



# Australian Population Association

12th Biennial Conference

population and society: issues, research, policy

15-17 September 2004 - Canberra, Australia

## Education, work, fertility and childcare in Australia

**Habtemariam Tesfagiorghis** (Habte.Tesfagiorghis@fac.s.gov.au)  
Department of Family and Community Services

### Abstract

Because of Australia's sustained fertility decline and increasing ageing debate is growing about the economic, fiscal and social implications of demographic change. The issue of work and family balance is high on the policy agenda. The key policy issue, which has an economic focus, is how mothers can be supported to participate in paid employment. This presentation summarises work from two research papers:

- Australia's fertility: A HILDA based analysis, and
- Education, work, fertility and childcare interrelationships

The issues examined in the first paper are what is happening to cohort fertility, childlessness, estimation of expected cohort fertility and childlessness and modelling of fertility.

The second paper aims to contribute to an understanding of work and family balance issues for working age women through examination of the following questions and issues.

- Do women's educational and labour force participation lower fertility?
- Do the number and age of resident young children in the household affect mother's labour force participation, and vice versa?
- What labour force and other characteristics of mothers are associated with the use of childcare?
- Do mothers' ratings of problems with finding good quality and affordable childcare vary according to their personal and household characteristics?

This study is based on primary analysis of the 2001 Household, Income and Labour Dynamics in Australia (HILDA) Survey, which collected information on number of children ever born. Given that the 1996 Census was the last to collect this information, the HILDA dataset with its rich demographic and socio-economic variables provides a good opportunity to analyse many aspects of fertility.

Paper prepared for the 12<sup>th</sup> Biennial Conference of the Australian Population Association, 15-17 September 2004, Canberra.





# Education, work, fertility and childcare interrelationships

Habtemariam Tesfaghiorghis

## Introduction

The issue of work and family balance is high on the policy agenda. Research and information is needed in this important area to inform policy debate and development. This research aims to contribute to an understanding of work and family balance issues for working age women through examination of the following questions and issues.

- Do women's educational and labour force participation lower fertility?
- Do the number and age of resident young children in the household affect mother's labour force participation, and vice versa?
- What labour force and other characteristics of mothers are associated with the use of childcare?
- Do mothers' ratings of problems with finding good quality and affordable childcare vary according to their personal and household characteristics?

This is a primary analysis of the 2001 Household, Income and Labour Dynamics in Australia (HILDA) Survey Wave 1 dataset Release 1.0. This stage of the research is exploratory. As such it will attempt to identify the key issues around the work and family balance by a preliminary investigation of the factors involved and their associations. The analysis methods include cross-tabulations, graphs, and application of appropriate demographic and other measures and standardisation. The results are subject to sampling errors and the analysis is based on the weighted population.

The fertility measures in this analysis are derived from the information on number of children ever born collected in the HILDA Survey<sup>i</sup>. An analysis of the historical levels of completed fertility and a multivariate analysis of the factors influencing fertility are the subject of another paper<sup>ii</sup>. However some key findings from that paper are worth noting here to provide a context for the fertility analysis in this paper.

- The HILDA fertility data are reliable, as HILDA based estimates of age-specific parities and completed fertility<sup>iii</sup> are consistent with estimates based on the Australian Bureau of Statistics (ABS) data sources such as the 1996 Census<sup>iv</sup> and birth registration data. For example the completed fertility of women aged 45-49 years was estimated at 2.3 children per woman, using the HILDA and the 1996 Census data. The extent of childlessness among women aged 45-49 years is also estimated at 11 % using the 1996 Census and 2001 HILDA data.
- The historical levels of completed fertility have consistently remained above replacement fertility (2.06 children per woman), even though total fertility rate<sup>v</sup> based on current (cross-sectional) fertility rates now stands at 1.73 children per woman.
- Even women aged 35-39 years, who have yet to complete reproduction, have achieved replacement fertility. They had an average of 2.09 and 1.97 children per woman based on HILDA data and the 1996 Census data, respectively.

The analyses in this paper comprise the following:

- Education and fertility: The analyses include age left school and fertility, current educational enrolment and fertility, highest educational level and fertility, and time since completing fulltime education and fertility. These fertility differences are analysed controlling for differences in age composition.
- Work and fertility: These include labour force status and fertility, the effect of labour force status and educational level on fertility, occupation and fertility, employment status according to number of hours worked per week and fertility, actual and preferred hours of work and fertility, and reason for part-time work and fertility.
- Ages and number of own resident children and labour force status: This deals with two aspects of the relationship. First it answers the question if women worked fulltime do they have resident young children, say aged 0-4 years and how many? Would the answer differ if women worked part-time or not worked at all? Second it answers the question of whether labour force participation rates for women vary by whether they have no resident children, had one child or at least two children of a given age.
- Childcare use and mothers' labour force and other characteristics. This section analyses how childcare use varies by mothers' characteristics.
- Finding good quality childcare: this deals with analysis of mothers' characteristics that are associated with problems of finding good quality childcare.
- Costs of childcare: this deals with analysis of mother's characteristics that are associated with difficulty at meeting the costs of childcare.

The summary presents the main results of the paper and the conclusion highlights the key issues, challenges and implications raised by the findings.

The general fertility knowledge is based on current/period fertility, which is the fertility experience of different cohorts of women that gave birth in a particular year or a given period. It is usually measured by age-specific-fertility rates and/or total fertility rate.

However the HILDA data did not collect current/period fertility. Instead it collected lifetime fertility, which is measured by average parity/ mean number of children ever born to women of a given age group. The average parity for cohorts of women who completed their reproduction is known as completed fertility rate, and is equal to cohort total fertility rate. In addition to age-specific average parities, average parity for the whole age range is calculated and is given in the bottom rows of tables. These are labelled mean CEB (children ever born)-reported. The next row is labelled mean CEB- adjusted. Adjusted mean CEB is a measure calculated to control for the effect of differences in age composition on fertility. This is done by assuming that each category of a variable of interest has the same standard age distribution, in this case the age distribution of total women in the HILDA survey. Thus any fertility effects that remain after controlling for age can be attributed to the variable of interest. The sum of the products of age-specific average parities and the corresponding standard population provide an adjusted mean CEB.

### **Education and fertility**

This section deals with analyses of the association of education and fertility. Education delays childbearing. The following section describes age-specific parties by age left school and educational level. While average parties of women aged 45 years and over represent actual

fertility, the parties for young women only represent the average cumulative fertility experience of the group. These are described in turn.

*Age left school and fertility:*

Table 1 clearly shows that fertility increases with age irrespective of age of leaving school. It also shows those who left school at younger ages have higher fertility for women who attained comparable ages. For women aged 30-34, the average parity declines from about 2.0 children for those who left school at 15 years or younger to 1.6 for those who left at 16 years, 1.3 at 17 years and 1.0 at 18 years or older. This pattern holds for all age groups.

The row labelled MCEB-Rep. Gives the overall reported mean children ever born for all women who left school at a given age. The reported average number of children declines from 2.5 children for those who left school at 15 or younger to 1.2 children for those who left at 18 years or older. The next row labelled MCEB-Adjusted gives the adjusted parity that is standardised for age differences. Controlling for age differences, the results clearly show that those who left school later had lower fertility.

. The last two rows in Table 1 show a marked decrease in the percentage of women who left school at ages 16 or younger in 2001 HILDA Survey (51 %) compared to the 1986 Census (71 %). A higher proportion of the 15-19 year olds in 2001 HILDA were still at school, 54 per cent, compared to 44 per cent in the 1986 Census.

The percentage of women who left school at ages 16 or younger declined from 71 % in the 1986 Census to 51 % in the 2001 HILDA Survey. A higher proportion of 15-19 year olds in 2001 HILDA were still at school, 54 per cent, compared to 44 per cent in the 1986 Census.

Table 1. Age-specific-parities, overall reported and adjusted mean number of children (CEB), mean age and share of total women in 2001 and 1986 by age left school: 20-64 years

| Age group   | Age left school (years) |      |      |            | Total     |
|-------------|-------------------------|------|------|------------|-----------|
|             | 15 or younger           | 16   | 17   | 18 & older |           |
| 20-24       | 0.94                    | 0.65 | 0.14 | 0.05       | 0.25      |
| 25-29       | 1.70                    | 1.30 | 0.53 | 0.51       | 0.80      |
| 30-34       | 1.98                    | 1.63 | 1.28 | 1.00       | 1.41      |
| 35-39       | 2.45                    | 2.24 | 1.96 | 1.71       | 2.09      |
| 40-44       | 2.57                    | 2.20 | 2.03 | 1.99       | 2.21      |
| 45-49       | 2.59                    | 2.28 | 2.10 | 1.94       | 2.26      |
| 50-54       | 2.61                    | 2.16 | 2.37 | 2.21       | 2.42      |
| 55-59       | 2.76                    | 2.74 | 2.68 | 2.20       | 2.71      |
| 60-64       | 3.18                    | 2.86 | 2.43 | 2.30       | 2.96      |
| MCEB-Rep.   | 2.53                    | 2.04 | 1.40 | 1.19       | 1.82      |
| -Adjusted   | 2.25                    | 2.08 | 1.78 | 1.60       | 1.97      |
| Mean age    | 47.0                    | 41.5 | 36.4 | 35.1       | 40.3      |
| % W (2001)  | 28.7                    | 22.0 | 28.2 | 21.1       | 5,762,438 |
| % W (1986)* | 47.6                    | 23.8 | 17.2 | 11.4       | 3,965,700 |

Source: Primary analysis of 2001 HILDA Wave 1 dataset, Release 1.0.

