Evaluating South African savings data from the Income and Expenditure Surveys (IES 1995 to IES 2010/11)

Adel Bosch

Part of PhD research

Supervisor:

Prof Steve Koch

University of Pretoria

ESSA conference September 2015

1. Introduction

Before the Great Recession (2007 – 2009) world economies were very alarmed about low and falling household savings ratios and a large part of literature studies were devoted to understanding the dynamics behind household's savings decisions. The problem with low and falling savings ratios is that it directly impacts on a country's growth potential as it impacts on national income over time. In an economy with low savings ratios, households are spending a high portion of their income which could result in improved living standards in the short-run. The trade-off is that there are fewer funds available to invest in economic infrastructure which will negatively impact economic growth in the medium to long term. This concern often results in Government's implementing tax breaks or other innovative policies in an attempt to increase savings.

Many factors such as income, expected income, wealth, investment in durable goods, changes in the variability of inflation, return on capital, fiscal factors, demographic factors as well as psychological, cultural and social factors impacts on the savings decision of households (Montgomery (1986)). Summers and Carroll (1987) identified informal factors that motivate savings behaviour. These were provisions for old age, possibility of 'rainy days', saving for a big item, and the desire to leave inheritances. A recent UK study also found that households' planning to save was motivated by reducing existing debt (Bunn and Rostom (2013)).

Household savings can be seen as the portion of disposable income that is not spent on consumption, but that is allocated to future spending. Savings are typically measured in the National Accounts of some countries through household surveys. These methods can differ widely in terms of the savings outcome, mainly due to, amongst others, their composition and aim of use. The benefit of using micro data is that it allows for a better understanding of savings behaviour and decision making by households, which often gets lost in the aggregated data. However, to enable users of savings information to clearly understand the concept and compilation of savings at both a macro and micro data level, there is a need for well documented definitions and methodology.

As there are many factors that can determine whether a household or a nation saves or not, it becomes important to understand whether savings data and savings ratios are merely the outcome of a general statistical methodology or residual (as in the National Accounts of most countries) or if it is possible to identify the drivers behind the data. As savings are often calculated as a residual item between disposable income and expenditure in the National Accounts, answering this question requires a thorough understanding of the System of National Accounts (SNA), specifically the composition of disposable income and expenditure as there are items in both, which if reallocated, could result in a more accurate savings profile of a country. See Orthofer (2015) for a detailed discussion on National Accounts saving concepts in South Africa.

To get a better understanding of the drivers of savings, many economists have turned to microeconomic surveys as an alternative to the National Accounts. The primary use of the Income and Expenditure Survey conducted by Statistics South Africa (Stats SA) is to survey information on household's consumption behaviour. However, the survey also collects additional information such as household and individual incomes and savings.

The general aim of this study is to make use of the IES 1995, 2000, 2005 and 2010 to analyse households' savings behaviour. The first approach will be to compare the savings questions in each round of questionnaires. Second, the trends in savings levels will be discussed, together with data challenges. Third, different savings definitions and ratio's will be applied.

2. The importance of household savings

Savings are important for both households, and a nation as a whole, as they provide the resources for future projects (Garner, 2006). Savings can therefore be broadly defined as consumption that is postponed for the future. The reasons for postponing consumption are broad. According to Garner (2006) households can save some of their current income for future expenditure such as vacations, or for retirement. Households may also save to insure themselves against unexpected layoffs, illness or loss of household income. Households

typically invest their savings in financial assets, such as bank accounts or mutual funds, or build equity in a real asset such as purchasing a house. Personal savings also contribute to investment for a nation as whole. Investments in financial assets through the intermediary actions of the financial sector are used for productive investments in factories, industrial machinery and other capital. When capital increase, the ability to produce more goods and services in the future increases, which will raise productivity and wage income. Much of the concern about the low personal savings rate in the US is the pressure that the ageing population will place on the nation's healthcare and retirement systems. When households fail to save sufficiently they will not have funds to cover future big expenses, and/or they will struggle financially during retirement. And, similar to the US, this will place more pressure on government.

According to David Bunting (1991), personal savings as a percentage of private income has declined to unprecedented levels in modern times. Montgomery (1986) found that changes in current income relative to permanent or expected income, increases in the wealth/income ratios, increases in investment in durables, changes in the variability of inflation, and demographic shifts. Summers and Carroll (1987) looked at the informal factors representing the 'primary motivations of savings', such as provisions for old age, possibility of 'rainy days' the desire for 'big-ticket' items, and the desire to leave bequests; and concluded that given all these, the downward trend in savings is impossible.

Bosworth, et al. (1991) suggest that microeconomic surveys offer an alternative to the National Income Accounts in assessing trends in the consumption patterns and saving behaviour of households. In the efforts to explain aggregate savings, the important fact that savings behaviour originates at the household level is often missed.

Attanasio (1998) argues that the behavior of conceptually different definitions of savings is important to understand the dynamics of aggregate savings. Some use the ratio of savings to consumption such as Attanasio, 1998 and Scobie and Gibson, 2003. The authors calculate savings as the residual between income and expenditure.

Scobie and Gibson (2003), Gibson and Scobie (2001) and Attanasio (1998) make use of different savings definitions, using information from the New Zealand Household Economic Survey. Scobie and Gibson (2003) remove from consumption expenditure the purchases of durable goods; expenses on education, medicine-, life- and health insurance; and repayments of mortgage principal and contributions to savings. As the survey does not have actual questions on savings, the measure of savings is derived from the income and consumption information in the survey. While Attanasio (1998) constructs a measure for saving, in which spending on durable goods, education and health are excluded from expenditure. Attanasio (1998) also makes use of other measures of consumption such as in which spending on education, health and mortgage payments are excluded from expenditure. Income is defined as total after tax family income in the twelve months preceding the interview. Income refers to earnings, transfers, capital income and pensions net of all income taxes including social security contributions. Savings are then calculated as disposable income net of social security contributions minus consumption. The treatment of social security is debatable: contributions could be considered either as savings or as taxes. Attanasio (1998) treated them as taxes, arguing that they are not voluntary. For the South African case, contributions are included in the reported savings definition.

Ceritoglu (2011) uses two different household savings definitions. The first definition is the residual between household disposable income and consumption expenditure. The second definition is the difference between household disposable income and consumption expenditures, but in this case selected durable goods are included under savings as durable goods are generally considered under savings in the economic literature. These durable goods are home appliances, medical equipment, consumer electronics, new and second-hand automobile purchases and jewellery and watches for personal consumption.

Alvarez-Cuadrado and El-Attar (2012) makes use of the Panel Study of Income Dynamics (PSID), the Survey of Consumer Finances (SCF), and the Consumer Expenditure Survey (CEX) to analyse savings and income as well as households comparison to other households'

income. Amongst other things, savings measures include realised and unrealised capital gains on housing, other real estate, financial assets and owned businesses. Second, they add estimates of savings through social security and private pensions to the change in wealth to obtain their most comprehensive measure of savings. Finally they compute a measure of active savings as the difference between income exclusive of capital gains and consumption. The results showed find that saving rates increase in permanent income, while saving decreases in the lifetime income when comparing interpersonal incomes of the reference group, as in the relative income hypothesis. The authors find that a negative effect of the reference income on saving rates is stronger for low-income households.

3. Savings questions in the IES 1995, 2000, 2005 and 2010

The Income and Expenditure Survey (IES) conducted by Statistics South Africa (Stats SA) is used mainly to survey information on household's consumption behaviour. This information plays an important role in determining the baskets of goods for the Consumer price index weights. However, the survey also surveys additional information such as household and individual incomes and savings. Over the different surveys, the questions have changed over time as survey methodologies are updated and more aligned with international best practice. Yu (2008) compiled a full comparison of the differences between the 1995, 2000 and 2005 surveys. Table 1 briefly summarises the differences in the methodology and survey method of each of the IES surveys. The IES 1995 and 2000 consisted of one main questionnaire and one visit. Households therefore relied on recall to complete the questionnaires. In 2005/06 Statistics South Africa introduced the diary method. Apart from the main questionnaire, households had to complete four weekly diaries, and were interviewed five times. For the 2010/2011 IES, households were interviewed a week before the survey period, after which they were interviewed twice while completing the two week diaries, and the last interview took place a week after the diaries were completed.

