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Rebecca Simson and Mina Mahmoudzadeh, 2024

ABSTRACT

This chapter uses a novel data source – probate records – to develop an original account of the scale of the racial wealth divide in South Africa and its geographic dimensions. The results provide a sobering perspective on the scale of the racial wealth divide 30 years after the end of Apartheid. We estimate that 45% of White South African adults own inheritable wealth of at least R.250,000, compared to 3% of Black, 9% of Coloured, and 23% of Asian South Africans, and these gaps have narrowed only modestly between 2009 and 2019. We compare these results to estimates from survey data and discuss the nature of the probate source biases and interpretation. We also show that Black South Africans leaving estates are primarily dwellers in former Apartheid-era townships, and to a lesser extent, Homelands, with 42% resident in townships and 17% in Homelands at death, suggesting that this Black formal wealth-owning upper-middle class are predominantly the owners of assets acquired during the Apartheid-era. This points to the limited extent to which South Africa’s Black upper and middle classes have bought into the historically White-owned asset stock. It also suggests that, much as in other parts of the world, the wealth distribution beyond the apex owes much to the structure of home ownership and geographically uneven house price appreciation.

Introduction

South Africa is one of the world’s most unequal societies and income inequality has remained stubbornly high since the end of Apartheid in 1994 (Alvaredo and Atkinson, 2022). On a racial basis however, the distribution of income has been far from static, and the racial composition of income earners in the top percentiles is gradually growing less unequal (Finn, Leibbrandt and Woolard, 2013; Seekings, 2011; Southall, 2016). Whether racial wealth inequality has also fallen, however, is harder to ascertain. In aggregate, top wealth shares have increased modestly since 1994 and wealth to income ratios have risen (Orthofer et al., 2019), but few sources allow us to study how the nation’s wealth is shared across the country’s racial groups.

There are reasons to be pessimistic about the pace of wealth redistribution. The Apartheid system severely limited the extent to which non-White communities could accumulate wealth, in part by preventing non-White South Africans from living and owning property across most of the country’s land area reserved for White settlement alone. Simply lifting such Apartheid-era residential restrictions may have had a relatively muted effect on property ownership. While politicians have a range of leavers with which to affect income and consumption disparities, redistribution of assets is more politically fraught, expensive, and risks serious economic reverberations if it threatens existing property rights. South Africa did not undertake any radical asset transfer programmes after 1994, and the white population of South Africa have largely seen their property rights respected.

The most high-profile programme designed to affect the post-Apartheid wealth distribution was Black Economic Empowerment (BEE), which facilitated a voluntary transfer or sales of financial assets to non-White owners and allows preferential treatment for Black-owned companies in public procurement. However, beneficiaries of BEE are thought to be a small and select group. At the other end of the wealth distribution, a set of progressive policy programmes have helped to increase non-White home ownership. Under the auspices of the Reconstruction and Development Programme (RDP), the government has built five million low-cost homes since 1994, primarily across South Africa's cities (Department of Human Settlements, 2021). A less studied wealth transfer started in the late 1980s at the end of the Apartheid era, when the government began to privatise the stock of publicly owned township housing at heavily discounted prices, which assigned private titles, typically to the male head of household occupier (Bolt, 2021; Emdon, 1993). In total around 750,000 houses were privatised, and in some of the more centrally located townships, house prices have appreciated substantially. Beyond BEE and such public housing programmes, less is known about the nature of middle class wealth accumulation in the new South Africa.

Inequalities in wealth have both political and social consequences. Today, wealth is a key determinant of an individual's life chances, shaping access to opportunities and economic security throughout lifetimes. Moreover, given its power to accumulate over time, wealth also confers long-term intergenerational benefits. Family wealth has been shown to significantly enhance educational outcomes (Hällsten and Pfeffer, 2017; Karagiannaki, 2017), access to homeownership (Gregg and Kanabar, 2022), and entry into elite professions (Devine, 2003; Toft and Friedman, 2021). Furthermore, there is a strong positive relationship between family wealth and an individual's own wealth stocks over numerous generations (Clark and Cummins, 2014). Wealth's accumulative nature therefore tends to amplify historical legacies of systemic racism, by reinforcing long-standing racial inequalities over generations. Politically, wealth inequality erodes political engagement and trust (Ansell and Gingrich, 2022; Hirneis, 2023), as wealthy elites wield disproportionate power and influence over political processes. Understanding the extent to which racial wealth inequalities are narrowing, and the means by which this is happening, throws light on the prospects for future reductions in racial wealth inequality and the policies that may aid it.

Wealth inequality is harder to measure than income inequality, as wealth is not declared in tax filings, and its greater concentration at the top of the distribution means that household surveys are poorly suited to capturing wealth, as such instruments typically under-enumerate the top. Recent work by Chatterjee, Czajka and Gethin (2020) and Orthofer et al. (2019) has shed light on overall wealth inequality, using tax records to impute total wealth and wealth by bracket. Racial wealth inequality, meanwhile, has been measured using the National Income Dynamics Survey (NIDS), which like most household surveys, seriously under-samples households at the top of the distribution (Daniels and Augustine, 2016). Nonetheless, the broad figures provided by these surveys certainly suggest stark racial wealth divides. Using the 2010-11 results, Mbewe and Woolard (2016) find that, in relative terms, Black households only hold about 1% of the wealth held by White households, while the figures in Coloured and Asian/Indian households are 12% and 63%, respectively. The same source suggests that 60% of those in South Africa's top wealth decile are white (Mbewe and Woolard, 2016).

This chapter provides an alternative set of measures of these wealth divides by drawing on counts of estates under probate or administration. The South African Estate registry¹ provides a searchable database of all registered estates going back to 2008, and notices in the government gazettes give information about estates under administration or probate. Although neither source specifies the value of the estate under administration, they indicate if estates fall into one of two administrative categories related to their size. Estates valued below R.250,000 can be administered through a simplified procedure specified in Section 18(3) of the Administration of Estates Act. Estates valued above R.250,000 are required to be issued with letters of executorship and follow the full process set out in the Act. As names are strong indicators of racial origin in South Africa, by imputing race or ethnicity from names, this source can provide a picture of the racial composition of two segments of wealth-holders in South Africa: those leaving inheritances of any size (estimated at roughly 30% of all decedents), and those with large estates worth more than R.250,000 (roughly the top 7% of wealth-holders at death). In addition, addresses of deceased estate-holders throws light on the geography of wealth and indirectly on the drivers of Black South African wealth accumulation.

Estate records have a long pedigree in economic history and continue to provide an important source of data for measuring and studying wealth inequality in historical contexts (Atkinson and Harrison, 1978; Bengtsson et al., 2017; Cummins, 2021; Jones, 1982). Wealth at death can be used to impute the total and distribution of wealth of the living, or study the characteristics of wealth-holders. In the South African context specifically, probate records have revealed a wealthier settler community in the 18th century Cape than previously thought (Fourie, 2013). For the 1970s, McGrath (1982) used estate duty data from Natal to study the South African wealth distribution, including along racial lines. In other country contexts, similar sources have been used to study ethnic and gender inequality, and Cummins (2024) has leveraged names of the deceased to impute ethnic identity of wealth-holders in England and Wales.

This source is not without challenges. Firstly, we know that the rate of compliance with South Africa's succession laws is poor, particularly by Black South Africans, and this will bias the measures of the shares of individuals with wealth at death downwards and the measure of racial wealth inequality upwards. Furthermore, converting wealth of the deceased into an estimation of the wealth of the living population is not straightforward, as those who die are by definition older, and thus typically richer, than the population at large. Furthermore, inferring race from names is also an imprecise endeavour. This article discusses the likely effects of such biases and how they shape the interpretation of the results. These challenges notwithstanding, the probate and administration records offer an interesting further lens on wealth inequality, independent of other data sources, and focused on the type of formal, titled wealth that vest in individuals a full range of use and exchange value. Because it relies on administrative data it is inexpensive to collect and can be analysed regularly at little marginal cost.

With this source, we estimate that 47% of White South African adults own inheritable wealth of at least R.250,000, compared to 3% of Black, 8% of Coloured, and 43% of Asian South Africans. Our results estimate racial wealth inequalities that are somewhat higher than those building on household surveys, because of the varying extent to which South Africa's racial communities make use of the formal succession framework. Our geographic analysis then sheds light on the nature of Black wealth acquisition in the post-Apartheid era. We show that most Black estate-holders are urban residents, only 17% are resident in former Homelands, and a substantial share (42%), were residents of the Apartheid-era townships, where housing was privatised in the 1980s and 1990s. Drawing on the work

¹ <https://icmsweb.justice.gov.za/mastersinformation/MastersOfficeWebPortal/DeceasedSearch>

by Bolt (2021), we hypothesise that this privatisation of previously public housing represents one of the most important wealth transfers for the 'upper middle' class. The rate at which Black South Africans have bought into the historically White-owned housing stock still appears to be low indeed.

