methods indicate that about two-thirds of overall inequality comes from inequality in earnings, and about half of this is due to the extremely high levels of unemployment. In addition to the effect of high unemployment on inequality, the wage distribution amongst those who are employed also exhibits a very long upper-tail, which thus compounds the overall income inequality. More recent work indicates that the Gini coefficient within household labour market income is even higher than it is for overall income (0,73 in 2014); however, these inequality increasing effects are dampened somewhat by government social grants, such as the Older Persons Grant (Old Age Pension) and the Child Support Grant.[9]

If the labour market is so crucial to understanding income inequality in South Africa, then we need to understand what drives inequality of earnings in the labour market. With an unemployment rate of between 25 and 30 percent, a key driver is unemployment. But what determines who gets a job and what wages they receive? Population group matters a lot, with black Africans being the most disadvantaged in finding employment, and earning substantially less when they are employed, relative to their white counterparts. Sex matters too, with women being less likely to have a job and earning on average substantially less than men, conditional on being employed. Finally, geography plays a big role too, whereby those living in rural areas are less likely to have formal sector employment and are more likely to earn lower wages when they do find employment.

Finn and Leibbrandt (2018) analyse key changes in the labour market for the period from 2001 to 2014 and estimate the relative contribution of these changes to changes in the overall earnings Gini coefficient. They consider the contribution of eight factors to changes in the labour market: education, experience, unionization, informal sector, race, gender, geographic location, and sector. Their key finding is that highly educated workers received disproportionately large wage increases, which led to a substantial increase in inequality between 2011 and 2014.[10] They also note that while there is some decrease in the earnings inequality between race groups, it remains exceptionally large, with black Africans on average earning less than half of what whites earn. Kerr and Wittenberg (2017) point to the increasing share of public sector employment, combined with above average wage growth within the public sector, as an important driver of labour market dynamics.

In summary, the labour market is vitally important for understanding inequality in South Africa. Within the labour market, employment is the main source of inequality, while returns on education are an important driver of earnings dispersion. Overall income inequality more or less stayed the same, but this aggregate trend masks shifts in the returns on education and the progressivity of government grants. Despite large and sustained racial disparities, an assets-based measure of inequality does

[7] The 'assets' that they use include access to electricity and piped water, consumer durables such as a TV or Fridge, and livestock.

[8] See for examples, Leibbrandt, Bhorat and Woolard (2001) and Leibbrandt, Finn and Woolard (2012).

[9] See Hundenborn et al (2018).

[10] It is interesting to note that there was also an observed increase in money-metric poverty levels over the period between 2011 and 2015 (Stats SA, 2017).

show substantial improvement in inequality in the first decade-and-a-half since South Africa's transition to a democracy.

1.4 STRUCTURE OF THIS REPORT

This report consists of five chapters. This opening chapter (Chapter 1) provided an introduction and overview of the inequality challenges facing South Africa and included a brief literature review to help frame and illustrate the growing research on inequality measurement and analysis in the country. The next chapter provides a brief overview of the policy environment for readers to understand the policies applied by the South African government to address the country's inequality challenges.[11] Chapter 3 offers background information on the various data sources used in this report.

Chapter 4 is the extensive analytical chapter of the report and is subdivided into six core sections. Section 4.1 provides an analysis of consumption/income inequality and explores a wide range of indicators such as the Gini coefficient, Theil's indices, Atkinson indices, and the Palma ratio. This section also decomposes inequality by sources of income. Section 4.2 measures inequality in access to assets through an asset index and explores the connection to wealth inequality. Section 4.3 reviews the role of the labour market and its impact on the inequality situation in the country; this is especially critical given the massive unemployment challenge in South Africa and its role in limiting progress in reducing inequality. Section 4.4 dives into the social domain and examines how access to basic services, education and health varies between people and geography. Section 4.5 provides a lens into the subtleties of inequality in terms of gender. While most of the other sections include analysis disaggregated by sex, it is increasingly important to shine a brighter light on issues of gender and this section aims to provide such light. Lastly, Section 4.6 explores issues of social mobility in the country.

In conclusion, Chapter 5 of the report provides a brief conclusion emanating from the findings discussed in Chapter 4 and offers a way forward in expanding and refining the dialogue on inequality. Finally, the report ends with a series of annexures which include an additional collection of statistical tables and graphs.

[11] The policies discussed in Chapter 2 go hand-in-hand with policies aimed at also tackling South Africa's high poverty and unemployment levels; the 'triple challenges' as they are often referred to.

CHAPTER 2

OVERVIEW OF THE POLICY ENVIRONMENT

"South Africa's transition from apartheid to a democratic state has been a success. In the past 18 years, we have built democratic institutions, transformed the public service, extended basic services, stabilised the economy and taken our rightful place in the family of nations. Despite these successes, too many people are trapped in poverty and we remain a highly unequal society. Too few South Africans work, the quality of school education for the majority is of poor quality and our state lacks capacity in critical areas. Despite significant progress, our country remains divided, with opportunity still shaped by the legacy of apartheid. In particular, young people and women are denied the opportunities to lead the lives that they desire. Our Constitution obliges all of us to tackle these challenges."

National Development Plan: Vision for 2030 (2012)
Selection from the Foreword

As emphasized by the quotation above, the National Development Plan makes clear that it builds on the RDP's insistence of an explicit and intentional focus on inequality reduction in policy formulation and assessment. Inequality reduction and poverty eradication have long been the defining cornerstones of South Africa's development policy and thus, it is helpful to have some background on the policies that might have impacted on inequality reduction efforts since 1994. This chapter provides a brief overview of the policy frameworks which have shaped the country's policy direction and objectives.

2.1 KEY POLICY FRAMEWORKS (RDP, GEAR, ASGISA, NGP AND NDP)

As reiterated in the RDP quotation that opens this report, from three centuries of colonialism and then more than a half a century of apartheid on top of that, South Africa inherited a pernicious inequality legacy from policies that intentionally created extreme inequality in each and every dimension of well-being. At the dawning of South Africa's democracy, our income inequality as measured by the Gini coefficient of 0,61 (Klasen, 1997) served as a vivid marker of the mountain that the country had to climb in effecting the vision of the RDP.

Understandably, the precise focus of the country's policies was on deprivation and empowering those in the bottom half of the income distribution - especially the poor - who had borne the brunt of the systematic discrimination. In line with this goal, the RDP proposed a strong role for the state in meeting the basic needs of the population, including housing, land, water and sanitation, energy and electrification, telecommunications, transport, nutrition, health care, education and social security. Rather than a narrow focus on economic growth, the emphasis was on democratization, reconstruction, and beginning to change the structure of South Africa's economy. Ultimately, the RDP aimed to redress the stark social, political, economic, and spatial inequalities that defined post-apartheid South African.

The policy framework that the South African government put in place to give effect to this was the Growth, Employment and Redistribution (GEAR) strategy of 1996. GEAR was a macroeconomic policy that, as its title suggests, aimed to boost economic growth through private and public sector investment, expand employment, and redistribute income and other resources more equitably. By fostering faster economic growth, GEAR argued that the country would be able to generate the

necessary financial resources to fund the social investments required to achieve the objectives of the RDP. As noted in Introduction of the GEAR document:

"It has become increasingly evident that job creation, which is a primary source of income redistribution, remains inadequate. It is widely recognised that the present growth trajectory of about 3 percent per annum:

- *fails to reverse the unemployment crisis in the labour market;*
- *provides inadequate resources for the necessary expansion in social service delivery; and*
- *yields insufficient progress toward an equitable distribution of income and wealth."* (DOF, 1996:1)

The core focus of GEAR was on fiscal stability, growth, and consequent employment creation with a key target of creating the environment for an economic growth rate of more than 5 percent per annum. The policy was also characterised by tight fiscal policies in order to rid South Africa of an inherited debt burden that was shackling the country's fiscus. Nevertheless, in line with the RDP objectives it financed sustainably large budget appropriations for education, health, housing, social services (such as water and electricity) and the roll out of a large set of social grants.

While GEAR did achieve some success with regard to its macroeconomic objectives, the policy did not produce sufficient job creation and economic growth to realize the country's larger social objectives of poverty and inequality reduction. Although the economy was growing more strongly in the mid-2000s (though not at the target of 5%), GEAR was eventually replaced in 2006 by the Accelerated and Shared Growth Initiative for South Africa (AsgiSA). Working within the macro framework of GEAR, the thrust of this new policy was improving the quality and efficiencies of delivery by focusing at the micro level on key projects and institutions, as well as by putting much greater focus and attention on policy implementation.

Unfortunately, the global financial crisis of 2007/08 threw the global economy in turmoil and pulled the South African economy into recession. This was the climate within which the New Growth Path (NGP) was framed. Replacing AsgiSA in 2010, the NGP returned to the RDP's focus on sustainable and inclusive development, but its central thrust remained on economic growth and employment creation, especially for the youth. The NGP's principal priority was to create 5 million new jobs over a 10-year period and identified six priority areas to accelerate job creation, namely 1) infrastructure development; 2) the 'Green' economy; 3) agriculture; 4) mining; 5) manufacturing; and 6) tourism and other high-level services.

In 2010, South Africa's National Planning Commission (NPC) was established to develop a long-term development strategy and vision for the country. After undertaking a detailed diagnostic review of the challenges confronting the nation, the NPC identified nine key challenges facing South Africa (NPC, 2012), namely:

1. Too few people work;
2. The quality of school education for black people is poor;
3. Infrastructure is poorly located, inadequate and under-maintained;
4. Spatial divides hobble inclusive development;
5. The economy is unsustainably resource intensive;
6. The public health system cannot meet demand or sustain quality;

7. Public services are uneven and often of poor quality;
8. Corruption levels are high; and
9. South Africa remains a divided country.

Building off of its diagnostic review, the NPC developed and published the National Development Plan (NDP) in 2012 to serve as the country's long-term blueprint for the development. The NDP set two overarching objectives, namely the 1) eradication of poverty below the Lower-bound Poverty Line (LBPL) and the 2) reduction of income inequality as measured by the Gini coefficient. The NDP remains the country's major guiding document at present and we are close to approaching the midway point of the journey it charted for the nation.

CHAPTER 3

REVIEW OF DATA SOURCES

This chapter provides a brief background on each of the primary data sources that have been utilized for this report. These include the Income & Expenditure Survey (IES), Living Conditions Survey (LCS), General Household Survey (GHS), Quarterly Labour Force Survey (QLFS), National Income Dynamics Study (NIDS), and the Post-Apartheid Labour Market Series (PALMS). As Stats SA surveys, the IES, LCS, GHS and QLFS are designated as official statistics for the country, whereas the NIDS and the PALMS do not have this official designation.

3.1 HOUSEHOLD EXPENDITURE SURVEYS (IES and LCS)

Stats SA conducts two household expenditure surveys as part of its household survey programme, namely the Income and Expenditure Survey and Living Conditions Survey. These type of surveys are fundamental components to the survey programme of any statistical agency as they are critical for the updating and reweighting of the consumer price index (CPI) to stay current with the changing spending and consumption patterns of the country and are the best sources of data for the measurement of money-metric poverty and inequality.

The collection methodology of using a combination of diary and recall methods to capture household expenditure was first used by Stats SA in the IES 2005/06 to bring the organisation in line with international best practice.[12] The primary purpose of the IES is to provide household consumption expenditure data to CPI for the selection and weighting of a new basket of goods and services used for measuring inflation. Although not intended to measure poverty, the IES contains the crucial income and expenditure information necessary to derive money-metric poverty and inequality measures. To address the lack of official poverty data, Stats SA initiated a process in 2007 to develop and implement a purpose-driven and user-guided multi-topic poverty survey, namely the LCS. This was the organisation's first data collection tool specifically designed to measure the multidimensional nature of poverty. The nucleus of the LCS maintained the detailed income and expenditure modules of the IES; however, it also included a host of other questions on assets, housing, access to services, living circumstances, perceived well-being and health status that, when combined with the money-metric data, allowed Stats SA to field its broadest poverty measurement tool to date. The first LCS was implemented in 2008/09 and a second round was conducted in 2014/15.

The IES and LCS both use three data collection instruments, namely the household questionnaire, the weekly diary, and the summary questionnaire to collect information from sampled households. The household questionnaire is a booklet of questions that are split into different modules and administered to respondents during the course of the survey period. One module was completed during each visit to the household (approximately one per week). The weekly diary is a booklet that is left with the responding household to track all acquisitions made by the household during the diary-keeping period. The household (after being trained by the Survey Officer) was responsible for recording all their daily acquisitions, as well as information about where they purchased the item (its source) and the purpose of the item. A household completed a different diary for each week of the diary-keeping period. The summary questionnaire is a booklet of questions for the sole use of the survey officer. This survey instrument has two primary functions. First, it serves as a code list for survey officers when assigning COICOP (Classification of Individual Consumption according to Purpose) codes for the reported items recorded in the weekly diary. Second, it helps to summarise the

[12] Prior to the IES 2005/06, the organization used a recall only methodology.

household's total consumption expenditure on a weekly basis to allow the Survey Officers to better understand the household's acquisition patterns so as to ensure accuracy and completeness of the diary.

The IES 2005/06 and LCS 2008/09 were both split into 12 survey periods that each revolved around one month of diary keeping. A household was in a sample for a period of six weeks. The survey instruments outlined above were administered in stages at different visits during the six weeks of data collection. A module was administered in the beginning of each week. A detailed list of activities conducted each week is shown in Table 3.1.1 below.

Table 3.1.1: Data collection activities by week for the IES 2005/06 and LCS 2008/09

Week 0 *(Week before diary-keeping)*	Weeks 1 to 4 *(Diary-keeping weeks)*	Week 5 *(Week after diary-keeping)*
– Hand-over by publicity team – Establish rapport with household – Train household on diary completion – Conduct interview 1 – Make appointments for anthropometric measurements*	– Drop weekly diaries to be completed by household – Conduct interviews 2/3/4/5 – Collect completed diaries for week 1/2/3 – Verify completed diaries for week 1/2/3 – Codification by means of the summary questionnaire – Conduct anthropometric measurements*	– Conduct interview 6 – Collect completed diaries for week 4 – Verify completed diaries for week 4 – Codification by means of the summary questionnaire – Conduct any outstanding anthropometric measurements*

* Only applicable to the LCS 2008/09

Publicity operations for the surveys[13] generally began one month prior to the commencement of data collection and then continued in parallel with data collection activities until the end of the respective survey. Prior to the start of the survey period, a two week publicity process occurs at a household level to inform and prepare the sampled household for the data collection process.

While the LCS 2008/09 cemented the diary and recall method as best practice with regard to collection of expenditure data, the methodology did impose a heavy burden on respondents to keep weekly diaries for the period of a month. In an effort to improve diary reporting, the diary-keeping period was reduced from one month to two weeks for the IES 2010/11. After extensive testing, the reduced diary-keeping showed an increase in the number of items reported in the weekly diary and had a noticeable impact on reducing respondent fatigue (meaning households were less likely to drop out during data collection). Despite the reduction to two weeks, the survey was still designed to ensure diary data for every day across the whole 12-month data collection period. The LCS 2014/15 maintained the two-week diary structure and introduced additional features aimed at improving the quality and cost-effectiveness of the survey.

[13] Including the IES 2010/11 and LCS 2014/15.

The IES 2010/11 and LCS 2014/15 were split into 26 survey periods that each revolved around a two-week diary keeping period. A household was in a sample for a period of four weeks. The survey instruments were administered in stages at different visits during the four weeks of data collection. A module was administered at the beginning of each week. A detailed list of activities conducted each week is shown in Table 3.1.2 below.

Table 3.1.2: Data collection activities by week for the IES 2010/11 and LCS 2014/15

Week 0 *(Week before diary-keeping)*	Weeks 1 to 2 *(Diary-keeping weeks)*	Week 3 *(Week after diary-keeping)*
– Hand-over by publicity team – Establish rapport with household – Train household on diary completion – Conduct interview 1 – Make appointments for anthropometric measurements*	– Drop weekly diaries to be completed by household – Conduct interviews 2 and 3 – Collect completed diaries for week 1 – Verify completed diaries for week 1 – Codification by means of the summary questionnaire – Conduct anthropometric measurements*	– Conduct interview 4 – Collect completed diaries for week 2 – Verify completed diaries for week 2 – Codification by means of the summary questionnaire – Conduct any outstanding anthropometric measurements*

* Only applicable to the LCS 2014/15

There are three main approaches used to collect data on household consumption expenditure, namely the acquisition approach, the payment approach, and the consumption approach. All three methods were used at some stage during data collection for all four surveys.

The *acquisition approach* entails taking into account the total value of goods and services acquired (not necessarily consumed, but for household consumption purposes) during a given period, whether the household paid for them or not. This is the general approach that was followed for most of the items. Information on non-durable, semi-durable and durable items is collected using the acquisition approach.

The *payment approach* takes into account the total payment made for all goods and services in a given period, whether the household has started consuming them or not. This approach is followed when collecting data of expenditure on services such as education, health, insurance, etc.

The *consumption approach* takes into account the total value of all goods and services consumed or used during a given period. This approach is used when collecting information on own production.

Table 3.1.3 compares various features of the four surveys used for this report.

Table 3.1.3: Comparison of past four household expenditure surveys (IES & LCS)

Distinguishing features		IES 2005/06	LCS 2008/09	IES 2010/11	LCS 2014/15
Reference year		2006	2009	2011	2015
Sample size		24 000 DUs	31 473 DUs	31 419 DUs	30 818 DUs
Methodology		Diary and recall	Diary and recall	Diary and recall	Diary and recall
Household questionnaire		Five modules	Seven modules	Four modules	Four modules
Diaries		Four weekly diaries	Four weekly diaries	Two weekly diaries	Two weekly diaries
Expenditure data collection approach	Goods	Acquisition approach	Acquisition and payment approaches	Acquisition approach	Acquisition approach
	Services	Payment approach	Payment approach	Payment approach	Payment approach
	Own production	Consumption approach	Consumption approach	Consumption approach	Consumption approach
Data collection period		22 Aug 2005 to 10 Sep 2006	25 Aug 2008 to 11 Sep 2009	23 Aug 2010 to 4 Sep 2011	13 Oct 2014 to 25 Oct 2015
Diary-keeping period		1 Sep 2005 to 31 Aug 2006	1 Sep 2008 to 31 Aug 2009	30 Aug 2010 to 29 Aug 2011	20 Oct 2014 to 19 Oct 2015
Survey midpoint		March 2006	March 2009	March 2011	April 2015
Number of survey periods		12	12	26	26
Visits per household		Six	Six	Four	Four
Classification of expenditure items		COICOP	COICOP	COICOP	COICOP
National response rate		96,8%	88,0%	91,6%	84,9%

The sample for the four IES and LCS surveys included all domestic households, holiday homes and all households in workers' residences, such as mining hostels and dormitories for workers. It did not include institutions such as hospitals, prisons, old-age homes, student hostels and dormitories for scholars. Boarding houses, hotels, lodges and guesthouses were also excluded from the samples.

3.2 GENERAL HOUSEHOLD SURVEY (GHS)

The General Household Survey is an annual survey that has been part of Stats SA's household survey programme since 2002. The survey's main objective is to measure the level of development and the performance of various government programmes and projects by focussing on the extent of service delivery and the quality of services across a number of key service sectors. The GHS uses an omnibus household-based survey instrument which covers six broad areas, namely education, health and social development, housing, households' access to services and facilities, food security, and agriculture.

The survey instrument contains both an individual and a household module. The individual section contains a core set of questions (on inter alia education, health, and employment) which are asked of all individuals in the household roster. A comprehensive set of additional questions covering access to services such as energy, water and sanitation, refuse removal, as well as questions on agriculture and food security are asked of a household representative.

The GHS replaced the annual October Household Survey (OHS) which was enumerated between 1993 and 1999. Although the OHS provided both labour market and more general developmental data, better information on the labour market was prioritised by the late nineties and the survey was discontinued in 1999 in favour of a Labour Force Survey (LFS) which later morphed into the Quarterly Labour Force Survey (QLFS). The subsequent loss of developmental information was addressed in 2002 by the introduction of the General Household Survey.

The GHS has since 2002 been based on a sample of approximately 30 000 dwelling units. The target population of the survey consists of all private households in all nine provinces of South Africa and residents in workers' hostels. The survey does not cover other collective living quarters such as students' hostels, old-age homes, hospitals, prisons and military barracks, and is therefore only representative of non-institutionalised and non-military persons or households in South Africa.

The GHS uses the Master Sample frame which has been developed as a general-purpose household survey frame that can be used by all other Stats SA household-based surveys having design requirements that are reasonably compatible with the GHS. Following the various Master Samples that have been used over time, survey results were representative at provincial level between 2002 and 2014, and, since 2015, also representative at metro/non-metro levels within provinces. Four different master samples have been used since the inception of the GHS covering the periods 2002–2003, 2004–2007, 2008–2014 and 2015–2018.

A multi-stage sample design was used in this survey, which is based on a stratified design with probability proportional to size selection of primary sampling units (PSUs) at the first stage and sampling of dwelling units (DUs) with systematic sampling at the second stage. After allocating the sample to the provinces, the sample was further stratified by geography (primary stratification) and by population attributes using Census 2011 data (secondary stratification).

The timing of data collection has varied since its inception. Between 2002 and 2008 all data was collected during a single month, namely July. This period was extended to three months (July to September) between 2009 and 2012. The collection period was finally extended to a full 12 months (January to December) in 2013 in order to align it with the data collection requirements of the Domestic Tourism Survey (DTS) and the Victims of Crime Survey (VoCS). Both the latter surveys

required fieldwork across a prolonged period to address seasonality and to improve coverage through the use of overlapping reference periods. Contract staff were used to conduct surveys until 2010, after which survey officers were employed permanently in 2011.

Face-to-face interviews were conducted by survey officers employed and trained by Stats SA. Two hundred and thirty-three enumerators (233) have since 2012 visited all the sampled dwelling units in each of the nine provinces supported by 62 provincial and district coordinators. Additional personnel from the provinces and head office assisted with monitoring and ensuring questionnaire quality. Since Survey Officers are continuously in the field because the continuous data collection method employed, more condensed refresher training is used in which the trainers predominantly focus on correcting mistakes and introducing new questions and content. Training takes place over two stages; during the first phase, provincial representatives are provided with refresher training over a period two days in Pretoria. The training is then cascaded down to provincial and district level where provincial trainers and survey officers are trained.

3.3 QUARTERLY LABOUR FORCE SURVEY (QLFS)

The Quarterly Labour Force Survey is a household-based sample survey conducted by Stats SA since 2008. It collects data on the labour market activities of individuals aged 15 years or older who live in South Africa. The labour market consists of a supply side and a demand side. The labour supply of the population, referred to as the economically active population or labour force, has two components: employed persons and unemployed persons. The labour demand of enterprises consists of two components: filled posts (jobs) and unfilled posts (vacancies).

Statistics of the economically active population, employment, unemployment and underemployment serve many purposes. They provide measures of labour supply, labour input, the structure of employment, and the extent to which the available labour time and human resources are actually utilised or not. Such information is essential for macro-economic and human resources development planning and policy formulation. When collected at different points in time, the data provide the basis for monitoring current trends and changes in the labour market and the employment situation, which may be analysed in connection with other economic and social phenomena to evaluate macro-economic policies. The unemployment rate, in particular, is widely used as an overall indicator of the current performance of a nation's economy.

Starting in 2005, Stats SA undertook a major revision of the Labour Force Survey (LFS) which was conducted twice per year since 2000. This revision resulted in changes to the survey methodology, the survey questionnaire, the frequency of data collection and data releases, and the survey data capture and processing systems. The redesigned labour market survey is the QLFS which is now the principal vehicle for disseminating labour market information on a quarterly basis.

The QLFS uses the Master Sample frame that has been developed as a general-purpose household survey frame that can be used by all other Stats SA household-based surveys having design requirements that are reasonably compatible with the QLFS. The 2013 Master Sample is based on information collected during the 2011 Census conducted by Stats SA. The QLFS sample covers the non-institutional population except for workers' hostels. However, persons living in private dwelling units within institutions are also enumerated.

The Master Sample is designed to be representative at the provincial level and within provinces at metro/non-metro levels. Within the metros, the sample is further distributed by geographical type. The three geography types are urban, tribal and farms. The sample is divided equally into four subgroups or panels called rotation groups. The rotation groups are designed in such a way that each of these groups has the same distribution pattern as that which is observed in the whole sample. They are numbered from one (1) to four (4), and these numbers also correspond to the quarters of the year in which the sample will be rotated for the particular group.

For each quarter of the QLFS, a quarter (25%) of the sampled dwellings are rotated out of the sample. These dwellings are replaced by new dwellings from the same PSU or the next PSU on the list. Thus, sampled dwellings are expected to remain in the sample for four consecutive quarters. The sample for the QLFS is based on a stratified two-stage design with probability proportional to size (PPS) sampling of PSUs in the first stage, and sampling of dwelling units with systematic sampling in the second stage.

3.4 NATIONAL INCOME DYNAMICS STUDY (NIDS)

NIDS is the first nationally representative individual level panel survey in South Africa. The first five waves were funded by the Presidency and then later by the Department of Planning, Monitoring and Evaluation (DPME) with the implementation service provider of each of these waves being the Southern Africa Labour and Development Research Unit (SALDRU) based at the University of Cape Town.

The first wave was conducted in 2008 with a nationally representative sample of over 28 000 individuals living in approximately 7 300 households. The sample was drawn by Stats SA for NIDS. Subsequent waves (Wave 2 to Wave 5) were conducted every two years (see Brophy et al. 2018). Given that NIDS is a panel of individuals, individuals interviewed in the first wave were followed in all subsequent waves even if they changed their place of residence. Only those who left the country were not tracked. These individuals are called Continuing Sample Members (CSMs). After the first wave, any children born to female CSMs become CSMs themselves and are followed accordingly in subsequent waves. In addition, in each wave, all individuals residing in a household with a CSM are interviewed too. If they are not themselves CSMs, they are called Temporary Sample Members (TSMs). This is done because it is important to understand the household context within which each CSM is living at each point in time. These TSMs are not followed in subsequent waves if they no longer live with a CSM or if the CSM leaves the household.

The NIDS dataset consists of four modules, namely an adult module, a child module, a household module, and a proxy module. The adult module collects information on CSMs and TSMs who were aged 15 years and older. The child module provides information on children aged 14 years and younger. The household module provides information on household characteristics and other features of the household. A proxy module collects some information on CSMs from other adult household members in cases where CSMs were not available for interview. NIDS collects detailed information on household income and consumption, household composition, migration, labour market outcomes, fertility, education, health, subjective well-being, social capital, and household shocks and coping mechanisms.[14]

[14] These questionnaires and the NIDS data are available for download at http://www.nids.uct.ac.za/

As NIDS tracks individuals over time to describe South Africa's social dynamics, retaining individuals in the panel is very important. NIDS along with all other panel-type studies struggle with individuals dropping out of the sample resulting in attrition over time. The NIDS attrition rates are reported with the release of each wave of data. These attrition rates compare favourably with panel studies internationally. However, as is found worldwide, high-income earners had low response rates in Wave 1 and higher attrition rates in subsequent waves. In South Africa, though, this implies that whites and Indians/Asians had higher attrition rates in each wave. For this reason, during Wave 5, a top-up sample was added to increase the representativity of these individuals. When using the balanced dataset, it is important to use attrition corrected weights.

3.5 THE POST-APARTHEID LABOUR MARKET SERIES (PALMS)

The PALMS dataset is a stacked cross-sectional dataset of employment and earnings created by DataFirst at the University of Cape Town in partnership with Stats SA. The PALMS dataset consists of surveys conducted by Statistics South Africa, including the October Household Surveys (1994–1999), the bi-annual Labour Force Surveys (2000–2007), the Quarterly Labour Force Surveys (2008–2019), and the smaller labour force pilot survey from February 2000 (Kerr & Wittenberg, 2019). In addition, the PALMS dataset includes the 1993 Project for Statistics on Living Standards and Development (PSLSD) survey conducted by SALDRU. All in all, the latest version of the PALMS dataset provides individual level data from 69 household surveys conducted between 1994 and 2019. The PALMS provides data on individuals' labour market outcomes that can be used to estimate participation rates, unemployment rates and earnings over the post-apartheid period, as well as survey weights that are calibrated to ensure accurate comparison of statistics over time.

CHAPTER 4

PROFILING AND ANALYSING INEQUALITY

4.1 ECONOMIC INEQUALITY

The National Development Plan (NDP) prioritises reducing inequality as one of its key objectives to tackling South Africa's significantly high inequality challenges. One of the NDP targets is to reduce income inequality (measured by the Gini coefficient) from 0,70 to 0,60 by 2030. Goal 10 of the SDGs aims to reduce inequalities within and between countries. In this section, we present measures of economic inequality using per capita income and per capita expenditure as our proxy welfare indicators. We use inequality measures including the Gini coefficient, the Lorenz curve, the Theil's indices, the Atkinson indices, and the Palma ratio.

For the purpose of this section, four datasets namely the IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15 are analysed to track if there has been any progress in reducing inequality in South Africa. Furthermore, while the tables presented in the analyses are mainly based on per capita expenditure, the corresponding figures and tables for per capita income are presented in Annexure B. It is also important to note that for comparison purposes, the income and expenditure figures for 2006, 2009 and 2011 were inflated to 2015 prices to allow for analysis in real terms. Moreover, respective survey weights have been used for all the calculations.

4.1.1 Real annual mean and median expenditure by subgroups

Table 4.1.1 and Table 4.1.2 provide mean and median expenditure estimates by population groups, location and poverty status. Nationally, both real mean and median expenditure per annum increased between 2006 and 2015, although both values peaked in 2011. This is the national trend, but as the table makes it clear this does not reflect the well-being of all groups in society; different patterns exist for the various subgroups presented in Table 4.1.1 and Table 4.1.2.

Figures in Table 4.1.1 show that individuals living in male-headed households had annual mean and median expenditures higher than those living in female-headed households over the years. The mean expenditure of those living in male-headed households remained more than double of those living in households headed by females since 2006; while the median expenditure of individuals living in male-headed households was fluctuating between 1,6 and 1,8 times higher than those living in female-headed households. By 2015, the average annual income was R38 180 for individuals living in male-headed households while the figure was R18 406 for those living in female-headed households. The corresponding median figures were R14 897 for individuals living in male-headed households and R8 225 for individuals living in female-headed households.

Table 4.1.1: Distribution of real annual mean and median expenditure by sex of household head and population group (2006, 2009, 2011 & 2015)

Variable	Sub-group	Mean				Median			
		2006	2009	2011	2015	2006	2009	2011	2015
Sex of the household head	Male	27 058	31 904	41 007	38 180	9 173	12 179	15 893	14 897
	Female	12 965	15 717	19 450	18 406	5 537	6 684	8 706	8 225
Population group	Black African	11 005	14 645	18 396	18 291	6 009	7 325	9 659	9 186
	Coloured	19 405	25 207	31 850	31 951	9 702	14 302	17 927	16 878
	Indian/Asian	39 840	51 744	67 386	58 249	22 828	31 802	49 308	37 561
	White	103 012	107 774	142 613	131 198	77 308	85 268	109 835	100 205
Total		20 930	25 245	32 022	29 841	7 124	9 059	11 910	11 149

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

Regarding race, the white population group had the highest annual mean and median expenditure compared to other population groups across all four years; while black Africans had the least. Black Africans had an annual median expenditure of only R6 009 in 2006 and R9 186 in 2015. Meanwhile, the white population group had their annual median expenditure sitting at R77 308 in 2006 which increased to R100 205 in 2015. The annual median expenditure for whites was more than ten times higher than that of black Africans across all four years. Furthermore, the white population group had more than nine times the annual mean expenditure of black Africans in 2006; although, this ratio declined to more than seven times in 2015.

Table 4.1.2 presents annual mean and median expenditures by education level of the household head. Estimates show that individuals living in households headed by individuals with higher education spent more than twice as those living in households headed by individuals with matric; more than five times higher than those living in households headed by individuals with some secondary education; and more than eight times higher than those with some primary and primary education levels. Furthermore, individuals living in households headed by individuals with higher education had a median expenditure of R60 803 in 2006 and this rose to R70 686 by 2015. Whereas, individuals living in households headed by individuals with matric had a median expenditure that was three times less; and those in households headed by individuals with lower education levels and no-education had medians approximately five to ten times less than individuals in households headed by individuals with higher education.

Table 4.1.2: Distribution of real annual mean and median expenditure by subgroups (2006, 2009, 2011 & 2015)

Variable	Sub-group	Mean				Median			
		2006	2009	2011	2015	2006	2009	2011	2015
Education of the household head	No schooling	5 748	6 672	8 569	7 600	4 101	4 663	6 371	5 262
	Some primary	7 349	8 587	10 828	10 039	5 030	5 796	7 454	6 856
	Primary	8 441	10 702	13 238	12 343	5 876	7 225	9 006	7 954
	Some secondary	15 981	18 369	23 893	20 164	8 370	9 711	12 744	10 767
	Matric	39 612	44 378	50 215	42 775	20 324	23 903	28 003	23 543
	Higher	89 495	83 076	109 643	100 982	60 803	59 285	75 688	70 686
Settlement type	Urban	29 870	34 836	43 394	40 290	10 619	14 324	17 922	17 193
	Rural	8 058	8 981	13 190	11 658	4 550	5 258	7 167	6 340
Province	Western Cape	39 029	41 505	44 955	47 592	11 110	16 761	20 158	19 000
	Eastern Cape	14 050	14 756	18 320	18 262	5 458	6 420	8 093	7 105
	Northern Cape	14 014	19 214	24 955	23 343	6 470	7 815	10 764	10 746
	Free State	21 536	20 063	26 880	28 421	8 253	8 458	12 544	12 179
	KwaZulu-Natal	14 149	16 530	22 319	18 436	5 365	6 930	8 667	8 007
	North West	17 553	19 407	25 785	20 809	6 642	8 202	10 066	9 541
	Gauteng	33 972	42 746	54 885	48 219	12 824	18 043	22 124	20 403
	Mpumalanga	15 034	17 005	23 248	23 932	6 034	7 115	9 139	10 172
	Limpopo	9 984	11 824	16 141	16 338	5 042	5 150	7 986	7 164
Poverty Status (UBPL)	Poor	5 433	6 234	6 885	6 712	4 829	5 541	6 461	6 175
	Non-poor	51 803	56 364	60 592	58 662	27 571	32 454	31 204	32 258
Total		20 930	25 245	32 022	29 841	7 124	9 059	11 910	11 149

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

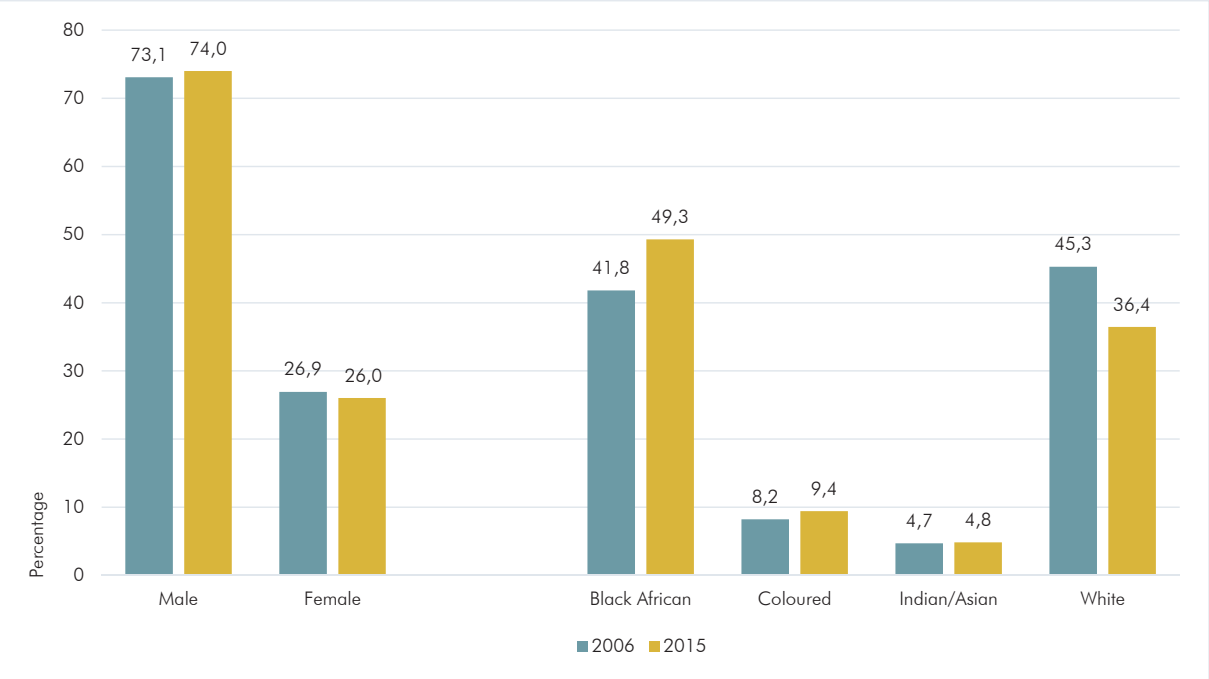
The differences in annual mean and median expenditures by province show the reality of inter-provincial inequality. Gauteng and Western Cape were better off compared to other provinces as illustrated by their higher annual mean and median expenditure values. While individuals living in Limpopo and Eastern Cape had the lowest annual mean and median expenditures for all four data points. On average, individuals living in urban areas spent R29 870 in 2006 and this expenditure rose to R40 290 by 2015. Rural dwellers had a mean expenditure value of R8 058 in 2006 and their average increased to R11 658 by 2015. Furthermore, the median expenditure of the urban population was R17 193 in 2015 whereas the rural population had just R6 340 in the same year.

The average expenditure of poor individuals was at R5 433 in 2006 and rose to R6 712 in 2015; while median expenditure for this group was at R4 829 in 2006 and rose to R6 175 in 2015. Meanwhile, the annual mean expenditure of non-poor individuals was approximately ten times more than that of the poor population and their median was approximately five times more compared to the poor.

4.1.2 Expenditure shares by subgroups

Figures 4.1.1 to 4.1.3 depicts the distribution of expenditure shares by sex of the household head, population group, deciles and the Lorenz curve for 2006 and 2015 using the IES 2005/06 and LCS 2014/15. These two datasets are the bookends of the available household expenditure data series and show the situation at the start and end of the series.

Figure 4.1.1: The distribution of expenditure shares by sex of household head and population group (2006 & 2015)



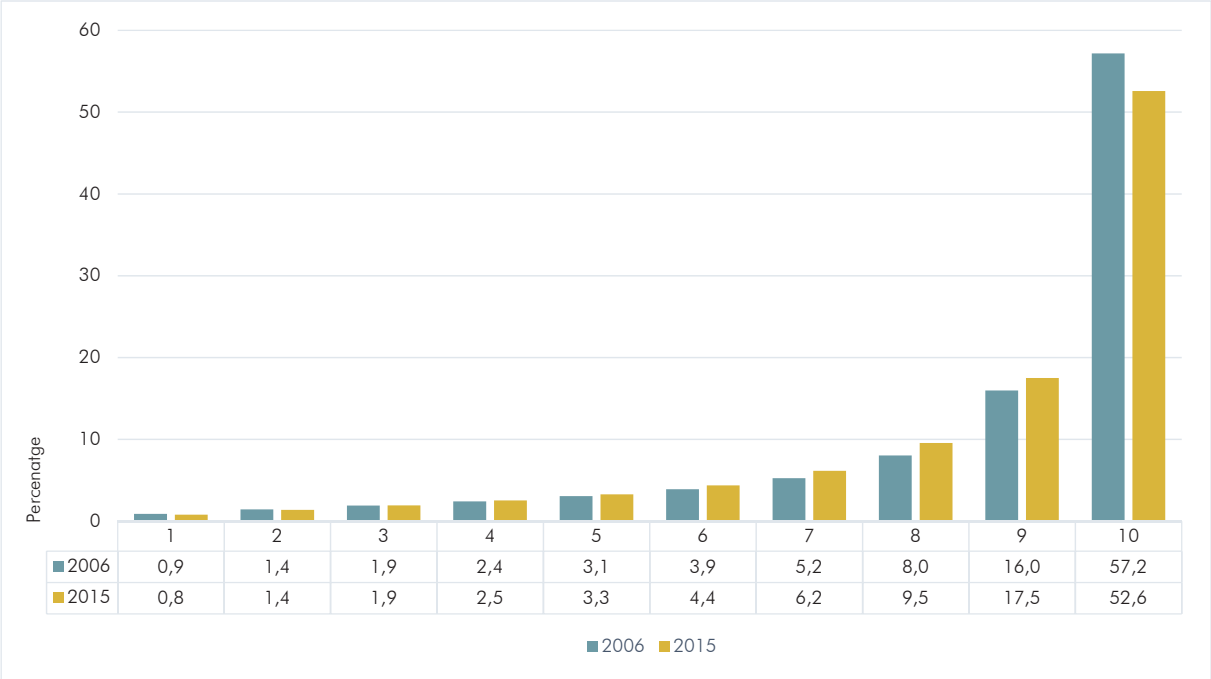
Source: IES 2005/06 and LCS 2014/15; own calculations

Figure 4.1.1 shows that individuals living in male-headed households had higher expenditure shares as compared to those living in female-headed households in both 2006 and 2015. Individuals living in female-headed households had a little over a quarter of the total expenditure share in 2006 and 2015; while this group accounted for roughly 43% of the total population in each of their respective years (see Annexure A for population shares). Individuals living in male-headed households, on the other hand, accounted for almost three quarters of the total expenditure at 73,1% in 2006 and 74,0% in 2015. The gap in expenditure shares between the two groups are disproportionate relative to the gap in their population shares.

This pattern of inequality is seen again when we move to expenditure shares by population group. There was an increase in the population share of black Africans from 79,5% in 2006 to 80,4% in 2015 (see Annexure A). At the same time, an increase is also observed in their expenditure shares from 41,8% in 2006 to 49,3% in 2015. Even though black Africans increased their share of expenditure, they still significantly lagged behind where you would expect them to be given their large population share in the country. Meanwhile, the white population declined by nearly 1 percentage point between 2006 (9,2%) and 2015 (8,3%) and their expenditure share also decreased from 45,3% to 36,4% over the same period. Nevertheless, this expenditure share remains disproportionately large relative to their small population share.

To a lesser degree than whites, Indians/Asians also had a larger share of expenditure (approximately 5%) compared to their population share which remained constant at 2,5%. The only population group that had expenditure shares that were in line with their population shares were coloureds. The coloured population decreased marginally from 8,9% in 2006 to 8,8% in 2015, while their expenditure share increased from 8,2% in 2006 to 9,4% in 2015.

Figure 4.1.2: The distribution of expenditure shares by decile (2006 & 2015)



	1	2	3	4	5	6	7	8	9	10
2006	0,9	1,4	1,9	2,4	3,1	3,9	5,2	8,0	16,0	57,2
2015	0,8	1,4	1,9	2,5	3,3	4,4	6,2	9,5	17,5	52,6

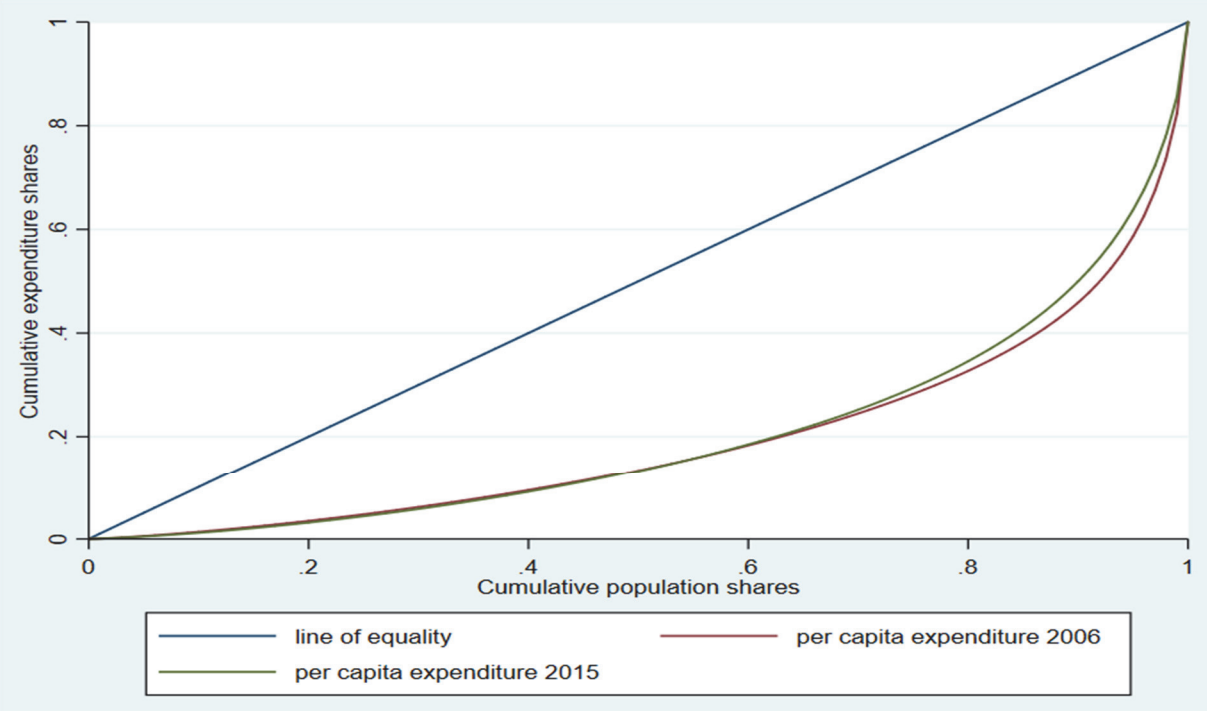
Source: IES 2005/06 and LCS 2014/15; own calculations

In an equal society, total household expenditure would be split equally across the 10 deciles. However, Figure 4.1.2 indicates that more than half of all household expenditure is spent by the richest 10% of the population accounting for 57,2% in 2006 and 52,6% in 2015. As such, individuals in the bottom nine deciles accounted for the remaining expenditure of 42,8% in 2006 and 47,4% in 2015. The bottom 50% of the population together shared less than 10% of total expenditure in both 2006 and 2015. Despite this inequality, there has been some small improvements in the middle of the 2015 distribution from the fourth to ninth deciles. This increase in expenditures shares for individuals in the middle deciles suggest a drop in inequality between

2006 and 2015. Exploring the Lorenz curves of the 2006 and 2015 distributions substantiate this point.

The Lorenz curve is constructed using cumulative percentage shares of per capita expenditure against cumulative population shares. As the curve gets closer to the line of equality, the more equal the underlying expenditure distribution is in a society. Moreover, a distribution is said to 'Lorenz dominates' another distribution when it's Lorenz curve lies above (close to the 45 degree line) the other distribution across all points (Shifa and Ranchhod, 2019).

Figure 4.1.3: Lorenz curve based on per capita expenditure (2006 & 2015)



Source: IES 2005/06 and LCS 2014/15; own calculations

According to Figure 4.1.3, there is no clear 'Lorenz dominance' between the 2006 and 2015 distributions as the two curves cross at some points of the distributions. However, the Lorenz curve for the 2015 distribution lies closer to the line of equality for the middle-to-upper deciles indicating some improvement in the distribution at that point relative to the 2006 distribution. Nonetheless, it remains the case that without clear Lorenz dominance throughout the distribution, it is not possible to definitively determine which distribution is more equal than the other. As such, to determine the degree of equality comprehensively we will examine the Gini coefficient and a range of other inequality measures.

4.1.3 Inequality ratios and indices

Table 4.1.3 shows trends of inequality based on per capita expenditure in South Africa from 2006 to 2015. The table presents various inequality measures including the Gini coefficient, the Theil's indices, the Atkinson indices, and the Palma ratio. These measures of inequality, when combined, provide profound understanding of how income/expenditure is distributed in South Africa. However, the Gini coefficient in the discussions will receive more attention due to the fact that South Africa's National Development Plan lists reducing inequality measured using the Gini coefficient as one of its fundamental objectives. The indices are defined below:

Gini coefficient

The Gini coefficient has been a commonly used measure of inequality in South Africa. The Gini ranges from 0 to 1, where 0 indicates perfect equality (all individuals have the same income) and 1 indicates prefect inequality (where one person has all the income and the rest have none). Therefore, the closer the Gini coefficient gets to 1, the more unequal the population is. On the other hand, as the Gini coefficient approaches 0, the more equal the population becomes.

Theil's index and General Entropy (GE)

The Theil's indices belong to the family of generalized entropy inequality measures (GE(α)). The parameter α represents the weight given to distances between income/expenditure at different parts of the income/expenditure distribution. This parameter α can take any real value and the commonly used values of α are 0, 1, and 2. When α is equal to 0, the GE(0) index is called Theil's L index; when α is equal to 1, the GE(1) index is called Theil's T index, and when α is equal to 2 the GE(2) index is called the Coefficient of Variation (CV) (Tregenna & Tsela, 2012). With a positive and large α, the GE index will be more sensitive to changes at the upper tail of the income/expenditure distribution and with α values closer to zero the GE index will be more sensitive to changes at the bottom tail of the distribution.

Palma ratio

The Palma ratio is defined as the ratio of national income/expenditure shares of the top 10 percent of the population relative to the bottom 40 percent.

Atkinson index

The Atkinson index presents the percentage of total income that a given population would have to forego in order to have more equal shares of income between its people. Atkinson (1970) approached inequality from a normative perspective and proposed a welfare-based inequality measure called the Atkinson's class of inequality measures (A(ε)). The parameter (ε) represents 'aversion to inequality' and can take values between zero and infinity. The larger the parameter (ε), the stronger the inequality aversion is in a society. This means that the Atkinson index pays more attention to the bottom of the income/expenditure distribution (Wittenberg, 2017). Having a greater aversion parameter (ε) means that social welfare is more sensitive to a shift in the income of a poorer individual than to the same shift affecting a richer individual.

In this subsection, we explore inequality by a number of its key markers; namely sex of the household head, population group, education level of the household head, province, settlement type, and poverty status. Such descriptions are often known as horizontal inequalities as they reflect the differing burden of inequality on important groups in the South African society. The inequality ratios

and indices presented in Tables 4.1.3 to 4.1.8 are based only on per capita expenditure (for measures based on income see Annexure B).

According to Table 4.1.3, the national Gini coefficient only dropped slightly from 0,67 in 2006 to 0,65 in 2009, while it remained uniform between 2009 and 2015. Both of Theil's indices show drops in inequality over the four data points. The Atkinson A(1) declined marginally from 0,57 in 2006 to 0,55 in 2015, while the Atkinson A(2) was stable between 2006 and 2011 at 0,74, before a minor rise to 0,75 in 2015. The Palma ratio based on per capita expenditure decreased from 8,6 in 2006 to 7,9 in 2015 suggesting a decline in inequality. The consistent trend of the Palma ratio to the Gini coefficient, resulted from an increase in the share of expenditure going to the middle-50% of the population that led to a decline in the share of expenditure for the top-10%; while the bottom-40% kept their spending share constant.

Table 4.1.3: Inequality measures based on per capita expenditure by sex of household head (2006, 2009, 2011 & 2015)

Sex of household head	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Male	2006	0,66	0,86	0,89	0,58	0,76	6,1%	40,1%	53,8%	8,9
	2009	0,64	0,80	0,77	0,55	0,76	6,2%	44,8%	49,0%	7,9
	2011	0,64	0,80	0,80	0,55	0,75	6,4%	43,7%	49,9%	7,8
	2015	0,64	0,79	0,77	0,55	0,76	6,4%	44,4%	49,2%	7,7
Female	2006	0,63	0,69	0,92	0,50	0,66	9,2%	35,0%	55,8%	6,1
	2009	0,63	0,70	0,89	0,50	0,66	8,8%	36,7%	54,5%	6,2
	2011	0,61	0,65	0,81	0,48	0,65	9,3%	38,3%	52,4%	5,6
	2015	0,61	0,68	0,80	0,49	0,67	8,7%	39,5%	51,8%	6,0
Total population	2006	0,67	0,85	0,95	0,57	0,74	6,6%	36,2%	57,2%	8,6
	2009	0,65	0,81	0,86	0,56	0,74	6,5%	40,2%	53,3%	8,1
	2011	0,65	0,80	0,86	0,55	0,74	6,8%	39,9%	53,3%	7,9
	2015	0,65	0,80	0,84	0,55	0,75	6,6%	40,8%	52,6%	7,9

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

According to nearly all the inequality measures presented in Table 4.1.3, individuals living in male-headed households seem to be more unequal as compared to those living in female-headed households. The Gini coefficient of the two groups dropped slightly by the same margin over the same period. The Gini coefficient for individuals living in male-headed households decreased from 0,66 in 2006 to 0,64 in 2009 and then remained uniform until 2015. The Gini coefficient for individuals living in female-headed households was the same for 2006 and 2009 at 0,63 before declining to 0,61 in 2011 and then stayed unchanged in 2015. Over the years, the Atkinson index, A(1), shows a similar trend like the Gini coefficient for individuals living in both male- and female-headed households.

Individuals living in female-headed households have a higher share of expenditure going to both the top-10% and the bottom-40% within this group as compared to those in male-headed households. Of importance to note is that this finding does not necessarily mean that individuals living in female-headed households have a larger share of total expenditure as compared to individuals living in male-headed households (see Figure 4.1.1).

The Palma ratio corroborates with the Gini coefficient in that there is more inequality among individuals living in male-headed households compared to those living in female-headed households. There was a significant drop in the Palma ratio for individuals living in male-headed households from 8,9 in 2006 to 7,7 in 2015, while the Palma for those living in female-headed households slightly decreased from 6,1 to 6,0 between 2006 and 2015. The significant drop in the Palma ratio for individuals living in male-headed households was due to the transfer of expenditure share coming from the top-10% going to the middle-50% of this population, with the bottom-40% also had minimal gains in their expenditure share. On the other hand, while the middle-50% of individuals living in female-headed households increased their expenditure shares, the bottom-40% and the top-10% of this population decreased their expenditure; hence, the minimal drop in the Palma ratio for individuals living in female-headed households during the period of analysis.

Table 4.1.4: Inequality measures based on per capita expenditure by population group (2006, 2009, 2011 & 2015)

Population group	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Black African	2006	0,54	0,51	0,61	0,40	0,58	11,4%	43,7%	44,9%	4,0
	2009	0,57	0,57	0,68	0,44	0,62	10,0%	43,2%	46,8%	4,7
	2011	0,55	0,54	0,63	0,42	0,61	10,4%	44,7%	44,9%	4,3
	2015	0,57	0,59	0,66	0,44	0,64	9,6%	44,2%	46,2%	4,8
Coloured	2006	0,56	0,56	0,60	0,43	0,63	9,9%	45,9%	44,2%	4,5
	2009	0,53	0,50	0,50	0,39	0,61	10,1%	51,2%	38,7%	3,8
	2011	0,53	0,50	0,54	0,40	0,60	10,5%	49,2%	40,3%	3,8
	2015	0,56	0,57	0,58	0,43	0,65	9,2%	48,6%	42,2%	4,6
Indian/Asian	2006	0,52	0,49	0,55	0,39	0,61	11,2%	48,2%	40,6%	3,6
	2009	0,50	0,44	0,48	0,36	0,55	11,4%	50,2%	38,4%	3,4
	2011	0,45	0,37	0,35	0,31	0,53	12,9%	54,3%	32,8%	2,5
	2015	0,45	0,35	0,36	0,30	0,49	13,5%	53,8%	32,7%	2,4
White	2006	0,43	0,32	0,32	0,28	0,49	14,7%	53,8%	31,5%	2,1
	2009	0,39	0,28	0,27	0,25	0,49	16,3%	55,4%	28,3%	1,7
	2011	0,41	0,31	0,30	0,26	0,49	15,4%	54,2%	30,4%	2,0
	2015	0,41	0,30	0,28	0,26	0,48	15,4%	54,8%	29,8%	1,9
Total population	2006	0,67	0,85	0,95	0,57	0,74	6,6%	36,2%	57,2%	8,6
	2009	0,65	0,81	0,86	0,56	0,74	6,5%	40,2%	53,3%	8,1
	2011	0,65	0,80	0,86	0,55	0,74	6,8%	39,9%	53,3%	7,9
	2015	0,65	0,80	0,84	0,55	0,75	6,6%	40,8%	52,6%	7,9

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table 4.1.4 shows inequality within population groups over time. The Gini coefficient based on per capita expenditure was the highest for black Africans compared to the other three population groups since 2009. Meanwhile, coloureds had the highest Gini coefficient in 2006. From 2006 to 2015, the Gini coefficient increased for black Africans while it remained constant for coloureds and decreased for Indians/Asians and whites. The Theil's indices, the Atkinson indices, as well the Palma ratios provide the same conclusion as the Gini coefficient, namely increasing inequality among black Africans. The coloured population had their lowest Gini levels in 2009 and 2011 at 0,53. In 2006 and 2015, the Gini coefficient for coloureds was at 0,56. Meanwhile, whites had a Gini coefficient of 0,43 in 2006, 0,39 in 2009, and 0,41 in both 2011 and 2015.

Table 4.1.5 highlights that expenditure inequality was the highest amongst individuals living in households headed by individuals with some secondary and matric education levels with a Gini coefficient of approximately 0,55 over the years. While it was the lowest among those living in households headed by individuals with no education followed by those with some primary and primary education levels with a Gini coefficient of roughly 0,45 over time. However, over the period, inequality has slightly risen among individuals living in households headed by individuals with no education, some primary and primary education, while it has slightly decreased among those living in households headed by individuals with some secondary, matric and higher education levels. Very slight decreases to the overall expenditure of individuals in the top-10% combined with almost constant overall expenditure for those in the bottom-40% lead to an increase in the overall expenditure of individuals in the middle-50% over the years.

Table 4.1.5: Inequality measures based on expenditure per capita by education level of the household head (2006, 2009, 2011 & 2015)

Education level of household head	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
None	2006	0,42	0,30	0,37	0,26	0,41	16,3%	49,7%	34,0%	2,1
	2009	0,42	0,29	0,35	0,25	0,40	16,4%	50,3%	33,3%	2,0
	2011	0,40	0,27	0,30	0,24	0,41	16,7%	52,1%	31,2%	1,9
	2015	0,44	0,34	0,39	0,29	0,46	14,7%	50,8%	34,5%	2,3
Some primary	2006	0,44	0,33	0,39	0,28	0,44	15,3%	49,9%	34,8%	2,3
	2009	0,45	0,35	0,41	0,29	0,46	14,5%	49,6%	35,9%	2,5
	2011	0,44	0,32	0,35	0,27	0,45	15,1%	51,3%	33,6%	2,2
	2015	0,45	0,36	0,39	0,30	0,49	14,1%	50,9%	35,0%	2,5
Primary	2006	0,44	0,33	0,40	0,28	0,44	15,3%	49,4%	35,3%	2,3
	2009	0,45	0,35	0,40	0,29	0,47	14,3%	50,3%	35,4%	2,5
	2011	0,46	0,35	0,43	0,30	0,47	14,4%	49,2%	36,4%	2,5
	2015	0,49	0,41	0,44	0,34	0,53	12,6%	49,2%	38,2%	3,0
Some secondary	2006	0,55	0,53	0,62	0,41	0,60	10,8%	44,5%	44,7%	4,1
	2009	0,55	0,54	0,61	0,42	0,61	10,3%	45,9%	43,8%	4,3
	2011	0,55	0,54	0,62	0,42	0,63	10,3%	45,1%	44,6%	4,3
	2015	0,54	0,51	0,57	0,40	0,59	10,8%	45,8%	43,4%	4,0
Matric	2006	0,57	0,63	0,60	0,47	0,70	7,8%	50,2%	42,0%	5,4
	2009	0,55	0,59	0,56	0,44	0,68	8,6%	51,3%	40,1%	4,7
	2011	0,55	0,57	0,54	0,43	0,68	8,8%	51,3%	39,9%	4,5
	2015	0,55	0,56	0,56	0,43	0,66	9,3%	49,5%	41,2%	4,4
Higher	2006	0,49	0,47	0,43	0,37	0,64	11,0%	54,1%	34,9%	3,2
	2009	0,48	0,46	0,39	0,37	0,66	11,2%	56,0%	32,8%	2,9
	2011	0,49	0,47	0,44	0,37	0,65	11,1%	53,6%	35,3%	3,2
	2015	0,48	0,46	0,40	0,37	0,65	11,1%	55,0%	33,9%	3,1
Total population	2006	0,67	0,85	0,95	0,57	0,74	6,6%	36,2%	57,2%	8,6
	2009	0,65	0,81	0,86	0,56	0,74	6,5%	40,2%	53,3%	8,1
	2011	0,65	0,80	0,86	0,55	0,74	6,8%	39,9%	53,3%	7,9
	2015	0,65	0,80	0,84	0,55	0,75	6,6%	40,8%	52,6%	7,9

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table 4.1.6 shows that inequality is higher among people living in urban areas as compared to those living in rural areas and this is true for all the inequality measures. However, despite having lower levels of inequality in rural areas, inequality has somewhat increased among individuals living in rural areas while it has slightly declined for those living in urban areas.

Table 4.1.6: Inequality measures based on expenditure per capita by settlement type (2006, 2009, 2011 & 2015)

Settlement type	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Urban	2006	0,65	0,80	0,83	0,55	0,74	6,6%	41,6%	51,8%	7,8
	2009	0,62	0,74	0,73	0,52	0,73	6,9%	45,8%	47,3%	6,9
	2011	0,62	0,74	0,75	0,52	0,73	7,0%	45,0%	48,0%	6,9
	2015	0,61	0,72	0,71	0,51	0,72	7,2%	45,5%	47,3%	6,6
Rural	2006	0,53	0,48	0,68	0,38	0,54	12,7%	41,9%	45,4%	3,6
	2009	0,51	0,45	0,62	0,36	0,52	13,0%	43,3%	43,7%	3,4
	2011	0,55	0,52	0,72	0,40	0,57	11,9%	41,4%	46,7%	3,9
	2015	0,55	0,54	0,70	0,41	0,59	11,2%	41,8%	47,0%	4,2
Total population	2006	0,67	0,85	0,95	0,57	0,74	6,6%	36,2%	57,2%	8,6
	2009	0,65	0,81	0,86	0,56	0,74	6,5%	40,2%	53,3%	8,1
	2011	0,65	0,80	0,86	0,55	0,74	6,8%	39,9%	53,3%	7,9
	2015	0,65	0,80	0,84	0,55	0,75	6,6%	40,8%	52,6%	7,9

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Furthermore, the share of total urban expenditure going to the top-10% has declined from 51,8% in 2006 to 47,3% in 2015, whereas the share of total rural expenditure going to the top-10% has increased from 45,4% in 2006 to 47,0% in 2015.

Table 4.1.7 shows that based on the Gini coefficient, inequality has reduced over time in all provinces except for Limpopo and Eastern Cape where we observed an increase in expenditure inequality from 0,56 and 0,63 in 2006 to 0,61 and 0,65 in 2015, respectively. It is interesting to highlight that expenditure inequality was the same among individuals living in the Northern Cape in 2006, 2011, and 2015 with a Gini coefficient of 0,60 (while it was at 0,62 in 2009). The Theil's indices follow the same inequality trends as the Gini coefficient between 2006, 2011 and 2015 in all the provinces (including the exceptions for Limpopo and Eastern Cape).

Table 4.1.7: Inequality measures based on expenditure per capita by province (2006, 2009, 2011 & 2015)

Province	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Western Cape	2006	0,67	0,91	0,88	0,60	0,79	5,6%	42,8%	51,6%	9,3
	2009	0,61	0,73	0,69	0,52	0,73	6,8%	47,4%	45,8%	6,8
	2011	0,59	0,65	0,65	0,48	0,68	8,0%	47,8%	44,2%	5,5
	2015	0,62	0,73	0,70	0,52	0,73	6,8%	47,2%	46,0%	6,7
Eastern Cape	2006	0,63	0,71	0,87	0,51	0,67	8,7%	36,3%	55,0%	6,3
	2009	0,61	0,66	0,78	0,48	0,65	9,1%	38,2%	52,7%	5,8
	2011	0,60	0,64	0,76	0,47	0,64	9,4%	39,9%	50,7%	5,4
	2015	0,65	0,77	0,92	0,54	0,71	7,5%	37,4%	55,1%	7,3
Northern Cape	2006	0,60	0,63	0,75	0,47	0,65	9,2%	40,8%	50,0%	5,4
	2009	0,62	0,69	0,80	0,50	0,67	8,6%	39,5%	51,9%	6,1
	2011	0,60	0,65	0,70	0,48	0,66	8,6%	43,6%	47,8%	5,6
	2015	0,60	0,64	0,72	0,47	0,66	8,7%	43,5%	47,8%	5,5
Free State	2006	0,63	0,72	0,81	0,51	0,69	7,9%	40,1%	52,0%	6,6
	2009	0,60	0,65	0,72	0,48	0,66	8,9%	41,3%	49,8%	5,6
	2011	0,58	0,61	0,65	0,46	0,65	9,1%	44,5%	46,4%	5,1
	2015	0,60	0,67	0,71	0,49	0,68	8,3%	43,6%	48,1%	5,8
KwaZulu-Natal	2006	0,66	0,78	0,96	0,54	0,70	7,7%	34,2%	58,1%	7,5
	2009	0,62	0,70	0,81	0,50	0,68	8,2%	40,2%	51,6%	6,3
	2011	0,64	0,75	0,87	0,53	0,70	7,8%	37,7%	54,5%	7,0
	2015	0,61	0,67	0,77	0,49	0,68	8,6%	40,7%	50,7%	5,9
North West	2006	0,63	0,74	0,82	0,52	0,71	7,7%	40,9%	51,4%	6,7
	2009	0,62	0,69	0,77	0,50	0,68	8,3%	40,4%	51,3%	6,1
	2011	0,65	0,78	0,91	0,54	0,72	7,4%	37,1%	55,5%	7,5
	2015	0,61	0,67	0,76	0,49	0,68	8,6%	41,0%	50,4%	5,9
Gauteng	2006	0,64	0,76	0,80	0,53	0,72	6,9%	42,7%	50,4%	7,3
	2009	0,61	0,73	0,70	0,52	0,73	6,9%	47,0%	46,1%	6,7
	2011	0,62	0,76	0,75	0,53	0,75	6,8%	45,5%	47,7%	7,0
	2015	0,61	0,71	0,69	0,51	0,72	7,2%	46,4%	46,4%	6,4
Mpumalanga	2006	0,65	0,76	0,94	0,53	0,70	8,1%	35,0%	56,9%	7,1
	2009	0,62	0,69	0,79	0,50	0,68	8,4%	39,9%	51,7%	6,1
	2011	0,63	0,71	0,83	0,51	0,67	8,5%	37,9%	53,6%	6,3
	2015	0,62	0,69	0,76	0,50	0,69	8,0%	41,1%	50,9%	6,3
Limpopo	2006	0,56	0,55	0,72	0,42	0,58	11,1%	39,9%	49,0%	4,4
	2009	0,61	0,65	0,85	0,48	0,64	9,6%	37,4%	53,0%	5,5
	2011	0,57	0,58	0,68	0,44	0,64	10,1%	42,2%	47,7%	4,7
	2015	0,61	0,69	0,80	0,50	0,68	8,4%	40,6%	51,0%	6,1
South Africa	2006	0,67	0,85	0,95	0,57	0,74	6,6%	36,2%	57,2%	8,6
	2009	0,65	0,81	0,86	0,56	0,74	6,5%	40,2%	53,3%	8,1
	2011	0,65	0,80	0,86	0,55	0,74	6,8%	39,9%	53,3%	7,9
	2015	0,65	0,80	0,84	0,55	0,75	6,6%	40,8%	52,6%	7,9

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

In all the provinces in 2006, the top-10% of the population accounted for about 50% of their respective total provincial expenditure while the bottom-40% of the population had less than 10% of their total provincial expenditure (except for Limpopo where the bottom-40% shared 11,1% of total provincial expenditure). In most provinces, individuals in the middle-50% saw big gains in expenditure over time and those in the bottom-40% saw slight increases in their expenditure whilst

expenditure of individuals in the top-10% decreased slightly over time. According to the Palma ratio, the highest inequality was observed in Western Cape where the top-10% of the population in that province shared 9 times more of total provincial expenditure than the bottom-40%. The lowest Palma ratio was reported in Limpopo where the top-10% of the provincial population had 4 times more of total provincial expenditure than the bottom-40% in 2006.

Overall, the highest inequality was observed in Western Cape followed by Gauteng, KwaZulu-Natal, and Mpumalanga in 2006 across all the inequality measures. However, these provinces made substantial progress in reducing inequality by 2015. Inequality has increased between 2006 and 2015 in Limpopo despite the fact that it was reported as the lowest in 2006 and 2011. Additionally, the Eastern Cape also saw an increase in expenditure inequality between 2006 and 2015.

Table 4.1.8 below shows that based on all the inequality indicators, inequality is higher among non-poor individuals compared to the poor. For instance, the Gini coefficient for the non-poor individuals were 0,51 and 0,50 in 2006 and 2015, respectively; while these figures were only 0,30 for poor individuals during the same time. Between 2006 and 2015, inequality has remained the same for poor individuals across all the inequality measures while the non-poor saw a slight decrease. Moreover, the top-10% of the non-poor population had approximately three times more expenditure than the bottom-40% of the non-poor group. Meanwhile, the top-10% and bottom-40% of the poor population both shared approximately about the same proportion of total expenditure at roughly 20%. Unsurprisingly, this illustrates that the poor population is more equal than the non-poor population.

Table 4.1.8: Inequality measures based on expenditure per capita by poverty status (2006, 2009, 2011 & 2015) (UBPL)

Poverty Status	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Non-poor	2006	0,51	0,45	0,50	0,36	0,53	11,6%	57,9%	39,6%	3,4
	2009	0,49	0,39	0,43	0,32	0,49	12,7%	58,1%	37,1%	2,9
	2011	0,52	0,45	0,52	0,37	0,53	11,7%	58,8%	40,5%	3,5
	2015	0,50	0,42	0,47	0,34	0,51	12,2%	58,7%	39,0%	3,2
Poor	2006	0,30	0,16	0,15	0,15	0,29	20,5%	48,8%	21,6%	1,1
	2009	0,31	0,16	0,16	0,15	0,29	20,1%	50,2%	21,8%	1,1
	2011	0,27	0,13	0,11	0,12	0,25	22,1%	47,8%	19,1%	0,9
	2015	0,30	0,16	0,16	0,15	0,29	20,4%	48,8%	20,9%	1,0
Total population	2006	0,67	0,85	0,95	0,57	0,74	6,6%	36,2%	57,2%	8,6
	2009	0,65	0,81	0,86	0,56	0,74	6,5%	40,2%	53,3%	8,1
	2011	0,65	0,80	0,86	0,55	0,74	6,8%	39,9%	53,3%	7,9
	2015	0,65	0,80	0,84	0,55	0,75	6,6%	40,8%	52,6%	7,9

Source IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Note: Poverty status was based on the Upper-bound Poverty Line (UBPL).

4.1.4 Inequality decomposition by subgroups

The Theil's indices, mentioned in Section 4.1.3, are additively decomposable and also satisfy all the necessary and relevant axioms and principles.[15] Therefore, in this subsection we will use the Theil's indices to decompose the overall inequality into between-groups and within-group components for the purpose of assessing the main contributors to overall inequality.

Table 4.1.9: Decomposition of expenditure inequality by sex of household head (2006, 2009, 2011 & 2015)

Index	Sex of household head	Absolute contribution				Relative contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
Theil's index GE(0)	Male-headed	0,65	0,58	0,60	0,57	0,68	0,67	0,69	0,68
	Female-headed	0,25	0,23	0,20	0,21	0,26	0,27	0,24	0,25
	Within contribution	*0,90*	*0,80*	*0,80*	*0,78*	*0,94*	*0,94*	*0,93*	*0,93*
	Between contribution	*0,06*	*0,05*	*0,06*	*0,06*	*0,06*	*0,06*	*0,07*	*0,07*
Theil's index GE(1)	Male-headed	0,48	0,47	0,46	0,46	0,57	0,58	0,58	0,57
	Female-headed	0,30	0,29	0,27	0,29	0,36	0,35	0,34	0,36
	Within contribution	*0,79*	*0,76*	*0,74*	*0,74*	*0,93*	*0,93*	*0,92*	*0,92*
	Between contribution	*0,06*	*0,06*	*0,06*	*0,06*	*0,07*	*0,07*	*0,08*	*0,08*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table 4.1.9 shows the Theil's indices decomposition of expenditure inequality by sex of the household head from 2006 to 2015. Based on the GE(0) index of total inequality, the relative contribution of the within group inequality was more than 90,0% during all four time periods considered. In this period, individuals living in male-headed households continued to contribute more to inequality as compared to those living in female-headed households. There were minor fluctuations between 2006 and 2015 in the contributions of both individuals living in male- and female-headed households to overall inequality.