\*= Computed from the 1986 Census- 1%Household Sample File and excludes those with not stated age left school.

*Highest education level and fertility:*

Table 2 clearly shows that fertility is clearly associated with age and the level of education of women. Women with post-school qualifications have lower fertility than those without qualifications. Women with postgraduate education had the lowest fertility at any age group. For women aged 45-49 years, average parities increase steadily from 1.8 children for those with postgraduate education to 2.0 children for those with Bachelor degrees, and 2.6 children for those with Year 11/below education. For any level of education, fertility increases with age.

Even after controlling for differences in age composition fertility increases with declining levels of education, as shown in the row labelled Mean CEB- adjusted.

The lower fertility of those with Year 12 education than those with Certificates could be that the later may have done some vocational studies and may be of lower qualification than that of the former. There could be other reasons too

Table 2. Age-specific and overall parities by age group and educational level.

| Age        | Postgraduate      | Bachelor | Diploma | Certificate | YR12 | ≤YR11 |
|------------|-------------------|----------|---------|-------------|------|-------|
| 15-24      | 0.00 <sup>1</sup> | 0.02     | 0.02    | 0.21        | 0.07 | 0.20  |
| 25-29      | 0.33 <sup>2</sup> | 0.25     | 0.59    | 0.96        | 0.64 | 1.66  |
| 30-34      | 0.76              | 0.86     | 1.22    | 1.68        | 1.36 | 1.97  |
| 35-39      | 1.54              | 1.89     | 1.84    | 2.40        | 1.80 | 2.34  |
| 40-44      | 1.58              | 1.81     | 2.11    | 2.32        | 2.00 | 2.62  |
| 45-49      | 1.75              | 1.96     | 2.17    | 2.19        | 2.27 | 2.60  |
| 50-54      | 1.79              | 2.27     | 2.41    | 2.58        | 2.08 | 2.57  |
| 55-64      | 2.11              | 2.54     | 2.74    | 2.58        | 2.64 | 3.09  |
| Mean CEB   | 1.37              | 1.27     | 1.59    | 1.78        | 1.02 | 1.99  |
| - Adjusted | 1.13              | 1.33     | 1.50    | 1.72        | 1.48 | 1.96  |
| % Women    | 6.5               | 15.1     | 8.6     | 21.2        | 13.0 | 35.6  |
| Mean age   | 41.4              | 37.6     | 38.8    | 38.4        | 31.2 | 39.1  |

Source: Primary analysis of 2001 HILDA Wave 1 dataset, Release 1.0.

Weighted N=6,459,165

Note: 1= based on 12 cases and 2=based on 45 cases.

## Work and Fertility

This section will examine fertility differences by labour force status, main occupation, number of weekly hours worked and preferred and reason for working part-time. 66 % of working-age women participated in the labour force. 33 % were employed fulltime, 29 % part-time and 4 % unemployed.

### *Labour force status and fertility:*

Fertility varies by labour force status. The results in Table 3 show that labour force participation is associated with lower fertility. Of those in the labour force, those in fulltime employment had the lowest fertility. Fulltime workers aged less than 30 years had zero or low fertility. Women not in the labour force had the highest age-specific parities over the 15-49 age range. Older part-time workers had high parities comparable to those not in the labour force. Overall those marginally attached had the highest adjusted average parity than even those not attached to the labour force. The marginally attached to the labour force are unemployed people who were not looking for work. The figures for the unemployed were excluded from the analysis due to small numbers but their fertility was much lower than part-time workers.

The adjusted results show that those employed fulltime had 0.8 children fewer than those not currently in the labour force.

Table 3 Age-specific-parities, overall reported and adjusted mean children by age group and labour force status

| Age group  | Employed          |           | Not in the Labour force |              |
|------------|-------------------|-----------|-------------------------|--------------|
|            | Fulltime          | Part-time | Marginally attached*    | Not attached |
| 15-19      | 0.00              | 0.00      | 0.04                    | 0.05         |
| 20-24      | 0.03              | 0.08      | 1.10                    | 0.64         |
| 25-29      | 0.16              | 1.00      | 1.92                    | 1.59         |
| 30-34      | 0.64              | 1.53      | 1.97                    | 2.25         |
| 35-39      | 1.54              | 2.24      | 2.74                    | 2.34         |
| 40-44      | 1.78              | 2.37      | 2.84                    | 2.48         |
| 45-49      | 1.94              | 2.35      | 2.67                    | 2.75         |
| 50-54      | 2.29              | 2.52      | 2.47                    | 2.52         |
| 55-59      | 2.44              | 2.68      | 2.63 <sup>1</sup>       | 2.84         |
| 60-64      | 3.11 <sup>1</sup> | 2.89      | 2.73 <sup>1</sup>       | 3.04         |
| Mean CEB   | 1.20              | 1.63      | 1.83                    | 2.27         |
| - Adjusted | 1.28              | 1.69      | 2.08                    | 1.99         |
| % Women    | 33.32             | 29.02     | 11.77                   | 21.84        |
| Mean Age   | 37.31             | 36.34     | 34.00                   | 43.95        |

Source: Primary analysis of 2001 HILDA Wave 1 dataset, Release 1.0.

\*= They are unemployed people who were not actively looking for work during the reference week.

<sup>1</sup>=based on 32-38 cases.

Table 4 clearly shows that even for women who had the same level of education, their fertility vary according to labour force status. For example, the average parity for women with post-graduate degrees increases from 1.1 children for those employed fulltime, to 1.6 for those employed part-time, 1.9 for those marginally attached to the labour force and 2.0 for those not attached to the labour force. Given the same level of education, labour force participation tends to lower fertility.

Table 4. Average parity and distribution of women according to educational level and labour force status.

| Educational Level        | Employed |           | Not in labour force |              | Share of Total Women |
|--------------------------|----------|-----------|---------------------|--------------|----------------------|
|                          | Fulltime | Part-time | Marginally attached | Not attached |                      |
| Post-graduate            | 1.06     | 1.64      | 1.86                | 2.01         | 6.5                  |
| Bachelor                 | 0.94     | 1.61      | 1.79                | 1.66         | 15.1                 |
| Advanced diploma/diploma | 1.14     | 1.75      | 1.98                | 2.46         | 8.6                  |
| Certificate              | 1.23     | 1.99      | 2.05                | 2.27         | 21.2                 |
| Year 12                  | 0.72     | 0.90      | 1.41                | 1.70         | 13.0                 |
| Year 11/ below           | 1.86     | 1.71      | 1.83                | 2.47         | 35.6                 |
| Total women              |          |           |                     |              | 6,459,165            |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

Row percentages do not add up to 100 % due to the omission of the unemployed.

### *Occupation and fertility*

The type of occupation appears to influence fertility, as higher profile occupations are associated with lower fertility. Table 5 sets out average parities according to age group, and occupation of main job. When account is taken of the significant age differences, the adjusted results show that fertility was high among cleaners and factory workers followed by intermediate service workers, intermediate production and transport workers, advanced clerical and service workers, and elementary sales and service workers. Fertility was lowest among the science, business and information professionals. Managers and administrators, health and education professionals, and associate professionals had similarly moderate fertility levels.

Table 5. Average parities by occupation of main job and age group of women

| Occupation                                       | 15-24 | 25-34 | 35-44 | 45-64 | Reported | Adjusted |
|--|-------|-------|-------|-------|----------|----------|
| Managers & administrators                        | 0.20  | 0.92  | 1.71  | 2.24  | 1.74     | 1.40     |
| Science, business & information professionals    | 0.00  | 0.26  | 1.57  | 1.85  | 0.89     | 1.05     |
| Health, education & other professionals          | 0.02  | 0.57  | 1.90  | 2.30  | 1.44     | 1.35     |
| Tradespersons & related workers                  | 0.05  | 0.69  | 1.67  | 2.26  | 1.14     | 1.32     |
| Advanced clerical & service workers              | 0.00  | 0.91  | 2.47  | 2.24  | 1.77     | 1.53     |
| Intermediate sales, service & production workers | 0.05  | 0.93  | 2.09  | 2.40  | 1.42     | 1.52     |
| Elementary sales & related workers               | 0.02  | 0.82  | 2.10  | 2.40  | 1.02     | 1.48     |
| Cleaners, factory & other labourers              | 0.08  | 1.21  | 2.13  | 2.62  | 1.84     | 1.73     |

These occupational differences in fertility are partly due to differences in the educational composition of occupations<sup>vi</sup>. Those with lower occupational profiles have high fertility due partly to their lower educational profile, while those with higher occupational profiles have low fertility due partly to their high educational level.