South Africa's Succession Laws

The interpretation of wealth measures derived from probate and administration records is intimately tied to the legal and administrative system of inheritance, in both its de jure and de facto forms. South Africa's succession laws are strongly shaped by a legal system designed around racial segregation and differential rights. Until recently, the inheritance system for Black South Africans were based on different laws and procedures to that governing White, Coloured and Asian succession.

The statutory legal framework, which historically applied to White, Coloured and Asian inheritance matters, and any Black South Africans leaving wills, rests on three laws: the Administration of Estates Act of 1965, the Intestate Succession Act 81 of 1987 (in the absence of a will), and Will's Act of 1953 (where the deceased has left a will). Reflecting South Africa's pluralistic legal history, this succession law has been influenced by Roman-Dutch law and common law. South Africa allows freedom of testation (with some limitations), meaning that a person can leave an estate to whomever they wish, and are not obliged to pass it to their spouse or children. The order of succession on intestacy typically means that the estate is divided between the spouse and descendants. Parents or siblings and their descendants inherit only if the deceased leaves no spouse or child.

For our purposes the Administration of Estates Act has the most direct bearing on the interpretation of the estate data. According to law, all estates must be reported to the Master's Office in the locality where the deceased was resident within two weeks of death, although this time limitation is not enforced. If the estate falls below a specified threshold value (currently R.250,000), it can be administered through an expedited process, where a representative issues Letters of Administration to an administrator, who then holds responsibility for division of the estate without further court involvement. Estates above the threshold follow a full executor process, which importantly for our purposes, requires that notices of the estate are published in the gazette at the time of administrator/executor appointment and when the accounts are completed (through forms J193 and J187), as well as in two newspapers. The process does have monetary costs, including the Master's Fees (R.600 for estates between R.250-400k, and thereafter increasing by value), rates clearance costs, transfer of asset fees, and legal fees if advocates are used (an executor can charge up to 3.5% of the value of the estate).

Note that the administration of estates and inheritance taxation are separate matters. Most of the estate cases taken through the courts are not liable for taxation (threshold for taxation is currently R.3.5 million). Furthermore, community of property, whereby married spouses jointly own the family's assets, does not theoretically exempt heirs from this administrative process. If a husband or wife outlives their spouse, this administrative process must still be completed, although the law is unclear on how the estate value threshold is applied in such cases (on the full value of the assets of the married couple, or only the effective share of the deceased spouse).²

Until recently, Black South African inheritance matters in contrast, was governed by Section 23 of the Black Administration Act of 1927, in cases of intestate inheritance,³ handled by Magistrates, and in

² South Africa does also allow 'massing of estates', whereby spouses agree to pass on their joint estate, on the death of the first spouse, but this legally complex practice is infrequently used.

³ Technically, Black South African estates with a will fell under the statutory legal framework, but these were far and few between. Written wills remain uncommon among Black South Africans.

accordance with the state's understanding and codification of 'official customary law',⁴ which could mean inheritance through male primogeniture, derived from a traditional understanding of the oldest son as assuming from his father the role as the custodian of family resources (see Weeks, 2015, for a discussion).

In 1991, South Africa repealed the four central acts that formed the legal framework of Apartheid, and in 1997, following the first multiracial election in 1994, it adopted a new constitution. However, the country's other laws were updated piecemeal, as they came in conflict with the new constitution. Most Black South African succession cases thus continued to be handled through this parallel administrative system until the landmark 2004 Constitutional Court judgement in the case of *Bhe vs. Magistrate*,⁵ which brought sweeping changes. The judges ruled that customary inheritance practices of male primogeniture discriminated against women, and the section of the Black Administration Act of 1927 dealing with inheritance was deemed unconstitutional. This brought all Black estate cases under civil law, and meant that the supervision of deceased estates fell to the High Court rather than the Magistrate's court, albeit with Magistrates serving as service points for low-value estates (below R.50,000). After 2004 therefore, Black South African estates were brought under the more bureaucratically complex succession laws previously used primarily by White, Coloured and Asian South Africans, including the requirement to gazette and publish notices of estates under administration or probate.

This increased the administrative burden on family members of the deceased, and also brought into stark relief the conflicts between a legal conception of private, individual property rights of European origin, and that of norms and customs governing the popular understanding of rights and obligations of property holding, typically conceived of as communal, on behalf of an extend family or lineage (Bolt, 2021). The combination of the time and monetary cost, administrative difficulties, and inheritance law often in conflict with family notions of inheritance – means that many – possibly the majority – of estates go unreported.

This will bias the results presented below, as Black South African compliance with this new framework is likely to be lower than for those communities where the inheritance practices are longer standing and less in conflict with norms and culture. An official presentation by the Chief Master estimated that two-thirds of estates go unreported, although this was thought to be mostly in rural areas, and presumably biased towards the lower value estates (cited in Bolt, 2021). However, the incentives to formalise transfer of assets will increase with the value of the state - a valuable urban property, for instance, would be harder to retain and use if it remained registered in the name of a deceased parent. Unreported estates are likely to be disproportionately of lower value and in areas of greater market informality in general. Thus this bias will be smaller for the higher value estates.

Furthermore, a formal transfer of title, only possible through this legal channel, is also in a sense what defines the assets as 'wealth'. Most economic studies of wealth take a narrow definition, focused only on marketable, private wealth, which emphasises the ability of wealth-holders to use their wealth as a financial asset, that can be exchanged, mortgaged and invested. Wealth registered in the name of a long-deceased family member, and used by a collective, thus also performs a different and more limited economic function, even if it holds use value to a set of family members. We therefore argue that this source offers a useful further perspective on the distribution of the type of formally registered

⁴ Unclear if customary law only applied in cases where the marriage was under customary law.

⁵ *Bhe and Others v Khayelitsha Magistrate and Other*

wealth with the widest use functions. Nonetheless, the anthropological research by Bolt (2021) and others are important reminders of the differences in conceptions of wealth and property across place and time, and how it influences any measurement and understandings of wealth inequality. The results and discussion sections consider the possible effects of this bias on the results, introduced some rough simulations that place an upper bound on the possible rate of underreporting, and discusses how it shapes our interpretation of said results.

Inferring Wealth Inequality from Estate Registries

From the estates database we extract a random sample of 2,000 records per year, and a larger sample for two benchmark years, 2009 and 2019. Each record is coded by race, based on name, gender and age (from ID number), year of death, and whether the estate was processed under section 18.3 (below a threshold set at R.250,000 since 2015, and R.125,000 prior), or a full executor process. Hereafter we will refer to estates above the threshold as large estates. Each year-sample was weighted based on the total number of records in a given year. We exclude estate-holders under the age of 20.

To study the legacies of a racially stratified society, this paper extends Apartheid-era racial categories into the present and classifies each estate-holder by race on the basis of name. This is not without challenge, both conceptually, as race is a socially constructed and malleable concept (Christopher, 2002), and practically, as names are far from perfect predictors of racial identity. However, in the South African context, race remains a relevant social category. However conceptually problematic, the political salience of these divides makes it important to map and understand them.

The categorisation of race from names relies on historical lists of names from different racial groups,⁶ which is used to classify names and name structure by race (see Appendix 1 for details). This carries some degree of imprecision, but we show in the appendix that alternative methods of name inference give broadly consistent results. Furthermore, the geographic mapping of names (Section 4) gives results that strongly support the accuracy of the name-race predictions. The biggest challenge, however, discussed in depth in Appendix 1, is the estimation of the White versus Coloured estate shares, as the names in these two communities are not distinct. We therefore estimate a Coloured share of the total estate number using a set names that are more strongly associated with one community than another. We use this to impute an overall White:Coloured ratio for certain benchmark years, and anchor it to an estimate from the late 1980s where the official race of the estate-holder is given. Nonetheless, these results should be treated as rough estimates only.

Another challenge is late registrations of estates, where the death of the estate-holder was many years prior to the year of administration or probate. The rate of late registrations differs considerably by racial group and by executor type. On average, 80% of estates are registered within three years of death, and this rises to 93% for the higher value estates undergoing the full executor process. We censor the results, so that we work only with estates where the holder died within three years of registration,⁷ and adjust the total by year upwards by the likely missing share of late registrations, by race and executor-type basis.

In the first set of results, we construct a simple ratio of estates to deaths above the age of 20. Mortality data by age, gender and race is not published by the South African statistical authorities, we therefore rely on racially disaggregated mortality data from Pillay-van Wyk et al. (2016) for three benchmark years (2000, 2006 and 2012), and interpolate for missing years, as discussed in Appendix 2.

⁶ Building on data from death notices generously shared by Fourie and Jayes (2021).

⁷ Otherwise the outer year results will be skewed by missing estates still to be registered.

