MINERALS COUNCIL OF AUSTRALIA

SUBMISSION TO THE PRODUCTIVITY COMMISSION'S INQUIRY INTO AUSTRALIA'S PRODUCTIVITY PERFORMANCE

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29 MARCH 2022

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10 decadal contributions by Australian mining

$2.1 trillion

EXPORT REVENUE

Australian resources export revenue from 2011-12 to 2020-21.

ABS, *International Trade in Goods and Services*, Sept 2021, released 4 Nov 2021, table 3.

60%

▲ EXPORT REVENUE

Increase in resources export revenue from 2011-12 to 2020-21.

ABS, *International Trade in Goods and Services*, Sept 2021, released 4 Nov 2021, table 3.

21%

GDP GROWTH

Mining share of GDP growth from 2011-12 to 2020-21.

ABS, *Australian System of National Accounts*, 2020-21, released 29 Oct 2021, table 5.

$132 billion

COMPANY TAXES

Company taxes paid by the mining industry from 2010-11 to 2019-20.

Deloitte Access Economics, *Estimates of Royalties and Company Tax Paid by the Minerals Sector*, prepared for the MCA, 17 May 2021.

$106 billion

ROYALTIES

Royalties paid by the mining industry from 2010-11 to 2019-20.

Deloitte Access Economics, *Estimates of royalties and company tax paid by the minerals sector*, prepared for the MCA, 17 May 2021.

$246 billion

MINING WAGES

Wages paid by the resources industry from 2011-12 to 2020-21.

ABS, *Business Indicators, Australia*, Sept 2021, released 29 Nov 2021, table 17.

$24 billion

EXPLORATION

Exploration expenditure from 2011-12 to 2020-21.

ABS, *Mineral and Petroleum Exploration, Australia*, Sept 2021, released 29 Nov 2021, table 5.

$257 billion

CAPITAL SPENDING

Mining industry capital expenditure from 2011-12 to 2020-21.

ABS, *Private New Capital Expenditure and Expected Expenditure*, Sept 2021, released 25 Nov 2021, table 19.

82%

▲ CAPITAL STOCK

Increase in real net capital stock from 2011-12 to 2020-21.

ABS, *Australian System of National Accounts*, released 29 Oct 2021, table 63.

54,000

NEW JOBS

Created in the mining industry from 2010-11 to 2019-20.

ABS, *Labour Force, Australia, Detailed*, Oct 2021, released 18 Nov 2021, table 6.

There's more to

Australian Mining

minerals.org.au

1. EXECUTIVE SUMMARY

The Minerals Council of Australia (MCA) welcomes the Productivity Commission's inquiry into Australia's productivity performance and the opportunity to provide this submission to it.

Australian mining is a nation builder and global leader. It is Australia's largest exporter and industry, the biggest company taxpayer and investor in infrastructure and equipment, and the world's largest exporter of minerals and metals. Australian mining is a world leader in the exploration geoscience, processing technologies and environmental management systems needed to sustainably meet the world's growing demand for mineral and energy commodities.

The mining industry is firmly embedded in Australia's future. It is a global leader in providing the essential elements of modern life while growing the nation's economy and sustaining regional communities, including small and medium businesses. Combined with its social contribution and responsible environmental management, Australian mining plays a critical role in the modern world.

The materials the industry provides not only support the technology-led productivity growth that lifts the incomes and living standards of people across the globe, they are fundamental to the major global transformation to digital and net zero emissions economies.

Over the long-term, productivity growth is the main driver of rising living standards. The May 2021 Federal Budget assumes that labour productivity will regain its long-run (30 year) average growth rate of 1.5 per cent.[1] However, over the last five years, market-sector labour productivity growth in Australia has averaged only 0.63 per cent a year, compared to 1.99 per cent over the past 25 years and 2.87 per cent during the era of microeconomic reform in the 1990s.[2]

Australia must embark on a comprehensive productivity enabling reform agenda to ensure the economy has the dynamism, resilience and competitiveness to successfully ensure the nation's future prosperity. The Australian economy can no longer continue to rely on population growth and increased debt to sustain its growth. It is through strong economic growth driven by improved productivity performance that more investment, jobs, higher real wages and higher incomes are delivered.

Analysis by the Centre for International Economics (CIE) shows a modest productivity reform agenda that increases labour productivity by one per cent a year could by 2030 deliver benefits to the economy similar to what has been experienced through the expansion of mining from 2005.[3] The CIE estimates that by 2020 Australian households were $14,800 better off compared to the expansion having not occurred and real GDP per person was about 15 per cent higher.

Over the past two decades, the Australian minerals industry has underpinned the nation's prosperity through its contribution to exports, jobs, incomes and government revenue, and has been central to the sustainability of regions and communities.

Industry commitments under native title and voluntary agreements have sought to support the economic aspirations of Aboriginal and Torres Strait Islander communities. This has led to sustained investments in tailored skills and employment pathways in addition to billions of payments for land access. Mining has also been a key driver of the Indigenous business sector since 2006.[4]

Over a range of economic measures, the decadal contribution to the economy is stellar – $2.1 trillion in resources export revenue, $246 billion in mining wages and 21 per cent of Australia's GDP growth. The industry can also be relied on to generate large fiscal returns to the economy, having contributed

[1] Australian Government, *Budget 2021-22, Budget Paper no.1*, p.239.
[2] Centre for International Economics, *Estimating the economic benefits of mining expansion and further productivity reforms*, report prepared for the Minerals Council of Australia, Canberra, 31 May 2021, p. 15.
[3] Ibid, p.1.
[4] M. Evans, C. Polidano, J. Moschion, M. Langton et al, *Indigenous Business Sector Snapshot Study 1.1*, University of Melbourne, 2021, p. 17.

$132 billion in company taxes and $106 billion in royalties over the last decade from significant capital investments in regional and remote Australia.

However, the minerals industry's contribution to the Australian economy, regions and communities cannot be taken for granted – having mineral resources and a stable political system is not enough to attract and secure investment in new and expanded projects. Global commodity markets are highly competitive and there is strong competition among countries as sources of supply.

Mining's commercial success is becoming more dependent on the efficiency of the entire export supply chain, from research, exploration, mine or product development through to final shipment. Enabling policies that improve productivity and competitiveness are integral to Australia retaining its comparative advantage in mining and minerals exports, and will ultimately benefit all businesses, households and workers.

While the priority policy reforms recommended in this submission aim to lift productivity growth in the Australian mining industry, they also apply more broadly across the economy. Improving Australia's productivity performance depends on government providing:

- Stable and internationally competitive business tax settings to attract investment in innovative, lasting and large-scale projects
- Emission reduction policy settings that enable and encourage least-cost abatement of CO_2 while providing affordable and reliable energy, including through the development and deployment of all low and zero-emissions technologies.
- More efficient project approvals processes to encourage investment in mines, processing plants and manufacturing facilities
- Regulatory frameworks and processes that enable the mining industry to adopt new and transformative technologies
- An industry-led education and training system to ensure Australian mining has a highly skilled, flexible and resilient workforce
- Modern workplace relations rules to foster more innovative, productive and adaptable enterprises
- Rules-based trade agreements and refined regulatory settings for international investment to expand trade and investment opportunities for Australian businesses.

