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Micro and macro economic estimates for Australian households: Recent developments and future directions

Bob McColl, John Billing, Bindi Kindermann and Heather Burgess

For additional information please contact:

Name: Bindi Kindermann
Affiliation: Australian Bureau of Statistics

Email Address: bindi.kindermann@abs.gov.au

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Australian Bureau of Statistics

INTRODUCTION

There is a continuing international and Australian focus on the importance of maximising the alignment of micro and macro data sets for household economic statistics, and in further integrating and analysing the data across its various dimensions.

Internationally, the micro-macro integration issues for the household sector have been given new impetus by several recommendations in the 'Report by the Commission on the Measurement of Economic Performance and Social Progress' (the 'Stiglitz Commission' report), but particularly Recommendation 4: *Give more prominence to the distribution of income, consumption and wealth.* The report explains this recommendation as follows:

> Average income, consumption and wealth are meaningful statistics, but they do not tell the whole story about living standards. For example, a rise in average income could be unequally shared across groups, leaving some households relatively worse-off than others. Thus, average measures of income, consumption and wealth should be accompanied by indicators that reflect their distribution. Median consumption (income, wealth) provides a better measure of what is happening to the "typical" individual or household than average consumption (income or wealth). But for many purposes, it is also important to know what is happening at the bottom of the income/wealth distribution (captured in poverty statistics), or at the top. Ideally, such information should not come in isolation but be linked, i.e. one would like information about how well-off households are with regard to different dimensions of material living standards: income, consumption and wealth. After all, a low-income household with above-average wealth is not necessarily worse-off than a medium-income household with no wealth. (The desirability of providing information on the "joint distribution" of the dimensions of people's wellbeing will be raised once again in the recommendations below on how to measure quality of life.)

Maximising the extent of alignment of measures of household income, consumption and wealth from the micro and macro datasets would enable the distributional measures to be used more extensively in macro economic analysis.

Within the ABS, focus on micro-macro integration and joint distribution issues includes the routine confrontation of household survey measures of income, expenditure and wealth with the corresponding macro economic measures to better understand and explain to users the differences in scope, data sources and measures. Importantly, it also includes the surveying of coincident household income, expenditure and wealth data every six years and income and wealth together more frequently.

This paper broadly discusses the objectives and purposes of micro and macro estimates of the income, expenditure and wealth of Australian households and summarises differences in the estimates. It also outlines opportunities to make better use of the

micro data in either benchmarking national accounting aggregates or at least in confronting the residuality of many of the current sources used in initially published macro-economic accounting.

Finally the paper considers how micro economic estimates for Australian households are used to inform Australian macro-economic analyses. In particular, the role of the micro estimates in better reflecting the multi-dimensional character, and distributional aspects, of economic performance and wellbeing are examined.

ABOUT THE AUSTRALIAN DATA

The ABS compiles two main economic datasets for Australian households:

- macro estimates compiled in the Australian System of National Accounts (ASNA);
- micro estimates produced from the Survey of Income and Housing (SIH) and the Household Expenditure Survey (HES).

A key objective of the ABS, and of international collaboration, has been to maximise the extent of alignment of measures of household income, expenditure and wealth from the micro and macro data sets. While the conceptual standards for micro and macro statistics on household income, expenditure and wealth are essentially the same, traditionally, there have been significant differences in the objectives and purposes of the two data sets, in their coverage and in the data sources used to compile them, and because of practical data reporting and estimation issues for individual households.

Survey of Income and Housing and Household Expenditure Survey

Australian micro estimates for household income, expenditure and wealth are compiled from the Survey of Income and Housing (SIH) and the Household Expenditure Survey (HES). The surveys collect information by personal interview from usual residents of private dwellings excluding very remote areas, covering about 97% of the people living in Australia. The household survey data, collected from individual households, can be used to analyse the distribution of income and wealth across the population and to compare levels of income, expenditure and wealth between various population subgroups and over time. The data sets are extensively used in modelling and analysing changes in government programs.

The SIH was conducted continuously from 1994-95 to 1997-98 and then in 1999-2000 (skipping a HES year in 1998-99), and 2000-01, in each case as relatively small survey of 7,000 households which were interviewed after they had completed their final (8th month) interview in the ABS Monthly Population Survey (MPS). In 2002-03 the sample was increased to 10,000 households, and in 2003-04 the SIH was decoupled from the MPS and conducted as a standalone independent sample. The SIH has been run biennially since then and collects demographic information for all household members, dwelling characteristics, and detailed information about the income, assets and liabilities, of persons aged 15 years and over.

The HES was conducted in 1974-75, 1975-76, 1984, 1988-89, 1993-94, and 1998-99 and collects both household level expenditures and diarised detailed information about the expenditure of all persons aged 15 years and over in the household. In 2003-04, the

HES was integrated with the SIH and this household income, expenditure and wealth survey (HIES) is currently scheduled to be run every six years with the next release in respect of the 2009-10 survey just out of the field.

In recent years the ABS has enhanced the range and quality of data available from these surveys for analyses to better understand the economic circumstances of Australian households. Significantly, in 2003-04 the major changes introduced included:

- a larger sample;
- an independent selection of dwellings rather than from respondents in the Monthly Population Survey;
- computer aided personal interviewing; and
- integrating the HES as a sub-sample of SIH.

By aligning common data items, and ensuring that all data items required for the SIH were also collected in the HES, it was possible to include the HES sample of 6,957 households as part of the SIH sample of 11,361 households.

The introduction of an expanded and comprehensive range of information about the assets and liabilities of each household in 2003-04, and then again in 2005-06, has enabled investigations of the relationships, at the household level, between income, wealth and expenditure, and analysis that provide a more complete picture of the economic wellbeing of Australian households. The generation, from 2003-04 onwards, of household level imputed rent estimates for owner-occupied dwellings and for households paying subsidised rentals has filled a significant information gap when assessing income distributions across tenure types and across time.

Micro data sets from the SIH and HES have long been used to analyse not only levels (aggregates), but also the distributions of income, consumption and wealth across the population, for various population subgroups, and over time. The confidentialised unit record survey files released by ABS are extensively used for modelling, analysis and monitoring the aggregate and the distributional impacts of changes in government programs.

The quality of household survey estimates of income, expenditure and wealth are subject to two types of error, non-sampling and sampling error. Non-sampling errors are difficult to quantify in any collection. However, every effort is made in SIH and HES to reduce non-sampling error to a minimum by careful design and testing of the questionnaire, training of interviewers and data entry staff and extensive editing and quality control procedures at all stages of data processing.

One sources of non-sampling error is non-response by persons selected in the survey. The magnitude of any bias depends upon the level of non-response and the extent of the difference between the characteristics of those people who responded to the survey and those who did not. ABS household surveys are conducted under the Census and Statistics Act, which gives the Australian Statistician the authority to direct households to respond to a survey, the overwhelming majority of households respond without recourse to formal direction.

The following methods are adopted to reduce the level and impact of non-response:

- face-to-face interviews with respondents;
- the use of interviewers who could speak languages other than English, where necessary;
- follow-up of respondents if there was initially no response;
- imputation of missing values, and for the majority of households with a missing values only a single value was missing (mostly for income from interest or investments, or information relating to household loans);
- ensuring that the weighted data are representative of the population (in terms of geographic, demographic, household composition and labour force characteristics) by aligning the estimates with relevant benchmarks.

