



Economic Series
Minerals Council of Australia

01

Productivity

Australia's productivity opportunity

September 2022



Productivity gains are out of reach unless Australia can increase capital investment.

Attracting capital investment for mining requires:



Internationally competitive tax settings.



Expanded trade and investment opportunities.



Efficient and effective regulatory settings.



Practical and beneficial workplace relations rules.



An efficient transformation to net zero emissions.



Industry-focused skills and training programs.

A one per cent lift in productivity by 2030 would deliver:

\$290b

Boost to the Australian economy.

9.4%

Increase in real wages of Australians.

\$11,700

Australian families better off each year.



It is time for comprehensive economic reform.

Australia needs economic reform to lift productivity if it is to unlock the growth potential across industries. Policy settings must enable rather than restrain the economy's growth. It is through faster productivity growth that the economy will achieve sustained long-term economic growth and deliver increased incomes.

The productivity performance of Australian mining, through its large capital investments, is a major factor in determining productivity growth in the market sector of the economy.

Australia's economic growth has been on a downward trend since the 1960s – a long-term trend in declining output per person that is closely linked to productivity (chart 1). Furthermore, the massive amount of fiscal stimulus provided by government to buffer the economy against the health-induced shock of the COVID-19 pandemic, along with the emergence of significant pressure on the federal budget from increases in structural and program spending, means that a protracted period of budget repair lies ahead. The budget is projected to remain in deficit for at least another decade and Australia's gross debt is expected to peak in excess of one trillion dollars.¹

The challenge confronting government is how to bring the budget back into balance and reduce debt without impairing the economy's performance. Drastically cutting expenditure or increasing the burden of taxation on individuals and businesses makes little sense when the result is slower economic growth and lower living standards. If the objective of economic policy is to ensure Australia remains a prosperous nation, then there is really only one course of action. Policy settings must support economic growth.

The Treasury Secretary recently highlighted the importance of lifting productivity growth to increase economic growth and reduce debt.² However, improving Australia's productivity performance will require comprehensive economic reforms aimed at reducing policy distortions and disincentives that are limiting the economy's competitiveness and the ability of business to drive economic and productivity growth.

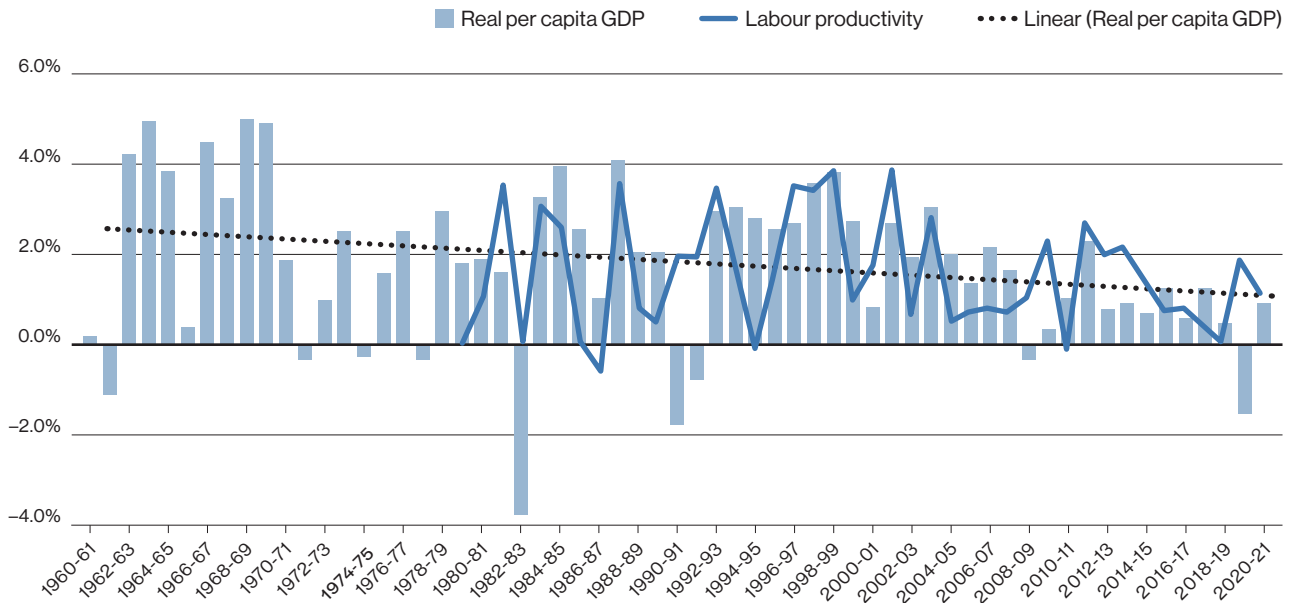
Economic reform and policies that deliver internationally competitive tax settings, expanded trade and investment opportunities, efficient and effective regulatory settings, practical and beneficial workplace relations rules, an efficient transformation to net-zero emissions and industry focused skills and training will improve the attractiveness of capital investment in Australia and lift productivity growth. Policy settings must support and enable businesses to innovate, invest and acquire the workforce capabilities and flexibilities that they need to successfully compete and grow.