Two further important changes were the move from recall to diary survey method, as well the change from the Standard Trade Classification to the Classification of Individual Consumption According to Purpose (COICOP). The impact of the diary method on the result can be positive and negative. Although the diary method lessens the reliance on the

respondents' memory, it does pose a risk to households who are not literate. Furthermore, the length of the period of diary reporting can be anything from two weeks to one month in some countries, resulting in household fatigue, especially in the second week of a two week diary. With the recall method respondents often over-estimate expenditure as they erroneously include expenditures that occurred before the specified recall period in their responses (Browning, Crossley, and Winter, 2014). Furthermore, according to Pettersson (2005) experiences from income and expenditure surveys show that there are 'conceptual and practical difficulties' when income is measured in household surveys. These difficulties often lead to estimates of income from household surveys being substantially lower than estimates of consumption. This difference can be so significant, that it becomes difficult to explain the difference by savings.

Table 2 summarises the savings questions from the IES 1995, 2000, 2005/06 and 2010/11. In the 1995 IES, the question on service for improvements, additions and alterations as well as security systems are grouped together, where they are separated in later surveys. The IES 1995 also does not include a category for labour and material for improvements, additions and alterations, which are included in the 2000, 2005/06 and 2010/2011 surveys. Where the 2000, 2005/06 and 2010/11 surveys have cost of other dwellings, the 1995 survey only asks about net expenses incurred as owner of a holiday home. Purchase of timeshare and levy on timeshare were not available in the 1995 IES.

In the 1995 survey shares and unit trusts are not split into listed company shares and unlisted company shares. In the 2010/2011 survey this category was excluded altogether. In 1995 the category for investment plans was also collapsed, whereas in the 2000 and 2005/06 survey it is divided into Investment plans and offshore. In 2010/11 the category was excluded. The categories for deposits into savings and withdrawals from savings were also excluded in the 2010/11 IES survey.

Table 3 reports the means and shares of the savings questions in the different IES surveys. The data are weighted, and deflated with the headline consumer price index (CPI) to March 2011 as to make them comparable to the IES 2010/2011. Average savings were much higher

in 2000 and 2005/06 compared to 1995 and 2010/11. In terms of the largest share of savings, these differ by IES. In 1995, the largest share of savings was monthly capital payments (16,9%), followed by savings in life and endowment policies (15,6%). In the 2000 IES, 66,8 per cent of households savings were in the category capital payments, followed by deposits into savings (9,2%).

In 2005/06, households reported 25,9 per cent of savings in deposits into savings accounts, while 11,1 per cent of savings were in terms of monthly capital payments. In 2010/11 there was a large increase in the share of households who repaid loans and overdrafts. The share increased from single digit levels in the previous surveys to 25, 2 per cent (the highest share of savings) in the 2010/11 IES survey. This was followed by monthly capital payments (23,5%).

4. Defining alternative savings measures

The aim of this paper is to determine if the IES can be utilised to analyse household savings behaviour in South Africa. International literature suggests that savings behaviour differs between different age cohorts, and that savings behaviour is not homogenous between different groups. To test the robustness of the results, different definitions of savings were tested. Five different savings definitions were used:

1. Savings as provided by the respondents in the IES 1995, 2000, 2005/06 and 2010/11.
2. Disposable income less consumption expenditure (see Scobie and Gibson, 2003).
3. Disposable income less consumption expenditure (excluding expenditure on durable goods) (Scobie and Gibson, 2003).
4. Disposable income less consumption expenditure (excluding expenditure on durable goods, education, health and medical insurance (see Scobie and Gibson, 2003).
5. Disposable income less consumption expenditure (excluding expenditure on durable goods, education, health and medical insurance and mortgage payments (see Scobie and Gibson, 2003).

Durable goods are defined according to the United Nations Statistics Division Classification of Individual Consumption According to Purpose (COICOP). Durable items where identified

based on their classification according to purpose. Durables goods were separated from non-durables goods item-by-item, according to the above classification. These items were:

- Housing, water, electricity and other fuels:
  Durable goods are classified as: Furniture and furnishings, carpet and other floor covering, major household appliances, whether electric or not and major tools and equipment. (See UN COICOP classification).
- Health:
  Durable goods are classified as: Therapeutic appliances and equipment.
- Transport:
  Durable goods are classified as: Motor cars, motor cycles, bicycles and animal drawn vehicles.
- Communication:
  Durable goods are classified as: Telephone and telefax equipment.
- Recreation and culture:
  Durable goods are classified as: Equipment for the reception and reproduction of sound and pictures, photographic and cinematographic equipment and optical instruments, information processing equipment, major durables for outdoor recreation and musical instruments and major durables for indoor recreation.
- Miscellaneous goods and services:
  Durable goods are classified as jewellery, clocks and watches.

Disposable income was calculated in the 1995, 2000 and 2005/06 IES as income (total income, including income from work, grants and other allowances) net from tax and unemployment insurance fund contributions (UIF). While for the 2010/11 IES, Lustig and Higgins (2012) concluded that households reported net incomes, instead of gross income, therefore income is taken as net from taxes.

5. Results

Because the IES is a measure of CPI, and information from the various IES surveys are used for national accounts estimation, the shares of results from the IES are compared to that of

National accounts. Figure 1 reports the results in constant March 2011 prices for both the IES and the National accounts data. It is clear that in 2005/06 and 2010/11 the results from the IES and National Accounts are closer, as compared to the 1995 and 2000 surveys. What is clear from both sources of information is that savings has remained a small share of disposable income, for both reported savings and disposable income less expenditure. Furthermore, debt as a percentage of disposable income has increased across both sources of information.

Figure 2 reports the results for the different savings measures employed. Until IES 2005/06, disposable income less expenditure were less than reported savings, while in 2010/11, reported savings were below disposable income less expenditure. For all other definitions average savings improved. A similar pattern was observed when the average savings for all the definitions were expressed as a percentage of disposable income.

Figure 4 contains the result of household's savings ratios by income quintiles. Each savings definitions is expressed as a percentage of disposable income. In 1995, lower income quintiles showed a very small savings ratio (across all definitions), while in IES 2000 – 2010/11, showed more similar trends. Reported savings were higher in income quintile one and two, compared to the other measures, while in quintile 4 and 5 the IES 2000 seems to show large increases in reported savings and savings less consumption (excluding expenditure on durable goods, education, health and medical insurance and mortgage payments). The largest part of savings in 2000 was capital payments on mortgages. When this item was removed from expenditure, savings increased significantly for the higher income quintiles as they were more likely to have home ownership.

When looking at the bottom quintile (figure 5), real savings decreased between 1995 and 2010, while real expenditure increased. Real disposable income decreased, which likely resulted in the increased debt that is observed in 2010/11. In the highest income quintile (figure 6), expenditure decreased between 1995 and 2010/2011, while disposable income and debt increased.

In 2000 there was 67 per cent home ownership for highest income quintile. When looking at representation, 37 per cent were African and 45 per cent were white in this income quintile. When analysing the increase in 2000 in capital payments, the results show that payments of capital were not restricted to a certain population group, however, it is discerning that capital payments decreased in the 2010/11 survey and even more so for African and Indian headed households (see figure 7).

Figure 8 to figure 11 shows the means, median, 25th and 99th percentile for each variable: i.e. disposable income, debt, savings and expenditure for each survey period. When comparing the means of the different survey years by age group, the hump shape in savings is consistent with the life cycle hypothesis (Scobie and Gibson, 2003). Debt and expenditure, and savings increase during the 30–54 year age group, before declining in the retirement period. However, in 2000 IES, there is a very observant spike in debt in the 45–49 year old age group. There is also a transition from 1995 to 2000, as during the 1995 survey debt was higher than expenditure in the early years from about age 40, after which debt fell below expenditure and equals income in the retirement years. Reported savings were however positive throughout the age spectrum. In 2000, however, expenditure was higher than debt across all age groups. Debt and savings levels were also more or less the same.