In the 2007-08 SIH, the total non-response was 16%. Half of that non-response related to dwellings which interviewers deemed to be occupied, but where no household member could be contacted during the survey enumeration. Most ABS household surveys experience a similar level of non-contact. It is possible that some of the uncontacted dwellings were not usual residences, and non-response is overstated. The other half of the SIH non-response related to households:

- affected by death or illness of a household member;
- in which the significant person(s) in the household did not respond because they had language problems or refused to participate; and
- in which the significant person(s) did not respond to key questions.

The quality of household survey estimates are also subject to sampling variability and may differ from the figures that would have been produced if information had been collected for all dwellings.

Australian System of National Accounts

Macro estimates for the household sector are compiled for the Australian System of National Accounts (ASNA). The ASNA show how the household sector interrelates with the other sectors of the economy and provides an overview of the economic activity of households in a series of accounts. There are separate accounts detailing consumption expenditure by commodity, income by source, use of income, capital transactions, and financial transactions. There is also a balance sheet recording the assets and liabilities of households.

The national accounting definition of the household sector used in the ASNA includes persons, unincorporated businesses and non-profit institutions serving households (NPISHs), for example churches, charities, political parties, trade unions, social clubs and sporting associations.

The sources and methods used to compile national accounts are typically many and varied, and the Australian situation is no exception. Most of the basic data derive from the general system of statistical surveys of businesses or as a by-product of government administrative processes. Most sources of ASNA data do not provide information for population subgroups, presented within the broader national accounting framework. The data show how the household sector relates to the corporate and government sectors in

Australia and to the rest of the world. As only aggregate information is needed for this purpose, greater use can be made of partial data sources and imputation, estimating the entire sector as a residual grouping, compared to the micro estimates compiled directly about households with information from households.

Compilation of the national accounts is a complex task involving many diverse data sources. It is not possible to provide a single, comprehensive measure of the quality of the estimates. A comprehensive discussion of this issue can be found in *Information Paper: Quality Dimensions of the Australian National Accounts* (ABS 2007). One of the more easily quantifiable aspects of quality is the extent to which statistics are subject to revision. However, these measures do not provide an unambiguous guide to quality. A series may be subject to few revisions, but the series may be highly inaccurate due to poor data sources or methods.

Revisions can be reduced by delaying the release of statistics until all or most 'final' data sources are available, but this would mean that the statistics would be less relevant to users. On the other hand, any increase in timeliness of data is usually at the expense of detail, reliability or additional resources. Therefore, estimates for recent years may be subject to considerable revision as firmer data become available.

DATA CONFRONTATION

Regular confrontation of micro and macro estimates is important for understanding the strengths and weaknesses of the respective datasets and is likely to lead to a number of opportunities to maximise alignment between them over time.

ABS household survey measures of income, expenditure and wealth are routinely confronted with the corresponding macro economic measures for the sector to better understand and explain to users the differences in scope, data sources and measures.

In this paper, micro and macro estimates of the income, expenditure and wealth of Australian households have been confronted, where data are available, for 2002-03, 2003-04, 2005-06 and 2007-08. As noted above, the two main differences in the scope of the household surveys compared with the ASNA household sector are:

- the household sector in the ASNA covers all persons residing in Australia, including people living in private dwellings (such as houses, flats and units) and those in non-private dwellings (such as hotels, boarding houses, and institutions). SIH and HES exclude people living in non-private dwellings as well as those living in very remote regions of Australia. Together these exclusions account for 3% of Australia's population; and
- the ASNA household sector estimates include activity of private non-profit institutions serving households (NPISHs). This is estimated to increase ASNA household sector estimates by between 2% and 5%, depending on the variable of interest.

To illustrate the comparability of micro and macro sources when estimates are compiled on a comparable basis, some of the ASNA published data series have been adjusted to a common scope using unpublished details. For a small number of low value household

survey items there are no directly comparable items in the ASNA, and therefore these estimates have not been confronted.

This section draws together the learnings from the detailed data confrontation.

Income

SIH income data have been confronted for the years 2002-03, 2003-04, 2005-06 and 2007-08 (Appendix 1). The 2007-08 results are shown in Table 1.

In 2007-08, the total value of all SIH income estimates was closely aligned with the comparable sum of ASNA estimates ($694b compared with $738b).

Table 1: SIH and selected ASNA household income estimates, 2007-08 (a)

Income	SIH *$b*	ASNA *$b*	SIH as a percent of ASNA *%*
Comparable income items			
Wages and salaries	513.1	512.1	100.2
Government pensions and allowances	64.6	87.2	74.0
Own unincorporated business (net of expenses)	43.4	58.7	74.0
Interest and dividends	43.6	41.4	105.2
Gross imputed rent on owner occupied dwellings	*81.9*	*81.8*	*100.0*
Less expenses	*52.3*	*48.8*	*. .*
Net imputed rent (b)	29.6	33.1	89.4
Profit/loss on residential rentals	-1.1	-1.0	111.3
Workers' compensation claims	1.3	6.4	19.9
Total comparable income	***694.4***	***737.9***	***94.1***
Percent of SIH income comparable with ASNA (%)	*95.6*	*. .*	*. .*
SIH income not directly comparable			
Superannuation and annuity income	20.6	*. .*	*. .*
Financial support from persons not in same household	8.3	*. .*	*. .*
Non-life insurance claims	0.5	20.0	*. .*
Other income	2.3	*. .*	*. .*
Total income not directly comparable	***31.6***	*. .*	*. .*

(a) ASNA data series have been adjusted to exclude any income components that cannot be directly compared to SIH data, e.g. employers' social contributions, imputed income, etc. Appendix 2 provides a concordance between SIH and ASNA components for each item in this table.
(b) ASNA estimate for net imputed rent approximated by subtracting the interest reported in SIH from the ASNA total owner occupied imputed rent component if the ASNA estimate of gross operating surplus from ownership of dwellings

Wages and salaries

The largest component of household income is wages and salaries. The SIH and the latest ASNA estimates for this income source were within $1m of each other in 2007-08, although a difference of about 0.5% to 1% would be expected for the higher geographic coverage in the ASNA. The ASNA also includes wages and salaries for residents of non-private dwellings. The current close alignment of the estimates follows significant upward revision to the ASNA estimates in December 2009, and the scope differences suggest further upward revision to the ASNA is likely in future. The relationship between the SIH and ASNA estimates for wages and salaries are explored further in the 'Integration opportunities' section of this paper.

Government pensions and allowances

SIH estimates for total income from government pensions and allowances was 74% of the ASNA estimate ($65b compared with $87b). About two-thirds of this difference (between $12b and $15b) can be explained by the following scope differences.

Firstly, the SIH estimate does not include pensions received by persons in non-private dwellings and very remote regions of Australia, e.g. the elderly in nursing homes and people living in remote Indigenous communities. About $5b of the difference is likely to be accounted for by this scope difference.