CHART 1

Real per capita GDP and labour productivity growth
Annual growth rate

Australia's long-term per capita
GDP growth is in decline



Source: ABS, [Australian System of National Accounts](#), released 29 October 2021

Lifting productivity growth: the opportunity for Australia.

Productivity growth is the key driver of rising material living standards over the long term. It is by businesses increasing the amount of capital available per worker and adopting more efficient methods of production that larger quantities of output are produced to deliver increases in economic growth and per capita income.

Government plays a critical role in providing the conditions that enable businesses to operate more efficiently, harness new innovative technologies and processes and support the upskilling of workers. Policies that support the economy's competitiveness and the ability of business to drive economic growth and productivity are critical.

Economy-wide analysis by the Centre for International Economics shows that a modest reform agenda that increases labour productivity by just one per cent a year through measures such as a lower effective corporate

tax rate for all businesses, better regulatory settings for project approvals and international investment, incremental improvements to workplace relations rules and an industry-focused skills program, could by 2030 result in:

- Households being \$11,700 better off
- Real wages 9.4 per cent higher, or \$130 a week 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.³

Since the early 1900s, about two-thirds of Australia's long-term growth in per capita income has come from improvements in how labour and capital work together to produce goods and services (multifactor productivity), with the other third coming from increases in the amount and efficiency of capital per worker (capital deepening).⁴

The economic reforms of the 1980s and 1990s were aimed at improving the competitiveness and flexibility of businesses through policies that helped better allocate resources throughout the economy. However, over the last decade the yearly growth in labour productivity for the entire economy has averaged only one per cent,⁵ well below the long-run (30-year) average of 1.5 per cent that is assumed in the government's economic forecasting. The slowdown in growth is attributed to both slower capital deepening (capital shallowing) and the failure of multifactor productivity growth to compensate.⁶

Australia is not alone in experiencing weak productivity growth. From about 2005, the productivity growth in many advanced economies slowed. Fortunately, Australia's decline was comparatively smaller than in other countries owing to the mining construction boom.⁷ It is estimated that by 2020 Australian households were \$14,800 better off compared to the expansion in mining having not occurred and real GDP per person was about 15 per cent higher.⁸

However, as shown in chart 2, 2012 to 2013 marks the start of a significant downward trend in productivity growth in the Australian economy's market sector. This period corresponds with the end of the strong investment in mining that had been driven by increased global demand for commodities that occurred from the early 2000s to 2013.

Over the last decade, annual labour productivity growth fell 2.5 percentage points (a yearly average growth of 1.3 per cent) and annual multifactor productivity growth fell 1.2 percentage points (a yearly average growth of 0.5 per cent).⁹

