

N.i.D.S.
NATIONAL INCOME DYNAMICS STUDY

Personal Debt and Financial Access: Analysis of the NIDS Wave 1 Dataset

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1. Introduction

This report provides an overview of the data on personal debt and financial access that is collected in section G of the adult questionnaire. The data generally look promising as there are relatively low non-response rates and the indebtedness and financial access measures are similar to earlier findings from the Income and Expenditure Surveys and other sources. There is some concern however, as to whether the levels of indebtedness have been slightly under-reported in lower income households. Also, these comparisons are conducted at the level of the household. This requires that the NIDS adult level data are aggregated. Given that there is no debt section in the adult proxy questionnaire, such proxy adults are omitted from the aggregation.

In section 2 we focus on item non-response for the variables in the debt section of the questionnaire. Section 3 then offers some descriptive findings on financial access by race and income. We move on to analyse indebtedness in section 4; with a discussion of indebtedness by income, race, gender and province and conclude the paper with a brief section on equity. This concluding section serves to draw attention to this unique aspect of the NIDS data set.

2. Item non-response

In general for section G the non-response rates are very low, with possession of debt questions having a 99%+ response rate. This can be seen in Table 1 below, where the highest level of non-response is for Vehicle debt at 0.45%.

Table 1: Item non-response for section G, part 2

Variable	Variable Label	Percentage non response for possession of this type of debt
G11	Bond	0.32%
G12	Personal loan -bank	0.32%
G13	Micro lender	0.36%
G14	Mashonisa	0.37%
G15	Study loan - bank	0.36%
G16	Study loan - other	0.38%
G17	Vehicle	0.45%
G18	Credit Card	0.38%
G19	Store Card	0.38%
G20	Hire-purchase	0.40%
G21	Family	0.48%

Whilst these low non-response rates would seem to allow for an accurate representation of the possession of debt by individuals, there may still be bias in the *level* of debt that is estimated from the data if there is a high non-response rate for outstanding balance of debt and monthly debt payments amongst those who said that they do have debt.

Non-response on the outstanding balance was generally higher than on the monthly payment, with the bulk of such non responses being Don't Know – indicating that participants may have had difficulty calculating the exact balance outstanding but found it easier to recall their last monthly payment. This is evident in Table 2 below which contrasts the non-response rates for these two sets of variables.

Table 2: Outstanding balance and payment non-response rates for indebted respondents

Variable	Variable Label	Responded yes to debt but non-response for amount (a)	Responded yes to debt but non-response for outstanding balance (b)
G11	Bond	16.8%	34.1%
G12	Bank loan - personal	9.9%	32.8%
G13	Microlender	4.9%	32.1%
G14	Mashonisa	5.1%	16.8%
G15	Study loan – bank	24.1%	37.9%
G16	Study loan – other	19.4%	47.22%
G17	Vehicle	9.3%	40.9%
G18	Credit Card	14.5%	29.3%
G19	Store Card	7.0%	25.3%
G20	Hire-purchase	5.7%	24.7%
G21	Family	4.4%	8.8%

In examining the cause of the higher non-response rate for the outstanding balance, an indicator was constructed and set to 1 when an individual had submitted a non-response to any of the outstanding balance questions but had indicated that they had that type of debt, and 0 otherwise. This was then regressed against a set of variables including race, gender, age, education and income quintile. As would be expected with a question requiring recall, age was significant and increased the probability of such a non response. In terms of race there was a significant difference only between African and Coloured respondents, with the latter having a higher probability of such non-response. Interestingly, the probability of non-response on the balance increased with the associated income quintile and with the highest education attained. This may have been a result of individuals in higher income segments having more complex financial instrument facilities and thus struggling to recall the exact amount outstanding in a specific category of debt.

