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Beyond the Pandemic: Unravelling the Threads of Poverty and Inequality in South Africa

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Abstract - This dissertation investigates the evolution of poverty and inequality in South Africa between 2009 and 2022, using General Household Survey data to measure changes across a 13-year period. A special emphasis is focused on the impact of the COVID-19 pandemic, examining how lockdown measures and subsequent economic disruptions affected employment and income levels. The research uses a variety of analytical techniques, including Theil indices and Gini coefficients, to investigate differences across racial groupings, emphasising both between-group and within-group inequality. Additionally, poverty is quantified using the Foster-Greer-Thorbecke (FGT) indices, which provide a more detailed knowledge of poverty dynamics. The data shows considerable variations in poverty levels during and after the pandemic, highlighting the underlying disparities that continue to impede South Africa's socioeconomic growth. This research contributes to the broader discourse on social protection and economic resilience in post-pandemic recovery efforts.

Acknowledgements

I would like to express my deepest gratitude to my supervisor, Andrew Kerr, whose mentorship and knowledge has been invaluable throughout the course of my research. His guidance, insightful feedback, and encouragement have been crucial to the completion of this dissertation, and I feel incredibly fortunate to have had the opportunity to work under his supervision. I would also like to thank the University of Cape Town for giving me the opportunity to complete a semester abroad at the Paris-1 Pantheon Sorbonne, where I first laid the groundwork for this dissertation.

Additionally, I extend my heartfelt thanks to my family. To my parents, the completion of this dissertation is a shared achievement, and is as much a result of your support as it is of my own efforts. I am forever grateful for your unwavering belief in me. To my grandparents, your wisdom and support is inspirational and I am deeply thankful for your love and guidance. Finally, to my sister, thank you for being my shoulder to lean on and for always knowing how to make me laugh during the most challenging times.

Lastly, I would like to thank the friends who became my family along this journey. Your support, laughter, and companionship have helped me through both the highs and lows of my university career. I am truly blessed to have each of you in my life.

Contents

Chapter 1: Introduction

Thirty years into the democratic era, the socio-economic impact of apartheid remains apparent in South Africa and strongly influences the dynamics of poverty and inequality in the post-apartheid era. South Africa notoriously has some of the highest inequality levels in the world, with high poverty levels also persisting. According to Stats SA (2017), 50% of all South Africans continue to live in poverty, with little evidence indicating that there will be an improvement for the poorest proportion of the population in years to come. Many South Africans, particularly those from historically marginalised racial groups, continue to face acute levels of poverty, demonstrating the persistence of apartheid's structural disparities.

These already-existing disparities were further impacted by the emergence of the Coronavirus pandemic (COVID-19), which has also exposed and heightened social vulnerabilities in South Africa. A large proportion of individuals lost their jobs and experienced a decrease in household income when lockdown measures were put in place, further impoverishing already vulnerable households. The pandemic highlighted the fragility of social safety nets and the urgent need for implementation of comprehensive measures that address both short-term demands and long-term structural problems. The question arises of how the composition of both poverty and inequality has shifted over time, and whether the dynamics of these factors continue to persist along racial lines or have begun to dissipate and replaced with other imposing dynamics. Furthermore, there is minimal research on the effects of the COVID-19 pandemic in terms of its economic impact in the post COVID-19 era, and additionally, its long-term effects on poverty and inequality in South Africa.

This dissertation aims to provide an in-depth analysis of the evolution of poverty and inequality in South Africa in the decades following the end of apartheid. To do so, data from the General Household Survey (GHS) is utilised across the years of 2009 to 2022. The GHS has the advantage of consistency over time relative to other datasets, in that it captures data annually, even during disturbances like the COVID-19 pandemic. Additionally, it is the first dataset to provide nationally representative household data on the impact of COVID-19. Furthermore, there are very limited studies that have used the GHS to measure poverty and inequality trends. These unique attributes make it the dataset of choice for this analysis.

This dissertation provides a perspective on the evolution of the socio-economic complexities of South Africa through an assessment of key trends and their underlying causes, particularly in relation to key events such as the COVID-19 pandemic. The dissertation contributes to existing literature by providing an analysis that offers a view of immediate post-pandemic impacts as well as long-term, less volatile trends. This allows for a more comprehensive view of poverty and inequality trends, highlighting how recent events have impacted pre-existing vulnerabilities.

This dissertation is guided by the hypothesis that the COVID-19 pandemic, and the associated expansion of social grant interventions, significantly influenced poverty and inequality dynamics in South Africa across the period of interest. The analysis takes an exploratory approach, documenting whether descriptive evidence from the GHS supports this hypothesis. While data limitations constrain the extent of causal inference, the focus is on tracing changes in poverty headcounts, inequality measures, and income sources across the pandemic period, thereby offering empirical insights into how welfare outcomes shifted during this shock.

The dissertation comprises of six key chapters: Chapter 2 consists of an in depth discussion of prior literature as well as an analysis of the evolution of poverty and inequality in South Africa both preceding and succeeding COVID-19. Chapter 2 then goes on to outline the tools used to measure both poverty and inequality, followed by an analysis of key driving factors of poverty and inequality such as the South African labour market. Finally, the role of social grants in alleviating poverty and inequality is discussed, with special emphasis on the Social Relief of Distress (SRD) grant and the effect of social grant 'top-ups' in 2020. Chapter 3 outlines the methodology and data utilised for the analysis. Chapter 4 presents an analysis of inequality in South Africa from 2009 to 2022 using GHS data with comparisons to other relevant studies. Chapter 5 presents the findings in relation to poverty levels from 2009 to 2022 using GHS data and compares these results to other analyses. The 6th and final chapter concludes the dissertation.

It should be noted that there are some key contributors to the level of poverty and inequality present in a population that have not been directly addressed by this dissertation. This includes social and health outcomes, life span, physical and mental wellbeing and physical safety, among others. This is due to the decision to keep the scope of the dissertation limited for feasibility and conciseness.

Chapter 2: Literature Review

Chapter 2 assesses the existing literature relating to the evolution of poverty and inequality in South Africa in the post-apartheid era. This chapter also covers key definitions concerning poverty and inequality as well as the tools required to measure them which have been utilised in previous literature.

Trends in poverty and inequality in South Africa is first explored through four key papers in South African academic literature, namely Bhorat and Van der Westhuizen (2009), Leibbrandt et al. (2010), Leibbrandt et al. (2011), and Leibbrandt et al. (2019). Following this is an assessment of the drivers of inequality and poverty, with particular emphasis on the role of the labour market and social grants. Finally, the impact of COVID-19 on poverty and inequality is analysed, whereby the effects of job-loss is assessed. The hypothesis of COVID-19 aggravating existing disparities and pushing millions deeper into financial hardship is explored.

The aim of this chapter, is to develop a clear perspective on the state of poverty and inequality which have previously been identified, to aid in the analysis to come.

2.1 Defining Inequality

Inequality can be defined as the extent of disparities present in the distribution of income and opportunity among different groups in society (IMF, 2024). This further relates to the distribution of resources across the population, including education, social, financial and economic divisions.

In the case of South Africa, historical instances of institutionalised discrimination and injustices along racial lines have led to deep rooted inequality which persists today. Seekings and Natrass (2006) write that apartheid's legacy in South Africa has fostered income inequality, with Black South Africans suffering disproportionately from aspects such as unemployment and poverty relative to other population groups. Additionally, Black South Africans have also faced barriers in terms of education opportunities, resulting in limitations across employment and social mobility. Leibbrandt et al. (2010) find that the quality of education is often stratified along racial and economic lines. Mlatsheni and Ranchhod (2017) find further disparities along geographical and gender lines, and argue that women and rural populations suffer from additional barriers to employment prospects relative to men and urban populations. The

intersectionality of all these factors contributes to the complex nature of inequality in South Africa.

2.2 Defining Poverty

The World Bank defines poverty as "pronounced deprivation in well-being" (Azevedo, 2024), while the United Nations (2024) emphasises that poverty goes beyond a lack of income and extends across socioeconomic dimensions. The definition of poverty therefore has a broad scope, covering a lack of income, wellbeing, resources and the standard of living attributed to an individual or population (Hulme & Shephard, 2003).

Woolard and Leibbrandt (1999) outline three steps which have become standardised in the measurement of poverty despite its broad scope: Firstly, households or individuals are rated using a welfare measure, which involves measurements of income or consumption expenditure. Second, a poverty line is drawn to differentiate the impoverished from the non-poor. Finally, the identified poor are analysed more deeply by creating a poverty profile. When considering the best measure for quantifying poverty per person, this dissertation follows the same method as Leibbrandt et al. (2012) in which each person in any given household is assigned a per capita measure.

2.3 Tools for Measuring Inequality and Poverty:

Utilising Income or Expenditure Data

The utilisation of expenditure data for measuring poverty is often seen as a more reliable portrayal of the state of a household in terms of welfare and poverty relative to income data (Woolard & Leibbrandt, 1999). However, the practicality of capturing this data accurately can be difficult, largely due to data capturing issues and also because of challenges in capturing the value and consumption of longer-standing goods such as homes, vehicles, and household items. Individuals may choose to omit disclosing the purchase of items such as alcohol, narcotics or very expensive items due to the nature of the goods purchased and how these individuals may be perceived as a result (Smith, 2006). When expenditure is erratic, particularly in poor households, there tends to be some recall bias in terms of what had been purchased in a given period (Woolard & Leibbrandt, 2006). Moreover, quantifying the consumption value of a long-standing good is not straightforward as calculating the yearly consumption of such items would have a high margin of error (Woolard & Leibbrandt, 2006).

Contrastingly, income data is current and is generally readily available (Woolard & Leibbrandt, 2006). However, some difficulties still exist, such as missing information, under-reporting and an unwillingness to participate in surveys relating to income. This particularly tends to relate to high earners, who according to Wittenberg (2017), may choose not to answer questions relating to income or not participate in these surveys at all. This can pose a large issue for studies focusing on inequality, such as this dissertation, and so adequate imputation methods need to be implemented. However, despite this, there is evidence to suggest that income can be a more representative measure of the economic state of a household than expenditure. Yu (2016) finds that there is large variation in reporting of expenditure, which tends to be lower when reported in bands compared to point estimates. For this reason, paired with the nature of the GHS which captures data in income more extensively relative to expenditure, this dissertation utilises income data to measure poverty and inequality.

Adjusting Estimates at a Per Capita Level

When considering the best measure for quantifying income per person, this dissertation follows the same method as Leibbrandt et al. (2012) in that household per capita income is used and each person in the household is assigned this per capita measure. This is largely due to the nature of reporting income in South African surveys, which tend to be captured at a household level. Quantifying income at a per capita level is necessary due to poverty and inequality estimates being measured at a per capita level.

2.3.1 Tools for Measuring Inequality

While several methods of measuring the level of inequality in a country have emerged through modern economics, there are five which are most relied on by scholars; namely, Percentile Ratios, Disparity Ratios, Lorenz Curves, the Gini Coefficient, and the Theil Index. Each of these measures can be used across inequality analyses relating to income data, expenditure data, earnings from the labour market, and others. This dissertation focuses on income inequality and relies on Gini indices and the Theil Index to decompose income inequality over time. Each measure is explained in more detail in the paragraphs to follow.

Percentile Ratios

Measurements of income inequality concerns the spread of income across the population. Using percentiles, deciles or quantiles to divide the population into equal proportions allows for the income share of each group to be easily compared to determine how income is distributed (Prendergast & Staudte, 2018).

This dissertation largely relies on division into ten groups, with each being referred to as a decile. The 1st decile refers to the lowest 10% of income earners in the population while the 10th decile refers to the top 10% of earners in the population.

The median, or middle of the income distribution, is an important position to consider when measuring inequality. This occurs at the 50th percentile. Unlike the mean, the median is not influenced by extreme values, making it a more robust indicator of the typical income within a population, especially in societies with high income inequality.

Disparity Ratios

Disparity ratios are a method of quantifying inequality, and particularly income inequality, through the comparison of various segments of a population (Leibbrandt, 2018). In the case of the analysis in Chapter 4, ratios between the mean White per capita income and the mean per capita income of other population groups is made in order to determine the level of disparity between population groups across the 2009-2022 time period.

The Lorenz Curve

The Lorenz Curve illustrates an income distribution graphically, and generally constitutes a line which has been constructed based on a cumulative measure of the population organised according to income level (Gastwirth, 1971). From this measure, one can deduce what proportion of the population holds a certain percentage of the country's total income. The Lorenz Curve of a more unequal society will therefore depict the bottom deciles of the country's population holding a smaller portion of the total income of the country. South Africa displays a trend which aligns strongly with this. Perfect equality would entail the bottom 10% of the population holding 10% of the country's total income (Gastwirth, 1971). The Lorenz Curve is largely used in conjunction with the Gini coefficient when determining the level of inequality present within a population.

The Gini Coefficient

The Gini Coefficient, or Gini Index, is the most commonly used measure of income inequality, and can be used to measure inequality within any distribution but is typically used to measure discrepancies across an income distribution (Dorfman, 1979). This method is derived from the Lorenz Curve, and measures inequality on a scale of 0 to 1, whereby a higher value is an indication of a higher level of inequality.

However, one notable limitation of this measurement is that it cannot be easily decomposed into the sum of its parts (Dorfman, 1979). Therefore, while it is a useful measure, it cannot be expressed as a sum or average of subgroups such as race. In accordance with this, this dissertation uses the Gini index in conjunction with other measures of inequality.

Leibbrandt, Finn and Woolard (2012) calculated South Africa's overall Gini coefficient using household per capita income for the year 2008 at 0.70. By 2017, this was calculated as 0.65 by Pabón et al. (2021), indicating a minimal improvement in inequality levels in over a decade.

Theil Index

The Theil Index is a good measure of economic inequality due to its ability to decompose inequality into different subgroups, and therefore take both between-group inequality as well as within-group inequality into consideration (Conceição & Ferreira, 2000). It is considered to be more difficult to interpret, but is a valuable indicator in the South African context due to the high levels of between-race and within-race inequality.

The formula for the Theil Index is typically defined as

$$T = T_B + \sum q_i T_i$$

Whereby Ti represents the inequality within the ith group, qi is the proportion of income accruing to the ith group and T_B represents the inequality between the groups. T_B assumes that all incomes within the group are equal (Leibbrandt et al., 2001).

Other measures within the Theil family include the Theil-L measure and the Atkinson measure. All three are thought to be significant measures within South Africa but usage in this context only really began to emerge in the post-apartheid era (Leibbrandt et al., 2001). This dissertation focuses on Theil-T specifically because of its ability to decompose overall inequality into within-group and between-group components, which is particularly useful in assessing inequality across racial and geographic subgroups in South Africa. Additionally, Theil-T is more sensitive to changes at the upper end of the income distribution, making it well-suited to understanding inequality in a country with a highly skewed income distribution.

The Theil Index quantifies how much a population's income distribution deviates from perfect equality, where everyone earns the same amount. It expresses this deviation as a form of negative entropy, meaning that a higher value corresponds to greater inequality and a distribution that is

more ordered but less equal. By defining the index in terms of negative entropy rather than entropy itself, it effectively serves as a measure of inequality instead of equality. Bhorat et al. (2009) calculated Theil Index values for South Africa in 1995 and 2008 and found the overall Theil Index value to be 0.87 for 1995 and 1.14 for 2008. Within-group inequality in 1995 was 0.50 compared to 0.63 in 2008, and between-group inequality was calculated as 0.37 for 1995 and 0.51 for 2008. These figures indicate an increase in overall inequality from 1995 to 2008, as well as highlighting that between-group inequality is actually more severe than within-group inequality in the South African context.

2.3.2 Tools for Measuring Poverty

Poverty Lines

Ravillion (1992) created a framework for the standardised measurement of poverty in a given society or population. He establishes the "Cost of Basic Needs" approach for determining poverty lines. Ravillion (1992) describes this approach to poverty lines as aiming to interpret the minimum needs for human survival particularly pertaining to nutritional requirements. The food poverty line (FPL) established for South Africa by Stats SA is derived from Ravillion's "Cost of Basic Needs" approach, whereby the levels of nutrition required to sustain day-to-day living is considered and what the cost of this would be (Ravillion, 1992; Stats SA, 2024). This is further substantiated by considering the food consumption behaviours observed amongst poorer individuals and households, thereby creating a tailored poverty line which reflects the typical food basket in South Africa (Stats SA, 2024).

In addition to this, establishing a range of poverty lines offers a more comprehensive understanding of poverty within a society. This approach prevents the perception of a single poverty line being selected arbitrarily and ensuring that the complexities of poverty are adequately represented (Ravillon, 1992). With this considered, the employment of the upper-bound (UBPL) and lower-bound poverty lines (LBPL) provides us with a critical range of poverty and has been utilised in this analysis.

Stats SA prescribes a FPL, UBPL and LBPL annually adjusted for inflation. The poverty lines are further amended when there are significant changes in consumption habits and to account for the changing costs of goods and services (Stats SA, 2024). The most recent modification happened in 2019, when the poverty limits were adjusted to reflect the Consumer Price Index for both food and non-food goods. This adjustment was derived by consumption data from the 2010/2011

Income and Expenditure Survey (Stats SA, 2019). This dissertation uses the LBPL and UBPL derived in 2022. Stats SA poverty lines for each year of interest are not utilised as the data has already been adjusted to real 2022 terms.

Foster-Greer Thorbecke Tools

After establishing the poverty line, the Foster-Greer Thorbecke (FGT) tools are employed to actively measure the levels of poverty in a society. The framework is derived by substituting different values of the parameter *a* into the following equation:

$$FGT_\alpha = \frac{1}{N}\sum_{i=1}^{H}\left(\frac{z - y_i}{z}\right)^\alpha$$

where z is the poverty threshold, N is the number of people in the economy, H is the number of poor individuals (those with incomes at or below z), y_i is the income of each individual i. The higher the value of *a,* the greater the weight placed on the poorest individuals. The higher the FGT statistic, the more poverty there is in an economy (Foster, Greer & Thorbecke, 2010).

