

**Senate Economics References Committee**  
**ANSWERS TO QUESTIONS ON NOTICE**  
Department of Industry, Science, Energy and Resources  
Inquiry into the Australian Manufacturing Industry  
11 November 2021

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**AGENCY/DEPARTMENT:** DEPARTMENT OF INDUSTRY, SCIENCE, ENERGY AND RESOURCES

**TOPIC:** Australia's current R&D investment to support the development of a domestic advanced manufacturing sector

**REFERENCE:** Written

**QUESTION No.:** 4

Submissions to this inquiry have noted that Australia's R&D investment remains well below the OECD average, with varying views about how well targeted the overall program is. Without wanting to re-open a debate that has been well trodden recently, does the Department think that there is a potential case to be made for re-assessing whether the current system is appropriately scoped and scaled to support the development of a domestic advanced manufacturing sector?

**ANSWER**

Submissions to the inquiry referring to Australia's R&D investment relative to the OECD average focused primarily on business expenditure on R&D (BERD) as a proportion of GDP, or BERD intensity. As observed in a recent 2021 OECD report, taken in isolation, R&D intensity is not a good measure of a country's innovation performance. A range of other factors need to be considered, including movements in a country's GDP and its industrial structure.

Innovation and Science Australia have attributed Australia's fall in BERD intensity between 2008-09 and 2017-18 to a shift in Australia's mining sector from a development to a production phase.

Recent data shows that BERD in Australia increased by 4.2 per cent between 2017-18 and 2019-20. Australian businesses spent \$18.2 billion on R&D in 2019-20 compared to \$17.4 billion (current prices) in 2017-18.

BERD in the Manufacturing sector forms a significant proportion of Australia's total BERD at around 26 per cent, second only to BERD in the Professional, Scientific and Technical Services Sector.

In 2019-20 Manufacturing BERD was around \$4.8 billion compared with \$4.6 billion in 2017-18, an increase of around 3.6 per cent.

The Australian Government provides a suite of complementary measures to support domestic advanced manufacturing at all stages of the business life cycle – incentivising and enabling Australian businesses to develop their ideas from early-stage research, through commercialisation to technology adoption and knowledge transfer.

The Research and Development Tax Incentive (R&DTI) encourages companies to invest in R&D. The program focuses on R&D activities that are less likely to be undertaken without government support and most likely to deliver spillover benefits to the broader Australian economy. These

spillover benefits include the generation of new ideas, skills and knowledge transfer, which play an important role in Australia's technological progress and economic growth. The R&DTI continues to support Australian manufacturers. In the 2019-20 financial year, manufacturing companies comprised 30 per cent of total registrations and 30 per cent of total R&D expenditure in the R&DTI – remaining stable at around this level over the past 4 financial years.

Australian businesses invest in a wide range of innovative activities, and encounter diverse challenges in their R&D and innovation journeys. The Australian Government's Modern Manufacturing Strategy (MMS) is designed to support the transformation of Australian manufacturing to capture more value across the value chain, to help capture new growth opportunities and better harness Australia's world-class science and research capabilities.

The MMS supports broader Government efforts to encourage greater collaboration to fully capture Australia's world class science and innovation capabilities to drive future economic growth and job creation. Through the Manufacturing Translation Stream, the MMS is helping manufacturers translate high-quality research and good ideas into commercial outcomes.