

The Household, Income and Labour Dynamics in Australia (HILDA) Survey Special Issue: Case Studies in Labour Economics*

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The Household, Income and Labour Dynamics in Australia (HILDA) Survey represents the most ambitious experiment in the social sciences in Australia. Over an indefinite time period, a large sample of Australians will be surveyed annually—and new respondents continually introduced to refresh the sample—on a broad range of labour market, education, income support and household formation issues. (Details of the HILDA Survey are provided in the Appendix to this introduction.) HILDA's size and the wide-ranging scope of questions means that the survey is at least as good, if not richer, as a data source than its international comparators, the US Panel Study of Income Dynamics (PSID) and the British Household Panel Survey (BHPS). However, it is still early days for the HILDA Survey and a continued significant financial commitment from the Australian Government and other funders is required so that the full benefits of the HILDA experiment are realised in future years.¹

In this special issue of the *AJLE*, we bring together eight papers based for the most part on the first wave of the HILDA Survey.² While longitudinal surveys are like good wines—growing in value (generally) with age—the

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¹ The Australian Department of Family and Community Services has provided the bulk of funding for the HILDA survey and has also contributed significantly to production costs of the present *AJLE* HILDA Special Issue.

² Watson and Wooden (2004; *This Issue*) consider the issue of attrition between waves 1 and 2.

richness of the HILDA wave 1 data means that we can gain significant new insights into the workings of the Australian labour market from the Wave 1 cross-section without waiting for the results of subsequent waves to become available.

Women's Earnings and Childbirth

At the end of the 1970s, about 41 per cent of women with dependents participated in the labour force. By the time of wave 1 of HILDA, this proportion had increased to about 59 per cent.³ Work of one kind or another (part-time or full-time) now represents a significant feature of the lifecycle experience of Australia mothers. The growth in employment among mothers has led to an increasing interest from researchers and policy makers into the earnings implications of labour market decisions of women (see, for example, Chapman, Dunlop, Gray, Liu and Mitchell, 2001).

In this issue, Breusch and Gray (2004; *This Issue*) provide updated, and they argue—and are correct in this assessment—more precise predictions of mothers' foregone earnings in Australia. This is achieved by utilising a more refined sample selection model of earnings than has been previously been adopted, by utilising more targeted variables in the richer HILDA data and through the correction of a number of technical errors in previous research.

One of the crucial benefits of the HILDA Survey, evident even in the first wave cross-section, is that it contains detailed information of the timing of childbirth and provides a summary labour market history. The former data item in particular has been a missing ingredient of previous studies while the latter allows for a direct estimate of actual labour force experience to replace inaccurate labour force experience proxies. Moreover, the HILDA Survey includes the variable 'current tenure with an employer', which previous international studies have shown to be a major driver of earnings. Not surprisingly, these latter labour market effects are highly significant in the earnings models estimated by Breusch and Gray (2004). The authors adopt a parsimonious form for the modelling structure so that relatively few variables (education, actual labour force experience, tenure and age) are included in estimating equations (a selection employment model and an earnings function). The authors report little difference with models that include a wider set of effects but with the consequence of relatively efficient coefficient estimates.

Two key simulations are presented in the paper. The first examines the lifetime earnings impact of the number of children on foregone earnings (no children, one child, two children and three children). The second simulation estimates the effect of the age of the mother at the birth of the first (and only) child. Readers need also note that in calculating lifetime estimates a zero discount rate has been applied. In terms of the first scenario, Breusch and Gray (2004) estimate that foregone earnings for women (assuming a baseline of the highest level of education of Year 12 completion), are 31 per cent of the earnings of a childless woman, 44 per cent of a childless

³ Kilmartin (1997) and ABS *Labour Force Status and Other Characteristics of Families*, cat. no. 6224.0 (various issues).

woman's earnings for two children and 53 per cent for those with three children. In the second scenario, a delay in the age at which a woman has her first (and only) child increases foregone earnings but the impact is not large. More important than the age at which women have their first child is the mediating role of education levels among women. Women with university qualifications forego lower earnings with childbirth than similar less educated women.