The observed fertility differences by labour force status and occupation type may arise because couples make labour supply decisions based on their characteristics or circumstances, which are aimed at optimising family outcomes, rather than maximising income. It could also be that women's fertility is constrained by, or facilitated, by the hours and working conditions in their industry or occupations.

*Fertility by employment status and number of hrs worked*

In general, women currently working fulltime have lower fertility than those working part-time. The more hours women work the lower their fertility. The age-specific parities clearly show that those working 41 hours or more had the lowest fertility. It is also evident from Table 6 that those working fulltime for 40 hours or less had lower age-specific parities than part-time workers, except for the two oldest age groups, where the age of children would not be a barrier to fulltime employment.

When the age effect is controlled for, those working part-time for 20 hours or less had higher fertility than those who work for 21-35 hours.

Table 6. Age-specific-parities, overall reported and adjusted mean children by age group, employment status and number of hours worked per week.

| Age group     | Part-time      |                   | Fulltime          |                   |
|---------------|----------------|-------------------|-------------------|-------------------|
|               | 20 Hrs or less | 21-35 Hrs         | 40 Hrs or less    | 41 Hrs+           |
| 15-19         | 0.00           | 0.03              | 0.00              | 0.00              |
| 20-24         | 0.04           | 0.17              | 0.04              | 0.01              |
| 25-29         | 1.16           | 0.75              | 0.17              | 0.12              |
| 30-34         | 1.77           | 1.24              | 0.69              | 0.56              |
| 35-39         | 2.37           | 2.08              | 1.67              | 1.39              |
| 40-44         | 2.48           | 2.22              | 1.82              | 1.72              |
| 45-49         | 2.32           | 2.37              | 1.97              | 1.89              |
| 50-54         | 2.65           | 2.43              | 2.40              | 2.14              |
| 55-59         | 2.79           | 2.52              | 2.50              | 2.36              |
| 60-64         | 2.96           | 2.75 <sup>1</sup> | 3.20 <sup>1</sup> | 3.01 <sup>1</sup> |
| Mean CEB      | 1.53           | 1.78              | 1.18              | 1.23              |
| -Adjusted CEB | 1.78           | 1.58              | 1.33              | 1.21              |
| % Women       | 27.99          | 18.55             | 32.15             | 21.32             |
| Mean Age      | 34.16          | 39.62             | 36.30             | 38.83             |

Source: Primary analysis of 2001 HILDA Wave 1 dataset, Release 1.0.

N=4,027,131; 1=based on 17-20 cases.

*Fertility by number of actual and preferred weekly work hours:*

Table 7 shows that women who preferred to work more hours per week, compared to actual number of hours worked, had lower average parities than those who preferred to work about the same or fewer hours (columns 2-4).

The last panel of Table 7 shows a relatively high proportion of those who worked 35 hours or less preferred to work more hours while those who worked longer hours preferred to work less or about the same hours.

There is a roughly even distribution of employed women according to actual work hours' categories; 24 % of employed women each worked 20 hours or fewer and 21-35 hours, 29 % worked 36-40 hours, and 22 % worked 41 hours or more (result not shown in table).

What is the distribution of preferred work hours according to actual work hours? Those who preferred to work fewer hours mainly worked long hours; 33 % worked 36-40 hours and 46 % worked 41 hours or more (table not shown). By contrast those who preferred more hours mostly worked short hours; 54 % worked 20 hours or less and 29 % worked 21-35 hours. Of those who preferred about the same number of work hours, 25 % worked 20 hours or less, 27 % worked 21-35 hours, 32 % worked 36-40 hours and 16 % worked 41 hours or more. In general, 55 % of employed women preferred to work about the same number of hours, 28 % preferred fewer hours and 17 % preferred more hours.

Table 7. Average parity and distribution of women according to actual and preferred work hours, and overall average reported and adjusted number of children.

| Hours worked<br>Per week | Prefer to work |                |            |
|--------------------------|----------------|----------------|------------|
|                          | Fewer hours    | About the same | More hours |
| 20 hrs or less           | 1.90           | 1.98           | 1.60       |
| 21-35 hrs                | 2.13           | 1.77           | 1.27       |
| 36-40 hrs                | 1.43           | 1.00           | 0.95       |
| 41 hrs or more           | 1.20           | 1.34           | 0.63       |
| Mean CEB                 | 1.46           | 1.51           | 1.38       |
| Adjusted                 | 1.31           | 1.48           | 1.65       |
| Mean age                 | 40.02          | 37.99          | 33.90      |
| % Distribution           |                |                |            |
| Hours worked             | Fewer hours    | About the same | More hours |
| 20 hrs or less           | 5.79           | 57.71          | 36.50      |
| 21-35 hrs                | 18.51          | 61.51          | 19.98      |
| 36-40 hrs                | 31.95          | 60.53          | 7.52       |
| 41 hrs or more           | 57.87          | 39.41          | 2.72       |
| Total                    | 28.15          | 55.34          | 16.51      |

Source: Primary analysis of 2001 HILDA Wave 1 dataset, Release 1.0.

Weighted N= 3,810,551

Note: Row percentage distribution for categories of work hour preference adds to 100 %.

### Age and number of own resident children and labour force status

The first addresses the association between a woman's labour force status and the age and number of resident children in the household. The presence of own resident young children, particularly five year olds or younger appears to reduce women's labour force participation. Appendix B presents the composition of all women aged 15-64 years, both with and without resident children, in each labour force status according to ages and number of own resident children in the household. Figure 1 displays the relationship between labour supply choices women make according to number of own resident children aged 0-4 years. The results are:

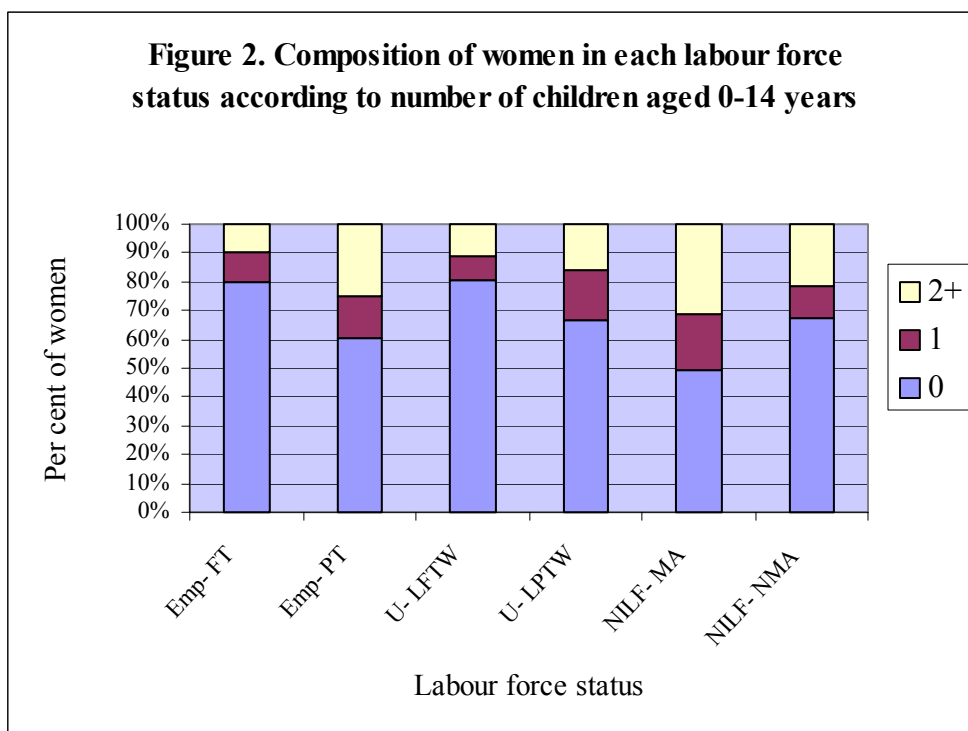
- Of all women who worked fulltime, 95 % had no resident children aged less than five years.
- By contrast 28 per cent of those marginally attached and 22 per cent of those not attached to the labour force, 19 per cent of the unemployed looking for part-time work and 16 per cent of part-time workers had at least one own

resident child aged 0-4 years. The pattern for unemployed women looking for fulltime work appears similar to those of fulltime workers



When considering the labour force status of all women aged 15-64 years according to number of children aged 0-14 years, 80 % of those employed fulltime as well as those looking for fulltime work had no children in the household. This contrasts to 49 % for those marginally attached to the labour force and 60 % for those employed part-time (see Figure 2).