The next set of results apply mortality multipliers to estimate what share of the population own wealth above the 18.3 threshold ('large' wealth-owners). Because wealth typically rises with age, wealth at death is not representative of the wealth of the living. Because life expectancy differs considerably across South Africa's racial communities, racial wealth inequalities at death map imperfectly onto the wealth inequalities of the living. We therefore apply mortality multipliers, which relate the share of estates to deaths by race, age-group and gender, to the share of this sub-group in the total living population. For instance, we assume that the share of white female 40-49 year olds who die with wealth above R.250,000, is the same as the share of living white female 40-49 year olds who hold wealth above this threshold. For this analysis we also vary the age cut-off, to see how the results are affected by the inclusion of younger decedents, with a lower probability of both death and wealth holding. The results here are sensitive to small samples. The main results therefore pool across the entire 2009-19 period to give more stable estimates, as well as separate estimates for two benchmark years, 2009 and 2019.

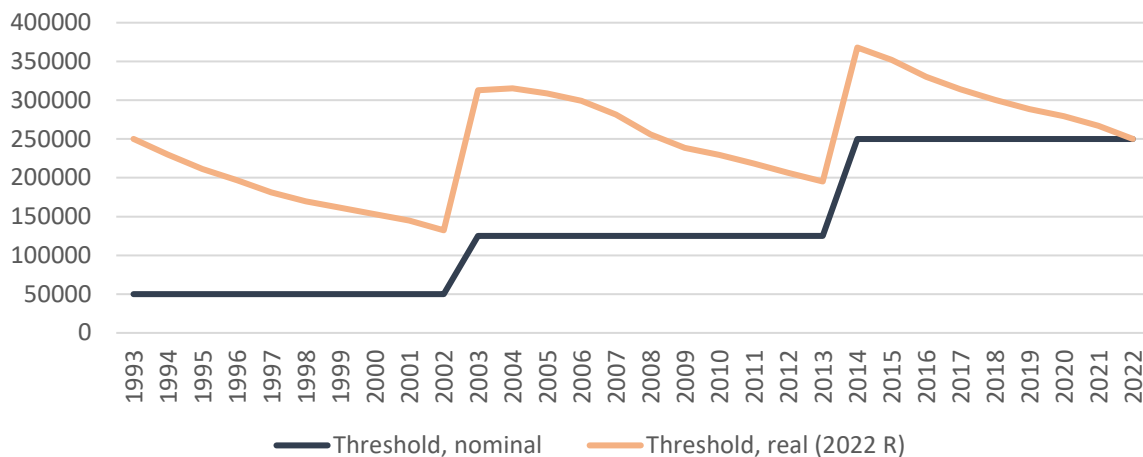
Table 1 summarises the full dataset. 'White' names are approximately 30% of the full sample, and 60% of the sample of large estates (above R.250k since 2015). The racial shares are relatively stable across time. Figure 1 shows how the monetary threshold for an executorship versus 18.3 process has changed over time, in real and nominal terms. The summary data does suggest a small drop in the share of estates under full executorship in 2015 (consistent with a rise in the executor threshold), although it subsequently rebounds (likely in part on account of high inflation).

Table 1. Summary Statistics

Year	Share of estates with full exec	Share of all estates by 'race name'				Share of exec estates by 'race name'				Female	Obs
		Missing	Asian	Black	White	Missing	Asian	Black	White		
2009	20%	3%	2%	69%	26%	2%	6%	25%	67%	41%	29,509
2010	19%	5%	2%	68%	25%	6%	5%	30%	60%	44%	1,863
2011	27%	6%	3%	64%	27%	8%	7%	30%	56%	43%	1,948
2012	26%	5%	3%	65%	27%	7%	8%	27%	58%	39%	1,970
2014	30%	6%	3%	61%	30%	7%	5%	31%	57%	40%	1,966
2015	26%	5%	2%	60%	32%	7%	6%	29%	59%	42%	1,972
2016	29%	6%	3%	62%	29%	8%	7%	25%	59%	41%	1,935
2017	30%	6%	2%	60%	32%	7%	4%	28%	61%	44%	1,955
2018	29%	5%	2%	60%	33%	8%	5%	28%	59%	41%	1,943
2019	29%	2%	3%	62%	33%	2%	7%	30%	61%	42%	29,339
Average	26%	3%	3%	64%	30%	4%	6%	29%	61%	41%	81,275

Note: 2013 data excluded from analysis due to errors in data.

Figure 1. Threshold for 18.3 provision, nominal and inflation adjusted (in Rand)

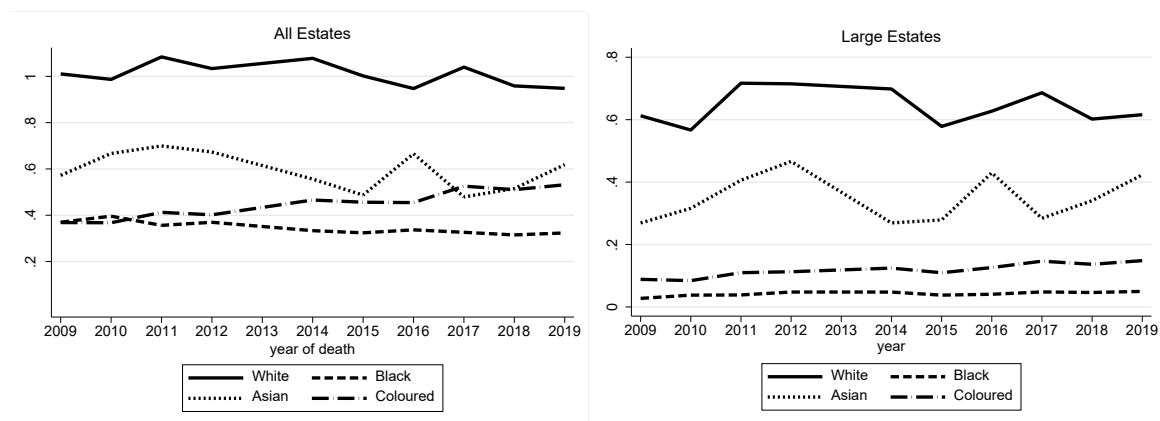


A second part of this paper uses a different source, the gazette notices, which also give us the last address of the deceased. This allows us to consider the geography of black and coloured wealth in South Africa. This is exploratory work, showing how these sources can be used to shed light on the origins or sources of wealth. This places estates in space, relating them to the former Apartheid zoning of urban areas by racial group (Group Areas Act), and how this relates to property prices.

Wealth inequality in South Africa: estimates based on estate records

What share of deceased leave estates that are formally processed through the courts? How does this vary by racial group? The first set of results compare the number of estates to the number of deaths by year and racial group. It confirms large differences in the rate at which members of different racial groups leave estates. White South Africans universally left an estate, and on average 64% left large estates. In fact, the White estate ratio even exceeds 1 in certain years, suggesting that estates are overestimated or deaths underestimated. In contrast, the corresponding Black South African ratios were 35% for all estates and 4% for large estates. The Asian and Coloured communities fell somewhere in between, with Asian ratios of 59% and 35%, and Coloured ratios of 45% and 12%, respectively. In other words, taken at face value, this implies that the probability of leaving a large estate, is more than 16 times higher for the White than the Black community (65% vs. 4%). The white-black racial wealth gap has narrowed only modestly between 2009 and 2019.

Figure 2. Estate ratio (estates to adult deaths)



Notes: 2013 linearly interpolated (data missing)

Table 2. Estate ratios by racial group (estates to death)

year	All Estates				Large Estates			
	Asian	Black	Coloured	White	Asian	Black	Coloured	White
2009	57%	37%	37%	101%	27%	3%	9%	61%
2010	67%	40%	37%	99%	32%	4%	8%	57%
2011	70%	36%	41%	108%	41%	4%	11%	72%
2012	67%	37%	40%	103%	47%	5%	11%	71%
2014	56%	33%	47%	108%	27%	5%	12%	70%
2015	49%	32%	46%	100%	28%	4%	11%	58%
2016	67%	34%	45%	95%	43%	4%	13%	63%
2017	48%	33%	53%	104%	28%	5%	15%	69%
2018	52%	31%	51%	96%	34%	5%	14%	60%
2019	62%	32%	53%	95%	42%	5%	15%	62%
Ave	59%	35%	45%	101%	35%	4%	12%	64%

The next set of tables applies mortality multipliers to calculate of the total number of estates by age group, and thereby estimate the share of the living with wealth of more than R.250,000. This assumes that the wealth at death by 10-year age band, gender and race, is representative of the wealth held by this segment of the population. Note that we apply no correction here for socioeconomic class beyond race, which will bias the results downwards. To increase our sample size, we pool the data across the 2009-2019 period.

The results are sensitive to the observations for the youngest cohorts, 20-29 and 30-39, where the probability of death is comparatively low, and thus the multiplier comparatively large. Death in these age groups may also be more strongly biased by socioeconomic factors, which could bias the results (e.g., if people dying in their 20s or 30s hold below average wealth). We also construct measures for adults 30 and above, and 40 and above, to examine how strongly the results are shaped by inclusion of these young adult cohorts.