Calculations of the foregone earnings from childbirth are interesting empirical exercises but, by themselves, have few direct policy implications. They represent instead the documentation of one aspect of family decision-making, the opportunity costs of having children, costs which presumably impact considerably on potential household decisions of parents concerning a host of related issues, such as labour force participation and investment in human capital by each parent. HILDA has allowed important progress in this area.

Health Outcomes and the Labour Market

The Australian Bureau of Statistics has undertaken two major surveys of the health outcomes of Australians in recent decades. The first of these is the National Health Survey, conducted on a regular 5-yearly basis, and the irregular Mental Health Survey. These surveys have been used to estimate mental health outcomes for those in different labour market states (e.g., Flatau, Galea and Petridis, 2000) but both of these surveys contain relatively limited labour market and income information. In both of these areas, the HILDA Survey provides considerably more detailed information. However, it also includes the SF36 health respondent survey, which incorporates both mental health and physical health components and has been found to have a strong relationship with diagnosed health outcomes. The linking of health and labour market information is a feature of a number of papers included in this special issue.

An existing gap in the labour market/health nexus literature is that of the mental health outcomes of income support recipients. This is the focal point of Butterworth, Crosier and Rodgers' (2004; *This Issue*) research. Butterworth *et al.* (2004) find that income support recipients exhibit poorer mental health outcomes than non-income support recipients. However, significant differences exist between income support categories in terms of mental health outcomes. The important distinction is between disability and sickness income support recipients and other recipient types with members of the former group exhibiting significantly poorer mental health outcomes than others. Such an outcome comes as no particular surprise except to those who have argued that these particular income support categories include large numbers of recipients who do not properly belong to these categories.

The Butterworth *et al.* (2004) results suggest that the lower mental health outcomes of income support recipients remain after socio-demographic and physical health functioning determinants are incorporated into the modelling. However, the further inclusion of a range of financial hardship

indicators has such a significant negative effect on mental health outcomes that most income support categories were no longer found to exhibit significant poorer mental health outcomes. The income support recipient categories that continue to have significant negative impacts include the unemployment-related income support categories and the disability and sickness recipient groups.

There is considerable room, in future HILDA-based analyses based on later waves, to further develop our understanding of the mental health consequences of labour market outcomes and of the position of income support recipients. In particular, future waves of the HILDA data can be utilised to assess the mental health impact of labour market and income support receipt transitions, particularly those from secure employment to job insecurity and unemployment.

A limitation of the Butterworth *et al.* (2004) analysis is that the empirical focus is on measuring associations between variables, rather than on attempts to test causal relationships. More sophisticated work, testing behavioural relationships, is warranted, albeit very demanding, extension of their research. HILDA has the potential to allow progress in this area.

Unemployment

The question of the linkage between mental health states and the labour market is further addressed in Dockery (2004; *This Issue*). Dockery provides a wide-angled overview of the experience of the unemployed utilising the particularly rich nature of the job search HILDA data. In terms of health and life satisfaction effects, Dockery finds that the unemployed exhibit lower mental health outcomes than other labour force categories including discouraged job seekers in the not in the labour force group. Those in the latter group are often perceived as being in a worse labour market and financial position than the unemployed, with transitions into this group arising after long spells of unemployment. The evidence presented by Dockery suggests that discouraged job seekers in fact face lower financial stress outcomes than the unemployed and this may be one reason for the better mental health outcomes of discouraged job seekers rather than the unemployed.

Among the unemployed, the access of the unemployed person to social support networks was found to significantly improve mental health outcomes while current financial hardship reduces mental health outcomes as does the fact that the individual believes that having a job is important to a sense of well being. Inexplicably, the fact that a person left their last job involuntarily improved mental health outcomes of those relative to the default group controlling for other factors, while the impact of time spent in the current spell of unemployment is found to have no significant impact.

These results may give rise to the possibility that once people become accustomed to a particular labour market state and have come to terms with it, their mental health is not necessarily adversely affected by the experience. However, this proposition must be examined in much more

detail, and most likely with an approach outside of the economics literature. This is ground most fertile for interdisciplinary research and a good place to start is the research program that has been undertaken in South Australia by Anthony Winefield and his colleagues (Winefield, Tiggemann, Winefield and Goldney, 1993; and Winefield, 2002).