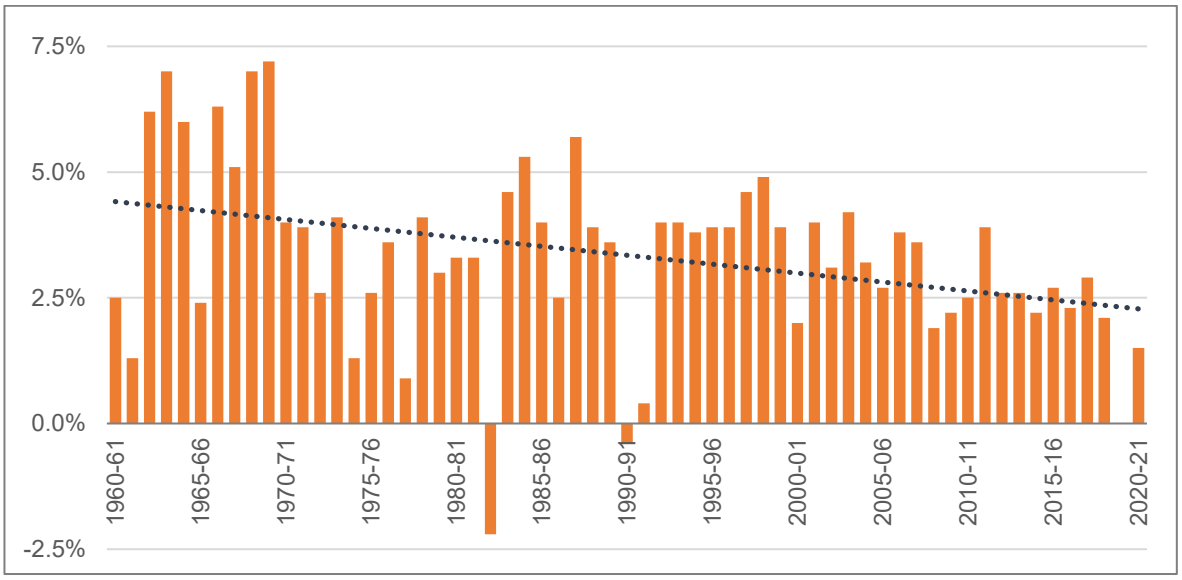
2. AUSTRALIA'S PRODUCTIVITY GROWTH CHALLENGE

Over the long-term, productivity growth is the main driver of rising living standards.

Australia must embark on a comprehensive productivity enabling reform agenda to ensure the economy has the dynamism, resilience and competitiveness to successfully ensure the nation's future prosperity. The Australian economy can no longer continue to rely on population growth and increased debt to sustain its growth. It is through strong economic growth driven by improved productivity performance that more investment, jobs, higher real wages and higher incomes are delivered.

Australia's rate of economic growth is in long-term decline. As shown in chart 1 below, Australia has experienced a long-term downward trend in its economic growth rate since the early 1960s – a trend which is closely linked to the decline in productivity and falling growth in the wages of Australian workers.

Chart 1: Australia's declining long-term GDP growth rate



Source: Australian Bureau of Statistics, *Australian System of National Accounts*, released 29 October 2021.

The comprehensive economic reforms of the 1980s and 1990s were aimed at improving both the competitiveness and flexibility of Australian businesses by enabling them to allocate resources more efficiently. These reforms touched on many aspects of the economy including, trade liberalisation, capital markets, infrastructure, labour markets, human services, National Competition Policy, macroeconomic policy and taxation.[5] While Australia experienced a significant lift in productivity growth in the 1990s as a result of the reforms, unfortunately this growth was not sustained.[6, 7]

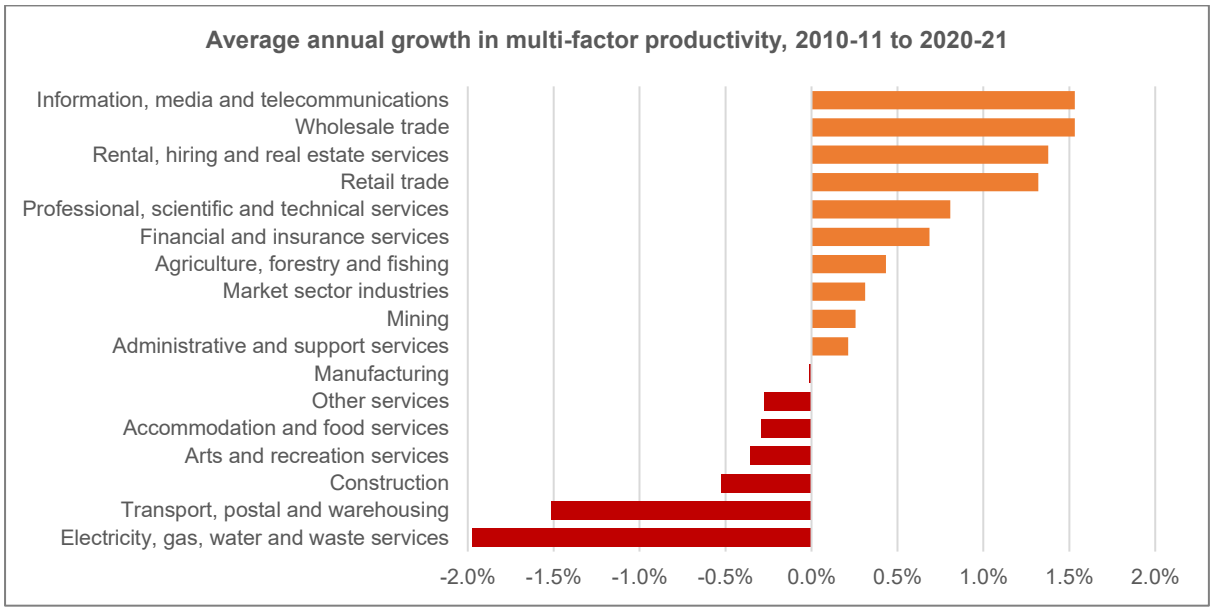
Since 2005, Australia along with other advanced economies experienced a slowdown in productivity growth. However, Australia's declining rate of productivity growth was comparatively smaller to most other economies partly owing to the expansion in mining.[8] By 2020, Australian households were $14,800 better off compared to the mining expansion having not occurred and real GDP per person was about 15 per cent higher.[9]

[5] Banks, G., *Structural reform Australia-style: lessons for others?* Presentation to the IMF, World Bank and OECD, May 2005.
[6] Centre for International Economics, *Estimating the economic benefits of mining expansion and further productivity reforms*, report prepared for the Minerals Council of Australia, Canberra, 31 May 2021, p. 15.
[7] Productivity Commission, *PC Productivity Insights: Recent Productivity Trends*, February 2020. No. 1/2020, p. 3.
[8] Ibid, p.1.
[9] Centre for International Economics, *Estimating the economic benefits of mining expansion and further productivity reforms*, report prepared for the Minerals Council of Australia, Canberra, 31 May 2021.