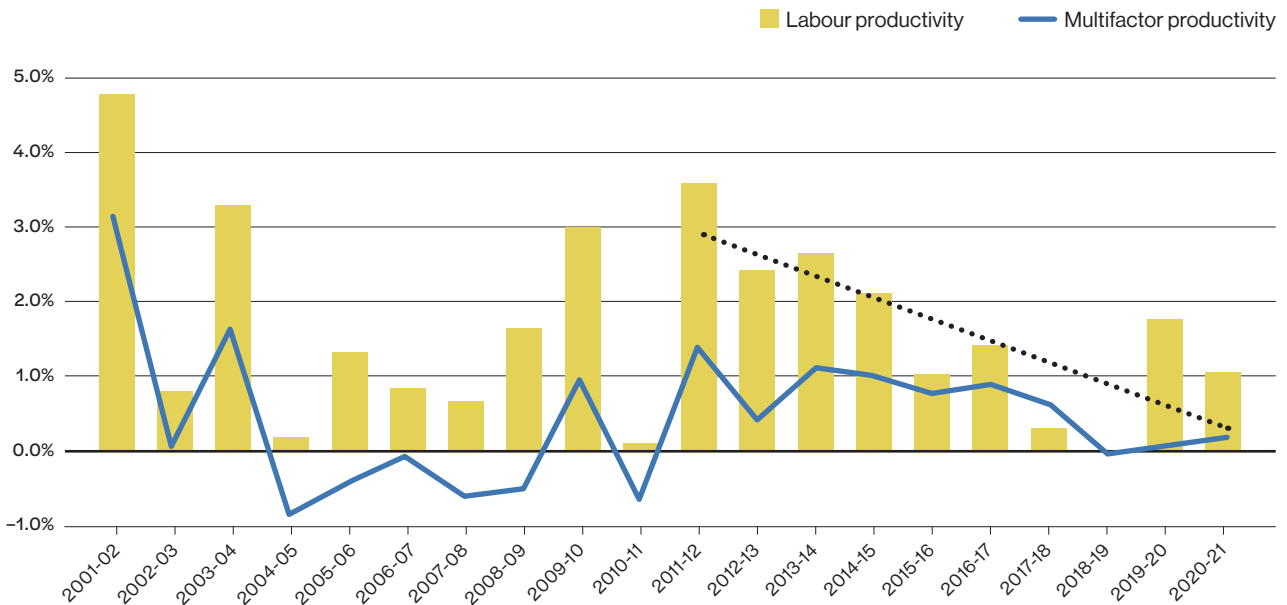
There was also a decline in the other key driver of productivity growth – capital investment. Growth in the economy's real net capital stock substantially slowed over the decade, falling by 2.4 percentage points (chart 3). Australia's net capital stock when adjusted for inflation is now growing at its lowest rate in 60 years.

CHART 2

Market sector productivity growth

Constant annual growth rate

Market sector productivity growth is weak

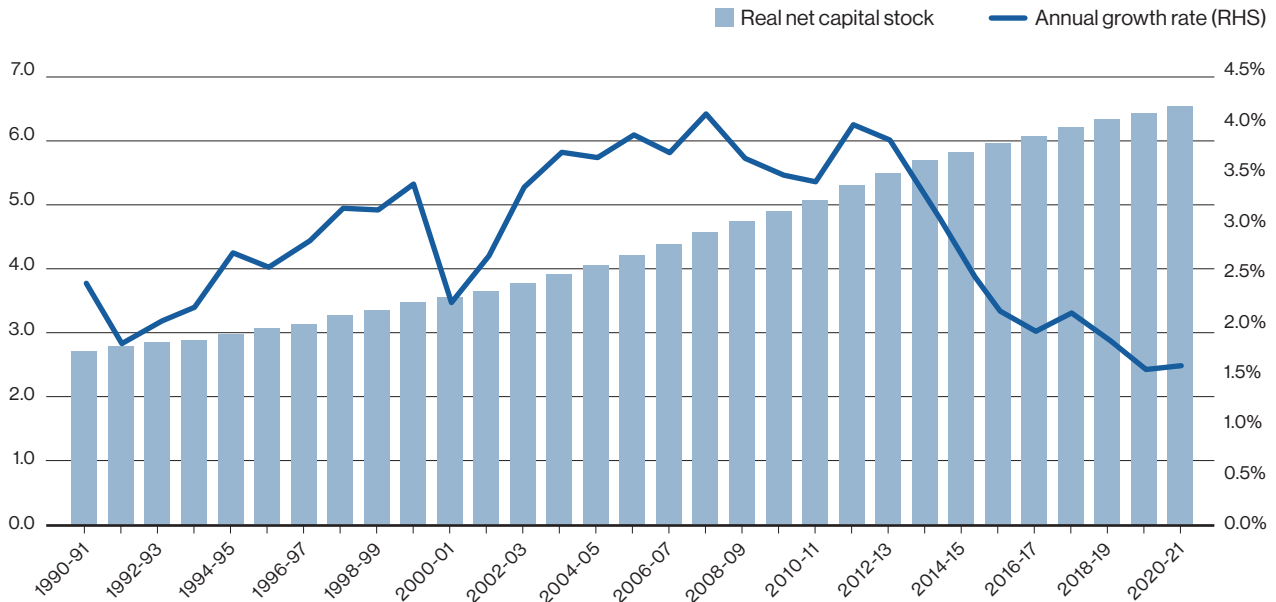


Source: ABS, *Estimates of Industry Multifactor Productivity*, released 13 December 2021

CHART 3

Net capital stock, all industries

A\$ billion (LHS), Annual growth rate (RHS)

Source: ABS, [Australian System of National Accounts](#), released 29 October 2021

The importance of capital investment for productivity growth.

