A reconsideration of what and who is middle class in South Africa

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Abstract

In this paper, we revisit 'what and who' is middle class in South Africa using data collected in the 2008 National Income Dynamics Study. First we consider how to identify the middle class based on two broad definitions adopted in the international literature: a middle class defined by the middle share of the national income distribution; and a middle class defined by an absolute level of affluence and lifestyle. We explore alternative ways of capturing the 'middle strata' of the national income distribution; and we suggest an approach for identifying threshold levels of income associated with middle-class affluence. Second, we show that both the size and the composition of the middle class in South Africa are very sensitive to how the middle class is defined. In particular, we demonstrate that there is very little overlap between the two broad definitions, a finding which reflects very high levels of poverty and inequality in the country. Lastly, both definitions of the middle class are shown to be robust to two common issues of measurement, namely the inclusion of implied rental income, and the use of expenditure as opposed to income as the basis for measuring class status.

Key words middle class; income strata; middle-class affluence; income distribution

JEL Codes: D31; D63; I31; Z13

1   Introduction

The development of the middle class holds promise for the development of the rest of the economy. Studies from a number of countries suggest that a sizable middle class may help to foster higher levels of economic growth (cf. Easterly 2001, 2007), be it through: attitudes and behaviours specific to the middle class (cf. Landes, 1998; Doepke and Zilibotti, 2007); stimulating optimal levels of effective demand (c.f. Brown, 2004); higher overall rates of human capital accumulation (cf. Galor and Zeira, 1993; Perotti, 1996; Sokoloff and Engerman, 2000); or the promotion of democracy and political stability (cf. Bollen and Jackman, 1985; Barro, 1999; Easterly, 2001).

A focus on the middle class also provides another window through which progress in development can be measured. Although there is a large literature which investigates how poverty and inequality have changed in post-apartheid South Africa, there has been relatively little work which interrogates the nature of the middle class in the post-apartheid period. Those studies which have been conducted typically identify the middle class in terms of a level of income or occupational status which make it possible for people to enjoy a life of 'middle-class' affluence (Rivero et al., 2003; Schlemmer, 2006; Udjo, 2008; Statistics South Africa, 2009; Van der Berg et al., 2010).

In this paper, we revisit 'what and who' is middle class in South Africa. The paper has three key objectives. First we consider how to identify the middle class based on two broad definitions adopted in the international literature: a middle class defined by the middle share of the national income

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distribution; and a middle class defined by an absolute level of affluence and lifestyle. We explore alternative ways of capturing the 'middle strata' of the national income distribution; and we suggest an approach for identifying threshold levels of income associated with middle-class affluence. Second, we show that the size and composition of the middle class in South Africa is very sensitive to how the middle class is defined. In particular, we show that there is very little overlap between the two broad definitions, a finding which reflects very high levels of poverty and inequality in the country. Third, we investigate the robustness of these middle class definitions to the inclusion of implied rental income and to the use of expenditure rather than income to identify class status The data which are used to illustrate these findings come from the first wave of the nationally representative National Income Dynamics Survey (NIDS), conducted in 2008.

The paper is structured as follows: Section 2 reviews the literature on the middle class in South Africa. Section 3 discusses the NIDS 2008 data and reviews the two approaches to conceptualising the middle class, namely by affluence or by the middle strata. Section 4 contrasts the size, racial composition and economic profile of the middle class in South Africa using these two approaches. This includes descriptions of average income, sources of income, the labour market and educational attainment. Section 5 examines robustness issues in the definition of the middle class, and the final section summarises the main findings of the study.

2   Review: The middle class in South Africa

There are different conceptions of the middle class. Being middle class may refer to having attained a certain absolute level of affluence or a particular lifestyle. The middle class may also refer to the relative economic position of the average citizen in the society. In studies from developed countries within the international economics literature (cf. Thurow, 1987; Horrigan and Haugen, 1988; Davis and Huston, 1992; Pressman, 2007), the middle class is typically identified as those individuals who occupy the middle strata of the income distribution, a group which is also likely to be affluent in absolute terms. In contrast, in developing countries, where the average citizen may be poor or not far from poverty, these two conceptions of the middle class may differ considerably.

Most of the research which has investigated the middle class in South Africa has defined the middle class in terms of an absolute level of 'affluence', with the main objective being to explore how the size and composition of this group has changed in the post-apartheid period. The threshold level of affluence which identifies the middle class, however, differs across the studies. Furthermore, studies differ according to whether the middle class is defined in terms of individual or household access to resources. Studies which use the individual to identify class status typically use individual earnings income (sometimes filtered by occupation) to identify the class status of economically active adults. Consequently, it is not possible to determine the class status of the not economically active (housewives, students and pensioners) as well as children. Identifying class status at the level of the individual may also classify individuals of the same household (who arguably share the same lifestyle, resources and social status) into different class categories. The more common approach is to identify the middle class in terms of household well-being. In other words, an individual is identified as being middle class if he or she lives in a household in which total household income, or per capita household income, lies within a certain range.

Rivero et al. (2003) examine the development of the middle class in South Africa between 1994 and 2000 in light of the positive association between the size of the middle class and stable democracy. Using the Human Sciences Research Council February Omnibus Surveys, they define the middle class at the level of the individual and measure class status by occupation. The self-employed are filtered further by an earnings criterion (between the second and fourth earnings quintiles of the White population). The study suggests that the middle class in South Africa grew from 8.8% of the total adult population in 1994 to 11.9% in 2000. This growth was characterised by an increase in the number of Africans in high-level occupations (particularly professionals). However, relatively small

sample sizes (approximately 2 500 individuals) for each survey compromised the ability to identify statistically significant trends across specific occupational groups.

Schlemmer (2005) uses the 1993 and 2003 All Media Product Survey (AMPS), to examine the growth of 'the core African middle class'. The study does not distinguish this middle class from an upper class. Rather, the core African middle class is defined as African households which received a total household income (unadjusted for household size) in excess of R12 000 per month (in 2003 prices) and who fell into the South African Advertising Research Foundation's (SAARF) top two Living Standard Measures (LSM's 9 and 10). Schlemmer finds that this 'core African middle class' grew from some 19 000 individuals in 1993 (0.11% of the African population aged 16+) to 129 000 individuals (0.58% of the African population aged 16+) in 2003 – an impressive average growth rate of 20% per annum, albeit from a very low base.

Udjo (2008) also uses SAARF's Living Standard Measures with AMPS data but he examines the 'emerging African middle class'. This is defined as African households which fell within LSMs 5 to 7 and refers to individuals who live typically in households with an income of R2 436 - R6 437 per month in 2000 prices (again unadjusted for household size). The study estimates that the emerging African middle class grew from 6.31 million individuals (amounting to 14.0% of the population) in 2001 to 9.32 million individuals in 2007 (or 19.2%), representing a more modest average annual growth rate of 6.5%.

