

## The Drivers of Long-term Earnings

**Briefing Note 2** from the *Inside the black box - Intra-household resource allocations of older couples project (ARC DPI170103297)*

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Briefing Note 1 identified large gender gaps in long-term earnings and revealed that women's average long-term earnings are still substantially below men's in all educational groups. These findings are important because they point to the large losses in GDP caused by an underutilization of women's skills and the large financial penalties imposed on the performance of unpaid care work. The findings also raise questions about the sources of the gender gap in long-term earnings. This briefing note addresses these latter questions by using Housing, Income and Labour Dynamics in Australia (HILDA) data to explore the different drivers of men's and women's long-term earnings. As such, it should help to further contextualize the differences in the resources of older Australian men and women.

Various Australian studies have explored the impact of factors such as parenthood, education and marital status on men's and women's lifetime earnings. These studies have typically relied on cross-sectional data *for a single year*, coupled with assumptions about the future pattern of wage rates, work hours and participation rates. Our approach improves on these estimates because we conduct multiple regression (OLS) analysis of the sum of individual earnings received *over the 15 years* from 2001 to 2015. Whilst 15 years is far short of a standard working life, the sum of an individual's earnings over this extended period provides more accurate guidance on his or her lifetime earnings than do any estimates derived from a single year's data.

We use regression methods to explore the drivers of long-term earnings for all Australian men and women who were aged 21 and over in 2001 and under 65 in 2015 (a sample of 3,615), and for the sub-set of individuals (2,619 in total) who were living in a couple household. The analysis includes variables relating to the individuals' education, age, and marital and parenthood status.

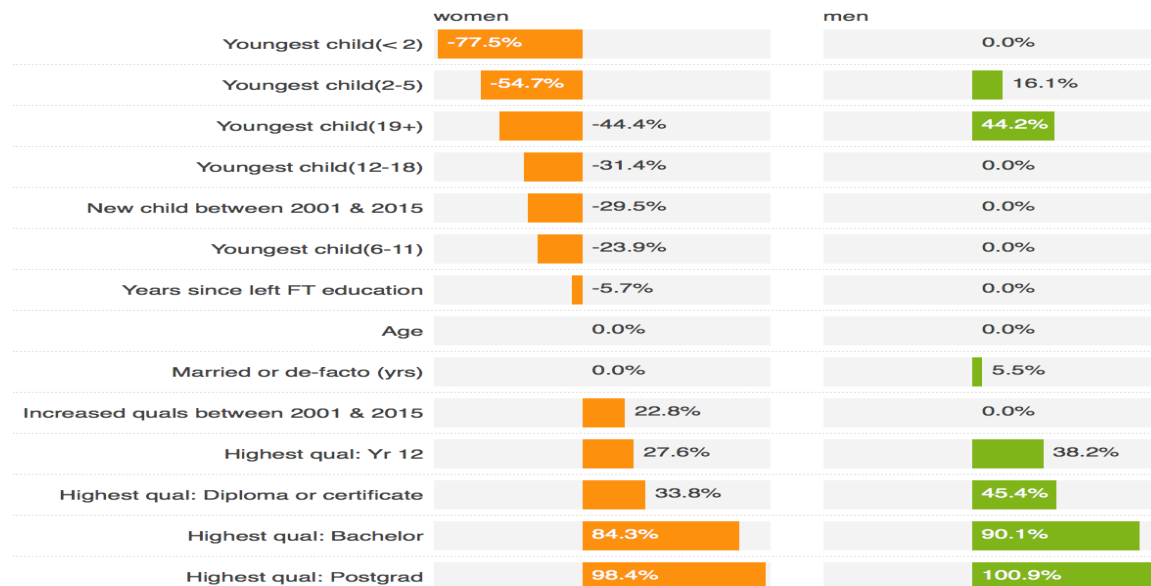
The first part of our analysis focuses on the effect on long-term earnings of factors such as gender, age, education, marital status and parenthood. The findings show that, at mean values, **men's long-term earnings exceed those of women by 74.1%**.

The second part of the analysis explores whether the effect of factors such as age, education and parenthood on long-term earnings differs between men and women. These results, which are summarized in the following chart, show that **parenthood is the key source of difference in the long-term earnings of men and women**.

Parenthood is generally weakly correlated with men's long-term earnings, but it is the source of substantially lower earnings for women. **For women, at mean values, having a child under the age of 2 in 2001 (as compared to no children) is associated with a 77.5% reduction in earnings over the subsequent 15 years. For men, this factor is not a statistically significant source of variation in long-term earnings.**

**Women whose youngest child was aged 2-5 in 2001 have long-term earnings which are, at mean values, 54.7% lower than women who did not have a child in 2001. In contrast, the long-term earnings of men whose youngest child was aged 2-5 are 16.1% higher than those of men without a child.** At mean values, women who had a child between 2001 and 2015 had long-term earnings 29.5% lower than other women, whilst, again, this factor was not a statistically significant source of variation in men’s earnings.

### Percentage Change in the Long-Term Earnings of Australian Men and Women, by Contributory Factor



*Results of OLS regression of log long-term earnings, summed over 2001-15*  
 Source: authors' calculations from HILDA data

<https://datawrapper.dwcdn.net/uR1hq/5/>

Other gender differences in the pattern of long-term earnings are smaller but still important. For both men and women, greater human capital (in the form of a Bachelor degree, as compared to less than Year 12 qualifications in 2001) is associated with higher earnings. For women, on average, the effect is an 84.3% increment in earnings over the 15-year period. For men, the effect is slightly higher: a 90.1% increment. The attainment of a new – and higher- qualification over the study period is also associated, on average, with higher long-term earnings for women (by 22.8%), although this effect is not statistically significant for men.

For men, spending more time married or in a de-facto relationship over the study period is positively correlated with long-term earnings (5.5% for each additional year spent married, at mean values). However, this factor is not a statistically significant source of variation in women’s long-term earnings.

Overall, our findings show how the gender division of paid and unpaid work associated with parenthood drives a large gender gap in long-term earnings. The unpaid childcare roles undertaken by many women have large – and negative – consequences for their financial situation, whilst parenthood improves the long-term earnings of many men. Thus, our findings show how the vital care roles performed by women can translate into high rates of economic dependency and vulnerability. A policy response is needed to protect the quality of care, the well-being of the individuals who provide this care and, thus, Australia’s long-run economic and social prospects.