Secondly, the ASNA includes some payments that are not treated as government pensions and allowances in the SIH. Examples include the Australian government's private health insurance rebate (about $4b) which SIH treats as an offset to expenditure rather than income, and parental child support payments (about $3b) paid from the non-custodial parent to the custodial parent via the government's Child Support Agency. The latter are treated as an inter-household transfer in SIH.

Thirdly, most of the remainder of the difference between the SIH and ASNA estimates relates to social transfers in kind.

There are many other small, often irregular, payments made by the Australian federal and state governments to households that individually are not significant enough to warrant separate questions in the SIH, and which are therefore not reported, but in total are worth several billion dollars annually. Overall, the SIH estimates track fairly well the welfare payments in cash.

Unincorporated business income

To compare unincorporated business income from the two sources, it has been necessary to adjust ASNA 'gross mixed income' estimates to remove an estimate of expenses that would be deducted by SIH respondents when they are asked to report their 'expected profit or loss'. After these adjustments, the ASNA estimate for 2007-08 was $59b compared with $43b in SIH.

The higher income in ASNA is partly due to some businesses having a trust associated with their incorporated operations. This may lead to them being treated as unincorporated enterprises in the ASNA whereas the business owners consider they are

an incorporated entity when reporting in the SIH. This results in this income being treated as dividend income in SIH.

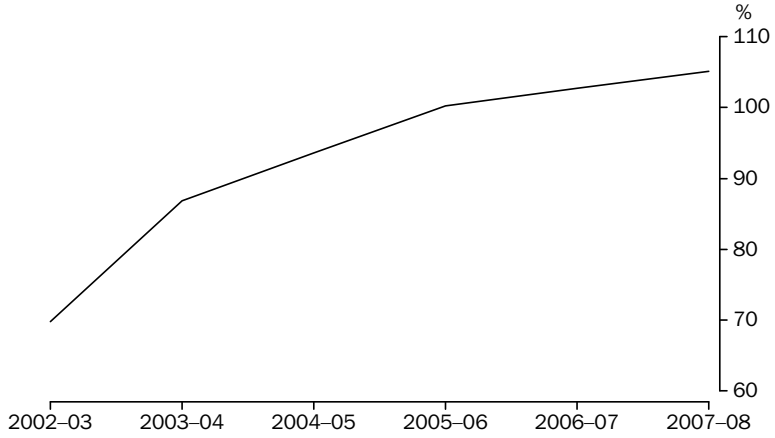
In the ASNA, an adjustment of $6b was added in 2007-08 to account for under-reporting of business income in the business survey and taxation data sources used for the ASNA.

Interest and dividends

Interest and dividends from the two sources aligned well in 2007-08, with SIH slightly higher than ASNA ($44b and $41b respectively). There has been a significant improvement in alignment between the two sets of estimates in recent years (Figure 1), reflecting improvements in SIH questionnaire design.

The higher SIH estimate for this income source also reflects the classification of income from businesses with a structure that includes a trust and an incorporated entity being treated as dividend income in SIH and business income in ASNA.

Figure 1: Alignment of interest and dividends, SIH as a percentage of ASNA (a)



(a) SIH conducted in 2002-03, 2003-04, 2005-06 and 2007-08.

Net imputed rent for owner occupied dwellings

Gross and net imputed rent for owner occupied dwellings from the two sources were closely aligned in 2007-08 at $82b each for gross imputed rent and $30b (SIH) and $33b (ASNA) for net imputed rent.

Further analysis of the alignment of these estimates is contained in the 'Integration opportunities' section of this paper.

Profit or loss from residential rentals

Gross actual rent (as measured in SIH from the renters' perspective) was higher in SIH ($29b) than ASNA ($25b). SIH is likely to be more accurate than ASNA for this estimate as ASNA estimates are extrapolated forward from a benchmark established using 5-yearly population Census data. Further analysis of the alignment of these estimates is contained in the 'Integration opportunities' section of this paper.

For net rental income, the SIH and ASNA estimates were relatively close. The ASNA estimates in Table 1 were calculated as the difference between gross actual rent and the expenses that would be deducted by respondents in a household survey reporting their profit or loss from residential rentals. Depreciation expenses reported in taxation statistics as an allowable deduction for property investors were deducted for this purpose.

Workers' compensation claims

SIH workers' compensation claims were estimated at $1b compared with $6b for ASNA. A significant proportion of workers' compensation claims will be reported in wages and salaries in SIH, where an employee receives these payments in their usual pay.

The aggregate workers' compensation amounts will also be lower in SIH as caps are applied to significant lump-sum amounts, where it is considered likely that part of the receipt would be saved to meet future expenses (a capital transfer), rather than to support current consumption.

SIH income not directly comparable with ASNA

In 2007-08, there was $32b of household income reported in the SIH that cannot be directly compared with ASNA estimates. The largest component was superannuation pensions and annuities ($21b in SIH). In ASNA, the imputed income earned by superannuation funds on behalf of their members, rather than the pensions and annuities received, is included in the household income account.

The other major source of income included in SIH but not ASNA are inter-household transfers such as child support and other financial support provided from one household to another. In total these were worth $8b in 2007-08. As the ASNA presents sectoral accounts on a net basis, generally transfers from one household to another within Australia's economic territory will net out. However payments between Australian households and those in the rest of the world will be shown as income flows.

Expenditure

In 2003-04, HES measured 81% of the comparable household final consumption expenditure (HFCE) items in the national accounts.

There are two main inclusions in ASNA that are not collected in HES. Firstly, expenditure by Australian residents based overseas in Australian embassies and consulates, as well as those working overseas for less than 12 months for non-resident employers are included in ASNA. Secondly, NPISH expenditure is included in household final consumption expenditure, mostly in 'Health', 'Education', 'Recreation and culture' and 'Other services'. The only NPISH expenditure that has been able to be removed from ASNA estimates, for the purposes of this data confrontation, is about $6b in 'Other services'.

As shown in Table 2, there are 20 COICOP categories for which HES and ASNA data are comparable. In 2003-04, seven of these categories had less than a 10% difference

between the total expenditure reported from the two data sources, and another five were within 20%.

In general, HES estimates were lower than the ASNA estimate. This is partly due to the inclusion of NPISH expenditure in ASNA, but is also likely to be due to people under-reporting some of their expenditure in ASNA.

Some expenditure is widely acknowledged to be under-reported in household expenditure surveys, such as alcohol (HES 62% of ASNA), cigarettes and tobacco (48%), and gambling which is a component of recreational and cultural services. Gambling net losses recorded in HES in 2003-04 were $2b compared with $16b in ASNA. The alignment between HES and ASNA data for recreational and cultural services after adjusting for gambling was 60%. This is one of the categories which are likely to have significant NPISH expenditure due to the inclusion in ASNA of spending by sporting and social clubs. ASNA may also include gambling by non-residents.

Expenditure categories that have lots of small value purchases by multiple members of a household, such as soft drinks, takeaway food and bus tickets would be expected to be under-reported in SIH as shopper dockets are unlikely to be provided by respondents to ABS for such expenditures, and respondents are likely to miss some of these transactions when completing expenditure diaries.

A small part of the undercount in HES may be due to recall periods and the timing of expenditure. Estimates for infrequently purchased or more expensive items are derived from the household questionnaire with varying recall periods used as adjudged appropriate for each item. For example, estimates of expenditure on motor vehicle registration cover the 12 months prior to interview and therefore amounts will refer to varying periods prior to the reference year as well as during the reference year.