Table 4.1.10: Decomposition of expenditure inequality by population group (2006, 2009, 2011 & 2015)

Index	Population group	Absolute contribution				Relative contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
Theil's index GE(0)	Black African	0,26	0,31	0,29	0,32	0,27	0,37	0,33	0,39
	Coloured	0,05	0,04	0,05	0,05	0,05	0,05	0,06	0,07
	Indian/Asian	0,03	0,02	0,02	0,02	0,03	0,03	0,02	0,02
	White	0,15	0,11	0,12	0,10	0,15	0,12	0,14	0,12
	Within contribution	*0,48*	*0,49*	*0,48*	*0,50*	*0,50*	*0,57*	*0,55*	*0,60*
	Between contribution	*0,48*	*0,37*	*0,38*	*0,34*	*0,50*	*0,43*	*0,45*	*0,40*
Theil's index GE(1)	Black African	0,40	0,45	0,43	0,47	0,47	0,56	0,54	0,59
	Coloured	0,05	0,05	0,05	0,05	0,06	0,06	0,06	0,06
	Indian/Asian	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
	White	0,03	0,03	0,03	0,02	0,03	0,03	0,03	0,03
	Within contribution	*0,49*	*0,54*	*0,51*	*0,56*	*0,58*	*0,66*	*0,64*	*0,69*
	Between contribution	*0,35*	*0,28*	*0,29*	*0,25*	*0,42*	*0,34*	*0,36*	*0,31*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

[15] See Shifa, M. and Ranchhod, V. 2019, *Handbook on Inequality Measurement for Country Studies*.

In 2006, both the within-group and between-groups inequality based on population group contributed equally to overall inequality when looking the GE(0). However, the within-group inequality overtook the between-groups inequality for the remaining periods (2009, 2011 and 2015). Meanwhile, when looking at GE(1), the within-group inequality accounted for 58,0% in 2006 and gradually rose to 69,0% in 2015, while the between-groups inequality has decreased from 42,0% in 2006 to 31,0% by 2015. Furthermore, the contribution of black Africans to within inequality was the highest and has risen over time, while the contribution of the other three population groups remained more or less the same over the period. Due to both their low population share and income share, Indians/Asians accounted for the lowest proportion to within group inequality followed by whites. Surprisingly, whites had the second highest contribution to within group inequality when looking at GE(0) while they were the least unequal group based on the Gini coefficient and other inequality measures (i.e. the Theil's indices, the Atkinson indices, and the Palma ratios) discussed in the preceding section.

Table 4.1.11: Decomposition of expenditure inequality by education level of household head (2006, 2009, 2011 & 2015)

Index	Education level of household head	Absolute contribution				Relative contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
Theil's index GE(0)	None	0,02	0,01	0,01	0,01	0,02	0,02	0,01	0,01
	Some primary	0,03	0,03	0,03	0,02	0,03	0,03	0,03	0,03
	Primary	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,02
	Some secondary	0,14	0,14	0,15	0,13	0,14	0,17	0,17	0,15
	Matric	0,15	0,12	0,11	0,13	0,15	0,14	0,13	0,16
	Higher	0,15	0,16	0,17	0,16	0,16	0,18	0,20	0,19
	Within contribution	*0,50*	*0,47*	*0,49*	*0,47*	*0,52*	*0,55*	*0,57*	*0,56*
	Between contribution	*0,45*	*0,37*	*0,37*	*0,36*	*0,47*	*0,43*	*0,43*	*0,43*
Theil's index GE(1)	None	0,05	0,04	0,03	0,04	0,06	0,05	0,04	0,05
	Some primary	0,07	0,07	0,07	0,06	0,09	0,09	0,09	0,08
	Primary	0,03	0,02	0,02	0,03	0,03	0,03	0,03	0,04
	Some secondary	0,15	0,17	0,18	0,17	0,18	0,21	0,22	0,21
	Matric	0,08	0,07	0,08	0,09	0,10	0,09	0,10	0,12
	Higher	0,04	0,06	0,05	0,05	0,05	0,07	0,07	0,07
	Within contribution	*0,43*	*0,44*	*0,44*	*0,45*	*0,51*	*0,54*	*0,55*	*0,56*
	Between contribution	*0,42*	*0,36*	*0,36*	*0,34*	*0,49*	*0,44*	*0,45*	*0,43*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table 4.1.11 shows the decomposition of the Theil's indices inequality by education level of the household head over time. Overall, the within education level inequality based on the household head has increased over the years and accounted for 51,0% and more to overall expenditure inequality between 2006 and 2015. The major contributors to within group expenditure inequality when focusing on GE(0) were individuals living in households headed by individuals with higher education level followed by those living in households lead by individuals with matric and some secondary level of schooling. However, when looking at GE(1) the main contributors to within group inequality were individuals living in households headed by individuals with some secondary level of schooling followed by those living in households lead by individuals with matric and primary education levels.

4.1.5 Decomposition of income inequality by income sources

This section focuses on inequality decomposition by sources of income. Before discussing inequality decomposition by income sources, we will first look at the breakdown and distribution of income across the various income source categories and then decompose inequality by sources of income using the Gini coefficient and Generalized Entropy inequality measures.

Total household income was decomposed into five income sources which are: 1) labour market income (salaries, wages and income from business); 2) social grants (old age pensions, child support grants, disability grants, etc.); 3) remittances/allowances from outside the household (alimony, maintenance, allowance from non-household members, etc.); 4) in-kind income; and 5) other income (interests, dividends, shares, etc.). The five income source categories are aligned to the IES 2010/11 income categories for comparison purposes due to that survey having the fewest income groupings. Thus, the four data points (IES 2005/06, LCS 2008/09, IES 2010/11 and LCS 2014/15) can be properly compared. Moreover, the income values are expressed in real terms and income sources were measured at a household level and therefore, they were adjusted to per capita measures to account for differences in household sizes.

Table 4.1.12: Distribution of mean and median annual per capita income (2006, 2009, 2011 & 2015)

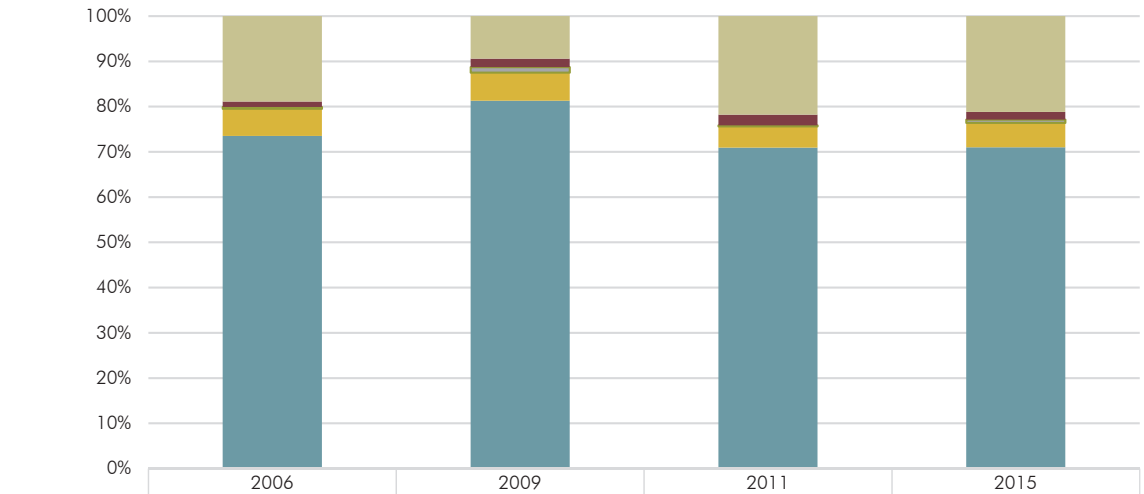
Income sources	2006		2009		2011		2015	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Labour market income	35 275	10 548	37 831	12 862	38 671	13 978	39 047	15 097
Social grants	3 477	2 375	3 555	2 320	3 243	2 399	3 323	2 601
Remittances	2 654	1 059	4 288	1 653	2 320	845	7 075	1 079
In-kind Income	1 266	142	1 883	182	2 236	356	2 372	451
Other income	6 769	922	7 729	608	10 239	1 800	9 516	1 554
Total income	34 826	9 647	33 755	10 572	40 227	12 822	39 747	13 546

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

Table 4.1.12 shows changes in mean and median annual per capita income over time. Overall, half of South Africans were earning below R9 647 in 2006; however, the total median income rose to R13 546 in 2015. From this table, we clearly see that household income from the labour market (including income from own business) was the leading source of income in the country and was the highest as compared to other income sources.

Labour market income has increased over time in real terms from an annual mean income of R35 275 in 2006 to R39 047 in 2015. Furthermore, the median annual income from the labour market, which was R10 548 in 2006, rose gradually over time to R15 097 in 2015. After the 'other income' source, social grants and remittances were the next most important sources of income for households; however, the value of these income sources fluctuated over time. Moreover, social grants increased from an annual mean income of R3 477 in 2006 to its peak of R3 555 in 2009 and then dropped to R3 243 in 2011, before increasing to R3 323 in 2015. Whereas remittances increased from an annual mean income of R2 654 in 2006 to R4 288 in 2009 and then dropped to R2 320 in 2009 before rising significantly to R7 075 in 2015.

Figure 4.1.4: Share of income sources of total household income (2006, 2009, 2011 & 2015)



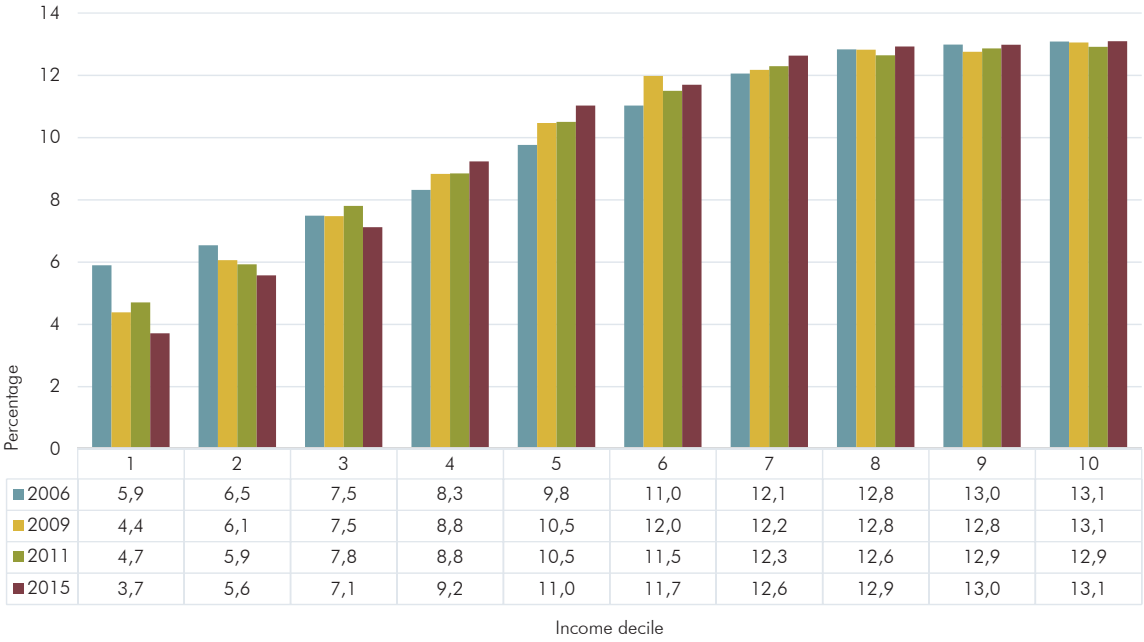
	2006	2009	2011	2015
Other	18,9	9,4	21,8	21,2
In-kind income	1,2	1,9	2,4	1,7
Remittance	0,4	1,2	0,2	0,7
Social grants	6,0	6,2	4,7	5,4
Labour market	73,5	81,3	71,0	71,0

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

As seen in Table 4.1.12, income from the labour market has been the main source of income throughout the years in South Africa. The mean and median income from the labour market was closer to those of the total income of the country. Therefore, Figure 4.1.4 confirms that income from the labour market has been contributing the largest proportion to overall household income. This proportion has increased from 73,5% in 2006 to 81,3% in 2009, before decreasing to 71,0% in 2011 and then remain constant between 2011 and 2015. The proportion of social grants to overall household income has slightly fluctuated over the years; this proportion decreased from 6,0% in 2006 to 5,4% in 2015. The share of in-kind income had gradually risen from 1,2% in 2006 to 2,4% in 2011 before dropping to 1,7% in 2015. Meanwhile, the share of remittances to overall income fluctuated over the years and reached its highest proportion in 2009 contributing 1,2% to overall income.

Figure 4.1.5 and Figure 4.1.6 show the distribution of labour market income and social grants by income-decile, respectively. From these figures, we observed a picture of the dependence on social grants and less reliance on labour market income in the bottom deciles. On contrary, there was a much greater reliance on labour market income in top deciles and less reliance on social grants. Therefore, social grants were to some extent, contributing to the reduction of income inequality existing between the bottom deciles and top deciles.

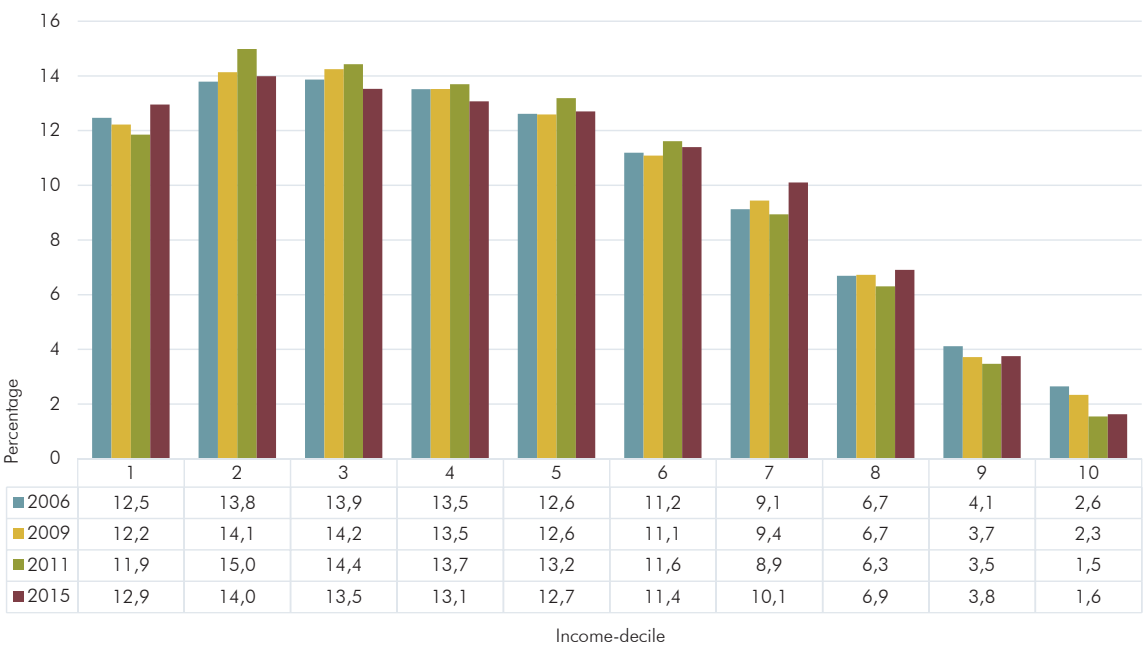
Figure 4.1.5: Distribution of per capita income from labour market by income-decile (2006, 2009, 2011 & 2015)



	1	2	3	4	5	6	7	8	9	10
2006	5,9	6,5	7,5	8,3	9,8	11,0	12,1	12,8	13,0	13,1
2009	4,4	6,1	7,5	8,8	10,5	12,0	12,2	12,8	12,8	13,1
2011	4,7	5,9	7,8	8,8	10,5	11,5	12,3	12,6	12,9	12,9
2015	3,7	5,6	7,1	9,2	11,0	11,7	12,6	12,9	13,0	13,1

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

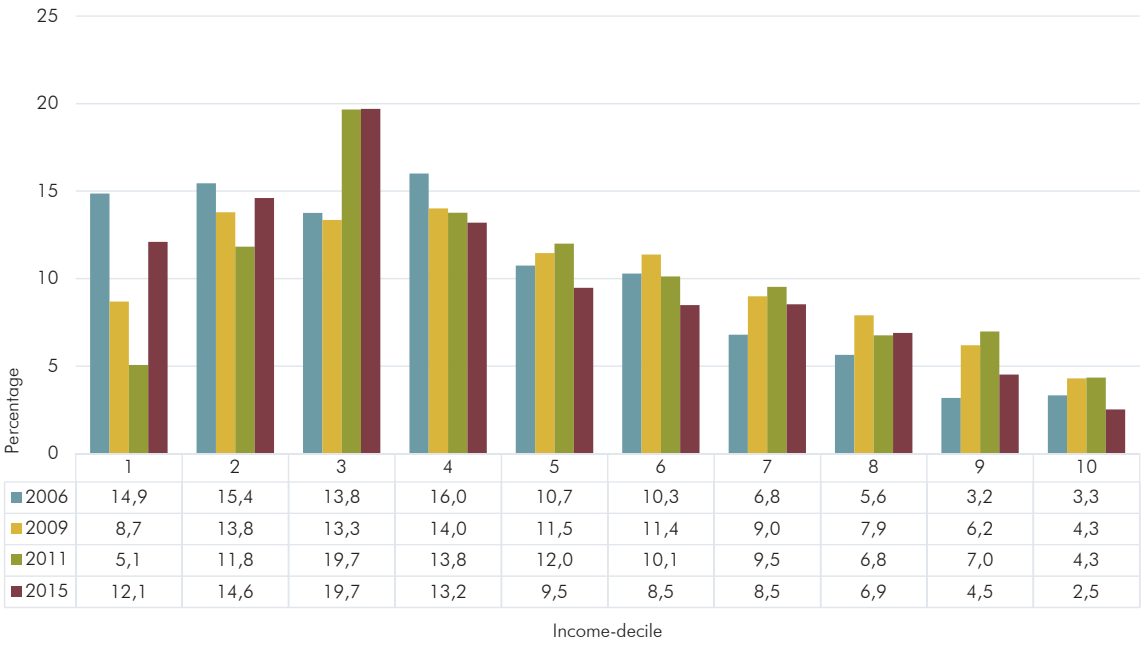
Figure 4.1.6: Distribution of per capita income from social grants by income-decile (2006, 2009, 2011 & 2015)



	1	2	3	4	5	6	7	8	9	10
2006	12,5	13,8	13,9	13,5	12,6	11,2	9,1	6,7	4,1	2,6
2009	12,2	14,1	14,2	13,5	12,6	11,1	9,4	6,7	3,7	2,3
2011	11,9	15,0	14,4	13,7	13,2	11,6	8,9	6,3	3,5	1,5
2015	12,9	14,0	13,5	13,1	12,7	11,4	10,1	6,9	3,8	1,6

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

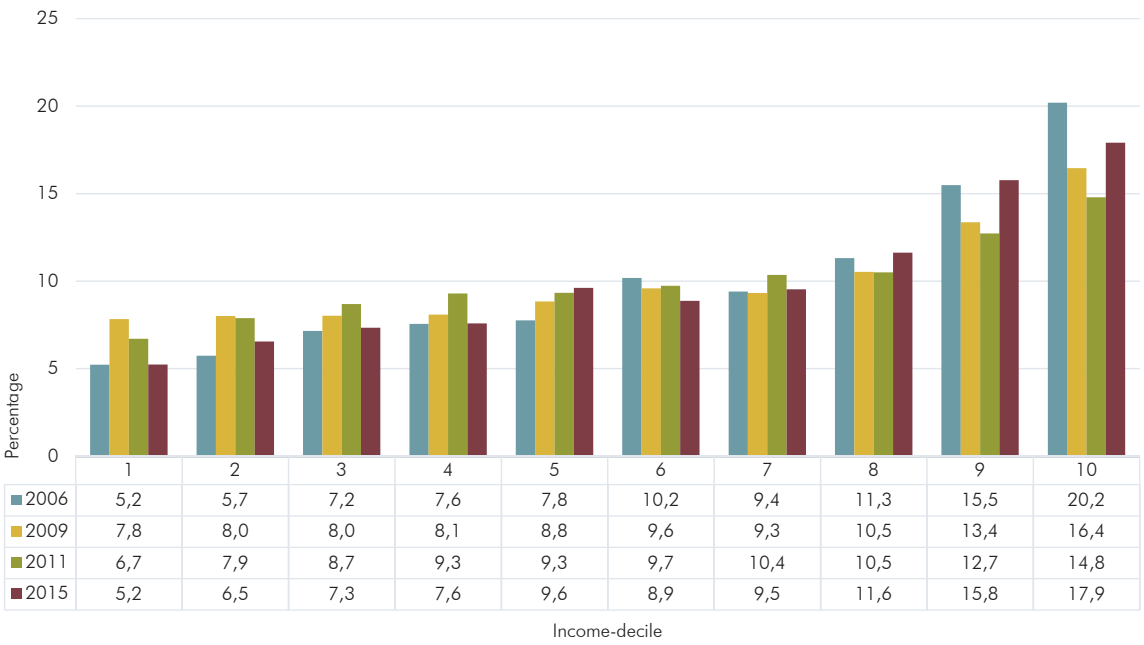
Figure 4.1.7: Distribution of per capita income from remittance by income-decile (2006, 2009, 2011 & 2015)



	1	2	3	4	5	6	7	8	9	10
2006	14,9	15,4	13,8	16,0	10,7	10,3	6,8	5,6	3,2	3,3
2009	8,7	13,8	13,3	14,0	11,5	11,4	9,0	7,9	6,2	4,3
2011	5,1	11,8	19,7	13,8	12,0	10,1	9,5	6,8	7,0	4,3
2015	12,1	14,6	19,7	13,2	9,5	8,5	8,5	6,9	4,5	2,5

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Figure 4.1.8: Distribution of per capita income from in-kind income by income-decile (2006, 2009, 2011 & 2015)



	1	2	3	4	5	6	7	8	9	10
2006	5,2	5,7	7,2	7,6	7,8	10,2	9,4	11,3	15,5	20,2
2009	7,8	8,0	8,0	8,1	8,8	9,6	9,3	10,5	13,4	16,4
2011	6,7	7,9	8,7	9,3	9,3	9,7	10,4	10,5	12,7	14,8
2015	5,2	6,5	7,3	7,6	9,6	8,9	9,5	11,6	15,8	17,9

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Figure 4.1.7 and Figure 4.1.8 show the distribution of remittances received by individuals and in-kind income by income-decile. Individuals in the bottom and middle deciles were the main recipients of the remittances, while those in the top deciles benefitted mostly from the in-kind income. Social grants and remittances played a crucial role in reducing income inequality between the bottom and top deciles over the years in South Africa.

Table 4.1.13 shows the decomposition of income inequality by income sources over time using the Gini coefficient (for figures based on the Theil's measures refer to Annexure C). As shown in Figure 4.1.4, income from the labour market constituted the largest proportion of total household income. Unsurprisingly, income from the labour market had accounted for the largest proportion of income inequality at about 77,2% in 2006. This proportion sharply increased to 85,0% in 2009 and then decreased to 73,8% by 2011 before slightly increasing to 74,2% in 2015.

Table 4.1.13: Contributions to inequality by income sources based on the Gini (2006, 2009, 2011 & 2015)

Index	Income sources	Absolute contribution				Relative contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
Gini coefficient	Labour market	0,553	0,592	0,507	0,499	77,2%	85,0%	73,8%	74,2%
	Social grants	0,014	0,016	0,007	0,007	2,0%	2,3%	1,0%	1,1%
	Remittance	0,002	0,006	0,001	0,003	0,2%	0,9%	0,1%	0,4%
	In-kind income	0,009	0,015	0,016	0,012	1,2%	2,1%	2,4%	1,8%
	Other	0,138	0,068	0,157	0,152	19,3%	9,7%	22,8%	22,6%
	Total	0,717	0,697	0,687	0,673	100,0%	100,0%	100,0%	100,0%

Source IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

The contribution of social grants to overall income inequality was roughly 2,0% in 2006 and 2,3% in 2009 before decreasing to 1,0% in 2011 which remained almost the same in 2015 (1,1%). Remittances have contributed the least to income inequality in South Africa between 2006 and 2015. In 2006 and 2009, income in-kind followed remittances by being second least contributor to overall income inequality; however, between 2011 and 2015, income in-kind and social grants swapped places. Income from other sources contributed the largest following labour market income. However, the contribution of income from other sources fluctuated significantly over time.

4.2 ASSET AND WEALTH INEQUALITY

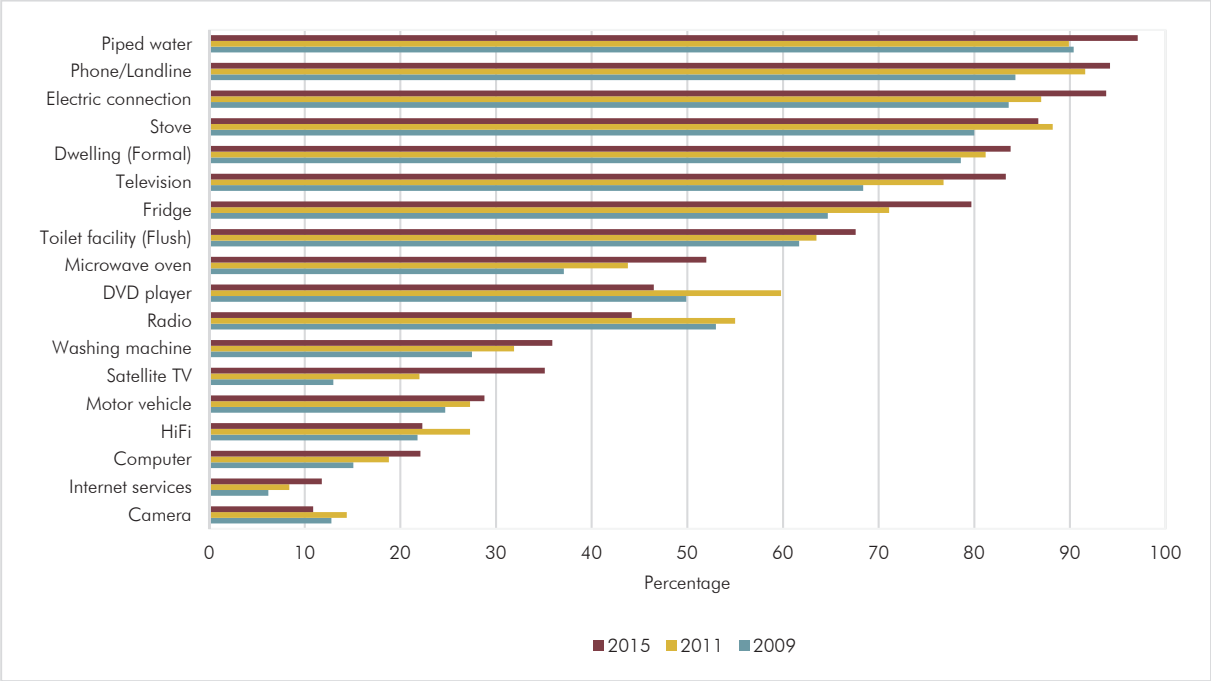
In Section 4.1 – Economic Inequality – per capita expenditure and per capita income were used to estimate inequality in South Africa. These monetary approaches are commonly used in many countries to measure household economic status. As discussed earlier in the report, the National Planning Commission set a money-based Gini coefficient target for 2030 and the SDG measure for SDG Goal 10 (Inequality) is also a money-based Gini coefficient. Notwithstanding this, there is general recognition that there are many dimensions of well-being other than the monetary measures that are central to understanding South Africa's inequality and to understanding the processes that generate South Africa's money-based inequality. This section profiles asset inequality using the LCS 2008/09, IES 2010/11, and LCS 2014/15 data sets. First, we look at trends of households asset ownership distributions followed by trends of asset inequality from 2009 to 2015. The section ends by broadening this discussion of assets to the measurement of wealth inequality in South Africa.

4.2.1 Trends of household asset ownership

According to economic literature, assets can be more reliable indicators of long-run economic well-being as compared to the income/expenditure measures. For the purpose of this section, the profiling of inequality in the ownership of assets and in access to basic services should be seen as a complementary measure of inequality. It provides a wider picture of the welfare status of households and individuals in South Africa. It is also important in understanding the resources that South African households and individuals can draw on in order to participate in schooling, the labour market, and society in general. We selected 18 assets consisting of three public assets (namely piped water, electricity connection, and toilet facility) and 15 assets that are regarded as private assets. For this section, it is important to mention that for services, the analysis will refer to 'access' as 'ownership' in order to simplify the interpretations.

Figure 4.2.1 and Table 4.2.1 shows trends of household asset ownership and access to basic services for the selected assets. From the 18 selected assets, a decline was observed in three assets over the period, namely radio, DVD player, and camera, while all other assets saw an increase in ownership levels. Between 2009 and 2015, the proportion of households that owned a radio dropped from 53,0% to 44,2%; the figure for DVD player from dropped from 49,9% to 46,5%; and ownership of cameras changed from 12,8% to 10,9%. However, these assets increased in ownership between 2009 and 2011 before they notably dropped in 2015 reaching their lowest proportions.

Figure 4.2.1: Trends of household asset ownership (2009, 2011 & 2015)



Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table 4.2.1: Trends of household asset ownership (2009, 2011 & 2015)

Assets	2009	2011	2015
Camera	12,8	14,4	10,9
Internet services	6,2	8,4	11,8
Computer	15,1	18,8	22,1
HiFi	21,8	27,3	22,3
Motor vehicle	24,7	27,3	28,8
Satellite TV	13,0	22,0	35,1
Washing machine	27,5	31,9	35,9
Radio	53,0	55,0	44,2
DVD player	49,9	59,8	46,5
Microwave oven	37,1	43,8	52,0
Toilet facility (Flush)	61,7	63,5	67,6
Fridge	64,7	71,1	79,7
Television	68,4	76,8	83,3
Dwelling (Formal)	78,6	81,2	83,8
Stove	80,0	88,2	86,7
Electric connection	83,6	87,0	93,8
Phone/Landline	84,3	91,6	94,2
Piped water	90,4	89,9	97,1

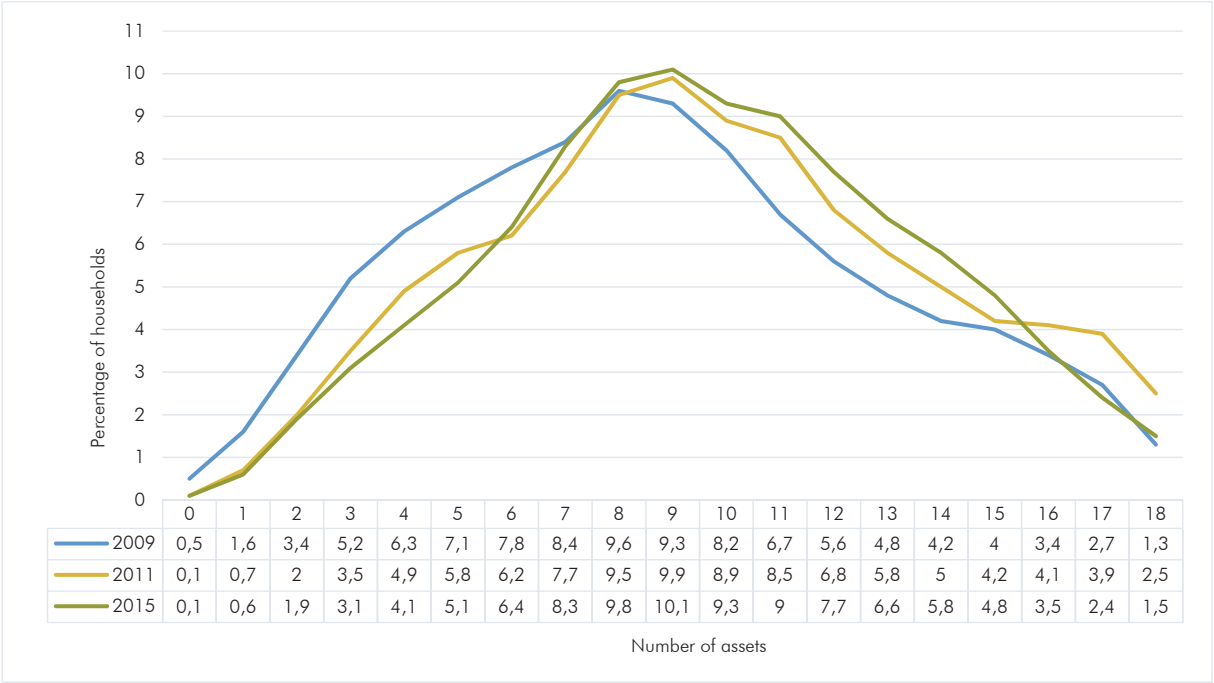
Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Piped water, phone/landline, and electricity connection were the leading assets in terms of ownership, while camera, internet, and computer were the least owned. The proportion of households that had access to piped water slightly declined from 90,4% in 2009 to 89,9% in 2011 before a significant increase to 97,1% in 2015. More than eight out of ten households owned a phone/landline or electricity connection in 2009, while the proportion increased to more than nine

out ten in 2015. About 28,8% of households had access to a motor vehicle in 2015 while this number was at 24,7% in 2009 and 27,3% in 2011. Satellite TV had the largest increase over the period (rise of 22,1 percentage points), followed by fridge, microwave and television with each seeing an increase of approximately 15,0 percentage points between 2009 and 2015.

As far as well-being is concerned, it can be said that the more assets a household/individual owns, the better off the household/individual is. Figure 4.2.1 shows that the proportion of households that do not own any of the 18 selected assets declined from 0,5% in 2009 to 0,1% in 2011 and remained unchanged between 2011 and 2015. On the other hand, the proportion of households that owned all of the 18 selected assets increased from 1,3% in 2009 to 2,5% in 2011. However, there was a 1,0 percentage point decline to 1,5% in 2015 for those who owned all 18 selected assets and services.

Figure 4.2.2: Distribution of households by number of assets they own (2009, 2011 & 2015)



	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2009	0,5	1,6	3,4	5,2	6,3	7,1	7,8	8,4	9,6	9,3	8,2	6,7	5,6	4,8	4,2	4	3,4	2,7	1,3
2011	0,1	0,7	2	3,5	4,9	5,8	6,2	7,7	9,5	9,9	8,9	8,5	6,8	5,8	5	4,2	4,1	3,9	2,5
2015	0,1	0,6	1,9	3,1	4,1	5,1	6,4	8,3	9,8	10,1	9,3	9	7,7	6,6	5,8	4,8	3,5	2,4	1,5

Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Figure 4.2.2 shows a peak around a general central point of total number of asset for all three distributions. This figure indicates that most households own between 8 or 9 of the 18 selected assets since 2009. In 2009, the highest point was at 8 while in 2011 and 2015 it was at 9. As time progressed, the distribution of households slightly shifted to the right suggesting an overall increase in the number of assets owned by households in South Africa.

4.2.2 Trends in asset inequality

In this section, a common set of 18 selected assets and services are used to calculate asset indices. These 18 indicators are combined into a single index (also called an 'asset index') using a statistical measure. Asset indices vary in terms of both (1) the set of indicators included and (2) the weights that are used to combine the asset ownership indicators into the index. Moreover, the asset index was generated after pooling the three datasets that are analysed, namely the LCS 2008/09, IES 2010/11, and LCS 2014/15. The use of these datasets is to maintain consistency as they are used regularly in Section 4 of the report and also to allow for profiling of asset inequality by the national poverty lines.

Unlike income/expenditure, there is no standard method to derive per capita measures in the case of asset indices. Therefore, all individuals in the household will carry the same index given to their respective household. The household's asset indices are derived using a technique suggested by Wittenberg and Leibbrandt (2015) – the uncentred Principal Component Analysis (UC PCA)[16] method. The advantage of using this approach is that it allows for the estimation of Gini coefficients to measure asset inequality given the weights generated using this approach are always positive.

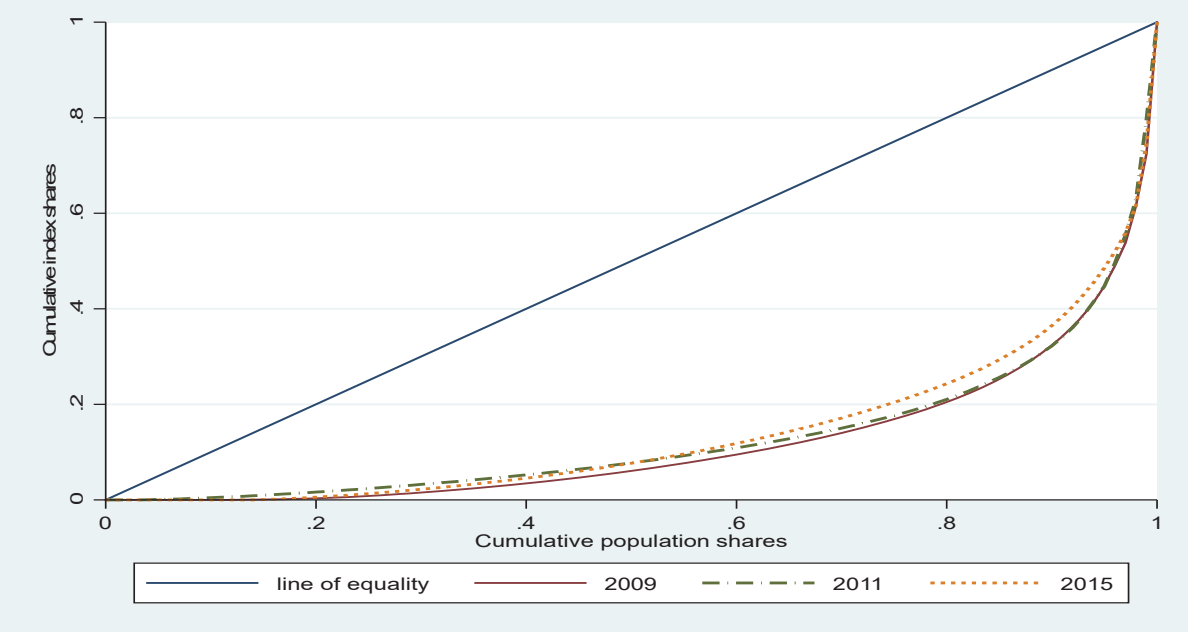
Similar to income/expenditure, the Gini coefficient for the asset index ranges from 0 to 1 and its interpretation is no different. As the coefficient approaches zero, the more equal the population gets; and as it shifts towards one, the more unequal the population gets. The Gini coefficient value of zero denotes perfect equality while the Gini coefficient value of one implies absolute inequality. This section reviews trends of asset inequality which are measured using the Lorenz curve, average asset scores, and the Gini coefficient based on household asset indices. The household-level observations are weighted using household size. Thus, the analysis of inequality will be presented at the level of individual.

Figure 4.2.3 is a display of the Lorenz curves based on asset indices in 2009, 2011 and 2015. The curve is constructed using cumulative index shares against cumulative population shares. As the distributions approach the 50th up to the 95th percentile, the 2015 distribution shifts towards the line of equality, showing an increase in the number of assets households in this group own. This picture is consistent with what is portrayed by Figure 4.2.2 above that households increased the number of assets they owned as time progressed.

Furthermore, based on Figure 4.2.3, there is no clear 'Lorenz dominance' since the three distributions cross. However, it is evident from the distributions that inequality remained high in South Africa since 2009 even when it is measured using the asset index. Nevertheless, asset Gini coefficients are lower than those based on per capita expenditure and per capita income presented in Section 4.1.

[16] See Wittenberg, Martin, and Murray Leibbrandt. 2017. *Measuring Inequality by Asset Indices: A General Approach with Application to South Africa*. Review of Income and Wealth 63 (4): 706–30. https://doi.org/10.1111/roiw.12286.

Figure 4.2.3: Lorenz curves based on asset index (2009, 2011 & 2015)



Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

The increase in ownership of assets over the years resulted in a drop in the asset Gini coefficient levels for South Africa from 0,62 in 2009 to 0,59 in 2015. Figure 4.2.3 further shows the evolution of the average asset score, as well as the Gini coefficients by sex of the household head from 2009 to 2015.

While the asset Gini coefficients provide the scale of inequality within groups, the average asset scores, on the other hand, reflect inequality between groups in terms of availability of resources that a specific group have compared to another group. Additionally, Figure 4.2.3 shows that the average asset scores for individuals living in male-headed households remained higher than those in female-headed households over the period of analysis. As such, this suggests that the economic well-being of individuals in male-headed households is better as compared to those in female-headed households.

Figure 4.2.4: Average asset scores and asset Gini coefficients by sex of household head (2009, 2011 & 2015)

Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Individuals living in male-headed households are more unequal compare to those living in female-headed households across all data points. Asset Gini coefficients for individuals living in male-headed households was the same as the national Gini at 0,62 in 2009 and 0,57 in 2011. Meanwhile, the national Gini increased to 0,59 in 2015, while for those in male-headed households it increased to 0,58. Between 2009 and 2015, inequality among individuals living in male-headed households declined by 0,04 Gini points while for those in female-headed households it only decreased by 0,01 Gini points from 0,57 in 2009 to 0,56 in 2015.

There was a consistent increase in the average asset scores for black Africans across all years, while other population groups increased their average asset scores between 2009 and 2011 before they dropped in 2015. However, the average asset scores for black Africans remained the lowest as compare to other population groups, whereas whites had the highest scores, followed by the Indian/Asian population. The average assets scores for coloureds, whites, and Indians/Asians were above the national average scores across all the years. Black Africans had a major impact in driving the national average assets down, as they constituted approximately 80,0% of the national population and had only reached their highest scores of 9,0 in 2015 (see Figure 4.2.5).

Figure 4.2.5: Average asset scores and asset Gini coefficients by population group of household head (2009, 2011 & 2015)

Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Figure 4.2.5 also shows that asset inequality has decreased between 2009 and 2015 among three population groups, namely coloureds, Indians/Asians, and whites; however, asset inequality unfortunately increased for black Africans over this period. The Gini coefficient for black Africans was the highest over the period compared to the other three population groups, while whites had the lowest Gini coefficients. Furthermore, asset inequality for black Africans dropped from 0,54 in 2009 to 0,50 in 2011 and then rose to 0,56 in 2015 reaching its peak for the period under review.

Regarding inequality by settlement type (Figure 4.2.6), the average asset scores remained higher for urban dwellers compare to rural dwellers across all three data points. However, the average asset scores for individuals living in rural areas increased from 6,1 in 2009 to 7,2 in 2011, and then to 7,8 in 2015. Meanwhile, the average asset scores for individuals living in urban areas increased from 10,3 in 2009 to 11,2 in 2011, but dropped to 10,9 in 2015. Thus, while those living in rural areas had less assets on average, they made notable gains, while those living in urban areas remained somewhat even.

Figure 4.2.6: Average asset scores and asset Gini coefficients by settlement type (2009, 2011 & 2015)

Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

On the other hand, the level of asset inequality among urban dwellers was higher than those in rural areas from 2009 to 2011, before they were equal in 2015 with the asset Gini coefficient of 0,56. Figure 4.2.6 also shows that the Gini coefficient based on the asset index for individuals living in urban areas was at 0,59 in 2009 and 0,54 in 2011, while for those in rural areas it was at 0,53 and 0,50 in 2009 and 2011, respectively.

Figure 4.2.6 further shows an inverse relationship between the average asset scores and the asset Gini coefficients for urban dwellers. The lower the average asset score for urban dwellers, the higher the asset Gini coefficients for this group. For rural dwellers, the average asset score continuously increased while the asset Gini coefficients fluctuated during the period under review. Nevertheless, both the average asset score and the Gini coefficient were the highest in 2015 for rural dwellers.

Gauteng and KwaZulu-Natal were the most populous provinces constituting more than 43,0% of the total national population across all the years under review. These two provinces along with the Eastern Cape were among the top three most unequal provinces since 2009, with the Eastern Cape leading the trio in 2009 and 2015. The Eastern Cape, nevertheless, had the lowest average asset scores since 2009, followed by KwaZulu-Natal and Limpopo (which swapped positions between 2011 and 2015). On the other hand, Western Cape and Gauteng had the highest average asset scores over the period (see Table 4.2.2).

Table 4.2.2: Average asset scores, asset Gini coefficients, and population shares by province (2009, 2011 & 2015)

Province	Average assets score			Gini coefficient			Population share		
	2009	2011	2015	2009	2011	2015	2009	2011	2015
Western Cape	11,3	12,1	11,7	0,56	0,50	0,52	11,2	11,2	11,3
Eastern Cape	6,7	7,7	7,9	0,64	0,59	0,62	12,8	12,9	12,6
Northern Cape	8,9	10,6	9,8	0,56	0,52	0,56	2,3	1,8	2,2
Free State	8,9	10,1	10,0	0,53	0,51	0,54	5,4	5,3	5,1
KwaZulu-Natal	7,3	8,5	8,6	0,62	0,59	0,61	19,8	19,7	19,9
North West	8,4	9,4	9,7	0,57	0,52	0,55	6,8	7,7	6,8
Gauteng	10,6	11,5	11,3	0,60	0,54	0,56	23,5	23,1	24,0
Mpumalanga	8,3	9,5	9,6	0,56	0,52	0,55	7,8	7,2	7,8
Limpopo	7,3	8,1	8,9	0,52	0,50	0,51	10,5	11,1	10,4
South Africa	8,7	9,7	9,8	0,62	0,57	0,59	100,0	100,0	100,0

Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

According to Table 4.2.2, Eastern Cape and KwaZulu-Natal were the most unequal provinces as compared to the others, while Limpopo was the least unequal across all the years. Eastern Cape had Gini coefficients greater than the national Gini since 2011, while KwaZulu-Natal's Gini coefficient was above the national Gini from 2009 to 2015. Between 2009 and 2011, there was a drop in inequality in all provinces. However, inequality increased between 2011 and 2015. This trend is observed across all provinces, with the 2009 Gini coefficients being the highest for all provinces except for the Free State. The Northern Cape had the same asset Gini coefficient of 0,56 for 2009 and 2015.

Table 4.2.3 illustrates the average asset scores, population shares, and asset Gini coefficients by poverty incidence using all three national poverty lines, namely the Food Poverty Line (FPL), Lower-bound Poverty Line (LBPL), and Upper-bound Poverty Line (UBPL). It is important to note that the poverty lines used are based on expenditure and not measured using the asset index.

The average asset score for the poor increased significantly over time while the non-poor only saw slight increases in their scores. This pattern is observed across all three poverty lines. However, when using the UBPL the asset scores for the non-poor slightly increased between 2009 and 2011, but declined marginally in 2015.

Table 4.2.3: Average asset scores, asset Gini coefficients, and population shares by poverty incidence (2009, 2011 & 2015)

	Year	FPL		LBPL		UBPL		Total
		Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	
Average assets score	2009	5,8	10,2	6,3	10,9	6,8	11,9	8,7
	2011	6,7	10,5	7,2	11,2	7,6	12,1	9,7
	2015	7,0	10,7	7,5	11,3	8,0	12,0	9,8
Gini coefficient	2009	0,46	0,58	0,46	0,56	0,47	0,53	0,62
	2011	0,46	0,56	0,38	0,53	0,40	0,50	0,57
	2015	0,47	0,53	0,50	0,54	0,50	0,51	0,59
Population share	2009	33,5	66,5	47,6	52,4	62,1	37,9	100,0
	2011	21,4	78,6	36,5	63,6	53,2	46,8	100,0
	2015	25,2	74,8	40,0	60,0	55,5	44,5	100,0

Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

The Gini coefficients for the non-poor remained higher as compared to the poor over the period under review. In 2009, the Gini coefficient was somewhat the same for the poor across all poverty lines; at 0,46 for the FPL and LBPL, and 0,47 when using the UBPL. The Gini remained constant over time for the poorest of the poor (i.e. those living below the FPL); while it dropped for the poor in the other poverty lines in 2011 before significantly increasing to 0,50 in 2015 for both the LBPL and UBPL. Unlike the national Gini, inequality among the poor is the highest in 2015 across all poverty lines. From 2009 to 2015, asset inequality increased for the poor, while the non-poor saw a drop in asset inequality levels. Intuitively, this can be explained thoroughly by Figure 4.2.2 where there is an indication that some households increased their number of assets over time, even at the bottom end of the distribution. But others remain with only a few assets.

4.2.3 Wealth and the returns on financial assets

The assets that have been profiled in the previous two subsections are crucial in allowing citizens to live healthy and productive lives in our country and thus, tracking inequality in access to such assets is imperative. The financial value of all assets owned by an individual or household is a measure of the wealth of that individual or household. In South Africa, wealth inequality is considerably higher than income inequality, with the wealth Gini coefficient being estimated at 0,94 in 2014/15 (Orthofer, 2016). Furthermore, while the top 10% of the population has a 56% to 58% share of income, they have approximately 95% of all wealth.

There are a number of assets other than those that are discussed earlier in the section that are crucial components of such wealth and wealth inequality. In this regard, in an increasingly financialised world, one crucial omission is access to and returns on financial assets such as deposits, bonds, equities, life insurance, and pension funds. Internationally, these financial assets represent an important source of wealth for households, especially because they tend to be held by wealthier households (Davies and Shorrocks, 2000); South Africa is no different. Orthofer (2016) finds that two thirds of private wealth is in the form of such financial assets.

Internationally, Alvaredo and Atkinson (2011) and Piketty (2014) have shown the link between the development of the financial sector and financial asset inequality and income inequality, in particular the rising trend in the top income shares. In the South African context, Bassier and Woolard (2018) show that for the top 1% of the population incomes from shares, profit and capital gains represent almost 50% of their total income and that one of the key drivers of South Africa's income inequality is the higher growth rate of capital income compared to labour income. These authors provide evidence that income from capital grew annually by 10 to 20% for the top 5% of the population, while the economy grew by only 4%. This return on capital, in turn, can be explained by an average annual real return of 9% of the Johannesburg Stock Exchange (JSE) All Share Index.

Therefore, it is clear that measuring wealth and understanding wealth inequality is very important in understanding South Africa's inequality and in formulating policies to overcome this inequality. In all countries, moving beyond the measurement of asset inequality (as provided in Sections 4.2.1. and 4.2.2) to the measurement of wealth requires the use of company and personal income tax data. This is always done under very stringent conditions that do not violate the obligations of the tax authorities of a country. The South African Revenue Service (SARS) and the National Treasury have embarked on a project to ensure that this evidence is available for policy making in South Africa too, under conditions that are both international best practice and ensure that SARS honours its confidentiality obligations to South African tax payers.[17]

[17] A full description of this project is provided at http://sa-tied.wider.unu.edu/home

4.3 LABOUR MARKET INEQUALITY

With an overall unemployment rate that ranges between 25% and 30% using the official (narrow) definition, any empirical investigation into economic inequality in South Africa would be incomplete without an analysis of the labour market. Leibbrandt, Bhorat and Woolard (2001) showed that the South African labour market – where a wide dispersion in wages is combined with a substantial fraction of individuals who earn no income – is a major contributing source of income inequality in the country. While that study was based on data from over twenty years ago, the labour market remains of primary importance in understanding contemporary inequality in the country.

There is a substantial amount of academic literature on labour market inequality in South Africa, which for the most part starts with data from 1993 and has been evolving ever since. While there are a few studies that pre-date 1993, they tend to be either industry specific or geographically localised and thus, not generalizable to a national level. From the mid-1990s to the present, there are several studies that have analysed income inequality and labour market inequality. For instance, Wittenberg (2017a, 2017b) analysed the long-term trends in wage inequality between 1994 and 2011 and found that there was compression in the wage distribution below the median wage and increased dispersion in the distribution above the median wage. Due to these changes in the individual wage distribution, combined with stratification in household formation, he concludes that "it is not surprising that overall inequality in South Africa has not come down or has even increased since the end of Apartheid" (Wittenberg, 2017b: p298).

The data that we use in this section comes from two sources. First, we make use of Stats SA's Quarterly Labour Force Survey (QLFS) from 2011 to 2017 for analysing access to employment. Second, we use version 3.2 of the Post-Apartheid Labour Market Series (PALMS) for analysing wage inequality and the earnings distribution. As described in Chapter 3, PALMS is a dataset that includes data from 1993 up until 2017 and contains several cross-sectional household surveys, including the 1993 PSLSD survey from SALDRU, the October Household Surveys, the Labour Force Surveys, and the Quarterly Labour Force Surveys from Stats SA. In this report, however, we restrict our analyses to the subset of data from the QLFS from 2011 onwards.[18] Thus, for employment trends we used the annualized[19] QLFS data spanning the period from Quarter 1 of 2011 up to Quarter 4 of 2017, while for earnings and wage inequality it only includes data up to and including the end of 2015.[20]

For Section 4.3.5 on labour market dynamics, we make use of the first five waves of the National Income Dynamics Study (NIDS). As also described in Chapter 3, NIDS is a nationally representative individual-level longitudinal survey that has data from 2008 to 2017, with an approximately two-yearly frequency. We restrict our sample to the subset of individuals in the balanced panel who were aged 25 to 49 in the first wave. This enables us to focus primarily on people who have already completed their education and training, while also avoiding retirement-related labour market dynamics that arise due to people receiving the Old Age Pension at age 60.

[18] To get a detailed analysis of trends up to and including 2011, we refer readers back to the aforementioned papers by Wittenberg (2017a, 2017b).

[19] By annualized we refer to the process of pooling the QLFS data from the four quarters of a particular year together and taking its average.

[20] The earnings and wage information is only released through a different dataset that comes out with a considerable time lag, hence the difference in the time spans for employment data relative to wage or earnings data.

The methods that are used are conventional within the economics of inequality measurement literature and as described in the ACEIR Handbook.[21] We apply these methods to adult individuals in the entire sample, as well as to certain subgroups. The subgroups are defined according to population group, sex, and geography. For access to employment, we compute the labour force participation rates, labour absorption rates and unemployment rates. To gain a sense of the earnings distribution, we plot Lorenz curves and kernel density graphs at various points in time. To measure wage inequality, we estimate the Gini coefficient for wages, as well as the Theil T index. As discussed in Section 4.1, the Theil index allows us to decompose wage inequality into components within and between subgroups. Finally, to measure labour market dynamics and churning, we estimate transition matrices using the balanced panel from NIDS Waves 1 to 5.

4.3.1 Labour force participation and employment

We start by presenting trends of labour force participation, labour absorption rates, and unemployment rates. Labour force participation measures the total number of individuals who are currently employed or seeking employment. Labour absorption rates indicate the percentages that are employed. The unemployment rate measures the percentage of the total labour force who are unemployed and are looking for a job. In our analysis, we restrict our sample to individuals aged 15 to 64 in the QLFS dataset. The results at national level are presented in Table 4.3.1.

Table 4.3.1: Labour market trends at national level (2011–2017)

Year	NEA	Employed	Unemployed	Total	Unemployment rate
2011	44,3	41,9	13,8	100,0	24,8
2012	43,8	42,2	14,0	100,0	24,9
2013	43,2	42,7	14,0	100,0	24,7
2014	42,9	42,8	14,3	100,0	25,1
2015	41,5	43,7	14,8	100,0	25,3
2016	41,3	43,0	15,7	100,0	26,7
2017	40,2	43,4	16,4	100,0	27,5

Source: QLFS (2011–2017)

Notes: 1. All entries are reported in percentages. 2. The unemployment rate is calculated as the ratio of % unemployed/(100% – NEA).

We observe a fairly clear trend in the labour market over the time period under consideration. The percentage employed (i.e. the labour absorption rate) is fairly stable between 40% and 44%. At the same time, the proportion of those who are not economically active (NEA) has decreased considerably, by about four percentage points. Thus, the labour force participation (LFP) rate, which is the proportion who are not NEA, has increased correspondingly. With a relatively stable absorption rate, and increasing LFP, the ranks of unemployed people have thus also increased considerably. Thus, the unemployment rate has increased from an already high level of 24,8 % to an even higher 27,5% between 2011 and 2017.

[21] See Shifa, M. and Ranchhod, V. (2019). *Handbook on Inequality Measurement for Country Studies*.

In Tables 4.3.2, 4.3.3 and 4.3.4 below, we present similar statistics by population group, sex and urban/rural[22]. With regards to population group, we observed the well-known statistical pattern that the labour market experiences of different population groups in South Africa continue to diverge substantially, and still reflect the strongly persistent legacies of apartheid policies. For example, black Africans have the highest unemployment rates, in excess of 30,0% in 2016 and 2017, while for whites the unemployment rate peaks in 2014 at 7,4%. Thus, black African unemployment rates are between four and five times as high as they are amongst whites.

Indians/Asians and coloureds have labour market experiences in-between the white and black African groups, with Indians/Asians bearing more similarity to whites, while the trends for coloureds indicates a greater similarity with black Africans. Note that the differences in unemployment rates are in fact muted somewhat due to the lower rates of LFP amongst black Africans relative to whites.

Table 4.3.2: Labour market trends by population group (2011–2017)

Year	Black African				Coloured			
	NEA	Employed	Unemployed	Unempl. rate	NEA	Employed	Unemployed	Unempl. rate
2011	46,8	38,0	15,2	28,6	37,0	48,6	14,4	22,9
2012	46,2	38,6	15,3	28,3	36,3	48,3	15,4	24,1
2013	45,5	39,3	15,2	27,9	36,1	48,5	15,4	24,1
2014	45,1	39,5	15,5	28,1	35,0	49,4	15,6	24,0
2015	43,2	40,6	16,2	28,5	35,9	49,3	14,8	23,0
2016	42,8	40,0	17,3	30,2	36,6	48,9	14,5	22,9
2017	41,6	40,3	18,1	31,0	36,6	48,5	14,9	23,5
Year	Indian/Asian				White			
	NEA	Employed	Unemployed	Unempl. rate	NEA	Employed	Unemployed	Unempl. rate
2011	40,7	53,1	6,2	10,5	31,6	64,4	4,0	5,8
2012	41,1	52,7	6,3	10,6	32,3	63,8	3,9	5,8
2013	39,2	53,4	7,5	12,3	31,8	63,6	4,6	6,8
2014	41,3	51,7	7,0	12,0	32,4	62,6	5,0	7,4
2015	40,5	51,7	7,8	13,1	31,7	63,7	4,6	6,8
2016	40,6	52,2	7,2	12,0	32,3	63,0	4,7	6,9
2017	38,8	54,1	7,1	11,6	31,7	63,7	4,5	6,7

Source: QLFS (2011–2017)

In Table 4.3.3, we conduct the analogous investigation but for groups defined by sex instead of population group. Here too we observe substantial differentials in labour market outcomes. Males have substantially lower unemployment rates than females, although this is masked to a large extent by the lower levels of female LFP. If we simply look at the labour absorption rate, we find that less than 38,0% of women are employed in any year, while the corresponding statistic for males is never below 48,0%. Both sexes have seen steady increases in LFP over the time period observed, but their trends differ. Almost all of the increase in male LFP has coincided with increased unemployment, while for females some of the increase is reflected in increased unemployment, but some has

[22] The variable to classify respondents as urban or rural changed in 2015 with a new geographic area category called 'mining' areas. We assumed that these are rural respondents. While this will introduce some element of measurement error into our analyses, it is unlikely to have a significant impact on our estimates as only about 3% of the sample in each wave were residing in 'mining' areas.

coincided with greater labour absorption rates. Thus, while differences between males and females in employment rates remains extremely large, there has been a small amount of convergence over the time period that our analysis covers.

Table 4.3.3: Labour market trends by sex (2011–2017)

Year	Male				Female			
	NEA	Employed	Unemployed	Unempl. rate	NEA	Employed	Unemployed	Unempl. rate
2011	37,2	48,5	14,2	22,7	51,0	35,6	13,4	27,3
2012	36,7	48,7	14,6	23,0	50,6	36,0	13,4	27,2
2013	36,6	48,7	14,7	23,1	49,6	36,9	13,4	26,7
2014	36,3	48,9	14,9	23,3	49,3	36,9	13,8	27,2
2015	34,9	49,9	15,2	23,4	47,9	37,7	14,4	27,7
2016	34,6	49,2	16,2	24,7	47,7	37,0	15,2	29,1
2017	33,9	49,1	17,0	25,7	46,4	37,7	15,9	29,6

Source: QLFS (2011–2017)

We next consider the differences in labour market trends between urban and rural residents.[23] From Table 4.3.4, we see that the proportion who are NEA in rural areas are approximately double the corresponding proportion of urban dwellers. The labour absorption rate, in contrast, is about twenty percentage points higher in urban areas. Thus, labour market outcomes differ significantly by geographic regions. Both groups display increases in LFP, but the increase is a lot larger (in absolute terms) amongst rural areas. The proportion employed in urban areas has mostly been stable at just below 50,0%, while it has increased in rural areas from 31,0% in 2011 to 33,2% in 2014, but dropped to 30,9% in 2017. This has partially mitigated the increase in the unemployment in rural areas, relative to urban areas, although the overall change in the unemployment rate is positive for both area types.

Table 4.3.4: Labour market trends by settlement type (2011–2017)

Year	Urban				Rural			
	NEA	Employed	Unemployed	Unempl. rate	NEA	Employed	Unemployed	Unempl. rate
2011	35,3	49,6	15,1	23,4	57,0	31,0	12,0	27,8
2012	35,2	49,5	15,2	23,5	56,0	31,8	12,2	27,7
2013	35,1	49,4	15,5	23,9	54,9	33,2	11,9	26,4
2014	34,9	49,4	15,8	24,2	54,6	33,2	12,2	26,9
2015	33,5	49,8	16,7	25,1	57,9	31,1	11,1	26,2
2016	33,5	49,0	17,5	26,3	57,3	30,7	11,9	28,0
2017	32,9	49,3	17,8	26,5	55,6	30,9	13,5	30,5

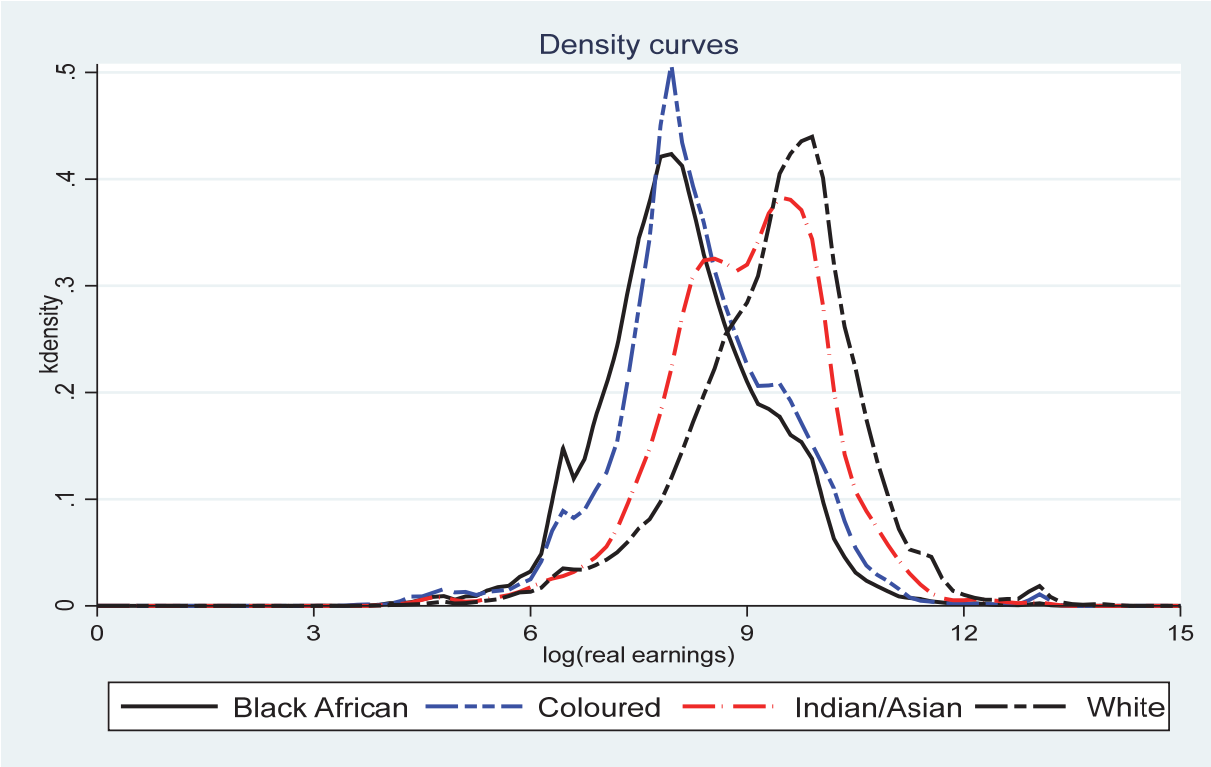
Source: QLFS (2011–2017)

[23] As was noted earlier, the aggregation of the various geo-types into urban and rural classifications is not necessarily a perfect one-to-one match as areas classified as 'mining' areas are treated as rural for our analysis, but on the ground some of these areas could be peri-urban.

4.3.2 Earnings distribution

In this section, we present graphical evidence to explore how spread out the monthly earnings distribution is. There are two important data related notes that apply to all of the subsequent PALMS related analyses. First, we are using the variable on earnings from the PALMS data, which in turn is obtained from Stats SA after cleaning and imputation. Second, based on the discussion from Kerr and Wittenberg (2017), we have decided to drop earnings values that they have been classified as outliers. Both of these facts are important for our results. All analysis in this section is undertaken in terms of real earnings in which nominal earnings are adjusted to reflect December 2016 prices.

Figure 4.3.1: Kernel density plot of log real monthly earnings by population group (2011–2015, pooled)



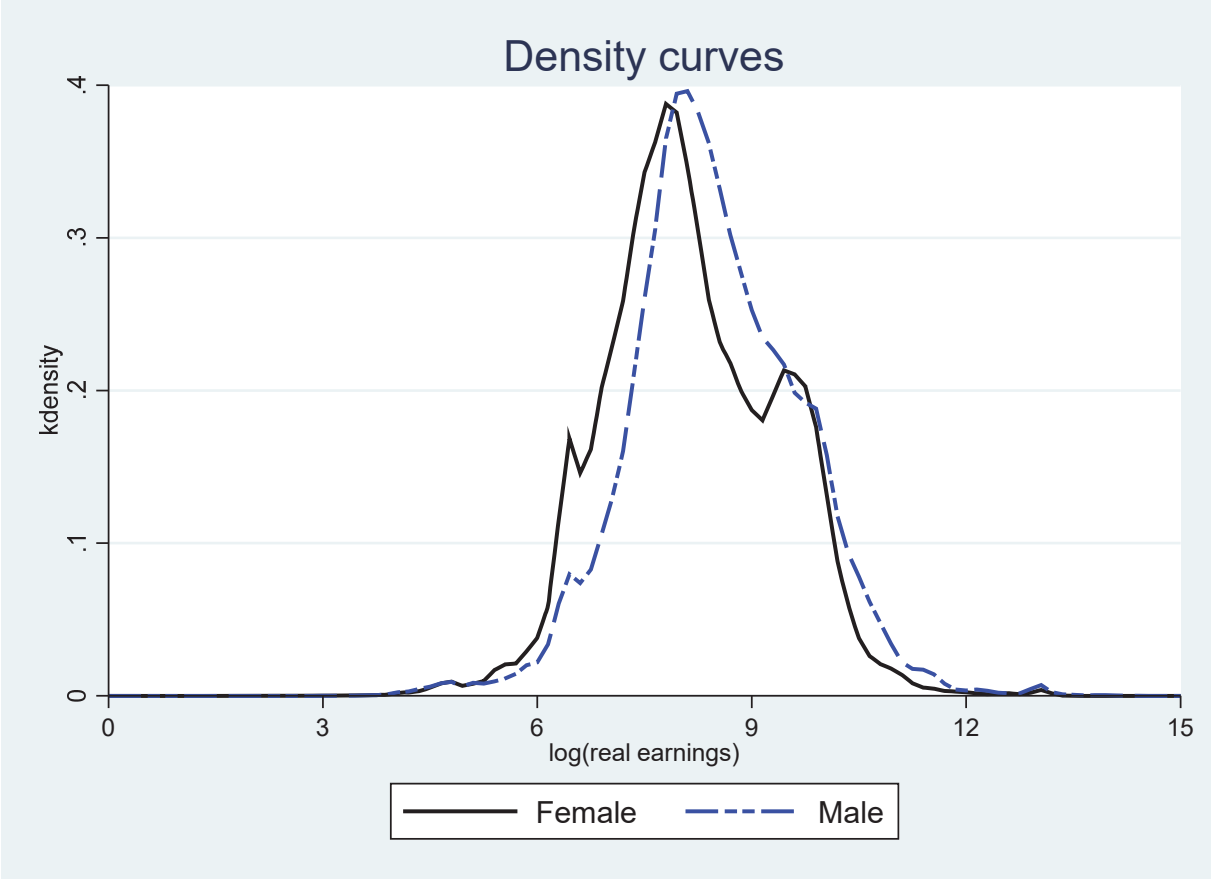
Source: PALMS (2011–2015); own calculations

Figure 4.3.1 presents the kernel density estimates of the natural logarithm of real earnings, for all positive earnings data amongst adults, for the period 2011 to 2015 combined. We pooled the various years so that we can see the differences in population group earnings over this entire period, which will highlight differences by population group on average for this time period.

The earnings distributions starkly depict the heavily racialized inequality in the South African labour market. In addition to having worse employment outcomes, black Africans also earn the lowest wages when they are employed, which we can see from the fact that the black African distribution lies to the left of all the other distributions. Whites, in contrast, also earn substantially higher wages than all the other population groups. These differences are large in absolute value, but the magnitude is difficult to read due to the logarithmic scale being used. To put things into perspective, the mean real earnings between 2011 and 2015, amongst employed black Africans, was R6 899

per month. For coloured and Indians/Asians the corresponding statistics are R9 339 and R14 235 per month, respectively. Amongst whites, it was R24 646 per month, or more than three times as high as it was amongst black Africans.

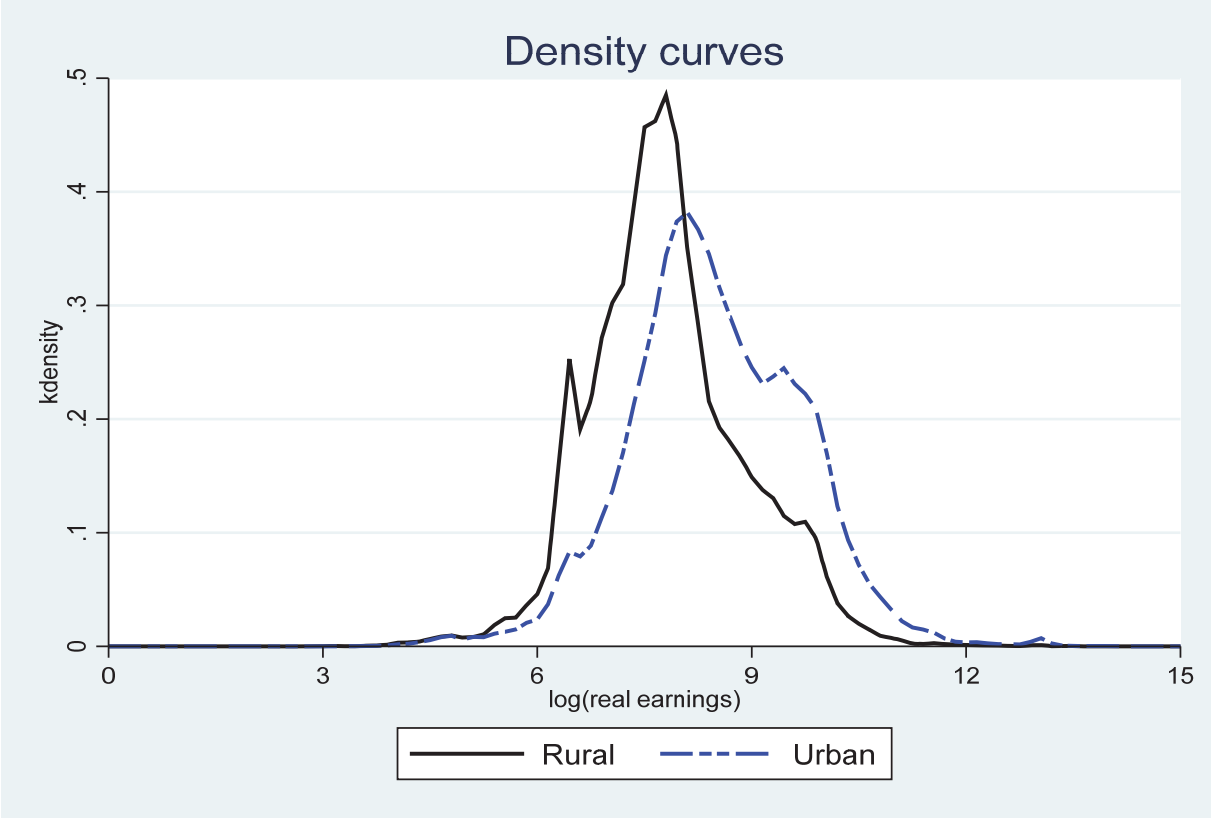
Figure 4.3.2: Kernel density plot of log real monthly earnings by sex (2011–2015, pooled)



Source: PALMS (2011–2015); own calculations

In Figure 4.3.2, we see a similar pattern in terms of differences between males and females as was observed for population groups in Figure 4.3.1. Males, who are much more likely to be employed, are also more likely to have relatively well-paying jobs as compared to females. Employed males have mean real earnings of R10 886 per month, as compared to employed females with mean real earnings of R7 658. Female workers earn approximately 30% less on average than males. The between group differences are even more pronounced in Figure 4.3.3, where we consider the differences in earnings between rural and urban areas. Here, the mean real earnings in rural areas is R4 932 per month, as compared to employed urban dwellers who make on average R10 764 per month. Thus, rural workers earn on average less than half of what urban dwellers earn.

