The latest economic data shows Australia’s productivity is going backwards, yet in an effort to understand why and what to do about it, we have so far overlooked the need for a National Research Strategy. This is essential if Australia is to secure its economic future through increased productivity and prosperity. Indeed, if the Australian Government abandons any target, hard or soft, to get Australia’s research and development (R&D) investment to 3 per cent of GDP, our long-term prosperity is at risk.

This is because productivity growth is the only way to achieve long-term improvement in living standards, including having the capacity to manage our pressing social and environmental challenges. A vibrant and successful research ecosystem enables improved human ‘know-how’ and innovation that, in turn, leads to new products, processes, and markets. Productivity therefore is underpinned by R&D.

Many innovations come from our R&D, broadly defined as investment in new knowledge to improve products and production processes. There are different forms of R&D, from basic (sometimes called ‘fundamental’ or ‘blue sky’) to applied research. All add to the stock of human knowledge that drives productivity and delivers improved living standards. This breadth of R&D also tackles existing and new challenges, be they health, environmental or social.

Evidence suggests that the positive economy-wide innovation and productivity benefits of research in Australia, while difficult to measure, are significant. Recent estimates from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) on the societal returns to national R&D investment indicate a benefit-cost ratio of 3.5. But this does not mean that all research achieves societal benefits – it depends as much on the quality of the research and expertise of the researchers and intellectual capital of the institutions, as the quantity of research.
THE SCALE AND QUALITY OF RESEARCH MATTERS

Research is conducted across our whole research ecosystem and there are pockets of strength even in our smaller institutions. However, both quality and scale in research matters – it’s what drives innovation and impact and underpins productivity growth.

In Australia, the bulk of university-based research funding from industry and other non-government sources – some 70 percent – flows to our research-intensive Go8 universities. In these institutions, you have both quality and scale of research effort. This is what ensures a greater likelihood of societal returns from research – in terms of the net economic, social, and environmental benefits that are delivered. Analysis by London Economics (2022) finds that for every $1 billion invested in Go8 university research, an estimated additional in-year economic output of $9.2 billion is generated across the rest of the Australian economy.1

Given Australia’s relatively small global population and size, large research-intensive universities are critical. They have the capacity to attract, employ and train world-leading researchers to expand the frontiers of human knowledge and capability across a wide range of diverse fields, such as biomedical and clinical sciences, IT, and computing capability, among others. World-leading research should be the expectation that Australian taxpayers have with respect to Australia’s leading universities.

High quality research is the precursor of successful translation, innovation and commercialisation. However, it’s the scale and focus that brings with it the capacity to work across the entire innovation pipeline; to attract the partners and investors essential to bring research outcomes to market; and to drive economic benefit and productivity for national benefit. It’s the large research-intensive universities that act as anchor tenants of innovation precincts that are so essential to diversification of our economy and the development of our advanced manufacturing capabilities.

In addition to underpinning our prosperity, being global leaders in research creates a virtuous circle – it means other smart people, institutions and industry partners across the world are willing to partner with Australia to create new knowledge and solve global problems. In other words, there are positive spillovers for Australia. This in turn, drives the productivity multiplier delivered through high quality R&D.

World-leading research should be the expectation that Australian taxpayers have with respect to Australia’s leading universities.

The good news is that Australian university research is world class in quality and influence but this position won’t be retained without the presence of large research-intensive universities that can deliver both quality and scale in their research efforts.

A number of indicators underpin the good news conclusion, including: independent global rankings of university research quality and influence; the fact that high potential international students overwhelmingly seek our research-intensive Go8 universities when deciding to study in Australia; and the extent of collaboration – by Go8 researchers with world-leading researchers both internationally and domestically – thereby lifting the quality and standards of research across Australia. For example:

- The Go8 have a top 10 per cent publication citation rate of 15.4 per cent (that is, the number of publications in the top 10 percent globally as a per cent of all Go8 publications). This compares to non Go8 universities of 14.9 per cent.
- The Go8 have outlined bold ideas in its submission to the Universities Accord to address these obstacles. We need amongst other ideas, greater diversity of mission, scale and focus among universities delivering research and full economic cost support for government research grants. By addressing the obstacles for research intensive universities, Australia wins big time. We can recognise these leaders and further champion world excellence we have with the Go8 universities without hindering any Australian institution aspiring to and achieving globally recognised research.