Minerals Council of Australia

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RE: EVALUATION OF THE FOREIGN INVESTMENT REVEW REFORMS 2021

I write in response to Treasury's consultation on its evaluation of the Australian Government's 2021 changes to the foreign investment review framework.

The MCA recognises the Australian Government's important responsibility to protect Australian citizens from threats to national security. The MCA also notes that the nation's foreign investment review and compliance process plays an important role in responding to such risks.

The foreign investment regime must also operate in the national interest, including Australia's interest in 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.

Access to international investment, especially foreign direct investment (FDI), is vital to ensuring Australian mining maintains its strong comparative advantage in resources exports and generates the revenues and high paying jobs needed for a sustained economic recovery.

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.[1]

The Centre for International Economics has quantified the benefits to workers and households of the ongoing mining boom. Thanks to the significant expansion of mining investment and production this century:

- Australian households are $14,800 better off in 2020
- Real wages are 8 per cent higher in 2020, or $120 a week higher per worker
- Real wages growth (while still sluggish) is faster than it otherwise would have been, averaging 0.74 per cent a year between 1998 and 2020 instead of 0.47 per cent
- The Australian economy was $250 billion larger in 2020 than would otherwise be the case
- Real GDP per person is $9,700 higher.[2]

[1] 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.
[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.

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Put another way, Australia's economic growth would have been 13 per cent lower in 2020 – the first year of the COVID-19 pandemic – had there not been a permanent increase in the size of the mining industry from 2005 onwards.

However, Australia has been undergoing a steady decline in its share of international investment in mining in the face of increasing competition. The Fraser Institute's Annual Survey of Mining Companies shows mining regions in North America and Africa are becoming more competitive as investment destinations because of improving investor perceptions of government policy.[3]

More than ever, domestic policy settings that attract investment are important to ensuring mines in Australia are developed to operate efficiently and in a cost competitive manner. We cannot rely solely on the continent's natural advantages of high quality, easily accessible minerals to attract investment.

However, the Australian Government's reforms to the foreign investment framework have introduced additional uncertainty, regulatory burden and cost to the regime, increasing hurdles for the approval of Australian projects and thereby providing a disincentive for foreign capital to flow to the Australian mining industry.

The Productivity Commission has 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.[4]

To reverse this alarming trend, an approach is required that sends a clear message to potential international investors in the mining industry that investment is welcome.

Mining and mining exploration are not sensitive sectors

The MCA considers that 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 overlapping defence land, or the mine is the sole supplier of an input that is critical to a defence supply chain.

Outside these narrow circumstances, there is no evidence to support the claim that national security concerns could arise from investment in Australian mining – whether it be in established commodities such as iron ore and coal, or in the emerging critical minerals industry.

Mineral deposits are diverse and in almost all cases, abundant. Within Australia there are many sites that host orebodies capable of producing the minerals. This includes those minerals designated as critical. No single company or country is in a position to exert influence on the development and operation of mines at all of these sites to control the supply of any mineral.

For every mineral deemed critical to defence supply chains, there are many deposits and companies ready to supply both Australia and its allies. Furthermore, with extensive exploration investment already underway, it is highly likely that additional critical mineral ore bodies will be identified in the future.

When it comes to mining and mining investment, the real policy risk is not that foreign companies might somehow acquire or control immobile Australian mines in a way that compromises national security, but rather that Australia becomes a less attractive destination for international mining investment and that opportunities to develop future mining projects and jobs are foregone.

The optimal strategy for Australia is provide a policy environment that opens the nation to international investment, removing regulatory barriers to make the economy competitive with other mining jurisdictions.

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[3] J. Yunis and E. Aliakbari, Fraser Institute, *Fraser Institute Annual Survey of Mining Companies 2020*, (February 2021).

[4] Productivity Commission, *Trade and Assistance Review 2019-20*, Annual Report Series, Canberra, p. 73.

On the other hand, heavy-handed government intervention is likely to create unintended distortions and adverse outcomes at the exploration and mining end which could drive investment to other jurisdictions in the medium and long term.

An approach based on the recognition that investment in mining does not in itself present national security risks is reinforced by provisions of the Security Legislation Amendment (Critical Infrastructure) Bill 2020. After an extensive drafting and consultation process, these reforms have designated 11 sectors as 'critical infrastructure sectors' – with mining excluded.

Australia's national interest lies in capturing more investment in mining through removing regulatory barriers and costs – investment which supports stronger regional communities and more highly skilled, secure, well-paid jobs in Australia, generates export dollars, and provides tax revenue (including 30 per cent of all company tax receipts).[5]

The MCA recommends that Treasury investigate possibilities for updating guidance and recommending 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.

An approach that better targets sensitive sectors would also add to the efficiency of the regime by ensuring that the Foreign Investment Review Board is focused on sectors where the risks are likely to arise.

The increased focus on critical minerals is not well-founded

The inclusion of certain critical minerals as an area of particular focus of the Foreign Investment Review Board on national security grounds is not well-founded and works against the national interest in developing Australia's emerging critical minerals mining and processing industries.

The guidance material recommends voluntary notification for foreign persons proposing to invest in the extraction, processing or sale of rare earth elements, lithium, graphite, cobalt, vanadium, copper and nickel.

The basis for the selection of these minerals as the subject of additional scrutiny appears to be that 'the scarcity and geographical concentration of some critical minerals leaves them potentially vulnerable to supply chain manipulation and disruptions' – which is both an arbitrary generalisation and untrue in many instances.

Scarcity of minerals is not usually the cause of supply chain risk. Even in the case of rare earth elements, which are globally abundant, the critical point in the supply chain is in downstream processing of the minerals. This is where the Government can add to national resilience of Australian industry by helping to create a new downstream processing sector in the economy.

The best way to guard against supply chain risks for Australia is to be open to international investment through removing regulatory barriers, enabling more mines and processing facilities to be developed for a more diverse range of commodities.

Copper is another example. While copper is an essential material in energy systems and many technologies, it is abundant both in Australia and globally. No country or company controls the supply of copper minerals, and is unlikely to do so even as world demand rises.

The most substantial risk associated with the development of copper mining is underinvestment. However, in recommending voluntary notification by prospective foreign investors in Australian copper mines, the guidance material sends a negative signal that such investments will be scrutinised and potentially subject to conditions and delays.

The identification of critical minerals as an area of focus for foreign investment review has created apprehension and uncertainty for potential investors in these industries. This is occurring in

[5] Deloitte Access Economics, *Estimates of royalties and company tax paid by the minerals sector*, report prepared for the Minerals Council of Australia, MCA, 11 May 2021.

circumstances where the attraction of capital and finance in the critical mineral industry (including downstream processing) is made especially difficult by the following factors:

- **Technological innovation:** Unlike many bulk commodities, the beneficiation and processing of raw materials is technically challenging and bespoke to the deposits. The research and development required to produce material is extensive and an unknown factor for financiers
- **Market imbalances:** The opening of new mines creates large increases in the supply of critical minerals. While demand is also rising, the jump in supply risks often creates a market surplus and lower prices in the short term. New mines find it harder to operate in these conditions
- **Lengthy project approvals timeframes:** Australia's stringent regulatory frameworks are well placed to facilitate safe and environmentally responsible growth in the mining of rare earth elements and downstream processing. However, investment decisions are impacted by regulatory uncertainty and unnecessarily lengthy approval timeframes. These processes can be significantly improved to reduce unnecessary complexity and improve the timeliness of project approvals while maintaining high environmental standards
- **Market power of existing suppliers**: It is common for owners of existing critical minerals mines to exert their market power by dropping prices when new competitors enter the market, or threaten to withhold supply from customers signing offtake agreements with competitors
- **Non-transparent markets:** Most critical minerals are traded 'over the counter' which creates little publicly available information on pricing, demand and supply and makes connecting buyers and sellers more challenging.

Investment in mines that produce minerals listed in the guidance material should not be treated differently to investments in other mines. The foreign investment screening regime should be further reformed to facilitate more international investment in these industries, consistent with the government's priorities in growing and investing in this industry (for example through the Modern Manufacturing Fund).

Regulatory uncertainty weighs heavily in investment decision-making processes of global boards of mining companies

Mining projects generally require large upfront investments that can provide a basis for long-term production. The investment analysis and decision making processes that boards adopt are therefore extensive and highly sensitive to long-term risks.