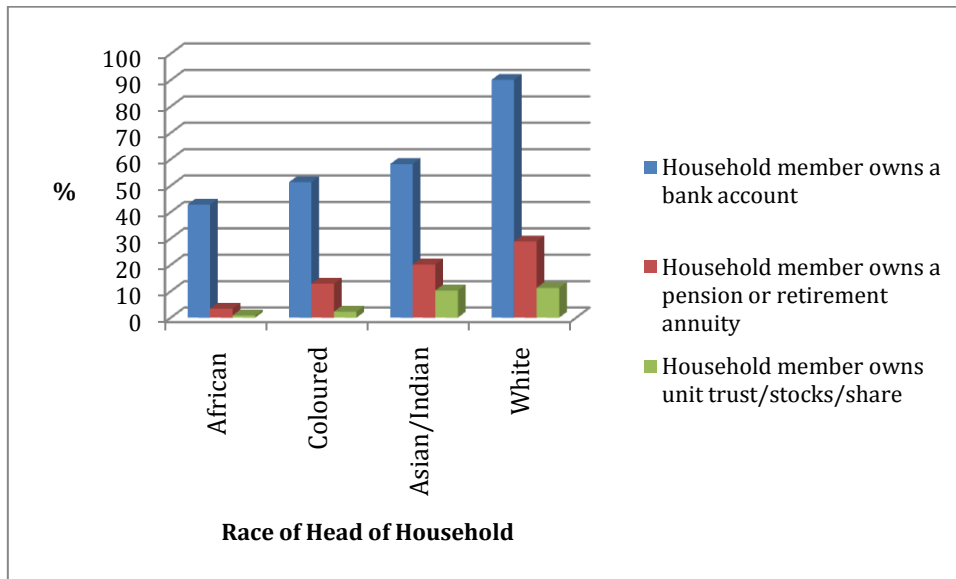
3. Financial Access

In South Africa most of the available data on debt and financial access is available at the level of households. This is not the case in NIDS which asked these questions of each adult that was interviewed. As a result, comparing the NIDS data to other sources requires the aggregation of individual responses about debt to the household level. This presents some difficulties. For instance, there is no debt data on the proxy questionnaire, which means that household level information may be under-reported by a simple addition of the adult level debt. At the same time households jointly run may have double reported some types of debts. (e.g. a mother and father both putting X amount as their “personal” debt on an outstanding bond).

Notwithstanding these difficulties we felt that it would be interesting to assess to see whether the general trends in the data are commensurable to those found in other sources. The rest of this report makes use of this aggregated, ‘household’ data from NIDS.

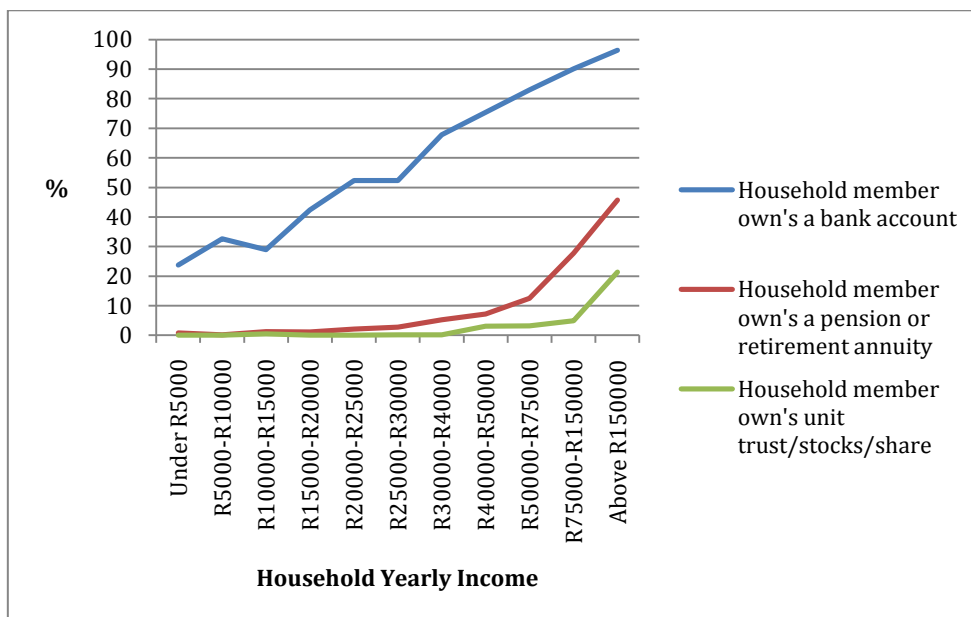
Questions G22-G24 ask respondents whether they currently possess, respectively, a bank account, a pension or retirement annuity or unit trust, stocks and shares. Using these questions, we can generate the relative proportion of households that have at least one household member with access to the relevant financial instrument. Ardington *et al* (2003) find that there is variation across the races in terms of access to such instruments with Whites having far higher access to formal bank savings (73 per cent) than Africans (33 per cent). This difference is also stark for investments (28 per cent compared to 3 per cent) and private pensions (76 per cent compared to 28 per cent). As can be seen in Figure 1, similar trends are present in the NIDS data with 90% of White households having access to a bank account whilst only 43% of African households do. Furthermore a greater proportion of White households have private pensions and investments than black households. That said, the proportions observed in the NIDS data for White pensions and investments, 29% and 11% respectively, are significantly lower than those observed by Ardington *et al* (2003).

