

NOT FOR QUOTATION – THE 2006 DATA ARE PRELIMINARY,  
INCOMPLETE & UNWEIGHTED

***HILDA's HOUSEHOLD FINANCIAL ACCOUNTS:  
THEIR VALUE FOR DEVELOPING IMPROVED ASSESSMENTS  
OF ECONOMIC WELL-BEING AND POVERTY***

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## *Abstract*

In 2005-06 the HILDA Survey moved towards providing a full set of *household financial accounts* on a longitudinal multi-year basis. A full set of accounts, which includes measures of wealth and consumption as well as income, will enable us to make much improved assessments of trends in the *economic well-being* of Australians. In this paper the accounts are used as a basis for suggesting improved estimates of *financial poverty*.

National measures of poverty in Australia and other Western countries are usually based only on low income. But this is conceptually incorrect; the measures lack validity. To be poor is to have a low material standard of living – involuntarily. So measures of poverty should also take account of household consumption and wealth. If a household has an adequate level of consumption or a reasonable amount of wealth (net worth), it should not be classified as poor, even if its current income is low.

The invalidity of income-based measures has long been recognised in principle. In practical terms, the problem is to combine measures of wealth and income, and especially consumption, in the same survey. The usual view, notably among Government statisticians, is that consumption can only be reliably measured using the ‘shopping diary’ method, which requires survey respondents to fill in a diary for a week. The HILDA Survey team is attempting to overcome these practical problems. In the 2005 survey a battery of household expenditure items was included which, benchmarked against the ABS Household Expenditure Survey for 2003-04, appeared to provide accurate measurement of 53% of total household expenditure. These accurately measured items correlated 0.76 with total expenditure.

This paper uses the 2005 data and a preliminary 2006 file to construct revised measures of financial poverty. The value of these measures for public policy and research purposes is illustrated. In particular, the measures can be used to predict which households are *at risk* of becoming poor.

Clearly much development work remains to be done, but the aim is for HILDA to produce valid medium and long term estimates of poverty and, more generally, economic well-being. If this can be achieved, there would be a strong case for Australian Governments to make use of the new household accounts in designing and evaluating tax, transfer and social policy measures.

## INTRODUCTION: THE VALUE OF HILDA'S HOUSEHOLD FINANCIAL ACCOUNTS

In 2005-06 the HILDA Survey moved towards providing a full set of *household financial accounts* on a longitudinal multi-year basis. A full set of accounts, which includes measures of wealth and consumption as well as income, may be a key to making much improved estimates of the *economic well-being* of Australians. So far as we know, the household accounts to be provided by HILDA will be unique. We are not aware of comparable data sets in other countries. Certainly none of the other major national panel studies has so far attempted to produce longitudinal household accounts.<sup>1</sup>

In this paper the accounts are used as a basis for suggesting improved measures and assessment of trends in *financial poverty*, but the data will have many other uses. Basically, they should be able to provide answers to four types of questions: -

- *Trends/risks*: How many Australian individuals and households are *on track* to achieve desirable financial outcomes; for example, adequate levels of consumption, or adequate savings for retirement. How many are not achieving these outcomes or are *at risk* of not doing so?
- *Population characteristics*: What are the family, educational, labour force... characteristics of people who, in some cases are on track, and

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<sup>1</sup> The Australian Bureau of Statistics (ABS) now combines its main income survey – the Survey of Income and Housing (SIH) – with the Household Expenditure Survey (HES) in order to combine cross-sectional measures of income, consumption and wealth in the same survey.

in other cases are not on track towards achieving desirable financial outcomes?

- *Strategies/decisions*: Why are some people succeeding and others having difficulty in achieving desirable financial outcomes? Which career strategies and decisions about, say, saving versus spending appear to be responsible for positive and negative trends and outcomes?
- *Interventions/public policies*: What strategies could people use to turn their fortunes around? How, if at all, could Government policy interventions help?

Here, to illustrate the possibilities, the focus is on poverty. National measures of poverty in Australia and other Western countries are usually based only on low income. But this is conceptually incorrect; the measures lack validity. To be poor is to have a low material standard of living – involuntarily. So measures of poverty should also take account of household consumption and wealth. If a household has an adequate level of consumption or a reasonable amount of wealth (net worth), it should not be classified as poor, even if its current income is low.

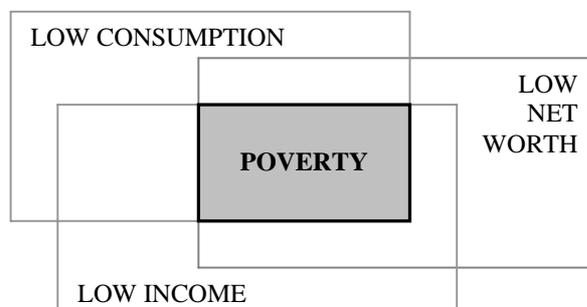
The invalidity of income-based measures has long been recognised in principle (Townsend, 1979; Ringen, 1987, 1988; Sen, 1999; Nolan et al, 2000; Saunders and Adelman, 2004; Saunders, 2005). Stein Ringen (1988), the Oxford economist, has perhaps put the point best. He notes that your material standard of living right now (this week or this year) *is* your level of

consumption. Income is at best only an indirect or proxy measure of consumption. It tells us about a person's or a household's *potential* command over resources, not what they actually consume. Ringen goes on to say that, in his view, to be defined as poor a person or household should be *both income poor and consumption poor*. Someone who is income poor but not consumption poor must be getting resources from somewhere else – they must be running down savings, borrowing or receiving gifts. Someone who is consumption poor but not income poor is saving, or, in the extreme cases, is a hoarder or a miser.