Competition for capital means that not all projects put to the board of a global mining company can be approved. Investment depends on proponents being able to demonstrate robust financial projections and risk-adjusted rates of return.

There is always a mix of factors that drive an investment decision and governance processes vary – but the relative weighting that global boards give to regulator uncertainty and changes in government policy when assessing the risk profile of a project cannot be underestimated.

Risks that are difficult to mitigate or quantify, or may cause project delays, are the most problematic and receive a high risk premium in the context of investment decision making. This can lead to projects being downgraded or stalled at the concept or pre-feasibility stage, reducing the range of well-developed project options.

The reformed foreign investment regime requires project proponents to address the question of whether pre-investment screening might be required on national security grounds, even where smaller transactions are concerned. Answering this can require detailed analysis of the proposal. If the possibility of requiring pre-approval cannot be ruled out at an early stage, project proponents must factor in the risk that elements of the project may be subject to delays of uncertain duration.

While it is not possible to be definitive, the MCA considers that the following features of the reformed foreign investment regime are likely to have contributed most to a higher risk premium for Australia:

- Uncertainty caused by the potential use of call-in powers up to 10 years after approval (although call-in powers can be extinguished with the grant of an exemption certificate, this is difficult to obtain at the early stages of project development)
- The possibility of extended delays in obtaining foreign investment approval
- Regulatory burdens associated with ongoing compliance obligations.

Productivity enhancing reforms must be pursued as a priority

The Centre for International Economics estimates that implementing a modest productivity reform agenda – including improved regulatory settings for international investment – would deliver benefits similar and additional to the mining boom, namely:

- Households would be $11,700 better off in 2030
- Real wages would be 9.4 per cent higher by 2030, or $130 a week higher per worker.
- Real wages growth would double from 2021 to 2030 to 1.7 per cent a year
- The economy would be $290 billion larger in 2030
- Real GDP per person would be $9,900 higher.[6]

However, the government's 2020 foreign investment reforms have increased regulatory burden and delays associated with the foreign investment review regime.

The MCA recommends that Treasury investigates reform options to enhance predictability and lower the costs of the foreign investment review regime, including publication of reasons for decisions to block proposals, greater certainty with respect to timelines, and aligning application fees with the actual cost of administering the screening regime – as has been recommended by the Productivity Commission.[7]

Yours sincerely

DEMUS KING

GENERAL MANAGER – TRADE AND INVESTMENT

[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. The CIE modelled the effects of a 1 per cent a year increase in labour productivity stemming from:

1. A lower corporate tax rate for all businesses (large businesses down to 27 per cent, others 25 per cent)
2. Implementing single-touch environmental approvals
3. Better regulatory settings for international investment, such that foreign direct investment in mining increases by 5 per cent a year
4. Incremental improvements to workplace relations rules (faster approvals of enterprise agreements, allowing greenfields agreements of up to eight years and reducing the time taken to terminate expired enterprise agreements)
5. Implementation of an industry-focused skills program.

[7] Productivity Commission, *Foreign Investment in Australia*, Commission Research Paper, (July 2020).

SUMMARY OF ISSUES AND RECOMMENDATIONS

Issue	Recommendation
The blanket approach to pre-investment approvals for notifiable national security actions and the call-in powers adds to uncertainty in sectors such as mining where there is minimal national security risk. Inward 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 overlapping defence land, or the mine is the sole supplier of an input that is critical to a defence supply chain.	MCA recommends Treasury update guidance and recommend 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.
The advice in the guidance material that voluntary notification is recommended for investments in some critical minerals will cause apprehension about investment in this industry. Investments in the mining of critical minerals listed in the guidance material should not be treated differently to other mining investment.	MCA recommends Treasury support reforms to the foreign investment screening regime to encourage more international investment in critical minerals, consistent with the government's priorities in growing and investing in this industry (for example through the Modern Manufacturing Fund).
Lack of transparency and predictability in the decision-making process driving uncertainty.	The MCA recommends that Treasury investigates reform options to enhance predictability and lower the costs of the foreign investment review regime, including publication of reasons for decisions to block proposals, greater certainty with respect to timelines, and aligning application fees with the actual cost of administering the screening regime – as has been recommended by the Productivity Commission

REPORT

Estimating the economic benefits of mining expansion and further productivity reforms

Prepared for
Minerals Council of Australia

27 May 2021

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Summary

Bottom line

- **This report considers two important features of Australia's economic well-being:**
  - **Australia's ability to cost effectively convert mineral endowments into economic returns for Australians, particularly in response to increased commodity demand from our trading partners.**
  - **The imperative for ongoing productivity-based policies to ensure continued growth in per person income.**
- **We illustrate the magnitude of each of these using simulations from a detailed model of the Australian economy:**
  - **The expansion of mining made households better off by $14 800 in 2020.**
  - **Implementing a modest productivity reform agenda would make households better off by $11 673 by 2030.**
- **CIE estimates that in the absence of an expanded mining industry:**
  - **Australia's real GDP would have been 10 per cent lower during the height of the Global Financial Crisis (2008) and average annual real wage growth between 1998 and 2009 would have been negative (-0.58% instead of 0.53%).**
  - **Australia's real GDP would have been 13 per cent lower during the first year of the COVID-19 pandemic (2020) and average annual real wage growth between 1998 and 2020 would have been even slower (0.47% instead of 0.74%).**
- **While Australia's productivity performance over the past two decades has been poor, even a modest productivity improvement of 1 per cent a year could deliver benefits similar and additional to the ongoing expansion of mining.**

Australia's mineral assets

- **Australia has significant resources of the minerals relied upon in modern economies for a wide variety of purposes.**
- **These natural endowments have economic value because mining companies have the technology and skills to discover, extract, process, transport and ship mineral products efficiently and competitively.**
- **Increasing world demand for minerals — driven by the growth and development of emerging economies — has induced a substantial increase in the size of the Australian mining industry and continues to support significant streams of export revenue.**

  - The share of mining in the economy has increased from under 5 per cent 15 years ago to 10 per cent currently.
  - Direct employment in mining has increased from approximately 130,000 people 15 years ago to more than 240,000 currently.

Benefits from the expansion of mining

- Using an economic model, we can compare actual outcomes (*with* the expansion of mining) with a constructed scenario of what the economy would be like *without* the expansion of mining.
  - The difference between these is one measure of the economic benefits of the mining sector and its ability to respond to international demand.
  - This approach is similar to that taken by Reserve Bank economists in 2014, who estimated the effects of the price and investment phases of the mining boom on employment, wages and household income.
  - These economists found that the first ten years of the mining boom:
    - Raised average real wages by 6 per cent;
    - Increased per capita household disposable income by 13 per cent; and
    - Lowered the unemployment rate by approximately 1.25 percentage points.[1]
  - CIE's analysis complements and updates this work by extending the modelled scenario to the third and ongoing phase of the expansion of mining; namely the production/export phase.
- Table 1 shows, for two representative years (2008 and 2020) the differences in GDP per person, and real consumption per household and real wage growth brought about by the mining sector.

1 Benefits from the expansion of mining

Scenario	Real GDP per person $		Real consumption per household $		Real wage growth (average annual %)	
	2008	*2020*	*2008*	*2020*	*1998 to 2009*	*1998 to 2020*
With more mining	69 789	75 771	102 459	105 976	0.53	0.74
Without more mining	62 256	66 036	90 237	91 170	-0.58	0.47
Difference	7 533	9 735	12 222	14 806	1.11	0.27

Source: CIE simulation estimates

- The results indicate that the expansion of mining has led to improved economic welfare (compared with what it would otherwise have been) of $9 700 per person in terms of GDP, and $14 800 per household in terms of real consumption.

1 Peter Downes, Kevin Hanslow and Peter Tulip, *The Effect of the Mining Boom on the Australian Economy*, RBA Research Discussion Paper No. 2014-08, 8 August 2014.