**Figure 2. Composition of women in each labour force status according to number of children aged 0-14 years**



The second part attempts to answer what the labour force participation rates will be if women have young resident children of given ages.. If women had no children aged 0-4 years, 37 % worked fulltime compared to 14 % for those with one child and 7 % for those with at least two children (Figure 3). Mothers with children aged 5-9, and 10-14 years had higher employment rates than mothers with children aged less than five years (table not shown). But the salient result is that working mothers' with children under 15 years are predominantly in part-time employment.

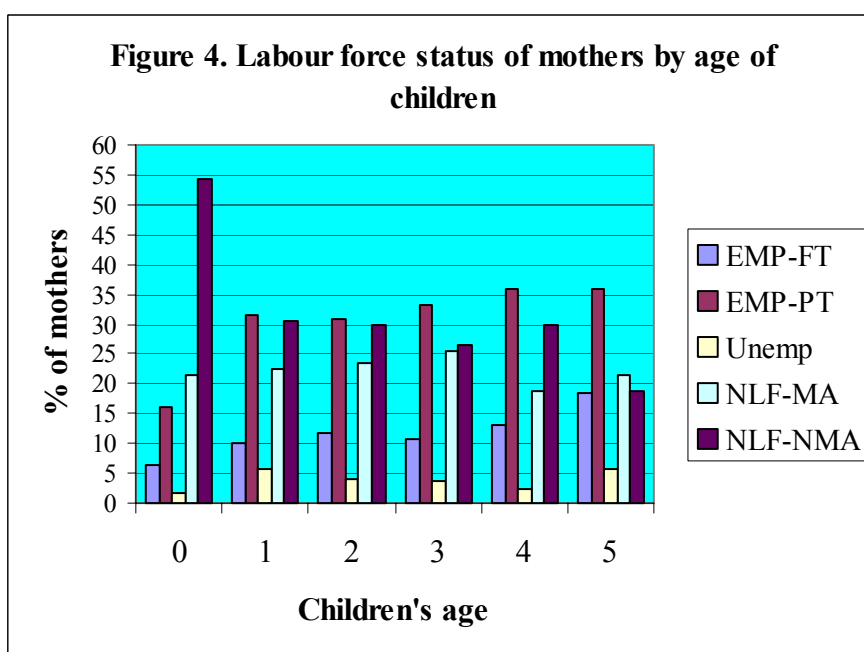
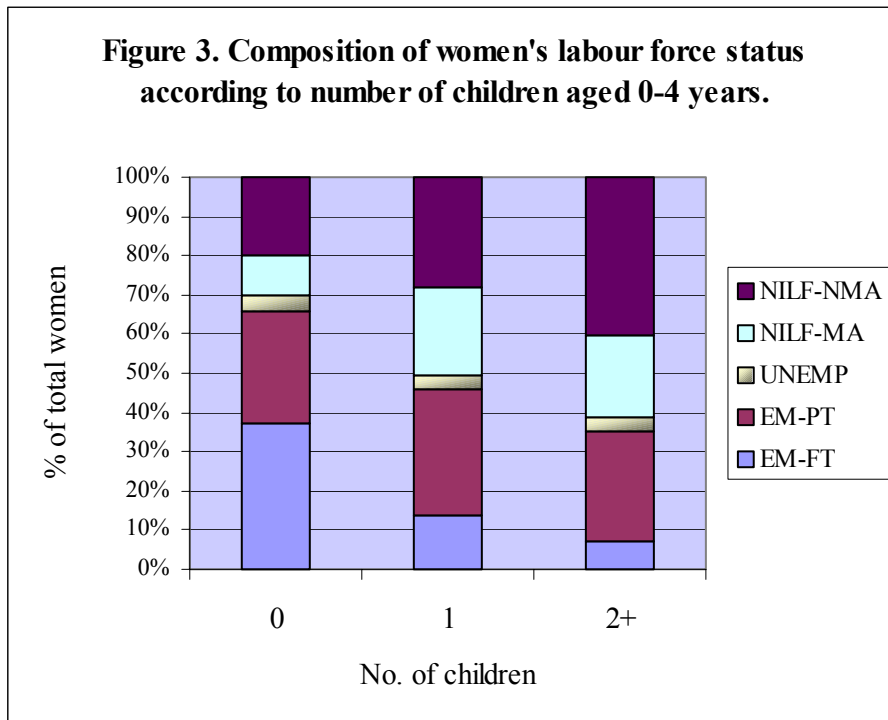
A further insight into the employment constraints faced by mothers of infants and toddlers is gained by considering the following results and Figure 4:

- Of mothers of infants under one year 6.5 % worked fulltime, 16.0 % part-time, 21.4 % were marginally attached to the labour force and 54.4 % were not attached to the labour force.
- Of mothers of one year olds 9.9 % worked fulltime, 31.5 % part-time, 22.6 % were marginally attached to the labour force and 30.5 % were not attached to the labour force.
- Of mothers of two year olds 11.8 % worked fulltime, 30.8 % part-time, 23.6 % were marginally attached to the labour force and 29.7 % were not attached to the labour force.
- Of mothers of four-year olds 13.0 % worked fulltime, 35.9 % part-time, 18.9 % were marginally attached to the labour force and 29.8 % were not attached to the labour force.

What is clear from these results and Figure 4 is that the majority of mothers of infants stayed out of the labour force with more than half of them without any labour force attachment. As the child reaches at least age one, mothers' employment participation increased substantially with 30-36 % employed part-time. While part-time employment of mothers jumped from 16 % to 30-36 p % as the child's age increases

the growth in fulltime employment was gradual rising from 6.5 % when the child is under one years to 10-12 % by ages 1-3 years, and 13 % by age 4. Mothers' part-time employment rates stabilise at 36 % when children are aged 4-6 years, while fulltime employment varies between 13 and 19 %.

McDonald's (2001:18-9) analysis of the 1966 census showed similar growing mothers' employment pattern as the child ages from 0 to 4 year-old, though his labour force participation figures are higher than these results.



It is not clear from these associations whether the number of young children is influencing women's labour supply decisions or whether women's labour supply decisions are influencing their fertility decisions. At this juncture, it suffices to say there is a clear association between the number and age of children and labour force participation.

### **Childcare use**

Access, quality and affordability of childcare are important elements in the consideration of work and family friendly policies. Of all women aged 15-64 years (6,457,967), only a third had own resident children under 15 years (13.2 % had one child and another 19.3 % at least two children). Parents with children aged 14 or less living in the household were asked 'At any time in the last 12 months, have you used, or thought about using any of the specified childcare types so you can (both) undertake paid work?' Of the working-age women with children aged 14 or less in the household (2,496,863), only 43.4 % of them (1,082,447) used or thought of using childcare in the 12 months preceding the survey date. Tables 8-11 describe the characteristics of women with children under 15 years in the household who used or thought of using childcare. Though the data does not distinguish how many actually used childcare, henceforth the term 'used childcare' is used to mean both those who used or thought of using it.

Table 8 shows that a woman's use of childcare depends on her labour force status. Employed mothers of prime working age, particularly those aged 25-34 years, had the highest childcare use levels. In general slightly more than half of those in employment used childcare compared to only a quarter of those not in the labour force (32 % and 20 % of those marginally attached and not attached to the labour force respectively).

Table 9 shows that childcare use increases with rising disposable household income. This is in general true but appears to be lower at the highest income group for those in fulltime employment. For mothers in part-time employment childcare use levels appear to decline with household disposable income. Though childcare use levels among mothers not attached to the labour force are comparatively low, it does increase with rising household income.

With respect to household type, a higher proportion (54 %) of lone parents with dependent children only used childcare compared with their couple family counterparts (42 %). It was 36.2 % for multi-family households. Childcare use appears to be lower if lone parents with dependent children lived with relatives and/or non-relatives (51.3 %). There was no such difference for couple families with dependent children. Compared to couples with dependent children, a much higher proportion of lone parents who participated in the labour force used childcare. This is also true for those not in the labour force (Table 10).

With respect to the effect of marital status and labour force status on childcare use, it is seen from Table 11 that a relatively high percentage of de facto, separated and divorced (includes widowed) mothers used childcare, particularly those in employment and looking for work. By contrast, a much lower proportion of married and never married mothers in employment used childcare.