Statistics South Africa (StatsSA) (2009) investigates the growth of households with a 'middle class standard of living' using a number of datasets, including the October Household Surveys 1998-2009, the Labour Force Surveys 2000-01 and the General Household Surveys 2002-06. In this study, the middle class is not defined in terms of household income but is identified rather by those households 'residing in formal housing, having a water tap in the residence, having a flush toilet in the residence, having electricity as the main lighting source, having electricity or gas as the main cooking source, and having a landline or a household member having a cell phone' (StatsSA, 2009: 1). Such a broad conception of the middle class would include a wide distribution in household income (with no upper income threshold delineating the middle class); however StatsSA does not report on the range of middle-class incomes. The middle class was estimated to have experienced modest growth between 1998 and 2006, from 23% to 26% of total households. The proportion of middle-class households amongst Whites remained high throughout the period at about 85%, whilst Africans experienced an increase in the percentage of middle-class households from 7.5% to 12.8% of African households.

Van der Berg (2010) includes an analysis of changes in the size of the African middle class, in a paper which examines inequality trends more generally in the post-apartheid period. The study also makes use of the AMPS data, but in contrast to the earlier studies, defines the middle class in terms of household income adjusted for household size. As in the study by Schlemmer (2005) and StatsSA (2009), Van der Berg (2010) does not specify an upper threshold for the middle class, but identifies two different base thresholds: R25 000 per capita per annum and R40 000 per capita per annum (in 2000 prices). The study estimates that the percentage share of Africans in the middle class increased from 21.1% to 44.0% using the R25 000 per annum threshold and from 12.3% to 36.4% using the R40 000 per annum threshold. This represents an increase in the relative size of the African middle class from 13.5% to 20.6% of the total population between 1994 and 2008 using the R25 000 threshold, and from 8.1% to 11.7% of the population using the R40 000 threshold.

3   Data and definitions

In this paper, we contribute to the literature on the middle class in South Africa by considering alternative ways of defining the middle class, and by showing that the size and composition of the middle class differ considerably, depending on whether the middle class is identified by some absolute level of affluence or by the middle position in the income distribution. The data used for the study

come from the first wave of the National Income Dynamics Survey (NIDS) 2008.

NIDS is a nationally representative household survey which collects detailed information on both total household income and expenditure. In contrast to many other nationally representative surveys in South Africa, NIDS captures a wide array of individual and household sources of income, including not only labour market income, but also government grant income; other government income; investment income; remittance income, agricultural income and implied rental income.

3.1 The middle-income strata: A relative approach

In identifying the middle class in terms of their relative position within the economic hierarchy (i.e. as the middle strata), we measure individual economic well-being in terms of per capita household income. In the main part of the analysis, we exclude implied rental income from the measure of total household income, but we consider how the inclusion of this income source affects the findings in section 5. NIDS also collects comprehensive information on total household expenditure,[1] including total monthly expenditure on food, total monthly non-food expenditure, and total monthly rental expenditure.[2] The impact on the findings if expenditure as opposed to income is used to measure class status is also considered in section 5.

We consider three definitions of the middle class as the middle strata, following methodologies which are commonly adopted in the international economics literature on class status. The first definition involves dividing households into income quantiles, with the middle quantiles selected as the middle class (c.f. Easterly, 2001; Solimano, 2009). We define the middle third of households from the per capita household income distribution to be the middle class and call this the 'middle tercile' definition.

The second and third definitions identify the middle class in terms of a range of income centred on median income (c.f. Pressman, 2007; Ravallion 2010). Following an influential paper by Thurow (1987), studies of developed countries typically use an income threshold of between 75% and 125% of median income in the per capita household income distribution, which we refer to as the '75-125% median' definition. Some authors have widened the threshold, arguing that 75-125% of the median may create too large an upper class (c.f. Davis and Huston, 1992 and Brandolini, 2010). For the third definition we follow Davis and Huston (1992) who adopt an income range of between 50% and 150% of median income and call this the '50-150% median' definition.

These three ways of conceptualising the middle class as the 'middle strata' in the income distribution are shown in the kernel density estimation of the log of income in Figure 1 and corresponding Table 1. The figure clearly shows how each of these definitions includes a group of households in the middle of the per capita household income distribution. Nonetheless, the exact boundaries identifying the middle class vary.

Table 1 shows that the 'middle tercile' definition has the widest income boundary for the middle class, with 4.56 million households falling within this income threshold. This includes some 1.19 million households which fall bellow the R515 per capita poverty line in 2008 prices.[3] The '50-150% median' definition uses a narrower range of income to select households into the middle class and also selects households which are generally poorer. More specifically, the '50-150% median' definition selects a total of 4.25 million middle class households of which 1.52 million households fall below the poverty line. The '75-125% median' definition identifies the smallest income range for the middle class, selecting only 1.96 million households into the middle class. There are no households which fall below the poverty line, as the lower bound for the '75-125% median' definition of R529 is above

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[1] Food expenditure consists of the sum of 32 food items; non-food expenditure consists of the sum of 52 non-food items. Rental expenditure excludes implied rental expenditure, which is discussed in further detail in section 7.

[2] Missing data in the NIDS have been imputed where feasible in order to ensure that income and expenditure are represented as comprehensively as possible (see Argent, 2009).

[3] The South African poverty line of R322 per capita per month (2000 prices) is commonly used (Hoogeveen and Özler, 2006; Leibbrandt et al., 2010; Posel and Rogan, 2010). It has been adjusted into 2008 prices using the Consumer Price Index (Metropolitan areas: 'P0141') published by StatsSA.

the R515 per capita poverty line (although only just). Although the '75-125% median' definition differs more notably from the other two definitions, in terms of the number of households selected into the middle class, it includes a narrower range of households rather than a different subset of middle-class households.

For the remainder of the analysis in this paper, we use the 50-150% median definition of the middle class as a summary measure of the middle-income approach. This definition specifies an upper-income threshold that falls between those for the other two definitions, and it provides a measure of the middle class comparable to the middle tercile definition, and less restrictive than the 75-125% median definition. Identifying the South African middle class by the middle-income strata selects households which are generally close to, and even below, the poverty line. The implications of this finding for the description of the middle class are highlighted throughout the remainder of the paper.

3.2   Affluence and lifestyle: An absolute approach

The second conception of the middle class is in terms of an absolute standard of affluence or lifestyle, i.e. what would normatively be considered to be a 'middle-class' standard of living. Within the international economics literature, middle-class affluence typically is identified using a threshold of household income, adjusted for household size. One of the difficulties of this approach is that the choice of income threshold is inherently subjective (particularly in developing countries where household incomes vary widely).

In their multi-country studies of the middle class in the developing world, Ravallion (2010) as well as Banerjee and Duflo (2008) select individuals into the middle class who fall between \$2 to \$13 (2005 prices) and \$2 to \$10 (1993 prices) per capita per day respectively. The middle class defined in these terms has barely escaped poverty (and aligns closer to the middle class defined around the middle strata). This is in contrast to other studies of the middle class in developing countries, which select absolute income thresholds well above the poverty line (more in line with the level of affluence of the middle class in developed countries). For example, Milanovic and Yitzhaki (2002) as well as Bussolo et al. (2008) identify the middle class using an income threshold of \$303 (the average income of Brazil) to \$611 (the average income of Italy) per capita per month in 1993 prices. That is some 10 to 20 times the international poverty line of \$1 per day. Wilson and Dragusanu (2008) employ an even higher and wider threshold of \$500 to \$2500 per adult equivalent per month in 2007 prices. Bhalla (2007) as well as Kharas and Gertz (2010) use an income threshold of \$10 to \$100 per capita per day (in 2006 and 2005 prices respectively), whilst Birdsall (2010) also uses a lower income threshold of \$10 per day in 2005 prices, but caps the upper boundary at the income level of the individual at the 95th percentile.