Another major focus of Dockery's (2004; *This Issue*) study concerns the job search methods and outcomes of the unemployed. The HILDA data provides a very rich source of information in this area which goes well beyond that found in most other data sets. As examples, HILDA contains information on subjective levels of respondents' 'well being', perceived barriers to employment, and measures of reservation wages. This enables Dockery to extend the rather small amount of previous research on job search in Australia (Heath, 1999, is a recent empirical study in this area in this country).

Dockery (2004) finds that the unemployed undertake a broad range of methods in searching for work but appear to receive very few job offers. In the standard neo-classical job search model, the unemployed are depicted as having a range of job offers against which judgments are made as to which job offer will be accepted. Job offers appear to decline as the duration of unemployment increases. In line with the job search model, reservation wages appear to fall as the duration of unemployment increases.

Consideration of unemployment issues continues in the paper by Prem Thapa (2004; *This Issue*) whose focus is on the risk of currently being unemployed. More specifically, Thapa considers the risk of unemployment among immigrants to Australia utilising both the HILDA data and the 1990 Income Distribution Survey. This allows him to do two things. First, determine whether the risk of unemployment among immigrant groups has changed over the 1990s. Second, to evaluate the role of a range of determinants that affect unemployment other than those contained in standard treatments.

Thapa (2004) finds that there is a clear disadvantage in the probability of finding employment for immigrants with similar characteristics of a native born Australian in both time periods. It appears that the relative disadvantage of immigrants in finding jobs has not diminished in spite of greater emphasis on skilled immigration in recent years. Thapa shows that the effects of variables commonly used previously, such as age, years of schooling, and period of residence for immigrants, are quite robust, but several additional correlates of individual unemployment are identified for immigrant specific as well as general characteristics. These include country of birth, parents' background, especially parents' unemployment experience when immigrants were young teenagers and parents' marital instability in the respondent's early teenage years. These results suggest fertile ground for research into the role of intergenerational effects on labour market experience, not only in respect of immigrants. It is here that the very considerable value of panel data is revealed.

Hours of Work and Employment Resilience

The *AJLE* HILDA Special Issue contains two papers on hours of work. The first by Joan Rodgers (2004; *This Issue*) considers whether those in part-time employment receive a wage premium or in fact face a wage discount by being in part-time positions. The second by Gray, Qu, Stanton and Weston (2004; *This Issue*) considers the opposite end of the spectrum in terms of hours by examining the impact of long hours of work among men on their own well-being and that of their families. Both utilise the richness of the HILDA data set to good effect. HILDA measures hours and wages in continuous form for the main job and also clearly distinguishes between casual and permanent work, and between employees and the self-employed, so allowing the researcher to estimate hours of work accurately and determine an hourly wage for part-time wage and salary workers in their main job (controlling for casual loading effects). Furthermore, as emphasized previously, the HILDA dataset includes a broader range of labour market determinants that can be expected to affect both wage outcomes (e.g., workplace size, business type, job satisfaction, and tenure) and the impact of hours on a sense of well-being.

Rodgers (2004; *This Issue*) finds a large hourly wage (unadjusted) premium for full-time male employees (21 per cent) but a smaller premium for full-time female employees (7 per cent). This unadjusted wage differential is, however, removed when we account for both selection effects and the impact of human capital and other determinants of wage outcomes, suggesting that no further wage premium is evident.

The Rodgers analysis offers several advantages over previous research. One is that the data allow very sophisticated adjustments with respect to the role of selection effects. Further, there are a large number of controls available. The richness of these controls adds weight to her conclusion that there seems to be no full-time wage premium.

While part-time employment rates have increased significantly in recent times so too have the hours of work of full-time male employees. Gray *et al.* (2004; *This Issue*) find that while satisfaction with the length of time spent at work decreases as work hours rise among fathers, sense of well-being does not generally display the same trend. Sense of well-being is measured by a set of indicators ranging from overall job satisfaction to satisfaction with family relationships, to work and family balance, to three health indicators. In other words, fathers who work long hours would prefer to work fewer hours and are dissatisfied with their hours of work, but long hours do not generally negatively impact on a sense of well-being even after controlling for factors such as educational attainment, country of birth, partner's employment status and even earned income. The exceptions to this general rule are poorer outcome for long hours' fathers in terms of one health indicator ('Vitality') and 'Negative effect of work on family'.

