

Gender and Australia's Higher Education Loan Program
Submission to the
Review of Australia's Higher Education System

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This submission is made by Professor Alison Preston. It draws on research projects and programs that the author is involved in. Any errors or omissions in this submission are entirely the responsibility of the author.

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Disclaimer

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Part I

Terms of Reference

The Government has established an Australian Universities Accord (The Accord) to drive lasting reform in Australia's higher education system. The Accord is a review of Australia's higher education system. The terms of reference (ToR) of the review are as follows:

The review is to consider -

1. *knowledge and skills needs, now and in the future*
2. *Access and opportunity*
3. *Investment and affordability*
 - Explore funding and contribution arrangements that deliver equity, access, quality and longer-term investments to meet priorities in teaching, research, workforce and infrastructure. This will include a review of the Job-ready Graduates Package.
4. *Governance, accountability and community*
5. *The connection between the vocational education and training and higher education systems*
6. *Quality and sustainability*
 - Examine the challenges faced by domestic and international students and staff due to the COVID-19 pandemic and the temporary and permanent impacts on the way the higher education sector works.
7. *Delivering new knowledge, innovation and capability*

Executive summary and recommendations

Thank you for the opportunity to make this submission. It is pertinent that a gender lens is applied to this review/inquiry and, with that in mind, the main contribution of this submission is with respect to terms of reference (ToR) (3) on funding and contribution arrangements. The goal is to offer a descriptive analysis of student debt with a view to informing policy concerning the sustainability, or otherwise, of the HELP system and current funding arrangements. The second, more minor, contribution relates to TOR (6) concerning challenges faced by staff due to the COVID-19 pandemic.

The submission draws, in large part, on data from the Household, Income and Labour Dynamics (HILDA) in Australia survey. HILDA is a large sample, nationally representative, longitudinal household dataset that contains detailed information relating to socio-economic/demographic characteristics, income, wages, financial situation and attitudes to finance (to name just a few of the features). The survey commenced in 2001 and at the time of writing the most recent wave is for 2021 (wave 21).¹

The descriptive analysis supporting the recommendations (concerning TOR (3)) is contained in Part II of this submission and contribution towards TOR (6) in Part III.

The analysis in Part II shows that:

- The value of outstanding student debt in the Higher Education Loan Program (HELP) in 2021/22 was equal to \$74.4bn, up from around \$18.4bn in 2005/6 (both values given in 2022 prices). Just over 60% of all those with an outstanding debt are women.
- Between 2001 and 2019 there has been a 57% increase in total university domestic enrolments, with female domestic enrolments in undergraduate (UG) and postgraduate (PG) programs growing at a faster rate than male domestic enrolments. Of the change (growth) in total domestic enrolments between 2001 and 2019, male UG and PG domestic students accounted for 29% and 7% of the growth, respectively. Female UG and PG domestic students, in contrast, accounted for 46% and 18% of the growth, respectively.
- Areas such as Health and Creative Arts have experienced most of the growth in domestic enrolments while fields such as Engineering and Management and Commerce have experienced below average growth. In the postgraduate area there has been a decline in male domestic enrolments in areas such as Information Technology, Agriculture and Management and Commerce. While female postgraduate domestic enrolments in Management and Commerce have increased the growth is below the overall average (across all fields of study). It is possible that the high student fees in the post-graduate field are impacting on course choices.

¹ For further information on the HILDA survey see <https://melbourneinstitute.unimelb.edu.au/hilda>.

- Over the last two decades tertiary education fees (as measured by the consumer price index) have grown faster than the CPI (all goods) while there has been slow / flat growth in the wages of young adults (aged 25-34).
- The combined effect of recent changes in the composition of students (gender and UG/PG enrolments) along with changes in the labour market means that student debt levels are rising and the characteristics of those with an outstanding debt are also changing. There is a growing incidence of older people with an outstanding debt – especially women. This will only get worse following recent (significant) changes to fee contribution requirements in some courses (e.g., humanities), rising inflation (which means debt indexation will increase) and growing cost of living pressures.
- There are significant differences in the capacities of men and women to repay their debts with this very much due to gender differences in patterns of labour force participation. The latter stems from Australia’s cultural norms and relate to the on-going prevalence and preference for a male-breadwinner / female part-time carer family model. While childcare subsidies may see an increase in the hours that women work at the margin it is unlikely to see a marked shift in participation arrangements.
- The overall conclusion is that the current ICL is no longer suitable or sustainable for an education system that is dominated by women. Outstanding debt will continue to grow, placing additional constraints on women (who hold the debt) and on the public universities (who rely, in part, on HELP repayments for financing arrangements).
- **The recommendation arising from Part II are as follows:**
 - That detailed – **and gender based** - review of the HELP. Consideration should be given to indexing arrangements (e.g., perhaps index to changes in average weekly earnings of women) or to not indexing at all.
 - Consideration be given to the cost and benefits of reverting to a free education system for all.
 - There is a need to better understand the market for domestic postgraduate studies and the elasticities associated with course fees. In some cases postgraduate qualifications are a requirement (e.g., teaching) – thus

increasing the debt burdens of participants (and likely affecting supply) and in other cases postgraduate education may be acting as a screening device – but an expensive screen at that. For example, in postgraduate fields such as management and commerce where fees are high (presently averaging A\$72,000 in Go8 universities for a two year degree) there is already evidence of slowing enrolments (and in the case of males, declining enrolments).

In Part III the focus is on a recent analysis of the gendered effects of COVID-19 on perceived research productivity. The abstract from the forthcoming publication is presented. In brief the research shows that academics with primary responsibility for care-giving were most likely to report that their research productivity was affected by COVID-19 and the shift to working from home. There is a sizeable gender gap in those who reported that publication became harder during this period (with women on average reporting it was harder). A decomposition of this gap shows that two-fifths (40%) of the gap relates to having the primary responsibility for the care of children. There is a significant lag in the time it takes to finish and submit a paper to publication and when it may actually be published. The ‘shock’ publications in 2020 – especially amongst women – may only starting to now show up in the data in the form of an even greater gap in the research productivity of men and women. Universities need to be tuned to this and need to ensure that female academic staff (particularly primary care-givers) are not further disadvantaged in promotions, grants, appointments etc. Failure to do so risks seeing a further gender divide within the academy.

- **The recommendation from Part III** is the need to ensure that there are deliberate interventions in the hiring, tenure and promotion criteria of universities that acknowledges the particular shock to the research productivity of women with primary care responsibilities in academia. Interventions such as grants, sabbaticals and teaching relief will be important to ensure that women-as-carers are not penalised and that there is gender justice within the universities.

Part II – TOR #3

Gender and Australia’s Higher Education Loan Program²

Introduction

In 1989 Australia introduced an income contingent loan (ICL) system and with it a mechanism through which domestic students in the Australian Higher Education System might share in some of the costs of their education. The new system was known as the Higher Education Contribution Scheme (HECS). HECS enables students to access an interest free loan (the loan does not attract interest but is indexed to inflation) to contribute towards their tuition costs.³

The HECS system was replaced with the Higher Education Loan Program (HELP) in 2003 under the *Higher Education Support Act 2003*. The changes introduced under the HELP included a change in the repayment threshold levels and contribution amounts and an extension of the ICL arrangements to domestic full-fee paying students (e.g. postgraduate students or students with private providers). The HELP system has continued to evolve. In 2017, for example, a discount for upfront payments was removed. In 2018, under the *Higher Education Support Legislation Amendment Act 2018*, the minimum repayment thresholds were reduced with the view of recouping debt at a faster rate. In 2020 the Government announced its ‘Job Ready Graduates Package’ and, in so doing, announced a major change in the level of government funding for Commonwealth Supported Places (CSP) in Australia’s tertiary institutions. Students studying humanities, for example, saw a significant change in their required course contribution amounts (increasing from \$6,684 in 2020 to \$14,500 in 2021). These changes were not gender neutral.

The ICL arrangements under the HECS scheme and now the HELP scheme are, as noted, interest free loans, although they are indexed to inflation (presently the consumer price index (CPI)). Students begin repaying their debt when their annual “reportable

² I would like to acknowledge the work of Daniel Lynch. In 2020, at UWA, Daniel wrote his thesis as part fulfillment for the requirements of his Masters in Economics degree at UWA (Lynch, 2020). The descriptive analysis in this submission draws, in part, on his analysis.

³ For a history of the background leading up to the adoption of HECS see Edwards (2001).

income” (RI) (all sources – including voluntary superannuation contributions)⁴ reaches a minimum threshold. Required minimum payments range from 1% to 10% depending on the level of RI.⁵ Since the HELP (and its predecessor, HECS) was introduced in 1988 there has been a marked change in the tertiary education sector. A particularly change is the growth in enrolments in undergraduate and postgraduate qualifications, especially amongst women. The HELP system was, arguably, designed with a full-year, full-time, worker in mind (i.e. a male). Women, however, have markedly different patterns of employment participation than men, both in terms of the extensive margin (the extent to which they are in the labour force and in employment) and in terms of the intensive margin (the hours they supply). This largely arises from cultural factors and the presence of a strong ‘male breadwinner / female part-time carer’ values model in Australia (Baxter and Hewitt, 2013). A high share of women switch to part-time employment after the birth of a child and/or leave the labour market. Their life-time earning profiles are therefore considerably different from that of males (Austen and Mavisakalyan, 2018) and the wages that they do receive are, on average, 10% lower than that of males because of the different treatment men and women experience in the labour market (i.e., the gender wage gap). By implication women have quite different repayment capacities (Higgins and Sinning, 2013).

The gender differences in repayment capacity matters as it brings into question the sustainability of the current HELP scheme, particularly given recent changes in the profile of undergraduate and postgraduate students. Estimates show that, for financial year 2021/22, the total outstanding student debt in the HELP was equal to \$74.4bn. In 2005/6 total outstanding debt (in 2022 prices) was \$18.4bn. Just over 60% of all those with an outstanding HELP debt are women.

There are several factors driving the growth in the total value of student debt owed. Growth in student enrolments and those using HELP arrangements to finance their study is the most obvious factor. Recent estimates based on data from the Australian Taxation

⁴ Reportable income includes taxable income, reportable fringe benefits, net investment loss (including rental loss), exempt foreign employment income amounts and reportable superannuation contributions (<https://www.ato.gov.au/individuals/study-and-training-support-loans/when-must-you-repay-your-loan/#Yourrepaymentincome>).