The need for ongoing productivity growth

- **Australia's economic history indicates that ongoing productivity growth — progressively doing more with the same resources and innovating to find new ways of doing things — is the major driver of economic welfare per person.**
- **While the configuration of Australia's comparative advantage in minerals exports is likely to change over time, enhancing innovation and flexibility in the economy will ensure continued economic prosperity.**
- **Many factors determine Australia's productivity performance, but Australia's experience — particularly in the reform era starting in the 1990s with National Competition Policy and related reforms — indicates that productivity reforms can substantively increase productivity growth.**
- **A persistent yet modest productivity reform agenda – including a lower corporate tax rate for all businesses, better regulatory settings for international investment, incremental improvements to industrial relations rules, and implementation of an industry-focused skills program – could easily lead to a 1-per cent-a-year improvement in labour productivity.**
- **Table 2 shows the effect of such higher productivity growth. It could lead to:**
  - **An increase of $9 942 in per person GDP by 2030 (relative to what would otherwise have been the case); and**
  - **An increase in real consumption per household of $11 673.**

2 Benefits of 1 per cent a year higher labour productivity growth

Scenario	Real GDP ($b)	Real GDP per person ($)	Real consumption ($b)	Real consumption per household ($)
	2030	*2030*	*2030*	*2030*
Business as usual	2 565	87 953	1 389	123 856
With productivity dividend	2 855	97 896	1 520	135 529
Difference	290	9 942	131	11 673

Source: CIE modelling estimates

- **A more ambitious productivity agenda could be expected to generate higher income gains for workers and households.**

Microeconomic reform to complement macro' policies

- **Macroeconomic policies, in particular fiscal policy involving large expenditures and the build-up of debt can only address economic issues in the short term.**
- **The medium to long term outcomes for the Australian economy depend fundamentally on our ability to adapt to changing economic circumstances.**
  - **On the one hand, to be flexible enough to take advantage of demand for our products, including in the minerals sector; and**

- **On the other hand, to establish a long-term microeconomic or structural framework to ensure continued and improved growth in productivity.**

1 Introduction

This report considers two key aspects of the Australian economy:

- First, the recent importance of the mining sector to Australia's overall economic performance given the ability of the sector to respond to increasing world demand for Australia's mineral products; and
- Second, the importance of ongoing economic reforms to ensure productivity improvements for future economic growth.

These two aspects of the economy are related in that they both capture different ways of increasing economic welfare per person — through terms of trade improvements in the case of the expansion of mining and through improving productivity in the case of economic reforms.

Both parts of the analysis involve the use of an economic model to simulate the implications of a smaller mining sector along with the implications of higher labour productivity growth — compared with what is likely to happen under 'business as usual'.

Here productivity refers to increasing the rate of output (goods or services) from a given level of inputs (labour, land, capital and energy) or maintaining a given rate of output with fewer inputs. Productivity growth can be achieved by improving the efficiency of existing production techniques, or by significantly changing the method of supplying goods or services – that is, through innovation. It is also influenced by the policy environment which affects both the incentives and flexibility to adjust as the world changes.

Chapter 2 summarises the importance of the mining sector and provides measures of the economic benefits it provides. Chapter 3 considers the importance of productivity growth in long term economic well-being, particularly as it relates to an ongoing program of economic reform.

The appendix provides details of the modelling approach.

2 *Mining in the economy*

Background

The Australian mining industry

Mining is a key part of Australia's diverse economy. The industry engages in a variety of economic activities — from exploration to construction, financing to technical development and transport logistics to exporting — that serve to convert mineral resources in the ground to income and economic activity for Australians.

Through these activities Australia produces a wide variety of the key minerals used in modern economies including iron ore, coal, bauxite and copper. Most of this production is exported making mineral and energy commodities Australia's largest source of export income. These exports have increased substantially in the 21st century in a period often referred to as Australia's mining boom.

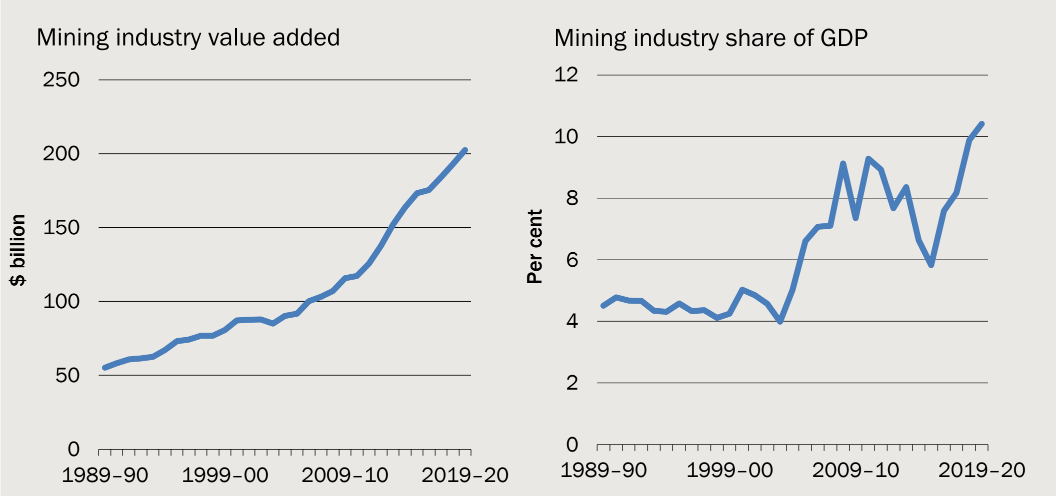
The recent expansion of the mining sector

Value added and mining's share of GDP

The period since 1989-90 has seen a steady increase in the real value added of the mining industry, going from around $55 billion in 1989-90 to around $200 billion currently. (See the left panel of chart 2.1). This increase in real production reflects the investment, construction and then production activities of the mining sector in response to a variety of factors, including increases in commodity prices.

At the same time, the share of mining in Australian GDP has also increased, more than doubling from around 4.5 per cent in 1989-90 to around 10 per cent now. (See the right panel of chart 2.1).

2.1 Mining industry real value added and share of GDP



Data source: ABS

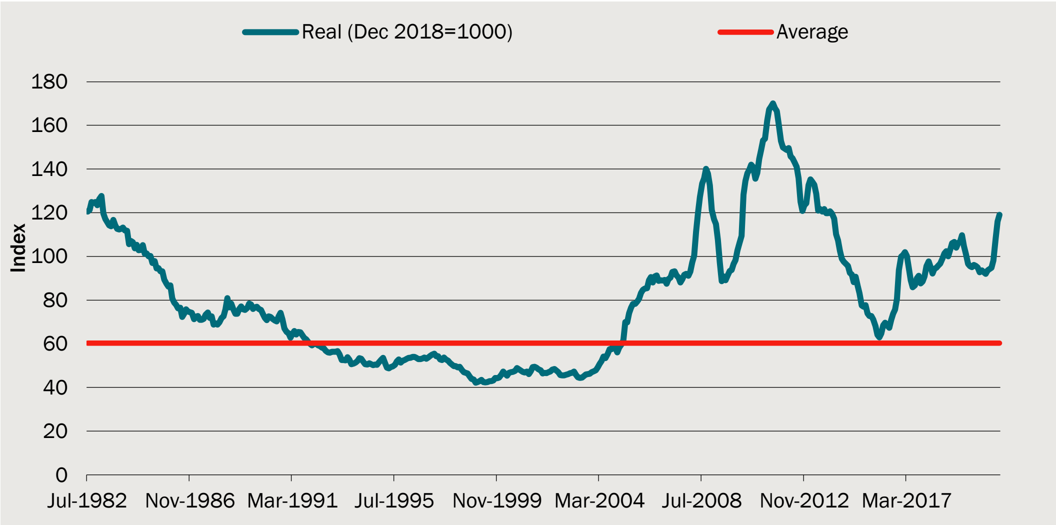
It is interesting to note that while real mining value added increased steadily over the period shown here, the mining share of GDP remained static until around 2003-04, after which it rapidly increased to a peak in 2010-11 before falling to 2015-16 before rapidly increasing again to 2019-20.

This pattern mostly reflects the changes in prices received for Australian minerals on the export market. While the real value added measure is designed to abstract from price changes, the returns to Australian from our mineral activities very much depend on real export prices which are included in the GDP share calculations.

Real commodity prices

Chart 2.2 shows movements in real commodity prices since 1982. This chart clearly shows the rapid increase in prices from 2004 to 2011, followed by a decline and then an increase again in recent years.

2.2 Real mineral commodity prices



Data source: OECD, G7.