The May 2021 Federal Budget assumes that labour productivity will regain its long-run (30 year) average growth rate of 1.5 per cent.[10] However, over the last five years, market-sector labour productivity growth in Australia has averaged only 0.63 per cent a year, compared to 1.99 per cent over the past 25 years and 2.87 per cent during the era of microeconomic reform in the 1990s.[11]

The challenge in lifting the economy's productivity growth is significant. As the Productivity Commission highlights, since Federation two-thirds of Australia's gains in labour productivity has come from increases in multifactor productivity, while the remaining third has come from capital-deepening.[12] Over the last decade, Australia's average annual growth of multifactor productivity was low and even negative in most industries (chart 2), and the annual growth rate in real net capital stock was weak (chart 3). As previously identified by the Productivity Commission, slower capital deepening over the last decade has been a key contributor to the nation-wide decline in labour productivity.[13]

Chart 2: Australia's low multifactor productivity growth



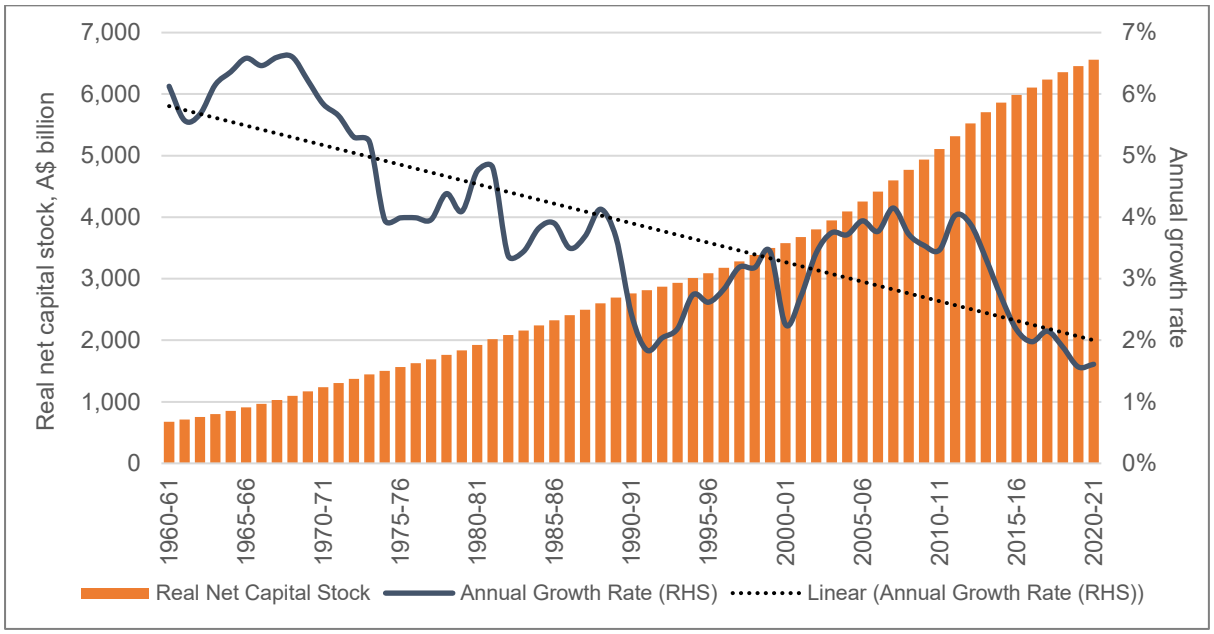
Source: Australian Bureau of Statistics, *Estimates of Industry Multifactor Productivity*, released 12 December 2021.

As shown in chart 3, growth in Australia's real net capital stock is at the lowest levels in 60 years. With workforce growth rates now exceeding the growth in capital stock, Australia finds itself in the undesirable position of a future with a declining capital to labour ratio that will likely further hamper productivity growth.

Despite the ongoing debate about the specific causes of weaker productivity growth, if higher levels of growth are more challenging to achieve than in the past, then policy settings must to the greatest extent possible support and enable businesses to be more productive. Businesses must have the conditions that enable them to innovate, invest and acquire the capabilities and flexibilities they need to compete and grow.

[10] Australian Government, *Budget 2021-22, Budget Paper no.1*, p.239.
[11] Centre for International Economics, *Estimating the economic benefits of mining expansion and further productivity reforms*, report prepared for the Minerals Council of Australia, Canberra, 31 May 2021, p. 15.
[12] Productivity Commission, *PC Productivity Insights: Australia's long term productivity experience*, November 2020. No. 3/2020.
[13] Productivity Commission, *PC Productivity Insights: Recent Developments*, released June 2021.

Chart 3: Australia's real net capital stock



Source: Australian Bureau of Statistics, *Australian System of National Accounts*, released 29 October 2021.

Analysis by the Centre for International Economics (CIE) shows that a modest reform agenda that increases labour productivity by just one per cent a year through a lower corporate tax rate for all businesses, better regulatory settings for project approvals and international investment, incremental improvements to workplace relations rules, and carrying out an industry-focused skills program, could result in the following outcomes by 2030:

- Households being $11,700 better off
- Real wages being 9.4 per cent higher, or $130 a week higher per worker
- Real wages growth doubling from 2021 to 1.7 per cent a year
- The economy being $290 billion larger
- Real GDP per person being $9,900 higher.[14]

Policy settings that enable businesses to boost productivity by increasing their investment in capital stock and having a skilled, flexible and resilient workforce that can optimally and innovatively be deployed, are essential to them being competitive and sustaining the livelihoods and living standards of Australians.

[14] Centre for International Economics, *Estimating the economic benefits of mining expansion and further productivity reforms*, report prepared for the Minerals Council of Australia, Canberra, 31 May 2021.

3. SUSTAINING AUSTRALIAN MINING'S ECONOMIC CONTRIBUTION

- Federal and state governments need to implement effective, comprehensive and complementary productivity enabling policies to ensure Australia does not lose mining and mineral processing opportunities to emerging economies, which offer lower construction and energy costs as well as lower taxes
- The minerals industry is Australia's largest exporter and industry, and biggest company taxpayer and investor in infrastructure and equipment. It is Australia's highest payer in terms of average wages and is the world's largest exporter of minerals and metals
- With the necessary enabling policies, Australia is well-placed to meet growing global demand for commodities to power economic growth, economic development and decarbonisation.