Employment-related issues are further explored in Hsu, Gibbings and Morrison's (2004; *This Issue*) who examine paid employment resilience among partnered males over the working lifetime with a focus on the role

of non-intact family background (divorce and absence of both parents living with children at the age of 14). By paid employment resilience, the authors mean the proportion of (labour force) time spent in paid employment following completion of full-time education. The proportion that is being measured is $Y = E/LF$ where E is years in employment and LF is years in the labour force (employment time plus unemployment time). Time spent in the not in the labour force state is excluded from the relevant proportion indicator but is included as a regressor in the estimated models. By non-intact family background, Hsu, Gibbings and Morrison (2004) mean whether an individual's parents were divorced before the individual was aged 14 and whether at age 14 the individual was not living with both original parents.

Irrespective of the age group being considered, Hsu, Gibbings and Morrison's (2004) find the majority of partnered males have not experienced a spell of unemployment during their working lifetimes since completing full-time education. The proportion of partnered males who indicated that they experienced at least one spell of unemployment is lower for those aged 55 and over than it is for younger age groups reflecting, in part, lower national rates of unemployment during the 60s and early 70s when those in this age category were first entering the labour market. It is in the early part of an individual's labour market career that an individual is most vulnerable. In their modelling analyses Hsu, Gibbings and Morrison (2004) find that employment resilience (higher Y) among males is positively associated with partner's lifetime employment experience, intact family background when growing up, health outcomes, personal and partner education (though not consistently so) and is negatively related to time spent in the NILF category (the clear implication being that there is a crossover from long spells of unemployed to a marginal attachment to the labour force).

This research is preliminary in nature and does not make use of the inherent value of HILDA that will come from its longitudinal nature. However, the research of Hsu *et al.* suggests many directions for exploring household dynamics that will be possible as successive waves of HILDA become available.

Attrition Issues

The final paper in the *AJLE* HILDA Special Issue is a technical paper examining the question of attrition bias. Watson and Wooden (2004, *This Issue*) document the extent and nature of sample loss between the first and second waves of HILDA. They find that, in statistical terms, the issue is likely to be important: around 13 per cent of those responding in wave 1 did not respond in wave 2.

Watson and Wooden explain that the extent to which attrition matters for research will depend critically on the question being asked, and that the most serious issue relates to the potential that those leaving the sample are different in unobservable ways to those remaining. This is particularly important if these unobservable characteristics are related systematically

to variables included in behavioural analyses, issues which cannot be directly tested.

The Watson and Wooden study documents the extent to which those leaving the sample differ from those remaining with respect to measured characteristics. They find that there are indeed strong relationships between the likelihood of attrition and measured variables, such as age, sex and employment status. Moreover, the apparent determinants of making contact are not the same as the factors associated with response given contact. Their analysis highlights the need for caution with respect to the role of attrition, a warning which becomes more apposite the greater the duration of the HILDA exercise.

Concluding Remarks

It is apparent from this introduction that economic and social research that will be made possible by HILDA is only in its infancy. This is hardly surprising in that researchers have only been able to investigate the first wave of HILDA in any depth so far. However, the second wave of data is now available, and the project is funded for at least eight waves of data by the Australian Government. The benefits from our understanding of labour market dynamics will be considerable once the key longitudinal characteristics of the data can be explored.

To that end, the *AJLE* plans to produce, in two years' time, a companion Special Issue to the present volume based on results from research that utilise the longitudinal nature of the HILDA data. We hope that this will be an on-going commitment!

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Appendix

The HILDA Survey: A Summary

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1. Background

The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a household-based panel survey. It was established with the primary objective of supporting research falling within three broad and interrelated areas: income dynamics; labour market dynamics; and family dynamics.

Fieldwork for the first wave of the study was completed in 2001 with subsequent waves conducted annually. The survey currently has funding for eight waves.