⁵ In 2022/23 the repayment thresholds are: 0% below \$48,361, 5% for incomes between \$79,207 to \$83,958 and 9% for incomes \$126,244 to \$133,818 and 10% for incomes above \$141,848. For the full schedule see <https://atotaxcalculator.com.au/help-debt#hecs2022>

Office (ATO) shows that, in the 10 years from 2005/6 to 2015/16, the number of students with an outstanding debt more than doubled (from 1.2m to 2.5m) and in the six years since (to 2021/22) another 529,905 individuals joined the ranks of those with an outstanding debt – taking the total number of individuals with an outstanding debt to 2,998,884. Another factor driving the growth relates to the changed contribution amounts (previously noted) and the fact that a large share of students at the undergraduate and postgraduate level are women with, as noted, reduced capacity to repay their debt.

The goal of this submission is to shed light on the gender dimension of HELP and student debt with a view to contributing to debate on the sustainability and suitability of HELP given the changed composition of students and changed labour market and cost of living conditions. The contention is that the HELP in its current form is no longer meeting its objectives of fairness and equity and that other alternatives for financing education should be considered.

The remainder of this submission is organised as follows. Section 2 contains a review of relevant literature. Section 3 describes recent trends in enrolments. Sections 4 and 5 consider the patterns and drivers of debt and section 6 concludes the analysis.

Relevant Literature (in brief)

The HELP system (and its predecessor, HECS) is an income contingent loan (ICL) arrangement designed to facilitate and support access to higher education. Loan repayments are contingent on receiving an income above threshold bands, with repayments collected through the tax office. The funds collected through the HELP system are used to fund (in part) the higher education system and support the expansion of the system. The architect of the HECS was, and is, Professor Bruce Chapman (Edwards, 2001). Central to Chapman's design of the initial system was acknowledgement that higher education delivers private benefits to the individual as well as spillover effects (public benefits) to the community. Examples of the latter include better informed public debate, R&D benefits, transferral of skills within the community and, of course, productivity, growth and therefore tax revenue effects (ibid.). As Edwards writes, the concern at the time was that free education was a form of 'middle-class welfare' – those benefiting from taxpayer funded

education were better off personally and should therefore contribute towards the cost of their education. In the late 1980s there was pressure to significantly expand the higher education system and make it more accessible to the broader community. Considerations in the design of the ICL included how much of a public subsidy should be given to cover tuition costs, what the contribution amount should be, whether it should be flat rate for all courses or vary and where to set income thresholds (ibid.).

Since the adoption of HECS there have been several studies examining the arrangements with particular interest in understanding how it affected the study decisions of actual or prospective students. Chapman and Ryan (2005), for example, considered the socio-economic status (SES) composition of students and concluded that SES inequalities were unaffected by the introduction of HECs. Others have concluded that there is a lower share of students from lower socio-economic status (SES) areas with debt aversion identified as a part explanation (Marks, 2008).

There is a large international literature examining issues associated with student loans to finance tertiary education. The international literature is more focused on the characteristics of those carrying a student debt. Such studies have attracted less attention in Australia, presumably because the debt is mostly income contingent and not interest bearing. International studies show that factors such as family wealth are important in terms of who has a debt (de Gayrdon et al. 2019) as are other characteristics such as debt aversion (de Gayrdon et al., 2019; Callender & Mason, 2017).

Returning to the Australian case, a part justification for the introduction of a student contribution towards their tuition fees – and subsequent changes to contribution amounts and repayment levels – is that tertiary qualified individuals have life-time earning profiles that are both higher and steeper than their counterparts who are not tertiary qualified. That is, there is a private as well as public benefit from education and, therefore, a case to be made to recoup some of this private benefit. Recent work, however, suggests that this benefit (wage premium) associated with tertiary education is on the decline and while older cohorts may have experienced significant private benefits, this is less so for more recent cohorts of graduates. For example, an analysis of the change in the returns (captured via the wage premium) to education amongst young adult males and females (aged 25-34) shows that between 2001/2 and 2018/19 there has been a significant decline in the wage premium

associated with having a degree or above (Birch and Preston, 2021). Deterioration in the wage premium is attributed to subdued growth in wages amongst young adults, particularly since the Global Financial Crisis (GFC). The latter particularly marked amongst young adult women (ibid.).

The gender aspect of the ICLs in Australia has been the focus of attention in research by Higgins and Sinning (2013) and, more recently, West (2020) as well as Lynch (2020). Higgins and Sinning's interest was in understanding how taxpayer subsidies for tuition costs might relate to cost recovery of loan outlays which, in turn, is dependent upon the earnings profiles and earnings models of those accessing the HELP system. Their analysis uses HILDA data for 2001-2011 for a sample of 22-55 year old university graduates. They find that 93% of the men employed full-time in 2001 are employed full-time in 2011. Most men who are not in full-time employment have transitioned to part-time employment. They contrast this with the case for women. Only 53% of women in full-time employment in 2001 were in full-time employment in 2011, around 35% transitioned to part-time employment and the majority of the balance dropped out of the labour force. They use this information to estimate earning profiles and simulate debt repayment schedules for graduates aged 20-35 who were either full-time or part-time employed. Their analysis (2001 to 2011) shows significant differences in actual and predicted average outstanding debt levels between male and female graduates. "While actual average debt levels of male [2001] graduates drop below \$3000 in 2011, average debt levels of female graduates remain above \$10,000 (ibid., p.282). In short, their analysis reveals significant gender differences in the repayment capacities of male and female graduates in Australia. They note the importance of understanding this difference in the design of the ICL and its implications for subsidy calculations but, also, cost recovery.

Technically women receive, on average, a greater education subsidy than men given their reduced repayment capacity. However, they also carry debt burdens for longer and, because of their reduced earnings power, will have a lower rate of return (over their lifetime) when compared to men on their educational investments. One concern, as highlighted in West (2020) is the assumption is that there is no 'cost' or 'effect' of having an outstanding debt. In other words, there is a common assumption that the outstanding debt is a 'benign' debt and not something individuals should be concerned with as the debt does not attract

interest and repayment is only required should earnings reach a particular threshold. The 'benign' assumption assumes that there is no emotional cost attached to having student debt. It also assumes that there is no effect of this outstanding student debt on other economic decisions that individuals (i.e., women) might make. This is questionable. Outstanding student HELP and other loans, for example, is taken into consideration when applying for a mortgage as repayments are from disposable income. Additionally, while the present policy setting may see HELP debt written-off at death, there are periodic debates concerning mechanisms to recover the debt – including proposals to recover the debt from the estate at death or from superannuation. Finally, while inflation was low debt could be slowly recouped. With rising inflation and debt linked to inflation many students now see themselves in a situation where the annual amount repaid is less than the annual increase after indexation, such that debt levels are growing, not declining.

Descriptive analysis of domestic enrolment trends and patterns

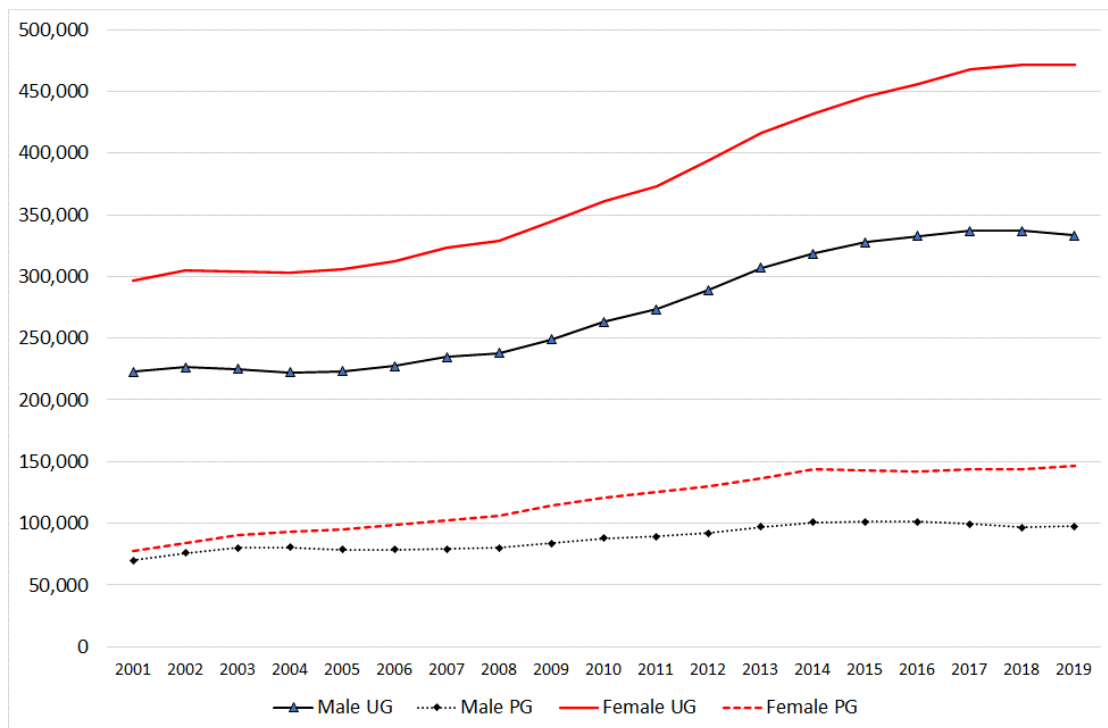
Figure 1 shows the trend in domestic enrolments in university undergraduate and postgraduate degree programs between 2001 and 2019. Across all programs (undergraduate and postgraduate) there has been a 57% increase in total enrolments over the period studied. Female enrolments have growth at a faster rate in both undergraduate (UG) and postgraduate (PG). Of the total change in domestic (UG and PG) enrolments between 2001 and 2019, male UG and PG enrolments accounted for 29% and 7% respectively, while female UG and PG enrolments accounted for 46% and 18% respectively.

Figures 2 and 3 show the change in the distribution of enrolments by gender and field of study at the UG level. Figures 4 and 5 show the corresponding change at the PG level. Focusing first on Figure 2 for UG males, the main change between 2001 and 2019 is a growth in enrolments in Health, Creative Arts and Natural and Physical Sciences and a decline in areas such as information technology and engineering and related technologies. Amongst females there has been a sharp increase Health program enrolments at the expense of education and management and commerce courses. At the postgraduate level male domestic enrolments have also increased in Health and in Society and Culture, again at the expense of management and commerce degrees and, to a lesser extent, information and technology programs. A similar pattern may be observed for females.