I would like to add a further definitional point. A household with substantial wealth or net worth (assets minus debts) should also not be considered poor, because wealth/savings can be used to tide over bad times, or as collateral for a loan. So I want to suggest that *a household should only be considered poor if it has low income, low consumption and low wealth*. The Venn diagram in Figure 1 illustrates the concept.

Figure 1

**Redefining financial poverty: intersection of low income, low consumption & low net worth**



As Figure 1 indicates, poverty should be viewed as the overlap or intersection of low income, low consumption and low net worth. (Operational measures – or specific poverty lines – for low income, consumption and net worth are proposed later in the paper).

A further important conceptual and normative point needs to be made. Poverty matters much more in the medium and long term than the short term. Most published measures of poverty are cross-sectional; they tell us how many people are estimated to be poor at one moment in time. But from a public policy and humanitarian point of view, what matters is how many people are poor for a period of years, not how many are poor at a given moment. Panel studies around the world – and this is true of the HILDA panel in Australia – have regularly shown that most income poverty is short term, but that substantial minorities suffer medium or long term poverty (Goodin, Headey, Muffels and Dirven, 1999; Headey, Harding and Warren, 2006). Of course, it remains to be seen, and the HILDA data will eventually tell us, whether measures of financial poverty based on wealth and consumption, as well as income, will also indicate that most poverty is short term, or whether they will show that medium and long term poverty is more prevalent.

How does a medium or long term perspective on poverty relate to definitional issues? To avoid medium term poverty households need to achieve a *sustainable level of consumption which is above the poverty line*. As commented earlier, they are not poor right now if their current consumption level is above the poverty line. Also, they have a good cushion

or reserve if they have a reasonable amount of net worth. But if they have little net worth, and if they are currently consuming more than their disposable income, then their position may be precarious. They may be headed towards poverty.<sup>2</sup> We shall make use of these ideas later in the paper in predicting future poverty.

In practical terms a proposal to define and measure financial poverty in more complicated ways, instead of just relying on income, would be irrelevant if the same households were income poor, consumption poor and net worth poor. In other words, if the three variables were highly correlated we could just carry on as before. But they are not highly correlated, or at least not in some countries. Ringen (1988) showed that in some European countries the section of the population found to be in poverty if one used an income measure was quite different from the section identified using a consumption measure. We shall find this to be true in Australia, according to the HILDA data. The ABS Household Expenditure Surveys also suggest the same point. They regularly show that close to half of all households, mostly in the bottom half of the income distribution, report that they spend more than their disposable income.

In general terms divergences between income and consumption, and their relationship to wealth/savings, can be understood in terms of the concept of lifetime income or 'permanent income' (Friedman, 1957). It is well known that people's earnings tend to increase from the time they start work until roughly their early fifties, then taper downwards towards retirement. A

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<sup>2</sup> However, even these households may be able to sustain their consumption level by borrowing, if they have high levels of human capital and are young or middle aged. In these circumstances it may be rational for them to borrow and rational for lenders to lend.

rational individual (or household) would anticipate this trajectory and would rationally decide to smoothe consumption, so that consumption was more equal year after year than income. Typically, households headed by young parents consume more than they earn when their children are young, save money and accumulate wealth (earn more than they consume) in later middle age, and then in retirement consume much more than they earn by running down their savings (for Australian evidence see Creedy and Tan, 2007).

*Relationship of the proposed measure of financial poverty to other well known poverty measures*

Clearly, what is proposed here is a measure of *financial* poverty. Some other well known approaches to poverty take account of other dimensions of deprivation besides the financial one. It may be appropriate to comment briefly on the two most influential of these approaches in order to offer justification for the financial focus suggested here.

The Nobel Laureate, Amartya Sen, is famous (inter alia) for his *low capabilities* definition of poverty (Sen, 1999).<sup>3</sup> He takes the view that to be poor is to lack effective freedom of choice in how to live one's life. A person will lack freedom and so be poor if he/she lacks adequate capabilities and functionings such as are conferred by a reasonable standard of education and health, as well as financial resources. Sen's approach has many attractions, not least that it would encourage policy-makers to focus on provision of skills/capabilities which could enable most people to fend for

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<sup>3</sup> Sen's approach formed the basis for a recent Melbourne Institute project on multidimensional approaches to the analysis of poverty. See Headey (2006).

themselves and avoid long term financial dependence on the State or other family members. It is clear that the Council of Australian Governments (COAG) has been influenced by Sen in adopting their human capital agenda – the so-called third wave of reform in this country (COAG, 2006).