Figure 1: Proportion of households with access to financial instruments by race



Ardington et al (2003) find that access to formal bank savings rises from 9 per cent in the lowest income decile to around 80 per cent in the top decile. Figure 2 shows that the distribution of financial access across the income spectrum in NIDS presents a very similar picture. Given that the NIDS wave 1 sample is taken 8 years after that used in the Ardington et al study it would seem to be in line with expectations that these figures are slightly higher for the NIDS data. The NIDS data imply, in addition, that access to pensions and private investments is still very low for households below the R40000/annum mark.

Figure 2: Proportion of households with access to financial instruments by income



3. Indebtedness

Questions G11-G21 ask each adult whether they hold loans from a variety of sources, vehicle finance, a credit card, a store card or a hire purchase agreement. A household which had a member who answered yes to any of these items is considered to be positively indebted. Figure 3 displays the proportion of positively indebted households as found in the NIDS and the 2000 and 2005/6 Income and Expenditure Surveys. As expected, the proportion of such households in the NIDS data rises with income category. The proportions of positively indebted households for those in the R40000+ yearly income categories are very similar to the 2005 IES proportions and are higher than those for the 2000 IES which would be expected given the growth in household sector debt that has occurred since then (Daniels; 2003). That said, for households under R40000 per year the NIDS proportions are lower than those found by Daniels in the 2000 IES data and significantly below those in the 2005 IES. This could indicate some under-reporting of debt in the lower section of the income spectrum.

Figure 3: Proportion of indebted households by yearly income

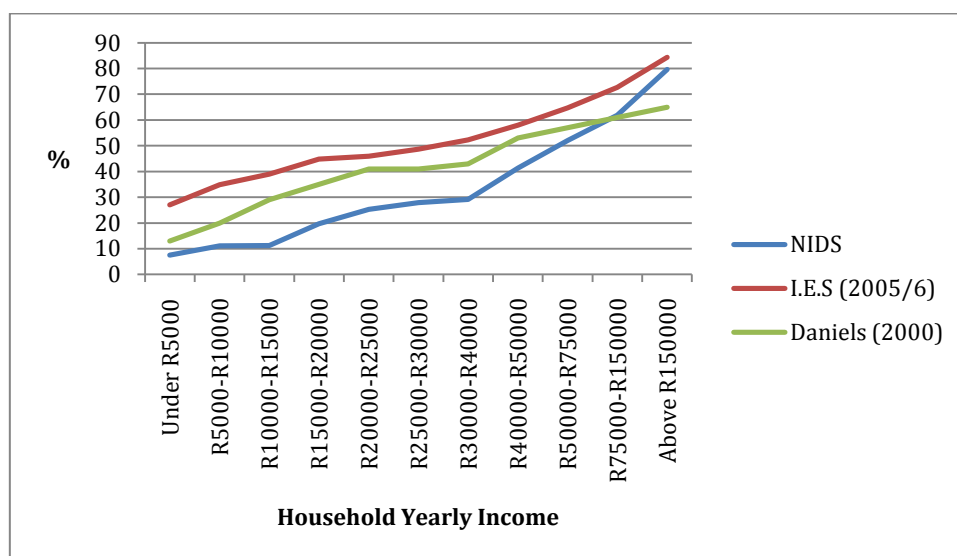
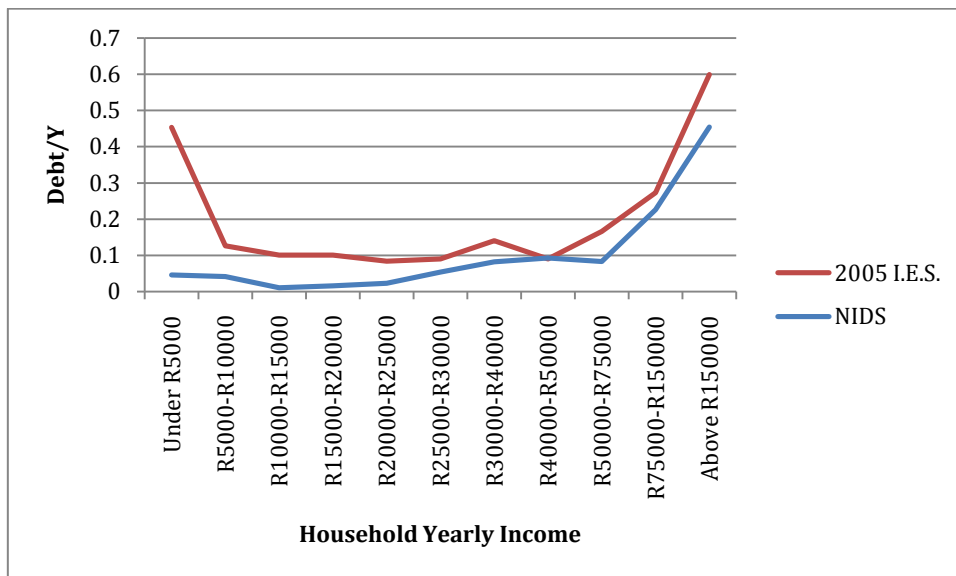