The project was initiated by, and is the responsibility of, the Department of Family and Community Services. The survey, however, is managed by a team based at the Melbourne Institute of Applied Economic and Social Research (at the University of Melbourne), which in turn sub-contracted the fieldwork to ACNielsen, a large private market research company.

2. Sample Design

Reference Population

The reference population for wave 1 was all members of private dwellings in Australia, with the following exceptions:

- certain diplomatic personnel of overseas governments, customarily excluded from censuses and surveys;
- overseas residents in Australia (i.e., persons who had stayed or intended to stay in Australia for less than one year);
- members of non-Australian defence forces (and their dependents) stationed in Australia;
- people living in remote and sparsely populated areas.

Further, to ensure that all members of the in-scope population have the same probability of selection, dwellings that are not primary places of residence (e.g., holiday homes) were also excluded.

These coverage rules are broadly in line with those adopted by the Australian Bureau of Statistics (ABS) in its supplements to the Monthly Population Survey. There are, however, two major differences. First, unlike the ABS, individuals at boarding schools, halls of residence and university colleges were included in the reference population for wave 1. Second, and again in contrast to ABS practice, military personnel who reside in private dwellings were part of the reference population for wave 1.

Sampling Unit

The sampling unit is the household, defined following the ABS, as a group of people who usually reside and eat together.

In general, persons who live in more than one household were only treated as members of the household where they spent most of their time. People who lived in another private dwelling for more than 50 per cent of the time were not treated as part of the household. Visitors to the household were also not treated as part of the household. Finally, people who usually lived in the household but were temporarily absent for work, school or other purposes were treated as part of the household, and this meant that a small proportion of interviews had to be conducted in locations other than at the household address.

Note again that we varied from the ABS practice in how we treated children attending boarding schools and halls of residence while studying. Specifically, while these dwellings are out of scope, such individuals were treated as members of sampled households provided they spent at least part of the year in the sampled dwelling.

Sample Selection

The households were selected using a multi-stage approach. First, a sample of 488 Census Collection Districts (CDs) were selected from across Australia (each of which consists of approximately 200 to 250 households). Second, within each of these CDs, a sample of 22 to 34 dwellings was selected, depending on the expected response and occupancy rates of the area. The selections were made after all dwellings within each of the CDs were fully listed. Finally, within each dwelling, up to three households were selected to be part of the sample.

After adjusting for out-of-scope dwellings and households (e.g., unoccupied or non-residential dwellings) and for multiple households within dwellings, the total number of households identified as in-scope was 11,693.

Following Rules

Since this is a panel survey, interviews in subsequent waves are sought with all members of responding households in wave 1 (including those members who declined to be interviewed). On its own, this approach would

necessarily mean a decline in sample size over time due to attrition. The sample, however, is designed to have an indefinite life. This is achieved by each year adding to the sample any children born or adopted by members of the selected households and any new members resulting from changes in the composition of the original households. In line with the practice adopted in the British Household Panel Survey (BHPS), these new sample members, however, will only remain in the sample permanently if they are either a child of an original sample member or have a child with an original sample member.

3. Survey Administration

Data Collection Methods

The principal method of data collection is face-to-face interviews, and these are conducted both at a household level and at an individual level. Interviews, however, are conducted by telephone if necessary or where respondents move to areas which are outside the reach of our interviewer workforce. In wave 3 about five per cent of personal interviews were conducted by telephone.

After establishing contact with a member of the household, an interview lasting, on average, around 12 minutes is conducted with at least one member of the household. This interview involved the administration of two instruments – the Household Form (HF) and the Household Questionnaire (HQ).

Interviews, using either the Continuing Person Questionnaire (CPQ) or the New Person Questionnaire (NPQ), were then pursued with each household member aged 15 years and over. In wave 3 the CPQ averaged 30 minutes in length, but it was closer to 35 minutes in wave 1. The NPQ is administered to persons who are first time respondents and thus tends to be slightly longer than the CPQ.

Once an individual completed this interview they were then provided with a self-completion questionnaire (SCQ) to complete in private. The interviewer returned to the household at a later date to pick up the SCQ. If the SCQ was still not complete or could not be collected in person, instructions were left with the respondent to return it by mail.