The price effect is an important part of understanding the value of the mining industry to Australia, as the improvement in Australia's terms of trade reflected in these numbers is an important source of economic gain. Along with labour productivity discussed in chapter 3, and improvement in the terms of trade is an important contributor to increases in economic welfare per capita.

Calculating the total economic effect of the mining industry

Economic linkages

The Australian mining industry contributes to the economy in a variety of ways and mining is linked throughout the economy through a number of mechanisms.

The overall mining industry it is a major purchaser of construction services, financial services and also technical and scientific services. The purchase of construction services reflects both the investment phase of mineral production (establishing a working mine and in some cases port facilities) as well as ongoing mine development and maintenance.

The purchase of financial services reflects the need to finance what are often large and complex projects with long time frames involved.

The purchase of technical and scientific services reflects the fact that modern mining — and particularly exploration — is a technically intensive activity requiring a range of specialist activities.

The share of technical and scientific inputs in total mining intermediate costs is around 13 per cent, which is slightly higher than the economywide average of 11 per cent and compares with magnitude inputs to other highly technical activities[2].

2 These shares are derived from the ABS *Input-output tables*.

Another major part of mining's economic interactions comes through royalty and tax payments made to various levels of government. These have also steadily increased in recent years, reflecting increases in production and in commodity prices. Total royalty and tax payments are currently around $39 billion per year[3].

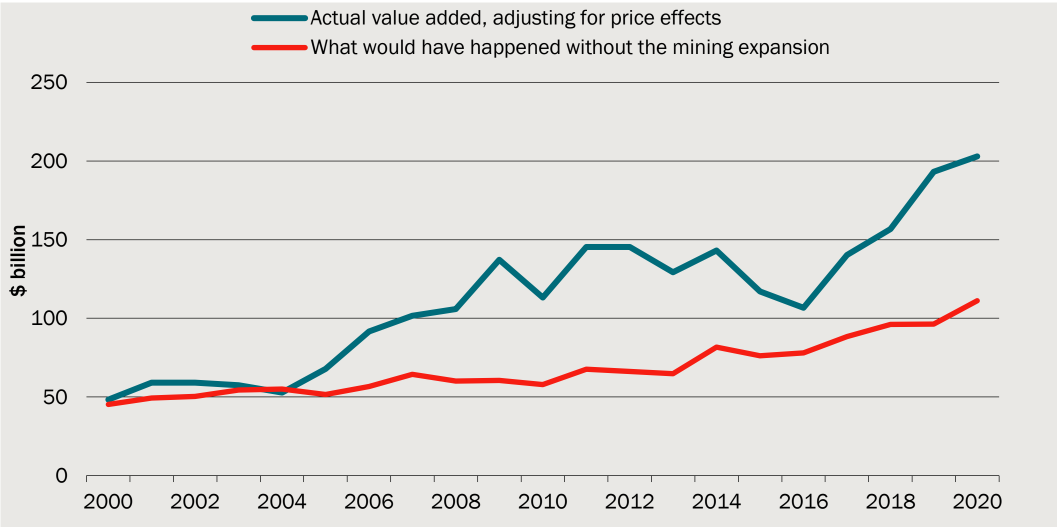
Modelling the impact of mining

One way of adding up all these elements to a total picture of the contribution of the mining sector to the economy is to use an economic model to undertake a 'what if' simulation. This 'what if' simulation uses the model to notionally remove the mining sector from the economy then see what happens to economic activity once economic readjustments have taken place.

Constructing this simulation involves comparing the current set of actual mining outcomes over time with an estimate of what would have happened in the absence of the expansion of mining.

Chart 2.3 shows a 'counterfactual' pathway for the mining sector, in the absence of its relatively rapid expansion from about 2000, compared with what actually took place. Importantly, this comparison is constructed to capture both real production effects of this change in combination with the terms of trade effects, which as noted are a crucial source of economic gain.

2.3 Mining value added compared with where it might otherwise have been



Data source: historical data from *Resources and Energy Quarterly*, counterfactual constructed by the CIE

We use an economic model (described in the appendix) to simulate the difference between the two lines in chart 2.3 and then use the results of the model to infer the total contribution of the mining sector.

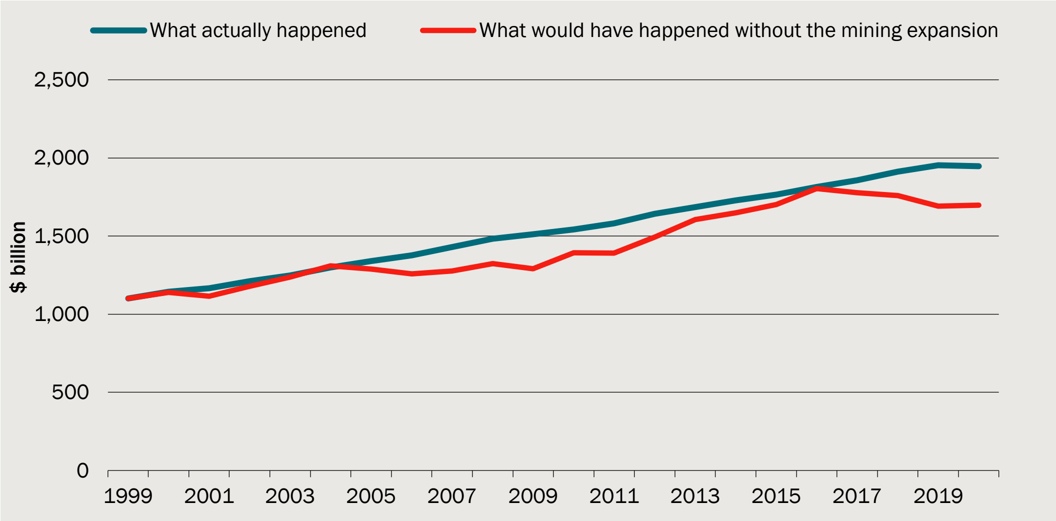
3 See Deloitte Access Economics 2021 *Estimates of royalties and company tax paid by the minerals sector*. https://minerals.org.au/sites/default/files/DAE%20-%20MCA%20-%202019-20%20Royalties%20and%20Company%20Tax.pdf.

Direct and indirect contribution of mining to GDP

Total GDP

Chart 2.4 shows the history of Australian real GDP since 1999. It is largely a story of steady growth, with the small reduction in growth during the financial crisis (2008), and a larger reduction in the last year because of COVID-19.

2.4 Australia's real GDP, with and without mining expansion



Data source: CIE modelling estimates, ABS.

The chart also shows what real GDP would have been in the absence of the expansion of mining; that is in the absence of the recent increase in the mining sector and its economic importance created by the increase in commodity prices (as described above).

The difference between the two lines: one the actual outcomes and the other simulated outcomes assuming no mining expansion, provides a clear indication of the importance of the mining sector to the Australian economy.

During the financial crisis, for example, Australian GDP would have been 10 per cent lower in the absence of the expansion of mining, an outcome which would have made the crisis even more difficult than was the case. Similarly, 2020 GDP would have been 13 per cent lower in the absence of an enlarged mining industry.

Real GDP per person

An indication of what this means for real GDP per person is provided in chart 2.5. In 2008, for example, real GDP per person would have been $7 500 lower that was the case. In 2020 this difference would have been $9 700 per person.

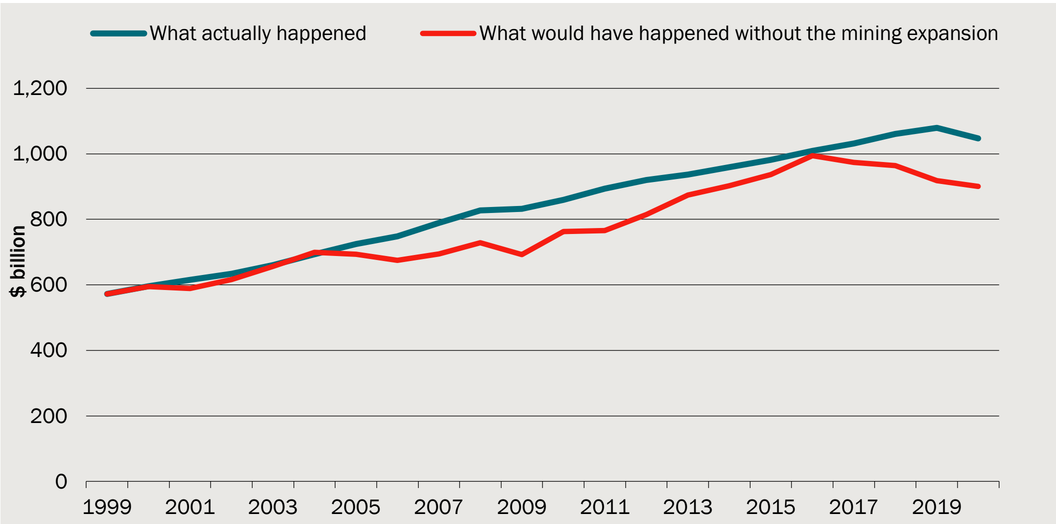
2.5 Real GDP per person

Data source: ABS, CIE modelling estimates.