Purchase of motor vehicles is one of only three categories where the HES estimate exceeds ASNA. HES includes private purchases between households whereas these are netted out in the aggregate accounts for the household sector. The HES estimates are also slightly higher for personal effects ($4.4b compared to $4.1b). The two data sources arrive at similar estimates for accommodation services ($5.7b in HES and $5.5b in ASNA).

HES expenditure not directly comparable with ASNA

- Water and sewerage services

The ASNA includes expenditure for water and sewage services for all housing stock. In HES, expenditure for water and sewage services is collected for owner occupied dwellings (accounts for 70% of dwellings) and the small number of non-rental properties owned by householders. Expenses for rental properties are deducted from income when householders report their profit or loss from this source, consistent with the treatment for expenses incurred by unincorporated businesses.

- Health

In the HES, private health insurance premiums are collected net of rebates and allocated to insurance services. Health services expenditure is collected net of any

reimbursements. By comparison, the gross cost of the medical service is allocated in the ASNA. This is likely to be the main reason for the large difference between health expenditure in HES ($11b) and the ASNA ($25b).

Table 2: HES and selected ASNA household expenditure, 2003-04

Expenditure	HES *$b*	ASNA *$b*	HES as a percent of ASNA *%*
Comparable expenditure items			
Food	44.7	54.4	82.0
Cigarettes and tobacco	4.7	9.6	48.4
Alcoholic beverages	5.9	9.6	61.5
Clothing and footwear	13.4	18.4	72.8
Actual rent for housing	19.2	20.9	91.6
Imputed rent for owner-occupiers	59.6	60.5	98.4
Electricity, gas and other fuel	9.6	10.2	94.1
Furnishings and household equipment	24.2	27.6	87.6
Transport services	9.6	13.2	72.6
Purchase of vehicles	20.0	19.7	101.4
Operation of vehicles	24.5	27.4	89.6
Communication	13.1	14.3	91.6
Goods for recreation and culture	19.1	22.3	85.4
Recreational and cultural services	10.9	30.7	35.4
Books, papers, stationery and artists goods	4.9	7.7	63.1
Catering	20.7	30.3	68.5
Accommodation services	5.7	5.5	103.3
Personal care	7.4	9.0	82.6
Personal effects	4.4	4.1	108.4
Other services	9.0	13.3	67.2
Total comparable expenditure	**330.3**	**408.8**	**80.8**
Percent of HES expenditure comparable with ASNA (%)	*89.1*	. .	. .
Expenditure not directly comparable			
Water and sewerage services	3.3	4.2	. .
Health	11.3	24.6	. .
Education services	7.8	15.7	. .
Insurance services	16.1	22.0	. .
Other financial services	1.2	23.9	. .
Total expenditure not directly comparable	***39.8***	***90.3***	. .

(a) ASNA estimates include expenditure by NPISHs.

- Education

The inclusion of expenditure financed from government grants to private schools (currently classified as NPISHs) in the ASNA household sector is the major difference in scope between the ASNA and HES estimates for education. In 2003-04, the ASNA estimate of HFCE on private school education was $9b compared with $3b in HES. Another difference is the accounting practice for the government low interest student loans scheme for tertiary education. In the ASNA, the payments are calculated on an accruals basis ($2b in 2003-04), whereas in the HES the payments are recorded as they are made ($1b).

- Insurance services

In the ASNA, only an imputed service charge is included in HFCE estimates for insurance services, that is, premiums plus premium supplements, less expected claims. By comparison, HES collects gross premiums. However the ASNA also include the imputed service charge for life insurance, superannuation and workers' compensation. Service charges for these three categories contributed $17b to the ASNA estimate. These charges are not collected in the HES.

- Financial services

Financial services in HES only cover accountant and tax agent fees as well as directly charged financial institution fees and charges. These are also included in ASNA, but by far the largest component of financial services in ASNA is the cost of financial intermediation services indirectly measured (FISIM), which was valued at $16b in 2003-04.

Wealth

Household net worth as measured in SIH aligned very closely with the ASNA estimates in both survey periods (95% in 2003-04 and 97% in 2005-06). ASNA assets and liabilities were both higher than SIH estimates because in SIH some assets are only collected on a net basis, in particular the value of unincorporated business operations.

It was not possible to remove the NPISH contributions from the ASNA household sector estimates.

Residential property

The largest class of non-financial assets of the household sector is residential property. Following a previous data confrontation of measures of residential land and dwelling measures in 2005, the ASNA balance sheet measures were revised upwards by about 20%, bringing the SIH and ASNA estimates into close alignment (ABS 2006).

Own unincorporated businesses

In 2005-06, SIH estimated the value of unincorporated businesses (net of liabilities) at $253b. This was less than half the net worth of business assets and liabilities recorded in the household sector of ASNA ($569b).

This difference partly reflects differences in the categorisations of data in the two data sets. A small business with a trust as the legal entity and an incorporated entity as the trustee would be treated as an unincorporated business in ASNA, but would be reported as an incorporated business in SIH. The SIH value for the net worth of own incorporated businesses was $359b in 2005-06, and consequently the SIH total for equity assets, including own incorporated businesses, was $286b higher than in ASNA.

There are also some assets that have been solely allocated to unincorporated businesses in this data confrontation even though some of the assets may not be used for business purposes, e.g. some accounts receivable may relate to non-business activity. By allocating these solely as business assets, these will have contributed to the higher estimate for ASNA compared with SIH. It is also possible that not all business liabilities were identified in the calculation of ASNA net assets.

Shares and other equity (incl. own incorporated business)

The value of shares, including own incorporated businesses, was significantly higher in SIH compared with ASNA in both survey periods (151% of ASNA in 2003-04 and 187% in 2005-06). Incorporated entities operated by householders as their own businesses contributed two-thirds of the SIH estimate in 2005-06. The value of incorporated businesses in SIH ($359b) was higher than the total value of all shares in ASNA ($332b) in that period. Further analysis of the alignment of these estimates is contained in the 'Integration opportunities' section of this paper.

Accounts with financial institutions

In 2005-06, household survey estimates of the value of accounts with financial institutions ($224b) were just over half the value of the corresponding ASNA estimate ($355b). There are a number of reasons why the SIH estimate might be lower.

Firstly, there will be differences in the classification of financial accounts held by unincorporated businesses. In ASNA these will be categorised in accounts with financial institutions while in SIH they will be included as part of the net value of unincorporated businesses.

Secondly, the scope of the SIH excludes about 3% of the total population, mostly older persons living in non-private dwellings (about 7% of persons aged 65 and over). In general, people in this age group have higher assets than younger people. The balances of NPISHs may also be included in the ASNA aggregate.

Lastly there is likely to be some degree of under reporting of these assets in SIH, with some householders not reporting accounts with relatively small balances.

Superannuation

Apart from residential property, superannuation is the most significant form of household asset. The SIH value of this asset was $491b in 2003-04 and $670b in 2005-06. The corresponding ASNA items are the technical reserves of pension funds which were higher than the SIH estimate in both survey periods ($547b and $778b, respectively).