Figure 6 sheds further light on these changes, comparing the change in enrolments between 2001 and 2019 by field of study (FOS) and sex and program level (UG or PG). As shown, total male UG enrolments increased by 49%. There was a disproportionately higher growth in areas such as Health and Creative Arts, with male enrolments increasing by 140% and 111%, respectively. This strong growth reflects, in part, the comparatively lower base they were growing from. In Health, for example, male domestic UG enrolments increased from 16,822 in 2001 to 40,379 in 2019. In Creative Arts the corresponding growth was from 12,420 to 26,124. This compares to Engineering and Related Technologies where male UG enrolments were equal to 33,716 in 2001 and 46,425 in 2019 (a growth of 38%).

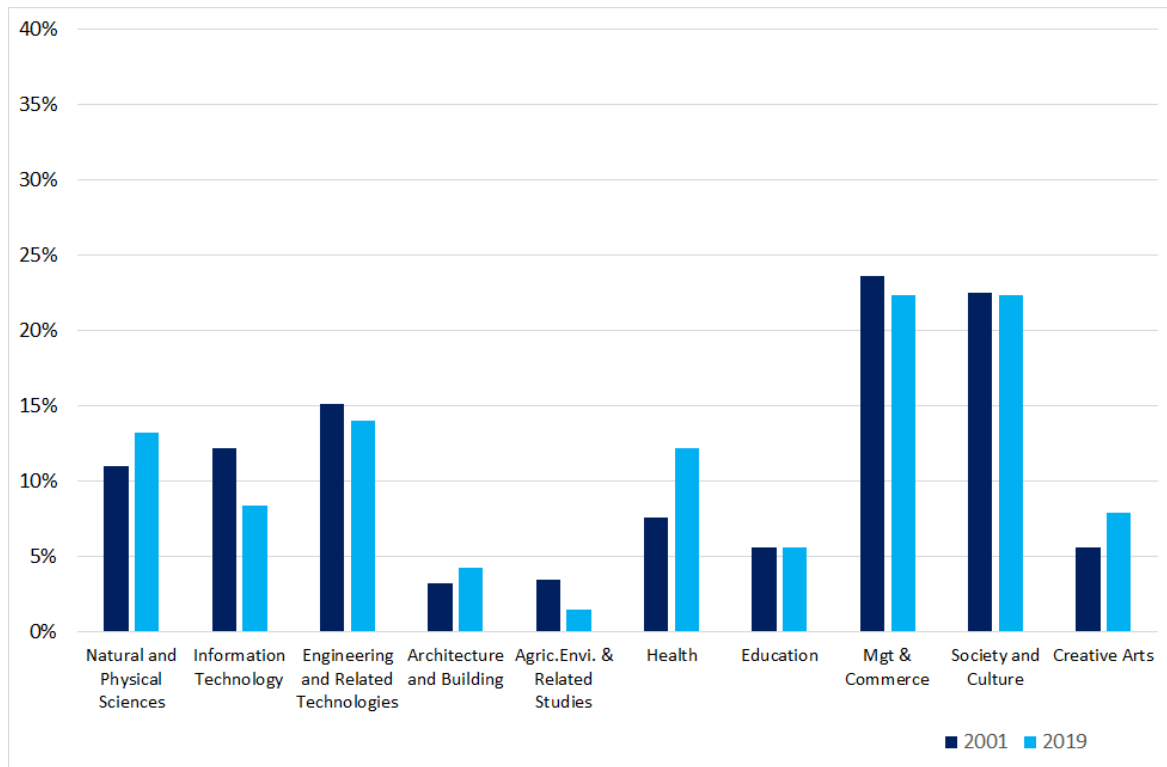
Figure 7 concludes this sub-section on trends in enrolments showing the share (%) of persons aged 15-64 in Australia with a Bachelor degree or higher. No distinction is made between where the qualifications were obtained. In other words, the figures will include migrants, many of whom will have been educated overseas. The main purpose of the diagram is to illustrate the significant growth in tertiary qualified persons within Australia. There are now, as shown, proportionately more degree qualified women in Australia than men.

Figure 1: Domestic University Enrolments in Undergraduate and Postgraduate Degree Programs, by Sex, Australia, 2001 to 2019



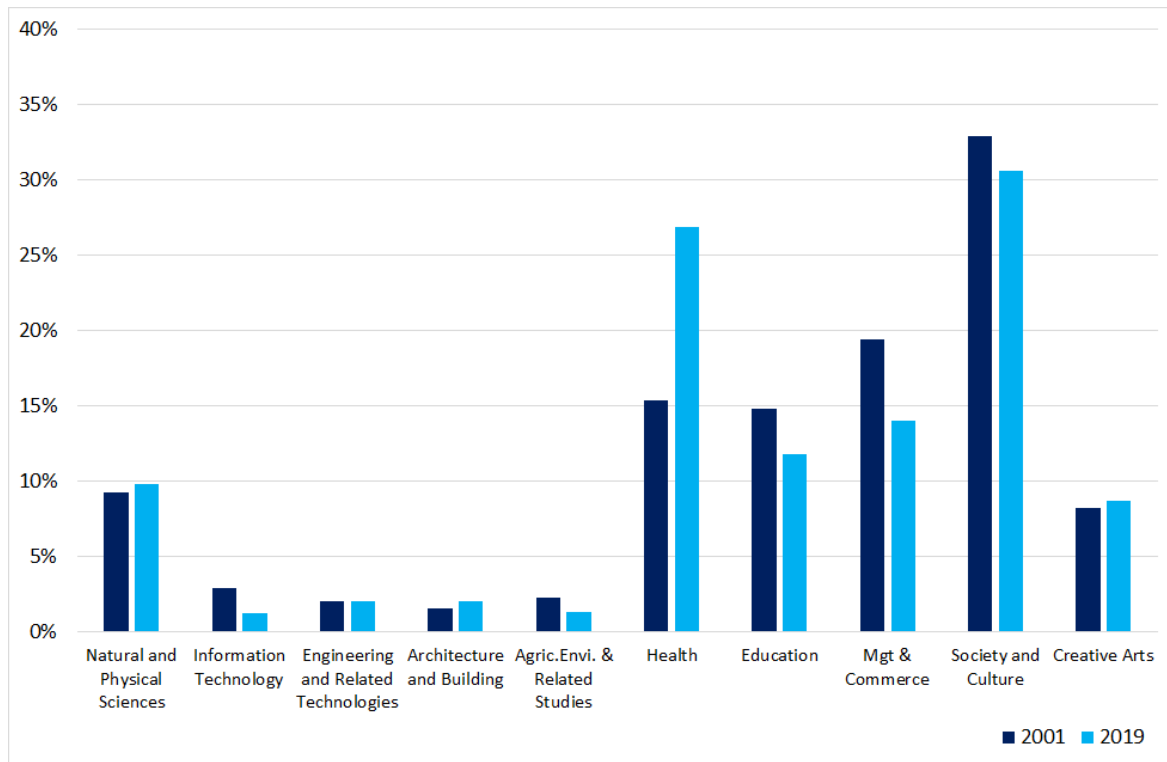
Source: Australian Government, Department of Education, Skills and Employment, *uCube*.

Figure 2: Distribution of male domestic undergraduate enrolment by broad field of study, 2001 and 2019



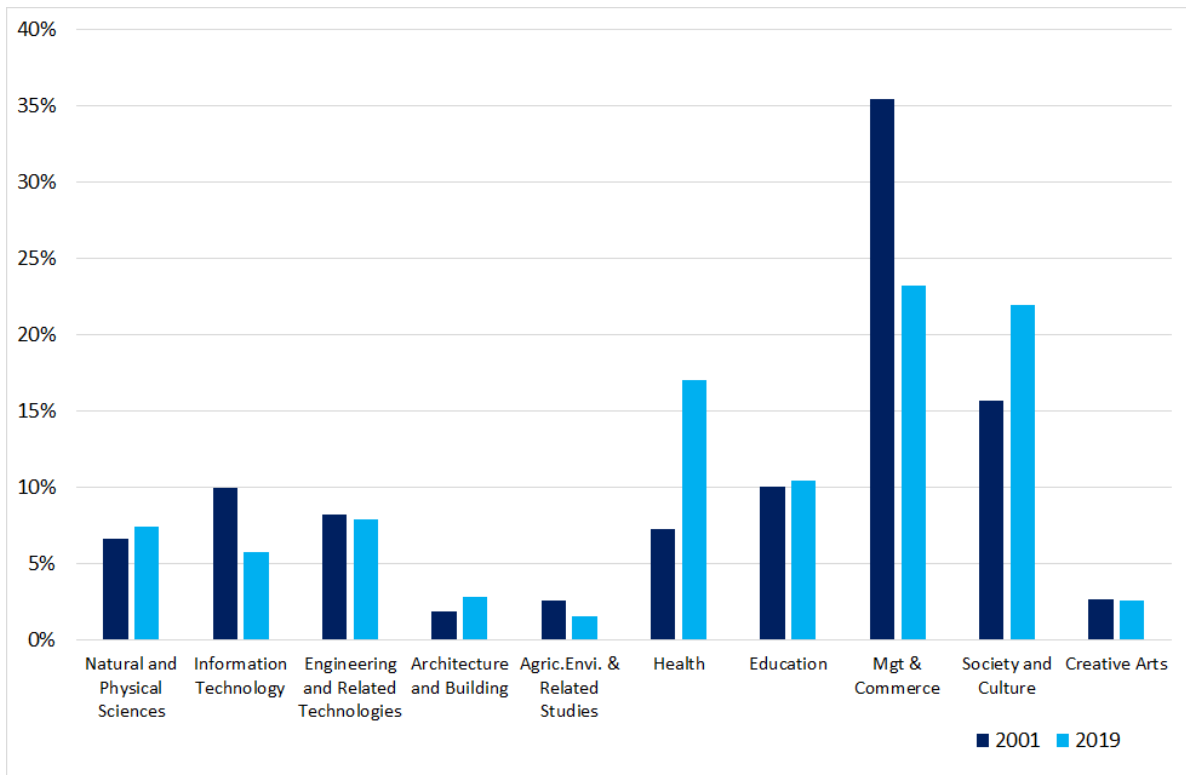
Source: Australian Government, Department of Education, Skills and Employment, *uCube*.