At the same time, there is also merit in keeping the financial dimension separate and then seeing to what extent, in fact, poor finances correlate with low capabilities. This is the approach adopted in this paper, where assessing relationships with low capabilities is seen as one way of providing construct validity evidence about the proposed financial measures.

The European Union has adopted a *social exclusion* approach to poverty and deprivation (Eurostat, 2000). Individuals are considered to be at risk of social exclusion if they have not just low financial resources, but also low human capital, or low social capital, or have poor health, or are discriminated against in various ways. In the EU this approach has proved to be politically feasible in that it has provided a semi-consensual approach and has led to the adoption of a range of specific targets for reducing deprivation. In Australia it seems unlikely that a social exclusion approach would have political traction. It is too open to the apparently robust common sense objection that many people whom the approach would define as ‘socially excluded’ are manifestly not lacking in adequate social contacts.

Some other approaches to measuring poverty and deprivation are best viewed as attempts to ‘make do’ in the absence of valid consumption measures. This appears to be true of the household budget standards

approach (Saunders, 1998), and of approaches which rely on deprivation indicators (Nolan et al, 2000), or measures of financial stress (ABS, 2000).

*Household financial accounts: relationships between consumption, income and wealth*

It may be useful to conclude this introductory section by describing household financial accounts in terms of the formal relationship between consumption, income and wealth.

$$\text{Consumption} = \text{Disposable income} - \text{Change in net worth}$$

In any given year a household's material standard of living or consumption is going to depend on its disposable income minus its change in net worth (assets minus debts). If it wants to spend more than it earns, it runs down wealth/savings. If it earns more than it spends, it foregoes consumption and its wealth increases. The definition of consumption here includes the market value of consumption goods, plus imputed rental values for durables (e.g. housing; see below). Household disposable income includes Government benefits and is net of taxes. Capital gains or losses, whether realised or unrealised, are included in income. Net worth comprises all assets (both financial and non-financial) minus all debts.

For present purposes, the main point is that in order to assess how households are going financially, including assessments of poverty, it is necessary in HILDA to measure all three variables every year.<sup>4</sup> If we do so, we can assess their progress or regress, and may be able to predict future outcomes.

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<sup>4</sup> From a purely arithmetic point of view, it would of course be possible to measure two of these variables and calculate the third. In practice, the amount of measurement error in all surveys is such that it makes much more sense to attempt to measure all three.

## METHODS

### *Practical measurement issues and how we have dealt with them in HILDA*

If it is accepted that it is desirable to measure all components of economic well-being - wealth, income and consumption - in the same survey, then it is clear that the main practical problem lies in developing a valid survey measure of consumption.

In the past it has been generally believed that the only valid way to measure the amounts which households spend on many items is to get members to fill in weekly 'shopping diaries'. These are routinely used in national household expenditure surveys, including ABS surveys (for a recent alternative approach, see Dvornak and Kohler, 2007). The general view has been that to ask all expenditure questions in a standard interview format would yield invalid data because, without the assistance of a diary, respondents would be unable to remember how much they spent on many goods and services.

However, recent work in Canada has shown that, in fact, some items of expenditure are more validly reported in standard surveys than a diary, in part because respondents tell us how much they 'usually' spend on items, which is exactly what we want to know for the purposes of analyses which look at individual or household relationships between consumption, other measures of well-being, and social and economic outcomes more generally (Browning, Crossley and Weber, 2003). A defect of diaries for these purposes is that they record expenditures in a specific time period (usually just a week), which may or may not be typical for an individual respondent or household. Consequently, individual or household level correlation and

regression analyses cannot sensibly be undertaken, although aggregate national estimates of each variable should be correct.<sup>5</sup>

Further, the Canadian researchers showed that total household expenditure can be accurately extrapolated from the validly reported items.<sup>6</sup> The official Canadian statistical agency, Statistics Canada, now regularly uses standard survey methods to collect expenditure data. It should be noted, however, that their instrument appears too long for inclusion in a panel survey like HILDA.

For the HILDA panel, we have tried to develop a set of questions to provide valid measurement of a wide range of household expenditures, but not all. Our approach is to divide expenditure into weekly, monthly and annual items. It seems natural or at least sensible for some items (e.g. groceries, public transport and taxis) to ask how much is spent in ‘a typical week’. For other items (e.g. motor vehicle fuel and telephone calls) we ask how much is spent in ‘a typical month’, and for a third set (e.g. holidays, costs of education) we ask about the whole year.

In the 2005 Survey all the consumption goods on which households spend at least a moderate amount of money were included: groceries, meals eaten out, alcohol, cigarettes and tobacco, public transport and taxis, motor fuel, car repairs, telephone costs, utilities (gas, electricity, water), home maintenance, health insurance, education, clothing and footwear, health care, holidays,

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<sup>5</sup> Given a national representative sample and a representative time slice.