Figure 4.3.3: Kernel density plot of log real monthly earnings by settlement type (2011–2015, pooled)

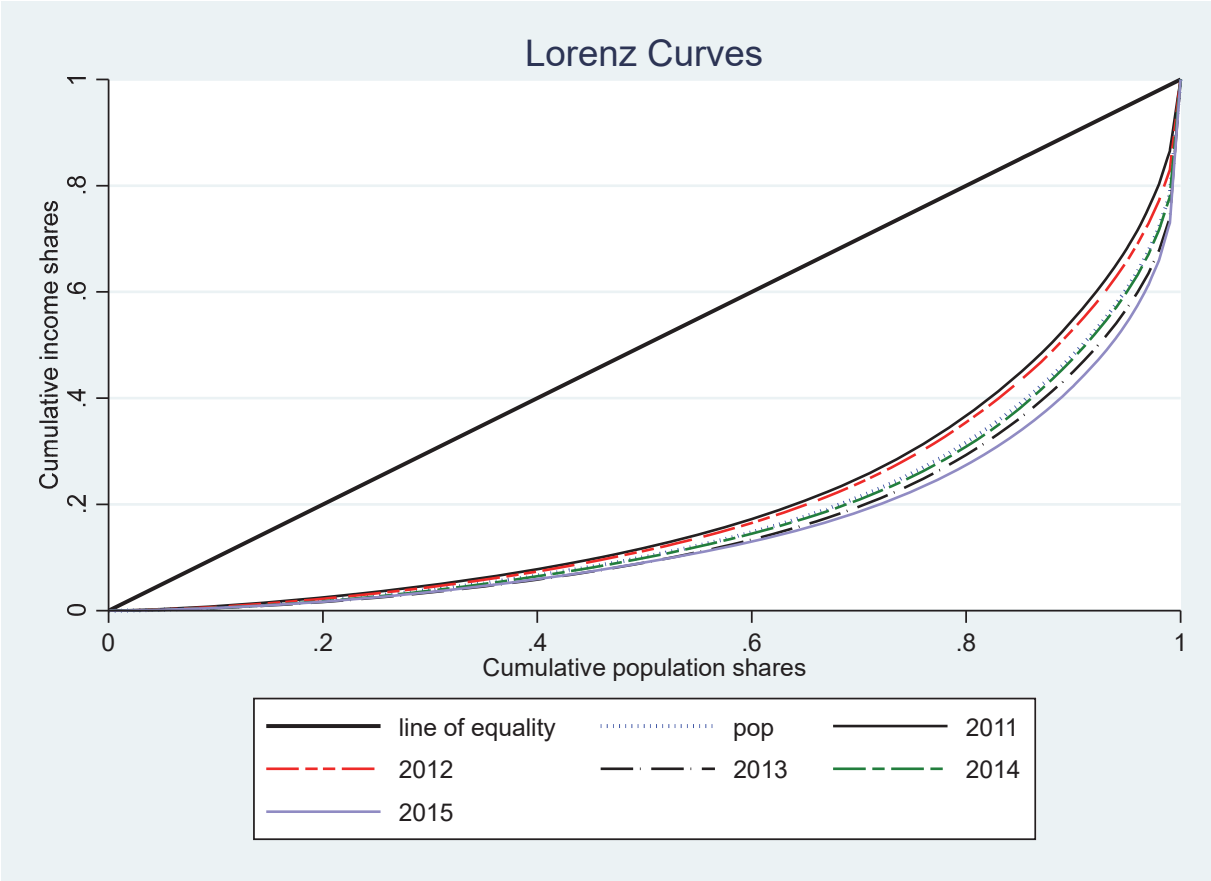


Source: PALMS (2011–2015); own calculations

4.3.3 Measuring overall inequality in earnings

In Figure 4.3.4, we plot Lorenz curves for real monthly earnings data by year. We see that wage inequality has, in general, been increasing over the period from 2011 to 2015. This is depicted by the fact that the 2011 curve is closest to the 45-degree line (or 'line of equality'), while the 2015 line lies below all of the other lines. Furthermore, it noteworthy that all of the curves show a very steep increase in the upper tail. This reflects the earnings inequality in South Africa, where a small proportion of people earn very high wages.

Figure 4.3.4: Lorenz curves of real monthly earnings by year (2011–2015)

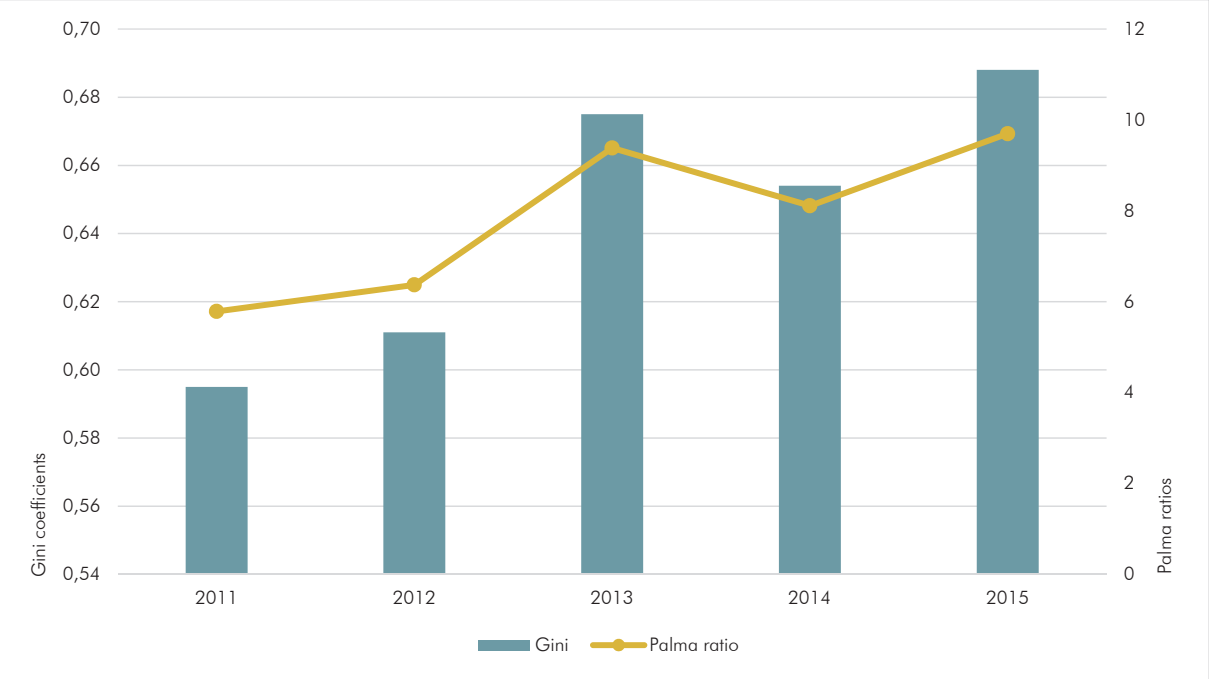


Source: PALMS (2011–2015); own calculations

Figure 4.3.5 presents estimates of Gini coefficients and Palma ratios for each year between 2011 and 2015. The time trend for the Gini coefficients indicates a sharp increase in the level of earnings inequality amongst employed adults over the period from 2011 to 2015. In particular, there is a very large break between 2012 and 2013.[24] The Palma ratio estimates also increased during the same period. The Palma ratio estimates indicate that the earnings share of the top 10% was 5,8 times higher than that of the bottom 40% in 2011. The corresponding figure for 2015 increased to 9,7 suggesting a sharply widening earnings gap between the two groups.

[24] The sharp increase in the inequality measures between 2012 and 2013 can likely be explained by the fact that there was a methodological change in the way Stats SA constructed the earnings data (see Finn & Leibbrandt (2018) for more information). It is unlikely that there was this sharp of an increase in earnings inequality.

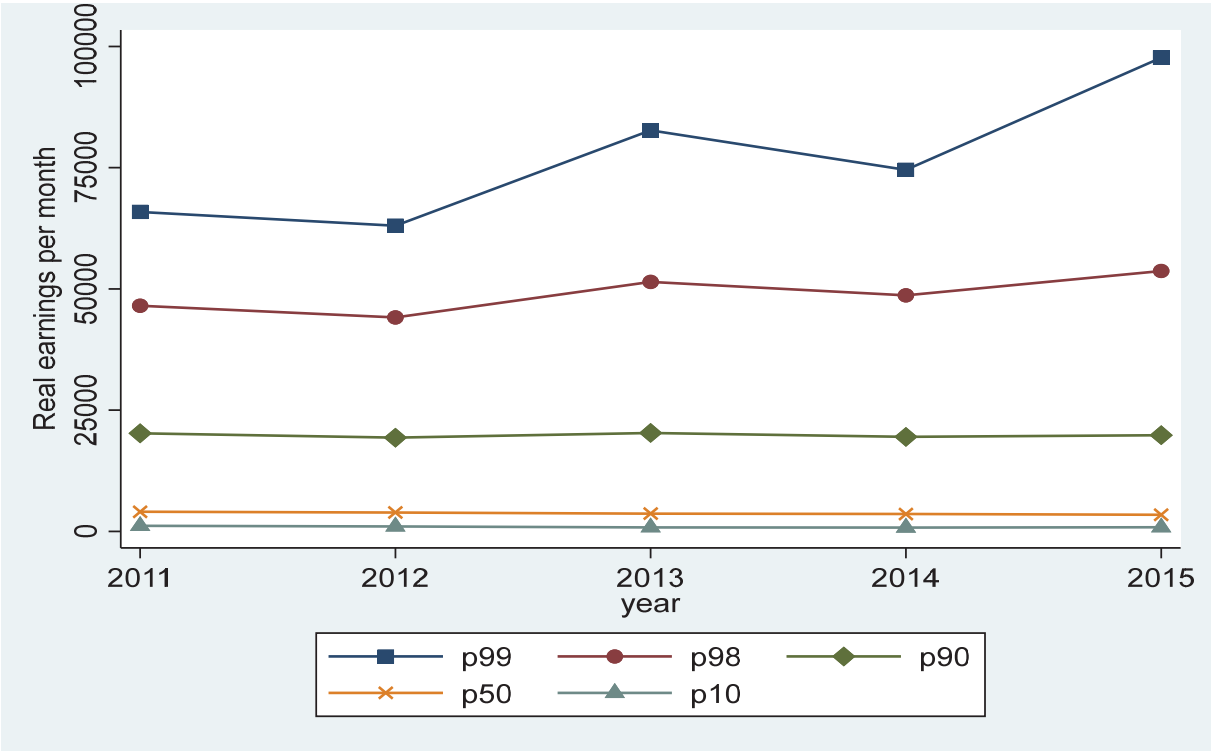
Figure 4.3.5: Gini coefficients and Palma ratios of real monthly earnings (2011–2015)



Source: PALMS (2011–2015); own calculations

In order to gain a better sense of where the shifts in the underlying earnings distribution over time have occurred, we plotted various percentiles of the real earnings distribution against time (see Figure 4.3.6). The visual evidence is striking. From 2011 to 2015, the earners at the 10th and 50th percentile of the distribution have earned less (in real terms) by 25,0% and 15,0%, respectively; while people who earned at the 90th percentile have maintained an almost unchanged real earnings level. In contrast, the people at the 98th percentile experienced an increase in real earnings of about 15,0% over this same time period, while those at the 99th percentile saw an improvement in their real earnings of 48,0%. Thus, the widening inequality is a combination of negative real earnings growth amongst low and median earners, with exceptionally high levels of real earnings amongst the very high earners.

Figure 4.3.6: Percentiles of real earnings per month (2011–2015)



Source: PALMS (2011–2015); own calculations

4.3.4 Decomposing earning inequality by subgroups

In order to understand how big a role the differences in earnings for various subgroups plays in generating our overall inequality, we need to use a measure that has the additive decomposability property. In Table 4.3.5, we present estimates of Theil's T index, with group level decompositions for 2011 and 2015. While most of the inequality is generated by within-group inequality for sex and settlement type groups, there remains a significant fraction of inequality that is still accounted for by differences between population groups. That being said, there is a sharp decrease in the between-population group contribution to overall inequality between 2011 and 2015 dropping from 22,0% to 14,0%.

Table 4.3.5: Decomposition of inequality by within and between group contributions (2011 & 2015)

Year	2011		2015	
Theil T	0,72		1,18	
Subgroup	*Within*	*Between*	*Within*	*Between*
Population group	0,78	0,22	0,86	0,14
Sex	0,98	0,02	0,99	0,01
Settlement type	0,96	0,04	0,97	0,03

Source: PALMS (2011–2015); own calculations

4.3.5 Labour market dynamics and informality

For the final set of analyses, we make use of the balanced panel component of the first five waves of the National Income Dynamics Study. We present a series of transition matrices for all pairwise waves combined; first for all adults and then for the subgroups as defined previously. This allows us to obtain a measure of the rates at which people find or lose employment over the period from 2008 to 2017. For this component of the analysis, we use attrition corrected weights and separate the employed category into 'regular employment' and 'self-employment'. The objective of this finer categorization is to capture, as a rough proxy, the proportion in informal sector employment. As the NIDS surveys do not allow for this estimation directly, we interpret self-employment as informal sector employment, while recognizing that there is very likely to be some mis-measurement of the size of the informal sector.

Table 4.3.6: Transition matrices (overall) (2008–2017)

	NEA	Searching	Employed regular	Self employed	Total
NEA	51,5	21,0	22,4	5,2	100,0
Searching	34,9	27,1	31,2	6,8	100,0
Employed regular	11,7	8,3	75,6	4,5	100,0
Self employed	23,0	10,5	27,1	39,5	100,0
Total	27,1	15,3	49,9	7,7	100,0

Source: NIDS (2008–2017); own calculations

In Table 4.3.6, we see that 51,5% of people who were NEA in a particular wave, were still NEA in the subsequent wave. Nevertheless, there is a lot of churning in the South African labour market, as reflected by the proportions in the off-diagonal elements of the matrix. The most stable group is those in regular employment, 75,6% of whom remain employed in a regular job in the next wave, although this implies that roughly one out of four employees in regular employment will lose their status by the next wave. The self-employed show a high propensity to migrate to regular employment, with 27,1% finding regular employment by the next wave. This indicates that self-employment is likely not a desirable state for most people, and that it is used more as a livelihoods strategy. Only a small fraction of people who were searching for employment find regular employment (31,2%), and in fact a greater proportion (34,9%) leave the labour market and become NEA by the following wave. The overall picture is one where it is difficult to find employment and easy to lose it. Only a small fraction of people are self-employed by the next wave, at 7,7% of the overall sample, with about half of the sample being in regular employment by the subsequent wave (49,9%).

Table 4.3.7: Transition matrices by population group (2008–2017)

Black African					
	NEA	Searching	Employed regular	Self employed	Total
NEA	49,3	22,3	23,1	5,3	100,0
Searching	35,0	27,1	31,0	6,9	100,0
Employed regular	12,1	9,2	74,5	4,2	100,0
Self employed	23,4	11,4	26,4	38,8	100,0
Total	27,4	16,5	48,5	7,6	100,0
Coloured					
	NEA	Searching	Employed regular	Self employed	Total
NEA	54,5	17,2	24,6	3,8	100,0
Searching	35,9	22,6	36,5	5,0	100,0
Employed regular	12,8	7,0	77,8	2,4	100,0
Self employed	19,7	6,5	18,3	55,5	100,0
Total	25,6	11,5	57,2	5,8	100,0
Indian/Asian					
	NEA	Searching	Employed regular	Self employed	Total
NEA	82,1	10,3	6,2	1,4	100,0
Searching	62,9	8,1	27,2	1,7	100,0
Employed regular	6,7	2,6	77,3	13,4	100,0
Self employed	17,1	1,7	45,3	35,9	100,0
Total	32,1	5,0	51,1	11,8	100,0
White					
	NEA	Searching	Employed regular	Self employed	Total
NEA	80,6	2,1	10,2	7,1	100,0
Searching	20,5	45,6	23,0	10,9	100,0
Employed regular	6,4	2,1	83,9	7,5	100,0
Self employed	22,7	5,8	35,1	36,5	100,0
Total	22,7	5,0	61,5	10,8	100,0

Source: NIDS (2008–2017); own calculations

We next present similar transition matrices, but now by population group, sex and location. The results for population group, in Table 4.3.7, do not highlight many stark differences in the rates of churning. Whites and Indians/Asians are more likely to remain NEA if they were already NEA, and more likely to transition into regular employment from self-employment. Whites are also most likely to maintain regular employment if they already have it (at 83,9%) compared to black Africans at 74,5%, Indians/Asians at 77,3%, and coloureds at 77,8%. Thus, the racial disparities in employment levels and earnings are further compounded by an advantage in terms of job security. The likelihood of someone who is searching for employment being employed in a regular job in the next wave is relatively low for all groups, although unemployed and searching whites are more likely to take up self-employment than other population groups.

In Table 4.3.8 we present transition matrices for females and males separately. Here there are clear differences between the two groups. Males who are NEA or searching are more likely to find employment by a considerable margin (27,2% vs. 20,4% if NEA, and 39,2% vs. 27,1% if searching), and they are more likely to keep regular employment or transition into regular employment from self-employment. Thus, males are more likely to find jobs, less likely to lose them, and earn more when they are employed, relative to females.

Table 4.3.8: Transition matrices by sex (2008–2017)

Female					
	NEA	Searching	Employed regular	Self employed	Total
NEA	53,9	20,9	20,4	4,8	100,0
Searching	39,1	27,9	27,1	5,9	100,0
Employed regular	15,4	9,0	71,9	3,8	100,0
Self employed	30,0	11,1	21,8	37,1	100,0
Total	33,7	17,0	42,5	6,8	100,0
Male					
	NEA	Searching	Employed regular	Self employed	Total
NEA	45,5	21,4	27,2	5,9	100,0
Searching	26,9	25,6	39,2	8,4	100,0
Employed regular	8,2	7,7	79,0	5,1	100,0
Self employed	15,4	9,8	32,8	42,0	100,0
Total	18,0	13,0	60,1	8,9	100,0

Source: NIDS (2008–2017); own calculations

The picture that we see in Table 4.3.9, which presents transition rates for rural and urban dwellers, is substantively quite similar to the one for the groups defined by sex above. Urban dwellers are more likely to find employment, and conditional on being employed, are significantly more likely to maintain their employment status. Thus, they also have multiple dimensions of advantage in the labour market compared to their rural counterparts.

Table 4.3.9: Transition matrices by settlement type (2008–2017)

Rural					
	NEA	Searching	Employed regular	Self employed	Total
NEA	53,4	21,2	20,5	4,8	100,0
Searching	36,0	30,0	27,7	6,4	100,0
Employed regular	16,1	10,6	68,7	4,6	100,0
Self employed	28,0	11,5	26,0	34,5	100,0
Total	33,4	18,4	41,1	7,1	100,0
Urban					
	NEA	Searching	Employed regular	Self employed	Total
NEA	49,5	20,8	24,2	5,5	100,0
Searching	34,1	24,8	34,0	7,1	100,0
Employed regular	9,6	7,3	78,7	4,4	100,0
Self employed	20,2	9,9	27,7	42,1	100,0
Total	23,0	13,3	55,6	8,1	100,0

Source: NIDS (2008–2017); own calculations

In this section on inequality in the labour market, we have produced more recent estimates of several dimensions of inequality in the South African labour market. Using data from nationally representative cross-sections and panel data, we have identified that inequality in the South African labour market is very high and has probably increased in the recent past. In addition, there is a general pattern such that groups who are more likely to find employment are also less likely to lose it, and to earn higher wages conditional on employment. All of these mechanisms serve to reinforce one another. Thus, the labour market remains one of the key institutions through which South Africa's exceptionally high levels of both vertical and horizontal inequality get transmitted.

4.4 INEQUALITY IN THE SOCIAL DOMAIN

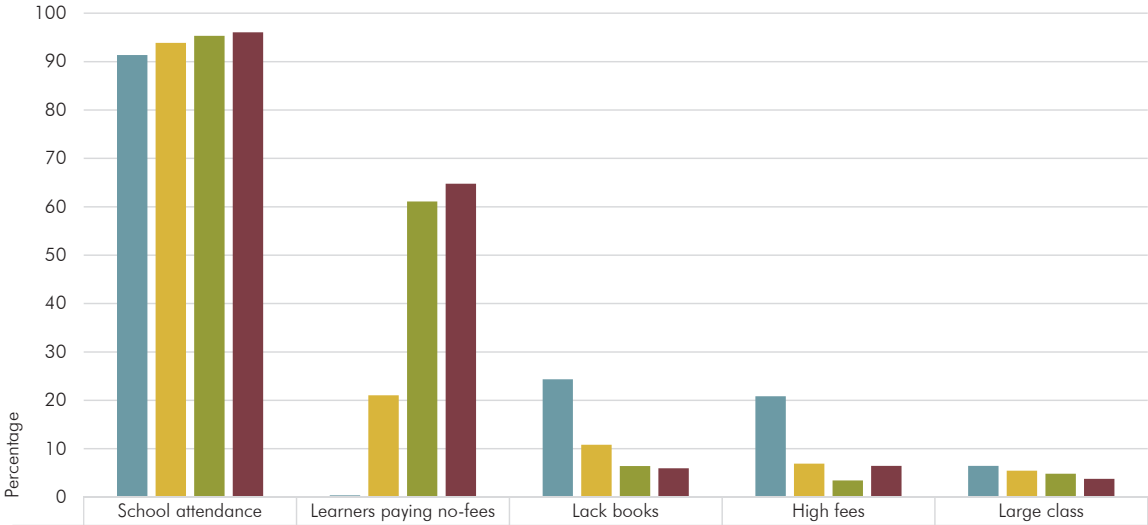
The impact of apartheid policies has left a legacy of unequal development across the South African landscape manifesting in regional inequalities in terms of access to education, healthcare, and basic services (such as water, sanitation, refuse removal and electricity). Since democracy in 1994, government has tried to eliminate these inequalities with varying degrees of success. This section will identify and highlight inequalities within the social domain; in particular, the analysis will focus on inequality pertaining to access to education, health, basic services, and internet.

4.4.1 National overview of select key indicators

Overall, when examining progress at a national level there appears to be notable areas of success and improvement. Nevertheless, when examining this progress at lower disaggregations, the story becomes mixed as there still are clearly some groups and/or places that lag behind others in terms of access.

As shown in Figure 4.4.1, school attendance of children aged 6–18 years has improved between 2002 and 2017 increasing from 91,3% to 96,0%, respectively. The findings further illustrate that the proportion of learners experiencing problems like lack of books and congestion in large classrooms has decreased over the same period. Additionally, the proportion of learners attending a 'no-fee' educational institution grew from 0,3% in 2002 to 64,8% in 2017.

Figure 4.4.1: Selected indicators on education at the national level (2002, 2007, 2012 & 2017)

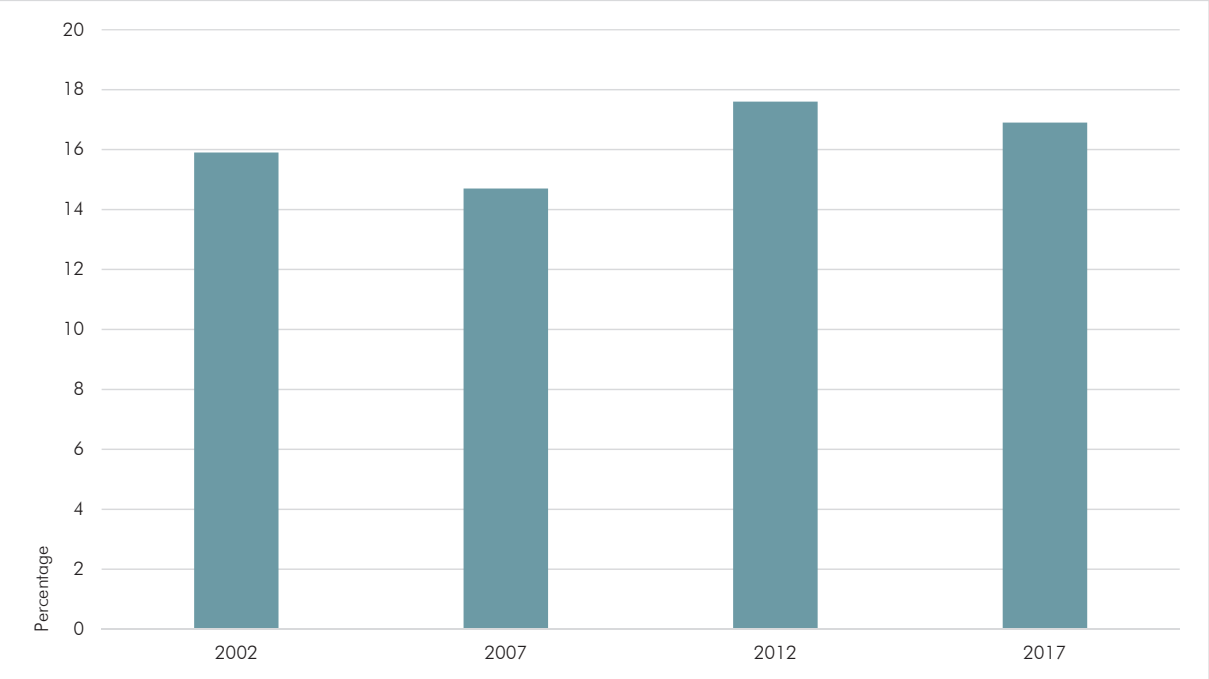


	School attendance	Learners paying no-fees	Lack books	High fees	Large class
2002	91,3	0,3	24,3	20,8	6,4
2007	93,8	21,0	10,8	6,9	5,4
2012	95,3	61,1	6,4	3,4	4,8
2017	96,0	64,8	5,9	6,4	3,8

Source: GHS (2002, 2007, 2012 & 2017)

According to Figure 4.4.2, there has been a very slight increase in the proportion of individuals with access to medical aid at a national level. The medical aid coverage rate increased from 15,9% in 2002 to 16,9% in 2017; a 1,0 percentage point increase. Despite the small increase in medical aid coverage, there has not been much change over the years in the preference of households in their usual choice of accessing a private or public health facility when needed.

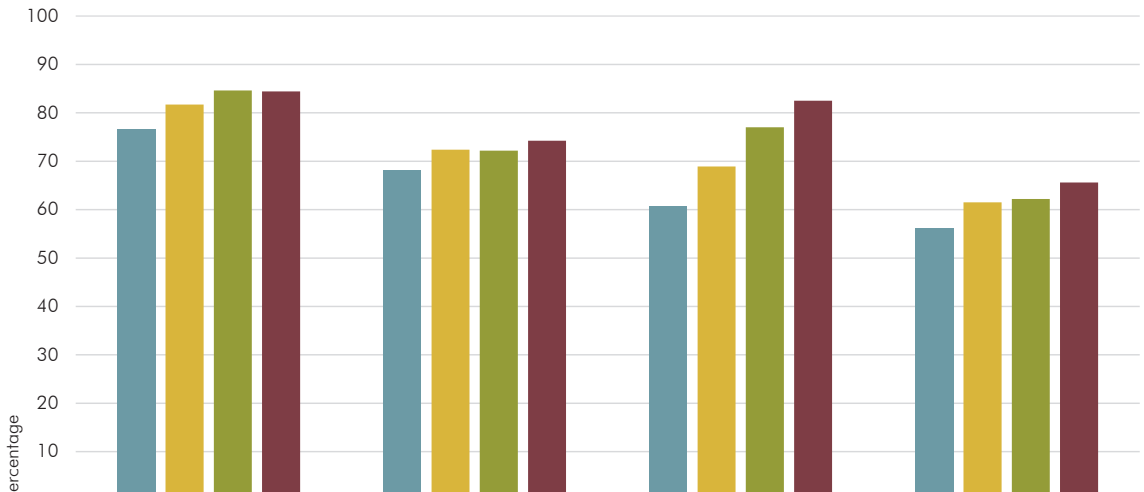
Figure 4.4.2: Percentage of individuals with access to medical aid at national level (2002, 2007, 2012 & 2017)



Source: GHS (2002, 2007, 2012 & 2017)

Figure 4.4.3 shows the national summary of access to the four basic services in 5-year intervals between 2002 and 2017. Nationally, access to electricity, water, sanitation, and refuse removal has improved over the 16-year period. Access to sanitation has shown the biggest improvement recording a 21,8 percentage points increase from about 60,7% in 2002 to 82,5% in 2017, while the least improvement was observed in access to water.

Figure 4.4.3: Household access to basic services at national level (2002, 2007, 2012 & 2017)



	Electricity	Water	Sanitation	Refuse removal
2002	76,6	68,1	60,7	56,1
2007	81,7	72,4	68,9	61,5
2012	84,6	72,2	77,0	62,2
2017	84,4	74,2	82,5	65,6

Source: GHS (2002, 2007, 2012 & 2017)

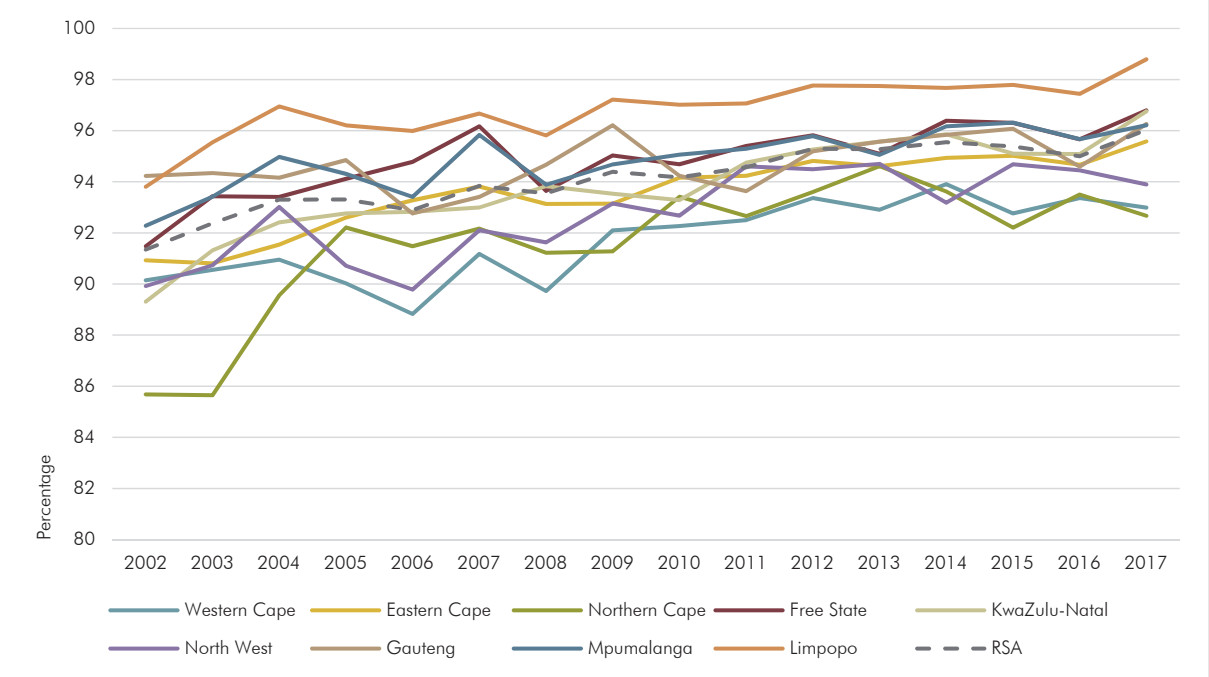
Overall, the country has witnessed notable progress in the provision of education, health care and the provision of basic services. The rest of this section provides further analyses of relative inequalities in access to these services by various demographic and geographic disaggregations.

4.4.2 Education

The focus of this section is to provide an overview of various aspects of education from 2002 to 2017 and how these differ across geographic areas and demographic groups. This section shows trends in education focusing on individuals currently attending educational institutions, type of educational institutions, and problems encountered at educational institutions.

4.4.2.1 Access to education

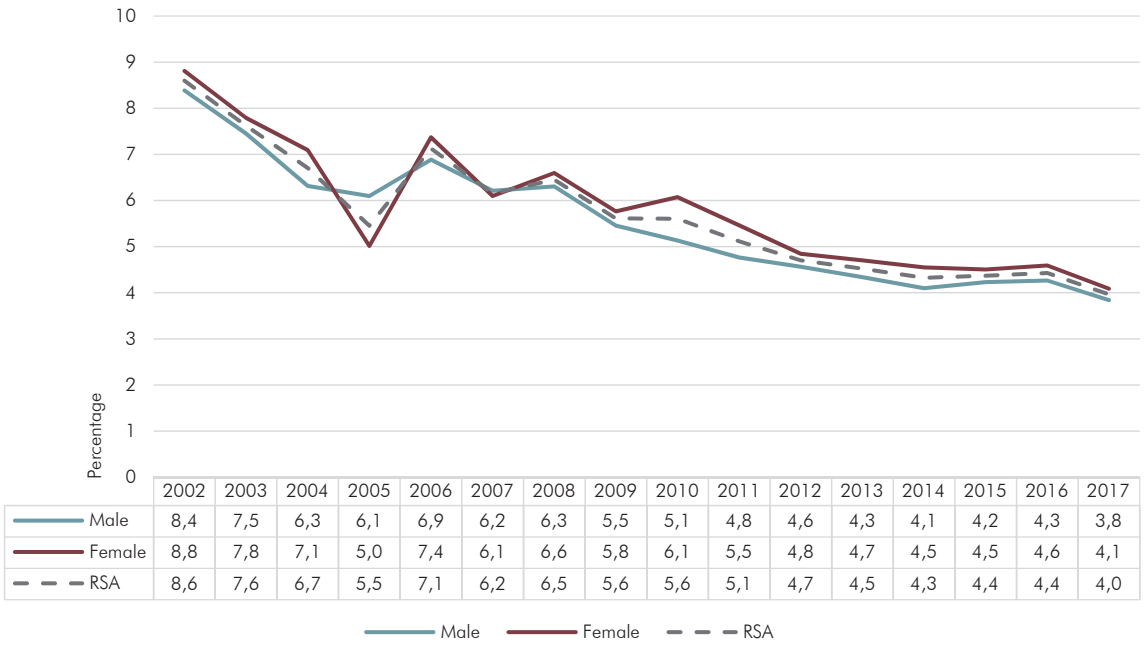
Figure 4.4.4: Proportion of learners aged 6–18 years attending an educational institution by province (2002–2017)



Source: GHS (2002–2017)

Figure 4.4.4 shows the attendance of learners aged 6–18 years by province from 2002 to 2017. Nationally, attendance gradually improved over the period, rising from 91,3% in 2002 to 96,0% in 2017. Limpopo stands out as the province that had the highest proportion of learners attending an educational institution, increasing from 93,8% in 2002 to 98,8% in 2017. These high attendance levels reflect the positive impact of South Africa's progressive education system, which requires compulsory primary education and provides 'no-fee' schools for learners from poor households. Northern Cape and Western Cape had the lowest attendance rates in the country at 92,7% and 93,0% in 2017, respectively. In particular, Northern Cape started quite low at 85,7% in 2002, but rose quickly from 2003 to 2005 bringing it more in line with the attendance rates observed in other provinces.

Figure 4.4.5: Proportion of learners aged 6–18 years not attending an educational institution by sex (2002–2017)

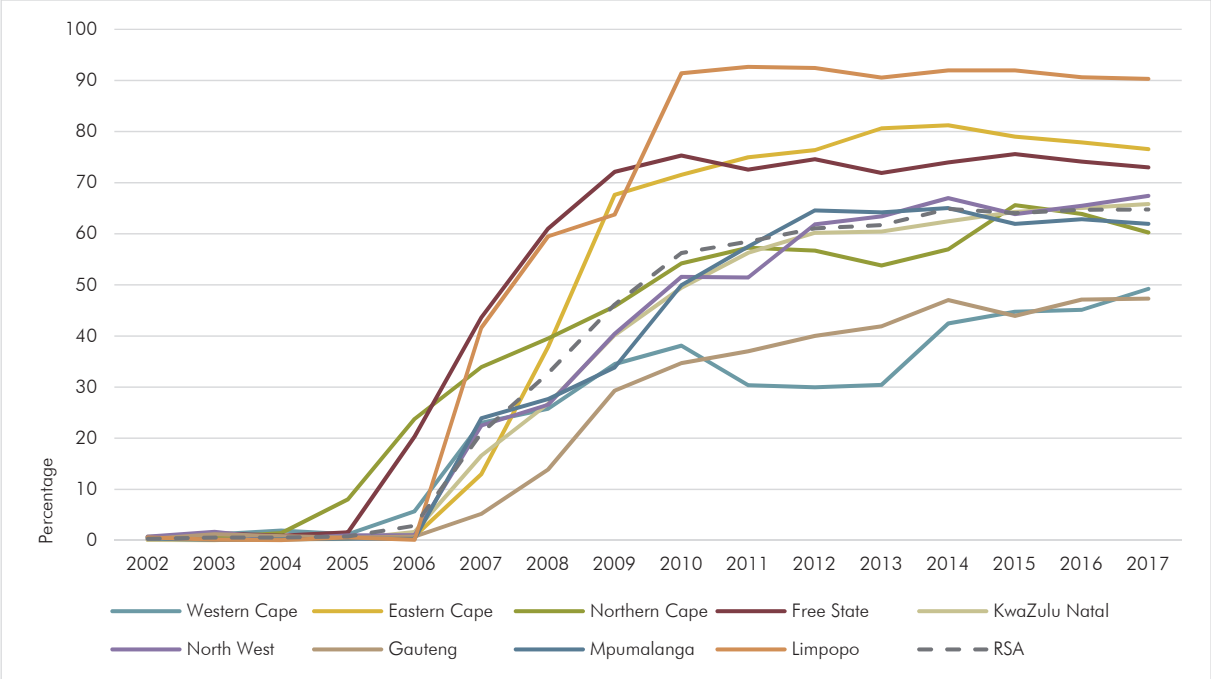


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	8,4	7,5	6,3	6,1	6,9	6,2	6,3	5,5	5,1	4,8	4,6	4,3	4,1	4,2	4,3	3,8
Female	8,8	7,8	7,1	5,0	7,4	6,1	6,6	5,8	6,1	5,5	4,8	4,7	4,5	4,5	4,6	4,1
RSA	8,6	7,6	6,7	5,5	7,1	6,2	6,5	5,6	5,6	5,1	4,7	4,5	4,3	4,4	4,4	4,0

Source: GHS (2002–2017)

Figure 4.4.5 shows the non-attendance of children aged 6-18 years by sex from 2002 to 2017. Nationally, non-attendance rates have decreased by more than half over the 16 year period, dropping by 4,6 percentage points from 8,6% in 2002 to 4,0% in 2017. For males, the proportion of non-attendance decreased from 8,4% in 2002 to 3,8% in 2017, while the proportion for females decreased from 8,8% in 2002 to 4,1% in 2017.

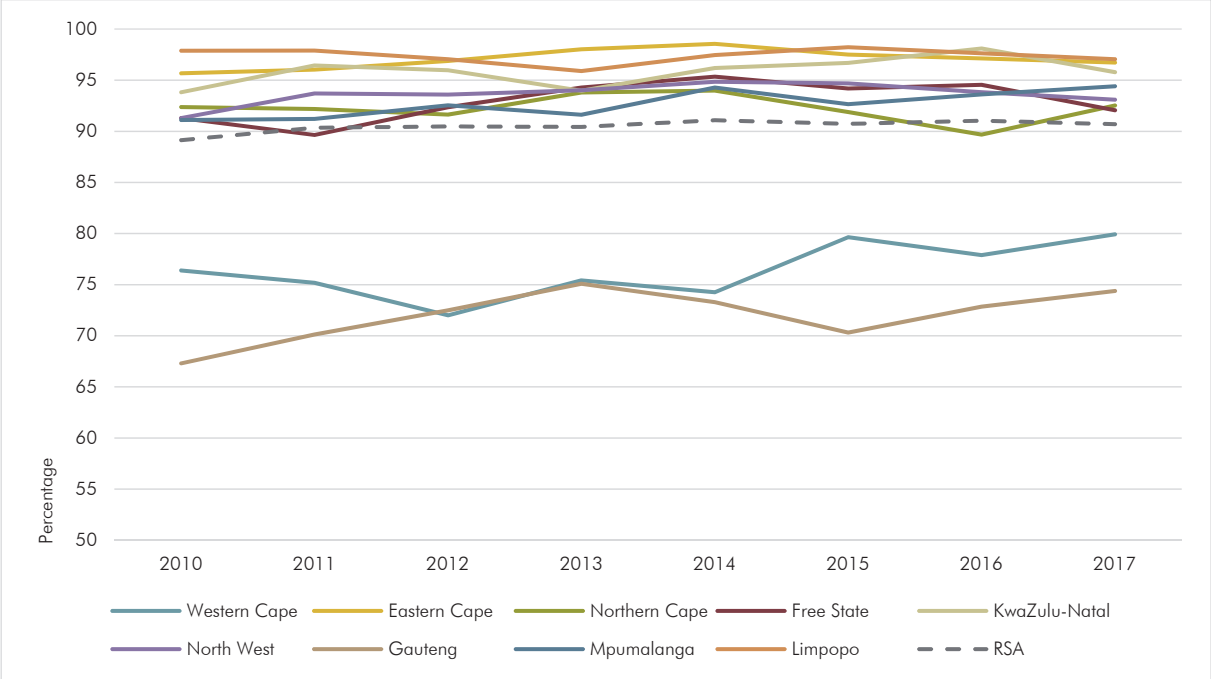
Figure 4.4.6: Proportion of learners aged 6–18 years attending public educational institutions and benefitting from 'no-fee' policy by province (2002–2017)



Source: GHS (2002–2017)

Figure 4.4.6 illustrates the proportion of 'no-fee' learners aged 6–18 years attending public educational institutions by province from 2002 to 2017. Since 2002 the 'no-fee' policy was gradually adopted by some schools. Provinces such as the Northern Cape and Free State were among the first to accelerate access to 'no-fee' institutions over 2005 and 2006. Gauteng and Western Cape had the lowest proportion of 'no-fee' learners at 47,3% and 49,2% in 2017, respectively. North West, Mpumalanga and Northern Cape closely mirror the national trend at roughly 65,0% of learners attending 'no-fee' institutions by 2017. Limpopo had the highest proportion of learners attending 'no-fee' educational institutions with the figure reaching 91,4% in 2010 and stayed relatively flat thereafter.

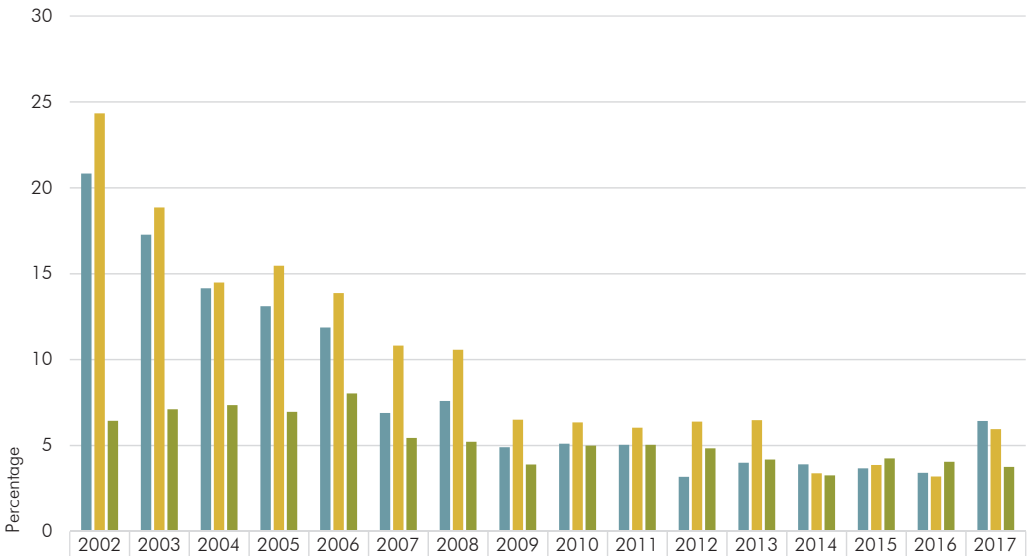
Figure 4.4.7: Proportion of learners aged 6–18 years who benefited from the government nutrition programme by province (2010–2017)



Source: GHS 2010–2017

Figure 4.4.7 depicts the proportion of learners aged 6–18 years who benefited from the government nutrition programme by province, from 2010 to 2017. Nationally, the average proportion of learners who benefited from the programme was 90,5% over the eight year period. Seven out of nine provinces were clustered together with proportions above 90,0%. Gauteng and Western Cape were the two provinces that had the lowest proportion of learners benefiting from the programme. Gauteng ranged between 67,3% and 74,4%, while Western Cape was between 76,4% and 79,9% in 2010 and 2017, respectively.

Figure 4.4.8: Proportion of learners aged 6–18 years by type of problems experienced in educational institutions (2002–2017)

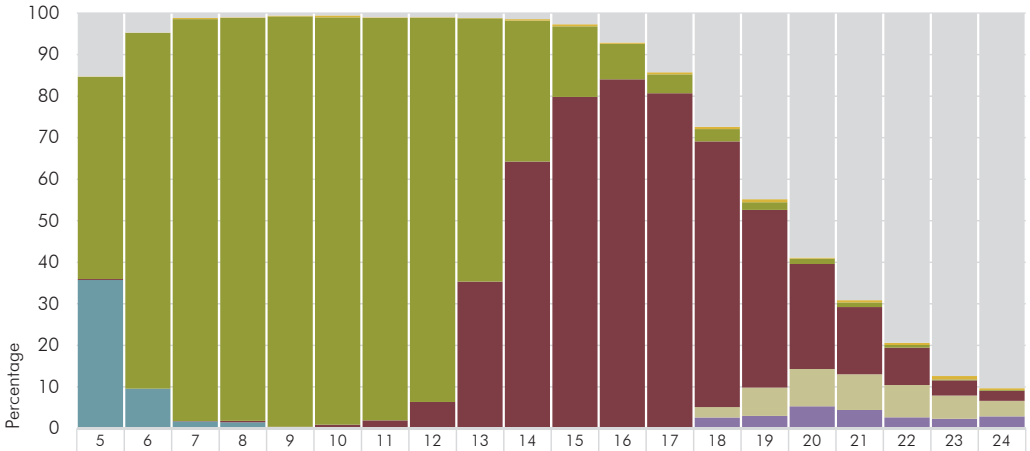


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
High fees	20,8	17,3	14,1	13,1	11,9	6,9	7,6	4,9	5,1	5,0	3,2	4,0	3,9	3,7	3,4	6,4
Lack of books	24,3	18,9	14,5	15,5	13,9	10,8	10,6	6,5	6,3	6,0	6,4	6,5	3,4	3,9	3,2	5,9
Class size too large	6,4	7,1	7,3	7,0	8,0	5,4	5,2	3,9	5,0	5,0	4,8	4,2	3,3	4,2	4,0	3,8

Source: GHS (2002–2017)

Figure 4.4.8 highlights the national proportion of learners that reported experiencing problems at educational institutions they attended from 2002 to 2017. In terms of 'lack of books' there was a decline from 24,3% in 2002 to 5,9% in 2017; however, this decline mostly occurred between 2002 and 2009, after which the proportion stayed fairly consistent. The same pattern is observed for 'high fees' but this makes sense in the context that the 'no-fee' policy only expanded significantly post-2007 which may have led to this change. The proportion of learners that complained about classroom size being too large remained fairly consistent, but slowly declined over the 16 year period, peaking in 2006 at 8,0%. Figures showing the breakdown by province are presented in Annexure D.

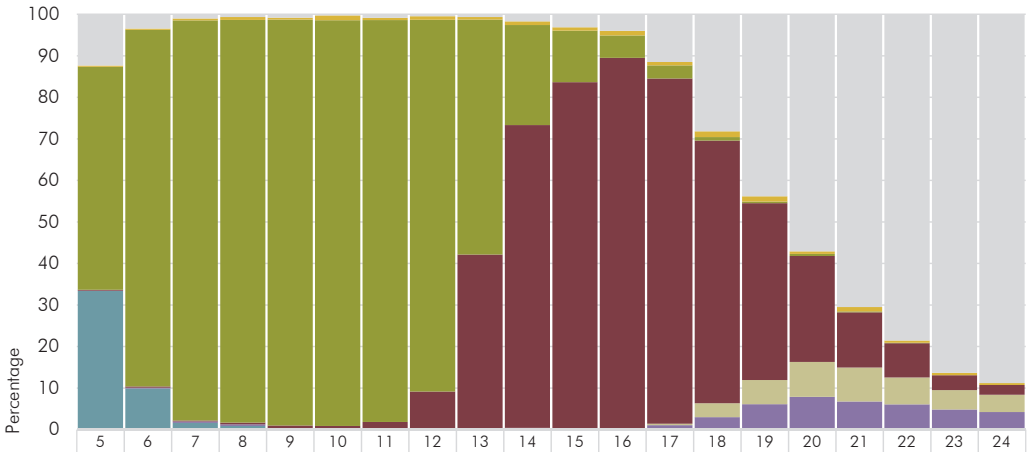
Figure 4.4.9: Proportion of individuals aged 5–24 years by type of institution (2011)



	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Not in education	15,3	4,7	1,2	1,1	0,6	0,6	1,1	1,0	1,2	1,5	2,7	7,1	14,3	27,4	44,8	58,9	69,1	79,4	87,4	90,3
Other	0,1	0,1	0,3	0,2	0,2	0,5	0,2	0,1	0,1	0,4	0,5	0,3	0,5	0,5	0,7	0,2	0,6	0,5	0,8	0,4
Primary school	48,7	85,7	96,8	97,0	98,8	98,1	96,9	92,5	63,4	34,0	17,0	8,5	4,6	3,0	1,9	1,3	1,1	0,7	0,2	0,2
Secondary school	0,3	0,0	0,1	0,3	0,3	0,9	1,9	6,3	35,2	64,2	79,6	83,9	80,4	64,0	42,8	25,3	16,2	9,0	3,7	2,4
University	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,0	0,0	0,1	2,5	6,8	9,0	8,6	7,8	5,6	3,8
TVET and other colleges	0,0	0,0	0,0	0,0	0,1	0,0	0,0	0,0	0,0	0,0	0,2	0,2	0,2	2,6	3,0	5,3	4,4	2,6	2,3	2,9
Pre-school	35,7	9,5	1,7	1,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Source: GHS (2011)

Figure 4.4.10: Proportion of individuals aged 5–24 years by type of institution (2017)



	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Not in education	12,4	3,5	1,0	0,7	0,8	0,3	0,9	0,5	0,7	1,7	3,2	4,0	11,5	28,2	43,8	57,1	70,5	78,6	86,4	88,8
Other	0,3	0,3	0,5	0,7	0,5	1,1	0,5	0,9	0,6	0,9	0,8	1,1	0,8	1,4	1,3	0,6	1,0	0,5	0,6	0,5
Primary school	53,7	85,8	96,4	97,0	97,7	97,7	96,7	89,5	56,6	24,1	12,4	5,4	3,1	0,8	0,4	0,5	0,2	0,1	0,0	0,0
Secondary school	0,2	0,3	0,2	0,4	0,6	0,8	1,8	8,9	42,1	72,9	83,4	89,3	83,1	63,3	42,6	25,5	13,3	8,3	3,6	2,4
University	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,4	3,3	5,8	8,4	8,2	6,5	4,7	4,2
TVET and other colleges	0,1	0,2	0,4	0,4	0,3	0,1	0,1	0,2	0,1	0,4	0,3	0,2	1,0	3,0	6,1	7,9	6,8	6,0	4,8	4,2
Pre-school	33,4	9,9	1,6	0,9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Source: GHS (2017)

Figures 4.4.9 and 4.4.10 show the proportion of individuals aged 5–24 years by type of educational institutions they attended in 2011 and 2017, respectively. The proportion of learners in preschool at age 5 dropped from 35,7% in 2011 to 33,4% in 2017. Attendance in TVET colleges and universities slightly improved from 3,7% in 2011 to 4,0% in 2017, while attendance in primary schools changed from 40,0% in 2011 to 44,0% in 2017. After 18 years of age, the proportion of individuals attending educational institutions drops. Overall, the proportion of individuals not attending an educational institution dropped from 26,9% in 2011 to 23,9% in 2017. The proportion of individuals aged 24 years not attending an educational facility was 90,3% in 2011 and 88,8% in 2017. It is interesting to find learners who are older than the normal graduation age still attending primary and secondary schools and less than 10% of learners attending university.

4.4.3 Health

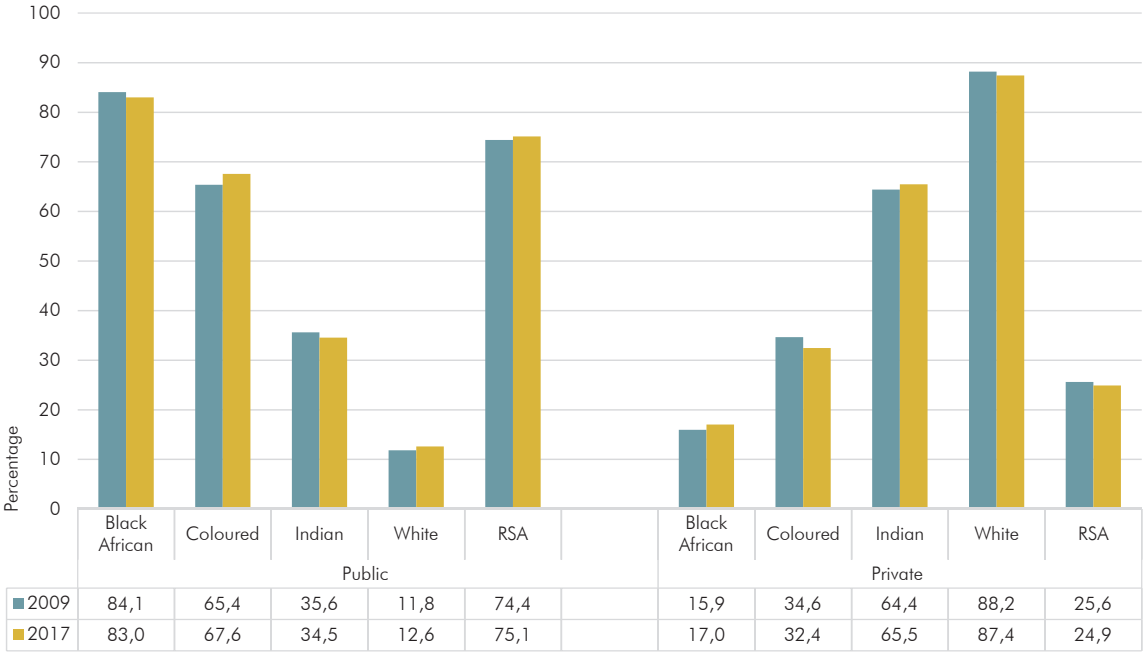
This section will look at inequality based on access to medical aid, use of health care facilities, and chronic illnesses. Where possible the analysis will utilise the full GHS series between 2002 and 2017; however, due to changes in the GHS questionnaire, some analysis will be limited to between 2009 and 2017.

4.4.3.1 Use of health care facilities

The question on use of health care facilities asked the main respondent: "if anyone in the household gets ill and decides to seek medical help, where do they usually go first?" The purpose of the question is to determine whether the usual place of consultation is a public or private healthcare facility.[25]

[25] Public healthcare facilities include government, provincial and community institutions, while private healthcare facilities include private clinics and hospitals, surgeries, sangomas, etc.

Figure 4.4.11: Proportion of households that use a health facility by type of health facility and population group (2009 & 2017)



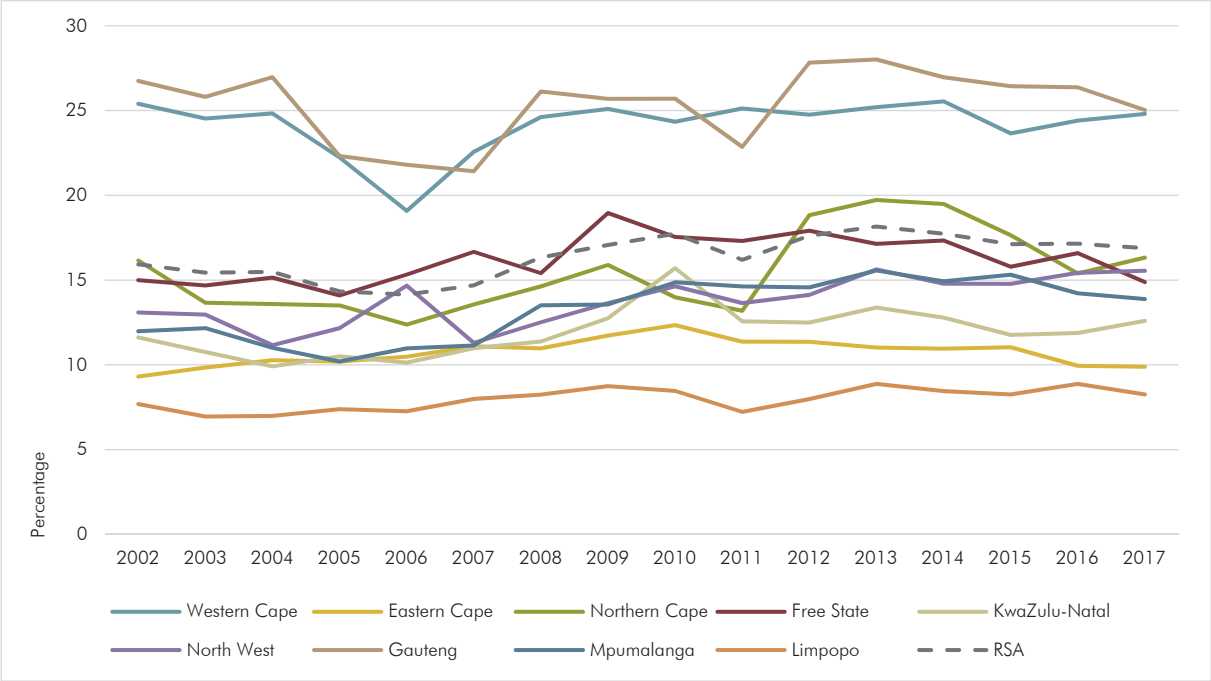
	Public					Private				
	Black African	Coloured	Indian	White	RSA	Black African	Coloured	Indian	White	RSA
2009	84,1	65,4	35,6	11,8	74,4	15,9	34,6	64,4	88,2	25,6
2017	83,0	67,6	34,5	12,6	75,1	17,0	32,4	65,5	87,4	24,9

Source: GHS (2009 & 2017)

The results in Figure 4.4.11 show that more than eight out of ten black African-headed households usually use public healthcare facilities when a household member gets ill compared to one out of ten white-headed households. Overall, a majority of black African- and coloured-headed households usually use public facilities, while a majority of Indian/Asian- and white-headed households tend to prefer the use of private facilities. These proportions have not changed much between 2009 and 2017. This trend of lack of change in the proportions for use of private and public healthcare facilities applies in both urban and rural areas as well (refer to Table D5 in Annexure D).

4.4.3.2 Access to medical aid

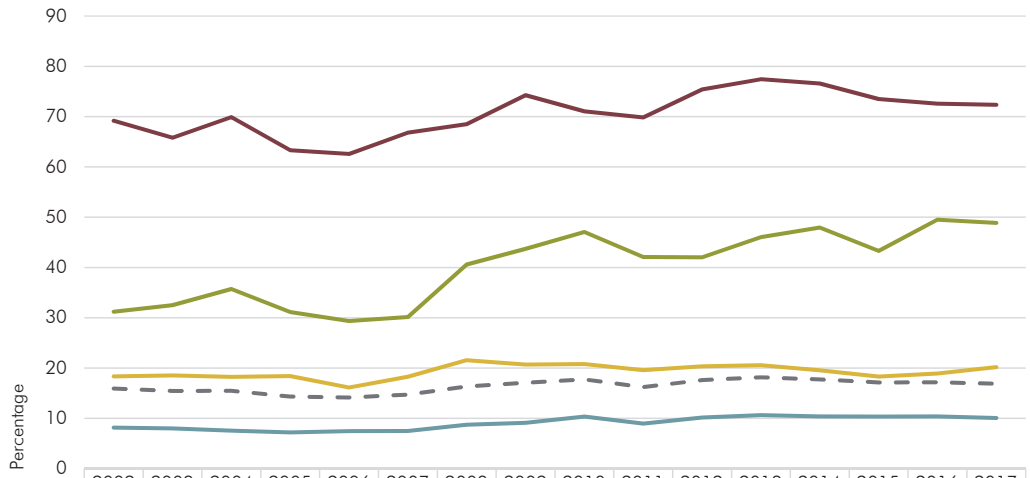
Figure 4.4.12: Percentage of individuals with access to medical aid by province (2002–2017)



Source: GHS (2002–2017)

Figure 4.4.12 depicts access to medical aid by province. After careful observation, three groupings of provinces emerge. The first group includes Gauteng and Western Cape had the overall highest levels of access to medical aid, namely 25,0% and 24,8% in 2017, respectively. The second (or middle) group was comprised of Eastern Cape, Northern Cape, Free State, KwaZulu-Natal, North West and Mpumalanga. These provinces generally had medical aid access rates roughly between 10% and 19% and are just below the national rate (which was pulled up due to the high coverage levels in Gauteng and Western Cape). The third group contains Limpopo which had the lowest medical aid access in the country. Between 2002 and 2017, the figure for Limpopo never rose above 10,0% and just peaked at approximately 8,9% in both 2013 and 2016. Furthermore, access to medical aid in Limpopo has not changed significantly between 2002 and 2017.

Figure 4.4.13: Percentage of individuals with access to medical aid by population group (2002–2017)



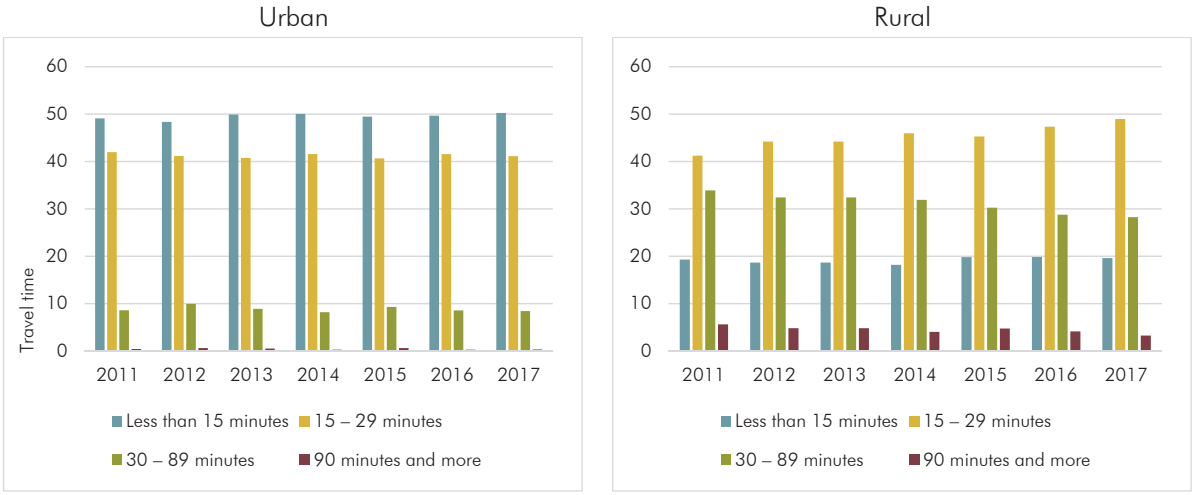
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Black African	8,1	8,0	7,6	7,2	7,4	7,5	8,7	9,1	10,4	8,9	10,2	10,6	10,4	10,4	10,4	10,1
Coloured	18,3	18,5	18,3	18,4	16,1	18,3	21,6	20,7	20,8	19,6	20,4	20,6	19,5	18,3	18,9	20,2
Indian/Asian	31,2	32,5	35,7	31,1	29,3	30,1	40,6	43,7	47,0	42,1	42,0	46,0	47,9	43,3	49,5	48,9
White	69,2	65,8	69,9	63,3	62,6	66,8	68,5	74,3	71,0	69,9	75,4	77,4	76,6	73,5	72,6	72,4
RSA	15,9	15,4	15,5	14,3	14,1	14,7	16,3	17,1	17,7	16,2	17,6	18,2	17,7	17,1	17,1	16,9

Source: GHS (2002–2017)

Figure 4.4.13 gives an interesting picture of people with access to medical aid by population group for the period between 2002 and 2017. According to the figure, we see that on average 71,0% of the white population reported having access to medical aid as compared to an average of 9,0% for black Africans. This means that white South Africans had roughly eight times more medical aid coverage than black Africans. Furthermore, the gap between these two particular groups doesn't seem to be narrowing. In 2002, only 8,1% of black Africans had access to medical aid as compared to 69,2% of whites, while in 2017, 10,1% of black Africans were covered as compared to 72,4% amongst whites. Similar to black Africans, the coloured population observed low proportions of people with access to medical aid, averaging 19,0% during the 16-year period; this rate closely mirrors the national average. Indians/Asians had notably better medical aid access relative to black Africans and coloureds; however, they still had less access than whites, but this gap decreases from 2009.

Based on Figures 4.4.12 and 4.4.13, black Africans living in Limpopo had the lowest access rates in the country and thus, are among the most vulnerable. However, beyond this particular vulnerable group, black Africans in general are still notably lacking behind, especially those living in Gauteng and Western Cape which have the highest access to medical aid coverage in the country. Therefore, there are clear geographic and demographic inequalities when it comes to access to medical aid.

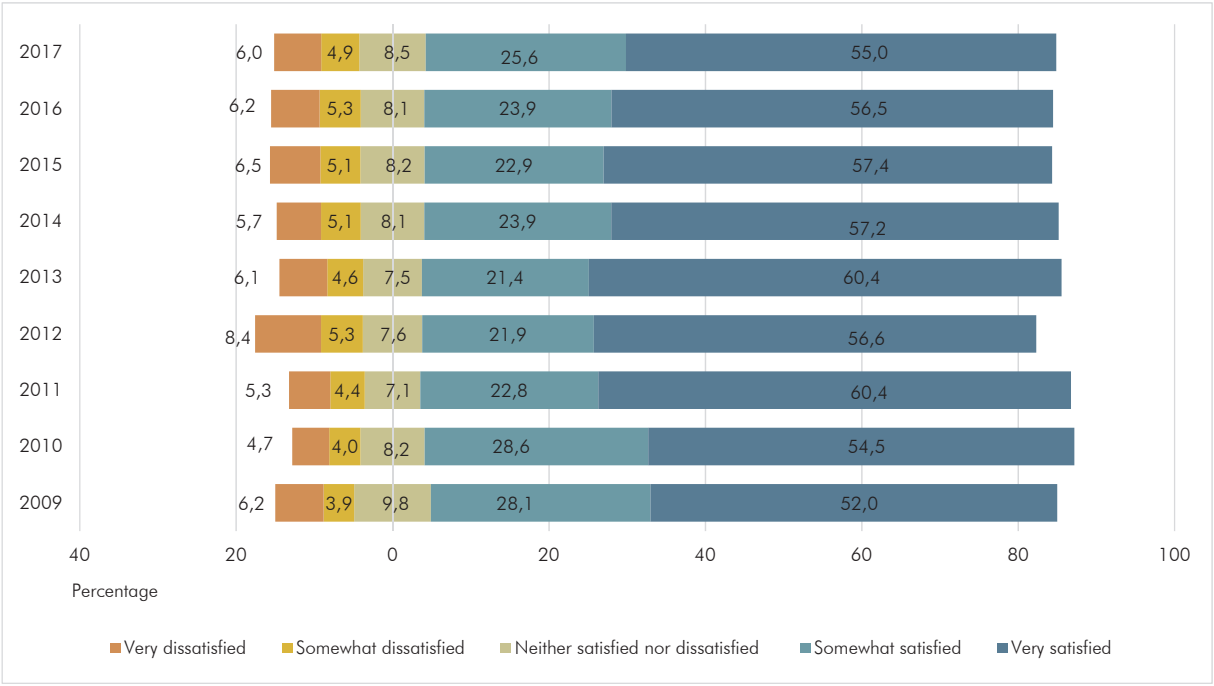
Figure 4.4.14: Travel time to health care facilities by settlement type (2011–2017)



Source: GHS (2011–2017)

Figure 4.4.14 shows that on average, it took rural households longer to reach a health care facility compared to their urban counterparts. Given the concentration of people in urban areas and easier access to public transportation, urban dwellers can more quickly reach their preferred facility. In 2017, 50,2% of households based in urban areas reported using a health care facility that took them less than 15 minutes to reach while 48,9% of rural dwellers used a health care facility that took them 15 to 29 minutes to reach.

Figure 4.4.15: Level of satisfaction reported on the use of public health care facilities (2009–2017)



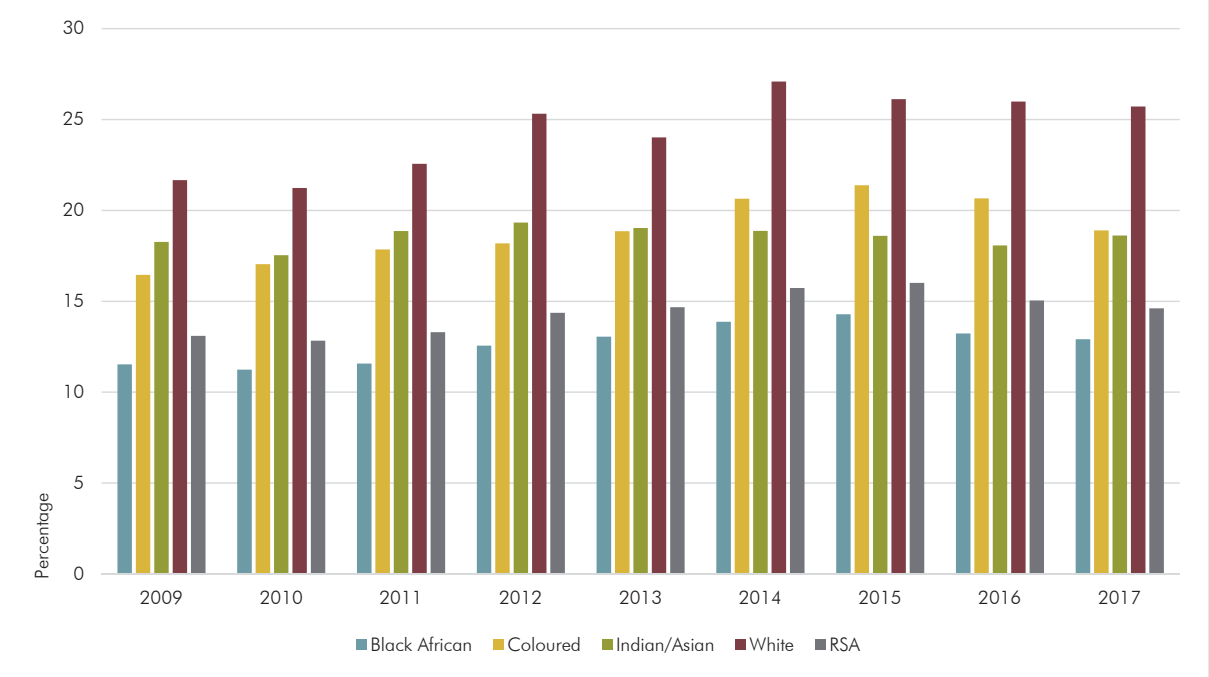
Source: GHS (2009–2017)

According to Figure 4.4.15, satisfaction levels reported by households that attended public health facilities were notably high with 52,0% in 2009 indicating that they were 'very satisfied'. This increased to 55,0% in 2017 with a peak of 60,4% in 2011 and 2013. Meanwhile, on average 11,0% of households reported being outright dissatisfied (which is a combination of the 'very dissatisfied' and 'dissatisfied' response categories). Although satisfaction levels with public health facilities were very high, the level of satisfaction reported by households that used private health facilities were much higher over the 9-year period (see Annexure D).

4.4.4.3 Chronic illness

A chronic illness is classified as any illness that is permanent or lasts three months or longer. The question is asked on an individual level and anyone who responded *'yes'* to any of the chronic illnesses listed has been included in this analysis as having a chronic illness.