Table 12 generally shows that the higher the educational level, the higher the use of childcare. Of mothers employed part-time the percentage that used childcare declined from a high of 78 % among those with postgraduate degrees to a low of 41 % among those with Year 11/ below education. This could be due to differences in the ages of women and ages of their children. Of those with diploma or higher degrees, a higher proportion of mothers employed part-time than fulltime used childcare.

The effect of occupation and educational level on childcare use is also analysed (table not shown). Although a number of the results in the cells are not stable due to small numbers, there are still clear relationships. Of the professionals, those who work in education had the lowest levels of childcare use presumably due to their more family friendly work hours. Though managers and administrators with postgraduate degrees have similarly high levels of childcare use as mothers in professional and associate professional occupations, the overall use of childcare by this occupational category was relatively low, and comparable to mothers in lower profile occupations.

Table 8. Per cent of women with children under 15 years in the household who used or thought about using childcare in the last 12 months by labour force status and age group.

| Age Group     | Employed |           | Unemployed | Not in the labour force |              | Total     |
|---------------|----------|-----------|------------|-------------------------|--------------|-----------|
|               | Fulltime | Part-time |            | Marginally attached     | Not attached |           |
| 15-24         | 46.6     | 29.4      | 45.8       | 33.6                    | 24.9         | 33.0      |
| 25-34         | 70.3     | 77.4      | 73.4       | 36.5                    | 22.1         | 52.8      |
| 35-44         | 59.4     | 54.4      | 41.5       | 28.0                    | 18.9         | 45.0      |
| 45-64         | 32.0     | 46.3      | 42.7       | 19.0                    | 9.2          | 29.5      |
| Total- % used | 56.2     | 56.1      | 52.1       | 31.8                    | 19.6         | 43.4      |
| -Number       | 494,349  | 886,930   | 101,413    | 469,855                 | 538,704      | 2,491,251 |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

Table 9. Per cent of women with children under 15 years who used or thought about using childcare by household disposable income and labour force status

| Disposable household income (\$/year) | Employed |           | Not in the labour force |              | Total users (%) | Share of total women |
|---------------------------------------|----------|-----------|-------------------------|--------------|-----------------|----------------------|
|                                       | Fulltime | Part-time | Marginally attached     | Not attached |                 |                      |
| <\$30,000                             | 48.4     | 57.6      | 32.6                    | 18.6         | 38.2            | 24.8                 |
| \$30,000-\$44,999                     | 58.6     | 57.2      | 28.2                    | 14.6         | 39.5            | 24.3                 |
| \$45,000-\$64,999                     | 58.3     | 56.3      | 31.4                    | 19.6         | 46.4            | 26.4                 |
| \$65,000 +                            | 55.8     | 54.3      | 37.3                    | 29.9         | 49.1            | 24.4                 |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

Table 10. Per cent of women with children under 15 years who used or thought about using childcare by household type and labour force status

| Household type                      | Employed |           | Not in labour force |              | Total     |
|-------------------------------------|----------|-----------|---------------------|--------------|-----------|
|                                     | Fulltime | Part-time | Marginally attached | Not attached |           |
| Couple with dependent children      |          |           |                     |              |           |
| - % Used                            | 54.2     | 53.8      | 29.0                | 16.9         | 41.6      |
| - Number                            | 397,115  | 739,121   | 325,387             | 409,959      | 1,939,116 |
| Lone parent with dependent children |          |           |                     |              |           |
| - % Used                            | 72.2     | 69.5      | 39.4                | 29.0         | 53.1      |

|               |         |         |         |         |           |
|---------------|---------|---------|---------|---------|-----------|
| - Number      | 79,125  | 124,243 | 123,997 | 96,073  | 453,100   |
| Total- % Used | 57.2    | 56.1    | 31.9    | 19.2    | 43.4      |
| - Number      | 476,240 | 863,364 | 449,385 | 506,032 | 2,295,021 |

Table 11. Per cent of women with children under 15 years who used or thought about using childcare by marital and labour force status

| Marital Status | Employed |           | Unemployed | Not in labour force |             | Total |
|----------------|----------|-----------|------------|---------------------|-------------|-------|
|                | Fulltime | Part-time |            | Attached            | N. Attached |       |
| Married        | 52.1     | 58.4      | 46.1       | 26.5                | 16.2        | 42.3  |
| De facto       | 70.7     | 70.1      | 63.4       | 52.0                | 26.2        | 56.2  |
| Separated      | 65.1     | 71.5      | 88.1       | 44.6                | 22.5        | 54.7  |
| Divorced       | 71.3     | 68.1      | 66.4       | 42.8                | 28.2        | 48.4  |
| Never married  | 54.6     | 36.4      | 43.9       | 27.0                | 26.5        | 34.7  |
| Total          | 56.2     | 56.1      | 52.1       | 31.8                | 19.6        | 43.4  |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

\*= Based on small number of cases.

Table 12. Per cent of women with children under 15 years in the household who used or thought about using childcare by educational level and labour force status

| Educational Level | Employed |           | Not in labour force |                   | Total |
|-------------------|----------|-----------|---------------------|-------------------|-------|
|                   | Fulltime | Part-time | Attached            | Not Attached      |       |
| Postgraduate      | 66.1     | 78.4      | 52.3 <sup>1</sup>   | 31.8 <sup>1</sup> | 65.6  |
| Bachelor          | 56.3     | 68.3      | 54.5                | 43.0              | 58.4  |
| Diploma           | 51.2     | 76.1      | 40.8                | 24.9              | 54.5  |
| Certificate       | 62.2     | 56.8      | 37.2                | 20.8              | 48.1  |
| Year 12           | 51.1     | 44.6      | 30.4                | 11.0              | 36.2  |
| Year 11/ below    | 50.9     | 42.5      | 24.9                | 16.2              | 32.3  |
| Total- % Used     | 56.2     | 56.1      | 31.8                | 19.6              | 43.4  |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

. 1= Based on small numbers.

*Childcare use according to number and age of own resident children:*

Childcare use is much higher for employed women when it particularly involves own resident children less than five years (Table 13). The percentage of fulltime employed women who used childcare increased from 83 % for those with one own child aged 0-4 years to 89 % for those with at least two children compared to only 47 % for those with no children of their own. The percentage of mothers with own resident children less than five years that used childcare declined from 84 % for those in employment to 44 % for those marginally attached and 24 % for those not attached to the labour force. The corresponding figures for mothers with children less than 15 years were 56%, 32 % and 20 % respectively.

For fulltime employed and unemployed mothers childcare use increases with the number of children. For mothers with children aged 0-4 years and employed part-time or marginally attached to the labour force, childcare use declines with the number of children. However, part-time employed mothers with children aged 0-14 years had lower childcare use if they had at least three children rather than two children. This could be presumably due to older siblings looking after the younger ones.

Table 13. Per cent of mothers who used or thought about using childcare by age and number of own resident children, and labour force status.

| Age/ Number of own children | Employed    |             | Unemployed  | Not in the labour force |              | Total       |
|-----------------------------|-------------|-------------|-------------|-------------------------|--------------|-------------|
|                             | Fulltime    | Part-time   |             | Marginally attached     | Not attached |             |
| 0-4 years                   |             |             |             |                         |              |             |
| None                        | 47.3        | 41.7        | 39.6        | 20.3                    | 13.0         | 35.0        |
| 1                           | 83.4        | 85.7        | 72.3        | 47.3                    | 22.0         | 58.3        |
| 2+                          | 88.5        | 78.6        | 86.0        | 36.9                    | 28.5         | 50.2        |
| <b>Total</b>                | <b>56.0</b> | <b>56.1</b> | <b>52.4</b> | <b>31.8</b>             | <b>19.5</b>  | <b>43.4</b> |
| 0-14 years                  |             |             |             |                         |              |             |
| None                        | 39.7        | 29.1        | 33.0        | 19.2                    | 16.0         | 26.2        |
| 1                           | 50.1        | 58.5        | 56.7        | 38.1                    | 21.3         | 45.4        |
| 2                           | 62.9        | 65.0        | 65.1        | 32.0                    | 18.3         | 48.4        |
| 3+                          | 78.1        | 58.6        | 69.5        | 32.2                    | 21.2         | 45.2        |
| <b>Total</b>                | <b>56.0</b> | <b>56.1</b> | <b>52.4</b> | <b>31.8</b>             | <b>19.5</b>  | <b>43.4</b> |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

### Finding good quality childcare

Table 14 looks at the demographic, social and economic characteristics of mothers with children under 15 years in the household who used childcare and their responses to a question about finding good quality childcare. Responses to the question: is finding good quality childcare a problem- ranged from 0, 'not a problem at all', to 10, 'very much a problem'.

Of the 995,000 of mothers who used childcare 66 % responded that finding good quality childcare was not a problem at all or was only a small problem (scores 0-3). However, 21 % of mothers said it was a problem (scores 7-10).