Debt again increased above disposable income during the early work years in the 2005/06 IES, and starts to decline after 45 years. In 2010/11 there is a sharper increase in the debt levels, and only from about 50 years does debt decline to below disposable income.

Table 4 shows that debt to disposable income has increased significantly in the bottom income quintile from 0,8 per cent of disposable income in 1995, to 43 per cent in 2005/06 and marginally down to 24,7 per cent in 2010/11. For poor households, having to service debt costs of around 30 per cent of disposable income is alarming. It is unlikely that these low income levels households will have access to formal deb, suggesting that these households are likely exposed to other high-cost-loans.

6. Conclusion and future research

The aim of the paper was to compare saving question and results from the various IES survey rounds (1995, 2000, 2005/06 and 2010/11). The savings response categories changed over the different surveys, however it is possible to match the categories to some extent to derive an average total savings. The IES 1995 and 2000 surveys used similar survey methods and methodologies, while the 2005/06 and 2010/11 used similar survey methods and methodologies which were different to the previous two waves. Real IES aggregates from the different surveys were also compared to the National Account aggregates, and the results show that there is a better match between the 2005/06 and 2010/11 IES and the National Account real aggregates. However, most aggregates moved in the same direction in each period, except for income less expenditure.

After deflating all the surveys to March 2011, the results show that there is a large increase in capital payments in 2000 and 2005/06. This was investigated further, and it was found that these payments were in the top income quintile, and were not restricted to a specific population group. However, these payments decreased significantly in the next survey, as a larger portion of savings were allocated to the repayment of loans and overdrafts.

Different savings definitions were employed to test the robustness of savings rate aggregates from IES data. The results were very similar at the aggregate level, except for the definition where capital payments are excluded from expenditure. This could be due to remaining homeownership inequality in South Africa. In fact, when applying the different definition to income quintiles, the results look very different, and different savings definitions are at most robust in the bottom two income quintiles for the 2000, 2005/06 and 2010/11 surveys. The results also showed that savings rates were less negative in 1995, compared to the other surveys for the bottom two quintiles. There is an interesting increase in the savings rate of the top two income quintiles for the savings definition where mortgage payments are excluded from expenditure. This was especially true for IES 2000, where it was earlier identified that this group had large capital payments.

Lastly, the age profile of households' disposable income, debt and savings were analysed. The results of reported savings align with the hump shape suggested by the life cycle hypothesis. However, over time, the hump has become flatter as households of all age groups seem to be saving less. Households' debt has also been increasing over the different surveys as debt seems to only come down at around 60 years, instead of the previous 49 years. This could be due to households working longer and taking credit over longer term structures.

Future research includes making use of the National Income Dynamic (NIDS) Panel survey to evaluate and compare savings from IES to NIDS. This analysis will form the foundation for analysing the impact of income shocks on household consumption, debt and income.

7. References

Abdelkhalek, T., Arestoff, F., de Freitas, N. E. M., & Mage, S. (2009). A microeconometric analysis of households saving determinants in Morocco. The 1st GDRI DREEM Conference, Istanbul, 21-23 May 2009.

Alvarez-Cuadrado, F. & El-Attar, M., 2012. *Income Inequality and Saving*, Institute for the Study of Labor (IZA). Available at:https://ideas.repec.org/p/iza/izadps/dp7083.html[Accessed March 17, 2015].

Attanasio, O. (1998), "Cohort Analysis of Saving Behavior by US Households," Journal of

Belke, A., Dreger, C., and Ochmann, R. (2012). Do wealthier households save more: The impact of demographic factors.

Blades, D., and Sturm. P. H., The Concept and Measurement of Savings: The United States and Other Industrialized Countries, in Federal Reserve Bank of Boston (ed.), Saving and Goven~rnent Policj, (Proceedings of a Conference held at Melvin Village, New Hampshire, October 1982), Conference Series No. 25, pp. 1-30, Federal Reserve Bank of Boston, Boston, MA, 1982.

Bosworth, B., G. Burtless an J. Sabelhaus, The ecline in saving: evience from househol surveys. *Brookings Papers on Enomic Activity* 1: 183-256, 1991.

Browning, M., Crossley, T.F. & Winter, J., 2014. The Measurement of Household Consumption Expenditures.*Annual Review of Economics*, 6(1), pp.475–501. Available at:https://ideas.repec.org/a/anr/reveco/v6y2014p475-501.html [Accessed March 19, 2015].

Bunn, P. & Rostom, M., 2014. Household debt and spending. *Bank of England Quarterly Bulletin*, 54(3), pp.304–315. Available at:http://econpapers.repec.org/article/boeqbullt/0150.htm[Accessed February 20, 2015].

Bunting, D., 1991 "Savings and the Distribution of Income," Journal of Post Keynesian Economics, 14, 3–22, 1991.

Ceritoğlu, E., 2013. The impact of labour income risk on household saving decisions in Turkey. *Review of Economics of the Household*, 11(1), pp.109–129. Available

at:https://ideas.repec.org/a/kap/reveho/v11y2013i1p109-129.html[Accessed February 19, 2015].

Garner, Alan C. “Should the Decline in the Personal Saving Rate Be a Cause for Concern?” Federal Reserve Bank of Kansas City Economic Review, Second Quarter 2006, pp. 5-28.

Gibson, J. & Scobie, G., 2001. A cohort analysis of household income, consumption and saving. *New Zealand Economic Papers*, 35(2), pp.196–216. Available at:https://ideas.repec.org/a/taf/nzecpp/v35y2001i2p196-216.html[Accessed February 17, 2015].

Gibson, J. and G. Scobie, Household Saving Behaviour in New Zealand: A Cohort Analysis. Working Paper 01/18, New Zealand Treasury, http://www.treasury.govt.nz/workingpapers/2001/01-18.asp 2001.

Pettersson, H. (2205) Survey design and sample design in household budget surveys Division, U.N.S.,.*Household Surveys in Developing and Transition Countries*, United Nations Publications.

UNITED NATIONS STATISTICS: http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=5

Lustig, N. & Higgins, S., 2012. *Commitment to Equity Assessment (CEQ): Estimating the Incidence of Social Spending, Subsidies and Taxes Handbook*, Tulane University, Department of Economics. Available at:https://ideas.repec.org/p/tul/wpaper/1219.html [Accessed August 05, 2015].

Montgomery, E., 1986. Where Did All the Saving Go? A Look at the Recent Decline in the Personal Saving Rate.*Economic Inquiry*, 24(4), pp.681–697. Available at:http://onlinelibrary.wiley.com/doi/10.1111/j.1465-7295.1986.tb01842.x/abstract[Accessed February 18, 2015].

Orazio P. Attanasio, O. P, (1998). A Cohort Analysis of Saving Behavior by U.S. Households. *The Journal of Human Resources* Vol. 33, No. 3 (Summer, 1998) , pp. 575-609 Published by: University of Wisconsin Press Stable URL: http://www.jstor.org/stable/146334

Orthofer, A. (2015). What we talk about when we talk about savings: Concepts and measures of household savings and their application in South Africa. ERSA Working Paper no 530.