Our results suggest that 9% of all adults aged 20 and above hold (probable) wealth of at least R.250,000,⁸ but this rises to 15% for adults aged 40 and above. The differences across racial groups are stark, at 3% for Black South Africans, 9% for Coloured, 23% for Asian and 45% for Whites, meaning that a White South African adult is 17 times more likely to have wealth above this threshold, than a Black South African. The disparities fall somewhat when we limit the estimates to adults aged above 30 or 40, to 13 and 11 respectively, which may suggest that a strong Black socioeconomic mortality gradient may be inflating these disparities (with disproportionately poorer people dying in their 20s and 30s). But it could also indicate that White adults begin accumulating wealth earlier in life.

We also estimate these wealth shares separately for 2009 and 2019 (in real terms, the executor threshold was similar in these two years), which suggests that the share of adults with wealth above the executor threshold has risen slightly from 8% to 9% and the Black ratio has risen the most in percentage terms from 1.9% to 2.9%. Consequently, there has been a slight narrowing of the racial wealth gap, with the ratio between the Black and White wealth ratios falling from 22 to 17.

Lastly, we separate out the bracket of adults with wealth above our threshold, and look at the racial composition of this wealth-holding group, which suggests that Whites still compose almost 60% of the

⁸ Not quite. The executor threshold changed in 2014, and inflation has been relatively high throughout the period, so the threshold in deflated terms has oscillated between 240,000-37,000 in 2022 R.

population with wealth above the R.250k threshold (the top 9% of wealth-holders), against their adult population share of 11%. Lastly, we simulate a much larger Black number of estates, at twice the current level (on the assumption that many Black estates go unreported). This reduces the White share only moderately, from 58% to 47%.

Table 3. Share of adults with large wealth holding (>R.250,000)

Racial name group	Pooled 2009-2019					2009	2019
	Adults 20+	Adults 30+	Adults 40+	Male 20+	Female 20+	Adults 20+	Adults 20+
Total	9%	11%	15%	9%	9%	8%	9%
Black	3%	4%	5%	3%	3%	2%	3%
Coloured	9%	12%	12%	9%	8%	7%	11%
Asian	23%	27%	27%	21%	25%	18%	45%
White	45%	49%	55%	45%	45%	41%	46%

Table 4. Racial share of ‘top wealth bracket’, pooled 2009-19

Racial name group	Adults 20+ ‘top 9%’	Adults 30+ ‘top 11%’	Adults 40+ ‘top 15%’	Simulation – 2x ‘Black’ number
Total				
Black	24%	22%	23%	38%
Coloured	10%	10%	9%	8%
Asian	8%	8%	7%	7%
White	58%	57%	61%	47%

How do these results compare to the measures of wealth derived from household surveys (NIDS Wave 4, 2015)? We use data from the NIDS Wave 4 (2015) survey, and structure it in the same way as in Table 3, to measure at the share of individuals holding wealth above R.250,000 by racial group according to survey estimates. In the first specification we use all reported assets in the NIDS, and in the second measure we exclude household possessions and vehicles, which are less likely to be included in the reported estate value. Exclusion of these assets lowers the Black and Coloured shares considerably, but has a comparatively smaller effect on the White and Asian shares. We compare this to our headline measures using the estate data, for 2009-15, as well as for 2015 alone.

This comparison shows that the wealth measure from the estate records is reasonably consistent with that from the NIDS for the White and Asian communities, but seriously underestimates wealth for the Black and Coloured communities. This reflects different rates of legal compliance across communities, presumably itself a reflection of different (and weaker) legal property rights over household assets across communities. Appendix 3 provides full replications of Table 3 using NIDS data, and shows that the gender differences and differences by age stratification have similar magnitude effects. Beyond the racial group biases, the estate data does not seem seriously biased in terms of gender or age group.

Table 5. Share of adults (20+) with large wealth holding (>R.250,000): Estates data vs. NIDS 2014/15

	Estate Dataset		NIDS 2014/15	
	2009-19	2015	All wealth	Excl. possessions
Total	9%	9%	13%	10%
Black	3%	3%	8%	5%
Coloured	9%	8%	15%	9%
Asian	25%	35%	25%	26%
White	45%	52%	47%	42%

Source: National Income Dynamics Survey, Wave 4

In sum, the rate at which South Africa’s different racial groups leave probated wealth is suggestive of the scale of wealth inequality in the country, with marked differences in the share of deceased leaving large estates, and similar magnitudes of difference when adjusting for the differences in the age and gender mortality structure of each racial group. Relative to the survey data, the estate records do understate the number of wealthier households, and the bias is larger for the Black group, reflecting differences in the degree to which members of different racial communities hold formal titles to assets.

The geography of wealth and race

One of Apartheid’s most defining characteristics was a legally-enforced geographic separation of racial communities, both nationally and within urban areas. The Apartheid-state maintained the notion of separate African rural ‘Homelands’, on paper self-governed, to which Black South Africans ostensibly belonged, while Black South Africans in the rest of South Africa held the status of migrants and held limited property rights. Within cities, separate areas were reserved for Whites, Blacks, Coloureds and Asians under the Group Areas Act which first came into effect in 1950, and resulted in the forced removal of non-white communities from areas designated for a different racial group.

Although the Group Areas Act was repealed in 1991, the legacies of this spatial segregation remain marked, with different racial compositions across different pockets of cities, as well as across provinces (Christopher, 2005; Seekings, 2011). The limited residential integration since 1994 has been attributed to both economic and social factors. As in many parts of the world, rapid housing price inflation in cities like Cape Town and Johannesburg has made it harder for high earners without preexisting capital to enter the housing market (Besteman, 2008), but Seekings (2011) has also suggested that discrimination and sense of social belonging, has discouraged Black middle class members from buying into White neighbourhoods, even when their incomes permit it.

While residential segregation in South Africa is well mapped, and can be measured using the South African census, such sources alone can tell us less about wealth ownership of residents of across different residential areas. What more can the geography of estate-leavers reveal about wealth dynamics in post-Apartheid South Africa?

The estate notices published in the government gazette include an address, and we have taken the full set of notices published in 2019, as our sample for the following analysis. The address of each deceased is geocoded using the google’s geocoder.⁹ The geocoder gives a confidence score (1-9) for

⁹ Note that there is a discrepancy between the number of estates reported to the Masters’ Offices, relative to gazette notices, suggesting that many families who report an estate for division do not subsequently complete

each address located, and in the first instance we work with the largest sample of geolocated addresses (confidence score 1), but Appendix Table 4.1 replicates key results with the highest confidence score, which reduces the size of the sample considerably, but has a fairly small impact on the results of interest. We divide our sample into two groups, those with 'black' names, versus those with 'white' or 'coloured' names, and map the addresses across space (Asian names are excluded from this analysis as they are comparatively few in number).

These maps give us a picture of where South Africa's 'middle class' wealth-holders are resident. As in much of the world, the main source of middle class wealth in South Africa is real estate, which comprises about 60% of the asset portfolio of households in the top deciles (Daniels and Augustine, 2016). Thus for most of deceased captured in this dataset, the main asset bequeathed is likely to be their home, and these maps therefore show us, in approximate terms, where South Africa's title-holding, home-owning class resides.

At the national level, the distribution is not markedly different between the two communities. In both cases those leaving estates were primarily living in the main urban areas: Johannesburg and its surroundings, Cape Town and Durban. A minority of estate-holders were resident in former Homelands: roughly 17% of all Black estate-holders were resident in Homelands, or 4% overall (and reassuringly those entries located within Homelands were very rarely identified as 'White' name holders).

Next we take a closer look at urban residents, focusing on the four largest metropolitan areas (Maps 2-4), and highlight in grey those estate-holders resident within former townships. To identify townships spatially, we work with a unique set of maps produced by Sefala, Gebru, Mfupe, Moorosi and Klein (2021), who have used satellite imagery and local informants, to establish the boundaries of different residential areas in South Africa, including townships, wealthier suburbs and informal settlements.

This shows a marked difference in the residential patterns of the two communities. In these urban areas, 'Black' estate-holders are strongly concentrated in former townships, while 'White' estate-holders are not. This pattern is most marked in Johannesburg and Ekurhuleni, where over 60% of the Black deceased were resident in townships, compared to 3-6% for those with 'White' or 'Coloured' names. In eThekweni municipality (which contains Durban), roughly half (47%) of the Black estate-holders were resident in townships, while in Cape Town the township share is lower (32%). Cape Town has a smaller Black community overall and a smaller number of Black estates, relative to Johannesburg and eThekweni, and this community is more recent in arrival. The lower share of residents in townships, therefore, probably reflects the smaller number of Black Apartheid-era township residents to begin with, rather than a comparatively high rate of residential mobility.

In Cape Town we also see a cluster of 'White' or 'Coloured' names within township borders, centred on Mitchell's Plain, a Coloured township created in the 1970s for people forcibly removed under the Group Areas Act. These are likely to be Coloured Cape Townians, with names indistinguishable from the White community. Similarly, the 'White' and 'Coloured' names in eThekweni townships are clustered in historically Coloured townships.