Figure 3: Distribution of female domestic undergraduate enrolment by broad field of study, 2001 and 2019



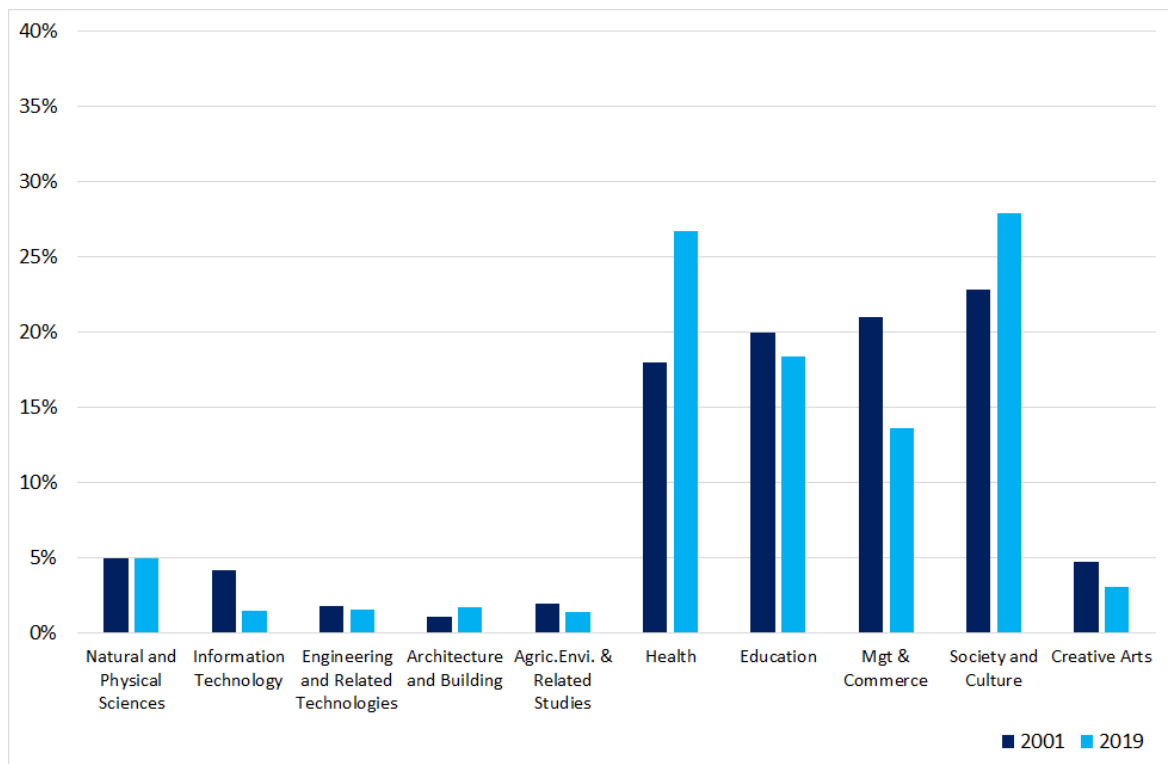
Source: Australian Government, Department of Education, Skills and Employment, *uCube*.

Figure 4: Distribution of male domestic postgraduate enrolment by broad field of study, 2001 and 2019



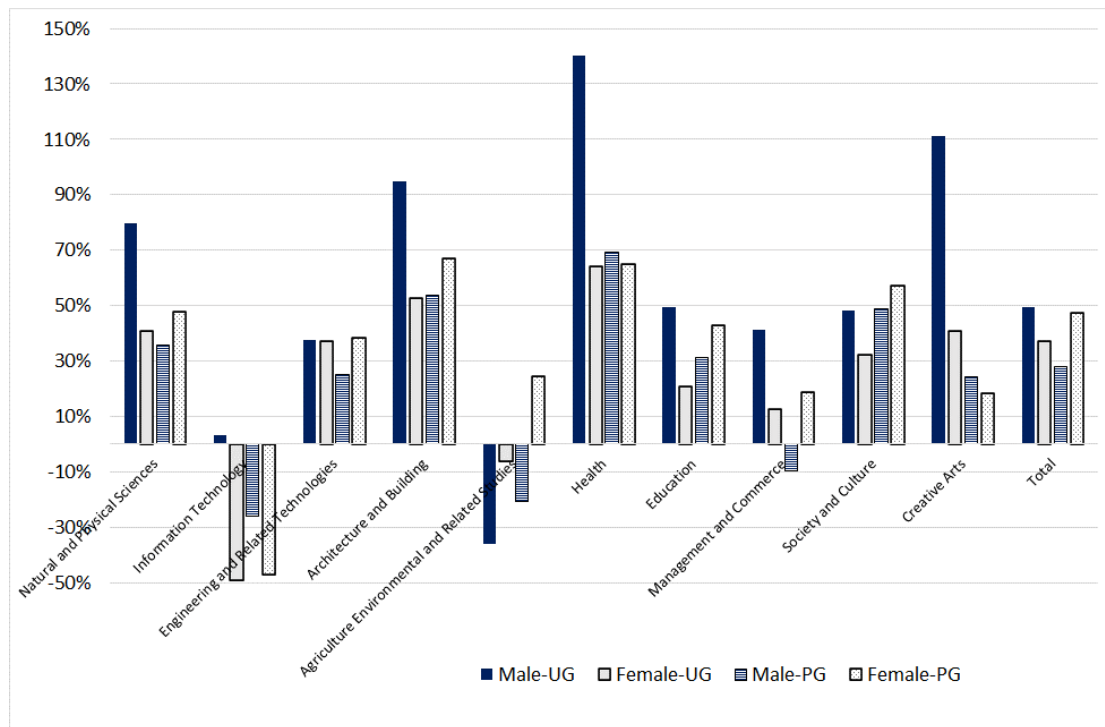
Source: Australian Government, Department of Education, Skills and Employment, *uCube*.

Figure 5: Distribution of female domestic postgraduate enrolment by broad field of study, 2001 and 2019



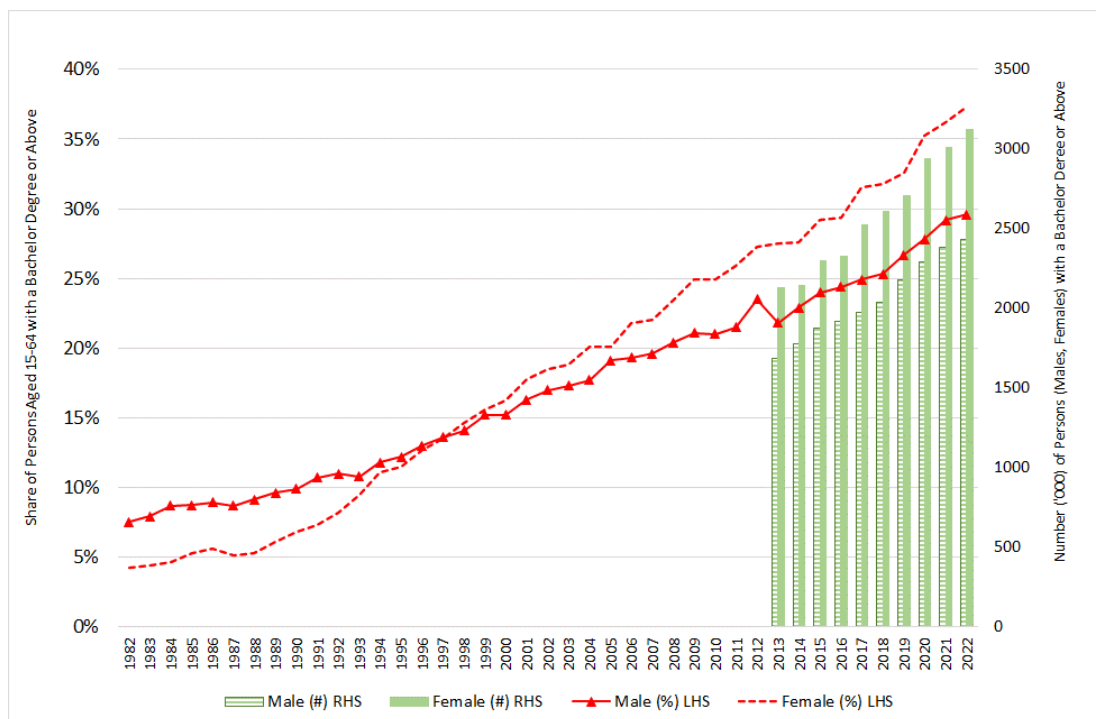
Source: Australian Government, Department of Education, Skills and Employment, *uCube*.

Figure 6: Change in domestic undergraduate and postgraduate enrolment between 2001 and 2019, by sex, Australia



Source: Australian Government, Department of Education, Skills and Employment, *uCube*.

Figure 7: Share (%) and Number of Persons Aged 15-64 with a Bachelor Degree or Higher, by Sex, Australia



Note: 1. Information on actual number ('000) of persons with a degree or higher is only available from 2013. Source: Australian Bureau of Statistics (ABS), Education and Work, Australia, May 2022. Released November 2022.

Student contribution amounts and trends in tertiary fees⁶

Table 1 shows the student contribution amounts for various fields of study (FOS) from 2007 to 2023. Column (2) for Accounting, Administration, Economics and Commerce show that since 2007 (and in nominal terms) the contribution amount has increased by 113%. In the Humanities the corresponding increase is 203% while in areas such as Mathematics the contribution has fallen by 42% and in Engineering increased by 17%. In Education and Nursing the change is minimal (3%). The figures shown are for a full-time student load. Assuming no other expenses, a student in Law, Commerce or Humanities commencing in 2023 will incur a HELP debt (should they choose to finance their studies this way) of \$45,426 for a three year undergraduate degree (assuming no yearly changes to their course fees and no indexation of debt during the course of their studies). Should they decide to return and enrol in postgraduate studies they will see their debt levels further grow, particularly if they enrol in a full-fee paying postgraduate course. The average cost of a Master of Commerce degree at a Group of Eight (Go8) university for a student commencing in 2023 is \$35,863. Assuming two years to complete and no price increase over the duration of study, an M.Com degree will cost a domestic student (fees alone) \$71,728. This is on top of any undergraduate fees. It presumably explains, in part, the significant drop in the shares of students enrolling in Management and Commerce postgraduate studies.

Figure 8 shows the trend in tertiary education fees in Australia, as given by data from the ABS consumer price index. The period covered is June 2000 to December 2022. As shown, tertiary education fees (aggregated) have increased by nearly 220% over the period, far exceeding the growth in the CPI over this time. This is set against slow / flat wage growth amongst young people, particularly since (see Figure 9).