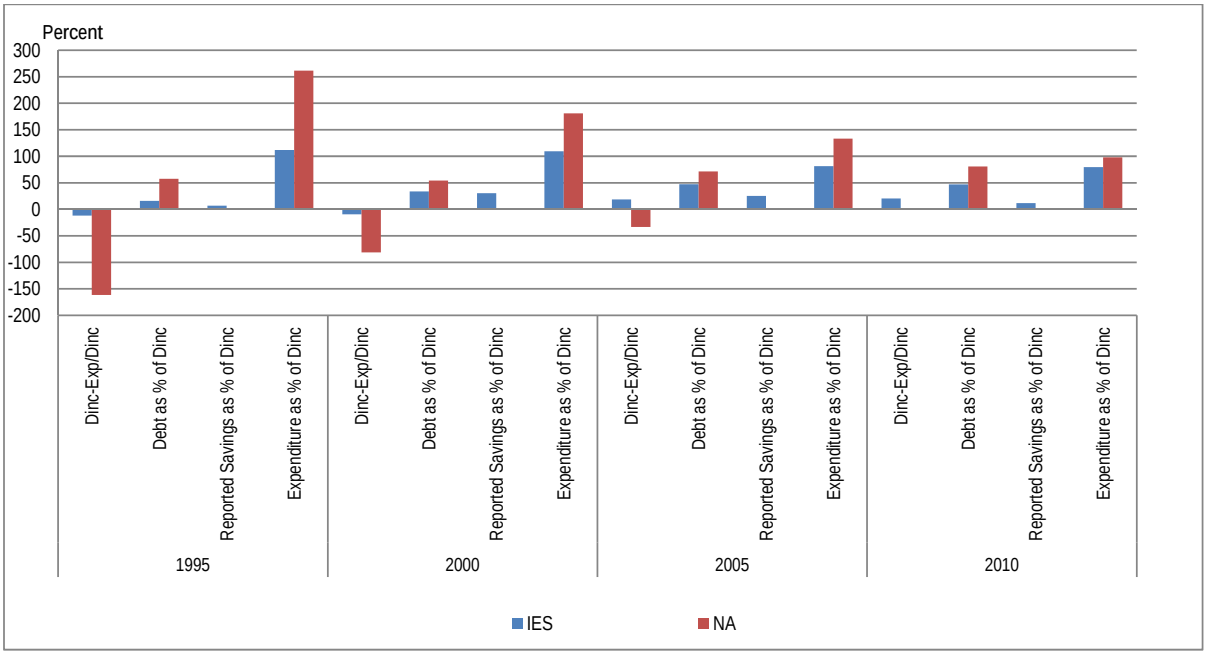
Paxson C.H., 2001, "Using Weather Variability to Estimate the Response of Savings to Transitoty Income in Thailand", The American Economic Review, Vol. 82, No. 1, pp. 15-33.

Scobie, Grant and John K Gibson (2003), "Household saving behaviour in New Zealand: why do cohorts behave differently?", Treasury Working Paper 03/02.

Summers, L. & Carroll, C., 1987. Why Is U.S. National Saving So Low? *Brookings Papers on Economic Activity*, 18(2), pp.607–642. Available at:https://ideas.repec.org/a/bin/bpeajo/v18y1987i1987-2p607-642.html [Accessed March 19, 2015].

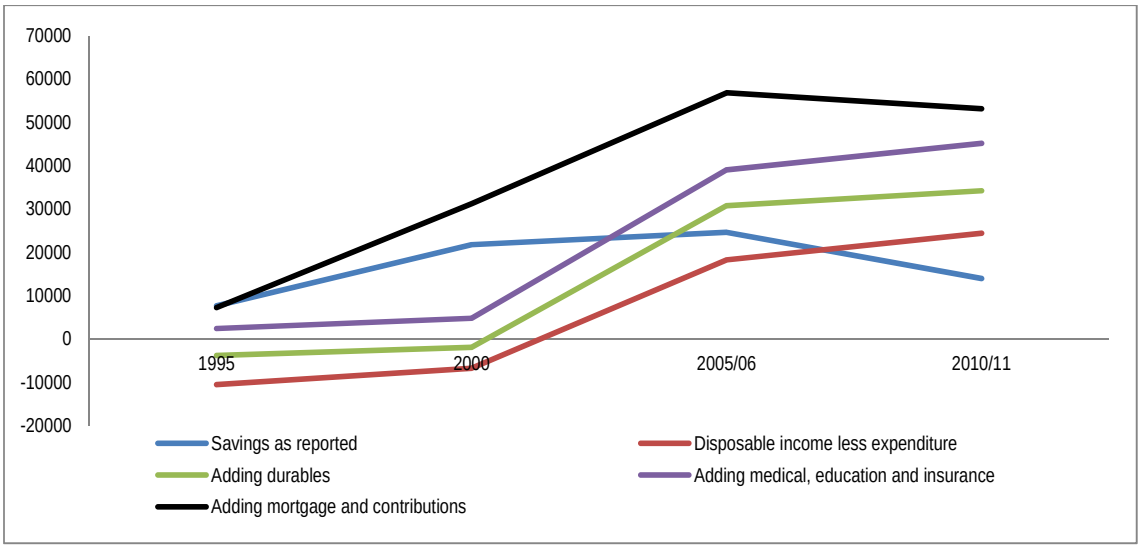
Yu, D., 2008. *The comparability of Income and Expenditure Surveys 1995, 2000 and 2005/2006*, Stellenbosch University, Department of Economics. Available at:https://ideas.repec.org/p/sza/wpaper/wpapers59.html [Accessed August 17, 2015].

Figure 1: Comparison between IES 1995 – 2010/11 and National accounts



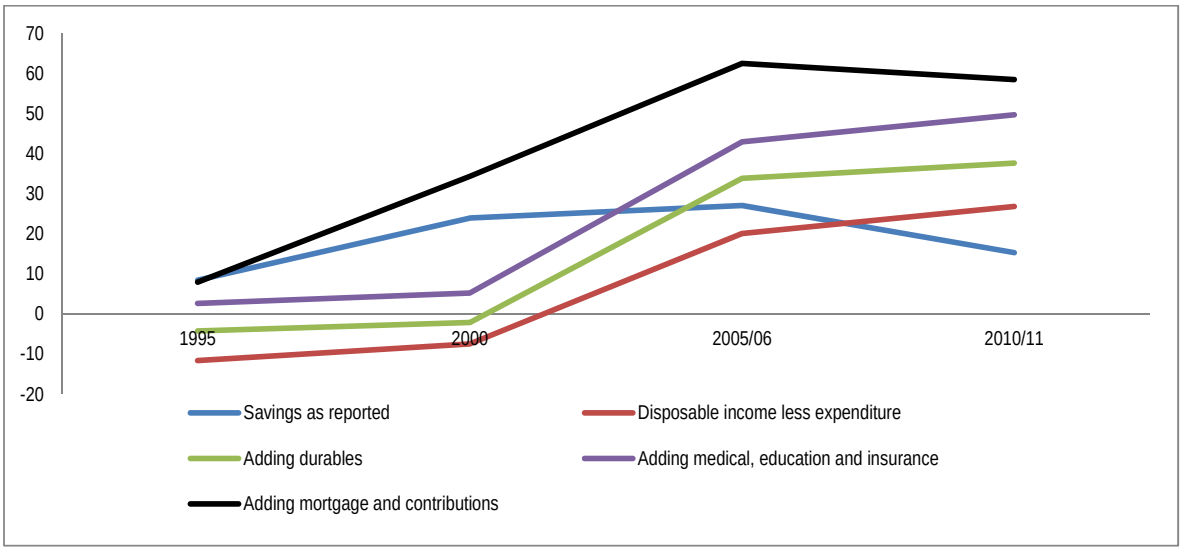
Source: IES 1995 -2010/11, own calculations and South African Reserve Bank: Quarterly Bulletin.

Figure 2: Average savings for IES 1995 – 2010/2011 according to different definitions



Source: IES 1995 -2010/11, Own calculations

Figure 3: Average savings as a percentage of disposable income for IES 1995 – 2010/2011 according to different definitions