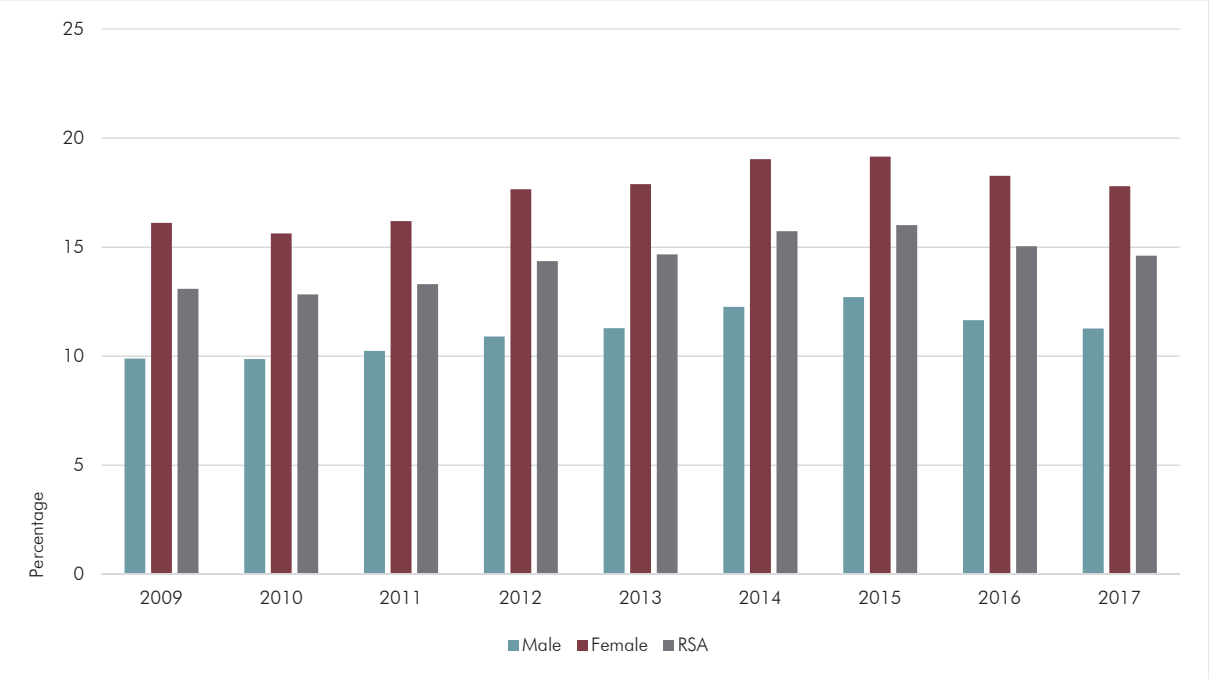
Figure 4.4.16: Proportion of individuals that reported having a chronic illness by population group (2009–2017)



Source: GHS (2009–2017)

Figure 4.4.16 shows that over the 9-year period, whites had the highest proportion of individuals that reported suffering from a chronic illness ranging from 21,2% to 27,1%. Black Africans had the lowest proportion of individuals that reported having a chronic illness with an average of 12,7% between 2009 and 2017. Over the same period, the Indian/Asian and coloured population groups reported on average 18,6% and 18,9% of individuals suffering from a chronic illness, respectively.

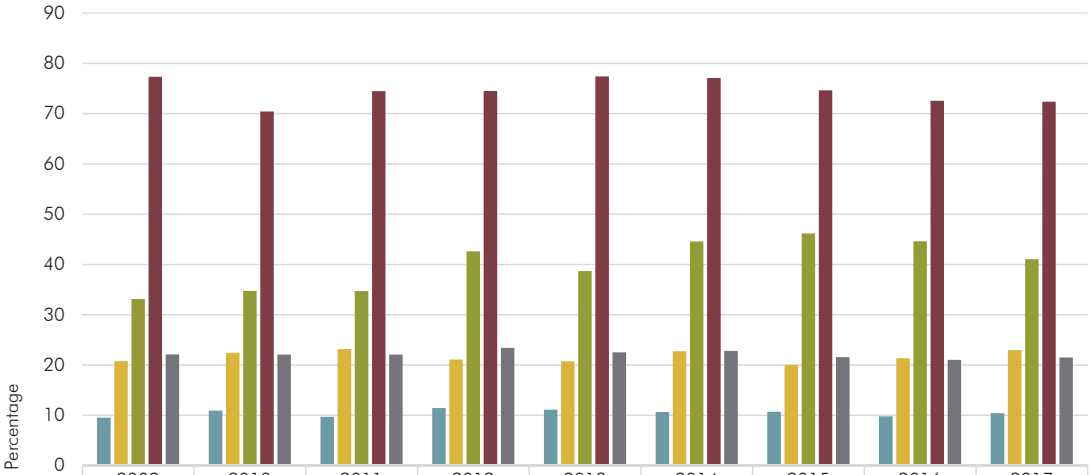
Figure 4.4.17: Proportion of individuals that reported having a chronic illness by sex (2009–2017)



Source: GHS (2009–2017)

In Figure 4.4.17, it is observed that females were more likely to have reported having a chronic illness as compared to their male counterparts. On average, 17,5% of females had a chronic illness as compared to 11,1% of males, with the highest peak for both sexes being in 2015 at 19,2% and 12,7%, respectively. Nationally the proportion of individuals with chronic illness increased from 13,1% in 2009 to 14,6% in 2017.

Figure 4.4.18: Proportion of individuals that have a chronic illness with access to medical aid by population group (2009–2017)

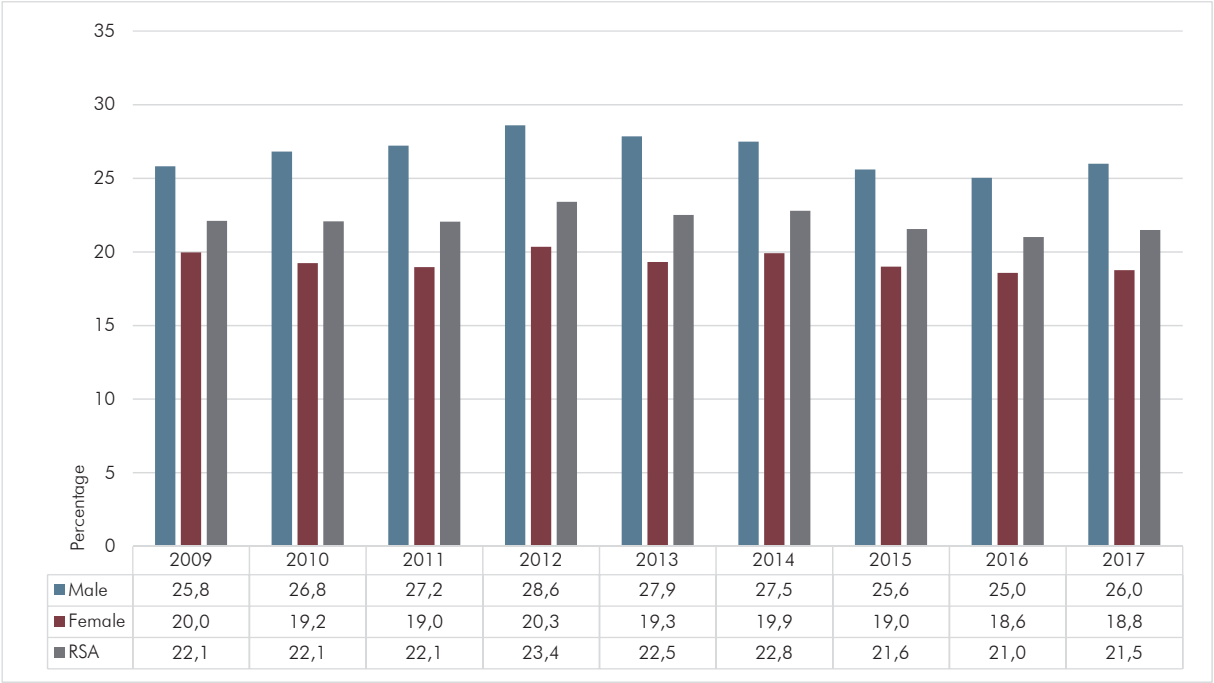


	2009	2010	2011	2012	2013	2014	2015	2016	2017
Black African	9,5	10,9	9,7	11,4	11,1	10,6	10,7	9,8	10,4
Coloured	20,8	22,4	23,1	21,1	20,7	22,7	20,0	21,3	22,9
Indian/Asian	33,1	34,7	34,7	42,6	38,7	44,6	46,2	44,6	41,1
White	77,3	70,4	74,5	74,5	77,4	77,1	74,6	72,6	72,4
RSA	22,1	22,1	22,1	23,4	22,5	22,8	21,6	21,0	21,5

Source: GHS (2009–2017)

According to Figure 4.4.18, whites had the highest proportion of individuals who had a chronic illness and access to medical aid, with proportions ranging between a low of 70,4% (in 2010) and a peak of 77,4% (in 2013) over the period 2009 to 2017. Meanwhile, black Africans, coloureds and Indians/Asians who reported having a chronic illness had significantly lower levels of access to medical aid relative to whites. Approximately two out of ten coloureds and one out of ten black Africans with a chronic illness were covered by medical aid. Between 2009 and 2017, there has not been much change in medical aid coverage rates for individuals with chronic illnesses by population group, except for Indians/Asians who saw an increase from 33,1% in 2009 to 41,1% in 2017 (a 8,0 percentage points increase).

Figure 4.4.19: Proportion of individuals that have a chronic illness with access to medical aid by sex (2009–2017)



	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	25,8	26,8	27,2	28,6	27,9	27,5	25,6	25,0	26,0
Female	20,0	19,2	19,0	20,3	19,3	19,9	19,0	18,6	18,8
RSA	22,1	22,1	22,1	23,4	22,5	22,8	21,6	21,0	21,5

Source: GHS (2009–2017)

Figure 4.4.19 illustrates the inequalities that exists between males and females. While approximately one out of every four males with a chronic illness reported having access to medical aid, only one out of every five females had similar medical aid coverage. Females with a chronic illness had a fairly stable level of access to medical aid coverage decreasing from 20,0% in 2009 to 18,8% in 2017 (a 1,2 percentage points difference). Meanwhile, the trend for males with chronic illnesses that had access to medical aid started at 25,8% in 2009, which then increased to a peak of 28,6% in 2012, but then decreased to 26,0% by 2017.

Figures 4.4.18 and 4.4.19 clearly show demographic inequalities. Black African females who have chronic illnesses are the least covered by medical aid relative to the rest of the country, especially when compared to Indian/Asian and white males. Given that both females and black Africans represent majorities in the country, the disparity in medical aid coverage for these groups should be a serious concern.

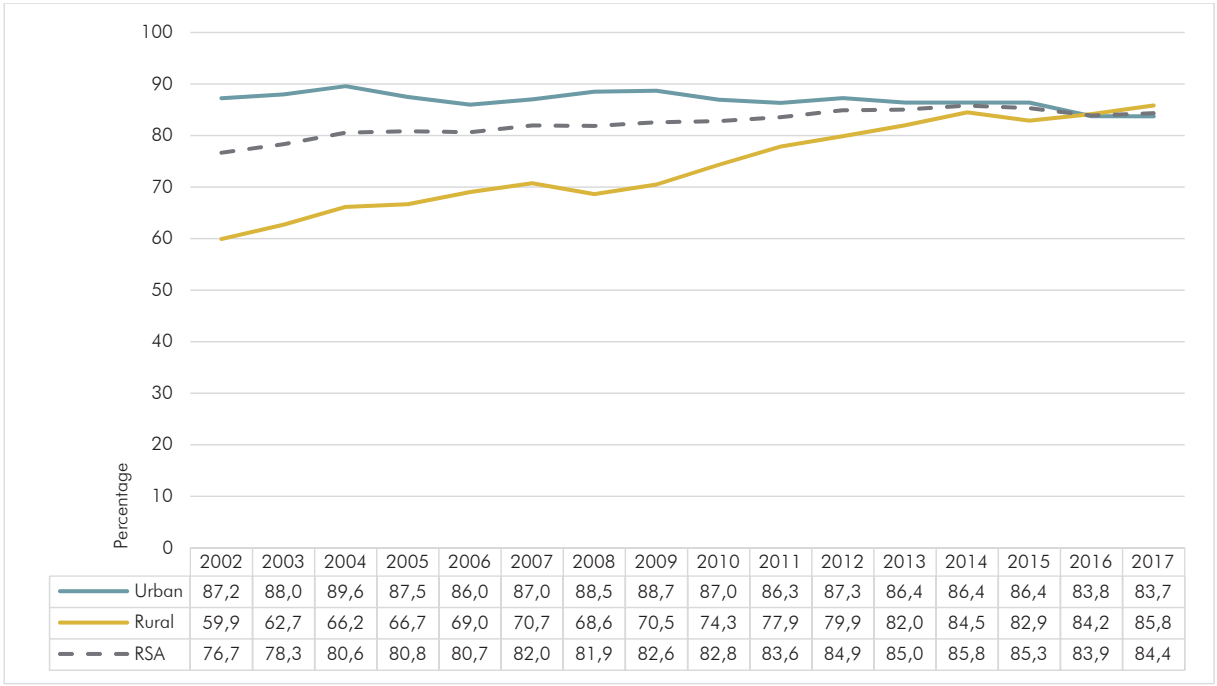
4.4.4 Basic services

4.4.4.1 Electricity

Electricity is one of the basic services that South African households depend on for their daily lives and wellbeing. This section provides a discussion on access to electricity across various demographic and geographic disaggregations to show the relative inequalities in access to this service.

4.4.4.1.1 Access to electricity

Figure 4.4.20: Proportion of households with access to electricity from the mains electricity supply by settlement type (2002–2017)



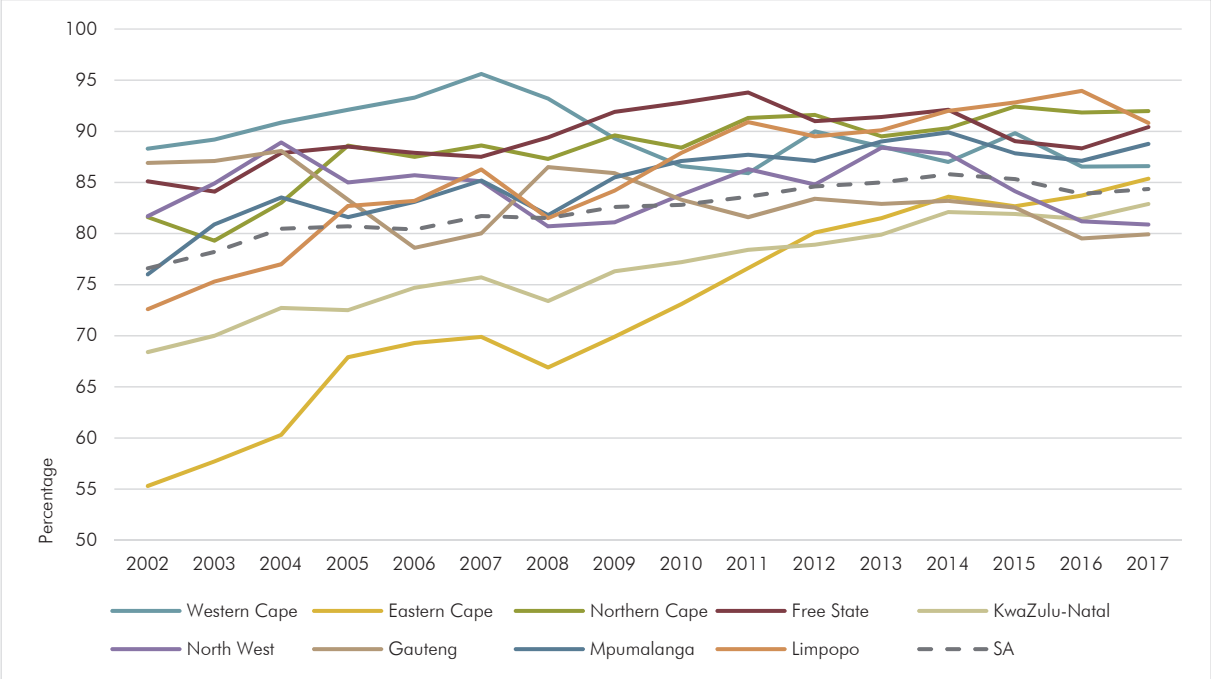
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Urban	87,2	88,0	89,6	87,5	86,0	87,0	88,5	88,7	87,0	86,3	87,3	86,4	86,4	86,4	83,8	83,7
Rural	59,9	62,7	66,2	66,7	69,0	70,7	68,6	70,5	74,3	77,9	79,9	82,0	84,5	82,9	84,2	85,8
RSA	76,7	78,3	80,6	80,8	80,7	82,0	81,9	82,6	82,8	83,6	84,9	85,0	85,8	85,3	83,9	84,4

Source: GHS (2002–2017)

Figure 4.4.20 shows the trend in access to electricity connection from the mains electricity supply[26] between 2002 and 2017 by settlement type. Over the years, inequality in access to electricity between households in urban and rural areas has declined. Households in rural areas witnessed tremendous progress, as they started at a low of 59,9% in 2002 and increased to 85,8% in 2017. While households in urban areas saw a slight decline from 87,2% in 2002 to 83,7% in 2017. Nationally, it started at 76,7% and peaked to 85,8% in 2014 before declining to 84,4% in 2017. Thus, the inequality gap in access to electricity between urban and rural dwellers has been reduced over the period under review. In addition, national access has also improved markedly.

[26] The 'mains electricity supply' refers to cases whereby electricity is supplied by companies like Eskom as well as other local designated suppliers such as municipalities. This means that electricity sourced from a generator and/or other devices is not included in the mains supply.

Figure 4.4.21: Proportion of households with access to electricity from the mains electricity supply by province (2002–2017)

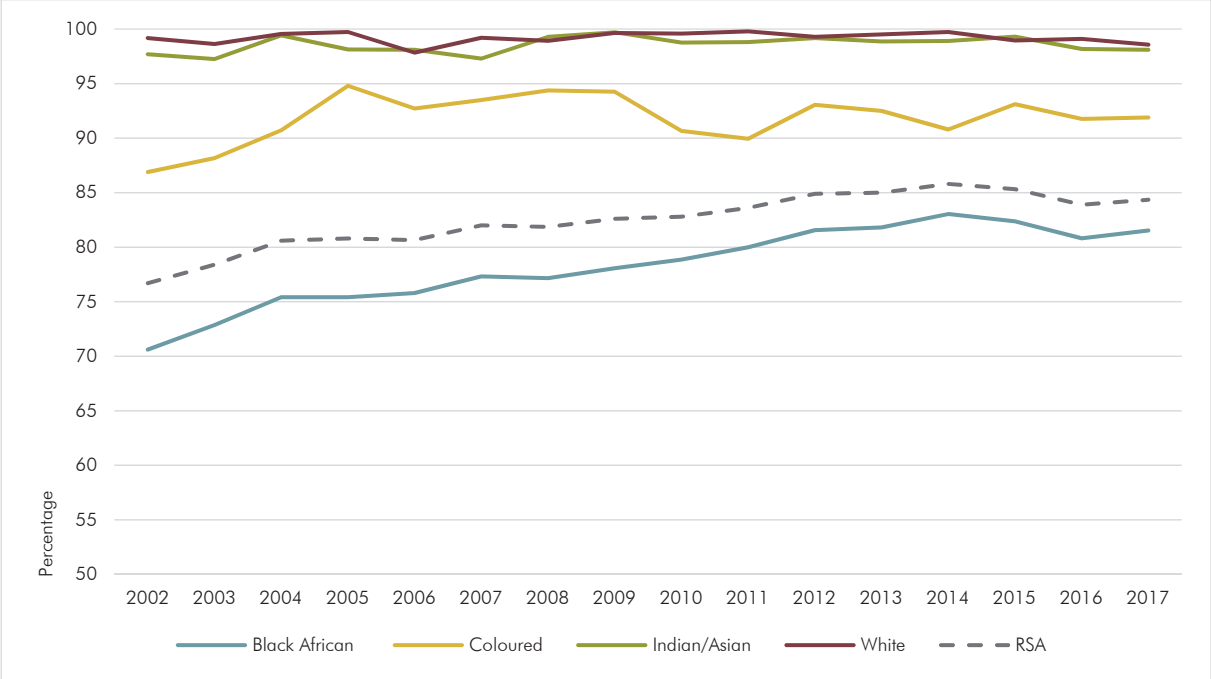


Source: GHS (2002–2017)

Figure 4.4.21 shows the proportion of households with access to electricity from the mains electricity supply by province between 2002 and 2017. Western Cape started off as the province with the highest proportion of households with access to electricity at 88,3% in 2002, but by 2017 it had slightly declined to 86,6% and was ranked 5th amongst the provinces. The Western Cape reached its peak in 2007 at 95,6% before declining to 85,9% in 2011 at which point it plateaued.

Inversely, Limpopo was ranked 7th in 2002 with 2,6%, but significantly increased to 90,8% by 2017, ranking 2nd after the Northern Cape which was at 92,0%. Eastern Cape and KwaZulu-Natal had the lowest proportion of households with access to electricity from the mains electricity supply over the period under review, with the Eastern Cape starting at 55,3% and KwaZulu-Natal with 68,4% in 2002. Both provinces witnessed a significant increase, especially Eastern Cape which increased to 85,4% in 2017 which represents a 30,1 percentage points increase (roughly 2 percentage points per annum); meanwhile, KwaZulu-Natal rose to 82,9% (a 14,5 percentage points difference). It is evident that the inequality between provinces in terms of accessing electricity has narrowed over the years.

Figure 4.4.22: Proportion of households with access to electricity from the mains electricity supply by population group of household head (2002–2017)

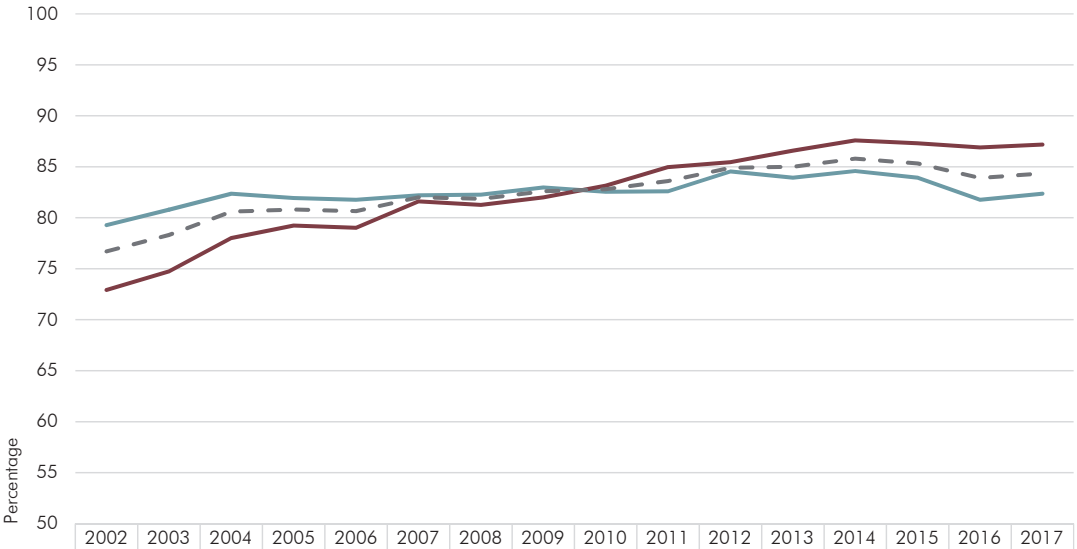


Source: GHS (2002–2017)

Figure 4.4.22 presents the proportion of households with access to electricity from the mains electricity supply by population group of the household head between 2002 and 2017. Households headed by whites and Indians/Asians had the highest proportion of households with access to electricity reaching 99,2% and 97,7% in 2002, respectively. These households stayed above 95% for the period under review recording 98,6% and 98,1% for white- and Indian/Asian-headed households in 2017, respectively.

Households headed by black Africans had proportionally lower levels of access to electricity relative to the other three population groups. In 2002, 70,6% of households headed by black Africans had access to electricity from the mains electricity supply this figure rose by 10,9 percentage points to 81,5% in 2017. This further shows how inequality between population groups in accessing electricity has also narrowed over the years.

Figure 4.4.23: Proportion of households with access to electricity from the mains electricity supply by sex of household head (2002–2017)

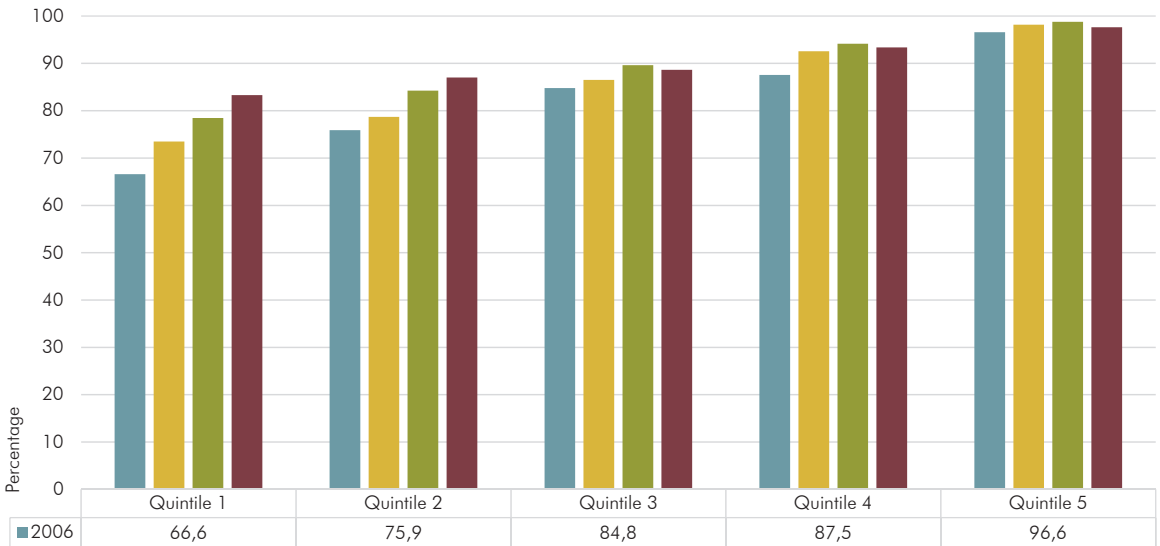


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	79,3	80,8	82,4	81,9	81,8	82,2	82,3	83,0	82,6	82,6	84,5	83,9	84,6	83,9	81,8	82,4
Female	72,9	74,7	78,0	79,2	79,0	81,6	81,3	82,0	83,1	85,0	85,5	86,6	87,6	87,3	86,9	87,2
RSA	76,7	78,3	80,6	80,8	80,7	82,0	81,9	82,6	82,8	83,6	84,9	85,0	85,8	85,3	83,9	84,4

Source: GHS (2002–2017)

Figure 4.4.23 shows the proportion of households with access to electricity from the mains electricity supply by sex of the household head between 2002 and 2017. In 2002, there was a 6,4 percentage points difference between female-headed households (72,9%) and male-headed households (79,3%) in accessing electricity from the mains supply. Interestingly, the inequality between the two sexes has notably changed over the years. While male-headed households reported higher access levels between 2002 and 2009, female-headed households' access to the mains electricity supply surpassed their male counterparts in 2010. By 2017, female-headed households had reached 87,2% access level, while male-headed households were at 82,4%.

Figure 4.4.24: Proportion of households with access to electricity from the mains electricity supply by per capita income quintile (2006, 2009, 2011 & 2015)



	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
2006	66,6	75,9	84,8	87,5	96,6
2009	73,5	78,7	86,5	92,5	98,2
2011	78,5	84,2	89,6	94,1	98,8
2015	83,3	87,0	88,6	93,4	97,6

Source: IES 2005/06, LCS 2008/09, IES 2010/11 and LCS 2014/15

Using data from the IES and LCS, Figure 4.4.24 shows the proportion of households with access to electricity from the mains electricity supply by income quintile between 2006 and 2015. Only 66,6% of households in the poorest quintile (Quintile 1) in 2006 reported having access to electricity, which increased to 83,3% by 2015 (a 16,7 percentage points increase). Similarly, improvements are observed in households in Quintile 2, although to a lesser degree. At the other end of the scale, households in the richest quintile (Quintile 5) maintained a very high level of access to electricity. Given these trends and the improvements noted in Figure 4.4.24, it is worthwhile looking into access to electricity by poverty status.

Table 4.4.1: Proportion of poor and non-poor households with access to electricity from the mains electricity supply by province (2009 & 2015) (LBPL)

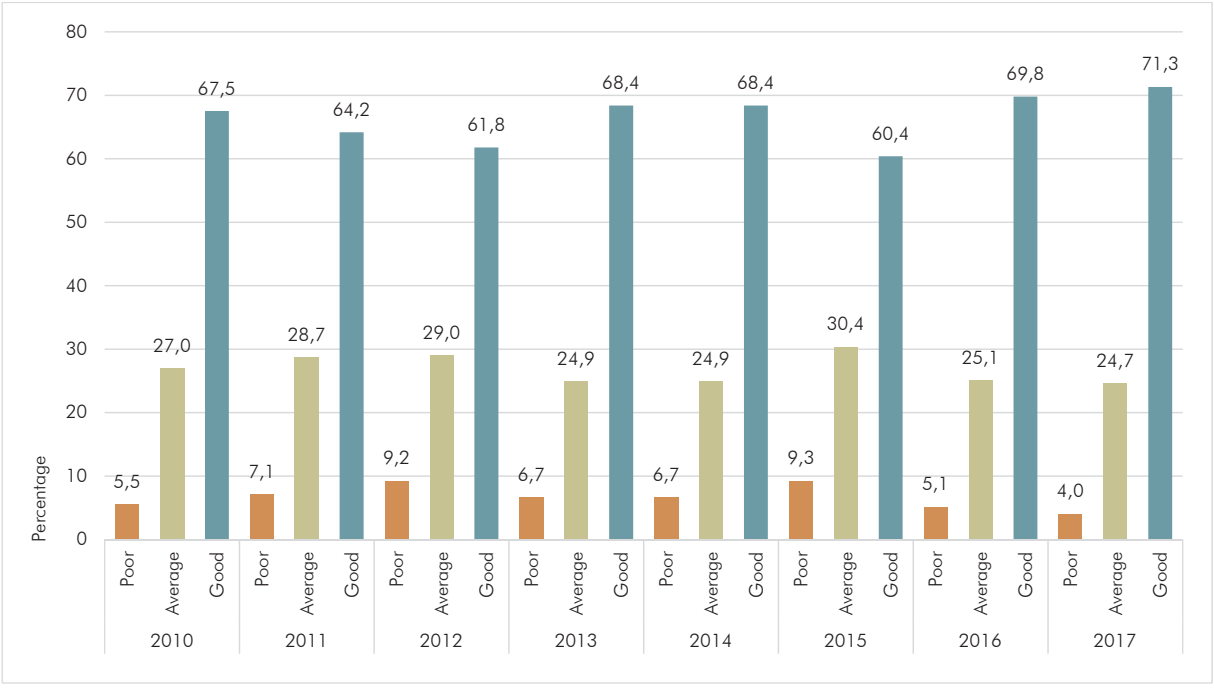
Province	Poor		Non-poor	
	2009	2015	2009	2015
Western Cape	79,2	73,4	94,6	89,3
Eastern Cape	51,3	73,4	77,6	87,3
Northern Cape	72,1	83,4	90,6	92,9
Free State	82,2	79,8	91,9	88,8
KwaZulu-Natal	54,4	72,7	82,6	84,6
North West	78,9	85,7	84,7	84,1
Gauteng	66,9	73,1	88,2	92,3
Mpumalanga	77,1	85,5	87,3	92,2
Limpopo	74,2	92,7	84,5	95,7
South Africa	67,0	86,9	78,8	89,8

Source: LCS 2008/09 & LCS 2014/15

Table 4.4.1 showed that the proportion of households in South Africa connected to electricity for both poor and non-poor households increased between 2009 and 2015. The biggest increases in the proportions for poor households connected to the mains supply is in Eastern Cape from 51,3% in 2009 to 73,4% in 2015 and KwaZulu-Natal from 54,4% in 2009 to 72,7% in 2015. Western Cape and Free State indicated a slight drop in the proportion of poor households with access to electricity, decreasing from 79,2% and 82,2% in 2009 to 73,4% and 79,8% in 2015, respectively. Similarly, there was also a small decrease in the proportions for non-poor households connected to the mains supply in Western Cape from 94,6% in 2009 to 89,3% in 2015 and in Free State from 91,9% in 2009 to 88,8% in 2015. Generally, inequality has reduced for both poor and non-poor households between 2009 and 2015 in terms of access to electricity.

4.4.4.1.2 Perceived quality of electricity supply service

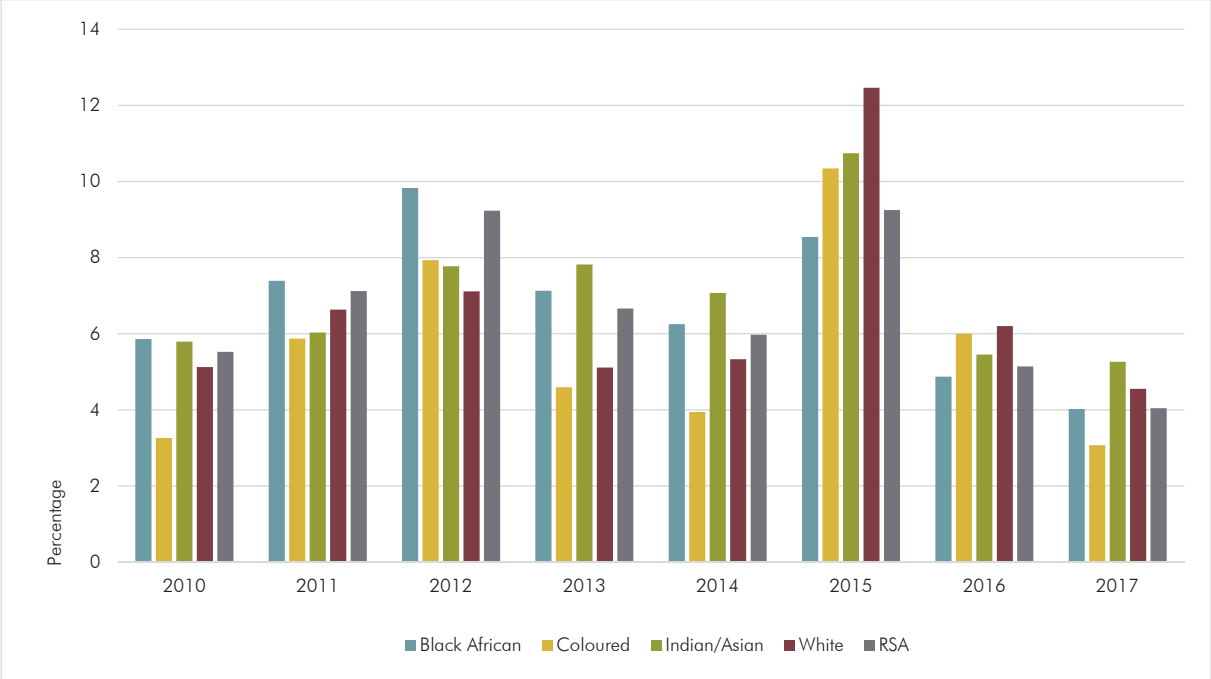
Figure 4.4.25: Perceived quality of electricity supply services at national level (2010–2017)



Source: GHS (2010–2017)

In addition to access to services, the quality of such services is also a major concern. Households were asked to rate how they perceived the quality of their electricity supply services; which included maintenance, meter reading, billing, complaint handling and connection installation. The response options included *'good', 'average' and 'poor'*. Over the 8-year period, a majority of South African households were pleased with the quality of their electricity supply, as those that perceived it to be good ranged between 60,4% to 71,3%; while those that perceived it to be poor were less than 10%.

Figure 4.4.26: Perceived quality of electricity supply services rated as poor by population group of the household head (2010–2017)



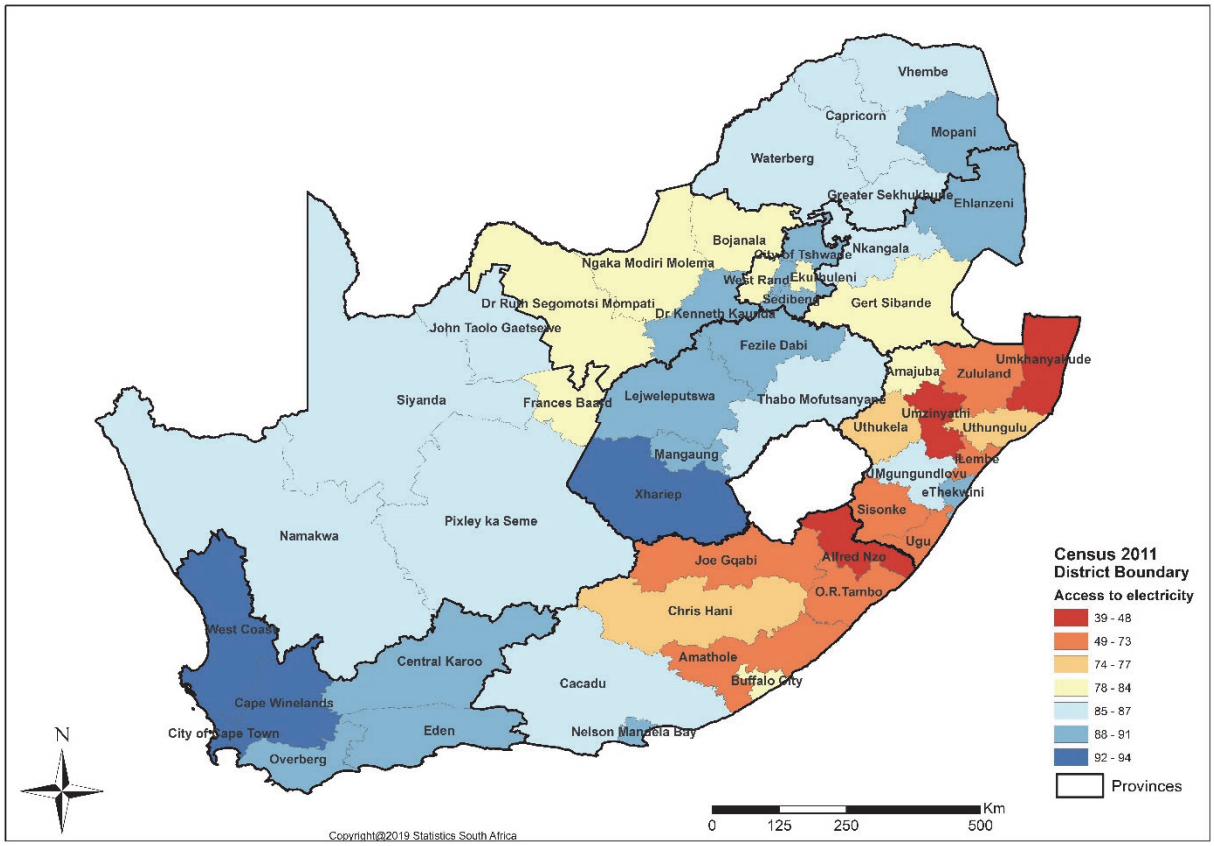
Source: GHS (2010–2017)

When disaggregated by the population group of the household head, with focus on those that perceived the quality of their electricity supply being poor, we observe an interesting trend. In 2015, the proportion of white-headed households that perceived their electricity supply as poor saw a peak of 12,5%; this later halved to 6,2% by the following year. A similar trend is also observed for Indian/Asian-headed households which also peaked in 2015 to 10,7% and later declined to 5,3% in 2017. This increase of perceived poor quality coincided with the heavy load shedding that occurred in 2015 across the country. For most of the years coloured-headed households had the smallest proportion of households that perceived their electricity supply to be poor, relative to other population groups, as it started at 3,3% in 2010 and dropped to 3,1% by 2017.

4.4.4.1.3 Mapping access to electricity

This section presents estimates on the proportion of households with access to electricity at district and municipal levels using data from the Census 2011. Access to electricity was derived by choosing all households who indicated that they use electricity as an energy/fuel for lighting, cooking and/or heating.[27]

Map 4.4.1: Proportion of households with access to electricity by district municipality (2011)

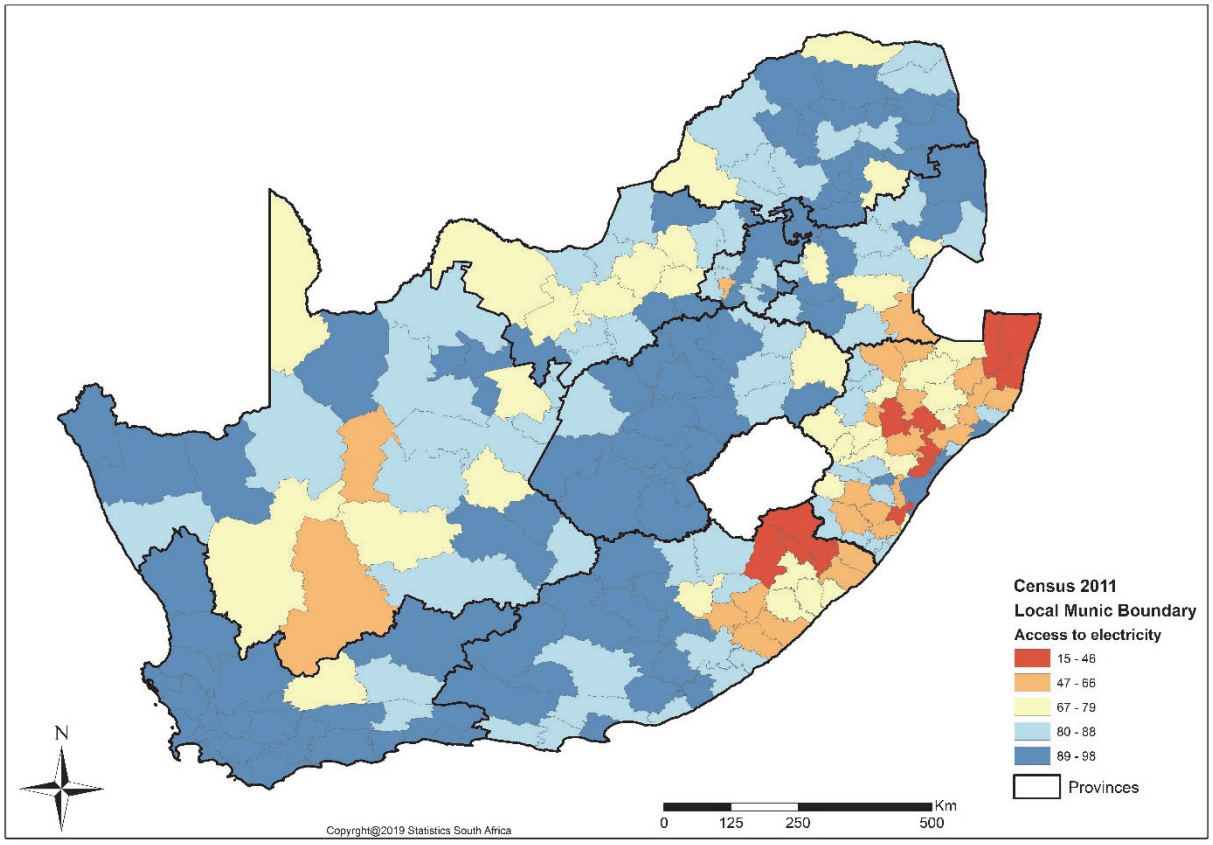


Source: Census 2011, own calculations

As illustrated in Map 4.4.1, KwaZulu-Natal and Eastern Cape had households with the lowest proportion of access to electricity as opposed to households in other provinces. Umzinyathi (49,0%), followed by Alfred Nzo (47,3%) and Umkhanyakude (39,6%) were the districts that had the lowest proportion of households with access to electricity in the country The same pattern is observed in Section 4.4.4.1.1 at a provincial level using household survey data.

[27] It should be noted that 'access to electricity' is not completely comparable to 'access to mains electricity'. Access to electricity would be higher as it also includes access to other sources of electricity, as well as informal access such as illegal connections, etc.

Map 4.4.2: Proportion of households with access to electricity by local municipality (2011)



Source: Census 2011, own calculations

The local municipalities with the lowest proportion of households that had access to electricity were located in Kwazulu-Natal and Eastern Cape. These proportions ranged from 15,0% to 50,0%. The Umhlabuyalingana municipality (KwaZulu-Natal) had the lowest proportion (15,0%) of households with access to electricity. While a similar pattern was also observed for the respective districts, a wide variation among municipalities within the same district is seen. As compared to Map 4.4.1, some local municipalities have a much lower proportion of households with access to electricity as compared to the average of the district within which they are located.

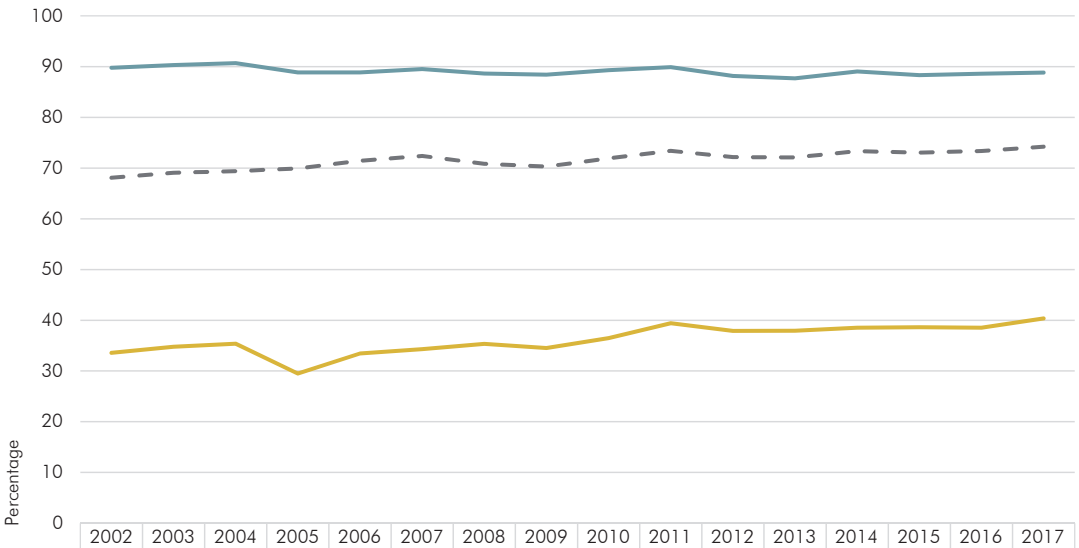
4.4.4.2 Water

Access to safe drinking water has an impact on the health, well-being and safety of the population. Water is the source of life and one of the most precious and critical natural resources, especially in South Africa which is one of the driest countries in the world. In this section, the focus is mainly on access, distance, interruptions, quality of water services and sources. Analysis is done at the household level using two data sources namely, the GHS series and the LCS 2008/09 and 2014/15.

4.4.4.2.1 Access to water

For this section, the use of 'access to water' refers to access to piped or tap water inside a dwelling or on-site. Thus, access to water in this case excludes access to piped or tap water off-site, such as water sourced from communal or public taps.

Figure 4.4.27: Proportion of households with access to water by settlement type (2002–2017)

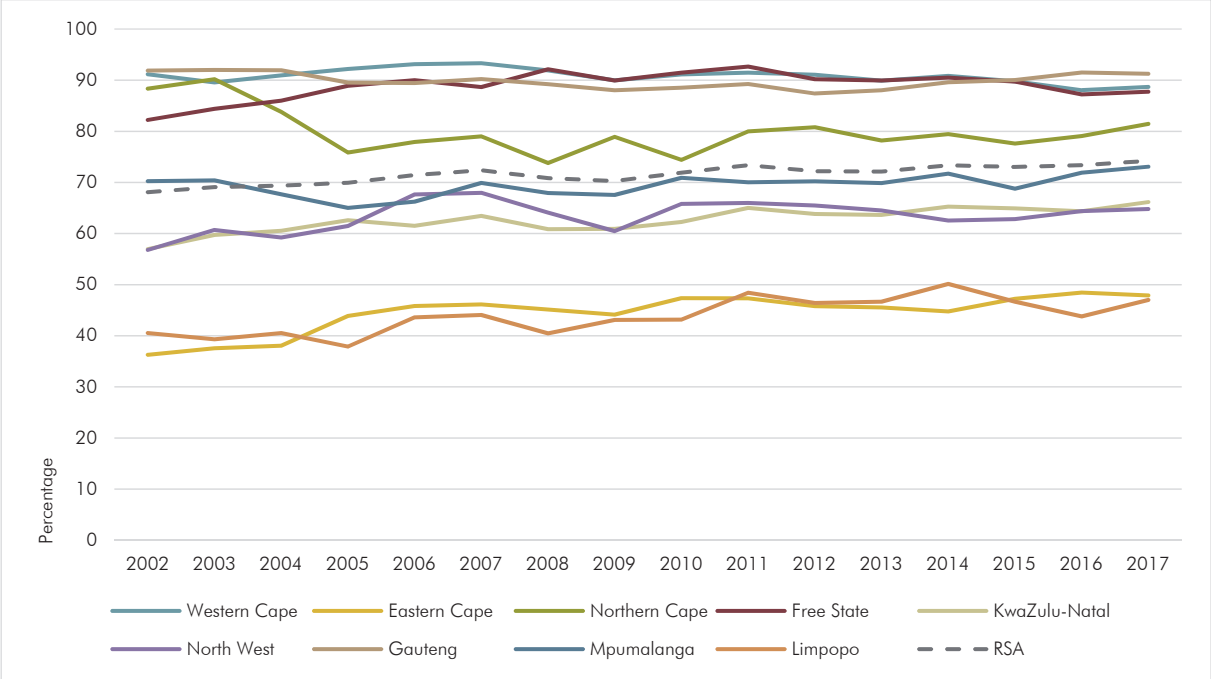


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Urban	89,8	90,3	90,7	88,9	88,9	89,5	88,6	88,4	89,3	89,9	88,2	87,7	89,1	88,3	88,6	88,8
Rural	33,6	34,8	35,4	29,5	33,5	34,3	35,4	34,5	36,5	39,4	37,9	37,9	38,5	38,6	38,5	40,4
RSA	68,1	69,1	69,4	69,9	71,4	72,4	70,8	70,3	71,9	73,4	72,2	72,1	73,3	73,0	73,4	74,2

Source: GHS (2002–2017)

The proportion of households with access to piped or tap water inside their dwelling or on-site was higher in urban areas than their rural counterparts as depicted in Figure 4.4.27. Households in urban areas recorded an access level of 89,8% in 2002 which slightly declined to 88,8% in 2017. Meanwhile, rural households increased from 33,6% to 40,4% between 2002 and 2017. Overall, households in rural areas were more deprived than those in urban areas highlighting the inequality that exists between settlement types.

Figure 4.4.28: Proportion of households with access to water by province (2002–2017)

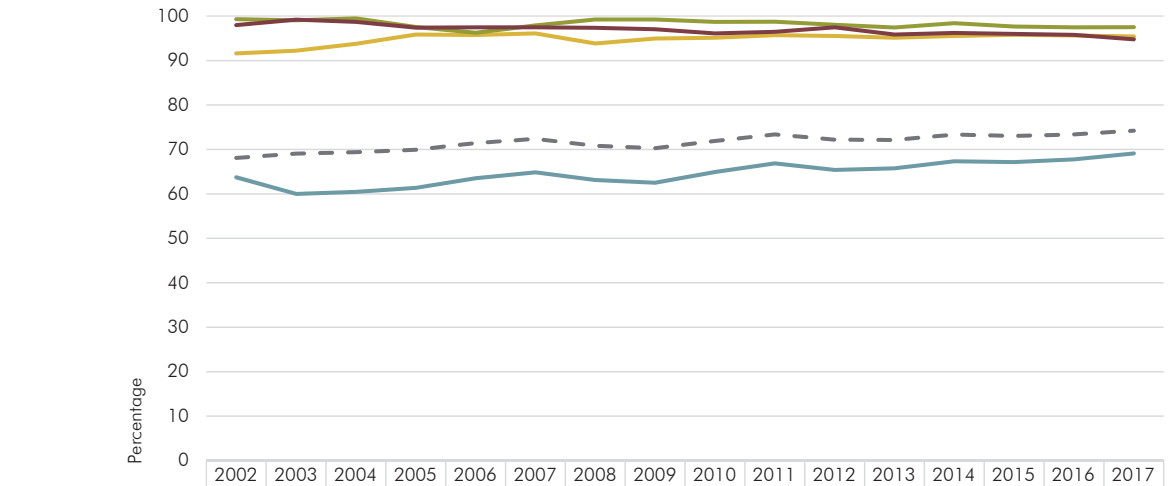


Source: GHS (2002–2017)

Figure 4.4.28 shows the proportion of households with access to piped or tap water inside their dwelling or on-site by province between 2002 and 2017. Over this time period, Eastern Cape and Limpopo have been the provinces with the lowest proportion of households with access to piped or tap water; however, Eastern Cape has also experienced a notable rise in the proportion of households with access to piped or tap water as it increased by 11,6 percentage points from 36,3% in 2002 to 47,9% in 2017. The province with the third lowest proportion of households with access to piped or tap water was North West with 56,8% in 2002 followed closely by KwaZulu-Natal at 57,0%. By 2017, North West had increased to 64,8% and KwaZulu-Natal rose to 66,2%.

Gauteng, Western Cape, Northern Cape and Free State were the four provinces that consistently had proportions that were above the national rate. However, Northern Cape experienced a drop in 2005 and remained flat at that level reaching 81,5% in 2017. Ultimately, Eastern Cape and Limpopo remain the provinces with the lowest access to piped or tap water relative to the other provinces (although the gains made by Eastern Cape are still commendable) and thus, it experienced greater levels of inequality in terms of this critical service delivery area.

Figure 4.4.29: Proportion of households with access to water by population group of the household head (2002–2017)



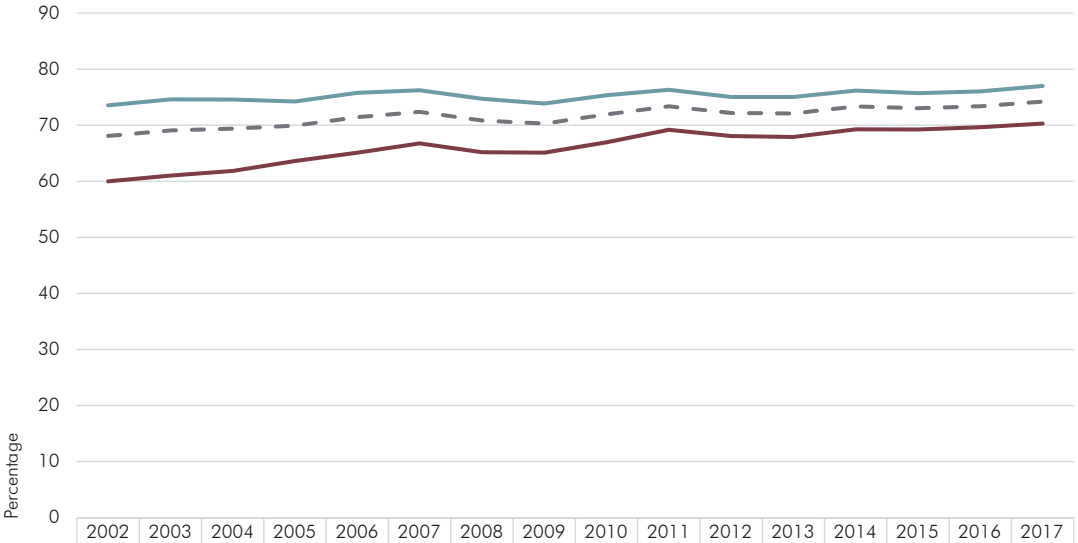
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Black African	63,7	60,0	60,5	61,4	63,5	64,8	63,1	62,5	64,9	66,9	65,4	65,7	67,3	67,1	67,8	69,1
Coloured	91,6	92,2	93,8	95,9	95,8	96,1	93,8	95,0	95,1	95,7	95,5	95,1	95,5	95,8	95,7	95,4
Indian/Asian	99,3	99,0	99,5	97,6	96,2	97,9	99,3	99,2	98,7	98,8	98,1	97,4	98,4	97,7	97,5	97,5
White	98,0	99,2	98,7	97,4	97,5	97,5	97,4	97,0	96,1	96,5	97,5	95,9	96,2	96,0	95,8	94,8
RSA	68,1	69,1	69,4	69,9	71,4	72,4	70,8	70,3	71,9	73,4	72,2	72,1	73,3	73,0	73,4	74,2

Source: GHS (2002–2017)

Figure 4.4.29 shows the proportion of households with access to piped or tap water by population group of the household head between 2002 and 2017. Black African-headed households reported the lowest proportion of households with access to piped or tap water ranging from 63,7% in 2002 to 69,1% in 2017, representing an increase of 5,4 percentage points. There was not much change in the proportion of households headed by the other three population groups in terms of access to piped or tap water over the period under review. In 2002, 99,3% of Indian/Asian-headed households, 98,0% of white-headed households, and 91,6% of coloured-headed households had access to piped or tap water.

Despite the general positive story in terms of access to piped or tap water, black African-headed households clearly remained well below the access levels experienced by the other three population groups. Although black African-headed households did record an increase between 2002 and 2017, their lower level of access does illustrate continued inequality.

Figure 4.4.30: Proportion of households with access to water by sex of the household head (2002–2017)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	73,6	74,6	74,6	74,2	75,8	76,2	74,7	73,9	75,3	76,3	75,0	75,1	76,2	75,7	76,0	77,0
Female	60,0	61,0	61,9	63,6	65,1	66,8	65,2	65,1	67,0	69,2	68,1	67,9	69,3	69,2	69,6	70,3
RSA	68,1	69,1	69,4	69,9	71,4	72,4	70,8	70,3	71,9	73,4	72,2	72,1	73,3	73,0	73,4	74,2

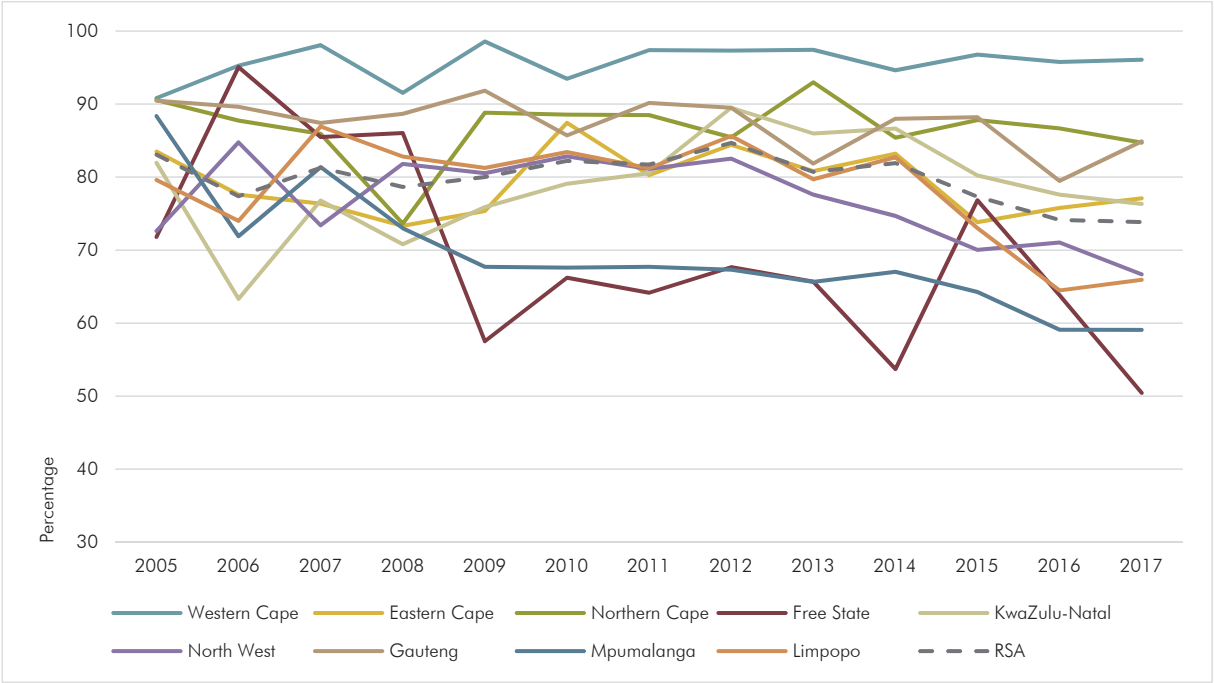
Source: GHS (2002–2017)

Figure 4.4.30 presents the proportion of households with access to piped or tap water by the sex of the household head. Over the 16-year period, there has been an increase in access to piped or tap water for both male- and female-headed households. Between 2002 and 2017, the trend for both sexes follows a similar trajectory, although there remains a disparity between the sexes as there are more male-headed households with access to piped or tap water. Male-headed households recorded an access level of 73,6% in 2002 increasing to 77,0% in 2017. Female-headed households had more substantial gains between 2002 and 2017 increasing from 60,0% to 70,3%, respectively; this represents a 10,3 percentage points increase compared to 3,4 percentage points gain for male-headed households over the same period. Therefore, female-headed households improved at the faster rate relative to their male counterparts and narrowed the gap that existed in 2002; however, female-headed households were still more deprived in 2017.

In 2003, the Department of Human Settlements, Water and Sanitation introduced a new strategy called the 'Strategic Framework for Water Services'. This strategy emanate from the Reconstruction and Development Programme (RDP), it was developed to improve water services and ensure the provision of at least basic water and sanitation services to all people living in South Africa. In particular, the policy recognized that women and children are the main individuals burdened by the need to carry water over long distances every day. The strategy also introduced the concept of 'universal service obligation' which set out the water services infrastructure necessary to supply 25 litres of potable water per capita per day within 200 metres of a household and with a minimum flow of 10 litres per minute (in the case of communal water points). The 200m threshold is thus, an important yardstick for evaluating progress in water service delivery to those households that do not

yet have access to piped or tap water in the dwelling or on-site.[28] For this analysis, the focus is mainly on households that reported to have access to neighbour's taps and/or communal taps.

Figure 4.4.31: Proportion of households with access to piped or tap water within 200m of their dwellings by province (2005–2017)

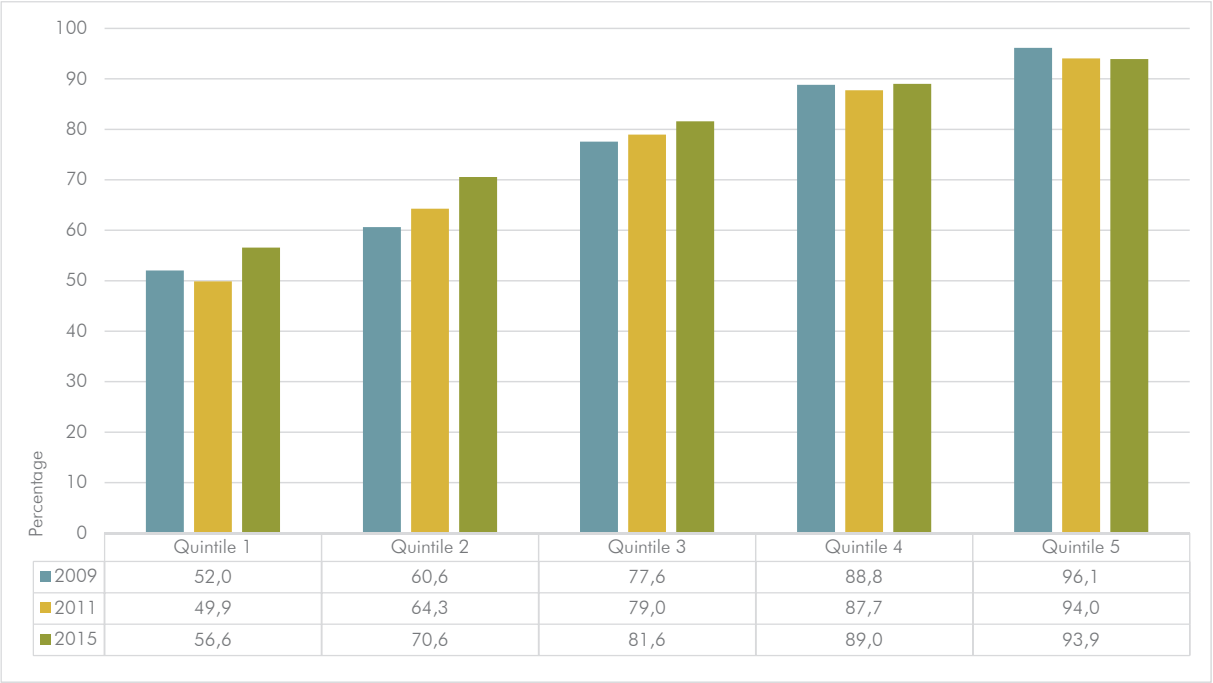


Source: GHS (2005–2017)

Figure 4.4.31 shows the proportion of households with access to piped or tap water within 200m of their dwelling by province from 2005 to 2017. As seen in Figure 4.4.31, Free State and Mpumalanga were the provinces that had the lowest proportion of households with access to piped or tap water within 200m of their dwellings. In 2005, the level of access for Mpumalanga was higher than the national rate at 88,4%, but this proportion saw a notable decline reaching 59,1% in 2017. Meanwhile, the proportion for Free State changed between 2005 and 2017 with several ups and downs over that period. In 2005, the Western Cape had the highest proportion of households with access to piped or tap water within 200m of their dwelling at 90,8% in 2005 and 96,1% in 2017. The other provinces were clustered together and experienced a gradual decline between 2005 and 2017.

[28] Department of Human Settlements, Water and Sanitation previously called the Department of Water Affairs and Forestry.

Figure 4.4.32: Proportion of households with access to piped or tap water inside the dwelling or on-site by income per-capita quintile (2009, 2011 & 2015)



	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
2009	52,0	60,6	77,6	88,8	96,1
2011	49,9	64,3	79,0	87,7	94,0
2015	56,6	70,6	81,6	89,0	93,9

Source: LCS 2008/09, IES 2010/11 and LCS 2014/15

The proportion of households with access to piped or tap water inside their dwelling or on-site by income quintiles is shown in Figure 4.4.32. Households in Quintile 1 started off at 52,0% in 2009, declining to 49,9% in 2011 before increasing to 56,6% in 2015. Meanwhile, the access level of the top quintile dropped from 96,1% in 2009 to 93,9% in 2015, which translates into a 2,2 percentage points change. As the income quintile increases so does the proportion of households with access to piped or tap water inside the dwelling or on-site.

Table 4.4.2: Proportion of poor and non-poor households with access to piped or tap water inside the dwelling or on-site by province (2009 & 2015) (LBPL)

Province	Poor		Non-poor	
	2009	2015	2009	2015
Western Cape	78,3	79,0	95,2	93,1
Eastern Cape	24,0	25,3	65,2	60,5
Northern Cape	65,3	65,0	79,6	80,9
Free State	83,1	85,1	92,4	93,5
KwaZulu-Natal	37,3	47,5	80,1	78,7
North West	51,1	52,8	73,3	70,9
Gauteng	76,9	83,2	93,2	95,6
Mpumalanga	56,9	53,1	76,2	78,1
Limpopo	40,0	33,6	61,0	58,5
RSA	50,9	52,9	84,3	83,5

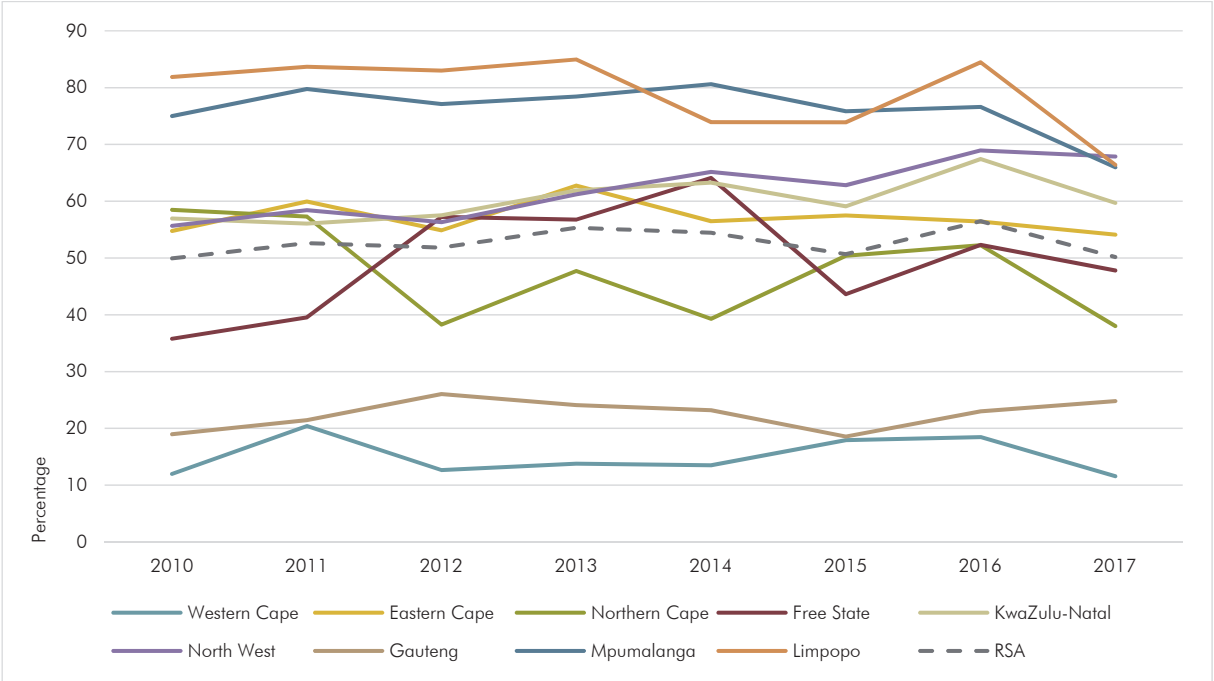
Source: LCS 2008/09 and LCS 2014/15

The proportion of households connected to piped or tap water inside their dwelling or on-site for both poor and non-poor households remained flat between 2009 and 2015. Poor households in KwaZulu-Natal recorded the largest increase between 2009 and 2015. The proportion of households with access to piped or tap water inside their dwelling or on-site increased by 10,2 percentage points in KwaZulu-Natal, rising from 37,3% in 2009 to 47,5% in 2015. Meanwhile, the proportion of poor households connected to piped or tap water inside the dwelling or on-site in Limpopo dropped from 40,0% in 2009 to 33,6% in 2015, Mpumalanga from 56,9% to 53,1%, and Northern Cape from 65,3% to 65,0%.

For non-poor households, their access was generally higher with Gauteng being the top performing province in terms of access, with 95,6% in 2015 increasing from 93,2% in 2009. Non-poor households in the Western Cape, Free State and Gauteng reported proportions above the national rate when it comes to access to piped or tap water inside the dwelling or on-site. Meanwhile, the figure for non-poor households in Eastern Cape decreased from 65,2% to 60,5% between 2009 and 2015 inside the dwelling or on-site.

4.4.4.2.2 Water interruptions

Figure 4.4.33: Proportion of households that received municipal water supply and reported water interruptions that lasted longer than 2 days by province (2010–2017)

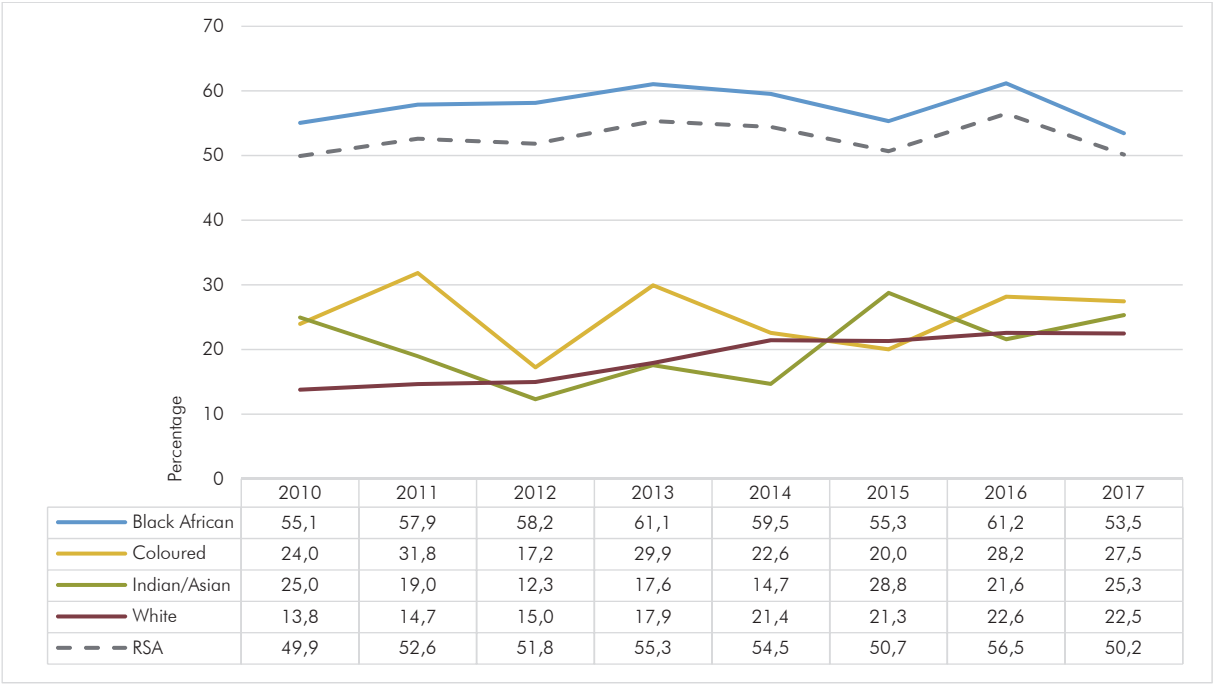


Source: GHS (2010–2017)

The proportion of households that received municipal water supply and reported water interruptions that lasted longer than 2 days by province is presented in Figure 4.4.33. Households in Limpopo and Mpumalanga consistently reported the most interruptions between 2010 and 2017; however, the proportion decreased over time reaching 66,4% and 66,0% in 2017 down from 81,9% and

75,0% in 2010, respectively. These were followed by North West (67,9%) and KwaZulu-Natal (59,7%) which were the third and fourth provinces that reported the most interruptions in their water supply that lasted longer than 2 days in 2017. Meanwhile, Western Cape (11,6%) and Gauteng (24,8%) had the least amount of water interruptions over the whole period. Given the proportion of interruptions that are still rather high in a majority of provinces, there is still a lot of development required to improve the countries water systems and ensure they are more reliable.

