

The Impact of the BBB-EE Policy Instrument on Wealth Inequality: A Case Study on the Banking Sector of South Africa

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DECLARATION OF ORIGINAL WORK

This page declares that the work produced in this thesis is my own and was conducted whilst completing the degree of Master of Commerce in Economics whilst at Rhodes University. Any work that is not my own has been credited accordingly. This thesis has not been submitted to other universities, technikons or colleges for degree purposes.

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ABSTRACT

It has been recognised that, whether measured in terms of income or wealth, South Africa remains as one of the most unequal societies in the world. Reducing these high levels of inequalities has been an important area of focus through the formulation of policy instruments by South African policy makers. Within a specific focus on the South African banking sector, the objective of this research is to ascertain the extent to which addressing inequalities was in fact achieved through the changing of wealth ownerships under the Broad Based Black Economic Empowerment policy instrument.

To contextualise, the thesis surveys literature on two stylised economic hypotheses on both income and wealth to understand the potential causes of their respective inequalities. An exploration of both income, wealth measurements and their distributions in South Africa are presented, in addition to policy instruments designed to ameliorate income and wealth inequalities in South Africa. The thesis further presents brief case studies from the literature on Brazil's success in reducing its high income inequality and the Malaysian National Economic Policy empowerment program to effect wealth economic transformation, as comparatives to the South African experience.

The thesis findings indicate that contrary to the objectives of the BBB-EE instrument and wealth transfers, the program within the banking sector resulted in highly unequal wealth shares and equally high concentration levels. The richest top one per cent of individuals participating in the BEE transactions in the banking sector captured 79 per cent of the total wealth transfers, this providing indications of extremely high concentrations of wealth. Further, wealth meaningfully cumulates at only the 50 percentage level of the wealth distribution, this additionally suggesting that wealth transfers featured less in the bottom half of the wealth distribution. The banking BBB-

EE wealth Gini coefficient of 0.88 is evidence of the extremely high levels of inequality that resulted from the BBB-EE program within the banking sector.

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Chapter 1: Research Background

1.1 Research Context

Whether measured in terms of income or wealth, South Africa is one of the most unequal societies in the world (Orthofer, 2016). Lucas-Bull (2007) suggested that these extremely high levels of inequalities could primarily be explained by Apartheid policies, which limited Black economic participation through restrictions of property ownership, access to financial capital, equitable wages and the quality of education. However, the widening of South Africa's income and wealth inequalities after democracy (1994), cannot be fully described by factors inherited from Apartheid. An examination of the present-day exacerbation of these inequalities and the limited success of policy instruments designed to reduce these inequalities, forms the basis of this research.

Both wealth and income inequalities are intricately linked (Piketty, 2014). Income allows for the propagation of wealth and wealth propagates capital income, through dividends and interest income streams. Hamann, Khagram and Rohan (2008) suggested that transforming the distribution of wealth in South Africa, is an important component for the long-term sustainability of a functioning society. Mbewe, Woolard and Davis (2019) concluded that the persistent high level of wealth inequality in South Africa, had the potential to undermine social, economic and democratic values.

Earlier, Kuznets (1955) presented one of the first attempts in explaining how inequality evolved. He suggested that income inequality had an inverted U-shape in relation to economic development. Using data from a handful of industrial societies in the 19th and 20th centuries, Kuznets (1955) showed that income inequality initially increased in the early stages of industrial development. This Kuznets (1955) attributed to the abundance of labour in the early stages of

economic development, as rural unskilled labour migrated to industrialised and urbanised cities. The abundance of the unskilled workers displayed a reducing effect on incomes, as the labour force competed for employment. As the industrial development proceeded further, Kuznets (1955) hypothesised that income inequality peaked at a mid-income level and then declined. That is, the urbanisation of the labour force will tend to reduce inequality, through income growths due to more workers joining high-productivity sectors of the economy.

Moran (2005) proclaimed the Kuznets inverted U-shape hypothesis, to be one of the most influential statements made on income inequality and economic development. Habimana (2015) investigated the validity of the Kuznets inverted curve in Sub-Saharan Africa based on a sample of twenty-nine countries, for a period of thirty-two years starting from 1980. He found that income inequality measured by the Gini coefficient, was indeed positively and significantly correlated to the level of development. However, Piketty (2006) attributed the income inequality decline hypothesised by Kuznets (1955) to be the result of negative capital shocks rather than the inevitable consequences of economic development.

Piketty (2014) catapulted the debate on wealth inequality into the public eye with his seminal book 'Capital in the 21st Century'. In the process he shifted the debate from the overall size of wealth, to how wealth is distributed and its possible role in causing income inequality through capital income. Piketty (2014) noted that distributions of both income and wealth had become more unequal over the past two decades, especially with the marked rise of the share accruing to the 'top one per cent'. Suggestively, Piketty (2014) argued that the high levels of income inequality experienced in the Nineteenth Century are re-emerging and that this is not accidental but rather a product of patrimonial capitalism.

A significant contribution to the existing literature on wealth rests with Piketty's (2014) hypothesis, on the relationship between the rate of return on capital r and the rate of economic

growth g . Piketty (2014) argued that, in the long run there was a propensity for the rate of return on capital r to significantly surpass the rate of economic growth g which indicated that inherited wealth was likely to grow much faster than output and income. Piketty (2014) reinforced his assertion by arguing that individuals with patrimonial capital were only required to save a portion of their income from that capital and reinvest most of the returns into capital, this leading to capital growing more rapidly than a country's economic growth. The country's wealth to income ratio tends toward s/g , the ratio of the savings rate to the growth rate. Consequentially, the declining growth rate leads to both a higher wealth ratio and higher wealth inequality, this presuming a constant or rising saving ratio (Piketty, 2014).

Bonnet, Bono, Chapelle, and Wasmer (2014) questioned the relevance of the capital measurement used by Piketty (2014) relating to the model of infinite accumulation of capital, through rising earnings relative to national income, they noted that Piketty (2014) had included housing capital in total capital. Bonnet *et al.*, (2014) argued that housing capital does not provide a good measure of the actual return on capital, as housing is both a consumption good, (the price of which comes from rental or shelter costs) and an investment good (yielding an income corresponding to the rent). Summers (2014) argued that Piketty's (2014) hypothesis of patrimonial capital and the connection to higher wealth inequality was debatable as the single main component of capital in the United States was owner occupied housing. Summers (2014) contended that the returns on housing capital, 'imputed rent' typically are consumed rather than reinvested, since housing capital does not take a financial form. This, Summers (2014) concluded, was not enough to allow the accumulation of returns that was central to Piketty's hypothesis.

Prior to Piketty (2014) little empirical evidence existed on the long-run evolution of aggregate wealth-income and wealth-output ratios. Wealth inequality was previously seldom mentioned in the literature, primarily because of the difficulties in defining and measuring it

(Mbewe and Woolard, 2016). This is changing and wealth inequality is now receiving growing attention both globally and in South Africa. South Africa was the first developing country to publish official balance sheet data, which includes a module on wealth. Using this available data, Orthofer (2016) attempted to recreate Piketty's (2014) capitalisation technique for South Africa, by analysing the long run evolution of private wealth in South Africa. Using both personal income tax data (PIT), with a sample of 1.2 million individual tax records in the 2010/2011 tax year and household surveys datasets (NIDS¹), Orthofer (2016) estimated the combined wealth distribution of South Africa, while adjusting the distribution to take into account the totals in the national accounts.

Orthofer (2016) found the wealthiest 10 per cent of South African earned 55 to 60 per cent of total income and owned 90 to 95 per cent of total wealth in South Africa. The next 40 per cent of the population earned 30 to 35 per cent of total income and owned only five to six per cent of total wealth (Orthofer, 2016). The bottom 50 per cent of South Africans earned approximately 10 per cent of income and have no measurable wealth (Orthofer, 2016). The Gini coefficients in South Africa were measured at 0.7 for income and 0.95 for wealth (Orthofer, 2016). This indicated that wealth inequality in South Africa was significantly more pronounced than income inequality. The World Bank (2018) provided their own South African estimates, indicating that the share of household wealth held by the top 10 per cent was 71 per cent, while the bottom 60 per cent held 7 per cent of net wealth.

Within the international experience, Oxfam (2019) corroborated Alvaredo, Chancel, Piketty, Saez and Zucman (2018) findings that global wealth inequality was extremely high and characteristically displayed a high level of wealth concentration, at the top tail of the global wealth

¹ NIDS. National Income Dynamics Study.

distribution. Oxfam (2019) further found that in 2017, 26 individuals owned the same wealth as 3.8 billion individuals who make up the poorest half of humanity. This was down from 43 people in 2016 (Oxfam, 2019) this indicating an upward trajectory of higher global wealth concentrations. Credit Suisse (2018) similarly provided evidence that the poorest half of global adults collectively owned less than one per cent of the total global wealth, with the top wealth decile owning 85 per cent of total global wealth and the top one per cent owning approximately half of global wealth. Credit Suisse (2018) found that 61 000 South Africans were members of the top one per cent of global wealth holders, with 50 000 South African individuals being United States (US) dollar millionaires.

South Africa's wealth inequality has a racial dimension. As far back as 1994, five per cent of the population, comprising mostly of Whites owned 88 per cent of the national wealth (Hamann *et al.*, 2008). Hamann *et al.*, (2008) argued that for economic transformation to be possible in South Africa, the Black majority needed to own a larger percentage of the economy. Partly to address this, the South African government introduced the Black Economic empowerment (BEE²) policy instrument in the early 1990's. With the premise of giving previously disadvantaged individuals (PDI's³) an improved opportunity to succeed in the economy (Krüger, 2011). Masito (2007) suggested that the BBB-EE (Black Broad Based Economic Empowerment) policy instrument was designed to balance South Africa's economic power by giving Black individuals access to and ownership of economic factors of production.

A prominent feature of the BBB-EE Act of 2003 is the promotion of economic transformation, to enable meaningful Black participation through the substantial change of the

² The BEE Act of 2003, was amended to the BBB-EE Act of 2003. For the purpose of this thesis, BEE and BBB-EE (Broad Based Black Economic Empowerment) will be used interchangeably.

³ PDI's are specifically defined as Black individuals which includes Black, Coloured and Indian/Asian citizens of South Africa (BBB-EE Act of 2003).

'ownership' element. The BBB-EE Act of 2003 defines *'ownership'* as the rights a person would have if they held shares in a Johannesburg Stock Exchange (JSE) listed entity. The definition further, does not require shareholder involvement in the operation of the entity, nor does it inherently necessitate any upskilling of the shareholders. It simply entitles a shareholder to vote on proposed shareholder resolutions and the right to receive dividends (BBB-EE Act 2003). The Amended Financial Services Codes (2017) embedded within the BBB-EE Act, further expands that the policy instrument is a mechanism aimed at *'addressing inequalities'*. This to be accomplished through *'equity ownership targets'* by means of *'sales of shares'* to Black individuals. Therefore, the *'ownership'* component of the BBB-EE policy instrument seeks to bring about a more equal distribution of wealth in South Africa, in the form of the *'sales of shares'* to Black individuals as defined.

Though the BBB-EE Act of 2003 and the embedded Financial Services Codes (2017), do not explicitly mention *'addressing inequality'* in direct reference to *'addressing wealth inequality'* within the banking sector, the *'sale of shares'* to Black individuals through *'equity ownership targets'* is a form of wealth accumulation as *"shares"* is a wealth stock concept, defined as the accumulation of marketable assets by a household (Trotman-Dickenson, 1983). The Financial Services Codes further indicates that the "sector can better play a role in the creation of sustainable *wealth* across a broad base". Since the overarching principle of the BBB-EE Act of 2003, is the promotion of Black *'economic empowerment'* henceforth inferences can be made that *'addressing inequality'* through economic empowerment, can be interpreted as the *'sale of shares'* (wealth stock concept) to Black individuals in the *'addressing inequalities'*⁴ of wealth through economic empowerment.

⁴ Wealth inequality is a composite of overall economic inequality.

Intellidex (2015) calculated that BBB-EE transactions undertaken by the JSE's Top 100 companies since 2004 brought R317 billion in total 'value attributable' to recipients. Value attributable is defined as the 'net assets value'. The 'net assets value' is defined as value accrued to recipients through capital gains or dividends per share on maturity⁵ of the respective BBB-EE transaction. According to Intellidex (2015) BBB-EE transactions in the South African banking sector generated approximately R54 billion of this value attributable. This represents approximately 18 per cent of the total value attributable across all industry sectors within the JSE Top 100 companies. Of key importance to this analysis was the decomposition of the recipients and value attributable relating to the recipients. Intellidex (2015) found a clear distinction between three 'types' of recipients: strategic partners, community schemes and employees schemes, with the total value attributable⁶ allocated to community schemes at 49 per cent, strategic partners at 28 per cent and 23 per cent to employees.

Intellidex (2015) defined strategic partners as Black-owned investment companies or prominent Black individuals, with strategic partners often taking board positions in investee companies. Employees were defined as Employee Share Ownership Schemes (ESOP's) in which Black employees were recipients and community schemes being trusts and/or other forms of non-profit entities (Intellidex, 2015).

The BBB-EE policy instrument has been criticised for largely benefiting only an elite of Black individuals. Bheki (2009) argued that the BBB-EE policy instrument '*strikes the fatal blow against the emergence of Black entrepreneurship, by creating as small class of unproductive but wealthy crony capitalists made up of ANC politicians...who have become strong allies of the economic oligarchy*'. Sartorius and Botha (2008) asserted that the success of the BBB-EE policy

⁵ Maturity, refers to the end of the vested period. That is the day the BBB-EE transaction closed.

⁶ Within the JSE Top 100 companies BBB-EE transactions.

instrument was ambiguous, as while it supposedly led to an increased Black middle class, however the real recipients of the BBB-EE policy instrument were an *elite few*. Southall (2007) noted the importance of prominent Black individuals within the banking BBB-EE transactions. The Standard Bank BBB-EE transaction for example benefited prominent strategic partners, Saki Macozoma and Cyril Ramaphosa, while the ABSA transaction benefited well known figures Tokyo Sexwale and Patrice Motsepe, as their strategic partners. Orthofer (2016) concluded that policies aimed at empowering Black South African's may have in reality disproportionately benefited a 'new economic elite'.

1.2 Objectives of the Research

The research will add to the limited body of knowledge on the subject of wealth and wealth inequality in South Africa. This to be accomplished by evaluating the extent to which *wealth inequality* was *addressed* within the context of the banking sector BBB-EE requirements in South Africa. '*Wealth*' is defined as the '*transfer of wealth*' through the '*sale of shares*' to Black individuals as defined, for this research purpose. Since the banking sector BBB-EE transactions were obligated by the Amended Financial Services Codes (2017) embedded within the BBB-EE Act of 2003, to transfer *wealth* through the '*sale of shares*' to Black individuals in '*addressing inequalities*'. The banking industry was selected as a case study.

The banking sector is also appropriate as a case study because the capital markets play a critical role within the South African economy. In addition, Rajan and Zingales (2001) highlighted that the degree of development in the financial sector acting as an important contributor to economic growth. Monnin and Jokipii (2013) submitted that the banking sector stability appears to be an important driver of Gross Domestic Product (GDP) growth. As indicated, the banking

sector BBB-EE transactions to date, had contributed 18 per cent of value attributable in respect of all sector BBB-EE transactions within the JSE Top 100 (Intellidex, 2015). Consequently, the quantum of the contribution of the banking sector relative to total value attributable across all sectors, provides a window into the workings of the overall BBB-EE policy instrument's mandate of '*addressing inequalities*' in South Africa.

In cognisance of prior studies conducted on wealth inequality and the multifaceted impacts of the BBB-EE policy instrument in South Africa, the research problem is identified as: The Impact of the BBB-EE Policy Instrument on Wealth⁷ Inequality: A Case Study of the Banking Sector of South Africa.

To this end, the following research objectives are identified:

1. Measuring the extent to which BBB-EE within the banking sector benefited mainly a '*small elite*' of Black individuals as defined. This to provide evidence of *wealth* shares and concentration levels.
2. Measuring the '*extent to which the BBB-EE transactions were broad-based*⁸'. This to provide evidence of *inequality* of wealth ('*sale of shares*') across the whole distribution, within the banking sector BBB-EE transactions.
3. Finally, to assess the extent to which the banking sector BBB-EE has achieved its mandate of '*addressing inequalities*' through the calculation of a *banking BBB-EE wealth*⁹ *inequality*

⁷ With '*wealth*' defined as the '*transfer of wealth*' through the '*sale of shares*' within the banking sector BBB-EE transactions.

⁸ Defined by the BBB-EE Act 53 as the increasing of the number of Black people that manage, **own** and control enterprises and productive assets.

⁹ With '*wealth*' defined as the '*transfer of wealth*' through the '*sale of shares*' within the banking sector BBB-EE transactions.

coefficient. This to provide a measure and summary of inequality within the context of the banking sector BBB-EE program.

In recognition of prior studies¹⁰ conducted on BBB-EE, the research objectives aim through empirical analytical techniques (Section 1.3) to quantify the extent to which BBB-EE within the banking industry has in fact benefited a “*elite few*”. Additionally, empirical analytical techniques are applied to quantify the extent to which BBB-EE is “*broad-based*” and to ascertain if ‘*addressing inequalities*’ has been achieved within the banking industry. Concluding, the research objectives aim to add to an existing body of the knowledge on the inner workings of BBB-EE equity transactions, within the banking industry of South Africa, by taking a quantitative approach.

A limitation of this study is that the redistribution of wealth under BBB-EE can address Black (intra-racial) wealth inequality within the context of the banking sector of South Africa, without addressing overall Black inequality in wealth nationally. Since the scope of the thesis is limited to the banking sector of South Africa only, conclusions on overall national wealth inequality cannot be drawn.

1.3 Methods, Procedures and Techniques

The research paradigm is post-positivism or methodological pluralism (Morris *et al.*, 2009). According to Krauss (2005) the post-positivist perspective is that not everything is completely knowable. To be meaningful, it is imperative that the study is representative of the listed banking industry as a whole. To this end, all seven banks¹¹ listed on the JSE (Standard Bank, ABSA, Capitec, Investec, Rand Merchant Holdings, Nedbank and First Rand) were evaluated.

¹⁰ Southall (2007), and Bheki (2009).

¹¹ The banking sector market capitalisation on the JSE, represented approximately 7¹¹ percent (R1.2 trillion) as of 28 February 2019.

There is no single repository of data for the banking BBB-EE transactions of the seven banks. Panel data was collected from the various sources available in the public domain, since the banking sector of South Africa is highly regulated. This allowed for the formation of a novel dataset for analysis. The required data are publicly available from audited annual financial statements (AFS), integrated reports (IR), Stock Exchange News Service announcements (SENS), entity Circulars and other public databases. Secondary data from other research on BBB-EE is also included. All the BBB-EE transactions took place from 2003 to 2011 and there is adequate publicly available information to conduct the research.

The quantitative analysis began with the computation of the net asset value (NAV¹²) of the equity instrument (*'sale of shares'*) at the close of the respective banking BBB-EE transactions. NAV is calculated by obtaining the vested¹³ equity value at the close of the respective BBB-EE transaction and then subtracting the embedded liability¹⁴ of the equity instrument. This allowed for the computation of the intrinsic *wealth* before¹⁵ taxation (per equity instrument). That is, the *wealth* value is calculated the moment the equity instrument became attributable to the recipient, before the respective taxation arrangements.

The three beneficiary 'types'¹⁶ allocations as per Intellidex (2015) were similarly replicated and computed to form the author's novel data, drawn from the publicly available sources. This allowed, firstly, validation of the author's primary computations against the Intellidex's (2015) calculations. Secondly, it enabled additional decomposition of the *'sales of shares'* at Black individual level, across all the three 'types'. The NAV (per equity) multiplied by the number of

¹² The net asset value (NAV), represents the price (VWAP: Volume Weighted Average Price) per equity instrument at the end of vested period (BBB-EE transaction maturity date), less the embedded equity liability.

¹³ Respective banking BBB-EE transaction close date.

¹⁴ The equity liability relates to the funding costs to acquire the equity instrument.

¹⁵ Before tax wealth values used to create uniformity, as individuals, trusts and corporations have different tax treatments.

¹⁶ The Intellidex (2015) types included Strategic Partners, Community Trusts and Employees.

'*sale of shares*' allocated to a Black individual and collated forms the Black population for the dataset.

Literature¹⁷ points to the upper tails of wealth distributions being well approximated by Pareto distributions or power laws. In measuring the extent to which the BBB-EE transactions within the banking sector benefited mainly a '*small elite*', this technique is deployed to estimate the *shares* and the *concentrations* of wealth at the top tail of the Pareto curve.

Whereas the Pareto distribution is selected to model the shares and concentrations at the top tail, the Lorenz curve (Lorenz, 1905) is selected to measure the '*extent to which the BBB-EE transactions were broad-based*'. As, at any point on the Lorenz curve, the percentage of the Black individuals which commands a particular per cent of the wealth, can be assessed, this technique provides evidence on inequality across the *whole* wealth distribution.

The Gini coefficient developed by Gini (1912) provides a representation of inequality through the Lorenz Curve and offers a numerical measure of the overall *extent of inequality* by a single figure. Through this technique, the Gini coefficient is to be used to estimate the *wealth inequality* of the banking sector BBB-EE transactions as a whole.

1.4 Structure of the Thesis

In pursuing the objectives of the research, the remainder of the thesis will be organised in the following manner:

1. Chapter 2 (Literature Review - theory)

¹⁷References include Stiglitz (2018), Atkinson (2007), Piketty (2014) and Zucman (2019).

This chapter surveys literature on two stylised economic hypotheses on inequality. The Kuznets (1955) inverted U-shape curve, describing the relationship between economic development and income inequality, followed by Piketty's (2014) hypothesis of when the return on capital r is greater than the rate of growth g , both the capital to income ratio and wealth inequality will rise. These two stylised economic hypotheses serve to provide the theoretical causes of inequality from their respective vantage observations. The literature review includes a spectrum of views in support and criticism of these two hypotheses.

2. Chapter 3 (Literature Review – applied research)

This chapter explores income inequality in South Africa through the examination of recent literature, to determine the nature and causes of income inequality. Further, policy instruments designed and implemented to reduce income inequality in South Africa are discussed. As the chapter surveys income inequality, the linkage between income inequality and wealth inequality is introduced. This is important since income allows for the formation of wealth and wealth propagates income through capital income. The chapter further provides a brief comparison of Brazil's experience in reducing its high income inequality from the period 1993 to 2015, as a comparative to South Africa's continued high income inequality.

3. Chapter 4 (Literature Review – policies to reduce inequality)

This chapter surveys wealth inequality within the global experience and within South Africa. This is achieved by evaluating recent literature on distributions and concentrations of wealth. The BBB-EE policy instrument to address wealth inequality in South Africa is introduced. The chapter further provides a brief overview of the Malaysian NEP wealth transfer program in addressing wealth disparities. This to serve as a comparative to South Africa's BBB-EE program.

4. Chapter 5 (Research Methodology and Techniques)

This chapter describes the research methodology and techniques employed for the study. The chapter highlights the key aspects of the methodology (for example, data collection and analysis) and the interlinkages of the methods and techniques selected.

5. Chapter 6 (Research Findings)

This chapter presents and interprets the data. It reports on the findings and provides a critical analysis of the observations by examining their implications within the context of the research objectives.

6. Chapter 7 (Conclusions)

Finally, this chapter serves to provide a synoptic overview of the research objectives and concluding remarks. It makes policy recommendations and identifies areas of possible future research in addressing wealth inequality in South Africa.

1.5 Conclusion

This chapter has served as an overview of the research study. It introduced the essence of the study through the presentation of the problem statement and outlined the quantitative focus for this research. It additionally highlighted the potential benefits as well as the limitations of the study and provided the structural outline of the research study.

The next chapter surveys literature on two stylised economic hypotheses on inequality, this to provide the theoretical causes of inequality from their respective vantage points. The literature review includes a spectrum of views in support and criticism of these two hypotheses.

Chapter 2: Literature Review

Concepts and Measurements of Inequality and Wealth

2.1 Introduction

One of the most stylised economic hypothesis is the Kuznets inverted U-shape curve. Late 1954, Simon Kuznets gave a bold address to the American Economic Association Congress (AEAC) and argued that as countries developed, income inequality first increased, peaked and then decreased. Until then, the subject of inequality had largely been unstudied due to insufficient data to produce homogenous distribution series, covering a reasonable amount of time.

This seminal contribution received significant attention and the empirical validity of the Kuznets inverted U-shape curve has been extensively tested, albeit with mixed results (for example; Fields (2002), Barro (2000), Habimana (2015) and Acemoglu and Robinson, (2002)). Decades later, Thomas Piketty published *Capital in the 21st Century* (2014) in which he claimed that rising inequality was the inevitable consequence of wealth accumulation under capitalism. This claim prompted a broad, energetic debate on inequality and placed the importance of wealth into the epicentre of inequality studies. It also shifted the debate from the overall size of national wealth, to how wealth is distributed.

These seminal contributions of the Kuznets inverted U-shape curve (Kuznets, 1955) and Piketty's model on wealth equality (Piketty, 2014) are pioneering in their efforts. In the sections

that proceed, these two highly stylised theories on inequality and their respective explanations of the causes of inequality are explored.

2.2 Historical Concepts and Measurements of Income Inequality

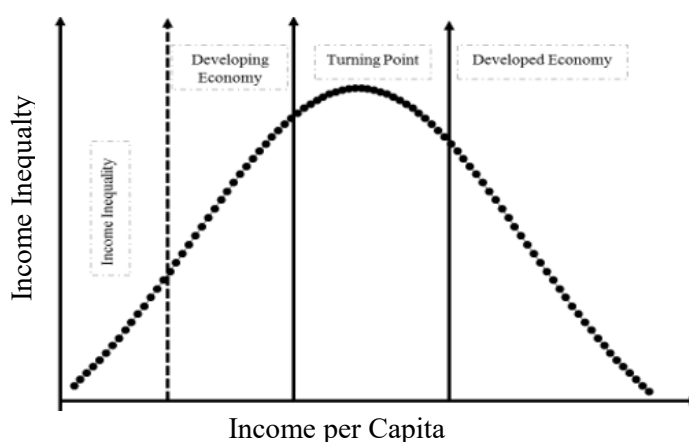
Contemporary data collection on the distribution of income began in the 1950's with the efforts of Kuznets (1955). Having established the first national times series for the US based on federal tax returns of 1913, Kuznets (1955) evaluated the influence of economic development on income inequality. Supplementary data was used on income distributions and economic growth of two other developed countries, namely, the United Kingdom and two states within Germany (Kuznets, 1955). Based on this cross-sectional data, Kuznets (1955) described the relationship of income inequality and the economic development of these three economies, by suggested that over a period starting from the beginning of the First World War 1, income inequality initially increased (although at different rates), with the share of the national income of poor individuals decreasing and conversely the share at the top of the distribution (the richer individuals) increasing (Kuznets, 1955).

Kuznets (1955) identified the emergence of industrialisation as the key economic mechanism explaining the influence of economic development on income inequality. This Kuznets (1955) suggested was a period in which households began to migrate from a low-wage agricultural sector to a higher-wage industrial sector, which culminated in individual incomes initially decreasing (Kuznets, 1955) and inequality rising. Kuznets (1955) further hypothesised that income inequality was expected to peak at the turning point when a certain level of average income was attained, as the process associated with industrialisation became more widespread. At the turning point in the development process, a society benefits from the trickle-down economic effects

through the increase in per capita income of those employed in the industrial sector (Kuznets, 1955). Once the majority of labour has moved into the industrial sector and are earning higher incomes, a smaller population of labour remains within the agricultural sector and inequality falls (Kuznets, 1955).

Kuznets' (1955) hypothesis of the relationship between economic development and income inequality was illustrated by an inverted U-shape curve explaining this relationship (See Figure 2.1). The inverted U-shape graphs income inequality against income per capita, throughout the development process¹⁸ (presumed to correlate with time). Figure 2.1 provides an illustration of the Kuznets U-shape Curve.

Figure 2. 1: Schematic Representation of the Kuznets Inverted U-shape Curve



Source: Kuznets (1955)

Kuznets' (1955) hypothesis has been tested to verify the existence of the inverted U-shape curve connecting the relationship between economic development and income inequality. Barro (2000) indicated that the movement from agricultural to industrial sectors described by Kuznets

¹⁸ Kuznets (1955) defined the development process as the movement from the agriculture sector to the industrial sector.

(1955) could also be represented as a shift from a financially unsophisticated system to a modern financial system or by a shift from an old technology to a recent or more advanced technology. Habimana (2015) investigated the validity of the Kuznets hypothesis within the context of Sub-Saharan African (SSA) countries and concluded that inequality as measured by the Gini coefficient was positively and significantly related to the level of development, as measured by per capita income. Habimana (2015) further suggested that SSA countries were still on the upward segment of the Kuznets inverted U-shape curve and found South Africa to display high levels of income inequality based on the Kuznets inverted U-curve hypothesis.

The Kuznets inverted U-curve became one of the most renowned studies on the correlation between economic development and income inequality. However, by the early 1980's, the Kuznets hypothesis was increasingly losing favour. Fields (2002) contended that cross-sectional studies were not an appropriate manner to assess the effects of economic growth on income inequality. Rather, within-country economic changes and income inequality should be evaluated over time (Fields, 2002). Acemoglu and Robinson (2002) maintained that while the Kuznets hypothesis explained the developmental experience of European economies, it failed to explain the lack of falling inequality in Latin American countries. Piketty (2006) argued that Kuznets' (1955) choice of the economic mechanism proposed was 'incidental' and not evolutionary in nature, as the required data to identify the economic mechanism was limited in nature at that time.

Of significance Piketty (2006) developed an updated Kuznets inverted U-shape curve, for a one-hundred-year period from 1910 to 2010 and found that the distribution of national income in the US initially followed the pattern depicted by the Kuznets inverted U-shape curve. The income shares of the top income decile rose, then declined from the 1920's until the end of the Second World War and levelled out until the early 1980's. Piketty (2006) found that starting from

the 1980's when deregulation and privatisation policies were effected, the share of the top income decile increased dramatically, resulting in a S-shape curve. Piketty (2006) suggested that the inequality declines were due to negative capital shocks, rather than the migration process as proposed by Kuznets (1955).

Though the Kuznets inverted U-shape curve has lost favour in contemporary economic theory on inequality, the hypothesis did however demonstrate the importance of improved economic measurements, through the pioneering adoption of the first-time series data and cross-sectional data collections. These were used to explain the economic mechanism causing income inequality. The Kuznets' inverted U-shape curve however depicted the reality at a particular period of time.

2.3 Concepts and Measurements of Wealth

In its simplest form, wealth is defined as the accumulation of marketable assets by households, either through savings or through the preservation of intergenerational transfers (Trotman-Dickenson, 1983). In contrast to income, which is a flow concept, wealth is a stock concept measured at a fixed point in time. Although wealth in the standard literature often takes the form of financial and non-financial assets, it can also be assumed to include forms of social, cultural, and human capital (Putnam, 2000).

The nature of wealth is dependent on the definition that is adopted. Wealth could in principle be taken to refer to one specific type of asset or group of assets. However, for most purposes, the standard wealth concept that is considered relevant for empirical analysis is net wealth (Cowell and Kern, 2015) expressed as:

$$\text{Net Wealth} = \sum_{i=1}^k \varphi_i \text{Assets}_i - \text{Liability}_i \quad (2.1)$$

Where $\text{Asset} \geq 0$ is the quantity held of asset type i , while φ_i is the price associated with Assets_i . With the Liability_i concomitant to the Assets_i . In certain cases, net wealth tends to be negative, highlighting the link between gross assets and gross liabilities. This link, as well as the link between gross savings and credit requires careful consideration when making any analysis about wealth (Daniels, Finn and Musundwa, 2014). This is different to income, which is usually assumed in the literature to be non-negative (Leibbrandt, Woolard, Finn and Argent. (2010).

2.4 Contemporary Concepts and Measurements of Wealth Inequality

The evidence on the high levels of income inequality in most OECD (Organisation for Economic Co-Operation and Development) countries in recent decades, has attracted much attention from policy makers. This has been substantiated by a large volume of studies on the changes in income inequality. However, until recently, there was less evidence on the inequality of the distribution of household wealth, both within-and-between countries. This rapidly changed in part due to Thomas Piketty's book *Capital in the 21st Century* (2014).

The recognised importance of understanding wealth inequality has resulted in the OECD collecting new data on the distribution of household wealth for the 35 OECD¹⁹ countries, as of 2019. Traditionally, the primary method to measure inequality have been in the form of household

¹⁹ This is known as the OECD Wealth Distribution Database. The 35 countries with household wealth surveys, represent an estimated of two-thirds of the global population and 95 percent of the world's household wealth.

surveys. Anthony Atkinson²⁰, Emmanuel Saez²¹ and Thomas Piketty²², enhanced evidence from household surveys with the merger of tax records to develop new national accounts statistics and examined the long run evolutions of the historical data distribution series (Atkinson, Piketty and Saez, 2011). This data was complemented with the use of micro data, such as the share of national income of the top ‘one per cent’ to estimate new measures on income and wealth concentrations, as far back as the early Twentieth Century.

From the new data distribution series, Piketty (2014) presented an economic model which aimed to provide a new theoretical framework, explaining the underlying mechanisms driving the distributions and concentrations of both income and wealth. The following section outlines the Piketty Model on Wealth Inequality.

2.4.1 Piketty’s Model on Wealth Inequality

Piketty’s (2014) model begins with the link between the stock of capital K ²³ and the flow of income Y . The ratio between the capital K and annual income Y (capital to income ratio²⁴), Piketty (2014) found for the past thirty years, was on the increase and reaching values close to the Twentieth Century. The significance of an increasing capital to income ratio β , becomes salient when combined with Piketty’s (2014) first fundamental law of capitalism, which states that the share of capital incomes in total national income α is equal to the real return on capital r multiplied by β . Piketty (2014) suggested that if the rate of return on capital r remains permanently above the rate

²⁰ The late Anthony Atkinson was Professor of Economics at Oxford University.

²¹ Emmanuel Saez is Professor of Economics at the University of California, Berkeley.

²² Thomas Piketty is Professor of Economics at the Paris School of Economics.

²³ The stock of capital K is inclusive of all form of explicit and implicit return-bearing assets which include housing, machinery, financial capital in the form of cash, bonds and shares, and intellectual property (Piketty, 2014).

²⁴ A high ratio indicates that most of the national income goes to individuals that possess assets that yield income.

of growth of the economy g , this results in an inequality relationship of $r > g$, then α increases by definition. This, combined with the increasing β , drives the share of capital K in the national income α , arbitrarily close to one (Piketty, 2014). Piketty (2014) indicated that the process has a positive feedback loop, as α increases, capital owners become richer, except if they consume the entire return from their capital r , if not, more return on capital remain for them to reinvest. The increased saving from the reinvestment in turn allows the growth rate of capital r to further exceed the growth rate of national income g (wealth inequality) and raises β (capital to income ratio) (Piketty, 2014). Henceforth, not only does higher β lead to higher α but higher α leads to higher β (Piketty, 2014). Piketty expressed this inequality as:

$$\text{Inequality} = r > g \quad (2.2)$$

Where r stands for the average annual rate of return on capital, including profits, dividends, interests, rents and other income from capital, expressed as a percentage of its total value and g stands for the rate of growth of the economy, that is, the annual increase in income or output. In support of the hypothesis that r is greater than g , historical data on inheritance flows was presented as national level variables, to highlight the importance of inherited wealth (patrimonial capitalism) in an economy (Piketty, 2014).

Piketty (2014) argued that, in the long run there is a propensity for the rate of return on capital r to significantly exceed the rate of economic growth g , indicating that inherited wealth is likely to grow much faster than output and income. That is, a country will present high levels of inherited flows when the stock of capital is significant under conditions of high mortality rates, when those that pass on, own significantly more capital than those who are living (Piketty, 2014).

By observing inherited wealth flows in France for the studied period²⁵, Piketty (2014) suggested that inherited levels were initially high, decreasing substantially during the mid-Twentieth Century and then increasing again. This later resurgence Piketty (2014) attributed to the increase in the capital to income ratio and the increase in the ratio of the average capital of the deceased, versus the average capital of the living. Significantly, Piketty (2014) suggested that the identified rising inheritance flows were the foremost evidence in support of his model on inequality.

It follows that a higher gap between r and g , is likely to lead to higher levels of wealth concentration under these conditions. Illustratively, if r is 10 per cent, and g , is one per cent, wealthy capital holders would only need to reinvest one-tenth of their capital income to ensure that their wealth grows as fast as economic growth.

2.4.2 Criticism of Capital in the Twenty First Century

Although Piketty's (2014) contributions have been praised²⁶ for his pioneering long-run and cross-sectional analysis of data, theoretical approach and for igniting the debate on inequality by centring the importance of wealth, Piketty's *Capital in the 21st Century* (2014) was not without criticism. The purpose of the commentary below is not to catalogue each criticism levelled, but to provide insights into some of the key assumptions within *Capital in the 21st Century* (Piketty, 2014) which have been criticised.

Potter (2014) argued that Piketty's inequality analysis was largely based on data from tax returns, which Piketty (2014) had suggested enabled better analysis of the top incomes over time, as household surveys could not measure the highest incomes correctly and covered much shorter

²⁵ Comparable patterns were further observed elsewhere in Europe.

²⁶ For example, Krugman (2017), Solow (2017) and Goldhammer (2017).

periods than tax data (Piketty, 2014). Potter (2014) found the use of tax returns to be problematic as, firstly, income from support benefits and grants were omitted; secondly, capital gains were incorrectly measured; and thirdly, omissions of non-taxable income occurred, meaning income measures became sensitive to the definition of taxable income (Potter, 2014). Homburg (2015) criticised Piketty (2014) for equating wealth with capital and argued that wealth does not only embrace capital goods in the sense of the means of production, but it is inclusive also of land and other natural resources. Homburg (2015) suggested that Piketty's (2014) observed increases in the capital to income ratios was reflective of rising land prices and not necessarily an accumulation of machinery, as Piketty (2014) had claimed.

Milanovic (2017) indicated that Piketty's (2014) findings were primarily based on western countries. However, when the $r > g$ equation was applied to emerging countries, this yielded different outcomes. Milanovic (2017) suggested that given that emerging countries traditionally have lower levels of capital stock therefore emerging markets offer higher returns, thus pushing r up. This contradicting Piketty's (2014) claim of the stability of r .

Nielsen (2017) noted the role of fertility in mitigating or exacerbating the dynastic accumulation or possible dilution of wealth across generations. High fertility rates tended to dissipate wealth more rapidly, as inheritances are distributed amongst numerous heirs (Nielsen, 2017). Although Piketty (2014) acknowledged the importance of fertility, Piketty (2014) did not provide a plausible conclusion on the relationship between fertility and its dilution effects on inherited wealth. Summers (2014) criticised Piketty for underestimating the importance of diminishing returns on capital which Summers (2014) believed would offset the return on capital and hence set an upper limit to inequality. Summers (2014) further challenged Piketty's (2014) claim on inherited wealth (patrimonial capital) by noting that based on the Forbes 400 list of the

wealthiest Americans between 1982 and 2012, researchers found that less than one tenth of the 1982 list were still on the list in 2012, thus suggesting that a large share of wealthiest had not increased their fortunes through patrimonial capital, as Piketty (2014) had suggested.