Source: IES 1995 -2010/11, Own calculations

Figure 4: Savings ratio's according to different savings definitions

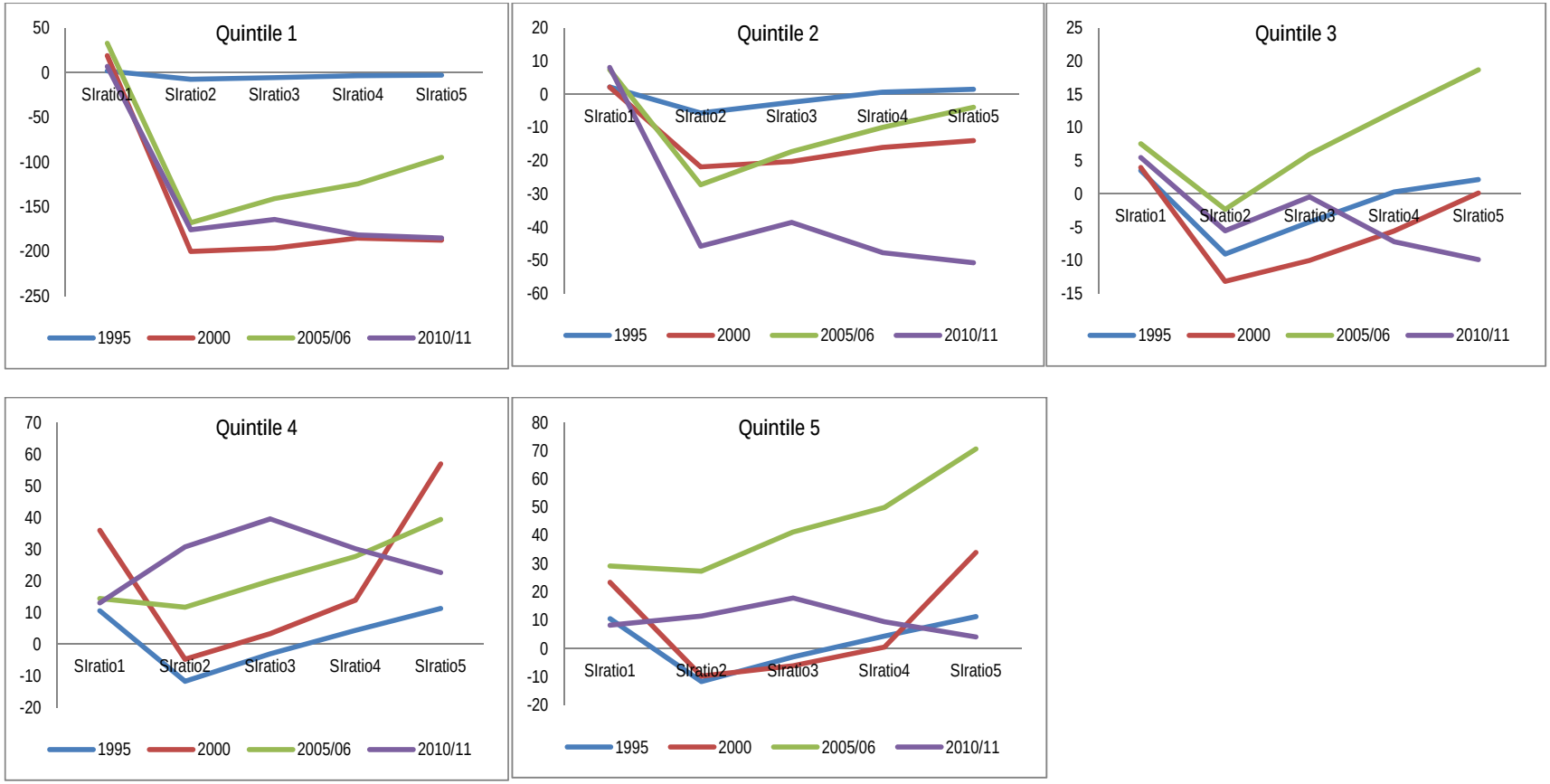


Figure 5: Mean savings, income, debt and expenditure of the bottom income quintile