Effect on household consumption

Chart 2.6 performs a similar comparison as for real GDP, this time examining real household consumption. Household consumption as used here is one measure of the benefits to the average Australian household of the increase in direct and indirect economic activity generated and induced by the expansion of mining.

2.6 Real household consumption, with and without mining expansion

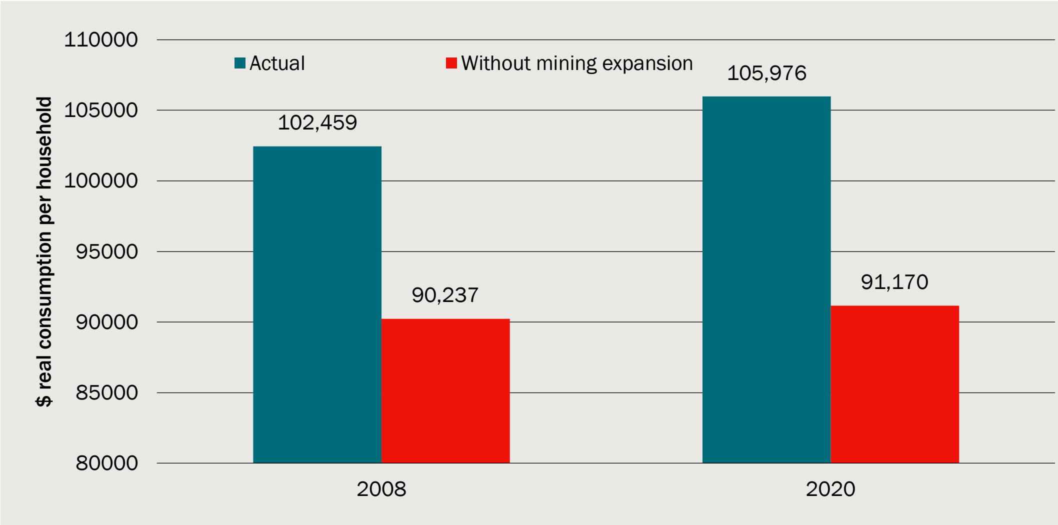


Data source: ABS, CIE estimates

An indication of what this means at the household level is provide in chart 2.7 which shows average real consumption per household at two illustrative points 2008 and 2020; both points in time where household income was already challenged by circumstances such as the global financial crisis and the COVID-19 pandemic.

In 2008, household income was $12 200 higher as a consequence of the expansion of mining compared with what it would otherwise have been. In 2020, this difference was $14 800.

2.7 Real consumption per household

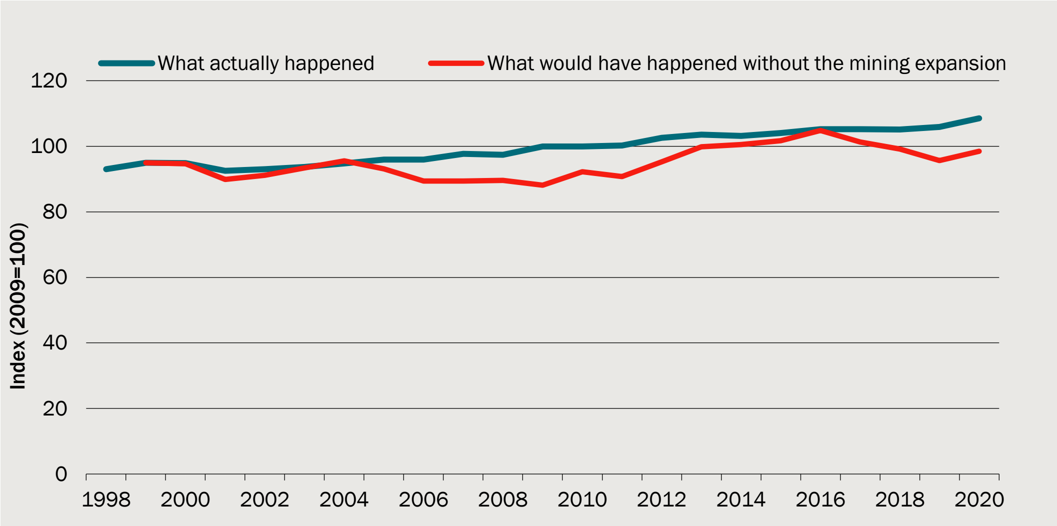


Data source: ABS, CIE estimates.

Real wages

Chart 2.8 shows the pathway for real wages, both with and without the expansion of mining. Real wage growth has been relatively slow in Australia, (partly reflecting low productivity as discussed in chapter 3) but would have been even slower in the absence of direct and induced demand for labour brought about by the expansion of mining. In 2008, for example, real wages would have been 8 per cent lower than otherwise in the absence of an enlarged mining industry. In 2020 this difference would have been 9 per cent.

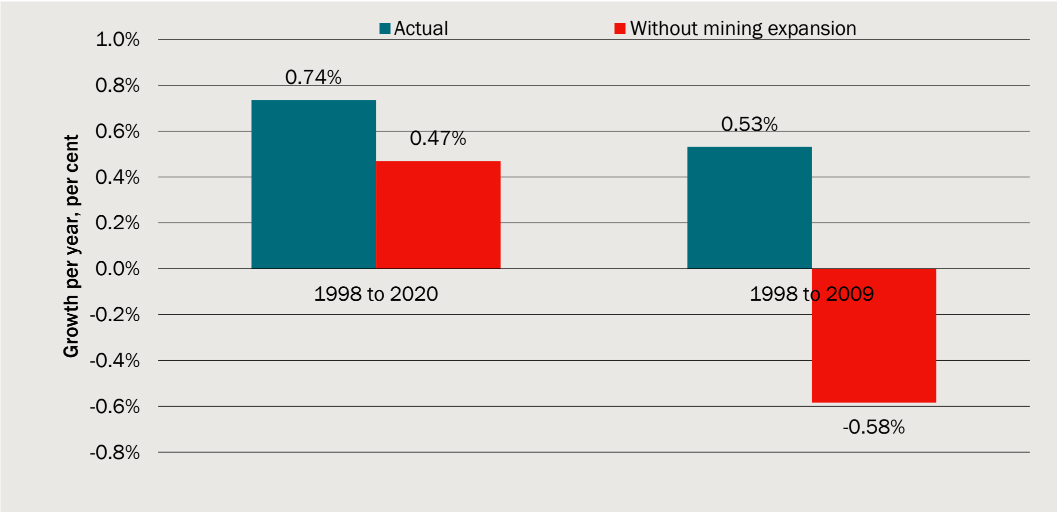
2.8 Real wages with and without the expansion of mining



Data source: ABS, CIE modelling estimates

As chart 2.9 illustrates, without the expansion of mining, real wage growth would have been 0.47 per cent a year, rather than the actual 0.74 per cent a year between 1998 and 2020. In the lead up to the financial crisis, real wage growth would have been negative in the absence of an enlarged mining industry.

2.9 Real wage growth (average annual)



Data source: ABS, CIE estimates

Using current all employee average weekly earnings of $1 280, these results imply that:

- In 2008, real wages per employee would have been $92 per week lower in the absence of the expansion of mining; and
- In 2020, real wages per employee would have been $120 per week lower in the absence of an enlarged mining industry.

3 Labour productivity growth

Background

Chapter 2 described the per capita economic gains that arise from one important economic mechanism — the effective use of a mineral asset, particularly in response to improvement in terms of trade.

This chapter considers another major contributor to economic welfare per capita (or per household) — labour productivity.