2.5 Conclusion

The chapter presented insights into the two seminal theories explaining the causes of inequality, namely, Kuznets (1955) hypothesis, on the correlation between economic development and income inequality and Piketty's (2006) argument that the reduction of income inequality during the period from the First World War until the end of the 1970's was due to capital shocks rather than the emergence of industrialisation as a key economic mechanism, as suggested by the Kuznets (1995).

Piketty (2014) further proposed that wealth was an integral component of inequality, by suggesting that when the rate of return on capital r is greater than the rate of growth g , then the capital to income ratio and wealth inequality will rise.

The next chapter will explore South Africa's evolution of income inequality post-Apartheid, by evaluating recent income inequality literature and evidence regarding the effectiveness of key policy instruments implemented post-1994, to ameliorate the prevailing high levels of income inequality in South Africa.

Chapter 3: Literature Review

Income Inequality in South Africa

3.1 Introduction

While the objective of this research is to evaluate *wealth inequality* within the context of the banking sector BBB-EE requirements of South Africa, it is necessary first to examine the causes, measurements and the policy instruments introduced, to reduce the exceptionally high income inequality of South Africa. This is because income and wealth inequalities are intrinsically linked. Income allows for the formation of wealth and wealth propagates income through capital income.

Bromberger and Hughes (1987) asserted that inequality in South Africa has its' genesis in colonialism and Apartheid, as principal agents of economic separation and race-based marginalisation. Terreblanche (2002) stated that decades of Apartheid and racial capitalism effectively disempowered the Black majority politically, socially and economically. This led to massive poverty and poor living conditions for Black individuals (Terreblanche, 2002).

Seekings (2007) suggested that Apartheid's legacy at the time of democracy (1994) included highly visible income poverty and inequality. He suggested income poverty and inequality were not high by African standards, however, they were highly visible since they coexisted with great affluence correlated with other race groups (Seekings, 2007). Assouad, Chancel and Morgan (2018) indicated that the White minority of South Africa represented approximately ten per cent of the population, but captured all of the top 10 per cent of incomes during Apartheid (Assouad et al., 2018).

Twenty-six years since the fall of Apartheid, South Africa remains as one of the most unequal societies globally²⁷. Leibbrandt, Ranchhod and Green (2018) concluded that the failure to make substantial progress in South Africa's transitioning into a more equal society was not surprising, but nonetheless still serves as a key metric of progress in building a new inclusive society. Therefore, the reasons for the continued high levels of income inequality in South Africa deserve further exploration.

The chapter proceeds as follows. Firstly, it presents available evidence on the measures of income inequality in South Africa. Secondly, recent literature on the causes of income inequality in South Africa are explored. Thirdly, policy instruments introduced in South Africa post-1994, to reduce income inequality are examined. Finally, a brief comparative case study of Brazil's income inequality evolution is presented as a comparison to South Africa's consistently high income inequality.

3.2 Income Inequality in South Africa

3.2.1 Measures of Income Inequality

The World Bank (2018) concluded that by any measure, South Africa is one of the most unequal societies globally, moreover inequality has been on the increase for the past 24 years. Statistics South Africa (StatsSA) (2018) indicated that South Africa had a Gini coefficient of 0.63 in 2015. Orthofer (2016) estimated income Gini coefficients of 0.7 (PIT²⁸) and 0.72 (NIDS²⁹). These

²⁷ World Bank (2018) indicator based on 149 countries surveyed.

²⁸ PIT, Personal Income Taxes period between 2010-2011, 20 percent unpublished sample obtained from the South African Revenue Services.

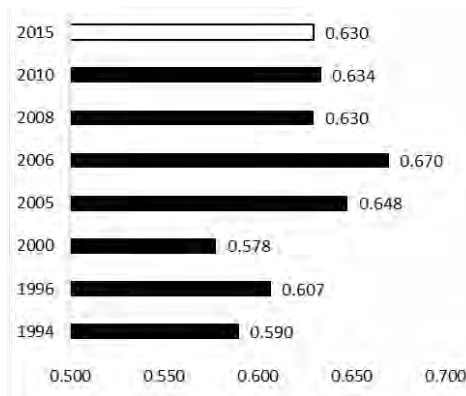
²⁹ NIDS, National Income Dynamics Study, study conducted between 2010-2011.

measures compared to the calculated Gini coefficient of 0.59 in 1994 (Central Intelligence Agency, 2019) suggests a deterioration of South Africa's income inequality since the advent of democracy in 1994.

Leibbrandt, Finn and Woolard (2012) however cautioned that income Gini coefficients for South Africa calculated by different researchers and organisations are a subject of robust academic and policy debates, as different methodologies have been used for those respective computations. Notwithstanding the various methodological computations, the constant reflection is a persistently high income Gini coefficient for South Africa. The evolution of South Africa's Gini coefficient since 1994, is presented in Figure 3.1. and Figure 3.2, illustrating how high South Africa's Gini is compared with a sample of developed and developing economies.

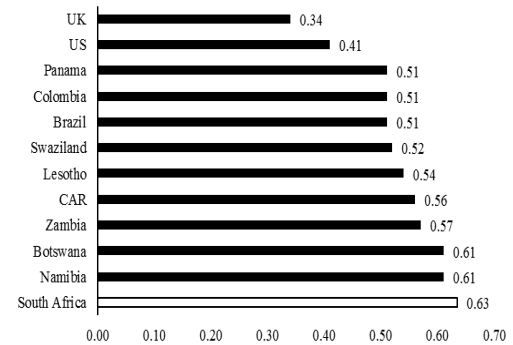
This prominence of South Africa's high Gini coefficient is central to South African policy makers. The National Planning Commission's *National Development Plan: Vision for 2030* (2011) lists the reduction of South Africa's Gini coefficient as a key policy imperative and sets a target of reducing the Gini coefficient to 0.6 by 2030. This, the NDP indicated, is to be achieved by raising employment levels and raising the income share of the bottom 40 per cent by 6 to 10 per cent.

Figure 3. 1: South African Long-Term Gini Coefficients



Source: World Bank (2019) and CIA FactBook (2019)

Figure 3. 2: Comparable Gini Coefficients



Source: World Bank (2019)

Leibbrandt *et al.*, (2010) provided evidence that the income Gini coefficient for South Africa increased from 0.66 to 0.70 between 1993 and 2008. Importantly, they found that rising within-race (Black) income inequality trends were influential in driving the rise in aggregate income inequality. Substantiating Leibbrandt *et al.*, 's (2010) racial dimension of South Africa's income inequality, Hino, Leibbrandt, Machema, Shifa, and Soudien (2018) provided evidence of large horizontal and vertical inequalities, indicating that income inequality in South Africa was high between-race and within-race. Table 3.1 depicts the evolution of South Africa's income Gini coefficients by race group for 1993, 2008 and 2015. It illustrates that income inequality amongst Black individuals was increasing and higher than all the other racial groupings, further suggesting that rising Black income inequality was the largest contributor to the sustained overall high income inequality in South Africa. Though the income inequality for the other racial groupings were lower than for Black individuals, the within-race inequalities highlights the centrality of the racialised dimension of income inequality in South Africa.

Table 3. 1 Inequality Per Capita Income, National and by Race

Year	Overall Gini	Black	Coloured	Indian/ Asian	White
1993	0.670	0.560	0.520	0.460	0.420
2008	0.700	0.640	0.590	0.610	0.510
2015	0.678	0.600	0.558	0.597	0.561

Source: Hino *et al.*, (2018)

Therefore, it can be concluded that South Africa displays a very high level of income inequality, which includes a visible racial dimension, with the high Black income inequality being a visible attribute of overall income inequality in South Africa. The following section will provide evidence on income distributions, with the purpose of signifying both the income concentration levels and the racial dimension of these highly unequal income shares in South Africa.

3.2.2 Income Shares Distributions

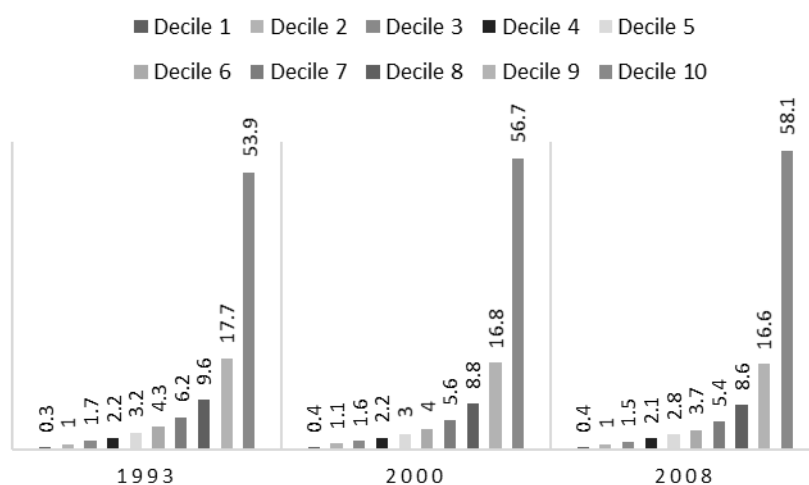
An alternative to using the Gini coefficient to measure income inequality is to examine the income shares of different deciles. Leibbrandt *et al.*, (2010) found that income shares in South Africa have become increasingly concentrated in the top decile, with the top decile accounting for 54 per cent of total income in 1993, 57 per cent in 2000 and 58 per cent in 2008. Leibbrandt *et al.*, (2010) further provided evidence that the poorest 50 per cent of South Africa's population experienced falling income shares, from 8.3 per cent to 7.85 per cent between 1993 to 2008. This indicating the diminishing progression of income shares at the bottom half of the income distribution and the converse effects at the top end of the income distribution, in South Africa.

Hino *et al.*, (2018) found corroborating evidence of increasing income inequality in South Africa, driven by the median income of the top 10 per cent becoming more pronounced relative to

the bottom 10 per cent. This ratio increased from 69 times in 1993 to 85 times in 2008, before falling back to 65 times in 2015 (Hino *et al.*, 2018). Hino *et al.*, (2018) further indicated that the income share of the top 10 per cent were 52 per cent of total income in 1993 and 56.9 per cent in 2008, declining slightly to 56.5 per cent in 2015. This indicates the dominance and persistence of high income concentrations within the top 10 per cent of South Africa, from 1993 to 2015.

Leibbrandt *et al.*, (2010) suggested the bottom decile comprised of approximately 50 per cent Black individuals. This further highlighted the racial dimension of income shares at the bottom of the income distribution of South Africa. Figure 3.3 shows the distribution of income shares in South Africa for 1993, 2000 and 2008, indicating the dominance of the income share of the top 10 decile as compared to the other income deciles and the relative ‘stickiness’ of income shares below the top 10 decile.

Figure 3. 3: Percentage Income Shares per Decile for 1993, 2000 and 2008



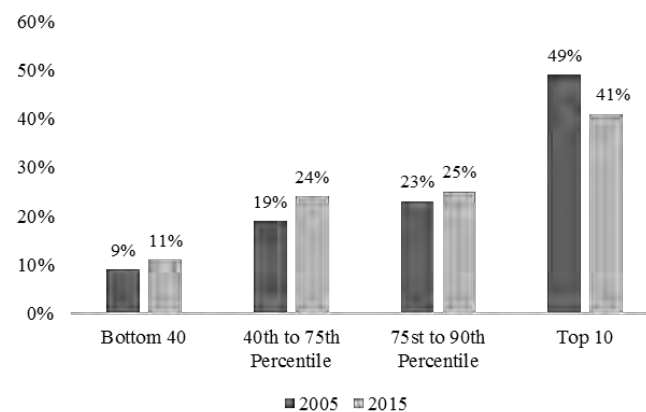
Source: Leibbrandt *et al.*, (2010)

The World Bank (2018) provided similar evidence on the dominant share of the top income decile for 2005 and 2015. The World Bank (2018) however, found that the income shares of the

top 10 percentile experienced an 8 percentage point decline between 2005 and 2015 (see Figure 3.4). Despite the decline, the top income shares were relatively high compared to the other income percentiles along the income distribution to begin with. The World Bank (2018) further indicated that the share of the bottom 40th percentile rose by two percentage points over this period, the shares of those from the 40th to 75th percentile rose by five per cent and the shares of the 75th to 90th percentile rose by only two per cent. The income share differentials are consistent with Leibbrandt *et al.*,’s (2010) and Hino *et al.*,’s (2018) findings relating the dominance and high income concentrations of the top income shares of South Africa.

Figure 3.4 illustrates the income shares for 2005 and 2015, highlighting both the higher concentrations of income shares at the top and lower income shares at the bottom of the income distribution of South Africa.

Figure 3. 4: Percentage Income Shares for 2005 and 2015



Source: World Bank (2018)

In summary, South Africa experiences one of the highest levels of income inequality as measured by the Gini coefficient and this inequality manifest itself through the skewed income distribution, with the differentials in income shares highly visible across the income distribution

and describing South Africa's high level of income inequality. In the furtherance of understanding of income inequality in South Africa, a perspective on the composition of income sources provides additional evidence of the drivers of income inequality. The following section will explore the various income types with the purpose of ascertaining the possible causes of income inequality in South Africa.

3.2.3 Composition of Income Types in South Africa

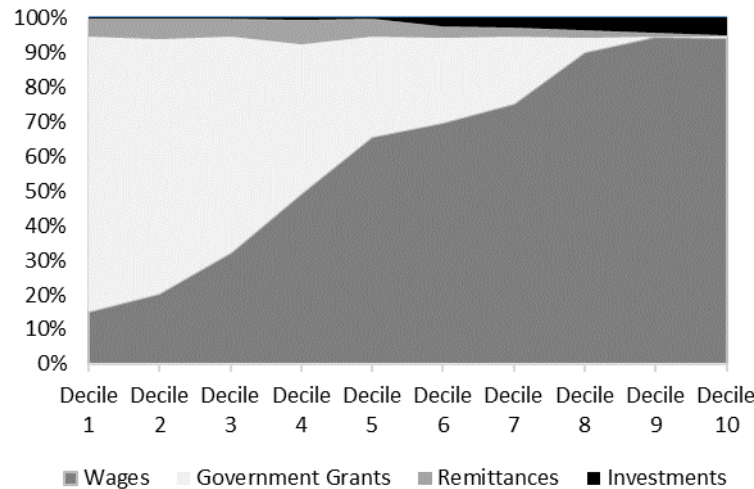
Statistics South Africa (2018) found that overall wage income was the major source of income³⁰ at 64.8 per cent, followed by grant income at 45.6 per cent and the lowest type being pension income, at 4.2 per cent. However, Isaacs (2016) provided evidence on the low component of wage income for poorer households, finding that poor earners had a wage dependency ratio of 2.65, meaning that each earner in a poor household supported themselves plus approximately 3 other people. For non-poor households the ratio was far lower at 1 (Isaacs, 2016).

Finn (2015) provided similar evidence that for the bottom deciles (poorest households) wage income was a relatively small component of household income. In contrast, grant income was estimated to be between 70 to 85 per cent of household income for the lower deciles (Finn, 2015). Investment income, which typically accrues from capital, featured only for those households in the top decile (Finn, 2015) this providing indications of the relevance of income from capital higher up the income distribution. Figure 3.5 provides the composition of income types across the income deciles in South Africa. The figure depicts the high concentration of grant income dependency for poor households in the bottom deciles, with wage income featuring progressively further up the

³⁰ A specific household can have more than one source of income therefore percentages do not add up to 100%.

income deciles and investment incomes' prominence relevant only at top end of the income deciles of South Africa.

Figure 3. 5: Composition of Household Income per Income Deciles



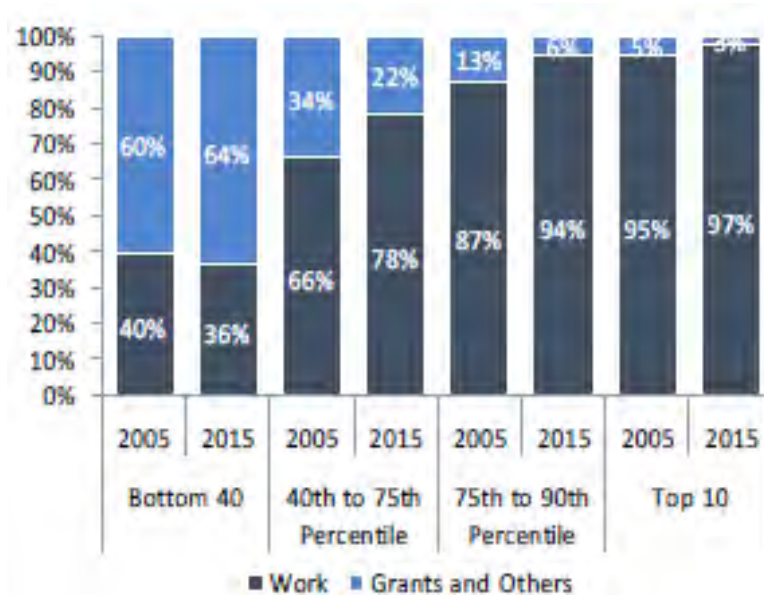
Source: Source: Finn (2015)

The World Bank (2018) similarly to Finn (2015) and Isaacs (2016) reaffirmed the dominance of grant income at the lower end of the income distribution. Additionally, the World Bank (2018) signified the rising importance of grant incomes as a total of income, from 60 per cent for the bottom 40 percentiles in 2005 to 64 per cent in 2015 (see Figure 3.6). This in contrast to the 40th to 75th percentiles, where wage income as a proportion of total income, featured and increased significantly at 66 per cent in 2005 to 78 per cent in 2015 (World Bank, 2018). For the top 10 percentile, wage income dominated for both 2005 (at 95 per cent) and 2015 (at 97 per cent) (World Bank, 2018).

The concentration of the wage income at the top end becomes a salient consideration in the proceeding section, when wage inequality is evaluated. Figure 3.6 below indicates the income

shares per source for 2005 and 2015 and similarly highlights the concentrations of grants incomes in the lower deciles and the converse relevance of wage income moving further up the top deciles.

Figure 3. 6: Income Shares by Sources, 2005 and 2015



Source: World Bank (2018)

As indicated, Finn's (2015) found that investment income featured prominently at the top end of the income distribution. Similarly, Bassier and Woolard (2018) found that until the top 99th percentile, wages and bonuses made up of over 80 per cent of household income, however for the top one per cent, income from wages and bonuses contributed only 50 per cent of total income (Bassier and Woolard, 2018). Bassier and Woolard (2018) further found that capital income from shares, profits and capital gains progressively increased for the top 0.1 to the top 0.01 percentiles. These findings are noteworthy; as capital income becomes a salient feature when referenced to Piketty's (2014) hypothesis of income from capital being a prominent driver of income inequality.

This furthermore suggests that the wealthiest South Africans are able to draw meaningfully from diversified income streams from the labour and capital markets

The composition of income types in South Africa is particularly meaningful to further explain income inequality in South Africa. Wage income features prominently further up the income distribution and thus, wage differentials are a key element in the evaluation of income inequality in South Africa. Additionally, the accelerated growth in top incomes is driven by labour market dynamics, in which highly-skilled professionals at the top of the income distribution have more income leverage, as they are not easily replaced by the labour market. Henceforth, the following section provides evidence on the importance of wage differentials, wage inequality, labour market dynamics and their resultant impact on income inequality in South Africa.

3.2.4 Wage Inequality in South Africa

Central to South Africa's high levels income inequality is wage inequality³¹. Lerman and Yitzhaki (1985) indicated that the Gini coefficient can be decomposed to reveal the relative contributions of each source of income, to overall income inequality. Leibbrandt *et al.*, (2012) found that South Africa's labour market was the dominant factor in explaining South Africa's income inequality. Wage inequality has two aspects; earnings inequality due to differentials in wages levels amongst those earning an income (employed) and earnings inequality due to the presence of those without an income (unemployed). Leibbrandt *et al.*, (2012) found that wage differentials amongst the employed accounted for 62 per cent and that the presence of zero-wage earners (the unemployed) accounted for 38 per cent to wage inequality in South Africa. Leibbrandt *et al.*, (2012) further

³¹ Wage inequality refers to the extent to which wages are distributed unevenly among a population. It ranges from 0 (perfect equality) to 1 (perfect inequality).

indicated that when differentiated by income sources (wages, social grants, remittances, and investment income), the relative contribution of unequal wage income to overall income inequality, was just over 90 per cent in 2012.

With the overall Gini coefficient for South African household income measured at 0.66 in 2012, Finn (2015) by decomposition, found similar results, namely that wage income had contributed 91 per cent of overall income inequality in 2012 (see Table 3.2). The World Bank (2018) corroborated the centrality of unequal wage income as a substantial cause of income inequality, contributing 90 per cent to South Africa's overall income Gini coefficient between 2006 and 2015. Table 3.2 provides Finn's (2015) decomposition of household income inequality by the various income sources, indicating the dominance of wage income as a significant contributor at to household income inequality in South Africa.

Table 3. 2 Decomposition of Household Income Inequality by Income Source (2012)

Source of Income	Absolute Contribution	Relative Contribution
Wages	0.6	91%
Government Grants	-0.01	-2%
Remittances	0.06	9%
Investments	0.01	2%
Total	0.66	100%

Source: Finn (2015)

Most studies suggest that wage inequality³² in South Africa has worsened since 1994. Finn (2015) found little change in the earnings Gini coefficients in 1993 at 0.553 compared to 0.554 for 2012, however Finn and Leibbrandt (2018) found that earnings Gini coefficient had increased from 0.54 to 0.57 for 2011 and increased to 0.66 after 2011. They attributed the higher Gini coefficient

³² Wage inequality and Earnings inequality are used interchangeably and refer to earnings for those employed.

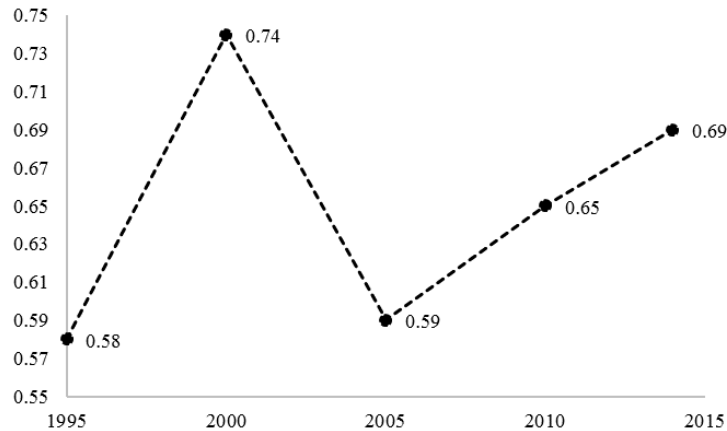
post-2011 to the revised construction of Statistics South Africa's (StatsSA's) datasets from 2012 onwards, concluding that the change in methodology had caused a substantial and lasting increase in measured earnings inequality in South Africa. Using alternative datasets, Wittenberg (2017)³³ found that the overall wage Gini coefficient had increased from 0.567 to 0.599 from 1994 to 2012, with the wage Gini for the employed increasing by 3 percentage points to 0.716 over the same period. Wittenberg (2017) concluded that the widening of wage inequality for the employed was driven mainly by the rise of earnings at the top end of the income distribution. Using the Palma ratio³⁴, Bhorat and Khan (2018) found the ratio had almost doubled from 5.11 in 1995 to 10.13 in 2015, confirming the rise of the top 10 per cent share of earnings at the top end of the income distribution.

Leibbrandt *et al.*, (2018) supported both Wittenberg's (2017) and Bhorat and Khan's (2018) findings by suggesting that in 2014 the rising incomes of the top 2.5 per cent of earners had increased the wage Gini coefficient by 5.5 percentage points. Similarly, Bhorat and Khan (2018) provided similar evidence (see Figure 3.7) of an increasing wage inequality evolution, with the Gini coefficient rising from 0.59 in 2005 to 0.69 in 2015. Based on their findings, the wage Gini coefficient was at its highest in 2000 at 0.74 and at its lowest at 0.58 in 1995 (Bhorat and Khan, 2018). Figure 3.7 plots the evolution of the real wage inequality from 1995 to 2015 for South Africa.

³³ Wittenberg (2017) used data on the four waves of the 2010 Quarterly Labour Force Survey data (QLFS) and 2011 PITS Data.

³⁴ Palma Ratio, is an alternative to the Gini index, and focuses on the differences between those in the top and bottom income brackets. The Palma ratios were based on the share of the Top 10 percent of earner's wages, to the share of the of the Bottom 40 percent's earnings.

Figure 3. 7: Wage Inequality from 1995 to 2015



Source: Bhorat and Khan (2018)

By decomposing wage inequality into industry sectors, Bhorat and Khan (2018) suggested that wage inequality was influenced by the interaction between intra-sectoral skills mismatches and sector occupations. With the skills-biased labour demand trajectory in South Africa since 1994 causing the widening levels of internal labour market inequality (Bhorat and Khan, 2018). This becomes visible when the wage Gini coefficients are decomposed per sector between 1995 to 2014 in Table 3.3, showing the extent to which larger scale wage inequality is driven by the interaction between intra-sectoral skills mismatches.

Alternatively presented, the Finance and Community and Social Services (CSP³⁵) sectors, whose share of skills set was the highest in 2015, exhibits the largest growth (60 per cent and 73 per cent respectively) in their sectoral wage Gini coefficients, between 1995 and 2014 (Bhorat and Khan, 2018). Conversely, the Retail and Wholesale Trade sector with the highest growth in unskilled labour between 1995 and 2014, exhibited one of the lower growth rates in the wage Gini of 39 per cent (Bhorat and Khan, 2018). This Bhorat and Khan (2018) concluded, indicated that a

³⁵ CSP services include government services.

higher and lower-skilled labour absorption dynamics having an effect on wage inequality in South Africa. Table 3.3 indicates South Africa's wage Gini coefficients per sector from 1995 to 2014, highlighting the Gini coefficients per sector and their relative changes.

Table 3. 3: South African Wage Gini Coefficient by Per Sector

Sector	1995	2000	2005	2010	2014	% Change (1995-2014)
Agriculture	0.50	0.51	0.54	0.59	0.72	43
Mining	0.45	0.70	0.49	0.45	0.50	12
Manufacturing	0.39	0.65	0.55	0.52	0.65	67
Construction	0.55	0.71	0.51	0.75	0.68	23
Retail and Wholesale Trade	0.48	0.48	0.56	0.57	0.67	39
Transport	0.46	0.65	0.41	0.49	0.6	30
Finance	0.49	0.92	0.55	0.29	0.78	60
CSP	0.41	0.78	0.46	0.69	0.72	73
Overall Wage Gini	0.58	0.74	0.59	0.65	0.69	9

Source: Borat and Khan (2018)

Finn and Leibbrandt (2018) found similar evidence of the changing composition of employment in South Africa, having an impacting on wage inequality. They showed that between 2000 and 2014 there were substantial decreases in the share of workers in Mining, Agriculture, Manufacturing and Domestic Workers sectors, which historically have been sectors employing large numbers of relatively unskilled labour (Finn and Leibbrandt, 2018). Whereas the shares of employment in the Financial and Services sectors, which typically demand higher skilled labour force, increased by 63 per cent and 25 per cent percentage respectively, between 2000 and 2014 (Finn and Leibbrandt, 2018) (See Table 3.4). Finn and Leibbrandt (2018) concluded that, the sectoral labour composition shift from lower-skilled to highly-skilled, created wage inequality-inducing effects, which directly influenced South Africa's high income inequality. Table 3.4 shows sectoral labour market participation per sector, indicating the declining low-skill sectors labour

participation trajectory and the increasing growth of high-skill sectors labour shares, from 2000 to 2014, in South Africa.

Table 3. 4: Labour Market Statistics 2000, 2011 and 2014

Sectoral Share (%)	2000	2011	2014	% Change (2000-2014)
Agriculture	0.10	0.05	0.06	-40%
Mining	0.07	0.03	0.03	-57%
Manufacturing	0.14	0.14	0.12	-14%
Domestic Services	0.13	0.10	0.10	-23%
Utilities	0.01	0.01	0.01	0%
Construction	0.06	0.07	0.07	17%
Trade	0.15	0.18	0.17	13%
Transport	0.05	0.06	0.06	20%
Finance	0.08	0.13	0.13	63%
Services	0.2	0.24	0.25	25%

Source: Finn and Leibbrandt (2018)

Literature points that higher wage levels predominately feature at the top end of the income distribution. Leibbrandt *et al.*, (2018) found that the mean overall real wages increased from R5 710 (2001) to R7 420 (2014), with wage increases predominately going to the top of the earnings distribution and consequentially increasing the overall income inequality from 0.552 (2001) to 0.634 (2014) as a consequence. Wittenberg (2017) similarly concluded that from 2000 to the end of 2011, annual increases in the mean and median wages were 2.45 per cent and 1.26 per cent respectively and suggested that the overall increases accrued disproportionately to those with higher wages to begin with.

Kerr and Wittenberg (2017) indicated that the public sector³⁶ employed approximately 18 per cent (approximately 2.7 million workers) of South Africa's workforce in 2014 and displayed

³⁶ Predominately within the services sector.

earnings consistently above the median. From 1997 to 2007 the median and mean earnings of public sector workers increased by 33 per cent and 25 per cent respectively, whilst the mean in the private sector increased by 25 per cent and the median remained unchanged (Kerr and Wittenberg, 2017).

Leibbrandt *et al.*, (2018) suggested that median workers were predominately Black males in their thirties and those earning below the median were mostly likely to be Black women. Wittenberg (2017) based on the Theil Index³⁷, found wage inequality for Black individuals had increased markedly from approximately 0.4 in 1994 to above 0.5 in 2011. For the White population, in contrast, wage inequality decreased from just below 0.3 to approximately 0.2 over a similar period (Wittenberg, 2017). Using the Theil Index, Finn (2015) similarly found that wage inequality for Black and Coloured workers was generally higher than for Asian/Indian and White workers and concluded that the Black within-wage inequality had increased whilst the White within-wage inequality decreased from 2003 to 2012. This designating racial dynamics as feature of wage inequality in South Africa.

Leibbrandt *et al.*, (2018) suggested that workers who were ‘stuck’ at the median level of earnings, were workers in sectors vulnerable to forces driving the demand for labour and wage settings. By examining similar occupations in both the private and public sectors, Kerr and Wittenberg (2017) found the premium attached to union membership had declined in the private sector. Similarly, Bhorat and Khan (2018) found a decreasing trend of private sector union membership as a percentage of total workers in the private sector. They suggested the trend showed a possible segmentation between public and private sector workers in the South African labour market and also provided a clear correlation with the decline in employment observed in

³⁷ The Theil Index measures overall inequality in addition it lends itself to decomposability for example racial segregation.

previously highly unionised sectors such as Mining and Manufacturing (Bhorat and Khan, 2018). These findings suggest the weakening of union power in the private sector as a plausible explanation for compressed earnings and labour participation in South Africa.

As presented above, income inequality is predominately driven by wage inequality in South Africa. With earnings inequality (due to differentials in wages levels amongst those employed), a central composite of overall wage inequality. Literature indicated that overall wage inequality was on the rise, this attributable to the rise in earnings inequality (employed) which in turn was driven by the rise in earnings at the top end of the income distribution.

Through the decomposition of wage inequality by sector, the South African wage inequality was influenced by the interactions between intra-sectoral skills mismatches and sector occupations. Sectors requiring higher skills-set exhibited the highest growths in sectoral wage Gini coefficients, while sectors with the highest growth in unskilled labour showed the lowest growths in their respective wage Gini coefficients. Literature points to the changing composition of employment in South Africa in further having an impacting on wage inequality, with sectoral labour composition shift from lower-skilled to highly-skilled creating wage inequality-inducing effects.

A strong probability to market labour participation and earnings is education levels. The next section presents evidence on educational attainment and intergenerational mobility as possible explanations of South Africa's wage inequality and therefore income inequality.

3.2.4.1 Educational Attainment and Intergenerational Mobility

A central driver of wage inequality in South Africa is educational attainment³⁸. Van der Berg *et al.*, (2011) asserted that labour market differentials (wage inequality) are at the heart of income inequality and fundamental to these labour market differentials was the quality of educational attainment. Finn, Leibbrandt and Ranchhod (2017) similarly suggested that the ‘stickiness’ of South Africa’s high income and wage inequalities originated from the dynamics whereby educational attainment and labour market earnings of parents feed through to the educational attainment and earnings of their children.

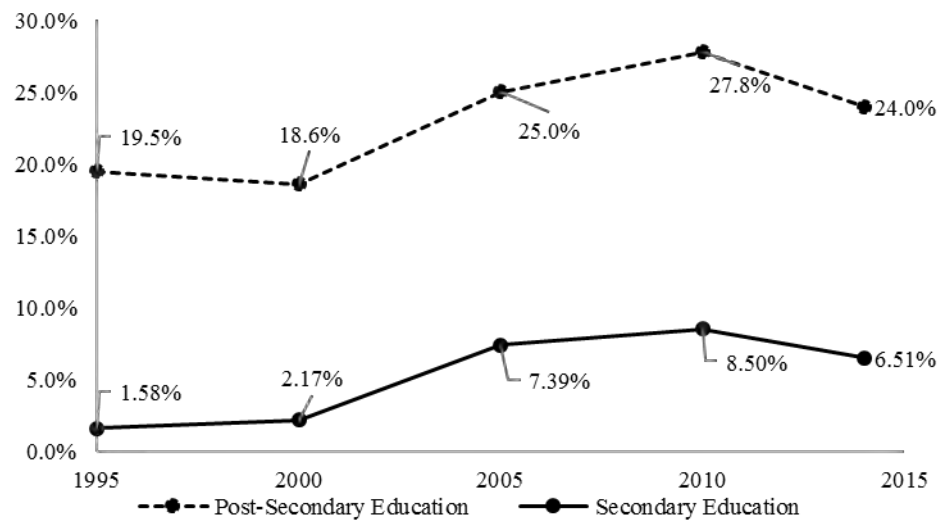
Leibbrandt and Levinsohn (2011) suggested that most South Africans who have been trying to enter the labour market had not been sufficiently educated to gain employment or, if employed, to earn decent wages. Only those who are highly skilled enter the labour market and move up the earnings distribution (Leibbrandt and Levinsohn (2011)). Wittenberg (2017) determined that approximately a quarter of overall income inequality in South Africa was attributable to wage inequality between those with a post-matric qualification and individuals with the least educational levels. Wittenberg (2017) further indicated that between 1994 to 2011, inequality within the defined broad educational categories³⁹ accounted for more than 60 per cent of overall income inequality. Bhorat and Khan (2018) confirmed that education attainment has a strong influence on the probability of labour participation and suggested that individuals with post-secondary education were 19.5 per cent more likely to participate in the labour market compared to those with only secondary education in 1995 and that this rose to 24 per cent in 2015. Figure 3.8

³⁸ Educational attainment is defined as the highest grade completed within the most advanced level attended in the educational system of a country where the education was received.

³⁹ Broad educational categories are 1. No education or at most primary school 2. Incomplete secondary school education. 3. Matric. 4. More than matric (reference?).

illustrates the correlation of labour market participation based on educational attainment in South Africa from 1995 to 2015.

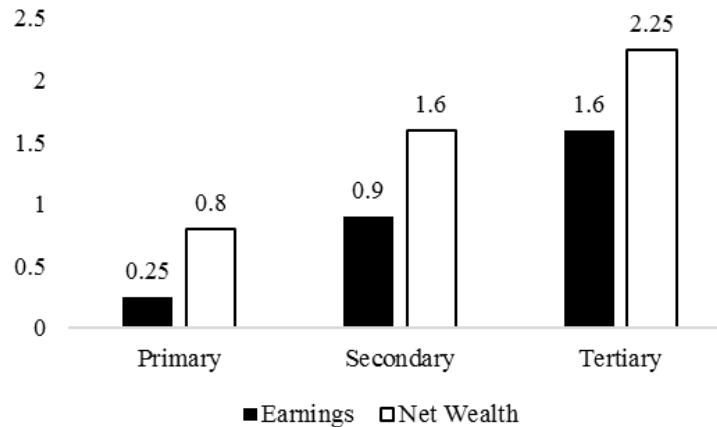
Figure 3. 8: Percentage Labour Market Participation Based on Education Attainment



Source: Borat and Khan (2018)

In a like manner, Finn *et al.*, (2017) suggested that, although educational attainment had increased in South Africa, the full benefits from educational attainment had not translated into a proportional increase in earnings, unless a worker had completed high school and continued into post-secondary education. The World Bank (2018) similarly found that higher levels of educational attainment in South Africa were strongly correlated with higher levels of income and wealth, with tertiary education attainment having the highest elasticity in both income and wealth determinations. Figure 3.9 illustrates the education attainment elasticity for income and wealth in South Africa.

Figure 3. 9: Elasticities for Income and Wealth and Educational Attainment



Source: World Bank (2018)

Finn *et al.*, (2017) asserted that an understanding of why income inequality in South Africa has remained so *persistent*, required an understanding of the dynamic relationship between the earnings of parents and the earnings of their offspring. That is, the undercurrents of how the educational attainment and labour market earnings of parents feeds through to the educational attainment and earnings of their children, which enables the intergenerational transmission of economic outcomes. Through the decomposition of intergenerational elasticity of education and a component measuring parental skills sets, Finn *et al.*, (2017) found that the overall relationship between a South African father's education and son's education, accounted for approximately 40 per cent of the intergenerational elasticity and the corresponding mother-son relationship accounted for 34 per cent.

Through a similar decomposition, the intergenerational correlation of occupational skills played a less significant role in intergenerational economic transmissions (Finn *et al.*, (2017) (See Table 3.5). Finn *et al.*, (2017) concluded that if the starting point for each generation was highly unequal, then the transmission of economic outcomes from parents to children is largely

predetermined, with the clear implications of intergenerational persistence of income inequality. Table 3:5 provides indications of the relative contributions to intergenerational elasticity for father-son and mother-son relationships, education versus skill.

Table 3. 5: Relative Contributions to Intergenerational Elasticity – Education vs Skill

<u>Fathers and Sons</u>	
	<u>All</u>
Edu. Father. Edu. Son	37.56
Skill. Father. Skill. Son	8.89
Edu. Father. Skill. Son	8.62
Skill. Father. Edu. Son	2.32
Edu. Father. Resid. Son	40.16
Skill. Father. Resid. Son	2.45
<u>Mother and Sons</u>	
	<u>All</u>
Edu. Mother. Edu. Son	34.22
Skill. Mother. Skill. Son	8.94
Edu. Mother. Skill. Son	7.91
Skill. Mother. Edu. Son	3.51
Edu. Mother. Resid. Son	36.24
Skill. Mother. Resid. Son	9.16

Source: Finn *et al.*, (2017)

International evidence suggests an inverse relationship between income inequality and intergenerational mobility, a relationship nicknamed the ‘Great Gatsby Curve’ (Corak, 2013). Given South Africa’s high level of income inequality, this relationship suggests South Africa would have a low intergenerational mobility, with a high intergenerational income elasticity⁴⁰.