⁶ See also the Parliament of Australia HELP and related loans chronology. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/HigherEducation

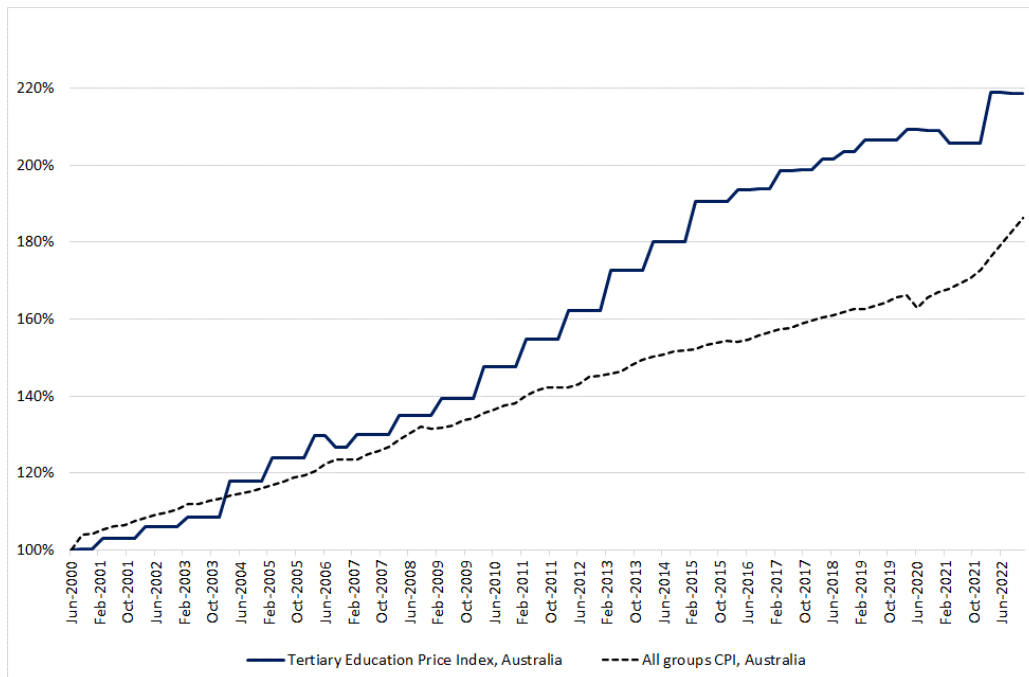
Table 1: Student contribution amounts for a student place (equivalent full-time student load)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Law	Accounting, Administration, Economics, Commerce	Humanities	Mathematics, Science	Behavioural Science, Social Studies	Computing, Built Environment, Health	Foreign Languages, Visual and Performing Arts	Engineering, Science, Surveying	Dentistry, Medicine, Veterinary Science	Agriculture	Education	Nursing
2007	\$8,333	\$7,118	\$4,996	\$7,118	\$4,996	\$7,118	\$4,996	\$7,118	\$8,333	\$7,118	\$3,998	\$3,998
2008	\$8,499	\$8,499	\$5,095	\$7,260	\$5,095	\$7,260	\$5,095	\$7,260	\$8,499	\$7,260	\$4,077	\$4,077
2009	\$8,677	\$8,677	\$5,201	\$4,162	\$5,201	\$7,412	\$5,201	\$7,412	\$8,677	\$7,412	\$4,162	\$4,162
2010	\$8,859	\$8,859	\$5,310	\$4,249	\$5,310	\$7,567	\$5,310	\$7,567	\$8,859	\$7,567	\$5,310	\$5,310
2011	\$9,080	\$9,080	\$5,442	\$4,355	\$5,442	\$7,756	\$5,442	\$7,756	\$9,080	\$7,756	\$5,442	\$5,442
2012	\$9,425	\$9,425	\$5,648	\$4,520	\$5,648	\$8,050	\$5,648	\$8,050	\$9,425	\$8,050	\$5,648	\$5,648
2013	\$9,792	\$9,792	\$5,868	\$8,363	\$5,868	\$8,363	\$5,868	\$8,363	\$9,792	\$8,363	\$5,868	\$5,868
2014	\$10,085	\$10,085	\$6,044	\$8,613	\$6,044	\$8,613	\$6,044	\$8,613	\$10,085	\$8,613	\$6,044	\$6,044
2015	\$10,266	\$10,266	\$6,152	\$8,768	\$6,152	\$8,768	\$6,152	\$8,768	\$10,266	\$8,768	\$6,152	\$6,152
2016	\$10,440	\$10,440	\$6,256	\$8,917	\$6,256	\$8,917	\$6,256	\$8,917	\$10,440	\$8,917	\$6,256	\$6,256
2017	\$10,596	\$10,596	\$6,349	\$9,050	\$6,349	\$9,050	\$6,349	\$9,050	\$10,596	\$9,050	\$6,349	\$6,349
2018	\$10,754	\$10,754	\$6,444	\$9,185	\$6,444	\$9,185	\$6,444	\$9,185	\$10,754	\$9,185	\$6,444	\$6,444
2019	\$10,958	\$10,958	\$6,566	\$9,359	\$6,566	\$9,359	\$6,566	\$9,359	\$10,958	\$9,359	\$6,566	\$6,566
2020	\$11,155	\$11,155	\$6,684	\$9,527	\$6,684	\$9,527	\$6,684	\$9,527	\$11,155	\$11,155	\$6,684	\$6,684
2021	\$14,500	\$14,500	\$14,500	\$3,950	\$3,950	\$7,950	\$3,950	\$7,950	\$11,300	\$3,950	\$3,950	\$3,950
2022	\$14,630	\$14,630	\$14,630	\$3,985	\$3,985	\$8,021	\$3,985	\$8,021	\$11,401	\$3,985	\$3,985	\$3,985
2023	\$15,142	\$15,142	\$15,142	\$4,124	\$4,124	\$8,301	\$4,124	\$8,301	\$11,800	\$4,124	\$4,124	\$4,124
% change 2007-23	82%	113%	203%	-42%	-17%	17%	-17%	17%	42%	-42%	3%	3%

Notes:

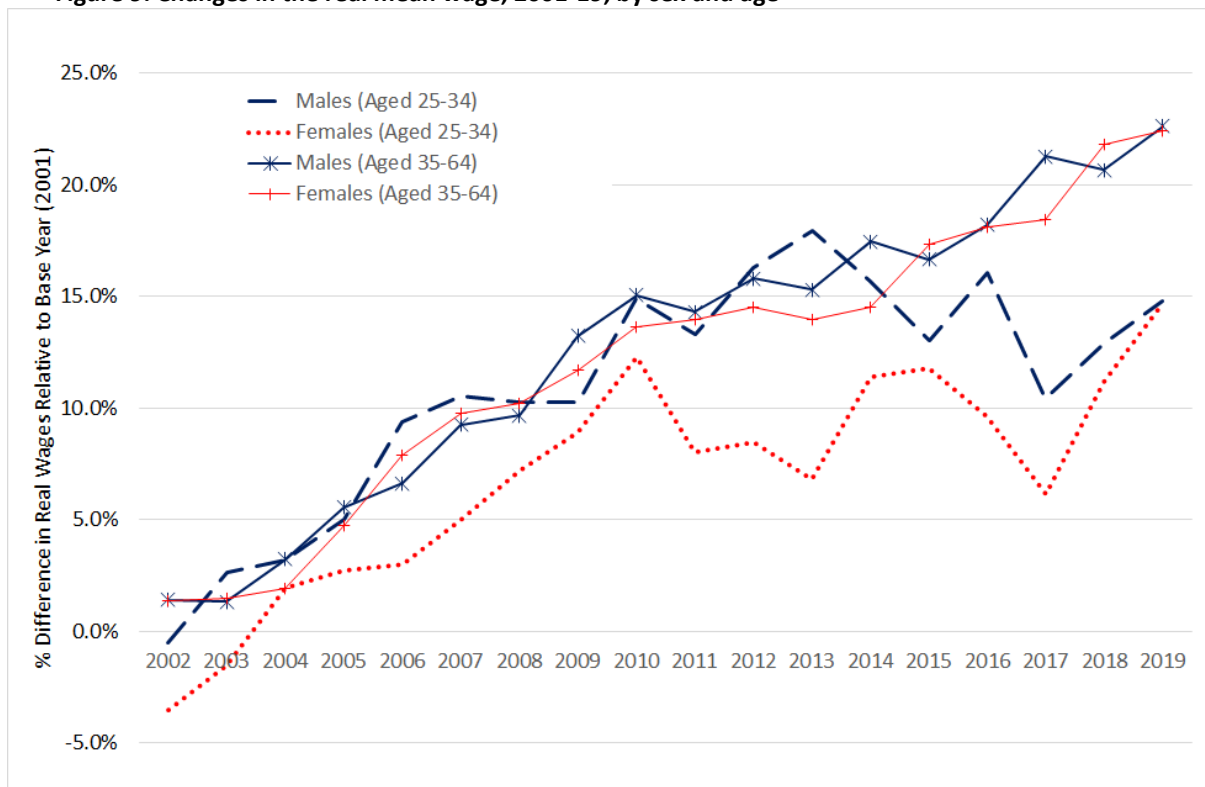
1. Information obtained from the Australian Government, Department of Education, Indexed Rates, various years.
2. Column headings correspond with the funding clusters in 2007. There have been some adjustments in the funding clusters since 2007, most notably in 2021 when the government shifted to four funding clusters. Cluster 1 – Law, Accounting, Administration, Economics, Commerce, Communications, Society and Culture; Cluster 2 – Education, Clinical Psychology, English, Mathematics, Statistics, Allied Health, Other Health, Built Environment, Computing, Visual and Performing Arts; Cluster 3 – Nursing, Indigenous and Foreign Languages, Engineering, Surveying, Environmental Studies, Science; Cluster 4 – Agriculture, Medicine, Dentistry, Veterinary Science, Pathology.
3. The column headings in columns (5) and (7) may not accurately reflect the funding cluster from 2021. The \$ amount entered in column (5) is based on the contribution for psychology. In column (7) it is based on the contribution for Indigenous and Foreign Languages (with Visual and Performing Arts now under Cluster 2 at \$7,950 in 2021).

Figure 8: Trend in Tertiary Education Fees (Price Index) and the Consumer Price Index (CPI), Australia, June 2000 to December 2022



Source: ABS 6401.0, Consumer Price Index, Australia, Table 9. CPI: Group, Sub-group. Series A2325846C and A2331561L.