Studies of the middle class in South Africa similarly adopt a wide range of income thresholds. Schlemmer (2005) uses a total household income threshold of R12 000 per month and above in 2003 prices, unadjusted for household size. This converts into R3 399 per capita per month if adjusted by the average size of households in the NIDS 2008 with a total income in excess of R12 000 per month of 3.53 individuals per households. Van der Berg (2010) uses two base thresholds of R2 083 and R3 333 per capita per month in 2000 prices respectively with no upper-income threshold. Although Udjo (2008) does not use income to identify the middle class directly, he nevertheless describes middle-class households as possessing a total household income of between R2 436 - R6 437 per month in 2000 prices. This converts into a per capita monthly income of R686 and R1 813 respectively.[4]

Table 2 describes the diversity in income thresholds used by studies of the middle class in the local and international literature. These are adjusted to 2008 purchasing power parity (PPP) monthly rand values for comparability.[5] The table clearly shows the wide range of income boundaries used

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[4] The conversion to per capita household income uses the average size of households in NIDS 2008 of 3.55.

[5] We use the United States Bureau of Labor Statistics Consumer Price Index (All Urban Consumers) to adjust into

to identify the middle class across different studies of developing countries. The extent of this divergence reflects whether or not middle-class affluence is made 'appropriate to what that term means in developing countries rather than developed ones' (Ravallion, 2010: 446). The studies of the middle class in South Africa in particular (with the exception of Udjo, 2008) appear to measure middle-class affluence at the level of affluence suitable for developed countries. In this regard, Schlemmer (2005) and Van der Berg (2010) do not distinguish between the middle and upper class, perhaps because the size of the upper class would be too small.

In an attempt to identify a plausible income range associated with 'middle-class affluence', we consider the earnings of individuals working in occupations that are typically associated with the middle class.[6] We identify middle-class occupations as including managers, senior officials, legislators, professionals, associate professionals, technicians and clerks. These occupations correspond to major groups 1 - 4 in the International Standard Classification of Occupations (ISCO). We further delineate between upper and lower middle-class occupations.

Section A of Table 3 describes average monthly earnings among all individuals employed in these occupations, and for purposes of comparison, the table also includes monthly earnings among those who would be employed in typically working-class occupations. The ranking of broad occupational categories according to earnings are ordered as one would expect. Earnings of individuals in upper middle-class occupations are higher than those in lower middle-class occupations which are above earnings in working-class occupations (this is seen by comparing mean incomes across occupational groups or by comparing earnings percentiles). Mean earnings in middle-class occupations range from R4 257 per month for clerks to R12 878 per month for legislators, senior officials and managers. This is in comparison to mean earnings for working-class occupations which range between R1 261 for individuals in elementary occupations to R3 777 for craft and related trade workers.

An analysis of individual earnings by occupation, however, fails to take into account that resources are shared at the household level. In order to assess affluence at the level of the household by occupational status, Section B of Table 3 reports the mean per capita income for households using the occupational status of the highest income earner in the household to represent the occupational status of the household.

The mean per capita household incomes reported in Section B of Table 3 are understandably lower than the mean earnings of individuals viewed in isolation. The income rankings by class grouping, however, remain unchanged: upper middle-class occupations are the most affluent, followed by lower middle-class occupations, and followed lastly by working-class occupations. Mean per capita incomes for households in middle-class occupations range from R2 749 per month for clerks to R8 228 per month for legislators, senior officials and managers. Considering that the median income in the household per capita income distribution is only R705 per month, the average household with a middle-class occupation is clearly relatively affluent in society. At the 20th percentile, however, households in lower middle-class occupations (specifically clerks, technicians and associate professionals), come close to the median per capita monthly income receiving R795 and R763 per capita per month respectively. Nevertheless, such households are still considerably better off than households with working-class occupations at the 20th percentile, all of which (with the exception of craft and related trade workers) fall below the poverty line of R515 per capita per month.

;or international comparability, we use a lower income threshold of R1 400 per capita per month to identify the middle class by affluence. This falls above the 20th percentile for the poorest of middle-class occupations (namely, clerks) and corresponds to $10 per capita per day in 2005 PPP prices commonly used in the international literature. For the upper-income bound, we use R10 000 per capita per month, which is below the 80th percentile for the wealthiest of middle-class

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2008 dollar prices, and convert to PPP rand values following Leibbrandt et al. (2010), who use a parity exchange rate of 4.25 rands to the dollar in 2008.

[6]There is a large discourse within the sociological literature on class that relies primarily on occupational status at the level of the individual to identify the social hierarchy (c.f. Goldthorpe, 1987; Edgell 1993). The difficulty of identifying class at the level of the individual (such as the inability to classify individuals who are not economically active) was discussed in Section 2 above.

occupations (namely, managers) and is the equivalent of $70 per capita per day in 2005 PPP prices. The upper bound income of R10 000 per capita per month falls between the 96th and 97th percentiles of the per capita household income distribution. This is in line with studies from the international literature which typically restrict the upper class to the top 1% to 5% of households in the national income distribution (c.f. Birdsall, 2010). (In Table A1 in the Appendix, we show how these two sets of income thresholds defining the middle class correspond to StatsSA's identification of the middle class based on living standards criteria.)

4   What and who is middle class?

We use the NIDS 2008 data to compare the size and composition of the middle class in South Africa, depending on whether the middle class is defined by the middle of the national income distribution (the 'middle strata': 50% - 150% of the median household income) or by an absolute level of affluence ('middle-class affluence': R1 400 - R10 000 per capita per month). The lower class and upper class from both approaches are also included for purposes of comparison.

4.1   The size of the middle class

Table 4 reports the size of the middle class as well as the proportion of total income accruing to the middle class whether defined by the middle-income strata or by an absolute standard of middle-class affluence.

The size of the middle class varies significantly across the two approaches: the middle class comprises approximately 15.4 million individuals (31.6% of population) when defined by the middle strata, in comparison to only 9.9 million individuals (20.4% of the population) when defined by middle-class affluence.

Comparing the size of the middle class without a comparison of the lower and upper classes, however, masks the extent to which the class structure in South Africa is fundamentally different across these two approaches. Whereas the upper class defined by the upper-income strata (income above 150% of the median) comprises 27.6% of the population, the upper class defined by extreme affluence (above R10 000 per capita per month) comprises only 2.1% of the population. At the bottom of the income distribution, the lower class defined by the lower-income strata (income below 75% of the median) comprises some 40.8% of the population, whereas the lower class defined by affluence (less than R1400 per capita per month) accounts for 77.4% of the population.