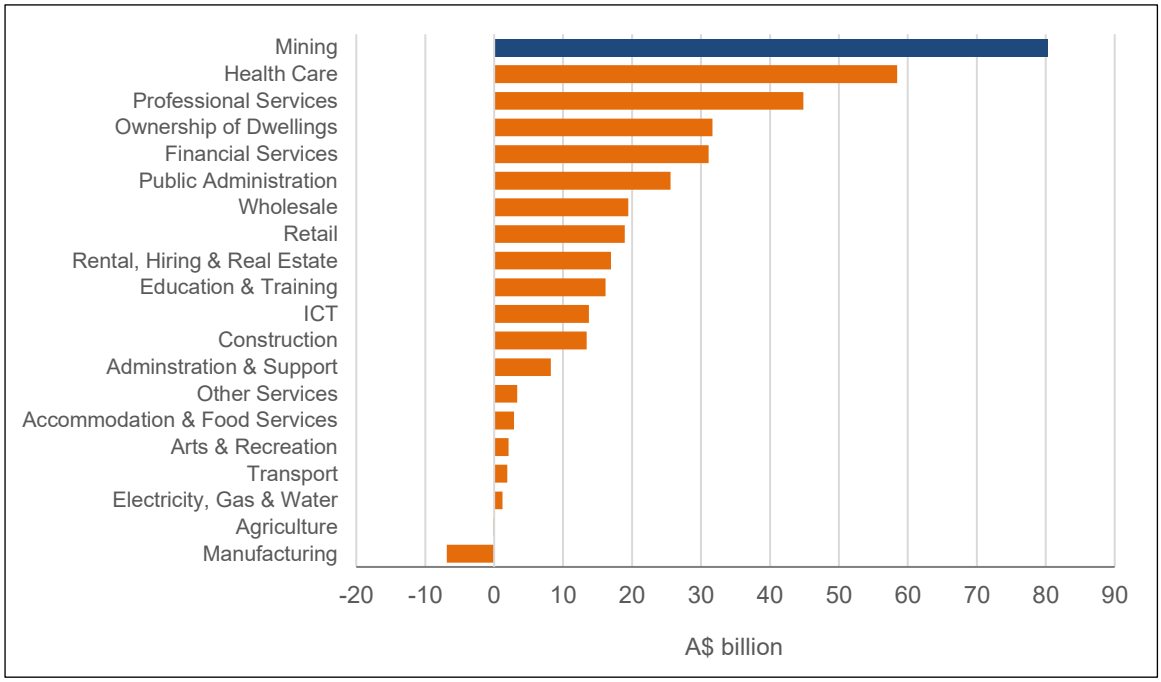
The significance of Australian mining's economic contribution

Improving the mining industry's productivity and competitiveness are essential for positioning Australia for the next wave of mining investment and maintaining its position as the largest exporter of minerals and metals in the world. The outlook for Australian mining is broadly positive, providing it remains competitive at both attracting investment and being able to diversify to other export markets as required.

Analysis by the CIE shows that the expansion of mining made Australian households $14,800 better off in 2020. Had there not been a permanent increase in the size of the mining industry from 2005 onwards, Australia's economic growth would have been 13 per cent lower in 2020, which corresponds to real wages being 8 per cent lower in 2020, or $120 a week lower per worker.[15]

Mining was the largest contributor to Australia's economic growth both in 2020-21 and over the last decade (chart 4).

Chart 4: Growth in real Gross Value Added, 2011-12 to 2020-21



Source: Australian Bureau of Statistics, *Australian System of National Accounts*, released 29 October 2021.

[15] Centre for International Economics, *Estimating the economic benefits of mining expansion and further productivity reforms*, report prepared for the Minerals Council of Australia, Canberra, 31 May 2021.

Australia is the world's largest exporter of minerals and metals, making it an essential part of global supply chains, and contributed $2.1 trillion in resources export revenue over the last decade. Australian mining provides the materials that support economic growth, the development of innovative technologies, and the transformation to a digital and net zero emissions economy. The Australian mining industry delivers these materials while having world leading sustainability practices, including best-practice environmental management and community partnership approaches.

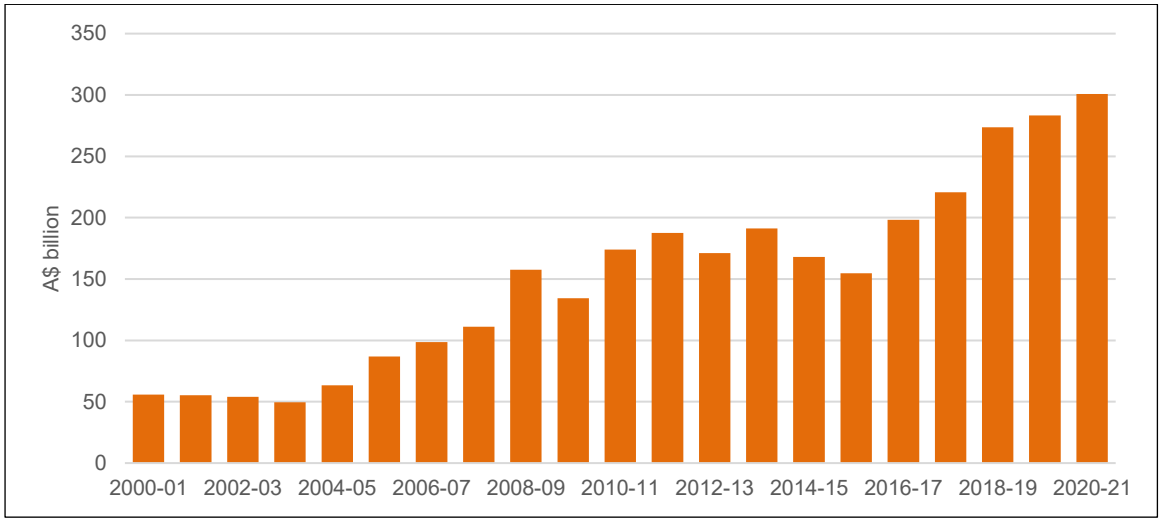
The industry's significant decadal economic contribution, which equates to 21 per cent of GDP, was underpinned by $257 billion of investment to develop new mines, processing facilities and infrastructure. It was investment in mining that drove substantial increases in production and made Australia the world's largest producer of key minerals including iron ore, bauxite and lithium.