This dissertation focuses predominantly on the Headcount Ratio and Poverty Gap Ratio as derived from the FGT framework which focus on showing the *extent* and *depth* of poverty of a society respectively. Along with their compelling technical properties, the FGT ratios extract the complex elements of poverty into simple-to-interpret metrics. The mechanics of each tool is expanded upon in Chapter 5.

2.4 Trends in Poverty and Inequality in Post-Apartheid South Africa

Understanding the movements of poverty and inequality in South Africa over the short term requires acknowledging that it is an issue deeply embedded within the country's history over the last century. This is reflected in poverty and inequality trends observed in the post-apartheid era. To better understand what is known about these trends, four fundamental studies which analyse this are assessed.

While there are detailed and strong studies on the movements of poverty and inequality from 1993 to the second half of the 2010's, there is a gap in these analyses from that point onward. The latest literature on these dynamics utilises the first four waves of National Income Dynamics Survey (NIDS), which end in 2014/15 as well as the Living Conditions Survey (LCS) of 2014/15,

including Leibbrandt et al. (2019) and Schotte et al. (2018). From these pieces of literature, key themes of increasing levels of inequality, largely fuelled by growing within-group inequality and consistently high levels of poverty emerge. There are no reliable sources which discuss these movements in the three to four years preceding the COVID-19 pandemic, and the gap in literature becomes even more prevalent in the years succeeding the pandemic in relation to the impact of COVID-19 on poverty and inequality. Pillay (2023), whose research is extensively discussed in Section 2.8 of this chapter, is one primary exception to this in terms of the pandemic's impact on poverty. Outside of this, it is not clear on what has been the overall movement of poverty and inequality from 2015 onward. As a result, the scope of this dissertation is particularly necessary and required to understand both long term poverty and inequality trends, as well as the trends in the second half of the 2010's and post the COVID-19 pandemic, within the South African landscape.

To begin, an analysis conducted by Bhorat and Van der Westhuizen (2009) is assessed, which utilises data from the Income Expenditure Survey (IES) of 1995 and 2005 to provide a profile of household poverty and inequality in South Africa over the period 1995-2005, the first decade of the post-apartheid era. This paper lays the foundation of how the composition of each of these factors is understood as well as the interactions between them. With regards to poverty, the authors use both the poverty gap ratio as well as the poverty headcount ratio to notably observe that poverty has declined both in absolute and relative terms over the decade. This spans across racial and gender compositions of households, and across any number of feasible poverty lines. The authors flag that while this is the case, there has been an erosion in gains in poverty reduction, a concern for future prospects in this regard. This is attributed to the fact that while there were fairly healthy growth rates since 1995, poverty reduction gains have been modest in comparison. This is a key constraint for future growth and economic development.

Inequality, on the other hand, showed an increasing trend over the decade, with a "stubbornly high Gini coefficient" which Bhorat and Van der Westhuizen (2009) flagged as a concern for the years to come. Furthermore, they attribute growing between-group inequality as the largest contributor to this, noting that the differences in expenditure between the African and White populations are fuelling rising inequality. From their analysis, it is concluded that the issues of high levels of poverty and inequality in South Africa have been deeply embedded from the early stages of the democratic era, having been inherited from apartheid, and observe that this continues to be a key constraint in South Africa to the present day.

Following this, Leibbrandt et al. (2010) is one of the most fundamental pieces of academic literature in terms of the key dimensions of inequality over the decade and a half which followed the end of apartheid. The paper examines the evolution and drivers of inequality and poverty in South Africa over the period 1993 to 2008 using data from Project for Statistics on Living Standards and Development (PSLSD) for 1993; the Labour Force Survey (LFS) and IES for 2000; and the NIDS for 2008. The authors find that within-group inequality between population groups is the largest contributor to increasing aggregate inequality over the period, and while the between-group component of inequality has fallen, it remains higher than international norms. A shift is therefore seen from the observations of Bhorat and Van der Westhuizen (2009) for the first democratic decade, whereby between-group inequality was flagged as the largest contributor to overall inequality levels. Notably, the authors stress that the labour market plays a dominant role in driving inequality due to two factors: firstly, there is a large proportion of households who are not able to access the labour market, and secondly due to extreme disparities in earnings for those who are able to access the labour market.

In terms of movements in poverty, Leibbrandt et al. (2010) find that money-metric poverty has remained stable from 1993 to 2008, particularly within the context of the racial composition of poverty. However, younger aged groups have the highest incidence and shares of poverty which has seen little improvement over time. This is concerning as it indicates that even young people with higher education levels are not benefiting drastically from the labour market, and therefore the labour market does not contribute strongly to combatting poverty. As a result, the authors point to social grants and assistance as a significant driver of movements in poverty. One finding in this regard is that the incidence and share of poverty of those aged 60 and older has fallen markedly since 1993, and due to economic inactivity for this group, can be directly attributed to the state old age pension.

Another key paper in relation to trends in both poverty and inequality in the post-apartheid period is Leibbrandt et al. (2011). The paper differs from Leibbrandt et al. (2010) in that its primary focus is the policies which aim to reduce income inequality and poverty. There is particular emphasis on social policies such as grant allocations as well as policy relating to education, whereby they determine the importance of tertiary education in alleviating poverty levels. Including this paper provides a view of additional contributing factors to movements in poverty and inequality relative to Leibbrandt et al. (2010). Comparing data from the 1993 PSLSD survey to the 2008 NIDS survey, the paper measures changes in income inequality between the two periods. Overall, it is established that the aggregate level of income inequality has increased between 1993 and 2008 with

the key driver of this being increasing shares of income for the top decile of the population. Within-group inequality of each of the four primary population groups in South Africa was found to be increasing, with the highest being within the African population group. While this may be the case, it is noted that between-group inequality in South Africa is still significantly above the norm relative to other countries.

The authors place emphasis on the fact that the labour market has not been successful in levelling income both between and within population groups, adding to rising earnings inequality. This is deepened by the fact that only highly skilled individuals tend to move up the earnings distribution within the labour market, leaving the vast majority of the population in a stagnant position. However, some of those from the lowest deciles benefited from social grants enough to be shifted into lower-middle deciles, though many who do not have access to social grants nor the education levels necessary to integrate successfully into the labour market were still significantly disadvantaged.

The fourth key paper to be discussed is a joint report produced by Stats SA in partnership with the Southern African Labour and Development Research Unit (SALDRU) and the Agence Francaise de Développement (AFD) as an assessment of inequality trends in South Africa spanning from 2005 to 2015 using several nationally representative survey data sources including NIDS, PALMS, QLFS, GHS, IES and LCS surveys. In this analysis, Leibbrandt et al. (2019) find several notable trends in inequality across the realms of economic inequality, asset and wealth inequality, labour market inequality and inequality in the social domain, and seeing as this is the most recent of the four key papers discussed in this dissertation, their findings are very relevant to those in this dissertation.

Leibbrandt et al. (2019) firstly note that aggregate inequality has remained persistently high over the course of 2005 and 2015. In 2006, both the within-group and between-group inequality based on population group contributed equally to overall inequality. However, by 2009, the within-group inequality overtook the between-group contribution to overall inequality, accounting for 58% in 2006 and increasing to 69% by 2015. In line with the findings of other papers discussed, the contribution of the Black African group to within-group inequality was the highest of all population groups and displayed an increasing trend over time, the contribution of White, Coloured and Indian households in terms of within-group inequality has remained unchanging over this period. Furthermore, Black Africans demonstrate the worst employment outcomes of all population groups, while also earning the lowest wages even when employed. Earnings from

the labour market for the White population group equated to more than three times as high as it was amongst Black Africans between 2011 and 2015.

Through a decomposition of income sources, Leibbrandt et al. (2019) find that income from the labour market constituted the largest proportion of total household income, and also for the largest proportion of income inequality, equating to 77% in 2006 before increasing to 85% in 2009, and then decreasing to 74% by 2015. The contribution of social grants to overall income inequality was found to be much less, at approximately 2% in 2006 and 2.3% in 2009 before decreasing to 1% in 2015. Remittances have contributed the least to income inequality in South Africa between 2006 and 2015. Remittance income as a component of household income will be further assessed in Chapter 4.

In terms of poverty, Leibbrandt et al. (2019) identify five key social classes which exist in South African society, namely chronic poor, transient poor, vulnerable middle class, actual middle class and the elite. In terms of the makeup of these groups, the chronic poor comprised of only Black African-headed households and Coloured-headed households, while the elite class comprised of 65% Whites and 23% Black Africans, Indians and Coloured groups made up the remainder.

The four papers discussed above provide us with a better picture of inequality and poverty in the post-apartheid era, ranging across the first twenty years of the democratic era. From 2005 to 2015, aggregate income inequality increased, with the increasing levels of within-group inequality being the primary contributor of this. In this regard, Black Africans saw the highest increases in within-group inequality. Despite between-group inequality decreasing during this period, it remained much higher than global norms. In addition, there is also evidence of rising earnings inequality during this period: only highly skilled individuals are able to progress up the earnings distribution within the labour market, with others left in a stagnant position. Money-metric poverty was found to be stable, with social grants and assistance proving to be a key driver of improvements in poverty. Furthermore, younger aged groups have the highest incidence and shares of poverty which saw little improvement over the period.

In later years, wage inequality remained high and consistent until 2010, and from 2011 to 2014, there was an observed increase in the levels of wage inequality (Leibbrandt et al., 2019). In this instance, low wage growth rates affected bottom deciles while top deciles saw significantly higher growth rates. Similarly to the years prior, while between-group inequality has decreased, there is a large observed gap between the earnings of Black Africans and the White population, as Black

Africans earn less than half of what the White population earns. Additionally, within-group inequality amongst the Black African population continues to be the most severe relative to other racial groups. Inequality in the labour market is also heavily segregated along racial lines, with Black Africans earning the lowest out of all population groups. Movements in poverty indicate that poverty continues to affect the Black population most severely twenty years into the democratic era.

2.5 Drivers of Poverty and Inequality in South Africa

From the above studies, it is observed that both poverty and inequality have distinct driving forces within the South African context. To better grasp the trends, it is important to understand what are the primary factors which cause changes over time. The papers discussed above point to the fact that the primary driver of movements in inequality is the labour market and the primary driver of movements in poverty is social grants alongside the labour market. Other papers which affirm this finding include Schotte et al. (2018), who find that the "chronic poor derive more than half their income from government grants", Ranchhod et al. (2011), who describe the labour market as an economic mechanism which acts as an inequality trap for those who are unskilled or poor, Finn and Leibbrandt (2018) who found that earnings and experience remain key drivers of inequality in the post-apartheid era, and Hundenborn et al. (2018) who state that "labour market income remains the pivotal driver of overall changes in inequality".

Hundenborn et al. (2018)'s findings around this emerge from their use of data from the 1993 PSLSD and the 2008 and 2014 NIDS surveys. Using static decomposition techniques, they find that income from the labour market contributes between 84% and 90% to the aggregate Gini coefficients between 1993 and 2014, thereby making it the largest driver behind South Africa's high inequality levels. Further reiterating this through a dynamic decomposition, income from the labour market contributed strongly to increases in inequality between 1993 and 2008 and similarly to decreases in inequality between 2008 and 2014.

The labour market is a key contributor to the movements of inequality in South Africa, where employment is one of the main sources of inequality. For this reason, understanding the composition of the labour market in South Africa is imperative, particularly within the lens of racial disparities. This is addressed extensively in Section 2.7 of this chapter.

There is also some evidence to suggest, according to Hundenborn et al. (2018), that inequality is also somewhat impacted by social assistance in the form of government grants, particularly

between 1993 and 2008. This is attributed to the increase in the allocation of social grants in the post-apartheid era. However, it is noted by the authors that social grants are not a sustainable method of combatting inequality in the long term as they are a more suited for alleviating poverty. This should largely be left to labour market policies that are also inclusive of those at the bottom end of the income distribution.

Notably, access to the labour market and social grants are identified as key drivers of poverty in South Africa by Leibbrandt et al. (2010). In their analysis, Leibbrandt et al. (2010) first point out that aggregate poverty improved marginally between 1993 and 2008. They further state that there is a correlation between the rollout of government grants and these improvements, as poverty would worsen over time rather than improve if the grants were not rolled out. The rapid rise of social grants as a primary source of income becomes evident when considering that the percentage of households in the bottom quintile reporting that their main source of household income came from social assistance grants rose from 16% to 47% between 1997 and 2006. Furthermore, as households move up the income distribution, labour market income becomes more important and reliance on social assistance reduces (Leibbrandt et al., 2010). As a result, analysing the impact of social grants on poverty trends over time is integral to this dissertation.

Assessing the relationship between the employment status and poverty status of households, Leibbrandt et al. (2010) find that those with no workers in the household see the highest poverty incidence being at 80% or higher from 1993 to 2008. Therefore, having no access to the labour market almost guarantees that a household will be poor.

Sections 2.6. and 2.7. unpack the role of social grants and the labour market as drivers of poverty and inequality in South Africa.

2.6 The Role of Social Grants in Alleviating Poverty & Inequality

Section 2.5 above highlights the research which points to social assistance being one of the largest contributing forces to poverty in South Africa. This section addresses the evolution of social grants in the apartheid and post-apartheid era, and existing research on its role in addressing poverty over time.

One of the strategies implemented by the democratically-elected government to combat rising poverty and inequality and improve livelihoods in South Africa was a more wide-reaching distribution of social grants. While there was a social grant system in place during the apartheid

era, it was constructed in a discriminatory and exclusive way in which the White population were the primary beneficiaries and the African population had limited access (World Bank, 2021). The system has since been reformed to become more targeted to those in need across all population groups. Racial parity in terms of old-age pensions was implemented in the 1980's and by 1993, African pension grants had increased from 16% of White pension grants to 85% (Bhorat, 1995). In 1995, steps were taken by the new government to redefine what social welfare entailed for South Africa, with a more concentrated focus on "developmental social welfare" and more widespread coverage (Neves et al., 2009). The number of grant recipients therefore increased rapidly in the post-apartheid era. In recent years, South African social grants are considered to be some of the most extensive and wide-reaching globally (World Bank, 2021), with the current spend on grants equating to approximately 3% of GDP, a relatively high portion in comparison to other middle income countries (Neves et al., 2009). The majority of grants currently issued fall under the pensioners, child support and disability categories (World Bank, 2021).

Since the end of apartheid, expenditure has increased for several progressive social policy initiatives. However, by 2011 spending on grants was found to have not increased as a share of GDP, thereby becoming less progressive (Van der Berg et al., 2011). This remains the case today, as during the 2010/11 financial year, 3.5% of GDP was set aside for social grants, and this remains at 3.5% in the 2023/24 financial year (Satumba et al., 2017; National Treasury, 2024). When contrasted against the steadily increasing unemployment rate over the past decade, from 23.8% in Q1 2011 to 33% in Q1 2023, this is concerning (Stats SA, 2023).

A third of South Africans are direct beneficiaries of social grants, while an additional one third of the population benefit indirectly (World Bank, 2021). In this case, there is evidence to suggest that grants reduce the employment probability of recipients (Miyajima, 2023). Seeing as unemployment levels are notoriously and consistently high in South Africa, this notion is worth exploring further. The relationship between those who are direct and indirect grant recipients and their access to labour market is therefore called into question.

A study conducted by the International Monetary Fund (Miyajima, 2023) using NIDS data, found merit in the theory that the probability of labour force participation is reduced by grants. Within the study it was found that, as expected, direct recipients of the old age and disability grants in South Africa have fewer job prospects than those who are not recipients. Moreover, those who are indirect recipients of these grants also have fewer job prospects relative to the entire sample indicating that these grants serve as a prompt for other members in the household to cease actively

participating in the labour market. Other studies such as those by Ranchhod (2006) and Abel (2019) support this hypothesis. However, other studies have found a different outcome regarding the effect of being a recipient of a child support grant. Eyal and Woolard (2011) found that the subsidies provide mothers with the means to pay for childcare which in turn allows them more time to seek out job prospects.

Several studies have been conducted with regards to the role of social grants in reducing poverty. However, there appears to be a consensus that while social grants do reduce poverty, they do not have a significant role in alleviating inequality (Van der Berg, 2014). As has already been established, the four key papers discussed above including Leibbrandt et al. (2010) and Leibbrandt et al. (2019) point to the labour market being the largest driver of inequality. Armstrong and Burger (2009) observe a similar finding through the analysis of the 2005 IES survey using a normalized Foster-Greer-Thorbecke measure and the General Entropy measure. Their findings indicated that social grants were only effective in reducing a General Entropy inequality measure by a mere 1%. They argue that this is due to the fact that high levels of inequality are mostly a result of continually increasing incomes for individuals in the top deciles of the income distribution. One of the primary goals of social grants is to lift individuals who are already living in poverty over the poverty line. Since social grants are of a considerably smaller amount compared to those with the highest earnings in the population, it is highly improbable for them to reduce inequality to the same degree as they reduced poverty. Therefore, despite social grants' great effectiveness in reducing poverty, they were found to be less successful in reducing inequality.

2.6.1 The Social Relief of Distress (SRD) Grant

The role of social grants rose to even greater importance in reducing poverty at the onset of the COVID-19 pandemic in 2020. This is due to the introduction of the Social Relief of Distress (SRD) grant, which was introduced in accordance with the government's strategy for addressing the negative economic and social impact of the pandemic. The SRD grant is a monthly sum of R350 which was issued to qualifying candidates who are unemployed, between the ages of 18 and 59 years old and earn less than R624 per month. The target group of the SRD grant is unemployed adults which have not previously qualified for any social grants (Köhler & Bhorat, 2021). Over 6 million previously unreached individuals entered the social grant system by the end of 2020 due to the SRD grant. The question of whether the SRD grant plays any role in addressing inequality is therefore raised, seeing as the grant targets a group which has the potential to participate in the labour force.