The large difference in the class structure between these two approaches is also shown by the percentage of total household income accruing to the lower, middle and upper classes respectively. In particular, the middle class defined as the middle strata receives only 13.2% of total household income, whereas the middle class defined by middle-class affluence receives some 49.6% of total household income.

The fundamental difference in class structure between these two approaches has important ramifications for policy makers who seek to promote the growth and status of the middle class. If the middle class is conceptualised by middle-class affluence, then growing the proportional size of the middle class would amount to supporting economic policies which would favour those in the upper tail of the income distribution, thereby increasing income inequality. In contrast, if the middle class is defined by the middle strata, growing the proportional size of the middle class would imply supporting economic policies that favour those in the middle of the income distribution, thereby decreasing income inequality.

4.2   The racial composition of the middle class

Table 5 presents the racial composition of the middle class in South Africa defined by the middle-income strata as well as by middle-class affluence. Individuals who reside in households which fall

in the middle-income strata (between 50 - 150% of the median) are predominantly African (83.4%), followed by Coloureds (11.1%), Whites (2.8%) and Indians (1.8%). However, the middle class defined by affluence (R1 400 - R10 000 per capita per month), is far less dominated by Africans who comprise just under 50% of individuals in the middle class, followed by Whites (31.1%), Coloureds (11.7%) and Indians (6.7%). The racial composition of the middle class defined by the middle strata therefore reflects the same ordering and similar racial shares of the population (with the exception of White individuals who are under-represented); while in the middle class defined by affluence, Whites are considerably over-represented while Africans are considerably under-represented.

The lower classes across the two approaches are most similar, being made up mostly of Africans; but the upper classes are vastly different. Using a relative approach to defining class status, the upper-income strata comprises a majority of Africans (51.3%) although Africans are considerably under-represented relative to their population share, followed next by the share of Whites at 29.2% (who are over-represented). Using an absolute approach to define class status, however, produces an upper class where Whites are in the majority at 65% (and are hence heavily over-represented) and Africans in the minority at only 20.3% (who are significantly under-represented). The extent of under- and over-representation of Africans and Whites respectively is comparatively much greater when comparing the upper class defined by affluence to the upper class defined by the upper income strata.

The racial composition of the middle class therefore clearly depends on the definition of the middle class being used. The middle class defined by affluence strongly under-represents Africans and over-represents Whites (although Africans comprise almost 50% of individuals in the middle class in percentage terms), whilst the racial composition of the middle class defined by the middle strata is predominated by Africans (over 80%) with a very small share of Whites (less than 3%).

4.3   The economic status of the middle class

The mean per capita monthly household income of middle-class households as well as sources of income, are reported in Table 6. These differ significantly between the middle class defined by the middle strata as opposed to the middle class defined by middle-class affluence.

The mean income for middle-class households according to the middle strata definition is only R646 per capita per month, some 25% above the R515 per capita per month poverty line. In fact, it is estimated that 42.8% of individuals in the middle class of the income strata fall below the R515 per capita per month poverty line. This is in stark contrast to the mean income of the middle class defined by middle-class affluence of R3 656 per capita per month (which is some 5.7 times higher than the mean income of the middle class identified by the middle-income strata).

The difference between the middle class defined by the middle strata as opposed to affluence is also shown by differences in the average share of income received by households across the sources of income. The middle class identified by affluence relies primarily on labour market income (85.3%), followed by income from investments (8.8%). Although the middle class defined by the middle strata also relies mostly on labour market income (58%), this is heavily subsidised by income from government grants (30.9%) as well as a component from remittances (8.3%). A comparison of the lower classes, across definitions of the middle class, shows that the lower class defined by the lower-income strata is dependant primarily on income from government grants (52.7%) followed by the labour market (32.9%), whereas for the lower class defined by affluence, labour market income is the modal income source (49.5%) followed by government grants (38%).

Differences in the level of asset ownership similarly reflect significant differences in the economic status of the middle class defined by the middle strata as opposed to by affluence. Figure 2 shows that the percentage of households which own a phone, television or vehicle is significantly higher for households in the middle class defined by affluence compared to the middle strata (these differences are significant at the 95% level of confidence). This is most pronounced in terms of vehicle ownership which rises from only 12.9% of households in the middle strata which own a vehicle, to 48.5% of

households defined by middle-class affluence. Housing ownership (of a formal structure), however, shows no statistical difference between the alternative definitions of the middle class at the 95% level of confidence. This is a surprising finding but it may reflect ownership of government-subsidised homes among poorer households.

The divergence in the economic status of the middle class across these two approaches reveals the sensitivity of class composition to its definition, particularly in a developing economy context such as South Africa. Average income and level of asset ownership for households in the middle of the national income distribution typically fall much below that of households defined by an absolute threshold of middle-class affluence.

4.4   The labour market status and educational attainment of the middle class

Table 6 highlighted the importance of the labour market as the largest single contributor to total household income for middle-class households, whether identified by the middle strata or by affluence. Table 7 examines the labour market in greater detail, presenting the average earnings and employment status of the working-age population (aged 15 to 62 years) by class status.(The upper threshold for the working-age population is based upon age-eligibility for receipt of the state old-age pension for men, which was at 63 years at the time that the fieldworkers were collecting the NIDS 2008 data.)

The mean wage of employed working-age individuals in the middle class, as defined by the middle strata, is relatively very low, at R1 321 per month. Furthermore, the unemployment rate is as high as 0.31. Such unfavourable labour market outcomes for individuals in the middle strata are very different from the above-average earnings (of R5 657 per month) and the comparatively low unemployment rate (of 0.10) facing working-age individuals in the middle class defined by affluence.

Table 7 also reports the average number of persons in employment per household (whether wage or self-employed) by class status. The table shows that there are significantly more employed individuals per household for the middle class defined by affluence (an average of 1.27 persons per household) compared to the middle class defined by the middle strata (0.97 persons per household). Further, the last row of Table 7 shows that a significantly higher proportion of the employed in the middle-income strata is in casual employment, compared to the affluent middle class (0.15 versus 0.06).

These differences in labour market outcomes for the middle class as conceptualised by the middle strata or by affluence correspond to significant differences in educational attainment, as seen in Table 8. The average years of education for individuals aged 15 to 62 years (working-age population) in the middle class defined by affluence is 11.3 years (i.e. just short of Matric or grade 12 education) compared to 8.6 years (approximately grade 9) for the middle class conceptualised by the middle strata. Approximately 40% of individuals in a middle class defined by affluence have less than a Matric education, compared to 75% of individuals in the middle-income strata. Further, the percentage share of individuals in the middle strata who have a matric or tertiary level education is 18.3% and 2.1% respectively, compared to far higher percentages of individuals in the middle class defined by affluence (31.3% and 22.6% of individuals with a matric and tertiary education respectively). The upper 'affluent' class is particularly well educated with 59.6% of individuals possessing a tertiary level education. Hence, part of the difference in earnings and employment outcomes across the two conceptions of the middle class is likely to be explained by considerable differences in education.

5   Issues of Robustness

Defining the middle class by affluence or as the middle strata leads to two very different descriptions of the middle class from the NIDS 2008 data. Nevertheless, issues of measurement may cloud the reliability of these competing descriptions of the middle class. In this section we test the robustness of the description of the middle class (either by affluence or by the middle-income strata) to two issues of measurement: the inclusion of implied rent as an additional source of household income; and the use of expenditure as opposed to income as the basis for measuring class status.