In 2020-21, while operating in adherence to strict health and safety protocols during the COVID-19 pandemic, the Australian mining industry generated a record high $301 billion of export revenue and accounted for 66 per cent of total exports.[16] This was underpinned by robust exports of:

- Iron ore: $151.9 billion
- Coal: $39.2 billion
- Gold: $28.4 billion
- Aluminium: $12.0 billion
- Copper: $11.5 billion

Export market diversification by the resources sector has contributed strong revenue growth (see chart 5). Export revenue in 2020-21 supported over 1.1 million direct and indirect jobs in the mining industry and across its supply chains – many of which are located in regional Australia. Jobs in the mining industry are well-paid with the average full time earnings of the mining workforce the highest in the country and 54 per cent above the national average. The mining industry is also a key source of government revenue. In 2019-20, the industry paid $24.1 billion in company tax – approximately 30 per cent of total company tax receipts – and generated $15.2 billion in royalties for state governments.[17]

Chart 5: Australia's resources export revenue



Source: Australian Bureau of Statistics, *International Trade in Goods and Services, Australia*, table 3, released 4 November 2021.

[16] Australian Bureau of Statistics, *International Trade in Goods and Services, Australia*, table 3, released 4 November 2021.
[17] Deloitte Access Economics, *Estimates of royalties and company tax paid by the minerals sector,* report prepared for the Minerals Council of Australia, Canberra, 17 May 2021.

While mining investment remains historically high as a result of ongoing expenditure to sustain production levels at existing mines, there has been little to no growth in real net capital investment over recent years (see chart 6 below). At $3.2 billion, exploration expenditure was close to record levels in 2020-21, and demand for the mineral commodities Australia produces are likely to remain robust in the future.

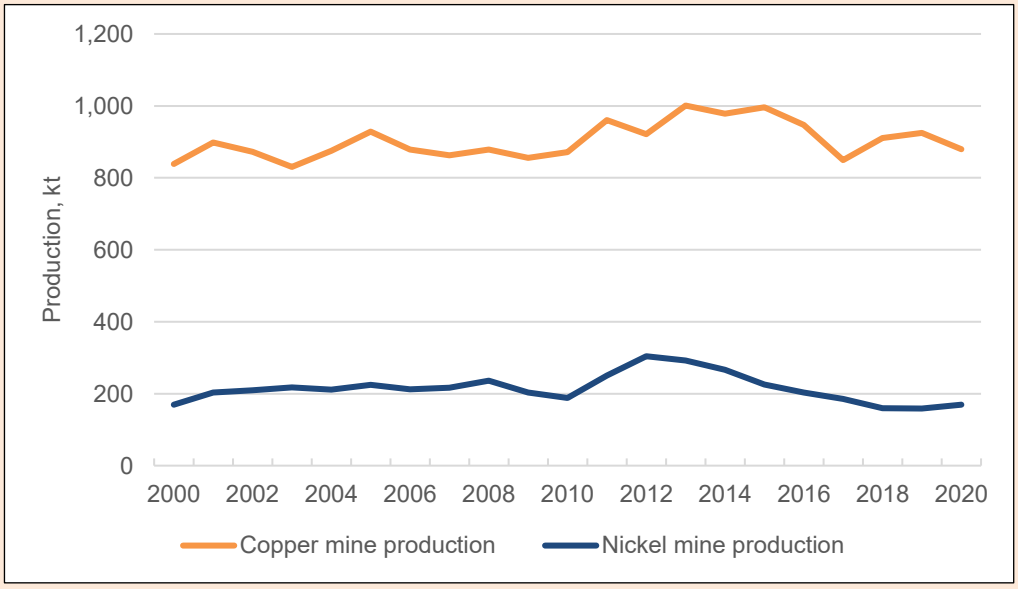
Global consumption of mineral and energy commodities will continue to increase as economies develop, grow and decarbonise. However, while Australia has significant resource endowments, and an established comparative advantage in minerals and energy exports, these benefits do not guarantee future success at attracting the investment needed to increase output (see Box 1).

Box 1: Economic success depends on more than large resource endowments

There is broad consensus that demand for metals essential to the clean energy transition will rise substantially in the long-term. This was confirmed in modelling recently released by the Department of Industry, Science, Energy and Resources.[18] While there is potential, Australia's future role in supplying these materials is not a foregone conclusion. Without the necessary investment there are considerable risks to growing Australia's output of copper, nickel and other battery minerals.

Analysis of Australia's production of these metals over the last twenty years shows little to no growth in output despite world demand growing significantly in that period. As shown in the chart below, Australia's copper and nickel mine production in 2020 were about the same as in 2000. This is despite Australia having the world's second largest copper resources and largest nickel resources. In the same period, world copper and nickel consumption increased 65 per cent and 112 per cent, respectively.

Australia's copper and nickel mine production - 2000 to 2020



Source: Department of Industry, Science, Energy and Resources, *Resources and Energy Quarterly: September 2021*.

The transition to clean energy systems and advances in technology are boosting demand for battery minerals, rare earth elements and other critical minerals such as copper. Although Australia has significant resources of these minerals, the mining industry faces significant competition for new investment from emerging mining regions in Africa as well as traditional mining centres in South America and Canada to attract investors.

[18] Department of Industry, Science, Energy and Resources, *Australia's Long-Term Emissions Reduction Plan: Modelling and Analysis*, Australian Government, 16 November 2021.

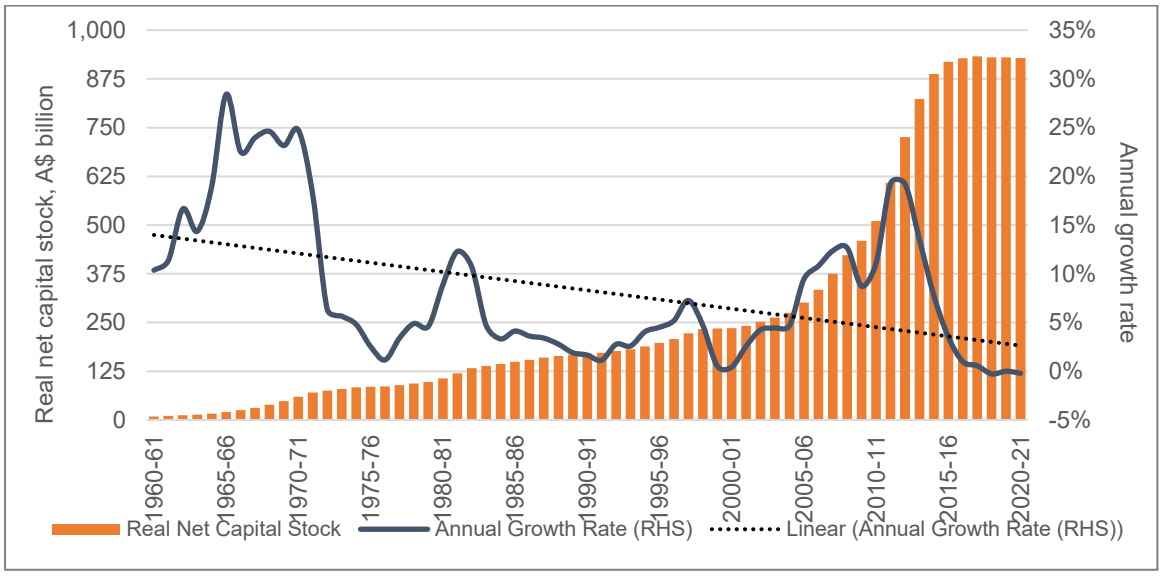
Conditions to encourage mining and minerals processing must be improved

Australia needs a clear plan, including enabling policy settings, to increase productivity growth and retain its competitive advantage in mining if it is to attract the investment necessary to benefit from growing world commodity demand in the future.