A key dataset created to measure the economic impact of COVID-19 in South Africa through nationally representative data is the National Income Dynamics Survey: Coronavirus Rapid Income Survey (NIDS-CRAM). This data aimed to provide insight on outcomes such as unemployment, household income, child hunger and access to government grants, including the SRD (Spaull et al., 2021). The survey utilised a nationally-representative panel survey of 7000 South African individuals, which had previously participated in the Fifth Wave of the NIDS survey in 2017. Each person was phoned monthly and asked questions relating to income and employment, receipt of grants, and behaviour related to COVID-19 (Spaull et al., 2021). The NIDS survey has undergone some attrition since the initial Wave 1 in 2008, calling its accuracy into question with regards to being nationally representative in later Waves. Ranchhod and Daniels (2020) point toward the fact that estimates using NIDS Wave 1 were largely comparable to results produced by other nationally representative surveys such as the QLFS. However, analyses using NIDS began reporting higher employment rates than those using QLFS by 2017. This is one of the key data issues present within the composition of NIDS-CRAM. Despite this, NIDS-CRAM was a crucial tool for gaining early knowledge of the implications of COVID-19 since there was no equivalent datasets available in 2020 for researching pandemic-related impacts.

One key analysis which utilised NIDS-CRAM to estimate the relationship between labour market inactivity and the SRD grant was conducted by Köhler and Bhorat (2021). In this assessment, the authors use inequality measures including the Theil and Gini indices to find that the SRD grant has reduced labour market inactivity and increased participation, thereby aiding in combatting inequality. Furthermore the grant was found to have a poverty reducing effect, whereby in the absence of the grant, poverty would have been 2 percentage points or 5.3% higher relative to the counterfactual. Household income inequality would have increased by between 1.3% to 6.3% depending on the measure used. They also identify the causal effect of the SRD grant on labour market outcomes among the unemployed and find that the SRD grant has been significant in lowering inactivity and promoting participation in the labour market, thus assisting the labour market's recovery. This finding contradicts those of previous studies discussed in relation to social assistance grants such as Miyajima (2023), where social assistance was found to discourage active participation in the labour market. These observations are relevant in relation to this dissertation, as the effect of the SRD grant on alleviating the effects of the pandemic is an indication of the effectiveness of social assistance on poverty levels, which will be further explored in Chapter 5.

Another relief measure put into place in relation to grants during the COVID-19 pandemic was the introduction of grant "top-ups", which were introduced during the height of the COVID-19

pandemic, and are described by Pillay (2023) as having a substantial effect on poverty levels. The top-ups entailed an increase of all preexisting grants (except for the Child Support Grant (CSG) which was increased by R300 or 68% per grant for May 2020 and R500 per caregiver from June 2020 onward) by R250, a 13% increase for all grants except for the Foster Care Grant, which equates to a relative increase of 24%, from May to October 2020 (Köhler and Bhorat, 2020). These grant top-ups have been identified by relevant literature as being the primary driver of the significant improvement in poverty levels in 2021 relative to 2019 outside of the SRD grant itself (Bhorat & Köhler, 2021; Pillay, 2023). Bhorat et al. (2020) also note that while the introduction of the SRD grant resulted in a significant expansion of grant coverage, the top-ups to existing grants significantly benefit those already in the grant system.

2.7 The Role of the Labour Market as a Driver of Poverty and Inequality

Studies which consider inequality trends in the post-apartheid era such as Hundenborn et al. (2018) and Finn and Leibbrandt (2018) point to employment as being one of the main sources of inequality in the country. As a result, understanding the configuration of the labour market in South Africa as well as movements over time is imperative to understanding long term trends in poverty and inequality. To further break this down, this section assesses the labour market through the lens of racial groups, access to the labour market and household composition.

South Africa has one of the highest unemployment rates in the world, and was recorded at 32.9% in the first quarter of 2023 (Stats SA, 2023). The labour force participation rate has remained relatively constant over the past 10 years, aside from the immense decline in 2020 as a result of the COVID-19 pandemic.

One key area in which disparities exist is across income deciles, where those living in households with no earnings or labour income, as well as low-wage earners will be more at risk of poverty. Finn (2015) finds that this is in fact the case. Using the 3rd wave of NIDS data, they find that those living in low-income homes are less likely to have a wage earner. This lack of access to wages is a major contributor to poverty. Furthermore, half of those who live with a wage earner reside in households where income falls below the poverty line. As a result, having access to wages does not necessarily ensure that household income per capita will increase over the poverty line. This is an indication of how access to the labour market directly drives poverty.

This is further observed by Leibbrandt, Wegner and Finn (2011), who show that the highest rates of both labour absorption and labour force participation are seen in the higher income deciles.

This directly correlates into much higher employment rates for people living in the highest income deciles. Additionally, overall unemployment rates have been driven higher since 1993 by the bottom four deciles while it has fallen in the top deciles. This confirms that those in higher-income deciles with access to high paying jobs are not at risk of falling into poverty, and this high level of labour force participation in the top deciles is one of the reasons for the extreme levels of inequality observed in South Africa.

Various studies have also conducted income source decompositions using both static and dynamic methods and have found similar conclusions in terms of the role of labour income's contribution to overall inequality. Hundenborn et al. (2018), whose findings were previously discussed in Section 2.5, used various types of decompositions to conclude that income from government grants significantly contribute toward total household income, while labour and investment income largely impact overall inequality. Tregenna and Tsela (2012) used data from the 2006 IES to decompose inequality by factor source as well as develop a comparison between households receiving income from work and households who do not. According to their analysis, 25% of households do not receive any income from work and thereby have a significantly lower mean income per capita (R2 862, annual) than the remaining 75% of the population (R5 836, annual). However, it is important to consider that this category would also include those who are retired who may still be significantly wealthy, therefore the disparity in terms of income per capita is even greater than these figures suggest. The study also found that over 60% of households which receive no income are female headed and over 90% have a Black household head.

From these studies, one observes that the labour market is a key driver of inequality, particularly along the lines of racial classifications, access to the labour market and access to high-skilled and high-paying employment opportunities.

2.8 The Impact of COVID-19 on Poverty and Inequality

A key component of this dissertation involves understanding the effects of the COVID-19 pandemic on poverty and inequality trends. Seeing as COVID-19 was considered as the most significant economic threat since World War II and the largest health disaster of the 21st century, it was expected to have profound effects on both poverty and inequality globally (Naseer et al., 2023). Francis, Valodia and Webster (2020) hypothesised that the pandemic would highlight and aggravate South Africa's already high level of overall and income inequality. Furthermore, the subsequent lockdown which accompanied the pandemic led to a significant number of jobs being lost as well as a decline in global trade. As has already been established, the labour market is a key

driver of inequality and to a lesser extent of poverty, and so understanding the pandemic's impact in this regard is imperative. There was a consensus that global lockdowns would hinder the economic state of developed countries, while developing countries with volatile economies such as South Africa would be left in an even worse economic position with severe ongoing consequences (de Villiers, Cerbone and van Zijl, 2020). The pandemic was therefore expected to take a severe toll on progress in improving poverty and inequality levels due to the vulnerable position of the South African economy, in contrast to developed countries such as the United States of America, where poverty was in fact driven down to record levels in the aftermath of the pandemic, due to the high level of funding for federal pandemic relief and economic security programs (Trisi, 2024).

The overall impact of the COVID-19 pandemic on poverty levels, which has not been directly quantified prior to this dissertation, has been described by existing research as having aggravated existing disparities and pushing millions deeper into financial hardship (Jain et al., 2020). In relation to its negative impact on inequality, poverty levels were found to have been exacerbated by the stringent eight-week lockdown that was introduced in the initial stages of the pandemic in South Africa. The decrease in active employment by 40% after only a few weeks is indication of this. Households with average earnings hovering around the poverty line, whereby income is largely derived from informal or casual work, were typically most severely affected (Jain et al., 2020).

Key factors at the onset of the pandemic in 2020 are first assessed, largely concerning the employment landscape. As discussed, employment is a key driver of poverty and inequality. Ranchhod and Daniels (2021) established that one in three employed people in the NIDS-CRAM Wave 1 sample lost their job or received no wages during April 2020. It is important to note that this occurred at the very beginning of the lockdown and it is therefore necessary to determine whether this was a long term trend. Jain et al. (2020), who utilised NIDS-CRAM data to produce one of the first detailed analyses on the impact of the pandemic on South Africa's labour market, also contribute to the literature. They found that after the first month of the initial hard lockdown, which commenced on 27 March 2020, there was a decrease in active employment by 40%. Half of those who lost their jobs did not expect to return. Furthermore, Jain et al. (2020) found that the overall job loss due to COVID-19 directly impacted over 1.5 million individuals, with a further 3-5 million being indirectly impacted as a result of being dependent on those who lost their jobs.

There is also some evidence to suggest that the job loss during this time was skewed to the already economically disadvantaged proportion of the labour market such as women and unskilled

labourers (Rogan and Skinner, 2020; Ranchhod and Daniels, 2021). Research from Oyenubi (2023) determined that there was a downgrading or mass movement of individuals into the lowest decile of the income distribution in April 2020. This was found to be the case more so for female workers than for male workers as well as for other vulnerable groups. Furthermore, there was evidence to suggest that within-group inequality for these groups had subsequently increased due to the economic impact of the lockdown.

This seems likely, as it is generally women and unskilled workers that have informal labour arrangements such as street hawkers, spaza shop vendors and domestic workers. These forms of labour are not adaptable to a work-from-home arrangement. For this reason, South Africa's sizeable informal sector was disproportionally impacted by the pandemic (Francis and Valodia, 2020). Jobs which fit a work-from-home arrangement largely belong to the formal economy and are higher paying (Nwosu et al., 2022). As a result, the gap between the incomes of the formal and informal sector was increased due to the 2020 lockdown. Nwosu et al. (2022) utilised NIDS-CRAM data to determine the socio-economic inequalities related to the work-from-home arrangement, and found that working from home is more conducive for non-Black individuals with a higher level of education who live in a house or apartment. This indicates the negative impact on poverty and inequality associated with the pandemic and subsequent lockdown and the skewed impact of the pandemic on South Africa's African population.

This theory is further confirmed by Espi et al. (2020), who found that under the lockdown, those classified as transient employed and persistently non-employed (typically young individuals who have spent the majority of their life being educated) were more susceptible to job-loss during the initial lockdown relative to those with stable employment. Only 8% of the persistent non-employed without employment in February were employed again by April. Those who fell most predominantly in this category were young African females. This instance is indicative of the vast discrepancies in the impact of the pandemic based on age, race and gender.

It has been established above that both employed and unemployed individuals are impacted by inequality drivers. Bhorat and Köhler (2023) provide an analysis on the years succeeding the stringent lockdowns in terms of wage inequality to better understand its long term impact. Using Quarterly Labour Force Survey (QLFS) data, they conduct an analysis of the drivers of wage inequality during 2020 and 2021 using a combination of growth incidence curves, Gini coefficient measures, and Oaxaca-Blinder decompositions. Their key finding pertains to an explanation of the reason for real wages returning to a similar level of prior to the pandemic. This is largely explained

by the workforce taking a similar structure to that of pre-COVID, as well as due to the personal characteristics of the workforce. This refers to age, race, educational background and line of work. However, it is troubling that wage inequality continues to be high in the post pandemic period, and is indicative that perhaps there was not sufficient enough recovery in terms of the labour market in the post-COVID era. Moreover, job loss was skewed towards the bottom of the income distribution relative to the top, whereby those at the bottom were 3.5 times more likely to lose their job due to the pandemic. This speaks to the deeply rooted levels of inequality already embedded into the South African population being exacerbated by the pandemic.

However, QLFS data has had notoriously ongoing imputation issues. These have been identified to have significant sampling error during the 2020 and 2021 period which are the key years for analysis around the pandemic. Daniels (2022) finds that the QLFS sample drops by 33% from the first to the second quarter of 2020, and then by a further 4% by quarter 1 of 2021. There is therefore clear levels of sampling error present, which can only be partially corrected by weights. Furthermore, from Daniels' (2022) analysis of labour market trends during the pandemic using both the NIDS-CRAM and QLFS, it is observed that the QLFS has significantly different results to the NIDS-CRAM regarding the employment rebound level. Studies produced surrounding the impact of the pandemic on various economic factors using the QLFS may therefore not have produced the most accurate results. In their analysis, Bhorat and Köhler (2023) address the quality of QLFS data particularly with regards to imputation and data capturing around the COVID-19 period, and find that missing data is non-negligible, and in fact inversely correlated with the wage level of the individual. They also observe unreliable imputation methods.

While existing research of the effect of the pandemic on income inequality is limited, exploring the long term impact is deeply relevant to understanding the current South African economic climate, and will be further explored through the analysis portion of this dissertation.

In response to the economic impact of the pandemic, the government introduced targeted social assistance to aid those most deeply affected in the form of the SRD grant as discussed in Section 2.5. This influenced the impact of the pandemic on poverty levels. Poverty in the COVID-19 era is particularly interlinked with unemployment and social assistance. At the time of the grant's roll-out, it was reported that a third of those who had lost their job during the initial lockdown were not previously eligible for any type of grant (Jain et al., 2020). The SRD grant was a direct solution to this (Bhorat et al., 2021).

In the period May to November 2020, SASSA received approximately nine and a half million applications, of which 68% were approved (Department of Social Development, 2021). Of those approved, 68% of grant receivers were men compared to only 32% women (Department of Social Development, 2021). Jain et al. (2020) found similarly, in that the coverage of the SRD grant was much higher among men compared to women. While some reports indicate that women are more likely to receive grants in South Africa than men thereby making them ineligible for the SRD grant (Stats SA, 2024), it could also be an indicator of vulnerable groups such as women being less cushioned in the blow of the pandemic relative to other groups.

Jain et al. (2020) further assess the impact of the SRD grant on poverty using NIDS-CRAM data by comparing income levels in June 2020 to April 2020, before the roll-out of the grant. While the issues with the composition of the NIDS-CRAM dataset are discussed in Chapter 2.6.1 above, it remained a key dataset for measuring pandemic-related socioeconomic effects, such as those addressed by Jain et al. (2020). They find that eliminating SRD grant income has no effect on poverty reduction between April and June when income is near to the upper bound poverty line but significantly affects the April-June poverty reduction at the lower-bound distribution. This is reflected in the distribution of the grant, which was 20 percentage-points higher in the bottom half of the income distribution compared to the top half (Jain et al., 2020). In Chapter 5, this dissertation will conduct a similar analysis to determine the effects on poverty when the SRD is included compared to when it is no longer included.

One of the key papers in relation to the impact of COVID-19 on poverty in South Africa is Pillay (2023). This paper presents the first nationally representative estimates of poverty during the height of the pandemic as well as in the initial stages of recovery. Using the General Household Survey (GHS) across 2020 and 2021 in comparison to 2019, Pillay (2023) tracks the effects of the pandemic on money-metric poverty, particularly in relation to vulnerable groups. As a result, the findings of Pillay's analysis directly tie into those of this dissertation. Pillay (2023) finds that an estimated 2.8 million people entered upper-bound poverty in 2020. A recovery in poverty levels was observed 2021, with estimated poverty levels lower than they were in 2019. Interestingly, this effect extended to vulnerable groups such as Black-headed and female-headed households. Pillay (2023) goes on to say that this is explained by the extended provision of the SRD grant across 2021, providing a large proportion of South Africans, many of whom were unemployed before the onset of the pandemic, with grant support which they had previously not received. Given that Pillay (2023) uses GHS data, as does this dissertation, it is expected that similar results will be found in terms of the effects of the SRD grant on poverty in 2020 as well as 2021. It is important

to note for the purpose of the analysis in Chapter 5 that Pillay (2023) undertook different measures in treating GHS data compared to those taken in this dissertation. One instance of this is that Pillay (2023) removes all households reporting zero income with more than one employed resident from the sample in all years of the GHS considered, whereas this dissertation instead uses the household expenditure value in cases where it exceeds the reported income value. Pillay (2023) also removes all households which report abnormally high levels of household income, whereas this dissertation used the imputation methods outlined in Chapter 3.

To assess the robustness of results to the decision to substitute expenditure values in cases where monthly household expenditure exceeds reported income, a sensitivity check was conducted for 2020 and 2021(Table 21 in the appendix). This compared results from the current method with those obtained using only reported income, without substitution. The results show that while absolute values of mean and median per capita income, Gini coefficients and the Theil index at both a national and population-group level differ slightly, the direction and magnitude of year-on-year changes remain broadly similar. This suggests that, although the substitution rule influences point estimates, the overall trends identified in the analysis are not solely driven by this methodological choice.

In line with the findings of Pillay (2023), other analyses of poverty levels in the years succeeding the deepest point of the pandemic in 2020 show some level of economic recovery. Spaull et al. (2021) observe that of all those who lost their jobs in April 2020, half had been re-employed by October 2020. Daniels et al. (2022) find that the employment-to-population ratio after Q2 of 2020 never recovered to pre-pandemic levels, with the largest fall in the employment-to-population ratio occurring between Q1 and Q2 of 2020. Bhorat and Köhler (2023), find that the lockdowns reduced employment probabilities across all levels of severity, the negative effects were largely concentrated in the informal sector. Seeing as the informal sector is more prone to job insecurity they are more likely to fall into poverty as a result. Ranchhod and Daniels (2021) confirm that job loss caused by the pandemic was skewed towards those who were already in an economically disadvantaged position.

Poverty and inequality in South Africa are some of the country's most severe economic challenges. The evolution of trends in poverty and inequality are a reflection of the country's ability to reform and readjust in the democratic era. With this in mind, it becomes clear that there have been significant setbacks in addressing inequality so that it is less severe over the course of the 2010s. This was heightened by the onset of the COVID-19 pandemic in 2020, which aggravated existing

issues such as unemployment and wage inequality. The overall findings in relation to inequality is that there is persistent and chronic inequality, with an increasing within-group component though between-group inequality remains well above average when considering other economies globally.

Poverty levels have fluctuated across the post-apartheid period, having fallen during the first decade from 1995 to 2005, but gradually increasing again by 2009 and remaining consistently high in the decade to follow. Once again, disadvantaged groups such as women and Black Africans are disproportionately affected by poverty. This appeared to have been worsened by COVID-19. However, following the height of the pandemic in 2021 and 2022, some recovery is observed in terms of poverty levels, with evidence pointing to the role of social grants as key drivers of poverty alleviation in South Africa across the fourteen year period. Their contribution to alleviating poverty during the pandemic further indicates their importance within the economic landscape of South Africa.