Through its contribution to capital deepening, private sector capital investment is an important component of productivity growth and, therefore, economic growth.¹⁰ If capital investment enables more to be produced relative to a given amount of inputs, productivity is improved. It is both the amount of capital available and embodied innovation that enables a larger quantity of output for each worker.

The long term contribution from capital investment to productivity growth highlights why Australia must remain internationally competitive at attracting investment. Achieving strong growth in business investment has been a long-term challenge for Australia, but as shown in chart 4 over the last two decades the mining industry's contribution was significant.

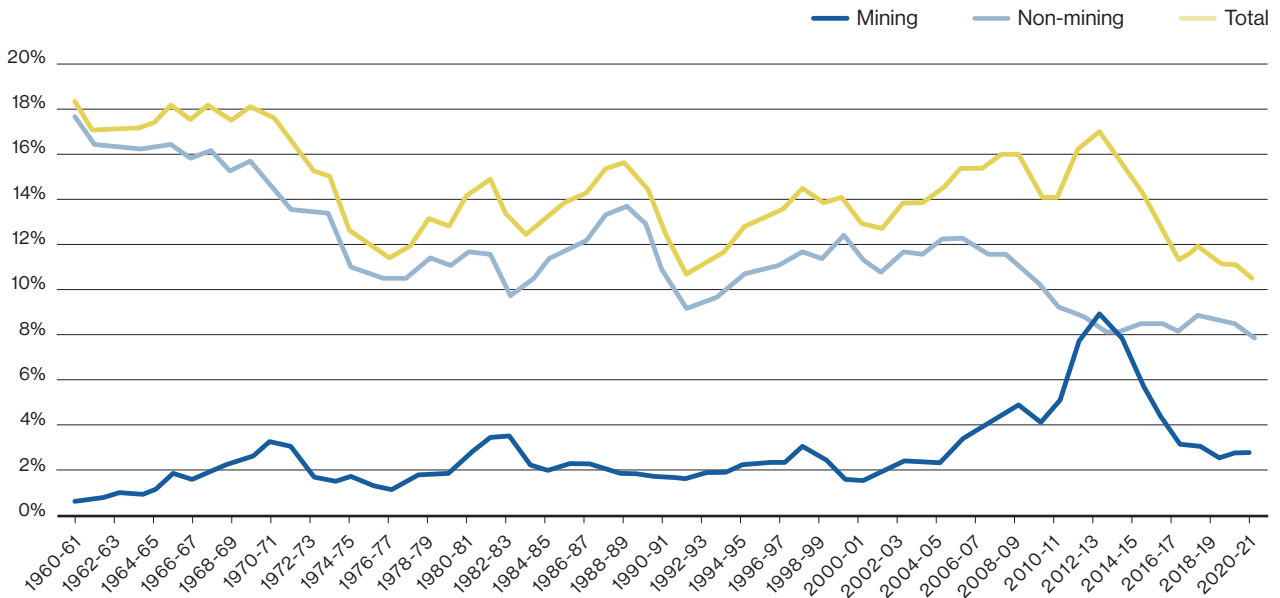
From the early 2000s private sector capital investment as a share of the economy grew by about 4 percentage points reaching 17 per cent in 2012-13¹¹, which marks the end of the large expansion in mining investment. During that period, mining's contribution to capital investment grew from 12 per cent to 52 per cent.¹²

Since 2012-13, capital investment's contribution to economic activity declined by 6.5 percentage points to 10.4 per cent in 2020-2021, and mining's contribution to all business investment has fallen to 25 per cent.¹³ Although mining's share of business investment declined during the last decade, as shown in chart 4, the contribution from non-mining investment has been trending down since the early 1960s. Between 1961 and 2021, the share of non-mining investment fell by 10 percentage points, while the share of mining investment increased 2 percentage points.¹⁴

The last decade has also seen Australia going from one of the best performing OECD countries for private sector capital investment to one of the poorest performing.¹⁵ In the absence of another mining investment boom, or something similar, Australia is at risk of experiencing continued weakness in business investment, which in turn will further weaken capital deepening and be a drag on productivity growth.