Recent detailed analysis by the Productivity Commission has confirmed that labour productivity growth has played a dominant role in GDP per capita growth over the long term (since Federation)[4]. In the same research, the Productivity Commission also note that historically most real wage growth is also associated with labour productivity growth.

Importantly, the Commission note that while the terms of trade is largely outside of Australia's control (aside from ensuring the flexibility to respond to changes), productivity can substantively be influenced by policy decisions.

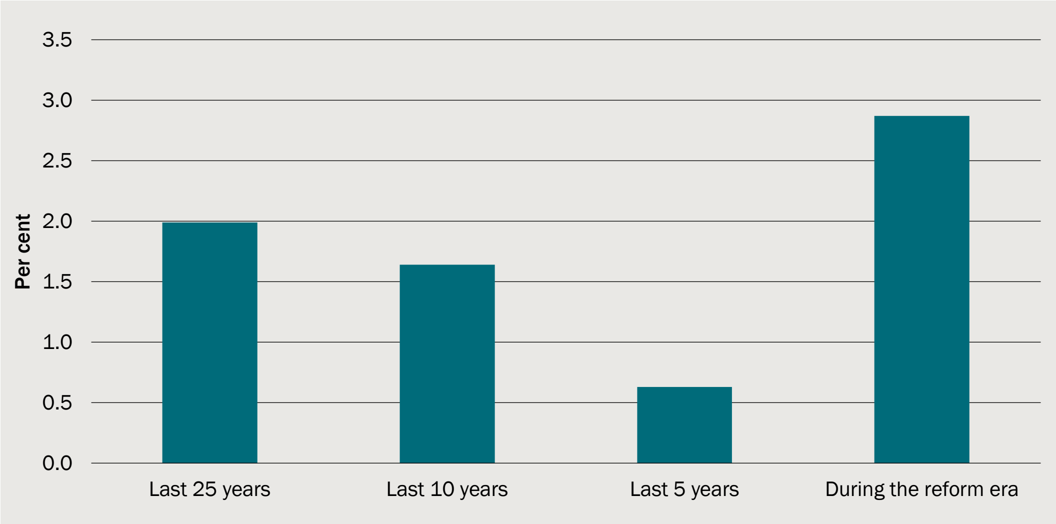
Recent productivity performance

Chart 3.1 shows the history of labour productivity growth over the past 25 years. This tells a story of steadily declining growth in recent years (compared with historical averages) and also dramatically illustrates the difference between the microeconomic and competition policy reform era (the 1990s to the early 2000s) and now[5].

4 Productivity Commission 2020 *Productivity Insights: Australia's Long Term Productivity Experience*. https://www.pc.gov.au/research/ongoing/productivity-insights/long-term.

5 It is important to note that there are a wide variety of productivity measures that could be used; while their magnitudes differ slightly, they all tell the same basic story.

3.1 Labour productivity growth (per year)



Data source: Australian Bureau of Statistics. Results compiled for the market sector.

Economic reform and labour productivity

As the Productivity Commission point out, and as widely recognised from Australian economic history, government actions can have a significant influence on productivity and therefore on long run prosperity.

While the government cannot directly influence the terms of trade, for example, it can affect the way in which the economy adjusts to changes in terms of trade, or indeed to other economic changes.

As noted above, productivity during Australia's microeconomic reform era was considerably higher than at other times. While this can be attributed to a wide variety of factors key government actions contributing to this included:

- Australia's unilateral reduction in import barriers;
- A suite of reforms undertaken as part of Australia's National Competition Policy (which in essence involved systematically removing barriers to competition, unless those barriers could be demonstrated to have net benefits); and
- A range of other economic reforms including increased competition in capital markets, infrastructure deregulation and privatisation, labour market reforms, and taxation reform.

The scope for reform to improve incentives and create economic flexibility is not yet completed and there are a wide variety of actions governments could take to further improve productivity and create a foundation for future growth. Many of these have already been set out in a variety of studies by the Productivity Commission and include[6]:

- Addressing regulatory impediments to innovation

6 A more detailed list of productivity policies is provided in Banks 2012 *Productivity policies; the 'to do' list*. https://www.pc.gov.au/news-media/speeches/productivity-policies

- Removing regulatory barriers to firm level adjustment and flexibility
- Increasing flexibility and reducing complexity of the industrial relations system
- Further reform of distorting taxes
- Ongoing infrastructure reform.

Effects of higher labour productivity growth

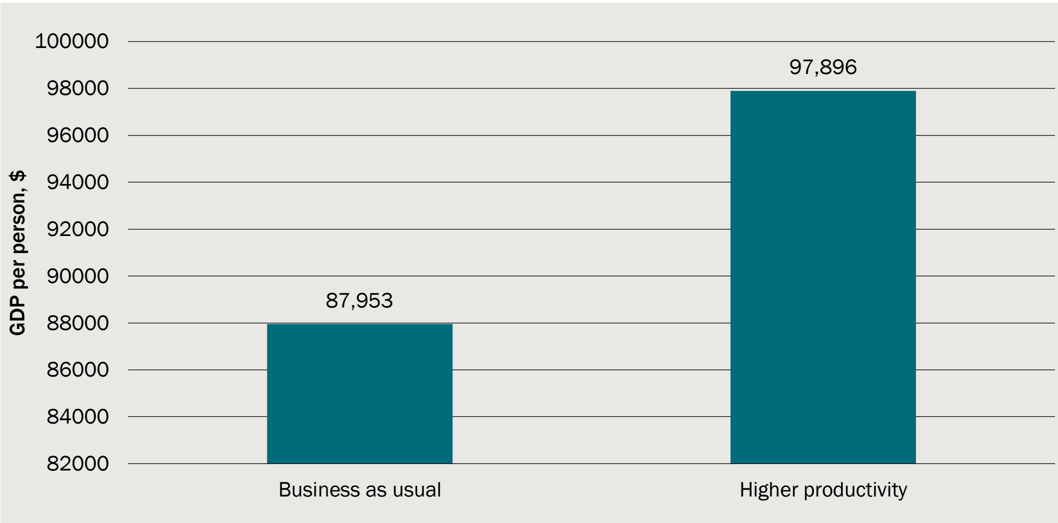
To illustrate the importance of labour productivity growth in determining future GDP and income outcomes, we present results of a simulation showing the implications of a one per cent a year increased labour productivity growth (compared with a baseline of recent growth).

The higher growth could come about through a range of ongoing economic reforms. As the discussion above indicates, a one percentage point increase is consistent with historical experience from the reform era of the 1990s.

GDP per person

Chart 3.2 shows the increment in GDP per person that could arise as a result of higher productivity growth. Overall, GDP could be $9 900 per person higher with higher productivity growth. By way of comparison, this is similar to the effect of the mining expansion in 2020.

3.2 Real GDP per person in 2030, business as usual and with productivity reform dividend

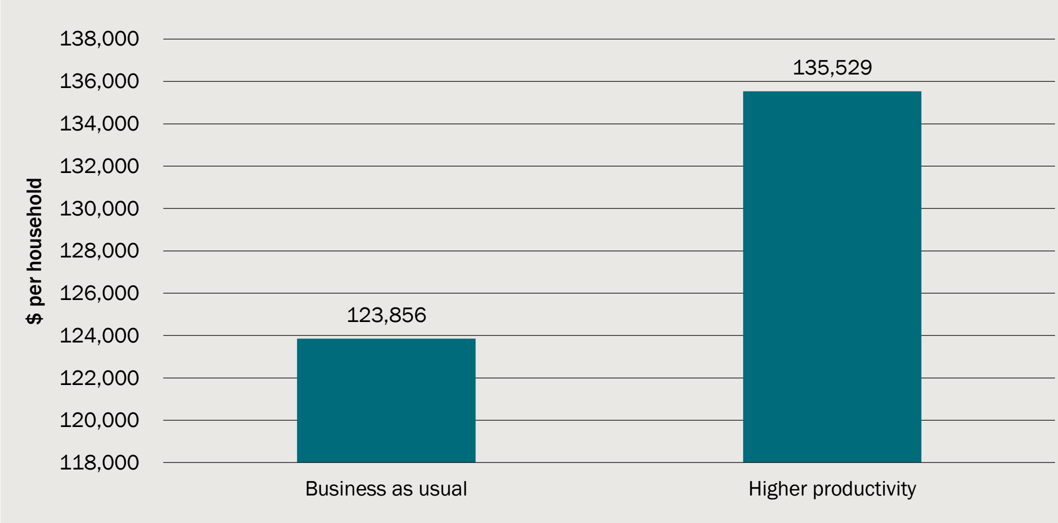


Data source: CIE estimates

Real consumption per household

Chart 3.3 shows the increment in real consumption per household projected to result from increased productivity. In this case, by 2030, real consumption per household is projected to be $11 600 per household higher per year. This is the same overall magnitude, but slightly smaller than the effect of the mining expansion in 2020.