⁴⁰ Intergenerational earnings elasticity is a measure of inequality transmitted between generations, which measures intergenerational mobility.

Piraino (2014)⁴¹, found intergenerational income persistence in South Africa to be high and significant, with coefficients ranging between 0.57 to 0.67 depending on the father's income. This means that approximately three-fifths of the income advantage of South African fathers was passed on to their sons. Significantly, Piraino (2014) concluded that within South Africa, inherited circumstances explained a significant fraction of South Africa's income inequality.

The World Bank (2018) found corroborating evidence of a high intergenerational income elasticity of 0.73 and provided further indications that South Africa had low levels of intergenerational mobility, as compared to other emerging countries such as Brazil, Chile, Peru and China. The World Bank (2018) found that at least a third of all sons born to very poor fathers in South Africa (those in the first quintile) will occupy the bottom 40 per cent of the income distribution (World Bank, 2018). With sons of rich fathers (those in the fifth quintile) having a 43 per cent chance of also being in the top quintile of their income distribution (World Bank, 2018).

A better understanding of wage inequality therefore goes a long way in assisting in the understanding of income inequality in South Africa and fundamental to labour market differentials is the 'stickiness' originating from the dynamics between how educational attainment and labour market earnings of parents feed through to the educational attainment and earnings of their children. Low intergenerational income mobility and the high intergenerational income elasticity in South Africa helps explain why both income and wage inequalities have been so *persistent* in South Africa. The following section will evaluate two policy instruments implemented in South Africa post (1994) to address and reduce South Africa's high level of income inequality.

⁴¹ By calculating the intergenerational income elasticity and inequality of opportunity index between fathers and sons in South Africa.

3.3 Policy Instruments to Reduce Income Inequality

3.3.1 Unconditional Cash Transfer Program

Case and Deaton (1998) argued that since the dawn of democracy in 1994, South Africa's social security system was already quite developed for a middle-income country. Van der Berg (1997) pointed out that the system developed under Apartheid, as a welfare state for Whites, further expanded under social and political pressure to incorporate other racial groups of South Africa. Van der Berg (2009) found that while social security spending per capita on White South Africans was almost nine times that of Black South Africans in the 1970's, by the 2000's spending per capita on Black South Africans was almost twice that on White South Africans.

The National Planning Commission, partially through its mandate of reducing inequality and poverty, expanded the unconditional cash transfer program⁴² of South Africa. The program currently uses a means test (based on personal income) for social grants qualification. Expenditure is targeted at specific categories which have limited links to the labour market, such as children, pensioners, war veterans and people living with disabilities. This fiscal social assistance policy is prioritised in the national budget in line with the South Africa's Constitution which under section 27(1) states that *'everyone has the right to have access to social security, if they are unable to support themselves and their dependents'*. National Treasury (2019) indicated that social grant recipients have increased exponentially from an estimated four million in 1994 to 17.6 million grant recipients in the 2019/2020 fiscal year. Total budgeted grants expenditure in the fiscal year

⁴² Unconditional cash transfers place no conditions upon the receiver's actions and hence provides autonomy on the cash disbursement with no criteria on the benefit. These transfers exclude poor able-bodied working individuals in South Africa.

2019/2020 was R175 billion, which amounts to approximately four per cent of South Africa's GDP (National Treasury, 2019). The number of recipients and budgeted spending on the different categories of grants in 2019/2020 are shown in Table 3.6.

Table 3. 6: Unconditional Cash Transfers, 2019/20 Fiscal Year

Cash Transfer	2019/20 (Number of Recipients)	Monthly Value	Annual Expenditure (m)
Old Age Grant (Over 75)	3.5 (m)	R 1 800	R 76 950.9
Child Support Grant	12.6 (m)	R 425	R 64 967.3
Disability Grant	1 (m)	R 1 780	R 23 077.6
Foster Child Grant	154 353	R 1 000	R 5 080.8
Care Dependency Grant	154 353	R 1 780	R 3 429.8
Grant In Aid	215 880	R 420	R 1 237.5
War Veterans Grant	107	R 1 800	R 1.7
Social Relief of Distress			R 410.0
Total	17.6 (m)		R 175 155.6

Source: National Treasury (2019)

Statistics South Africa (2018)⁴³, highlighted the racial dimension of grant recipients in South Africa, with more than one-third being Black recipients (33.9 per cent), followed by Coloured recipients at 29.9 per cent, Indian/Asian recipients at 12.5 per cent and the White recipients at 7.5 per cent. Maboshe and Woolard (2018) found the poorest 50 per cent of South Africans were recipients of more than 70 per cent of the total direct transfer benefits. Inchauste, Lustig, Moboshe, Purfield and Woolard (2015) similarly found that social cash transfers in South Africa are well targeted and progressive⁴⁴ with cash transfers flowing mainly to bottom households which exhibited high concentrations of the elderly and children. Inchauste *et al.*, (2015) additionally

⁴³ The balancing figure of 16.2 percent, was not defined by Statistics South Africa (2018).

⁴⁴ The importance of the 'progressiveness' of the fiscal policy establishes whether South Africa's social expenditure program was ameliorating or worsening the degree of inequality that would otherwise exists between individuals.

indicated that the most progressive of all transfers is the child support grant, with the poorest 40 per cent of South Africans receiving 69 per cent of all cash transfers and 66 per cent of the bottom decile households having children under 18 years (Inchauste *et al.*, 2015).

Leibbrandt *et al.*, (2018) suggested that though grant incomes were typically a relatively small component of overall household income, they played an important role in reducing income inequality and offsetting the inequality increasing effects that took place in the labour market between 1993 and 2008. However, Leibbrandt *et al.*, (2018) found that from 2008 to 2014 the equalising effects on income inequality were much smaller. Similarly, Hundenborn, Leibbrandt and Woolard (2018) found that government grants lowered the overall income Gini by 0.3 percentage points in 2008 and by 1 percentage point in 2014. Whilst Maboshe and Woolard (2018) found grant incomes had reduced the market income Gini by 0.48 percentage points in 2014/2015 (See Table 3.7). These findings highlight the importance of South Africa's redistribution expenditure program, in the form of the unconditional cash transfers, in addressing South Africa's high income inequality.

Table 3. 7: Market Income and Inequality Indicators

Scenario	Market Income (1)	Gross Income (2)
		(2)=(1) + Cash Transfers
Inequality Indicators		
Gini Coefficient	0.727	0.679
Theil	1.05	0.921

Source: Maboshe and Woolard (2018)

The literature therefore shows that although South African's grant unconditional cash transfer program forms a relatively small portion of total household income, it has played an important small role in reducing income inequality and most significantly in reducing poverty in South Africa. Inchauste *et al.*, (2015) however cautioned, that in further addressing South Africa's high levels of income inequality, consistent fiscal sustainability and higher levels of quality plus efficiencies within the public service space, will be required. Concluding that the fiscal space to use grants to further reduce income inequality is restricted in South Africa (Inchauste *et al.*, 2015).

3.3.2 Implementation of the National Minimum Wage

Under pressure from trade unions leading up to the 2014 general elections, the South African government, under the pillars of promoting equality and decent working conditions, investigated the introduction of a National Minimum wage (NMW) as one of the key mechanisms in reducing income inequality (ANC Election Manifesto, 2014). Neumark (2015) suggested that the minimum wage had gained momentum amongst policymakers as a driver to alleviate rising income and wage income inequalities. Neumark, Salas and Wascher (2014) acknowledged the debate of whether raising minimum wages causes job losses, as well as the potential magnitude of those losses, but

argued that recent evidence suggested it was appropriate to weigh the cost of those potential job losses against the benefits of wage increases for other workers.

Providing context for the formulation of the NMW, National Treasury (2016) indicated that 36 per cent of the poorest households had access to employment opportunities, with a working poverty line⁴⁵ estimated at R4 317 per month. Over half of the working population earned below R3 700 per month and 4.6 million workers earned less than R2,500 per month (National Treasury, 2016). This positioned the ‘working poor’⁴⁶ as a relevant concept in understanding South Africa’s labour income differentials. Isaacs (2016) similarly indicated that 54 per cent of full-time workers earned a wage below the line of working poverty⁴⁷, equivalent to R4 125 per month based on 2015/2016 prices.

Castel-Branco (2016) found that, even when supplemented with other forms of income such as social grants, the combined incomes were insufficient to bring workers and their dependents out of poverty. Bosch (2015) found a gender dimension to the working poor, with a gender working poor gap⁴⁸ of between 15 to 17 per cent. National Treasury (2016) similarly found that the bottom of wage workers were overwhelmingly women. This provided insights into the gendered nature of wage differentials in South Africa.

The intersection of wage incomes and working poverty is demonstrated by the proportion within each labour market category whose wages are above or below the working poverty line (see Table 3.8). Finn (2015) found 95 per cent of those employed in Domestic Services earned less than

⁴⁵ International Labour Organisation recommends that for developing countries the poverty threshold should be defined in relation to the households rather than at individual level. The working poor line measures the wage income required for an average worker to bring them and dependents out of poverty. The R4,317 was calculated based on the cost-of-living needs poverty line computed by Budlender, Leibbrandt and Woolard (2015).

⁴⁶ Working poor is used to refer to workers who live in households in which income is less than approximately two-thirds of the national medium.

⁴⁷ Isaacs (2016) used the cost-of-living needs poverty line.

⁴⁸ The gender gap is defined as the difference in pay for individuals with equivalent skills and experience doing the same job.

R4 125 per month (working poverty line 2014/2015), with 90 per cent of those employed in Agriculture, 63 per cent in Construction and 60 per cent in Trade, earned below the working poverty line. Isaacs (2016) estimated that that 90 per cent of domestic workers' wages were below R3 120 and 75 per cent of agricultural workers were below R2 600, these wages being drastically below the working poverty level of R4 371 in 2015/2016. The industries with the lowest proportion of low wage workers were Mining and Utilities, at 23 per cent and 31 per cent, respectively (Finn 2015).

As discussed previously, Leibbrandt *et al.*, (2018) and Bhorat and Khan (2018) suggested that workers who exhibited higher earnings potentials were less vulnerable due to wage settings and strong union participation. The mining industry in South Africa, for instance has a stronger and more effective labour union representation as compared to other industries and consequentially displays the lowest workers below the working poverty line. Contrasted to Domestic Services, which displays low union participation, has the largest number of workers working below the poverty line. Table 3.8 indicates the proportion below and above working poverty lines by sector in South Africa.

Table 3. 8: Proportion Below and Above the Working Poverty Lines by Industry Sector

Industry	Below Working Poverty Lines	Above Working Poverty Lines	Total	Number Of Workers	Percentage
Domestic Services	95.2	4.8	100	648 657	11.91%
Agriculture	89.6	10.4	100	522 500	9.59%
Construction	63.1	36.9	100	453 004	8.32%
Trade	60.2	39.8	100	1 113 021	20.43%
Manufacturing	49.2	50.8	100	649 746	11.93%
Transport	47.5	52.5	100	312 192	5.73%
Finance	47.3	52.7	100	701 174	12.87%
Services	38.8	61.2	100	945 417	17.36%
Utilities	31.1	68.9	100	28 719	0.53%
Mining	22.9	77.1	100	72 459	1.33%
Total				5 446 889	100%

Source: Finn (2015)

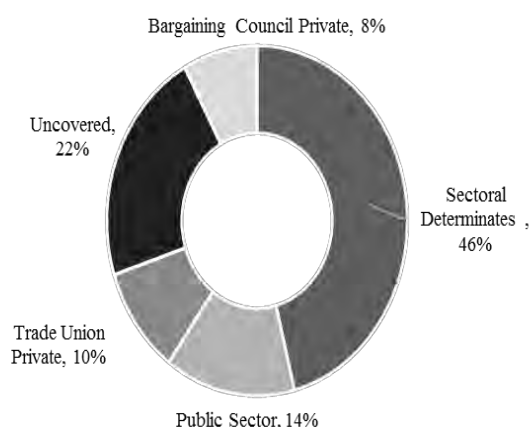
Finn (2015) further found that around 60 per cent of Black workers, 56 per cent of Coloured workers, 37 per cent of Asian/Indian and 22 per cent of White workers, earned below the working poverty line. This further highlighted the centrality of the racial dimension within the ‘working poor’ of South Africa’s labour force. Isaacs (2016) concluded that the ‘working poor’ in South Africa, is highly visible and it was under these circumstances that the implementation of the NMW was introduced.

Prior to the implementation of the NMW, South Africa did not possess a wage floor. The Basic Conditions of Employment Act (BCEA) of 1997 made provisions for a framework of Sectoral Determinations which set minimum wages on a sectoral basis, either through collective bargaining or through sectoral determinations published by the Minister of Labour (MoL). This based on the recommendations of the Employment Conditions Commission (ECC). Bhorat (2016) found that approximately 46 per cent of labour workers in South Africa were covered under the

sectoral determination, with 22 per cent of workers uncovered and the rest falling into other categories⁴⁹.

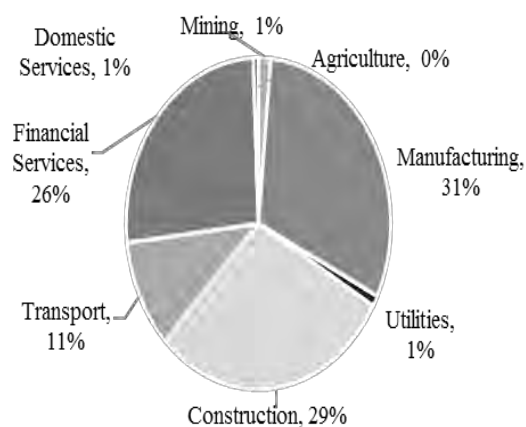
Valodia and Francis (2018) provided evidence that the largest proportion of uncovered workers were in the manufacturing sector at 31 per cent, followed by the construction sector at 29 per cent and the financial services sector at 26 per cent. Figure 3.10 illustrates the coverage/uncovered under the sectoral determination and other coverage categories for 2014 and Figure 3.11 illustrates the sectoral determination uncovered workers per industry sector.

Figure 3. 10: Market Labour Coverage, 2014



Source: Bhorat (2016) from (DRPU and CDSA 2016)

Figure 3. 11: Sectoral Determination Uncovered



Source: Valodia and Francis (2018) from (DRPU and CDSA 2016)

In an attempt to reduce wage inequality and decrease the number of working poor, the South African government embarked on the implementation of a NMW floor which became effective from the 1 January 2019 (National Minimum Wage Act, 2019).

⁴⁹ These included trade unions, private council bargaining and private sector bargaining categories.

The National Minimum Wage Act (2019) determined a NMW⁵⁰ floor at R20 for each ordinary hour worked (or R3 500 per month⁵¹) with the following exclusions: agricultural workers⁵², domestic workers⁵³ and workers⁵⁴ under the Expanded Public Works Programme (EPWP). The NMW used the BCEA definition of ‘economically vulnerable’, defined as individuals with compromised ‘bargaining powers’ and with an annual ‘income vulnerability’ threshold of R205 433.3 or R17 119 per month.

Valodia and Francis (2018) found that the NMW of R3 500 per month fell above the wages of 6.2 million workers (full-time equivalent) or 47.3 per cent of the total work force in South Africa. Valodia and Francis (2018) provided evidence that the NMW benefited 54.6 per cent of construction workers, 48.2 per cent of trade and 39.7 per cent of manufacturing workers. 90.7 per cent of domestic workers and 84.5 per cent of agricultural workers were potentially affected under the R3 500 NMW regime (Valodia and Francis, 2018) however, as previously mentioned, these last two sectors fall out of the standard NMW setting. Finn (2015) and Isaacs (2016) found that the domestic and agricultural sectors have markedly lower wage levels as compared to the other sectors and estimated that 80 per cent of workers in both sectors, earning below the NMW’s R3 500 per month. Table 3.9 indicates by sector workers falling under the NMW of R3 500.

⁵⁰ The NMW does not include various employment allowances, payments in kind and other alternative forms of payments.

⁵¹ R3 500 is based on R20 multiplied by a 40 hours work week by 4.33 weeks per month.

⁵² This includes domestic workers and security guards working on farms or any other agricultural premises. Their minimum wage entitlement is capped at R18 per hour, that is 90 percent of the NMW.

⁵³ Their minimum wage entitlement is capped at R15 per hour, that is 75 percent of the NMW.

⁵⁴ Their minimum wage entitlement is capped at R11 per hour, that is 55 percent of the NMW.

Table 3. 9: Distribution of Workers at R3 500 wage (Based on 2016 Prices)

Sector	Number Of Workers	Number Of Workers within Sector Earning Below R3 500	Share of Total Number of Workers Earning Below R3 500	Workers Within Sector Earning Below R3 500	Share of Total Number of Workers Earning Below R3 500
Domestic Services	1 235 770	1 120 636	8.5%	90.7%	18.0%
Agriculture	657 286	555 193	4.2%	84.5%	8.9%
Construction	948 331	517 786	3.9%	54.6%	8.3%
Trade	2 307 491	1 112 935	8.5%	48.2%	17.9%
Manufacturing	1 565 716	622 181	4.7%	39.7%	10.0%
Transport	810 423	319 453	2.4%	39.4%	5.1%
Financial Service	1 816 839	671 008	5.1%	36.9%	10.8%
CSP	3 261 921	1 190 986	9.1%	36.5%	19.2%
Utilities	117 118	27 982	0.2%	23.9%	0.5%
Mining	427 869	77 912	0.6%	18.2%	1.3%
Total	13 152 697	6 218 093	47.2%		100.0%

Source: Valodia and Francis (2018)

Abdool and Fakir (2018) argued that the NMW was way below the working poverty lines (R4 371 at 2015/2016 prices), further not adequate to meet the needs of the worker and their dependents, as defined by the International Labour Organisation (ILO). Mudronova (2016) suggested that for the NMW to function as a distributive tool, it should be designed so that wage growth at the bottom outstrips wage growth at the top. Castel-Branco (2016) concluded that while the NMW can contribute to the transformation of South Africa's wage structure, by increasing the wages of the working poor through reducing wage differentials, the NMW floor should however be sufficient enough to meet the worker's basic needs.

Of significance to the NMW policy instrument, is the reduction of working poverty and wage inequality. The impact of the NMW in reduction of working poverty and wage inequality is illustrated by Borat and Khan (2018) using two NMW scenarios⁵⁵ of real minimum wage of

⁵⁵ The NMW scenarios were determined before the final determination of the NMW at R3,500.

R2 447 and a real minimum wage of R3 400 at 2015 prices. They showed that across both scenarios the decrease in the wage Gini coefficient was largest when the wage elasticity⁵⁶ was at its lowest because the disempowerment effect of falling employment was minimised. Centrally, Bhorat and Khan (2018)⁵⁷ found with a 2014 wage Gini coefficient of 0.62⁵⁸, depending upon wage elasticity, the introduction of the minimum wage reduced the wage inequality Gini between 0.59 and 0.61 in the R2 447 scenario and between 0.56 and 0.62 in the R3 400 scenario. Table 3.10 illustrates the extent in which the introduction of the NMW ameliorates wage inequality in South Africa based on the two NMW scenarios and the elasticities.

Table 3. 10: Wage Gini Coefficient by Minimum Wage Scenario and Elasticity

Scenario	Elasticity	Wage Gini Coefficient	Wage Gini Coefficient
		R2 447	R3 400
Current (Pre-NMW)	-	0.62	0.62
	-0.1	0.59	0.56
	-0.3	0.60	0.60
	-0.5	0.61	0.62

Source: Bhorat and Khan (2018)

Bhorat and Khan (2018) concluded that the ‘stickiness’ of the Gini coefficient points to a larger problem in South Africa in resolving the extent of income inequality. Concluding that though the NMW has the potential to positively affect many low wage earners and reduce poverty, the impact on the broader inequality of the population is negligible (Bhorat and Khan, 2018). Valodia and Francis (2018) provided their own conclusions by suggesting that NMW

⁵⁶ Wage elasticity refers to the effect of the change in the wage level on the demand for labour and its employment level.

⁵⁷ Bhorat and Khan (2018) used a their own NMW estimations as the NMW not yet determined.,

⁵⁸ Bhorat and Khan (2018) used a wage Gini coefficient at household level.

implementation was a far more substantial intervention in the labour market and one that constitutes a significant change in the share of income for labour and will fundamentally alter the lower end of the wage distribution.

The NMW was implemented on the 1 January 2019 and still in a nascent stage. Further academic research on the long run effects of this policy instrument, will reveal the extent to which the introduction of the NMW has ameliorated income and wage inequalities in South Africa. The final section of this chapter provides a brief comparison of Brazil's approach to reducing its similarly high income inequality over the period 1993 to 2015, as a comparative to South Africa's policies and the limited success in reducing income inequality.

3.4 Income Inequality: A Comparative Study of Brazil and South Africa

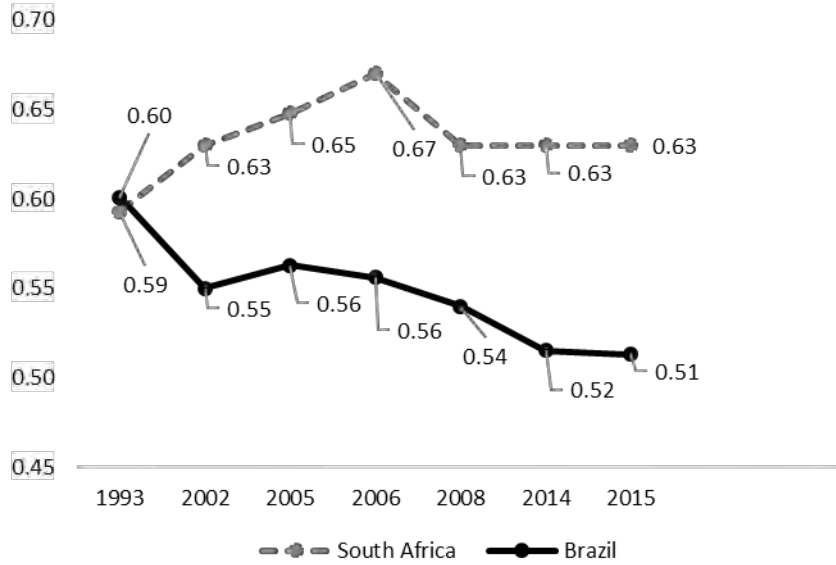
Seekings and Natrass (2005) suggested that in many respects, Brazil was in a similar position to South Africa during Apartheid; neither country was democratic and both displayed very high levels of income inequality. For decades, income inequality in Brazil was very high in comparison with other countries (Gasparini, 2003). Brazil's income Gini coefficient had increased from 0.574 in 1981 to 0.625 in 1989, garnering the distinction of being the second most unequal country, narrowly behind Sierra Leone's income Gini coefficient of 0.629 (World Bank, 2019). Morgan (2018) stated that since the late 1990s and within the context of the millennium objectives, poverty and inequality reductions became central to the agenda of the newly elected Workers Party's in Brazil.

Camargo and Neri (1999) and Francisco, Ferreira, Phillipe, Leita and Ravallion (2014) indicated that Brazil's historical macroeconomic instability, particularly periods of hyperinflation,

coupled with deep recessions, contributed to the very high income inequality in the 1980's. Assouad *et al.*, (2018) suggested that Brazil's high-income inequality could also be explained by modern factors, particularly the industrialisation of the Brazilian economy in the Twentieth Century where the politics of industrialisation favoured only a minority of workers in the context of limited agrarian reform and weak taxation of inherited wealth. Henriques (2001) attributed Brazil's high income to Brazil's labour market discrimination, evidenced through the earnings differentials between White and Afro-descendant's workers.

Leibbrandt and Finn (2018) asserted that two comparative stylised facts in recent decades were the sharp decrease of Brazil's income inequality, whereas South Africa's level of income inequality remaining stubbornly high. Figure 3.12 illustrates Brazil's and South Africa's income Gini coefficients from 1993 to 2015, illustrating the diverging evolution of their respective income inequalities.

Figure 3. 12: Brazil's and South Africa's Long-Term Income Gini Coefficients



Source: World Bank (2019)

Alvaredo *et al.*, (2018) and Marcelo (2019) attributed the drivers behind the fall in Brazil's income inequality to a combination of factors such as, increasing education levels, falling education wage premiums, rise in the minimum wage, the diffusion of social programmes such as conditional cash transfers (CCTs), the expansion of contributory and non-contributory social security benefits. Arrias (2019) suggested the fall was due to the reduction of unemployment levels (driven by a public infrastructure expansion program), inflationary controls (that had an impact on the real minimum wage), the expansion of social security benefits program in the form of the Direct Income Transfer Program (DITP) and the Bolsa Familia Program (BFP)⁵⁹.

Soares *et al.*, (2007) concluded that the Bolsa Familia Program played a meaningful role in reducing Brazil's income inequality, finding that it explained approximately 21 per cent of the fall

⁵⁹ The Bosa Familia Program is a fiscal redistribution program which was introduced in 2003 as nationwide conditional cash transfers (CCTs) managed by the relevant local administration within a federal structure, with the aim of provide universal social safety coverage to households in the form of monthly income transfers based on a means income test.

in Brazil's income inequality between 1995 and 2004. Hoffmann (2006) found corroborating evidence by indicating the contribution of BFP to the fall of income inequality, to be impactful. Similarly, the OECD (2010) found that between 2001 and 2008 the Bolsa Familia Program accounted for a 17 per cent fall in income inequality in Brazil. With smaller weights of Bolsa Familia Program transfers between 2001 and 2008 (OECD, 2010) this suggested a better ratio of fiscal cost to social benefit in terms of inequality reduction.

Similar to South Africa, income inequality in Brazil, was driven mainly by wage inequality. Lima and Scorzafave (2008) found that private sector wages were the most important factor driving the reduction in income inequality. The OECD (2011) corroborated and found that earnings from work contributed 55.6 per cent in the reduction in income inequality in Brazil from 1992 to 2008 while Francisco *et al.*, (2014) found that the changes in the distribution of labour earnings contributed between 35 per cent and 55 per cent to the reduction of income inequality over a similar period. These findings highlight the centrality of the reduction of the wage inequality, as a significant variable in the reduction of Brazil's overall high income inequality. Table 3.11 illustrates the importance of different compositions income sources, most notably wage earnings and the BFP in the reduction of Brazil's income inequality from 1992 to 2008.

Table 3. 11: Participation of Different Income Sources in Inequality Reduction in Brazil

Share	1992-2008 (%)
Work Earnings	55.6
Social Security	5.9
Bolsa Familia	40.9
Private Transfers	-2.5
Bonus	0.1
Total	100.00

Source: OECD (2011)

Ferreira, Firpo and Messina (2017) provided evidence that the wage Gini coefficient had fallen from 0.5 in 1995 to 0.41 in 2012 while on the Theil Index inequality fell between 30 per cent to 40 per cent. This fall was attributed to the changed structure of remuneration in the Brazilian labour market rather than changes in the distribution of workers' characteristics (Ferreira *et al.*, 2017). Figure 3.15 illustrates the declining evolution of wage and income inequalities of Brazil from 1995 to 2012.

Figure 3. 13: Wage and Household Income Inequalities in Brazil from 1995 to 2012



Source: Ferreira *et al.*, (2017)

Evidence suggests that the growth in wages and the decline in wage inequality were largely associated with the rapid increases in Brazil's NMW. Ferreira *et al.*, (2017) found that between

1995 and 2012, the overall real national minimum wage rose by 103 per cent. Similarly, Engbom and Moser (2018) found the NMW increased from approximately 34 per cent in 1996 to 60 per cent in 2012. Marcelo (2019) found that until 2014, the median income grew three times faster than GDP and the incomes of the bottom five per cent increased fivefold between 2003 to 2015. Between 2003 and 2015 the yearly income growth of the bottom 40 per cent of 6.39 per cent exceeded average income growth rate of 3.79 per cent (Marcelo, 2019). At the top end of the income distribution, Morgan (2018) found that the top 10 per cent wage income share had fallen threefold between 2001 and 2015. Whilst the bottom 50 per cent shares had increased almost twice as fast over the same period (Morgan, 2018).

Engbom and Moser (2018) concluded that the rapid increase in the Brazilian NMW accounted for 55 per cent of the overall compression in wage inequality in Brazil from 1996 to 2012. The share of workers employed at the minimum wage level fell to below 10 per cent and the wage inequality compression, driven by the spillovers of the NMW, reached up to the 80th percentile of the earnings distribution. This suggesting that the minimum wage hikes in Brazil had a far-reaching spillover effect in the Brazilian labour market.

Concluding, similar to South Africa, Brazil's wage inequality is a significant composite of overall income inequality. Brazil's declining evolution of earnings inequality between 1993 to 2015 can largely be explained by the NMW policy instrument, which lead to a reduction in wage and income inequalities. The South African new national minimum wage policy instrument was only implemented on the 1 January 2019 and it is still in its commencement stages, therefore the effects are limited in assessing the impact on the long run effects in the reducing of wage and overall income inequalities. Additionally, the South African NMW is limited to serve as a comparison to the Brazilian NMW experience.

Further comparisons can be drawn between South Africa's unconditional cash transfer program and Brazil's Bosa Familia Program (BFP). Researchers have indicated that the BFP played a meaningful role in the reduction of income inequality in Brazil. The same however cannot be said for South Africa, as the grant program has had a smaller effect in reducing South Africa's high income inequality, however, having the effect of marginally offsetting the high income inequality (Hunderborn, Liebbrandt and Woolard, (2018); Maboshe and Woolard (2018). The success of the South African grant programme, has been more visible in the reduction poverty, specifically for individuals who have limited access to the labour market, such as children, pensioners, war veterans and individuals living with disabilities.

3.5 Conclusion

This chapter began with findings from the literature on income inequality in South Africa, building up to the findings on the distribution of income shares, composition of income and the key finding of wage inequality as the principal driver of income inequality in South Africa. The findings further included the key mechanisms inducing South Africa's wage inequality, specifically educational attainment, and intergenerational mobility. The chapter further introduced two key policy instruments implemented in South Africa to reduce income inequality, namely the unconditional cash transfer programme and the newly introduced national minimum wage. The chapter concluded with a brief comparative case study of Brazil's success in reducing income inequality from very high levels, as a comparison to South Africa's high income inequality dynamics.

Whilst this chapter has explored income inequality in South Africa, the evidence to be presented in the following chapter will be on wealth inequality within the global experience and South Africa. Piketty (2014) asserted that income differentials were partly as a result of unequal pay for work and partly because of much larger inequalities of *income from capital*, which are themselves consequences of the extreme concentration of wealth. High global and local concentrations of wealth, their causes, distributions and their link to income through capital income, will be explored in the next chapter.

Chapter 4: Literature Review

Wealth Inequality

4.1 Introduction

The purpose of the research is to evaluate the extent to which wealth inequality was addressed within the context of the banking sector BBB-EE of South Africa. It was therefore necessary to focus the research in examining wealth and capital income as central drivers of wealth inequality. A significant portion of the literature on economic inequality has been focussed on inequality with regard to wages, the high premium for skilled/educated workers relative to low-skilled workers and inequality in consumption. Davies and Shorrocks (2018) suggested that the neglect of the wealth dimension of inequality could be explained by income being considered a more comprehensive measure of inequality, as it covers flows of purchasing power from both human and non-human wealth.

The OECD (2018) indicated that an understanding of wealth inequality requires consideration, as income from the labour market provides only a partial view of economic resources available to support consumption. Stiglitz (2012) asserted that differentials in household income are not only related to disparities in wages, but also include differentials in wealth and income from capital. Wealth provides a basis for income generation, through interest, rents, dividends or capital gains (Orthofer, 2016). Wealth further has the effect of reducing vulnerabilities due to shocks, such as, unemployment and ill health (Credit Suisse, 2019).

Khan (2010) indicated that high wealth concentrations describe the presence of a group who have disproportionate control or access to resources, defined as the economic elites. This group,

Khan (2010) suggested, use their positions to secure political and administrative connections in order to maximise profits and convert their disproportional economic capital to other forms of capital. Mbewe *et al.*, (2019) asserted that the concentration of a society's wealth in the hands of a few, reduces mobility of wealth which in turn limits its productive use in a society. Piketty (2014) suggested that deep economic forces were allowing the rich to amass a rising share of overall wealth at the expense of society.

To set the scene, this chapter firstly explores wealth inequality thorough a review of recent literature on wealth inequality and wealth distributions from a global viewpoint. The global experience on wealth inequality is far more researched than in South Africa and thus provides a better understanding on the nature of wealth inequality dynamics overall. A discussion of the South African experience follows by evaluating recent literature on wealth inequality, wealth distributions and the BBB-EE policy instrument introduced in part to address wealth inequality in South Africa. The chapter further provides a brief overview of the experience of the Malaysian NEP wealth transfer program in addressing wealth disparities. This to serve as a brief comparative study to South Africa's BBB-EE program.

4.2 Global Wealth Inequality

There has been an increasing recognition of the importance of wealth inequality following the publication of Piketty's (2014) *Capital in the 21st Century*. Prior to this, there was less examination of the evidence on the inequality of wealth distributions both within-and-between countries. The new focus has highlighted inherent challenges on the ability to measure wealth concentrations and wealth distributions, as few countries have wealth taxes. The absence of wealth taxes has in turn

impeded the ability to collect administrative data on wealth distributions. The OECD (2019) estimated that approximately 35⁶⁰ countries globally have national household surveys on wealth.

Zucman (2013) indicated that the measurement of wealth of richer households has become increasingly difficult to measure due to globalisation as 8 per cent of the world's household wealth (financial portfolios) were held offshore and problematic to capture into household sector balance sheets. Despite these limitations, progress has been made through the use of domestic household wealth surveys, income tax data and 'rich lists' to provide evidence on wealth inequality within-country and between-countries.

The general consensus⁶¹ is that wealth inequality is greater than income inequality. Earlier, Smith (2001) suggested that the possible drivers of wealth inequality generally fall into three categories: labour income, savings choices and bequests. The International Monetary Fund (2015) submitted that the causes of high wealth inequality included stagnating wage growths, which impeded the middle- and lower-income workers' ability to create savings. This juxtaposed with the low propensity of consumption by top-income workers (International Monetary Fund, 2015). Studies conducted by Piketty (2014), Saez (2015), Zucman (2019) and Alvaredo, *et al* (2018) found that the high wealth inequality in advanced countries could be explained by rising wealth concentrations at the top of the wealth distribution.

Relating to inequality measurements, Davies and Shorrocks (2018) found a high global wealth Gini coefficient of 0.90 as compared to the global income Gini coefficient of 0.73 in 2015. This reflecting an extremely high global wealth inequality relative to an already high global income inequality. Further, Davies and Shorrocks (2018) found that global wealth inequality had

⁶⁰ The 35 countries with household wealth surveys, represent an estimated of two-thirds of the global population and 95 percent of the world's household wealth.

⁶¹ Atkinson (2007), Piketty (2014), OECD (2018), Alverado *et al.*, (2019).

decreased marginally to 0.90 in 2017 from 0.91 in 2000 and showed no significant descending trend and thus indicating a ‘stickiness’ of the global wealth index over the period. In contrast, Davies and Shorrocks (2018) found the global income inequality index had declined over a similar period. The declining trend of the global income inequality was broadly in line with the findings of previous studies by Lakner and Milanovic (2016) and Boarini *et al.*, (2018). Thus conclusions can be drawn that global income inequality was on the decrease, whilst global wealth inequality remained stubbornly high.

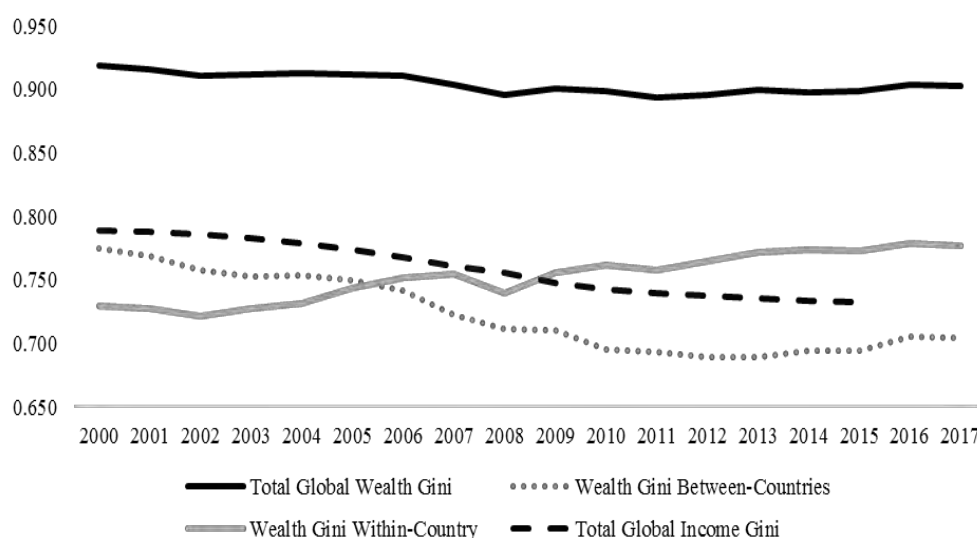
Global wealth dynamics are driven by both between- and within-country forces. Davies and Shorrocks (2018), Zucman (2019), and Alverado *et al.*, (2018), found a declining evolution of between-country wealth inequality as compared to rising within-country wealth inequality. The declining between-country wealth inequality effects were, driven by the rise of private wealth growing faster in large emerging economies⁶², as compared to rich countries (traditionally positioned at the top of the global wealth distribution). These emerging economies were powered by high economic growths and large-scale privatisation within their transition economies and typically featured in the bottom three quarters of the distribution (Zucman, 2019). This trend culminated in a reducing effect on overall global wealth inequality. Davies and Shorrocks (2018) found the negative impact of the between-country component on global wealth inequality was approximately double the contribution of the rising within-country component within the global wealth dynamics.

The rising wealth inequality within-countries was determined by a number of factors, including rising income inequality amplified by the inequality of savings rates and high rates of capital returns (Alverado *et al.*, 2018). Zucman (2019) found within-country, wealth concentration

⁶² Most notably China, discussed further under Global Wealth Distributions.

was on the rise, pushing wealth concentration up and contributing to the upward trend of within-country wealth inequality. The declining between-country wealth inequality had an offsetting impact on the increasing within-country wealth inequality and contributed to the ‘stickiness’ of the high global inequality. Table 4.1. illustrates the progression of total global wealth inequality, within-country wealth inequality, between-country wealth inequality and total global income inequality from 2000 to 2017. This to provide insights of the evolutions of the respective Gini coefficients relative to each other.