Chapter 3: Methodology and Data

3.1 Data Description

3.1.1 The General Household Survey

The data utilised in this study is the General Household Survey (GHS) from 2009 to 2022. The GHS is an annual household survey conducted by Stats SA since 2002 (Stats SA, 2021). The October Household Survey (1994-1999)- which later split into the Labour Force Survey (LFS) and the GHS - alongside the GHS together comprise of the only nationally representative time-series which cover individual and household level data for almost every year of the post-apartheid South African period (Thornton and Wittenberg, 2022).

The survey targets private households across all nine provinces of South Africa, along with residents in workers' hostels, but excludes various communal living spaces like student hostels, elderly care facilities, hospitals, prisons, and military barracks (Stats SA, 2021). As a result, it can be said that the survey accurately represents individuals or households in South Africa that are not part of such institutions. The 2019 GHS surveys 33 000 dwelling units using 3, 324 primary sampling units derived from the 2013 Master sample (Stats SA, 2019). The data is gathered using a two-stage stratified sample design based on probability proportional size principles, and primary stratification occurs at the metropolitan/non-metropolitan level (Stats SA, 2019). The GHS involves a detailed questionnaire which is captured at a household and individual level.

In South Africa, numerous major datasets have added to our understanding of poverty and inequality. The Income and Expenditure Surveys (IES), Living Conditions Surveys, and National Income Dynamics Study (NIDS) are known for their extensive gathering of detailed expenditure data (Leibbrandt et al., 2010). These databases provide a comprehensive examination of poverty by capturing a diverse variety of purchasing patterns that represent real living situations (Leibbrandt et al., 2010). The decision between utilising income or expenditure data to measure poverty is not only technical, but also reflects deeper fundamental issues regarding well-being. The GHS absence of comprehensive expenditure data outside of a single bracket question may result in an overestimate of poverty levels since it does not capture the whole context of household consuming behaviours. However, the GHS does collect substantial data relating to income, including questions around household income sources, access to social grants and employment status. This is one of the key reasons that the GHS is suitable for this analysis. Furthermore, the GHS has the advantage of consistency over time in that there is yearly regularity and stability in

data collection, even during disturbances like COVID-19. This unique attribute makes it the dataset of choice for this analysis. The GHS has not been extensively utilised for analyses relating to poverty and inequality, thereby further differentiating the analysis to come.

3.1.2 The Evolution of the GHS Over Time

The GHS was first introduced in 2002, and was designed to assist with policymaking based on what was observed in the South African population. The survey followed on from the October Household Survey (OHS), which was a nationally representative annual household survey which was conducted between 1994 and 1999 (Wittenberg & Thornton, 2022). The GHS is South Africa's only nationally representative dataset that covers almost every year of the post-apartheid period (Wittenberg & Thornton, 2022). The survey keeps track of household conditions, service delivery, income and other measures on an annual basis (Wittenberg & Thornton, 2022). The questionnaire and structure of the survey remained relatively constant until 2013, when the Master Sample that was derived from the 2011 census was introduced (Stats SA, 2019). Standardised sampling techniques and improved representativeness across provinces, metropolitan and non-metropolitan areas and districts emerged as a result. In 2019, a substantial revision to the GHS questionnaire was made whereby many variables were renamed in order to improve the relevance of the survey (Stats SA, 2019). This occurred just prior to the COVID-19 pandemic in 2020, which had a significant impact on several aspects of the survey.

The pandemic brought about several key shifts in the manner in which the survey was conducted. Firstly, due to the imposed restrictions involving constraints in movement, the surveys were performed via telephone interviews rather than face-to-face interviews which had always been utilised in preceding years (Stats SA, 2020). Secondly, only households that supplied active phone numbers in the 2019 survey were able to be recontacted for the 2020 and 2021 surveys. Consequently, 8,896 households, or 45% of the 2019 sample, were able to be reincluded in the 2020 survey. The sample size was successfully further increased to 9,629 households for 2021 as uncontactable households from previous years were physically visited in order to obtain updated contact details and were then interviewed telephonically, allowing for additional data points to be obtained (Pillay, 2023). Due to this, the data obtained from the 2020 and 2021 surveys are not as nationally representative as in previous years and analyses conducted using this data must be evaluated tentatively due to its potential unreliability. The households that were successfully reinterviewed tended to have smaller household sizes on average, which may bias estimates of per

capita income, poverty, and inequality. Smaller households typically report higher per capita income, all else equal, which could lead to an underestimation of poverty rates and inequality in those years. This limitation underscores the need for caution when interpreting trends during the pandemic period. By 2022, enumerators were able to return to conducting face-to-face interviews (Stats SA, 2022). As a result, the number of interviewed households returned to pre-COVID levels in 2022.

Notably, Pillay (2023) found that there was a statistically significant difference in the household size of those re-interviewed in 2020 compared to 2019, with the former having an average household size of 3.8 members compared to the latter with an average size of 3 members. Additionally, reinterviewed households have a higher proportion of grant income and lower total monthly household income to those who were not reinterviewed.

These methodological shifts have important implications for the interpretation of welfare indicators derived from the 2020 and 2021 surveys. The reduced sample size and reliance on telephonic recontact meant that the final sample was not only smaller but also systematically different from the pre-pandemic population, as only households that provided valid contact numbers in 2019 could be reinterviewed. This likely introduced some bias into the sample, particularly through the underrepresentation of certain pockets of the previously interviewed sample, such as higher income households who are less likely to engage in surveys telephonically. As noted by Pillay (2023), reinterviewed households were more likely to rely on grant income and reported lower overall household income, suggesting a skew in the data towards poorer households. At the same time, the smaller average household sizes observed in these samples may have artificially inflated per capita income estimates, since dividing total household income by fewer members mechanically raises the per person value. Together, these biases pull in opposing directions and complicate the analysis of poverty and inequality. Observed trends in these years, including sharp fluctuations in mean income and changes in the Gini coefficient, may therefore reflect underlying sample composition effects or measurement error, rather than true shifts in household welfare. For this reason, findings from 2020 and 2021 are interpreted with caution throughout the analysis, and these years are treated as outliers where appropriate.

3.1.3 Variables of Interest

Three key variables have been integral to this dissertation: The total monthly household income, total monthly household expenditure, and population group. The total monthly household income was calculated based on the household's labour income, grant income, remittances and pensions

received within the household. The value of each grant type issued was obtained from Stats SA reports for each year and deflated into 2022 terms using the Consumer Price Index. In cases of item non-response in relation to private pensions, remittances and earnings, regression imputation was implemented involving predicting missing values through regression modelling. The regression model developed for this included the dependent variables of age, age squared, years of education, education squared, population group, employment, formal/informal sector, gender and province to develop an appropriately fitted imputed value for each individual who did not disclose this information. Table 1 below illustrates the proportion of the sample which received imputed values for each year. It is observed that there were minimal instances of imputation needed relating to item non-response for pension and remittances, outside of 2020, where there was a reduced sample size due to the COVID-19 sampling methods discussed in the previous section.

Table 1: Proportion of Sample which Underwent Imputation for Pensions & Remittances

Year	% of Imputed Values for Pension Item non-response	% of Imputed Values for Remittances Item non-response
2009	0.14%	0.05%
2010	0.27%	0.07%
2011	0.24%	0.01%
2012	0.35%	0.13%
2013	0.30%	0.17%
2014	0.18%	0.03%
2015	0.06%	0.08%
2016	0.16%	0.05%
2017	0.07%	0.08%
2018	0.65%	0.23%
2019	0.61%	0.16%
2020	2.09%	1.66%
2021	0.46%	0.12%
2022	0.31%	0.13%

Source: Own calculations using the GHS (2009 - 2022). Table shows the proportion of imputation to address item non-response for pension and remittance datapoints for each year.

Seeing as many households report zero income but have a positive value for expenditure, it is likely that the survey under-captures income, and so zero or low income values may be an inaccurate representation. Therefore, in cases where monthly household expenditure exceeds reported income, the expenditure value is used. This was applied across instances in which income values were stated to be "0" and in cases where the expenditure value disclosed exceeded the income value. This technique has been supported by various studies, including Martins (2007), which argues that household expenditure may be preferred to income in measuring poverty and inequality, due to income's unreliability, especially when reported income falls short of actual

spending. Additionally, Tregenna & Tsela (2012) treat household expenditure as a parallel measure when income data may be unreliable. This dissertation includes these cases as "per capita income" along with all actual per income values, the share of these cases can be seen in Table 2 below.

In the survey, the household head self-reports monthly household expenditure through a choice of 10 bands ranging from R0 to R10,000 or more. The midpoint of each band is taken as the expenditure value in this case. Table 2 showcases the proportion of the sample where household expenditure exceeded household income and where household income was reported as zero year on year:

Table 2: Proportion of sample whereby Household Expenditure is greater than Household Income and where Household Income is Reported as Zero

Year	% sample where household expenditure exceeds household income	% sample where household income is reported as zero
2009	18%	1.8%
2010	18%	1.4%
2011	19%	1.5%
2012	26%	1.5%
2013	21%	1.6%
2014	24%	1.3%
2015	25%	1.4%
2016	26%	1.5%
2017	25%	1.4%
2018	26%	1.3%
2019	27%	1.3%
2020	10%	0.7%
2021	33%	0.6%
2022	32%	0.7%

Source: Own calculations using the GHS (2009 - 2022). Table shows the proportion of the sample in which household expenditure exceeds household income and where household income was reported as zero.

3.2 Data Usage and Preparation

The questionnaires for the GHS were revised extensively in 2009 and not all questions are directly comparable to the GHS data collected in years prior (Stats SA, 2009). Revised sections which would have been relevant to this dissertation include Monthly Household Expenditure, Sources of Income and Social Grants (Stats SA, 2009). However, the overall structure of the GHS, including data sampling methods, imputation and editing methods utilised has largely remained

constant from 2009 onwards. One deviation from this however, has been the introduction of computer assisted personal interviews (CAPI) from 2019 onward, whereby manual data collection was replaced with a computer format (Stats SA, 2021). Despite this shift, the comparability of data across years remains uniform and hence allows for consistent analysis. Therefore, the data used in this dissertation spans across 2009 to 2022.

The GHS has consistently collected comprehensive income data through four primary sources from 2009 onwards: salaries and wages, grants, remittances and pensions. Table 3 below outlines the distribution of sources of household income for each year.

Table 3: Distribution of Sources of Household Income by Year

	Salaries & Wages	Grants	Remittances	Pensions
2009	58.3%	15.1%	9.0%	8.8%
2010	57.4%	22.0%	9.9%	1.8%
2011	56.6%	22.3%	9.5%	2.0%
2012	59.1%	21.4%	8.0%	1.6%
2013	58.4%	21.6%	8.6%	1.4%
2014	57.5%	21.5%	8.4%	2.0%
2015	58.0%	21.7%	7.9%	2.0%
2016	57.9%	21.3%	8.3%	2.0%
2017	58.8%	20.1%	9.2%	2.2%
2018	58.6%	19.9%	9.4%	2.2%
2019	54.8%	20.4%	11.0%	3.0%
2020	50.8%	28.8%	8.8%	2.4%
2021	52.4%	24.4%	10.0%	2.9%
2022	53.0%	23.5%	9.6%	3.0%

Source: Own calculations using the GHS (2009 - 2022). Table shows the proportion of Salaries and Wages, Grants, Remittances and Pension to total household income and how this has changed year on year.

In order to maintain uniformity in terms of income earned, all disclosed salary amounts for employed individuals needed to be standardised into monthly figures. Enquiring about income levels is notoriously difficult, and many participants often choose not to disclose information related to earnings levels. However, some choose to disclose their salary through a bracket figure in order to maintain some level of ambiguity, Therefore, the midpoint of each bracket level was added as the salary of those who provided this information. In order to account for missing salary information and maintain accuracy in the analysis, regression imputation was utilised as previously outlined to develop an appropriately fitted imputed value for each individual who did not disclose salary information.

Additionally, the monthly grant allowance issued to respondents who identified themselves as grant recipients was accounted for. Furthermore, remittances and private pensions were captured in order to determine the total monthly income of each household.

One notable observation in Table 3 is the substantially higher share of household income attributed to pensions in 2009 (8.8%) versus the much lower levels in subsequent years (1.4–3.0%). This sharp decline in the share of income from pensions after 2009 is explained by a change in the GHS questionnaire: from 2010 onward, old-age pensions were grouped under the 'social grants' category rather than 'pensions' in the income source question (Stats SA, 2010). This reclassification accounts for the observed pattern. This indicates that some of the year-to-year change observed from 2009 to 2010 onward reflects a methodological recategorization, and not a shift in household income structure. Interpreting trends over time should therefore account for this potential classification shift.

All data was standardised into real 2022 terms using the Consumer Price Index (CPI) as issued by Statistic South Africa for each year. The process involves calculating the ratio of the CPI in the target year to the CPI in the base year, then multiplying that ratio by the original data point to get the inflation-adjusted value (Mendez-Carbajo, 2023). This enables comparative observations across the entire period of 2009 to 2022.

While the GHS provides comprehensive data on income movements spanning across the post-apartheid era, which makes it suitable for this analysis, it is not without shortcomings. For instance, Wittenberg and Thornton (2022) provide a detailed outlook on survey weights used in the GHS from 1995 to 2011. They comment that firstly, the survey weights used reduce the data quality due to poor calibration. Furthermore, the GHS provides separate weights at the household level and the individual level, each designed to produce representative estimates for its respective unit of analysis. These weights are not intended to be used together, as doing so would effectively double count the sample and introduce distortions in the results. The second weakness of the calibration process is inaccuracy in the series of household auxiliary information StatsSA uses to calibrate the GHS household weight. These issues stem from choice of data sources for benchmarks, resulting in a series of household counts that is too low. This is particularly problematic for policymakers who use household counts for planning purposes. Finally, there is no compensation for the consistent under sampling of small households. Since the household is the unit that is sampled, systematically missing certain household types could lead to bias in a broad range of statistics. The empirical strategy is therefore descriptive in nature, designed to test the plausibility of the

hypothesis that the COVID-19 pandemic and related grant interventions had measurable effects on poverty and inequality outcomes.

Chapter 4: Measuring Inequality

This chapter offers a thorough examination of movements in inequality in South Africa between 2009 and 2022. The analysis centres on the Gini coefficient, a key indicator of income inequality, along with trends in mean and median household income per capita. Particular attention is paid to the role of income from grants and remittances in shaping overall inequality, which is explored prior to income decompositions. In order to assess disparities both within and between groups, the chapter also examines disparity ratios and Theil indices, offering insight into inequality among different population groups. Decompositions by income source are used to contextualise South Africa's broader socioeconomic landscape. Furthermore, comparisons across deciles and population groups are used to provide a more detailed understanding of how income is distributed across society. All analyses are conducted at a per capita level, and values are presented in 2022 terms to adjust for inflation and enable comparisons over time.

4.1 An Analysis of Monthly Household Income

To better understand the levels of monthly per capita household income both nationally and across population groups over time, Table 4 and 5 present estimates of the mean and median per capita household incomes of the different population groups from 2009 to 2022, the period of interest for this thesis. This measure provides a comparative view of financial circumstances both nationally and *within* population groups and whether this has been increasing, stagnating or narrowing and if so, by how much. Furthermore, one is able to assess whether there is a narrowing or widening of the gap in income levels *between* population groups, indicating how inequality levels have shifted from this perspective.

Table 4: Mean Estimates of Monthly per Capita Household Income by Race Group in 2022 terms 2009 - 2022

Year	Overall	African	Coloured	Indian	White
2009	R2 871	R2 014	R3 418	R7 729	R12 909
2010	R2 850	R1 897	R3 458	R6 585	R13 753
2011	R3 031	R2 082	R3 495	R7 487	R13 291
2012	R3 331	R2 237	R3 713	R8 198	R14 380
2013	R3 376	R2 251	R3 858	R8 211	R14 202
2014	R3 316	R2 342	R3 547	R8 705	R13 416
2015	R3 356	R2 511	R3 968	R8 979	R14 821
2016	R3 401	R2 453	R3 475	R9 096	R14 640
2017	R3 256	R2 419	R3 375	R8 176	R13 968
2018	R3 307	R2 501	R3 478	R7 844	R14 095
2019	R3 317	R2 399	R3 729	R9 484	R14 885
2020	R2 639	R2 846	R5 352	R1 778	R3 413
2021	R2 836	R2 177	R4 393	R6 883	R14 737
2022	R3 330	R2 198	R3 439	R9 009	R15 617

Source: Own calculations using the GHS (2009 - 2022). Adjusted to 2022 terms using Stats SA CPI values to account for inflation and for uniform analysis. Sampling weights are applied to each year.

Table 5: Median estimates of monthly per capita household income by race group in 2022 terms 2009 - 2022

Year	Overall	African	Coloured	Indian	White
2009	R1 050	R906	R1 908	R5 089	R9 518
2010	R1 032	R890	R1 835	R4 586	R10 090
2011	R1 101	R940	R1 828	R5 112	R9 822
2012	R1 213	R992	R1 984	R5 513	R10 944
2013	R1 216	R990	R1 977	R5 726	R10 618
2014	R1 222	R1 005	R1 923	R5 768	R10 057
2015	R1 303	R1 098	R1 895	R6 364	R10 766
2016	R1 319	R1 115	R1 909	R5 921	R11 342
2017	R1 285	R1 131	R1 890	R5 819	R10 474
2018	R1 319	R1 157	R1 955	R5 139	R11 115
2019	R1 295	R1 114	R2 114	R6 083	R10 794
2020	R1 048	R1 098	R3 154	R754	R1 621
2021	R1 065	R962	R2 316	R4 817	R11 322
2022	R1 100	R1 000	R1 734	R6 000	R10 000

Source: Own calculations using the GHS (2009 - 2022). Adjusted to 2022 terms using Stats SA CPI values to account for inflation and for uniform analysis. Sampling weights are applied to each year.

The calculations were formulated by estimating income at a per capita level and then using this variable to create various statistics. Household income was measured and divided by the number

of residents per household to determine the mean and median household income per capita. These estimates are drawn from GHS data and transformed into real 2022 terms using Stats SA's CPI. Upon analysis, the overall median real income showed an increasing trend from 2009 – 2018, and then dropped by ~19% from 2019 to 2020. The data provides us with a clear view of the discrepancy in income across different racial groups, with the African population experiencing significantly lower mean and median income levels relative to other racial groups across the period. While there has been some improvement in these figures from 2009 to 2022, particularly from 2014 to 2018, the post COVID-19 period appears to have hindered this. Furthermore, the gap between Africans and the Indian and White population group remains vast.