Internationally competitive tax settings, timely project approvals, a highly skilled workforce, productive workplace relations, open trade and investment policies, and support for investment in exploration, innovation and decarbonisation are all essential to encouraging investment in large and long-life mining projects and securing well-paid jobs. These enabling factors also provide supply and procurement opportunities and community investment and benefits to related industries and governments.

The need for policy reform to attract greater productivity enhancing capital in the mining industry is perhaps greater than any other sector in the economy. As shown in chart 6, the net capital stock of the Australian mining industry peaked in 2017-18 and has been declining since. Given the mining industry was the largest contributor to Australia's GDP growth over the last decade and has the potential to continue its contribution, resolving this situation requires an immediate policy response.

Chart 6: Mining industry real net capital stock



Source: Australian Bureau of Statistics, *Australian System of National Accounts*, released 29 October 2021.

There is strong competition from emerging mineral provinces in other countries for investment in exploration, mine development and downstream processing facilities. Many of these emerging mining regions are jurisdictions that offer lower construction and energy costs, as well as lower taxes and less prescriptive regulatory regimes that provide superior capital returns for investors. Australia has already missed many opportunities in realising its resource potential over the last decade as a result of deteriorating competitiveness. Australia's share of global exploration expenditure has fallen, its output of some minerals have plateaued and in some cases decreased in recent years, and higher energy costs are contributing to the closure of existing downstream processing industries.

International competition applies both between and within companies. When a multinational mining company makes the case for progressing a local project to its board, predicable and competitive policy settings are crucial to defining the risk profile of that project favourably against other investment opportunities in the company's international portfolio. Although a number of factors influence the allocation of scarce capital, the right policy settings can be instrumental in persuading mining companies to commit to complex projects with high upfront costs, but multigenerational benefits.

Global consumption of mineral and energy commodities will continue to grow. Rising urbanisation, rising incomes and the transformation to net zero emissions, together with the technology-led productivity growth has lifted the incomes and improved the living standards of millions of people in highly populated economies. These factors will remain the driving force of higher commodity consumption for decades to come and present Australia with a significant opportunity to benefit from.

4. POLICY REFORM PRIORITIES TO SUPPORT PRODUCTIVITY GROWTH

- Achieving productivity growth is key to improving business performance and increasing the standard of living of all Australians.
- Sustained private investment in capital and technology is essential to boosting productivity, jobs and wages in all industries.
- Government should encourage additional private investment and higher workplace productivity through policy settings that deliver stable and competitive tax settings, affordable and reliable energy with low and zero emissions, timely project approvals, increased adoption of new technologies, a skilled and resilient workforce, more practical and beneficial workplace relations rules, and expanded trade and investment opportunities.

Stable and internationally competitive business tax settings

A strong focus of tax reform must be on how the tax system can improve the competitiveness and productivity of Australian businesses.

Private sector investment in capital has a direct impact on labour productivity and growth in wages. Therefore, it is vital that Australia's business tax system is internationally competitive to attract investment in all industries and productive activities. International tax competitiveness is a critical factor to attracting the investment in innovative, long-lasting and large-scale projects in mining and minerals processing.

The minerals industry pays significant taxes and royalties every year to federal, state and territory governments, contributing a total of $238.8 billion between 2010-11 and 2019-20. The payment of consistently high company tax and royalty receipts throughout the business cycle demonstrates the reliability of the industry's contribution.

Deloitte Access Economics estimates that company tax payments and royalties from the minerals industry in 2019-20 amounted to $39.3 billion. This consisted of $24.1 billion in company tax – approximately 30 per cent of total company tax receipts – and $15.2 billion in royalties.[19]

Australia is at risk of being uncompetitive at attracting new business investment (see chart 3 above). Over the last 20 years, the company tax rate for Australian businesses with annual turnover at or above $50 million has remained at 30 per cent – higher than the weighted average of the G7, G20 and OECD countries. In 2021, Australia had the third highest corporate income tax rate among OECD economies and well above the OECD GDP-weighted average of 26.3 per cent.[20]

The positive relationship between lower company tax rates and higher productivity is well established. Analysis by the Department of the Treasury found broad benefits of lower company income tax across the economy, including to workers and households:

> Australia's living standards must be driven by a higher level of labour productivity… a company income tax cut can do that, even after allowing for increases in other taxes or cutting government spending to recover lost revenue, by lowering the before tax cost of capital. This encourages investment, which in turn increases the capital stock and labour productivity. Analysis presented here also suggests the long-term benefits accrue to workers and households via permanently higher after-tax real wages and consumption.[21]

A recent report on Australia's corporate income taxation by the Tax and Transfer Policy Institute supports Treasury's analysis and highlights that the negative impacts of company income tax 'have

[19] Deloitte Access Economics, *Estimates of royalties and company tax paid by the minerals sector,* report prepared for the Minerals Council of Australia, Canberra, 17 May 2021.
[20] Bazel, P. and Mintz, J., Can corporate tax reform help address Australia's weak investment performance? Research report prepared for the Minerals Council of Australia, 2022.
[21] Kouparitsas, M., Prihardini, D., Beames, A., *Analysis of the long term effects of a company tax cut*, Treasury Working Paper, 2016-02.

been exacerbated by globalisation and the increasing mobility of capital'.[22] The same report finds evidence that the effectiveness and sustainability of entire tax system are influenced by the design of the corporate income tax system.[23]

Research commissioned by the MCA consistently shows that Australia's corporate income tax rate is uncompetitive, negatively impacts investment and is in urgent need of reform.[24] A decade ago, Australia had the best performing economy in terms of gross capital formation. However, after peaking at 17.2 per cent of GDP in 2012 it has been steadily declining, falling to 11.1 per cent of GDP in 2019 and 10.5 percent in 2020.[25] The largest factor contributing to this decline is the reduction in investment in the mining industry, which accounted for 27 per cent of private investment in 2019.

It is important for Australia's future that policy settings encourage investment in innovative, lasting and large-scale projects that will have multi-generational benefits. This requires a globally competitive, well-structured business tax system that offers a reasonable after-tax rate of return and does not distort investment decisions.

Least-cost CO_2 abatement and affordable and reliable energy

Internationally competitive mining and minerals processing – which will make decarbonisation possible – requires technology-neutral policies to deliver affordable and reliable energy with zero emissions. As an energy-intensive industry, Australian mining has a material interest in driving down its emissions.