Figure 4. 1: Global Wealth and Income Gini Coefficients



Source: Davies and Shorrocks (2018)

The OECD (2015) suggests that wealth Gini coefficients are not well suited for the study of wealth distributions as a large fraction of households at the bottom of the distribution have zero or negative wealth and therefore the Gini coefficient can no longer be bound by 1 (OECD, 2015). Similarly, Morrison and Murtin (2013) indicated that individuals with zero or negative wealth blurs the interpretation of between-country differences or changes in wealth inequality over time.

Notwithstanding these measurement problems, the key finding is that global wealth inequality is even greater than global income inequality and is influenced by between-and-within country dynamics. The next section of this chapter will explore findings on global wealth distributions and the possible drivers of global wealth inequality.

4.2.1 Global Wealth Distributions

An understanding of wealth inequality requires an exploration of both wealth distributions and concentration levels. A significant body of knowledge is emerging on the long-run evolution of between-countries, within-country wealth distributions and wealth concentration levels. The most predominant contributions include: Saez (2015), Piketty (2014), Stiglitz (2018), Zucman (2019), the OECD Wealth Distribution Database and the Global Wealth Databook (Credit Suisse). The OECD (2018) cautions that differences in statistical outputs from these various sources are reflective of a mixture of differences in assumptions, measurements/estimations, inherent errors in each source of data and treatments of pension wealth. Nonetheless, important inferences can be drawn on wealth distributions and wealth concentrations presented by these various studies.

The OECD (2015) suggests that the high global wealth inequality is increasingly being influenced by a noticeable rise in wealth concentrations at the top of the global wealth distribution. Similarly, Alvaredo *et al.*, (2018) found evidence of high global wealth concentrations levels, with the global top 10 per cent owning more than 70 per cent of total global wealth, the bottom 50 per cent owning less than 2 per cent and the middle 40 per cent owning less than 30 per cent of total wealth. Zucman (2019) found global wealth to be more concentrated than income, with the global

bottom 50 per cent owning wealth of close to 0 per cent⁶³ compared to income shares of the global bottom 50 per cent of approximately 15 to 25 per cent. The OECD (2015) reached similar conclusions, finding the top decile of the global income distribution accounting for 25 per cent of total global income, while the top decile of wealth accounted for 50 per cent of total global wealth. Later research by the OECD (2018) found the global top 10 per cent owning 52 per cent of global wealth, indicating the progressive nature of concentrations of wealth within the top decile of global wealth dynamics.

Davies, Lluberus and Shorrocks (2019) found similar evidence, finding that the bottom half of global households collectively owned less than 1 per cent, the top 10 per cent owned 82 per cent and the top 1 per cent owned approximately 50 per cent of the total global wealth. Of significance, was the consistent evidence of the high concentration levels of global wealth within the top 10 per cent across all sources (Table 4.1). This confirms the importance of the wealth concentrations at the top of the global wealth distribution in explaining the high global wealth inequality. Table 4.1. illustrates the findings on global wealth distributions per the various sources and wealth concentration levels at the top of the wealth distribution (the top 1%).

⁶³ Total assets of bottom 50 percent were typically equivalent to total liabilities.

Table 4. 1: Global Wealth Distributions Per Various Sources

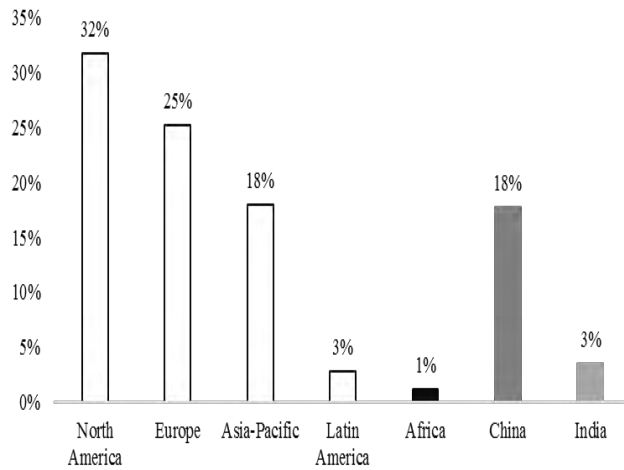
Source	Bottom 50 Percent	Bottom 75 Percent	Top 10 Percent	Top 1 Percent
Alverado et al.(2018) and Zucman (2019)	2%	10%	70%	33%
Davies and Shorrocks (2019)	1%		82%	50%
OECD (2018)			52%	

Source: Alverado *et al.*, (2018), Zucman (2019), OECD (2018) and Davies *et al.*, (2019)

To understand global wealth distributions an exploration of differences in geographical wealth concentrations was required. Credit Suisse (2019) found that total global wealth increased by 5.9 per cent to \$ 360.6 trillion from 2017 to mid-2019. This trend masks divergent tendencies between regions, as wealth is geographically unequal. Davies *et al.*, (2019) found that Europe and North America together accounted for approximately 57 per cent of total global wealth in 2019, followed by the Asia-Pacific region at 18 per cent. The World Bank (2018) found that the wealth of middle-and upper-income countries increased between 19 and 28 per cent from 1995 to 2014, with the share of global wealth of high-income OECD countries declining from 75 per cent to 65 per cent over this period. Noticeably, the World Bank (2018) found, Asian upper-and middle-income countries, most notably China had experienced rapid rises in wealth.

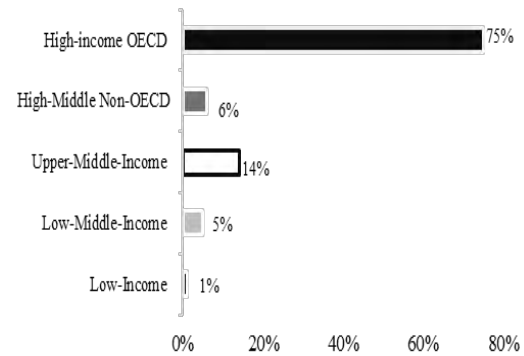
Over the past 20 years Credit Suisse (2019) found China's total wealth increased from \$4 trillion to \$64 trillion, with China playing a pivotal role in shaping global wealth inequality dynamics and accounting for two-thirds of real wealth gains since 2008 (Davies *et al.*, 2019). Figure 4.2 illustrates global wealth distributions by geographic region and the growing importance of China's global share of wealth. Figure 4.3 Indicates global wealth shares according to countries' income levels, this to provide a comparative to the higher wealth shares globally.

Figure 4. 2: Global Wealth Shares and China



Source: Davies *et al.*, (2019)

Figure 4. 3: Global Wealth Shares Per Income Shares



Source: World Bank (2018)

Credit Suisse (2019) found that China had a significant impact on reducing between-country global wealth inequality throughout the past two decades. However, Piketty, Yang and Zucman (2019) found a rising trend of wealth inequality within China itself (within-country), with the top 10 per cent share of total wealth increasing from 40 per cent in 1995 to 67 per cent in 2015. Piketty, Yang and Zucman (2019) elaborated that while Chinese wealth inequality was lower than Western countries in the mid-1990's, it is currently positioned between the United States and Europe. The share of the bottom 50 per cent in China is now comparable to Western countries at 6.4 per cent of total wealth (Piketty *et al.*, 2019). Table 4.3. illustrates China's highly unequal wealth distributions and highlights the significance of the wealth concentration within the top 10 per cent. This is consistent with evidence of the global top 10 shares (Table 4.1).

Table 4. 2: Chinese Wealth Distributions

Wealth Group	Wealth Share
Bottom 50 Percent	6.4%
Middle 40 Percent	26.2%
Top 10 Percent	67.4%
Including Top 1 Percent	29.6%
Including Top 0.1 Percent	16.4%
Including Top 0.01 Percent	11.0%
Including Top 0.001 Percent	5.8%

Source: Piketty *et al.*, (2019)

There is a general consensus⁶⁴ of rising wealth concentrations since 1980, though the causes are still under deliberation by researchers. Piketty (2014) provided explanations of neoliberal reforms and the increasing lobby power exercised by the wealthy, which resulted in taxation in most developing countries becoming less progressive. Stiglitz (2015) argued that privatisation, the emergence of global oligopolies and monopolies increased monopoly rents. Crotty (2012) suggested that the labour market, through diminishing labour union density, increasing unemployment and reduced workers bargaining powers, led to the evolution of high wealth concentrations.

A key feature of global wealth concentrations is the rise of the ‘1 per cent’ and the controversial ‘billionaire class’. Goda (2018) found the top 1 per cent of the global population had amassed approximately 46 per cent of total global wealth in 2012. Davies and Shorrocks (2018) found that the share of the top 1 per cent had accelerated in the aftermath of the global financial crisis of 2007 to 2008. Alvaredo *et al.*, (2018) found the share of wealth held by the global top 1 per cent had risen from by 3.5 per cent between 1987 and 2017, with the fastest growth experienced

⁶⁴ Piketty (2014), Stiglitz, (2012), World Bank (2018), OECD (2018) and Zucman (2019).

further up the wealth distribution. Zucman (2019) found the average wealth shares of the top 0.01 per cent were 100 to 200 times larger than the average wealth of the bottom of the distribution. Table 4.3 illustrates the concentrations and growth within the 1 per cent of global wealth shares.

Table 4. 3: Decomposition and Growth Between Periods within the 1 Per cent Global Wealth Share

Decomposition of the One Percent	1980-2017	1987-2017
Top 0.01 Percent	5.5%	5.7%
Top 0.1 Percent	4.4%	4.5%
Top 1 Percent	3.4%	3.5%

Source: Alverado *et al.*, (2018)

Alvaredo *et al.*, (2018) suggested that growing within-country wealth inequality was driven by a small wealthy group⁶⁵ of the top 1 per cent who had particularly experienced rapid wealth growth rates (Table 4.3). Within this grouping, even faster wealth growth rates had been experienced within the top 0.1 at 4.5 per cent and the top 0.01 at 5.7 per cent, between 1897 to 2017 (Alvaredo *et al.*, 2018). Alvaredo *et al.*, (2018) indicated that if maintained, the speed of the wealth growth rate of the top 0.1 by 2050, will result in this grouping having the same wealth as the global middle class (middle 40 per cent of the population). These circumstances of extreme wealth concentrations captured by the global top one per cent, have led to the billionaire class receiving increased scrutiny and subjected to emotive criticism.

Oxfam (2019) found that in the ten years after the global economic crisis of 2008, the number of billionaires globally had almost doubled, with their combined wealth increasing by \$900 billion in the last year studied, whilst the poorest half of humanity (approximately 3.8 billion people)

⁶⁵ Alvaredo *et al.*, define wealth group qualification as global individuals owning €1.125 million (Top 1 %), €5.2 million (Top 0.1%) and €25.8 million (Top 0.01%).

experienced an 11 per cent fall in their combined wealth. Oxfam (2019) further found that 26 individuals owned the same wealth as approximately 3.8 billion global individuals, down from 43 individuals in 2018. McKinsey (2019) provided evidence of wealth concentration among fewer billionaire's in 2018, estimating that 26 billionaires owned 50 per cent of global wealth.

Forbes (2019) indicated that there were 2,153 global billionaires, (55 fewer than 12 months previously), with a record 607 billionaires in the United States, of whom 14 were included in the top 20 rich list. Stiglitz (2018) found that within the United States, wealth was highly concentrated with three United States billionaires having approximately as much wealth as the bottom 50 per cent. China debuted 60 new billionaires in the Forbes Rich list of 2019 (Forbes, 2019) demonstrating the growth of the billionaire class in this emerging economy.

Inherited wealth is a key feature of commentary on wealth dynamics. The OECD (2018) found that globally one in three households receive some form of a gift or bequest in their lifetime, with richer households more likely to receive an inheritance or gift. The incidences and value of inheritances are higher for those in the top wealth quintile than those at the bottom (OECD, 2018). Piketty (2014) asserted that rising inheritance flows are foremost in supporting patrimonial capital returns where (r) increases faster than the real growth rate (g), with the result that the rich get richer faster than their ability to spend their wealth and faster than new fortunes can be created. Earlier research by Jacobs (2014) in evaluating the United States (the country with the most billionaires) found, however, that 66 per cent of billionaires on the Forbes 400 Rich List⁶⁶ of 2013 were in fact self-made and only 33 per cent had inherited their wealth (composed of 13 per cent of wealth inherited and 21 per cent inherited and grown into further wealth).

⁶⁶ The Forbes 400 Rich List is a list of the wealthiest American individuals and is not to be confused with the Global Billionaire List, which is a global list of billionaires. Both are generated by Forbes annually.

Collins and Hoxie (2018) provided corroborating evidence that only 136 members (34 per cent) out of the Forbes 400 Rich List of 2018, had derived their wealth from companies started by earlier generations. Collins and Hoxie (2018) however indicated that the three wealthiest modern family dynasties have consistently featured on the Forbes 400 Rich List since it was first published in 1982, and had seen their wealth expand from \$2.22 billion (\$7.65 billion in 2018 dollars) in 1982 to \$348.7 billion in 2018, representing an increase of approximately 6 000 per cent. Table 4.4 provides the wealth evolution of the three wealthiest families in the United States from 1982 to 2018.

Table 4. 4: Top Three Wealthiest Families United States

Family Dynasty	1982 Wealth (Billion)	1982 Wealth, Adjusted For Inflation (Billion)	2018 Total Family Wealth (Billion)	Percentage Increase
Waltons	0.690	1.810	169.70	9276%
Kochs	0.532	1.400	107.00	7543%
Mars	1.000	2.630	72.00	2638%
Total	2.22	5.84	348.70	5871%

Source: Collins and Hoxie (2018)

The ‘types’ of wealth have a significant influence on wealth concentrations and wealth growth trajectories. Therefore, an important distinction needs to be made on the composition of wealth because of historical differences in wealth price changes (Kuhn, Schularick and Steins, 2018). Goda (2018) indicated that changes in global equity prices, real-estate prices and the deepening of globalisation had an influence on overall wealth. Venti and Wise (2001) suggested that families with the same level of income can end up in different locations of the wealth distribution due to their different forms of savings, such as real-estate, equities, bank deposits and other financial instruments. Favilukis (2013) indicated that the rapid growth of the equity markets benefits wealthier households more because of their higher savings rates. Atkinson *et al.*, (2011)

and Piketty (2014), suggested that recent increases in the top income shares likely contributed to the increase in wealth concentrations, though the growths are not perfectly correlated, as income inequality and wealth concentrations tend to be mutually reinforcing because of the higher savings rates of the rich (Piketty, 2014).

Thus, research indicates that the ‘types’ of wealth may influence the level of wealth inequality. Wealth is broadly categorised into financial⁶⁷ and non-financial⁶⁸ assets. Financial assets include deposit accounts, bonds, listed shares, mutual investments funds, life insurance etc. Non-financial assets include real estate, property investments, vehicles, art etc. The level of economic development typically determines the composition of financial and non-financial assets in gross assets of a country or region. Davies *et al.*, (2019) found that developed regions displayed higher levels of financial assets, as compared to non-financial assets within gross assets. For example, financial assets share of gross assets constituted 69 per cent for North America (United States and Canada) and 44 per cent for Europe, compared to a less developed region such as Latin America, at 36 per cent (Davies *et al.*, 2019).

The OECD (2018) found financial assets to be more unequally distributed than non-financial assets, with financial assets more important at the top end of the wealth distribution. The OECD (2018) indicated that across the 28 countries studied, households in the top wealth quintile had on average financial wealth of 72 times, that of the bottom quintile households. Relating to non-financial assets (real-estate), households in the top wealth quintile had on average 23 times non-financial wealth as compared to the bottom quintile households. Based on the global wealth

⁶⁷ Financial assets are entities over which ownership rights are enforced by institutional units, individually or collectively from which economic benefits may be derived by their owners by holding them or using over a period of time and there is a counterpart liability.

⁶⁸ Non-financial assets are entities over which ownership rights are enforced by institutional units, individually or collectively from which economic benefits may be derived by their owners by holding them or using over a period of time and there is no corresponding liability.

portfolios, Davies *et al.*, (2019) similarly found financial assets were 17 per cent greater than non-financial assets in 2014 and this difference increased further up the global wealth distribution. Earlier, the OECD (2015) asserted that the high concentrations of financial assets at the top of the distribution were a key factor in influencing overall wealth inequality, as higher prices of financial assets were associated with larger shares of wealth going to the top 10 per cent of the global wealth distribution.

Another significant influence on overall wealth inequality is the level of home ownership, particularly the extent to which households own their main residence outright. The OECD (2018) found real-estate wealth (non-financial wealth) constituted the largest share of overall gross assets across the wealth distribution and is more evenly distributed compared to financial assets. Piketty (2014), Alvarado *et al.*, (2018) indicated that real-estate (mainly primary residence) was the main source of wealth for households below the top 50 per cent shares of the wealth distribution. The OECD (2015) suggests that factors contributing to the growing inequality of wealth distribution included significant housing price fluctuations relative to consumer prices, with falling housing prices potentially leading to households experiencing negative housing equity and contributing to higher levels of wealth inequality (OECD, 2018).

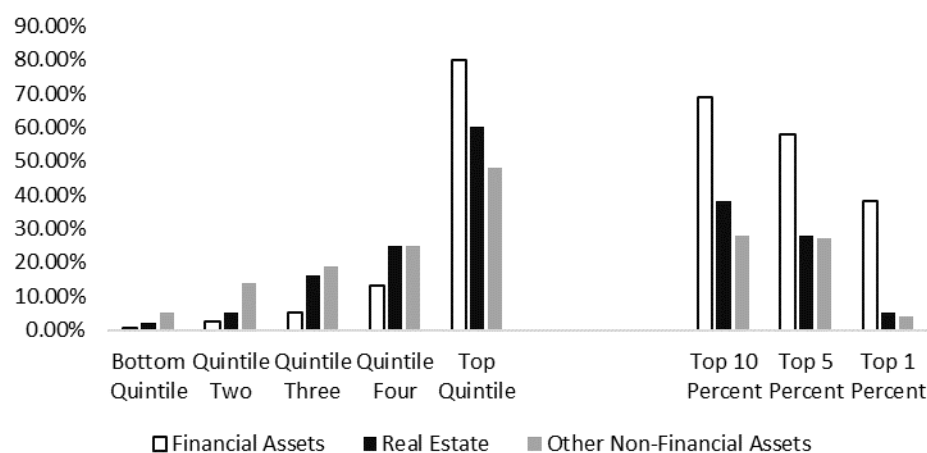
Household debt also plays an important component in real-estate (non-financial) wealth. The OECD (2018) found countries characterised by a lower share of households owning real-estate outright (unleveraged) experienced higher levels of wealth inequality. For example, countries with higher levels of wealth inequality, such as the United States, the Netherlands and Denmark, were characterised by a lower share of households owning their home outright (OECD, 2018).

The OECD (2018) found that for the bottom 50 per cent, liabilities relating to the purchase of real-estate constituted the bulk of household debts at 85 per cent on average. Consequentially,

household debt plays an important factor across the wealth distribution, as real-estate ownership often has a counterpart liability component. Therefore, when housing prices drop, the net effect with the concomitant liability may result in zero or negative housing equity, thus playing a role in influencing wealth inequality.

Figure 4.4 illustrates the shares of financial and non-financial assets in total wealth⁶⁹. It highlights the centrality of financial assets being concentrated further up the wealth distribution and less visible at the bottom of the distribution, with non-financial assets featuring across the distribution.

Figure 4. 4: Shares of Financial and Non-financial assets across the Wealth Distribution.



Source: OECD (2018)

Concluding, the general consensus is that global wealth inequality is more unequal than global income equality. Furthermore, global wealth dynamics are shaped by both between-and-within country forces, with the declining between-country wealth inequality having an offsetting effect on the increasing within-country wealth inequality and together contributing to the

⁶⁹ This was based on 28 countries surveyed by the OECD (2018).

‘stickiness’ of the high global inequality wealth Gini coefficient. Evidence further suggests that global wealth distributions are highly unequal and concentrated at the top of the global wealth distribution.

Literature indicates that the ‘types’ of wealth have an influence on wealth inequality, with financial assets more unequally distributed than non-financial assets. Financial assets mainly featured within the top 10 per cent of the global wealth distribution and are a key factor in influencing global wealth inequality, due to the benefits of rising prices of financial assets going to the top end of the global wealth distribution. Another important feature on the influence of wealth inequality is real-estate wealth (non-financial wealth) which is more evenly distributed (compared to financial assets) across the global wealth distribution. Non-financial wealth, in particular real-estate wealth, further has an influence on wealth inequality due the concomitant liability of real-estate assets. When housing prices drop, the net effect may result in zero or negative housing equity values and thus playing a role on influencing global wealth inequality.

The following section will explore wealth dynamics in South Africa, by reviewing literature on wealth inequality, wealth distributions, and the BBB-EE instrument introduced in part to address wealth inequality in South Africa.

4.3 Wealth Inequality in South Africa

The understanding of wealth inequality in South Africa has a unique significance as it co-exists with extreme levels of poverty and overall economic and social inequalities. In South Africa, the starting levels of wealth have been configured by dispossession and discrimination (Terreblanche, 2002). Given the historical dispossession and discrimination in the capital and labour markets,

wealth inequality also captures the legacy of low wages, personal and organisational discrimination and institutionalised racism (Oliver and Shapiro, 2013).

As discussed, until recently wealth inequality had previously not been comprehensively researched in South Africa. The focus of research had been on income and consumption inequalities, since macroeconomic research in developing countries has principally been concerned with the flows of income and expenditure, as opposed to changes of ownership of the stocks of assets and liabilities. In South Africa, flow variables have been recorded in the national accounts since the 1940's and stock variables have only recently been included in official national statistics (Orthofer, 2016).

Deficiencies in research on wealth inequality in South Africa have been compounded by lack of consistent and sufficient data. South Africa has two possible sources of wealth data, namely, large-scale household surveys and administrative records from the tax authorities. The main limitations when using household surveys, is that participation is voluntary and richer households tend to be less likely to participate in wealth disclosures. Further, households may not be aware of the current market values of their assets or feel comfortable in disclosing their wealth.

Administrative taxation data provides wealth data, as tax filing is mandatory and does not run the risk of under-representing individuals at the top of the distribution. However, tax data comes with its own limitations as 80 per cent of South Africans fall below the tax threshold for mandatory income tax submissions (Orthofer, 2016). Wealth during its 'life', in itself is not liable for taxation in South Africa, however taxation typically applies at the point of acquisition and disposal. Therefore, income from wealth provides a proxy only to the extent that particular wealth generates measurable income streams. Therefore, approximations need to be made to measure the

distribution of taxable income from investments, to approximate wealth distribution patterns (Orthofer, 2016).

The resultant effect of South Africa's wealth data limitations is that sampling and/or estimations are required to approximate South Africa's wealth distributions. Despite the data limitations, significant research on wealth and wealth inequality is emerging. The following section will explore these findings.

4.3.1 Measuring Wealth Inequality in South Africa

All recent estimates show that South Africa's wealth inequality is extremely high and much higher than the already very high income inequality. Orthofer (2016) estimated South Africa's wealth Gini coefficient at 0.98 compared to an income Gini coefficient of 0.7. Mbewe and Woolard (2016) provided their own estimations of an increasing wealth Gini coefficient of 0.93 in 2010/2011 rising to 0.94 in 2014/15. These findings suggest that South Africa's wealth inequality was higher than the global wealth inequality Gini coefficient of 0.9 in 2015 (Davies and Shorrocks, 2018).

Wealth inequality in South Africa has a racial dimension. The institutions of colonialism and Apartheid, resulted in Black individuals being denied access to most forms of capital (McGarth, 1982) explaining in part, the high degree of within-race wealth inequality in South Africa. Liebbrandt *et al.*, (2010) and Finn and Liebbrandt (2013) suggest that this trend persisted in the post-apartheid era, with the bulk of Black South African households still holding little or no measure of wealth. Mbewe and Woolard (2016) found evidence that wealth inequality was far more severe for Black South Africans (within-race) at 0.98, compared to other racial groupings. Paradoxically, the lower White wealth inequality (than other race groups) lowers overall wealth inequality in South Africa (Orthofer, 2016). This supports existing research on income inequality

which found that increasing or decreasing inequality within-race are increasingly shaping overall income inequality in South Africa (Liebbrandt *et al.*, 2010).

Henceforth, wealth inequality in South Africa is racialised and overall wealth inequality is much higher than the overall income inequality at 0.63 (Statistics South Africa (2018), thus shaping South Africa to be highly unequal in both income and wealth inequalities. Table 4.5 summarises the various measures of South Africa's high wealth Gini coefficients and shows the within-race dimension of wealth inequality in South Africa.

Table 4. 5: South Africa's Wealth Inequality per Various Sources

Source	Wealth Inequality
Orthofer (2016)	0.95
Mbewe and Woolard (2016) For 2010/2011	0.93
Mbewe and Woolard (2016) For 2014/2015	0.94
Mbewe and Woolard (2016) Per Race	
Black	0.98
Asian/Indian	0.91
Coloured	0.81
White	0.74

Source: Orthofer (2016) and Mbewe and Woolard (2016)

Piketty (2014) emphasised that the high levels of wealth inequality are not accidental, but a product of patrimonial capitalism. The experience for South Africa is unique, as in addition to patrimonial capitalism, the prevailing high levels of extreme wealth inequality and low intergenerational mobility of wealth were created from the structural inequalities embedded by Apartheid (Mbewe *et al.*, 2019). Similar to income inequality, the World Bank (2018) found that educational attainment had a high elasticity to net wealth determination. Tertiary education having

the highest wealth elasticity at approximately 220 per cent greater than primary education (World Bank, 2018). The World Bank (2018) found that race has the second strongest correlation to net wealth determination and that White South Africans had much higher wealth elasticity than Black South Africans.

The following section evaluates South Africa's wealth distributions this to provide a better understanding of the causes of South Africa's overall high level of wealth inequality.

4.3.2 South Africa's Wealth Distributions

An understanding of wealth inequality in South Africa required the exploration of wealth distributions. Daniels and Khan (2018) found wealth per household in South Africa to be highly unevenly distributed and displaying similar global trends of high concentration of wealth within the top decile. Orthofer (2016) found South Africans had negative wealth (i.e. net debt) at the bottom of the wealth distribution. Similarly, the World Bank (2018) found the bottom 60 per cent of South Africans owned 7 per cent of total wealth, while the top 10 per cent owned 71 per cent of total wealth. Daniels and Khan (2018) corroborated the high concentration of wealth shares at the top of South Africa's wealth distribution, by estimating that the top 10 per cent own 73 per cent of total wealth. Table 4.6 summarises various findings on the distribution of wealth in South Africa, showing the high concentration of wealth within the top 10 per cent and the low levels of wealth shares at the bottom of the wealth distribution in South Africa.

Table 4. 6: South Africa's Wealth Distributions per Various Sources

Distribution	Bottom 50 Percent	Middle 40%	Top 10 Percent	Top 1 Percent
Orthofer (2016)	-1%	6%	90-95%	61%
Distribution	Bottom 60 Percent	Middle 60-90%	Top 10 Percent	Top 1 Percent
World Bank (2018)	7%	22%	71%	

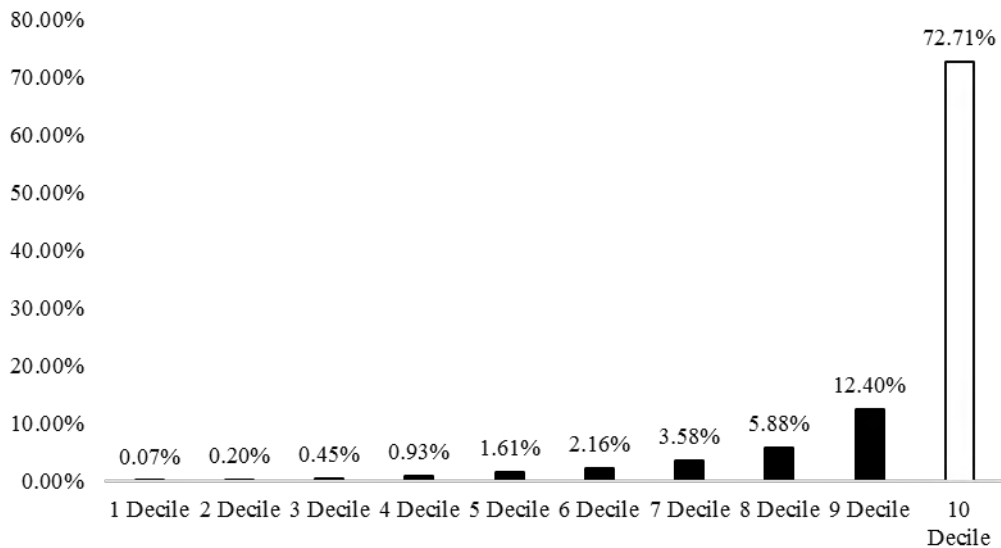
Source: Orthofer (2016) and World Bank (2018)

By evaluating wealth across the wealth distribution, Daniels and Khan (2018) provided a more nuanced understanding of the uneven wealth distributions and the high wealth concentration levels in South Africa. They found that the bottom 10 per cent of South African households owned less than one per cent (0.07 per cent) of total assets, with a median wealth of just R5 100. At the top of the distribution, Daniels and Khan (2018) found that the top decile owned 72 per cent of total wealth with a median wealth of R2 534 540, this is 29 times the median value of the fifth decile and 462 times larger than the median value of assets in the bottom decile.

A significant shortcoming in the compilation of the wealth distribution by Daniels and Khan (2018) for South Africa, lies in the NIDS datasets used to estimate assets and liabilities (net assets). Daniels and Khan (2018) found that NIDS captured only 6 per cent of financial assets reported by the South African Reserve Bank (SARB), which uses tax-based datasets and that NIDS is also less efficient in capturing household real-estate liabilities plus other liabilities. Conversely, Daniels and Khan (2018) found that NIDS was more efficient in capturing data on household non-financial assets. This means the evaluation of South Africa's wealth distributions by Daniels and Khan (2018) was limited due to gross under reporting of financial assets as well as household liabilities. This shortcoming is important as the global experience indicates that financial assets are typically an important component of gross assets and are especially important at the top of the wealth distribution (Davies *et al.*, 2019). Nonetheless, Daniels and Khan (2018) demonstrated the central

themes of uneven wealth distributions and high concentration levels at the top end of the wealth distribution in South Africa, which are consistent with global trends. Their findings are summarised in Figure 4.5.

Figure 4. 5: South Africa's Wealth Distributions Per Decile as a Percentage



Source: Davies and Khan (2018)

Asset types are significant in evaluating wealth distribution in South Africa. Daniels and Khan (2018) found that households in the bottom deciles acquired non-financial assets in the form of smaller assets first, with real-estate featuring only from the fourth decile upwards. Wittenberg and Liebbrandt (2017) found that improved access to electrification between 1993 and 2008 resulted in higher penetration levels in smaller assets such as televisions, cell phones, refrigerators at the bottom of the wealth distribution of South Africa.

Daniels and Khan (2018) found that income was highly correlated to wealth. For households higher on the income distribution, real-estate wealth was the largest component of wealth (Daniels and Khan, 2018). At the top end of the wealth distribution, the World Bank (2018) found,

consistent with global trends, that ownership of financial assets featured prominently, representing approximately 75 per cent of total assets. Similarly, Daniels and Khan, (2018) found financial assets only prominently featuring from the 9th decile upwards.

As assets typically have a counter liability, debt levels are also important to consider. By evaluating household debt levels, the World Bank (2018) found that poorer households have a small share of mortgage debt in total liabilities, at approximately 7 per cent, while for richer households the share was approximately 58 per cent. Daniels and Khan, (2018) found that for the bottom five deciles, financial debts (personal loans, credit facilities etc.) constituted the largest share of total liabilities. From the 7th to the 10th decile, real-estate liability featuring prominently and within the 10th decile, real-estate liability accounted for three-quarters of total liabilities (Daniels and Khan, 2018).

A significant consequence of the presence of high real-estate liabilities from the 7th to the 10th decile, is that households at the bottom of the distribution may in fact not be less wealthy than households at the top of the distribution. Since households at the top of the distribution may have a larger number of both assets and liabilities, their net worth may in fact be close to zero or even negative, placing them in the lower deciles of wealth distribution (Daniels and Khan, 2018). Henceforth, the connection between the asset and the counterpart liability is one of the challenges in evaluating measuring net wealth and determining wealth distributions, specifically in light of wealth data deficiencies in South Africa.

A significant contribution in the understanding of wealth inequality in South Africa came from Orthofer (2016) who recreated Piketty's (2014) capitalisation technique which used the average investment returns of asset classes to determine private wealth. Unlike Piketty's (2014) analysis which focused on both wealth distributions and the aggregate level of private wealth,

Orthofer's (2016) ability to generate wealth distributions for South Africa was impeded due to lack of data. However, Orthofer (2016) used extrapolation techniques to scale the bottom end of the PITS (tax) data and resample the top end of NIDS (household surveys) data and combined the datasets to impute estimates of inequality for financial and non-financial assets. The research provided new insights on the evolution of South Africa's wealth-to-income ratios for the period of 1975 to 2014.

Orthofer (2016) found South Africa's wealth-to-income ratio was 240 per cent in 1975 and 255 per cent in 2014. This compared to advanced economies' wealth-to-income ratios of between 200 to 300 per cent in 1975 and between 400 to 700 per cent in 2010 (Orthofer, 2016). Orthofer (2016) attributed the small change in South Africa's wealth-to-income ratio to low private savings rates and the sharp rise in the price of financial assets. Orthofer (2016) found that non-financial assets contributed only a quarter of overall private household wealth and that financial assets made up the bulk of households' asset portfolios. The largest portion of financial assets emanated from pension funds and long-term insurance products (Orthofer, 2016). These findings are contrary to global experience where non-financial wealth constitutes the largest share of assets across the wealth distribution and were more evenly distributed than financial assets (OECD, 2018).

Similar to the global experience, financial assets in South Africa are more important than non-financial assets further up the wealth distribution. Table 4.7 summarises Orthofer's (2016) findings on the composition of private wealth in South Africa and the concentration of financial assets as a significant portfolio composition of household wealth in South Africa.

Table 4. 7: Portfolio Composition of Private Wealth in South Africa, 2010

Asset Class	Percentage of Total
Financial Assets	
Pension and Long-Term Insurance Assets	35%
Other Financial Assets	
Cash Equivalents	11%
Other Securities	22%
Total Financial Assets	68%
Non-Financial Assets	
Real Estate Assets	26%
Other Non-Financial Assets	6%
Total Non-Financial Assets	32%

Source: Othorfer (2015)

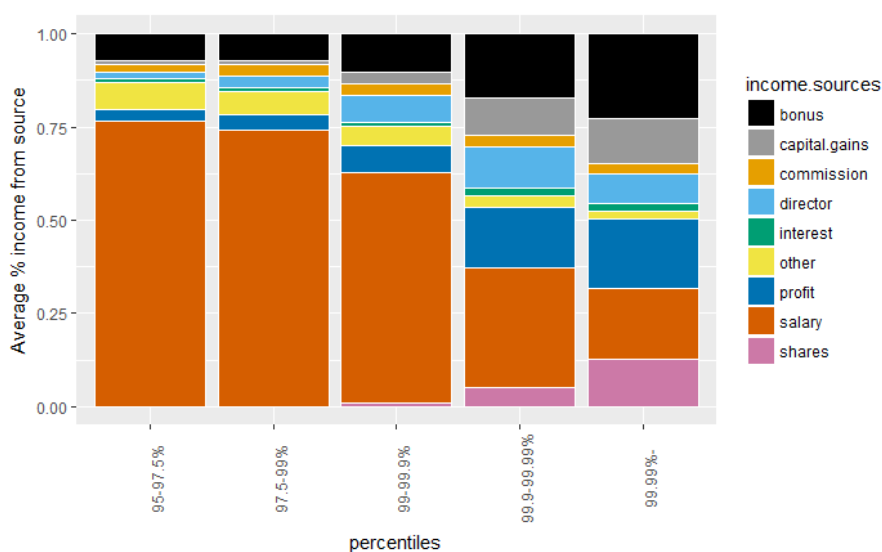
In summary, the depth of research on the understanding of wealth inequality in South Africa is not comprehensive. The chief drawback is insufficient data. The use of the NIDS and PITS datasets by Orthofer (2016) does not provide adequate coverage of the bottom of the distribution, especially for those not filing tax returns since they fall below the tax threshold. Consequentially, improving data on wealth holdings was one of the key recommendations of the Davis Tax Committee (Davis Commission, 2018). Chatterjee (2019) similarly highlighted that South Africa requires further development of data sources on distributions of wealth, to create the ability to measure wealth inequality deeper and more comprehensively.

The wealth datasets are particularly salient in South Africa, as wealth inequality is highly concentrated. Significant clues as to why this is the case, are emerging from the tail end of South Africa's income distribution. Bassier and Woolard (2018) found that while South Africa's

economy grew by approximately 4 per cent on average per year between 2003 and 2015, between 2011 and 2014, income from capital grew annually by 10 to 20 per cent for the top 5 per cent group.

Using PIT (tax) datasets Bassier and Woolard (2018) found that until the 99th percentile on the income distribution, salaries and bonuses comprise over 80 percentage of total income. But for the top one per cent labour income falls to approximately 50 per cent of all income, with capital income from shares, profit, interest and capital gains comprising the rest (Bassier and Woolard, 2018). Income from capital became even more dominant for the top 0.1 per cent and 0.01 per cent (Bassier and Woolard, 2018). This centrality of capital income within the top end of the distribution (See Figure 4.6) is consistent with the international experience. Capital income at the top end of the income distribution provides strong indications of wealth concentrations at the top end of the wealth distribution and is a plausible explanation of the high wealth inequality in South Africa.

Figure 4. 6: Source of Income Per Percentile



Source: Bassier and Woolard (2018)

The findings of Bassier and Woolard (2018) confirm much earlier research from Lydall and Tipping (1961) who had already suggested that non-wage income was found almost exclusively at the top end of the distribution, suggesting that income inequality is driven by assets (wealth), rather than just labour market income (Lydall and Tipping, 1961).

Despite challenges in comprehensive data collections and measurements, wealth inequality has been at the forefront of policy formulation in South Africa since the advent of democracy in 1994. The next section will explore the BBB-EE policy instrument that was introduced to partially address the racial wealth disparities and wealth inequality in South Africa.

4.4 Measures to Address Wealth Inequality in South Africa

4.4.1 Broad-Based Black Economic Empowerment

Literature points to an extremely high wealth inequality in South Africa and at the core of the Broad Based Black Economic Empowerment Act (2003) is equity/share allocations to Black individuals to facilitate wealth dissemination, through the '*ownership*' element of this policy instrument. Suggestively, Orthofer (2016) found that wealth inequality amongst Black individuals was the highest within-race inequality in South Africa at 0.98 and was also the driving force for between-race wealth inequality in South Africa. Intellidex (2015) suggested that BBB-EE should contribute to undoing the racial bias of wealth through distribution of wealth across previously disadvantaged South Africans.