<sup>6</sup> It is far from certain, however, that a *longitudinal series of estimates* of total expenditure could be validly obtained in this way. In other words, a few items may or may not provide an adequate basis for estimating annual *changes* in expenditure. Clearly, the prime purpose of HILDA is to provide longitudinal estimates.

hobbies and child care. The only consumer durable that was included was housing, both mortgages and rents. Other durables were omitted in 2005, but then were attempted in 2006.

*Benchmarking HILDA consumption data for 2005<sup>7</sup>*

The obvious way to assess measurement validity is to make an adjustment for inflation and benchmark results against the latest ABS Household Expenditure Survey (HES) for which published data are available, namely the HES conducted in 2003-04. In benchmarking we mainly rely on comparisons between mean expenditures reported in HES and in HILDA. The standard deviations reported in the HES are in many cases much higher than in HILDA precisely because, for some items, HES did not ask about 'usual' expenditures but recorded expenditures in a survey/diary week. Inevitably, this led to inclusion of some expenditures which were unusually high or low for the households concerned, so inflating standard deviations.

It transpires that HILDA appears to have recorded accurate measurement (to within about plus or minus 10%) of items comprising 53.4% of total household expenditure on goods and services.<sup>8,9</sup> The validly measured items were the first twelve on the list above, starting with groceries, plus housing

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<sup>7</sup> A paper benchmarking HILDA consumption measures for both 2005 and 2006 is being prepared by the HILDA team. At present, the 2006 data are only preliminary.

<sup>8</sup> We allowed ourselves a bit of leeway over 10% where there was good reason to believe that the HILDA estimates might be reasonably satisfactory. In particular, in view of large housing price increases in recent years, we accepted that HILDA's high estimate of housing consumption might well be valid. The same point may well apply to education costs.

<sup>9</sup> Total household goods and services expenditure recorded in HES 2003-04 was \$893 per week. This figure includes payments of mortgage interest but not principal. In HILDA the question about mortgage payments made no distinction between interest and principal. So, for comparison with HILDA, one must add to \$893 a sum of \$36 which was the mean weekly amount of principal repayments in 2003-04. HILDA appears validly to measure items which in HES amount to 53.4% of \$929 (\$893+\$36).

and rent. The items for which HILDA estimates proved inaccurate were the last five on the list, starting with clothing and footwear.

In regard to the validly measured items, the total expenditure figure in HILDA differs by only 3.8% from the HES total for the same items, after adjusting for inflation.<sup>10</sup> A key point is that the putatively validly measured items correlate 0.76 with total household expenditure.<sup>11</sup> Further, and relevant to the measurement of poverty (see below), the same correlation was found for low income households.

Clearly we need to keep trying to improve our instrument, but arguably a correlation of 0.76 means that it is reasonable to extrapolate total household expenditure. This requires an assumption that households are placed in correct ratio scale order for total expenditure on the basis of their consumer goods expenditures plus housing. Here it needs to be conceded that the distinction being made between household expenditure and consumption is fairly crude. Conceptually, the difference is that expenditure is just out-of-pocket expenses, whereas consumption also includes benefits in kind. In this paper, expenditure estimates are treated as equivalent to consumption, except in the case of owner-occupier housing.<sup>12</sup> Here the consumption benefit has been equated to a rental value set at 6% of the current value of the house if sold today (as estimated by HILDA survey respondents).<sup>13</sup>

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<sup>10</sup> Given good economic growth, one would expect a real increase of about this amount between the mid-point of the HES in January 2004 and September-October 2005 when the HILDA Survey was conducted.

<sup>11</sup> This correlation was supplied by ABS, based on the HES for 2003-04.

<sup>12</sup> This seems realistic, given the list of items accurately measured. Clearly it would not be realistic if more consumer durables, in addition to housing, were included.

<sup>13</sup> 6% of current sale value is a fairly standard rule of thumb for the rent which a dwelling would be likely to attract. Clearly, actual rental values in specific suburbs can differ quite widely from this guideline.

Further in regard to measurement issues, it should be recorded that over 80% of households provided information about their expenditures for all items included in the 2005 and 2006 HILDA Surveys. Imputed values for total consumption (but not individual items) were added for the remaining households who had some missing data.<sup>14</sup> The Pearson correlation between household consumption measured in 2005 and 2006 was 0.80. This is a higher correlation than was found for disposable income (0.69), indicating consumption smoothing. Also, as permanent income theory would predict, consumption was also more equally distributed than income. For example, the Gini coefficient of household consumption in 2005 was about 20% lower than the Gini for income.

#### *Measures of income and wealth in HILDA*

The validity of the measures of income and wealth collected in HILDA has been assessed in previous publications and will only be briefly summarized here (Watson and Wooden, 2004; Headey, Marks and Wooden, 2005).

HILDA collects annual data on all main sources of labour income, asset income, private transfers and Government benefits. Income tax, the Medicare Levy and Family Tax Benefits are imputed by the survey data managers. The HILDA totals for gross incomes (income from all sources, including Government) and disposable incomes match up well with ABS sources, although they are somewhat higher. In a recent study ABS sought to benchmark its own main income survey – the Survey of Income and

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<sup>14</sup> The imputation was done by the author, using the SPSS MVA (missing values analysis) program. The imputation is likely to be revised in future years, when it is expected that the HILDA statistical team will undertake a longitudinal imputation of the kind already done for individual and household incomes and wealth.