The Coloured population's data fluctuated between R1 800 and R1 900 from 2009 to 2018, exhibiting a sharp increase in 2020 and returning to below pre-COVID levels in 2022. This is an indication of sluggish growth in income for the population. The Indian median income level also showed little growth across the 10 year period, however the mean income has steadily been rising. Notably however, the mean and median values in 2020 for Indians are questionably low, particularly in contrast to the values measured for the Coloured population, which are exceedingly high for 2020. The decrease in the median household income from R6 083 in 2019 to R754 in 2020 is extreme and highly improbable in reality. The abnormal results are likely due to data quality issues related to the nature of data collection during that year and the reduced sample size. These factors may lead to unreliable results, necessitating caution in interpreting these figures. In order to cushion for this, it is more cautious to consider results for the years following COVID-19, particularly 2022, where interviewing had reverted back to an in-person format with a larger sample size, rather than during the high-point of the pandemic (i.e. 2020 and 2021). This becomes evident when observing that mean values appear to normalise for the Indian population in 2022.

The White population shows the most significant increase in the mean monthly per capita household income over the period. This is on average R5 000 more than the average for the Indian population group, which is second most well off in this instance, and almost triple the national household per capita average. This is an indication of the vast discrepancy in inequality that continues to exist, with the White population benefiting the most. There are clear increases in the median income from 2009 to 2017 where it then stagnated, followed by an extreme downturn in 2020 and returns to a pre-COVID level in 2021 and 2022. Similar to the Indian population group, the extremely low mean and median values in 2020 are an indication of data quality issues, particularly as the extreme decrease in the median household income from R10 794 in 2019 to R1 621 in 2020 is highly improbable.

The results in Table 4 reveal dramatic and unrealistic fluctuations in mean monthly per capita income between 2019, 2020, and 2021 for certain population groups. For example, the White population group's mean income falls sharply from R14 885 in 2019 to R3 413 in 2020, before rebounding to R14 737 in 2021. In contrast, Coloured households show an opposite pattern, with income increasing from R3 729 in 2019 to R5 352 in 2020 before falling again in 2021. The Indian group displays an equally unusual drop to R1 778 in 2020, well below pre-pandemic levels, followed by a partial recovery. Such extreme year-on-year swings are unlikely to reflect genuine economic changes and are more plausibly explained by the data quality issues affecting the 2020 and 2021 GHS waves. As discussed previously, these years relied on telephonic data collection from a reduced and selective sample, which may have disproportionately excluded certain income brackets, regions, or household types, and introduced compositional shifts such as smaller household sizes or changes in the mix of income sources that distort per capita measures.

While these figures are retained in the calculations for consistency and comparability across years, their interpretation is made with caution, particularly when assessing pandemic-related changes in poverty and inequality. It is recognised that some of the large shifts observed in group-specific Gini coefficients and disparity ratios during this period may be attributable more to survey artefacts than to actual changes in the underlying income distribution. This limitation is therefore explicitly acknowledged in the discussion of results, and relevant findings are contextualised in light of these anomalies.

4.2 Gini Coefficient Analysis

Observing long-run trends in inequality is well captured through movements in the Gini coefficient. South Africa has notoriously maintained high levels of inequality over time and continues to be described as the most unequal country in the world (World Bank, 2022). When observing the output in Table 6 below, what is immediately clear is the that the national level of inequality has shown no movement over the thirteen-year period and remains consistently high but stable across the pre-COVID, during-COVID and post-COVID periods. Stats SA (2017) found that South Africa's Gini Coefficient has remained above 0.60 for a number of years, moving from 0.72 to 0.68 from 2006 to 2015. Table 6 finds similarly, in that the Gini Coefficient derived from the GHS was calculated as 0.66 in 2015. Orthofer (2016) found the income Gini Coefficient to be 0.67 in 2016 and the World Inequality Database measured it to be at 0.71 by 2019. Similarly, Table 6 shows that the Gini Coefficient was 0.65 in both 2016 and 2019. The similarity in the Gini coefficient findings in Table 6 and those of the above sources are on par, confirming the validity of the GHS as a reliable source for calculating the Gini Coefficient. The National Development

Plan has the aim of reducing inequality levels, and has set an objective of reducing the income Gini Coefficient to 0.60 by 2030 (National Planning Commission, 2012). Table 6 shows that the Gini Coefficient in 2022 was 0.66. At the time of writing this dissertation, this is the only known estimate of South Africa's Gini coefficient for 2022. However, given that there is some validity in the GHS estimates of the Gini Coefficient as discussed, it is acceptable to assume that this is a reliable estimate.

Table 6: Comparisons of Household Income Inequality Using the Gini Coefficient: 2009 - 2022

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
National	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.65	0.64	0.64	0.65	0.64	0.65	0.66
African	0.61	0.60	0.61	0.61	0.61	0.63	0.62	0.61	0.60	0.61	0.61	0.65	0.62	0.61
Coloured	0.57	0.57	0.58	0.57	0.57	0.55	0.61	0.56	0.54	0.54	0.54	0.55	0.56	0.58
Indian	0.50	0.50	0.51	0.49	0.48	0.48	0.49	0.51	0.49	0.51	0.48	0.64	0.46	0.52
White	0.49	0.45	0.45	0.45	0.46	0.44	0.47	0.44	0.46	0.46	0.46	0.58	0.45	0.55

Source: Own calculations using the GHS (2009 - 2022). Table shows the Gini coefficient at a national and population group level and how this has changed year-on-year. Calculated based on household income values in 2022 terms. Sampling weights are applied to each year.

At a population group level, Table 6 demonstrates that inequality is particularly extreme for Africans, who have the highest Gini coefficients across the period. Harmse (2014), found a similar result whereby Africans had a consistently higher Gini coefficient compared to other racial groups. However, it is discouraging to see that such vast discrepancies are still visible in terms of inequality for this population group three decades after the end of Apartheid. In contrast to this, Coloured, Indian and White population groups have faced significantly less extreme inequality present within each group as per the Gini coefficient calculations in Table 6. Notably however, the Gini coefficient in 2020 across population groups, but particularly for Indian and White groups are outliers relative to the rest of the figures. While this may be a product of the pandemic, the large increase in inequality is unexpected. It is likely that this is due to the questionable data quality of the 2020 GHS survey and therefore should not necessarily be believed with certainty. This is further confirmed by the rapid reduction in inequality levels for these population groups by 2022.

4.3 Disparity Ratio Analysis

When Table 4 and 5 are analysed in conjunction with Table 7 below, one is able to assess levels of disparity between groups. Table 7 reports on the ratios between mean White household per capita income and the mean household per capita income of other population groups across the period. The gap between the African per capita income level and the White per capita income level has worsened slightly from 2009 (20%) to 2022 (19%). The ratio showed improvements from 2009 to 2015, where it reached a high point of African income being on average 22% of White income. However, there appears to be an exacerbation of the gap in income post COVID-19 where the disparity ratio dropped to 19%. Van der Berg and Louw (2004), tracked the relative per capita income of Africans as a percentage of White income levels from 1970 to 2000, and found this to be at 11% in 2000. Measuring the income gap between the two groups which had historically benefited the most and least indicates the progress that has been made in closing inequality gaps. Based on Van der Berg and Louw's (2004) analysis, the ratio improved by 9 percentage points from 2000 to 2009 but then stagnated from 2009 to 2022 based on this analysis. The stagnation in the past thirteen years indicates that little has been achieved in terms of correcting for existing income inequalities between the two groups.

In 2021, the disparity ratios for the Coloured and Indian population groups appear to diverge from earlier trends, as shown in Table 7. For the Coloured group, the ratio increased to 40%, compared to a more consistent range of 35% to 38% in prior years. In contrast, the ratio for the Indian group declined to 58%, below the usual levels of around 65% to 73%. This pattern can be better understood when viewed alongside Table 5, which shows that the median income for the Indian population remained below pre-pandemic levels in 2021, indicating a slower income recovery following COVID-19. Conversely, median income for the White group had rebounded strongly by 2021, surpassing its 2019 level. This likely contributed to the lower relative income share for the Indian group in that year. For the Coloured group, the increase in the disparity ratio may reflect an unusual uptick in median income in 2021, which then moderated in 2022. These shifts highlight the lingering effects of the pandemic period, as well as possible volatility in income estimates due to data collection challenges during 2020 and 2021.

Table 7: Disparity ratios: Mean White Household Income per Capita of the White population group to other population groups

	2009	2012	2015	2018	2021	2022
African	20%	21%	22%	22%	20%	19%
Coloured	35%	37%	38%	35%	40%	31%
Indian	70%	69%	73%	65%	58%	65%

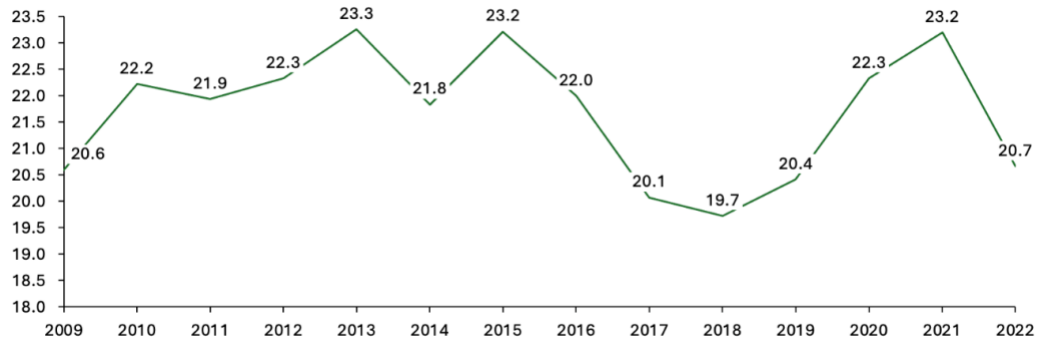
Source: Own calculations using the GHS (2009 - 2022). Table compares the mean White household per capita income to the mean household per capita income of each population group. Calculated using household income per capita values in 2022 terms. Sampling weights are applied to each year.

The disparity for both Coloured and Indian population groups has also worsened relative to the White population from 35% in 2009 to 31% in 2022 for the Coloured group and from 70% in 2009 to 65% in 2022 for the Indian group. This is an indication that the White group's income has increased over the period compared to all other population groups. This again demonstrates that rather than inequality gaps closing between racial groups, they appear to be widening in recent years.

4.4 90/10 Ratio Analysis

This dissertation goes on to assess the gap in income between the rich and poor in South Africa through the 90/10 ratio, which allows for an assessment of the income gap between the 90th percentile and the 10th percentile of the of the South African population. When observing the trend of the 90/10 ratio in Figure 1, it is seen that the income gap between the richest and poorest 10% of the South African population has not changed substantially and high levels of inequality remain persistent within the population. The output fluctuates between the range of 19.72 to 23.25 over the period, where there were above average figures in 2013, 2015 and 2021, with the latter most likely being a reflection of the pandemic.

Figure 1: 90/10 Ratio for Household Income per Capita: 2009-2022



Source: Own calculations using the GHS (2009 - 2022). Figure compares the household income per capita between the 10th and 90th percentiles of the population. Calculated using household income per capita values in 2022 terms. Sampling weights are applied to each year.

The absence of a declining 90/10 ratio over the period is indication that South Africa has seen little improvement in resolving the inequality gaps which are the remnants of apartheid, despite being thirty years into the democratic era. In order to investigate this further, Table 8 outlines the annual movements in the per capita household income for both the 10th and 90th percentile. Here it can be seen that there appears to be an overall decline in the average per capita income for the 10th percentile until 2020, and overall improvements for the 90th percentile until 2020, where there is some collapse post the pandemic. This is an indication that the majority of the population has not been able to increase their earnings, while the most well-off percentile has been able to. This is an explanation for the continued high level of inequality being observed.

Table 8: 10th and 90th and Percentile Average Household Income per Capita: 2009-2022

Year	10th Percentile	90th percentile
2009	R 317.72	R 6,889.48
2010	R 285.13	R 7,338.73
2011	R 291.24	R 8,726.85
2012	R 330.67	R 8,270.09
2013	R 361.46	R 9,023.26
2014	R 367.35	R 8,830.59
2015	R 281.29	R 11,234.37
2016	R 290.85	R 11,570.45
2017	R 236.59	R 11,995.64
2018	R 304.40	R 11,862.21
2019	R 183.81	R 11,578.83
2020	R 190.31	R 7,382.96
2021	R 349.23	R 8,204.31
2022	R 354.94	R 9,578.86

Source: Own calculations using the GHS (2009 - 2022). Table compares the mean household per capita income of the 10th percentile to the mean household per capita income of the 90th percentile. Calculated using household income per capita values in 2022 terms. Sampling weights are applied to each year.

Despite numerous government initiatives aiming at redistribution, Statistics South Africa has continuously shown that the nation is still among the most unequal in the world, with income disparity being firmly ingrained and unchangeable (Maluleke, 2019). To put the astronomical level of inequality in South Africa into perspective, the Gini coefficient for Brazil, another notoriously unequal nation, was reported at 0.53 in 2019 compared to South Africa's 0.65 for the same year (World Bank, 2022). This inequality is worsened by the high unemployment rate and stagnating

real earnings, which show that economic progress has not resulted in a fair distribution of income (Sulla, Zikhali and Cuevas, 2022) Because of this, there continues to be sizable income disparity between the richest and poorest groups in South Africa.

4.5 Decomposition of Between-Group and Within-Group Inequality

The Theil Index is another widely recognised metric for measuring inequality. What makes it a particularly useful is that it allows for the decomposition of inequality into two components: the "between" portion of different groups and 'the "within" portion of the same group. This is especially beneficial given South Africa's history of racial disparity, allowing for a concentrated focus on its impact on income inequality. In the case of Table 9 below, the subgroups concerned in the "between" and "within" composition are South Africa's population groups. Table 9 indicates a decline in the contribution of between-group inequality and increases in within-group inequality across the analysis period. This is a continuation of the trend observed by Leibbrandt and Woolard (2007) and Leibbrandt et al. (2010) who also describe growing within-group inequality, particularly for Black Africans.

Table 9: Inequality Comparisons Within and Between Population Groups, using the Theil Index

Note: Between-Group Inequality+Within-Group Inequality=Total Theil Index

	2009	2012	2015	2018	2020	2021	2022
Theil Index	0.95	0.89	0.94	0.84	0.86	0.88	0.99
Within-Group Inequality	0.71	0.63	0.71	0.64	0.76	0.68	0.75
Between-Group Inequality	0.24	0.26	0.23	0.20	0.10	0.20	0.24

Source: Own calculations using the GHS (2009 - 2022). Table assesses movements in between-group and within-group inequality over time using the Theil Index. Calculated using household income per capita values in 2022 terms. Sampling weights are applied to each year.

Between 2009 and 2022, the Theil Index shifted from 0.95 to 0.99, indicating an overall increase in inequality over the period. This illustrates that disparities in the income distribution have widened. Between-group inequality has remained relatively constant, with marginal fluctuations around 0.24. This stability implies that disparities between racial groups have not widened but have rather remained consistent. The within-group inequality component also increased marginally

from 0.71 in 2009 to 0.75 in 2022. This variation suggests that there is an increasing level of income disparities within population groups. One reason for this could be attributed to the long-term impact of affirmative action policies such as BBBEE having been found to have significantly narrowed the racial wage gap for top earners rather than entire population groups (Burger & Jafta, 2010). This has the knock-on effect of widening within-group inequality. The high levels of within-group inequality could indicate that individuals belonging to the same population group are being afforded vastly different opportunities which benefit and uplift a small proportion of that population.

The increases in within-group inequality becomes more evident when assessing the percentage of each population group per decile at the beginning and end of the analysis period. In Table 10, a nine percentage-point increase in the tenth decile and a seven-percentage-point increase in the ninth decile for the African population from 2009 to 2022 is observed, which demonstrates an increasing proportion of Africans becoming top earners. The African population group has therefore seen the largest increase in those belonging to the 10th decile out of all the population groups. However, there was also a three percentage-point increase in the proportion of Africans in the first decile, which speaks to the widening inequality gap within the group itself.

Table 10: Population-Group Composition of per Capita Income Deciles, 2009/2022

Decile	African		Coloured		Indian		White	
	2009	2022	2009	2022	2009	2022	2009	2022
1	90%	93%	6%	6%	0%	0%	4%	1%
2	96%	96%	4%	3%	0%	0%	0%	0%
3	95%	95%	5%	5%	0%	0%	0%	0%
4	93%	92%	7%	7%	0%	1%	0%	0%
5	89%	90%	9%	8%	1%	0%	1%	1%
6	87%	89%	11%	10%	1%	0%	1%	1%
7	80%	83%	15%	13%	2%	1%	3%	2%
8	78%	83%	12%	13%	3%	1%	2%	2%
9	69%	76%	16%	13%	6%	4%	9%	7%
10	44%	53%	13%	12%	8%	7%	34%	28%

Source: Own calculations using the GHS (2009 & 2022). Table assesses the population group composition of income deciles at a per capita level and comparing the shift from 2009 to 2022. Calculated using household income per capita values in 2022 terms. Sampling weights are applied to each year.

Table 11, which illustrates the composition of each decile by population group, helps us better account for this, as one is now able to see the spread of the African population across all income

deciles. Here, it is observed that the proportion of Africans in the 1st decile has increased by 1 percentage point from 2009 to 2022. Furthermore, the increase by 1 percentage point in the 9th and 10th deciles suggests income growth at the higher end of the distribution. When paired with the movements observed in the increase of the African population in the 8th, 9th and 10th deciles in Table 10, this trend points to rising affluence among wealthier individuals, which impacts within-group inequality. The share of African income across the bottom 5 deciles has also shifted by 1 percentage point and by 2 percentage points in the 3rd decile, indicating small movements, which are not as substantial as those in the higher deciles. There is also limited movement in the bottom seven deciles of both the Indian and Coloured population groups across the period.