Figure 4.4.34: Proportion of households that received municipal water supply and reported water interruptions that lasted longer than 2 days by population group of the household head (2010–2017)



	2010	2011	2012	2013	2014	2015	2016	2017
Black African	55,1	57,9	58,2	61,1	59,5	55,3	61,2	53,5
Coloured	24,0	31,8	17,2	29,9	22,6	20,0	28,2	27,5
Indian/Asian	25,0	19,0	12,3	17,6	14,7	28,8	21,6	25,3
White	13,8	14,7	15,0	17,9	21,4	21,3	22,6	22,5
RSA	49,9	52,6	51,8	55,3	54,5	50,7	56,5	50,2

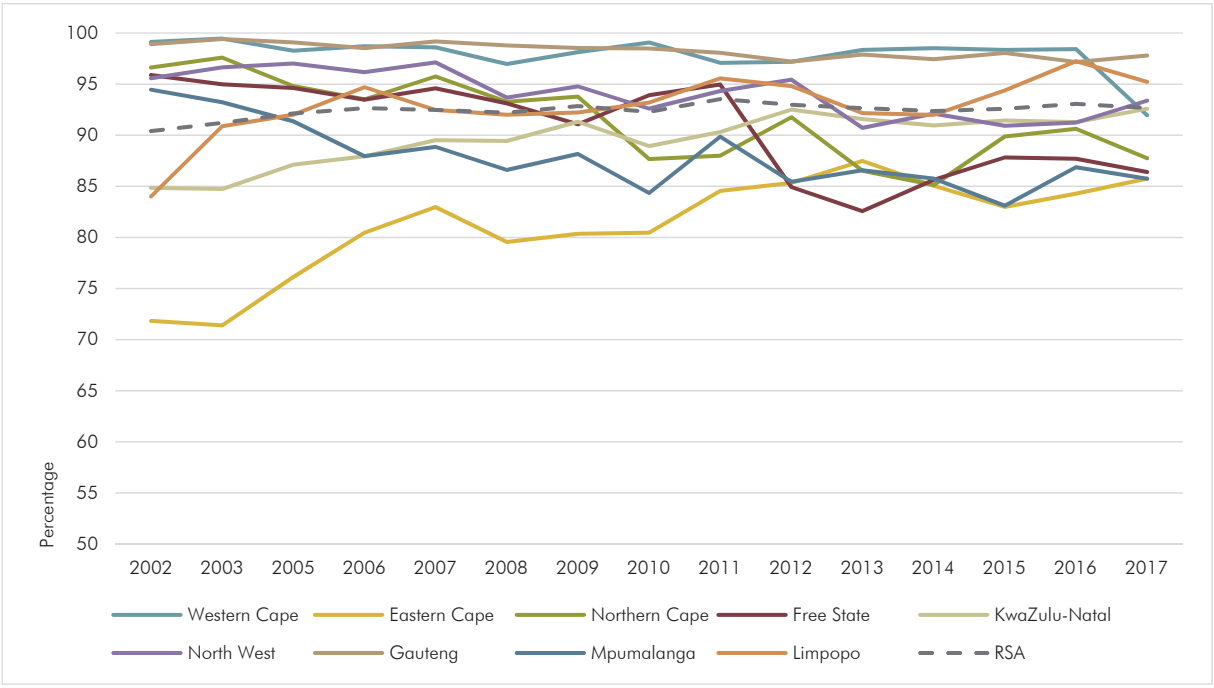
Source: GHS (2010–2017)

Figure 4.4.34 shows the proportion of households that received municipal water supply and reported water interruptions that lasted longer than 2 days by population group of the household head between 2010 and 2017. Black African-headed households had notably higher proportions of interruptions as compared to the other three population groups. Over this time period, black African-headed households reported proportions above the national rate. Meanwhile, coloured- and Indian/Asian -headed households had some upward and downward movements between 2010 and 2017. White-headed households had the lowest proportion of households that received municipal water supply and reported water interruptions that lasted longer than 2 days; however, white-headed households had also reported an increase from 13,8% in 2010 to 22,5% in 2017. Thus, there was an inequality between black African-headed households and households headed by other population groups.

4.4.4.2.3 Quality of water

The GHS includes questions to establish the quality of drinking water. These include whether the drinking water is safe to drink as discussed in Figure 4.4.35, as well as the smell, taste, and look of the water. This section further investigates the quality of water supplied by municipalities.

Figure 4.4.35: Proportion of households that regard the quality of water safe to drink by province (2002–2017)

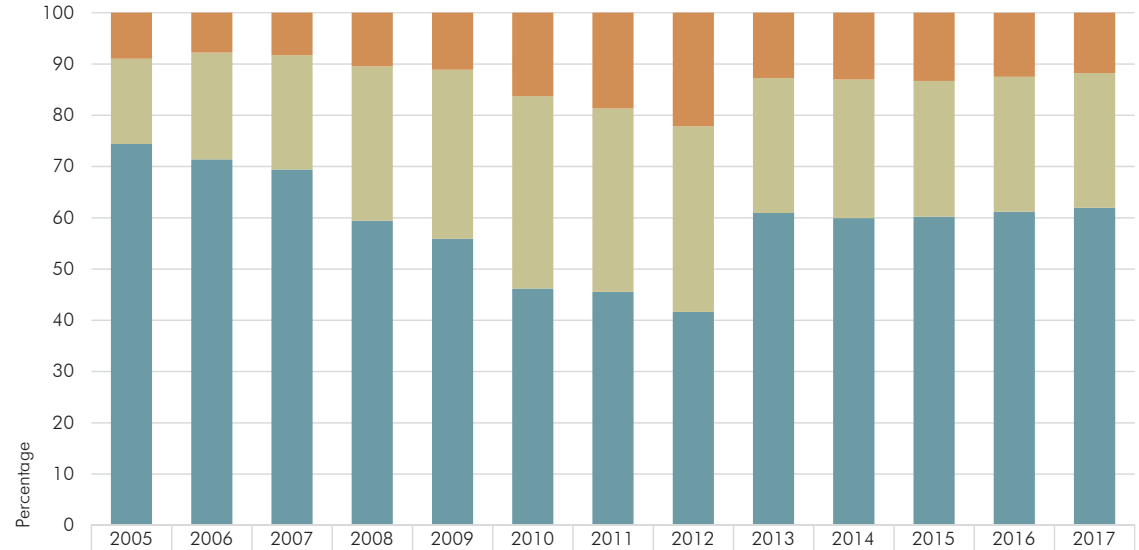


Source: GHS (2002–2017)

Figure 4.4.35 shows the proportion of households that regarded the quality of water safe to drink by province between 2002 and 2017. Overall, Eastern Cape reported the lowest proportion of households that regarded the quality of water as safe to drink; however, this province also experienced a significant increase in safe drinking water, from 71,8% in 2002 to 85,8% in 2017. Limpopo and KwaZulu-Natal also reported notable increases from 84,0% in 2002 to 95,2% in 2017 and from 84,8% in 2002 to 92,6% in 2017, respectively.

Free State, Northern Cape and Mpumalanga were the three provinces that reported declines in the proportion of households that regarded the quality of water as safe to drink between 2002 and 2017. Meanwhile, the proportion of households that regarded the quality of water as safe to drink remained flat over the years in Gauteng and Western Cape.

Figure 4.4.36: Proportion of households rating the quality of municipal water services (2005–2017)



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Poor	9,0	7,8	8,3	10,5	11,1	16,3	18,7	22,2	12,7	13,0	13,3	12,5	11,8
Average	16,6	20,9	22,3	30,1	33,0	37,5	35,8	36,2	26,3	27,0	26,5	26,3	26,2
Good	74,4	71,4	69,4	59,4	55,9	46,2	45,5	41,6	60,9	59,9	60,2	61,2	62,0

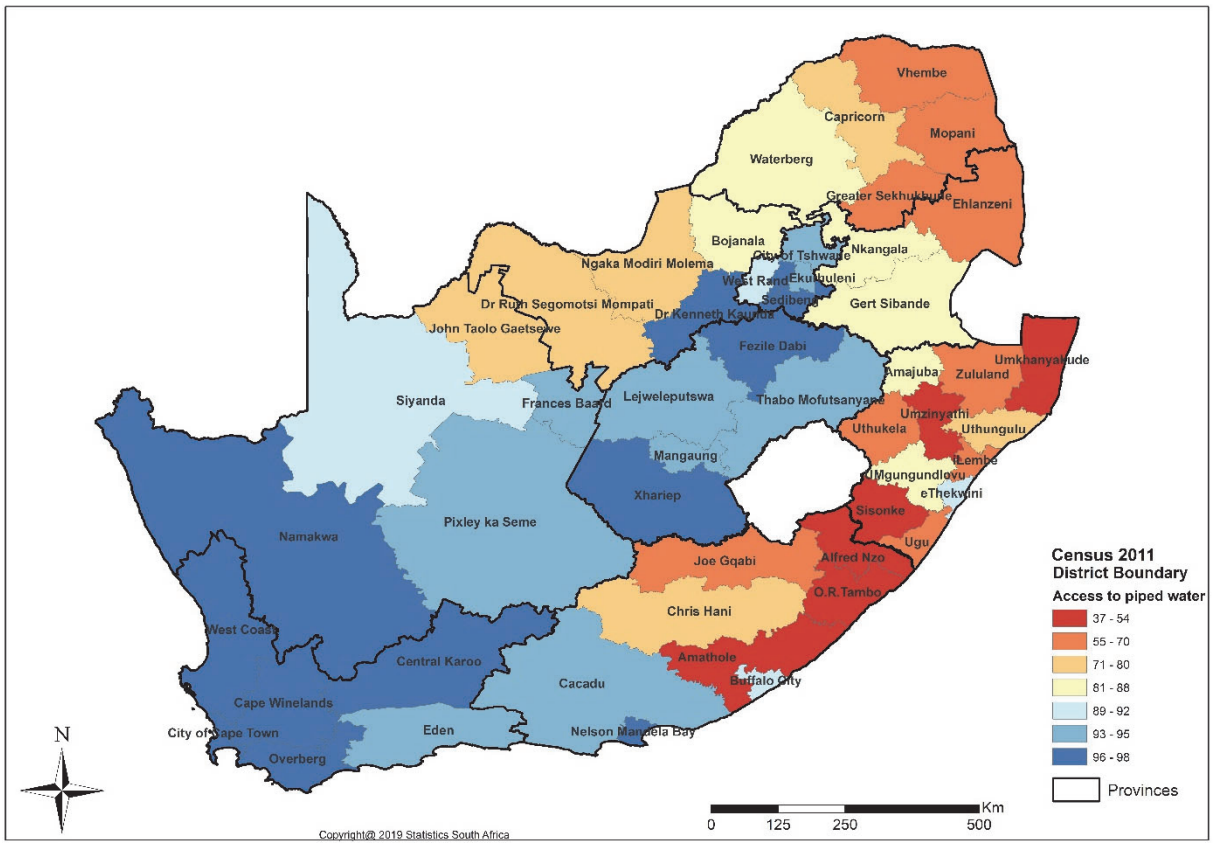
Source: GHS (2005–2017)

Figure 4.4.36 presents information on the proportion of households that rated municipal water services as 'good', 'average' or 'poor' from 2005 to 2017. According to households, the quality of municipal water services as classified as 'good' decreased from 74,4% in 2005 to a low of 41,6% in 2012. As from 2013, the proportion of households that rated the quality of municipal water services as 'good' increased to approximately 60,0% and stayed at this level recording 62,0% in 2017. Meanwhile, the proportion of households that rated their water services as 'poor' was at its highest levels between 2010 and 2012, peaking at 22,2% in 2012.

4.4.4.2.4 Mapping access to water

This section presents estimates on the proportion of households with access to water at district and municipal levels using data from the Census 2011. Access to piped water was defined as any household that reported having access to 'Piped (tap) water inside the dwelling /institution' or 'Piped (tap) water inside the yard' or 'Piped (tap) water on community stand: distance less than 200m from dwelling/institution'.

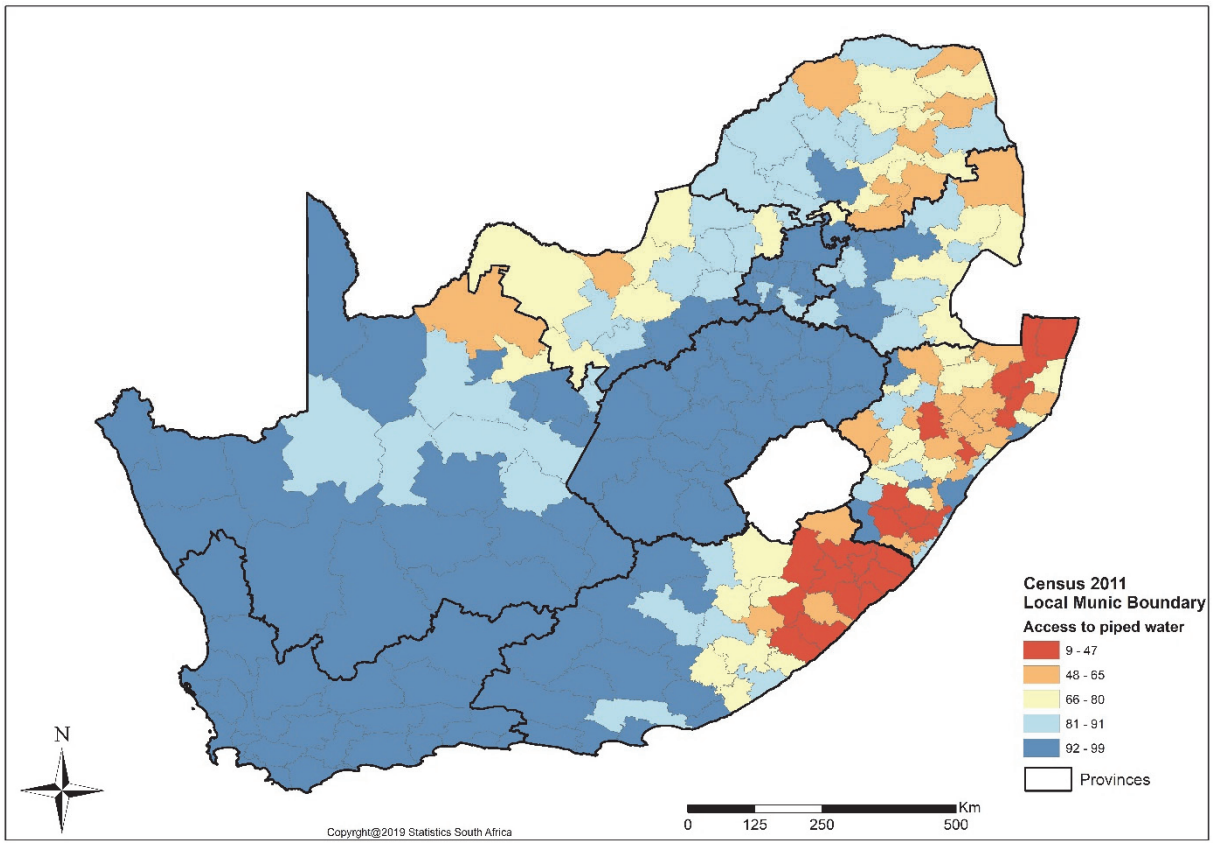
Map 4.4.3: Proportion of households with access to piped water by district municipality (2011)



Source: Census 2011

Map 4.4.3 shows the proportion of households with access to piped water by districts in 2011. A wide variation was observed in Eastern Cape, which had districts falling between the low and high access ranges. OR Tambo and Alfred Nzo districts located in Eastern Cape had the lowest percentage of households with access to piped water in 2011, while Nelson Mandela Bay located within the same province showed the opposite with 96,4% of households having access to piped water. Another point that is worth stating, is only three out of the nine provinces namely, Western Cape, Free State and Gauteng had districts that showed equality where the percentage of households with access to piped water for all districts within these provinces fell in the range 90% to 100%.

Map 4.4.4: Proportion of households with access to piped water by local municipality (2011)



Source: Census 2011

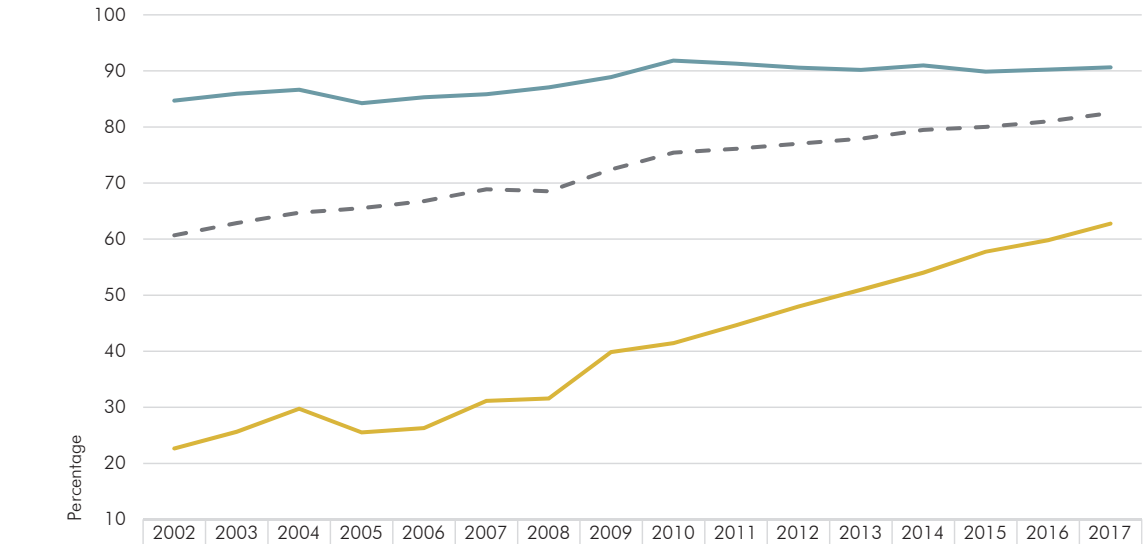
Map 4.4.4 shows that the majority of municipalities in South Africa had high levels of access to piped water in 2011. Furthermore, the map shows that the lowest levels of access to piped water were among households located in local municipalities situated in Eastern Cape and KwaZulu-Natal. Meanwhile, the levels of access to piped water in South Africa ranged between 48,7% and 99,2%.

4.4.4.3. Sanitation

According to the World Health Organization (WHO), 'improved sanitation' refers to sanitation facilities that hygienically separate human excreta from basic human contact. These sanitation facilities include flush toilets connected to a public sewerage system, flush toilets connected to sceptic tank or conservancy tank, pit latrine toilets with ventilation, and pour-to-flush toilets connected to a sceptic tank. Households with such toilet facilities are regarded as having 'improved sanitation'.

4.4.4.3.1 Access to improved sanitation

Figure 4.4.37: Proportion of households with access to improved sanitation by settlement type (2002–2017)

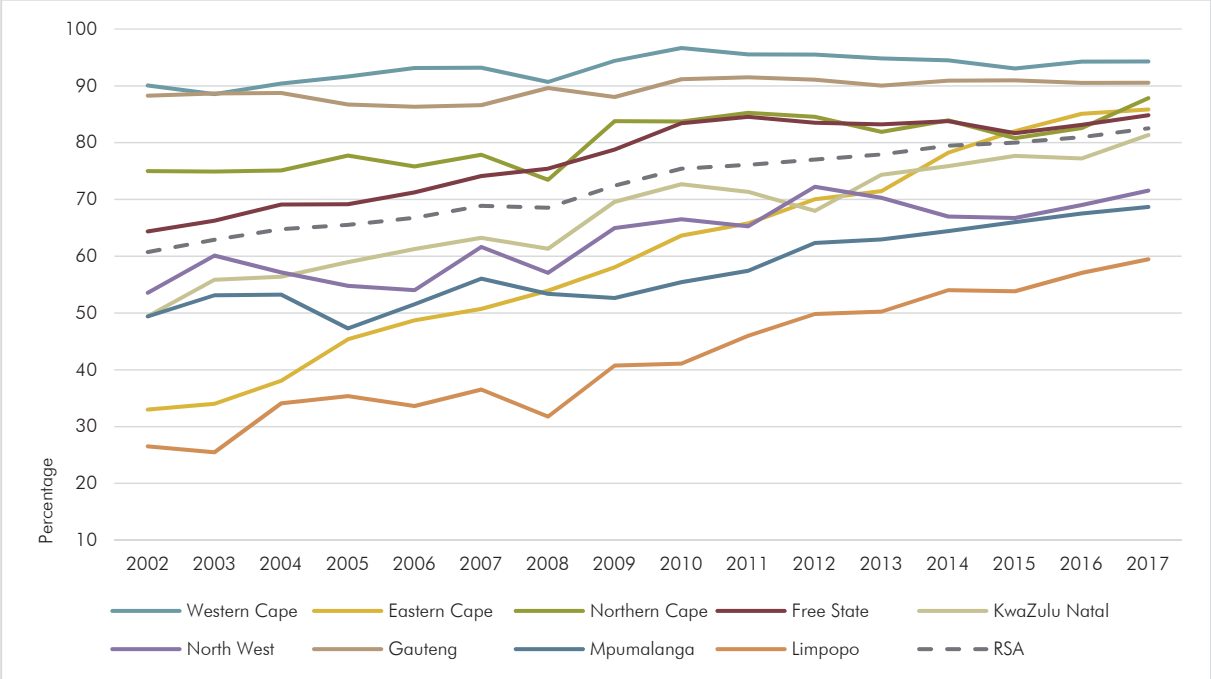


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Urban	84,7	85,9	86,6	84,3	85,3	85,8	87,1	88,9	91,8	91,3	90,6	90,2	91,0	89,9	90,2	90,6
Rural	22,7	25,7	29,7	25,5	26,3	31,2	31,6	39,9	41,5	44,6	48,0	51,0	54,0	57,8	59,8	62,8
RSA	60,7	62,9	64,7	65,5	66,8	68,9	68,6	72,4	75,4	76,1	77,0	77,9	79,5	80,0	81,0	82,5

Source: GHS (2002–2017)

The proportion of households with access to improved sanitation by settlement type between 2002 and 2017 is shown in Figure 4.4.37. In 2002, 84,7% of households residing in urban areas had access to improved sanitation, while only 22,7% had access in rural areas. However, sanitation in rural areas saw a significant improvement over the years; by 2017, access levels for rural dwellers had increased by 40,1 percentage points to 62,8%. Thus, the gap between rural and urban areas was notably reduced.

Figure 4.4.38: Proportion of households with access to improved sanitation by province (2002–2017)

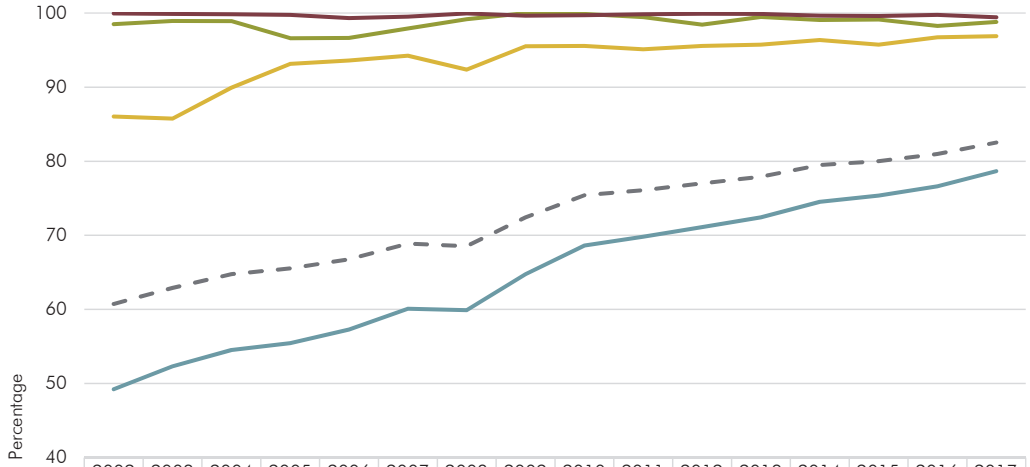


Source: GHS (2002–2017)

Figure 4.4.38 shows the proportion of households with access to improved sanitation by province. Nationally, the proportion of households with access to improved sanitation increased from 60,7% in 2002 to 82,5% in 2017. Western Cape and Gauteng had the highest proportion of households with access to improved sanitation over this period. For Western Cape, the proportion increased from 90,1% in 2002 to 94,3% in 2017 and for Gauteng it increased from 88,3% in 2002 to 90,6% in 2017. Below these two leading provinces was Northern Cape, starting off at 75,0% in 2002 and rose to 87,8% in 2017, followed by Free State at 64,4% in 2002 which increased by 20,4 percentage points to 84,8% in 2017.

Limpopo and Eastern Cape are the provinces with the lowest proportion of households that had access to improved sanitation relative to other provinces. However, they are also the provinces that witnessed the most growth over the period; in Eastern Cape, the proportion of households with access to improved sanitation increased by 52,6 percentage points, while Limpopo increased by 33,0 percentage points between 2002 and 2017.

Figure 4.4.39: Proportion of households with access to improved sanitation by population group of household head (2002–2017)



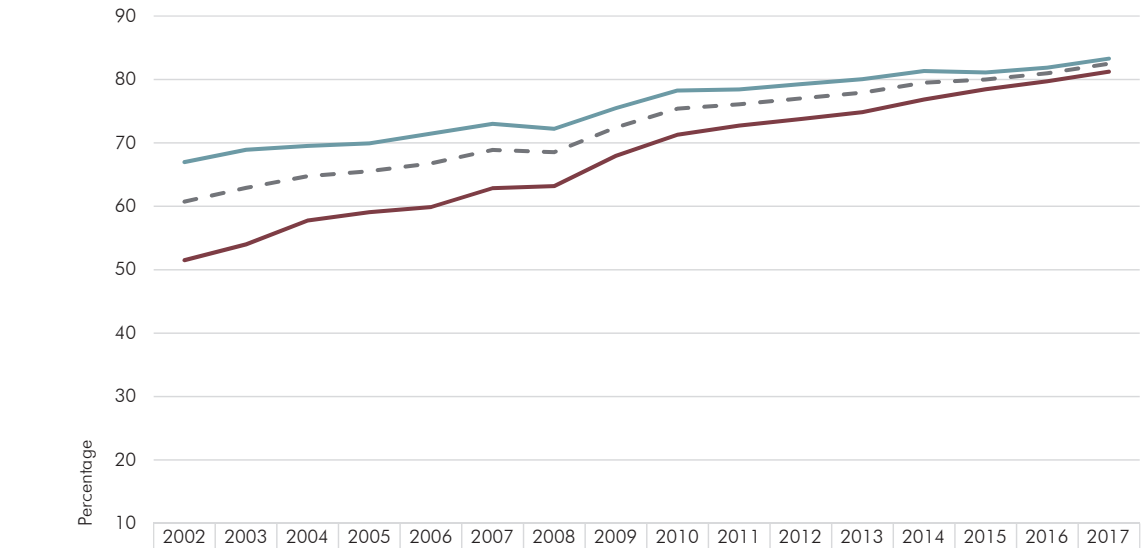
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Black African	49,2	52,3	54,5	55,5	57,3	60,1	59,9	64,8	68,6	69,8	71,1	72,4	74,5	75,4	76,6	78,7
Coloured	86,0	85,8	89,9	93,1	93,6	94,3	92,4	95,5	95,6	95,1	95,6	95,7	96,4	95,7	96,7	96,9
Indian/Asian	98,5	98,9	98,9	96,6	96,7	97,9	99,2	100,0	99,9	99,5	98,4	99,5	99,1	99,1	98,3	98,8
White	100,0	99,9	99,9	99,8	99,3	99,5	100,0	99,7	99,7	99,8	99,9	99,9	99,7	99,6	99,8	99,4
RSA	60,7	62,9	64,8	65,5	66,8	68,9	68,6	72,4	75,4	76,1	77,0	77,9	79,5	80,0	81,0	82,5

Source: GHS (2002–2017)

Figure 4.4.39 shows the proportion of households with access to improved sanitation by population group of the household head between 2002 and 2017. Black African-headed households reported the lowest proportion of households with access to improved sanitation, at 49,2% in 2002 and 78,7% by 2017. There was not much change between white-headed households and those headed by Indians/Asians, though both population groups reported the highest proportion of households with improved sanitation in the country.

Throughout the period under review, white- and Indian/Asian-headed households almost achieved universal access to improved sanitation. In 2017, white-headed households recorded access at 99,4%, followed by Indian/Asian-headed households at 98,8%. Coloured-headed households made good progress increasing the figure from 86,0% in 2002 to 96,9% in 2017. By 2016, coloured-headed households had almost reached parity with households headed by whites and Indians/Asians.

Figure 4.4.40: Proportion of households with access to improved sanitation by sex of household head (2002–2017)

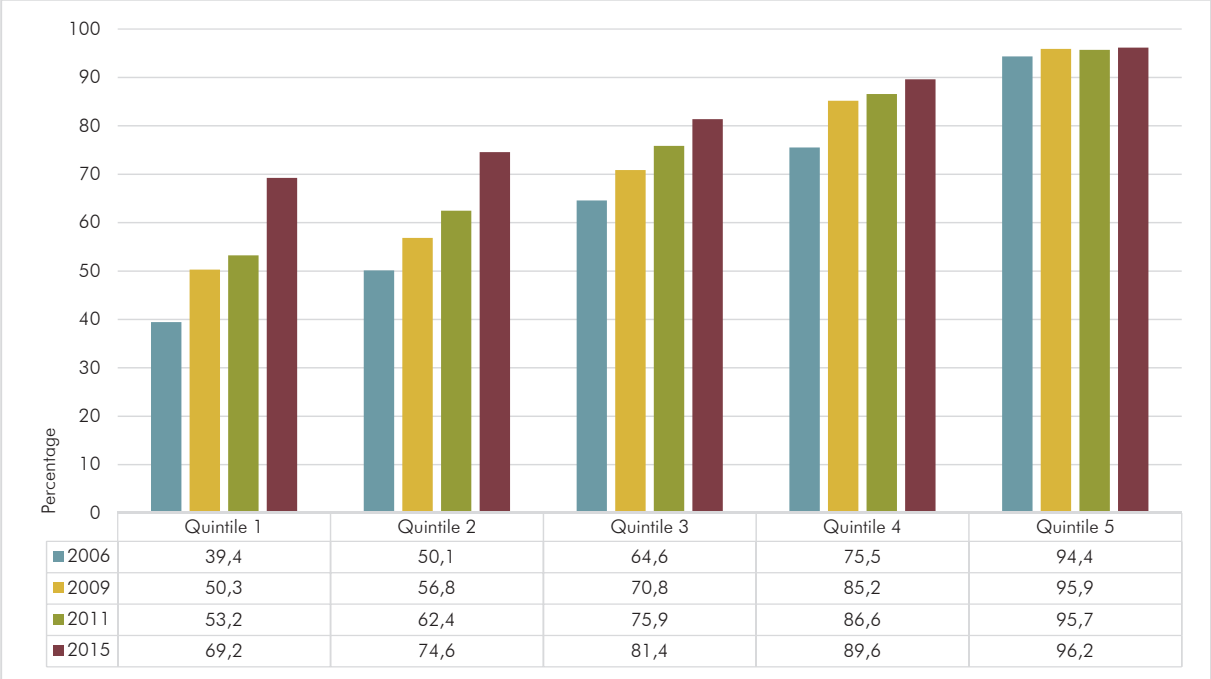


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	67,0	68,9	69,5	69,9	71,5	73,0	72,2	75,5	78,3	78,4	79,3	80,1	81,3	81,1	81,9	83,3
Female	51,5	54,0	57,8	59,1	59,9	62,9	63,2	68,0	71,3	72,7	73,8	74,9	76,9	78,5	79,7	81,2
RSA	60,7	62,9	64,8	65,5	66,8	68,9	68,6	72,4	75,4	76,1	77,0	77,9	79,5	80,0	81,0	82,5

Source: GHS (2002–2017)

The proportion of households with access to improved sanitation by sex of the household head between 2002 and 2017 is presented in Figure 4.4.40. Households headed by males had a greater proportion of access to improved sanitation at 67,0% in 2002, rising to 83,3% in 2017. Meanwhile, for female-headed households the proportion was 51,5% in 2002, increasing to 81,2% in 2017. Overall, there is a general upward trend in households' access to improved sanitation and the gap between the sexes is almost closed.

Figure 4.4.41: Proportion of households with access to improved sanitation by per capita income quintiles (2006, 2009, 2011 & 2015)



	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
2006	39,4	50,1	64,6	75,5	94,4
2009	50,3	56,8	70,8	85,2	95,9
2011	53,2	62,4	75,9	86,6	95,7
2015	69,2	74,6	81,4	89,6	96,2

Source: IES 2005/06, LCS 2008/09, IES 2010/11 and LCS 2014/15

Figure 4.4.41 shows the proportion of households with improved sanitation by per capita income quintiles between 2006 and 2015. As expected, the higher the income quintile, the larger the proportion of households with improved sanitation. Households in Quintile 1 started at a low of 39,4% in 2006 and increased by 29,8 percentage points to 69,2% in 2015. Households in Quintiles 1, 2, 3 and 4 experienced continuous improvements in sanitation over the years observed, while Quintile 5 experienced minimal change over the four data points.

Table 4.4.3: Proportion of poor and non-poor households with access to improved sanitation by province (2009 & 2015) (LBPL)

Province	Poor		Non-poor	
	2009	2015	2009	2015
Western Cape	77,5	91,3	94,9	96,1
Eastern Cape	38,0	73,3	70,2	85,4
Northern Cape	64,1	59,8	79,8	83,3
Free State	69,1	69,1	84,7	87,7
KwaZulu-Natal	43,7	66,3	79,4	83,4
North West	40,9	55,0	66,0	72,4
Gauteng	69,3	70,0	91,2	93,2
Mpumalanga	35,2	52,5	62,8	74,6
Limpopo	24,2	41,8	46,8	61,6
South Africa	46,7	63,6	81,3	85,8

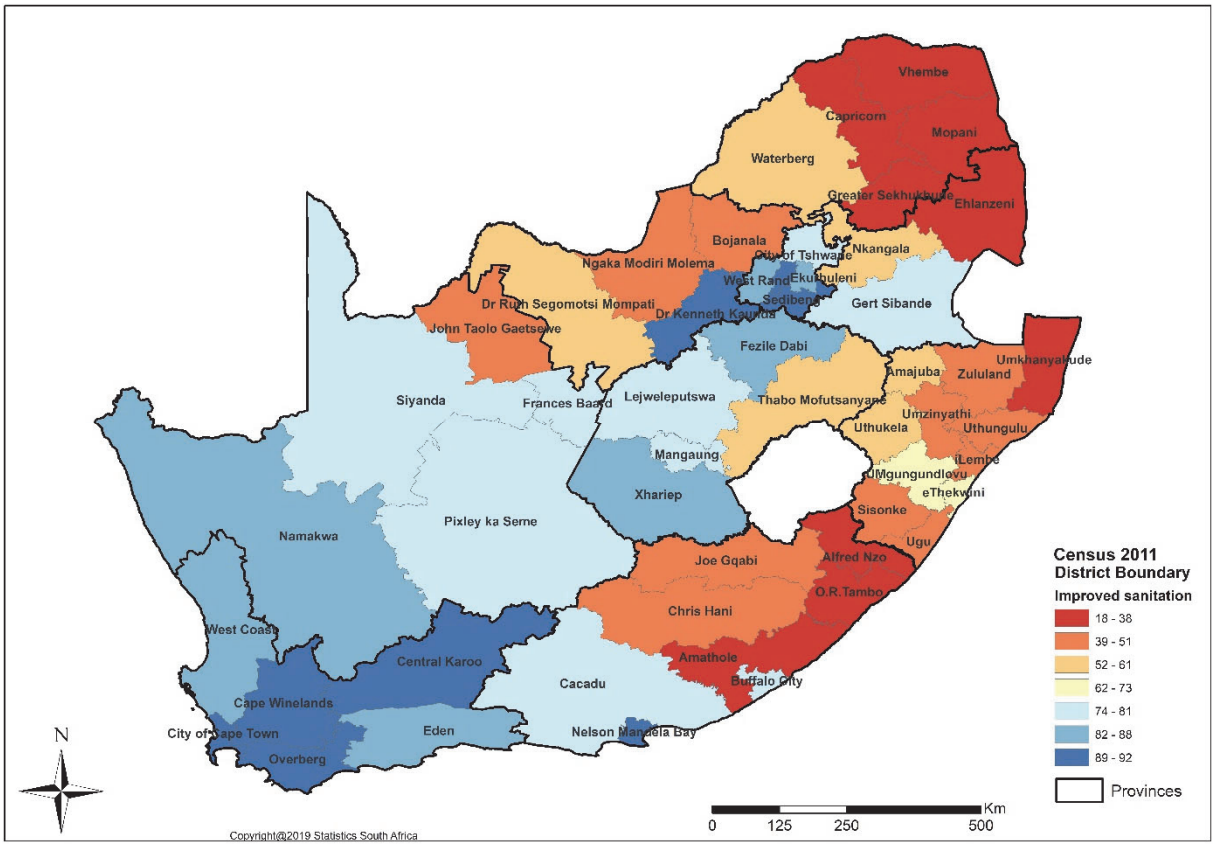
Source: LCS 2008/09 and LCS 2014/15

Table 4.4.3 shows the proportion of poor and non-poor households that had access to improved sanitation by province in 2009 and 2015. Poor households in Eastern Cape, KwaZulu-Natal and Limpopo realised the greatest progress in access to improved sanitation. The proportion of poor households with access to improved sanitation in Eastern Cape and KwaZulu-Natal increased from 38,0% to 73,3% and 43,7% to 66,3% in 2009 and 2015, respectively. Limpopo had the lowest proportion of households with access to improved sanitation; recording 24,2% in 2009 and 41,8% in 2015 (a 17,6 percentage points increase). While poor households in all provinces saw positive change, poor households in Free State did not experience any change during this period as access to improved sanitation remained at 69,1%.

4.4.4.3.2 Mapping access to improved sanitation

This section presents estimates on the proportion of households with access to improved sanitation at district and municipal levels using data from the Census 2011. Access to improved sanitation was defined as any household that reported having access to a 'Flush toilet (connected to sewerage system)' or 'Flush toilet (with septic tank)' or 'Pit toilet with ventilation (VIP)'.[29]

Map 4.4.5: Proportion of households with access to improved sanitation by district municipality (2011)

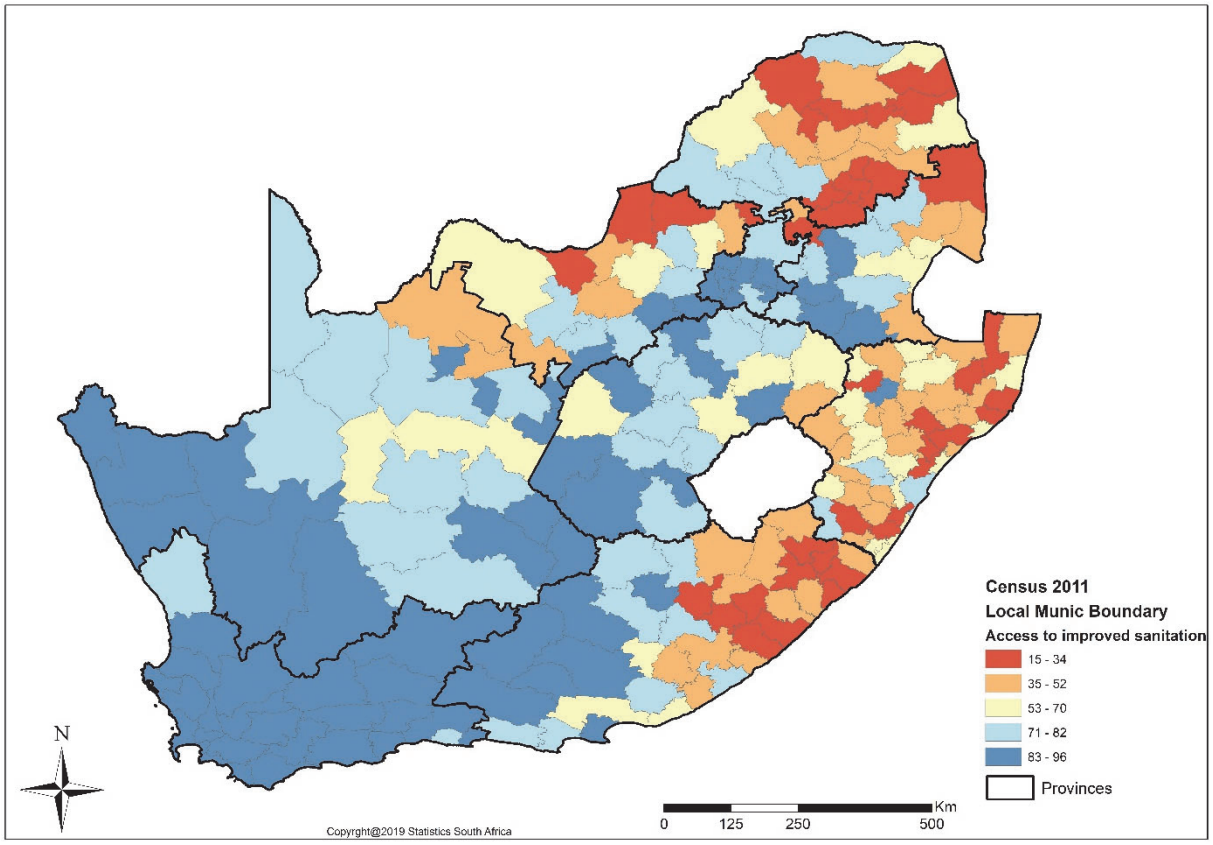


Source: Census 2011

[29] The Census 2011 did not include the response category for pour-to-flush toilets.

The colours in Map 4.4.5 show disparities in terms of access to improved sanitation by district. Furthermore, the map shows that all the districts within Western Cape and Gauteng had a high percentage of households with access to improved sanitation. Greater Sekhukhune district in Limpopo had the lowest percentage of households with access to improved sanitation at 18,8% in 2011.

Map 4.4.6: Proportion of households with access to improved sanitation by local municipality (2011)



Source: Census 2011

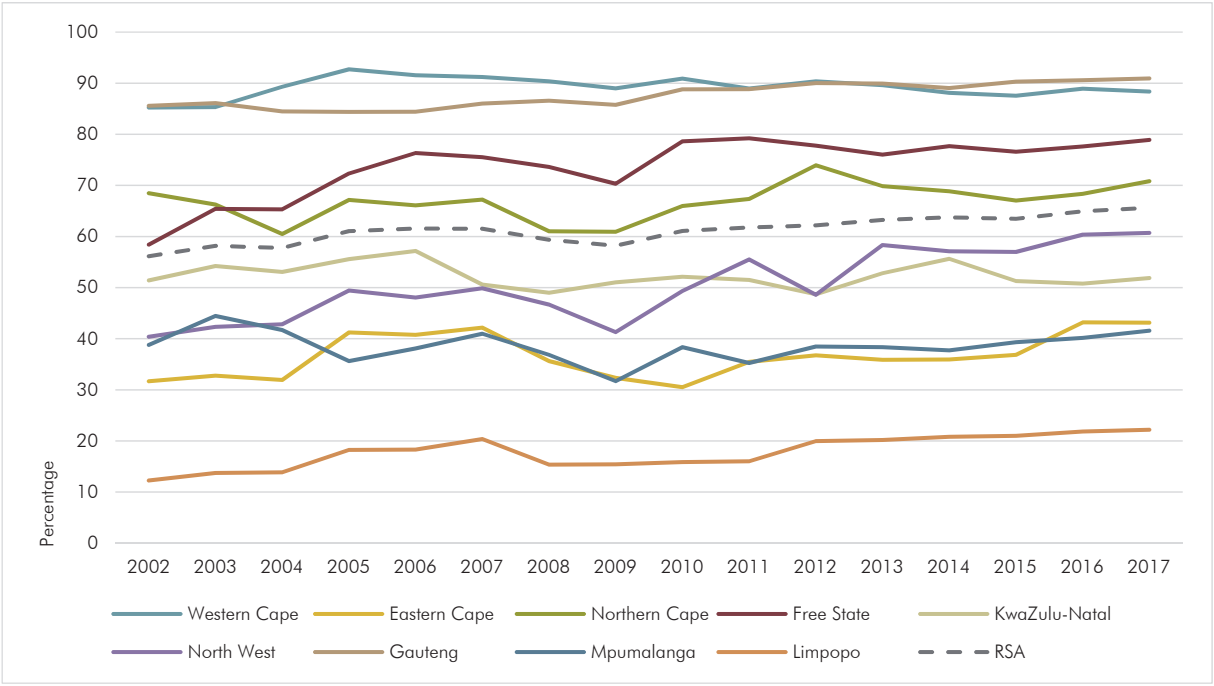
The majority of municipalities with households that reported low levels of access to improved sanitation were concentrated in Limpopo, KwaZulu-Natal, Eastern Cape, North West and Mpumalanga. Furthermore, 29 municipalities reported having households with less than 30% access to improved sanitation (see Annexure D). In contrast, 117 municipalities reported having households with more than 70% access to improved sanitation. Municipalities in Western Cape and Gauteng had among the highest percentage of households with access to improved sanitation.

4.4.4.4 Refuse removal

The disposal of household waste and refuse is important for protecting the health of household members, keeping the community and surrounding environment clean, and maintaining the well-being of all citizens. This section presents analysis on access to refuse removal and the results are derived from the GHS series.

4.4.4.4.1 Access to refuse removal

Figure 4.4.42: Proportion of households with access to refuse removal by local authority or private company at least once a week by province (2002–2017)



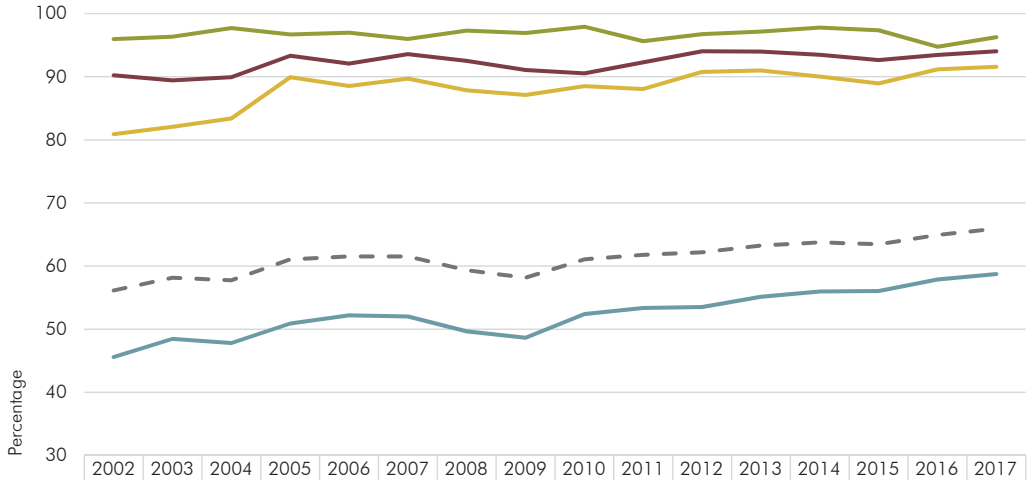
Source: GHS (2002–2017)

Figure 4.4.42 presents the proportion of households with access to refuse removal by local authority or private company at least once a week by province between 2002 and 2017. In general, other than a few exceptions like Free State and North West, there was not a substantial change between 2002 and 2017. Gauteng and Western Cape are the provinces that recorded the highest proportion of households with access to refuse removal at 90,9% and 88,4% in 2017, respectively. The four provinces that reported proportions above the national rate were Gauteng, Western Cape, Free State and Northern Cape.

Since 2002, Free State recorded an increase in the proportion of households with access to refuse removal by local authority or private company at least once a week increasing from 58,4% to 78,9% by 2017. Additionally, North West province also saw an increase from 40,4% in 2002 to 60,7% in 2017.

Limpopo had the lowest proportion of households for which refuse was removed at least once per week, starting at 12,3% in 2002 and increasing to 22,2% in 2017. After Limpopo, Eastern Cape and Mpumalanga were the next two lowest ranked provinces with the Eastern Cape at 31,7% in 2002 and reaching 43,1% in 2017. It is evident that there is a level of disparity between the provinces when it comes to refuse removal and, given the slow pace of change observed between 2002 and 2017, it will require a long amount of time before it equalizes.[30]

Figure 4.4.43: Proportion of households with access to refuse removal by local authority or private company at least once a week by population group of household head (2002–2017)



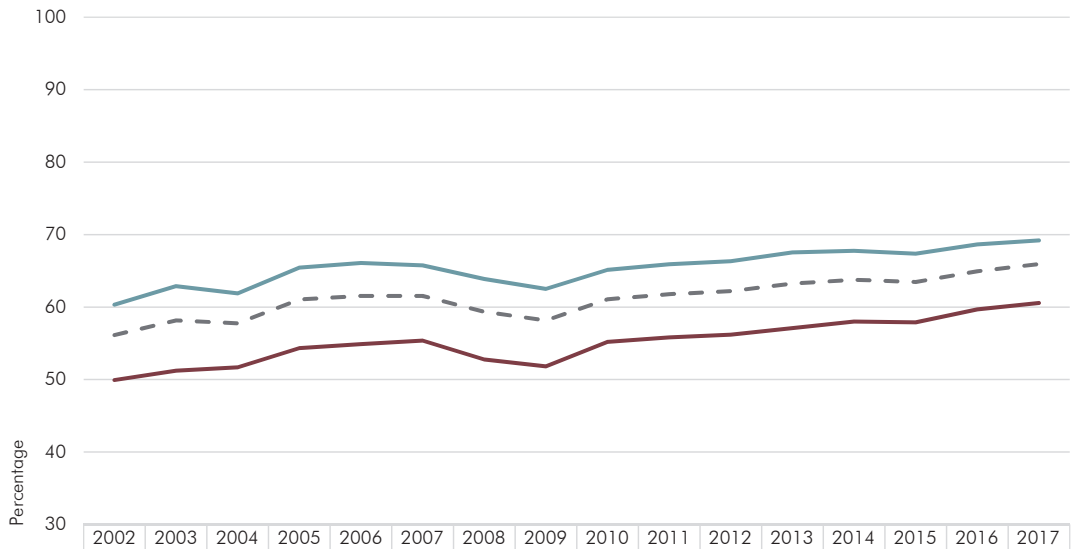
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Black African	45,6	48,5	47,8	50,9	52,2	52,0	49,7	48,6	52,4	53,4	53,5	55,1	56,0	56,1	57,9	58,8
Coloured	80,9	82,1	83,4	89,9	88,5	89,7	87,8	87,1	88,5	88,1	90,8	91,0	90,0	88,9	91,2	91,6
Indian/Asian	96,0	96,3	97,7	96,7	97,0	96,0	97,3	96,9	97,9	95,6	96,8	97,2	97,8	97,4	94,8	96,3
White	90,2	89,4	89,9	93,3	92,1	93,6	92,5	91,1	90,6	92,3	94,0	94,0	93,5	92,6	93,5	94,0
RSA	56,1	58,2	57,8	61,1	61,5	61,5	59,4	58,2	61,1	61,8	62,2	63,3	63,8	63,5	64,9	65,9

Source: GHS (2002–2017)

Figure 4.4.43 shows the proportion of households with access to refuse removal by local authority or private company at least once a week by population group of the household head between 2002 and 2017. Black African-headed households reported the lowest proportion of access to refuse removal, increasing from 45,6% in 2002 to 58,8% in 2017. Meanwhile, Indian/Asian-headed households reported the highest proportion of households with access to refuse removal at least once a week, with observations consistently above 95%. Coloured-headed households experienced an increase of 10,7 percentage points in their access to refuse removal between 2002 and 2017, rising from 80,9% to 91,6%, respectively. Despite black African-headed households recording an increase in access to refuse removal, they were still less likely to receive refuse removal services as compared to households headed by the other three population groups.

[30] Rural areas have relatively low population densities and this makes regular weekly refuse removal unfeasible and unaffordable for local municipalities. Thus, there will likely always be a significant gap between more urban and more rural provinces in terms of refuse removal.

Figure 4.4.44: Proportion of households with access to refuse removal by local authority or private company at least once a week by sex of household head (2002–2017)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	60,3	62,9	61,9	65,4	66,1	65,8	63,9	62,5	65,1	65,9	66,3	67,5	67,8	67,4	68,7	69,2
Female	49,9	51,2	51,7	54,3	54,9	55,4	52,8	51,8	55,2	55,8	56,2	57,1	58,0	57,9	59,7	60,6
RSA	56,1	58,2	57,8	61,1	61,5	61,5	59,4	58,2	61,1	61,8	62,2	63,3	63,8	63,5	64,9	65,9

Source: GHS (2002–2017)

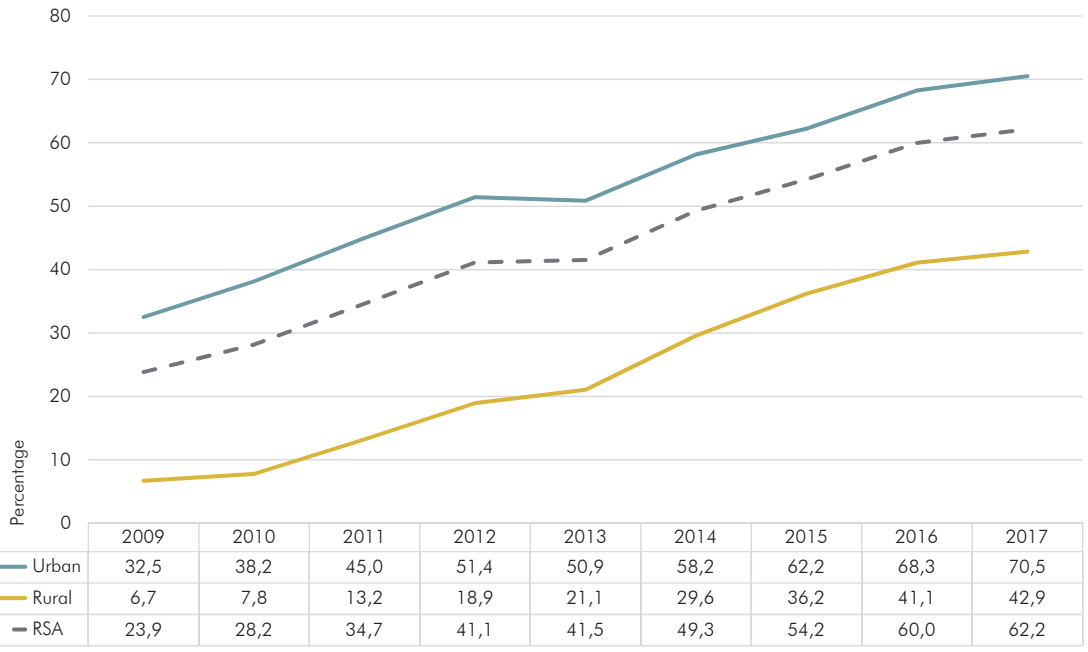
The proportion of households with refuse removal by local authority or private company at least once a week by sex of the household head between 2002 and 2017 is presented in Figure 4.4.44. Between 2002 and 2017, the proportion of households with access to refuse removal increased from 60,3% to 69,2% for male-headed households and from 49,9% to 60,6% for female-head households, respectively. Even though access to refuse removal for both male- and female-headed households has increased at approximately the same rate, it took female-headed households about fifteen years to reach the proportion that male-headed households had achieved in 2002.

4.4.5 Internet access

The internet plays an important role in contributing to the fourth industrial revolution by providing households with the necessary communication infrastructure. It has made access to information and communication easier, cheaper and quicker. The internet is a nexus for government, business, academia and the average citizen to interact, exchange and communicate at the click of a button. This section looks at households that had access to internet connections and these results are derived from the annual GHS series.

4.4.5.1 Access to internet

Figure 4.4.45: Proportion of households that had access to internet by settlement type (2009–2017)

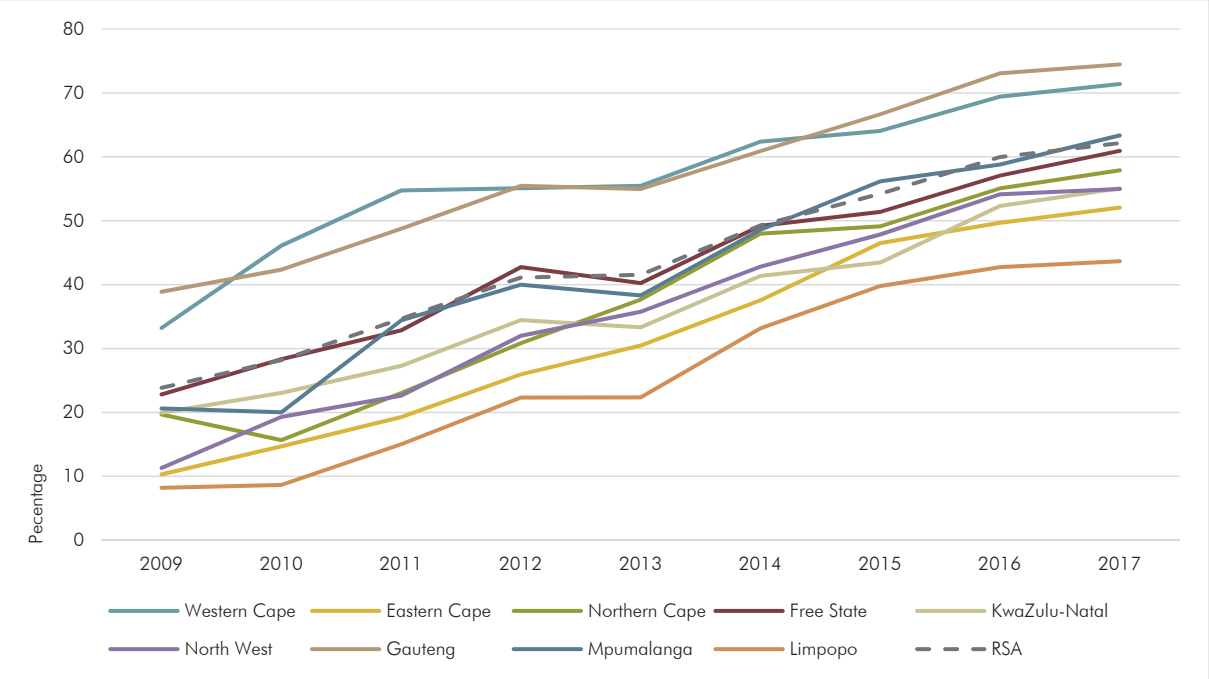


	2009	2010	2011	2012	2013	2014	2015	2016	2017
Urban	32,5	38,2	45,0	51,4	50,9	58,2	62,2	68,3	70,5
Rural	6,7	7,8	13,2	18,9	21,1	29,6	36,2	41,1	42,9
RSA	23,9	28,2	34,7	41,1	41,5	49,3	54,2	60,0	62,2

Source: GHS 2009–2017

Figure 4.4.45 shows that the proportion of households with access to internet connection in South Africa was 23,9% in 2009 and this proportion almost tripled to 62,2% by 2017 (an increase of 38,3 percentage points). Urban households had a higher level of access to internet connection, at 32,5% in 2009, rising quickly to 70,5% in 2017. Even though households in rural areas had experienced an increasing trend with regards to access to internet connection, they were still lagging way behind households in urban areas; with proportions ranging between 6,7% in 2009 to 42,9% in 2017. Overall, the trend from 2009 to 2017 highlights the digital divide between urban and rural households.

Figure 4.4.46: Proportion of households with access to internet by province (2009–2017)

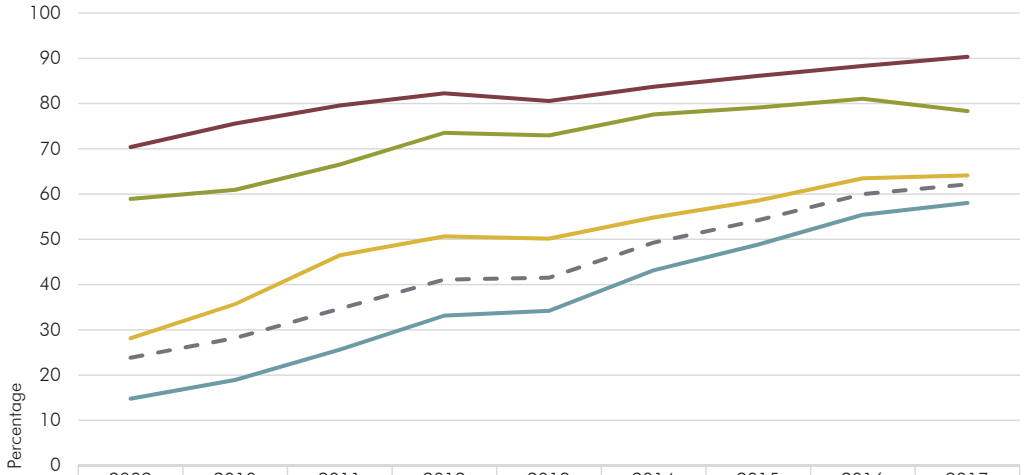


Source: GHS 2009–2017

According to Figure 4.4.46, all provinces have experienced an increase in their access to internet between 2009 and 2017. Gauteng and Western Cape reported the highest proportion of households with access to internet. Between 2009 and 2017, Gauteng went from 38,9% to 74,5%, while Western Cape increased from 33,2% to 71,4% during the same period. Mpumalanga started off at the low of 20,6% in 2009 and gradually increased to 63,4% in 2017, making it the 3rd highest province with households that had access to internet.

As expected, two of the poorest provinces Limpopo and Eastern Cape had the lowest proportion of households with access to the internet. Despite the overall gains, the gap between the top and bottom provinces highlights the need for advancing the country's communication infrastructure and network.

Figure 4.4.47: Proportion of households with access to internet by population group of household head (2009–2017)

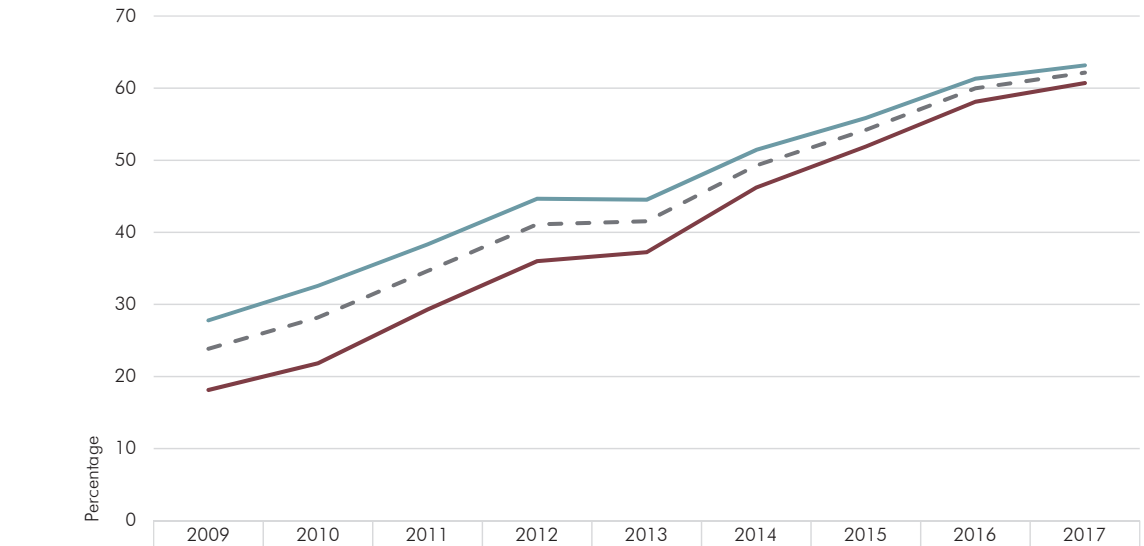


	2009	2010	2011	2012	2013	2014	2015	2016	2017
Black African	14,8	18,9	25,6	33,1	34,2	43,2	48,9	55,4	58,1
Coloured	28,1	35,7	46,5	50,6	50,2	54,8	58,6	63,5	64,1
Indian/Asian	58,9	60,9	66,5	73,6	73,0	77,6	79,1	81,1	78,4
White	70,4	75,6	79,6	82,3	80,6	83,7	86,1	88,3	90,3
RSA	23,9	28,2	34,7	41,1	41,5	49,3	54,2	60,0	62,2

Source: GHS 2009–2017

The proportion of households that had access to the internet by population group of the household head is presented in Figure 4.4.47. White- and Indian/Asian-headed households had the highest proportion of households with access to the internet, while, black African-headed households recorded the lowest proportion, increasing from just 14,8% in 2009 to 58,1% in 2017. While coloured-headed households also made progress, increasing from 28,1% in 2009 to 64,1% in 2017.

Figure 4.4.48: Proportion of households with access to internet by sex of household head (2009–2017)



	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	27,8	32,6	38,3	44,7	44,5	51,4	55,9	61,3	63,2
Female	18,1	21,8	29,3	36,0	37,2	46,2	51,9	58,1	60,7
RSA	23,9	28,2	34,7	41,1	41,5	49,3	54,2	60,0	62,2

Source: GHS 2009–2017

Figure 4.4.48 shows the proportion of households that had access to internet by sex of the household head between 2009 and 2017. During the reported years, there was a significant increase in the proportion of households with access to internet for both male- and female-headed households. Access to the internet in male-headed households increased from 27,8% in 2009 to 63,2% in 2017; meanwhile, for female-headed households it rose from 18,1% in 2009 to 60,7% in 2017. Overall, the digital gap between the sexes has narrowed.

4.5 GENDER INEQUALITY

Inequality is a multidimensional challenge and impacts all segments of society. While racial and spatial divides are of utmost importance given the country's history of racial and spatial segregation, it is important to also consider the impact of gender inequality as this overlaps with and amplifies many other disadvantages. It is interesting to note that throughout history, when the great thinkers, from Aristotle to Rawls, started focusing on the idea of inequality and justice, their analysis covered all, except the gender dimension.

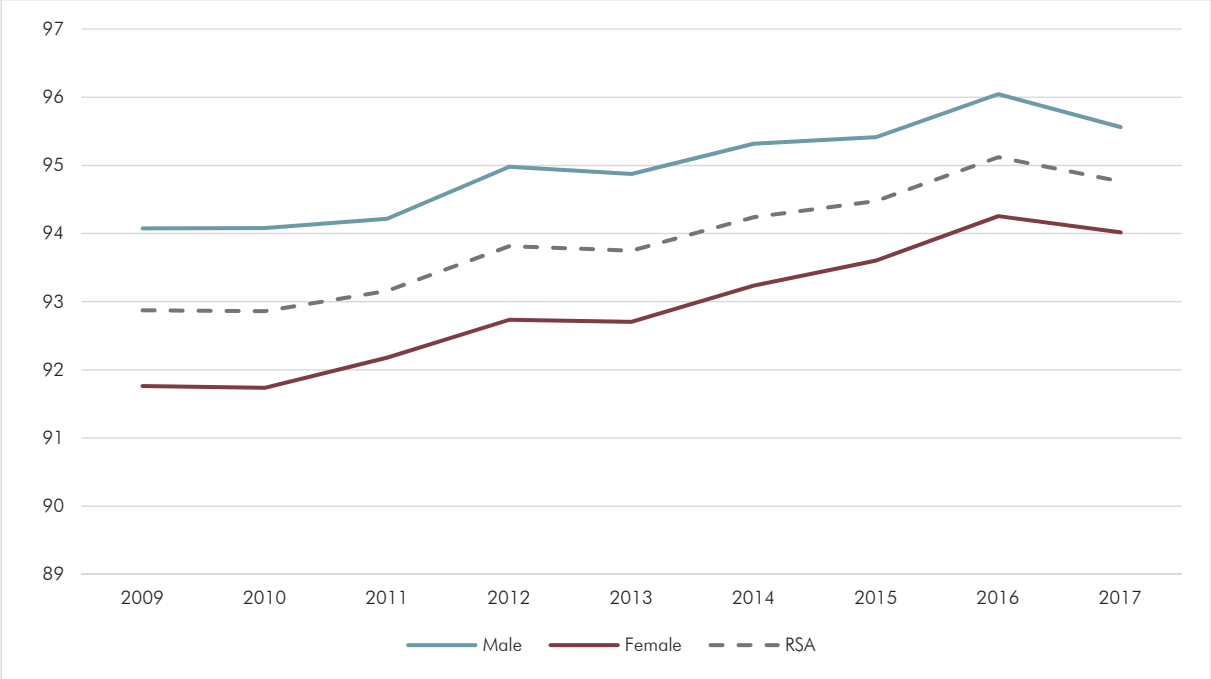
While women represent approximately 51,2% of the population in South Africa[31], females' share of household income and expenditure are significantly lower than that of their male counterparts. For instance, individuals living in female-headed households only had a 26,0% share of total household expenditure and a 24,6% share of the total household income in 2015. It is therefore imperative to understand how education and health outcomes, asset ownership, as well as access to basic services are distributed by gender in order to provide an analysis of how inequalities overlap and accentuate vulnerabilities.[32]

Despite the significant progress that has been made in reducing gender gaps in education in South Africa, there remains significant gender gaps in labour market outcomes. While women are less likely to participate in the labour market as compared to men (53,6% for women and 66,1% for men in 2017), their unemployment rates were higher (29,6% for women vs 25,7% for men in 2017). As shown in Section 4.3 on labour market inequality, there was a slight convergence over time in terms of employment rates, but this was not necessarily reflected in the wage differential. Women's monthly real earnings remain around 70,0% of that of men.

[31] According to the 2019 Mid-year Population Estimates (Statistical Release P0302) published by Stats SA.

[32] It is important to note that when analysing household level data in terms of gender equality, we could have males living in female-headed households and females living in male-headed households.

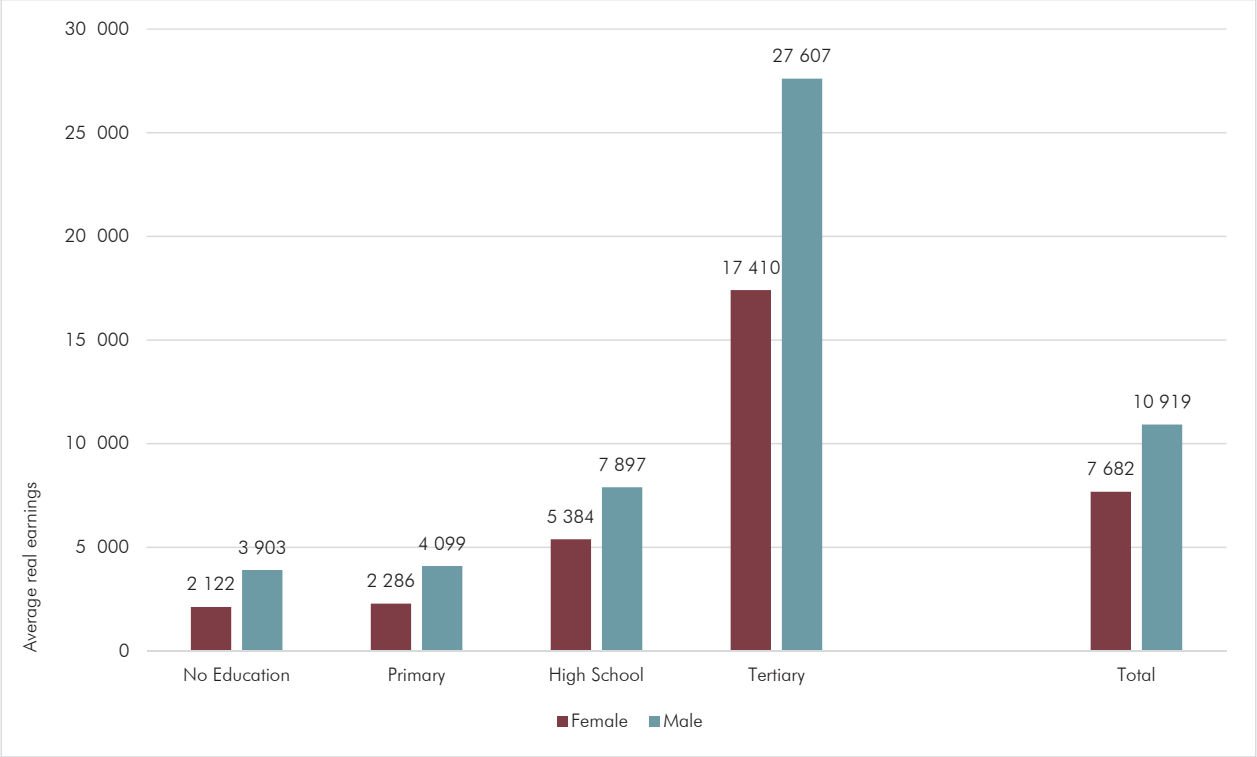
Figure 4.5.1: Literacy rate by sex of individuals aged 15 years and above (2009–2017)



Source: GHS (2009–2017): own calculation

Figure 4.5.1 presents literacy rates by sex between 2009 and 2017 for persons aged 15 years and above. Males consistently had higher literacy rates compared to females over the period observed, recording 94,1% vs 91,8% in 2009 and 95,6% vs 94,0% in 2017, respectively. Even though females reported lower literacy rates, the gap between the sexes had slightly decreased over the period. This indicates that overall, polices put in place to improve gender equality in education have led to some improvements in literacy levels for women. However, there still remains other gender lags in educational outcomes.