Broad Based Economic Empowerment is not a novel idea. Ponte, Roberts and Van Sittert (2007) indicated that economic assistance was furnished under Apartheid to poor Whites during the interwar years, specifically to the Afrikaner Whites. This successfully transformed a group of

largely uneducated and poor Afrikaners, into commercial farmers, urban businessmen and the political elite (Ponte *et al.*, 2007). The first BBB-EE transaction was concluded in 1993 before the first multiracial elections, with Metropolitan Life disposing of a 10 per cent equity stake to New Africa Investment Limited (NAIL), a holding company owned by Black individuals (Uppal, 2014).

The overarching principle of the BBB-EE Act of 2003, is the promotion of ‘Black economic empowerment’ defined per the Act as ‘the economic empowerment of all Black people including women, workers, youth, people with disabilities and people living in rural areas’. The BBB-EE Act of 2003 allows for any sector of the economy to have its own BBB-EE Sector Codes and enterprises are measured only in accordance with the relevant sector codes.

The measurement criteria of “Black Economic Empowerment” pertaining to the banking industry is through the Financial Services Codes of Good Practice (2013). Table 4.8 illustrates the Financial Services Codes (FSC) scorecard for the banking industry and the respective contributions of the elements being measured. Of importance, for banking entities in South Africa, to economically transact with national and local government including parastatals, they are required to be “empowered”⁷⁰ in accordance with the FSC through a scorecard, as required by the Preferential Procurement Policy Framework Act 5 of 2001. Thus the FSC scorecard is an important tool to conduct business with the South African government. Typically, the FSC scorecards are verified by accredited agencies to ensure independent verification of BBB-EE contributions per element on the scorecard.

The general mechanism of the BBB-EE instrument is illustrated by the following simple example. If the South African government wishes to raise a loan through the form of a sovereign

⁷⁰ “Empowered” means achieving the points required per the seven elements of the FSC.

bond⁷¹, National Treasury will utilise 12 appointed primary dealers which include the banking sector, to ‘make a market’⁷² on the bond instrument. For any of the banks to be appointed, they need to be ‘empowered’ per the independently verified FSC scorecard. The appointed banks benefit economically through fees and commissions on the bond ‘market making’, this contingent on an ‘empowered’ FSC scorecard as required by the Preferential Procurement Policy Framework Act 5 of 2001. Henceforth, entities not ‘empowered’ are excluded.

Table 4. 8: Financial Services Codes Scorecard

Elements of the Financial Service Codes	BBB-EE Points
1. Ownership	23 points
2. Management Control	20 points
3. Skills and Development	20 points
4. Procurement and Enterprise Development	15 points
5. Socio Economic Development and Consumer Education	5 points
6. Empowerment Financing	25 points
7. Access to Financial Services	12 points
Total	120 points

Source: Amended Financial Sector Code (2017)

For the purpose of this thesis, the banking industry has been selected as a case study and only the evaluations of the Financial Services Sector Codes ‘*ownership*’ element will be explored. As a key mandate in ‘*addressing inequality*’ is found in the Amended Financial Services Codes (2017) which indicates ‘*addressing inequalities*’ through ‘*equity ownership targets*’ by means of ‘*sales of shares*’ to ‘*Black individuals*’ to be achieved through the ‘*ownership*’ element. Black individuals are defined as Black (African), Coloured and Indian citizens of South Africa (BBB-

⁷¹ A sovereign bond, is an instrument of indebtedness issued by the national government to support government spending.

⁷² Market makers are typically intermediaries entities that quote both a buy and a sell price in a tradable instrument (e.g. bond)

EE Act of 2003). The BBB-EE Act defines ‘ownership’ as the rights a person would have if they held shares in a JSE listed company (BBB-EE Act of 2003). The Financial Services Codes sets a target of 23 points allocated for the ‘ownership’ element. The Financial Services Codes further indicates that the “sector can better play a role in the creation of sustainable *wealth* across a broad base”.

As of 2019, within the seven JSE listed banks evaluated, three had met the Codes⁷³ ownership target of 23 points, with the ownership element broadly evenly distributed across gender (Table 4.8). The Black equity ownership of the seven banks ranged between 28 per cent (Nedbank) to 17 per cent (Capitec).

As a comparison with the banking sector’s Black equity ownership, Sartorius and Botha (2008) estimated that in 1995 total Black equity ownership on the JSE was only 1 per cent. By 2015, National Treasury (2017) estimated that this had increased to 23 per cent, of which 10 per cent was direct Black ownership and 13 per cent was indirect Black ownership held through institutional funds (National Treasury, 2017). Table 4.8 below illustrates the seven listed banks BBB-EE ownership points and Black ownership within the respective banks.

Table 4. 8: Listed Bank’s Ownership Codes

Bank	BBBEE Ownership	Total Black Equity Ownership	Black Male Equity Ownership	Black Female Equity Ownership
Nedbank	26.00 points	28.00%	13.95%	14.05%
FirstRand	25.28 points	25.86%	13.01%	12.85%
Standard Bank	23.81 points	22.20%	12.61%	9.59%
RMH	20.47 points	20.02%	10.61%	9.41%
Investec	20.23 points	20.25%	10.26%	9.99%
ABSA Group	17.94 points	15.28%	8.77%	6.51%
Capitec	14.28 points	17.08%	10.16%	6.92%

Source: Financial Services Sector Transformation Council (2018)

⁷³ Codes for the purpose of this thesis indicate Financial Services Codes.

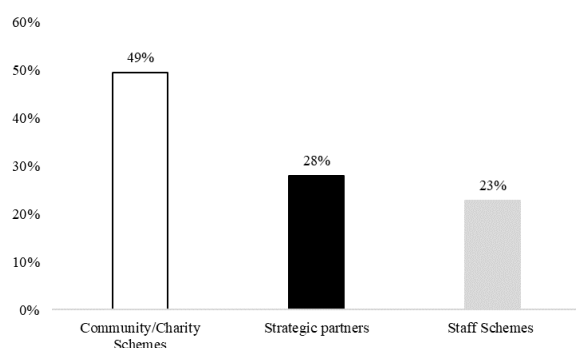
The codes are not comprehensive in evaluating the Black equity/wealth ownership as they are limited by providing equity/wealth allocations within the Black population as a whole. That is, the ‘*ownership*’ element codes only provide an aggregate view of Black ownership and not the dispersion of allocations of equity/wealth at Black individual level. This is an important principle in ascertaining the extent to which ‘*addressing inequalities*’ has in fact been achieved through the changing of wealth ownership to Black wealth ownership, through this policy instrument.

Evidence on the banking industry BBB-EE ‘*sales of shares*’ to ‘*Black individuals*’ was compiled by Intellidex (2015). Intellidex (2015) demonstrated how the BBB-EE policy instrument was applied by the banking industry in respect of equity (wealth) ‘*sales of shares*’ to Black individuals. This is particularly meaningful as literature discussed in the previous section has evidenced that differentials at the top of the income distribution are not only explained by the labour market, since income is also inclusive of capital income. Income from capital, which is an indicator of wealth, featured predominately within the top 1 per cent of the income distribution (Bassier and Woolard, 2018) thus providing hints of uneven wealth distributions. At the bottom of the income distribution, investment income, (a pointer of wealth) does not feature (Finn, 2015). Literature additionally suggested uneven wealth distributions and high wealth concentrations at the top of the wealth distribution of South Africa (Davies and Khan, 2018) and showed the importance of financial assets (which include shares/equity instruments) at the top of the wealth distribution (World Bank, 2018).

Intellidex (2015) provides a lens as to how the “*sales of shares*” within the various bank’s BBB-EE structures were allocated in accordance with the respective bank’s strategy. The Intellidex (2015) research provided a financial asset decomposition of ‘*sales of shares*’ to Black

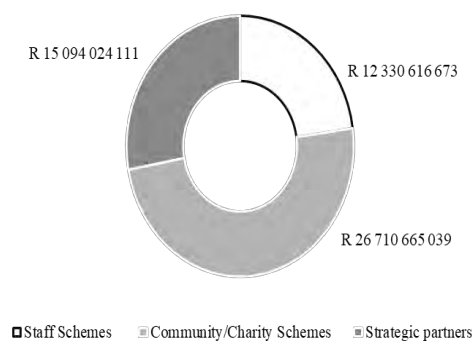
individuals through the lens of three categories: strategic partners⁷⁴, staff schemes⁷⁵ and community schemes⁷⁶. Community schemes featured dominantly compared to the other categories, followed by strategic partners. The selection of strategic partners was based on their ability to drive the respective bank's strategy and competitiveness, which manifested through lobbying at the political level, to guide business development (Intellidex, 2015). Intellidex (2015) computed the total 'value attributable'⁷⁷ from BBB-EE transactions for banks to be approximately R54 billion. Of this, 49 per cent was allocated to community and investment trusts, 28 per cent strategic partners and 23 per cent Black staff schemes. (see Figure 4.7 and Figure 4.8).

Figure 4. 7: Percentage Value Attributed Per Category



Source: Intellidex (2018)

Figure 4. 8: Banking Value Attributed Per Category



Source: Intellidex (2018)

The FirstRand BBB-EE transaction was the largest concluded across the banking sector, with a value attributable of approximately R23 billion (Intellidex, 2015). A notable aspect was the RMH

⁷⁴ Strategic partners. These are Black-owned investment companies and/or prominent Black individuals.

⁷⁵ Staff schemes. These were usually Employee Share Ownership schemes in which Black employees are beneficiaries and receive shares, dividends and have voting rights attached to the shares.

⁷⁶ Community schemes. These types of investors are generally trusts and/or other forms of non-profit entity and tend to be the most broad-based type of beneficiary. These included community and community investment trusts.

⁷⁷ Value attributable to the recipient is gross of any tax liability that may be due by the recipient. In other words, value at the moment it becomes attributable to the recipient, rather than after any tax had been deducted.

BBB-EE transaction which was the most broad-based⁷⁸, with 100 per cent allocated to a community investment trusts, the Royal Bafokeng Nation (RBN). Community trusts and community investment trusts typically benefit economically vulnerable groups at the lower end of the income and wealth distributions. Table 4.9 summarises the value attributable for the various listed banks per category of allocations.

Table 4. 9: Value Attributed Per Bank in Rands

Bank	Strategic Partners	Staff Schemes	Community/ Charity Schemes	Total
Barclays Group Africa (ABSA)	2 584 500 000	-	-	2 584 500 000
Capitec	3 132 330 000	68 000 000	-	3 200 330 000
FirstRand	2 593 740 000	5 970 800 000	14 697 860 000	23 262 400 000
Investec	1 418 000 000	473 670 000	-	1 891 670 000
Nedbank	1 742 503 151	2 184 621 088	1 573 427 324	5 500 551 563
RMH	-	-	8 627 902 281	8 627 902 281
Standard Bank	3 622 950 960	3 633 525 585	1 881 475 435	9 067 951 979
Total	15 094 024 111	12 330 616 673	26 710 665 039	54 135 305 822

Source: Intellidex (2015)

Though value attributable across these broad categories provides evidence of the transfer of wealth to Black individuals as defined by the BBB-EE policy instrument, the categories are not sufficient to evaluate their effectiveness in ‘*addressing inequality*’ through the ‘*sale of shares*’. Additional decomposition of allocations at Black individual level is required to determine the extent to which the ‘*sale of shares*’ redistributed through the BBB-EE policy instrument, achieved its mandate of ‘*addressing inequalities*’. This principle of further decomposition of wealth (through the ‘*sale of shares*’) at the Black individual level, is explored in the chapters that follow.

⁷⁸ Defined by the BBB-EE Act 53 as the increasing of the number of Black people that manage, own and control enterprises and productive assets.

4.4.1.2 Broad-Based Black Economic Empowerment Structuring

To comply with the ‘ownership’ element of the FSC scorecard, the banks in South Africa implemented Black ‘empowerment’ transactions to sell equity stakes at a discount to participating Black recipients in terms of their respective BBB-EE scheme arrangement. This was done to increase their Black ‘ownership’ element and meet the FCA ‘ownership’ scorecard target. The various banks each used their own specific scheme of arrangement to operationalise their respective BBB-EE scheme as the mechanism for achieving ownership transfer is not specified in the BBB-EE Act of 2003.

Since all the banking entities reviewed are listed companies they are required to meet Johannesburg Stock Exchange (JSE) listing rules. These rules are designed to emphasise shareholder protection and therefore include the requirement for shareholder notifications of corporate action such as a BBB-EE scheme of arrangement. Further, for any corporate action the directors of the banking entity have a fiduciary responsibility to obtain shareholder approval of the BBB-EE scheme of arrangement through a special resolution as per the Companies Act of 2003.

Typically shares allocated to the Black recipients did not initially incur the ‘sale of share’ purchase price or liability because of the Black recipients’ funding limitations. Accordingly, the banks’ BBB-EE transactions were vendor financed, that is, the banks raised the funding to enable their respective scheme arrangement to facilitate the ‘sale of shares’ to Black recipients at the end of the vested period (lock-in period). Further, the Black recipients did not possess the conditional rights to the shares until the vested period of the BBB-EE transaction had lapsed. (This is discussed below.)

To explain the mechanisms through which the BBB-EE policy instrument typically manifested through the respective bank’s BBB-EE scheme arrangements, the Standard Bank

transaction was selected for illustrative purposes. The Standard Bank scheme of arrangement (Tutuwa) commenced in the last quarter of 2004. A 10 per cent interest in the South African banking operations, equivalent to approximately 7.5 per cent of the issued ordinary share capital of Standard Bank Group (SBG), was ‘sold’ to Black strategic partners, Black employees and lastly community groupings, through their respective special purpose vehicles (SPV’s). When the scheme of arrangement vested (31st of December 2014), the Black recipient received the unconditional rights to the shares, contingent on the full settlement of funding costs. The extent to which the sale of shares was distributed to Black recipients, was largely based on bank’s strategy as previously indicated by (Intellidex, 2015).

The starting point of the Standard Bank scheme arrangement was the funding required for the BBB-EE scheme of arrangement. In summary, the SBG subscribed (bought) 8.5% redeemable cumulative preference shares issued by a special purpose vehicle⁷⁹ (SPV) controlled by SBG. Cash flowed into the SPV and the SPV purchased SBG ordinary shares in the market, which then were held as treasury shares⁸⁰. The purchase of SBG ordinary shares by the SPV was treated as a reduction in the SBG’s equity, since Standard Bank Group itself controlled the SPV, (therefore effectively a share buy-back). The dividends receivable (8.5%) on the preference shares were contractually repayable from future dividends received on the SBG ordinary shares over the approximately 10-year vesting period of the scheme.

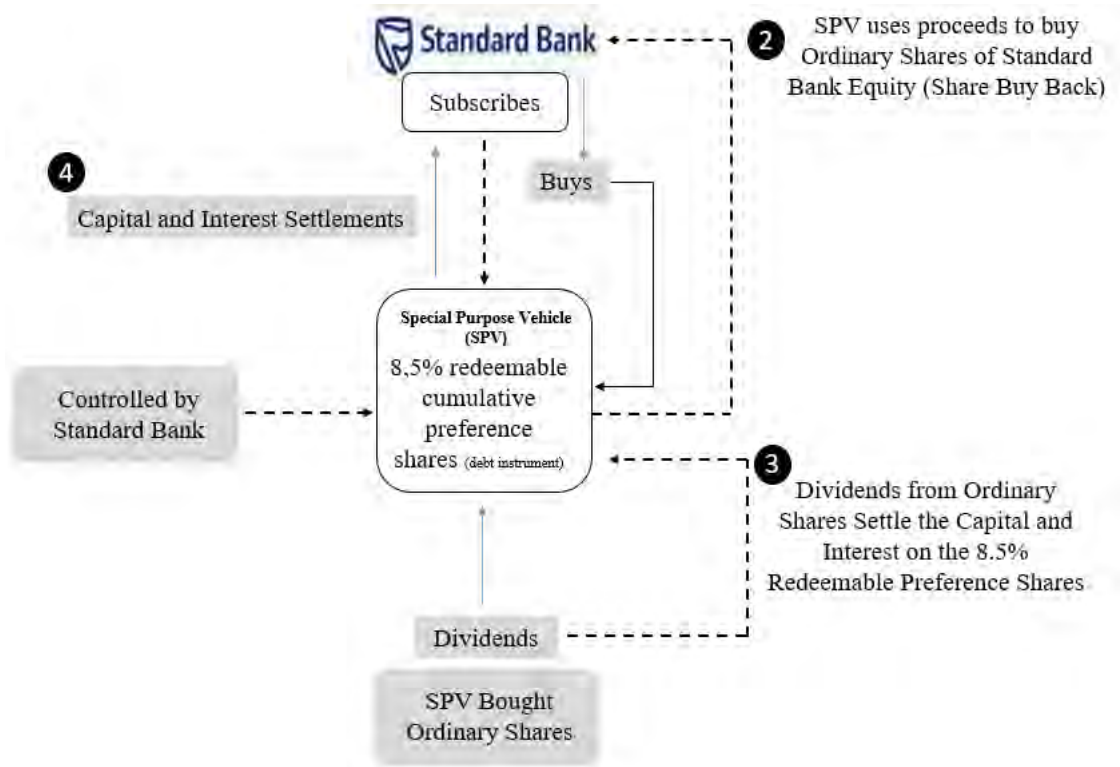
Standard Bank Group received the rights to its own dividends back in the form of preference dividends receivable (8.5%) in part settlement of the vendor financing (subscription of the preference shares). This treatment was applied until full redemption (settlement) of the preference

⁷⁹ A special purpose vehicle is a subsidiary created by a parent company to isolate financial risk.

⁸⁰ Treasury shares are re-acquired equity instruments bought back from stockholders by the issuing company (Standard Bank)

shares by the SPV to Standard Bank Group at the vesting date of 31st December 2014. Figure 4.9 provides an illustration of Standard Bank BBB-EE funding arrangements for the BBB-EE shares.

Figure 4. 9: Standard Bank Funding Structure Mechanism



Source: Standard Bank Annual Financial Statements (2004)

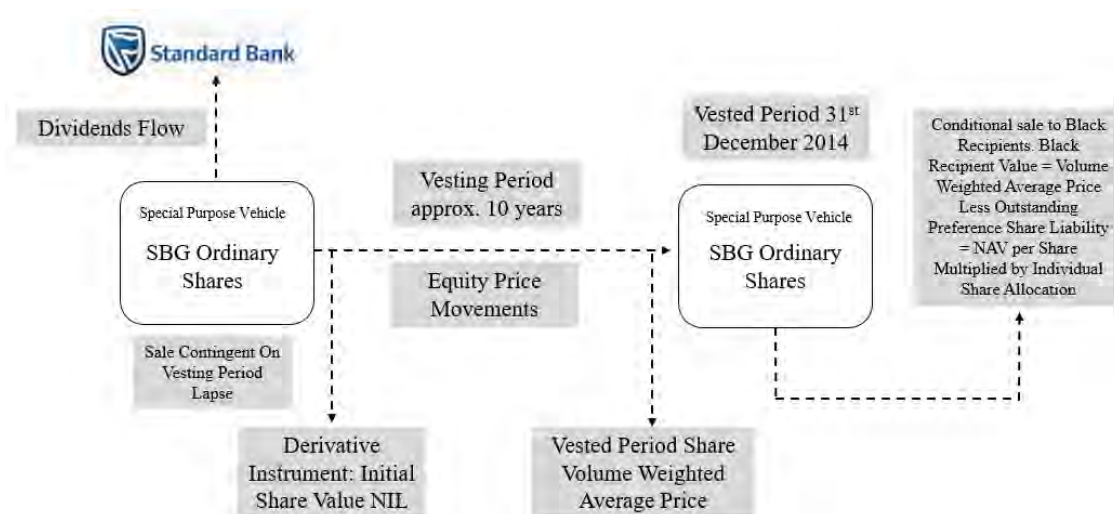
The second component of the Standard Bank scheme of arrangement was the inherent value being ‘sold’ to participating Black recipients. The SBG ordinary shares (underlying asset) within the SPV initially served as a ‘sale’ to Black participants in the form of an equity linked instrument (derivative⁸¹ contract), conditional on the vesting period lapsing and settlement of the debt of the scheme. The equity linked instrument (derivative) was treated at an initial consideration received

⁸¹ Derivatives are financial contracts whose value is linked to the value of an underlying asset. In this respect the underlying assets was the ordinary SBG shares.

of nil, that is, the equity linked instrument was ‘sold’ to participating Black recipients at an initial 100 per cent discount within the SPV, conditional on the lapse of the vesting period. Over the life of the vesting period (approximately 10 years), the share market capital gains of the underlying asset (SBG ordinary shares within the SPV) accrued, the accruals being the equity linked instrument component.

Upon vesting, the equity linked instrument was wound down, that is, the accrued capital gains over the vested period, in the form of the volume weighted average price⁸² (VWAP) per share multiplied by the schemes share allocations on the vesting date, were used to redeem (settlement to SBG) the preference share capital. This settlement contractually triggered the delivery of the SBG shares to the Black participants, as the vendor finance (preference shares capital) was settled. Figure 4.10 illustrates the potential value gain of the shares over the vested period.

Figure 4. 10: Standard Bank Share Value Gain



Source: Standard Bank Annual Financial Statements (2004)

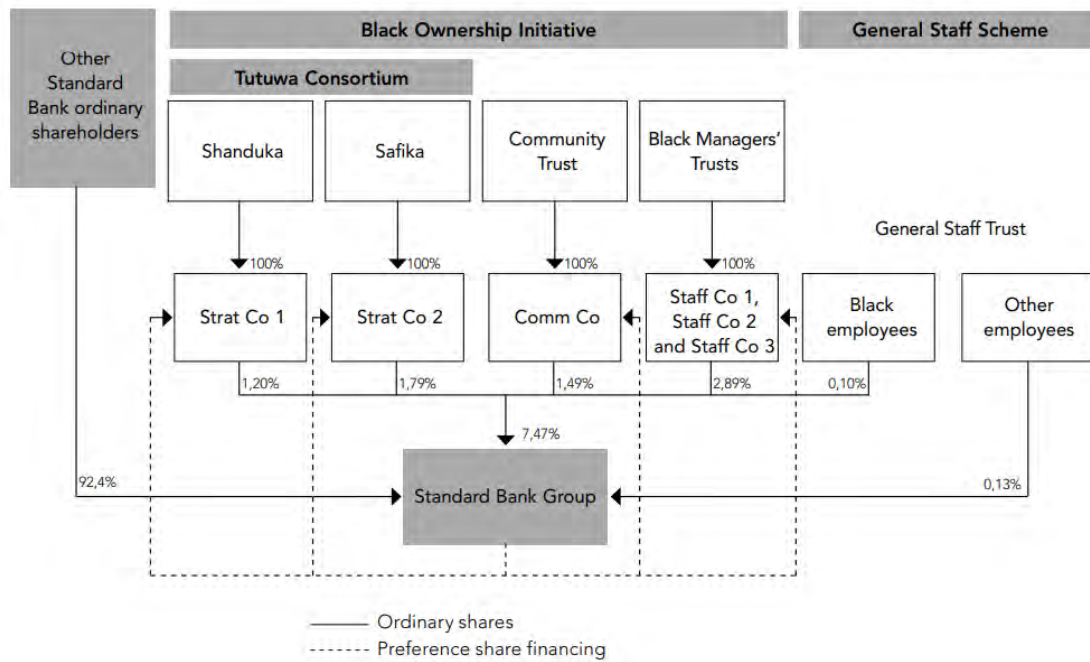
⁸² The volume weighted average price (VWAP) is a trading benchmark that gives the average price of an equity instrument traded throughout the day, based on both volume and price.

The Standard Bank scheme of arrangement (Tutuwa) was legally structured into specific groupings of ‘sale of shares’ Black recipients. The Employee Share Ownership Programmes (ESOPs), were Black individuals’ equity allocations linked to an employment relationship benefit (Black employees). Community schemes typically benefited economically vulnerable groups at the lower end of the income and wealth distributions.

Standard Bank also selected two Black strategic partners, namely, Shanduka a managed investment holding company founded by Cyril Ramaphosa (who owned 33 per cent of Shanduka) and Safika an empowerment investment holding company with notable shareholders such Saki Macozoma (20 per cent ownership) and Vuli Cuba (20 per cent). Both Cyril Ramaphosa and Saki Macozoma were Standard Bank board members at the time of the Standard Bank BBB-EE scheme of arrangement.

At the close of the Standard Bank (vested) scheme of arrangement, the vested SBG ordinary shares were then allocated per the percentage contractual arrangements (see below) to meet the ‘ownership’ element requirement of the BBB-EE Act of 2003. Figure 4.11 illustrates the respective allocations of the ‘sale of shares’ within the scheme.

Figure 4. 11: Standard Bank Share Ownership



Source: Standard Bank Annual Financial Statements (2004)

The above provides a lens into the complexities through which the Standard Bank scheme of arrangement manifested to comply with the 'ownership' element of the BBB-EE Act, to provide one example of the mechanisms through which the 'ownership' element of the FSC scorecard was operationalised within a banking entity. The actual value of the share transfers will be discussed in Chapter 6. The below section will briefly evaluate the experience of the Malaysia wealth transfer program in addressing their wealth differentials, this to serve as a comparison to South Africa's BBB-EE program. This is because the South Africa's BBB-EE program has resemblances to the New Economic Policy (NEP) implemented in Malaysia between 1970 and 1990.

4.5 The Experience of Wealth Transfer in Malaysia

Economic indigenisation programmes have been pursued internationally, most notably in Malaysia, Namibia and the United Arab Emirates, with varying successes (Uppal, 2014). South Africa's BBB-EE policy bears close similarities to Malaysia's National Economic Policy (NEP). Both countries have a colonial past which affected the distribution of skills and economic participation across all population groups. Similar to the new democracy of South Africa in 1994, Malaysian independence from Britain in 1957 was characterised by a disjuncture between political and economic participation. While the indigenous Malays (Bumiputra) dominated the political sphere, Chinese business and other foreign investors dominated the economy (Esman, 1987).

The NEP program was adopted in 1970 and set an ambitious twenty-year plan from 1970 to 1990 to effect economic transformation with the aim of redistributing wealth and to effect national integration through the restructuring of the economy. To achieve the NEP's objectives, the Malaysian government set an annual GDP growth target rate of 7.1 per cent per annum (Stoevers, 1985). The NEP aimed at increasing the wealth and economic participation of the indigenous Malay's (Bumiputra), firstly through the eradication of poverty regardless of ethnicity and secondly, by deracialising the Malaysian economy through putting in place preferential policies to facilitate 'inter-ethnic redistribution' within the economy (Jomo, 1990).

The Malaysian government expected to increase Bumiputra corporate equity/wealth ownership to 30 per cent by 1990 and to facilitate the emergence of a fully-fledged Malay entrepreneurial community within one generation (Suryadinata, 1985). In 1970, Bumiputra corporate ownership was estimated at just 2.4 per cent (Chopra, 1974). Over the 20-year period the NEP's objectives were further restructured to achieve 40 per cent 'other' Malaysian ownership

(i.e. Chinese- and Indian-owned) and 30 per cent foreign corporate ownership (Ponte *et al.*, 2007). The final economic ownership mix was therefore 30/40/30.

The wealth distribution objectives of the NEP were not attained through expropriation, but rather through encouraging foreign investment and economic growth, with the benefits thereof disproportionately allocated to the Bumiputra (Esman, 1987). In this way, the NEP sought to increase the prosperity of the Bumiputra without reducing the wealth of other sections of society (Ponte *et al.*, 2007). By 1990, the Bumiputra had in fact increased their control of the economy from 2.4 per cent of corporate equity in 1970 to 20.3 per cent in 1990, with ‘other’ Malaysians holding 46.2 per cent and foreigners 33 per cent (von der Mehder, 1992). Table 4:10 illustrates the progress of the Malaysian NEP program over the twenty-year program.

Table 4. 10: Malaysia 20 Year Plan

20 Year Plan (1970 to 1990)	Bumiputra Ownership	Other (Chinese and Indian) Ownership	Foreign Ownership	Other (Undefined)	Reference
Economic Corporate Ownership NEP Targets	30%	40%	30%		Uppal (2014)
Economic Corporate Ownership as of 1970	2.4%	22%	61%	14.6%	Chopra (1974)
Actual Economic Corporate Ownership Achieved in 1990	20%	46%	33%		von den Mehder (1992)

Source: Uppal (2014), Jomo (1990) and von der Mehder (1992)

When the NEP was terminated in 1990, the targets of 30/40/30 had not been fully achieved, specifically the Bumiputra ownership target was missed by 10 percentage points. However, there was a significant increase in Bumiputra ownership/wealth, this considering that foreign direct investment was promoted at the same time (Hart, 1994). The overall success of the NEP program was attributable to a variety of factors. Perkins and Woo (2000) suggested that the boom in the

prices of rubber and tin, the increased foreign investments in free trade zones, were collectively instrumental in the Malaysian government effecting structural economic changes, in the period following the implementation of the NEP. Uppal (2004) concurred and found that since Malaysia is a commodity exporter, the surge in government revenues from higher oil and commodity prices played a decisive role in enabling what was essentially redistribution from incremental income rather than a reallocation of existing resources and property rights.

Although the NEP was hailed as having reduced the socio-economic disparity between the Chinese and Malay majorities, some commentators accused it of having reduced the status of non-Malays to second-class citizens by cementing ‘Malay supremacy’ (Uppal, 2014). Accusations of corruption were also rife, as power in the economic and political spheres began to converge (Jomo, 1990). Hart (1994) concluded that the NEP gave rise to a class of rentier capitalists who used their preferential access to subsidies, licences and contracts to operate in close alliance with wealthy Chinese through so-called Ali-Baba arrangements. When the NEP terminated, the preferential policies for Bumiputra did not come to an end. Rather, the NEP was replaced by the New Development Project, which was subsequently replaced by the Vision Development Project (Uppal, 2014).

The important lessons for South Africa from the Malaysian NEP program are twofold: firstly, that economic empowerment policies are not necessarily a deterrent to economic growth and secondly, their effectiveness is greatly aided by a conducive economic environment where new wealth is being created through rapid economic growth. This environment of rapid economic growth and the complementary generation of new wealth, has been largely absent in the South African experience. The transfer of wealth through South Africa’s BBB-EE programme, has been

largely based on transfer of wealth that was previously created from existing wealth holders, this to effect economic transformation in South Africa.

4.6 Conclusion

The chapter began by outlining the findings from the literature on wealth inequality from a global perspective, examined the findings on global wealth distributions and the causes of global wealth inequality. Evidence was further presented on South Africa's high wealth inequality, wealth distributions and the key policy instrument BBB-EE that was designed to address in part wealth inequality. The Malaysian NEP program provided evidence of empowerment transactions effecting economic transformation through wealth distributions to previously marginalised communities, without disrupting economic growth.

The overall synthesis is that wealth inequality in South Africa is very high, even higher than the high income inequality and the high global wealth inequality. The literature revealed that South Africa's wealth was highly concentrated, was unequally distributed and similarly to the global experience, financial assets as compared to non-financial assets featured predominately further up the wealth distribution.

The next chapter will turn to describe the research methodology and techniques that will be employed for this research. It will highlight the key aspects of data collection and the methodology for data analysis, as well as providing the rationale for particular aspects of the techniques employed to answer the research questions.

Chapter 5

Research Questions, Data, Methods and Techniques

5.1 Introduction

This chapter serves to expand on the data sources, methodology and techniques used to conduct the research. The research objectives seek to ascertaining the extent '*addressing inequalities*' has been met through the '*sale of shares*' to Black individuals by the banking sector (case study), within the context of the BBB-EE policy instrument of South Africa. '*Wealth*' for this research purpose, is defined as the '*transfer of wealth*' through the '*sale of shares*' to Black individuals, through this BBB-EE policy mechanism.

To this end, the chapter is structured as follows; section 5.2 restates the overarching objectives of the research, 5.3 explains how the required data was identified, collated and manipulated for the banking industry BBB-EE transactions. Section 5.4 and 5.5 explain the methods and techniques used to analyse the data, in order to answer the research questions.

5.2 Overarching Objectives of the Research

As previously indicated, a key mandate in addressing inequality is found in the Amended Financial Services Codes (2017) which states the objective of '*addressing inequalities*' through '*equity ownership*' targets by means of '*sales of shares*' to '*Black individuals*'. '*Ownership*' is defined as

the rights a person would have if they held shares in a JSE listed company (BBB-EE Act of 2003). Black individuals are defined as Black, Coloured and Indian citizens of South Africa (BBB-EE Act of 2003).

This focus on ascertaining the extent to which '*addressing inequalities*' has in fact been met, through the '*sale of shares*' allocations to Black individuals within the banking sector of South Africa, is important, as Orthofer (2016) indicated that policies aimed at empowering Black South African's may have in reality disproportionately benefited a '*new economic elite*' and henceforth, may not have been '*broad-based*'. Earlier research by Mbewe and Woolard (2016) additionally submitted that inequality in South Africa was increasingly shaped by the growing inequality within-race in South Africa. Therefore, the objective of the research is to determine to what extent the banking sector BBB-EE transactions have in fact achieved their mandate of '*addressing inequalities*' through the '*sale of shares*' (wealth) to Black individuals as defined in South Africa.

5.3 Data Sources

Data was the most significant limitation of this study, as there was no single repository of datasets for the banking sector BBB-EE transactions assessed. Panel data was collected from various sources which fortunately are available in the public domain since the banking sector of South Africa is highly regulated and is mandated to make such data public. This allowed for the formation of a unique dataset for analysis using panel data. Panel data analysis refers to the statistical analysis of pooled data which consists of a cross-section of units (e.g., countries, firms, households, individuals) for which there exist repeated observations over time (Grill, 2017).

All the banking entities are required to meet JSE listing rules which are designed to emphasise shareholder protection and therefore include the inherent expectation that published

information is complete and accurate. All the banking entities are further obligated to provide corporate action notifications through the SENS platform and the entities circulars to notify shareholders of significant entity corporate actions. The corporate action notifications are very detailed and provided the BBB-EE transaction structure, financing structure, the total number of shares allotted for the BBB-EE transaction, the allocation per individual, including allocations within the various strategic partner structures and the BBB-EE transaction share price.

Further, for any corporate action (e.g. BBB-EE transaction), the directors of an entity have a fiduciary responsibility to notify shareholders (owners of the company) of any impending corporate action. This corporate action is usually submitted and approved at the annual general meeting (AGM) or special shareholders' meeting (SSM). The approved details of the respective bank's BBB-EE transactions were also detailed in these notifications. Data was also extracted from audited annual financial statements of each bank as per the statutory requirements of the Companies Act 71 of 2008 and the Integrated Reports⁸³ of the entities. Additional data was collated from other public databases such as Intellidex (2015).

To be meaningful, the study analysed all the listed banking entities. To this end, the direct impacts on *wealth (sale of shares)* of the BBB-EE transactions of all the seven banks listed on the JSE (Standard Bank, ABSA, Capitec, Investec, Rand Merchant Holdings, Nedbank and FirstRand) were evaluated. The BBB-EE transactions of all the banking entities had all been concluded at the time of this study.

⁸³ South African companies listed on the JSE, are required to prepare Integrated Reports in accordance with JSE listing requirements. Integrated Reports published by an entity explain how an organisation's strategy, governance, performance and prospects will lead to the creation of value over the short, medium, and long terms.

5.3.1 Data Formulation

The quantitative analysis began with the computation of the net asset value (NAV⁸⁴) of the equity instrument for each bank at the close of the respective banking BBB-EE transaction. The net asset value was calculated by obtaining the *vested* equity value at the close of the BBB-EE transaction and then subtracting the embedded liability of the equity instrument. This allowed for the computation of the intrinsic *wealth* before taxation. The before taxation *wealth* values were used to create uniformity for all recipients. That is, the wealth value was calculated the moment the equity instrument became attributable to the recipient and before the respective taxation arrangements.

As with the BBB-EE Employee Share Ownership Programmes (ESOP's), the individual equity allocations were linked to an employment relationship 'benefit' and this 'benefit' was subject to progressive income tax, based on the individual's marginal tax rate. The Income Tax Act No. 58 of 1962, as amended (Income Tax Act), deems any equity benefits acquired through an employer-employee relationship to be treated as income and not capital in nature, therefore these gains are subject to full income taxation (IT) and not capital gains taxation (CGT) on vesting.

BBB-EE community and community investment trusts⁸⁵ received share allocations within the respective banking BBB-EE transaction, were typically structured as discretionary trusts and further structured to qualify as public benefit organisations (PBO's), in terms of section 30 of the Income Tax Act, which allowed tax exemptions and other tax benefits for these trusts. Effective from 1 May 2015, the BBB-EE codes were amended requiring the trustees of the broad-based

⁸⁴ The net asset value (NAV), represents the price (VWAP: Volume Weighted Average Price) per equity instrument at the end of vested period (BBB-EE transaction maturity date) less the embedded equity liability. Capital income in the form of dividends, was progressively applied to reduce the equity liability over the unvested period of the equity instrument.

⁸⁵ BBB-EE community and investments trusts are known also as BBB-EE broad-based trusts.

trusts to no longer select beneficiaries (non-discretionary) nor decide the amount to be paid to each beneficiary. Thus trust beneficiaries are required to be treated in the same way as ordinary shareholders, that is, having the vested rights to receive capital distributions (*wealth*) and capital income (dividends). For the purpose of the research, the new BBB-EE amendments were effective after the close date (vested period) of all the banking sector transactions evaluated and therefore all the banks transactions were not impacted by the amended BBB-EE requirements.