Nation-wide, the picture is sobering. In 2019, roughly 6% of deceased left an estate that was subsequently taken through the succession system and reported in the government gazette. Of this number, an estimated 26% were Black South Africans. Within this group, 17% were resident in former

the succession process; and this lowers the share of black names gazetted, relative to those recorded by the Master.

Homelands and 42% in townships, suggesting that their sources of wealth are property and land acquired during the Apartheid-era, and in areas of comparative deprivation relative to White middle class neighbourhoods. Put another way, just over 2% of Black South African deceased left gazetted estates, and less than 1% were estate-leavers resident in areas historically reserved for Whites.

Wealth-holders resident in former townships will most likely be passing on residential property in these townships. This lends support to the argument by Bolt (2021), that (formally registered) Black estates in Johannesburg are primarily comprised of the stock of township housing that was privatised in the 1980s and 1990s. This also speaks to the possible order of magnitude of differences in the size of White versus Black-owned estates, and suggests that most Black property-owners are still at a comparatively low rung on the wealth ladder. While properties in Soweto, the largest township in Johannesburg, typically sold for between R.300,000-R.600,000 in 2022, those in the north of Johannesburg, where White names predominate, typically sold for above R.1.2 million.¹⁰ Nonetheless, property price appreciation in centrally located townships in particular, mean that at least some segments of the non-White population of South Africa have benefitted from strong housing price growth of the 2000s, particularly in the rapidly gentrifying pockets of former townships. Today township houses typically represent several rungs up on the urban property ladder, above the low-cost social housing (RDP houses) of the post-Apartheid era (Lemanski, 2011).

It should be emphasised that the estate distributions provide a backward-looking perspective of wealth accumulation, as it will primarily capture an older generation of Black wealth-holders, already adults in 1994, who would have had less opportunity for upward mobility in the post-Apartheid era. Furthermore, in years to come, there may still be more Black estates from this period entering the statistics, as families who previously saw no need to formalise the transfer of property return to the courts to do so. Nonetheless, this source gives us an order of magnitude, and suggests that the creation of a broader, racially inclusive property-owning middle class, is proceeding slowly.

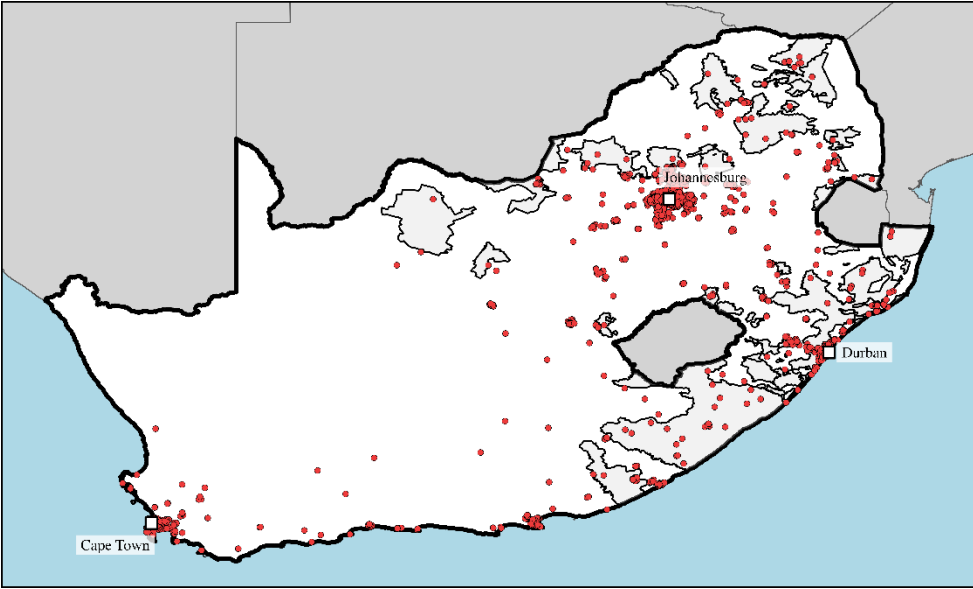
¹⁰ Centre for Affordable Housing Finance in Africa, *South Africa Housing Market Performance*, <https://public.tableau.com/app/profile/housingfinanceafrica/viz/2017MayCitymarkPublicDashboard/SouthAfricaHousingMarketIndicators> (viewed Jan 2024)

Table 6. Estates by location of residence of deceased, 2019

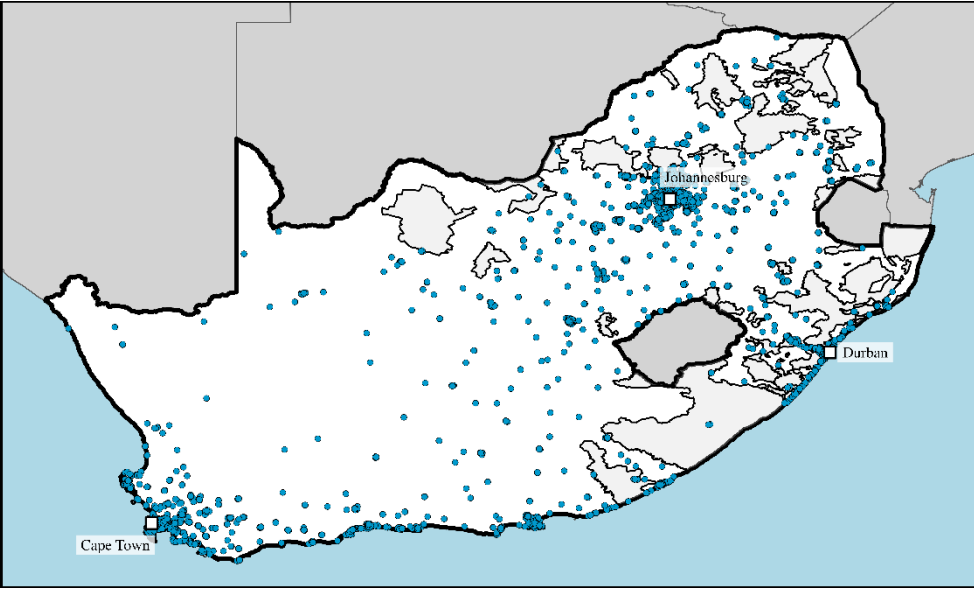
Unit	Total			'Black' named deceased			'White' or 'Coloured' named deceased				Mean Diff. (township)	p-Value	confidence level	
	N	% in homeland	% in townships	N	% total	% in homeland	% in townships	N	% total	% in homeland				% in townships
National	24846	4.9%	13.9%	6426	26%	17%	42%	18420	74%	0.6%	4%	38%	< 0.01	1
Cape Town	3833		12.0%	299	8%		32%	3534	92%		10%	22%	< 0.01	1
Johannesburg	3162		28.1%	1240	39%		63%	1922	61%		6%	57%	< 0.01	1
Ekurhuleni	2650		25.6%	1007	38%		63%	1643	62%		3%	61%	< 0.01	1
eThekwini	1221		20.9%	441	36%		47%	780	64%		6%	41%	< 0.01	1