Table 3: SIH and selected ASNA assets and liabilities (a) (b)

	2003-04		2005-06		
	SIH	ASNA	SIH	ASNA	SIH as a percent of ASNA
	$b	*$b*	*$b*	*$b*	*%*
Comparable assets and liabilities					
Assets					
Residential property	2,369	2,376	2,846	2,844	100.1
Own unincorporated business (net of liabilities) (c)	226	467	253	569	44.5
Shares and other equity (incl. own incorporated business)	388	257	618	332	186.5
Accounts with financial institutions	165	298	224	355	63.2
Superannuation	491	547	670	778	86.1
Securities other than shares	8	12	10	16	65.2
Total comparable assets	***3,647***	***3,956***	***4,622***	***4,893***	***94.5***
Liabilities					
Property loans	463	547	627	721	87.0
Other liabilities	74	126	106	162	65.4
Total comparable liabilities	***537***	***673***	***733***	***882***	***83.1***
Net worth of comparable assets and liabilities	**3,110**	**3,283**	**3,890**	**4,011**	***97.0***
Percent of SIH net worth comparable with ASNA (%)	*86.0*	. .	*87.2*	. .	
SIH assets not directly comparable with ASNA	**SIH**	**ASNA**	**SIH**	**ASNA**	
	$b	**$b**	**$b**	**$b**	
Household contents and vehicles	504	207	565	224	
Unfunded superannuation claims	. .	143	. .	160	
Loans to persons not in same household	4	. .	7	. .	
Total assets not directly comparable	**508**	**350**	**572**	**384**	

(a) ASNA estimates calculated as the average of the balance sheet data as at 30 June at the start and end of each financial year.

(b) ASNA data exclude items that cannot be directly compared with SIH data. See Appendix 3 for details.

(c) SIH collects the value of unincorporated businesses on a net basis, rather than collecting business assets and liabilities by type. The ASNA estimates of net unincorporated business are calculated as the net value of assets and liabilities most likely to relate to business activities. Refer to appendix 3 for details.

The ASNA estimate is sourced from information provided to regulatory authorities by the fund managers. Therefore at least part of the difference between the two estimates may reflect under-reporting in the SIH. This is more likely where people have multiple, small value superannuation accounts or have balances in unclaimed superannuation accounts. The Australian Taxation Office estimated the latter at about $10b in 2006. There is also a timing issue with householders likely to report amounts based on their last statement which could relate to the previous financial year.

Some SIH respondents may also have mistakenly included the assets of their self-managed superannuation funds when reporting other types of assets.

Loans

The value of total liabilities was lower in SIH than the ASNA estimates since some SIH items are collected net of liabilities.

SIH assets and liabilities not directly comparable with ASNA

- Household contents and vehicles

The SIH value for household contents is not comparable to ASNA estimates. In SIH, householders report the total insured replacement value of their dwelling contents. In ASNA, a memorandum item is provided for the depreciated value of consumer durables. However, this series is not included in the official estimates of household wealth in ASNA.

- Unfunded superannuation claims

The value of unfunded superannuation claims are excluded from SIH net worth estimates as statements do not include the value of unfunded superannuation amounts.

FURTHER OPPORTUNITIES

The routine confrontation of the household survey measures of income, expenditure and wealth with the corresponding macro economic measures provides a number of opportunities for improvements in either of the datasets as well as to inform users about the differences.

From the household survey perspective, the results of these comparisons are used to assist with the validation of the data and to inform areas where improvements can be made in future survey cycles. The publication of the results of these confrontations are also useful for explaining to users the differences in scope, data sources, measures and other limitations (e.g. under-reporting of some items).

From the national accounts perspective, the results of these confrontations are useful for similar reasons. The 'Integration opportunities' section of this paper highlights three case studies that the ABS will pursue as a result of confronting the two sets of estimates.

The last section of this paper considers where micro economic estimates for Australian households can be used to inform Australian macro-economic analyses. In particular, the role of the micro estimates, in better reflecting the multi-dimensional character and distributional aspects of economic performance and wellbeing, is examined.

Integration opportunities

The ABS is pursuing the following areas where further integration of the micro and macro estimates will improve the quality of its estimates.

Case study 1: Using micro estimates of actual and imputed rent in the compilation of the national accounts

The SIH has for some time collected the actual rent paid by renters. In 2008, the ABS released household level estimates of the gross imputed rent for owner occupied dwellings in respect of 2003-04 and 2005-06. Since then, estimates have been released for 2007-08 and will be produced for all future survey cycles on a routine basis.

The availability of household survey estimates of actual and imputed rents offers an alternative data source for use in the computation of future ASNA estimates. The two yearly frequency of the SIH data offers a significant advantage over the existing use of the five-yearly population Census benchmark in producing the ASNA imputations.

The concepts and methods underpinning the estimation of gross imputed rent for owner occupied dwellings in SIH and ASNA have much in common, with both sources imputing a market value for the housing services accruing to owner occupiers. Both sources estimate the market value of the housing services accruing from the rental equivalent. In producing the SIH imputations, the market value of the rental equivalent has been estimated by regressing actual rents paid by private renters on the characteristics of their unfurnished rented dwellings e.g. location, dwelling structure and number of bedrooms. The estimated coefficients have then been applied to the characteristics of owned dwellings to produce predicted values of the rental equivalence of these dwellings. Details are available in *Experimental Estimates of Imputed Rent* (ABS 2008).

In producing the ASNA estimates of actual and imputed rent, a benchmark is established using the Census of Population and Housing, which gives the number of owner occupied and rented dwellings, and information about rents paid for rented dwellings. The actual rent paid by renters and the imputed rent for owner-occupied dwellings is calculated by multiplying average private rents for unfurnished dwellings reported in the Census in various strata (defined by broad levels of geography; cross classified by dwelling structure and number of bedrooms) by the number of rented and owner occupied dwellings in the same categories.

For intercensal and post census periods, the estimates are interpolated / extrapolated using a range of indicator data. Details are available in Chapter 14, paragraph 14.41 of *Australian National Accounts: Concepts, Sources and Methods* (ABS 2000).

Table 4 compares the household level estimates of the actual rent paid by renters and the gross imputed rent for owner occupied dwellings with household sector estimates in the ASNA.

Table 4. Comparison of SIH and ASNA actual and imputed rent estimates

		2003-04	*2005-06*	*2007-08*
Actual rent				
ASNA estimate[1]	$m	20,932	22,572	25,281
SIH estimate	$m	19,278	23,429	29,430
SIH as percent of ASNA	%	*92.1*	*103.8*	*116.4*
Imputed rent [2]				
ASNA estimate	$m	60,506	68,514	81,841
SIH estimate	$m	59,720	69,107	81,864
SIH as percent of ASNA	%	*98.7*	*100.9*	*100.0*

[1] Actual rent for ownership of dwellings by persons

[2] Rent buyers are included in both estimates.

There are three areas that impact slightly on the comparability of the two sets of estimates. Firstly the ASNA estimates include a rent accruing to owner occupiers and renters not only from occupation of their primary residence but also from additional residences, such as holiday homes, and a portion from unoccupied dwellings. Secondly, SIH excludes households in areas defined as very remote. Lastly, internal ABS investigations suggest that the SIH imputed rent estimates are underestimated at the higher end of the distribution and a project to address this issue has been identified. Given these differences, it would be reasonable to expect that the ASNA estimates be slightly higher than the SIH estimates.

