

Shortfall of More than \$7 Billion in University Research Funding and 4,600 Researcher Job Losses Predicted Over the Next Five Years

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Australian university expenditure on research reached an all-time high of \$12.2 billion in 2018. The outlay represented 37.4% of the total university expenditure at \$32.5 billion. In a recent article it was reported that \$6.2 billion (50.7%) of the R&D expenditure of \$12.2 billion was sourced from university discretionary funds. <https://melbourne-cshe.unimelb.edu.au/lh-martin-institute/fellow-voices/strong-research-performances>

The total operating revenues for all Australian universities in 2018 were \$33.7 billion. Of this the non-government component was \$15.4 billion (46%). International student fee revenue amounts to \$8.84 billion or 57% of the \$15.4 billion. It is this component of revenue that is most at risk as a result of the COVID-19 pandemic.

Notwithstanding the contractual obligations that attach to some of the funding components, universities have considerable discretion as to how they apply much of the non-government funding they receive. It is from the \$15.4 billion that the \$6.2 billion (40.3%) was committed to support research activities in 2018. Assuming that the discretionary funds are committed to research in the proportion that the revenue is obtained, then 57% or \$3.52 billion of the \$6.2 billion would in 2018 have been sourced from international student fees. This sum represents 40% of all the international student fee income available.

In an earlier analysis on the impact of the COVID-19 pandemic on university revenues we estimated that under a pessimistic scenario there would be a 40% loss in international student revenue in 2020 compared with 2018; 55% loss in 2021; 50% loss in 2022; 35% loss in 2023 and a 25% loss in 2024. <https://melbourne-cshe.unimelb.edu.au/lh-martin-institute/insights/modelling-individual-australian-universities-resilience-in-managing-overseas-student-revenue-losses-from-the-covid-19-pandemic>. Subsequent developments support the conclusion that these estimates are both realistic and likely.

Using the data presented above the analysis we have conducted is summarised in the table below. It is expected that the 2019 research expenditures would be higher; however, we have chosen to use 2018 as the baseline. All the findings therefore are given in 2018 dollars with no CPI corrections. We are also assuming that the other sources of discretionary funding, investments, royalties, contracts and miscellaneous funds committed to support research are not diminished. Hence, the findings are conservative since any corrections will lead to higher predicted losses.

Predicted Research Support Revenue Shortfalls

Year	Estimated Percentage International Fee loss	International Fee Revenue in 2018 Dollars	International Fee Revenue committed to supporting research at 40% of total available	Shortfall Compared with 2018 expenditure
		\$ billions	\$ billions	\$ billions
2018	0%	\$8.84	\$3.52	0
2020	40%	\$5.30	\$2.11	\$1.41
2021	55%	\$3.98	\$1.58	\$1.94
2022	50%	\$4.42	\$1.76	\$1.76
2023	35%	\$5.75	\$2.29	\$1.23
2024	25%	\$6.63	\$2.64	\$0.88
				Total \$7.23

The predicted percentage losses are shown in column 2 based on our earlier modelling. The expected revenue for each year using the 2018 figure of \$8.84 billion is shown in column 3. Assuming that 40% of this revenue continues to be committed to supporting research, the funds available are shown in column 4. The shortfalls in funds available relative to maintain the commitment at the 2018 value are shown in column 5. Over the five-year period 2020 to 2024 it is estimated that the shortfall in available funds to support research from this one source, because of the loss of international fee revenue, will be of the order of \$7.2 billion.

The major consequence of these findings is a decline in the amount of funding available for Australian university research over the period 2020-24 of 11.8%, i.e. from an estimated total (based on 2018 data) of \$61 billion (unindexed) to \$53.8 billion. The average annual reduction over the five year period is in excess of \$1.4 billion a year. Assuming (conservatively) that at least 50% of this shortfall would have been allocated to staffing costs and an average staffing cost per research EFT of \$150,000 (with more highly remunerated researcher costs offset by lower paid research assistants, post-doctoral researchers and research higher degree students), the total revenue shortfall would translate to a reduction in Australia's research and development workforce of more than 4,600 full time researchers.

Australia's 'Big Five' universities – Sydney, Melbourne, Queensland, UNSW and Monash – will be most exposed. Collectively in 2018 they generated 44% of the total international fee revenue and account for 50% of all the external research funding received by the sector. Average revenue per full-time international student enrolment was \$29,500 well ahead of both other university clusters and the Deloitte finding on the average cost of teaching of \$18,500 per EFTSL. In large part these universities are the dominant research and research training players because of the increased levels of international fee revenue each has been able to secure and direct towards research. The impact of a 40% decline in international fee revenue supporting research will disproportionately impact on their research programs and the staff and research higher degree students involved in those programs.

The Research Sustainability Working Group established by the Minister for Education, has a major and pressing task. It must raise awareness within government of the strategic national consequences of a shortfall in research funding of this nature and of the need for an urgent and informed response. Stated baldly, Australia cannot afford the loss of more than 4.600 from its

R&D workforce. At a time when increased national resilience, capability and self-sufficiency have become paramount national priorities, such a loss would amount to a national tragedy.

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