Figure 6: Mean savings, income, debt and expenditure of the top income quintile

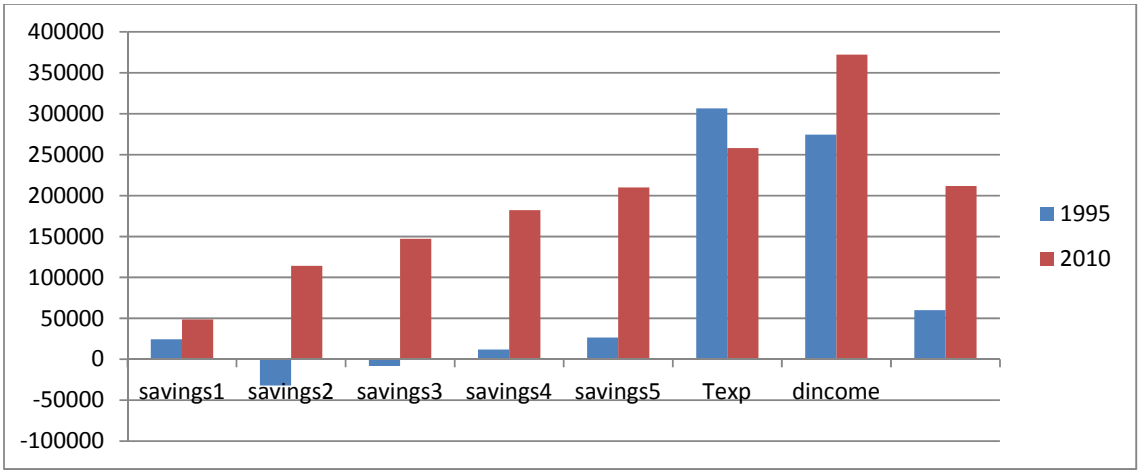


Figure 7: Mean capital payments in the top quintile by population group

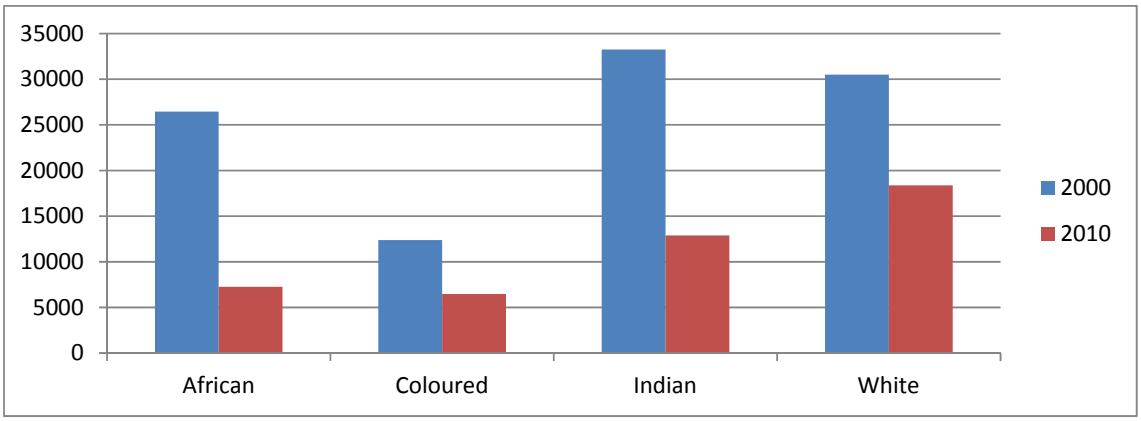


Figure 8: Age effects of Inomce, Consumption, debt and savings – IES 1995

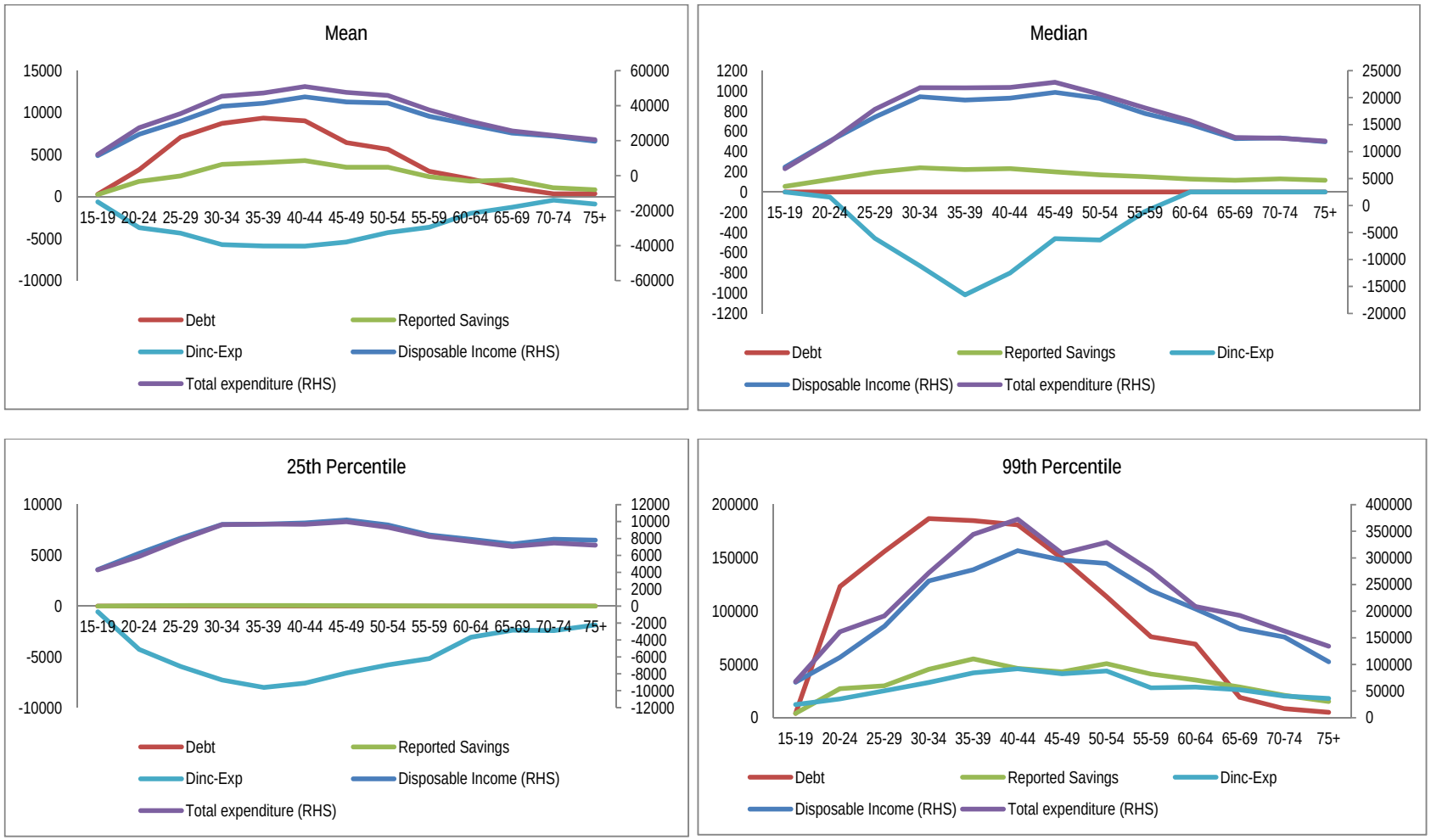


Figure 9: Age effects of Inomce, Consumption, debt and savings – IES 2000

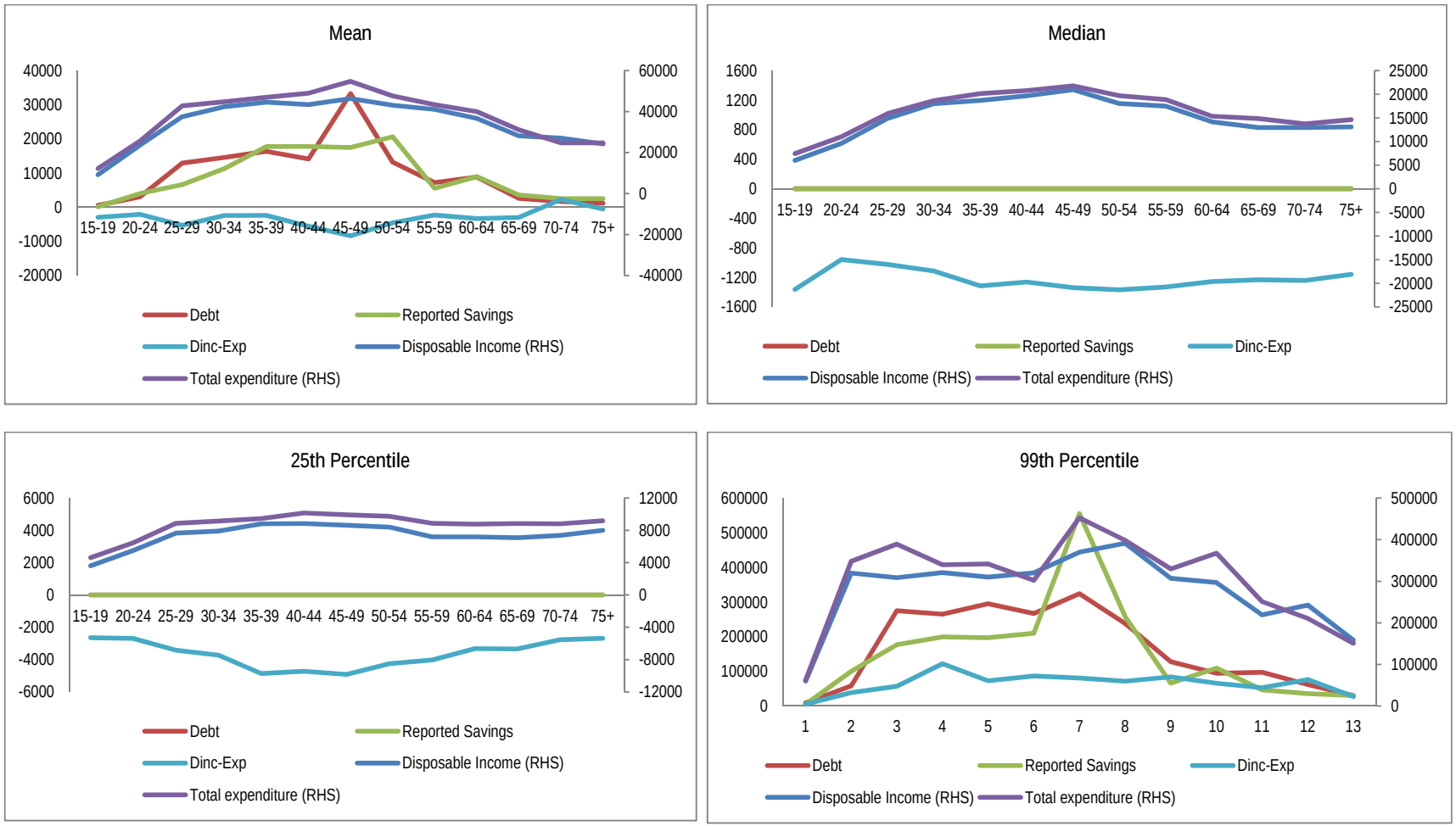


Figure 10: Age effects of Inomce, Consumption, debt and savings – IES 2005/06

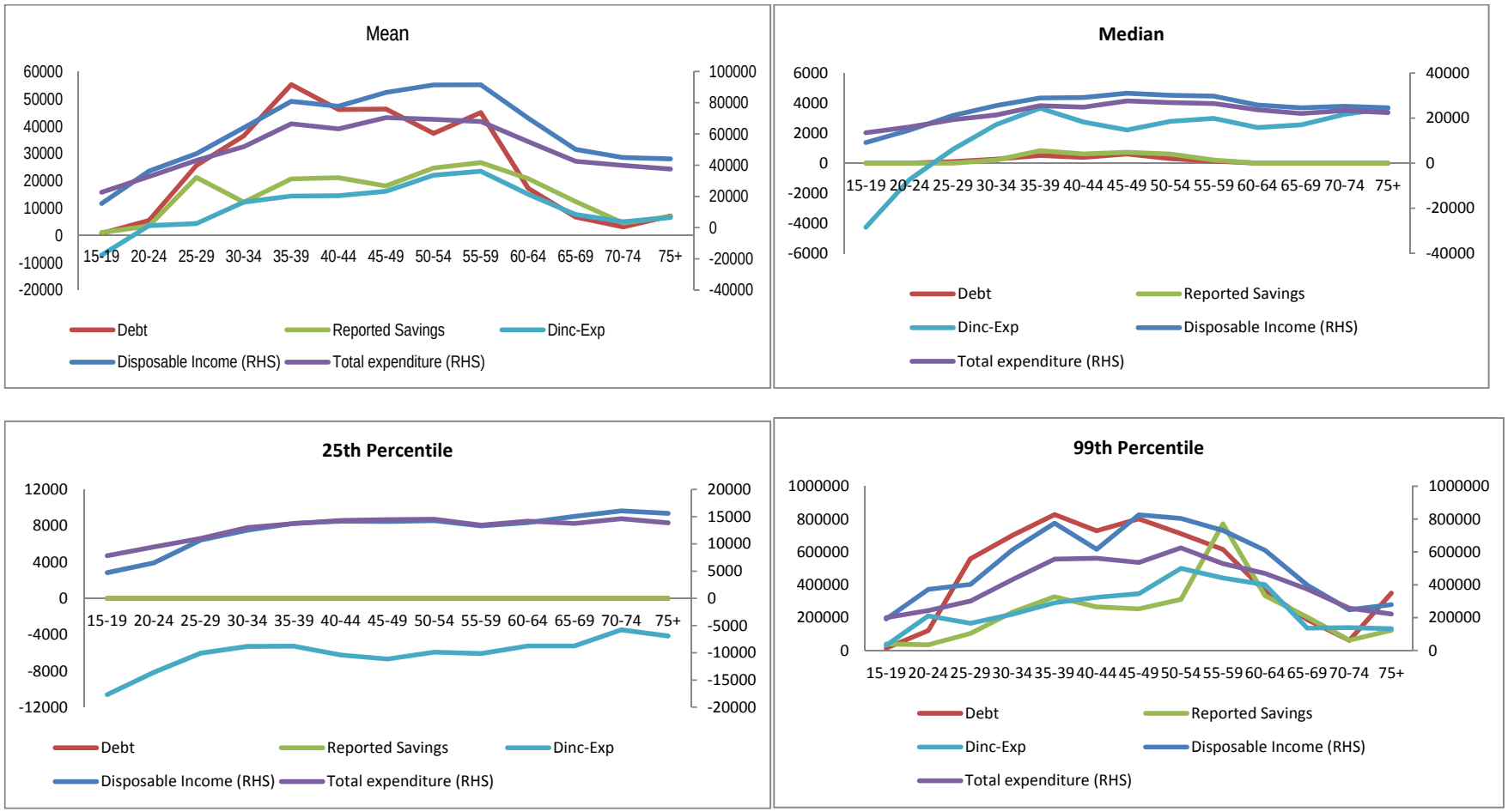
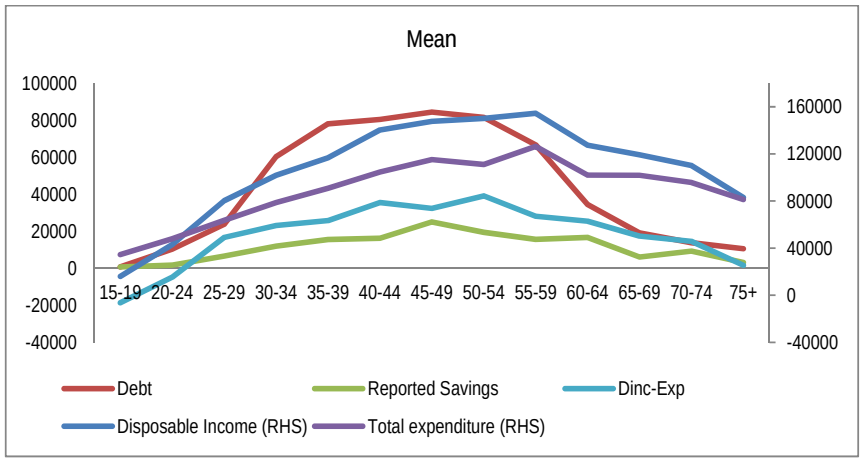
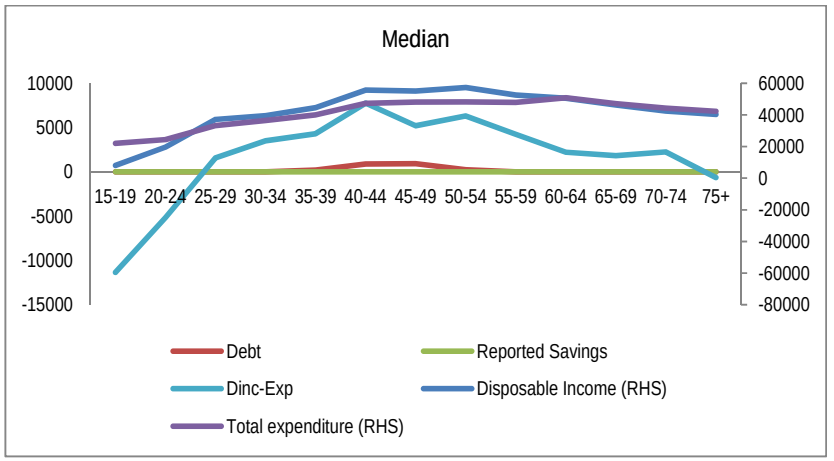
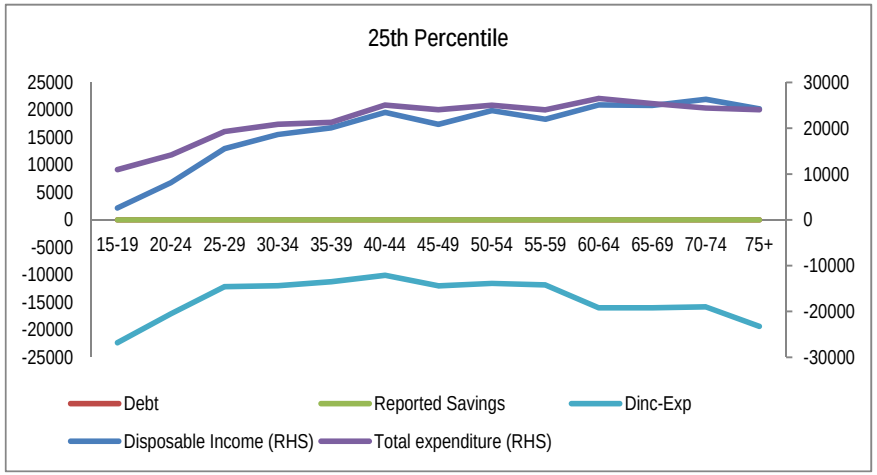


Figure 11: Age effects of Inomce, Consumption, debt and savings – IES 2010/11