Figure 9: Changes in the real mean wage, 2001-19, by sex and age

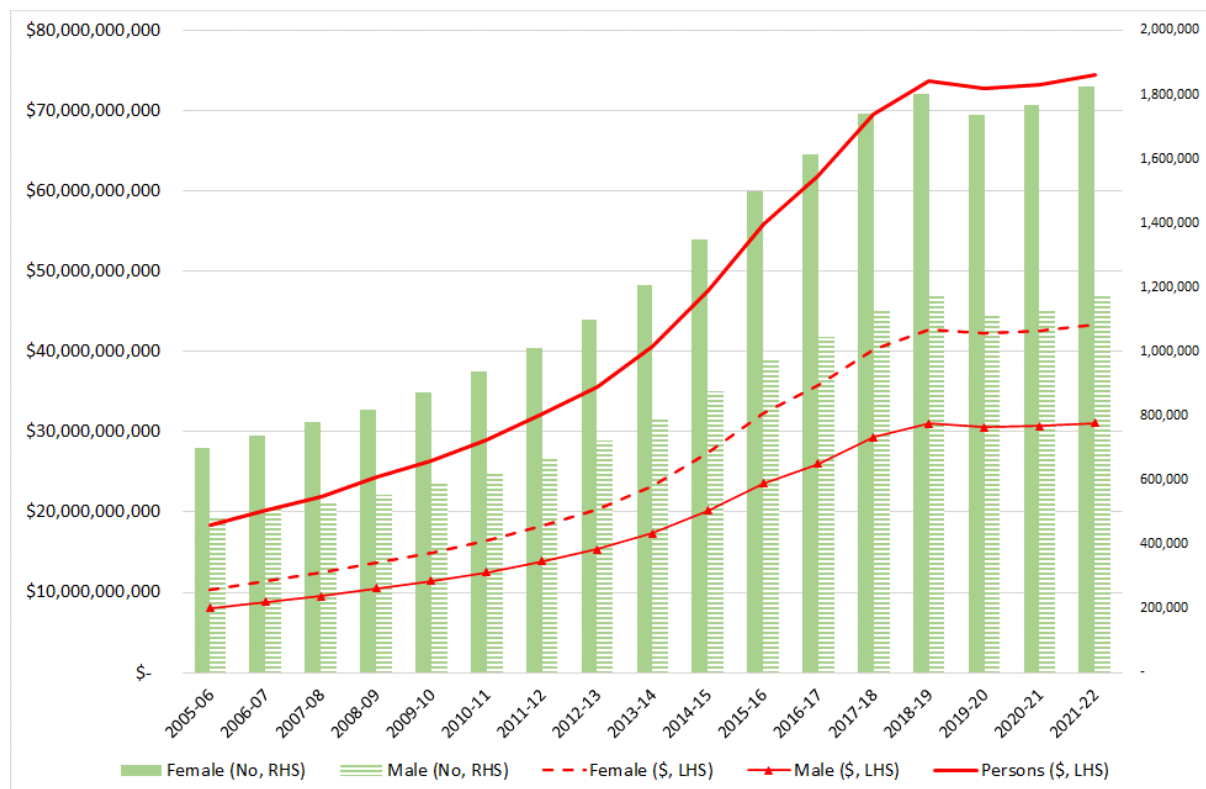


Source: Figure 1, Birch and Preston (2021).

Student debt – numbers and \$ amounts

Figure 10 draws on data from the Australian Taxation Office (ATO). It shows the growth in the number of students with an outstanding HELP debt between 2005-6 and 2021-22. The combined chart also shows the growth in the dollar (\$) amount of outstanding debt. Estimates show that, for financial year 2021/22, the total outstanding student debt was equal to \$74.4bn. In 2005/6 total outstanding debt (in 2022 prices) was \$18.4bn.

Figure 10: Outstanding student HELP debt (Numbers and \$) by year



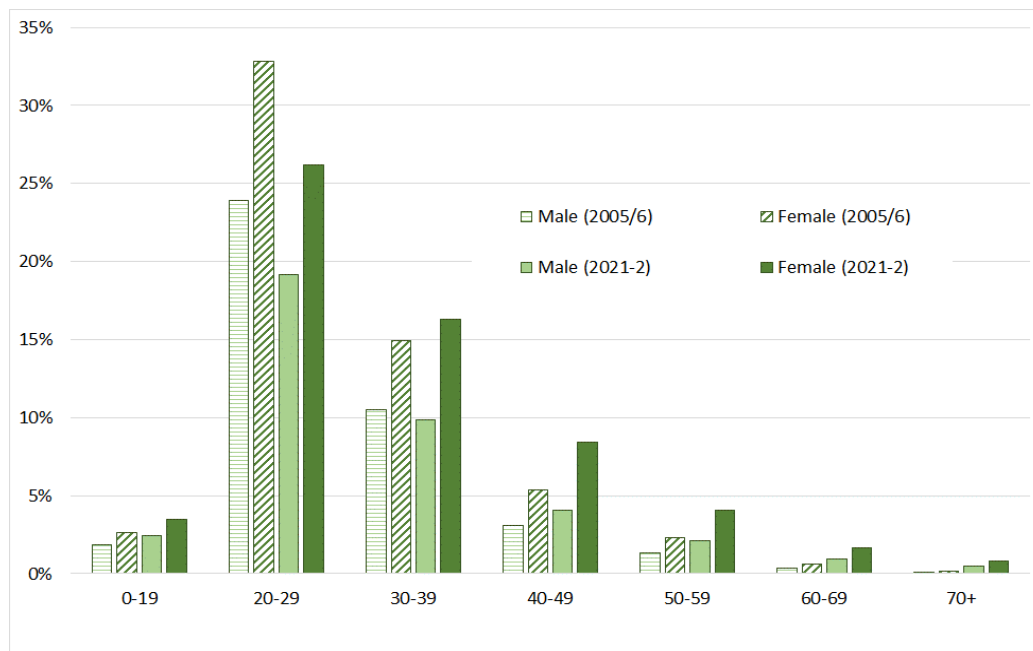
Notes

1. Source: ATO (2022) HELP statistics 2021-22(XLSX). <https://data.gov.au/dataset/ds-dga-ce4c58ec-c930-4a05-8a37-f244d960e5f8/details?q=>
2. All dollar (\$) figures are in 2022 prices using data from ABS 6401.0 CPI (Australia), All groups.

In Figure 11 the focus is on the distribution of those with an outstanding debt by age (within each year and group the figures sum to 100%). As shown, persons aged 20-29 are the most likely to have an outstanding HELP debt. This is not surprising as the debt will reduce by age and repayments (for those in paid employment and with earnings that meet minimum threshold repayment levels). Of interest, however, is the marked growth in older groups with an outstanding debt – particularly amongst older women. In 2005/6, 10% of women aged 30-

39 had a HELP debt, by 2021/2 this figure was around 17%. The expectation is that the future will see older women make up a greater share of those with an outstanding HELP debt, particularly given rising incidence of debt holding, rising tuition fees and debt levels, rising cost of living pressures, lower capacity to repay, slow wage growth and a declining return on education investments.

Figure 11: Distribution of those with outstanding debt by age and sex, 2005/6 and 2021/2

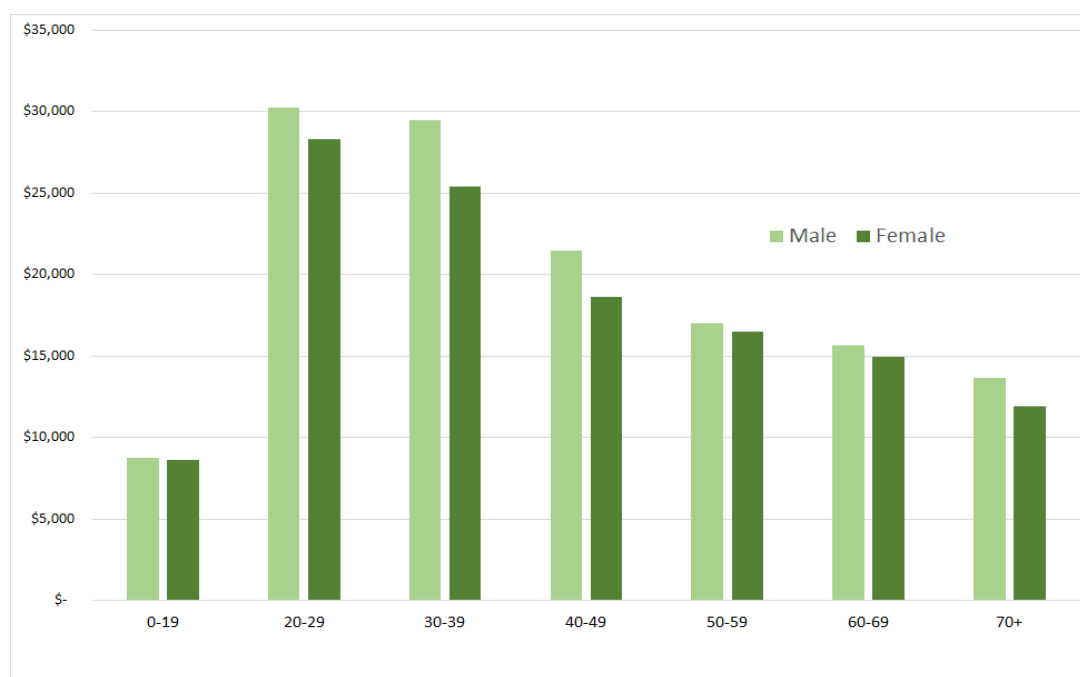


Notes

1. Source: ATO (2022) HELP statistics 2021-22(XLSX). <https://data.gov.au/dataset/ds-dga-ce4c58ec-c930-4a05-8a37-f244d960e5f8/details?q=>
2. Note: the male and female 2005/6 columns jointly sum to 100%, as do the male and female 2021/2 columns.

Figure 12 shows the average (mean) outstanding HELP debt amounts by age in 2021/22 based on ATO data. In the 30-39 year-old age group, the average debt level was \$29,458 for males and \$25,369 for females. Across all males and females with an outstanding HELP debt the average balance was \$26,533 for males and \$23,695 for females. In real dollar terms (2021/22) this represented a 60% increase on average debt balances in 2005/06. While average balances for males exceeds females it is important to remember that males are able to pay off their debt at a faster rate.