The slightly lower ASNA estimates of rent in 2005-06 and 2007-08, compared to SIH, may partly reflect that they are still subject to revision, traditionally upwards, when the 2006 Census results are incorporated into the benchmark in October this year. However the increasing divergence between the SIH and ASNA estimates of actual rent may also mean that the indicator data used to extrapolate the benchmarks forward have not kept up with the real world effects of a period of comparatively rapid changes in rental prices.

Given that SIH actual rent data is available biennially, and that imputed rent estimates will be produced each cycle of the SIH, there is now a more frequent data source to benchmark the ASNA estimates, compared to the five yearly benchmark, reducing the time period for possible divergence between the extrapolated number and the revised number produced after the new benchmark is applied and the estimates between benchmarks are interpolated.

Case study 2: Confronting SIH and ASNA estimates for wages and salaries

The improved coherence between SIH and ASNA estimates for wages and salaries provide a very good alternative data source to confront the ASNA estimates.

The first published annual totals for wages and salaries in ASNA are released in December of each year, about six months after the end of the reference period, with revisions continuing over a number of years as more complete and accurate data becomes available. The ASNA estimates are generally revised upwards in the December of the following year when the annual survey data becomes available to produce the benchmark for the wages and salaries series.

Table 5 shows the revisions history of the ASNA data for the recent SIH survey periods.

SIH data have in the recent past been released about 12 months after the end of the reference period, but it is expected that this can be improved to about nine months in the future. The SIH data should therefore be available at about the same time as the annual survey data used to produce the annual ASNA benchmarks for wages and salaries.

Given the significantly improved coverage of the SIH estimates for wages and salaries, their availability as an alternative data source at this time should prove highly valuable. Any significant differences between ASNA and SIH data should be investigated as part of the benchmarking process with a view to reducing the necessity for substantial upwards revisions at a later date.

Table 5: Wages and salaries, ASNA revisions history

	ASNA - *Date published*							**SIH**	
	Dec '03 $m	Dec '04 $m	Dec '05 $m	Dec '06 $m	Dec '07 $m	Dec '08 $m	Dec '09 $m	$m	*Improvements in SIH coverage*
Reference period									
2002-03	325.0	324.1	337.3	335.7	335.6	335.6	350.5	308.4	Incl. regular cash payments
2003-04		342.0	355.6	355.3	355.8	356.1	372.2	341.7	As 2002-03, plus non-cash employee benefits
2005-06				408.3	411.5	412.5	432.8	402.1	As 2003-04
2007-08						478.2	512.1	513.1	As 2003-04, plus irregular payments e.g. overtime, termination payments

Case study 3: Using household survey data in the validation and compilation of household balance sheets

Comprehensive wealth data were first collected in SIH 2003-04, and then again in 2005-06 and 2009-10, and is expected to be repeated on a regular basis. A longer time series exists for the value of owner-occupied housing which is the most significant asset for most households, with approximately 70% of Australian households owning their own home.

Previous confrontations of national balance sheet measures of residential land and dwellings with valuations collected in ABS household surveys and estimates produced by the Reserve Bank of Australia resulted in the introduction of revised ASNA balance sheet measures in 2005-06 (ABS 2006). This brought the survey and national accounting aggregates broadly into alignment.

The results of the data confrontation of household assets and liabilities contained earlier in this paper highlight the general quality of the micro estimates. It also highlights potential further opportunities to use the household survey data to confront a number of items in the household financial accounts, particularly those calculated as the residual of other sectors, and so reflect errors and omissions in the estimates for those sectors.

For example, the ASNA has reliable data sources for the total value of listed shares on issue, and uses the asset data collected from various surveys to calculate the household sector's holdings as a residual. The data sources for unlisted shares, including incorporated entities operated by householders, are recognised as being of relatively poor quality. In 2005-06, the value of shares in incorporated businesses in SIH ($359b) was higher than the total value of all household holdings of shares in ASNA ($332b), indicating an underestimation of the total value of shares attributed to households in the ASNA. The SIH data item for incorporated businesses could be used to confront the ASNA estimates and could also be investigated for use in the direct compilation of ASNA estimates.

Extend analytical opportunities

Economic performance is a key concern of governments because it is through growth that many people are able to increase their material living standards. Information that monitors levels of income, patterns of consumption, redistribution through the tax and transfer systems, levels of consumer debt and levels of savings, or net worth, provides input into economic and social policy development.

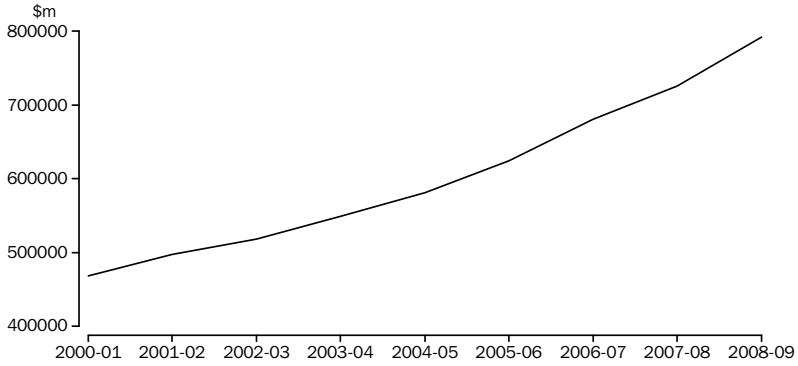
While the national accounts provide essential information for macro economists about the overall performance of the whole economy, and aggregate outcomes for households, they do not inform our understanding of the distribution of these resources over time, across regions or between sub groups of the population. In addition, the per capita measure in the national accounts does not take account of the way in which household needs vary on the basis of household composition and age. Ideally, understanding the distributional dimensions of economic well-being requires measurement of concepts at the household level.

For example, Figure 2 shows how total disposable household income in the national accounts has increased over the last decade, with the overall effect of raising the

average level of economic wellbeing (ABS 2009). While all groups in the population have experienced real increases in income, the total growth has not been distributed evenly.

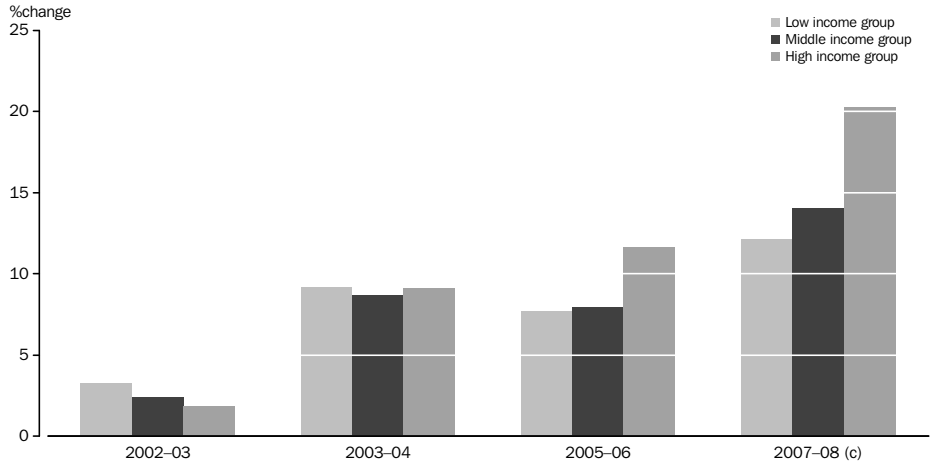
Figure 3 uses SIH data to compare changes in real equivalised disposable household incomes for low, middle and high income groups. While real incomes have increased for all three income groups, the percentage increases are not equal across the distribution, with quite different patterns depending on the year of the survey.