3.3 Real consumption per household in 2030, business as usual and with productivity reform dividend



Data source: CIE estimates

Real wages

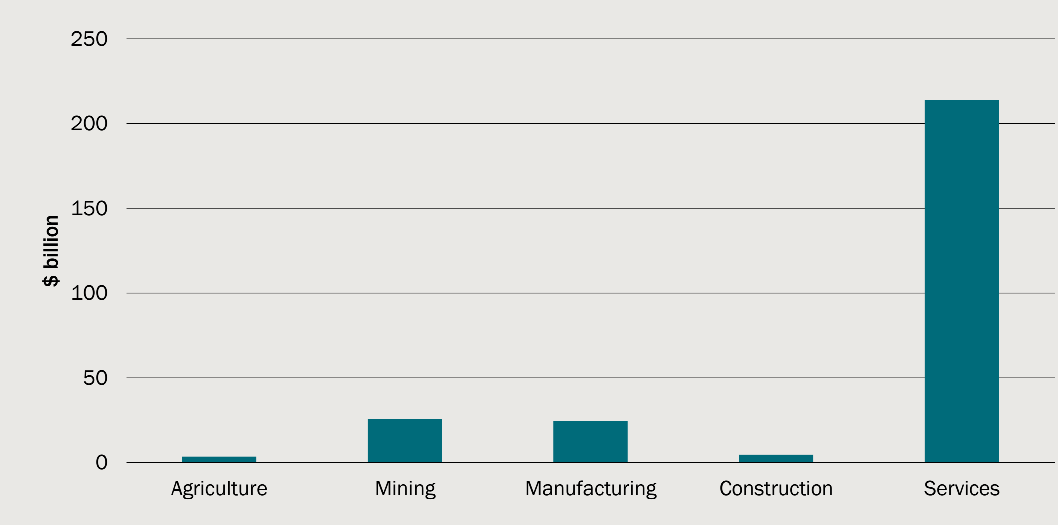
Labour productivity growth allows real wages to increase relative to where they would otherwise have been. With higher productivity, real wages would be 9.4 per cent higher by 2030 than would otherwise have been the case. The growth in real wages with the productivity improvement from 2021 to 2030 is 1.7 per cent a year, more than double the rate without the productivity improvement.

Using the 2020 all employee earnings of $1 280 per week, this implies that by 2030, real wages would be $130 per week higher that would have been the case without the productivity improvement.

Value added by broad sector

Chart 3.4 shows the changes in value added (in billions of dollars) that would occur in 2030 under higher productivity growth compared with business as usual. The greatest absolute number is for the services sector (as it is the largest sector in the economy and on average very labour intensive) followed by mining and manufacturing.

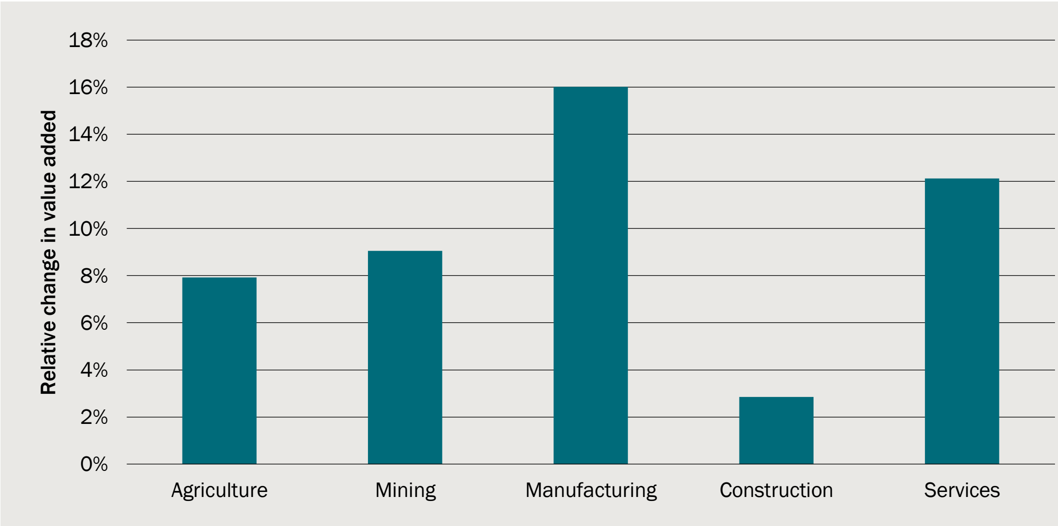
3.4 Change in value added by sector in 2030, higher labour productivity relative to BAU



Data source: CIE estimates.

Chart 3.5 shows this outcome in percentage terms (that is, the percentage increase in value added, in 2030, with higher productivity growth compared with BAU). In this case, manufacturing has the largest percentage increase, followed by services and then mining and agriculture.

3.5 Percentage change in value added by sector in 2030, higher labour productivity relative to BAU



Data source: CIE estimates

4 Conclusion

Through the use of an economic model to simulate the effect of 'removing' the expansion of mining, this report has found that the twenty-first century enlargement of mining — and the mining industry's ability to cost effectively respond to international demand for mineral products, taking advantage of an improvement in Australia's terms of trade — has provided a major source of economic benefits to the Australia economy.

Importantly, these benefits have accrued at times when there have been other stresses on the economy, including the 2008 global financial crisis and the 2020 recession induced by the COVID-19 pandemic.

At the same time, the report notes that long term prosperity for the Australian economy requires a policy focus on improving labour productivity. Australia's labour productivity performance has been poor in recent years, but Australia's long-term experience indicates that labour productivity is the major source of per person economic growth.

Using an economic model, we estimate that a 1 per cent a year labour productivity improvement would, by 2030, lead to economic benefits very similar in magnitude to the mining expansion. This could be achieved through a relatively modest reform agenda, with greater reforms leading to greater benefits.

A Modelling details

Background

The approach taken in this report to look at the implications of the expansion of mining is in many ways similar to recent work at the Reserve Bank of Australia, in particular the 2014 report by Downes, Hanslow and Tulip *The Effect of the Mining Boom on the Australian Economy* (Research Discussion Paper RDP 2014-08).

The modelling framework described below is similar to that used by Downes *et al.,* and while our analysis covers a longer period, the overall magnitude of results is similar.

The model used

The economywide or computable general equilibrium (CGE) model of the Australian economies to be used for the analysis is the CIE REGIONS model.

The model was developed by the Centre for International Economics (CIE) based on the publicly available MMRF-NRA (Monash-Multiregional Forecasting — National Reform Agenda) model used by the Productivity Commission.[7] The CIE has updated the model and introduced a more detailed treatment of state/territory government fiscal revenues and expenditures.

Like other economywide models, CIE REGIONS captures the interactions between different sectors of the economy (and between different states). The model is able to trace through the subsequent and flow on effects of mining industry activity and spending, along with the implications of productivity improvements by sector.

Some of the key aspects of the model include that it:

- uses the latest input-output tables
- provides a detailed account of industry activity, investment, imports, exports, changes in prices, employment, household spending and savings and many other factors;
- identifies 58 industries and commodities (based on the input-output industry classification, table A.1), including detailed primary energy and electricity generation and supply sectors
- accounts for Australia's six states and two territories as distinct regions
  - accounts for differing economic fundamentals in the states and territories

7 Productivity Commission 2006, *Potential Benefits of the National Reform Agenda*, Report to the Council of Australian Governments.