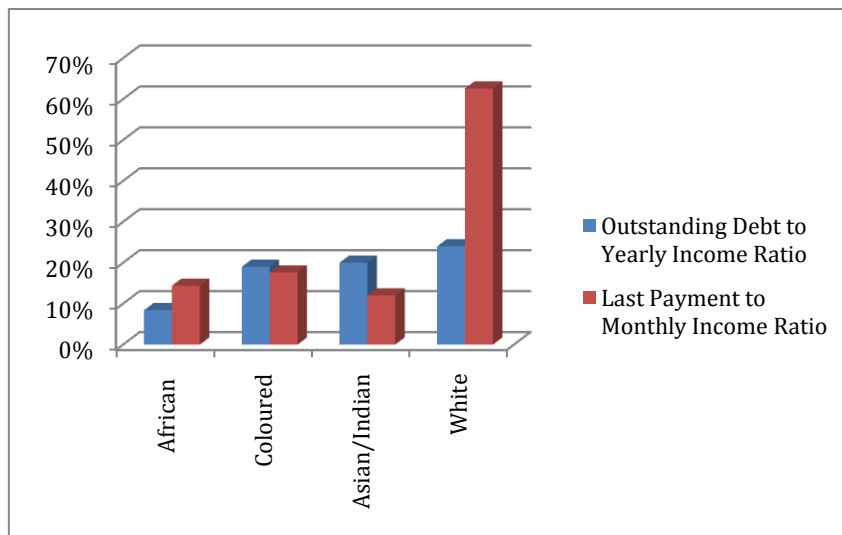
Figure 4 below plots the mean Total Outstanding Debt/Yearly Income Ratios for the NIDS and the 2005 IES. The shape of the curves are remarkably similar. That said, the debt/income ratio is lower for all categories and especially for the lower income categories for NIDS compared to the 2005 IES. This seems to be in line with the general observation made earlier that indebtedness was not as frequent in lower income households in the NIDS data as it was in other data.

Figure 4: Mean outstanding debt/yearly income ratios by yearly income



A unique attribute of the NIDS data set is that it provides information on both the outstanding balance of loans as well as the last monthly payment that respondents made. The latter is particularly useful when we are attempting to determine the propensity for households to default on their debt as the level of debt becomes unsustainable when monthly payments consume a substantive proportion of household monthly income.

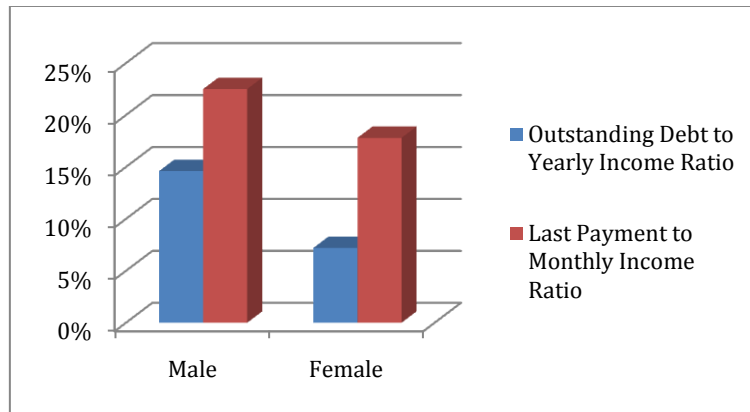
Figure 5: Total outstanding debt/yearly income & monthly payment/income by race