Figure 4.5.2: Average real monthly earnings by sex and education levels (2011–2015, pooled)



Source: PALMS (2011–2015): own calculation

When comparing the average monthly earnings for males and females by their different education levels as shown in Figure 4.5.2, it is observed that on average females earned less than males across all educational levels. Females with no education earned 54,4% of the income earned by their male counterparts, while females with high school or tertiary educations earned 68,2% and 63,1%, respectively, of their male counterparts average income. Similar to the no education category, males with primary education earned almost double that of females with similar educational attainment, while those that had a tertiary qualification were earning almost 1,6 times more than their female counterparts. This is a good indication that there are still huge disparities in the labour market between males and females, especially in terms of earnings for comparable levels of educational attainment. It is therefore clear that greater efforts need be made on closing this wage disparity.

Table 4.5.1: Distribution of population and expenditure shares by expenditure deciles and sex of household head (2006 & 2015)

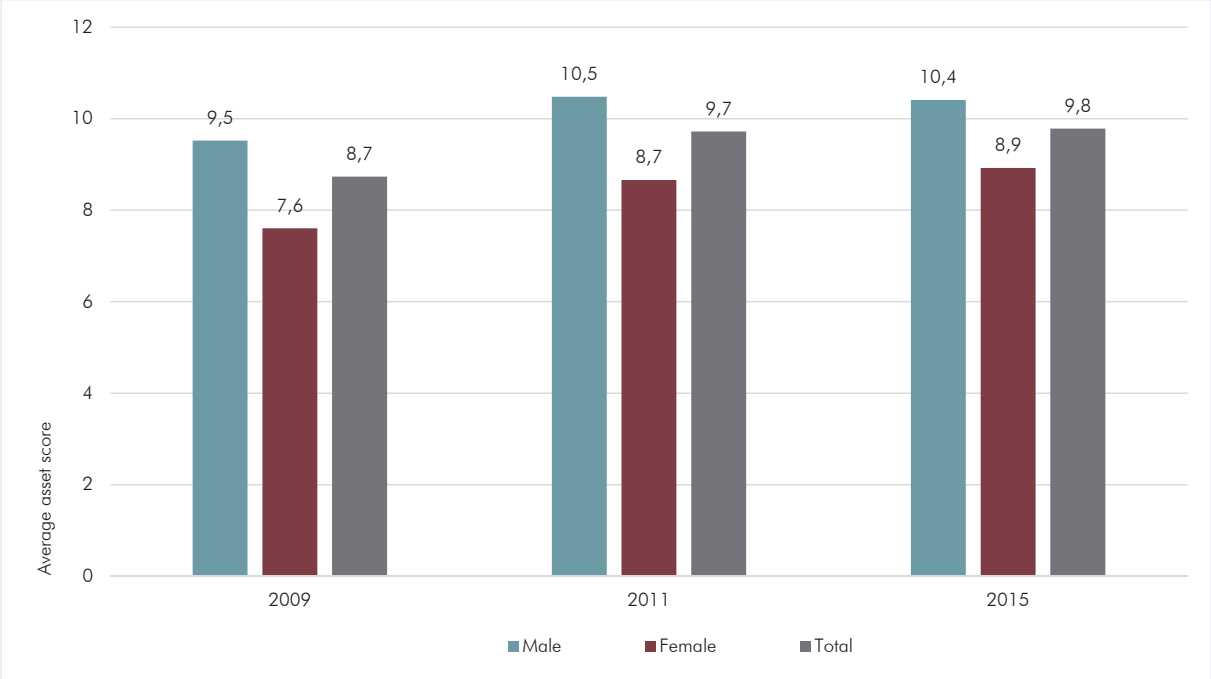
Deciles	Population share				Expenditure share			
	2006		2015		2006		2015	
	Male	Female	Male	Female	Male	Female	Male	Female
1	42,8	57,2	40,3	59,7	42,4	57,6	40,5	59,5
2	41,3	58,7	44,0	56,0	41,4	58,6	44,4	55,6
3	47,8	52,2	46,1	53,9	47,9	52,1	46,1	53,9
4	45,9	54,1	52,7	47,3	45,7	54,3	52,8	47,2
5	52,4	47,6	51,9	48,1	52,5	47,5	51,9	48,1
6	54,8	45,2	56,7	43,3	54,9	45,1	56,8	43,2
7	58,8	41,2	64,1	35,9	58,9	41,1	64,4	35,6
8	68,4	31,6	66,6	33,4	68,6	31,4	66,8	33,2
9	73,1	26,9	74,5	25,5	73,7	26,3	74,8	25,2
10	80,1	19,9	81,4	18,6	80,4	19,6	82,3	17,7
Total	56,5	43,5	57,8	42,2	73,1	26,9	74,0	26,0

Source: Own calculations using data from IES 2005/06 and LCS 2014/15

Table 4.5.1 shows the spending patterns of males and females in terms of consumption expenditure, their share of that expenditure and how these expenditure and population shares vary across the different income groups. The income groups are classified using expenditure deciles as a proxy, where decile 1 includes households with the lowest expenditure (poorest households) and decile 10 includes households with the highest expenditure (richest households).

While the overall share in expenditure between males and females remained relatively stable between 2006 and 2015, the difference in expenditure shares between the sexes, in particular at the upper-end of the expenditure deciles are highly skewed towards males. This indicates that there is a huge inequality in expenditure patterns between male- and female-headed households. The figures further illustrate that individuals who reside in male-headed households are generally better off, in terms of consumption and livelihood, than those who reside in female-headed households. This point is supported by the fact that most female-headed households fall in the bottom three expenditure deciles while male-headed household are generally concentrated in the upper-end of the expenditure spectrum in both 2006 and 2015.

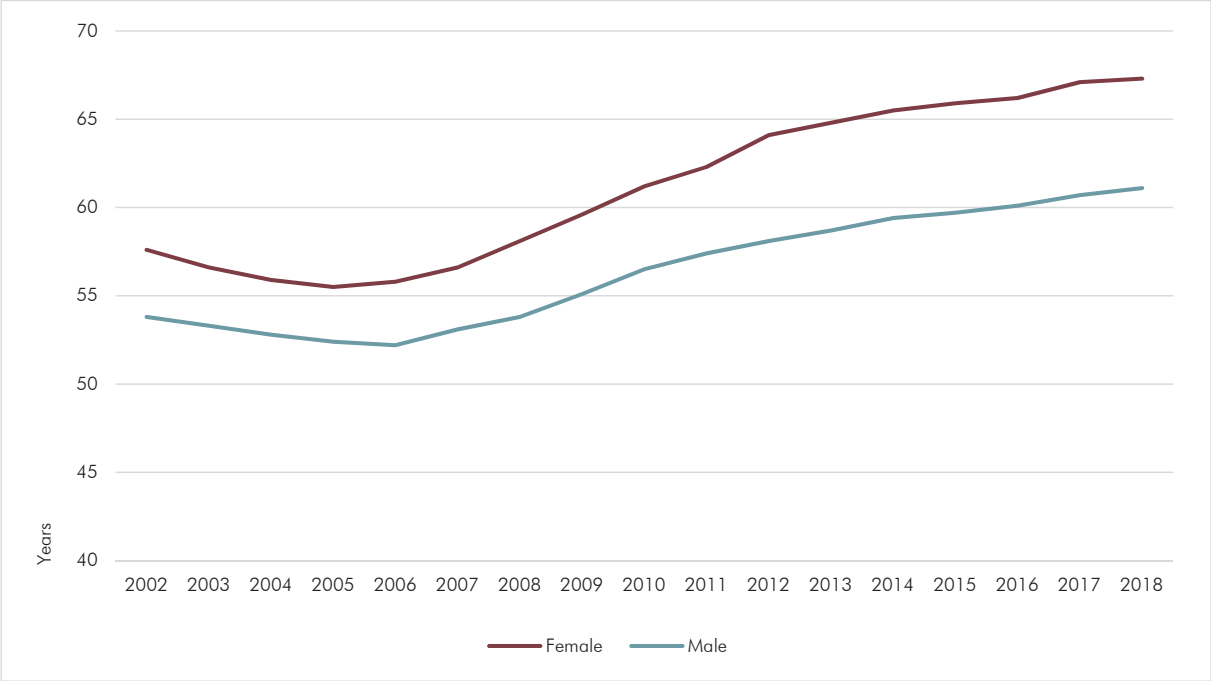
Figure 4.5.3: Average asset scores by sex of the household head (2009, 2011 & 2015)



Source: LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Asset scores are a measure of a household's asset ownership. Figure 4.5.3 shows the disparities in asset ownership between male- and female-headed households. In general, both male- and female-headed households saw increases in their average ownership of assets between 2009 and 2015. Between 2009 to 2011, male-headed households experienced a 1,0 point increase in their average asset ownership rising from 9,5 to 10,5; this was followed by a tiny drop to 10,4 by 2015. Female-headed households experienced steady increases over the same period increasing from 7,6 in 2009 to 8,7 in 2011, and to 8,9 by 2015. Even though the asset scores for female-headed households were lower than their male counterparts, this gap had narrowed by 2015.

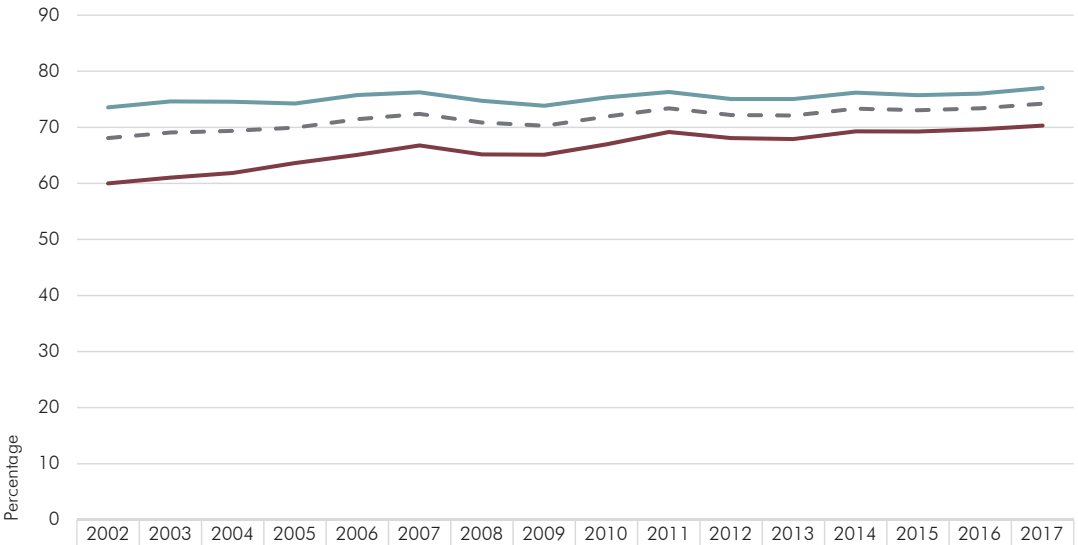
Figure 4.5.4: Life expectancy by sex over time (2002–2018)



Source: Mid-year Population Estimates (2018)

The same trends observed in education and the labour market, are also reflected in health, where females are generally worse off than males. This tendency is highlighted in Section 4.4.4.3, where the proportion of females with a chronic illness is approximately 6 percentage points higher than for males. Furthermore, when compared to their male counterparts, females with a chronic illness are significantly less likely to have access to medical aid (Figure 4.4.19). However, despite these inequalities, females still had a higher life expectancy than males for the between 2002 and 2018, as seen in Figure 4.5.4 above.

Figure 4.5.5: Proportion of households with access to water by sex of household head (2002–2017)

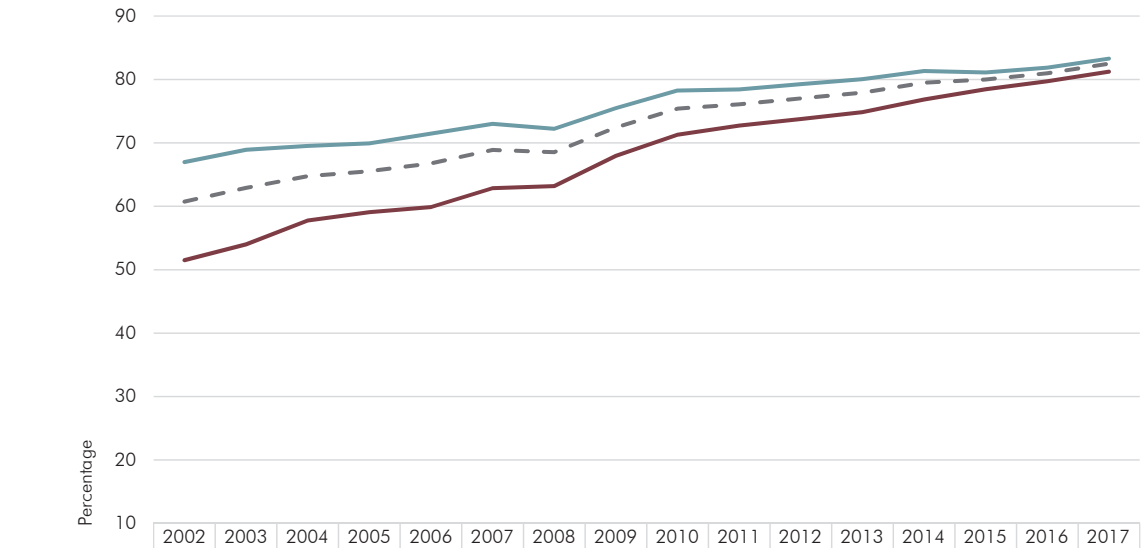


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	73,6	74,6	74,6	74,2	75,8	76,2	74,7	73,9	75,3	76,3	75,0	75,1	76,2	75,7	76,0	77,0
Female	60,0	61,0	61,9	63,6	65,1	66,8	65,2	65,1	67,0	69,2	68,1	67,9	69,3	69,2	69,6	70,3
RSA	68,1	69,1	69,4	69,9	71,4	72,4	70,8	70,3	71,9	73,4	72,2	72,1	73,3	73,0	73,4	74,2

Source: GHS (2002–2017)

Figure 4.5.5 illustrates that between 2002 and 2017, there was an increase in access to piped or tap water for both male- and female-headed households. Even though there were disparities between the sexes, access to piped or tap water for female-headed households improved at a faster rate, from 60,0% in 2002 to 70,3% in 2017 (a 10,3 percentage points increase), than male-headed households which only achieved a 3,4 percentage points increase over the same period. This has reduced the gap (approximately 13,6 percentage points in 2002 compared to 6,7 percentage points 2017) in access to piped or tap water that exists between male- and female-headed households.

Figure 4.5.6: Proportion of households with access to improved sanitation by sex of household head (2002–2017)

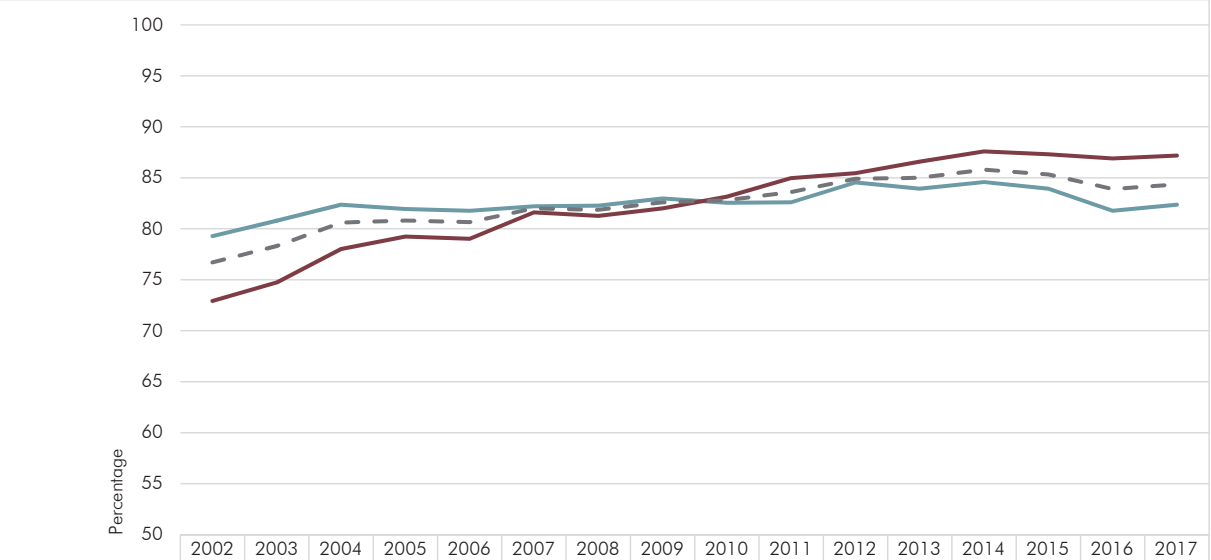


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	67,0	68,9	69,5	69,9	71,5	73,0	72,2	75,5	78,3	78,4	79,3	80,1	81,3	81,1	81,9	83,3
Female	51,5	54,0	57,8	59,1	59,9	62,9	63,2	68,0	71,3	72,7	73,8	74,9	76,9	78,5	79,7	81,2
RSA	60,7	62,9	64,8	65,5	66,8	68,9	68,6	72,4	75,4	76,1	77,0	77,9	79,5	80,0	81,0	82,5

Source: GHS (2002–2017)

Figure 4.5.6 shows the proportion of households that had access to improved sanitation by sex of the household head. Individuals residing in households headed by males had greater levels of access to improved sanitation between 2002 and 2017 as compared to those living in female-headed households; however, even though male-headed households had higher levels of access, the access for female-headed households showed significant improvement, increasing from 51,5% in 2002 to 81,2% in 2017. Thus, we observe a general positive trend in all households' access to improved sanitation coupled with a notable decrease in the inequality between male- and female-headed households with the difference between the sexes narrowing from 15,5 percentage points in 2002 to approximately 2,1 percentage points in 2017.

Figure 4.5.7: Proportion of households with access to electricity from the 'mains electricity supply' by sex of household head (2002–2017)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	79,3	80,8	82,4	81,9	81,8	82,2	82,3	83,0	82,6	82,6	84,5	83,9	84,6	83,9	81,8	82,4
Female	72,9	74,7	78,0	79,2	79,0	81,6	81,3	82,0	83,1	85,0	85,5	86,6	87,6	87,3	86,9	87,2
RSA	76,7	78,3	80,6	80,8	80,7	82,0	81,9	82,6	82,8	83,6	84,9	85,0	85,8	85,3	83,9	84,4

Source: GHS (2002–2017)

Figure 4.5.7 reveals a very interesting situation which has not been observed in the other basic service areas. Here, female-headed households started with lower levels of access to the mains electricity supply and remained below male-headed households until 2009; however, from 2010 onwards, female-headed households' access to mains electricity overtook their male counterparts. Furthermore, access levels in male-headed households stayed fairly flat only increasing by 3,1 percentage points between 2002 and 2017; meanwhile, female-headed households saw their access levels improve by 14,3 percentage points over the same period. By 2017, female-headed households reported having 87,2% connection to the mains compared to just 82,4% in male-headed households. This clearly indicates strong gains in the fight for gender equality in terms of access to electricity.

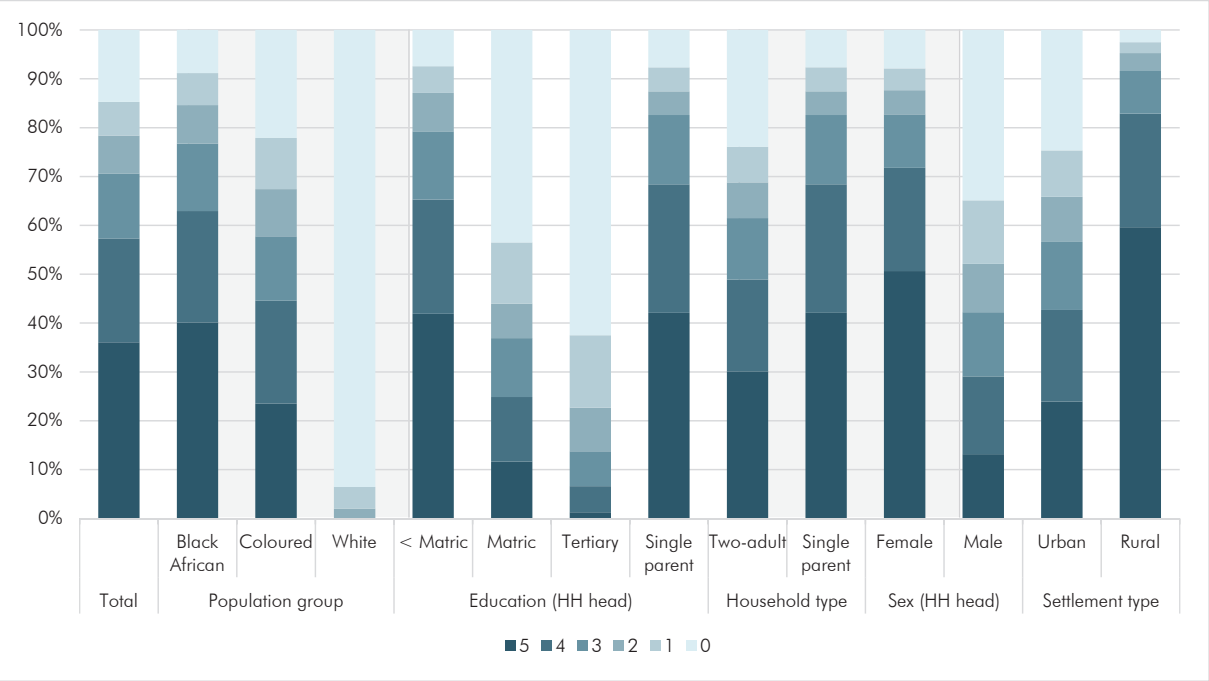
4.6 SOCIAL MOBILITY

Social mobility refers to the movement of an individual or a household between social strata or social classes. Such mobility is often proxied by economic mobility. This ability to move between different levels of social status can be analysed at the level of an individual's lifetime, in which case we talk about intra-generational mobility, or over subsequent generations, we talk about intergenerational mobility. Whether individuals can experience upward mobility during their life or if they can have better economic outcomes than their parents is strongly linked to the level of inequality in the society. If we picture social mobility as the upwards or downwards movement of an individual on a ladder which corresponds to the levels according to which the society is stratified, inequality is what determines the distance between each step of the ladder. The more unequal a society, the more difficult it is for its members to move from a lower position to a higher one (and vice versa). Moreover, the lack of social mobility, especially in a highly unequal country, will trigger a vicious cycle with the poorest not being able to improve their future situation and further widening the inequality gaps. Therefore, observing the social mobility levels in a society is crucial in understanding inequality and identifying levers to reduce it. For this reason many countries undertake such measurement, often with an emphasis on assessing whether economic well-being is improving for the most vulnerable groups in a society.

Measuring social mobility requires longitudinal or panel surveys that follow the same people over time in order to track their progress. As reported in Chapter 3 on data sources, in order to fill this information gap in South Africa, the Presidency launched a nationally representative panel study known as the National Income Dynamics Study in 2008. To date, there have been five successful waves of NIDS collection and the study has tracked a representative sample of over 28 000 South Africans since then. This section reports on some of the key findings from NIDS.

Using five waves of the NIDS data collected between 2008 and 2017, Zizzamia et al. (2019) showed that 85,3% of the South African population has experienced at least one poverty spell during the study period, while 36,1% remained consistently below the poverty line in all five waves. The persistence of poverty disproportionally impacts black Africans, those with low levels of education, rural populations, and individuals living in female-headed households (see Figure 4.6.1). For instance, 40,1% of black Africans were chronically poor and experienced poverty during all five waves of the study, while the corresponding figure for coloureds was 23,5%. While 50,6% of female-headed households were in poverty during all the survey years compared to only 13,1% for male-headed households.

Figure 4.6.1: Number of poverty spells by various characteristics



Source: Zizzamia et al. (2019)

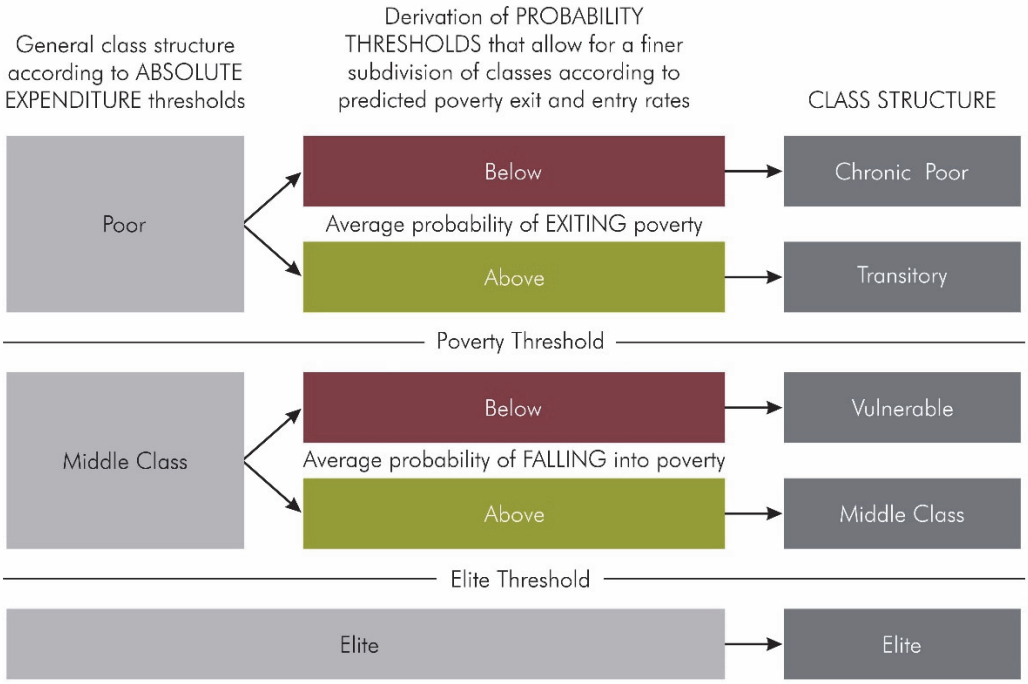
Notes: NIDS Waves 1 to 5 pooled sample (post-stratified weights corrected for panel attrition). Balanced panel, weighted using Wave 5 panel weights. Population group, education level of the household (HH) head, household type, sex of the household (HH) head and settlement type as recorded in the first wave of NIDS (2008). The Indian/Asian sample is very small and has been omitted.

In addition to these poverty dynamics, NIDS data presents a picture of social dynamics across the income distribution. In this regard, Schotte et al. (2018) propose a five category classification system (see Figure 4.6.2) for South African society, namely:

- The *chronic poor* are those who fall below the national poverty line as measured in terms of the cost of basic needs and have below average chances of getting out of poverty;
- The *transient poor* are those who fall below the national poverty line as measured in terms of the cost of basic needs and have above average chances of getting out of poverty;
- The *vulnerable* middle class are those whose basic needs are currently being met but who face above-average risks of slipping into poverty;
- The actual *middle class* are those who are in a position to maintain a non-poor standard of living even in the event of a negative shock; and
- The *elite* are those who have a standard of living far above the average.[33]

[33] In this analysis, the elite threshold is set two standard deviations above mean per capita household expenditure.

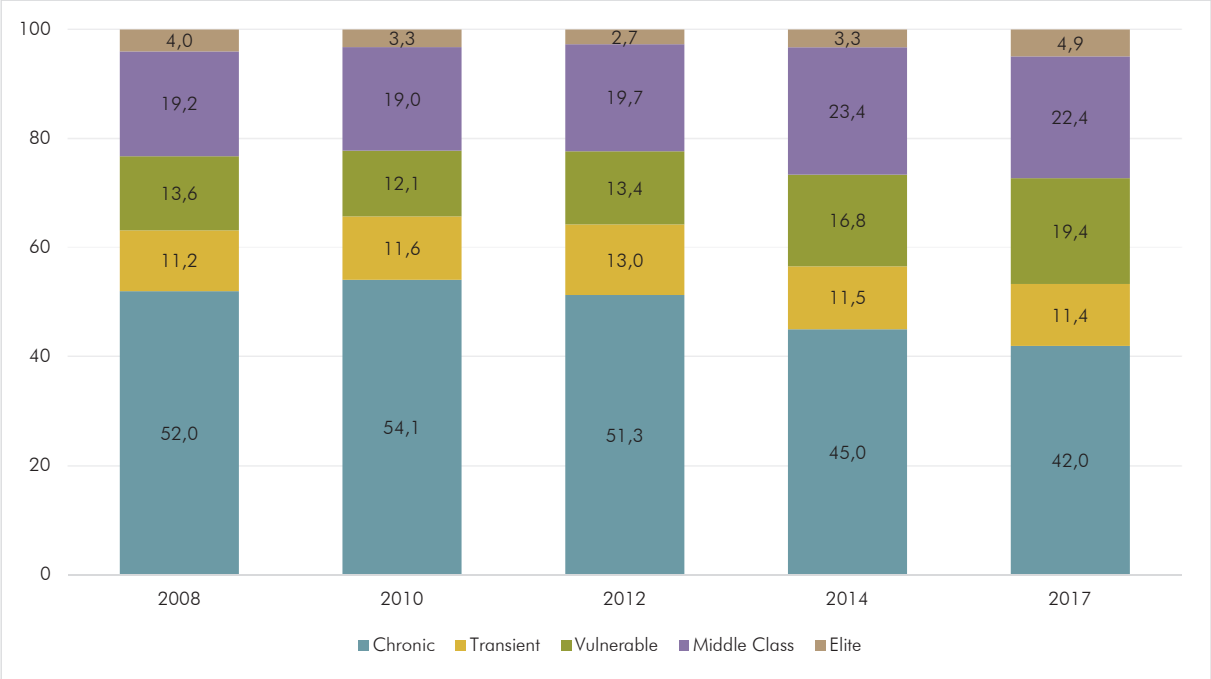
Figure 4.6.2: Schema of social stratification – A poverty dynamics approach to structured inequality



Source: Schotte et al. (2018)

Based on this classification, on average about one in four South Africans could be classified in either the stable middle class or the elite as shown in Figure 4.6.3.

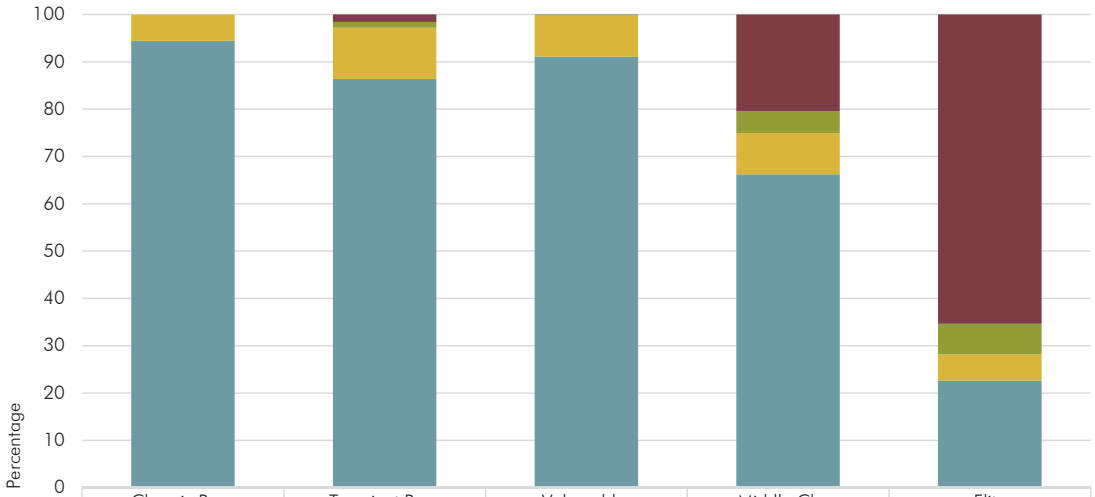
Figure 4.6.3: Socio-economic class sizes between 2008 and 2017



Source: Zizzamia et al. (2019). NIDS Waves 1 to 5 pooled sample (post-stratified weights corrected for panel attrition)

The size of the chronic poor decreased by 10,0 percentage points from 52,0% to 42,0% between 2008 and 2017, whereas the size of the transient poor remained largely unchanged at around 11,5% over the same period. In contrast, the percentage of those who were vulnerable increased from 13,6% in 2008 to 19,4% in 2017. Meanwhile, the size of the middle class grew slightly from 19,2% to 22,4% between 2008 and 2017, whereas the elite group increased marginally to just under 5% by 2017.

Figure 4.6.4: Proportion of households by social class and population group of household head (2008–2017)

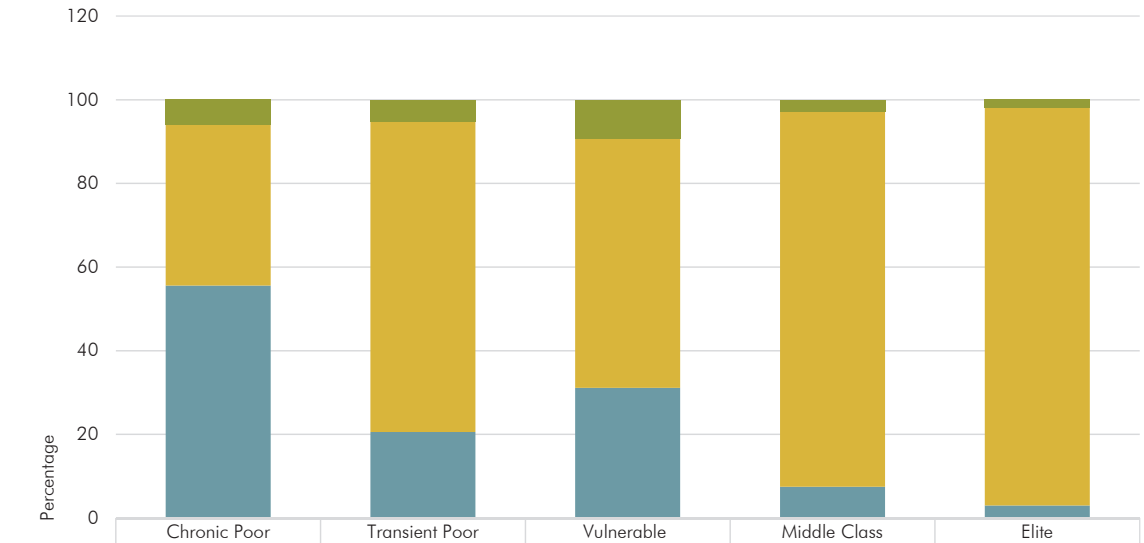


	Chronic Poor	Transient Poor	Vulnerable	Middle Class	Elite
White	0,0	1,6	0,1	20,5	65,4
Asian/Indian	0,0	1,2	0,2	4,6	6,5
Coloured	5,6	10,8	8,7	8,7	5,6
African	94,4	86,4	91,1	66,2	22,6

Source: Zizzamia et al. (2019). NIDS Waves 1 to 5 pooled sample (post-stratified weights corrected for panel attrition)

According to Figure 4.6.4, a majority of black African-headed households were chronically poor, transient poor, and vulnerable; however, on a positive note, they also represented the majority of middle class households and about a fifth of elite households. The chronic poor was the only group that was comprised of just two of the four population groups, namely black African- and coloured-headed households; while the other four social classes were comprised of all four population groups (except for the vulnerable class which didn't report any Indian/Asian-headed households, but this is more likely the result of their small sample size rather than not having households within this particular class, especially as they were already represented within the transient poor group). White-headed households accounted for the largest contribution to the elite group at 65,4%.

Figure 4.6.5: Proportion of households by social class and settlement type (2008–2017)

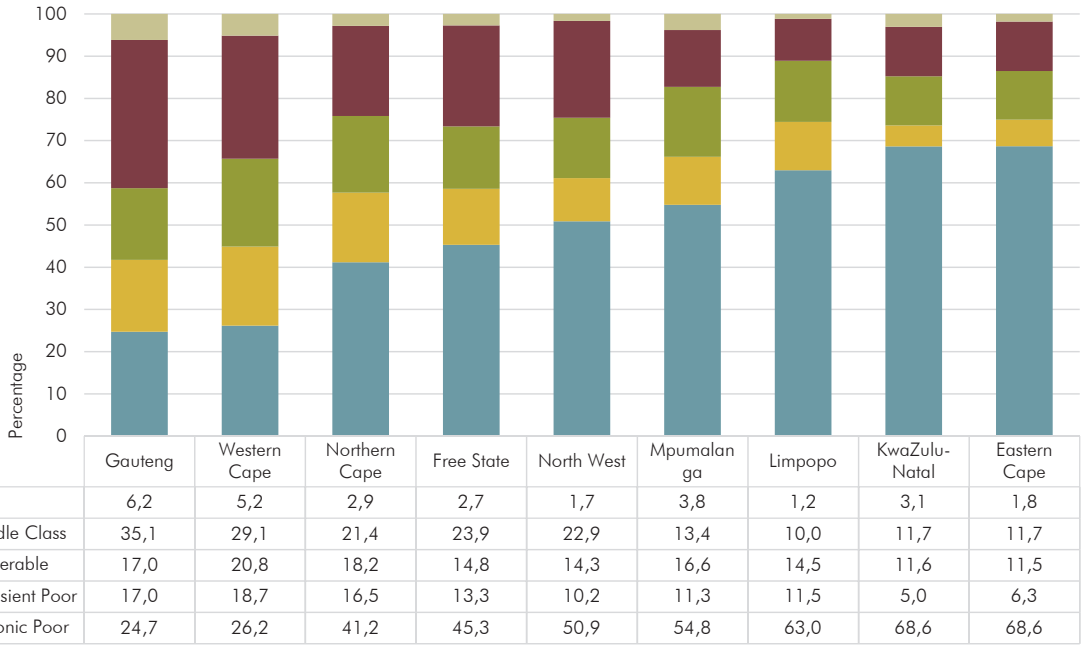


	Chronic Poor	Transient Poor	Vulnerable	Middle Class	Elite
Farms	6,0	5,3	9,2	2,8	2,0
Urban	38,5	74,2	59,7	89,8	95,0
Traditional	55,5	20,6	31,1	7,5	3,0

Source: Zizzamia et al. (2019). NIDS Waves 1 to 5 pooled sample (post-stratified weights corrected for panel attrition)

According to Figure 4.6.5, about 55,5% of the chronic poor were located in traditional areas compared to 38,5% based in urban areas and 6,0% on farms. The majority of households in the four other social classes were made up of households located in urban areas. At the top end, 89,8% of the middle class and 95,0% of the elite class were urban-based households.

Figure 4.6.6: Proportion of households by province and social class (2008–2017)

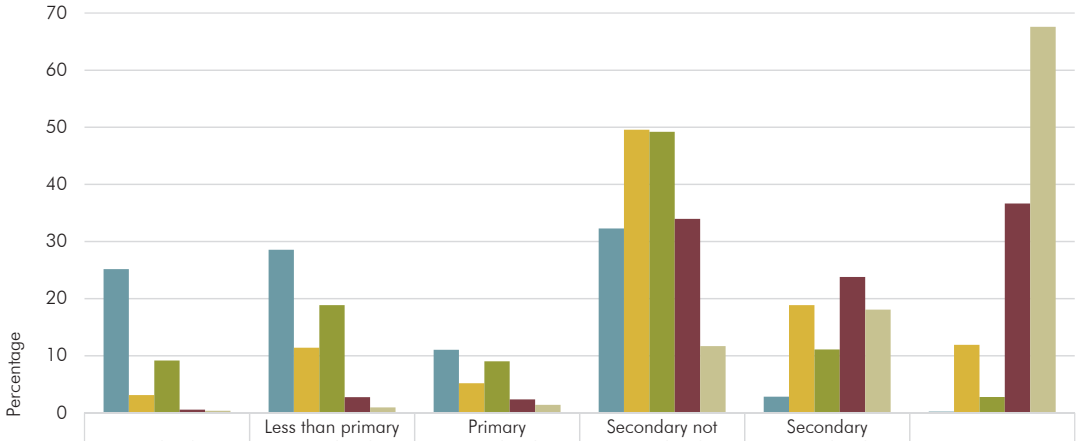


	Gauteng	Western Cape	Northern Cape	Free State	North West	Mpumalanga	Limpopo	KwaZulu-Natal	Eastern Cape
Elite	6,2	5,2	2,9	2,7	1,7	3,8	1,2	3,1	1,8
Middle Class	35,1	29,1	21,4	23,9	22,9	13,4	10,0	11,7	11,7
Vulnerable	17,0	20,8	18,2	14,8	14,3	16,6	14,5	11,6	11,5
Transient Poor	17,0	18,7	16,5	13,3	10,2	11,3	11,5	5,0	6,3
Chronic Poor	24,7	26,2	41,2	45,3	50,9	54,8	63,0	68,6	68,6

Source: Zizzamia et al. (2019). NIDS Waves 1 to 5 pooled sample (post-stratified weights corrected for panel attrition)

Provinces with large rural populations have a larger share of chronically poor households, while more urban and richer provinces have a relatively high concentration of middle class and elite households as illustrated in Figure 4.6.6. Gauteng had the highest proportion of middle class (35,1%) and elite (6,2%) households. The Western Cape follows, with the proportion of middle class and elite households being 29,1% and 5,2%, respectively. Meanwhile, Limpopo had the lowest proportions of middle class households at 10,0% and elite households at 1,2%. A high proportion of transient poor and vulnerable households were located in the Western Cape.

Figure 4.6.7: Proportion of households by social class and education level of the household head (2008–2017)



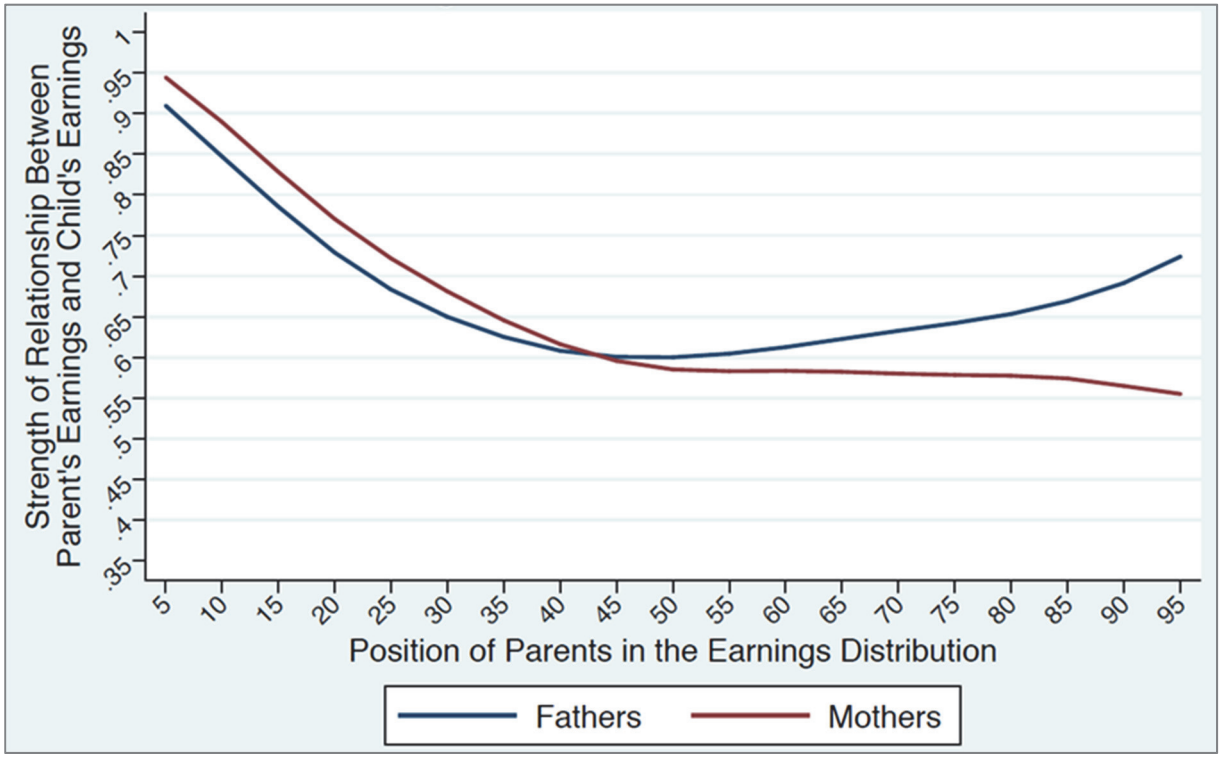
	No schooling	Less than primary completed (grades 1 to 6)	Primary completed (grade 7)	Secondary not completed (grades 8 to 11)	Secondary completed (grade 12)	Tertiary
Chronic Poor	25,1	28,5	11,0	32,3	2,8	0,2
Transient Poor	3,1	11,4	5,2	49,6	18,9	11,9
Vulnerable	9,1	18,9	9,0	49,2	11,1	2,8
Middle Class	0,5	2,7	2,4	33,9	23,8	36,6
Elite	0,4	0,9	1,4	11,7	18,1	67,6

Source: Zizzamia et al. (2019). NIDS Waves 1 to 5 pooled sample (post-stratified weights corrected for panel attrition)

As observed in Figure 4.6.7, among chronic poor households, 53,6% of them were headed by individuals with no schooling or less than primary, while 32,3% of them were headed by individuals who had some secondary education. In contrast, middle class households were mostly headed by individuals with tertiary (36,6%) and some secondary (33,9%) and, among elite households, 67,6% of them were headed by individuals with tertiary qualifications.

Given that social status is often passed through family, it is important to look at what is happening with intergenerational mobility. Finn et al. (2017) showed that, once children enter the labour market, nine out of ten from the poorest families still occupy the same place in the earnings distribution as their parents (see Figure 4.6.8). This is very high labour market immobility by international standards and it reflects the transmission of disadvantage across generations for parents at the lower end of the earnings distribution. The correlation between parents and children's earnings is somewhat lower in the middle of the distribution. It is interesting to note that this correlation increases again for fathers towards the top of the distribution. Children of top-earning fathers have a 70% probability of being top-earners themselves. This shows very strong transmission of advantage from one generation to the next at the top end of the labour market. This picture of very low intergenerational mobility confirms earlier analysis from Piraino (2015) who also used the NIDS data.

Figure 4.6.8: The intergenerational transmission of earnings advantages or disadvantages



Source: Finn et al. (2017)

CHAPTER 5

CONCLUSIONS AND WAY FORWARD

5.1 SUMMARY OF THE FINDINGS

As profiled in Chapter 3 of this report, we have been able to draw on many publicly released data sets that South Africa has available as a rich resource to measure progress in achieving the country's policy objectives and broader objectives as a society. We have excellent data and this report has sought to make a contribution to using it well. The particular focus of this report has been on benchmarking progress in lowering the many inequalities that hold back South Africa. Like the photographs that we have used in this report, we have painted this picture of South Africa's inequality at some level of detail. There have been some areas of progress, but aggregate inequality has remained resiliently high. A major contribution of a focus on inequality is to show how the many dimensions of inequality intersect to reproduce poverty and inequality. This helps highlight the package of interventions and policy coordination that is going to be required for South Africa to make stronger gains in reversing our inequality and achieving a more equal society.

5.1.1 Economic inequality

In this report, we used per capita expenditure to measure economic inequality. The measures used to estimate inequality included the Gini coefficient, the Lorenz curve, Theil's and Atkinson indices, and the Palma ratio. These measures assist with assessing trends in inequality over time, as well as the between-groups and within-group inequality levels in the country. Consistently across the money measures we have seen a slight improvement in inequality, but from extremely high levels. Furthermore, while we did see progress, it seems to have slowed down in recent years.

Nationally, both real mean and median expenditure per annum increased between 2006 and 2011, but dropped slightly between 2011 and 2015. This reflects the overall economic climate which has prevailed in recent years. Furthermore, we observed that individuals living in male-headed households had annual mean and median expenditures higher than those living in female-headed households. The white population group had the highest annual mean and median expenditure compared to other population groups between 2006 and 2015, while black Africans had the lowest. Moreover, the annual mean expenditure of non-poor individuals was approximately ten times more than that of the poor population, while their annual median expenditure was approximately five times more.

Looking at all the subgroups (such as sex of the household head, population group and poverty status), the gap in the mean and median expenditure has widened, suggesting that inequality has increased between subgroups over the years. Expenditure inequality has also increased between urban and rural dwellers.

The expenditure shares between groups are disproportionate relative to their population shares. Approximately, 57,0% of individuals living in male-headed households accounted for almost three quarters of total household expenditure in the country. While roughly 43,0% of individuals living in female-headed households accounted for a little over a quarter of total expenditure share between 2006 and 2015.

When it comes to population groups, the expenditure share of coloureds was in line with their population size. Unfortunately, this was not the case for the other population groups. The expenditure share of black Africans was significantly smaller than their large population share in the country;

while, the expenditure share of whites remained disproportionately large relative to their small population share. This and the gaps in expenditure and population shares – which we already observed in the differences by mean and median expenditure – highlights the high level of inequality in South Africa.

Despite the high level of inequality in the country, most measures suggested a decrease in inequality within groups between 2006 and 2015. For example, all provinces except for Limpopo and Eastern Cape reported a decrease in their respective Gini coefficients. Furthermore, individuals living in both male- and female-headed households recorded a decrease in their Theil scores between 2006 and 2015. While inequality decreased for Indians/Asians, it remained fairly constant for whites and coloureds, but increased for black Africans.

The Theil's index showed that the relative contribution of the within group inequality based on sex of the household head was more or less 93% at all four data points[34]. This means that inequality was predominantly driven by within household head groups rather than dynamics between these groups. Over time, individuals living in male-headed households continued to contribute more to overall inequality as compared to those living in female-headed households.

Inequality amongst black Africans was the most unequal compared to other population groups and the contribution of black Africans to overall inequality was the highest and has risen over time. The contribution of the other three population groups remained more or less the same between 2006 and 2015, although inequality within each population group increased over time.

Throughout the years, income from the labour market has been the main source of household income in South Africa, accounting for over 70% of overall income. Additionally, labour market income is overwhelmingly the largest contributor to income inequality when compared to other income sources. Nevertheless, social grants and remittances have played a crucial role in reducing the income inequality gap between the bottom and top deciles over the years in South Africa.

5.1.2 Asset and wealth inequality

There is a general recognition that there are many dimensions of well-being other than the monetary measures that are central to understanding South Africa's inequality. As far as well-being is concerned, the more assets a household owns, the more likely that household will be better off compared to households with less assets. For example, in times of financial shocks the household could sell these assets for an additional source of income or use the assets to generate an income. Overall, as time progressed, the distribution of households shifted slightly to the right suggesting an overall increase in the number of assets owned by households in South Africa (see Figure 4.2.2).

A set of 18 selected assets and services was used to calculate an asset index using the Uncentred Principal Component Analysis (UC PCA) method. This approach allows for the estimation of Gini coefficients to measure asset inequality. The asset Gini coefficients provide the scale of inequality within groups while the average asset scores, on the other hand, reflects inequality between groups in terms of availability of asset resources that a specific group has compared to another group. The average asset scores (i.e. the average number of the 18 assets owned) for South Africa increased

[34] The four data points refer to the current IES and LCS series and include 2006, 2009, 2011 and 2015.

from 8,7 in 2009 to 9,8 in 2015; while the asset Gini coefficient levels dropped from 0,62 in 2009 to 0,59 in 2015. Since better-off South Africans already have most (if not all) of these 18 assets, the increase in the average asset score implies that less well-off South Africans are getting access to more of these assets and therefore, inequality is falling.

Black Africans reported the largest increase in their average asset scores over time compared to other population groups, but they still had the lowest amount of assets overall. The asset Gini coefficient was the highest for black Africans, followed by coloureds, then Indians/Asians, with whites recording the lowest Gini. Despite the increase in the average number of assets, asset inequality has increased amongst black Africans, whereas it has decreased for the other population groups.

Looking at the provincial asset profiles, Eastern Cape and KwaZulu-Natal were the most unequal provinces as compared to the others, while Limpopo was the least unequal between 2009 and 2015. Eastern Cape had Gini coefficients greater than the national Gini since 2011, while KwaZulu-Natal's Gini coefficient was above the national Gini over the whole period. Overall, asset inequality has decreased over time for all provinces, except for Northern Cape and Free State.

The assets that have been profiled are crucial in allowing citizens to live healthy and productive lives in our country and thus, tracking inequality in access to such assets is imperative. The financial value of all assets owned by an individual or household is a measure of the wealth of that individual or household. In South Africa, wealth inequality is considerably higher than income inequality.

5.1.3 Labour market inequality

Any analysis of inequality in South Africa would be incomplete without focusing on the country's labour market. Between 2011 and 2017, the labour absorption rate was fairly stable, ranging between 40% and 44%. At the same time, the proportion of those who are not economically active (NEA) decreased markedly which led to an increase in the labour force participation (LFP) rate. With a relatively stable absorption rate, and increasing LFP, the ranks of unemployed people have thus, increased considerably. Consequently, the unemployment rate has increased from an already high level of 24,8% in 2011 to an even higher 27,5% by 2017.[35]

The labour market experiences of different population groups in South Africa continue to diverge substantially, and still reflect the strongly persistent legacies of apartheid policies. Black Africans had the highest unemployment rates; which were between four and five times as high as they were amongst whites. The coloured population also had high unemployment rates, however not as high as black Africans. Males have lower unemployment rates than females, although this is slightly masked by the lower levels of female LFP.

The distribution of earnings starkly depict the heavily racialized inequality in the South African labour market between 2011 and 2015. In addition to having worse employment outcomes, black Africans also earn the lowest wages when they are employed. Whites, in contrast, earn substantially higher wages than all the other population groups. Their monthly average real earnings were more than three times higher than those of black Africans. Females are less likely to be employed and also earn approximately 30% less on average compared to males.

[35] Since 2017, the unemployment rate has further increased in South Africa with the latest available data indicating an unemployment rate of 29,1% for Quarter 3 of 2019 (Stats SA, 2019b).

The Gini coefficients indicated a sharp increase in the level of earnings inequality amongst employed adults between 2011 and 2015. The Palma ratio estimates also increased during the same period from 5,8 in 2011 to 9,7 in 2015, suggesting a sharply widening earnings gap in South Africa. The earners at the 10th and 50th percentile of the distribution saw almost no real growth in earnings, while individuals at the 99th percentile experienced a remarkable increase in real earnings. Therefore, the widening inequality is a combination of no real earnings growth amongst low and median earners and exceptionally high levels of real earnings amongst the very high earners.

Ultimately, inequality in the South African labour market remains very high and has increased in the recent past. The unemployment rate rose at the same time and, if the unemployed are included as zero earners in measures of inequality, this rise in wage inequality would be even steeper. In addition, there is a general pattern such that groups who are more likely to find employment are also less likely to lose it, and to earn higher wages conditional on employment. All of these mechanisms serve to reinforce one another. Thus, the labour market remains one of the key institutions through which South Africa's exceptionally high levels of both vertical and horizontal inequality get transmitted.

5.1.4 Inequality in the social domain

The impact of apartheid policies has left a legacy of unequal development across the South African landscape manifesting in regional inequalities in terms of access to education, healthcare, and basic services (such as water, sanitation, refuse removal and electricity). Since democracy in 1994, government has tried to eliminate these inequalities with varying degrees of success.

Generally, inequality in the social sphere has declined in some aspects. High attendance levels in schools reflect the positive impact of South Africa's progressive education system. Nationally, school attendance has increased between 2002 and 2017, particularly with Limpopo having the highest proportion of learners aged 6 to 18 years attending school.[36] All provinces (except Western Cape and Gauteng) had above 90% of learners who benefited from the government's nutrition programme. Furthermore, learners attending public schools benefited from the 'no-fee' policy, with Limpopo and Eastern Cape being the major beneficiaries. Across the board, there have been notable improvements in school attendance, as well as access to text books, no fee schools and school nutrition programmes.

This contrasts sharply with health care where substantial differences remain, by race and province, in the use of public versus private health care facilities and in having access to a medical aid. Inequality in health was measured by inaccessibility to medical aid; strikingly, black Africans were amongst the most vulnerable and had the lowest access to medical aid coverage, especially in provinces like Limpopo. Individuals living in Gauteng and Western Cape reported the highest medical aid access rates in the country at 25,0% and 24,8% in 2017, respectively.

The inequality gap between subgroups in accessing electricity has substantially narrowed over the years. Provincially, Eastern Cape and KwaZulu-Natal made tremendous gains in accessing electricity from the mains supply, which brought them closer to parity with other provinces. With regard to settlement type, there has been notable progress in improving access to electricity for households in

[36] It should be noted that higher attendance rates can possibly mask the fact that some learners in the specified age group stay on longer than they should (e.g. repeating grades, teenage pregnancy, etc.) and that some do not complete grades at the stipulated ages.

rural areas between 2002 and 2017. Black African-headed households continue to have the lowest proportion of access to electricity from the mains compared to other population groups.

Access to improved sanitation between rural and urban households narrowed between 2002 and 2017; however, this was not the case in terms of access to piped or tap water which remained flat. Eastern Cape and Limpopo had the lowest proportion of households with access to both water and improved sanitation throughout this period. Nevertheless, these two provinces made progress in terms of access to improved sanitation, but little progress in terms of access to water. There are very large differences in water access between black Africans and the other population groups, all of who have more or less the same level of access.

Between 2009 and 2017, access to internet connections in both urban and rural areas increased; although, households in rural areas were still lagging behind. Gauteng and Western Cape had the highest proportion of households with access to internet connections while Limpopo reported the lowest access levels. Unsurprisingly, black African-headed households had the lowest levels of access to the internet compared to other population groups.

Overall, more rural provinces and black Africans tend to lag further behind in access to medical aid and basic services such as electricity, water, sanitation, and internet. Although some progress has been achieved by black Africans, females, as well as those living in rural areas, there still remains a noticeable inequality gap relative to other groups in most domains.

5.1.5 Gender inequality

It is also important to consider the impact of gender inequality as this overlaps with and amplifies many other disadvantages. Furthermore, it is therefore imperative to understand how education and health outcomes, as well as access to basic services are distributed by gender in order to provide an analysis of how inequalities accentuate vulnerabilities.

Life expectancy for males remains lower as compared to that of females. Moreover, the gap seems to have widened over time. However, when looking at other indicators, such as literacy, earnings, expenditure shares and other basic services, males were consistently better off than their female counterparts. Although, female-headed households made good progress with regard to access to electricity from the 'mains electricity supply' as they surpassed access levels in male-headed households in 2010 and have since remained higher.

Additionally, female-headed households were catching up in terms of access to water and improved sanitation. Female-headed households improved at a faster rate with regard to access to water, increasing from 60,0% in 2002 to 70,3% in 2017 (a 10,3 percentage points increase), while male-headed households only achieved a 3,4 percentage points increase over the same period. For households' access to improved sanitation there was a notable decrease in inequality between male- and female-headed households with the difference between the sexes narrowing from 15,5 percentage points in 2002 to approximately 2,1 percentage points in 2017.

5.1.6 Social mobility

Social mobility refers to the ability to move between different levels of social status. In this report, we analysed intra-generational and inter-generational mobility using the NIDS panel dataset (see Section 4.6). The findings showed that 85,3% of the South African population experienced at least one poverty spell between 2008 and 2017, while 36,1% remained consistently below the poverty line. This most heavily impacted were black Africans, individuals with low levels of education, those residing in rural areas, and households headed by females.

Five social classes were identified, namely the chronic poor, transient poor, vulnerable middle class, the actual middle class, and the elite. The chronic poor was the only group that was comprised of just two of the four population groups, specifically black African- and coloured-headed households. Furthermore, black African-headed households only accounted for a fifth (22,6%) of the elite class compared to whites who accounted for 65,4%.

When looking at provinces, those with large rural populations had a larger share of chronically poor households, while more urban and richer provinces had a relatively high concentration of middle class and elite households. Gauteng had the highest proportion of middle class households followed by the Western Cape; meanwhile, Limpopo had the lowest proportion of middle class households. Interestingly, a high proportion of the transient poor and vulnerable households were located in the Western Cape.

Internationally, social status is often passed down through family and, in South Africa this is certainly the case. Children of top-earners have a higher probability of being top-earners themselves and this shows a strong transmission of advantage from one generation to the next at the top end of the labour market. Children of earners at the bottom of the earnings distribution have a very good probability of being low-earners themselves. This shows extremely strong transmission of disadvantage from one generation to the next for those at the bottom end of the labour market.

5.2 WAY FORWARD

5.2.1 Improving SDG reporting on inequality

In 2014, the United Nations General Assembly proposed 17 Sustainable Development Goals, containing 169 targets and 232 indicators, covering more themes than its predecessor the Millennium Development Goals (MDGs). The 2015 MDG reports released by South Africa and other member states signalled the end of the MDG era and the start of the SDG era. The SDGs are a set of international targets used to measure progress on overcoming various developmental challenges. In 2015, South Africa along with other member states in the United Nations (UN) adopted the SDG framework, in a worldwide attempt to eradicate poverty and achieve sustainable development by 2030. To some extent the SDGs were built on the "unfinished business" of the MDGs (Stats SA, 2019c).

Since the adoption of the 2030 Agenda in 2015, the SDGs have made notable progress in tracking inequality. South Africa is able to report on five SDG 10 indicators, of which four are Tier I or Tier II indicators and one is a domesticated indicator (Stats SA, 2019c). Meanwhile, the other SDG 10 indicators are listed as Tier III indicators which means that consistent reporting on these indicators has not fully been developed, and therefore, monitoring progress at global, regional and national levels is limited (UN, 2019). Given the serious nature and extent of inequality in South Africa, there needs to be a concerted effort to improve the availability and reliability of data to measure and monitor the country's progress in reducing inequality in all its forms. It is hoped that this report on inequality trends will serve as a cornerstone for inequality measurement efforts in the country and that it will eventually lead to improvements in our SDG and other reporting responsibilities.

In the past, the Gini coefficient has been the most commonly used indicator for measuring and monitoring inequality. However, due to the Gini's oversensitivity to changes in the middle of the income distribution, and by extension, its insensitivity to changes in the bottom and top ends of the income distribution, its ability to serve as a singular headline indicator is limited. Together with the rise in the adoption of inclusive development policies, which mainly focus on uplifting the incomes of the poorest 40% of households and their overall share of income; there has been an ongoing debate to find a more broad-based robust measure of inequality. Some National Statistical Offices (NSOs) and other international development agencies (such as the World Bank, United Nations, etc.) have opted to produce and report on the Palma ratio to supplement the Gini. The authors of this report agree that the inclusion of the Palma ratio along with the Gini coefficient would be a step in the right direction. Furthermore, if the Palma ratio is to be included in the country's SDG reporting regime, as an additional indicator for measuring Target 10.1, South Africa would be the first country in Sub-Saharan Africa and outside of the OECD countries to produce and report on the Palma ratio for monitoring SDG 10 (Sachs, J. et.al., 2019).

The data presented in the tables and figures below can be used for reporting the Palma ratio by sex and race, using the four IES and LCS data points available. It is important to note that any analysis by sex is done at a household level, while analysis on population group is done at an individual level. As is common in many developing countries, expenditure data is used as a proxy for reporting on income, as this data is often more robust and better reported by households. However, in the spirit of Target 10.1 which refers to 'income growth', it is clear that understanding the Palma ratio using both income and expenditure data is important and these would be complementary to one another.

The Palma ratio, as mentioned in Section 4.1, measures the income/expenditure share of the richest 10% of the population with respect to the income/expenditure share of the poorest 40%. When interpreting the Palma, high ratio values indicate higher levels of inequality between the two groups while lower ratio values imply greater parity.

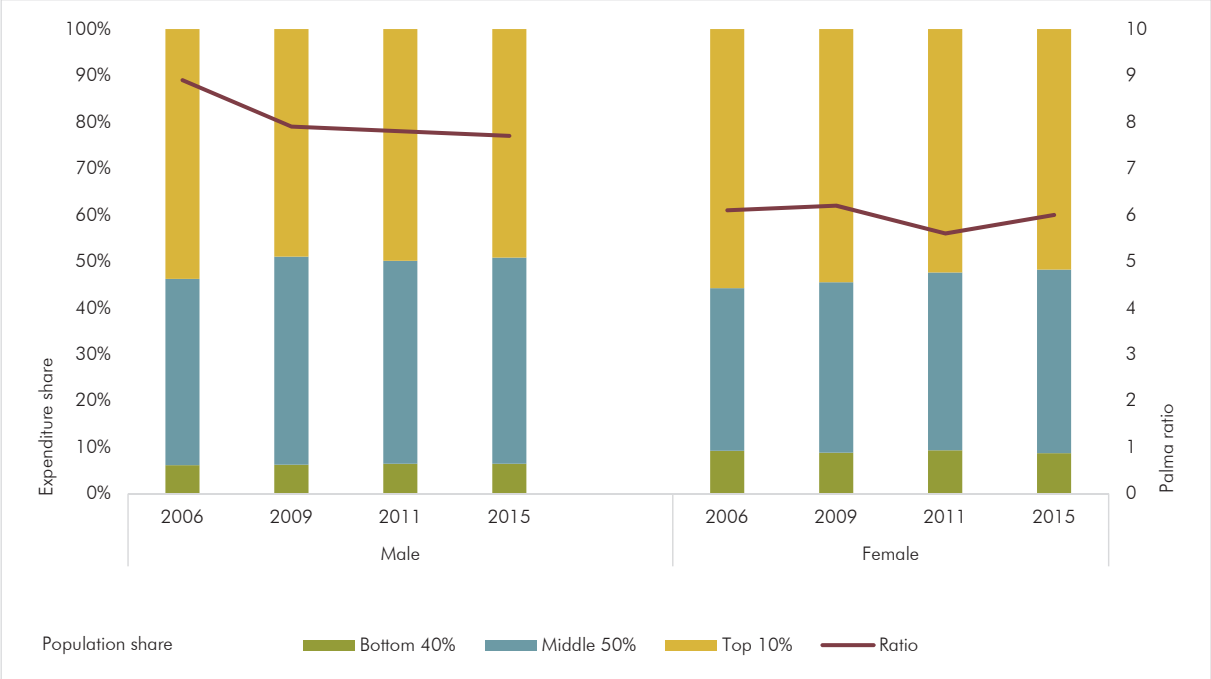
Table 5.2.1: Palma ratio based on expenditure per capita by sex of household head and population group (2006, 2009, 2011 & 2015)

Year	Palma ratio	Sex of household head		Population group				Total population
		Male	Female	Black African	Coloured	Indian/ Asian	White	
2006	Bottom 40%	6,1%	9,2%	11,4%	9,9%	11,2%	14,7%	6,6%
	Middle 50%	40,1%	35,0%	43,7%	45,9%	48,2%	53,8%	36,2%
	Top 10%	53,8%	55,8%	44,9%	44,2%	40,6%	31,5%	57,2%
	Ratio	*8,9*	*6,1*	*4,0*	*4,5*	*3,6*	*2,1*	*8,6*
2009	Bottom 40%	6,2%	8,8%	10,0%	10,1%	11,4%	16,3%	6,5%
	Middle 50%	44,8%	36,7%	43,2%	51,2%	50,2%	55,4%	40,2%
	Top 10%	49,0%	54,5%	46,8%	38,7%	38,4%	28,3%	53,3%
	Ratio	*7,9*	*6,2*	*4,7*	*3,8*	*3,4*	*1,7*	*8,1*
2011	Bottom 40%	6,4%	9,3%	10,4%	10,5%	12,9%	15,4%	6,8%
	Middle 50%	43,7%	38,3%	44,7%	49,2%	56,7%	54,2%	39,9%
	Top 10%	49,9%	52,4%	44,9%	40,3%	32,8%	30,4%	53,3%
	Ratio	*7,8*	*5,6*	*4,3*	*3,8*	*2,5*	*2,0*	*7,9*
2015	Bottom 40%	6,4%	8,7%	9,6%	9,2%	13,5%	15,4%	6,6%
	Middle 50%	44,4%	39,5%	44,2%	48,6%	53,8%	54,8%	40,8%
	Top 10%	49,2%	51,8%	46,2%	42,2%	32,7%	29,8%	52,6%
	Ratio	*7,7*	*6,0*	*4,8*	*4,6*	*2,4*	*1,9*	*7,9*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

Using per capita expenditure, the national Palma ratios in Table 5.2.1 show that the share held by the top 10% of the population decreased between 2006 and 2015. In 2006, it was estimated that the richest 10% spent 8,6 times more than the bottom 40%, compared to 7,9 times more in 2015. Interestingly, when looking at the share of the bottom 40% over the same period not much movement is observed; this likely indicates that the drop in the Palma ratio is driven primarily by a loss of expenditure share by the top 10% of the population to the middle 50%, and not necessarily due to changes in the share owned by the bottom 40%.

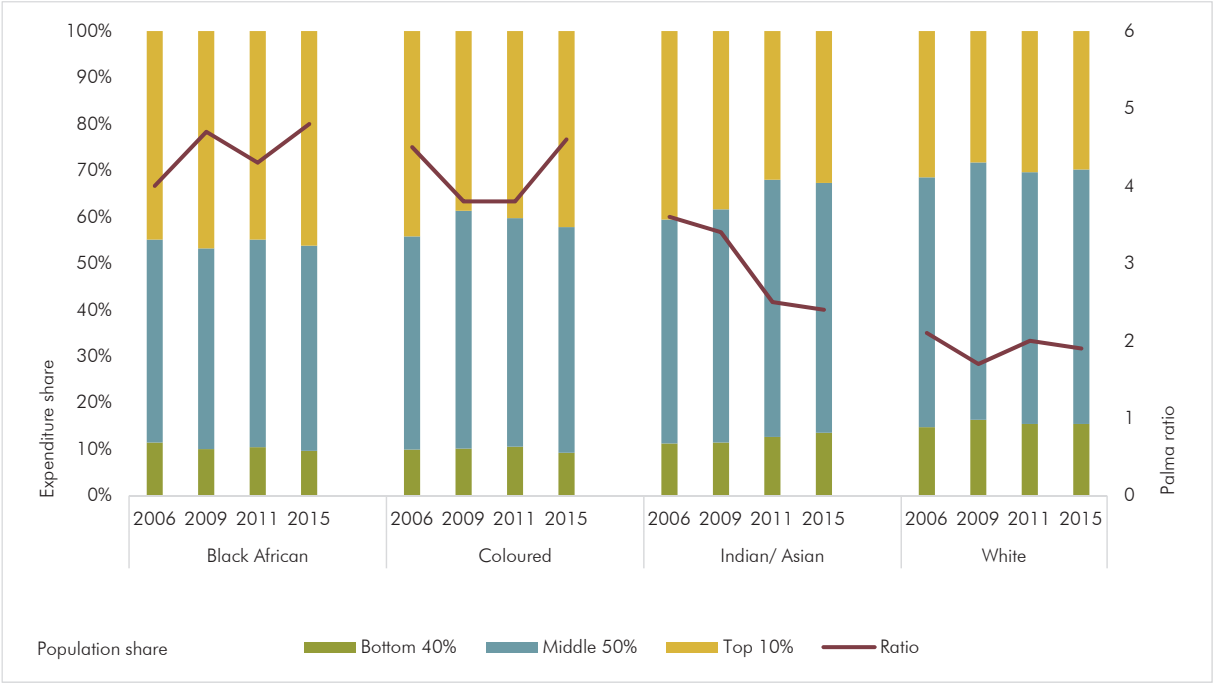
Figure 5.2.1: Expenditure share and Palma ratio based on expenditure per capita by sex of household head (2006, 2009, 2011 & 2015)



Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

Figure 5.2.1 indicates within group inequalities of male- and female-headed households over time. Across all periods concerned it can be seen that approximately 50% or more of the expenditure in South Africa was held by the top 10% of households, while the bottom 40% of household's share of expenditure averaged 6,3% for male-headed households and 9,0% for their female counterparts. The Palma ratio was at its highest for male-headed households in 2006, when the top 10% of male-headed households spent 8,9 times more than those in the bottom 40%, while female-headed households reported their highest Palma in 2009 at 6,2. Meanwhile, female-headed households reported their lowest Palma in 2011, when the top 10% spent 5,6 times more than those in the bottom 40%, the corresponding ratio for male-headed households stood at 7,8 in 2011. Overall, both sexes saw a reduction in their Palma ratios between 2006 and 2011; in 2015, the ratio for male-headed households stayed roughly the same at 7,7, but it increased in female-headed households from 5,6 in 2011 to 6,0 in 2015.

