

## Long-term Earnings and Education

**Briefing Note 1** from the *Inside the black box - Intra-household resource allocations of older couples project (ARC DP170103297)*

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A gender gap in lifetime earnings arises because of the combined influence of gender gaps in wage rates, work hours and participation in paid work. The gender gap in lifetime earnings also reflects the larger unpaid roles that most women take on in provisioning their households' needs, and can be viewed as a measure of the economic penalty imposed on women who take on these roles. Policy makers have often responded to gender inequality by promoting women's education in order to lift women's participation in paid work and improve their wage and other outcomes. This briefing note uses the Housing, Income and Labour Dynamics in Australia (HILDA) data to review the effect of education on the gender gap in lifetime earnings.

Various Australian studies have attempted to estimate men's and women's lifetime earnings and assess the impact of education. Typically, these studies have relied on cross-sectional data *for a single year*, coupled with assumptions and predictions about the future pattern of wage rates, work hours, participation rates, and so on. The HILDA data creates an opportunity to improve on previous estimates because the sum of each individual's earnings *over the 15 years* from 2001 to 2015 can be measured directly. Whilst this covers a period far short of a standard working life, it provides more accurate guidance on lifetime earnings than estimates derived from a single year's data.

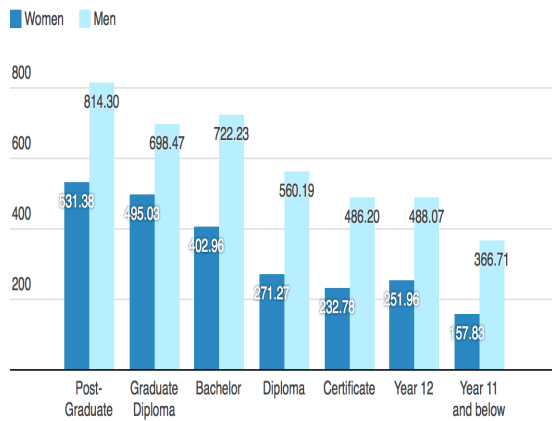
Using five broad educational attainment categories, the following charts show the average and median sum of earnings over the 15 years from 2001, by gender. This data is presented for all men and women who were aged 21 and over in 2001 and under 65 in 2015 (a sample of 3,615), and for the sub-set of these individuals (2,619 in total) who were living in a couple household.

The data in these charts reveal very large gender gaps in long-term earnings, despite substantial improvements delivered by education. Across the sample as a whole, women's median total gross 15 year earnings were only 49.6% of men's, and in couple households this ratio fell to 43.7%. Similar patterns apply in each of the sub-groups defined by educational qualifications and the earnings difference is particularly large between men and women with less than Year 12 qualifications (in this group, women's total gross 15 year earnings are 43.0% of men's and, in couple households this ratio is 37.9%).

Women with a Bachelor degree attain much higher long-term earnings than women without post-school qualifications, suggesting a substantial 'payoff' from education. However, the long-term earnings of women with a Bachelor degree fall well short of men with the same qualification, with their median total gross 15 year earnings reaching only 55.7% of that attained by men in the same educational group. It is

troubling that the median total gross 15 year earnings of women with a Bachelor degree is actually *lower* than that attained by men with *Year 12* qualifications. In the sub-set of individuals living in couple households, the median gross 15 year earnings of women with Bachelor degrees is lower than that recorded by every group of men, *including the group that did not complete high school*.

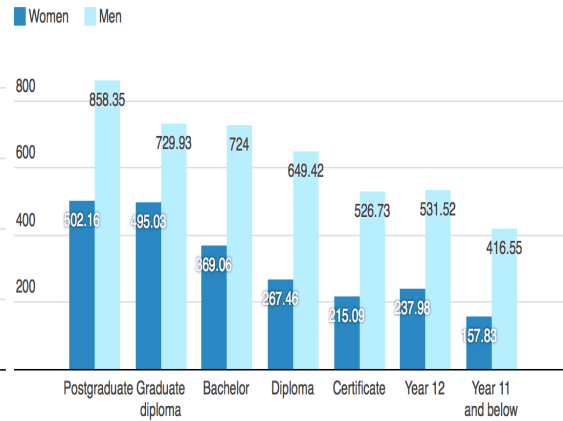
Median long-term earnings of Australian women and men, by educational category



sum of annual earnings for 2001-2015 ('000)  
Source: authors' calculations from HILDA data

<https://datawrapper.dwcdn.net/0SRac/5/>

Median long-term earnings of Australian women and men in couple households, by educational category



sum of annual earnings for 2001-2015 ('000)  
Source: authors' calculations from HILDA data

<https://datawrapper.dwcdn.net/o2DRb/2/>

Clearly, improving women's education is important in raising their long-term earnings. Women with higher levels of qualifications tend to earn more over the long-term than those with lower levels of education. For example, the median long-term earnings of women with a postgraduate qualification is approximately \$300,000 or 128% higher than those with a TAFE certificate. However, educational qualifications are not raising most women's long-term outcomes to the same level as men's. This contributes to productivity losses in the paid economy and lower levels of economic growth. It seems that women's long-term earnings will not be raised to that of men's by education alone. Ultimately, substantial changes in the way in which unpaid and paid work is organised will be necessary in order to redress the disproportionate economic penalties that are currently imposed on women.

These findings have implications for superannuation and age pension policies, and assessments of the likely adequacy of retirement incomes. The large gender gaps in long-term earnings also have direct consequences for gender equality in retirement income. Lower long-time earnings translate into higher rates of economic dependency and vulnerability in old age for women. Education is improving the life-long prospects of women but education by itself is unlikely to redress the gender gaps in long-term earnings and its associated negative impacts on retirement income.