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## Comment 2 on ‘Climate change policy and energy transition’ by Fisher

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In ‘The economics of climate change policy and energy transition’, Brian S. Fisher provides an excellent overview of the contributions that economists in Australia and New Zealand (ANZ) have made to the climate policy landscape. Fisher rightly highlights that ANZ economists have made meaningful impacts beyond both academia and the local region. In my opinion, by laying the foundations for the Global Trade Analysis Project (GTAP) database and associated models, which is used by nearly all global analyses of climate policies, the contribution of ANZ practitioners to global quantitative climate and energy policy analysis cannot be overstated.

As noted by Fisher, early versions of the GTAP database – maintained by the Center for Global Trade Analysis at Purdue University – built heavily on the Sectoral Analysis of Liberalising Trade in the East Asian Region (SALTER) Project at the Australian Industry Commission. However, the influence of ANZ researchers extends beyond seeding the GTAP database. Robert McDougall, who led data and model development for the SALTER Project, continues to play a key role in the maintenance and development of the GTAP database. Additionally, Terrie Walmsley, educated at Monash University, was director of the Center for Global Trade Analysis from 2005 to 2013. Finally, the General Equilibrium Modelling PACKage (GEM-PACK) developed by the late Ken Pearson and others at the Center for Policy Studies, formerly at Monash University but now at Victoria University, is used by academics, governments and consultants worldwide to operationalise the GTAP database.

At least two key challenges lie ahead for ANZ researchers. First, in the words of Robert M. Solow, economists must be ‘intellectual sanitation workers’ and ‘hold out against nonsense’. Fisher conjectures that the profession’s contribution to blocking or weakening ‘bad’ policies has been as large as the benefits from advocating ‘good’ policies. Although Fisher notes that it is difficult to measure the benefits from preventing bad policies, this function must continue and perhaps will be even more important in the future than in the past. As nations implement measures to meet Intended Nationally Determined Contributions (INDCs) pledged at the United

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Nations Conference of the Parties in Paris, the distributional impacts of these policies will create incentives for ‘nonsense’ to be portrayed as rational analysis. Additionally, the collective action problem may result in undesirable outcomes even when all stakeholders are well informed. These outcomes must be articulated to decision-makers so that they can be avoided.

A second future challenge is to not only conduct climate and energy research that assess domestic policies, but also evaluate the domestic impacts of policies elsewhere. A salient question for Australia is how will INDCs by other countries, especially China, impact mineral exports? Will foreign demand for all fossil fuels decline, or will moderate carbon prices incentivise increased use of natural gas that mitigate losses due to reduced coal exports? Additionally, how will attitudes towards nuclear power in Japan and other regions affect demand for Australian natural gas in a low-carbon future? Anderson and Strutt (2014) provide a useful starting point for research to address such questions.

New Zealand – the only developed country where emissions from agriculture account for a significant share of total greenhouse gas emissions places – faces unique challenges. If developed countries impose more comprehensive sectoral coverage or more stringent emissions targets than other regions, how will changes in agricultural competitiveness impact the broader New Zealand economy? Addressing these questions will require continued collaboration between economists and agricultural scientists.

Climate measures proposed by the aviation industry may have a large impact on both Australia and New Zealand. International aviation was omitted from the Paris agreement, but the UN International Civil Aviation Organization plans to implement a carbon offset scheme to cap emissions from 2020 onwards. The major impact of such an agreement on ANZ would be through changes in international tourist arrivals and could be analysed by building on the framework presented by Tol (2007).

In summary, ANZ practitioners have laid an excellent foundation for climate and energy policy analysis that has enhanced the academic and political landscape both in this region and abroad, but much more needs to be done.

## References

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