Figure 2: ASNA annual total household disposable income



In 2003-04, the mean real incomes of all groups grew equally, on average, at approximately 9% compared to the previous year. In 2007-08, real incomes also grew for all groups over the two years since the previous survey, but with the most growth in the incomes of those in the high income group at 16%, and is associated with the number of employees rising 8% (while the number of households rose only 2%), and with a strong rise in wage and salary incomes.

Figure 3: Changes in mean real equivalised disposable household income (a)



(a) Change from previous survey year. No surveys were conducted in 2004-05 or 2006-07.
(b) Low income group are people in the second and third income deciles[1], middle income group are people in the third quintile and high income group are people in the highest income quintile.
(c) Estimates presented for 2007-08 are not directly comparable with estimates for previous cycles due to improvements made to income introduced in 2007-08 cycle. Most of the changes were to employment income at the higher end of the distribution.

The above example is a simple illustration of how analysis of the distributional characteristics of household economic resources can be important for policy makers interested in changing the aggregate outcomes, that is overall economic performance, and also those interested in improving economic wellbeing.

Recommendation 4 of the Stiglitz-Sen-Fitoussi Commission report focuses on the importance of analysis of the distribution of income, consumption and wealth to inform how available resources are distributed. That report also notes the need to have information about all three dimensions of material living standards.

The recommendation arises from the well known limitations both of using only macro-economic aggregates in the analysis of household economic behaviour, and of micro-economic analysis of single dimensions (such as just income) of household economic resources. The primary source of this type of information is household surveys and this is an area where the ABS is particularly well placed, with information on income, wealth and expenditure collected together in 2003-04 (the first integrated collection of SIH and HES) and again in 2009-10. Income and wealth were collected together in SIH 2005-06 and it is planned that they will be collected together again in 2011-12.

The ABS household survey confidentialised unit record files are used by government and other analysts in the development, implementation and evaluation of both the distributional and aggregate impacts of social and economic policies. They are used heavily in modelling work to understand a wide range of policy issues, including fiscal and monetary policies, the effectiveness of tax-transfers systems, levels of remuneration, poverty, adequacy of retirement incomes, access to particular resources and the fairness of opportunity.

A recent example is the use of household survey data to inform aspects of the comprehensive 'root and branch' review of Australia's tax system (Henry et al 2009). In Australia, personal income taxation is the largest source of tax revenue and is also an important influence on the choices people make. The final report of the Henry Review highlights the projected fiscal pressures of population ageing and the need to reduce disincentives for people to work, to improve their incentives to save and to assist people to meet their own costs. ABS household survey files were used directly in the review, for example to understand the distribution of wealth and the impact of the introduction of bequest tax on equity, but also indirectly as one of the data sources for the Treasury model used to analyse retirement incomes, i.e. the RIMGROUP model (Rothman and Tellis 2008).

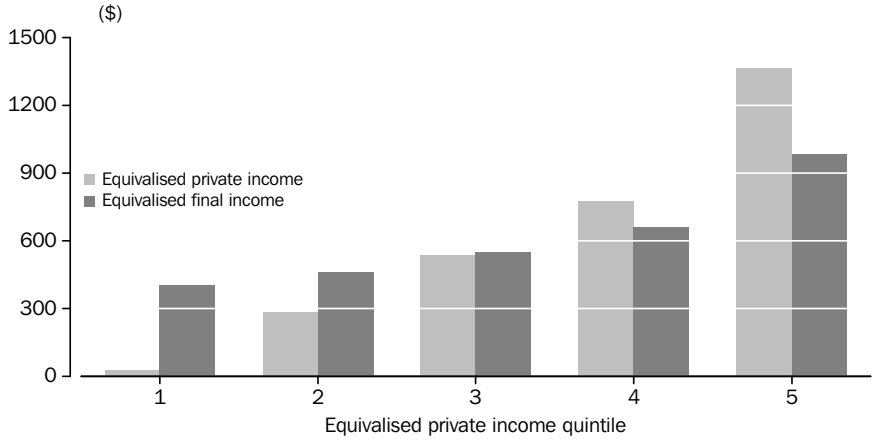
The household survey files were also heavily used in the related review of Australian government pension payments (Harmer 2009) to support modelling of the value of pensions relative to earnings over time, to investigate the relative needs of single and couple pensioners and to support modelling of superannuation balances over a full employment lifetime.

In addition to the data confronted in this paper, the ABS produces unit record level estimates of government social transfers in kind (mainly in the areas of education, health and housing) and indirect taxes. Micro and macro analysts use these data files to understand the extent and form of redistribution and its implications for the material wellbeing of particular groups within the population but also for aggregate outcomes.

In Australia, low income households receive more social benefits in cash and social transfers in kind and pay less in tax than do high income households. The redistribution of income from high to low income households can be seen more in the following analysis of equivalised private income quintile groups, shown in Figure 4. Private income is defined by the ABS as disposable income excluding social assistance benefits in cash or in kind. Final income is disposable income plus government social transfers in kind, less indirect taxes.

The net effect of benefits and taxes was to increase the average income of households in the three lower quintiles and decrease the average income of households in the two higher quintiles, that is, their inclusion has a partial equalising effect.

Figure 4: Private and final income, by private income quintile



The above discussion highlights how analysis of the distributional characteristics of household economic resources can be important for policy makers interested in changing the aggregate outcomes, that is overall economic performance, and also those interested in improving economic wellbeing.

CONCLUSION

Distribution matters. Household surveys of income, expenditure and wealth allow for not only the wellbeing impacts of changing levels of these household economic resources, but also the changing distribution of them among households. Unexpected, unwanted or unintended changes in distribution can be pointers to inefficient processes in taxes and transfers, or in the operation of labour and other markets, leading not only to less equitable outcomes for people, but less optimal growth at an economy wide level.

The confrontation of the macro and micro datasets allows the analyst to consider the composition and distribution of income, expenditure and wealth, in part, as an explanation of economy wide developments observed in sector wide estimates.

However, the micro-macro data confrontation also allows an early insight into potential risks with aggregate data sources and methods used in national accounting that may be slow to reflect evolving relationships at the transactor level, and therefore leave early aggregate estimates out of step with current and evolving circumstances.

Finally, the exploration of potential differences in confrontations of the sort summarised in this paper provide insights into how both data sets might be strengthened over time.

Social Conditions Statistics Branch
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NOTES

[1] The ABS uses households in the second and third income deciles as a 'more representative group' of 'low income households'. Studies of the expenditure, wealth and other characteristics of the lowest income decile show that they are very heterogenous group, with many with expenditure levels comparable to those with much higher income levels.