Map 1: Distribution of estates by residence of deceased, 2019

'Black' name holders

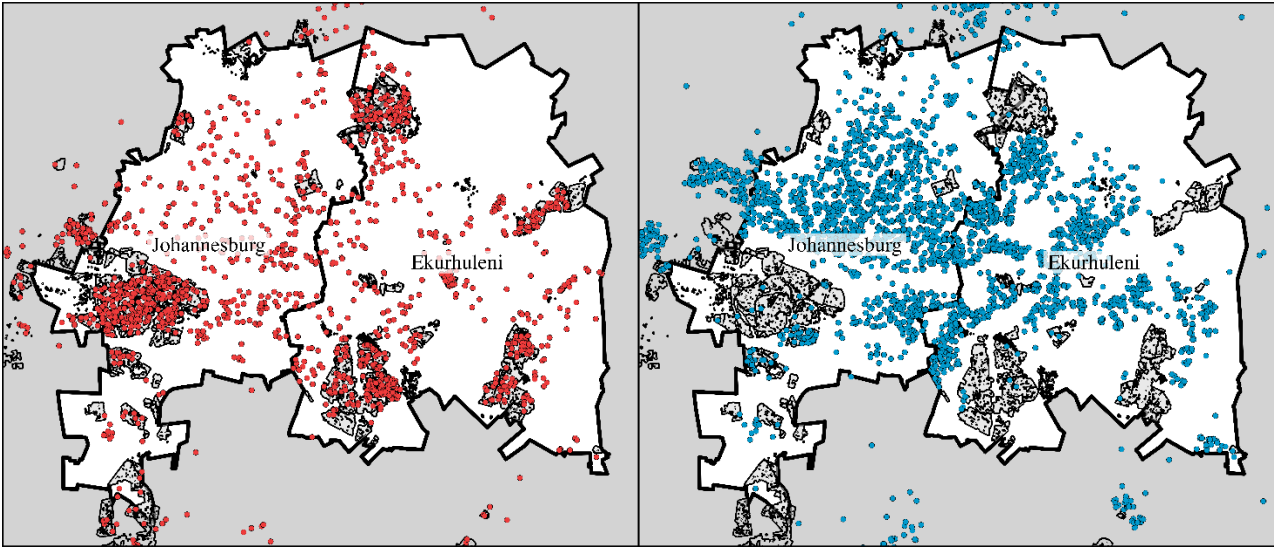


'White' or 'Coloured' name holders

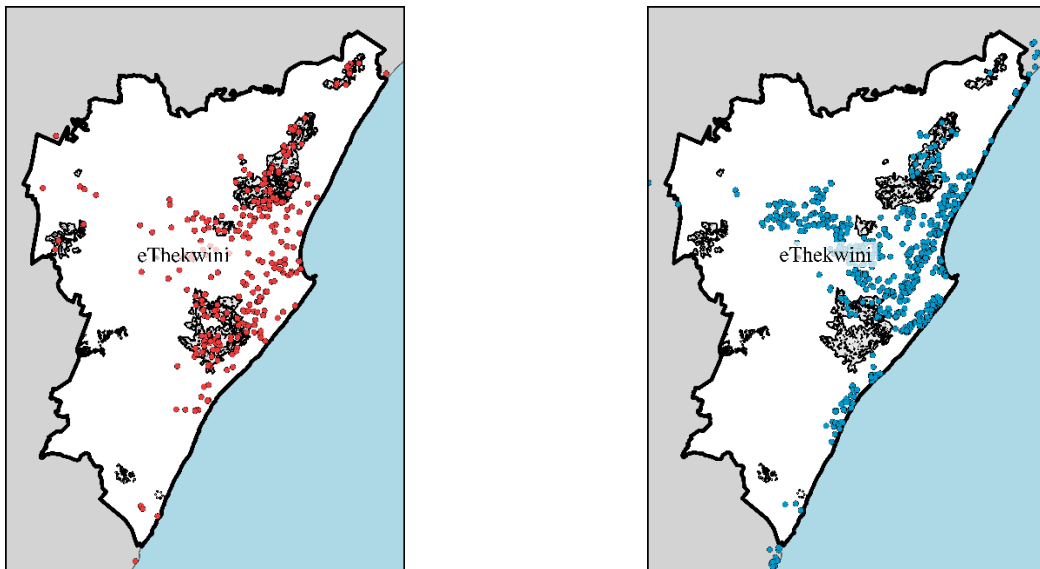


Notes: shaded areas capture former Homelands

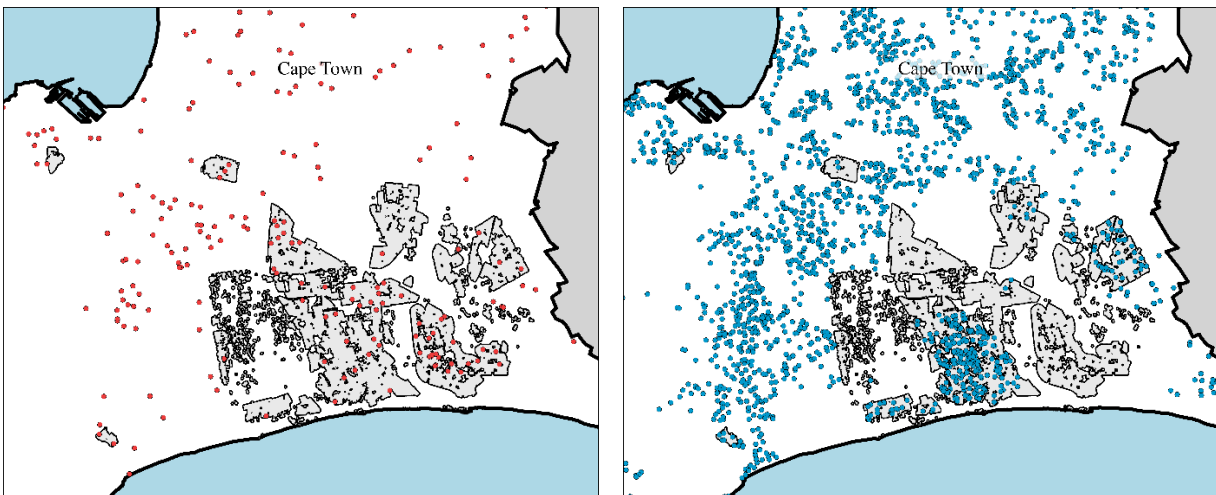
Map 2: Distribution of estates by residence of deceased: Johannesburg and Ekurhuleni



Map 3: Distribution of estates by residence of deceased: eThekweni



Map 4: Distribution of estates by residence of deceased: Cape Town



Notes: Grey shaded areas represent former townships, based on geomapping by Sefala et al. (2021)

Discussion: Wealth Accumulation in Post-Apartheid South Africa

South Africa's negotiated political transition from Apartheid to majority rule impressed the world with its peacefulness. Unlike the many violent regime changes in history, South Africa managed the transition to democracy without any economic contraction, and the outflow of White-owned capital and skill remained manageable. One tenant of this negotiated process was a cautious approach by the ANC towards white-owned capital, and broad respect for private property rights. Without a forced transfer of wealth, it tacitly accepted a slow route to non-White wealth accumulation in the new South Africa.

Consequently, the government had relatively fewer levers for realising a more equitable distribution of wealth. The most discussed policy tool of the post-Apartheid era is arguably the Black Economic Empowerment (BEE) policies, focused on voluntary transfer or sales of shares to non-White owners (often facilitated with credit from state-owned institutions), sale of public companies to Black companies, and preferential treatment for Black-owned companies in public procurement. Yet at least through the early 2000s, these policies had fairly modest success in increasing Black economic control (Southall, 2004). In recent years, the country has also been locked in debate about a proposed Constitutional amendment to Section 25, which would allow expropriation of land without compensation, under certain conditions. Furthermore, although not always framed in this light, the Reconstruction and Development Programme (RDP) housing construction programme, presumably represents the biggest transfer of assets for the bottom half on the income distribution. Since 1994, the government estimates that 5 million subsidized low-cost homes have been built, mostly in urban areas, which residents can in time register under a formal, private title.

Less emphasis has been placed on diversifying the ownership of middle and upper class housing stock, which constitutes a large share of total household wealth in South Africa. The very skewed racial distribution of inherited wealth and spatial separation of 'middle class' wealth owners of different racial communities, suggests limited success in wealth transfer in this key asset class. The predominance of township dwellers among the Black estate holders suggests that one of the most broad-based asset transfers in the new South Africa has in fact been the relatively understudied process of township housing privatisation, that began in the 1980s.

Estimates of the share of households owning their homes in Johannesburg and Cape Town are illustrative. In Johannesburg, the share of households owning outright, or owning a mortgaged home, has fallen across all racial groups except the Coloured group, and particularly severely so for Black households (from 37% in 2001 to 30% in 2011) (SA Census, IPUMS 2022). This is probably in large part due to rapid in-migration, as South Africa urbanises, but does point to the obstacles to acquisition of residential property.

In some regards therefore, South Africa's wealth transfer problem is analogous to that in Western countries, which face a marked generational wealth divide as a consequence of house prices outperforming wage growth over many decades. While this gap has much greater political salience in South Africa, where the divide is predominantly racial rather than generational, the appropriate policy tools for grappling with it – housing construction programmes, preferential access to credit, differential taxation policies, and tools for managing house price inflation - may not be entirely dissimilar.

By focusing on inheritances, this chapter also touches on another, uncomfortable dimension of wealth inequality dynamics in South Africa. To the extent that inherited wealth is increasing in importance to both the stock of wealth and flow of income in South Africa (which, given the rising wealth to income

ratios, is not implausible (Orthofer et al. 2019)), this will tend to increase rather than ameliorate racial wealth inequalities. Larger families in South Africa's Black and Coloured communities than in the White and Asian ones, means that inheritances are shared among a larger number of heirs in the former. Similarly, greater family contestation over the sharing of- and meaning of inherited wealth, and lower rates of formal transfer of title to assets, will disproportionately hinder Black formal wealth accumulation, relative to White.

This chapter has shown how a comparatively simple, but overlooked source of administrative data can shed more light on dynamics of wealth in post-Apartheid South Africa. Further research is needed, using a range of complementary methods and sources, to understand how an increasingly multi-racial middle class is faring in terms of its ability to accumulate wealth, and to identify the routes that seem the most promising for fostering broad-based asset accumulation.

Appendix 1: Race Identification from Names

We code the likely racial origin of a name-holder through a mixture of methods. To separate ‘Black’ from ‘White’ names, we use a list of White South African names from Rosenthal (1965), as well as names from a sample of early 20th century death notices, which include racial identity, compiled by Fourie and Jayes (2021).¹¹ These lists, in combination with some manual identification, provide us with an initial sample. We then use two alternative methods of ‘bulk’ identification: we identify names based on name endings and beginnings (three letters), that are very distinct to each community – we do this both for last and first names. We hand-clean the remaining observations.