Notably however, the spread of the Indian population has decreased in the 9th decile from 29% to 26% and increased in the 10th decile from 37% to 43%, indicating upward movements in income earned for this population group.

Table 11: Per Capita income Decile Composition of Population-Groups, 2009/2022

Decile	African		Coloured		Indian		White	
	2009	2022	2009	2022	2009	2022	2009	2022
1	11%	12%	6%	7%	2%	2%	4%	1%
2	12%	11%	4%	4%	0%	1%	0%	1%
3	12%	10%	5%	5%	1%	2%	0%	0%
4	11%	11%	6%	8%	1%	4%	1%	1%
5	11%	10%	9%	8%	3%	3%	2%	3%
6	11%	11%	11%	12%	5%	2%	2%	2%
7	10%	10%	14%	15%	11%	9%	5%	6%
8	9%	9%	16%	13%	13%	7%	5%	5%
9	8%	9%	16%	14%	29%	26%	18%	17%
10	5%	6%	13%	14%	37%	43%	63%	64%

Source: Own calculations using the GHS (2009 & 2022). Table assesses the income decile composition of population groups at a per capita level and comparing the shift from 2009 to 2022. Calculated using household income per capita values in 2022 terms. Sampling weights are applied to each year.

In terms of composition of the White population across deciles, Table 10 indicates that there is the largest concentration in the tenth decile which has shifted downwards by six percentage-points from 2009 to 2022. While this has decreased, it demonstrates that the income distribution still largely favours the White demographic, despite only constituting 7.3% of the population in 2022 (Stats SA, 2023). Furthermore, the spread of the White population has increased from 63% to 64% across the 10th decile and decreased from 4% to 1% across the 1st decile from 2009 to 2022,

indicating that they are continuing to improve the overall income and position of the group. The share of the White group in the bottom eight deciles remains constant. This is also observed in. the 2nd to 6th deciles in Table 10. The African population is therefore experiencing within-group income inequality at an elevated level relative to other groups.

Leibbrandt and Woolard (2007) found that the overall trend observed in terms of income movements demonstrate an upward movement of Africans into the top deciles whereas there is no significant downward movement of the White population in the lower deciles. This continues to be the trend seventeen years on as observed in Tables 10 and 11, indicating that inequality has continued to remain largely unchanged 30 years into the democratic era.

4.6 Analysis of the Contribution of Social Grants to Household Income

Numerous studies have indicated that social grants are a key source of income in South Africa, especially for impoverished individuals in rural areas (Lebbrandt et al., 2011). Grant income is a key aspect in providing some financial security for the unemployed and poor. In South Africa, it is not uncommon for families to organise around available sources of income such as social grants due to vast levels of unemployment. For instance, households with a pensioner have been found to utilise the pension income to facilitate younger members of the household to become labour migrants (Ardington et al., 2016).

Table 12 analyses the share of the adult population receiving grant income, and movements in the mean household grant income per capita by race group in 2022 terms. The table includes data where zero grant income was recorded. When looking at the mean household grant income for those receiving it, it is observed that it increases over the entirety of the period, though very minimally. However, a spike occurs in 2020 and the grant income level remains elevated in 2021 and 2022, though with a decreasing trend. The share of the population remains consistent around 36% between 2009 and 2019, and spikes to 55.8% in 2020. This could be attributed to the extended share of the population allocated the SRD grant, but is likely not an entirely accurate reflection of the actual share of the population receiving grant income due to the data issues present in the 2020 sample. The share of the population receiving grants decreases from 2020 to 2021 and 2022, but remains higher than in the years prior to COVID. This could also be due to the continuation of the SRD grant being issued in the years following 2020.

Table 12: Share of the Adult Population Receiving Grant Income and Mean Estimates of Monthly per Capita Household Grant Income by Population Group

Year	Share of Adult Population	Overall *(conditional on receiving grants)*	Black *(conditional on receiving grants)*	Coloured *(conditional on receiving grants)*	Indian *(conditional on receiving grants)*	White *(conditional on receiving grants)*
2009	36.6%	R177	R181	R162	R169	R126
2010	35.9%	R162	R172	R158	R124	R54
2011	36.4%	R174	R185	R170	R124	R62
2012	36.1%	R188	R201	R183	R144	R59
2013	36.7%	R198	R212	R193	R147	R69
2014	36.9%	R202	R215	R215	R134	R67
2015	36.1%	R205	R213	R229	R177	R78
2016	36.1%	R214	R223	R229	R170	R92
2017	36.8%	R235	R242	R260	R210	R87
2018	37.4%	R252	R259	R278	R219	R114
2019	38.1%	R273	R284	R286	R214	R117
2020	55.8%	R274	R401	R446	R226	R119
2021	43.6%	R387	R375	R367	R287	R165
2022	43.0%	R354	R364	R374	R297	R165

Source: Own calculations using the GHS (2009 & 2022). Table compares the share of the adult population receiving grant income (adults were taken as those who reported their age as 18 or older) and the mean monthly per capita household grant income by population group comparing the shift from 2009 to 2022. Calculated using household income per capita values in 2022 terms. Includes data points where zero grant income was recorded. Sampling weights are applied to each year.

The African and Coloured groups, which both have a similar mean grant income level throughout the period, appear to have benefited the most from the additional grant issuance during the pandemic with a 41% and 56% year on year increase from 2019 to 2020 respectively. This finding is a possible explanation for the results observed in Tables 4 and 5 in Section 4.1., whereby the African population experienced a significantly lower decrease in mean and median household per capita income levels from 2019 to 2020 relative to Indian and White groups, while the Coloured group in fact had an increase in mean and median per capita household income from 2019 to 2020. Additionally, both the African and Coloured groups maintain higher than pre-pandemic mean grant levels in 2021 and 2022. Prior to the pandemic, both groups exhibited the highest levels of mean grant income received. This is a reflection of the continued racial inequality in South Africa.

Contrastingly, both White and Indian population groups show little to no fluctuations in the level of grant income received in 2020, though both groups experienced. increases in 2021 and 2022, which is the opposite of what is observed for the African population group. The Indian and White mean grant income level is significantly lower than that of the African and Coloured groups across the entirety of the period.

4.7 Analysis of the Contribution of Domestic Remittances to Household Income

For impoverished South African households, domestic remittances are a significant source of income (Posel & Casale, 2005). The legacy of worker migration and "split households", a by-product of apartheid which continues to the present day, is likely a large contributor to the significance of remittances as a source of income (Biyase and Tregenna, 2016).

In the South African context, Biyase and Tregenna (2016), assess the nature of remittances in South Africa using NIDS data, and find evidence to support the following findings: firstly, those living in rural areas are both more likely to receive remittances as well as a higher proportion of remittance income than those in urban areas. Secondly, the African population group is most likely to receive remittance income, which is expected given South Africa's history. Thirdly, female-headed households are more likely to receive remittances than male-headed households. Finally, domestic inflation is found to have a positive and significant impact om the amount of remittance income received by households.

Analysing the share of the population receiving remittances, as well as movements in per capita monthly household remittances, Table 13 paints a picture of movements in remittance income over the analysis period. The share of households receiving remittance income has remained largely constant, fluctuating between 16% and 19% between 2009 and 2018. In 2020, a notable and extreme decrease occurs, in which only 6.1% of the population receives remittance income. As previously mentioned, the decreased sample size and other data issues present in the 2020 GHS survey makes this estimate unreliable. In 2021 and 2022, the share of households receiving remittances is lower than it was pre-COVID. In terms of the average value of remittance income, it is observed that it has been steadily increasing over time, with a notable increase occurring from 2016 to 2017, particularly for the White and Indian population groups. The White per capita level of remittance income is the highest out of all population groups, while the African population group has the lowest. It should be highlighted that the percentage of White and Indian populations who remit is far lower than that of African people, meaning that the average income for these groups does not fairly represent what Africans should be earning. A drop can be observed in the

level of remittances received in 2020 across African, Indian and White population groups. This could be attributed to the effects of the COVID-19 pandemic restricting income sources but once again is the product of unreliable data. This stabilises by 2022 where the GHS becomes more reliable.

Table 13: Share of Households Receiving Remittance Income and Mean Estimates of Monthly per Capita Remittance Income by Population Group

Year	Share of Households	Overall Mean *(conditional on receiving remittances)*	Black *(conditional on receiving remittances)*	Coloured *(conditional on receiving remittances)*	Indian *(conditional on receiving remittances)*	White *(conditional on receiving remittances)*
2009	16.4%	R176	R179	R143	R165	R180
2010	17.3%	R196	R179	R159	R178	R222
2011	17.2%	R193	R182	R165	R191	R208
2012	16.5%	R191	R185	R162	R178	R281
2013	18.3%	R282	R277	R259	R316	R352
2014	16.7%	R286	R280	R259	R369	R390
2015	19.0%	R381	R377	R359	R404	R469
2016	17.8%	R391	R392	R352	R511	R540
2017	16.7%	R546	R495	R562	R1 832	R2 270
2018	16.8%	R567	R499	R595	R1 672	R2 892
2019	14.8%	R629	R568	R712	R2 166	R3 229
2020	6.1%	R551	R513	R833	R1 108	R2 004
2021	15.9%	R514	R479	R704	R1 992	R1 729
2022	12.7%	R656	R588	R662	R2 764	R4 105

Source: Own calculations using the GHS (2009 & 2022). Table compares the share of households receiving grant income and the mean monthly per capita household remittance income by population group comparing the shift from 2009 to 2022. Calculated using household income per capita values in 2022 terms. Includes data points where zero remittance income was recorded. Sampling weights are applied to each year.

4.8 Household Income Source Decomposition

Sections 4.6 and 4.7 discuss the contribution of social grants and remittances towards household income, while the addition of income from the labour market is another key contributor towards overall household income. Decomposing the sources of income in a household allows for an analysis of how important each of these sources are in driving shifts in inequality (Leibbrandt, Finn

and Woolard, 2012). Tables 14, 15 and 16 break down the contributions of primary income sources to total household income over time to better understand their contributions to inequality. This is done across the entirety of sample and not just recipients of each income type. These decompositions are static comparison exercises, detailing the contributions of each income source in year independently rather than examining how variations in income sources affect changes across time.

When looking at the contribution of the labour market to household income, it is observed that this has shifted from 65% in 2009 to 69% in 2015 before reducing to 61% in 2022. Income from the labour market should ideally be the primary source of income for most households, despite there being a large variation in the income earned from the labour market across households. An increase in the mean income received from this source was observed from R9 238 in 2009 to R10 597 in 2015 followed by a decrease to R 9 473 in 2022. This is likely to be attributed to the impact of the pandemic on earnings levels. The decline in income earned from the labour market is reflective of a decline in employment levels. It is alarming to see that the contribution of this type of income is lower in 2022 than it was in 2009, fourteen years prior. One would expect employment levels to have increased during this period due to economic stimulation and other proactive measures, but a lack of these measures paired with the lay-offs, business closures and lockdown restrictions of the pandemic which impacted employment has resulted in the opposite.

The importance of household income from social grants is apparent from the tables below. The proportion of households receiving grant income has increased from 50% in 2015 to 58% in 2022 the population. This indicates the increasing dependence of households on this type of income, and its extended scope as a result of the pandemic. However, the mean monthly income from grants has decreased from 2009 to 2022 in real terms. The introduction of the SRD grant in 2020 could be the reason for this, as households without a prior grant and without other means for financial support were eligible, thereby bringing the average household income from social grants downward.

The proportion of households receiving income from private pensions shows some volatility over the period, fluctuating between 11% in 2009, to 8% in 2015 and finally to 14% in 2022. This is indicative that only a small proportion of the population is in a position to have some income in retirement due to their investments and savings. The mean income earned remains appears to be steadily rising, ranging from R1102 in 2009 to R2829 in 2022. Furthermore, inequality across

private pensions is also increasing, as indicated by the rising Gini coefficient from 0.61 in 2009 to 0.72 in 2022.

Remittance income remains between 13% and 19% of the total number of households receiving this type of income in all three years. The Gini coefficient for remittance income remains high and unchanging at 0.93 across all three years. This is likely due to the amount of money that each contributing remitter can afford varies from person to person.

Table 14 - Inequality Decomposition by Income Source: 2009

Income Source	**% of Households Receiving Income Source**	**Mean Household monthly income from source** *(conditional on receiving it)*	**Gini of income source for all households** *(calculated at a household income per capita level)*
Remittances	16%	R701	0.93
Grants	54%	R1757	0.60
Private Pensions	11%	R1102	0.61
Labour Market	65%	R9238	0.66

Source: Own calculations using the GHS (2009). Calculated using household income per capita values in 2022 terms using the entire sample. Sampling weights for 2009 were used.

Table 15 - Inequality Decomposition by Income Source: 2015

Income Source	**% of Households Receiving Income Source**	**Mean Household monthly income from source** *(conditional on receiving it)*	**Gini of income source for all households** *(calculated at a household income per capita level)*
Remittances	19%	R1203	0.93
Grants	50%	R994	0.69
Private Pensions	8%	R1328	0.67
Labour Market	69%	R10597	0.73

Source: Own calculations using the GHS (2015). Calculated using household income per capita values in 2022 terms using the entire sample. Sampling weights for 2015 were used.

Table 16 - Inequality Decomposition by Income Source: 2022

Income Source	**% of Households Receiving Income Source**	**Mean Household monthly income from source** *(conditional on receiving it)*	**Gini of income source for all households** *(calculated at a household income per capita level)*
Remittances	13%	R1800	0.93
Grants	58%	R1212	0.64
Private Pensions	14%	R2829	0.71
Labour Market	61%	R9473	0.72

Source: Own calculations using the GHS (2022). Calculated using household income per capita values in 2022 terms using the entire sample. Sampling weights for 2022 were used.

Chapter 4 provides an analysis of the movements in inequality trends across the third and fourth decade in the post-apartheid era, spanning across the 2010s and the early 2020s. From the analysis, a few conclusions can be drawn. Firstly, inequality has remained chronic and persistent in South Africa, with a national Gini coefficient remaining at an average of 0.66, well above the global average of 0.38 (World Bank, 2024). This illustrates why South Africa has continued to remain as one of the world's most unequal nations. In addition, the absence of a declining 90/10 ratio over the period is indication that South Africa has seen little improvement in resolving the inequality gaps. Secondly, the overall median real household income was found to be increasing across the 2010s, but this was hindered by the onset of the COVID-19 pandemic. Overall, estimates appear to be reliable across the 2010s, but the data quality issues for the 2020 and 2021 surveys have produced questionable results over the COVID-19 and post COVID-19, and so these results should be interpreted with caution.

Thirdly, when assessing inequality at a population group level, the analysis indicates that inequality within groups has been steadily increasing and has become a larger contributor to overall inequality relative to between-group inequality. These findings suggest that while measures such as BBBEE have aimed to uplift historically marginalised groups, the benefits have not been evenly distributed within those groups. In particular, the disproportionate income gains observed at the top end of the distribution indicate that a subset of individuals may have been better positioned to take advantage of such policies. While BBBEE may have contributed to improved outcomes for some, it is unlikely to have been the sole driver of rising incomes among higher earners, and further

research is needed to fully understand the range of factors influencing income dynamics during this period. However, this argument is supported by the fact that the number of Black Africans in the 1st decile and the 10th decile of earners has in fact increased from 2009 to 2022 as per Table 10. Finally, there has been some stagnation in the contribution of the labour market to income sources per household in the post COVID-19 years, however the importance of social grants as a source of household income per capita has become evident during this period. This will be further explored in Chapter 5.

Chapter 5: Measuring Poverty

Chapter 4 assessed the evolution of inequality from 2009 to 2022 with special emphasis on the impact of the COVID-19 pandemic. Following from this, Chapter 5 uses Foster-Greer Thorbecke poverty headcount ratios as well as poverty gap ratios to evaluate movements in poverty from 2009 to 2022, once again placing emphasis on the period during and after the COVID-19 pandemic. Additional analysis is conducted regarding the allocation of the SRD grant and other grant top-ups in 2020 to understand its role and effectiveness in combatting poverty in South Africa. This analysis will aid in understanding the general shifts in poverty have been across the 2010s, how this changed as a result of COVID-19, and the role of social grants in influencing poverty measures during and after the pandemic.

5.1 Methods used in this Chapter

To recap from Chapter 2, establishing the most relevant poverty lines to use for poverty measurements is crucial. In this analysis, Stats SA's lower-bound and upper bound poverty lines have been utilised. The lower-bound poverty line (LBPL) refers to the food poverty line plus the average amount derived from non-food items of households whose *total* expenditure is equal to the food poverty line (Stats SA, 2022). The upper-bound poverty line (UBPL) refers to the food poverty line added on to the mean amount derived from non-food items for households where *food* expenditure is equal to the food poverty line (Stats SA, 2022). The 2022 StatsSA poverty lines was used in this study to increase comparability with other poverty studies conducted during this time. The 2022 LBPL was measured at R945 and the 2022 UBPL was measured at R1417. All income data was standardised into real 2022 terms using the CPI to enable comparative observations across the entire period.

Two poverty measures are utilised in this section. The first is the poverty headcount ratio, which measures the number of impoverished people as a percentage of the overall population at each poverty line (Leibbrandt, 2009). The second is the poverty gap ratio, which is used to measure the extent of poverty and arises from the FGT methodology as discussed in Chapter 2. The poverty gap ratio provides an estimate of the total resources required to eliminate poverty (Meth, 2006). It is therefore an indication of the percentage of additional income needed for the average individual to no longer be considered impoverished, as it measures the mean difference between a poor individual's income and the poverty line, expressed as a percentage of the poverty line (Meth, 2006). To strengthen the robustness of the analysis and to address concerns regarding the importance of evaluating poverty through multiple thresholds, both the LBPL and UBPL are used.

Using the LBPL provides a worst-case scenario perspective of poverty levels in the country, in contrast with the UBPL which is padded for food and non-food related living expenses. For example, using the poverty line of R945 per month, the calculated poverty gap ratio is 19.6% in 2009, thereby indicating that the average poor individual has an income that falls approximately 20 percent short of the poverty line, and would require an additional R185 (19.6% x R945) to be considered non-poor. Therefore, the headcount ratio is a measure of the *reach* of poverty in a society, while the poverty gap ratio measures the *depth or severity* of poverty in a society.