The results in Table 14 indicate that:

- Finding good quality childcare was relatively a problem for the de facto, separated and divorced mothers than those legally married and the never-married mothers.
- A higher proportion of mothers with lower education levels reported that finding good quality childcare was not a problem at all or was only a small problem than those with higher education levels.
- Employed mothers, particularly part-time, had a lesser problem (scores 0-3) of finding good childcare than the unemployed and those not in the labour force.
- Compared to married mothers in employment, those not in the labour force reported greater childcare quality problems (table not shown).
- Mothers in fulltime employment that had bachelor or higher degrees had greater problems with the quality of childcare than with lower educational levels (table not shown).
- Finding good quality childcare is related to household disposable income. A higher percentage of mothers from high-income households had lesser problems in finding good quality childcare than those from low income households.

- Though couples with dependent children had lesser problems than lone parents in finding good quality childcare, they had greater problems with the cost of childcare (see Tables 14 and 15).

Table 14. Per cent of women by whether finding a good quality childcare was a problem or not according to selected characteristics.

| Women's Characteristics            | Is finding good quality childcare a problem? |         |         |         |        | Mean score |
|------------------------------------|--|---------|---------|---------|--------|------------|
|                                    | 0  | 1-3     | 4-6     | 7-9     | 10     |            |
| <b>Age group</b>                   |  |         |         |         |        |            |
| 15-24                              | 39.9   | 15.4    | 21.1    | 19.0    | 4.6    | 3.43       |
| 25-34                              | 45.2   | 20.1    | 12.4    | 16.4    | 5.9    | 2.86       |
| 35-44                              | 49.0   | 19.7    | 11.6    | 15.4    | 4.3    | 2.61       |
| 45-54                              | 49.1   | 23.7    | 7.0     | 14.5    | 5.6    | 2.53       |
| Total (%)                          | 46.4   | 19.7    | 12.7    | 16.2    | 5.1    | 2.80       |
| <b>Disposable household income</b> |  |         |         |         |        |            |
| <\$30,000                          | 39.8   | 18.7    | 13.1    | 20.8    | 7.6    | 3.43       |
| \$30,000-\$44,999                  | 42.7   | 19.9    | 14.7    | 17.9    | 4.9    | 3.05       |
| \$45,000-\$64,999                  | 49.3   | 22.5    | 11.0    | 13.3    | 3.9    | 2.38       |
| \$65,000 & above                   | 52.5   | 17.2    | 11.6    | 14.3    | 4.4    | 2.53       |
| <b>Household type</b>              |  |         |         |         |        |            |
| Couple with dep. Child             | 47.7   | 19.3    | 12.4    | 16.3    | 4.3    | 2.72       |
| Lone parent with dep. child        | 43.5   | 19.9    | 11.8    | 17.1    | 7.7    | 3.10       |
| <b>Marital status</b>              |  |         |         |         |        |            |
| Legally married                    | 49.1   | 19.4    | 12.5    | 14.8    | 4.2    | 2.58       |
| De facto                           | 35.2   | 24.5    | 13.8    | 22.0    | 4.5    | 3.35       |
| Separated                          | 43.5   | 19.0    | 10.6    | 21.1    | 5.7    | 3.25       |
| Divorced                           | 43.6   | 22.1    | 9.2     | 13.5    | 11.6   | 3.05       |
| Never married                      | 47.0   | 16.1    | 15.3    | 16.4    | 5.3    | 2.93       |
| <b>Current enrolment</b>           |  |         |         |         |        |            |
| Not studying                       | 47.6   | 18.4    | 12.8    | 15.6    | 5.6    | 2.78       |
| Studying FT                        | 32.7   | 24.5    | 13.7    | 28.0    | 1.0    | 3.62       |
| Studying PT                        | 41.4   | 30.4    | 10.8    | 16.0    | 1.4    | 2.58       |
| <b>Educational Level</b>           |  |         |         |         |        |            |
| Postgraduate                       | 45.8   | 23.8    | 8.0     | 20.3    | 2.0    | 2.58       |
| Bachelor                           | 41.0   | 22.1    | 14.3    | 15.5    | 7.2    | 3.08       |
| Advanced diploma/dipl.             | 48.3   | 20.1    | 9.6     | 20.5    | 1.5    | 2.69       |
| Certificate                        | 44.7   | 19.2    | 12.1    | 16.6    | 7.4    | 3.07       |
| Year 12                            | 46.4   | 20.9    | 16.3    | 11.3    | 5.0    | 2.56       |
| Year 11/ below                     | 51.4   | 16.2    | 13.7    | 14.7    | 4.0    | 2.56       |
| <b>Labour force status</b>         |  |         |         |         |        |            |
| Employed- Fulltime                 | 51.7   | 18.7    | 9.4     | 14.1    | 6.0    | 2.54       |
| Employed- Part-time                | 47.0   | 23.4    | 13.1    | 13.1    | 3.4    | 2.46       |
| Unemployed                         | 38.6   | 15.6    | 11.7    | 29.4    | 5.3    | 3.82       |
| Not in the labour force            |  |         |         |         |        |            |
| Marginally attached                | 38.1   | 13.0    | 15.6    | 25.9    | 7.5    | 3.87       |
| Not marginally attached            | 45.0   | 15.9    | 16.0    | 15.9    | 7.2    | 3.13       |
| Total number of users              | 461,923                                      | 195,616 | 126,187 | 160,626 | 50,320 | 994,683    |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

Note: The response variable code: 0, 'not a problem at all', - - -, 10, 'very much a problem'.

## **Cost of Childcare**

Parents who had used childcare were asked about the difficulty with the cost of childcare on a scale of 0, 'not a problem at all', to 10, 'very much a problem'. The results according to mother's demographic, social and economic characteristics are presented in Table 15.

While 66 % of mothers rated the quality of childcare as not a problem (scores 0-3), the percentage that said so in regard to childcare cost problems was much lower. 53 % of mothers rated childcare cost as 'not a problem at all' or was 'a small problem' (scores 0-3), 21 % moderate (scores 4-6) and 26 % a problem (scores 7-10). De facto mothers had greater problems with the cost than other mothers (scores 7-10), while legally married mothers had lesser problems. As with the problem of finding good quality childcare, childcare cost was less of a problem to women in higher income households than those in lower income households. As with good quality childcare, employed mothers, particularly part-time and those marginally attached to the labour force had lesser problems with the cost, while the unemployed had greater cost problems. Of employed married mothers, those in fulltime employment had greater cost problems than those in part-time employment. Married mothers not in the labour force had greater problems with childcare cost than those in employment.

Table 15. Per cent of women by whether the cost of childcare was a problem or not classified according to selected characteristics.