Housing (SIH) – against detailed small areas experimental estimates of income constructed mainly from taxation returns made to the Australian Tax Office, supplemented by evidence from Centrelink about actual pay-outs of Government benefits. If the experimental estimates are treated as a ‘gold standard’, it appeared that the main SIH income aggregates are about 4% too low. Using the same benchmark, the main HILDA estimates are about 3% too high.<sup>15</sup> Given that the ‘gold standard’ is mainly based on tax returns - returns on which people would surely tend to understate rather than overstate their incomes - the HILDA estimates seem plausible.<sup>16</sup>

HILDA measured wealth – assets and debts - in 2002 and then again in 2006. Most household and individual level surveys seriously underestimate wealth, when matched up against aggregate data sources. However, when the HILDA 2002 data are benchmarked against ABS and Reserve Bank of Australia sources (which themselves differ substantially for some components of assets), it appears that under-estimation is only moderate. Average (mean) financial assets in HILDA are 93% of what we regard as the preferable benchmark figure, non-financial assets (mainly housing, but also including privately owned businesses, farms and cars) are 98%, and total assets are 96% (Headey, Warren and Wooden, 2005).<sup>17</sup> Debts are least well measured and were 82% of the benchmark. Altogether net worth in HILDA

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<sup>15</sup> Both HILDA results and SIH results reported here are weighted.

<sup>16</sup> However, some smaller components of income, notably business income and investment income, are seriously mismeasured. Also, figures for Centrelink income support payments in HILDA are about 10% too low.

<sup>17</sup> For reasons explained in Headey, Warren and Wooden (2005), we use an ABS benchmark for financial assets and an RBA benchmark for non-financial assets and specifically housing.

in 2002 came in at approximately 99% of the figure suggested by the relevant benchmarks.<sup>18</sup>

Only preliminary data for wealth (net worth) in 2006 are available. The data have been used for illustrative purposes in this paper. Wealth was estimated for 2005 by adjusting 2006 data for the difference between housing values and rents in the two years. This is a crude estimate, although it should be remembered that about 55% of the net worth of Australian households is held in property (HILDA Survey 2006, preliminary estimate).

#### *Operational definitions of poverty*

The two poverty lines most widely used in Western countries define individuals as income poor if they live in a household with an income (i) less than 50% of median household-size adjusted (equivalent) income and (ii) less than 60% of median equivalent income.<sup>19</sup> The former poverty line is normally used in OECD publications, and the latter is the semi-official European Union (EU) line. Extrapolating from these income-based lines, we will also calculate income+consumption poverty using 50% and 60% of median cut-off lines. One should note, parenthetically, that poverty lines depend on current community standards (or what Governments deem to be

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<sup>18</sup> However, this apparently miraculous result is partly due to cancelling errors; both the assets and debt figures in HILDA are too low judged against benchmarks. But when debts are subtracted from assets, the errors largely cancel out.

<sup>19</sup> The OECD equivalence scale was used. It is based on giving a weight of 1.0 to the first adult in the household, 0.5 to other adults, and 0.3 to children under 15. There is ample international evidence to show that point estimates of poverty are little affected by which of several reasonable equivalence scales one uses, although the specific households deemed to be poor are considerably affected by the weight given to children (Buhmann et al, 1988; Coulter, Cowell and Jenkins, 1992). For a recent article proposing sophisticated improvements to equivalence scales, see Creedy and van der Ven (2005).

community standards),<sup>20</sup> so there seems no reason to select different cut-off levels for income and consumption.

Selecting a wealth (net worth) cut-off for assessing poverty is more problematic. It makes no real sense to select a cut-off based on 50% or 60% of the household median; one odd consequence would be to place almost all younger households below the line. For present purposes, we shall deem that a household is excluded from poverty (for measures which include wealth) if it has a net worth of \$200,000 or more. Clearly, this figure is somewhat arbitrary but it was set bearing in mind the likely net worth of Australian homeowners who own a modest home which they have lived in for several years and so have paid off part of the mortgage. It should also be noted that the percentages designated as poor in measures combining income, consumption and wealth are scarcely affected if other reasonable cut-offs (e.g. \$100,000, \$300,000 or \$500,000) are selected.<sup>21</sup>

#### *Construct validity evidence of the value of the new measures of poverty*

How can we assess whether poverty measures based on consumption and wealth as well as income improve our understanding of poverty and are more valid than income measures alone? One approach is to take account of the economist's standard human capital theory. If the new measures have greater validity than the old, one would expect that they would have stronger statistical relationships with measures of human capital, including

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<sup>20</sup> A more critical view is that poverty lines are essentially arbitrary. While this is arguably the case, it is also true that public opinion, as reflected in surveys in many Western countries, deems that to have an income below about 50-60% of current median household income is to be poor (Citro and Michael, 1995).