CHART 4

Private sector capital investment Annual growth rate



Source: ABS, [Australian System of National Accounts](#), released 29 October 2021

Mining investment is a key driver of Australia's productivity growth.

The role of Australian mining in determining the economy's productivity performance cannot be overstated. The mining industry contributed 21 per cent of GDP growth from 2011-12 to 2020-21.¹⁶ Given mining's substantial contribution to economic growth, the decline in the sector's productivity from 2011-12 is a key factor affecting broader market sector productivity over the last decade (see chart 2).

Chart 5 highlights that during this period there was a large decline in the contribution from capital services to mining's output growth, which is a function of the sector's growth in capital investment.

There are currently over 100 prospective mining and processing projects totalling about \$50 billion of investment and potentially providing around 30,000 construction jobs and 20,000 operating jobs.¹⁷ While in terms of policy perception and mineral potential Australia is ranked the most attractive region in the world for mining investment,¹⁸ converting perception into actual investment greatly depends on policy settings that affect the return on investment.

As shown in chart 6, the net capital stock of the resources sector has increased almost fourfold since the start of this century to reach \$929 billion in 2020-21.¹⁹

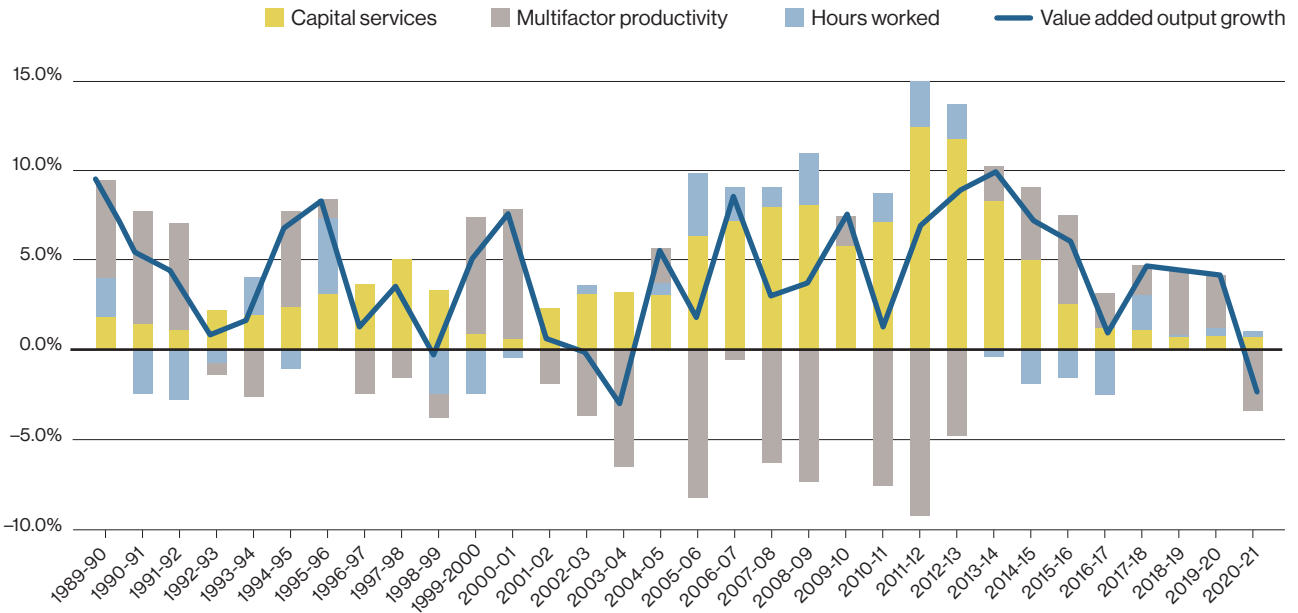
The main factor driving this investment was the expansion in mining from the early-2000s to 2013. Since the peak of the mining boom, the decadal economic contribution from the significant capital investment made has been substantial, including \$2.2 trillion in resources export revenue,²⁰ \$249 billion in mining wages,²¹ and 21 per cent of Australia's GDP growth.²² Over this period the industry also generated large fiscal returns, contributing \$142 billion in company taxes and \$112 billion in royalties.²³

While the outlook for demand for the mineral and energy commodities Australia produces is strong,²⁴ a substantial increase in capital investment in mining is needed if Australia is to seize the opportunity.