These data are presented in Figure 5. The examination of mean outstanding balance to yearly income shows that Africans have the lowest mean level of indebtedness of 8.5%. The Coloured, Indian/Asian and White are all significantly higher means at 19%, 20% and 24% respectively. It is important, however, to note that this measure of indebtedness is subject to bias arising from the term structure of the debt as some respondents are near the beginning of the term of the

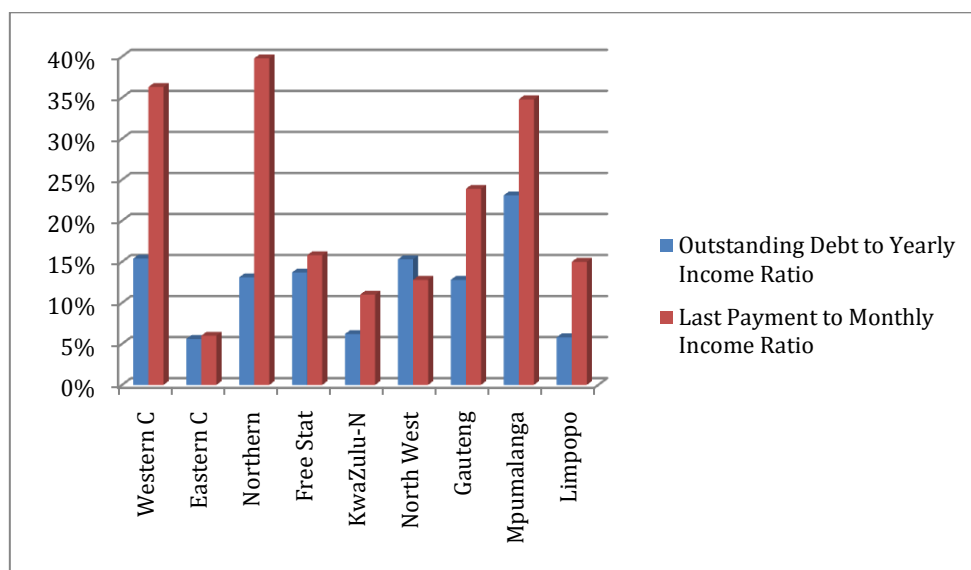
loans when compared to other respondents. This would mean that whilst over-time their total debt/income levels may be lower, this cross-sectional analysis would attribute a higher level of debt to their race category. The ratio of the last monthly payment to monthly income is slightly less susceptible to this bias. On this indicator Africans still have the lowest levels of debt obligation, whilst White debt service obligation relative to income is now by far the highest at 62.6%.

Figure 6: Total outstanding debt/yearly income & monthly payment/income by gender



In Figure 6 we examine these same indicators by the gender of the head of the household. It can be seen that male-headed households have both a higher outstanding balance to yearly income ratio and last payment to monthly income ratio. This trend is apparent in the 2005 IES data too and would seem to be indicative of the greater access to credit that male headed households still enjoy in the financial markets.

Figure 7: Total outstanding debt/yearly income & monthly payment/income by province



Finally, Figure 7 shows marked geographical variation in the levels of indebtedness. Whilst we expect households in metropolitan centers like Gauteng to have the greatest absolute value of debt, when it comes to outstanding debt relative to yearly income households in Mpumalanga, Free State, Northern Cape & Western Cape actually have the highest values. This pattern is amplified when we examine the monthly debt payments as a percentage of monthly income with the mean for the Northern Cape being 39.8%. The driver of these higher ratios is presumably the low incomes of respondents in these regions (as opposed to inordinately large debt levels). If that is the case then it stands as a reminder that the class of debt stressed individuals is not completely comprised of the higher income earners but also includes those who resort to the use of debt as a survival strategy in the face of poverty.

4. Equity

Another strength of the NIDS data is that it is one of the few datasets that contains information on both debt and the household assets that the debt may be used to finance. Whilst debt/income ratios are useful in a preliminary analysis of the position of households, a more probing assessment of debt requires an examination of what debt is actually being used for. If households for example have high-levels of indebtedness, but this is coupled with the accumulation of assets, then household equity (assets -liability) and hence wealth, is actually being increased by the utilization of debt and this is likely to have to have positive effects on the rest of the economy. If, on the other hand, debt is merely being used to finance consumption then the question of whether the debt burden is sustainable becomes highly pertinent.