<sup>21</sup> Caner and Wolff (2004) propose what are in some ways more sophisticated measures of asset poverty, based on the number of months a household could survive on its assets if its income was cut off. But their measures classify almost all young households as asset poor, which in some respects is sensible but ignores the fact that many have good access to loans.

educational attainment, work experience and health. In other words, economic theory would lead us to expect fairly strong relationships between human capital and measures of poverty, and the stronger these relationships the more confidence one may have in the measures. In methodological jargon, we can conduct *construct validity tests* which compare the different poverty measures.

It transpires that poverty measures based on consumption and wealth, as well as income, have Pearson correlations about 50% higher with measures of educational attainment, and also with physical and mental health than measures based on income alone. The multidimensional measures also correlate much more strongly with a measure of self-assessed poverty/prosperity included in HILDA.<sup>22</sup> To make the same point slightly differently: regression analyses indicate that measures of human capital and health account for considerably more variance in multidimensional poverty measures than in measures based on income alone.

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<sup>22</sup> Respondents are asked to rate their own prosperity, given their current needs and financial responsibilities, on a 6-point scale running from 'prosperous' to 'very poor'.

## RESULTS

*Preliminary estimates of financial poverty in 2005-06 based on wealth and consumption as well as income*<sup>23</sup>

In Table 1 results are first given for poverty lines based solely on low income. This is the conventional approach. Then we see how big a difference it makes to estimate poverty rates when first consumption is added to provide income+consumption poverty lines, and finally when net worth is added to give income+consumption+net worth lines.<sup>24</sup>

Table 1  
**Measures of Financial Poverty in 2005-06 Based on**  
**(i) Income**  
**(ii) Income + Consumption**  
**(iii) Income + Consumption + Net Worth<sup>a</sup>**

	2005 Below 50% pov. line <sup>b</sup> %	2005 Below 60% pov. line <sup>b</sup> %	2006 Below 50% pov. line <sup>b</sup> %	2006 Below 60% pov. line <sup>b</sup> %
<b>income poverty</b>	<b>12.4</b>	<b>20.0</b>	<b>11.7</b>	<b>18.5</b>
<b>income poor + consumption poor</b>	<b>3.4</b>	<b>7.0</b>	<b>2.1</b>	<b>5.5</b>
<b>income poor + consumption poor + net worth poor</b>	<b>3.4</b>	<b>6.5</b>	<b>1.9</b>	<b>4.9</b>

a. Sources: HILDA (2005, 2006). Unweighted results.

b. These poverty lines apply to household income and consumption. A cut-off of \$200,000 was used for wealth.

<sup>23</sup> Strictly speaking, the dates of the wealth, consumption and income poverty measures are not the same. The wealth and consumption measures apply to the dates on which the Survey was conducted (September-October 2005 and September-October 2006). The income measures relate to Financial Years 2004-05 and 2005-06.

<sup>24</sup> Results are unweighted. Normally all results given for panel surveys are weighted, but weights are not yet available for the preliminary 2006 data, so rather than give weighted results for 2005 and unweighted for 2006, it was decided not to use weights for either year.

It can be seen that in Australia the choice of whether to define and measure poverty in terms of just income, or both income and consumption, makes a huge difference to how many people (and, as we shall see, which groups of people) are designated as poor. However, inclusion of wealth makes only a small difference. Fundamentally, the reason why inclusion of consumption has such a large effect is that (as noted earlier) consumption is about 20% more equally distributed than income. It is also only moderately highly correlated with income; the Pearson correlations in 2005 and 2006 respectively were 0.54 and 0.48.<sup>25</sup> It is also clear from Table 1 that choice of poverty line (50% or 60% of median) makes a large difference to estimated poverty rates.

Income+consumption poverty lines give much lower estimates of poverty than income lines. Many households appear to engage in consumption smoothing, maintaining their standard of living during putatively temporary periods of low income (Barrett, Crossley and Worswick, 2000). Adding in wealth (net worth) then reduces estimated poverty rates just a little more.

All measures show that rates of financial poverty fell in 2006 compared to 2005. However, the measures that rely solely on income show smaller declines than measures which include consumption and wealth.

Next we show how the new measures could be used to provide revised estimates of the persistence of financial poverty. As noted earlier, poverty persistence is of much greater normative and policy significance than short

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<sup>25</sup> It also quite important to realise that household consumption is more highly related to net worth (correlation in 2006=0.65) than to household net income (correlation=0.40).

term poverty, or poverty at one moment in time. However, with only two years of data for the new measures, the evidence is purely illustrative; plainly a two-year measure cannot sensibly be described as indexing 'persistent' poverty. Using each of the alternative measures, Tables 2A and 2B show how many Australians were not poor in either 2005 or 2006, how many were poor in one of these years but not both, and how many were poor for two years running. Table 2A uses measures based on the 50% of median poverty lines, while Table 2B uses 60% lines.