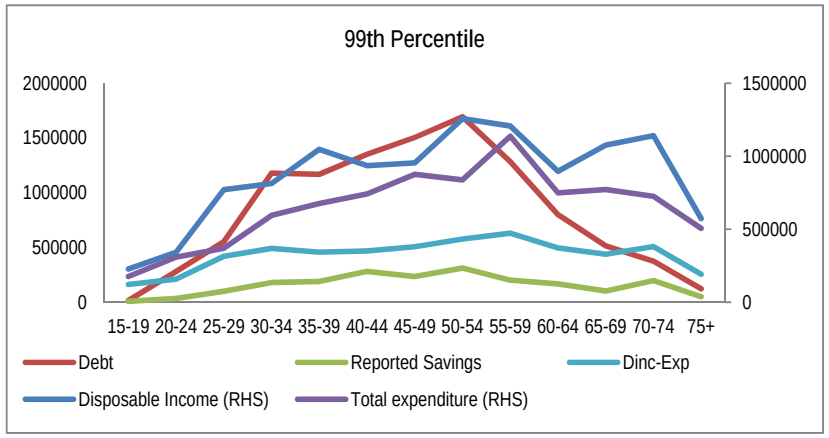


Table 1: Summary information on the IES 1995 – 2010/2011

	1995	**2000**	**2005/06**	**2010/11**
Sample size	29 582	26 263	21 144	26 328
Methodology	Recall	Recall	Diary and recall	Diary and recall
Semi-durable and durable goods	Payment approach and recall method	Payment approach and recall	Acquisition approach and recall and diary method	Acquisition approach and recall and diary method
Household questionnaire	One interview	One interview	Five interviews	Four interviews
Diaries	None	None	Four weekly diaries	Two weekly diaries
Classification of expenditure	Standard Trade classification	Standard Trade classification	COICOP (Classification of Individual Consumption According to Purpose)	COICOP(Classification of Individual Consumption According to Purpose)

Source: IES 1995-2010/2011, Yu (2008).