| Women's Characteristics            | Difficulty with the cost of childcare |         |         |         |         |            |
|------------------------------------|---------------------------------------|---------|---------|---------|---------|------------|
|                                    | 0                                     | 1-3     | 4-6     | 7-9     | 10      | Mean score |
| <b>Age group</b>                   |                                       |         |         |         |         |            |
| 15-24                              | 47.8                                  | 10.9    | 16.7    | 12.4    | 12.3    | 3.29       |
| 25-34                              | 30.0                                  | 18.9    | 24.8    | 16.1    | 10.2    | 4.00       |
| 35-44                              | 36.7                                  | 17.5    | 20.7    | 14.6    | 10.5    | 3.57       |
| 45-64                              | 39.4                                  | 14.2    | 17.8    | 16.2    | 12.4    | 3.80       |
| Total (%)                          | 35.7                                  | 17.0    | 21.5    | 15.0    | 10.8    | 3.72       |
| <b>Disposable household income</b> |                                       |         |         |         |         |            |
| <\$30,000                          | 29.4                                  | 21.4    | 21.7    | 12.8    | 14.7    | 4.06       |
| \$30,000-\$44,999                  | 35.2                                  | 17.0    | 19.3    | 19.8    | 8.7     | 3.75       |
| \$45,000-\$64,999                  | 37.6                                  | 14.4    | 22.8    | 14.1    | 11.2    | 3.66       |
| \$65,000 & above                   | 39.2                                  | 17.1    | 21.5    | 12.7    | 9.5     | 3.47       |
| <b>Household type</b>              |                                       |         |         |         |         |            |
| Couple with dep. Child             | 34.6                                  | 16.7    | 22.0    | 16.0    | 10.7    | 3.82       |
| Lone parent with dep. Child        | 37.3                                  | 19.4    | 20.0    | 10.9    | 12.4    | 3.51       |
| <b>Marital status</b>              |                                       |         |         |         |         |            |
| Legally married                    | 34.7                                  | 18.2    | 23.2    | 14.9    | 9.0     | 3.66       |
| De facto                           | 33.5                                  | 10.9    | 18.6    | 21.9    | 15.1    | 4.36       |
| Separated                          | 33.2                                  | 26.0    | 15.6    | 10.4    | 14.9    | 3.55       |
| Divorced                           | 39.7                                  | 14.6    | 21.2    | 15.6    | 8.9     | 3.48       |
| Never married                      | 40.5                                  | 13.5    | 19.9    | 12.1    | 14.0    | 3.67       |
| <b>Current enrolment</b>           |                                       |         |         |         |         |            |
| Not studying                       | 36.3                                  | 16.8    | 20.8    | 14.8    | 11.4    | 3.71       |
| Studying FT                        | 36.2                                  | 15.3    | 26.1    | 12.9    | 9.5     | 3.67       |
| Studying PT                        | 29.6                                  | 19.4    | 27.3    | 18.5    | 5.2     | 3.78       |
| <b>Educational Level</b>           |                                       |         |         |         |         |            |
| Postgraduate                       | 31.3                                  | 19.6    | 30.2    | 11.4    | 7.6     | 3.60       |
| Bachelor                           | 32.2                                  | 19.4    | 20.8    | 15.0    | 12.7    | 3.91       |
| Diploma                            | 25.9                                  | 24.6    | 21.0    | 20.8    | 7.9     | 4.09       |
| Certificate                        | 35.6                                  | 15.2    | 21.4    | 15.6    | 12.2    | 3.88       |
| Year 12                            | 38.5                                  | 14.1    | 23.6    | 16.5    | 7.4     | 3.52       |
| Year 11/ below                     | 43.9                                  | 14.9    | 17.6    | 11.6    | 11.9    | 3.37       |
|                                    |                                       |         |         |         |         |            |
| <b>Labour force status</b>         |                                       |         |         |         |         |            |
| Employed- Fulltime                 | 33.5                                  | 17.8    | 22.3    | 14.4    | 12.0    | 3.82       |
| Employed- Part-time                | 36.3                                  | 18.4    | 22.7    | 14.8    | 7.8     | 3.47       |
| Unemployed                         | 24.6                                  | 17.6    | 22.4    | 24.5    | 10.9    | 4.55       |
| Not in the labour force            |                                       |         |         |         |         |            |
| Marginally attached                | 38.7                                  | 11.1    | 19.0    | 12.7    | 18.5    | 4.09       |
| Not marginally attached            | 40.3                                  | 15.6    | 16.8    | 16.1    | 11.2    | 3.70       |
|                                    |                                       |         |         |         |         |            |
| Total number                       | 353,124                               | 167,781 | 212,976 | 148,538 | 106,442 | 988,863    |

Source: Primary analysis of HILDA Wave 1 dataset, Release 1.0.

The foregoing analyses showed that childcare use by women with children 14 years or younger in the household is not high. Of those women that used childcare or thought of using childcare, one in five women rated finding good quality childcare a problem, and one in four rated the cost a problem. Access to childcare, quality of childcare and affordability of childcare cost are important if mothers are to combine work with childrearing and other family responsibilities. McDonald (2000: 9) stated that 'obviously, among all family services, provision of childcare is highly beneficial to the employment of women and hence to a higher level of gender equity. - - - Again, low expenditure on family services matches low fertility'.

Gustavsson and Stafford (cited in McDonald: 2000: 9) argued that the relatively high fertility in Sweden in the early 1990s was due, besides the provision of childcare, to more flexible working conditions such as the availability of part-time work, flextime and liberal conditions for absence.

The differing design of family- friendly policies followed by countries may have different effects on family life, fertility and labour force participation (Gilbert and Voorhis: 2003:55-6). For example, the 1998 policy initiative in Norway to pay cash benefits to all families with children up to three years old if the child was not enrolled in a state subsidized day care centre resulted in higher marriage rates and fertility but lower labour force participation (TFR= 1.85 in 2000) than in Sweden (TFR= 1.54 in 2000) with its 'extensive provision of public day care services', which only benefit those who work' (Gilbert and Voorhis: 2003:55-6).

Gilbert and Voorhis (2003: 56) observed that 'It is difficult to imagine a reversal of the heightened labour force participation of women. The contemporary issue for family policy is not whether to assist the transfer of labour from household to market but how to help parents manage this shift in a way that lends adequate consideration to various desires for work and children at different stages of family life'. Beyond work related measures, family support programs that could have the potential to reverse declining trends in marriage and fertility rates by strengthening family life, could be tried from a mix of policies. These include paid childrearing leave as an alternative to day care, pension credits towards retirement for parents who stay home to care for young children, and the normalisation of part-time employment with measures that promote choices, which allow different parents to balance work and family life according to their varied preferences (Gilbert and Voorhis: 2003:56).

## **Summary**

There were substantial fertility differences by education and labour force status. The younger the age of leaving school, the higher the fertility irrespective of the current age of women. The research found that time since full-time education is an important influence on fertility, where substantial childbearing occurs on average only after 10 years of leaving fulltime education. Educational enrolment is associated with low fertility. With respect to educational level, it is found that the higher the education, the lower the fertility.

Labour force participation is associated with low fertility. Fulltime employees and the unemployed had the lowest fertility, while those not in the labour force had the highest fertility. Part-time employees had an intermediate fertility level. Of employed women those who worked part-time had the highest fertility while those who worked fulltime, particularly those working for 41 hours or more per week, had the lowest fertility.

The analysis of fertility by reason for working part-time found that fertility was higher among those who worked part-time to care for children and for other personal/family responsibilities. It was lower among those who did so to study or because of an illness/disability. Those who preferred part-time work and those who couldn't find fulltime work had an intermediate fertility level.

This analysis also found that higher education levels and fulltime employment are associated with low fertility. It is likely that the opportunity cost to these women will be higher in terms of taking time off to have children. The analysis found that women

employed fulltime had higher education levels than those employed part-time or in other labour force statuses.

The examination of the occupation, employment status and fertility interrelationships found that the lower fertility of fulltime versus part-time employees could be related to employment in higher profile occupations that in addition to fulltime employees having higher education levels and a younger age structure compared to part-time workers.

How does labour force participation influence fertility? The analysis of the relationship between labour force status and age and number of own resident children under 15 years found that the majority of women who worked fulltime or looked for fulltime work had no resident children in the household. By contrast more than half of those not marginally attached to the labour force and 40 % of part-time employees had children.

Only 15 % of working age women had children aged 0-4 years in the household. Most women who worked fulltime or who looked for fulltime work had no children aged less than five years in the household. This may be due to the difficulty of combining both fulltime work and childrearing. On the other hand about one in five part-time workers had at least one child aged 0-4 years.

How does fertility relate to labour force participation? The analysis of women's labour force participation according to age and number of own resident children found that a higher proportion of women with no children worked fulltime than those with children. It found that 61 % of mothers with at least two children aged 0-4 years were out of the labour force and a further 28 % worked part-time.

It is not clear from these associations whether the age and number of young children women have is influencing labour supply decisions or whether women's labour supply decisions are influencing their fertility decisions. It is very likely that there is reciprocal causality between fertility and labour supply decisions.

What is the role of childcare use in supporting mothers' labour force participation? In general 44 % of women with children aged 14 years or younger in the household stated they used or thought of using childcare to enable them or their partners to undertake paid work. It is found that more than half of those in the labour force used childcare compared to a quarter of those not in the labour force. Among employed mothers of children less than five years, 84 % of them used childcare. Childcare use was high among fulltime and part-time employed women of prime working ages; and among employed de facto, separated and divorced women; and low among the married and never married. It was high among those women with a combination of high household income and employment. Childcare use by employed women is lower for those with lower levels of education. Among employed women with a diploma, or higher level of education, a higher proportion of part-time workers than fulltime workers used childcare.

The majority of women who used or thought of using childcare at any time during the last 12 months said that finding good quality childcare was not a problem. However, it was a problem for one in five women. It was more of a problem for the de facto,

separated and divorced compared to legally married women; lone parents with dependent children; those with low household income; those studying fulltime; and those unemployed or out of the labour force. While a majority of women had no/little problem finding good quality childcare, only 53% said they had little or no difficulty with the cost of childcare.

## **Conclusion**

There are several conclusions from this research that raise many issues and challenges. First, it appears that women delay childbearing after completing fulltime education for, on average, up to ten years. This may indicate that these women are delaying their fertility until such time they build their careers or because they find it difficult to combine work with childbearing.

Second, those who work fulltime have lower fertility while part-time workers and those out of the labour force have higher fertility. Is this because those employed fulltime are giving priority to their jobs over childbearing or because of the difficulties they face in combining work and childbearing? Women who are not in the labour force have the highest fertility, and it is likely that many of the mothers currently not in the labour force are doing so to care for their children. A significant proportion of part-time workers are working part-time so that they can care for their children, and these mothers have the highest fertility among part-time workers.