APPENDIX 1 SIH and selected ASNA household income, 2002-03 to 2007-08(a)

	SIH				ASNA				SIH as a percent of ASNA			
	2002-03	**2003-04**	**2005-06**	**2007-08**	**2002-03**	**2003-04**	**2005-06**	**2007-08**	**2002-03**	**2003-04**	**2005-06**	**2007-08**
	$b	*$b*	*$b*	*$b*	*$b*	*$b*	*$b*	*$b*	*%*	*%*	*%*	*%*
Comparable income items												
Wages and salaries	308.4	341.7	402.1	513.1	350.5	372.2	432.8	512.1	88.0	91.8	92.9	100.2
Government pensions and allowances	48.3	55.0	59.5	64.6	64.3	72.7	78.0	87.2	75.1	75.7	76.4	74.0
Own unincorporated business (net of expenses)	34.5	33.2	41.4	43.4	46.0	51.4	55.8	58.7	75.0	64.7	74.3	74.0
Interest and dividends	14.2	20.1	29.9	43.6	20.4	23.1	29.8	41.4	69.8	86.8	100.3	105.2
Gross imputed rent on owner occupied dwellings	*n.a.*	*59.7*	*69.1*	*81.9*	*57.1*	*60.5*	*68.5*	*81.8*	*n.a.*	*98.7*	*100.9*	*100.0*
Less expenses	*n.a.*	*35.8*	*43.8*	*52.3*	*n.a.*	*34.7*	*41.9*	*48.8*	*n.a.*	*103.1*	*104.5*	*107.2*
Net imputed rent	n.a.	23.8	25.3	29.6	n.a.	25.8	26.6	33.1	n.a.	92.1	95.2	89.4
Profit/loss on residential rentals	0.7	0.3	-1.3	-1.1	5.2	3.8	2.2	-1.0	13.6	9.1	. .	111.3
Workers' compensation claims	1.3	0.7	0.8	1.3	6.7	6.7	5.7	6.4	19.2	10.8	13.8	19.9
Total comparable income	407.4	474.8	555.7	694.4	n.a.	555.7	630.7	737.9	n.a.	85.4	88.1	94.1
Percent of SIH income comparable with ASNA (%)	n.a.	96.9	96.2	95.6								
SIH income not directly comparable												
Superannuation and annuity income	10.6	13.2	14.3	20.6	. .	. .	. .	. .				
Financial support from persons not in same household	2.5	3.0	3.2	8.3	. .	. .	. .	. .				
Non-life insurance claims	n.a.	0.1	0.3	0.5	14.2	14.8	16.6	20.0				
Other income	2.0	2.1	3.2	2.3	. .	. .	. .	. .				

(a) ASNA data excludes any income that cannot be directly compared to SIH data, e.g. employers' social contributions, imputed income, etc. Appendix 2 provides a concordance between SIH and ASNA components for each item in this table.

APPENDIX 2 Concordance for Table 1
SIH and selected ASNA income items

	Concordance with	
	SIH data items	**ASNA data items**
Comparable income items *Label used in Table 1*		
Wages and salaries	Wages and salaries	Compensation of employees *less* Employers' social contributions
Government pensions and allowances	Australian government pensions and allowances	Social assistance benefits
Own unincorporated business (net of expenses)	Own unincorporated business (net of expenses) Non-residential property (net of expenses) Silent partner Royalties	Gross mixed income (net of expenses) Rent on natural assets
Interest and dividends	Interest from financial institution accounts Interest on debentures and bonds Dividends from own incorporated businesses and trusts Dividends from shares Public unit trust income Other trust income (excl. public unit trusts and own business income)	Interest (net of FISIM) Dividends
Net imputed rent on owner occupied dwellings	Gross imputed rent on owner occupied dwellings less housing costs	Gross imputed rent on owner occupied dwellings less housing costs (on SIH basis - expenses derived using ASNA and SIH data)
Profit/loss on residential rentals	Profit/loss on residential rentals	Net actual rent (on SIH basis) (part of Gross operating surplus-dwellings owned by persons)
Workers' compensation claims	Workers' compensation	Workers' compensation (Social benefits receivable)

	Concordance with	
	SIH data items	**ASNA data items**
SIH income not directly comparable with ASNA		
Label used in Table 1		
Superannuation and annuity income	Superannuation/annuity/private pension	--
Inter household transfers	Financial support from persons not in same household Child support/maintenance	--
Non-life insurance claims	Accident compensation and sickness insurance	Non-life insurance claims
Other income	Overseas government pensions and benefits Interest on loans to persons not in this household Scholarships Other financial investments nec Other regular income nec	Other current transfers

ASNA income not collected in SIH

Employers' social contributions
Imputed interest on investment income
Reinvested earnings of corporations and investment funds
Financial Intermediation services indirectly measured (FISIM) on interest received
Expenses included in Gross operating surplus on dwellings and Gross mixed income (deducted to convert to SIH basis)
Current transfers to NPISHs from government and corporations

APPENDIX 3 Concordance for Table 3
SIH and selected ASNA wealth items

	Concordance with	
	SIH data items	**ASNA data items**
Comparable assets and liabilities		
Assets		
Label used in Table 3		
Residential property	Owner occupied dwelling Other residential property	Dwellings Residential land
Own unincorporated business (net of liabilities)	Own unincorporated business (net of liabilities) Non-residential property	*Add Assets* Non-residential property Non-dwelling construction Native standing timber Rural and commercial land Machinery and equipment Cultivated biological resources Intellectual property products Inventories Accounts receivable Cash held by businesses *Deduct Liabilities* Securities other than shares Unincorporated business loans and placements Accounts payable
Shares and other equity (incl. own incorporated business)	Own incorporated business (net of liabilities) Shares Trusts	Shares and other equity
Accounts with financial institutions	Accounts with financial institutions Children's assets	Accounts with authorised deposit-taking institutions, excl. NPISH deposits (part of currency and deposits) Loans and placements
Superannuation	Balance of accounts with superannuation funds	Pension funds (part of Insurance technical reserves)
Securities other than shares	Debentures and bonds Other financial assets	Securities other than shares

	Concordance with	
	SIH data items	**ASNA data items**
Liabilities		
Label used in Table 3		
Property loans	Loans for owner occupied dwelling Rental property loans Other property loans	Loans for owner occupied housing Loans for investment housing Loans for housing, where type of housing unknown
Other liabilities	Study loans Credit card debt Loans for vehicle purchases (excl. business loans) Investment loans (excl. business / rental property loans) Loans for other purposes (excl. business and investment loans)	HECS debt Consumer loans
Assets not comparable		
Label used in Table 3		
Household contents and vehicles	Contents of dwelling Vehicles Other non-financial assets nec	Consumer durables
Unfunded superannuation claims	Part may be reported as superannuation in SIH	Unfunded superannuation claims (part of Insurance technical reserves)
Loans to persons not in same household	Loans to persons not in same household	--

ASNA assets and liabilities not collected in SIH

Assets
General and life insurance reserves (part of Insurance technical reserves)
Ownership transfer costs
NPISH bank deposits
Cash held by households

Liabilities
NPISH borrowings