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Mineral and energy policies*

Deborah Peterson and Ross Cullen†

Recent years have seen significant growth in the mineral and energy resource industries globally. In Australia, the mining boom has impacted on the broader economy through appreciation of the Australian dollar resulting from strong resource exports. At the same time, the Australian Government is moving to introduce a mining tax and a price on carbon, both of which will have significant impacts on the resources sector. The environmental and social impacts of mining continue to be an important focus of public debate and academic research. With such momentous changes underway, a special issue of AJARE focusing on these themes is well-timed.

Australia is well endowed with a range of mineral and energy resources. Australia has the largest economic demonstrated resources of brown coal, lead, rutile, zircon, nickel, silver, uranium and zinc, as well as significant resources of antimony, bauxite, black coal, copper, gold, industrial diamond, iron ore, ilmenite, lithium, manganese ore, niobium, tantalum, tungsten and vanadium.¹

The resources sector is an important contributor to the Australian economy. In 2010–2011 in industry gross value-added terms, mineral resources accounted for around nine per cent of GDP (\$117.7 billion).² In 2010–2011, resources and energy sectors exports were valued at \$177.4 billion and accounted for a record 83.9 per cent of commodity exports and 59.5 per cent of total goods and services exports.³ In employment terms, the resources sector is a small part of the Australian economy, accounting for less than two per cent of total employment in 2010–2011.⁴ Despite this small number, the relatively high wages paid by this sector present a challenge for other industries competing for labour.

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¹ Geoscience Australia 2011, *Australia's Identified Mineral Resources 2010*, Canberra, p1.

² ABS 2011, *Australian National Accounts: National Income, Expenditure and Product*, cat no 5206.0, June Quarter 2011, Canberra. GDP is calculated using chain volume measures.

³ BREE 2011, *Resources and Energy Statistics 2011*, Canberra, p4 and 6.

⁴ BREE 2011, p2.

Historically, Australia's resources, particularly coal, have also provided relatively low cost and reliable energy supplies to drive competitive advantage in manufacturing and other industries. Oil and gas also play important roles in the Australian economy by providing fuel for heating, cooking, industrial uses and transport.

Strong economic growth, industrialisation and urbanisation in Asia – particularly China and India – are fuelling demand for Australia's resources. Over the 10 years from 1999–2000 to 2009–2010, as the volume of Australia's resources exports has risen, the destination of those exports has changed. In 1999–2000, China accounted for just 4.7 per cent of Australia's resources exports. In that year, Japan was the most significant destination for exports (26.2 per cent), followed by Korea (10.7 per cent). In 2009–2010, for the first time, China became the largest destination for Australia's resources exports (27.3 per cent), followed by Japan (23.1 per cent), India (11.0 per cent) and Korea (9.9 per cent).⁵

Resources have been an important part of the Australian economy since the discovery of gold in the 1850s. In 20th century, resources replaced agriculture as Australia's largest commodities export earner. Significant discoveries and developments occurred including iron ore in the Pilbara in Western Australia, oil and gas in Bass Strait (Victoria), then the North West Shelf (Western Australia and the Northern Territory), and major expansions of coal mining and export in New South Wales and Queensland.

Some of the pressures the 19th century gold rush placed on the broader Australian economy, for example, the demand for labour and promise of wealth draining labour from other sectors of the economy and driving increases in immigration, still resonate in today's boom.

Other challenges facing the sector and the economy are of a more modern making. Concerns about the environmental impacts of mining encompass a range of issues from mine site rehabilitation to impacts on air quality and health. The connection of global climate change with coal mining and exports has also emerged as a significant issue. Social issues, including those resulting from fly-in-fly-out (FIFO) working arrangements and the influence of FIFO work forces on remote and regional communities, the impact of high wages in the resources sector on other areas of the economy, as well as how the mining industry interacts with and impacts upon indigenous communities continue to be rich areas for research.

Some of the challenges associated with the mining boom raise important issues for government policy. For example, there has been extensive debate about whether government should have a role in softening the impacts of the mining boom on the broader economy, and on what should be done with the proceeds of the mining boom – should they be invested in a sovereign wealth fund? Should such a fund try to smooth fluctuations in the exchange rate?

⁵ BREE 2011, p29.

How much should be spent on regional Australia and on indigenous Australians?

The papers presented in this special issue span the range of issues discussed above. The first paper by Kate Penney, Clare Stark, Jane Melanie and Terry Sheales provides an overview of the drivers of the performance of the Australian resources sector and discusses the opportunities and challenges the sector will confront in the coming decade. This sets the context for the papers that follow.

Bob Gregory's paper revisits his seminal 1976 paper in this journal on the implications of the growth of the minerals sector, 36 years on. The paper considers differences arising from a mining boom generated by sustained export price increases rather than export volume increases. Papers by John Freebairn and Lindsay Hogan consider different aspects of the mining tax debate. John Freebairn also considers the case for establishing a sovereign wealth fund using revenue windfalls from a mining boom. Ross Garnaut's paper demonstrates the importance of China to Australia's current prosperity. The paper by Paul Burke examines the relationship between long-run economic development, transitions in electricity generation sources and reductions in carbon dioxide emissions. Ben White, Graeme Doole, David Pannell and Veronique Florec examine optimal environmental policy design for mine rehabilitation and pollution with a risk of non-compliance due to firm insolvency. Finally, while noting the large contribution of mining to the national economy is clear, Andrew Reeson, Thomas Measham and Karin Hosking observe that the impact on the socio-economic well-being is not even. Reeson et al. consider the relationship between income inequality and employment in the mining sector at the local scale.