As a robustness check, we also construct a list from the sample by Fourie and Jayes (2021), by retaining names that are distinct to a racial group and significant in number ($n >$). then we use a machine-learning algorithm (token-based), to classify the full set of estate registry names by race (black vs. white). Using the death notice results, for those names that could be classified reliably (prob $>80\%$), the match with the partially hand-coded classification is around 90%.

We use a separate identification strategy for the Asian names. Here we use a set of Indian marriage records from 1929-1960 available on FamilySearch to identify a set of common Asian names.¹² We complement this with further hand-coding.

Estimating a Coloured South African share

The biggest challenge to this method is that South Africa’s Coloured community hold names that are not distinct from those of the White community. The Coloured share of records therefore has to be imputed. We do this by using the Fourie and Jayes (2021) death notice names dataset to identify a set of names with a higher than average probability of being ‘Coloured’ vs. ‘White’. These are typically European in origin, and are shared by the white and coloured communities in South Africa. However, some such names are more common in one community than the other. A small number of names, which have their origin in slavery, are also distinct to the Coloured community, such as last names of the months of the year (April, September).

We use the death notice data to identify names that appear to be relatively more common to the coloured community. We then correct this name list within the estates dataset in two ways: firstly, ‘coloured’ names should be more prevalent in the Western, Northern and Eastern Cape relative to ‘white’ names (as the coloured population is more strongly concentrated in those regions), and ‘coloured’ names will have a lower ratio of executor to low-value estates, as the community is poorer on average. We use these as exclusion criteria to identify a set of names that appear to be disproportionately associated with the coloured relative to white community.

We use this names list to examine the likely rate of change of the coloured:white ratio, and anchor it in the 1988-89 data, where race is given in the gazette lists from the Apartheid-era ID number that contained a racial variable.

We sense-check the names list using the geocoded entries, and find that names identified as high prob coloured, are more prevalent among residents of (coloured) townships (Appendix Fig 1.1.).

¹¹ Johan Fourie, Jonathan Jayes, Health inequality and the 1918 influenza in South Africa, *World Development*, Volume 141, 2021, 105407, ISSN 0305-750X, <https://doi.org/10.1016/j.worlddev.2021.105407>. Further data provided by the authors.

¹² Available on FamilySearch, film numbers 2220372 & 2220373, extracted ~2,000 randomly sampled records, which gave ~800 unique surnames.

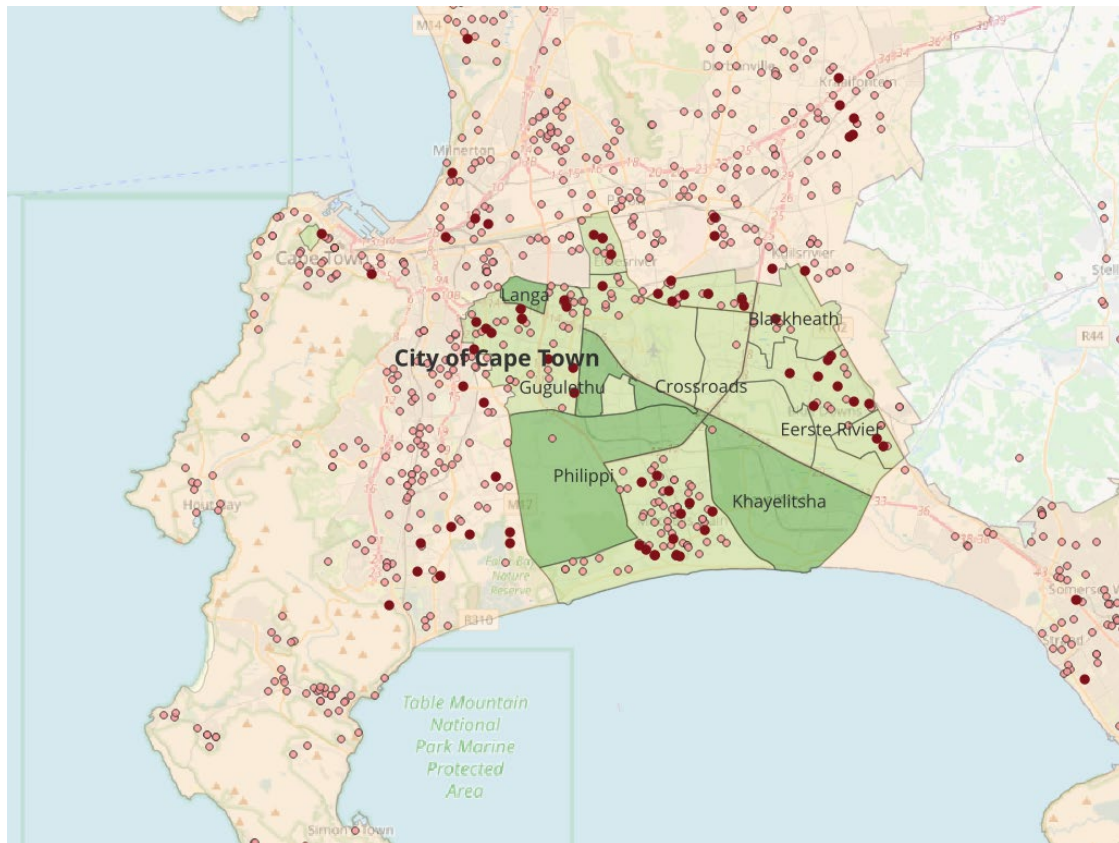
Appendix Table 1.1. Estimate of 'coloured' names as share of 'white' names (executor-only)

	A	B	C	D	E	F	G
Year	'Coloured' share actual (from ID)	Names high prob 'Coloured' share by year	'Coloured' name share by year of death	Ratio B to A	Implied Coloured share by year	Implied Coloured share by yod	Final share used in paper (smoothed)
1988	4.8%	1.7%		35%	4.8%	4.8%	
1989	4.8%	1.9%		40%	4.8%	4.8%	
1999	5.6%	2.5%		45%	5.6%	5.6%	
2009		3.8%	3.5%	40%	9.5%	8.8%	9.0%
2010		2.8%	3.6%	40%	7.0%	8.9%	9.3%
2011		3.1%	4.1%	40%	7.8%	10.4%	9.6%
2012		2.6%	3.1%	40%	6.5%	7.8%	9.8%
2014		5.7%	5.0%	40%	14.3%	12.5%	10.4%
2015		4.7%	5.7%	40%	11.8%	14.3%	10.8%
2016		3.6%	3.6%	40%	9.0%	9.0%	11.1%
2017		4.8%	5.9%	40%	12.0%	14.8%	11.4%
2018		5.9%	6.2%	40%	14.8%	15.5%	11.7%
2019		4.8%	4.3%	40%	12.0%	10.7%	12.1%

Appendix Table 1.2. Estimate of 'coloured' names as share of 'white' names (all estates)

	A	B	C	D	E
Year	'Coloured' share actual (from ID)	Names high prob 'Coloured' share by year	Ratio B to A	Implied Coloured share by year	Final share used in paper (smoothed)
1988	4.8%	1.7%	35%	4.8%	
1989	4.8%	1.9%	40%	4.8%	
1999	5.6%	2.5%	45%	5.6%	
2009		7.1%	40%	17.6%	17.3%
2010		6.0%	40%	15.1%	17.7%
2011		7.7%	40%	19.3%	18.0%
2012		7.2%	40%	18.1%	18.4%
2014		7.7%	40%	19.3%	19.1%
2015		8.1%	40%	20.1%	19.5%
2016		5.7%	40%	14.2%	19.9%
2017		7.5%	40%	18.9%	20.3%
2018		9.2%	40%	23.1%	20.7%
2019		8.8%	40%	22.0%	21.1%

Appendix Figure 1.1. Coloured versus White estates by residence, City of Cape Town, 2019



Notes. Shaded dark green, Black townships; shaded light-green, Coloured townships. Legend: Dark red: names of high probability 'Coloured'; pink dots: other 'White/Coloured' name-holders.

Appendix 2. Estimating Mortality by Racial Group

The distribution of wealth amongst the living is estimated by exploring the distribution of estates left at death (French, 1970¹³; Atkinson and Harrison, 1975¹⁴; Alvaredo, Atkinson and Morelli¹⁵, 2018). However, mortality risk between different groups is not equal, and therefore there will be an under/over representation of various groups within the estate data. For instance, certain ethnicities, men, older people and those from less advantaged socioeconomic backgrounds have a higher mortality risk and so will be overrepresented. Mortality multipliers are necessary to adjust the estate data into estimates of the distribution of wealth holdings amongst the living population. These mortality multipliers are the inverse of the mortality rate for each group. Mortality multipliers were created for each year of interest by gender, ethnicity and 5-year age band.