5.1   Inclusion of implied rent

Implied rent is defined as the value of rental income that households would receive if they were not living in their own residences, or the value of rent that households would have to pay if they were not residing at their current residence free of charge. In practice implied rent has seldom been included within any analysis of income in South Africa. This is partly because household surveys infrequently collect the necessary information. Over and a lack of data, it is also not clear whether changes in implied rent across time (given the recent South African property boom) represent any real changes in household welfare, at least where measuring poverty is concerned. The NIDS 2008 does present the opportunity to calculate implied rent; moreover 85% of households in the sample receive an implied rental, making it a potentially significant source of income. However, the reliability of these data is somewhat questionable given that rates of non-response for the *value* of implied rent were in excess of 40% and therefore required significant imputation (c.f. Argent, 2009; Leibbrandt et al, 2010). Nevertheless, we assess the impact on class structure of including implied rent as an additional source of income.

Figure 3 shows that the income distribution shifts slightly to the right when implied rent is included as additional source of income. However, the shape of the income distribution remains similar across the two distributions. Section A of Table 9 reports that the mean per capita monthly income for all households increases by 16.9% when implied rent is included as an additional source of income. The mean incomes of the lower and middle class defined by the income strata are significantly increased, by 35.1% and 15.7% respectively. The mean income of the lower class defined by affluence is also significantly affected by the inclusion of implicit rent, rising by 12.7%. It therefore appears that the lower classes are more significantly affected by the inclusion of implied rent than the middle and upper classes.

These changes in mean incomes (at least concerning the lower classes) upon the inclusion of implied rent, however, only affect a change in actual class status for a minority of households (as seen in Section B of Table 9). Using affluence to define the middle class, a total of 5.3% of households increase their class status upon the inclusion of implied rent. A slightly larger percentage of households change their class status when the class structure is defined by the income strata (8.9%), with the 6.7% of middle class households moving up into the upper class and 5.0% of middle class households moving down into the lower class.[7] Overall, the inclusion of implied rent shifts the income distribution slightly to the right and makes little difference to the shape of the income distribution. The resulting class structure is mostly unaffected by the inclusion of implied rent.

5.2   Income versus expenditure

The second concern with measuring the middle class is whether expenditure as opposed to income would provide a better indicator of access to resources. In principle, the difference between income

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[7]Given that including implied rent as an additional source of income can only increase household income, it is only possible for households to move up the class ladder when defined by affluence. The same logic, however, does not apply to the middle class defined by the middle strata. This is because the median household income (around which class status is classified) is increased by the inclusion of implied rent, which means that households may fall within a different class category despite income being unaffected.

and expenditure for a household is the level of savings or dissavings, where lifetime expenditure is equal to lifetime income. If households smooth their consumption, given fluctuations in income across time, then expenditure may give a better measure of the general level of household wellbeing in comparison to income. Furthermore, household respondents may be more willing to report expenditure than income (particularly the very rich and the very poor). In practice, however, both measures of economic wellbeing are commonly used (c.f. Ravallion, 1994; Deaton, 1997; Deaton & Zaidi, 2002).

Figure 4 shows the household per capita income and expenditure distributions from the NIDS 2008. The income distribution generally lies to the right of the expenditure distribution, although the two distributions are very similar in the tails. Hence, income does not appear to be underestimated. The fact that the NIDS 2008 collects income information as the summation of a series of individual questions on sources of income, rather than a once-off question, certainly enhances the reliability of income information in the NIDS.

In Table 10, we explore further the overlap between income and expenditure measures of class status. Section A of the table compares the mean incomes of the lower, middle and upper classes defined by income, to the mean expenditures of the lower, middle and upper classes defined by expenditure. Mean expenditure is consistently lower than mean income across the lower, middle and upper classes, possibly as the result of savings, although this difference is not statistically significant at the 95% level of confidence (with the exception of the middle class defined by the middle-income strata).

Section B of the table shows, nevertheless, that there is a fair degree of repositioning of households in the class structure when income is substituted for expenditure. Approximately 34.5% of households change class status when using a relative definition of class status and approximately 18.1% of households change their class status when using an absolute standard of affluence to define class status. This reshuffling in class position may reflect differences in the distribution of savings across households.

6   Conclusion

There are two approaches to defining the middle class in the international economics literature: a relative definition of the middle class as the middle-income strata; or an absolute definition of the middle class based on a middle-class lifestyle or affluence. This study has demonstrated that the size, composition and economic profile of the middle class in South Africa are very different across these two broad definitions. Given extensive poverty and income inequality in South Africa (Hoogeveen and Özler, 2006; Leibbrandt et al., 2010), individuals living in households which are 'middle of the road' within the national income distribution do not possess the socio-economic status typically associated with middle-class affluence.

The size of the middle class defined by affluence is significantly smaller than the size of the middle class defined by the middle strata, at 20.4% and 31.6% of the population respectively. Further, the racial composition of the middle class differs considerably across the two approaches. Whereas the racial profile of the middle class defined by the middle strata broadly reflects the total population racial shares (over 80% of households in the middle strata are African), the racial composition of the middle class defined by affluence substantially over-represents Whites and under-represents Africans.

Mean incomes are also significantly different across the two approaches. The mean monthly income for the middle strata is only R646 per capita per month (of which 58% is derived from the labour market and 30.9% from government grants) compared to R3 656 per capita per month for households defined by middle-class affluence (of which 85.3% is derived from the labour market and 8.8% from investments). Differences in mean incomes correspond to differences in labour market status and educational attainment between the two approaches. The middle class defined by affluence (in comparison to the middle strata) reports significantly higher earnings, is less likely to be

casually employed or unemployed and is more likely to possess a matric or tertiary education. Large differences in the size and characteristics of the middle class are shown to be robust to the inclusion of implied rent as an additional source of income and to the use of expenditure instead of income to measure class status.

In light of these competing descriptions of the middle class, the obvious question to ask is whether one definition is more appropriate than the other? We suggest that both definitions of the middle class are useful, as is a comparison of the economic status of individuals across the two definitions. The middle class conceptualised by a middle-class level of affluence draws attention to those in society who have achieved a standard of living associated with economic stability and prosperity. Given South Africa's history of racial exclusion and discrimination, this definition of the middle class typically is used to assess racial transformation in opportunities and access to resources. The middle class conceptualised by the middle-income strata draws attention to the status of the 'average' or 'regular' South African. The difference in the economic well-being and composition of these two middle-classes provides another window through which economic development and changes in income inequality can be viewed.

