

For the Australian – 7 June 2014 – Brian P Schmidt

Along with Education and Infrastructure, Investing in Research and Development is the key way in which Governments invest in the long-term future prosperity of the country. In the nearly 20 years I have spent in Australia, 2014 is the first year that higher education and research has really got the nation's attention – a refreshing change from its political innocuity of decades past.

The Australian Bureau of Statistics figures released last month show, in the decade 1999-2008, Australia increased our R&D spend from very low levels to just below the OECD average. The substantive growth of R&D spending in the period after 1998 helped enable Australian Universities to shoot up the world rankings. This same investment has helped create our largest manufactured export industry, medicines and medical instruments, which total to more than \$4.5 Billion per annum. However, since 2009 our R&D investment has been falling, with Australia's gross expenditure in R&D, now at 2.13% of GDP, 11% below the OECD average. Mirroring our R&D investment, our University rankings have started to sag, and our ability to create innovative products will follow. Our nation's fortunes rise and fall on the tides of our investment in R&D.

The 2014 Budget handed down last month contained a number of measures around research, including continuing support for Major National Infrastructure, sparing medical research from funding cuts, and creating a Medical Research Future Fund from GP co-payments. But in total, the fraction of our GDP the government invests in R&D is set to fall. The biggest change in Australia's R&D landscape, however, is set to come from the education portfolio, hidden in the form of deregulation of fees within the higher education sector.

The largest area of investment in R&D made by the government is through the University sector, representing about 2/3rds of Government R&D expenditure. This money is distributed to the higher education sector through a complicated set of government grants for research and student fees. Because government grants do not pay for the full cost of research, substantial cross-subsidisation of research occurs from student fees.

At present, student fees are a one size fits all system, where every university gets the same amount of income, independent of the type of product they provide. This system, after the uncapping of the number of student places allocated to each university in 2012, has led to the perverse incentive that rewards the teaching of large numbers of students at the lowest possible cost. Revenue raised from student fees then can be used to cross-subsidize research. This research cross-subsidisation is important for a University because its esteem is almost entirely set by international measures of its research quality.

This current funding model is so irrational, that I believe the *status quo* is unacceptable. Students suffer poor teaching outcomes, Universities' ability to

undertake research is moderated by the number of undergraduates they can attract rather than the quality of their research, and we end up with sub-optimal teaching and research outcomes.

In theory, deregulation of student fees will allow universities to differentiate on the type of education they provide. Deregulation would potentially enable my institution, the Australian National University, to offer an Oxbridge/Ivy-league quality education – but only if the new funds were directed to teaching, not research. But because the full cost of research is not paid, and government investment in research is falling, the increased fees we will charge will primarily be directed at research rather than teaching outcomes. Questions around the ability of all Australian's ability to afford my institution in the future aside, it is manifestly not fair for students to take the lead role in funding Australian research outcomes. If I were a student, I'd be protesting the deregulation as proposed, too.

But unlike the students whom I have talked to, I think we do need some form of deregulation from our current system to improve the quality and diversity of education. The proposed deregulation will most certainly bring additional money to the elite research universities and their research programs. However, allowing uncapped fees in an environment with elite monopoly players, income contingent loans (HELP), and the highly distortive feedback loop where student fees pay for research, research drives esteem, and esteem drives student fees is a recipe for disaster. No more so than for students who will pay much more and get very little in return.

In any form of funding, I think it is imperative that the government pays the full cost of research, such that it is not necessary to cross subsidize research from student fees. This was almost achieved after a series of studies undertaken by the Department of Innovation in 2008/9, but abandoned in the 2<sup>nd</sup> term of the Gillard Government. Student fees could be deregulated, but capped to a reasonable level such that students will not incur an undue burden of debt when they complete their degrees. This should ensure a system where students from all backgrounds will not be dissuaded from studying, higher education providers can differentiate, but limited by the cap on fees, with this cap ensuring the long-term viability of the HELP system and equity. University research opportunities will be based almost entirely on the quality of the research program and government research funding, rather than the number of undergraduates they can attract, with the impetus to divert tuition fees away from teaching outcomes largely removed.

Australia does not invest enough in Higher Education and Research to afford our current inefficient system, but nor can we afford a highly distorted system where research is funded high student fees. If well implemented, such a scheme does not need to cost more, but it will give better outcomes in research and education alike, because it directly connects funding with outcomes.