CHART 5

Contributions to mining sector output growth
Annual growth rate

Weak mining investment is impacting the sector's output growth



Source: ABS, [Estimates of Industry Multifactor Productivity](#), released 13 December 2021

The minerals industry's long-term success depends on exploration and, in particular, the discovery of large deposits of global significance. From 2012 to 2021, expenditure on mineral exploration totalled \$24 billion with the majority spent on existing deposits (about twice the amount spent on exploring for new deposits), and the largest shares of expenditure targeted at gold (35.1 per cent), followed by iron ore (21.4 per cent), coal (12 per cent), copper (11.6 per cent) and nickel and cobalt (6.6 per cent).²⁶ Over the period, as a share of total exploration expenditure, gold increased by 24 percentage points and copper by 4 percentage points, while the shares of iron ore and coal declined by 16 and 13 percentage points, respectively, and nickel and cobalt's shares hardly changed.

As a result of the large increase in capital stock from investment during the mining construction boom, the production of some mineral and energy commodities has increased significantly. For example, from 2011-12 to 2020-21, production of iron ore increased by 81 per cent, bauxite by 41 per cent, gold by 30 per cent and coal by 11 per cent.²⁷

However, not all commodities have benefited.

Over the last decade, Australia's copper production declined by 12 per cent and nickel production declined by 50 per cent, while globally copper production increased by 25 per cent and nickel production by 36 per cent.²⁸ It is important to note that over the past twenty years both Australia's copper and nickel mine production as shares of global production have declined by 3 percentage points and 12 percentage points, respectively. This has occurred even though Australia ranks second in the world for copper resources and has 22 per cent of the world's nickel resources.²⁹

Exploration expenditure and mine production once again highlight that mineral potential alone is not enough to attract major new capital investment in mining.

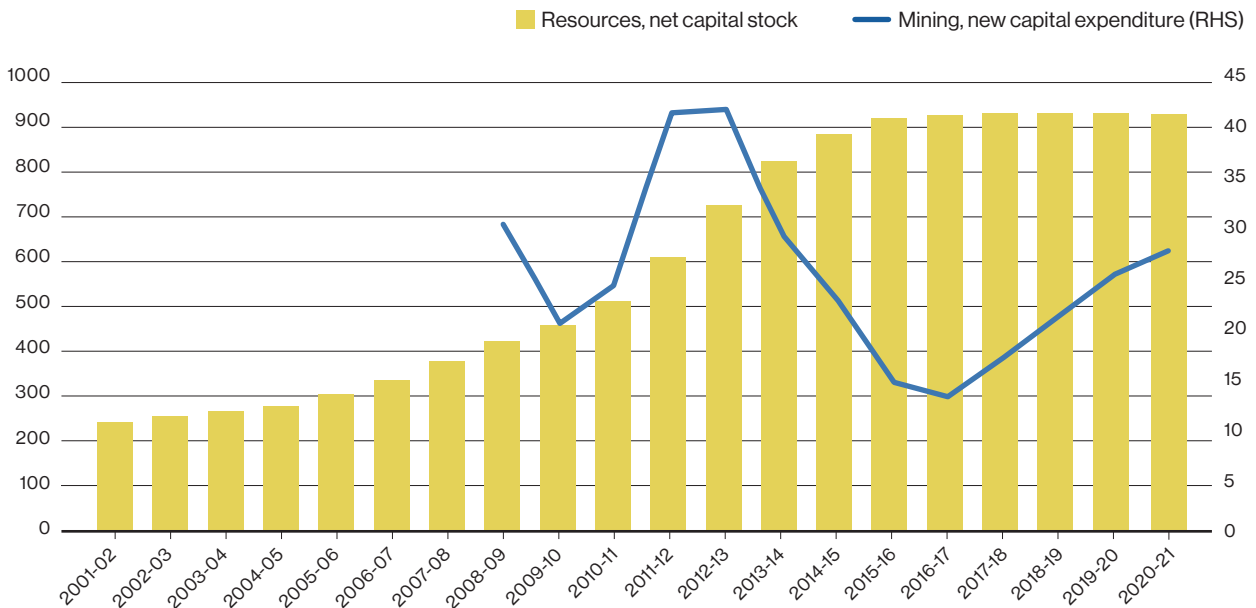
Despite the minerals industry investing \$257 billion over the decade following the end of the mining boom, the resources sector's net capital stock (which also accounts for depreciation) has plateaued since about 2015-16 (chart 6).³⁰ The increase in new mining investment over