Figure 5.2.2: Expenditure share and Palma ratio based on expenditure per capita by race of household head (2006, 2009, 2011 & 2015)



Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

Figure 5.2.2 shows the expenditure shares and Palma ratios for the different population groups in South Africa. When comparing the racial inequality patterns across the four data points, it is observed that households headed by black Africans and coloureds remain the most unequal. Both black African- and coloured-headed households reported the highest Palma ratios in 2015 at 4,8 and 4,6, respectively. In contrast, the ratios reported by Indian/Asian-headed households was 2,4 in 2015, while white-headed households recorded a ratio of 1,9.

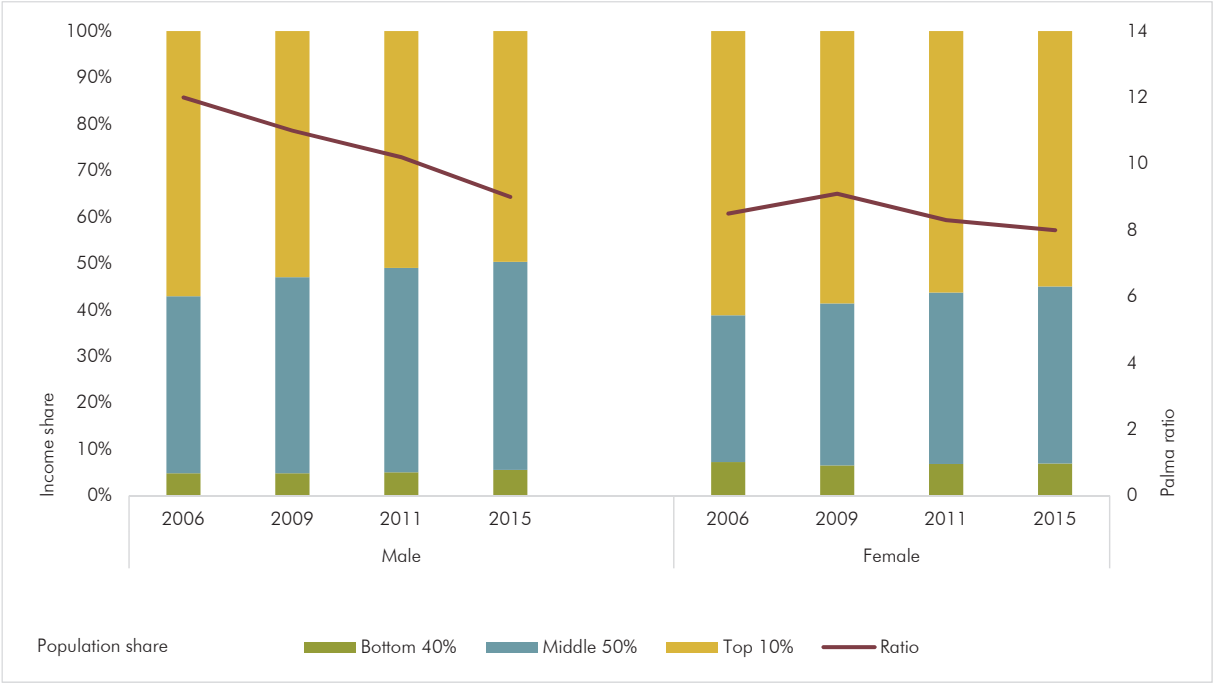
Table 5.2.2: Palma ratio based on income per capita by sex of household head and population group (2006, 2009, 2011 & 2015)

Year	Palma ratio	Sex of household head		Population group				Total population
		Male	Female	Black African	Coloured	Indian/ Asian	White	
2006	Bottom 40%	4,8%	7,2%	8,8%	8,7%	8,4%	12,1%	4,9%
	Middle 50%	38,1%	31,6%	41,6%	44,7%	50,0%	50,9%	33,9%
	Top 10%	57,1%	61,2%	49,6%	46,6%	41,6%	37,0%	61,2%
	Ratio	*12,0*	*8,5*	*5,6*	*5,4*	*5,0*	*3,1*	*12,5*
2009	Bottom 40%	4,8%	6,5%	6,8%	8,8%	10,0%	11,5%	4,7%
	Middle 50%	42,2%	34,9%	40,0%	48,0%	51,5%	56,7%	37,9%
	Top 10%	53,0%	58,7%	53,2%	43,2%	38,5%	31,8%	57,4%
	Ratio	*11,0*	*9,1*	*7,8*	*4,9*	*3,8*	*2,8*	*12,2*
2011	Bottom 40%	5,0%	6,8%	7,3%	8,3%	11,5%	13,4%	4,9%
	Middle 50%	44,0%	36,9%	42,1%	47,3%	52,3%	56,7%	39,3%
	Top 10%	51,0%	56,3%	50,6%	44,4%	36,2%	29,9%	55,8%
	Ratio	*10,2*	*8,3*	*7,0*	*5,4*	*3,2*	*2,2*	*11,5*
2015	Bottom 40%	5,5%	6,9%	7,2%	9,0%	9,7%	13,0%	5,3%
	Middle 50%	44,8%	38,1%	42,2%	48,4%	51,4%	55,2%	40,8%
	Top 10%	49,7%	55,0%	50,6%	42,6%	38,9%	31,8%	53,9%
	Ratio	*9,0*	*8,0*	*7,0*	*4,7*	*4,0*	*2,4*	*10,2*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

Table 5.2.2 shows a similar trend as reported in Table 5.2.1; however, the Palma ratios are higher when using per capita income data. According to per capita income data, the top 10% of the population earned 12,5 times more than those in the bottom 40% in 2006, while this figure decreased gradually over the years to 10,2 by 2015. This decrease of 2,3 points in the national Palma ratio indicates a reduction in income inequality.

Figure 5.2.3: Income share and Palma ratio based on income per capita by sex of household head (2006, 2009, 2011 & 2015)



Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

Figure 5.2.3 reveals a similar pattern as seen when using per capita expenditure, namely female-headed households' share of income in the top 10% are higher than those for males. Similarly, the trend shown by the Palma ratio in Figure 5.2.1, where even though female-headed households' income shares in the top 10% were greater than those of the male counterparts, their Palma ratios were lower. This could be attributed to the bottom 40% of female-headed households having a greater share of income as compared to the bottom 40% of male-headed households. Female-headed households reported their highest Palma ratio in 2009, when the top 10% earned 9,1 times more than those in the bottom 40%, while male-headed households experienced their highest level in 2006, when the top 10% earned 12,0 times more than those in the bottom 40%. Both male- and female-headed households reported their lowest Palma ratios in 2015 with 9,0 and 8,0, respectively. This indicates an improvement in gender-based inequality over time.

Figure 5.2.4: Income share and Palma ratio based on income per capita by race of household head (2006, 2009, 2011 & 2015)

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

It is worth mentioning that even though the income shares in the figures may differ from the corresponding expenditure values, the general direction of the inequality trend is similar to that of the per capita expenditure. Black African-headed households saw the highest level of within group inequality in 2009, when the top 10% earned 53,2% of the income, making it 7,9 times more than those in the bottom 40%. Households headed by whites and Indians/Asians experienced their lowest levels of inequality in 2011, with their Palma ratios being 2,2 and 3,2, respectively.

The differences reported in the per capita expenditure and income Palma ratios should not be the determining factor when considering which version to use. Instead, it is important that the decision be informed by the value the Palma will add to the robustness of measuring inequality in South Africa. Including the Palma ratio in the SDGs will assist the country to better report and monitor progress made on reducing inequality in all its forms. It will also place South Africa at the forefront of SDG reporting, as it will be the first country in Sub-Saharan Africa, as well as the first country outside the OECD, to include the Palma ratio. Thus, the recommendation of this report is that, in addition to the Gini coefficient, the Palma ratio should be considered for inclusion as an additional indicator for reporting on SDG 10, Target 10.1.

5.2.2 Improving data for inequality measurement

Although South Africa has a wealth of survey data, the evidence base that we are able to draw from is not comprehensive and in some key areas falls short of what is available to the policy research communities in developed countries. As we have progressed through the report, we have alluded to some gaps in this evidence base which limits our ability to profile and understand the evolution of post-apartheid inequality in South Africa. The most notable challenge is the limited availability of reliable sub-provincial data; currently, the primary two data sources that can inform analysis at district and municipal levels are the Census and Community Survey which are both conducted only once every 10 years.[37] Beyond the challenge of limited low level data, there are other specific data gaps within the various content areas discussed in the report. Here we consolidate this discussion and sketch a data wish list that would make important improvements to the evidence base of the country.

5.2.2.1 Gaps in education, health and social services data

In this report we have been able to augment the discussion of income and earnings inequality with a discussion of inequalities in education, health and many services. The data have been nuanced enough to show rapid improvements in access to some services (i.e. education) and less rapid progress in others (i.e. health). However, it is very important to go beyond this to measure the nature and quality of this access to households and individuals. While it is important to know who has a tap or an electricity connection in their home and who does not, it is also important to know the quality of the services being provided.

Outside of the household, but still in the communities within which people live, we have been able to profile access to education and even some assessment of progress through school and educational achievements. However, we have not been able to link the learners in our surveys to the characteristics of their schools – such as the size of the school, the learner/teacher ratio, etc. – or to the profile the qualifications of their principals and their teachers.

In sum, although we have been able to profile inequality in access to the social domain, we have not been able to move much beyond whether or not the members of that household have access to measuring the quality of access and how this has changed over time. This limits the ability to ensure that the analysis of multidimensional inequalities gives sufficient attention to the quality of what is being provided. It also limits the ability to correlate access and quality to household income. Tracking this correlation is very important, especially as soon as there is payment involved in accessing services. Finally, this limits the ability to correlate the value of these services in terms of the improved labour market prospects for individuals or their ability to escape from poverty.

The report has demonstrated how important these considerations are in understanding how intersecting inequalities facilitate and/or stifle authentic access to quality services and to consequent success in the economy and society. This is at the heart of using our SDG reporting systems to focus hard on improving the delivery of quality services that empower the citizens of South Africa and improving the assessment of our improvements in this regard.

[37] There have only been three population censuses undertaken in South Africa since democracy, namely in 1996, 2001 and 2011. Stats SA is currently planning, testing and preparing for the country's fourth census scheduled for October 2021. There have only been two Community Surveys implemented, one in 2007 and the latest in 2016.

Although this is a wish list, much of this information is available through administrative systems. The key gap that we are raising is the lack of integration of the household surveys that we have used in this report with relevant administrative systems. There are a number of examples of such integrations that illustrate the power of linking this information and therefore, the need. The NIDS panel data that are used in this report have been able to use school and clinic level information to show that quality of services are important in livelihood trajectories. Census data has been merged with youth centres, labour offices, educational institutions and local labour market metrics to understand the prevailing situation that confronts youth in different parts of the country. One of the core strategic goals of Stats SA for the period 2020/21 to 2024/25 is to improve the integration of data sources and build an inter-connected data ecosystem for the country; however, to realize this goal requires not only legislative reform, but also the willingness and openness of all data producers and owners in the country to band together. Building strong partnerships is critical to ensuring success in the area and remains a central priority for Stats SA.

Much of the data integration is focused on understanding the situation in each specific community in the country within which individuals and their households live. It is spatial coordinates that allow the merging of data to take place. Thus, greatly enriched versions of the spatial profiles that have been presented in this report lie at the heart of this approach. The Presidency has recently launched a new District Development Model which, at its core, recognizes the need to adopt an integrated approach to the delivery of all municipal services at the local level.

5.2.2.2 Gaps in data on income and earnings

The income and earnings profiles in this report have relied on the Stats SA's labour market and household expenditure surveys, as well as the national income dynamics study. There is now a rich international literature that augments such analysis by bringing tax data into such assessments. In particular, such analysis augments the description and understanding of the top end of the income and earnings distributions. The inclusion of tax data in the data mix is therefore becoming increasingly common-place in developed countries and is much discussed in developing countries.

South Africa is very much part of this developing country discussion and hopes to drive and lead such efforts on the African continent. In Section 4.2.3 of this report, we have already made reference to such research using personal income tax and company income tax data. In the first instance, these data will be used to monitor tax compliance effectively and to provide information for better designed tax policy. But, they also provide rich sources of information on the behaviour of firms and on the incomes and earnings of those who pay tax. In this report, we have cited research that merges these data with information from household expenditure and labour market surveys. It shows that the information gathered in the household expenditure surveys (namely the IES and LCS) may sometimes under-report or miss important information about the top-end of the earnings and income distributions, especially with regard to income from capital.

This analysis shows both that there is room for improving the evidence base needed to address the employment and earnings challenges that South Africa faces and that much of the data that we need to do this exists and is slowly being pulled together effectively and used. Stats SA produces South Africa's official labour market statistics on employment and earnings. It also conducts firm surveys. The need is to harmonise these data with tax data and also data coming into the Department of

Labour on unemployment insurance. The wish list here is for an integrated labour market information system to undergird labour market policy.

5.2.2.3 Gaps in data on wealth

It has been mentioned in this report a number of times that it is essential to measure and understand wealth and assets because these form the foundation of individuals' abilities to thrive and earn income. We have been able to list the assets that individuals and their households have been able to draw on to show how this connects to the opportunities that they are able to realise. However, we have had little information about their wealth (i.e. the money value of their financial assets). Measuring wealth is a tricky exercise as it requires both detailed information on the nature of housing or land or financial assets and also the data to determine the money value of these assets. In South Africa, we unfortunately have very little wealth data and thus, this remains a key data gap in our knowledge base.

In many developed countries, tax data has opened up one avenue to fill this gap. This has enabled an evidence-informed discussion of the role of wealth in driving inequality and of the options for taxing wealth. In South Africa, the revenue service is open to the idea of using tax data to measure wealth, under appropriately stringent conditions to ensure the protection and confidentiality of this very sensitive information. Thus, we have an opportunity to fill this data gap and we are encouraging greater cooperation between SARS, Stats SA, National Treasury and the other relevant regulatory bodies to explore ways to improve analysis in this area. Of course, much hard and technical work will be needed to do this.

Housing and land are two key assets and two key components of any discussion on wealth. In South Africa, they are both central planks of any discussion of sustainable livelihoods. Historically, they have played a key role in structuring and perpetuating inequality in the country. Therefore, there needs to be a greater focus on the collection of data that can improve our measurement and understanding of these two key issues.

ANNEXURES

ANNEXURE A

Table A1: Population shares by subgroups (2006, 2009, 2011 & 2015)

Variable	Sub-group	2006	2009	2011	2015
Sex of household head	Male	56,5	58,9	58,3	57,8
	Female	43,5	41,1	41,7	42,2
Population group	Black African	79,5	79,1	79,5	80,4
	Coloured	8,9	9,0	9,0	8,8
	Indian/Asian	2,5	2,5	2,5	2,5
	White	9,2	9,4	9,0	8,3
Education level of household head	No schooling	18,3	14,1	12,8	12,0
	Some primary	22,8	21,4	22,1	18,3
	Primary	7,9	7,1	6,9	7,1
	Some secondary	29,4	32,9	32,7	33,8
	Matric	13,1	12,3	13,7	17,0
	Higher	8,5	12,4	11,8	11,8
Settlement type	Urban	59,0	62,9	62,4	63,5
	Rural	41,0	37,1	37,7	36,5
Province	Western Cape	10,0	11,2	11,2	11,3
	Eastern Cape	14,4	12,8	12,7	12,6
	Northern Cape	2,4	2,3	2,2	2,2
	Free State	6,2	5,4	5,3	5,1
	KwaZulu-Natal	21,0	19,8	19,8	19,9
	North West	7,0	6,8	6,8	6,8
	Gauteng	20,2	23,5	23,7	24,0
	Mpumalang	7,4	7,8	7,8	7,8
	Limpopo	11,3	10,5	10,4	10,4
Poverty status (UBPL)	Poor	66,6	62,1	53,2	55,5
	Non-poor	33,4	37,9	46,8	44,5
Total		100,0	100,0	100,0	100,0

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15

ANNEXURE B

Table B1: Distribution of real annual mean and median income by sex of household head and population group (2006, 2009, 2011 & 2015)

Variable	Sub-group	Mean				Median			
		2006	2009	2011	2015	2006	2009	2011	2015
Sex of the household head	Male	47 028	44 098	53 321	51 838	14 363	15 440	18 781	19 102
	Female	18 978	18 955	21 905	23 165	6 636	6 774	8 182	8 887
Population group	Black African	17 077	20 067	23 043	25 249	7 759	8 165	9 877	10 811
	Coloured	32 548	34 491	44 204	44 637	14 745	18 292	22 513	22 375
	Indian/Asian	64 033	59 654	85 298	79 543	36 910	40 260	55 058	45 087
	White	182 705	141 795	175 373	163 359	118 578	105 238	139 173	120 761
Total		34 826	33 755	40 227	39 747	9 647	10 572	12 822	13 546

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B2: Distribution of real annual mean and median income by subgroups (2006, 2009, 2011 & 2015)

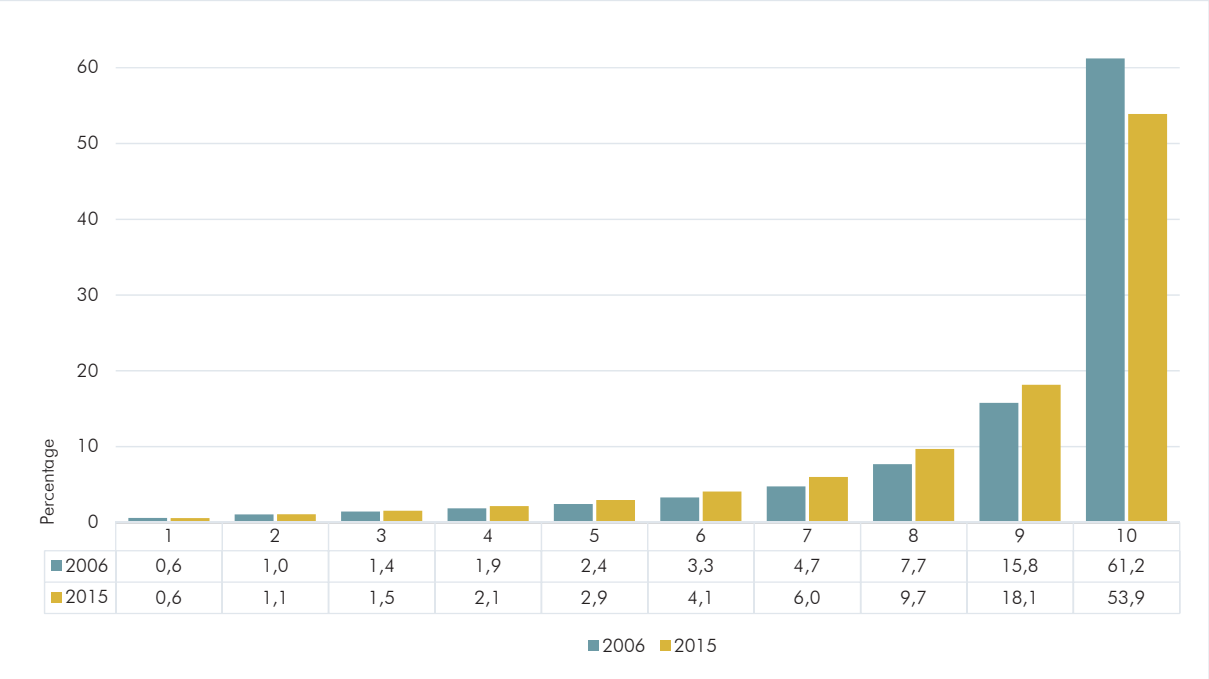
Variable	Sub-group	Mean				Median			
		2006	2009	2011	2015	2006	2009	2011	2015
Education of the household head	No schooling	8 223	8 670	9 827	9 945	5 440	5 445	6 371	6 328
	Some primary	10 726	10 778	13 124	12 651	6 684	6 211	7 608	8 187
	Primary	13 934	12 890	16 253	16 268	7 433	8 031	9 164	9 581
	Some secondary	25 477	22 761	28 891	24 978	12 075	11 218	13 841	12 848
	Matric	68 174	60 421	64 356	56 339	31 763	31 087	34 847	31 273
	Higher	156 345	117 029	141 210	141 197	100 344	75 934	102 047	99 383
Settlement type	Urban	50 573	46 910	55 225	54 290	16 152	17 311	21 222	21 587
	Rural	12 217	11 447	15 388	14 439	5 947	5 584	6 591	6 911
Province	Western Cape	64 146	50 527	57 672	64 792	18 541	21 171	23 336	24 190
	Eastern Cape	21 456	20 332	22 126	23 007	6 882	6 601	7 304	7 557
	Northern Cape	22 838	24 326	32 282	30 471	8 178	8 632	12 740	12 432
	Free State	32 917	27 452	34 351	32 559	10 425	9 287	12 518	13 146
	KwaZulu-Natal	23 249	21 850	28 132	25 562	7 119	7 191	9 028	9 582
	North West	27 852	24 269	33 900	25 912	8 773	9 224	10 195	10 822
	Gauteng	61 006	60 393	68 818	65 557	19 831	22 230	27 973	27 244
	Mpumalanga	24 201	22 879	29 677	30 884	8 141	8 517	10 018	12 411
	Limpopo	15 621	14 563	18 350	21 507	6 630	5 882	7 408	7 928
Poverty Status (UBPL)	Poor	87 465	73 904	75 363	76 785	45 680	39 988	37 668	42 000
	Non-poor	8 403	9 227	9 312	10 024	6 298	6 048	6 457	7 116
Total		34 826	33 755	40 227	39 747	9 647	10 572	12 822	13 546

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Figure B1: The distribution of income shares by sex of household head and population group (2006 & 2015)

Source: IES 2005/06 and LCS 2014/15; own calculations

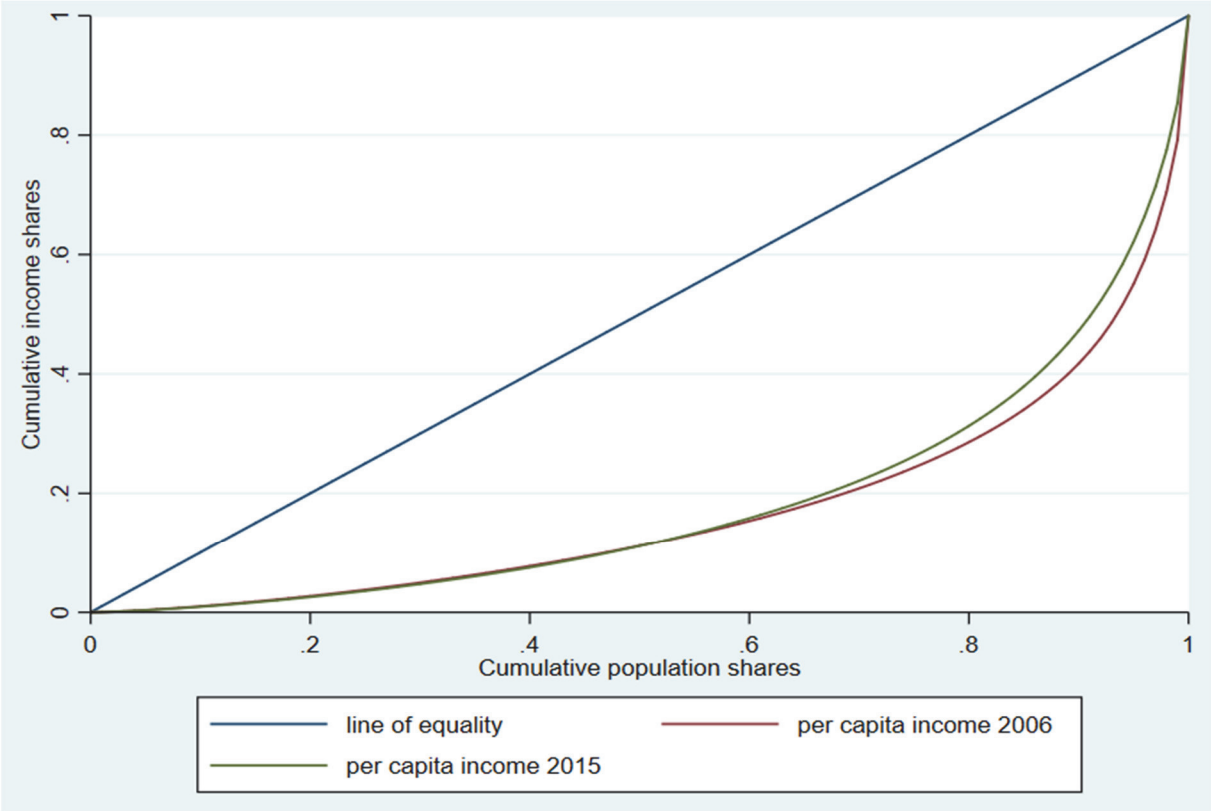
Figure B2: The distribution of income by decile (2006 & 2015)



	1	2	3	4	5	6	7	8	9	10
2006	0,6	1,0	1,4	1,9	2,4	3,3	4,7	7,7	15,8	61,2
2015	0,6	1,1	1,5	2,1	2,9	4,1	6,0	9,7	18,1	53,9

Source: IES 2005/06 and LCS 2014/15; own calculations

Figure B3: Lorenz curve based on per capita income (2006 & 2015)



Source: IES 2005/06 and LCS 2014/15; own calculations

Table B3: Inequality measures based on per capita income by sex of household head (2006, 2009, 2011 & 2015)

Sex of household head	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Male	2006	0,70	1,01	1,03	0,63	0,83	4,8%	38,1%	57,1%	12,0
	2009	0,67	0,98	0,89	0,63	0,91	4,8%	42,2%	53,0%	11,0
	2011	0,66	0,93	0,84	0,61	0,87	5,0%	44,0%	51,0%	10,2
	2015	0,65	0,88	0,81	0,58	0,83	5,5%	44,8%	49,7%	9,0
Female	2006	0,68	0,87	1,12	0,58	0,75	7,2%	31,6%	61,2%	8,5
	2009	0,68	0,90	1,04	0,59	0,83	6,5%	34,8%	58,7%	9,1
	2011	0,66	0,84	0,95	0,57	0,80	6,8%	36,9%	56,3%	8,3
	2015	0,65	0,81	0,92	0,56	0,76	6,9%	38,1%	55,0%	8,0
Total population	2006	0,72	1,04	1,14	0,65	0,82	4,9%	33,9%	61,2%	12,5
	2009	0,70	1,03	0,99	0,64	0,89	4,7%	37,9%	57,4%	12,2
	2011	0,69	0,98	0,94	0,63	0,86	4,9%	39,3%	55,8%	11,5
	2015	0,67	0,92	0,90	0,60	0,82	5,3%	40,8%	53,9%	10,2

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B4: Inequality measures based on per capita income by population group (2006, 2009, 2011 & 2015)

Population group	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Black African	2006	0,60	0,66	0,75	0,48	0,69	8,8%	41,6%	49,6%	5,6
	2009	0,65	0,82	0,90	0,56	0,84	6,8%	40,0%	53,2%	7,8
	2011	0,63	0,75	0,79	0,53	0,80	7,3%	42,1%	50,6%	7,0
	2015	0,63	0,75	0,80	0,53	0,76	7,2%	42,2%	50,6%	7,0
Coloured	2006	0,59	0,64	0,69	0,48	0,69	8,7%	44,7%	46,6%	5,4
	2009	0,57	0,64	0,60	0,47	0,88	8,8%	48,0%	43,2%	4,9
	2011	0,58	0,64	0,62	0,47	0,72	8,3%	47,3%	44,4%	5,4
	2015	0,57	0,61	0,58	0,45	0,71	9,0%	48,4%	42,6%	4,7
Indian/ Asian	2006	0,56	0,62	0,56	0,46	0,73	8,4%	50,0%	41,6%	5,0
	2009	0,52	0,57	0,51	0,44	0,86	10,0%	51,5%	38,5%	3,8
	2011	0,49	0,46	0,43	0,37	0,66	11,5%	52,3%	36,2%	3,2
	2015	0,53	0,53	0,52	0,41	0,68	9,7%	51,4%	38,9%	4,0
White	2006	0,49	0,45	0,46	0,36	0,67	12,1%	50,9%	37,0%	3,1
	2009	0,47	0,50	0,37	0,39	0,93	11,5%	56,7%	31,8%	2,8
	2011	0,43	0,37	0,31	0,31	0,63	13,4%	56,7%	29,9%	2,2
	2015	0,45	0,39	0,35	0,32	0,65	13,0%	55,2%	31,8%	2,4
Total population	2006	0,72	1,04	1,14	0,65	0,82	4,9%	33,9%	61,2%	12,5
	2009	0,70	1,03	0,99	0,64	0,89	4,7%	37,9%	57,4%	12,2
	2011	0,69	0,98	0,94	0,63	0,86	4,9%	39,3%	55,8%	11,5
	2015	0,67	0,92	0,90	0,60	0,82	5,3%	40,8%	53,9%	10,2

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B5: Inequality measures based on per capita income by level of education of household head (2006, 2009, 2011 & 2015)

Education level of household head	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
None	2006	0,46	0,37	0,46	0,31	0,52	14,8%	48,0%	37,2%	2,5
	2009	0,50	0,46	0,62	0,37	0,68	13,1%	47,2%	39,7%	3,0
	2011	0,47	0,38	0,42	0,32	0,56	14,1%	49,4%	36,5%	2,6
	2015	0,47	0,39	0,43	0,32	0,56	13,7%	49,3%	37,0%	2,7
Some primary	2006	0,49	0,42	0,49	0,35	0,55	12,9%	47,7%	39,4%	3,0
	2009	0,53	0,52	0,53	0,41	0,73	10,9%	48,2%	40,9%	3,8
	2011	0,53	0,51	0,57	0,40	0,69	11,0%	47,5%	41,5%	3,8
	2015	0,49	0,43	0,44	0,35	0,57	12,2%	50,7%	37,1%	3,0
Primary	2006	0,56	0,55	0,73	0,42	0,63	10,6%	43,9%	45,5%	4,3
	2009	0,51	0,51	0,50	0,40	0,78	10,7%	51,6%	37,7%	3,5
	2011	0,55	0,56	0,61	0,43	0,68	9,8%	47,0%	43,2%	4,4
	2015	0,52	0,50	0,51	0,39	0,63	10,9%	49,0%	40,1%	3,7
Some secondary	2006	0,60	0,68	0,74	0,49	0,71	8,0%	44,0%	48,0%	6,0
	2009	0,60	0,71	0,70	0,51	0,81	7,6%	45,9%	46,5%	6,2
	2011	0,61	0,72	0,74	0,51	0,79	7,4%	44,6%	48,0%	6,5
	2015	0,58	0,64	0,63	0,47	0,73	8,4%	46,8%	44,8%	5,3
Matric	2006	0,63	0,82	0,80	0,56	0,84	6,1%	46,0%	47,9%	7,9
	2009	0,59	0,78	0,66	0,54	0,93	6,8%	49,2%	44,0%	6,4
	2011	0,58	0,72	0,61	0,51	0,91	7,0%	51,0%	42,0%	6,0
	2015	0,57	0,65	0,57	0,48	0,76	7,8%	51,0%	41,2%	5,3
Higher	2006	0,52	0,54	0,49	0,42	0,73	10,0%	52,8%	37,2%	3,7
	2009	0,52	0,62	0,48	0,46	0,95	9,0%	54,9%	36,1%	4,0
	2011	0,49	0,52	0,41	0,41	0,77	10,1%	57,1%	32,8%	3,2
	2015	0,49	0,50	0,42	0,39	0,84	11,2%	54,1%	34,6%	3,1
Total population	2006	0,72	1,04	1,14	0,65	0,82	4,9%	33,9%	61,2%	12,5
	2009	0,70	1,03	0,99	0,64	0,89	4,7%	37,9%	57,4%	12,2
	2011	0,69	0,98	0,94	0,63	0,86	4,9%	39,3%	55,8%	11,5
	2015	0,67	0,92	0,90	0,60	0,82	5,3%	40,8%	53,9%	10,2

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B6: Inequality measures based on per capita income by settlement type (2006, 2009, 2011 & 2015)

Settlement type	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Urban	2006	0,69	0,98	0,98	0,62	0,84	4,9%	39,4%	55,7%	11,4
	2009	0,66	0,93	0,85	0,61	0,90	5,2%	43,2%	51,6%	9,9
	2011	0,64	0,87	0,78	0,58	0,87	5,6%	45,5%	48,9%	8,8
	2015	0,64	0,83	0,77	0,56	0,82	6,0%	45,6%	48,4%	8,1
Rural	2006	0,59	0,62	0,92	0,46	0,63	10,4%	37,8%	51,8%	5,0
	2009	0,60	0,66	0,83	0,49	0,76	9,4%	40,0%	50,6%	5,4
	2011	0,63	0,74	0,99	0,52	0,74	8,5%	36,8%	54,7%	6,5
	2015	0,59	0,62	0,74	0,46	0,66	9,6%	41,1%	49,3%	5,1
Total population	2006	0,72	1,04	1,14	0,65	0,82	4,9%	33,9%	61,2%	12,5
	2009	0,70	1,03	0,99	0,64	0,89	4,7%	37,9%	57,4%	12,2
	2011	0,69	0,98	0,94	0,63	0,86	4,9%	39,3%	55,8%	11,5
	2015	0,67	0,92	0,90	0,60	0,82	5,3%	40,8%	53,9%	10,2

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B7: Inequality measures based on per capita income by province (2006, 2009, 2011 & 2015)

Province	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Western Cape	2006	0,70	1,00	1,03	0,63	0,82	5,0%	37,6%	57,4%	11,4
	2009	0,62	0,79	0,72	0,55	0,91	6,8%	45,8%	47,4%	7,0
	2011	0,62	0,77	0,72	0,54	0,77	6,7%	46,5%	46,8%	7,0
	2015	0,63	0,81	0,74	0,56	0,80	6,3%	46,5%	47,2%	7,5
Eastern Cape	2006	0,69	0,90	1,07	0,59	0,75	6,5%	33,1%	60,4%	9,2
	2009	0,68	0,91	1,01	0,60	0,82	6,2%	35,5%	58,3%	9,4
	2011	0,69	0,92	1,02	0,60	0,83	6,1%	34,8%	59,1%	9,8
	2015	0,67	0,86	0,94	0,58	0,75	6,5%	37,2%	56,3%	8,7
Northern Cape	2006	0,66	0,81	0,90	0,55	0,73	7,2%	36,8%	56,0%	7,7
	2009	0,67	0,89	0,93	0,59	0,84	6,1%	38,1%	55,8%	9,1
	2011	0,63	0,78	0,79	0,54	0,76	6,8%	43,3%	49,9%	7,3
	2015	0,63	0,78	0,78	0,54	0,77	7,0%	42,9%	50,1%	7,2
Free State	2006	0,68	0,91	1,01	0,60	0,80	6,0%	38,0%	56,0%	9,3
	2009	0,67	0,88	0,92	0,59	0,80	6,2%	37,2%	56,6%	9,2
	2011	0,65	0,82	0,87	0,56	0,75	6,8%	39,3%	53,9%	8,0
	2015	0,63	0,74	0,76	0,52	0,73	7,3%	43,2%	49,5%	6,8
KwaZulu-Natal	2006	0,71	0,98	1,12	0,62	0,80	5,7%	32,1%	62,2%	11,0
	2009	0,69	0,98	1,02	0,62	0,88	5,4%	36,9%	57,7%	10,6
	2011	0,68	0,92	0,94	0,60	0,79	5,6%	38,4%	56,0%	9,9
	2015	0,65	0,82	0,87	0,56	0,78	6,5%	40,2%	53,3%	8,2
North West	2006	0,68	0,91	0,95	0,60	0,80	5,8%	39,8%	54,4%	9,4
	2009	0,65	0,83	0,85	0,57	0,82	6,4%	41,8%	51,8%	8,1
	2011	0,72	1,05	1,15	0,65	0,85	4,9%	32,8%	62,3%	12,6
	2015	0,63	0,74	0,77	0,53	0,74	7,2%	42,9%	49,9%	6,9
Gauteng	2006	0,68	0,98	0,97	0,63	0,86	4,9%	40,3%	54,8%	11,2
	2009	0,67	0,97	0,84	0,62	0,91	4,9%	43,6%	51,5%	10,5
	2011	0,63	0,85	0,74	0,57	0,91	5,8%	47,2%	47,0%	8,0
	2015	0,63	0,82	0,76	0,56	0,83	6,1%	46,1%	47,8%	7,9
Mpumalanga	2006	0,69	0,89	1,11	0,59	0,76	6,7%	32,5%	60,8%	9,1
	2009	0,66	0,86	0,89	0,58	0,87	6,4%	39,3%	54,3%	8,5
	2011	0,68	0,93	0,96	0,60	0,81	5,7%	36,8%	57,5%	10,1
	2015	0,64	0,80	0,80	0,55	0,79	6,6%	41,9%	51,5%	7,8
Limpopo	2006	0,62	0,67	0,85	0,49	0,65	9,4%	36,6%	54,0%	5,8
	2009	0,64	0,78	0,86	0,54	0,83	7,7%	39,3%	53,0%	6,9
	2011	0,64	0,79	0,88	0,54	0,79	7,5%	37,9%	54,6%	7,3
	2015	0,66	0,83	0,91	0,56	0,76	6,7%	37,6%	55,7%	8,3
South Africa	2006	0,72	1,04	1,14	0,65	0,82	4,9%	33,9%	61,2%	12,5
	2009	0,70	1,03	0,99	0,64	0,89	4,7%	37,9%	57,4%	12,2
	2011	0,69	0,98	0,94	0,63	0,86	4,9%	39,3%	55,8%	11,5
	2015	0,67	0,92	0,90	0,60	0,82	5,3%	40,8%	53,9%	10,2

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B8: Inequality measures based on per capita income by poverty status (2006, 2009, 2011 & 2015)

Poverty Status	Year	Gini coefficient	Theil's indices		Atkinson indices		Palma ratio			
			GE(0)	GE(1)	A(1)	A(2)	Bottom 40%	Middle 50%	Top 10%	Ratio
Non-poor	2006	0,58	0,63	0,65	0,47	0,73	8,5%	54,4%	44,6%	5,2
	2009	0,57	0,65	0,58	0,48	0,90	8,4%	51,5%	42,0%	5,0
	2011	0,58	0,65	0,60	0,48	0,85	8,0%	52,4%	42,3%	5,3
	2015	0,55	0,58	0,56	0,44	0,74	9,0%	53,1%	40,7%	4,5
Poor	2006	0,40	0,29	0,28	0,25	0,47	15,9%	46,9%	29,7%	1,9
	2009	0,48	0,44	0,46	0,35	0,70	12,5%	49,6%	36,0%	2,9
	2011	0,45	0,36	0,37	0,30	0,59	14,1%	49,7%	33,5%	2,4
	2015	0,44	0,35	0,36	0,29	0,53	14,2%	50,3%	32,7%	2,3
Total population	2006	0,72	1,04	1,14	0,65	0,82	4,9%	33,9%	61,2%	12,5
	2009	0,70	1,03	0,99	0,64	0,89	4,7%	37,9%	57,4%	12,2
	2011	0,69	0,98	0,94	0,63	0,86	4,9%	39,3%	55,8%	11,5
	2015	0,67	0,92	0,90	0,60	0,82	5,3%	40,8%	53,9%	10,2

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Note: Poverty status was based on the Upper-bound poverty line (UBPL).

Table B9: Decomposition of income inequality by sex of household head (2006, 2009, 2011 & 2015)

Index	Sex of household head	Absolute contribution				Relative contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
GE(0)	Male-headed	0,79	0,68	0,65	0,61	0,69	0,69	0,69	0,67
	Female-headed	0,26	0,24	0,22	0,23	0,23	0,24	0,23	0,25
	Within contribution	*1,05*	*0,92*	*0,86*	*0,84*	*0,92*	*0,93*	*0,92*	*0,93*
	Between contribution	*0,09*	*0,07*	*0,08*	*0,07*	*0,07*	*0,07*	*0,08*	*0,07*
GE(1)	Male-headed	0,57	0,58	0,54	0,51	0,55	0,56	0,55	0,55
	Female-headed	0,38	0,37	0,35	0,34	0,36	0,36	0,36	0,37
	Within contribution	*0,95*	*0,95*	*0,89*	*0,85*	*0,91*	*0,92*	*0,91*	*0,92*
	Between contribution	*0,09*	*0,08*	*0,09*	*0,07*	*0,09*	*0,08*	*0,09*	*0,08*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B10: Decomposition of income inequality by population group (2006, 2009, 2011 & 2015)

Index	Population group	Absolute contribution				Relative contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
GE(0)	Black African	0,29	0,42	0,36	0,41	0,26	0,43	0,38	0,45
	Coloured	0,06	0,06	0,06	0,06	0,05	0,06	0,07	0,06
	Indian/Asian	0,03	0,02	0,02	0,03	0,02	0,02	0,02	0,03
	White	0,22	0,15	0,12	0,12	0,19	0,15	0,13	0,13
	Within contribution	*0,59*	*0,65*	*0,57*	*0,61*	*0,52*	*0,65*	*0,60*	*0,67*
	Between contribution	*0,54*	*0,35*	*0,37*	*0,30*	*0,48*	*0,35*	*0,40*	*0,33*
GE(1)	Black African	0,52	0,65	0,60	0,60	0,50	0,63	0,61	0,65
	Coloured	0,06	0,06	0,06	0,05	0,06	0,06	0,06	0,06
	Indian/Asian	0,02	0,01	0,01	0,01	0,02	0,01	0,01	0,01
	White	0,04	0,05	0,03	0,03	0,04	0,05	0,03	0,04
	Within contribution	*0,63*	*0,77*	*0,70*	*0,70*	*0,61*	*0,75*	*0,71*	*0,76*
	Between contribution	*0,40*	*0,26*	*0,28*	*0,22*	*0,39*	*0,25*	*0,29*	*0,24*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

Table B11: Decomposition of income inequality by education level of household head (2006, 2009, 2011 & 2015)

Index	Education level of household head	Absolute contribution				Relative contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
GE(0)	None	0,02	0,02	0,01	0,01	0,02	0,02	0,01	0,01
	Some primary	0,03	0,04	0,04	0,03	0,03	0,04	0,04	0,03
	Primary	0,02	0,01	0,02	0,01	0,02	0,01	0,02	0,02
	Some secondary	0,16	0,15	0,17	0,13	0,14	0,15	0,18	0,15
	Matric	0,20	0,14	0,13	0,14	0,18	0,14	0,14	0,15
	Higher	0,19	0,20	0,17	0,18	0,16	0,20	0,18	0,20
	Within contribution	*0,63*	*0,57*	*0,54*	*0,50*	*0,55*	*0,57*	*0,58*	*0,55*
	Between contribution	*0,50*	*0,41*	*0,39*	*0,39*	*0,44*	*0,42*	*0,42*	*0,43*
GE(1)	None	0,07	0,06	0,05	0,05	0,06	0,06	0,05	0,05
	Some primary	0,10	0,11	0,11	0,08	0,09	0,11	0,11	0,08
	Primary	0,04	0,04	0,04	0,03	0,04	0,03	0,04	0,04
	Some secondary	0,20	0,23	0,23	0,21	0,19	0,22	0,24	0,23
	Matric	0,11	0,09	0,10	0,11	0,10	0,09	0,10	0,12
	Higher	0,05	0,08	0,06	0,06	0,04	0,07	0,06	0,06
	Within contribution	*0,56*	*0,61*	*0,59*	*0,54*	*0,54*	*0,59*	*0,60*	*0,58*
	Between contribution	*0,48*	*0,40*	*0,38*	*0,38*	*0,46*	*0,39*	*0,39*	*0,41*

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

ANNEXURE C

Table C1: Contributions to inequality by income sources based on the Theil's indices (2006, 2009, 2011 & 2015)

Index	Income sources	Absolute Contribution				Relative Contribution			
		2006	2009	2011	2015	2006	2009	2011	2015
Theil's index GE(0)	Labour market	0,36	0,42	0,30	0,22	43,5%	60,2%	67,0%	56,3%
	Social grants	0,03	0,02	0,02	0,02	3,6%	3,2%	4,0%	5,4%
	Remittance	0,07	0,06	0,02	0,04	8,2%	8,4%	5,4%	8,9%
	In-kind income	0,01	0,11	0,01	0,02	1,1%	14,9%	2,5%	4,6%
	Other	0,36	0,09	0,09	0,10	43,6%	13,2%	21,2%	24,8%
	Total	0,84	0,70	0,45	0,40	100,0%	100,0%	100,0%	100,0%
Theil's index GE(1)	Labour market	0,89	0,87	0,69	0,68	78,5%	87,0%	73,7%	74,9%
	Social grants	0,00	0,00	-0,01	-0,01	-0,1%	-0,2%	-1,0%	-1,1%
	Remittance	0,00	0,01	0,00	0,00	0,1%	0,5%	0,1%	0,1%
	In-kind income	0,01	0,02	0,02	0,01	1,1%	2,4%	2,2%	1,6%
	Other	0,23	0,10	0,24	0,22	20,5%	10,3%	25,0%	24,5%
	Total	1,14	1,00	0,94	0,90	100,0%	100,0%	100,0%	100,0%

Source: IES 2005/06, LCS 2008/09, IES 2010/11, and LCS 2014/15; own calculations

ANNEXURE D

Table D1: Proportion of children aged 6–18 years attending an educational institution by province (2002–2017)

Year	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpuma-langa	Limpopo	RSA
2002	90,1	90,9	85,7	91,5	89,3	89,9	94,2	92,3	93,8	91,3
2003	90,6	90,8	85,6	93,4	91,3	90,7	94,3	93,4	95,5	92,4
2004	90,9	91,5	89,6	93,4	92,4	93,0	94,2	95,0	96,9	93,3
2005	90,0	92,6	92,2	94,1	92,8	90,7	94,9	94,3	96,2	93,3
2006	88,8	93,3	91,5	94,8	92,8	89,8	92,8	93,4	96,0	92,9
2007	91,2	93,8	92,2	96,2	93,0	92,1	93,4	95,8	96,7	93,8
2008	89,7	93,1	91,2	93,6	93,8	91,6	94,7	93,9	95,8	93,5
2009	92,1	93,1	91,3	95,0	93,5	93,1	96,2	94,7	97,2	94,4
2010	92,3	94,2	93,4	94,7	93,3	92,7	94,2	95,1	97,0	94,2
2011	92,5	94,2	92,7	95,4	94,8	94,6	93,6	95,3	97,1	94,6
2012	93,4	94,8	93,6	95,8	95,3	94,5	95,2	95,8	97,8	95,3
2013	92,9	94,6	94,6	95,1	95,6	94,7	95,6	95,1	97,7	95,3
2014	93,9	94,9	93,6	96,4	95,9	93,2	95,8	96,2	97,7	95,6
2015	92,8	95,0	92,2	96,3	95,1	94,7	96,1	96,3	97,8	95,4
2016	93,4	94,7	93,5	95,7	95,1	94,4	94,6	95,7	97,4	95,0
2017	93,0	95,6	92,7	96,8	96,8	93,9	96,3	96,2	98,8	96,0

Source: GHS (2002–2017)

Table D2: Proportion of children aged 6–18 years not attending an educational institution by settlement type and sex (2002–2017)

Year	Urban			Rural			RSA		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2002	6,6	7,3	7,0	10,0	10,3	10,1	8,4	8,8	8,6
2003	6,7	7,1	6,9	8,1	8,4	8,3	7,5	7,8	7,6
2004	5,7	7,1	6,4	6,9	7,1	7,0	6,3	7,1	6,7
2005	6,0	7,0	6,5	6,2	3,9	6,9	6,1	5,0	5,5
2006	7,3	7,5	7,4	6,5	7,3	6,9	6,9	7,4	7,1
2007	7,0	6,0	6,5	5,4	6,2	5,8	6,2	6,1	6,2
2008	6,6	6,6	6,6	6,0	6,6	6,3	6,3	6,6	6,5
2009	5,7	5,4	5,5	5,2	6,2	5,7	5,5	5,8	5,6
2010	5,1	6,1	5,6	5,1	6,1	5,6	5,1	6,1	5,6
2011	5,2	5,5	5,3	4,3	5,4	4,9	4,8	5,5	5,1
2012	5,1	5,0	5,1	3,9	4,7	4,3	4,6	4,8	4,7
2013	5,3	5,4	5,3	3,2	3,9	3,6	4,3	4,7	4,5
2014	4,3	4,6	4,4	3,9	4,5	4,2	4,1	4,5	4,3
2015	4,8	4,6	4,7	3,6	4,4	4,0	4,2	4,5	4,4
2016	4,8	4,9	4,9	3,6	4,2	3,9	4,3	4,6	4,4
2017	4,4	4,3	4,3	3,1	3,8	3,5	3,8	4,1	4,0

Source: GHS (2002–2017)

Table D3: Proportion of learners aged 6–18 years by population group and by type of educational institution attended (2009–2017)

Year	Public					Private				
	Black African	Coloured	Indian/ Asian	White	RSA	Black African	Coloured	Indian/ Asian	White	RSA
2009	95,0	92,4	71,0	58,4	92,2	5,0	7,6	29,0	41,6	7,8
2010	95,4	94,5	83,2	63,6	93,2	4,6	5,5	16,8	36,4	6,8
2011	95,0	94,1	76,9	69,8	93,2	5,2	6,3	30,1	43,3	6,8
2012	95,3	94,8	82,3	71,6	93,7	4,7	5,2	17,7	28,4	6,3
2013	95,3	94,5	75,9	74,4	93,8	4,7	5,5	24,1	25,6	6,2
2014	95,5	94,5	77,7	75,3	94,1	4,5	5,5	22,3	24,7	5,9
2015	95,1	97,0	75,9	68,5	93,6	4,9	3,0	24,1	31,5	6,4
2016	95,2	95,3	80,0	71,0	93,7	4,8	4,7	20,0	29,0	6,3
2017	95,0	96,0	77,4	68,0	93,5	5,0	4,0	22,6	32,0	6,5

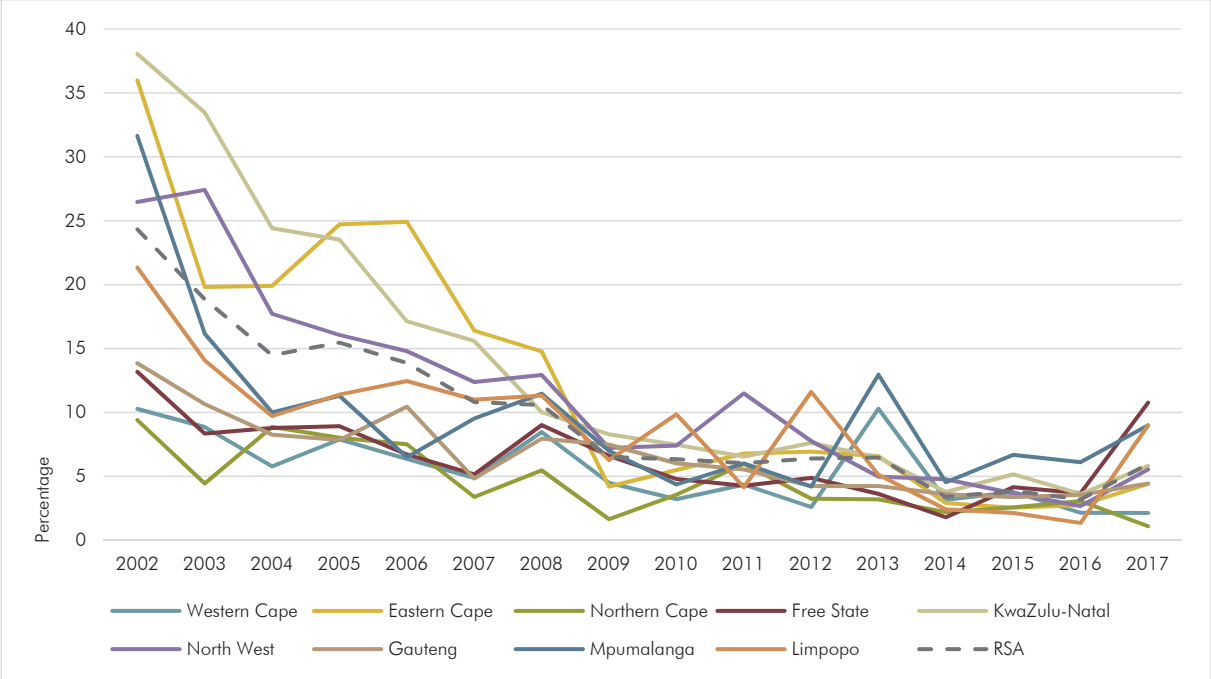
Source: GHS (2009–2017)

Table D4: Proportion of learners aged 6–18 years by type of educational institution attended and settlement type (2009–2017)

Year	Public			Private		
	Urban	Rural	RSA	Urban	Rural	RSA
2009	87,2	97,5	92,2	12,8	2,5	7,8
2010	89,6	97,4	93,3	10,4	2,6	6,7
2011	89,4	97,6	93,2	10,6	2,4	6,8
2012	90,3	97,6	93,7	9,7	2,4	6,3
2013	90,8	97,2	93,8	9,2	2,8	6,2
2014	91,4	97,4	94,1	8,6	2,6	5,9
2015	90,1	98,0	93,6	9,9	2,0	6,4
2016	90,6	97,7	93,7	9,4	2,3	6,3
2017	90,2	97,7	93,5	9,8	2,3	6,5

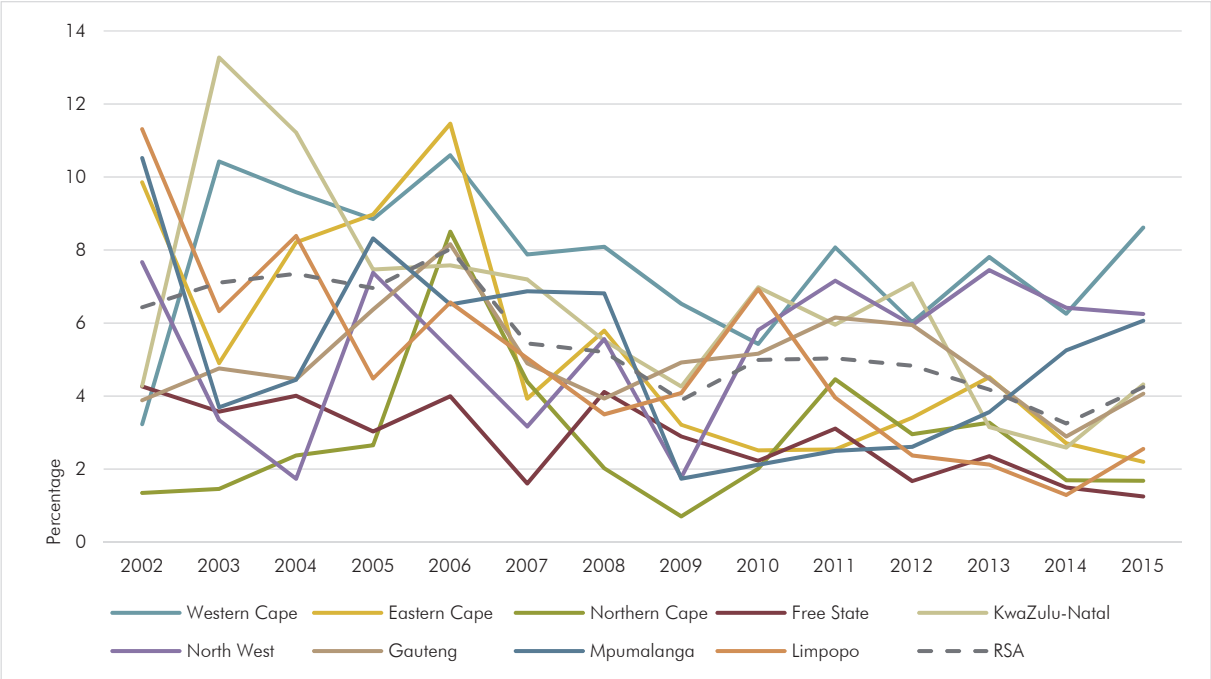
Source: GHS (2009–2017)

Figure D1: Proportion of learners aged 6–18 years experiencing 'lack of books' at their educational institutions by province (2002–2017)



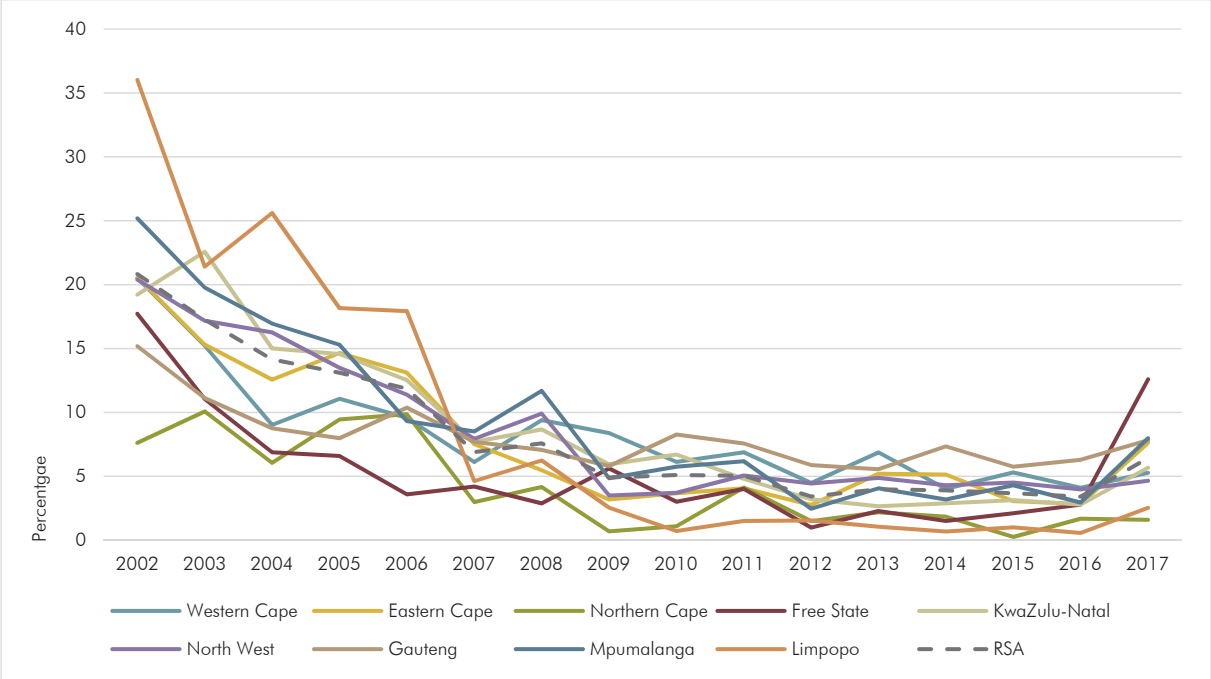
Source: GHS (2002–2017)

Figure D2: Proportion of learners aged 6–18 years experiencing 'class size' at their educational institutions by province (2002–2017)



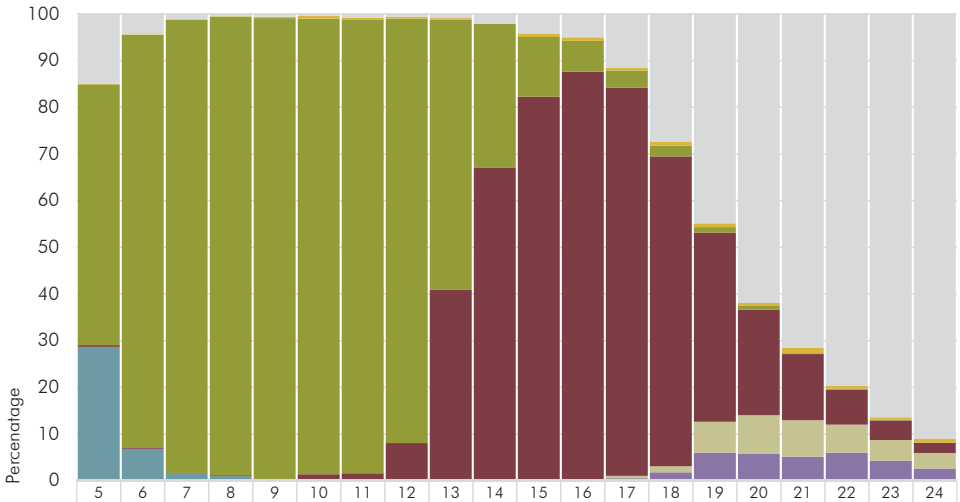
Source: GHS (2002–2017)

Figure D3: Proportion of learners aged 6–18 years experiencing 'high fees' at their educational institutions by province (2002–2017)



Source: GHS (2002–2017)

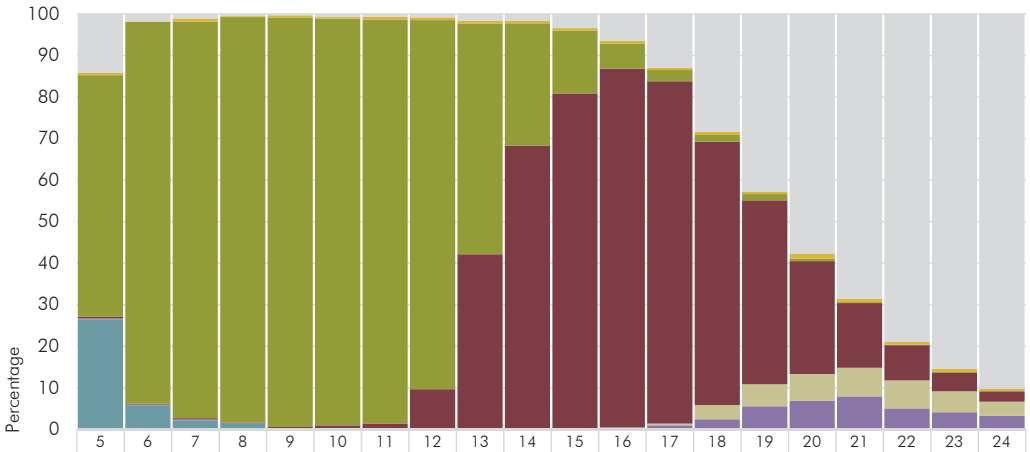
Figure D4: Proportion of individuals aged 5–24 years by type of institution (2013)



	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Not in education	15,0	4,4	1,2	0,5	0,6	0,5	0,8	0,7	0,9	2,1	4,2	5,1	11,5	27,4	44,9	61,9	71,5	79,7	86,4	91,0
Other	0,1	0,1	0,1	0,1	0,3	0,6	0,4	0,4	0,4	0,1	0,8	0,7	0,6	0,9	0,8	0,7	1,2	0,6	0,5	0,9
Primary school	55,8	88,5	97,1	98,2	98,9	97,6	97,2	90,9	57,8	30,8	12,8	6,6	3,7	2,3	1,1	0,8	0,2	0,3	0,2	0,0
Secondary school	0,4	0,2	0,0	0,2	0,2	1,4	1,6	8,1	40,8	67,0	82,0	87,4	83,2	66,4	40,5	22,6	14,2	7,5	4,2	2,2
University	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2	0,0	0,5	1,3	6,7	8,3	7,9	6,0	4,5	3,3
TVET and other colleges	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,0	0,1	0,5	1,8	6,0	5,7	5,1	6,0	4,3	2,6
Pre-school	28,7	6,8	1,6	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Source: GHS 2013

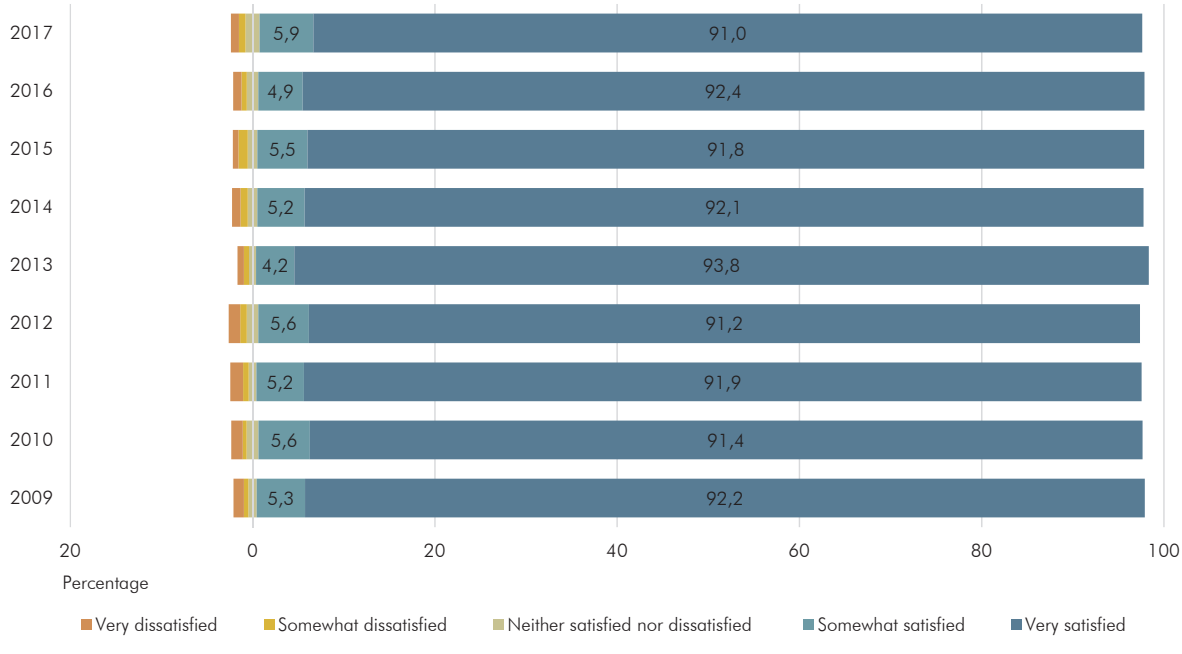
Figure D5: Proportion of individuals aged 5–24 years by type of institution (2015)



	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Not in education	14,2	1,8	1,1	0,5	0,4	0,8	0,7	0,9	1,7	1,6	3,4	6,4	13,0	28,4	42,9	57,7	68,5	78,9	85,5	90,2
Other	0,6	0,1	0,8	0,2	0,5	0,4	0,6	0,6	0,7	0,7	0,6	0,7	0,6	0,8	0,5	1,2	0,9	0,7	0,7	0,6
Primary school	58,2	91,9	95,5	97,6	98,6	97,9	97,3	88,9	55,6	29,5	15,1	6,1	2,7	1,6	1,5	0,6	0,2	0,2	0,3	0,0
Secondary school	0,4	0,3	0,3	0,2	0,4	0,8	1,3	9,6	42,0	68,2	80,8	86,3	82,4	63,4	44,3	27,2	15,6	8,5	4,4	2,5
University	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,4	3,4	5,3	6,5	6,9	6,8	5,0	3,4
TVET and other colleges	0,3	0,2	0,3	0,0	0,2	0,1	0,1	0,0	0,1	0,1	0,1	0,4	0,9	2,4	5,5	6,8	7,9	5,0	4,1	3,2
Pre-school	26,4	5,8	2,1	1,4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

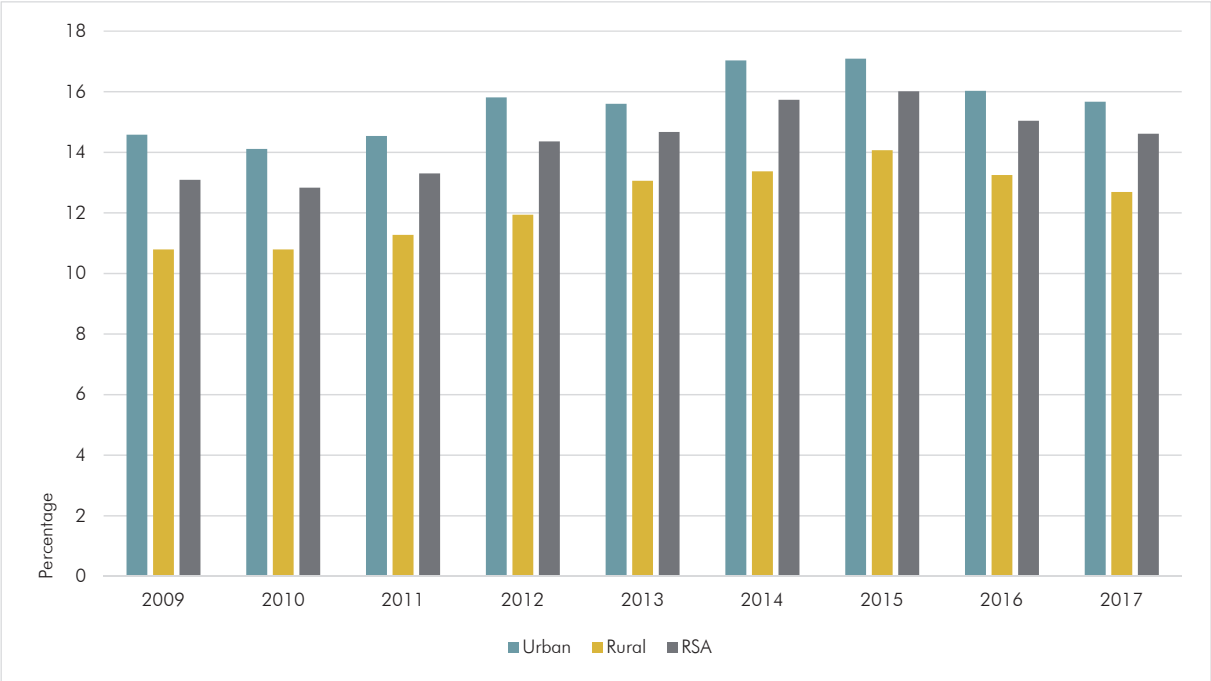
Source: GHS 2015

Figure D6: Perception of service delivery by public health care (2009–2017)



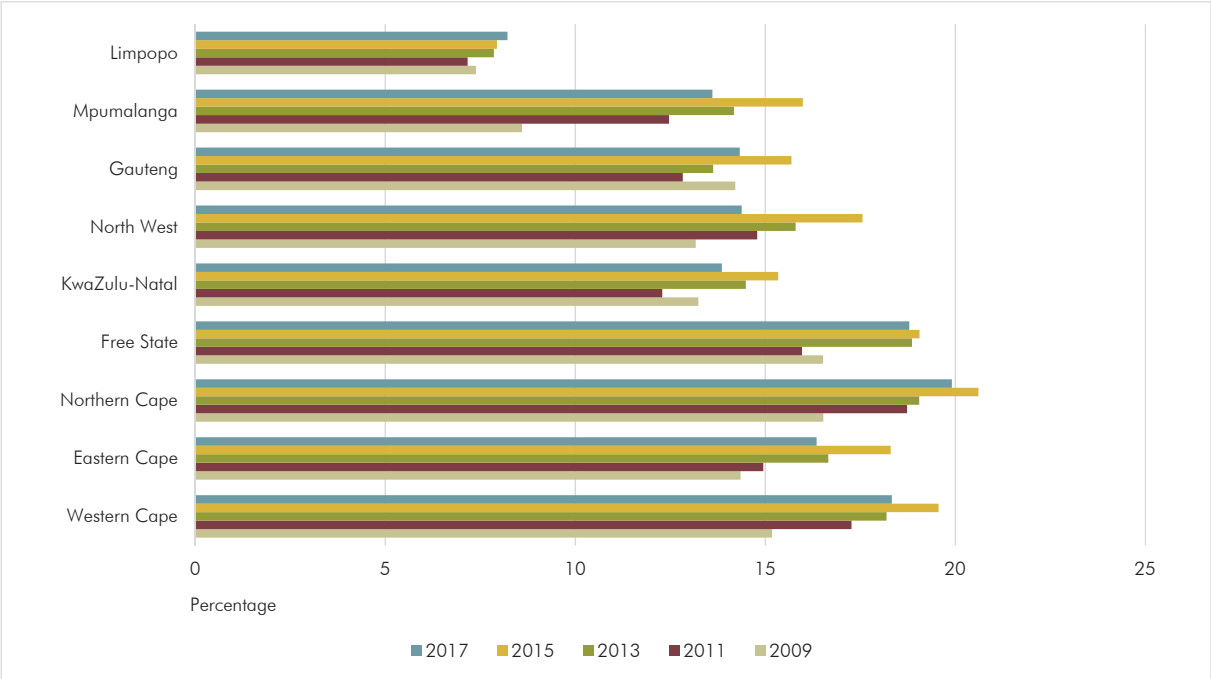
Source: GHS (2009–2017)

Figure D7: Proportion of people that have a chronic illness by settlement type (2009–2017)



Source: GHS (2009–2017)

Figure D8: Proportion of people that have a chronic illness by province (2009, 2011, 2013, 2015 & 2017)