Australia has substantial energy resources including coal, gas, renewables, and uranium, as well as the minerals and metals needed for energy storage, hydrogen and ammonia production. All fuels and technologies can play a part in facilitating an effective transformation to reliable, competitive, zero emissions energy. This also provides opportunities for Australian mining and minerals processing.

All Australian governments should ensure policy settings enable and encourage least-cost abatement of CO_2 emissions by promoting the development and deployment of all low and zero-emissions technologies, including carbon capture, utilisation and storage (CCUS),[26] renewable energy technologies, advanced storage, hydrogen from various zero-emissions production sources, and advanced nuclear.

The current prohibition on nuclear energy has no scientific basis and should be removed. All zero-emissions technologies must be able to participate in Australia's future energy mix and cost-effectively transform the economy to net-zero emissions.

More efficient project approval processes

Regulatory inefficiency, delays and uncertainty discourage investment, impede job creation and increase costs to business across the value chain. Efficient and effective regulation is crucial not only for the mining and processing of minerals, it is also important to the high-tech manufacturing and engineering that support the industry, as well as other advanced manufacturing activities.

There are currently 112 minerals projects across Australia in the pre-feasibility or feasibility stage, which together have the potential to generate 31,600 construction jobs and 21,600 operational jobs.[27]

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[22] Sobeck, K., Breunig, R., and Evans, A., *Corporate Income Taxation in Australia, Tax and Transfer Policy Institute (TTPI) Policy Report, 2020. No. 01-2022, Canberra, Australia. p.1.*
[23] Ibid. p.86.
[24] See: Mintz, J., Bazel, P. and Chen, D., *Growing the Australian economy with a competitive company tax* . Policy paper commissioned by the Minerals Council of Australia, March 2016; Bazel, P and Mintz, J. *Australia's investment challenge in wake of 2018 US tax reform*. Policy paper commissioned by the Minerals Council of Australia, March 2018; Bazel, P and Mintz, J. *Corporate tax reform: Australia watches the train go by*. Policy paper commissioned by the Minerals Council of Australia, March 2019.
[25] Bazel, P. and Mintz, J., Can corporate tax reform help address Australia's weak investment performance? Research report prepared for the Minerals Council of Australia, 2022.
[26] In addition to reducing emissions in power generation, CCUS technology can reduce emissions in cement, iron and steel, and alumina and aluminium production, all of which require coal for the provision of essential infrastructure.
[27] MCA review of companies' feasibility studies.

Addressing inefficiencies, delays and uncertainty in national environmental regulation will boost minerals investment, supporting jobs and businesses in regional communities while upholding high environmental standards.

Successive reviews of national environmental regulation by the Productivity Commission have found that unnecessarily complex, uncertain or disproportionate requirements impose delays and costs on minerals projects, without delivering any environmental gains.[28] The Commission's 2020 study of resource sector regulation found that despite recent worthwhile initiatives, regulatory processes continue to impose unnecessary costs, and may be becoming more burdensome.[29]

Technical reforms also need to be progressed. These include statutory timeframes for post-approval processes, risk-based assessments, flexibility to vary approvals and coordinated environmental offsets.

Regulatory settings that support investment in new and transformative technologies

While there is a clear need for lifting productivity in the mining industry, new technology is driving change and making the industry more sustainable, energy efficient and productive.

Although the industry has low rates of direct employment, it has a significant supply chain across all of Australia with estimates from Deloitte Access Economics indicating that one in ten jobs in Australia is linked in some way to the mining industry.[30]

A key part of this supply chain is the mining engineering, technology and services (METS) sector that is delivering innovative drilling, extractive and processing technologies to improve the performance of the Australian mining industry. This sector holds the key to unlocking future growth in the Australian mining industry by implementing the digital technologies needed to boost productivity.

Estimates from EY show that adoption of digital and technological innovation has the potential to deliver significant productivity improvements of up to 23 per cent to the Australian mining industry by 2030.[31] EY also estimates that to transform the industry in this way would also require investment of up to $35 billion – further demonstrating the urgent need to make Australia a competitive place to do business. This investment will make existing mines more productive and previously uneconomic mineral deposits commercially viable. It is therefore essential that government policy frameworks support and encourage the investment necessary for the digital transformation to occur.

Regulatory settings for both processes and approaches must be supportive of businesses investing in new productivity enhancing technologies. The potential benefits from governments amending regulations to keep pace with emerging technologies are large. For example, the New South Wales Productivity Commission, as part of an inquiry into regulating emerging technologies, commissioned the Centre for International Economics (CIE) to examine the potential gains from moving to risk based regulation of drones in the agricultural sector in NSW. CIE found that if the Civil Aviation Safety Authority (CASA) moved to risk based regulation, it could deliver up to $500 million in net benefits for the state in today's dollars by 2041.[32]

[28] See Productivity Commission, *Major Project Development Assessment Processes: Research report*, Canberra, November 2013, released 10 December 2013, p. 2; *Shifting the Dial: 5 Year Productivity Review*, Canberra, released 24 October 2017, p. 236.
[29] Productivity Commission, *Resources sector regulation: Study report*, 30 November 2020, released 10 December 2020, Canberra, p. 2.
[30] Deloitte Access Economics, *Economic contribution of the mining and METS sector: Australia Estimates*, report commissioned by the Minerals Council of Australia, released 3 June 2021.
[31] EY, *Future of work: The economic implications of technology and digital mining*, report commissioned by the Minerals Council of Australia, released February 2019.
[32] NSW Productivity Commission, *Research and Discussion Paper Regulating emerging technologies*, 2021, p. 29, viewed 14 December 2021.

An industry-led education and training system

The success of Australian mining depends on a highly skilled, flexible and resilient workforce.

Digital transformation will present both significant opportunities and challenges for the entire Australian workforce. With respect to mining, EY's analysis found that new technology and innovative practices will enhance the performance and productivity of 42 per cent of Australian mining jobs, with a further 35 per cent of occupations being redesigned and upskilled leading to more valuable employment opportunities.[33]

Rapid changes in innovation and technology in the minerals industry make it important to ensure training courses are focused on contemporary and future skills to produce job-ready graduates. An industry-led education and training system is vital to aligning needs with outcomes. Partnering with industry is the most effective way for government and private sector training providers to identify skills shortages, reconfigure roles and careers, and anticipate future workforce requirements.

Modern workplace relations rules

Australia needs modern workplace relations rules that promote flexible practices in the deployment of capital and labour that are both practical and beneficial to employers and employees.

To compete and succeed, Australian mining needs to be safe, technologically advanced and adaptable. This is best achieved by mutually beneficial partnerships between employers and employees founded on flexible workplace arrangements underpinned by a strong safety net.