– state and territory results can be further disaggregated down to statistical division (SD) level or other more disaggregated level

A.1 Industries/commodities identified in CIE-REGIONS

No.	Industry/commodity	No.	Industry/commodity
1	Livestock	30	Electricity generation – hydro
2	Crops	31	Electricity generation – other
3	Forestry	32	Electricity supply
4	Fishing	33	Gas supply
5	Coal	34	Water supply
6	Oil	35	Construction
7	Gas	36	Wholesale trade
8	Iron ore	37	Retail trade
9	Other metal ores	38	Mechanical repairs
10	Other mining	39	Accommodation and food services
11	Food, drink and tobacco	40	Road passenger transport
12	Textiles, clothing and footwear	41	Road freight transport
13	Wood products	42	Rail passenger transport
14	Paper products	43	Rail freight transport
15	Printing and publishing	44	Pipelines
16	Petroleum products	45	Ports
17	Chemicals	46	Transport services
18	Rubber and plastic products	47	Water freight transport
19	Other non-metal construction materials	48	Ship charter
20	Cement	49	Air passenger transport
21	Iron and steel	50	Air freight transport
22	Other metals	51	Communication services
23	Metal products	52	Finance
24	Transport equipment	53	Business services
25	Other equipment	54	Dwellings
26	Other manufacturing	55	Government administration and defence
27	Electricity generation – coal	56	Education
28	Electricity generation – gas	57	Health
29	Electricity generation – oil	58	Other services

Source: CIE-REGIONS database

- includes specific details about the budgetary revenues and expenditures of each of the eight state and territory governments and the Australian Government (the government finances in CIE-REGIONS align as closely as practicable to the ABS government finance data)
  – specifically accounts for major taxes including land taxes, payroll taxes, stamp duties and others at the state level, as well as income taxes, tariffs, excise, the GST and other taxes at the federal level
  – traces out the impact of transfers between governments
- can be run in a static or dynamic mode. The dynamic version allows analysis to trace impacts over time as the economy adjusts, being particularly useful over the medium to longer terms.

The dynamics in the model are recursive dynamic, that is, economic agents make their decision based on current conditions and the market equilibrium is established at the end of each period (year).

Assumptions about productivity-enhancing reforms

CIE assumes that the prevailing national government successfully pursues a modest range of policies that together increase national labour productivity by 1 per cent a year. Specific measures could include:

- lowering the company tax rate for large businesses to 27 per cent (noting that the rate for small and medium-sized businesses is currently 27.5 per cent and is scheduled to reduce to 25 per cent by 2021-22);
- implementing single-touch environmental approvals underpinned by national environmental standards for Commonwealth environmental matters
- improving regulatory settings such that, for example, foreign direct investment in mining increases by 5 per cent a year;
- implementing the changes to enterprise agreements contained in the 23 February draft of the Fair Work Amendment (Supporting Australia's Jobs and Economic Recovery) Bill 2021, notably a more efficient process for approving enterprise agreements and allowing greenfields agreements of up to eight years' duration for major projects;
- reducing the average time taken to terminate expired enterprise agreements (where termination is contested) from 18 months to 6 months, by instituting a more practical test for the Fair Work Commission to apply; and
- progressing and enhancing government and industry workforce initiatives so that, for example, 10 per cent of the minerals industry workforce are trained or upskilled each year.

Real consumption and GDP pathways with and without mining expansion

Table A.2 shows the real consumption and GDP pathways, with and without the expansion of the mining sector.

A.2 Real GDP and consumption, $ billion

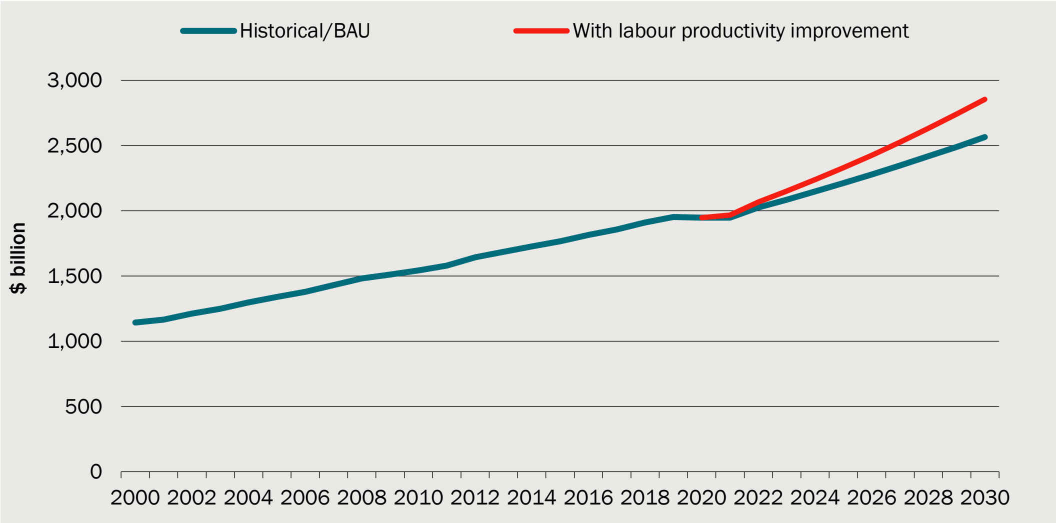
	Real GDP		Real consumption	
	Base	*Without more mining*	*Base*	*Without more mining*
1999	1 100	1 100	572	572
2000	1 143	1 139	596	595
2001	1 165	1 115	615	589
2002	1 212	1 179	634	617
2003	1 248	1 237	660	656
2004	1 299	1 309	693	699
2005	1 340	1 288	725	694
2006	1 378	1 258	748	675
2007	1 431	1 276	789	694
2008	1 483	1 323	828	729
2009	1 512	1 291	832	693
2010	1 543	1 393	859	762
2011	1 581	1 391	894	765
2012	1 643	1 494	920	815
2013	1 685	1 606	936	875
2014	1 728	1 648	959	902
2015	1 766	1 702	982	937
2016	1 815	1 804	1 009	994
2017	1 857	1 777	1 032	974
2018	1 911	1 758	1 061	965
2019	1 953	1 691	1 080	919
2020	1 947	1 697	1 047	901

Source: ABS, CIE model estimates

Real GDP and real consumption with productivity improvements

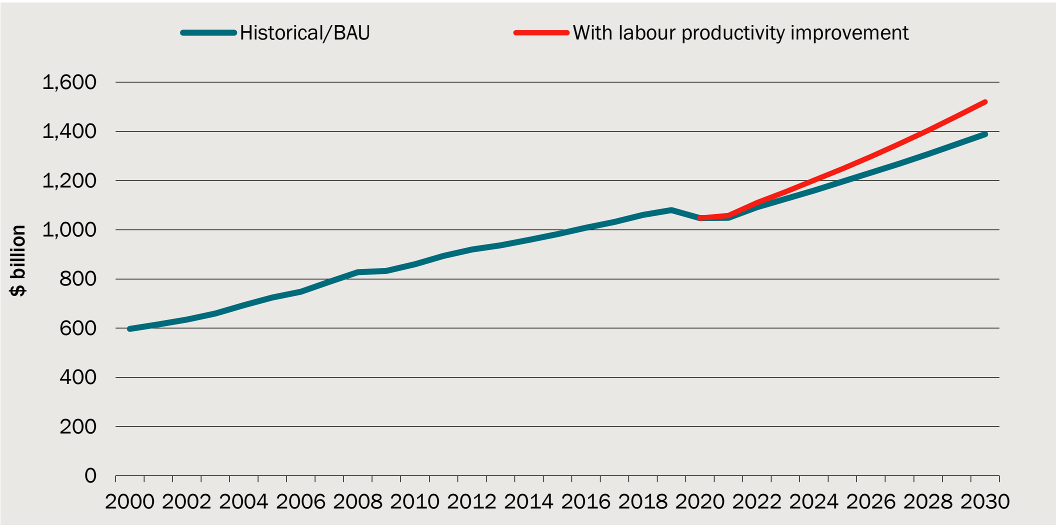
Charts A.3 and A.4 show the pathways for aggregate real GDP and real household consumption under ‘business as usual’ and with a 1 per cent increases in average annual labour productivity growth.

A.3 Real GDP pathways with and without increased labour productivity growth



Data source: ABS, CIE modelling estimates

A.4 Real consumption pathways with and without increased labour productivity growth



Data source: ABS. CIE modelling estimates

The analysis reported in the main body of the report assumes population in 2030 to be 29.166 million based on ABS low migration projections. This corresponds to a projected 11 217 000 households.

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