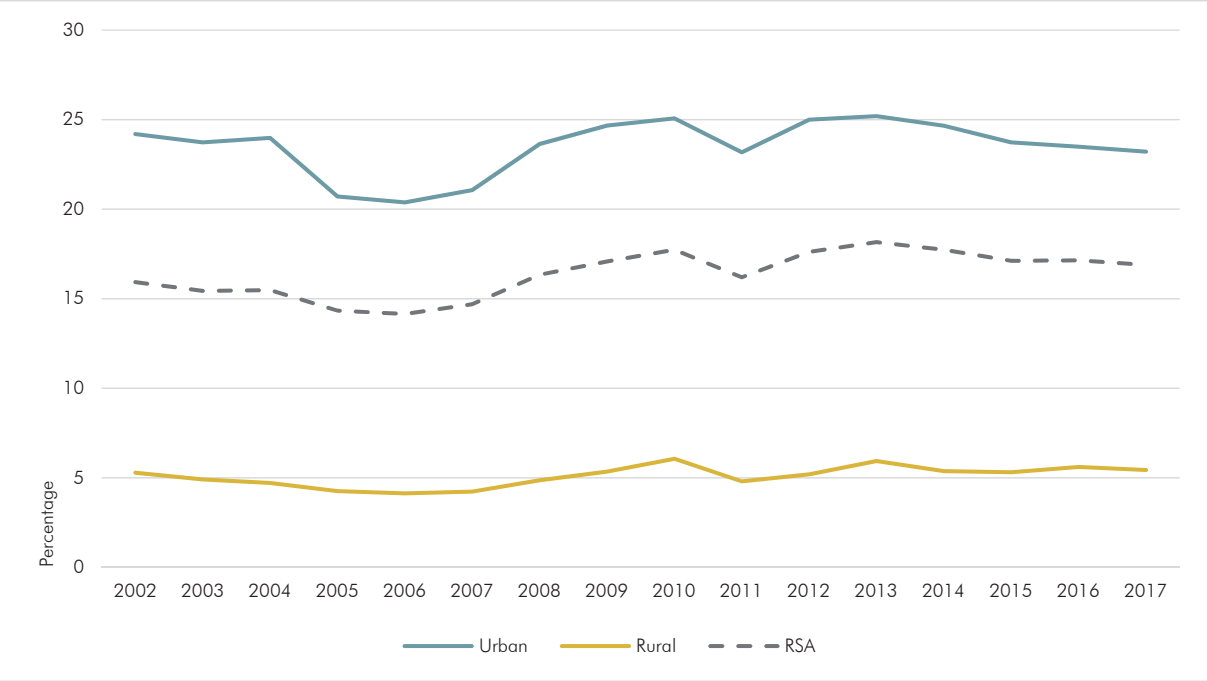
Source: GHS (2009, 2011, 2013, 2015 & 2017)

Table D5: Proportion of households that use health facility by type of health facility and population group (2009–2017)

Year	Public health facility					Private health facility				
	Black African	Coloured	Indian/ Asian	White	RSA	Black African	Coloured	Indian/ Asian	White	RSA
2009	84,1	65,4	35,6	11,8	74,4	15,9	34,6	64,4	88,2	25,6
2010	84,0	64,1	32,7	9,6	74,0	16,0	36,0	67,3	90,4	26,0
2011	83,7	65,1	36,9	10,9	74,1	16,4	34,9	63,1	89,1	25,9
2012	82,6	63,8	35,1	11,5	73,4	17,4	36,2	64,9	88,5	26,6
2013	83,2	64,6	38,7	9,9	74,4	16,8	35,4	61,3	90,1	25,6
2014	82,5	63,3	32,1	10,3	73,7	17,5	36,7	67,9	89,7	26,3
2015	83,2	67,8	34,3	13,6	74,9	16,9	32,2	65,7	86,4	25,1
2016	83,7	66,6	34,3	12,4	75,3	16,3	33,4	65,7	87,6	24,7
2017	83,0	67,6	34,5	12,6	75,1	17,0	32,4	65,5	87,4	24,9

Source: GHS (2009–2017)

Figure D9: Proportion of people with access to medical aid by settlement type (2002–2017)



Source: GHS (2002–2017)

Table D6: Proportion of households with access to electricity by district municipality (2011)

Province	District	Electricity
KwaZulu-Natal	Umkhanyakude	39,6
Eastern Cape	Alfred Nzo	47,3
KwaZulu-Natal	Umzinyathi	49,0
KwaZulu-Natal	Sisonke	62,9
Eastern Cape	Joe Gqabi	69,6
KwaZulu-Natal	Zululand	70,5
Eastern Cape	Amathole	70,5
Eastern Cape	OR Tambo	70,9
KwaZulu-Natal	iLembe	72,6
KwaZulu-Natal	Ugu	73,0
KwaZulu-Natal	Uthukela	75,2
Eastern Cape	Chris Hani	77,0
KwaZulu-Natal	Uthungulu	77,0
North West	Ngaka Modiri Molema	81,0
Eastern Cape	Buffalo City	81,6
Gauteng	West Rand	81,8
Gauteng	Ekurhuleni	82,5
North West	Dr Ruth Segomotsi Mompati	82,8
Mpumalanga	Gert Sibande	83,7
Northern Cape	Frances Baard	83,8
KwaZulu-Natal	Amajuba	84,6
North West	Bojanala	84,8
Northern Cape	Pixley ka Seme	85,6
Mpumalanga	Nkangala	86,2
Limpopo	Greater Sekhukhune	86,5
Northern Cape	Siyanda	86,6
Northern Cape	Namakwa	86,9
KwaZulu-Natal	UMgungundlovu	87,1
Limpopo	Waterberg	87,3
Northern Cape	John Taolo Gaetsewe	87,4
Limpopo	Vhembe	87,6
Free State	Thabo Mofutsanyane	87,6
Limpopo	Capricorn	87,8
Eastern Cape	Cacadu	87,9
Gauteng	City of Tshwane	89,1
Limpopo	Mopani	89,2
North West	Dr Kenneth Kaunda	89,4
Mpumalanga	Ehlanzeni	89,7
Western Cape	Central Karoo	90,1
Free State	Fezile Dabi	90,1
KwaZulu-Natal	eThekwini	90,7
Eastern Cape	Nelson Mandela Bay	91,0
Free State	Lejweleputswa	91,3
Gauteng	City of Johannesburg	91,3
Gauteng	Sedibeng	91,4

Table D6: Proportion of households with access to electricity by district municipality (2011) (concluded)

Province	District	Electricity
Western Cape	Eden	91,7
Western Cape	Overberg	91,8
Free State	Mangaung	91,8
Free State	Xhariep	92,6
Western Cape	Cape Winelands	93,4
Western Cape	City of Cape Town	94,4
Western Cape	West Coast	95,0

Source: Census 2011

Table D7: Proportion of households with access to electricity by local municipality (2011)

Province	Municipality	Electricity
KwaZulu-Natal	Umhlabuyalingana	15,1
Eastern Cape	Ntabankulu	25,1
KwaZulu-Natal	Msinga	25,9
KwaZulu-Natal	Jozini	30,9
KwaZulu-Natal	Maphumulo	35,0
KwaZulu-Natal	Vulamehlo	38,4
KwaZulu-Natal	Ndwedwe	38,4
KwaZulu-Natal	The Big 5 False Bay	44,4
Eastern Cape	Matatiele	45,7
KwaZulu-Natal	Nkandla	46,3
Eastern Cape	Umzimvubu	46,3
Eastern Cape	Elundini	46,7
KwaZulu-Natal	Emadlangeni	49,0
KwaZulu-Natal	Umzumbe	50,4
Eastern Cape	Mbhashe	50,5
KwaZulu-Natal	Ingwe	50,5
Eastern Cape	Engcobo	51,6
KwaZulu-Natal	Nqutu	53,7
KwaZulu-Natal	Ubuhlebezwe	54,4
KwaZulu-Natal	Hlabisa	56,3
KwaZulu-Natal	Umvoti	58,2
KwaZulu-Natal	Indaka	59,2
KwaZulu-Natal	uMlalazi	59,5
Eastern Cape	Mbizana	60,5
Eastern Cape	Mnquma	61,9
KwaZulu-Natal	eDumbe	62,7
Eastern Cape	Ngquza Hill	63,1
KwaZulu-Natal	Ntambanana	63,2
Gauteng	Westonaria	63,4
KwaZulu-Natal	Nongoma	64,5

Table D7: Proportion of households with access to electricity by local municipality (2011) (continued)

Province	Municipality	Electricity
Northern Cape	!Kheis	64,6
KwaZulu-Natal	Umzimkhulu	64,6
Eastern Cape	Intsika Yethu	65,3
Northern Cape	Karoo Hoogland	65,6
KwaZulu-Natal	Mkhambathini	66,2
KwaZulu-Natal	Mtubatuba	66,5
Mpumalanga	Mkhondo	66,8
Eastern Cape	Port St Johns	68,6
KwaZulu-Natal	Mthonjaneni	70,2
KwaZulu-Natal	Imbabazane	70,3
Eastern Cape	Nyandeni	71,9
KwaZulu-Natal	Mpofana	72,4
KwaZulu-Natal	Abaqulusi	72,7
KwaZulu-Natal	Umtshezi	73,2
Mpumalanga	Emalahleni	73,6
Eastern Cape	Mhlontlo	73,8
KwaZulu-Natal	uMshwathi	73,9
Northern Cape	Kareeberg	73,9
KwaZulu-Natal	UPhongolo	73,9
Eastern Cape	King Sabata Dalindyebo	74,1
North West	Tswaing	74,1
KwaZulu-Natal	Ulundi	74,3
North West	Kagisano/Molopo	74,4
Mpumalanga	Msukaligwa	74,8
North West	Ditsobotla	74,9
Free State	Phumelela	75,3
Northern Cape	Thembelihle	75,5
Northern Cape	Mier	75,5
KwaZulu-Natal	Kwa Sani	75,6
KwaZulu-Natal	Okhahlamba	76,2
Limpopo	Greater Tubatse	76,3
Northern Cape	Dikgatlong	76,6
North West	Ventersdorp	76,8
KwaZulu-Natal	Umdoni	76,9
Limpopo	Musina	77,0
Limpopo	Thabazimbi	77,0
North West	Naledi	77,1
Northern Cape	Hantam	77,3
KwaZulu-Natal	Endumeni	78,9
North West	Kgetlengrivier	78,9
Mpumalanga	Umjindi	79,1
Eastern Cape	Emalahleni	79,1
Western Cape	Laingsburg	79,6
Eastern Cape	Sakhisizwe	80,1
Gauteng	Midvaal	80,3

Table D7: Proportion of households with access to electricity by local municipality (2011) (continued)

Province	Municipality	Electricity
Eastern Cape	Sundays River Valley	80,3
Eastern Cape	Great Kei	80,4
KwaZulu-Natal	Ezingoleni	80,9
North West	Mamusa	81,3
KwaZulu-Natal	UMuziwabantu	81,3
KwaZulu-Natal	Dannhauser	81,3
Eastern Cape	Buffalo City	81,6
North West	Madibeng	81,7
Eastern Cape	Senqu	81,9
KwaZulu-Natal	Greater Kokstad	82,0
Northern Cape	Joe Morolong	82,2
Gauteng	Merafong City	82,4
North West	Ramotshere Moiloa	82,4
Gauteng	Ekurhuleni	82,5
Northern Cape	Phokwane	82,7
Northern Cape	Siyancuma	82,7
Eastern Cape	Amahlathi	82,9
KwaZulu-Natal	Emnambithi/Ladysmith	82,9
Limpopo	Polokwane	83,3
KwaZulu-Natal	Richmond	83,4
North West	Maquassi Hills	83,4
Limpopo	Mutale	83,5
North West	Rustenburg	83,5
Mpumalanga	Dipaleseng	83,6
Northern Cape	Tsantsabane	83,8
Limpopo	Modimolle	83,9
KwaZulu-Natal	Mandeni	83,9
KwaZulu-Natal	Impendle	84,1
Mpumalanga	Thaba Chweu	84,1
North West	Ratlou	84,3
Eastern Cape	Maletswai	84,4
Mpumalanga	Emakhazeni	84,5
Free State	Tokologo	84,8
Mpumalanga	Nkomazi	84,8
Free State	Mafube	85,0
North West	Mafikeng	85,1
Free State	Dihlabeng	85,1
Free State	Nketoana	85,1
KwaZulu-Natal	Mfolozi	85,2
Northern Cape	Ubuntu	85,3
Northern Cape	Magareng	85,4
Northern Cape	Sol Plaatjie	85,4
Limpopo	Lephalale	85,4
Gauteng	Randfontein	85,4
Limpopo	Bela-Bela	85,4

Table D7: Proportion of households with access to electricity by local municipality (2011) (continued)

Province	Municipality	Electricity
Mpumalanga	Pixley Ka Seme	85,6
Western Cape	Oudtshoorn	85,8
Mpumalanga	Victor Khanye	85,9
Free State	Metsimaholo	86,3
KwaZulu-Natal	uMngeni	86,3
Northern Cape	Siyathemba	86,4
Gauteng	Mogale City	86,4
North West	Lekwa-Teemane	86,6
Northern Cape	Kai !Garib	86,6
KwaZulu-Natal	Hibiscus Coast	86,8
Limpopo	Greater Tzaneen	87,0
Eastern Cape	Ndlambe	87,0
Northern Cape	Umsobomvu	87,3
Western Cape	Prince Albert	87,4
Limpopo	Mookgopong	87,5
Eastern Cape	Kouga	87,5
Limpopo	Thulamela	87,5
Eastern Cape	Kou-Kamma	87,7
Mpumalanga	Albert Luthuli	87,8
Eastern Cape	Blue Crane Route	87,9
Northern Cape	Kamiesberg	87,9
KwaZulu-Natal	Newcastle	88,1
Eastern Cape	Tsolwana	88,4
Northern Cape	Gamagara	88,4
Limpopo	Blouberg	88,5
Western Cape	Breede Valley	88,6
Northern Cape	Renosterberg	88,8
Eastern Cape	Nkonkobe	89,0
Free State	Setsoto	89,0
Eastern Cape	Ikwezi	89,0
North West	Greater Taung	89,1
Gauteng	City of Tshwane	89,1
Western Cape	Cederberg	89,2
Mpumalanga	Lekwa	89,2
Limpopo	Greater Giyani	89,3
Western Cape	Knysna	89,3
Eastern Cape	Baviaans	89,4
Northern Cape	Khâi-Ma	89,4
Western Cape	Theewaterskloof	89,5
Western Cape	Matzikama	89,5
Free State	Maluti a Phofung	89,5
Limpopo	Makhado	89,8
Eastern Cape	Makana	90,1
Free State	Mohokare	90,1
Western Cape	Kannaland	90,2

Table D7: Proportion of households with access to electricity by local municipality (2011) (continued)

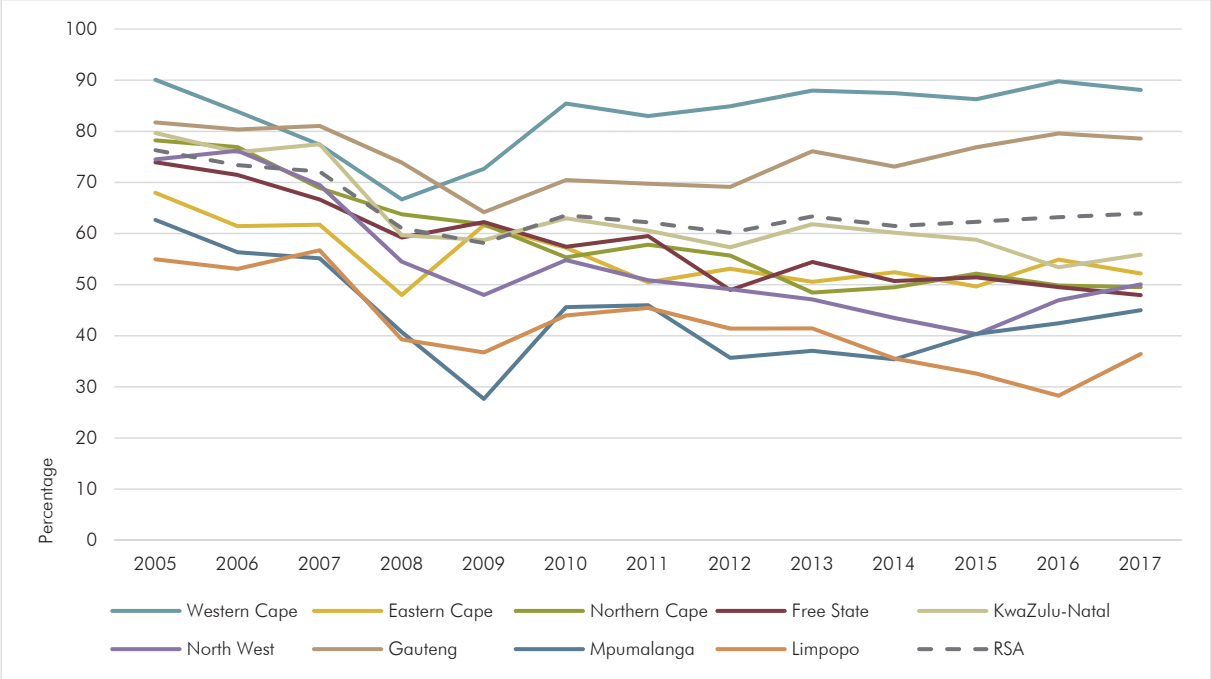
Province	Municipality	Electricity
North West	Moses Kotane	90,5
Limpopo	Ephraim Mogale	90,6
Gauteng	Lesedi	90,6
KwaZulu-Natal	Ethekwini	90,7
Limpopo	Makhuduthamaga	90,8
Mpumalanga	Govan Mbeki	90,9
Free State	Nala	90,9
Eastern Cape	Nelson Mandela Bay	91,0
Limpopo	Greater Letaba	91,0
Mpumalanga	Mbombela	91,0
Limpopo	Ba-Phalaborwa	91,1
Western Cape	Overstrand	91,2
North West	City of Matlosana	91,2
Gauteng	City of Johannesburg	91,3
Free State	Matjhabeng	91,3
Limpopo	Maruleng	91,3
Eastern Cape	Gariep	91,3
Eastern Cape	Lukanji	91,4
North West	Tlokwe City Council	91,4
Free State	Mantsopa	91,5
Mpumalanga	Steve Tshwete	91,5
Northern Cape	Kgatelopele	91,5
KwaZulu-Natal	KwaDukuza	91,5
Northern Cape	//Khara Hais	91,5
Western Cape	George	91,6
Northern Cape	Ga-Segonyana	91,7
Limpopo	Elias Motsoaledi	91,8
Free State	Mangaung	91,8
Limpopo	Fetakgomo	92,1
Eastern Cape	Ngqushwa	92,2
Limpopo	Mogalakwena	92,2
Limpopo	Lepele-Nkumpi	92,3
Eastern Cape	Inkwanca	92,3
Free State	Tswelopele	92,4
KwaZulu-Natal	The Msunduzi	92,5
Free State	Ngwathe	92,6
Mpumalanga	Thembisile	92,7
North West	Moretele	92,7
Western Cape	Beaufort West	92,8
Eastern Cape	Nxuba	92,9
Gauteng	Emfuleni	93,0
Northern Cape	Emthanjeni	93,0
Free State	Kopanong	93,1
Free State	Letsemeng	93,2
Western Cape	Stellenbosch	93,6

Table D7: Proportion of households with access to electricity by local municipality (2011) (concluded)

Province	Municipality	Electricity
Free State	Moqhaka	93,8
Free State	Masilonyana	93,9
Western Cape	Witzenberg	94,0
Free State	Naledi	94,1
Mpumalanga	Bushbuckridge	94,3
Northern Cape	Nama Khoi	94,3
Western Cape	City of Cape Town	94,4
Western Cape	Mossel Bay	94,5
Western Cape	Bitou	94,5
Western Cape	Swellendam	94,5
Eastern Cape	Camdeboo	94,6
KwaZulu-Natal	uMhlathuze	94,6
Limpopo	Aganang	94,9
Western Cape	Langeberg	95,1
Western Cape	Drakenstein	95,5
Western Cape	Hessequa	95,6
Western Cape	Bergrivier	95,6
Northern Cape	Richtersveld	96,1
Eastern Cape	Inxuba Yethemba	96,1
Limpopo	Molemole	96,2
Mpumalanga	Dr JS Moroka	97,0
Western Cape	Cape Agulhas	97,2
Western Cape	Saldanha Bay	97,5
Western Cape	Swartland	98,3

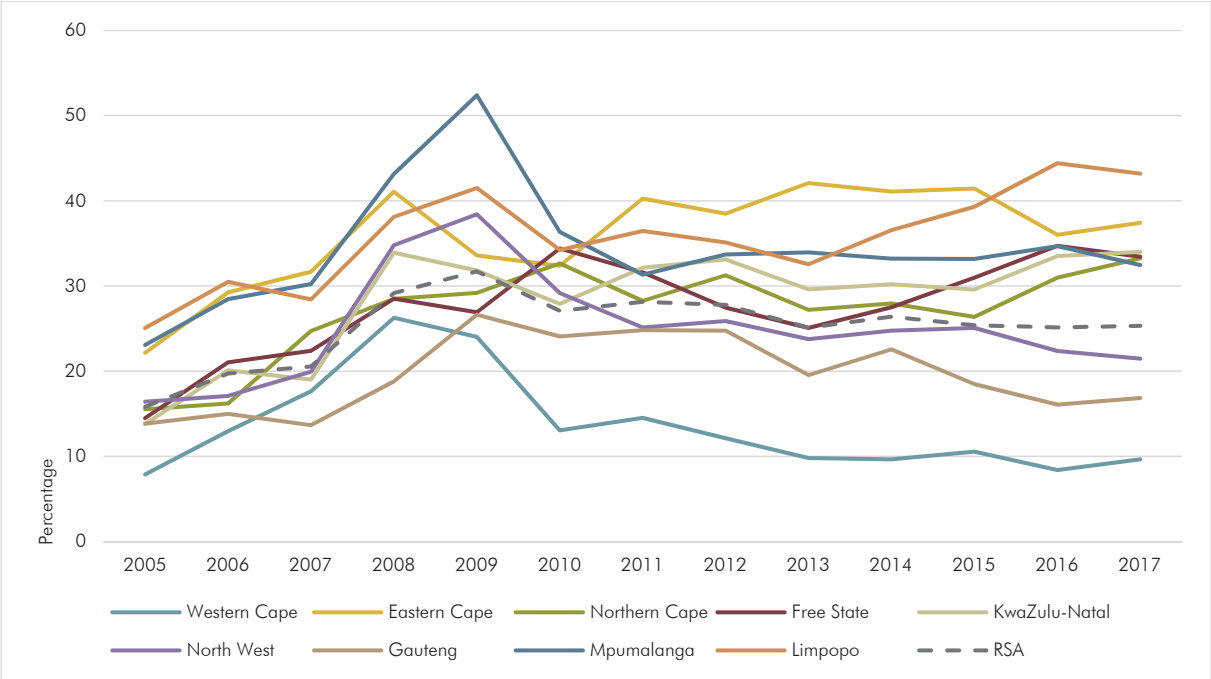
Source: Census 2011

Figure D10: Proportion of households who rated municipal water service to be 'good' by province (2005–2017)



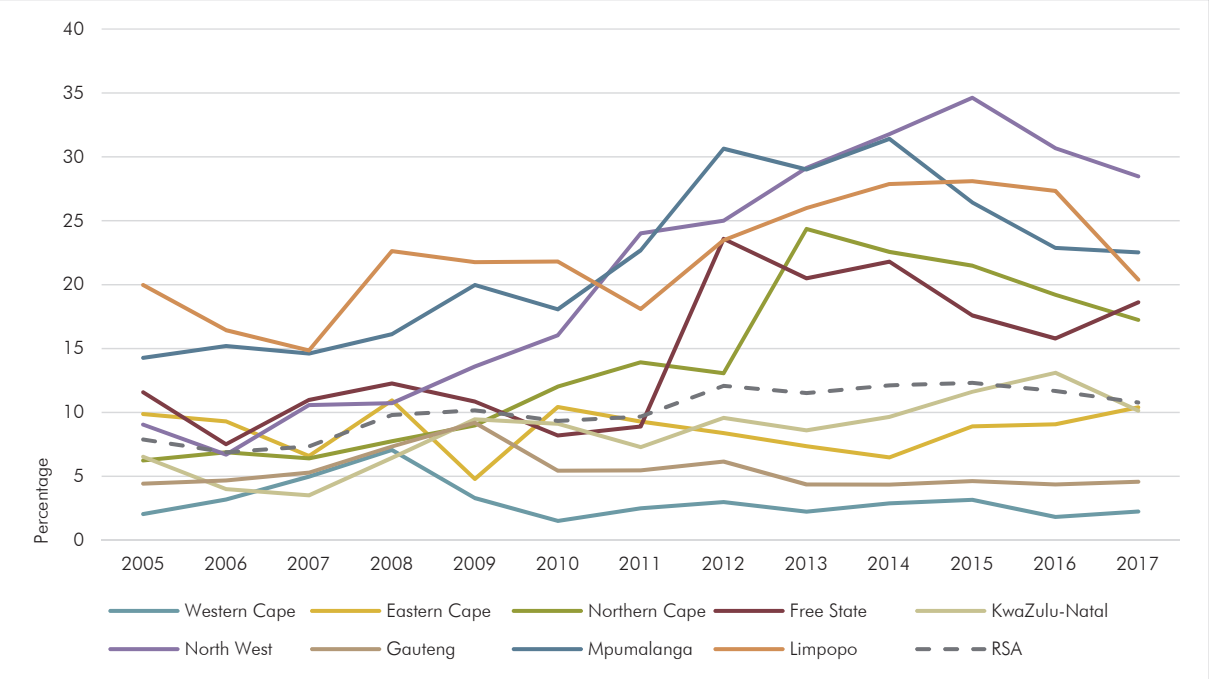
Source: GHS (2005–2017)

Figure D11: Proportion of households who rated municipal water service to be 'average' by province (2005–2017)



Source: GHS (2005–2017)

Figure D12: Proportion of households who rated municipal water service to be 'poor' by province (2005–2017)



Source: GHS (2002–2017)

Table D8: Proportion of households with access to piped water by district municipality (2011)

Province	District	Piped water
Eastern Cape	OR Tambo	37,0
Eastern Cape	Alfred Nzo	37,3
KwaZulu-Natal	Umkhanyakude	51,2
KwaZulu-Natal	Sisonke	53,3
KwaZulu-Natal	Umzinyathi	54,0
Eastern Cape	Amathole	54,4
Limpopo	Greater Sekhukhune	61,1
Eastern Cape	Joe Gqabi	61,8
KwaZulu-Natal	Zululand	62,2
KwaZulu-Natal	Ugu	65,6
KwaZulu-Natal	Uthukela	68,0
Limpopo	Vhembe	69,0
KwaZulu-Natal	iLembe	69,3
Limpopo	Mopani	69,5
Mpumalanga	Ehlanzeni	70,3
Eastern Cape	Chris Hani	72,1
North West	Ngaka Modiri Molema	74,3
Northern Cape	John Taolo Gaetsewe	75,5
KwaZulu-Natal	Uthungulu	76,7
North West	Dr Ruth Segomotsi Mompati	79,1
Limpopo	Capricorn	80,1
North West	Bojanala	83,4
Limpopo	Waterberg	86,1
KwaZulu-Natal	UMgungundlovu	86,5
Mpumalanga	Gert Sibande	87,0
KwaZulu-Natal	Amajuba	87,6
Mpumalanga	Nkangala	88,5
Eastern Cape	Buffalo City	89,8
Northern Cape	Siyanda	92,3
Gauteng	West Rand	92,6
KwaZulu-Natal	eThekwini	92,6
Eastern Cape	Cacadu	93,8
Free State	Thabo Mofutsanyane	94,1
Gauteng	City of Tshwane	94,4
Gauteng	Ekurhuleni	94,6
Northern Cape	Frances Baard	94,8
Free State	Mangaung	95,1
Free State	Lejweleputswa	95,2
Northern Cape	Pixley ka Seme	95,2
Western Cape	Eden	95,3
Eastern Cape	Nelson Mandela Bay	96,4
North West	Dr Kenneth Kaunda	96,5
Free State	Fezile Dabi	96,6
Western Cape	City of Cape Town	96,6
Gauteng	City of Johannesburg	96,8

Table D8: Proportion of households with access to piped water by district municipality (2011) (concluded)

Province	District	Piped water
Gauteng	Sedibeng	96,8
Free State	Xhariep	96,8
Northern Cape	Namakwa	96,9
Western Cape	Cape Winelands	97,2
Western Cape	Overberg	97,5
Western Cape	Central Karoo	98,2
Western Cape	West Coast	98,4

Source: Census 2011

Table D9: Proportion of households with access to piped water by local municipality (2011)

Province	Municipality	Piped water
Eastern Cape	Mbizana	9,8
Eastern Cape	Ngquza Hill	19,9
Eastern Cape	Port St Johns	24,1
Eastern Cape	Nyandeni	28,7
Eastern Cape	Mbhashe	29,1
KwaZulu-Natal	Msinga	33,8
Eastern Cape	Ntabankulu	34,3
KwaZulu-Natal	Maphumulo	34,5
KwaZulu-Natal	Umzumbe	36,3
KwaZulu-Natal	Nongoma	36,9
Eastern Cape	Elundini	38,3
KwaZulu-Natal	Hlabisa	39,5
KwaZulu-Natal	Umzimkhulu	40,5
KwaZulu-Natal	Vulamehlo	43,2
Eastern Cape	Engcobo	43,2
Eastern Cape	Mnquma	43,3
Eastern Cape	Mhlontlo	45,1
KwaZulu-Natal	Jozini	46,3
KwaZulu-Natal	Umhlabuyalingana	46,4
Eastern Cape	Umzimvubu	46,6
KwaZulu-Natal	Ubuhlebezwe	46,6
KwaZulu-Natal	Ingwe	46,8
KwaZulu-Natal	Ntambanana	47,8
KwaZulu-Natal	Emadlangeni	48,7
KwaZulu-Natal	Imbabazane	49,9
Eastern Cape	Intsika Yethu	51,0
KwaZulu-Natal	Umvoti	51,1
Eastern Cape	King Sabata Dalindyebo	51,5
KwaZulu-Natal	Okhahlamba	54,4
KwaZulu-Natal	Ezingoleni	56,0

Table D9: Proportion of households with access to piped water by local municipality (2011) (continued)

Province	Municipality	Piped water
Eastern Cape	Matatiele	56,5
Limpopo	Greater Tubatse	56,5
Limpopo	Elias Motsoaledi	58,1
Limpopo	Makhuduthamaga	58,4
KwaZulu-Natal	UMuziwabantu	58,6
KwaZulu-Natal	Mkhambathini	58,8
KwaZulu-Natal	Ndwedwe	59,1
KwaZulu-Natal	Mtubatuba	60,6
KwaZulu-Natal	uMlalazi	61,0
North West	Ratlou	61,2
KwaZulu-Natal	Nkandla	61,3
KwaZulu-Natal	Ulundi	61,7
Mpumalanga	Bushbuckridge	62,1
KwaZulu-Natal	Mthonjaneni	62,2
Limpopo	Greater Tzaneen	62,2
KwaZulu-Natal	Nqutu	62,9
Limpopo	Mutale	63,2
KwaZulu-Natal	Indaka	63,2
KwaZulu-Natal	UPhongolo	64,3
Limpopo	Greater Giyani	64,5
Northern Cape	Joe Morolong	65,2
Limpopo	Blouberg	65,7
Eastern Cape	Senqu	66,7
Limpopo	Thulamela	67,1
Limpopo	Maruleng	67,4
Limpopo	Lepele-Nkumpi	67,8
Limpopo	Fetakgomo	68,5
Limpopo	Molemole	68,7
Mpumalanga	Mkhondo	68,7
North West	Kagisano/Molopo	69,4
Mpumalanga	Nkomazi	69,5
Limpopo	Makhado	69,7
Eastern Cape	Ngqushwa	70,7
North West	Mafikeng	71,0
KwaZulu-Natal	Mandeni	71,5
North West	Greater Taung	71,5
Eastern Cape	Amahlathi	71,5
Eastern Cape	Great Kei	71,6
Mpumalanga	Mbombela	71,8
KwaZulu-Natal	eDumbe	72,5
KwaZulu-Natal	The Big 5 False Bay	72,8
KwaZulu-Natal	Umtshezi	73,6
KwaZulu-Natal	Impendle	74,2
KwaZulu-Natal	Richmond	74,3
Limpopo	Greater Letaba	74,5

Table D9: Proportion of households with access to piped water by local municipality (2011) (continued)

Province	Municipality	Piped water
KwaZulu-Natal	uMshwathi	74,6
Eastern Cape	Emalahleni	74,6
KwaZulu-Natal	Mfolozi	75,1
Northern Cape	Ga-Segonyana	75,7
Mpumalanga	Dr JS Moroka	75,9
Eastern Cape	Sakhisizwe	77,0
KwaZulu-Natal	Abaqulusi	77,6
North West	Madibeng	78,0
North West	Tswaing	78,0
Mpumalanga	Albert Luthuli	78,1
North West	Ramotshere Moiloa	78,7
Limpopo	Ephraim Mogale	79,5
KwaZulu-Natal	Mpofana	79,8
KwaZulu-Natal	Dannhauser	80,0
Eastern Cape	Nkonkobe	80,3
North West	Moses Kotane	80,7
KwaZulu-Natal	Kwa Sani	80,7
KwaZulu-Natal	Emnambithi/Ladysmith	81,1
North West	Moretele	81,6
North West	Ditsobotla	81,9
KwaZulu-Natal	KwaDukuza	82,3
KwaZulu-Natal	Hibiscus Coast	82,7
Limpopo	Mogalakwena	83,0
Limpopo	Thabazimbi	83,8
Northern Cape	!Kheis	83,9
Eastern Cape	Sundays River Valley	84,0
Mpumalanga	Msukaligwa	84,3
KwaZulu-Natal	Umdoni	84,4
Northern Cape	Tsantsabane	84,9
Limpopo	Aganang	85,8
Gauteng	Westonaria	86,3
Eastern Cape	Tsolwana	87,1
Limpopo	Musina	88,0
North West	Mamusa	88,3
KwaZulu-Natal	Endumeni	88,4
Limpopo	Polokwane	88,4
Mpumalanga	Emalahleni	88,5
Mpumalanga	Dipaleseng	88,7
North West	Rustenburg	88,8
Limpopo	Lephalale	88,8
Northern Cape	Thembelihle	88,9
Mpumalanga	Umjindi	88,9
Limpopo	Bela-Bela	89,1
Northern Cape	Siyancuma	89,2
North West	Kgetlengrivier	89,7

Table D9: Proportion of households with access to piped water by local municipality (2011) (continued)

Province	Municipality	Piped water
Eastern Cape	Buffalo City	89,8
Mpumalanga	Thaba Chweu	90,0
Eastern Cape	Maletswai	90,3
Northern Cape	Phokwane	90,4
North West	Ventersdorp	90,5
KwaZulu-Natal	uMngeni	90,6
Mpumalanga	Pixley Ka Seme	90,7
Eastern Cape	Lukanji	90,8
Gauteng	Midvaal	90,9
Limpopo	Ba-Phalaborwa	91,0
Limpopo	Modimolle	91,0
Northern Cape	Kai !Garib	91,2
Northern Cape	Magareng	91,2
Mpumalanga	Victor Khanye	91,3
North West	Naledi	91,5
Free State	Phumelela	91,9
Free State	Nketoana	92,1
Northern Cape	Mier	92,2
KwaZulu-Natal	The Msunduzi	92,2
KwaZulu-Natal	Greater Kokstad	92,3
KwaZulu-Natal	Newcastle	92,3
Western Cape	Bitou	92,5
KwaZulu-Natal	Ethekwini	92,6
Mpumalanga	Emakhazeni	93,0
Gauteng	Mogale City	93,1
Eastern Cape	Ndlambe	93,2
Mpumalanga	Thembisile	93,3
Northern Cape	Dikgatlong	93,3
Free State	Mafube	93,3
Free State	Maluti a Phofung	93,4
Mpumalanga	Steve Tshwete	93,5
Gauteng	Merafong City	93,6
Free State	Tokologo	93,7
Free State	Letsemeng	93,8
Eastern Cape	Makana	93,9
Eastern Cape	Kou-Kamma	94,2
North West	Maquassi Hills	94,2
Western Cape	Kannaland	94,3
Eastern Cape	Nxuba	94,4
Western Cape	Oudtshoorn	94,4
Gauteng	City of Tshwane	94,4
Gauteng	Ekurhuleni	94,6
Free State	Dihlabeng	94,6
Western Cape	Knysna	94,7
Eastern Cape	Blue Crane Route	94,7

Table D9: Proportion of households with access to piped water by local municipality (2011) (continued)

Province	Municipality	Piped water
Limpopo	Mookgopong	94,9
Western Cape	Stellenbosch	94,9
Free State	Mangaung	95,1
Free State	Matjhabeng	95,2
Northern Cape	Kamiesberg	95,2
Free State	Nala	95,2
Mpumalanga	Lekwa	95,2
Free State	Masilonyana	95,5
Gauteng	Randfontein	95,5
KwaZulu-Natal	uMhlathuze	95,6
Northern Cape	Kareeberg	95,6
Western Cape	Mossel Bay	95,7
Free State	Tswelopele	95,7
Eastern Cape	Kouga	95,7
Free State	Setsoto	95,8
North West	Tlokwe City Council	95,8
Free State	Ngwathe	95,9
Northern Cape	Khâi-Ma	96,1
Western Cape	George	96,1
Western Cape	Swellendam	96,2
Northern Cape	//Khara Hais	96,3
Northern Cape	Richtersveld	96,3
Eastern Cape	Nelson Mandela Bay	96,4
Eastern Cape	Baviaans	96,4
Western Cape	Matzikama	96,4
Western Cape	Breede Valley	96,4
Eastern Cape	Ikwezi	96,5
Western Cape	City of Cape Town	96,6
Northern Cape	Nama Khoi	96,7
Gauteng	City of Johannesburg	96,8
Northern Cape	Sol Plaatjie	96,8
Western Cape	Theewaterskloof	96,8
Free State	Naledi	97,1
Northern Cape	Renosterberg	97,2
Free State	Metsimaholo	97,3
Mpumalanga	Govan Mbeki	97,3
Northern Cape	Umsobomvu	97,3
Gauteng	Emfuleni	97,5
Western Cape	Cape Agulhas	97,5
Eastern Cape	Gariep	97,5
Gauteng	Lesedi	97,6
Western Cape	Cederberg	97,7
Western Cape	Hessequa	97,7
Free State	Moqhaka	97,7
Free State	Kopanong	97,9

Table D9: Proportion of households with access to piped water by local municipality (2011) (concluded))

Province	Municipality	Piped water
Western Cape	Langeberg	97,9
Northern Cape	Emthanjeni	98,0
Free State	Mantsopa	98,0
Eastern Cape	Inkwanca	98,0
North West	City of Matlosana	98,0
Western Cape	Beaufort West	98,0
Northern Cape	Ubuntu	98,1
Free State	Mohokare	98,2
Northern Cape	Hantam	98,2
North West	Lekwa-Teemane	98,2
Western Cape	Prince Albert	98,3
Northern Cape	Siyathemba	98,4
Northern Cape	Karoo Hoogland	98,4
Western Cape	Bergrivier	98,4
Eastern Cape	Inxuba Yethemba	98,5
Western Cape	Witzenberg	98,6
Western Cape	Overstrand	98,6
Western Cape	Drakenstein	98,6
Eastern Cape	Camdeboo	98,8
Western Cape	Laingsburg	98,9
Northern Cape	Gamagara	98,9
Northern Cape	Kgatelopele	99,0
Western Cape	Swartland	99,1
Western Cape	Saldanha Bay	99,2

Source: Census 2011

Table D10: Proportion of households with access to improved sanitation by district municipality (2011)

Province	District	Improved sanitation
Limpopo	Greater Sekhukhune	18,8
Eastern Cape	Amathole	31,5
Eastern Cape	Alfred Nzo	35,1
Limpopo	Vhembe	36,6
Limpopo	Mopani	37,3
Mpumalanga	Ehlanzeni	37,9
Eastern Cape	OR Tambo	38,3
KwaZulu-Natal	Umkhanyakude	38,9
Limpopo	Capricorn	39,0
KwaZulu-Natal	Zululand	43,5
KwaZulu-Natal	Ugu	44,0
KwaZulu-Natal	Sisonke	44,1
North West	Ngaka Modiri Molema	44,3
KwaZulu-Natal	Uthungulu	46,5
KwaZulu-Natal	iLembe	46,7
Eastern Cape	Joe Gqabi	47,8
North West	Bojanala	48,0
KwaZulu-Natal	Umzinyathi	49,2
Eastern Cape	Chris Hani	50,0
Northern Cape	John Taolo Gaetsewe	51,6
KwaZulu-Natal	Uthukela	56,5
KwaZulu-Natal	Amajuba	57,2
Limpopo	Waterberg	57,8
North West	Dr Ruth Segomotsi Mompati	58,0
Mpumalanga	Nkangala	61,2
Free State	Thabo Mofutsanyane	61,7
KwaZulu-Natal	UMgungundlovu	70,2
KwaZulu-Natal	eThekwini	73,3
Mpumalanga	Gert Sibande	76,3
Eastern Cape	Buffalo City	76,4
Northern Cape	Siyanda	76,6
Eastern Cape	Cacadu	77,0
Free State	Lejweleputswa	79,4
Free State	Mangaung	79,6
Northern Cape	Pixley ka Seme	80,8
Gauteng	City of Tshwane	81,0
Northern Cape	Frances Baard	81,7
Free State	Fezile Dabi	82,6
Free State	Xhariep	84,7
Gauteng	West Rand	85,8
Northern Cape	Namakwa	86,1
Gauteng	Ekurhuleni	86,8
Western Cape	Eden	87,7
Western Cape	West Coast	88,0
Gauteng	Sedibeng	89,4

Table D10: Proportion of households with access to improved sanitation by district municipality (2011) (concluded)

Province	District	Improved sanitation
Eastern Cape	Nelson Mandela Bay	89,7
North West	Dr Kenneth Kaunda	90,0
Western Cape	Overberg	90,3
Western Cape	City of Cape Town	90,4
Western Cape	Cape Winelands	91,4
Western Cape	Central Karoo	92,6
Gauteng	City of Johannesburg	92,9

Source: Census 2011

Table D11: Proportion of households with access to improved sanitation by local municipality (2011)

Province	Municipality	Improved sanitation
Limpopo	Makhuduthamaga	15,2
Limpopo	Aganang	15,4
Limpopo	Greater Tubatse	16,5
KwaZulu-Natal	Umzumbe	17,9
Eastern Cape	Mbhashe	18,5
Mpumalanga	Bushbuckridge	19,0
Limpopo	Elias Motsoaledi	19,6
Limpopo	Blouberg	21,0
Eastern Cape	Mnquma	22,2
KwaZulu-Natal	Dannhauser	22,5
Limpopo	Fetakgomo	24,9
Eastern Cape	Engcobo	25,1
KwaZulu-Natal	Nkandla	25,5
KwaZulu-Natal	Nongoma	25,7
Eastern Cape	Intsika Yethu	25,8
Limpopo	Ephraim Mogale	26,5
KwaZulu-Natal	Umzimkhulu	26,7
KwaZulu-Natal	Maphumulo	26,8
North West	Moses Kotane	27,1
Eastern Cape	Port St Johns	27,4
Eastern Cape	Ngquza Hill	27,6
KwaZulu-Natal	Ndwedwe	28,1
KwaZulu-Natal	uMlalazi	28,2
North West	Ratlou	28,5
Limpopo	Thulamela	28,9
Mpumalanga	Thembisile	29,1
Limpopo	Greater Giyani	29,2
Eastern Cape	Mhlontlo	29,4
Limpopo	Greater Letaba	29,4
KwaZulu-Natal	Jozini	30,4

Table D11: Proportion of households with access to improved sanitation by local municipality (2011) (continued)

Province	Municipality	Improved sanitation
KwaZulu-Natal	Mtubatuba	31,3
KwaZulu-Natal	Mfolozi	32,0
Eastern Cape	Emalahleni	32,2
KwaZulu-Natal	Vulamehlo	32,2
Limpopo	Molemole	32,7
North West	Ramotshere Moiloa	32,7
North West	Moretele	33,0
Eastern Cape	Ntabankulu	34,1
Eastern Cape	Umzimvubu	34,2
KwaZulu-Natal	Emadlangeni	34,9
KwaZulu-Natal	UMuziwabantu	35,2
Limpopo	Makhado	35,3
Eastern Cape	Elundini	35,5
Eastern Cape	Mbizana	35,6
Eastern Cape	Matatiele	35,9
Mpumalanga	Nkomazi	36,1
KwaZulu-Natal	Impendle	36,2
Limpopo	Lepele-Nkumpi	36,5
Limpopo	Greater Tzaneen	37,1
Eastern Cape	Nyandeni	38,0
KwaZulu-Natal	Msinga	38,6
Limpopo	Mogalakwena	38,6
North West	Greater Taung	38,8
Eastern Cape	Ngqushwa	39,0
North West	Madibeng	40,0
Mpumalanga	Dr JS Moroka	40,1
Northern Cape	Ga-Segonyana	40,1
KwaZulu-Natal	Ingwe	40,2
KwaZulu-Natal	UPhongolo	40,5
KwaZulu-Natal	Nqutu	41,4
KwaZulu-Natal	Ulundi	41,4
Eastern Cape	Amahlathi	41,5
Eastern Cape	Senqu	41,8
KwaZulu-Natal	Mthonjaneni	41,9
Limpopo	Maruleng	42,5
Eastern Cape	Sakhisizwe	43,0
KwaZulu-Natal	Ntambanana	43,0
Eastern Cape	Great Kei	44,5
KwaZulu-Natal	Indaka	44,6
KwaZulu-Natal	Okhahlamba	44,7
Mpumalanga	Mbombela	44,9
KwaZulu-Natal	Mandeni	45,2
KwaZulu-Natal	Umhlabuyalingana	45,7
North West	Tswaing	46,4
Mpumalanga	Mkhondo	47,0

Table D11: Proportion of households with access to improved sanitation by local municipality (2011) (continued)

Province	Municipality	Improved sanitation
Eastern Cape	Nkonkobe	47,1
KwaZulu-Natal	Imbabazane	47,4
Northern Cape	Joe Morolong	47,5
North West	Mafikeng	47,9
Free State	Maluti a Phofung	47,9
KwaZulu-Natal	Hlabisa	48,8
KwaZulu-Natal	Ubuhlebezwe	49,5
Limpopo	Polokwane	49,6
Eastern Cape	King Sabata Dalindyebo	51,0
KwaZulu-Natal	Umvoti	52,0
KwaZulu-Natal	Richmond	52,5
KwaZulu-Natal	Hibiscus Coast	53,4
KwaZulu-Natal	Abaqulusi	53,9
North West	Kagisano/Molopo	54,2
North West	Ditsobotla	56,3
KwaZulu-Natal	Umtshezi	57,2
KwaZulu-Natal	Umdoni	58,2
Mpumalanga	Albert Luthuli	58,3
Limpopo	Ba-Phalaborwa	58,4
Northern Cape	!Kheis	60,5
KwaZulu-Natal	KwaDukuza	61,0
KwaZulu-Natal	uMshwathi	61,4
Eastern Cape	Sundays River Valley	62,4
KwaZulu-Natal	Mkhambathini	63,1
KwaZulu-Natal	eDumbe	63,2
Free State	Tokologo	63,4
Limpopo	Mutale	63,8
North West	Rustenburg	64,4
Free State	Phumelela	64,8
Free State	Setsoto	65,6
Eastern Cape	Ndlambe	65,9
Eastern Cape	Nxuba	66,3
KwaZulu-Natal	uMhlathuze	66,9
KwaZulu-Natal	Newcastle	67,1
Mpumalanga	Umjindi	67,5
KwaZulu-Natal	The Big 5 False Bay	68,2
Northern Cape	Siyancuma	68,3
KwaZulu-Natal	Mpofana	68,7
KwaZulu-Natal	Emnambithi/Ladysmith	69,4
Limpopo	Lephalale	69,4
KwaZulu-Natal	Kwa Sani	69,9
Free State	Nketoana	69,9
KwaZulu-Natal	Ezingoleni	70,1
Limpopo	Thabazimbi	70,4
Eastern Cape	Tsolwana	70,9

Table D11: Proportion of households with access to improved sanitation by local municipality (2011) (continued)

Province	Municipality	Improved sanitation
Western Cape	Matzikama	71,2
Northern Cape	Tsantsabane	71,3
Limpopo	Mookgopong	71,8
Mpumalanga	Thaba Chweu	71,8
Free State	Nala	72,5
Northern Cape	Dikgatlong	72,5
KwaZulu-Natal	Ethekwini	73,3
Mpumalanga	Emalahleni	73,5
KwaZulu-Natal	The Msunduzi	74,2
North West	Naledi	74,5
Free State	Mantsopa	74,6
North West	Kgetlengrivier	74,8
Northern Cape	Phokwane	74,8
North West	Mamusa	75,0
Limpopo	Musina	75,0
Free State	Metsimaholo	75,2
KwaZulu-Natal	Greater Kokstad	75,4
Free State	Mohokare	75,4
Limpopo	Modimolle	75,7
Northern Cape	Kai !Garib	75,9
North West	Ventersdorp	76,1
Mpumalanga	Msukaligwa	76,2
Free State	Masilonyana	76,4
Eastern Cape	Buffalo City	76,4
Northern Cape	Thembelihle	76,6
Eastern Cape	Lukanji	76,8
Western Cape	Knysna	77,0
Eastern Cape	Kouga	77,1
KwaZulu-Natal	uMngeni	77,8
Northern Cape	Ubuntu	77,8
Northern Cape	//Khara Hais	78,3
Gauteng	Midvaal	78,4
Mpumalanga	Dipaleseng	78,6
Eastern Cape	Gariep	78,8
Eastern Cape	Kou-Kamma	79,2
Free State	Mangaung	79,6
Northern Cape	Mier	79,6
Eastern Cape	Maletswai	79,9
Free State	Mafube	80,2
Mpumalanga	Victor Khanye	80,3
North West	Maquassi Hills	80,4
Eastern Cape	Makana	80,7
Mpumalanga	Emakhazeni	80,8
Gauteng	City of Tshwane	81,0
Free State	Matjhabeng	81,8

Table D11: Proportion of households with access to improved sanitation by local municipality (2011) (continued)

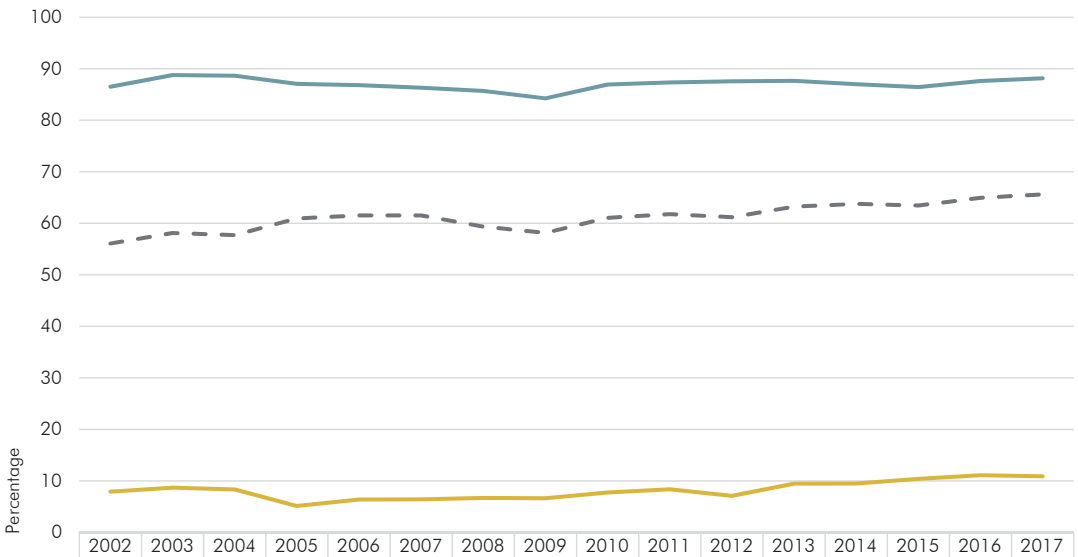
Province	Municipality	Improved sanitation
Northern Cape	Kareeberg	82,2
Limpopo	Bela-Bela	82,3
Northern Cape	Siyathemba	82,5
Free State	Ngwathe	82,7
Mpumalanga	Pixley Ka Seme	83,2
Western Cape	Cederberg	83,3
Free State	Tswelopele	83,5
Gauteng	Westonaria	84,2
Eastern Cape	Ikwezi	84,3
Free State	Dihlabeng	84,4
Western Cape	Oudtshoorn	84,4
KwaZulu-Natal	Endumeni	84,6
Gauteng	Merafong City	84,7
Northern Cape	Sol Plaatjie	84,7
Northern Cape	Karoo Hoogland	84,8
Northern Cape	Umsobomvu	84,9
Northern Cape	Nama Khoi	84,9
Eastern Cape	Blue Crane Route	85,4
Northern Cape	Hantam	85,4
Eastern Cape	Baviaans	85,9
Free State	Letsemeng	86,1
North West	Tlokwe City Council	86,3
Western Cape	Prince Albert	86,4
Western Cape	Kannaland	86,5
Gauteng	Mogale City	86,6
Western Cape	Swellendam	86,7
Gauteng	Ekurhuleni	86,8
Gauteng	Randfontein	86,9
Northern Cape	Khâi-Ma	87,0
Mpumalanga	Steve Tshwete	87,1
Free State	Kopanong	87,4
Mpumalanga	Lekwa	87,5
Western Cape	Bitou	87,5
Western Cape	Theewaterskloof	87,9
Northern Cape	Richtersveld	88,0
Northern Cape	Emthanjeni	88,3
Western Cape	Laingsburg	88,3
Western Cape	Breede Valley	88,4
Northern Cape	Renosterberg	89,4
Western Cape	Langeberg	89,4
Eastern Cape	Inkwanca	89,5
Eastern Cape	Nelson Mandela Bay	89,7
Western Cape	George	89,8
Gauteng	Lesedi	89,9
Free State	Naledi	90,1

Table D11: Proportion of households with access to improved sanitation by local municipality (2011) (concluded)

Province	Municipality	Improved sanitation
Northern Cape	Magareng	90,1
Western Cape	Bergrivier	90,3
Western Cape	City of Cape Town	90,4
Northern Cape	Kamiesberg	90,4
Free State	Moqhaka	90,6
Eastern Cape	Inxuba Yethemba	90,7
Western Cape	Cape Agulhas	90,7
Gauteng	Emfuleni	90,8
Eastern Cape	Camdeboo	91,0
Northern Cape	Gamagara	91,0
Western Cape	Stellenbosch	91,5
Western Cape	Swartland	91,7
Western Cape	Mossel Bay	91,8
North West	Lekwa-Teemane	92,2
Western Cape	Witzenberg	92,4
Gauteng	City of Johannesburg	92,9
Mpumalanga	Govan Mbeki	93,5
Northern Cape	Kgatelopele	93,6
Western Cape	Overstrand	93,8
Western Cape	Hessequa	93,8
Western Cape	Drakenstein	93,9
North West	City of Matlosana	94,9
Western Cape	Beaufort West	95,1
Western Cape	Saldanha Bay	96,3

Source: Census 2011

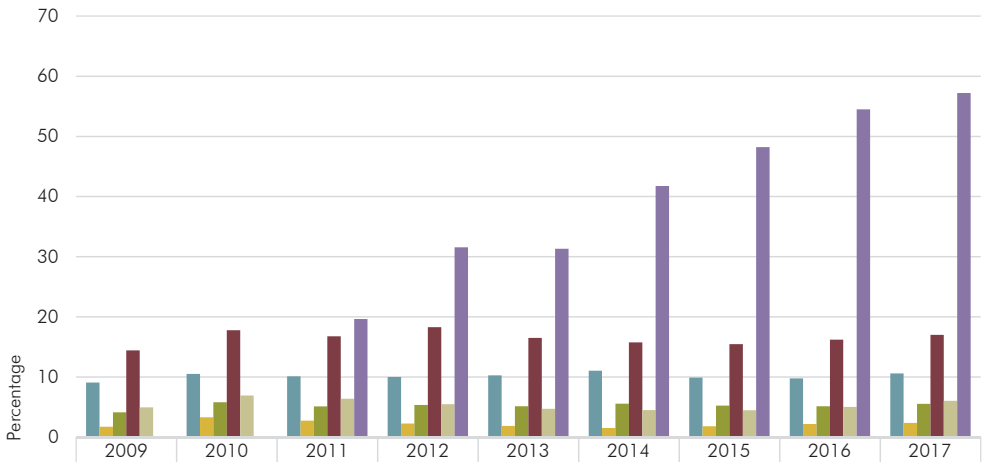
Figure D13: Proportion of households with access to refuse removal by local authority or private company at least once a week by settlement type (2002–2017)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Urban	86,5	88,8	88,7	87,1	86,8	86,3	85,7	84,3	86,9	87,3	87,6	87,7	87,0	86,4	87,6	88,2
Rural	7,9	8,7	8,4	5,2	6,4	6,4	6,7	6,7	7,8	8,4	7,1	9,5	9,5	10,4	11,1	10,9
RSA	56,1	58,1	57,7	60,9	61,5	61,5	59,4	58,2	61,1	61,8	61,2	63,3	63,8	63,5	64,9	65,6

Source: GHS (2002–2017)

Figure D14: Proportion of households with access to internet by place of access (2009–2017)

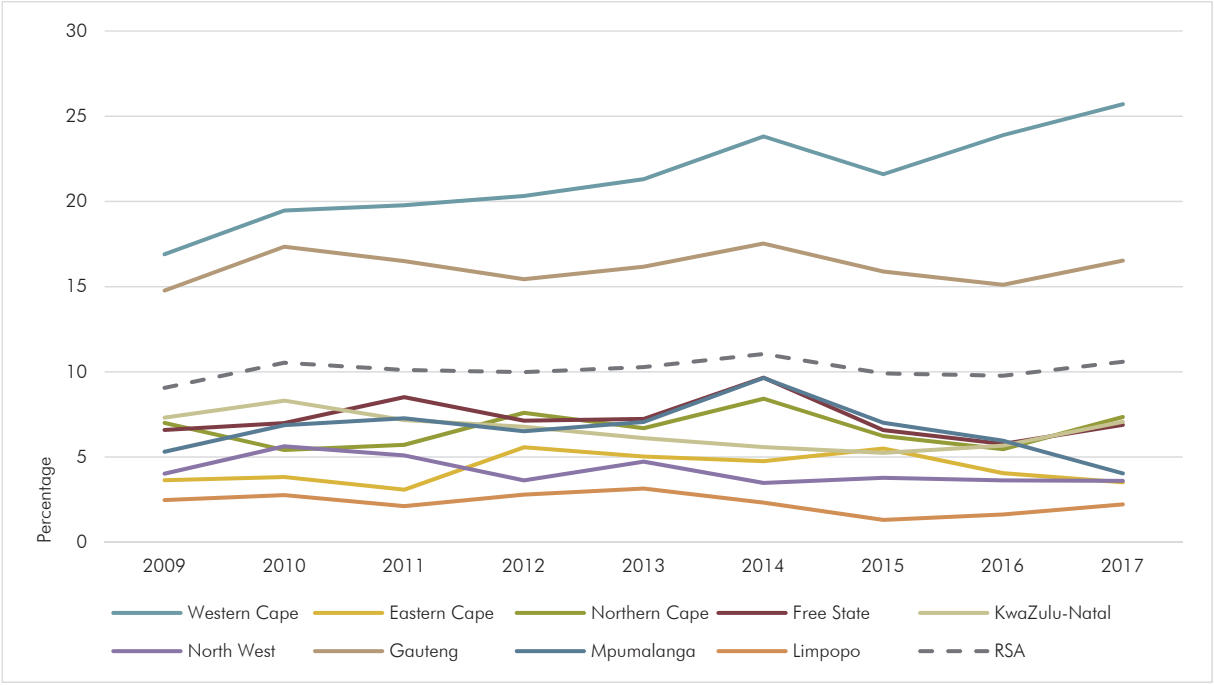


	2009	2010	2011	2012	2013	2014	2015	2016	2017
At home	9,1	10,5	10,1	10,0	10,3	11,1	9,9	9,8	10,6
Library/community hall	1,7	3,3	2,8	2,3	1,9	1,5	1,8	2,2	2,4
School/College/University	4,1	5,8	5,1	5,3	5,1	5,6	5,2	5,1	5,5
Place of work	14,4	17,8	16,8	18,3	16,5	15,8	15,5	16,2	17,0
Internet cafes	5,0	6,9	6,4	5,5	4,7	4,5	4,5	5,0	6,0
Using mobile devices	—	—	19,6	31,6	31,3	41,8	48,2	54,5	57,2

Source: GHS (2009–2017)

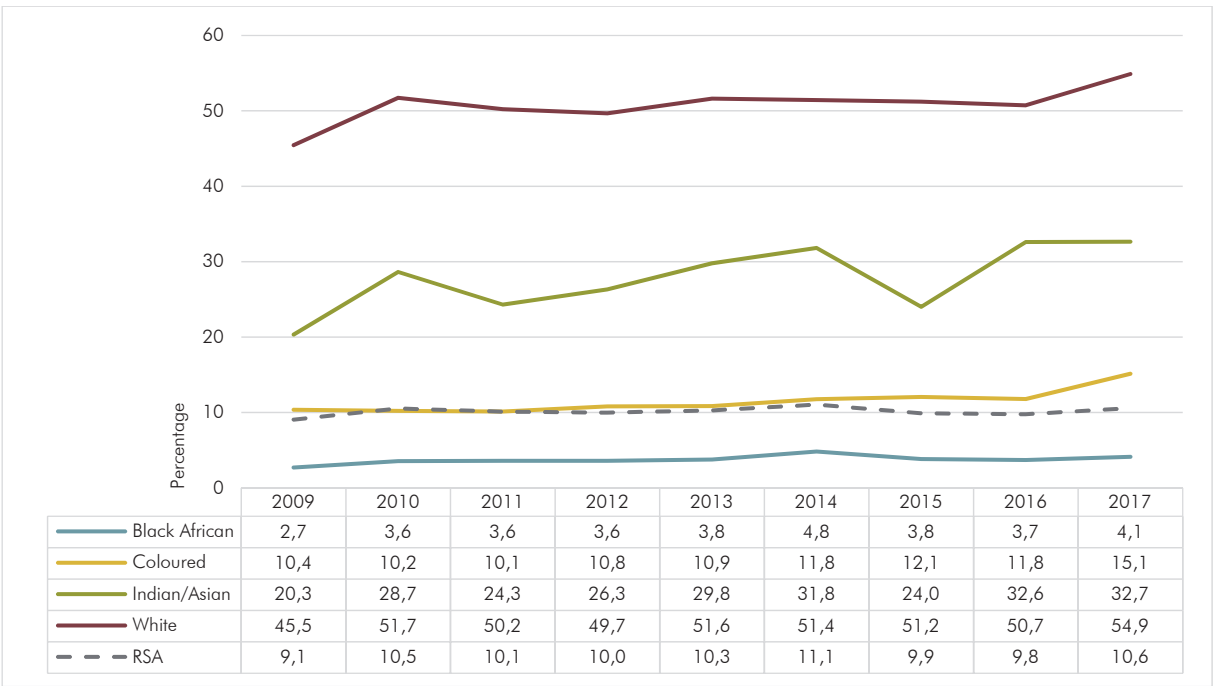
Note: Questions about mobile devices only included in the GHS from 2011

Figure D15: Proportion of households with access to internet at home by province (2009–2017)



Source: GHS (2009–2017)

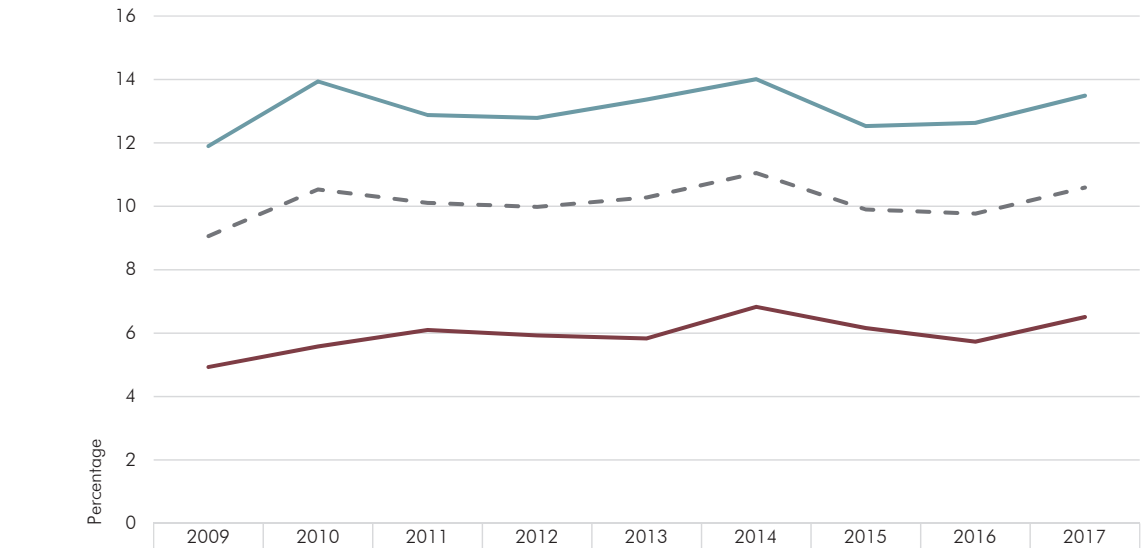
Figure D16: Proportion of households with access to internet at home by population group of household head (2009–2017)



	2009	2010	2011	2012	2013	2014	2015	2016	2017
Black African	2,7	3,6	3,6	3,6	3,8	4,8	3,8	3,7	4,1
Coloured	10,4	10,2	10,1	10,8	10,9	11,8	12,1	11,8	15,1
Indian/Asian	20,3	28,7	24,3	26,3	29,8	31,8	24,0	32,6	32,7
White	45,5	51,7	50,2	49,7	51,6	51,4	51,2	50,7	54,9
RSA	9,1	10,5	10,1	10,0	10,3	11,1	9,9	9,8	10,6

Source: GHS (2009–2017)

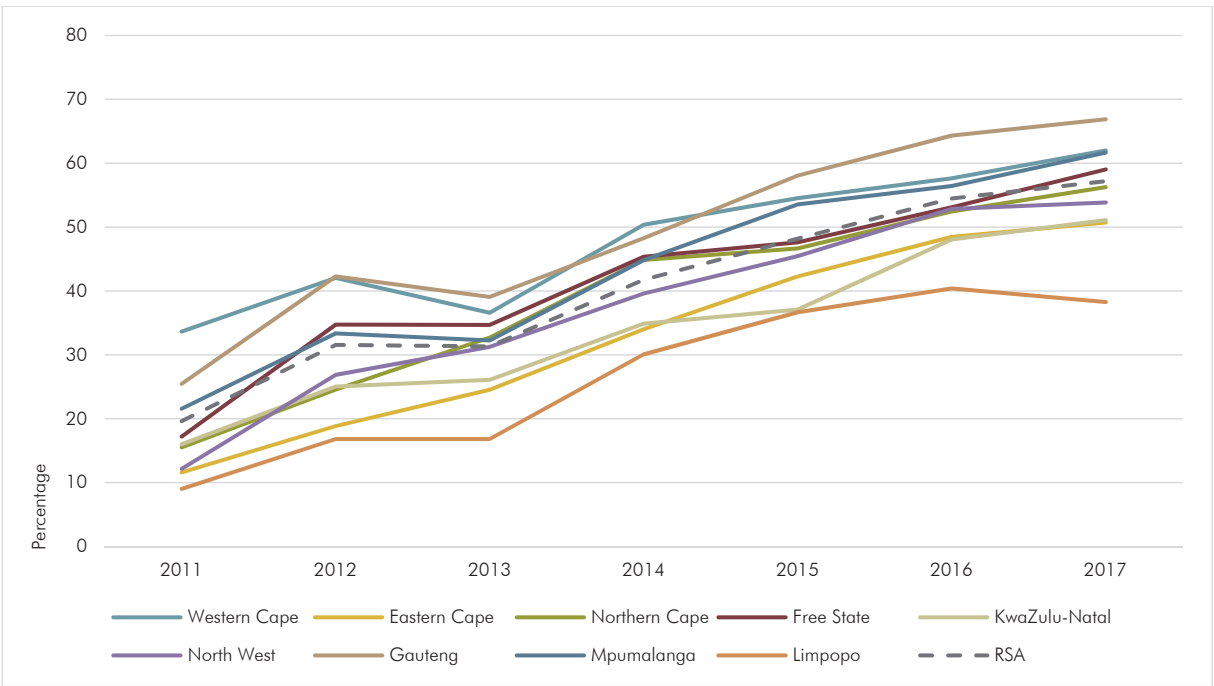
Figure D17: Proportion of households with access to internet at home by sex of household head (2009–2017)



	2009	2010	2011	2012	2013	2014	2015	2016	2017
Male	11,9	13,9	12,9	12,8	13,4	14,0	12,5	12,6	13,5
Female	4,9	5,6	6,1	5,9	5,8	6,8	6,2	5,7	6,5
RSA	9,1	10,5	10,1	10,0	10,3	11,1	9,9	9,8	10,6

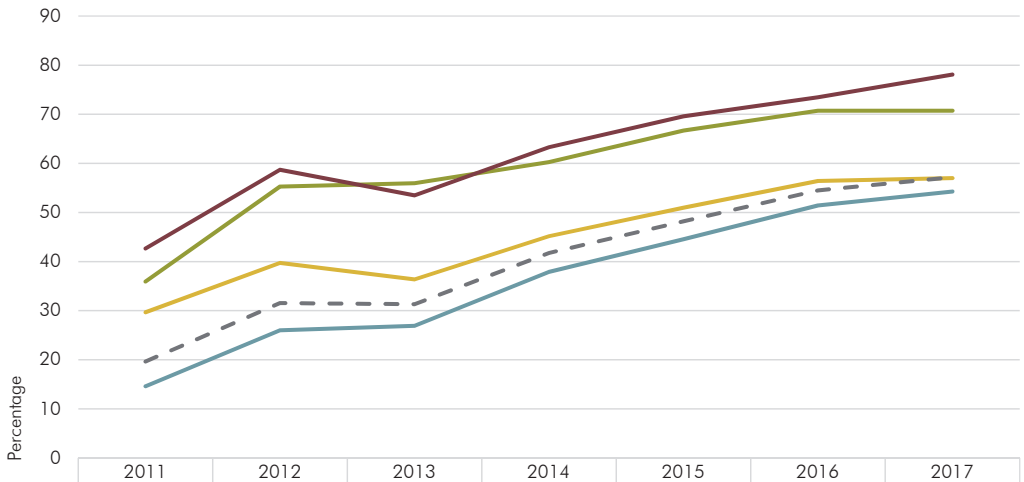
Source: GHS (2009–2017)

Figure D18: Proportion of households with access to internet using mobile devices by province (2011–2017)



Source: GHS (2011–2017)

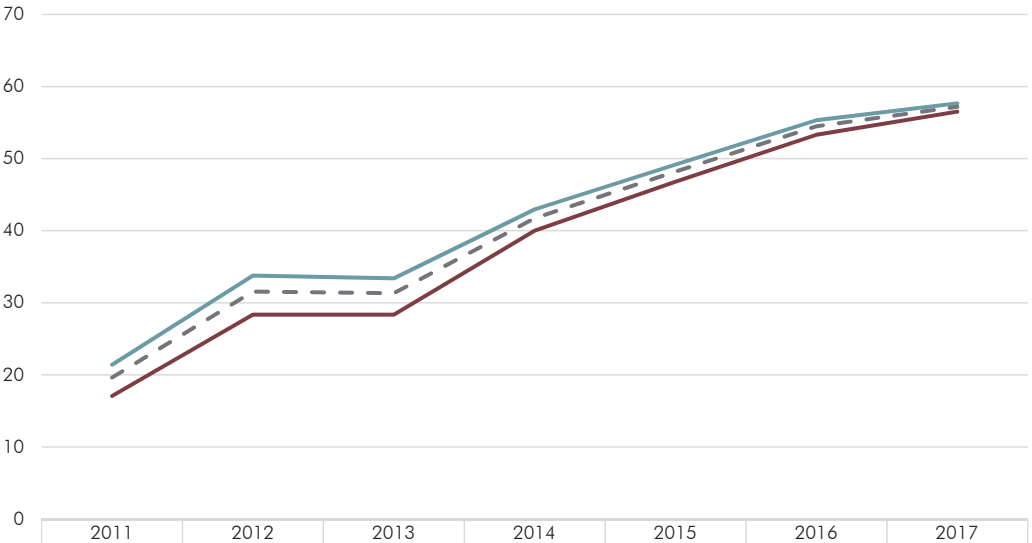
Figure D19: Proportion of households with access to internet using mobile devices by population group of household head (2011–2017)



	2011	2012	2013	2014	2015	2016	2017
Black African	14,6	26,0	26,9	37,9	44,6	51,4	54,3
Coloured	29,7	39,7	36,4	45,2	51,0	56,4	57,0
Indian/Asian	35,9	55,3	56,0	60,3	66,7	70,7	70,7
White	42,7	58,7	53,5	63,3	69,6	73,5	78,1
RSA	19,6	31,6	31,3	41,8	48,2	54,5	57,2

Source: GHS (2011–2017)

Figure D20: Proportion of households with access to internet using mobile devices by sex of household head (2011–2017)



	2011	2012	2013	2014	2015	2016	2017
Male	21,4	33,8	33,4	43,0	49,2	55,3	57,7
Female	17,1	28,4	28,4	40,0	46,8	53,3	56,5
RSA	19,6	31,6	31,3	41,8	48,2	54,5	57,2

Source: GHS (2011–2017)

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