Third most women who currently work fulltime have no children aged 0-4 years. Of those mothers with own resident children (younger than five years), the majority were either out of the labour force (54 %) or in part-time employment (31 %). Only 12 % of mothers with under five year olds were in fulltime employment. However, 84 % of this group used childcare. It was also similar for mothers in part-time employment. This evidence implies that childcare is supporting mothers to participate in paid employment.

This research may give a partial answer to the question of how these mothers can be supported to combine work with childbearing and other family responsibilities. But it has not answered whether childcare supports childbearing except to infer that it may do so, as a higher proportion of part-time workers used childcare, presumably due to their higher fertility.

Fourth, compared to those in employment, a much lower proportion of mothers currently not in the labour force used childcare. The reason for the lower childcare use by the latter is not established here. It may be that a majority of these mothers choose to care for their children or it may be due to problems with the quality and cost of childcare. This research showed that the quality and cost of childcare might be more of a problem for mothers not in the labour force and for those with lower household incomes than for those in employment.

This research has only attempted to identify the key issues in the work and family balance by preliminary investigation of the factors involved and their associations. The answers to the problems raised are partial at best. The next phase of the research is to undertake a multivariate analysis of factors that influence fertility and labour

force participation so as to establish the independent and joint effects of the key variables identified in this research.

### References

- Allen Susan F, 2003, 'Working parents with young children: Cross-national comparisons of policies and programmes in three countries', in *International Journal of Social Welfare* 12:261-273.
- Australian Institute of Health and Welfare 2003, **Adoptions Australia 2002-03**, cat. No. CWS 21, Canberra.
- Fisher Kathleen and David Charnock, 2003, 'Partnering and fertility patterns: Analysis of the HILDA Survey, Wave 1', paper presented at the HILDA Conference, University of Melbourne, Melbourne, 13 March 2003.
- McDonald Peter, 2000, 'Gender equity, social institutions and the future of fertility', in *Journal of Population Research* 17 (1): 1-16.
- McDonald Peter, 2001, 'Work-family policies are the right approach to the prevention of very low fertility', *People and Place* 9(3):17-27.
- Sardon J. -P, 2002, 'The demographic situation of Europe and the developed countries overseas: An Annual Report', *Population: English Edition* 57(1): 111-156.
- Gilbert Neil and Rebecca A. Van Voorhis, 2003, 'The paradox of family policy', in *Social Science and Public Policy*. September/October 2003:51-6.

Problems of finding good quality and difficulty with cost of childcare by selected characteristics of women

| Women's Characteristics       | Not a problem (scores 0-3) |         | Mean score   |         |
|-------------------------------|----------------------------|---------|--------------|---------|
|                               | Good quality               | Cost    | Good quality | Cost    |
| <b>Age group</b>              |                            |         |              |         |
| 15-24                         | 55.3                       | 58.7    | 3.43         | 3.29    |
| 25-34                         | 65.3                       | 48.9    | 2.86         | 4.00    |
| 35-44                         | 68.7                       | 54.2    | 2.61         | 3.57    |
| 45-54                         | 72.8                       | 53.6    | 2.53         | 3.80    |
| Total (%)                     | 66.1                       | 52.7    | 2.80         | 3.72    |
| <b>Disposable hhld income</b> |                            |         |              |         |
| <\$30,000                     | 58.5                       | 50.8    | 3.43         | 4.06    |
| \$30,000-\$44,999             | 62.6                       | 52.2    | 3.05         | 3.75    |
| \$45,000-\$64,999             | 71.8                       | 52.0    | 2.38         | 3.66    |
| \$65,000 & above              | 69.7                       | 56.3    | 2.53         | 3.47    |
| <b>Household type</b>         |                            |         |              |         |
| Couple with dep. Child        | 67.0                       | 51.3    | 2.72         | 3.82    |
| Lone parent with dep. child   | 63.4                       | 56.7    | 3.10         | 3.51    |
| <b>Marital status</b>         |                            |         |              |         |
| Legally married               | 68.5                       | 52.9    | 2.58         | 3.66    |
| De facto                      | 59.7                       | 44.4    | 3.35         | 4.36    |
| Separated                     | 62.5                       | 59.2    | 3.25         | 3.55    |
| Divorced                      | 65.7                       | 54.3    | 3.05         | 3.48    |
| Never married                 | 63.1                       | 54.0    | 2.93         | 3.67    |
| <b>Current enrolment</b>      |                            |         |              |         |
| Not studying                  | 66.0                       | 53.1    | 2.78         | 3.71    |
| Studying FT                   | 57.2                       | 51.5    | 3.62         | 3.67    |
| Studying PT                   | 71.8                       | 49.0    | 2.58         | 3.78    |
| <b>Educational Level</b>      |                            |         |              |         |
| Postgraduate                  | 69.6                       | 50.9    | 2.58         | 3.60    |
| Bachelor                      | 63.1                       | 51.6    | 3.08         | 3.91    |
| Diploma                       | 68.4                       | 50.5    | 2.69         | 4.09    |
| Certificate                   | 63.9                       | 50.8    | 3.07         | 3.88    |
| Year 12                       | 67.3                       | 52.6    | 2.56         | 3.52    |
| Year 11/ below                | 67.6                       | 58.8    | 2.56         | 3.37    |
| <b>Labour force status</b>    |                            |         |              |         |
| Employed- Fulltime            | 70.4                       | 51.3    | 2.54         | 2.54    |
| Employed- Part-time           | 70.4                       | 54.7    | 2.46         | 2.46    |
| Unemployed                    | 54.2                       | 42.2    | 3.82         | 3.82    |
| NILF - Marginally attached    | 51.1                       | 49.8    | 3.87         | 3.87    |
| NILF- Not attached            | 60.9                       | 55.9    | 3.13         | 3.13    |
| Total number of users         | 657,539                    | 520,905 | 994,683      | 988,863 |

<sup>i</sup> The HILDA Survey asked the question 'How many children in total have you ever had? That is, ever (fathered/given birth to) or adopted?' Although analysis of female fertility is conventionally based on biological children, it is not possible to do so here as the answer did not distinguish between adopted and biological children. The proportion of total children that are adopted in Australia is likely to be negligible, as there has been a substantial decline in the number of adopted children from the peak of about 10,000 children in 1971-72 to only 472 in 2002-03 (Australian Institute of Health and Welfare 2003:3-5). In the USA it is less than one per cent of total children (Brandon 2003: 18). The surveys also collected information on fertility intentions and expectations, but are not considered here as they are analysed by Fisher & Charnock (2003).

<sup>ii</sup> Fertility in Australia, a paper being prepared for a referred journal publication.

<sup>iii</sup> Defined as the average number of children that a cohort of women who completed their fertility had over their reproductive lifetime. Where birth registration data exists for such cohorts, it is calculated by summing the age-specific fertility rates up to age 50.

<sup>iv</sup> The 1996 Census was the last to collect information on number of children ever born.

---

<sup>v</sup> The average number of children that would be born per woman if all women lived to the end of their childbearing years and born children at each age according to the current age-specific fertility rates.

<sup>vi</sup> The following educational profile of selected occupational groups demonstrate the point:

- Managers and administrators: 24.0 % had Bachelor degrees, 22.8 % Year 11 or below, 16.9 % graduate degrees, 13.6 % certificates, and 12.9 % advanced diploma/diploma.
- Science, business and information professionals: 46.6 % had Bachelor degrees, 19.9 % graduate degrees and certificates, and 10 % each advanced diploma and Yr 12.
- Health professionals: 70.4 % had Bachelor degrees, 16.7 % graduate degrees, and 8.8 % certificates.
- Education professionals: 39.8 % had graduate degrees/certificates, 31.9 % Bachelor degrees, and 21.1 % advanced diploma/diploma.
- Social, arts and miscellaneous professionals: 47.5 % had Bachelor degrees, 17.5 % graduate degrees, and 11 % each advanced diploma and certificates.
- Associate professionals: 22.7 % had certificates 1-4, 19.4 % Yr11 or below, 17.2 % Bachelor degrees, 15.9 % advanced diploma, and 14.2 % YR 12.
- Tradespersons and related workers: 50.5 % had certificates 1-4, 24.2 % Yr11 or below, 9.5 % Yr 12, and 8.8 % advanced diploma.
- Advanced clerical and service workers: 26.2 % had Yr11 or below, 24.3 % certificates 1-4, 15.0 % Yr 12, 13.0 % certificate undefined and 12.6 % advanced diploma.
- Intermediate clerical workers: 26.1 % had YR11 or below, 20.7 % YR12, 20.3 % certificates 1-4, 11.3 % Bachelor, and

Cleaners, factory workers and other labourers: 58.2 % had Year 11 or below, 16.3 % YR12, and 17.5 % certificates.