Table 2A

**Two-Year Persistence of Financial Poverty in 2005-06 Based on 50% of Median Poverty Lines:**

**(i) Income Poverty**

**(ii) Income + Consumption Poverty**

**(iii) Income + Consumption + Net Worth Poverty<sup>a</sup>**

N times poor in 2005-06	Income poor 50% line <sup>b</sup> %	Income & consump. poor <sup>b</sup> %	Income, consump. & wealth poor <sup>b</sup> %
Never poor	82.5	94.9	95.2
1 year poor (2005 or 2006)	10.6	4.2	3.8
Both years poor	6.9	0.9	0.9
	(100.0)	(100.0)	(100.0)

Table 2B

**Two-Year Persistence of Financial Poverty in 2005-06 Based on 60% of Median Poverty Lines:**

**(i) Income Poverty**

**(ii) Income + Consumption Poverty**

**(iii) Income + Consumption + Net Worth Poverty<sup>a</sup>**

N times poor in 2005-06	Income poor 60% line <sup>b</sup> %	Income & consump. poor <sup>b</sup> %	Income, consump. & wealth poor <sup>b</sup> %
Never poor	74.0	90.2	91.0
1 year poor (2005 or 2006)	13.3	6.7	6.1
Both years poor	12.8	3.1	2.9
	(100.0)	(100.0)	(100.0)

<sup>a</sup>Sources: HILDA (2005, 2006). Unweighted results.

<sup>b</sup>These poverty lines apply to household income and consumption. A cut-off of \$200,000 was used for wealth.

Clearly, two-year poverty persistence is estimated to be a great deal lower if income-based measures are replaced by measures which also incorporate consumption, or consumption plus wealth. This is further evidence of

consumption smoothing. Using the income-based 50% poverty line, two-year poverty in 2005-06 is estimated at 6.9% of the population. If income, consumption and wealth are combined the rate drops to 0.9% for the two-year period. In parallel fashion, if the 60% income-based poverty line is used, two-year poverty is estimated at 12.8%, while if income, consumption and wealth are all included, the rate is 2.9%.

In summary, if the logic behind including these revised measures of poverty is accepted as sound, it also has to be accepted that existing income-based measures are seriously in error. The results they give are much too high. Saying this does not in any way diminish the importance of financial poverty as a public policy issue. The key aim is to define and measure poverty more accurately in order to provide improved evidence for public policy intervention.

***Who is income poor but not consumption poor – and vice-versa?***

Given that the groups diverge, it is valuable to ask ‘Who is income poor but not consumption poor – and vice-versa?’ Three hypotheses may be suggested about the characteristics of the first group. First, we might expect that many would be homeowners who have completely or nearly paid off their mortgage, and so are living more or less ‘rent-free’. Secondly, we might expect that some young people with high levels of human capital but a low current income would take a chance on consuming more than they earn because they consider that they can afford to take on debt. Thirdly, and

overlapping with the second group, we might expect to find some young people consuming more than earn due to gifts from parents and relatives.<sup>26</sup> All three hypotheses receive some confirmation. The largest set of people who lack income but whose consumption levels appear adequate are those who own their homes outright. Many are of course older people who have retired. For example, the estimated rate of poverty in 2006 for households headed by people aged 65 and over falls from over a third if the traditional 50% of median income-based poverty line is used, down to 5.9% if a parallel measure combining income, consumption and net worth is used.

Younger well educated people also have a fairly high rate of income poverty. As noted above, they may be borrowing to consume, or perhaps living partly off a parental subsidy.<sup>27</sup> Their decisions to spend more than they earn may be quite rational in so far as they have high earnings expectations down the track. Single women are particularly likely to have higher levels of consumption than earnings, and may perhaps receive some subsidies from boyfriends and partners, in addition to borrowings and possible parental subsidies. In general, households headed by individuals or couples of prime working age (25-54) are less likely than households headed by younger or older people to be income poor but still have adequate levels of consumption.

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<sup>26</sup> In principle, gifts should be recorded as income in HILDA, but survey research experience suggests substantial under-recording.

<sup>27</sup> As noted earlier, parental subsidies should be recorded in surveys as inter-household transfers but are, in practice, often omitted as a source of income.

It proved harder to identify specific groups who are consumption poor but not income poor. However, renters who have low incomes and pay a high proportion of what they do earn in rent are one such group.<sup>28</sup>

*Who is at risk of future poverty and why?*

In the introduction, it was suggested that the HILDA household financial accounts could be valuable for answering four types of questions: questions relating to trends/risks, population characteristics, strategies/decisions and interventions/public policies. Here an attempt is made just to give a sense of the possibilities by continuing with analysis of poverty and seeking to predict who is at risk of future poverty and, to some extent, why. For this illustration, *the preferred measure is income+consumption+wealth poverty*, using 60% of median lines.<sup>29</sup> Table 1 showed that in 2005 6.5% were deemed to be in poverty using this measure, and Table 2B showed that 2.9% were poor in both 2005 and 2006. Other relevant facts are that 4.5% ceased to be poor in 2006, having been poor in 2005, and 1.7% became poor.

For present purposes the focus is on the last of these groups – the people who became poor in 2006, having not been poor in 2005. What were their risk factors? A reasonable set of hypotheses is that they were (1) already in the bottom half of the income distribution in 2005 (2) they took a risk by spending (consuming) more than their disposable income in that year, and (3) they had little wealth (less than \$200,000 net worth) to fall back on. In fact, 10.7% of the population had these characteristics in 2005 and, as it transpired, 10.3% of this sub-set (i.e. 1.1% of the total population) actually

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<sup>28</sup> It is not really clear why. In some cases they may be saving a lot; e.g. to buy a house.