Figure 8: Mean household equity by income category

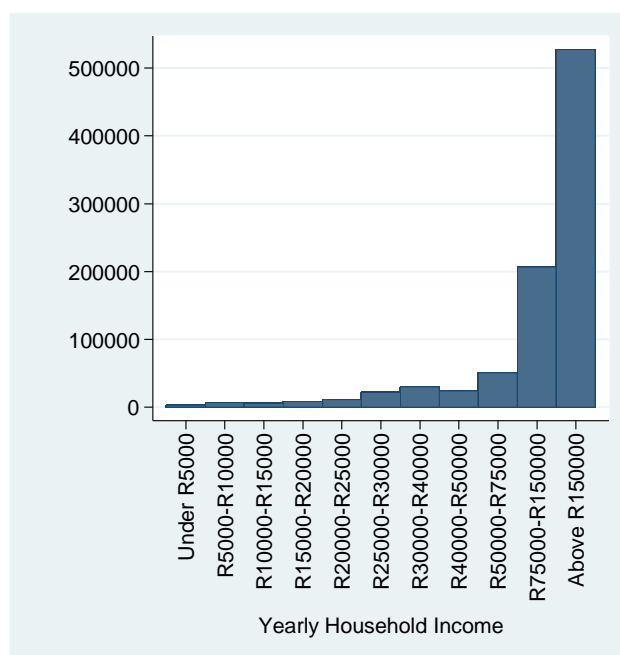
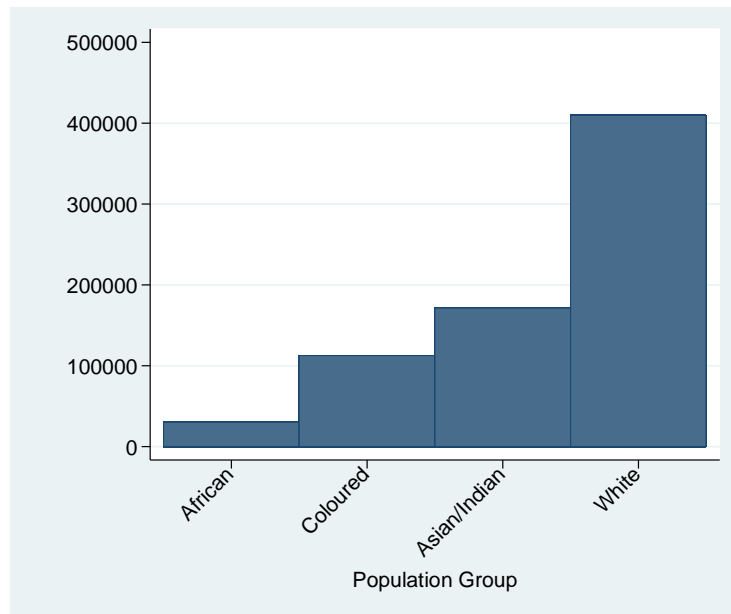


Figure 8 graphs the (weighted) mean of equity across household income categories. The equity figure was generated by subtracting the value of household debt from the value of household assets (obtained from section G Part 1 and the value of the household dwelling where respondents were homeowners). It is encouraging to note that the mean figure is positive across the income spectrum. This would seem to imply that even if households are debt stressed on a cash flow basis, they have sufficient assets to liquidate their positions if their income proves insufficient for servicing the debt. That said, the substantive increase in equity in the last 3 income categories would seem to indicate that it is still the rich that are best able to access and use debt for the purpose of generating wealth.

Figure 9: Mean Household Equity by Race



The differential usage of debt is further evidenced when we examine the variation of equity across race in Figure 9. African respondents with a mean household equity level of just over R30 000 are lagging far behind White respondents with a mean household equity of just over R409 000. Given that 4% of African respondents as opposed to 26% of White respondents stated that they had a bond, it would seem that a significant avenue through which this differential in equity arises is through the differential access to and use of housing finance. If this is the case, and the bulk of debt being accrued by Africans and those in the lower segment of the income spectrum is not being used for the purposes of accumulating assets, then the debt position for these households is particularly problematic for their livelihoods in the medium to long run. More generally, it seems that these segmentations in the national debt position suggest differential policy responses.

References

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