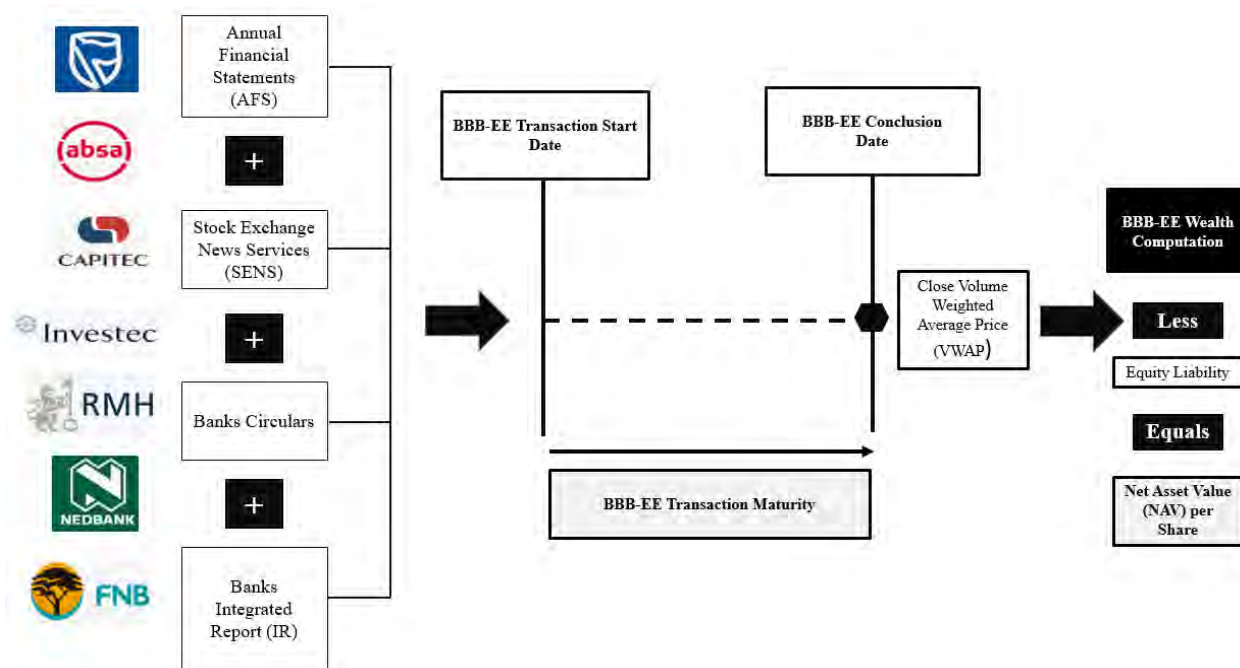
Taxation arrangements for BBB-EE recipient companies were subject to their respective taxation treatments, depending on the nature of the BBB-EE structure at inception point. These potentially included the disposal of equity shares by existing shareholders to new BBB-EE shareholders, which could have resulted in capital gains tax implications for the disposing shareholders. Or the BBB-EE transaction could have been structured by means of a share buy-back arrangement which reduces the interest of existing shareholders and could have potentially attracted dividends tax and/or capital gains tax.

Alternatively, equity could have been increased by the company issuing shares to the new BBB-EE shareholders. The issuing of shares would be of a capital nature and therefore not taxed as gross income in the hands of either the company or the shareholder. In addition, paragraph 11(2)(b) of the Eighth Schedule in the Income Tax Act 58 of 1962, specifically states that the issue or cancellation of a share in the company does not constitute a disposal of an asset and would thus not trigger any capital gains tax for the issuing company. Therefore, the share issue would generally be a tax-free event that changes the shareholding for the issuing company.

Figure 5.1 illustrates how the acquired data was manipulated to compute the NAV per equity from the various sources of data relating to the respective banks, at the BBB-EE transaction close

date. The NAV was the primary synthesis of this computation, as it represents the ‘wealth’ per share attributable to shareholders from the respective bank BBB-EE transaction.

Figure 5.1: Banking Sector BBB-EE NAV per Share Computation



Source: Author (2020)

As indicated in the previous chapter, Intellidex (2015) provided a decomposition of the ‘sales of shares’ to through the lens of three categories: strategic partners⁸⁶; staff schemes⁸⁷; and community schemes⁸⁸. Intellidex (2015) computed the net asset value using the same methodology as the author (gross NAV before taxation). The research objective necessitated the recalculation of the NAV of these broad categories, to form a basis of validating the author’s primary

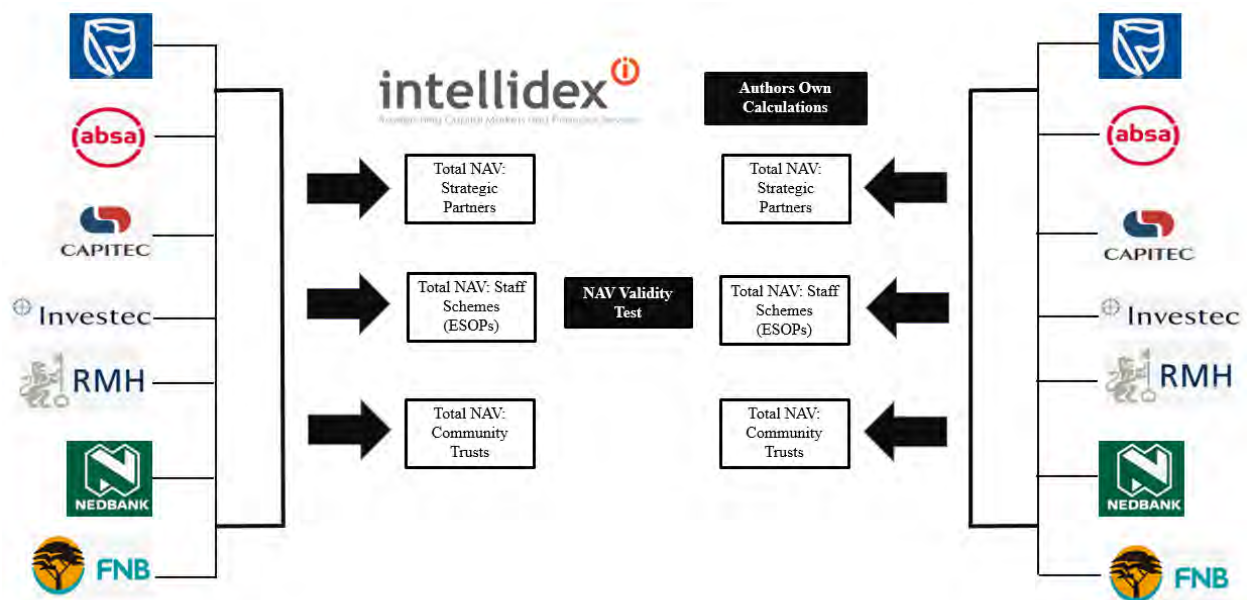
⁸⁶ Strategic partners. These are Black-owned investment companies and/or prominent Black individuals.

⁸⁷ Staff schemes. These were usually Employee Share Ownership schemes in which Black employees are beneficiaries and receive shares, dividends and have voting rights attached to the shares.

⁸⁸ Community partners. These types of investors are generally trusts and/or other forms of non-profit entity and tend to be the most broad-based type of beneficiary

computations against Intellidex's (2015) calculations and to enable additional decomposition of the 'sales of shares' at Black individual level. The author's computations were then validated against the Intellidex (2015) data to evaluate reasonability of the computation of the total NAV per across the three broad categories. Figure 5.2 illustrates how the author's data was validated against the Intellidex (2015) data.

Figure 5. 2: Banking Sector BBB-EE Data Validity Test

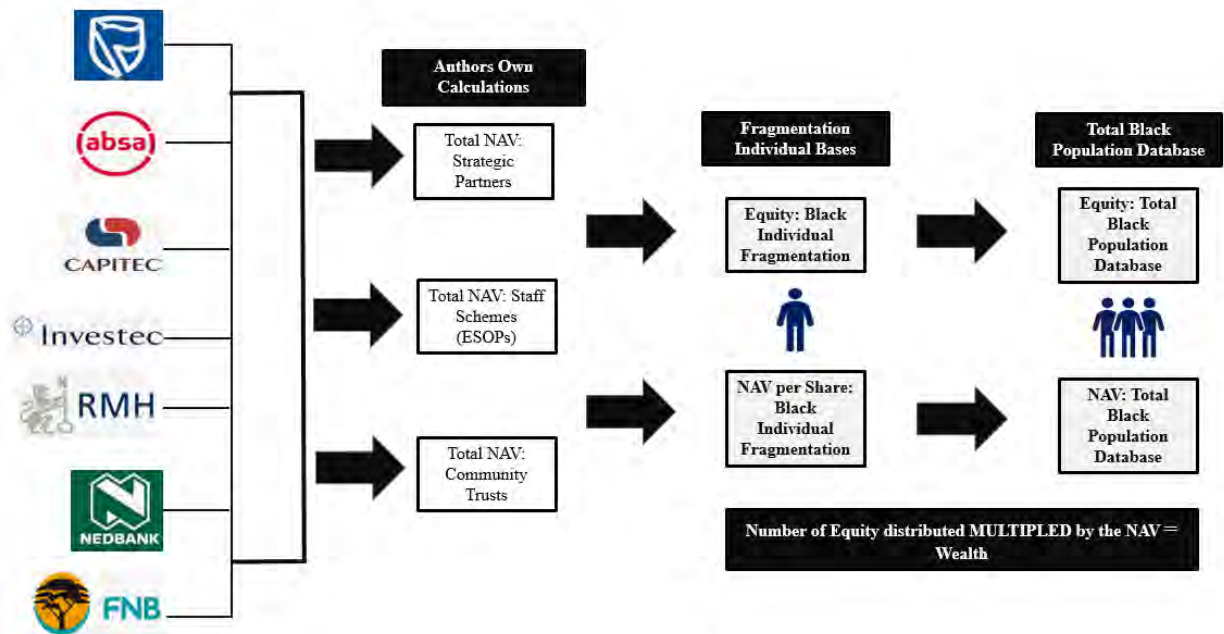


Source: Author (2020)

The Intellidex (2015) study was limited to these three specific categories and further decomposition at Black individual level was not computed. Additional decomposition of the data was performed for this research, by fragmenting the three broad categories at Black individual level, to attain specific Black individual equity allocations. The number of Black equity instruments (shares) per individual were then multiplied by the NAV to derive the wealth allocated per individual. The individual data was then collated into a total database for all the banking BBB-

EE transactions to form the total Black population. The total Black population formed the basis for techniques and methodologies of analysis described in Sections 5.4. and 5.5. Figure 5.3 provides an illustration of the total database formation for the purposes of the research.

Figure 5. 3: Banking Sector BBB-EE Database Formation



Source: Author (2020)

A significant departure from the Intellidex (2015) calculations, for this research, was the elimination of White individual ‘*sale of shares*’ allocations from the banking BBB-EE transactions, as well as the elimination of community and community investment trusts, non-strategic companies and unallocated shares earmarked for future BBB-EE transactions. As previously indicated, community and community investment trusts during the period of observation, were not treated in the same way as ordinary shareholders, that is, they did not have the right to ‘*ownership*’ of equity instruments and further lacked the vested rights to receive capital

income. Therefore, these allocations did not meet the definition of ‘*wealth*’ as defined. White individual recipients did not meet the definition of ‘Black’ as defined under the BBB-EE Act of 2003. Non-strategic companies were typically companies investing in banking BBB-EE transactions. Examples included Remgro (Investec transaction), Old Mutual and RMB Private Equity (Nedbank). This group further included banking entities themselves taking equity positions within their partnered BBB-EE strategic partners transaction.

As the objective of this research was to ascertain the extent to which ‘*addressing inequalities*’ has been achieved through the ‘*sale of shares*’ to the Black individuals as defined, henceforth only the ‘*Black*’⁸⁹ individual data formed the basis of the Black population for quantitative analysis.

5.4 Methods and Techniques

5.4.1 One Sample Kolmogorov-Smirnov Test

As the descriptive measures (parameters) of the entire population were unknown, the ‘goodness of fit’ test was deployed. To test the ‘goodness of fit’, the one sample Kolmogorov-Smirnov Test or K-S Test was selected (Smirnov, 1939). Normal distributions are commonly expressed as $N(0,1)$, 0 (mean) and 1 (standard deviation). The one sample K-S test⁹⁰ is attractive, as it is a non-parametric test (distribution free test) type of hypothesis testing which does not specify a particular family of distribution. The hypothesis representing a formal statement which presents the expected

⁸⁹ As defined by the BBB-EE Act of 2003.

⁹⁰ K-S Test is restricted to distributions where by the null hypothesis is fully specified.

relationship between an independent and dependent variable. (Creswell, 1994). So, the question was, is the Black population normally distributed?

The one sample Kolmogorov-Smirnov Test was constructed as a statistical hypothesis test. The null hypothesis is H_0 : the Black population *is not* significantly different from a normal distribution $N(0.1)$. Evidence was then searched to reject or accept the H_0 , compared to the alternative hypothesis H_1 , which states that the Black population *is* significantly different from a normal distribution $N(0.1)$. To accept or reject the null hypothesis H_0 , the K-S test statistic was devised. The K-S test statistic is simply the *maximum* difference between the empirical cumulative distribution function (ECDF) $F_n(x)$, compared to the cumulative distribution function (CDF) $F(x)$. The Kolmogorov-Smirnov statistic was computed using the below following formula:

$$D_n = \sup_z |F_n(x) - F(x)| \quad (5.1)$$

With:

D_n , representing the K-S test statistic

$F_n(x)$, representing empirical cumulative distribution function (ECDF), for n^{91} independent and identical distributed (i.i.d) ordered data X_i

$F(x)$, representing the cumulative distribution function (CDF), for the ordered data X_i , associated with the null hypothesis

(x) , representing the ordered data

A significant feature of this test, is that the distribution of the K-S test statistic, in itself does not depend on the underlying cumulative distribution function (CDF) being tested. That is, D_n

⁹¹ n , represented the number of observations.

does not depend on F_{exp} , since F_{obs} depends on the data selected. D_n , consequentially is a random variable used to estimate F_{exp} . Following, a confidence interval level (CIL) of 95 per cent⁹² was selected and n , represented the number of observations. The critical value of $D_{crit,0.05}$ ⁹³ was computed, by the following equation:

$$D_{crit,0.05} = \frac{1.36^{94}}{\sqrt{n}} \quad (5.2)$$

Concluding, the null hypothesis H_0 , the Black population *is* normal $N(0.1)$, was either *rejected* or *accepted* based on the following conditions:

1. Accepted if: $D_n < D_{crit,0.05}$, the Black population *is* normally distributed $N(0.1)$ and the alternative hypothesis H_1 is thus rejected
2. Rejected if: $D_n > D_{crit,0.05}$, the Black population, is *not* normally distributed $N(0.1)$, and the alternative hypothesis H_1 is therefore accepted

The understanding of the Black population dataset was an important starting point. By applying the one sample Kolmogorov-Smirnov Test, if the null hypothesis was rejected, this indicated that the Black population was not Gaussian distributed (normal distribution). Thus limiting the application of descriptive statistics measurements of central tendencies such as means, mediums, modes and variability (variances: minimum and maximum variances) to answer the

⁹² Confidence interval level of 95 percent, is a range of values that can be 95 percent certain contains the true mean of the population and not the range that contains 95 percent of the values. For large population sizes, a confidence level of 95 percent is acceptable.

⁹³ A significant level of 0.05 was selected and it indicates a 5 percent risk of concluding that a difference exists when there is no actual difference.

⁹⁴ From the P Value table. At alpha α 0.05 (significant level), for $\sqrt{n} > 50$ n

research questions. Therefore, placing reliance on other statistical techniques not requiring normality assumptions for quantitative analysis for this study.

5.5 Methods and Techniques used to Address the Research Questions

Quantitative models on wealth are conceptually more complicated because wealth accumulates gradually over time and in addition, data on wealth is more difficult to collect. However, the novel data created for this research, circumvents these constraints, as it firstly offers a static standpoint (the close date of the respective banking BBB-EE transactions) and secondly the data is publicly available, henceforth facilitating easier data formation. Inferences can thus be made in measuring the extent to which '*addressing inequalities*' has been addressed through the '*sale of shares*' to Black population within the banking BBB-EE transactions. To answer the research questions, the Generalised Pareto distribution, the Lorenz Curve, the Gini coefficient and the connections between them were used.

5.5.1 The Generalised Pareto Distribution

Literature indicates that the upper tails of the income and wealth distributions, can be well approximated by Pareto distributions or power laws. Grounded on Pareto's (1897) findings, various economists⁹⁵ have used Pareto distributions to construct the upper tails of both income and wealth distributions to explain various economic mechanisms. Relating to wealth, Davies and Shorrocks (1999) called two stylised features of the shape of the distribution of wealth as, firstly

⁹⁵ Kuznets (1953), Piketty and Emmanuel (2003), Saez and Gabriel (2014) and Atkinson (2017).

it is positively skewed and secondly the top tail was well approximated by the Paretian functional form.

A prominent characteristic of the Paretian top tail, reveals large inequality and therefore calculating the Pareto distribution was the first methodology used in evaluating the research question; the ‘*extent to which the BBB-EE transactions benefited mainly a small elite of Black individuals*’, or alternatively expressed, the estimations of the shares and concentrations of wealth (of a small elite group of Black individuals) at the upper tail of the Pareto curve.

Recall, Pareto in his article in 1896 and subsequently Cours in 1897, illustrated a curve describing the distribution of income by using data⁹⁶, he found this curve had the appearance of recurring in various countries and within diverse periods. The Pareto distribution is simply stated as follows; N is the number of individuals earning an income above a certain threshold x ⁹⁷, with A as a constant and α ⁹⁸ the shape parameter (thus measuring the heaviness of the right tail). When expressed graphically, this exhibits the distribution of income linearly shown in Figure 5.4, and is stated by the following equation:

$$N = \frac{A}{x^\alpha} \quad (5.3)$$

The above equation implies that the elasticity of N with respect to x is α . Alternatively, if income x increases by 1 per cent, the proportion of individuals having income greater than or equal to x declines by α per cent. The α parameter can therefore be interpreted as the elasticity of decrease in the number of individuals when passing to a higher income class.

⁹⁶ Data from England, Italian cities, German states, Peru and Paris.

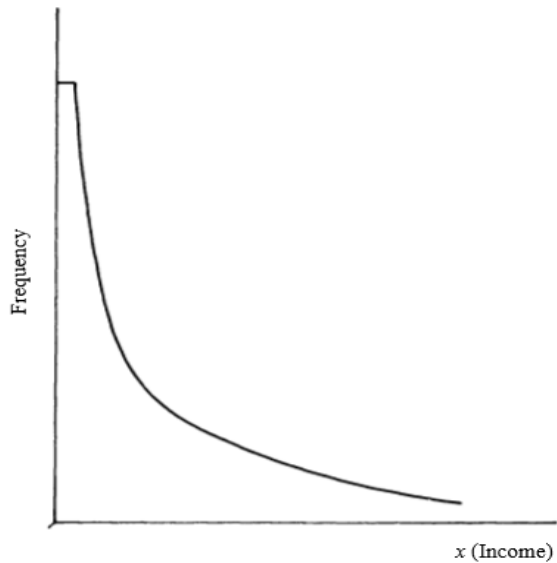
⁹⁷ Where x represents a certain income threshold.

⁹⁸ $\alpha > 1$

This distribution can be transformed into a logarithmic form, by moving to a double logarithmic representation reveals a straight line(s), that is, the logarithmic transformation of this power function is linear in $\log x$. Thus representing, the elasticity of N with respect to x as a constant. Since the elasticity does not depend on the size of x (income), the power relationship is scale invariant⁹⁹ shown in Figure 5.5, and expressed as:

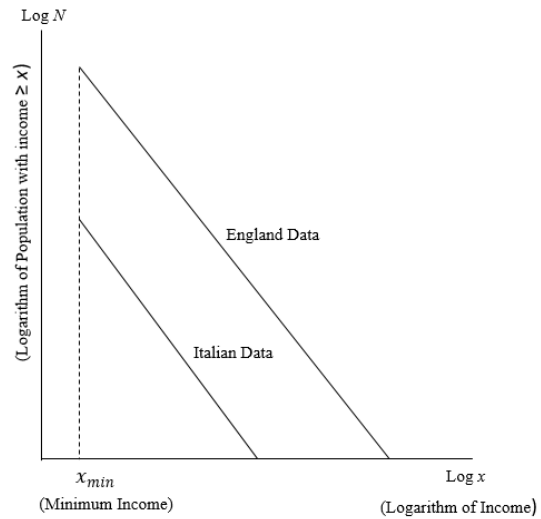
$$\text{Log } N = \log A - \alpha \log x \quad (5.4)$$

Figure 5. 4: Frequency Distribution of Income



Source: Tusset (2018)

Figure 5. 5: Pareto Law: Log N and Log x



Source: Tusset (2018)

Figure 5.5, is drawn on the basis of the Pareto Law (1897) representing the plot with the strongest Pareto Law. The plot refers only to individuals whose income is higher than the minimum level x_{min} (minimum threshold, scale parameter). Pareto (1897) further suggested that the slope

⁹⁹ Scale invariance is an attribute of power laws. That is, if the N measurements are changed, then the x remains unchanged. This behaviour produces a linear relationship when logarithms of both are taken.

of the plot, from different periods and countries lied in a narrow range. With the value of the important parameter α clustered around 1.5 (Pareto, 1897). He inferred from this important parameter α , that some natural law was ruling the distribution of incomes. Pareto (1897) had hoped he had discovered a universal constant of 1.5, that resulted from an underlying economic mechanisms. However, this universal constant of α 1.5, has long been discarded.

Further, the slope of Figure 5.5 resembles a pyramid shape of the curve; this construction was based on certain assumptions made by Pareto (1897). Notably, not all levels of income of a given society could be considered, with individuals whose income was higher than the minimum threshold (x_{min}), should be included. Pareto (1897) justified the exclusions of the lowest levels of income based on fiscal grounds. He proposed that the study of income distributions was mainly of fiscal interest and therefore low incomes exclusions were justifiable, as fiscal authorities are typically not interested in taxing low income earners (Pareto, 1897).

A Pareto distribution is most often presented in terms of its survival function¹⁰⁰, which gives the probability of observing larger values than x_{min} . Strictly, a random variable X , is said to follow a Pareto distribution, if the following is the survival function:

$$S(x) = \mathbb{P}(X > x) = \begin{cases} \left(\frac{x_{min}}{x}\right)^\alpha & x \geq x_{min} \\ 1 & \text{otherwise.} \end{cases} \quad (5.5)$$

where x_{min} is the scale parameter and $\alpha > 1$ is the parameter determining the shape of the distribution and both parameters being positive. The support of the distribution is the interval

¹⁰⁰ The survival function, is sometimes referred to the tail function or reliability function. It is the probability of income X greater than x_{min} . For example, the proportion of household income X greater than R100,000 x_{min} .

$[x_{min}, +\infty)$. Equivalently, the cumulative distribution function (CDF) of a Paretian random variable X , writes as follows:

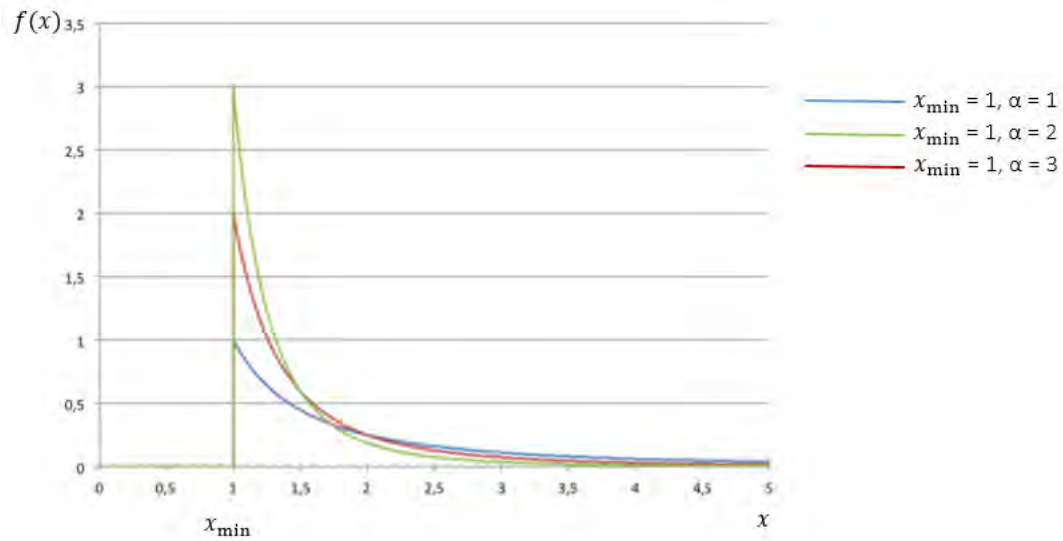
$$F(x) = 1 - \left(\frac{x_{min}}{x}\right)^\alpha \quad x \geq x_{min} > 0 \quad (5.6)$$

and its probability density function (PDF) writes as:

$$f(x) = \frac{\alpha x_{min}^\alpha}{x^{1+\alpha}} \quad x \geq x_{min} > 0 \quad (5.7)$$

Below is an illustration of the probability density function (PDF) of a Pareto distribution.

Figure 5. 6: Density of the Pareto Distribution



Source: Fournier (2015)

Pareto (1897) found the distribution to be *skewed*, *one-sided* and *heavy-tailed* (Refer to 5.6) and fundamentally different from a normal curve. With its density beginning at a minimum income

$x_{\min}$ and decreased monotonically¹⁰¹ afterwards. The cause of the Pareto distribution *heavy-tail* is the probability density function (PDF) decreasing at a *power rate*. As indicated, $\alpha > 1$, is the shape parameter measuring the heaviness of the right tail and the *power* α in the Pareto distribution is conventionally estimated by Van der Wijk's law (Van der Wijk, 1939).

Van der Wijk's law, states if a random variable X , follows a Pareto distribution, with a coefficient of α and the minimum income $x_{\min}$, so $F(x) = 1 - \left(\frac{x_{\min}}{x}\right)^\alpha$. Then $b(p) = \frac{\alpha}{\alpha-1}$ is a *constant*. This *constant* of proportionality $b(p)$ is commonly referred to as the inverted Pareto coefficient. For example, the share¹⁰² of the top $100 \times (1-p) \%$, is an increasing function of b and is equal to $(1-p)^{1/b}$. Therefore, $b(p)$ is viewed as a concentration factor. Consequentially, a high $b(p)$ is associated with a distribution of income or wealth that exhibits high levels of inequality.

The Paretian functional form fits comfortably with the distributions of the top shares of incomes and wealth. However, the strict *power law*, indicates $b(p)$ is *constant*, thus suggesting that the level of inequality stays the *same* (up to a scaling factor) at the top tail of the distribution. That is, the share of the top 10 per cent within the whole population, are the *same* as the share within the top 1 per cent, 0.1 per cent or 0.01 per cent etc., which may not necessarily be the case. The standard Paretian functional form thus conceals 'fractal inequality'¹⁰³.

To answer the research question '*extent to which the BBB-EE transactions benefited mainly a small elite of Black individuals*', required the derivative of the standard Pareto distribution (as discussed above) in the form of *Generalised Pareto distribution*¹⁰⁴ extrapolation. This

¹⁰¹ Decreasing with a mode = 1.

¹⁰² For instance, the share of the top 10 percent, which corresponds to $p = 0.9$.

¹⁰³ Factual inequality is simply the repeated skewed shapes within a scale, e.g. repeated skewedness within the top 10 percent.

¹⁰⁴ Formalised by Blanchet, Fournier and Piketty (2017). Computation through the World Inequality Database Applications (WIDS Generalised Pareto extrapolation).

to depart from the strict *power function* $b(p)^{105}$ piecewise constraint of the standard Pareto distribution. Thus permitting movement away from the tight inverted Pareto coefficient $b(p)$ (as discussed above), to summarise the top tail of the curve. Accordingly, the Generalised Pareto distribution exposes fractal inequality by estimating the *variations* of wealth shares and concentrations (*of the small elite Black individuals*) at the top tail of the Generalised Pareto curve.

Formally, the distribution of wealth is characterised by a random variable W with a cumulative distribution function $F(w)$. W is assumed to be integrable (i.e. $\mathbb{E}[|W|] < +\infty$) and $F(w)$ is differentiated over domain $D = [\alpha, +\infty]$. With the probability density function $f(w)$ and Q the quantile function noted.

For any wealth level $w > 0$, the inverted Pareto coefficient¹⁰⁶ can be expressed for any wealth w as follows:

$$\tilde{b}(w) = \frac{1}{(1 - F(w))w} \int_w^{+\infty} zf(z)dz \quad (5.8)$$

The inverted Pareto coefficient is solely considered above a strictly positive of threshold $w_{\min} > 0$. Expressed as a function of the fractile p with $p = F(w)$ and $b(p) = \tilde{b}(w)$ gives:

$$b(p) = \frac{1}{(1-p)Q(p)} \int_p^1 Q(u)du \quad (5.9)$$

For a strict power law (i.e. standard Pareto distribution), the Pareto curve is constant. The Generalised Pareto distribution, alternatively connects asymptotic power laws¹⁰⁷ based on

¹⁰⁵ The power function $b(p) = \frac{\alpha}{\alpha-1}$, estimated conventionally by the Van der Wijk's law.

¹⁰⁶ First defined by Fournier (2015).

¹⁰⁷ Asymptotic power law is one that is only true in the limit.

Karamata's (1930) theory of regular variations¹⁰⁸. This to unwind the constant Pareto coefficient b (measurement of inequality), above a sufficiently high threshold. With $\alpha > 1$, W is an asymptomatic power law with a Pareto coefficient of α , if and only if $\lim_{p \rightarrow 1} b(p) = \frac{\alpha}{\alpha-1}$. This equation *generalises* the Van der Wijk's law (Van der Wijk, 1939) as the distribution is an asymptotic power law if and only if, its asymptotic inverted Pareto coefficient is strictly above one. That is, it will tend toward infinity when α approaches one, and to one when α approaches infinity.

To avoid differences due to scaling, the inverted Pareto coefficient is observed as a function of the fractile p rather than the wealth w . The limit, $b(p) = 1$, which defines a situation where all individuals above rank p have the same wealth, so that there is no inequality above p . A higher $b(p)$, henceforth, corresponds to higher levels of inequality. The *Generalised Pareto curve* is therefore the function $b : p \mapsto b(p)$ defined over $[\bar{p}, 1[$ [with $\bar{p} = F(w_{\min})$]. If W satisfies the properties stated above, then b is differentiable¹⁰⁹ (*variation*). The p -th quantile¹¹⁰ then writes as:

$$Q(p) = \bar{w} \frac{(1-\bar{p})b(\bar{p})}{(1-p)b(p)} \exp \left(- \int_{\bar{p}}^p \frac{1}{(1-u)b(u)} du \right) \quad (5.10)$$

A non-constant $b(p)$ exposes 'fractal inequality' which is not a characteristic of the standard Pareto curve, thus the non-constant $b(p)$ permits the divergence of wealth shares and concentrations within the top tail of the Generalised Paretian functional form. When applied, the

¹⁰⁸ The theory of regular variations, is a function of a real variable whose behaviour at infinity is similar to the behaviour of a power law function near infinity.

¹⁰⁹ And for all $p \in [\bar{p}, 1[$, $1 - b(p) + (1-p)b'(p) \leq 0$ and $b(p) \geq 1$.

¹¹⁰ If W is defined for $w > w_{\min}$ by $F(\bar{w}) = \bar{p}$ and the Generalised Pareto curve $b : [\bar{p}, 1[\rightarrow \mathbb{R}$, then for $p \geq \bar{p}$.

non-constant $b(p)$ is increasing with p , suggesting that wealth is getting more varied (*relating small elite Black individuals*), within the top wealth tail. This allows for estimations of *small elite Black individuals* concentrations and shares, for example the share of the 0.1 per cent within the top 1 per cent is higher than the share of the one per cent within the top 10 per cent.

5.5.2 The Lorenz Curve and Gini Coefficient

Whilst the Generalised Pareto distribution was employed to model the *variations* within the top tail to estimate the '*small elite Black individuals*' wealth concentrations and shares, the Lorenz curve proposed by Lorenz (1905) was selected to assess the *spread* of inequality within the Black population. This to measure the '*extent to which the BBB-EE transactions were broad-based*' as at any point on the Lorenz curve, the percentage of the Black individuals which commands a particular per cent of the wealth can be assessed. Henceforth, the Lorenz curve provides complete inequality information on the *whole* Black population.

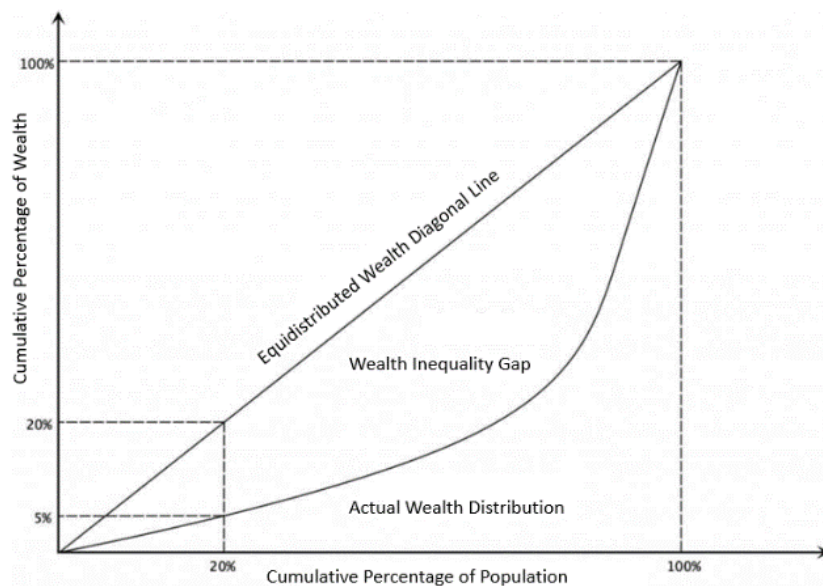
Recall, Pareto (1897) stated to approximate the top tail of the distribution, a Pareto distribution is simply stated as the number of individuals N earning an income above a certain threshold x , with A as a constant and α (1.5 constant). Lorenz (1905) argued against Pareto's (1897) findings, that when an unchanging degree of concentration was combined with the growth in per capita income, the value of α does not remain constant (leading to a compression of data and concealing irregularities) but increases¹¹¹. Lorenz (1905) further suggested that logarithmic curves were '*more or less treacherous*', thus serving as a springboard in developing his own famous curve. Consequentially, Lorenz's (1905) contribution emanates from the effectiveness in

¹¹¹ For example, for N to remain the same when x doubles, α must increase.

establishing the *orderings of distributions in terms of inequality* on a Lorenz curve. That is, Lorenz (1905) believed the Lorenz curve would enable conclusions to be made regarding inequality in the distribution of wealth, between two possible extreme distributions; on one hand, the complete concentration of wealth in one individual and on the other, equal distributions of wealth among all individuals.

Formally, the Lorenz curve graphically illustrates the cumulative percentage of wealth, to the cumulative percentage of the population (arranged from the poorest to the richest) on the vertical axis and horizontal axis respectively (Lorenz, 1905). In the presence of inequality of wealth distributions, the Lorenz curve will be bowed out. That is, the greater the inequality of the wealth distributions, the more that the line is bowed further from the equidistributed wealth diagonal line. (See, Figure 5.7).

Figure 5. 7: Schematic Representation of the Wealth Lorenz Curve



Source: Lorenz (1905)

The equidistributed wealth diagonal line, represents perfect equality in wealth distributions. With the actual wealth distributions below the Lorenz curve. The x axis records the ordered cumulative percentage of the population, whilst the y axis records the cumulative percentage of wealth. The Lorenz curve can be formally written as:

$$L(p) = \frac{\int_0^p Q(q) dq}{\int_0^1 Q(q) dq} = \frac{1}{\mu} \int_0^p Q(q) dq \quad (5.11)$$

The numerator $\int_0^p Q(q) dq$ sums the wealth of the bottom p proportional (the poorest 100 per cent) of the population. The denominator $\mu = \int_0^1 Q(q) dq$ sums the wealth of all. The $L(p)$ therefore indicates the cumulative percentage of the total wealth held by the cumulative proportion p of the population, when the individuals are ordered in increasing wealth values. For example, if $L(0.5) = 0.3$, then 50 per cent of individuals hold 30 per cent of the total wealth in the population. The Lorenz curve is thus convex in p , since as p increases, the new wealth that are being added up are greater than those that have already been counted.

It follows that, the larger the density of wealth $f(Q(p))$ at the quantile $Q(p)$, the less convex the Lorenz curve at $L(p)$. Thus the convexity of the Lorenz curve is revealing of the density of the wealth at the various percentiles. Henceforth, measures of wealth inequality can be extracted from the Lorenz curve. If all individuals held the same amount of wealth, the cumulative percentage of total wealth held by any bottom proportion p of the population would be equivalent also to p . The Lorenz curve would then be $L(p) = p$, that is, the population shares and shares of the total wealth would be identical. A useful informational content of the Lorenz curve is thus its distance $p - L(p)$, from the equidistributed wealth diagonal line (perfect line on equality). Compared to the

equidistributed wealth diagonal line, inequality removes a proportion $p - L(p)$ of the bottom 100 per cent of the population. The larger the deficit, the larger the inequality of wealth.

The aggregate deficit between the Black population shares and wealth shares in wealth across all values of p between 0 and 1, reveals half of the Gini Coefficient. Since Lorenz (1905) did not concern himself with the *significance* of a very unequal distribution on wealth. The Gini coefficient becomes a notable measurement the overall '*inequality*' of the wealth distribution and forms a summary of the Lorenz curve by a single value. This single value, the Gini coefficient forms the basis for examining the research question, the extent to which the banking BBB-EE transactions have achieved the mandate of '*addressing inequalities*' through '*the sale of shares*' amongst Black individuals (as defined), through a single measurement of the *banking BBB-EE wealth inequality coefficient*.

The Gini coefficient was developed by Gini (1912) and is strictly linked to the representation of inequality through the Lorenz Curve. The Gini coefficient provides a numerical measure of the overall *extent of inequality* by a single figure. The Gini coefficient based on the Lorenz curve is expressed as follows:

$$\frac{\text{Gini Coefficient}}{2} = \int_0^1 (p - L(p)) dp \quad (5.12)$$

The below table provides measurement interpretations of the Gini coefficient relating to inequality, this to form the basis of the interpretation of the wealth Gini computed for the banking sectors' BBB-EE transactions.

Table 5.1: Gini Coefficient and Inequality

Gini Coefficient	0 - 0.2	0.2 - 0.3	0.3 - 0.4	0.4 - 0.5	0.5 - 1
State	Equality	Relative Equality	Little Inequality	Relative Inequality	Absolute Inequality

Source: World Bank (2020)

The bigger the Gini coefficient, the more unequal is the wealth distribution. If the Gini coefficient equals 0, wealth is perfectly equally distributed. If the Gini coefficient equals 1, the whole wealth is owned by single individual, which is a situation of perfect inequality.

In summary, the Generalised Pareto distribution method is selected to construct the upper tail to estimate the *variations* in wealth shares and concentrations *of the small elite Black individuals*, in answering the research question. For the research question, ‘*extent to which the BBB-EE transactions were broad-based*’, the Lorenz curve is selected to present complete information on inequality across the BBB-EE wealth distribution. Finally, the Gini coefficient selection forms the basis of answering the extent to which ‘*addressing inequalities*’ was overall achieved by the banking BBB-EE transactions through the computation of a *wealth inequality coefficient*, for the banking sector of South Africa.

5.6 Conclusion

This chapter has served as a positioning of the research study. It has presented the research questions and it has emphasised the potential benefits and limitations of the study. The quantitative research methodology and techniques used to answer the research questions were described.