Table 2: Summary of savings question in IES 1995 – 2010/11

Question Number	1995	Question Number	2000	Question Number	2005	Question Number	2010
b07f020 +b07f021	Repair and maintenance of existing buildings, swimming pools, etc.(plumbers, electricians) + Additions and alterations (including installation of security systems, built-in furniture, solar energy systems, swimming pools and garden lay-outs)	P0304Q04 +P0304Q0401+P0304Q0402	Improvements, additions and alterations (including build-in furniture, solar energy systems, swimming pools and garden layouts)	52110000	Improvements, additions and alterations (including build-in furniture, solar energy systems, swimming pools and garden layouts)	52110000	Improvements; additions and alterations (including build-in furniture; solar energy systems; swimming pools and garden layouts)
		52122000	Services for improvements, additions and alterations(carpenters, electricians etc)	52122000	Services for improvements, additions and alterations(carpenters, electricians etc)	52122000	Services for improvements; additions and alterations(carpenters; electricians etc)
		P0304Q0403+P0304Q0404	Security structures (including fences, electronic gates)	52130000	Security structures (including fences, electronic gates)	52130000	Security structures (including fences; electronic gates)
b07f022	Building materials not included in 9.1 or 9.2 (e.g. for building houses)	P0304Q05	Building materials not included in Q813 (a) or (c) (eg for building purposes)	52140000	Building materials not included in Q813 (a) or (c) (eg for building purposes)	52140000	Building materials not included in Q813 (a) or (c) (eg for building purposes)
			Labour and material for improvements, additions and alterations	52150000	Labour and material for improvements, additions and alterations	52150000	Labour and material for improvements; additions and alterations
b07f027	Net expenses incurred as owner of a holiday home, i.e. after deduction of income received from letting. (If net income is involved, see section 22.1, item 3, page 34)		Cost of Other Dwelling	52210000	Cost of Other Dwelling	52210000	Cost of Other Dwelling
b07f018	Additional single amount paid to bank/building society regarding mortgage bond Capital payments (including deposit)	p0304Q0101	Capital payments (including deposit)	52220000	Capital payments (including deposit)	52220000	Capital payments (including deposit)
b07f007	Monthly instalment (including voluntary additional monthly payment and subsidy/allowance but excluding insurance) of which - Capital	p0303Q050101	Monthly capital payments	52230000	Monthly capital payments	52230000	Monthly capital payments
b07f019	Other payments such as transfer dues and transfer costs and registration of mortgage bond	p0304Q0102	Other payments such as transfer duty and transfer costs and registration of mortgage bond	52240000	Other payments such as transfer duty and transfer costs and registration of mortgage bond	52240000	Other payments such as transfer duty and transfer costs and registration of mortgage bond
		p03052Q010401	Purchase of timeshare	52251000	Purchase of timeshare	52251000	Purchase of timeshare
		p03052Q010402	Levy on timeshare	52252000	Levy on timeshare	52252000	Levy on timeshare
b69f004	Life and endowment policies (including study policies)	p2104Q0201	Life and endowment policies	52310000	Life and endowment policies	52320000	Life insurance covering mortgage debt
b69f009	Insurance covering mortgage	p2104Q0402	Life insurance covering mortgage debt	52320000	Life insurance covering mortgage debt		
b69f003	Repayments on personal and over draft loans - excluding instalments shown elsewhere (e.g. housing, furniture, studies, vehicles and recreational equipment)	p2104Q0103	Repayment on loans and overdrafts	52410000	Repayment on loans and overdrafts	52410000	Repayment on loans and overdrafts
b69f013	Contribution to pension; provident and annuity funds	p2104Q0601	Contribution to pension, provident and annuity funds	52421000	Contribution to pension, provident and annuity funds	52421000	Contribution to pension; provident and annuity funds
b69f014	Employer contribution to pension; provident and annuity funds	P2104Q0602	Employer contribution to pension, provident and annuity funds	52422000	Employer contribution to pension, provident and annuity funds	52422000	Employer contribution to pension; provident and annuity funds
b69f015	Contributions to a stokvel	p2104Q07	Contributions to a stokvel	52500000	Contributions to a stokvel	52500000	Contributions to a stokvel
b69f016	Shares and unit trusts	p2104Q0801	Listed company - shares	52610000	Listed company - shares		
			Unlisted company - shares	52620000	Unlisted company - shares		
b69f017	Investment plans	p2104Q0802	Investment plans	52640000	Investment plans		
		p2104Q0803	Offshore	52650000	Offshore		
b69f018	Amount paid into savings account during the year 1 November 1994 up to 31 October 1995	p2104Q09	Deposits into savings	52710000	Deposits into savings		
b88f019	Total withdrawals from savings (i.e. total withdrawals minus total deposits).	P2402Q0801	Withdrawals from savings	52720000	Withdrawals from savings		

Table 3: Averages of savings categories for IES 1995 – 2010/11

	1995	2000	2005/06	2010/11	1995 share of total	2000 share of total	2005/06 share of total	2010 share of total
Improvements, additions and alterations (including build-in furniture, solar energy systems, swimming pools and garden layouts)	547	637	595	214	7.2	2.9	2.4	1.5
Services for improvements, additions and alterations(carpenters, electricians etc)	11	N/A	35	30	0.1	0.0	0.1	0.2
Security structures (including fences, electronic gates)	N/A	115	103	91	0.0	0.5	0.4	0.7
Building materials not included in Q813 (a) or (c) (eg for building purposes)	N/A	144	112	216	0.0	0.7	0.5	1.6
Labour and material for improvements, additions and alterations	N/A	N/A	1 499	563	0.0	0.0	6.1	4.0
Cost of Other Dwelling	1 052	N/A	1 345	783	13.8	0.0	5.5	5.6
Capital payments (including deposit)	140	525	1 218	732	1.8	2.4	5.0	5.3
Monthly capital payments	1 285	14 519	2 731	3 263	16.9	66.8	11.1	23.5
Other payments such as transfer duty and transfer costs and registration of mortgage bond	257	92	304	72	3.4	0.4	1.2	0.5
Purchase of timeshare	N/A	73	228	117	0.0	0.3	0.9	0.8
Levy on timeshare	N/A	27	98	54	0.0	0.1	0.4	0.4
Life and endowment policies	1 188	1 095	1 531	N/A	15.6	5.0	6.2	0.0
Life insurance covering mortgage debt	78	75	1 006	264	1.0	0.3	4.1	1.9
Repayment on loans and overdrafts	362	487	1 464	3 508	4.8	2.2	6.0	25.2
Contribution to pension, provident and annuity funds	947	1 113	1 941	1 994	12.4	5.1	7.9	14.3
Employer contribution to pension, provident and annuity funds	524	820	1 464	1 702	6.9	3.8	6.0	12.2
Contributions to a stokvel	56	81	325	299	0.7	0.4	1.3	2.1
Listed company - shares	347	518	1 540	N/A	4.5	2.4	6.3	0.0
Unlisted company - shares	N/A	N/A	345	N/A	0.0	0.0	1.4	0.0
Unit trusts	N/A	N/A	406	N/A	0.0	0.0	1.7	0.0
Investment plans	377	349	1 272	N/A	4.9	1.6	5.2	0.0
Offshore	N/A	200	139	N/A	0.0	0.9	0.6	0.0
Other investments	N/A	N/A	35	N/A	0.0	0.0	0.1	0.0
Deposits into savings	1 148	1 999	6 360	N/A	15.1	9.2	25.9	0.0
Withdrawals from savings	693	1 148	1 519	N/A	9.1	5.3	6.2	0.0
Total	7 624	21 721	24 578	13 901				

Table 4: Debt to disposable income

Income quintiles	1995	2000	2005/06	2010/11
20	0.8	16.1	43.0	24.7
40	0.9	3.2	10.5	13.4
60	3.4	4.4	10.6	13.5
80	7.6	8.8	15.9	20.7
100	21.9	43.3	57.6	56.9