Incentives

All responding households are offered a payment of either \$50 or \$20. The \$50 payment is made where all household members participate. The \$20 payment is made in cases where only part of the household cooperates.

Fieldwork

In wave 1, the interviews occurred between August and December 2001. In subsequent waves, the interviewing period was extended by several months to allow for the follow up of households that have moved. Thus, from wave 2 onwards, the interviews occur between August and March the following year.

Approximately 135 interviewers have been used each wave to conduct the interviews. The interviewers work within each area over a two to three week window, making contact with and interviewing as many households as possible. At a later stage in the fieldwork period, either the same interviewer or another interviewer will revisit the area to re-approach the households and obtain as many additional interviews that are possible. From wave 2 onwards, a third attempt is also made on each area to follow up any households that have moved and were found late in the fieldwork period, or were temporarily away or sick during earlier visits to the area. The calls to households are made across a mix of week days and weekend days and across day and evening times.

The following procedures were used to trace households that had moved: matching the address file to Australia Post records prior to fieldwork; asking the remaining sample members or new occupants at the last known address; calling all contact phone numbers for the sample members and emailing the addresses provided during the previous interview; asking neighbours at the last known address; searching the Electronic White Pages; and contacting the relatives or friends whose details were provided during the previous interview.

4. Response and Sample Characteristics

Response Outcomes

From the 11,693 households identified as in scope in wave 1, interviews were completed with all eligible members of 6,872 households and with at least one eligible member of a further 810 households. The household response rate was, therefore, 66 per cent.

Within the 7,682 households interviewed, there were 19,914 people. Of these people, 4,787 were under 15 years of age on the preceding 30 June and hence were ineligible for an interview in wave 1. This provided a sample of 15,127 eligible persons, 13,969 of whom completed the Person Questionnaire.

A summary of the outcomes of the wave 2 and 3 fieldwork is shown in Tables 1 and 2. Of the 13,969 people interviewed in wave 1, 11,993 were re-interviewed in wave 2 and 11,190 were re-interviewed in wave 3. The number interviewed in all three waves is 10,777.

A common measure of the re-interviewing success is the attrition rate, calculated as the proportion of respondents in the previous wave that did not provide an interview in the current wave, excluding those that are out-of-scope (i.e., those that have died or moved overseas). The attrition rates for waves 2 and 3 were 13.2 per cent and 9.6 per cent respectively.

Table 1 Wave 2 and 3 Person Outcomes Against Wave 1 Person Outcomes

	<i>Wave 1</i>			<i>New Entrant, W2</i>	<i>New Entrant, W3</i>	<i>Total</i>
	<i>Respondent</i>	<i>Non-Respondent</i>	<i>Child</i>			
<i>Wave 2</i>						
Respondent	11993	222	250	576	-	13041
Non-respondent	1824	904	61	208	-	3127
Out-of-scope	152	32	19	-	-	203
Child	-	-	4457	347	-	4683
<i>Wave 3</i>						
Respondent	11190	223	462	358	498	12731
Non-respondent	2467	888	164	177	157	3853
Out-of-scope	312	47	24	305	-	688
Child	-	-	4137	291	363	4791
TOTAL	13969	1158	4787	1131	1018	22063

Table 2 Response Rates for the HILDA Survey, Waves 2 and 3 Compared

<i>Sub-sample</i>	<i>Wave 2</i>	<i>Wave 3</i>
Previous wave respondents	86.8	90.4
Previous wave non-respondents	19.7	17.1
Previous wave children turning 15	80.4	69.4
New entrants to the wave	73.4	76.0

Sample Representativeness

Table 3 provides a summary of selected characteristics of the initial sample of individual respondents and how they compare with population data from the Monthly Population Survey conducted by the ABS.

This table demonstrates that the HILDA sample is noticeably different from the broader population in a number of ways. First, Sydney residents are under-represented in the HILDA sample. Second, the HILDA sample has an under-representation of men and an over-representation of women, which is not uncommon in voluntary surveys. Third, immigrants from a non-English-speaking background comprise only 14.5 per cent of the HILDA sample, which compares with a population estimate of 17.5 per cent.

Overall, however, and despite these differences, the achieved sample does appear to be broadly reflective of the Australian population. In any case, the most obvious differences are relatively easily corrected through application of population weights.