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Table 1: Lower and upper bound ranges for households in the middle class by definition

	Per capita monthly household income (rands)		
	Tercile	75-125% Median	50-150% Median
Lower Boundary	390	529	353
Upper Boundary	1 333	880	1 058
Middle of Range	862	705	705
Size of Range	943	351	705
Number of Households (millions)	4.56	1.96	4.25

Source: NIDS 2008, own estimates
Notes: The data are weighted

Table 2: Per capita monthly income boundaries to identify the middle class in developing countries by various authors (2008 PPP rand Values)

	Lower boundary	Upper boundary	Middle of Range	Size of Range
International Studies				
Milanovic and Yitzhaki (2002); and Bussolo et al (2008)	1 919	3 869	2 894	1 950
Banerjee and Duflo (2008)	386	1 931	1 159	1 545
Wilson and Dragusanu (2008)	2 186	10 928	6 557	8 742
Bhalla (2007); and Kharas and Gertz (2010)	1 428	14 290	7 859	12 862
Birdsall (2010)*	1 428	8 001	4 715	6 573
Ravallion (2010)	285	1 858	1 072	1 573
Local Studies				
Udjo (2008)	1 098	2 901	2 000	1 803
Schlemmer (2005)	4 430	n/a	n/a	n/a
Van der Berg (2010)	3 333 & 5 333	n/a	n/a	n/a

Notes: *Birdsall's sets the upper threshold at the 95th percentile of the household per capita income distribution in the country under study. This is done for South Africa using the NIDS 2008 data.

Table 3: Earnings (rands) and occupational status

Occupation	Section A: Monthly Earnings (Sample: all employees)				Section B: Per capita Income (Sample: household's highest inc. earner)			
	Mean	Percentiles			Mean	Percentiles		
		20th	50th	80th		20th	50th	80th
Upper Middle Class								
Legislators, senior officials & managers	12 878 (2 240)	2 500	7 252	19 933	8 228 (1 560)	1 526	4 185	12 963
Professionals	9 431 (1 014)	2 917	6 700	11 992	5 266 (585)	1 329	3 174	8 260
Lower Middle Class								
Technicians & associate professionals	6 487 (953)	1 671	4 059	10 500	3 729 (531)	795	2 917	6 167
Clerks	4 257 (311)	1 525	3 074	6 167	2 749 (307)	763	1 971	3 611
Working Class								
Service, shop & market sales workers	2 972 (304)	1 000	1 800	3 800	2 093 (364)	416	1 076	2 900
Skilled agricultural & fishery workers	1 341 (172)	538	880	1 300	829 (67)	333	735	988
Craft & related trades workers	3 777 (462)	1 000	2 031	4 515	2 399 (283)	538	1 345	3 267
Plant & machinery operators & assemblers	3 204 (322)	1 027	2 000	4 146	1 985 (200)	500	1 240	2 900
Elementary occupations	1 261 (91)	400	900	1 700	948 (118)	250	527	1 361

Source: NIDS 2008, own estimates
Notes: Standard errors in parenthesis; the data are weighted

Table 4: The size of the middle class

	Income Strata			Affluence			Population
	Lower Class	Middle Class	Upper Class	Lower Class	Middle Class	Upper Class	Total
Number (millions)	19.9* (1.0)	15.4* (0.8)	13.4* (0.9)	37.7 (1.5)	9.9 (0.7)	1.0 (0.3)	48.7
% of population	40.8* (1.5)	31.6* (1.3)	27.6* (1.8)	77.4 (1.8)	20.4 (1.6)	2.1 (0.5)	100.0
% of total household inc.	5.2*	13.2*	81.6*	22.6	49.6	27.7	100.0

Source: NIDS 2008, own estimates
Notes: * Significantly different from corresponding 'affluence' class definition at the 95% confidence level.
Standard errors in parenthesis; the data are weighted.

Table 5: The racial composition of the middle class

	Income Strata			Affluence			Population
	Lower Class	Middle Class	Upper Class	Lower Class	Middle Class	Upper Class	Total
% African	94.3* (1.2)	83.4* (2.5)	51.3* (3.8)	88.3 (1.7)	49.8 (4.0)	20.3 (7.8)	79.0 (2.2)
% Coloured	4.6 (1.1)	11.1 (1.9)	12.6 (2.2)	8.2 (1.4)	11.7 (2.2)	4.2 (2.5)	8.9 (1.4)
% Indian	0.6 (0.5)	1.8 (1.4)	6.3 (1.9)	1.2 (0.9)	6.7 (2.3)	10.5 (5.8)	2.5 (1.0)
% White	0.4* (0.2)	2.8* (0.8)	29.2* (3.8)	1.8 (0.4)	31.1 (4.1)	65.0 (8.6)	9.1 (1.5)
% Missing	0.1 (0.1)	0.8 (0.4)	0.6 (0.3)	0.4 (0.2)	0.8 (0.4)	0.0 (0.0)	0.5 (0.2)
% Total	100	100	100	100	100	100	100

Source: NIDS 2008, own estimates

Notes: * Significantly different from corresponding 'affluence' class definition at the 95% confidence level.
  Standard errors in parenthesis; the data are weighted.

Table 6: Mean income (rands) and sources of income of the middle class

	Income Strata			Affluence			Population
	Lower Class	Middle Class	Upper Class	Lower Class	Middle Class	Upper Class	Total
Mean Inc. Per Capita	177* (2)	646* (7)	4 687* (391)	482 (11)	3 656 (127)	20 031 (1 383)	2 041 (204)
% Labour Market	32.9* (1.3)	58.0* (1.7)	84.8 (1.4)	49.5 (1.3)	85.3 (1.4)	82.3 (5.9)	61.4 (1.2)
% Govt. Grants	52.7* (1.5)	30.9* (1.4)	2.6* (0.3)	38.0 (1.2)	2.2 (0.4)	0.4 (0.2)	25.9 (1.1)
% UIF&Work.Comp	0.7 (0.3)	0.9 (0.5)	0.4* (0.1)	0.8 (0.2)	0.3 (0.1)	0.0 (0.0)	0.6 (0.2)
% Investments	1.1 (0.3)	1.7* (0.3)	7.7 (1.2)	1.4 (0.2)	8.8 (1.4)	10.3 (3.5)	3.9 (0.6)
% Remittances	10.4 (0.9)	8.3* (1.0)	4.5 (0.7)	9.2 (0.7)	3.4 (0.6)	7.0 (3.1)	7.4 (0.6)
% Subs. Agriculture	2.1* (0.4)	0.3 (0.0)	0.1 (0.0)	1.1 (0.2)	0.0 (0.0)	0.0 (0.0)	0.7 (0.1)
% Total	100	100	100	100	100	100	100

Source: NIDS 2008, own estimates

Notes: *Significantly different from corresponding 'affluence' class definition at the 95% confidence level.
  Standard errors in parenthesis; the data are weighted.