The novel Black banking sector BBB-EE data collected for this research, forms the foundation for answering the research questions. Firstly, through the Generalised Pareto distribution construction of the upper tail curve, to estimate the variations of wealth shares and concentrations *of the small elite Black individuals*. Secondly, the Lorenz curve is employed to measure *‘extent to which the BBB-EE transactions were broad-based’*, this to offer complete information on inequality on the whole Black population. The Gini coefficient forms the basis for examining, the overall extent to which the *banking BBB-EE* transactions are successful in *‘addressing inequalities’* through the calculation of a *wealth inequality coefficient*. This provides a single value summary of *wealth inequality* within the context of the banking sector BBB-EE transactions.

The next chapter serves to provide the results and findings of the research questions, based on the various techniques and methodologies, as discussed in this chapter.

Chapter 6

Findings and Interpretations of Results

6.1 Introduction

The redistribution of *wealth* in South Africa has historically been a core feature of the political debate, with the BBB-EE policy instrument being put forward by the South African government, as a key mechanism in addressing '*inequalities*' to achieve a more equal distribution of *wealth*. The South African government co-operated with corporate capital in setting empowerment targets acceptable to local industry and foreign companies purposefully to facilitate the allocation of *wealth* through the '*sale of shares*' to Black individuals, as defined by the BBB-EE Act 53 of 2003. The end results of BBB-EE, as a redistribution policy instrument, have been controversial partly because of its perceived modest scope in redressing historical inequalities.

The research findings on the extent to which BBB-EE transactions of the banking sector¹¹² played a role in '*addressing inequalities*' through the '*sale of shares*' allocations to Black individuals are presented in this chapter. These findings firstly, measure the extent to which the banking BBB-EE transactions benefited '*mainly a small elite*' of Black individuals. Secondly they, provide results on the extent to which the banking sector BBB-EE transactions were '*broad-based*'. The findings conclude with the calculation of a *banking BBB-EE wealth inequality coefficient*, to assess the overall extent to which the mandate of BBB-EE of '*addressing inequalities*' was achieved with respect to wealth ('*sale of shares*'), with a single value.

¹¹² Per the Amended Financial Services Codes (2017) embedded in the BBB-EE Act 53 of 2003.

The chapter is structured as follows: Section 6.2 provides preliminary findings from the novel data compiled; Sections 6.2 to 6.5 answer the research questions; and Section 6.6 concludes.

6.2 The Novel Data Preliminary Insights

Typically in South Africa there are two main sources for micro-economic data on *wealth*: large scale household surveys (NIDS¹¹³) and administrative records from the tax authorities (PIT¹¹⁴). This research necessitated the creation of a unique dataset for analysis since there was no single repository of data for the BBB-EE banking transactions of the seven banks¹¹⁵ evaluated. Data was compiled from Stock Exchange News Services (SENS) notifications, audited annual financial statements (AFS), entities integrated reports (IR) and other public databases (Intellidex, 2015) for each bank, as discussed in the preceding chapter.

The synthesis of the data compilation was the extraction of Black individual ‘*sale of shares*’ to form the Black population for the seven banks’ BBB-EE transactions. A population size of 93,684 Black individuals (Black population) was identified, with a combined total value of approximately R18 billion of wealth (total NAV) allocated to this population. Interestingly, the combined Black population wealth allocation represented only 33 per cent of the total allocation of R54 billion by the seven banks’ BBB-EE transactions (Figure 6.1). The largest portion, 60 per cent or approximately R33 billion was allocated to community trusts and community investment trusts. Most notable in this regard, was the RMH BBB-EE transaction, which allocated 100 per cent of the ‘*sale of shares*’ to the Royal Bafokeng Nation (RBN). These preliminary findings

¹¹³ National Income Dynamics Study.

¹¹⁴ Personal Income Tax.

¹¹⁵ Standard Bank, ABSA, Capitec, Investec, Rand Merchant Holdings, Nedbank and FirstRand.

suggest that the wealth allocation was ‘*broad-based*’¹¹⁶, as community and investment trust beneficiaries are usually recipients of philanthropic activities and would typically fall in the bottom ends of the income and wealth distributions.

However, as previously indicated, trusts were specifically excluded for this research, as at the close date (vested periods) of all the banking sector BBB-EE transactions evaluated, the trusts’ beneficiaries lacked the vested rights to receive share capital allocations (*wealth*) and capital income (dividends), therefore not meeting the definition of ‘*wealth*’ as defined. This is not to say the communities did not benefit from the transactions. Further research would be required to ascertain how the allocations to the trusts benefitted communities broadly, that is, whether the allocations resulted in improvements and support of, income and wealth levels, educational levels or/and resulted in consumption. An additional important point for this research is that overall wealth inequality in South Africa was unaffected, as this fell outside the scope of this research.

Another interesting feature was the allocation of *wealth* of approximately R400 million to 219 White individuals who did not meet the definition of ‘*Black*’ as defined under the BBB-EE Act of 2003 and thus were also excluded from the total Black population in these findings. Further, non-strategic companies¹¹⁷, typically asset managers, private equity entities and including the seven bank’s investments in their respective strategic partners¹¹⁸, were allocated a total of approximately R1 2 billion of *wealth*. Therefore, conclusions could be drawn, that non-strategic companies’ investments served to entrench political access through their respective strategic partner relationships. As Intellidex (2015) suggested, strategic partners were well targeted, to enable lobbying at a political level, to guide business development with the South African

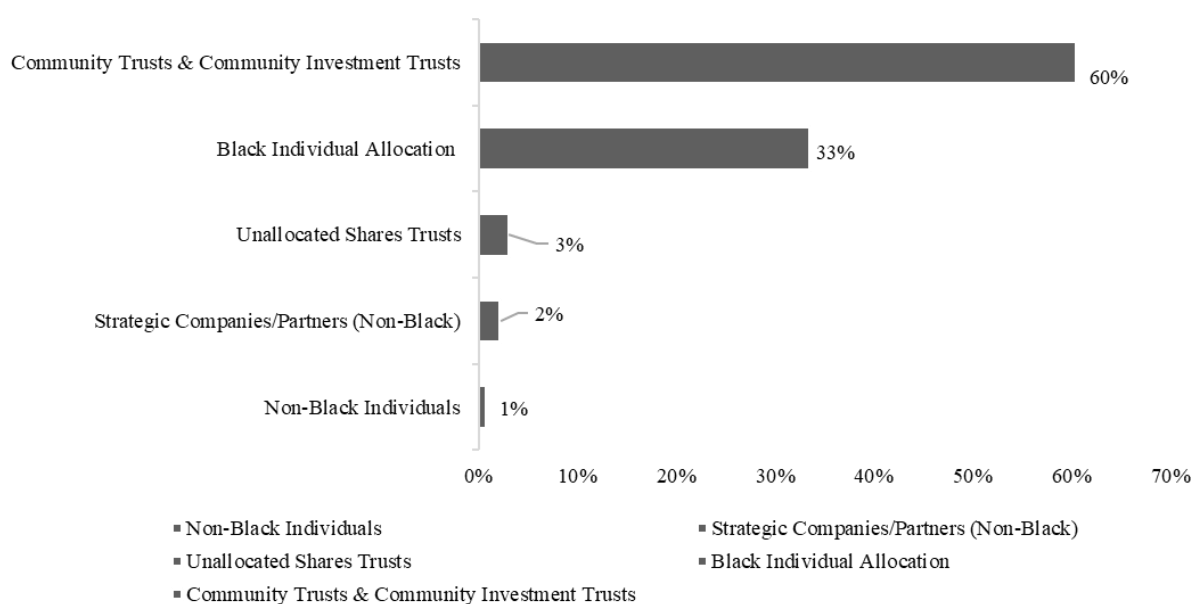
¹¹⁶ Defined by the BBB-EE Act 53, as the increasing of the number of Black people that manage, own and control enterprises and productive assets.

¹¹⁷ Examples included Remgro (Investec transaction), Old Mutual and RMB Private Equity (Nedbank).

¹¹⁸ Strategic partners. These are Black-owned investment companies and or/prominent Black individuals.

government. This transfer was also excluded. An additional characteristic, was ‘unallocated shares’, which was *wealth* generally preserved by the banks for future expansion of their respective BBB-EE program and not included in the calculation of *wealth* allocations. Figure 6.1 illustrates the total allotment of *wealth* of the seven banks reviewed. Details of the allocations for the seven individual banking institutions are show in Annexure A.

Figure 6. 1: Wealth Allotment of the Seven Banks¹¹⁹



Source: Moshikaro (2020)

To further expand on the extent to which ‘*wealth*’ was allocated to individuals within the respective banks’ schemes of arrangements, Standard Bank and Capitec are presented for illustrative purposes. It should be noted that the calculations that follow and the calculated shares of total allocation refer only to shares allocated to individuals in the various schemes. The overall 60 per cent allocated to communities is not included.

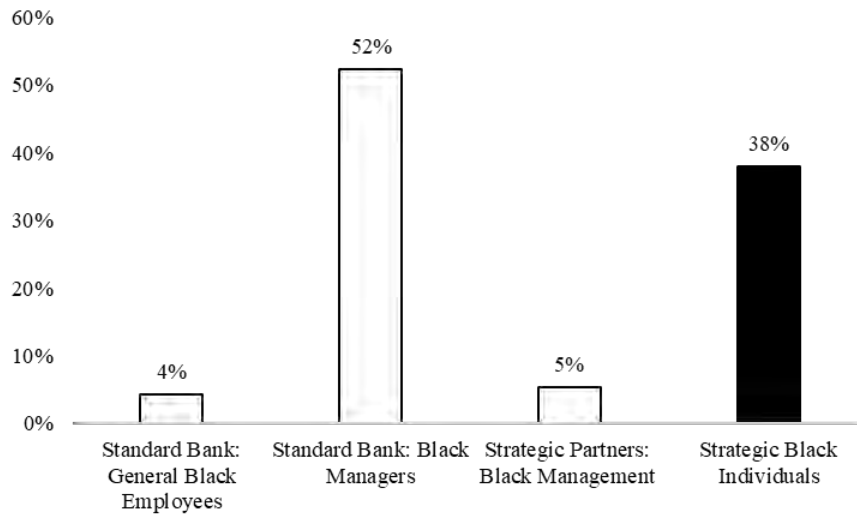
¹¹⁹ See Annexure A. for more details.

The Standard Bank scheme of arrangement (Tutuwa) allocated the largest portion of approximately 52 per cent (R 2.7 billion) of wealth to Black management (ESOP¹²⁰), approximately 2 500 individuals. This equated to about R 1 million per recipient (or 12 300 shares). The allocation to this specific grouping was based on the strategic intent of ‘promoting the retention of employees’ at a senior level within Standard Bank. The second largest allocation was attributable to strategic Black individuals. This grouping comprised of Black Standard Bank board members and significant shareholders of the strategic partner companies (Shanduka and Safika) - see Table 6.1. Approximating 38 per cent (R2 billion) of the total R 5 billion in *wealth* was allocated to these Black recipients. This grouping equated to just 12 individuals out of a total of approximately 27 000 Black individuals who were direct recipients of the *wealth* allocations under the Standard Bank scheme of arrangement.

The lowest allocation was attributable to the general staff (ESOP general staff) of Standard Bank, who typically were non-managerial individuals within the Standard Bank branch network. This grouping of approximately 25 000 Black individuals was allocated approximately 100 shares each (equivalent to R9 000 each). Figure 6.2 illustrates the wealth share allocations of the Standard Bank scheme.

¹²⁰ Employee share ownership scheme, for Standard Bank managerial positions, excluding executives.

Figure 6. 2: Standard Bank Wealth (Share) Allocations



Source: Moshikaro (2020) and Standard Bank Annual Financial Statements (2004)

The context of a ‘*small elite*’ of beneficiaries becomes salient as Intellidex (2015) indicated that Black-owned investment companies and/or prominent Black individuals (strategic partners), were specifically targeted to enable lobbying at the political level. Table 6.1 provides indications of the specifically targeted strategic partner individuals for the Standard Bank scheme of arrangement. Prominent politically aligned strategic individuals such as Cyril Ramphosa, Saki Macozoma, Moss Ngoasheng and Richard Chauke featured heavily within the Standard Bank scheme of arrangement and received considerable individual allocations of *wealth* under the scheme. These findings present preliminary indications on the disproportionate allocations of *wealth* to a ‘*small elite*’ of 12 strategic Black individuals who were direct recipients of wealth under the Standard Bank scheme of arrangement. Table 6.1 illustrates the Standard Bank wealth allocations and highlights the “*small elite*” allocations per individual name.

Table 6. 1: Standard Bank Individual Allocations of Wealth

Standard Bank Black Recipients	Functions Within Standard Bank Scheme	Individual(s) Number	Individual Number Shares Allocated	Sum of Total Share Wealth Post Debt	Percentage Allocation
Standard Bank: General Black Employees	Employees	25 433	100	220 094 519	4.3%
Standard Bank: Black Managers	Employees	2 500	12 303	2 661 831 224	52.3%
Strategic Partners: Black Management	Employees: Strategic Partners	15	210 729	273 547 441	5.4%
Cyril Ramaphosa	Board Member & Shanduka (33%) Shareholder	1	4 741 405	410 321 161	8.1%
Moss Ngoasheng	Safika (20%) Shareholder	1	4 286 421	370 946 908	7.3%
Saki Macozoma	Board Member & Safika (20%) Shareholder	1	4 286 421	370 946 908	7.3%
Vuli Cuba	Safika (20%) Shareholder	1	4 286 421	370 946 908	7.3%
James Motlasi	Shanduka (10%) Shareholder	1	1 436 789	124 339 746	2.4%
Richard Chauke	Safika (5%) Shareholder	1	1 071 605	92 736 727	1.8%
Soto Ndukwana	Safika (5%) Shareholder	1	1 071 605	92 736 727	1.8%
Sim Shabalala	Managing Director, Africa	1	698 339	60 434 257	1.2%
Advocate Kgomo Moroka	Board Member	1	125 000	10 817 500	0.2%
Chris Nissen	Board Member	1	125 000	10 817 500	0.2%
Dr Mamphela Ramphele	Board Member	1	125 000	10 817 500	0.2%
Thulani Gcabasha	Board Member	1	125 000	10 817 500	0.2%
Grand Total		27 960	22 602 140	50 92 152 527	100%

Source: Moshikaro (2020) and Standard Bank Annual Financial Statements (2004)

The RMH scheme of arrangement allocated 100 per cent of the ‘*sale of shares*’ to the Royal Bafokeng Nation (RBN). An interesting comparison with this is the Capitec scheme of arrangement which was concluded in 2007 to increase the ‘ownership’ element to 16 per cent, thus increasing its compliance with the financial sector charter. The Capitec scheme of arrangement concentrated its ‘sale of shares’ to a specially created strategic partner consortium of individuals (Coral), led by Litha Nyhonyha from the controversial Regiments Capital¹²¹. Further, the Capitec scheme of arrangement strategic direction excluded Employee Share Ownership Schemes (ESOP’s), this diverting from the general ESOP inclusions typically found within BBB-EE scheme of engagements. Table 6.2 illustrates the individual wealth allocations to Black individuals within the Capitec scheme of arrangement.

¹²¹ Regiments Capital has been implicated in “state capture” and is currently in liquidation because of a large unpaid tax liability to SARS.

Table 6. 2: Capitec Individual Allocations of Wealth

BEE Consortium Shareholders of Coral	Shareholders/ Trustees	Individual Share Allocation (Shares)	Wealth Per Individual (Rands)	Percentage Allocation
1. Regiments Capital (Pty) Ltd				
	1. L Nyhonyha	525,000	159,337,500	5.9%
	2. N Pillay	487,500	147,956,250	5.5%
2. Kaebetso Holdings Pty Ltd				
	3. T Mahoele	1,592,500	483,323,750	17.9%
	4. Z Nzama	1,592,500	483,323,750	17.9%
3. Lemosshanang Trust				
	5. Mr Moropa	125,000	37,937,500	1.4%
	6. Mrs Moropa	125,000	37,937,500	1.4%
	7. Ms Mokone	125,000	37,937,500	1.4%
	8. Mr Kekana	125,000	37,937,500	1.4%
4. Mdumo Trust				
	9. Abdool Ahmed	250,000	75,875,000	2.8%
	10. Feroza Mootla	250,000	75,875,000	2.8%
5. Batho- Batho Trust				
	11. Reverend Tsele	500,000	151,750,000	5.6%
	12. Vallie Moosa	500,000	151,750,000	5.6%
	13. Kenny Fihla	500,000	151,750,000	5.6%
	14. Sbongiseni Dhlomo	500,000	151,750,000	5.6%
6. Koma Trust				
	15. Tlhalefang Sekano	250,000	75,875,000	2.8%
	16. Ramateu Monyokolo	250,000	75,875,000	2.8%
7. Nozala Investment (Pty) Limited				
	17. Dr Makaziwe Mandela	327,795	99,485,783	3.7%
	18. Dawn Mokhobo	123,000	37,330,500	1.4%
	19. Lorato Phalatse	164,205	49,836,218	1.8%
8. Rorisang Basadi Investment Holdings (Pty) Limited				
	20. Jackie Huntley	75,000	22,762,500	0.8%
	21. Puli Moloto-Stofile	75,000	22,762,500	0.8%
	22. Modie Mabalayo	75,000	22,762,500	0.8%
	23. Nombini Mehlomakulu.	75,000	22,762,500	0.8%
9. Capitec Bank Share Empowerment Trust				
10. Pilisiwe Nomsa Tau	24. Pilisiwe Nomsa Tau	100,000	30,350,000	1.1%
11. Prudence Mtshali	25. Prudence Mtshali	100,000	30,350,000	1.1%
12. Tdikeledi Muriel Majola	26. Tdikeledi Muriel Majola	100,000	30,350,000	1.1%
13. Bongani Khumalo	27. Bongani Khumalo	100,000	30,350,000	1.1%
Totals		9,512,500	2,704,943,750	100%

Source: Moshikaro (2020) and JSE Capitec BBB-EE Circular (2007)

The Capitec scheme of arrangement is the extreme example of *wealth* having being allocated to a specific ‘*small elite*’ of Black individuals in terms of the banking sector BBB-EE ownership schemes. Just 27 individuals collectively received close to R3 billion of *wealth* under the Coral scheme. Similar to the Standard Bank scheme of arrangement, prominent politically aligned individuals such as Valli Moosa and eminent business people featured in the scheme. This is consistent with the Intellidex (2015) findings of specifically targeted Black individuals as strategic partners. Of interest, Gerrie Fourie (CEO of Capitec) concluded that ‘BEE-EE in totality in South

Africa, has not worked because it should be there to help all South Africans and unfortunately it has only helped a couple of people' (BusinessTech, 2019).

These preliminary data findings were not comprehensive enough in evaluating the research questions. However, they do provide indications that a substantial portion of *wealth* (60 per cent) was also allocated to community trusts and community investment trusts, suggesting that the banking BBB-EE policy instrument was usually *broad-based*. Intellidex (2015) likewise found community and investment trust allocations of 49 per cent for the banking sector, which is lower than the author's findings of 60 per cent. The reason for this difference is, that Intellidex (2015) did not further decompose the '*sale of shares*' within each strategic partner allocation. That is, Intellidex (2015) gave the total allocations to strategic partners without further decomposing allocations within their respective strategic partner's equity structures. The author's data formulation (See 5.3.1) identified community and investment trusts within the strategic partners grouping also, and this accounts for the 11 percentage point difference.

To answer the research questions, the focus turns to the Black population (Black individual allocations) in the form of *wealth (sale of shares)* as defined for this research. For this specific grouping, further statistical procedures were employed, which initiated the 'goodness of fit' test, as the parameters of the entire Black population of 93 684¹²² were unknown. Additionally, to determine how well the Black population fits the probability functions of normal or non-normal distributions. This to form the basis of the selection of statistical techniques and methodologies appropriate for this research. By applying the one sample Kolmogorov-Smirnov Test, if the null hypothesis was rejected, this indicated that the Black population was not Gaussian distributed (normal distribution). This limits the application of descriptive statistics measurements of central

¹²² The total population size of 93,684 represented *wealth* of approximately R18 Billion.

tendencies such as means, mediums, modes and variability (variances: minimum and maximum variances) to answer the research questions. Therefore, reliance is placed on other statistical techniques not requiring normality assumptions for quantitative analysis for this study.

6.3 The One Sample Kolmogorov-Smirnov Test: Results

To test the ‘goodness of fit’, the one sample Kolmogorov-Smirnov Test or K-S Test was applied, as it is a non-parametric type of hypothesis testing¹²³ which does not specify a particular family of distributions. The one sample Kolmogorov-Smirnov Test (K-S Test) tested for *normality* of the of the Black population. The Kolmogorov-Smirnov test statistic (D_n) and the critical ($D_{crit,0.05}$) were calculated and the obtained results are shown below in Table 6.1. (See Annexure B and C)

Table 6.1: One Sample Kolmogorov-Smirnov Test

Test for Normality			
One - Sample Kolmogrov-Smirnov			
Test Statistic	0.47995595	Critical Value	0.00444331

Source: Moshikaro (2020) using IBM SPSS Statistics

Since the calculated test statistic (D_n) value was greater than the critical value ($D_{crit,0.05}$), the null hypothesis was *rejected*. Conclusions were drawn; namely, that the Black population data is *not* normally distributed. Henceforth, other statistical techniques not requiring *normality* assumptions for quantitative analysis were explored to answer the research questions and are

¹²³ Distribution free test.

discussed below. The above finding prevented the use of descriptive statistics measures of central tendency such as means, medians and variances etc. which have the potential to provide simpler indicators of wealth inequality when analysed together. See Figure C. in the Appendix. The distribution of the One Sample Kolmogorov- Smirnov Test, illustrates the distribution skewed to the right and thus not displaying a bell curve (Gaussian normal distribution curve).

6.4 Top Wealth Shares and Concentrations: Results

Table 6.2. reports the results of the estimations of top wealth shares and concentrations based on the Generalised Pareto curve computations (See Annexure D and E). The results reveal extremely high wealth distributions within the top decile and equally very high concentration levels within the top tail (top 10 per cent). Evidently, the richest top 10 percentile own 79 per cent of the total wealth allocated, followed by the top one per cent at 55 per cent and the top 0.1 per cent at 47 per cent of total wealth. The Generalised Pareto distribution reveals this fractal inequality, through the estimations of *variations* (See Annexure F for the varying $b(p)$) of wealth shares and concentrations within the curve. This evidence further indicates that even within the top 10 per cent, *wealth* diverges. That is, for even the rich (top 10 per cent), the super-rich 0.1 per cent have pulled ahead relative to the rich.

In other words, of the approximately R18 billion of total *wealth* allocated to Black individuals (i.e. excluding community schemes), the top 10 per cent of individuals (approximately 9 500 people) obtained approximately R14 billion of total *wealth*, the top one per cent (950 people) approximately R10 billion of total *wealth*, the top 0.1 per cent (95 people) approximately R8.6 billion of total *wealth* (See Table 6.2). This evidence signifies the high levels of concentrations and the wealth variations deep within the top 10 per cent and provides indications of the banking

BBB-EE transactions disproportionately benefited mainly a ‘*small elite*’. This evidence concurrently provides preliminary evidence that even within the top 10 per cent, wealth distribution was significantly unequal.

Table 6. 2: Top Wealth Shares

Distribution of Wealth	Wealth Share	Wealth Threshold Rands	Wealth Shares Rands
Top 10% (p90p100)	79%	337,737	14,297,094,147
Top 1% (p90p100)	55%	1,064,732	9,975,517,484
Top 0.1% (p90p100)	47%	4,417,416	8,574,547,419

Source: Moshikaro (2020) computation WIDS Application

Literature on economic inequality in South Africa offers some guidance on the relationship between race and wealth inequality, post-apartheid. These findings support contemporary research that South Africa’s inequality is increasingly being shaped by the growing inequality within the Black race group (Leibbrant, *et al.*, 2010; Orthofer, 2016; Mbwe and Woolard, 2016). The top 10 per cent wealth shares and concentration levels, illustrates this point of the presence of extreme Black (as defined) inequality even within the context of the banking BBB-EE transactions of South Africa.

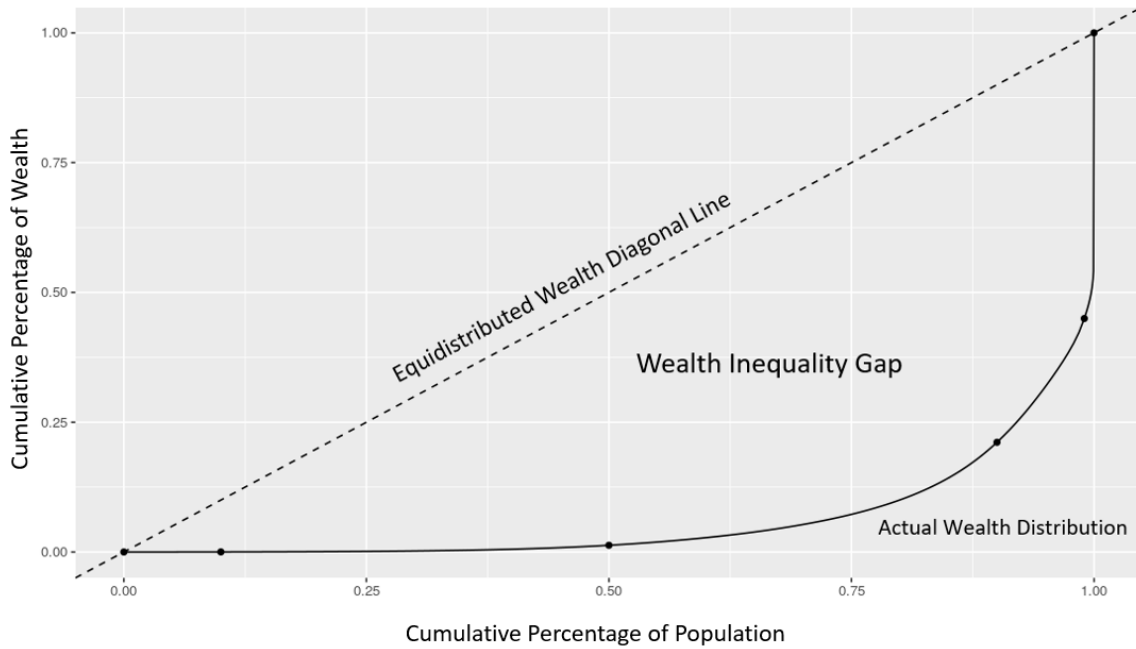
Deductions can be made that the BBB-EE banking transactions transferred enormous amounts of *wealth*, to a disproportionately small number of Black individuals as defined. This is consistent with earlier research by Southall (2007) who noted the importance of prominent Black wealth recipients within the respective banking BBB-EE transactions. Examples of these Black individuals include the Standard Bank BBB-EE transaction benefiting Saki Macozoma and Cyril Ramaphosa, while the ABSA transaction benefiting Tokyo Sexwale and Patrice Motsepe.

6.5 The Wealth Lorenz Curve and Gini Coefficient: Results

Whilst Generalised Pareto curve provides evidence on the top wealth shares and concentrations of the within the top tail (top 10 per cent), the Lorenz Curve describes the overall distribution of *wealth* across the whole wealth distribution. Figure 6.2 graphically evidences extremely high inequality of the *wealth* distributions, since the plotted Lorenz curve is considerably convex and far from the equidistributed wealth diagonal line.

These finding come as no surprise, as Table 6.2 has already demonstrated that the top 10 per cent own 79 per cent of total *wealth* arising from the banking BBB-EE transactions. Notice how the Lorenz curve starts to rise only above the cumulative 50 percentage of the Black population, this suggesting that individuals below 50 per cent commanded a miniscule percentage of total *wealth*. This is graphically noticeable by the bottom part of the Lorenz curve almost touching the horizontal axis, illustrating a cumulative Black population measuring little *wealth* from 0 per cent right up to 50 per cent. Beyond the 50 per cent cumulative population mark, the Lorenz curve features more meaningfully especially after the 75 per cent mark and beyond, suggesting meaningful *wealth* distributions only further up the curve.

Figure 6. 2: The Lorenz Curve



Source: Moshikaro (2020) computation WIDS Application

Table 6.3 provides further evidence from the Lorenz curve of the minimal cumulative wealth shares commanded by the bottom percentages of the cumulative Black population. It suggests that the bottom 50 per cent accumulated approximately only 1.3 per cent of *wealth* and the bottom 10 per cent approximately only 0.02 per cent of total wealth. Further, there is a stark evolution of diminishing of wealth from the 50 per cent Black population moving down to the last bottom decile. The evidence suggests that the ‘broad-base¹²⁴’ element, that is, the transformation of meaningful economic wealth ownership across the broader landscape within the context of the ‘*extent to which the BBB-EE transactions were broad-based*’, cannot be supported.

¹²⁴ Defined by the BBB-EE Act 53 as the increasing of the number of Black people that manage, own and control enterprises and productive assets.

Table 6. 3: Bottom Wealth Shares

	Bottom 10%	Bottom 20%	Bottom 30%	Bottom 40%	Bottom 50%
Wealth	0.02%	0.07%	0.20%	0.53%	1.30%

Source: Moshikaro (2020) computation WIDS Application

Previous evidence (Section 6.2) suggests that the majority of the *wealth* allocation (60 per cent or R33 billion) was allocated to community trusts and community investment trusts. This suggested that the *wealth* allocation was ‘broad-based’, that is, the banking BBB-EE instrument increased the number of Black individuals ‘to manage, **own** and control enterprises and productive assets’¹²⁵. However, the ‘broad-based’ element does not hold within context of the ‘*sale of shares*’ as previously indicated, as the BBB-EE trusts were typically structured as discretionary trusts and beneficiaries of those trusts lacked the vested rights to receive capital distributions (*wealth*) or capital income (dividends) directly.

Whilst the Lorenz curve provides evidence of *wealth* inequality across the curve. The Gini coefficient derived from the Lorenz curve formed the measurement of ‘*the extent to which addressing inequalities*’ through the *banking BBB-EE wealth inequality coefficient*, was overall achieved. The *banking BBB-EE wealth Gini coefficient* of **.88** was computed. (See Table 6.4).

¹²⁵ Broad-based as defined by the BBB-EE Act 53.

Table 6. 4: Banking BBB-EE Wealth Gini Coefficient

	World Bank (2020)	Banking BBB-EE Wealth Inequality
Gini Coefficient	0.5 - 1	0.88
State	Absolute Inequality	Extremely High Inequality

Source: Moshikaro (2020) based on the WIDS Application

The BBB-EE wealth Gini coefficient is extremely high and provides an overall summary of the pervasive wealth inequality of the banking sectors BBB-EE program. It demonstrates clearly that the mandate to address inequality found in the Amended Financial Services Codes (2017) which states ‘*addressing inequalities*’ through ‘*equity ownership*’ targets by means of ‘*sales of shares*’ to ‘*Black individuals*’ has not been realised even within the banking BBB-EE transactions benefiting Black individuals.

The significant high *wealth* concentrations (Table 6.2), diminutive *wealth* distributions below the bottom 50 wealth shares (Table 6.3) and the extremely high banking BBB-EE *wealth* inequality as noted above, have important implications. Firstly, Black individuals as defined, with little *wealth* will not have sufficient *wealth* to sustain consumption in the event of vulnerabilities due to economic shocks, such as, unemployment and ill health. Secondly, Black individuals will not have wealth to pass on to future generations, a future source of inheritance inequality. The persistence of such trends creates a breeding ground for what Piketty (2014) refers to as patrimonial capitalism.

Additionally, the extremely high inequality of wealth transfers within the context of the BBB-EE transactions in banking have the potential to create a greater imbalance of political power between citizens, as high concentrations of *wealth* amongst the ‘*small elite*’ can potentially

influence the political process unfairly and thus compromising democracy in South Africa. This becomes salient in the context of the ‘*small elite*’ in which Intellidex (2015) indicated that Black-owned investment companies and/or prominent Black individuals (strategic partners), were specifically targeted to enable lobbying at the political level. This theme is salient as, Khan (2010) indicated that high wealth concentrations described the presence of a group who have disproportional control and access to resources and further using their positions to secure political and administrative connections to convert their disproportional economic capital to other forms of capital.

6.6 Conclusions

This chapter has provided the empirical findings for the thesis and used these results to answer the respective research questions.

Evidence was presented on the wealth shares of the banking BBB-EE transactions, indicating extremely high top wealth shares and equally high concentration levels, with the richest top 10 per cent acquiring 79 per cent of the total wealth transferred. These findings suggest that the BBB-EE transactions within the banking sector, disproportionally benefited mainly a '*small elite*' within the 93,684 Black individuals who made up the Black population of this study. The Lorenz curve was used to provide evidence of extremely high inequality across the Black distribution, with *wealth* starting to meaningfully cumulate at only after the 50 per cent mark on the curve. Additionally, the bottom 10 per cent to 30 per cent accumulating less than one per cent of the total wealth. Thus, suggesting the intended '*broad-based*' element of wealth ownership cannot hold true within the banking BBB-EE instrument's '*addressing inequality*' mandate.

To form an assessment of the extent to which the mandate of BBB-EE of '*addressing inequalities*' was achieved with respect to wealth ('*sale of shares*'), with a single value, the banking BBB-EE wealth Gini coefficient of 0.88 summarises the overall evidence of the extremely high levels of inequality within the banking sector BBB-EE of South Africa.

Chapter 7

Conclusion and Recommendations

7.1 Introduction

Economic inequality is a very pressing issue post-Apartheid, it has been established that South Africa remains as one of the most unequal countries in the world, both in terms of income and wealth inequalities. Within the South Africa experience, literature has pointed to the inescapable findings that wealth inequality is more severe than income inequality, with the persistently high wealth inequality having the potential to compromise social, economic and democratic values of South Africa (Mbewe *et al.*, 2019).

South Africa has been a pioneer in respect of the collection and publishing of data on household wealth, through large-scale household surveys (NIDS) and the publication of an additional wealth module in the administrative tax records (PIT). However, as Orthofer (2016) noted both NIDS and PIT were originally not designed to be wealth surveys. Thus, by their nature they are limited in their scope to collect good quality wealth data at a micro and macro-levels for South Africa. This thesis added to the limited wealth data, by exploring and collecting data outside the national statistical data frameworks, through the collection of individual wealth data from the banking sector BBB-EE policy redistribution program, made possible by the high disclosure requirements of the banking sector of South Africa. The thesis findings thus contribute to the existing body of knowledge on wealth inequality, despite the inherent limitations on wealth data in South Africa.

This concluding chapter provides a summary of the literature review, methodologies and techniques, the research findings, policy recommendations and finally concludes with the policy and research implications on wealth inequality in South Africa.

7.2 Literature Review and Methodology

The study sought to establish the extent to which '*addressing inequalities*' has been addressed through the '*sale of shares*' allocations to Black individuals, within the context of the South African banking sector BBB-EE transactions. The literature review conducted in Chapter 2, examined the potential causes of both income and wealth inequalities. The literature identified two stylised developmental economic hypotheses relating to inequality, namely the Kuznets (1955) inverted U-shape curve, describing the relationship between economic development and income inequality, and Piketty's (2014) hypothesis, that when the rate of return of capital (r) is greater than the rate of growth (g), both the capital to income ratio and wealth inequality will rise. The purpose of this theoretical review was to examine the theoretical evolution of the causes of inequality from these seminal contributions.

The literature review further included a variety of views in support and criticism of these two theoretical hypotheses. The concept of wealth was introduced and defined as, the accumulation of marketable assets by households, either through savings or through the preservation of intergenerational transfers (Trotman-Dickenson, 1983) with wealth being a stock concept measured at a fixed point in time and the nature of wealth dependent on the definition that is adopted.

Chapter 3 began with the findings from literature on South Africa's exceptionally high income inequality (as measured by the Gini coefficient), which displayed a pronounced racial

dimension, with the high within-Black income inequality driving overall income inequality in South Africa. Research further suggested that differentials in income shares across the income distributions explained South Africa's high income inequality, evidenced by highly concentrated income shares at the top of the distribution, with lower shares of income, progressively moving down the income distribution.

The evidence found that wage inequality was a significant driver of income inequality in South Africa, with most studies suggesting that wage inequality had worsened since 1994. Evidence indicated that wage inequality was predominately driven by wage differentials between low-income and high-income earners in South Africa and further influenced by the interaction between intra-sectoral skills mismatches and sector occupations within the South African labour market. Evidence additionally suggested that wage differentials originating from the dynamics between how educational attainment and labour market earnings of parents fed through to the educational attainment and earnings of their children. Studies concluded that South Africa's low intergenerational income mobility and the high intergenerational income elasticity played a contributing factor in explaining why both income and wage inequalities had been so *persistent* in South Africa.

Chapter 3 concluded with a brief comparative case study of Brazil's reduction of income inequality between 1993 to 2015. The findings suggested that Brazil's income inequality, similarly to South Africa was centrally driven by wage inequality. Evidence suggested that the overall growth in wages resulting in the decline in wage inequality in Brazil, were largely driven with the rapid increases in Brazil's national minimum wage. Contrasts were drawn between South Africa's and Brazil's redistribution programmes. Researchers concluded that the Brazilian BFP played a meaningful role in the reduction of income inequality in Brazil. Within the South African

experience, the unconditional grant program saw successes in contributing to the reduction of poverty and offsetting the inequality increasing effects of South Africa's rising wage inequality (Hunderborn, Liebbrant and Woolard, (2018); Maboshe and Woolard (2018). However, the South African grant program was unable to reduce overall income inequality at a similar quantum compared to the Brazilian BFP.

Chapter 4 outlined the findings from the literature on wealth inequality from a global perspective. The general consensus was that global wealth inequality is significantly more unequal than global income equality, with conclusions drawn that overall global income inequality was on the decrease, whilst global wealth inequality remained stubbornly high. Evidence suggested that global wealth dynamics were driven by both between and within country forces. In addition, literature presented a declining evolution of between-country wealth inequality compared to a rising within-country wealth inequality. Evidence further indicated that China was playing an increasing role in the development of global wealth inequality dynamics, significantly impacting the reduction of between-country global wealth inequality. Additionally, evidence suggested that the 'types' of assets influenced wealth concentrations, with financial assets more unequally distributed than non-financial assets.

Within the South African experience, the overall finding was that wealth inequality in South Africa was very high, higher than South Africa's high income inequality and higher than global wealth inequality. The literature revealed that South Africa's wealth was unevenly distributed and highly concentrated, with financial assets featuring predominately at the top end of the wealth distribution, similar to global wealth experience. South Africa's key policy instrument for reducing wealth inequality, the BBB-EE policy was introduced and contrasted to the Malaysian NEP program. Important lessons for South Africa from the Malaysian NEP program being:

empowerment policies are not necessarily a deterrent to economic growth; and secondly, their effectiveness is greatly aided by a conducive economic environment where new wealth is being created by rapid economic growth. This environment of rapid economic growth has been largely absent for South Africa, with wealth transferred from existing wealth within the BBB-EE program.

Chapter 5, served as a positioning of the research study. It presented the research questions and it emphasised the potential benefits as well as the limitations of the study. The quantitative research methodology and techniques used to answer the research questions were outlined. Henceforth, '*wealth*' for this case study of the banking sector was defined as the '*transfer of wealth*' through the '*sale of shares*' to Black individuals, through the banking BBB-EE policy mechanism.