Of course, sample representativeness can be further undermined through selective attrition. This is something that we have dealt with at length in another article in this issue.

Table 3 Selected Wave 1 Individual Sample Characteristics and Population Estimates from the ABS Monthly Population Survey Compared (persons aged 15 years or over)

	ABS ^a	HILDA PQ Respondents	HILDA: All hh members
Area of usual residence			
Sydney	21.5	17.3	18.5
Rest of NSW	12.2	13.7	13.2
Melbourne	18.4	18.0	18.2
Rest of Victoria	6.7	7.7	7.5
Brisbane	8.6	8.3	8.3
Rest of Queensland	10.0	10.6	10.5
Adelaide	5.8	6.2	6.0
Rest of South Australia	2.0	3.1	3.0
Perth	7.3	7.2	7.1
Rest of Western Australia	2.5	2.7	2.6
Tasmania	2.4	2.9	2.9
Northern Territory	0.9	0.5	0.5
ACT	1.6	1.7	1.6
Sex			
Male	49.3	47.4	48.6
Female	50.7	52.6	51.4
Age (years)			
15-19	8.8	8.4	8.8
20-24	8.9	7.3	7.8
25-34	18.7	18.6	18.6
35-44	19.0	21.5	21.2
45-54	17.1	17.4	17.4
55-64	11.8	12.1	11.8
65 or over	15.6	14.7	14.2
Indigenous status			
Indigenous	1.7	1.8	
Non-indigenous	98.3	98.2	
Birthplace			
Australia	72.4	74.5	
Main English-speaking country	10.2	10.9	
Other country	17.5	14.5	
Labour force status			
Employed	59.5	61.0	
Unemployed	4.3	4.4	
Not in the labour force	36.3	34.6	

Note: a The ABS estimates come from the Monthly Population Survey for October 2001 (or August 2001 in the case of indigenous status and employment status). With the exception of country of birth, population that these estimates apply to is all civilians aged 15 years and over. The figures for country of birth exclude persons living in an institution.

5. Survey Content

Each year a large number of close to identical questions have been asked about the following broad topics:

- Household structure
- Child care
- Housing and housing wealth
- Education

- Employment status
- Current employment
- Activities of persons not in paid employment
- Income and household finances
- Family formation and parenting
- Partnering
- Disability, health and well-being
- Mobility
- Lifestyle and living situation

While a panel survey demands that question content remain stable, there nevertheless has been some change to content across the waves. Thus questions on job training were included for the first time in wave 3 and questions on religion for the first time in wave 4.

In addition some latitude has existed for asking questions on other one-off topics. The additional topics to date have been:

- Wave 1 Family background and personal history variables (and subsequently included in every NPQ).
- Wave 2 Household wealth.
- Wave 3 Retirement and plans for retirement.
- Wave 4 Private health insurance and youth aspirations.

6. Data Outputs

The Public Use File

A moderately confidentialised unit-record data file is available for research purposes. Provided on CD-Rom, the latest release provides data from both wave 1 and wave 2 in SPSS and SAS formats.

Very few variables are withheld, and only a few variables are affected by aggregation, top-coding and the like. Included in the data file is a detailed set of population weights constructed as well as a relatively large collection of derived variables, which provide many commonly used variables following ABS conventions. Examples here include: relationship in household, labour force status, education (ASCED), occupation (ASCO) and industry (ANZSIC). A particularly noteworthy feature of the file is the inclusion of a detailed set of after-tax income variables.

Missing values have generally not been imputed. The notable exceptions are income and wealth data items. An additional set of income and wealth variables have been constructed which impute missing cases using a nearest neighbour regression method.

Availability

Information on how to order the data, including copies of the order forms, is available from the HILDA Survey web page at:

<http://www.melbourneinstitute.com/hilda/data.html>

All users are required to sign a Deed of License (also available on the website). The Deed of License constitutes a legal contract between the user and the Commonwealth of Australia and specifies conditions that users of the HILDA unit-record data agree to abide by. Apart from a fee to cover handling costs (\$77 if based in Australia), the data are free to approved users.

The next release, which will include wave 3 data, is expected to be available in January 2005.