Figures 3 and 4 (appendix) present concentration curves for the LBPL and UBPL across the years 2019 to 2021. These curves allow for a visual comparison of the distribution of poverty across the population, capturing both changes in incidence and the degree to which poverty is concentrated among particular segments of the population.

In both sets of concentration curves, the 2020 curves are significantly bowed away from the line of equality (the 45-degree line), indicating a greater concentration of poverty among the lower end of the population distribution. This is particularly pronounced under the LBPL, where the 2020 curve diverges sharply from those of 2019 and 2021. This suggests a substantial short-term increase in poverty concentration during the height of the COVID-19 pandemic. The 2021 curves show a return closer to the pre-pandemic distribution, although they remain slightly more bowed than in 2019, indicating some persistence in poverty concentration despite the partial recovery.

5.2 Headcount and Poverty Gap Ratios between 2009 and 2022

5.2.1 Headcount Ratio

Table 17 below shows two of the FGT poverty indices for the lower bound poverty line and upper bound poverty line as proposed by Stats SA (in 2022 terms) spanning from 2009 – 2022; namely the poverty headcount ratio and the poverty gap ratio. Movements in the poverty headcount ratio and the mean poverty gap (as a percentage of the poverty line) across this period give a perspective on changes in the living circumstances of the poorest South Africans who would have to choose between food and other living necessities. The LBPL headcount ratio across the period indicates that poverty levels have remained between 35% and 43%. The UBPL headcount ratio remained between 50% and 56% over the period.

Table 17: Poverty Headcount Between 2009 and 2022 According to the Annual General Household Survey

	Poverty Headcount Ratio							
	2009	**2012**	**2015**	**2018**	**2019**	**2020**	**2021**	**2022**
R945 (LBPL) per month	38.8	37.2	39.1	35	42.8	45.4	38.5	37
R1417 (UBPL) per month	53.2	51.4	50.8	47	56.2	58.6	54.5	53.6

Source: Own calculations using the GHS (2019 - 2019). Table shows the proportion of the population poverty as per the upper-bound and lower-bound poverty lines, poverty lines used are in 2022 prices. Sampling weights are applied to each year.

While there has been sparsity in measurements of poverty during the 2009 - 2022 period, these estimates are compared to the last official estimate of poverty as defined by Stats SA (2012) using the LCS 2008/9, Stats SA (2017) using the 2005 and 2010 Income and Expenditure Survey (IES) and 2008 and 2015 Living Conditions Survey (LCS), estimates by Pillay (2023) using the 2015 to 2019 GHS and estimates from Zizzamia et al. (2019) using all five waves of NIDS.

Comparing headcount ratios in 2009, Stats SA (2012) provide estimates which closely match this dissertation. They find the headcount ratio for the LBPL and UBPL to be 38.9% and 52.3% respectively, which closely matches the observations for 2009 in Table 17.

However, also using the LCS for 2008 and 2015, Stats SA (2017) finds the headcount estimates to be much higher for 2009, with the LBPL headcount ratio measuring at 47.6% and the UBPL headcount ratio at 62.1%. It is concerning that two analyses by Stats SA over the same time period provide different findings from one another by 8.7 percentage points for the LBPL headcount ratio and the UBPL headcount ratio by 9.8 percentage points, posing a much greater issue than this dissertation can solve. Despite this however, Stats SA (2017) is still used for comparison as it is the only report which covers poverty across the same time period as this dissertation. Recovery was observed in the Stats SA (2017) measures of poverty in 2011, whereby the LBPL headcount ratio was found to be 36.4% and the UBPL headcount ratio at 53.2%, which is more aligned with Table 17's estimate for 2012.

Increases in poverty were observed again by 2015, whereby Stats SA (2017) found the headcounts ratios for the LBPL at 40.0% and the UBPL at 55.5%. Similarly to the discrepancy observed in 2009, the estimates in Table 17 are substantially lower than those reported by Stats SA, though the trend observed is similar, where an increase in poverty levels is also observed in 2015. From these figures, there is an indication that households which are close to but not under the poverty line

are the ones which bear the brunt of economic pressures during volatile periods, such as 2011 to 2015, and end up falling into poverty as a consequence.

Pillay (2023) provides an estimate for 2015 which is lower than the estimates in Table 17 and significantly lower than those in Stats SA (2017). They found the LBPL to be approximately 33% and the UBPL is found to be approximately 44%. Similarly to Table 17's estimates, Pillay (2023) finds a substantial increase in poverty by 2019, with the LBPL and UBPL measuring at approximately 30% and 40% respectively.

To further compare the overall trends observed in the poverty headcount ratios in Table 17, the estimates of Zizzamia et al. (2019) are assessed, which uses data from all five waves of NIDS spanning from 2008 to 2017. The authors also note that there are some discrepancies between their results and those reported by Stats SA (2017) as a result of the later rounds of NIDS being less nationally representative than earlier rounds. Assessing their measurements of upper-bound poverty, it is seen that their poverty estimates are much higher than those in Table 17. Zizzamia et al.'s (2019) estimate for the 2008 headcount is 61.96%, almost 9% higher than Table 17's estimate for 2009. This continues to be the case for 2012, as Zizzamia et al. (2019) found the headcount to be 63.8%, which is almost 12% higher than Table 17's estimate. They also observe a significant decline in poverty in their 2014/15 estimate of 56.9% to their 2017 estimate of 52.2%.

Overall, poverty has remained constantly elevated, with certain high points and low points over the 2009 to 2019 period, making it evident that poverty has remained as one of South Africa's chronic challenges in the post-apartheid era.

Transitioning from examining poverty trends during the decade preceding COVID-19, shifts in 2020 and post 2020 are assessed. An increase in the poverty headcount in 2020, where 58.6% and 45.4% of the population fall below the UBPL and LBPL respectively, a 2.6 percentage point increase from 2019 to 2020 is observed. This is a surprisingly moderate increase given the suddenness of the shifts presented by the pandemic, and skewed results are likely observed in 2020 due to GHS data quality issues previously mentioned.

From 2020 to 2021 and 2022, the picture changes. The headcount ratio demonstrates a significant recovery from the downturn which occurred in 2020. In fact, the impoverished proportion of the population in 2021 (38.5% for the LBPL and 54.5% for the UBPL) was less than in the pre-pandemic period of 2019. From 2020 to 2021, the headcount ratio decreased by 6.9 and 4.1 percentage points for the LBPL and UBPL respectively. The moderate increase in poverty from

2019 to 2020 likely does not reflect what the actual increases were during this period. It has already been established that there were significant data quality issues with the 2020 GHS survey, particularly due to low response rates, which could have affected results.

These results are compared to those produced by Pillay (2023). Their analysis mentions the notable increase in poverty levels from 2019 to 2020, though larger increases than the observations in Table 17 were observed. Lower-bound and upper-bound poverty showed increases of 3.13 percentage points from 30.04% in 2019 to 33.17% in 2020 and 4.15 percentage points from 41.29% in 2019 to 45.44% in 2020. Similar differences were observed in Pillay's (2023) headcount ratio calculations for 2015 to 2018 which were typically lower relative to the calculations in this dissertation. This is attributed to differences in the treatment methods of the GHS data in both analyses, including Pillay's (2023) removal of households reporting zero income where there is an employed individual in the household, as well as their removal of households reporting abnormally high levels of household income (this is detailed in Section 2.8). Despite this, however, it affirms Table 17's findings that Pillay (2023) notes the same trend in the increase in poverty from 2019 to 2020 as this dissertation.

Pillay's (2023) analysis of movements from 2020 to 2021 largely align with the findings of Table 17. This is particularly evident in that both this dissertation and Pillay (2023) report that there was observed stabilisation in the COVID-19 income poverty increase by 2021. Furthermore, both the LBPL and UBPL headcount estimates are also found to have returned to below their pre-pandemic level in 2019 whereby both differed from 2019 estimates by less than one percentage point.

As a result, the question arises of the driving factors of the poverty reduction. The analysis in Chapter 2 points towards social grant policy amendments including the introduction of the Social Relief of Distress (SRD) grant as well as the roll-out of grant 'top-ups' being key contributors to this.

5.2.2 Poverty Gap Ratio

As previously discussed, the poverty gap ratio allows for the evaluation of the depth of poverty, and is calculated as the difference between the income of a person considered poor and the poverty line, over the poverty line (Ravallion, 1992). The poverty gap ratios for the period of 2009 to 2019 are presented in Table 18. It is observed that the depth of poverty has remained largely constant between 2009 and 2015, improves in 2018, and worsens significantly in 2019. Between 2009 and 2012, there is some narrowing of the depth of poverty, and by 2018 there is some indication that

some proportion of those under the poverty line improved their financial position enough to move outside of this bracket entirely. However, by 2019, the increase in the poverty gap tied with the headcount ratio indicates that poverty levels increased to the point where more of the population were in poverty relative to a decade prior in 2009, and that the poor population had shifted even further away from the poverty line making them more poor than they had been in the last decade.

This is concerning, as it is indicative of little to no improvements in poverty in the 2010's, adding to the narrative of "the lost decade" having occurred for South Africa in terms of stagnation in economic growth, unemployment levels, poverty levels and inequality.

Table 18: Poverty Gap Ratio Between 2009 and 2019 According to the Annual General Household Survey

	Poverty Gap Ratio				
	2009	**2012**	**2015**	**2018**	**2019**
R945 (LBPL) per month	19.6	18.9	21	17.4	25.1
R1417 (UBPL) per month	30.4	29.4	30.7	26.9	35.1

Source: Own calculations using the GHS (2019 - 2019). Table shows the gap to the upper-bound and lower-bound poverty lines, poverty lines used are in 2022 prices. Sampling weights are applied to each year.

These results are compared to those produced by Stats SA (2017), as it is the most comparative analysis due to the use of data from the 2005 and 2010 IES and the 2008 and 2015 LCS. The findings for 2009 are largely comparative to Table 18, with the poverty gap ratio for the LBPL and the UBPL being 21.0% and 33.5% respectively. The 2015 output, which they find to be 16.6% and 27.7% also aligns closely with Table 18, affirming that the slight narrowing of the poverty gap which was observed during this period occurred in reality.

While the Stats SA (2017) poverty gap ratio calculations stop at 2015, The findings for 2019 can be compared to those produced by Pillay (2023). Pillay (2023) finds the poverty gap ratio for the LBPL and UBPL to be 17% and 25% respectively. This is much lower than the observations in Table 18. However, as was observed with the headcount ratio calculations produced by Pillay (2023), the output tends to be lower. This can again be attributed to the different treatment methods of GHS data by Pillay (2023) and this dissertation.

Unemployment has already been identified as a key driver of poverty, and consequently, income from the labour market plays a crucial role in whether a household will incur poverty (Leibbrandt and Finn, 2017). Stats SA (2024) points out that nationally using GHS data, the incidence of

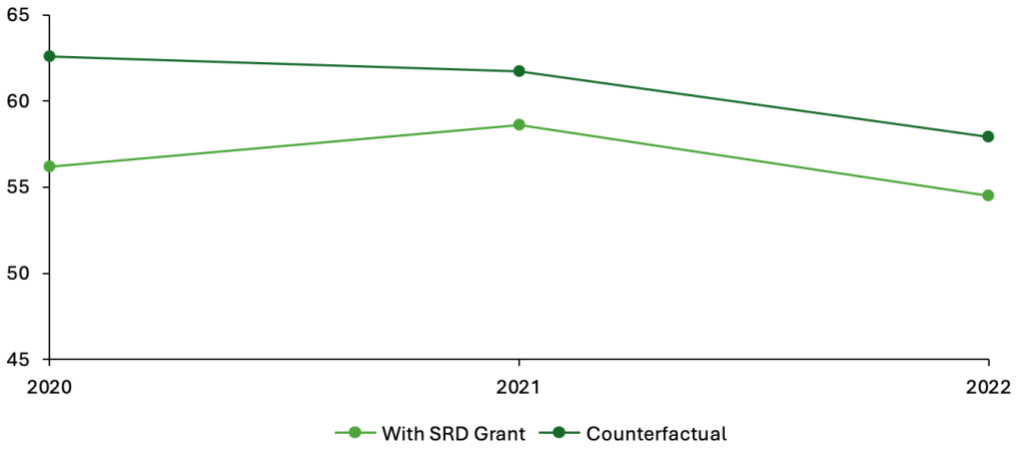
poverty by employment status indicates that households where no members are employed display higher poverty levels (40.9% in 2019) than households in which at least one member is employed (20% in 2019). This high level of poverty in unemployed households in 2019 could serve as an indicator of the elevated poverty gap levels observed in Table 18 for 2019.

5.3 How did the SRD grant alleviate poverty during COVID-19?

As previously discussed, the implementation of the Social Relief of Distress (SRD) grant was aimed at combatting the detrimental effects of the pandemic and subsequent lockdowns on those in need who were not previously reached by any other social grants. This was particularly important for those who had lost their jobs due to COVID-19 (Jain et al., 2020).

One potential contributing factor to the dramatic recovery in the poverty headcount ratio from 2020 to 2021 could be the continued distribution of the SRD grant, which was estimated to have reached 5.2 million individuals directly and 11.3 million individuals indirectly from its introduction in May 2020 until October 2020 (Köhler and Bhorat, 2021). To measure its impact, Figure 2 establishes the headcount ratio for 2020, 2021, and 2022 alongside a counterfactual scenario in which no SRD grants are distributed. This was calculated by adding the total income received from the SRD grant per household, subtracting this figure from the total household income, and dividing by the number of people in the household to determine the per capita income value without the SRD. However, given the scale of the observed changes and the known limitations of the 2020 and 2021 GHS data, including reduced sample size, telephonic collection, and compositional shifts in the reinterviewed households, it is likely that underlying data quality issues account for a substantial portion of the measured recovery. While the SRD grant may have played a role in mitigating poverty during this period, the magnitude of the recovery should therefore be interpreted with caution, recognising that it may partly reflect measurement artefacts rather than solely real improvements in welfare.

Figure 2: UBPL Headcount Ratios with SRD Grant Counterfactual



Source: Own calculations using the GHS (2020 - 2022). Figure shows the proportion of the population poverty with the SRD grant and if the SRD grant was not implemented (counterfactual) as per the upper-bound poverty line, poverty line used is in 2022 prices at R1417.

From the graph above, it can be seen that removing the SRD grant results in an increase in the poverty headcount ratio by approximately 2 to 3 percentage points. While there is an observable effect on overall poverty levels, it is not significant. Jain et al. (2020) conduct a similar exercise, but rather assesses the effects of the SRD grant on poverty reduction by income decile relative to a no-SRD counterfactual scenario for 2020. Their findings indicate that the SRD played a significant role in reducing poverty amongst the poorest adults – making a difference of approximately 2 percentage points. There is some similarity in the overall trend in their findings and in Figure 2 in this regard.

The question therefore arises of what is the main source of the significant improvement in poverty levels in 2021 relative to 2019 if not the SRD grant; the relevant literature points to the expansion of South Africa's social assistance program via top-ups of all preexisting grants (except for the Child Support Grant (CSG) which was increased by R300, or 68% per grant for May 2020 and R500 per caregiver from June 2020 onward) by R250, or 13% for all grants except for the Foster Care Grant, which equates to a relative increase of 24%, from May to October 2020 being the primary driver of this (Bhorat & Köhler, 2021; Pillay, 2023). It is important to note that grant top-ups were therefore only in place for six months. Bhorat et al. (2020) also note that while the introduction of the SRD grant resulted in a significant expansion of grant coverage, the top-ups to existing grants significantly benefits those already in the grant system.

Pillay (2023) presents an important analysis on the impact of top-ups on poverty levels, finding that these top-ups both cushioned the COVID-19-related increase in poverty and reduced extreme

poverty to levels below those observed pre-pandemic in 2019. Table 19 below reflects this dynamic and illustrates the effect of grant top-ups on poverty outcomes. For the counterfactual, the number of grants received by an individual in 2020 was determined, the value of top-ups for each grant type was subtracted, and the poverty headcount was recalculated. It is observed that poverty increases without the top-ups by approximately 4 percentage points for both the LBPL and UBPL. As Pillay (2023) notes, it was the combination of the COVID-19 grant top-ups alongside the SRD grant and. not the SRD alone that supported the recovery in poverty levels during 2020. Interestingly, Table 19 shows that poverty decreased further in 2021 compared to 2020, even though the grant top-ups were no longer in place. This finding is unexpected, as one might anticipate a rise in poverty following the withdrawal of the top-ups. The observed decrease is therefore could also reflect data limitations within the 2020 GHS which have been previously highlighted rather than a sustained improvement in poverty outcomes driven by social grants.

Table 19: Actual Poverty Headcount Compared to Counterfactual Headcount (no top-ups) for 2020

	2020 Poverty Headcount		2021 Poverty Headcount
	Actual	**Counterfactual** *(no top-ups)*	**Actual**
R995 (LBPL) per month	45.4	49.7	38.5
R1417 (UBPL) per month	58.6	61.4	54.5

Source: Own calculations using the GHS (2020). Table shows the proportion of the population poverty with social grant top-ups and without top-ups (counterfactual) as per the upper-bound and lower-bound poverty lines, poverty lines used are in 2022 prices. Sampling weights for 2020 and 2021 are used.

5.4 Poverty Decomposition by Population Group

In order to develop a better picture of how poverty has affected different population groups over time, it is valuable to assess the gap to poverty at a population group level in addition to a country level as has been done in Section 5.2. Table 20 therefore decomposes poverty by population groups, providing insight into how poverty has manifested across different racial groups in light of the COVID-19 pandemic and prior to the pandemic. What immediately comes to the forefront is the overabundant representation of the African population group in the headcount and poverty gap ratios. This reflects a higher incidence of poverty in the African group relative to other populations, as well as more severe level of poverty for impacted individuals and households. Assessing this in 2019, we see that 36.6% of Africans were below the UBPL, which increased to

37.1% by 2020. These numbers reflect the disproportionate level of inequities faced by the African population which was only exacerbated by the onset of the pandemic. Despite this, the average poverty gap ratio for Africans has decreased year on year since 2020 to levels less than those in 2019. This indicates that in the recovery of the pandemic, the depth of poverty has decreased on average for the population, likely because those on the cusp of the poverty line prior to COVID were pushed into poverty, but not to such extreme levels of poverty as those who are chronically impoverished. It is also worth noting the abnormally large increase in the poverty gap ratio for Africans between 2018 and 2019. There does not appear to be any reason for this occurrence, and is likely an outlying set of results.