Table 7: The labour market and the middle class (working-age population 15 – 62 years)

	Income Strata			Affluence			Population
	Lower Class	Middle Class	Upper Class	Lower Class	Middle Class	Upper Class	Total
Broad unempl. rate	0.59*(0.02)	0.31*(0.01)	0.11 (0.01)	0.42 (0.01)	0.10 (0.01)	0.07 (0.03)	0.31 (0.01)
% Not econ. active	42.9* (1.2)	28.1* (1.1)	16.7 (1.1)	34.7 (0.9)	15.4 (1.2)	21.3 (3.8)	29.7 (0.8)
% Unemployed	28.5* (1.2)	18.9* (0.8)	8.4 (0.8)	23.1 (0.7)	7.6 (0.8)	5.0 (2.6)	18.9 (0.6)
% Employed	20.0* (0.8)	41.0* (1.2)	66.1 (1.3)	32.0 (0.8)	67.9 (1.5)	70.7 (4.5)	41.6 (1.1)
% Missing	8.6 (0.7)	12.0 (1.4)	8.9* (0.9)	10.2 (0.8)	9.1 (1.0)	2.9 (1.4)	9.8 (0.6)
% Total	100	100	100	100	100	100	100
Mean monthly earnings (rands)	587* (23)	1 321* (30)	6 999* (600)	1 289 (32)	5 657 (279)	27 048 (2 080)	4 313 (401)
Mean no. employees per household	0.54*(0.03)	0.97*(0.03)	1.27 (0.03)	0.80 (0.02)	1.27 (0.03)	1.27 (0.9)	0.95 (0.02)
Prop. employees in casual labour	0.24*(0.02)	0.15*(0.01)	0.06*(0.01)	0.16 (0.01)	0.06 (0.01)	0.01 (0.00)	0.11 (0.01)

Source: NIDS 2008, own estimates
Notes: *Significantly different from corresponding 'affluence' class definition at the 95% confidence level.
Standard errors in parenthesis; the data are weighted.

Table 8: Educational attainment and the middle class (working-age population 15 – 62 years)

	Income Strata			Affluence			Population
	Lower Class	Middle Class	Upper Class	Lower Class	Middle Class	Upper Class	Total
Mean Years Educ.	8.0 (0.1)	8.6 (0.1)	11.1 (0.1)	7.7 (0.1)	11.3 (0.2)	13.6 (0.4)	9.2 (0.1)
% No Schooling	9.2* (0.6)	7.7* (0.6)	1.9* (0.3)	8.1 (0.4)	1.7(0.3)	0.0 (0.0)	6.4 (0.4)
% Some Primary	25.3* (1.0)	20.2* (1.0)	7.2* (0.8)	22.1 (0.8)	6.4 (0.9)	1.0 (0.7)	17.8 (0.8)
% Incomplete Sec.	47.6 (1.2)	47.1* (1.1)	32.1* (1.8)	47.2 (0.9)	31.5 (1.9)	7.7 (2.5)	42.4 (1.0)
% Matric	12.8* (0.7)	18.3* (0.9)	29.4 (1.5)	16.1 (0.7)	31.3 (1.7)	21.8 (6.0)	19.9 (0.8)
% Tertiary	0.9* (0.2)	2.1* (0.3)	22.7* (1.9)	1.9 (0.2)	22.6 (1.8)	59.6 (6.2)	8.4 (0.9)
% Missing	4.3 (0.5)	4.6* (0.5)	6.7 (0.6)	4.6 (0.3)	6.5 (0.7)	10.0 (4.2)	5.2 (0.3)
Total	100	100	100	100	100	100	100

Source: NIDS 2008, own estimates
Notes: *Significantly different from corresponding 'affluence' class definition at the 95% confidence level.
Standard errors in parenthesis; the data are weighted.

Table 9: Inclusion of implied rent as an additional source of household income

	Income Strata				Affluence			
	Lower	Middle	Upper	Total	Lower	Middle	Upper	Total
Section A: Mean Per Capita Monthly Income:								
without implied rent	R177	R 646	R 4 687	R 2 041	R 482	R 3 656	R 20 031	R 2 041
with implied rent	R239*	R 747*	R 5 342	R 2 385	R 543*	R 3 684	R 18 579	R 2 385
% change	+35.1	+15.7	+14.0	+16.9	+12.7	+0.8	-7.3	+16.9
Section B: Class Status:								
% unaffected	88.3	88.3	95.7	91.1	94.4	94.9	100.0	94.7
% changed	11.7	11.7	4.3	8.9	5.6	5.2	0.0	5.3
% move up class ladder	11.7	6.7	0.0	5.7	5.6	5.2	0.0	5.3
% move down class ladder	0.0	5.0	4.3	3.2	0.0	0.0	0.0	0.0

Source: NIDS 2008, own estimates
Notes: *Significantly different from the 'without implied rent' figure at 95% level of confidence.

**Table 10: Using income versus expenditure to measure class status**

	Income/Expenditure Strata				Affluence			
	Lower	Middle	Upper	Total	Lower	Middle	Upper	Total
Section A: Mean Per Capita Monthly:								
Income	R177	R646	R4 687	R2 041	R82	R3 656	R 20 031	R 2 041
Expenditure	R173	R513*	R3 746	R1 721	R476	R3 547	R 16 738	R 1 721
% change	-2.5	-20.7	-20.1	-15.7	-1.2	-3.0	-16.4	-15.7
Section B: Class Status:								
% unaffected	61.9	50.7	80.5	65.5	91.9	63.3	37.7	81.9
% changed	38.1	49.3	19.4	34.5	8.1	36.7	62.3	18.1
% move up class ladder	38.1	21.1	0.0	16.1	8.1	4.9	0.0	11.3
% move down class ladder	0.0	28.2	19.4	18.3	0.0	31.8	62.3	6.9

Source: NIDS 2008, own estimates
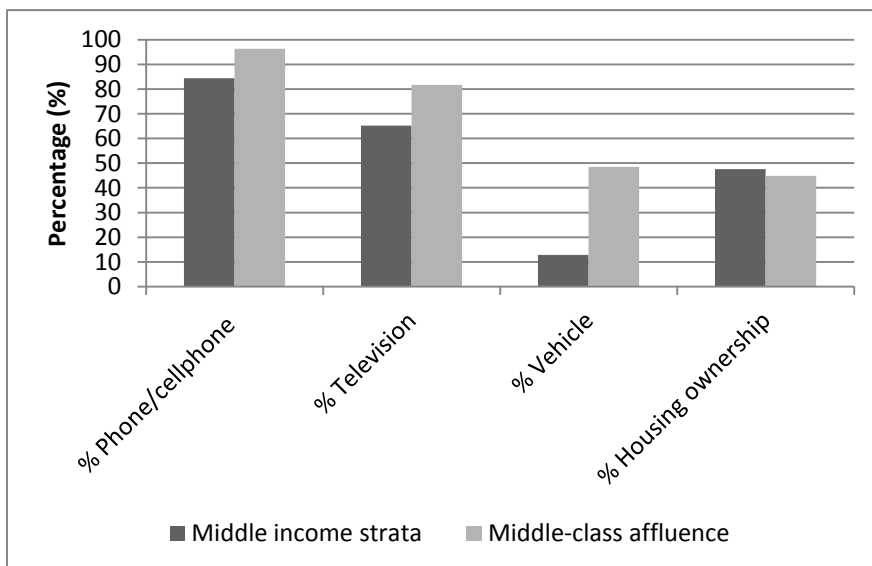Notes: *Significantly different from income figure at 95% level of confidence.
[a] Confidence intervals overlap at the 99% level of confidence; the data are weighted.