Figure 12: Average (mean) outstanding debt amounts (\$) by age, 2021/22



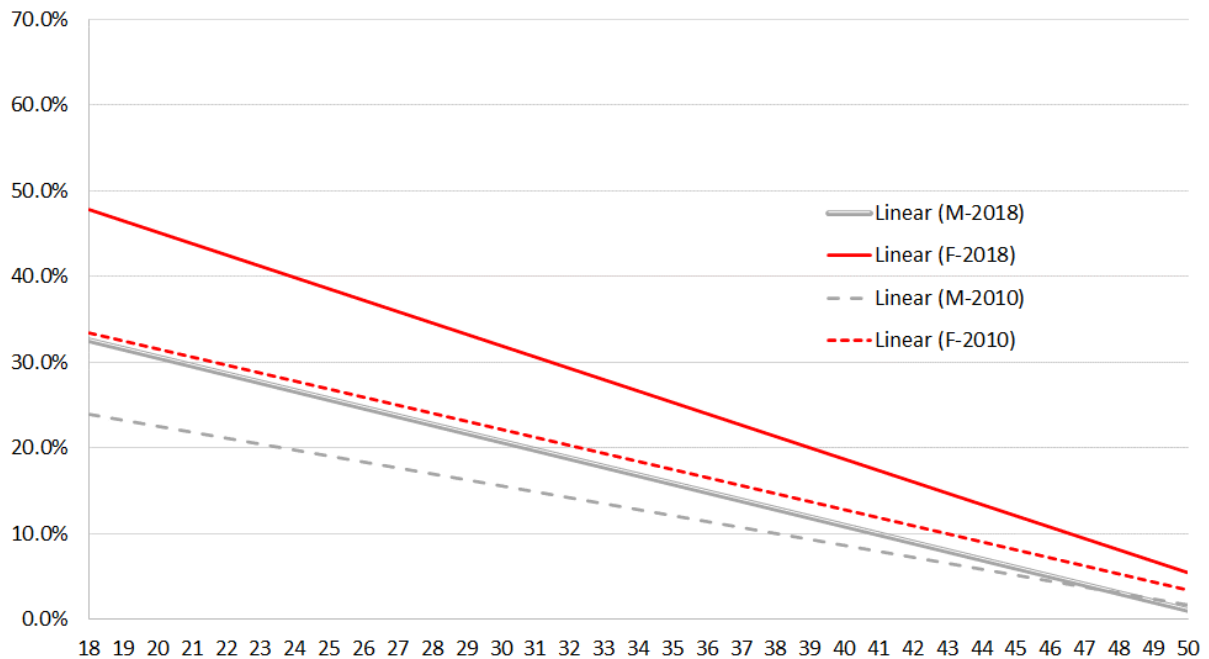
Notes

1. Source: ATO (2022) HELP statistics 2021-22(XLSX). <https://data.gov.au/dataset/ds-dga-ce4c58ec-c930-4a05-8a37-f244d960e5f8/details?q=>

HELP and Student Loan Debt – HILDA Analysis

The following set of figures draw on data from the Household, Income and Labour Dynamics in Australia (HILDA) survey. HILDA is a large nationally representative longitudinal household survey that commenced in 2001 and at the time of writing has 21 waves of data (2001 to 2021). In waves 2, 6, 10, 14 and 18 (corresponding to 2002, 2006, 2010, 2014 and 2018) respondents were asked whether they had an outstanding HECS debt or student debt. The relevant question in the HILDA survey asks “Do you have any outstanding HECS debts or other student loans?”. If they say yes, the follow up question is “How much do you still owe?”. Figure 13 shows the trend in the average incidence of having an outstanding debt disaggregated by sex, age and year (2010 and 2018). The linear trend lines are fitted on a scatter plot. As shown, there has been a significant upward shift in the incidence of holding a debt since 2010. The estimates also show that women, on average, are more likely to report having a debt (consistent with the ATO data from the previous section).

Figure 13: Trend in the share (%) with a HELP/student loan by age, sex and year (2010, 2018)



Notes

1. Sample: all persons aged 18-50
2. Estimates weighted to reflect population totals
3. Linear trend lines fitted to a scatter plot of mean incidence of having a debt, by age and sex
4. Source: HILDA, waves 10 and 18

Figures 14, conditioned on those sample members who have an outstanding HELP/student loan debt, shows the average debt by age, sex and year (2010 and 2018). The debt amounts are in 2018 prices. Again consistent with ATO data, the HILDA data shows that there has been a significant increase in the average debt held, especially amongst younger respondents. In 2018 the average 18 year-old male with a debt owed around \$28,000 while the average 18 year-old female owed around \$24,000. Males, as noted, are able to repay their debt at a faster rate and this is reflected in their steeper (negative) debt age profiles.

Figure 14: Average HELP/student loan debt by age and sex, 2010 and 2018



Notes

1. Sample: all persons aged 18+ who are degree qualified
2. Estimates weighted to reflect population totals
3. Linear trend lines fitted to a scatter plot of student debt amounts, by age and sex
4. Source: HILDA, waves 10 and 18

What factors are associated with the probability of having an outstanding debt?

In this section HILDA data are again employed. The focus is on understanding what factors predict or are associated with having an outstanding debt. The sample is restricted to persons aged 25-60 and whose highest qualification is a diploma or above. Regression analysis is used to explore the ‘determinants’ (or correlates). No causality is claimed. The exercise is descriptive only. The analysis draws on data from all five waves in HILDA where student loan information is collected. There are 17,917 observations or 7,184 unique individuals that meet the sample conditions (aged 25-60 and with a degree) over the five waves. Half (50%) of the individuals have appeared in two waves or more.

The dependent variable is a binary variable set equal to 1 if the respondent indicates that ‘yes’, they have an outstanding student loan (be it HECS-HELP or private) and equal to 0

otherwise. The set of covariates in the regression are detailed in Table 2 along with sample means.

Table 2: Variables in regression and sample means

	Female (All waves)	Male (All waves)	Female (2018)	Male (2018)
Has an outstanding HELP or student loan (=1 if yes, =0 if no) [dependent variable]	21%	14%	23%	15%
Highest qualification: undergraduate degree	44%	43%	43%	43%
Highest qualification: postgraduate degree	13%	18%	18%	22%
Age 35-45	34%	32%	33%	34%
Age 46-60	62%	66%	63%	66%
Married	60%	64%	60%	63%
Defacto	14%	13%	16%	14%
Widowed, separated, divorced	10%	6%	9%	6%
Number of dependent children	0.74 (1.00)	0.67 (0.98)	0.76 (1.00)	0.72 (0.99)
Has child of pre-school age	25%	23%	25%	24%
Ever worked part-time, main job	77%	43%	76%	46%
Ever not in the labour force	61%	36%	60%	33%
Ever unemployed	21%	21%	24%	23%
Currently employed, private sector	40%	63%	43%	66%
Currently employed, public sector	31%	23%	29%	22%
Currently employed, not-for-profit sector	10%	5%	10%	5%
Foreign born	36%	38%	41%	43%
Resides in low socio-economic area	11%	12%	11%	12%
Resides in high socio-economic area	31%	33%	30%	33%
Mortgaged paid	14%	16%	12%	11%
Has mortgage	51%	49%	53%	54%
2002	14%	15%	--	--
2006	16%	17%	--	--
2010	19%	19%	--	--
2014	23%	23%	--	--
2018	28%	25%	--	--
Number of observations	10,082	7,694	2,710	1,887

Notes:

1. Sample: aged 25-60 and highest qualification diploma or above
2. % effect for binary variables; standard deviation in parenthesis for continuous variables
3. Source: HILDA, waves 2, 6, 10, 14 and 18

The research approach involves estimating a linear probability model using panel regression and a population-average estimator. Table 3 presents the coefficients from the regression. In the first case a pooled (males and females) regression is estimated with a binary variable to test whether there is a gender difference in the likelihood of having an outstanding

student debt. Other controls in the regression include the respondent's highest qualification (with the base category those with a diploma), age, marital status, employment history (in terms of a variable capturing if ever employed part-time, ever not in the labour force and ever unemployed) and variables capturing SES status and wealth status (e.g., mortgage paid or still mortgaged; with the base category those who are renting).

The estimate in column (1) show that women are 6.2 percentage points more likely to have an outstanding debt than males and that those with a postgraduate qualification have the highest likelihood of having an outstanding debt (with no particular surprises in this). Persons aged 35-45 have a higher likelihood of having a debt than their counterparts aged 25-34. The wave dummies in column (1) show that respondents in 2018 are significantly (5%) more likely to have an outstanding debt than their counterparts in 2002 (the base year). In column (2) additional controls are added to the regression. While the likelihood of having an outstanding debt has fallen for females (now at 1.7%) this is because labour market characteristics such as 'ever worked part-time', 'ever not in the labour force' and 'ever unemployed' have soaked up much of this effect. As shown in columns (3) for females and (4) for males, persons who are married have a lower likelihood of having an outstanding debt (perhaps because in couples there is a better ability to pool resources and pay off debt). Those with a pre-school child also have a lower likelihood of having a debt. Clearly this is not casual and may be picking up behavioural effects, such as a preference to pay off debt before having children. The interesting results concern the historical labour market variables. Persons who report having ever been out of labour force, unemployed or worked part-time have a much higher likelihood of having an outstanding student debt when compared to their counterparts who have been in full-time employment and never unemployed or out of the labour force. These estimates reinforce the findings of Higgins and Sinning (2013), namely that men have a higher repayment capacity.

Table 3: Factors Associated with Having an Outstanding Student Debt (>\$0)

	(1) Pooled	(2) Pooled	(3) Female	(4) Male
Female	0.062*** (0.008)	0.017** (0.008)	--	--
Highest qualification: undergraduate degree	0.112*** (0.008)	0.111*** (0.008)	0.112*** (0.011)	0.110*** (0.011)
Highest qualification: postgraduate degree	0.062*** (0.011)	0.075*** (0.011)	0.068*** (0.014)	0.080*** (0.017)
Age 35-45	0.032*** (0.005)	0.043*** (0.006)	0.040*** (0.008)	0.047*** (0.009)
Age 46-60	-0.265*** (0.008)	-0.229*** (0.008)	-0.219*** (0.012)	-0.239*** (0.011)
Married	--	-0.114*** (0.012)	-0.102*** (0.018)	-0.124*** (0.016)
Defacto	--	-0.025* (0.013)	-0.015 (0.019)	-0.031* (0.017)
Widowed, separated, divorced	--	-0.098*** (0.015)	-0.103*** (0.022)	-0.096*** (0.020)
Number of dependent children	--	0.003 (0.003)	-0.000 (0.004)	0.005 (0.005)
Has child of pre-school age	--	-0.043*** (0.007)	-0.030*** (0.010)	-0.054*** (0.010)
Ever worked part-time, main job	--	0.084*** (0.008)	0.083*** (0.011)	0.086*** (0.012)
Ever not in the labour force	--	0.053*** (0.008)	0.051*** (0.012)	0.055*** (0.011)
Ever unemployed	--	0.062*** (0.011)	0.057*** (0.015)	0.066*** (0.015)
Currently employed, private sector	--	-0.012 (0.009)	-0.014 (0.016)	-0.014 (0.011)
Currently employed, public sector	--	0.010 (0.010)	0.006 (0.016)	0.010 (0.012)
Currently employed, not-for-profit sector	--	0.028** (0.013)	0.033 (0.023)	0.024 (0.016)
Foreign born	--	-0.094*** (0.008)	-0.080*** (0.010)	-0.104*** (0.012)
Resides in low socio-economic area	--	0.013 (0.011)	0.000 (0.015)	0.022 (0.015)
Resides in high socio-economic area	--	-0.013* (0.007)	-0.017* (0.009)	-0.008 (0.010)
Mortgaged paid	--	-0.078*** (0.008)	-0.066*** (0.011)	-0.087*** (0.011)
Has mortgage	--	-0.052*** (0.007)	-0.059*** (0.010)	-0.048*** (0.010)
2006	-0.006 (0.007)	-0.013* (0.007)	-0.018* (0.010)	-0.009 (0.009)
2010	0.013* (0.008)	0.003 (0.007)	0.006 (0.010)	0.001 (0.011)
2014	0.026*** (0.008)	0.019** (0.008)	0.016 (0.011)	0.022** (0.011)
2018	0.050***	0.039***	0.034***	0.044***