The mining industry directly employs 256,800 highly skilled, highly paid workers across Australia, more than triple the number employed in 2001-02 (81,400). 88 per cent of mining workers are permanently employed and 96 per cent are full-time. Over the past decade, the share of casual workers in mining across Australia has averaged 13 per cent, compared to 24 per cent for all industries.

Australian mining successfully employs a range of agreement options to drive productivity and incomes, with 99 per cent of mining workers earning above-award wages and conditions. Average full-time adult total earnings in mining was $143,000 in 2020-21, compared to $93,000 across all industries.[34]

Mining companies tailor their employment arrangements to suit very different locations, ore bodies, production techniques, occupations and worker preferences. Service contractors perform specialist tasks, ranging from overburden removal to planned maintenance shutdowns. Some companies use labour hire to manage temporary expansions, while others deploy specialised teams of permanent employees for specific safety, environment and productivity projects.

The current regulatory framework for workplace relations is unduly complex and inflexible. Incremental improvements to the Fair Work Act could help attract additional investment in new projects, as well as foster more efficient, harmonious and competitive enterprises.

Of the current 112 minerals projects across Australia in the pre-feasibility or feasibility stage, 83 are greenfield projects worth $41 billion and entail approximately 27,000 construction jobs and 17,000 ongoing jobs. Allowing greenfields agreements to extend beyond four years, will encourage mining investment by reducing the risk of project disruption in the period between construction (when earthworks at the new site begins), execution (when infrastructure, systems and facilities are in place and equipment is tested) and completion (when the initial production target is reached).

Australia's mining competitors in the United States and Canada already have access to enterprise agreements covering the life of a project. Longer greenfields agreements would especially benefit

[33] EY, *The Future of Work: the Changing Skills Landscape for Miners*, report prepared for the Minerals Council of Australia, 14 February 2019, p. 2

[34] Australian Bureau of Statistics, *Employee Earnings and Hours, Australia, May 2018*, released 22 January 2019, data cube 7; *Average Weekly Earnings, Australia*, May 2021, released 19 August 2021, table 10H.

projects that involve underground mining, minerals processing or more complex project plans, which may take more than four years to proceed from construction to execution to completion.

Legislation or regulation must support the flexibility benefits and performance incentives of enterprise bargaining to ensure the industry is flexible, adaptable and competitive. Enterprise bargaining – as introduced and modified by Labor – replaced centralised wage fixation and industry-wide bargaining and enabled differential pay rates (above award minima) to be linked to the productivity of workplaces and individuals.

Amending the Fair Work Act to improve the process for approving enterprise agreements will facilitate pay increases linked to productivity gains and ensure more consistent approval times for similar agreements. Additional opportunities for incremental improvements that will boost productivity include:

- Instituting a simpler procedure for terminating expired enterprise agreements
- Focusing bargaining on matters directly relevant to employers and employees
- Allowing high-income earners to opt out of enterprise agreements and enter into individual agreements.

Every employee, business and industry cannot and should not be expected to flourish under the same workplace rules. High-income earners should be permitted to opt out of an enterprise agreement and enter into individual agreements.

Rules-based trade agreements and refined regulatory settings for international investment

Increasing opportunities for Australia to expand its international trade and investment are fundamental to the nation's prosperity.

Australia's openness to trade and investment drives job creation across the nation. One in five Australian jobs are trade-related and exporting firms generally employ more people, pay higher wages and have higher survival rates than firms that focus on domestic markets only.[35]

Australian mining relies on recurrent flows of international investment to fund exploration, develop and sustain job-creating, large, long-life projects, and gain access to technology.

A stable, rules-based international trading environment, in which trade and investment occur free from political coercion, is vital to the ability of Australian companies – including in mining and METS – to meet the needs of customers overseas and maintain their global reputation as reliable, responsible suppliers.

Australia should continue to support high-quality trade and technology cooperation agreements. Recent examples include the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Regional Comprehensive Economic Partnership (RCEP).

Australian manufacturers and exporters of mining equipment now benefit from duty-free access for their exports to CPTPP countries. The CPTPP eliminates tariffs of up to 15 per cent on Australian exports of mining equipment to Mexico, and binds tariffs at zero in countries where Australian exports already have tariff-free access.

The RCEP enshrines commitments from China, Indonesia, the Philippines, Thailand, Malaysia, Laos and Myanmar, which benefit Australian firms that provide business services – including METS – and eliminate tariffs on equipment such as mining drills and tamping or compacting machinery.

[35] See Commonwealth of Australia, *2017 Foreign Policy White Paper*, p. 14; Razib Tuhin and Jan A. Swanepoel, Department of Industry, Innovation and Science, *Export behaviour and business performance: Evidence from Australian microdata*, Research Paper 7/2016, 9 February 2017, pp. 8, 17; Commonwealth Treasury, *Analysis of wage growth*, working/technical paper, November 2017, released on 8 December 2017, p. 58f.

While Australia's foreign investment review and compliance process plays an important role in responding to threats to national security, it must operate in the national interest, including maintaining a strong economy with globally competitive industries. This is best achieved with a balanced, non-discriminatory foreign investment framework that is transparent, efficient and provides investment certainty.

Positive net investment is a prerequisite to the expansion of production and employment. The resources sector has undertaken unprecedented investments over the past two decades, increasing the sector's net capital stock fourfold between 2000-01 and 2019-20. Similarly, the number of Australians employed directly in the resources sector more than tripled from 79,000 in 2001 to 256,000 in 2021.[36]

However, reforms to the foreign investment framework have raised obstacles to the approval of Australian projects and created a disincentive for international capital to flow to the Australian economy.

The Productivity Commission observed that in 2020, the Australian mining industry experienced a decline in its share of international investment, with net outflows of nearly $7 billion. The Commission identified the dampening effect of the COVID-19 pandemic on investment flows and changes to Australia's screening arrangements as possible explanations for the below average investment performance.[37]

To avoid impeding international investment, there is the need for updated guidance and legislative and regulatory reforms that put clear limits on the use of the Treasurer's call-in power and pre-investment notification for national security purposes in relation to mining investment, including critical minerals.

International investment in mining and mining exploration should only be subject to national security reviews and pre-screening requirements in very limited circumstances, such as where the mine or exploration is adjacent to (or overlaps) defence land, or the mine is the sole supplier of an input that is critical to a defence supply chain.

More targeted review criteria would ensure that the Foreign Investment Review Board is focused on sectors where risks are likely to arise, rather than wasting resources investigating and delaying transactions in non-sensitive sectors.

[36] Australian Bureau of Statistics, *Australian System of National Accounts*, 2019-20, released 30 October 2020, table 58; *Labour Force, Australia, Detailed, May 2021*, released 24 June 2021, table 6.
[37] Productivity Commission, *Trade and Assistance Review 2019-20*, Annual Report Series, Canberra, p. 73.