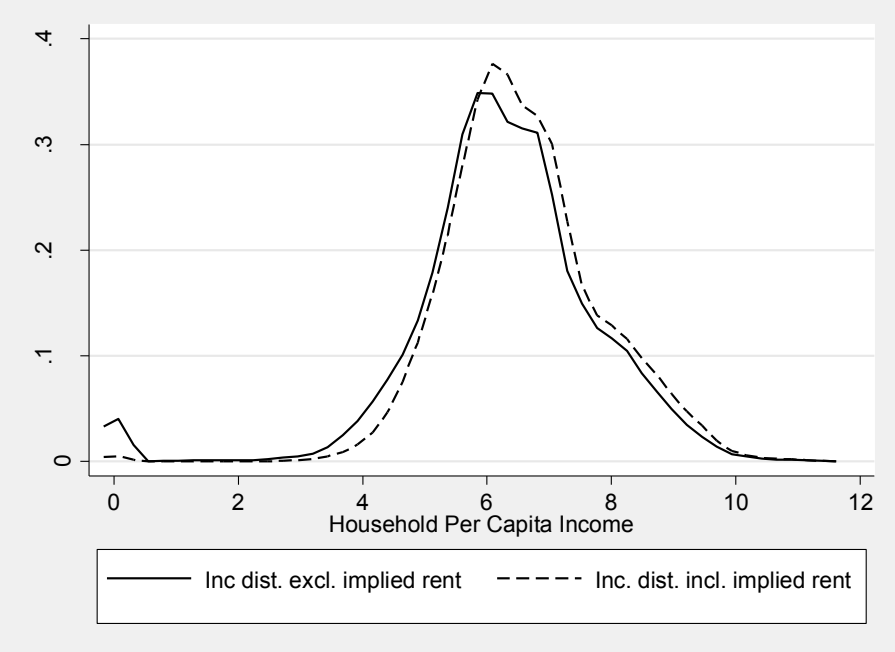**Figure 1: Kernel Density Estimation of Log Income**
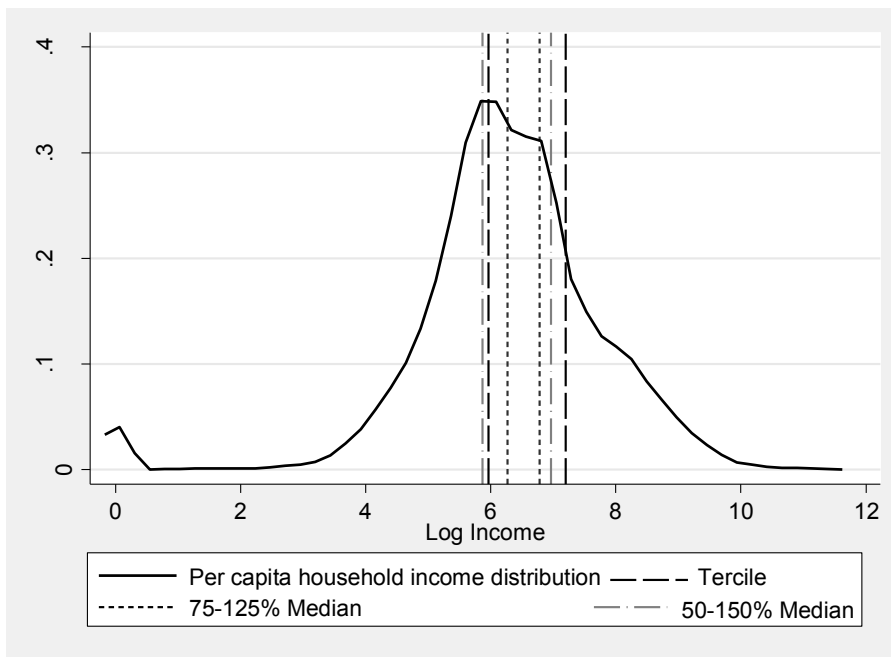
Source: NIDS 2008, own estimates
Notes: The data are weighted

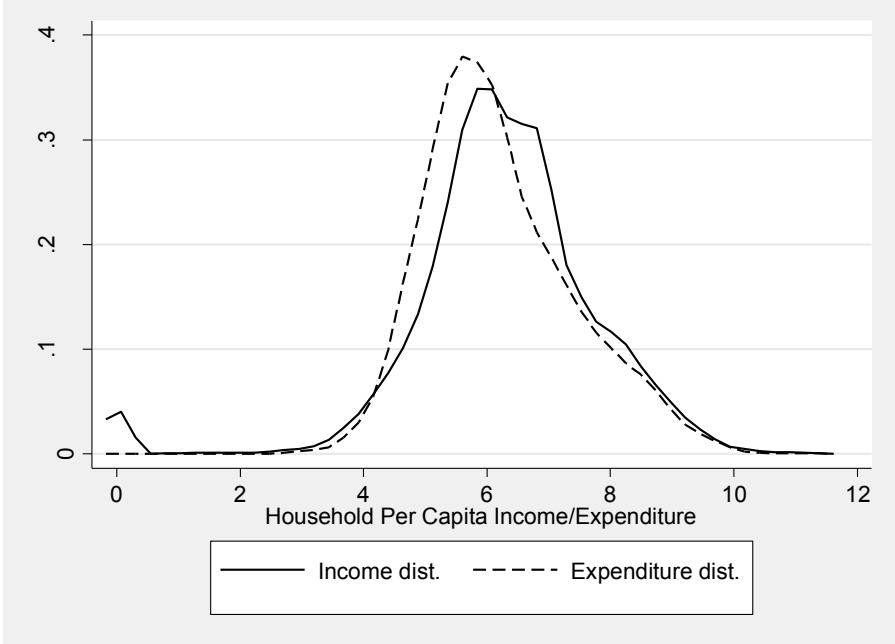**Figure 2: Asset ownership and the middle class**

Source: NIDS 2008, own estimates
Notes: The data are weighted

Figure 3: Comparison of income distribution including & excluding implied rent, NIDS 2008

Source: NIDS 2008, own estimates

Figure 4: Comparison of income and expenditure distribution, NIDS 2008

Source: NIDS 2008, own estimates

Appendix

Table A1: Middle-class standard of living (StatsSA definition*) and class status

% in StatsSA definition	Income Strata			Affluence			Population
	Lower Class	Middle Class	Upper Class	Lower Class	Middle Class	Upper Class	Total
Yes	11.5 (1.2)	24.0 (1.9)	59.6 (2.7)	19.8 (1.4)	60.7 (2.9)	81.9 (4.8)	33.7 (2.0)
No	87.6 (1.4)	75.0 (1.9)	37.6 (2.7)	79.3 (1.5)	36.1 (2.9)	16.2 (4.9)	64.7 (2.1)
Missing	0.9	1.0	2.8	1.0 (0.3)	3.2 (0.7)	1.9 (1.5)	1.7 (0.3)
Total	100	100	100	100	100	100	100

Source: NIDS 2008, own estimates

Notes: Standard errors in parenthesis; the data are weighted
* Defined as households having formal housing, having a water tap in the residence, having a flush toilet in the residence, having electricity as the main lighting source, having electricity or gas as the main cooking source, and having a landline or a household member having a cell phone (StatsSA, 2009).