The population estimates necessary to create the mortality rates for each group were obtained from the Statistics South Africa mid-year population estimates (Statistics South Africa, 2022¹⁶). This data is disaggregated into gender, age and ethnicity for all relevant years. Statistics South Africa does not, however, publish mortality data broken down into our desired categories. UN mortality data (United Nations, 2022¹⁷) exists for South Africa and is disaggregated into gender and age, however not ethnicity. Pillay-van Wyk et al. (2017¹⁸) created population group estimates of deaths, broken down by age, gender and ethnicity using death notifications data. Estimates were provided for 2000, 2006 and 2012. We estimate the number of deaths in each group for all other relevant years using linear interpolation between these values.

South Africa experienced a decline in their population death rate from 2006 throughout our period of interest to 2019. This fall in mortality was largely attributable to reductions in HIV mortality, caused by the 2004 launch of the South African governments roll-out of free antiretroviral therapy to public health facilities across the country (Johnson, 2012¹⁹; Larson et al., 2012²⁰; Burger, Burger and Doorslaer²¹, 2022; Doan, Shin and Mehta, 2022²²). UN mortality data shows that the rate of decline in mortality rates was highest between 2006-2012, with an average percentage decrease in the number of deaths across the population of 3.50% per year. The decline continued after 2012, however at a considerably decreased rate, with an average rate of decline of 0.84% per year in the period 2012-2019. The percentage change in number of deaths between 2006-2012 is shown in table X1.

The population group estimates for 2007 and 2011 were estimated by interpolating between the 2006 and 2012 Pillay-van Wyk et al. (2017) estimates. Given the decline in the rate of decrease in mortality rates from 2012 onwards, it would not be reasonable to extend past 2012 and extrapolate the 2013-2019 values. This would create major underestimates for number of deaths in this period. We therefore create an estimate for the number of deaths in each population group of interest for 2019 using UN mortality data. The 2013-2018 deaths are then estimated via interpolation between the Pillay-van Wyk et al. (2017) estimates for 2012, and our UN data-based estimates for 2019. The Pillay-van Wyk et al. (2017) and UN mortality estimates (United Nations, 2022) are created using

¹³ <https://www.jstor.org/stable/3485762?seq=1>

¹⁴ <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1468-0084.1975.mp37001002.x>

¹⁵ <https://www-sciencedirect-com.gate3.library.lse.ac.uk/science/article/pii/S0047272718300288?via%3Dihub>

¹⁶ <https://www.statssa.gov.za/publications/P0302/P03022022.pdf>

¹⁷ <https://population.un.org/wpp/Download/Standard/Mortality/>

¹⁸ <https://pubmed.ncbi.nlm.nih.gov/27539806/>

¹⁹ <https://sajhivmed.org.za/index.php/hivmed/article/view/156>

²⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3323417/pdf/1471-2458-12-173.pdf>

²¹ <https://www-sciencedirect-com/science/article/pii/S0277953622001381?via%3Dihub>

²² <https://www.demographic-research.org/volumes/vol46/18/46-18.pdf>

various methods and sources, however, their estimates of total deaths in the years 2000, 2006 and 2012 are relatively comparable. In 2006 the percentage difference between the two estimates is 6%, and the percentage difference between the two estimates for 2012 is 0.35%. Further, the age distribution of deaths for each are relatively similar. Comparisons of the year totals and the 2012 age distribution of deaths between the two sets of estimates are presented in tables X2 and X3 respectively.

UN mortality data is broken down by gender and age, however not by ethnicity. Exploring the Pillay-van Wyk et al. estimates for 2000, 2006 and 2012 it is clear that the ethnic composition of deaths per age-band for each gender remain relatively stable over time, as can be seen in table X4. We therefore apply the average ethnic structure over the three given years to the UN data for each gender and age-band to create estimates for deaths in 2019 by age, gender and ethnicity. The 2013-2018 population group estimates for number of deaths are then estimated via interpolation between the 2012 and 2019 values. The inverse of each of the population group mortality rate estimates are used as mortality multipliers, transforming the estate data into wealth holdings of the living.

Appendix Table 2.1: Percentage change in number of deaths in the South African population- UN mortality data

	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Men	0.04%	-1.12%	-3.37%	-4.53%	-4.95%	-3.87%	-0.67%	-1.56%	-0.58%	0.38%	-2.32%	0.68%	-1.26%
Women	-1.98%	-3.25%	-4.15%	-4.99%	-4.66%	-5.11%	-1.14%	-2.74%	0.37%	-3.21%	-1.03%	0.87%	0.38%
Total	-0.99%	-2.20%	-3.76%	-4.76%	-4.80%	-4.49%	-0.90%	-2.15%	-0.11%	-1.38%	-1.69%	0.77%	-0.45%

Appendix Table 2.2: Percentage difference in estimates for total deaths between Pillay-van Wyk et al. and UN mortality estimates 2000, 2006 and 2012

% difference in estimate for total deaths between Pillay-van Wyk et al. and UN estimates	2000	2006	2012
Total	6.42%	3.33%	0.35%
Male	9.91%	7.18%	3.35%
Female	2.70%	0.48%	4.26%

Appendix Table 2.3: Comparison of age distribution of deaths between Pillay-van Wyk et al. and UN mortality estimates for the year 2012

	Male		Female	
Age band	Pillay-van Wyk et al.	UN	Pillay-van Wyk et al.	UN
0-9	11%	11%	10%	9%
10-19	2%	3%	2%	2%
20-29	9%	10%	9%	10%
30-39	15%	14%	13%	12%
40-49	15%	18%	12%	13%
50-59	15%	13%	11%	12%
60-69	14%	14%	12%	14%
70-79	11%	9%	14%	13%
80+	8%	8%	16%	15%

Appendix Table 2.4: Ethnic composition of deaths by age band 2000, 2006 and 2012

Age band	Year	African	Asian	Coloured	White
0-9	2000	95%	0%	4%	1%
	2006	95%	0%	3%	1%
	2012	94%	1%	4%	1%
10-19	2000	93%	1%	4%	2%
	2006	94%	1%	4%	2%
	2012	94%	1%	4%	2%
20-29	2000	96%	0%	3%	1%
	2006	97%	0%	2%	1%
	2012	95%	0%	4%	1%
30-39	2000	93%	1%	4%	1%
	2006	96%	0%	3%	1%
	2012	94%	0%	4%	1%
40-49	2000	87%	1%	8%	4%
	2006	91%	1%	5%	2%
	2012	89%	1%	7%	3%
50-59	2000	79%	3%	10%	9%
	2006	83%	2%	9%	6%
	2012	82%	2%	10%	6%
60-69	2000	77%	3%	9%	11%
	2006	78%	3%	9%	10%
	2012	76%	3%	10%	11%
70-79	2000	74%	3%	7%	17%
	2006	75%	3%	7%	15%
	2012	75%	3%	8%	14%
80+	2000	67%	2%	5%	26%
	2006	66%	2%	6%	26%
	2012	70%	2%	5%	23%

Appendix 3. Further NIDS Analysis

Table 3.1. NIDS 2014/15: Share of adults with wealth above executor threshold (R.250,000), all wealth

	Adults 20+	Adults 30+	Adults 40+	Male 20+	Female 20+
Total	13%	18%	22%	14%	12%
Black	8%	11%	13%	9%	7%
Coloured	15%	19%	25%	16%	13%
Asian	25%	31%	30%	26%	23%
White	47%	55%	60%	52%	43%
Multiple of Black rate					
Black	1	1	1	1	1
Coloured	2	2	2	2	2
Asian	3	3	2	3	3
White	6	5	5	6	6

Source: National Income Dynamics Survey, Wave 4

Table 3.1. NIDS 2014/15: Share of adults with wealth above executor threshold (R.250,000), (Wealth includes real estate, financial, business and superannuation, but excludes vehicle and possession wealth)

	Adults 20+	Adults 30+	Adults 40+	Male 20+	Female 20+
Total	10%	14%	17%	11%	9%
Black	5%	7%	9%	6%	4%
Coloured	9%	12%	15%	9%	10%
Asian	26%	33%	31%	29%	24%
White	42%	48%	52%	49%	37%
Multiple of Black rate					
Black	1	1	1	1	1
Coloured	2	2	2	2	3
Asian	5	5	3	5	6
White	8	7	6	8	9

Source: National Income Dynamics Survey, Wave 4

Table 4.1. Estates by location of residence of deceased, 2019, replication, confidence level 9

Unit	Total			Black' named deceased				White' or 'Coloured' named deceased				Mean Difference (townships)	p-Value	confidence level
	N	% in homeland	% in townships	N	% total	% in homeland	% in townships	N	% total	% in homeland	% in townships			
National	15237	2.0%	14.7%	3403	22%	9%	47%	11834	78%	0.1%	5%	42%	< 0.01	9
Cape Town	3085		12.9%	239	8%		31%	2846	92%		11%	19%	< 0.01	9
Johannesburg	2305		21.9%	735	32%		58%	1570	68%		5%	53%	< 0.01	9
Ekurhuleni	2001		23.4%	705	35%		62%	1296	65%		3%	59%	< 0.01	9
eThekwini	1013		16.1%	295	29%		41%	718	71%		6%	35%	< 0.01	9

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