The novel '*sale of shares*' to the Black population data from the banking BBB-EE transactions, formed the foundation in answering the research questions. Firstly, through the Generalised Pareto curve construction of the upper tail, to estimate the wealth shares and concentrations *of the small elite* within the Black population. Secondly, the Lorenz curve was employed to measure the '*extent to which the BBB-EE transactions were broad-based*', this to offer complete information on wealth inequality based on the Lorenz curve. The Gini coefficient provided a single value summary of wealth inequality within the banking sector BBB-EE transactions, to assess the extent to which the mandate of BBB-EE of '*addressing inequalities*' was achieved.

Chapter 6, presented the research findings. Evidence was presented on the top wealth shares of the BBB-EE banking transactions, indicating highly unequal wealth shares and equally high concentration levels, with the top 10 per cent attaining 79 per cent of the total wealth. These findings suggest that the BBB-EE transactions within the banking sector disproportionately

benefited mainly a '*small elite*'. Further evidence of this unequal distribution was presented, as the Lorenz curve also delivered evidence of extremely high inequality across the wealth distribution, with wealth starting to meaningfully accumulate at only after the top 50 per cent mark along the curve. Additionally, the bottom 10 per cent to 30 per cent accumulated less than one per cent of wealth respectively. Thus, the '*broad-based*' mandate of banking B-BBEE instrument cannot hold, considering the diminutive the bottom 50 per cent wealth shares. The computed BBB-EE wealth Gini coefficient of 0.88 summarised the overall evidence of the extremely high levels of inequality within the banking sector BBB-EE program of South Africa.

7.4 Policy Recommendations

The key objectives of this study involved ascertaining the extent to which '*addressing inequalities*' has been addressed through the '*sale of shares*' allocations to Black individuals, within the context of the South African banking sector BBB-EE transactions. However, given the limited scope of the banking sector of South Africa as a case study for this research, it cannot be concluded that the mandate of the banking sector BBB-EE policy's instruments of '*addressing inequalities*' is reflective also across all industry sectors of South Africa. Therefore, the thesis findings are localised specifically to the banking sector of South Africa.

While the key objectives in terms of the research questions have been met, it was apparent during the research process, that certain other questions surrounding the BBB-EE redistribution program and wealth inequality are important, however they fall outside the scope of this thesis and could serve as valid areas of further investigation in the future. This will be further discussed in Section 7.5.

Contextualised, South Africa's high wealth inequality co-exists with high poverty, high unemployment and high income inequality levels, with the overlay of the racial dimension. The future redistribution of wealth in the South African economy requires the meaningful participation of all the stakeholders, namely, business, labour, the government and civil society. Looking at policy, nearly all areas of economic policy can contribute to the aim of achieving a more egalitarian society and the following policy recommendations seek to provide possible alternatives.

Based on Intellidex (2015) findings, a common theme of the all BBB-EE transactions concluded as of 2015, was a significant allocation of shares to community trusts and community investment trusts (22 per cent or R69 billion¹²⁶). This indicated that many Black individuals (beneficiaries) were recipients of economic flows through community trusts and investment trusts of the respective BBB-EE transactions. Though the BBB-EE codes were subsequently amended from 1 May 2015, requiring the trust beneficiaries to be treated in the same way as ordinary shareholders, an alternative policy proposal would be the formation of a sovereign fund for future new BBB-EE waves. This is, the '*ownership*' component of the policy instrument relating to community trusts and investment trusts, could be diverted into a sovereign fund model. Though the funding structures of a sovereign fund may be a challenge in formulating, the benefits however could be directed to specifically capacitate and support existing budgetary gaps in areas such as education, health and job creation initiatives in South Africa. Through this would not directly create wealth at an individual level, it could provide a supportive basis in addressing inequities.

A parallel policy to the above, is the recommendation of improved quality of education outcomes in South Africa to create greater equity in education, from pre-school to tertiary education, thus ensuring fairness of opportunities for all young citizens. Researchers have

¹²⁶ Based on all Top 100 JSE listed companies, across all sectors.

indicated that central to wage inequality in South Africa is the unequal quality of education attainment, since labour market earnings are symmetrical to higher educational outcomes. Higher educational outcomes are concurrently tied to skills and training and these, in turn, increasingly determine an individual's ability to earn improved earning capacities. With higher income levels, wealth can accumulate through savings and the creation of other assets to generate dispersed income streams outside employment income to a much broader cross-section of society. Currently South Africa is experiencing a shortage of STEM (Science, Technology, Engineering and Maths) qualifications, positioning South Africa in a precarious position under this new age of the fourth industrial revolution.

A further policy instrument recommendation is the introduction of Corporate Gini Coefficients (CGI) within the corporate landscape of South Africa. The CGIs would serve as measures of corporate pay (income) and employee share schemes (wealth) inequalities for which regulators could mandate disclosures. The regulator could further impose CGI thresholds required as an entry point to conduct business with all levels of governance in South African, serving as a mandated business conduct requirement and providing a further expansion to the current BBB-EE framework. CGI's provide a much better measure of corporate inequalities than current measures such as the CEO's pay as a ratio of the lowest paid employees and has the added advantage of bringing clear benefits at both micro and macro levels of interventions.

South Africa's poor are particularly vulnerable due to widespread financial illiteracy, thus lacking the ability manage risks effectively and avoiding financial pitfalls. Policy recommendations include those that are designed to encourage a higher understanding of financial principles, not only for the adult citizens but further imbedded within school curriculum. This is particularly relevant for wealth formation, as financial literacy forms the entry point to financial

inclusion by enabling the most vulnerable, the poor, access to financial services and participation into the formal economy. This would manifest through the abilities to transact and save (wealth creation) through low cost financial products on digital mobile platforms and further creating a platform for credit scoring, enabling the ability to raise credit for entrepreneurship endeavours, specifically for the poor and those less educated and currently have limited access to the formal labour market.

7. 5 Research Implications

Although South Africa is ahead of most developing countries with regard to the collection of both micro-and-macroeconomic wealth data, both sources are still in the nascent stage. Deficiencies in research on wealth inequality in South Africa is partly due to the lack of consistent and sufficient data. Improved data formation is required for the furtherance of the understanding of wealth dynamics in South Africa.

Aside from statistics, this thesis introduced findings on wealth inequality within the context of the banking BBB-EE transactions. It did not answer the questions as to, firstly, whether the findings for the banking sector BBB-EE regarding ‘*addressing inequalities*’ were pervasive across all industry sectors of South Africa. Secondly, the thesis did not ascertain the extent to which share/wealth allocations to Black individuals ultimately manifested. That is, did the individuals ultimately decide to hold on to their wealth ‘*sale of shares*’, or were the shares acquired sold and the wealth ultimately translated into income or/and consumption. If this was the case, the BBB-EE objective of wealth transfer will have been even less than what the findings of this research

suggest and '*addressing (wealth) inequality*' will not have been achieved under the banking BBB-EE programme.

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Annexures

A. The Novel Data Preliminary Insights

Table A. 1: Total Listed Banking Sector: Per Beneficiary Types Summary

Beneficiary Type	Total Share of Wealth Post Debt (Rands)	Population: Number of Individuals	Percentage Share
Black Individual Allocation	18,128,422,408	93,684	33%
Non-Black Individuals	403,095,442	219	1%
Strategic Companies/Partners (Non-Black)	1,195,957,315	9	2%
Community Trusts & Community Investment Trusts	32,745,924,559	-	60%
Unallocated Shares Trusts	1,661,906,098	-	3%
Total	54,135,305,822	93,912	100%

Source: Moshikaro (2020)

Table A. 2: Total Listed Bank: Wealth and Black Population Per Bank Summary

Bank	Total Share Wealth Post Debt (Rands)	Population Individuals (Number)
ABSA	1,263,597,200	13,212
Capitec	2,735,293,750	27
FirstRand	7,393,667,734	35,784
Investec	555,151,035	10,857
Nedbank	1,088,560,161	5,844
Standard Bank	5,092,152,527	27,960
Grand Total	18,128,422,408	93,684

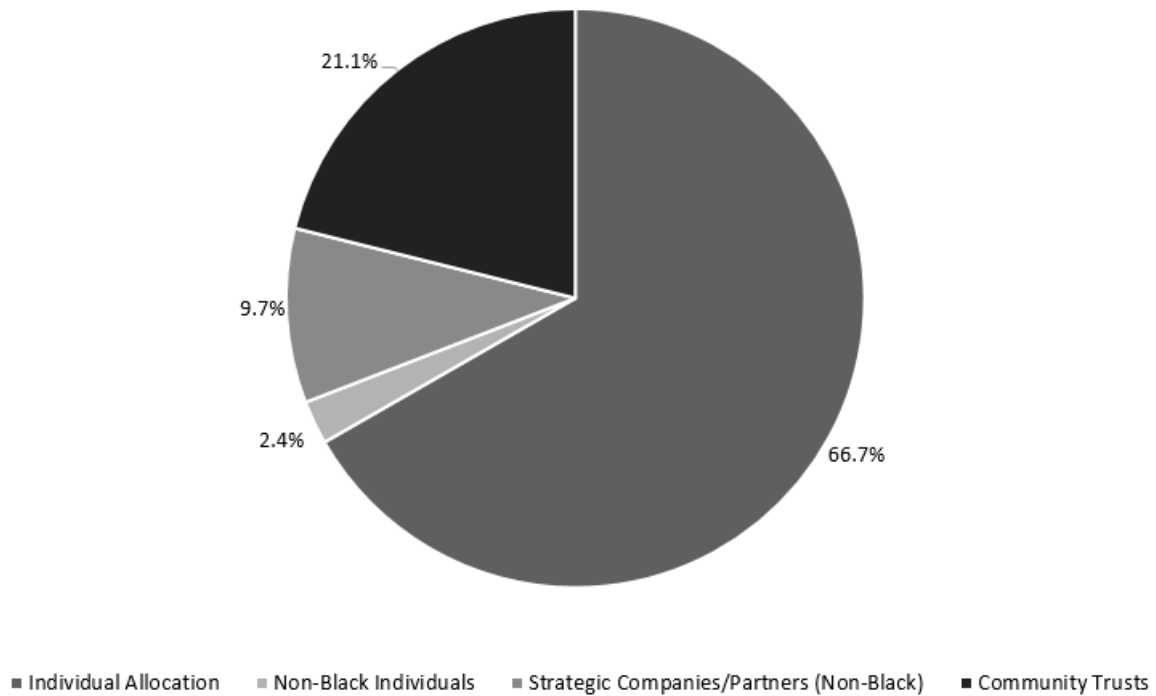
Source: Moshikaro (2020)

Table A. 3: Standard Bank Beneficiary Types: Wealth Allocations and Number of Individuals

Beneficiary Type	Share of Wealth Post Debt (Rands)	Population: Number of Individuals
Individual Allocation	5,092,152,527	27,960
Non-Black Individuals	185,473,454	1
Strategic Companies/Partners (Non-Black)	743,966,146	3
Community Trusts	1,611,235,873	
Total	7,632,828,000	

Source: Moshikaro (2020)

Figure A. 1: Standard Bank: Percentage Wealth Allocation Per Beneficiary Type



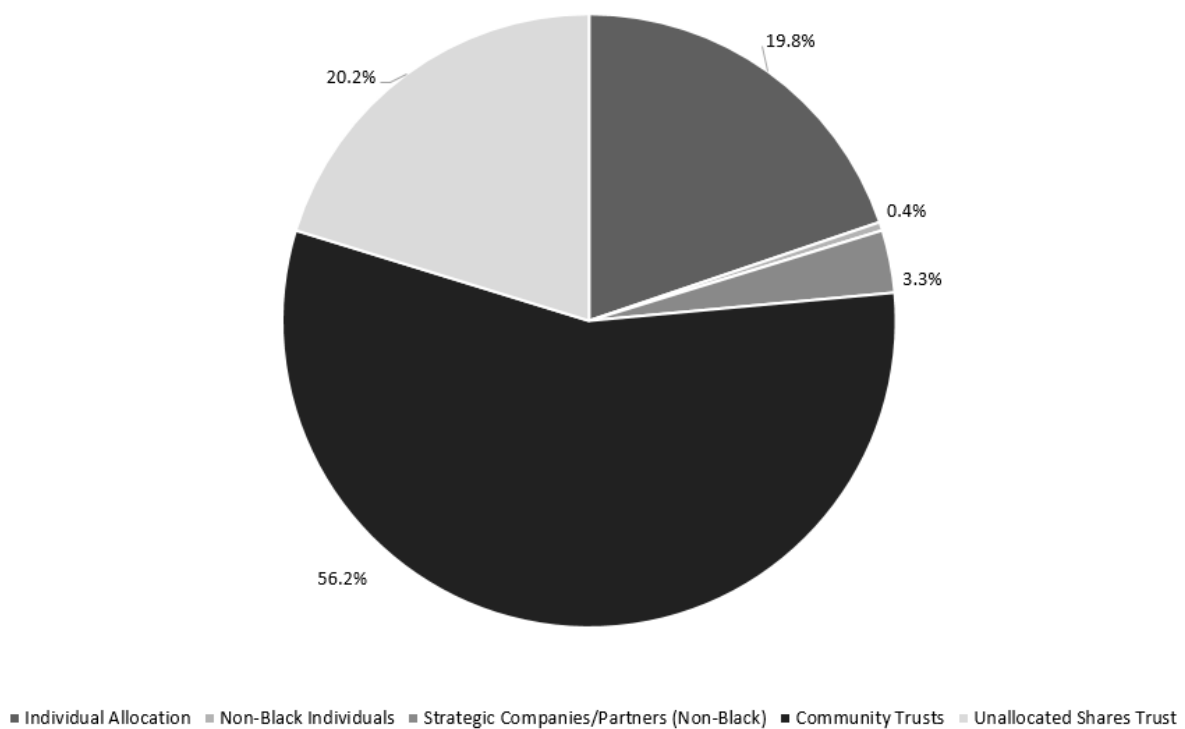
Source: Moshikaro (2020)

Table A. 4: Nedbank Beneficiary Types: Wealth Allocations and Number of Individuals

Beneficiary Type	Share of Wealth Post Debt (Rands)	Population: Number of Individuals
Individual Allocation	1,088,560,161	5,844
Non-Black Individuals	24,475,738	215
Strategic Companies/Partners (Non-Black)	181,551,469	4
Community Trusts	3,092,193,413	
Unallocated Shares Trust	1,113,219,218	
Total	5,500,000,000	

Source: Moshikaro (2020)

Figure A. 2: Nedbank: Percentage Wealth Allocation Per Beneficiary Type



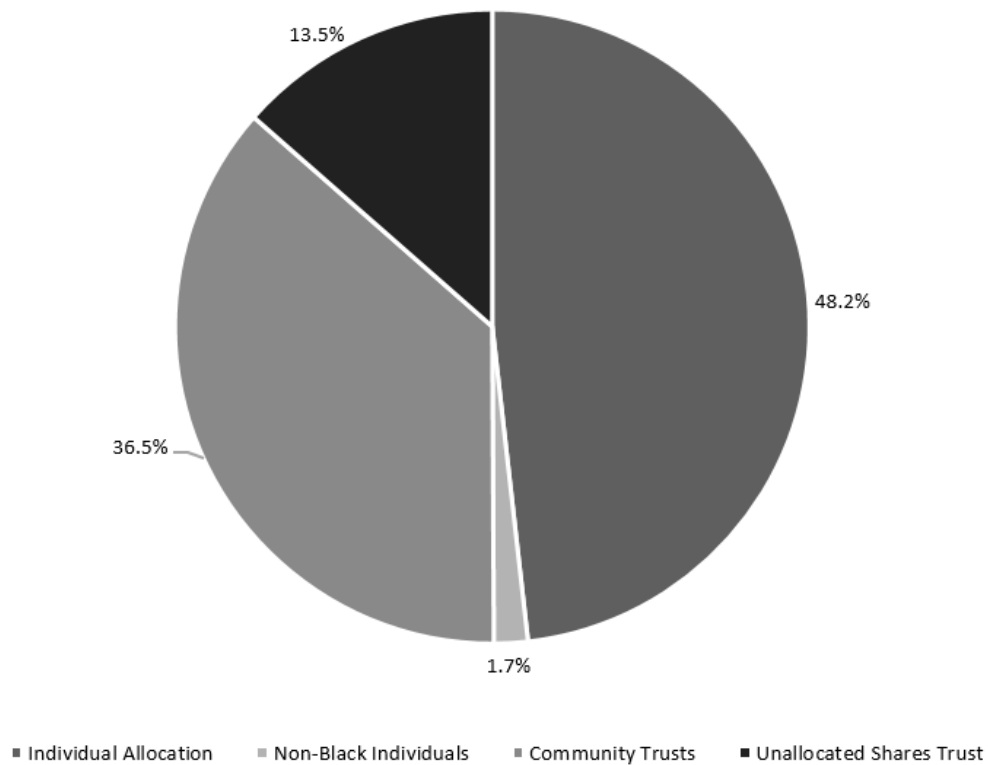
Source: Moshikaro (2020)

Table A. 5: ABSA Beneficiary Types: Wealth Allocations and Number of Individuals

Beneficiary Type	Share of Wealth Post Debt (Rands)	Population: Number of Individuals
Individual Allocation	1,263,597,200	13,212
Non-Black Individuals	45,190,000	1
Community Trusts	958,028,000	
Unallocated Shares Trust	354,741,500	
Total	2,621,556,700	

Source: Moshikaro (2020)

Figure A. 3: ABSA: Percentage Wealth Allocation Per Beneficiary Type



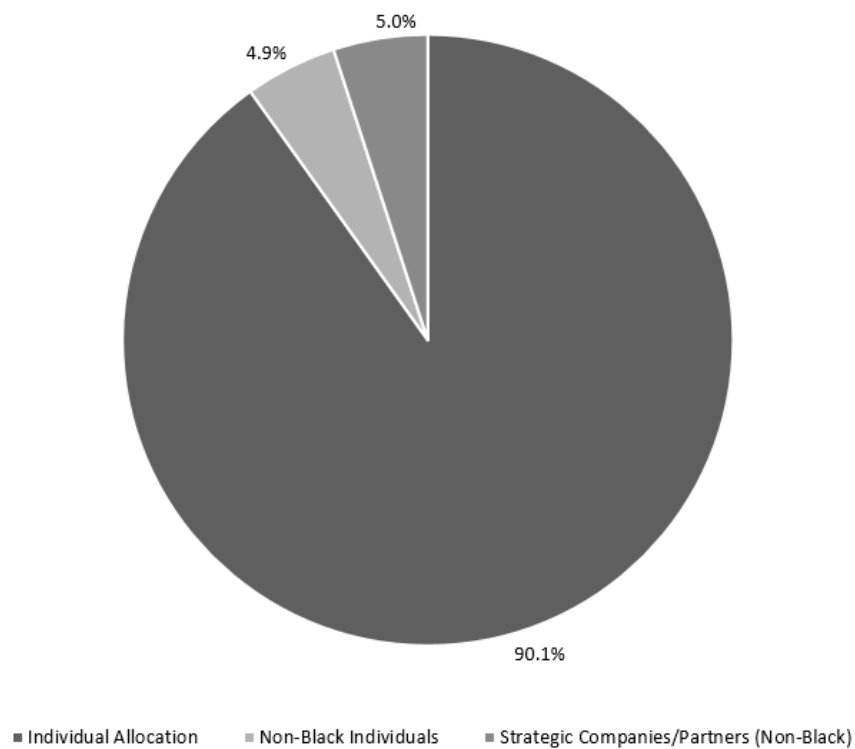
Source: Moshikaro (2020)

Table A. 6: CAPITEC Beneficiary Types: Wealth Allocations and Number of Individuals

Beneficiary Type	Share of Wealth Post Debt (Rands)	Population: Number of Individuals
Individual Allocation	2,735 293 750	27
Non-Black Individuals	147 956 250	1
Strategic Companies/Partners (Non-Black)	151 750 000	1
Total	3 035 000 000	29

Source: Moshikaro (2020)

Figure A. 4: CAPITEC: Percentage Wealth Allocation Per Beneficiary Type



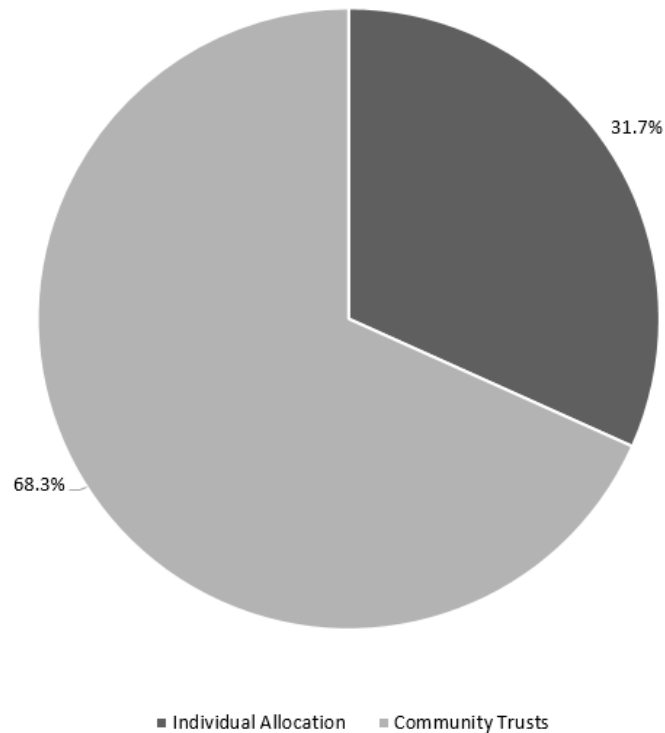
Source: Moshikaro (2020)

Table A. 7: FirstRand Beneficiary Types: Wealth Allocations and Number of Individuals

Beneficiary Type	Total Share Wealth Post Debt (Rands) Calc.	Population Individuals (Number)
Individual Allocation	7,393,667,734	35,784
Community Trust	15,906,332,266	-
Total	23,300,000,000	35,784

Source: Moshikaro (2020)

Figure A. 5: FirstRand: Percentage Wealth Allocation Per Beneficiary Type



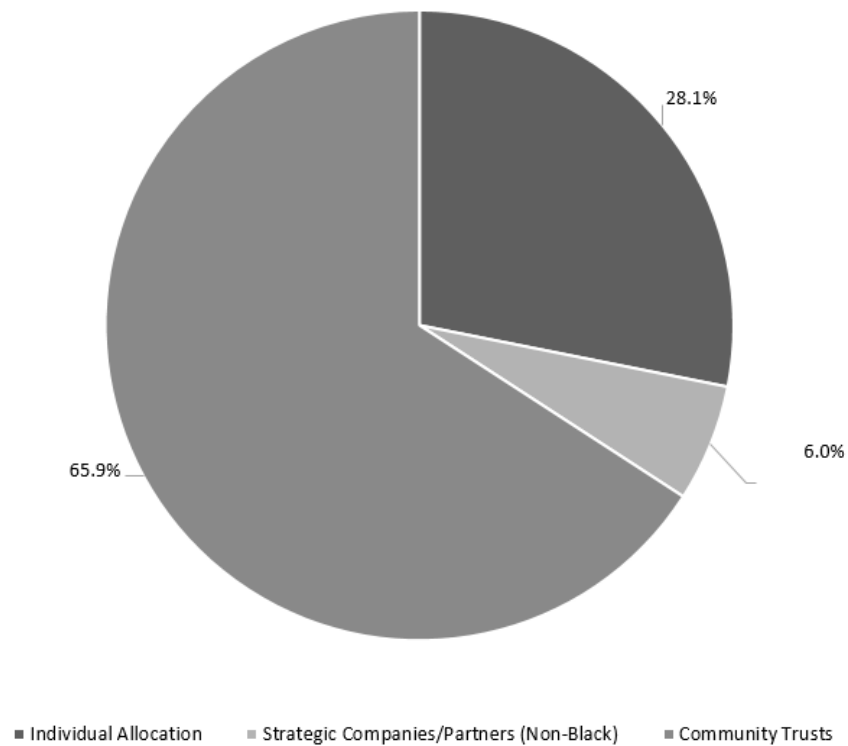
Source: Moshikaro (2020)

Table A. 8: Investec Beneficiary Types: Wealth Allocations and Number of Individuals

Beneficiary Type	Share of Wealth Post Debt (Rands)	Population: Number of Individuals
Individual Allocation	555,151,035	10,857
Strategic Companies/Partners (Non-Black)	118,689,700	1
Community Trusts	1,299,663,793	
Total	1,973,504,527	

Source: Moshikaro (2020)

Figure A. 6: Investec: Percentage Wealth Allocation Per Beneficiary Type



Source: Moshikaro (2020)

* The RMH BBB-EE transaction, 100% benefited the Royal Bafokeng Community (RBH).

B. One-Sample Kolmogorov-Smirnov Normal Test: Test Statistic

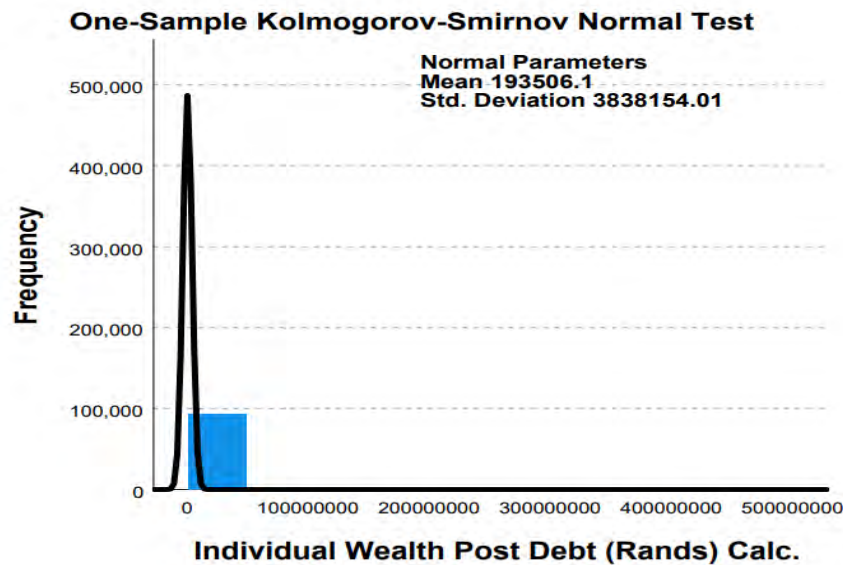
One-Sample Kolmogorov-Smirnov Normal Test Summary

Total N		93684
Most Extreme Differences	Absolute	.480
	Positive	.438
	Negative	-.480
Test Statistic		.480
Asymptotic Sig.(2-sided test) ^a		.000

a. Lilliefors Corrected

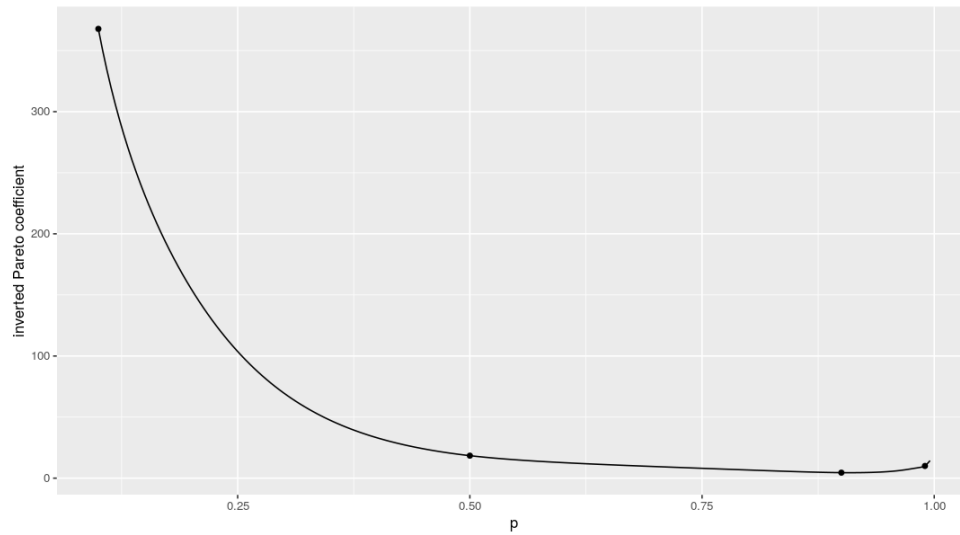
Source: Moshikaro (2020) Using IMB SPSSS Statistics

C. One-Sample Kolmogorov-Smirnov Normal Test: Frequency Distribution



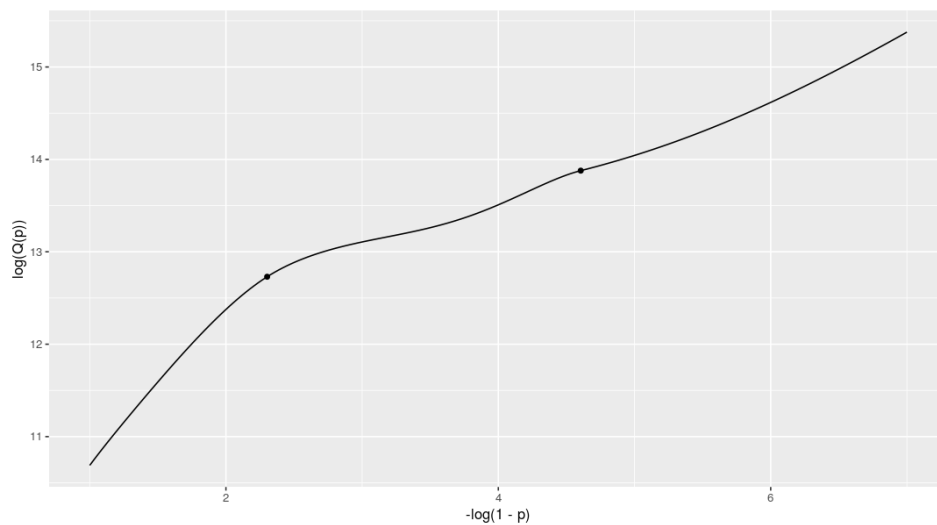
Source: Moshikaro (2020) Using IMB SPSSS Statistics

D. Generalised Pareto Curve¹²⁷



Source: Moshikaro (2020) Using WIDS Application

E. Log Scale Pareto Distribution Top Tail¹²⁸

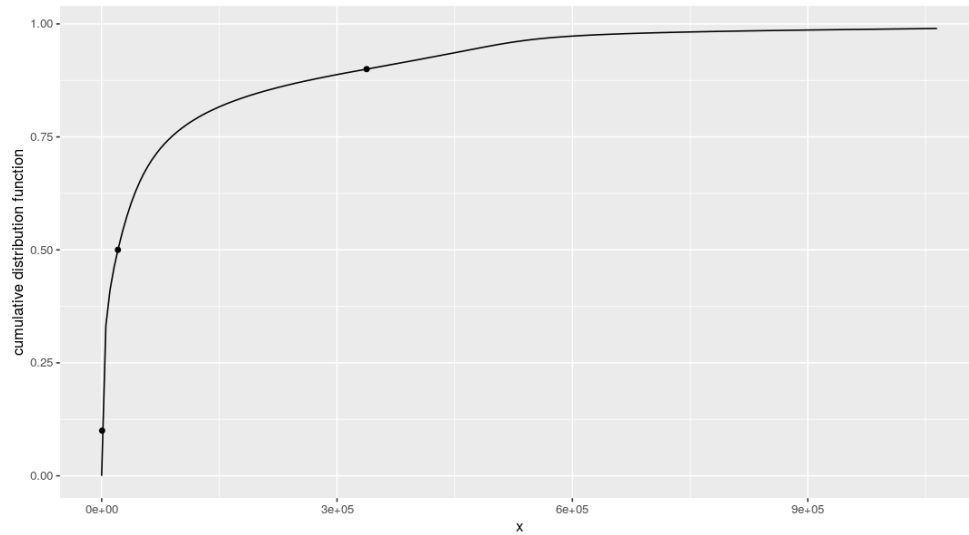


Source: Moshikaro (2020) Using WIDS Application

¹²⁷ The Generalised Pareto curve associate a fractile p to its inverted Pareto coefficient $b(p)$. For the Standard Pareto distribution with coefficient α , the inverted Pareto is constant.

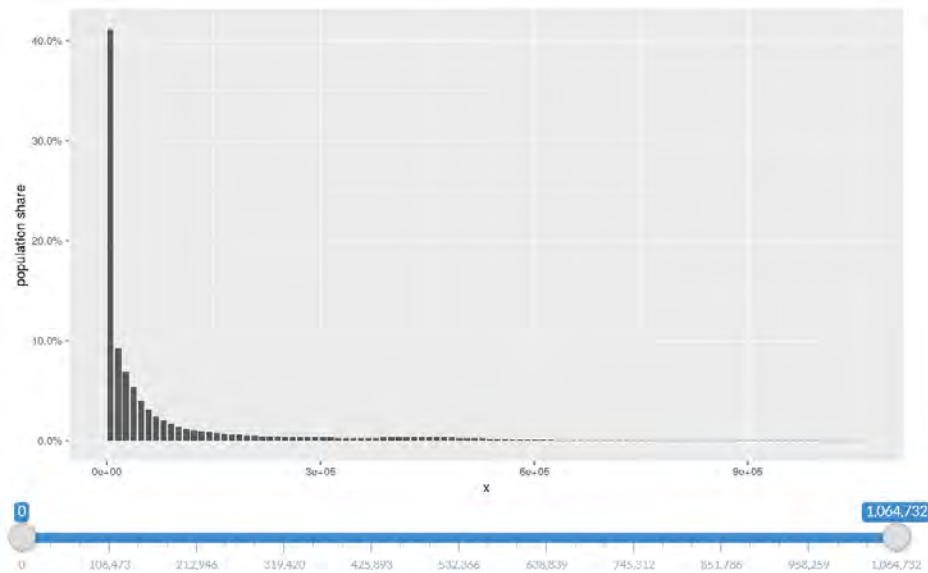
¹²⁸ This plot shows the top of the quantile function with a logarithmic scale on both axes, to get a linear curve in the of the Pareto distribution.

F. Cumulative Distribution Function¹²⁹



Source: Moshikaro (2020) Using WIDS Application

G. Histogram Approximating PDF (Probability Density Function)¹³⁰

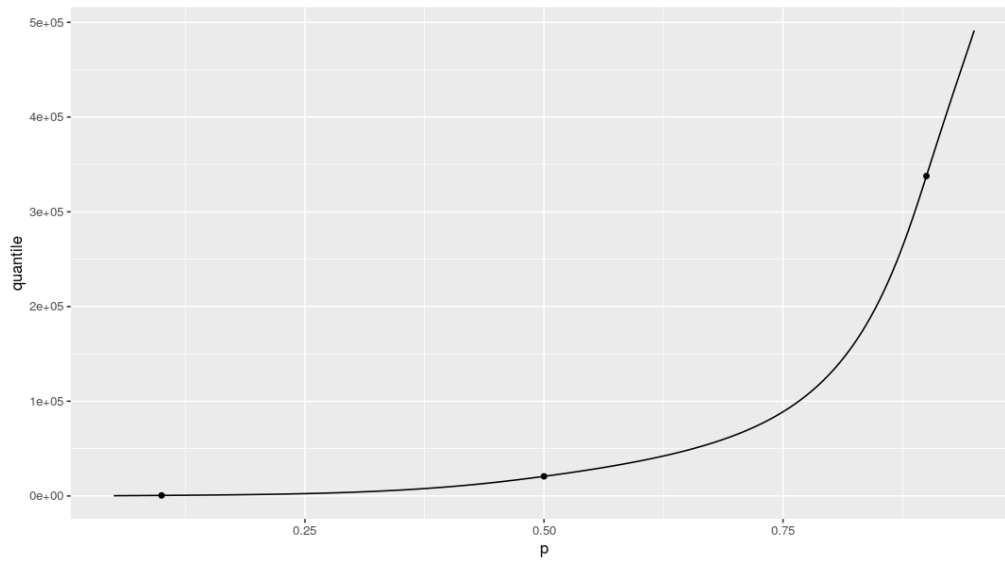


Source: Moshikaro (2020) Using WIDS Application

¹²⁹ The cumulative distribution function represents the share of individuals below a certain wealth level.

¹³⁰ The histogram approximates the probability density function of the distribution. The range starts either from the lower bound of the distribution (if it is finite) or the 1st percentile, and ends at the 99th percentile. It is divided into 100 bins of equal size

H. Pareto Distribution Quantile Function¹³¹



Source: Moshikaro (2020) Using WIDS Application

¹³¹ The quantile function gives the wealth level associated to a fractile.

I. Varying Pareto Inverted Coefficient $b(p)^{132}$ within the Top 10 Per cent

Percentile	Threshold	Top Share	Varying Inverted Pareto Coefficient $b(p)$
0.9	337,736.96	0.79	4.52
0.91	369,281.39	0.77	4.49
0.92	400,500.03	0.75	4.53
0.93	431,151.57	0.73	4.67
0.94	461,204.37	0.71	4.94
0.95	491,401.10	0.68	5.37
0.96	525,160.76	0.66	6.03
0.97	575,731.47	0.63	7.02
0.98	697,142.35	0.59	8.25
0.99	1,064,732.49	0.55	10.00
0.991	1,108,774.75	0.54	10.56
0.992	1,163,573.02	0.54	11.20
0.993	1,233,660.97	0.53	11.93
0.994	1,326,554.14	0.53	12.79
0.995	1,455,696.62	0.52	13.79
0.996	1,647,778.47	0.51	15.00
0.997	1,964,507.99	0.50	16.47
0.998	2,588,759.64	0.49	18.31
0.999	4,417,416.36	0.47	20.72
0.9991	4,817,744.47	0.47	21.00
0.9992	5,315,840.87	0.47	21.29
0.9993	5,952,914.82	0.47	21.60
0.9994	6,797,279.98	0.46	21.91
0.9995	7,971,138.27	0.46	22.24
0.9996	9,717,092.47	0.45	22.58
0.9997	12,596,048.70	0.45	22.93
0.9998	18,270,269.30	0.44	23.30
0.9999	34,892,094.32	0.43	23.69
0.99991	38,530,931.37	0.43	23.73
0.99992	43,058,446.63	0.42	23.77
0.99993	48,849,217.37	0.42	23.82
0.99994	56,524,189.83	0.42	23.86
0.99995	67,194,135.08	0.41	23.90
0.99996	83,064,224.26	0.41	23.94
0.99997	109,232,890.18	0.41	23.99
0.99998	160,809,493.42	0.40	24.03
0.99999	311,895,842.34	0.39	24.08

Source: Moshikaro (2020) computation WIDS Application

¹³² The Generalised Pareto curve associate a fractile p to its inverted Pareto coefficient $b(p)$. For the Standard Pareto distribution with coefficient α , the inverted Pareto coefficient is constant.