Table 20: Poverty Gap Ratio by Population Group According to the General Household Survey

	Poverty Gap Ratios by Population Group							
	2009	**2012**	**2015**	**2018**	**2019**	**2020**	**2021**	**2022**
R945 (2022) per month								
African	22.42	21.8	23.74	19.68	26.48	27.87	19.79	18.67
Coloured	10.39	11.53	12.64	8.93	10.72	11.32	8.6	9.65
Indian	2.55	4.27	4.2	3.17	4.49	12.56	1.7	4.19
White	1.42	0.91	2.98	0.57	3.28	12.2	1.34	2.11
R1417 (2022) per month								
African	34.51	33.7	34.59	29.16	36.56	37.14	32	30.41
Coloured	17.88	19.23	20.44	14.46	13.45	17.46	14.48	17.05
Indian	4.96	6.83	6.58	5.76	8.58	17.5	3.91	6.67
White	2.51	1.7	3.67	1.43	4.17	14.78	1.85	2.99

Source: Own calculations using the GHS (2019 - 2022). Table shows the gap to the upper-bound and lower-bound poverty lines for each population group, poverty lines used are in 2022 prices. Sampling weights are applied to each year.

In 2020, the African population encounters substantially heightened depth in poverty due to the pandemic and while the poverty headcount does decrease gradually, it does not return substantially below pre-COVID levels in 2021 as it does for the other population groups. While more affluent populations have better access to stable employment, healthcare and education opportunities, the systemic barriers to these entities have exacerbated the vulnerabilities of Africans in the post-

COVID landscape. The slower rate of recovery indicates that Africans will face prolonged economic difficulties, with long-term ramifications for intergenerational poverty and social inequality. It therefore becomes evident that the role of social grant 'top-ups' and the SRD grants has played a pivotal role in minimising detrimental effects of the pandemic, as the severity of the poverty gap ratios for the African population would likely be more extreme if these measures were not in place in 2020.

In terms of the Coloured, Indian and White population groups, while there was some strain placed in terms of the gap to the poverty line in 2020 to 2019, it is nowhere as extreme as was endured by the African population. Furthermore, recovery in the depth of poverty to pre-COVID levels (2019) was observed for all groups in 2021.

Chapter 5 discussed the state of poverty levels across the 2009 to 2022 period. Overall, it can be said that poverty levels in South Africa over this period remained persistent with limited improvement, making it one of South Africa's most chronic challenges. The poverty gap ratio increased across the 2009 to 2019 to a point where the gap to the poverty line was 35 percent in 2019. This has been particularly aggravated for the Black African population. The severe poverty gap indicates the severity of the poverty that households have faced. However, the COVID-19 pandemic brought on a new dimension to poverty in South Africa, firstly by moderately increasing poverty levels in 2020 but then surprisingly recovering to lower than pre-pandemic levels in 2021. While it first appears as though the introduction of the SRD grant may have been the sole reason for this, particularly as it tapped into a large proportion of South Africa's population who were unreached by grants, this is not the full picture. Upon further investigation, it becomes clear that the initiation of grant 'top-ups' across all grants issued during the height of the pandemic in 2020 was a key contributor towards this. The question of the role of social grants in alleviating poverty is therefore a key aspect in making long-term changes to the extreme levels of poverty faced in South Africa. Despite these findings, it is important to interpret results with caution due to the data quality issues present within the 2020 and 2021 GHS datasets.

Chapter 6: Conclusion

South Africa's tumultuous history has shaped the landscape of poverty and inequality which continues to persist thirty years after the end of apartheid. It is evident that both poverty and inequality has remained chronic throughout the 2010s. However, the onset of the COVID-19 pandemic shifted the dynamic in the short-term, whereby the average national household income dropped by 20% between 2019 and 2020 and the poverty headcount ratio at the LBPL increased by 3 percentage points. The GHS dataset was particularly suitable for understanding the dynamics of poverty and inequality over the 2009 to 2019 period, despite the fact that it has not been previously used to do this in other research. While there are detailed studies on the movements of poverty and inequality from 1993 to the second half of the 2010's, there have been few studies after the mid 2010's, as there have been no new IES and LCS surveys. The exceptions to this are Pillay (2023) and this dissertation, which have both utilised GHS data. Therefore, the findings of this dissertation are particularly relevant and important. However, results in the COVID-19 era are less reliable given the limitations in the data collection in 2020 and 2021 which likely led to skewed results. More reliable estimates are observed again in 2022, attributed to the higher response rates which occurred relative to 2020 and 2021.

Movements in inequality across the fourteen year period of interest indicate the following trends: South Africa's Gini coefficient has remained well above the global average, with little deviations from the average of 0.66. This stands as testament to the lack of measures that have been effective in addressing the vast level of inequality that persists in the country. This is observed when income is decomposed by population groups, where it is observed that Black Africans continue to experience the lowest level of median household income per capita, the most disparity in income relative to the White population, and have had an increasing contribution to the population share of the 1st decile by income from 2009 to 2022. Furthermore, the analysis indicates that there is an increasing share of within-group inequality relative to between-group inequality, and so the disparity within population groups is the largest contributor to overall inequality levels.

The onset of the COVID-19 pandemic led to additional challenges in addressing already high levels of poverty and inequality in the country. The contribution of labour market income to total household income has significantly declined from 2015 to 2022. Lay-offs, business closures and lockdown restrictions of the pandemic which impacted employment are the likely cause of this. As a result, the importance of social grants as a source of household income has increased, particularly in the post-COVID era.

Poverty has remained persistent with limited improvement across 2009 to 2022. The gap to the poverty line has been increasing over the 2010's, indicating that the depth of poverty has become more severe over time. This was particularly evident for the African population. The impact of COVID-19 increased these effects, with the poverty gap ratio and poverty headcount ratio increasing for both poverty lines both nationally and across population groups.

The findings presented provide partial support for the hypothesis that the COVID-19 pandemic and related grant interventions shaped poverty and inequality outcomes in South Africa. In particular, the sharp fluctuations in poverty headcounts and inequality measures during 2020 and 2021 align with expectations of pandemic-related disruption, while the cushioning effect of grant top-ups and the SRD grant is evident in both absolute poverty rates and the distributional analysis. At the same time, the results also highlight the importance of data quality concerns, which complicate a definitive assessment of the pandemic's impact. The descriptive focus of this dissertation thus serves as a foundation for future research to test this hypothesis more rigorously using alternative datasets and methodologies better suited for causal analysis.

While the patterns observed in poverty and inequality over the 2009–2022 period are interpreted primarily through changes in income distribution and the potential effects of the COVID-19 pandemic, other factors may also have contributed to the observed trends. Changes in household size and composition can influence per capita income measures, with smaller households typically reporting higher per capita incomes even when total resources remain unchanged. Spatial disparities, including differences in access to services, employment opportunities, and infrastructure between urban and rural areas, may also shape income distribution patterns. Furthermore, data quality limitations particularly in the 2020 and 2021 GHS waves, could have amplified or dampened certain trends in ways unrelated to actual economic conditions. While these factors were beyond the scope of the present analysis, they remain important considerations for interpreting the results and for guiding future research.

However, the rise in poverty appeared to be short-lived, as recovery became imminent in 2021 and continued into 2022. In 2021, the poverty headcount was lower than it had been prior to the pandemic in 2019 for both poverty lines. One reason for this could be the rollout of social grants including the SRD and grant 'top-ups', which were found to have played an essential role in decreasing the effects of the pandemic on poverty, though it is important to be mindful of the data quality issues in the GHS in the COVID-19 and post-COVID-19 era. This dissertation concludes

that both poverty and inequality remain as South Africa's most chronic challenges in the post-apartheid era, and into the period following on from the COVID-19 pandemic.

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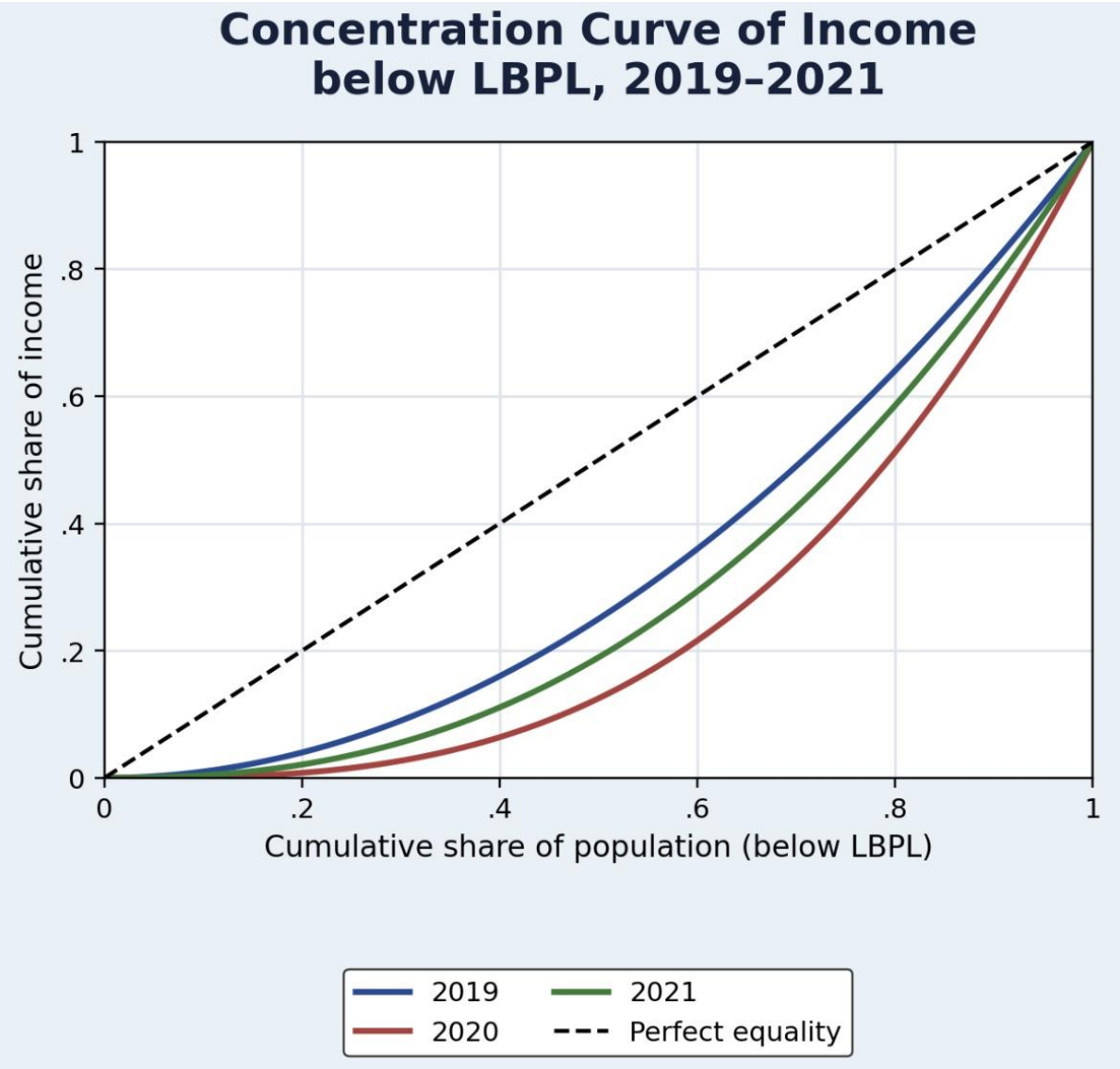
Appendix

Table 21: Sensitivity of Key Welfare Measures to Income-Expenditure Substitution, 2020 and 2021

	2020 Without Substitutions	2020 With Substitutions	2021 Without Substitutions	2021 With Substitutions
Mean Monthly per Capita Household Income				
National	R2,753	R2,836	R3,204.00	R3,330
African	R1,898	R2,177	R1,748.00	R2,198
Coloured	R4,289	R4,393	R3,270.00	R3,439
Indian	R6,982	R6,833	R9,482.00	R9,009
White	R14,986	R14,737	R15,811.00	R16,617
Median Monthly per Capita Household Income				
National	R893	R1,065	R1,021	R1,100
African	R881	R962	R934	R1,000
Coloured	R2,501	R2,316	R1,857	R1,734
Indian	R4,978	R4,817	R6,135	R6,000
White	R11,521	R11,322	R10,342	R10,000
Gini Coefficient				
National	0.63	0.64	0.64	0.65
African	0.67	0.65	0.64	0.62
Coloured	0.56	0.55	0.57	0.56
Indian	0.63	0.64	0.46	0.46
White	0.56	0.58	0.43	0.45
Theil Index				
National	0.83	0.86	0.85	0.88

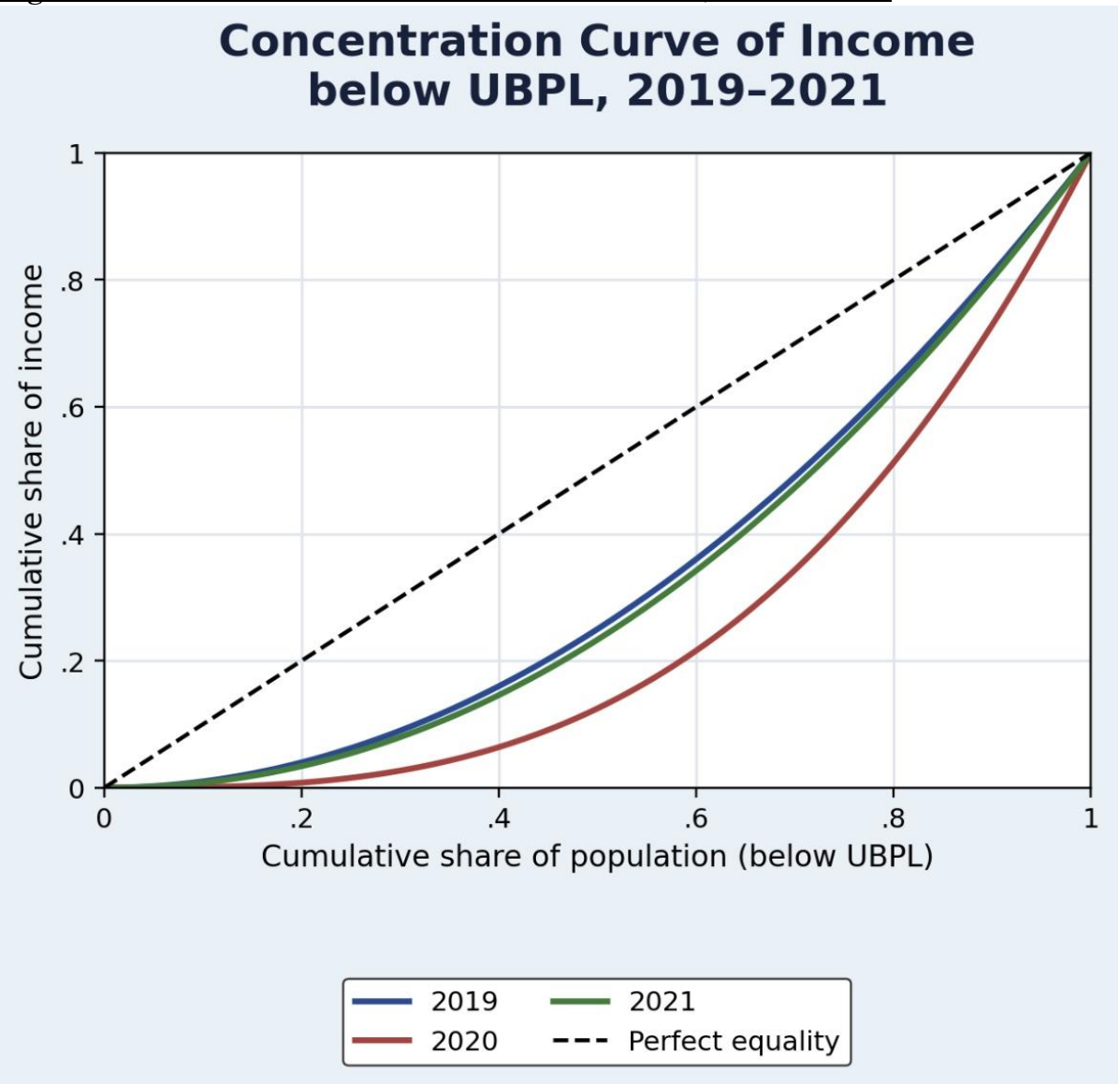
Source: Own calculations using the GHS 2020 and 2021. Table shows key welfare indicators including mean and median per capita income, poverty headcount ratios (upper-bound and lower-bound poverty lines, expressed in 2022 prices), Gini coefficient, Theil's T, and disparity ratios, under alternative income–expenditure substitution rules: **Original substitution rule** – Household income is replaced with reported household expenditure in cases where monthly expenditure exceeds reported monthly income. **No substitution** – Household income values are used as reported, even if expenditure exceeds income.Sampling weights for each survey year are applied.

Figure 3: LBPL Concentration curve of income for 2019, 2020 and 2021



Source: Own calculations using the GHS (2019–2021). Figures show concentration curves for the distribution of per capita household income relative to the lower-bound poverty line (LBPL), expressed in 2022 prices. Curves plot the cumulative share of income against the cumulative share of the population ranked by per capita income, with deviations from the 45-degree line indicating inequality. Sampling weights for each survey year are applied.

Figure 4: UBPL Concentration curve of income for 2019, 2020 and 2021



Source: Own calculations using the GHS (2019–2021). Figures show concentration curves for the distribution of per capita household income relative to the upper-bound poverty line (UBPL), expressed in 2022 prices. Curves plot the cumulative share of income against the cumulative share of the population ranked by per capita income, with deviations from the 45-degree line indicating inequality. Sampling weights for each survey year are applied. Sampling weights for each survey year are applied.