	(0.008)	(0.008)	(0.011)	(0.011)
Constant	0.258***	0.325***	0.316***	0.349***
	(0.010)	(0.017)	(0.025)	(0.023)
Observations	17,917	17,917	7,747	10,170
Number of unique individuals	7,184	7,184	3,113	4,071

Notes:

4. Sample: aged 25-60 and highest qualification diploma or above
5. Linear probability model estimated using a population average model
6. Dependent variable =1 if reports having an outstanding student loan and equal to 0 otherwise
7. Robust standard errors in parentheses
1. Significance given by *** p<0.01, ** p<0.05, * p<0.1
2. Source: HILDA, waves 2, 6, 10, 14 and 18

In Table 4 the focus is on understanding why there is a gender gap in the likelihood of having an outstanding student debt. In 2002 the gender gap was 5.5% (19.3% of women had a debt compared to 13.8% for men). In 2018 this gap had increased to 8.0% (23.3% of women with a debt compared to 15.2% of men). The research approach adopted involves decomposing the gender gap using a technique commonly used by labour economists to examine the gender wage gap (Blinder, 1973; Oaxaca, 1973).⁷ Row (6) of Table 3 shows that around 90% of the gender gap in the probability of having a debt may be attributed to gender differences in characteristics controlled for – with the main drivers being age, having ever worked part-time and, in 2018, having had periods of time out of the labour force. The repayment capacity by females is constrained by the fact: (a) they work part-time and will have lower earnings (resources to repay with) and, (b) they will be less likely to have to repay back if their earnings fall below the threshold levels (not that this is advocating that this be changed).

In Table 5 the focus is on a within-sex decomposition. In other words, a comparison is made between those with an outstanding debt in 2002 and those in 2018 separately by sex. Estimates for males show that the likelihood of having an outstanding debt grew by 1.4%. Having a postgraduate level qualification is the main factor driving this (explaining 44% of the change in the gap). The estimates for women show that the gap increased by 4%. The growth in postgraduate enrolments accounts for 28% of this gap and 14.5% comes from changes in mortgage status (which may be picking up capacity to pay). In 2002 20% of women aged 25-

⁷ The decomposition equation may be expressed as follows, where Y is the dependent variable, V is the characteristics (means) for each variable in the regression, beta is the estimated coefficients and m and f stand for male and female, respectively $\overline{\ln Y_m} - \overline{\ln Y_f} = (\overline{V_m} - \overline{V_f})\hat{\beta}_m + \overline{V_f}(\hat{\beta}_m - \hat{\beta}_f) + (\hat{\beta}_{0m} - \hat{\beta}_{0f})$.

60 reported having their mortgage paid. By 2018 the corresponding share was 11.6%. Similarly in 2002 43.4% of women in this age group had a mortgage and by 2018 this had increased to 53%.

Table 4: Decomposing Gender Differences in the Likelihood of Holding a Student Debt

	2002	2018		
(1) Share of females with a student debt	19.3%	23.2%		
(2) Share of males with a student debt	13.8%	15.2%		
(3) Difference (gap) [(1)-(2)]	5.5%***	8.0%***		
(4) Share of gap accounted for by gender differences in characteristics	5.0%***	7.0%***		
(5) Share of gap arising from gender differences in coefficients	0.5%	1.0%		
(6) % of gap explained [(5)/(3)*100]	90.8%	87.9%		
(7) % of gap not explained [(6)/(3)*100]	9.2%	12.1%		
			% of gap explained	% of gap explained
Detailed components	Coef			
Degree	0.004	7.9%	-0.001	-0.7%
Master	0.000	-0.8%	-0.004	-5.4%
Age	0.013***	24.6%	0.009	11.2%
Marital status and children variables	0.000	0.2%	0.002	2.2%
Part-time employment	0.021	39.0%	0.027***	33.4%
Not-in-the labour force	0.004	6.5%	0.028***	35.0%
Unemployment	-0.001	-1.9%	0.000	0.3%
Sector	0.003	5.3%	0.007	8.3%
Migrant	0.004*	7.2%	0.002	3.0%
Socio-economic and mortgage variables	0.002	3.0%	0.000	0.5%
% of gap explained (total)		90.8%		87.9%

Notes:

1. Sample: aged 25-60 and highest qualification diploma or above
2. Based on estimates from linear probability models estimated using OLS with population weights
3. Weighted using male coefficients
4. Dependent variable =1 if reports having an outstanding student loan and equal to 0 otherwise
5. Significance given by *** p<0.01, ** p<0.05, * p<0.1
6. Source: HILDA, waves 2 and 18

Table 5: Decomposing With-Sex Change in the Likelihood of Holding a Student Debt (2002 to 2018)

	Males	Females		
(1) Share with debt in 2018	15.2%	23.2%		
(2) Share with debt in 2002	13.8%	19.3%		
(3) Difference (gap) [(1)-(2)]	1.4%	4.0%**		
(4) Share of gap accounted for by differences in characteristics between two periods	-0.3%	-0.7%		
(5) Share of gap arising from differences in coefficients	1.7%	4.6%***		
(6) % of gap explained [(5)/(3)*100]	-20.7%	-17.0%		
(7) % of gap not explained [(6)/(3)*100]	120.7%	117.0%		
Detailed components	Coef	% of gap explained	% of gap explained	
Degree	0.001	6.8%	-0.003	-6.7%
Master	0.006**	44.4%	0.011***	28.0%
Age	-0.003	-23.3%	-0.009*	-23.6%
Marital status and children variables	0.002	14.3%	-0.001	-2.1%
Part-time employment	0.004*	27.0%	0.003	8.1%
Not-in-the labour force	-0.005*	-34.7%	0.000	0.6%
Unemployment	0.002	16.7%	0.002	5.9%
Sector	-0.001	-7.9%	0.001	2.0%
Migrant	-0.011***	-81.8%	-0.017***	-43.8%
Socio-economic and mortgage variables	0.003	18.0%	0.006*	14.5%
% of gap explained (total)		-20.7%		-17.0%

Notes:

1. Sample: aged 25-60 and highest qualification diploma or above
2. Based on estimates from linear probability models estimated using OLS with population weights
3. Weighted using 2002 coefficients
4. Dependent variable =1 if reports having an outstanding student loan and equal to 0 otherwise
5. Significance given by *** p<0.01, ** p<0.05, * p<0.1
6. Source: HILDA, waves 2 and 18

Conclusion

The purpose of this submission is to highlight to 'The Review' the gender nature of the growth in student debt. In 2021/22 women accounted for 61% of all those with an outstanding student (HELP) debt. This share can be expected to rise in future years given the growth in UG and PG enrolments in recent years and the surge in tertiary fees (required contribution amounts and fees in full-fee paying courses, particularly at the postgraduate level).

There are significant differences in the labour market experience of women and men. Aside from the issue of a sizeable and persistent gender wage gap (even after controlling for

differences in characteristics such as labour market experience), a high proportion of women work part-time at some point in their career or exit the labour market completely. Their life-time earning profiles are, as a result, markedly different and their capacity to repay the debt significantly constrained.

While it is recognised that the ICL in Australia does not attract interest, it is the case that the debt is linked to inflation and presently inflation is increasing at a faster rate than wage growth, particularly for women and especially for young women where wages growth has been flat over much of the last decade. The debt is also real in the sense that repayments are required when thresholds are met and that it is taken into consideration when applying for mortgages as it affects disposable income and, therefore, borrowing capacity. As West (2020) notes, further research is required to understand how such high levels of debt are impacting on economic decisions of females. Is it a constraint on their capacity to borrow? Does it contribute to reduce fertility? Does it affect their capacity to apply for loans or make other decisions such as starting their own business. Is the debt linked to reduce well-being in other areas (e.g., if women are more averse to holding debt than men does their debt holding contribute to higher levels of stress?).

More than anything the analysis in this paper shows that the current ICL is not sustainable and will see outstanding debt levels continue to soar into the future. It is not suitable to a student population that is increasingly female in a cultural context where women still assume much of the care responsibilities and, unlike males, are significantly less likely to have full-time, full-year earnings over their life-course. Failure to make changes to the contribution amounts, tertiary fees and indexing arrangements in the ICL will not only see the debt levels of more recent graduate cohorts rise (especially amongst women). It will also add to the funding pressure of universities. The Review needs to consider ways that both attract and support Australians to upskill and re-educate as well as other ways to finance the sector. When HECs was initially introduced there was a significant private return associated with education investments. This is no longer the case today, especially for women.

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Part II – TOR #6

COVID-19 and the Gender Gap in Research Productivity: Understanding the Effect of Having Primary Responsibility for the Care of Children⁸

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Abstract

In this paper we contribute to the emerging literature on the effect of the COVID-19 pandemic on the gender gap in research productivity. We extend previous studies by considering men and women academics from science and non-science disciplines through an analysis of data from academics at 14 universities across two countries (seven in Australia and seven in Canada) and focusing on the role of primary caregiving. Our empirical approach used logistic regressions and the Blinder-Oaxaca decomposition technique. The latter enabled us to ask: “How much of the gender gap in perceived productivity during the pandemic is due to gender differences in primary care responsibilities?” Within the sample (N=2,817) of academics, 33% of women and 25% of men reported that their perceived publication ability decreased a lot during the pandemic. This is an eight percentage-point gender gap in perceived publication ability. Statistical analysis revealed that two-fifths (40%) of this gap may be explained by gender differences in having primary responsibility for the care of children. Gender differences in other characteristics such as age, discipline, and increased teaching and administrative work were not, as a group, significant. There were also no differences between Australia and Canada. The findings are important, particularly for the pursuit of gender equality within academia. In the absence of specific mitigating interventions, research disruptions in 2020 may have long-lasting career scarring effects (e.g., hiring, promotion, tenure) and, as a result, see women further disadvantaged within the academy.

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