CHART 6

Resources sector capital stock and mining new investment

A\$ billion (LHS, RHS)

The resources sector's capital stock is not growing



Source: ABS, *Australian System of National Accounts*, released 29 October 2021; ABS, *Private New Capital Expenditure and Expected Expenditure*, released 25 November 2021

the subsequent five years had no impact on increasing the sector's net capital stock.³¹ A factor that is likely to explain the lack of growth is that an increasing share of capital expenditure was on mining equipment plant and machinery, which includes spending on sustaining capital, compared to expenditure on new additional buildings and structures.³² Hence, over recent years relatively less capital investment is going into new projects.

International investment to fund exploration, develop and sustain job-creating projects and gain access to new technologies, skills and capabilities has helped mining become the Australia's most successful global industry. However, over recent years there has been a slowdown in foreign direct investment (FDI) in the resources sector. In 2021, \$4.5 billion of FDI flowed into the resources sector bringing the level of investment from FDI to \$361 billion.³³ Over the last five years FDI in mining and quarrying only increased by 3 per cent (the second worst performing industry) and has been volatile ranging from an inflow of \$19.7 billion in 2017 to an outflow of \$8.9 billion in 2020.

Although the minerals industry makes an important contribution to productivity growth through capital investment, it 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 and regions such as Africa, South America and Canada as sources of supply.

The minerals industry has demonstrated its ability to be a major contributor to Australia's private sector capital investment and productivity growth owing to the expansion of mining that began in the 2000s. The industry can again make a substantial contribution to lifting productivity if policy settings make Australia a competitive destination for large-scale investment in mining and minerals processing projects.

Australia needs an effective productivity agenda.

Reversing Australia's weak productivity performance presents a significant opportunity for the government. The structure of the Australian economy and the important long-term contribution from capital investment to productivity growth, means that ensuring Australia is competitive at attracting investment is fundamental to supporting sustainable, strong economic growth.

A decade after the end of the last mining construction boom, Australia has the chance to undergo another expansion in mining to supply the growing global consumption of mineral and energy commodities arising from increasing urbanisation and incomes, and the transformation to net zero emissions and technology-led productivity growth. Achieving this requires an effective productivity agenda that delivers the supply-side reforms to ensure Australia has internationally competitive tax settings, expanded trade and investment opportunities, efficient and effective regulatory settings, practical and beneficial workplace relations rules, an efficient transformation to net-zero emissions, and industry focused skills and training.

Improving the productivity performance of Australian mining requires:

- Stable and internationally competitive tax settings to attract investment in innovative, lasting and large-scale projects in mining, minerals processing and mining-related manufacturing
- Greater access to international markets and recognition of Australia's high quality, responsibly-mined and processed minerals and metals to drive growth in jobs and wages
- Better coordinated approval processes and more efficient national environmental regulation, to boost investment and jobs in mining and minerals processing, while upholding high environmental standards
- An effective workplace relations system to balance the imperatives of competitiveness, innovation and productivity growth with the need to maintain a strong safety net
- Technology-neutral, cost-effective emissions reduction policies, which take account of industry competitiveness, to enable Australian mining to continue reducing its emissions and achieve the goal of net zero by 2050
- Government and providers partnering with industry to develop a skilled workforce to support innovation and productivity for the current and future needs of the economy.

Policies that improve productivity and competitiveness and hence, attract investment, are integral to Australia maintaining its comparative advantage in mining and minerals exports, and expanding minerals processing and mining-related manufacturing, which will ultimately benefit all businesses, households and workers.

Endnotes

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- ¹⁴ *ibid.*
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- ²⁸ *ibid.*
- ²⁹ *ibid.*
- ³⁰ Australian Bureau of Statistics, *Private New Capital Expenditure and Expected Expenditure, Australia – Table 19: Mining and Manufacturing subdivisions by Type of Asset - Current Prices \$m*, September 2021, released 25 November 2021.
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