<sup>29</sup> Results are very similar if the measure used is income+consumption poverty, based on 60% of median lines.

became poor in 2006. Since, in fact, only 1.7% of the total population became poor in that year, this simple approach has succeeded in identifying/predicting nearly two-thirds of those who moved into poverty.<sup>30</sup>

Another group, otherwise similar but with some wealth to fall back on, was at very low risk of poverty. Individuals in households in the bottom half of the income distribution who spent more than their disposable income in 2005, but whose net worth was \$200,000 or more, had only an 0.3% risk of becoming poor in 2006.<sup>31</sup> By contrast, otherwise similar people whose consumption was not ‘excessive’ or ‘risky’, but who had little wealth to fall back on, were at an 8.0% risk of poverty in 2006.

There is, admittedly, an element of platitude in finding that people who overspend, and also have few assets to fall back on, are at the greatest risk of poverty. However, the result is by no means entirely obvious. It might have been thought (or guessed) that most people who become poor do so solely because they suffer a loss of income; for example, because of unemployment. What has been shown here is that, while a decline in income was part of the story (by definition – the individuals in question would not have been defined as poor in 2006 unless their incomes had fallen), it was also true that about two-thirds of those who became poor were overspending in the previous year. Doubtless they hoped their incomes were about to increase, or would at least stay steady, but that did not happen.

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<sup>30</sup> Results for the prime working age group (25-54) followed the same pattern as for the total population, although overall poverty rates were considerably lower.

<sup>31</sup> Of course, if people in this group had had a great deal of wealth in 2005, only extreme spending could have reduced them to income+consumption+wealth poverty in 2006. However, only 1.9% were reduced to income+consumption poverty, indicating that wealth really does provide an effective buffer in most cases.

This simple analysis, the thrust of which was confirmed by more detailed multivariate results, suggests the key importance of knowing about a household's wealth (net worth) in assessing its risk of poverty. It may also suggest that a possible policy intervention to assist some individuals and households would be to provide emergency loans for specific purposes (rather than for general consumption) to see them through periods of income and consumption hardship. This is just what higher net worth households are, in effect, able to do for themselves and what well-off parents quite often do for their children when they are students or young adults. It may be noted that emergency loans have from time to time been made available in specific circumstances by both the Australian and some State Governments.<sup>32</sup>

It is worth noting that the group identified as being at high risk of becoming poor in 2006 were about average in terms of human capital (education and work experience) compared with the total population in the bottom half of the income distribution.<sup>33</sup> They were, however, disproportionately in female-headed households. Given their reasonable level of human capital, many might be worth consideration for emergency loans.

*Poverty accounts for 2005-06: a sub-set of the household financial accounts*

A dot point summary of poverty accounts which could be provided within HILDA's household financial accounts for 2005-06 can now be given.

Again, the measure of poverty selected for illustrative purposes is the income+consumption+wealth measure, using 60% of median cut-offs.

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<sup>32</sup> One case: loans were made available to low income people to tide over emergencies (e.g. to cover extra expenses at the beginning of the school year) in 1993-96 when Peter Baldwin was Minister of Social Security. The Victorian Government appears to have operated a somewhat similar scheme in the 1980s.

<sup>33</sup> Again, multivariate analysis confirmed these results.

- *Poverty in 2005*

Below the poverty line = 6.5%. At risk of future poverty on the basis of their 2005 financial indicators = 10.7%.

- *Poverty in 2006*

Below the poverty line = 4.9%. Among these individuals 3.2% were already poor in 2005. The remaining 1.7% became poor in 2006. Of these 1.7%, 64.7% (1.1% of the total population) had been assessed as being at risk of future poverty.

At risk of future poverty on the basis of their 2006 financial indicators = 15.8%.

- *Poverty in 2005-06*

Below the poverty line in both years = 2.9%. At very high risk of future poverty on the basis of both their 2005 and 2006 financial indicators = 5.9%.

## **DISCUSSION**

Much remains to be done to improve the household accounts in HILDA. We are gradually improving the household expenditure/consumption measures, but it is a slow process. A further point is that, in order to have continuous accounts monitoring the financial progress/regress of households, it is highly desirable that a short measure of wealth (net worth) be included in every annual survey. The present plan is to ask wealth questions every four years (2002, 2006...) but it may be possible to devise a very short battery of questions put to one respondent per household. This person would be asked to update wealth information after being reminded of the household's assets and debts on the last occasion the data were collected in detail.

It is hoped that enough evidence has been offered in this paper to show that the new household accounts in HILDA provide alternative and, it is suggested, improved measures of financial poverty. As the Survey progresses, these accounts will enable improved assessment of trends in poverty and poverty persistence. More generally, the accounts should be of value to academics and policy-makers who seek to understand the dynamics of economic well-being in Australia as a basis for designing effective policy interventions.

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