

Ai GROUP SUBMISSION

2019-20 FEDERAL BUDGET SUBMISSION

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Contents

1.	Summary and Recommendations	4
2.	Economic Outlook for Australian Business	9
2.1	Australian economy in 2018: a year of two speeds	9
2.2	Australian economic outlook: soft landing expected for 2019	17
2.3	Global outlook, challenges and risks in 2019	23
2.4	Australian global competitiveness in 2019	25
3.	Fiscal position	30
4.	Taxation Reform	32
5.	Skills, Education and Training Policies	37
5.1	Strategy to meet emerging skill needs	37
5.2	Developing Australia's STEM (STEM) capabilities	41
5.3	Investment in continuous learning by existing workers	43
5.5	Reform of Australia's apprenticeship system	47
5.6	Investment in Australia's VET system	52
5.7	Connecting higher education	54
5.8	Towards a better-connected tertiary education system	57
5.9	Addressing youth unemployment	59
6.	Developing Australia's business capabilities	62
6.1	Industry 4.0	62
6.2	Digital capabilities	62
6.3	Cyber security capabilities	63
6.4	Improving Australia's export capabilities.....	65
6.5	Improving Australia's defence industry capabilities.....	66
6.6	Energy and environment policy priorities	67
7	Innovation and Commercialisation Policies	70
8	Annual skilled migration program	72

About Australian Industry Group

The Australian Industry Group (Ai Group) is a peak industry association in Australia which along with its affiliates represents the interests of more than 60,000 businesses in an expanding range of sectors including: manufacturing; engineering; construction; automotive; food; transport; information technology; telecommunications; call centres; labour hire; printing; defence; mining equipment and supplies; airlines; and other industries. The businesses which we represent employ more than one million people. Ai Group members operate small, medium and large businesses across a range of industries. Ai Group is closely affiliated with more than 50 other employer groups in Australia alone and directly manages a number of those organisations.

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1. Summary and Recommendations

The domestic economy is slowing. Uncertainties about the direction of the global economy and the prospect of further falls in trade volumes are creating international headwinds. And there are significant domestic risks arising from high household indebtedness, falling residential property prices, a constrained credit outlook and the impacts of high energy prices on key industrial sectors.

Jobs growth has been strong, the unemployment rate is lower than anticipated, participation rates are high and reports of skill shortages are becoming more widespread. Nevertheless, there are still clear frailties in the labour market with high rates of underemployment persisting and with youth unemployment and underemployment remaining high.

While December's Mid-Year Economic and Fiscal Outlook (MYEFO) showed a welcome improvement in Australia's fiscal position and heralded the return to structural budget surpluses, the size of the projected surpluses suggests that further acceleration of fiscal consolidation will be required to repay the stock of public-sector debt and rebuild a fiscal buffer that would restore our fiscal resilience.

There is a risk that slower growth could undercut some of the MYEFO estimates of tax collections in 2018-19 and 2019-20. In this circumstance, while there is still a substantial medium-term task of fiscal consolidation ahead, Ai Group would favour accepting a slower pace of fiscal consolidation in the 2019-20 year rather than risk adding to the slowdown in momentum and further exposing the frailties in the labour market by tightening fiscal policy in an attempt to preserve the thin surplus estimated for 2019-20.

Inflation remains below the Reserve Bank's target. Real wage growth appears to be rising gradually but with a muted near-term outlook for the pace of productivity improvements, in most parts of the economy further rises in real wages could only come at the expense of already-flat profitability.

In this environment Ai Group proposes modest and targeted allocations to underwrite medium to longer-term productivity growth and to reinforce social cohesion with measures to address entrenched youth unemployment and underemployment.

- Skills, education and training - including as a means of addressing some of the structural barriers to employment of segments of the workforce (particularly young people);
- Business capability development; and
- Innovation and commercialisation.

A further priority should be to maintain the current permanent migration target. There are growing skill shortages across a range of industries and occupations and cutting back would constrain domestic activity.

Policy Recommendations

Skills, Education and Training Policy

- Invest in a renewed national skills forecasting system that incorporates increased regularity of reporting and assesses against broad sets of competencies.
- Implement a national workforce strategy that provides industry-relevant workplace opportunities for students by coordinating partnerships between industry and the school and post-secondary education sectors.
- Develop and effectively resource a national STEM skills strategy in conjunction with industry to expand the STEM-qualified workforce.
- Implement measures to increase the level of STEM participation in the VET sector, especially through apprenticeships and traineeships relevant to STEM skills.
- Develop specific measures to expand the STEM workforce in SMEs through cluster/network models.
- Provide incentives for industry, focussing on SMEs, to assist with workforce planning to continue re-skilling its transitioning workforce.
- Build capability for continuous learning in individuals through the curricula frameworks and teaching and learning practices of all education and training sectors.
- A national foundation skills strategy needs to be provided with a sufficient budget to support workforce literacy and numeracy programs.
- The Government commence discussions with industry and other appropriate stakeholders about the development of a new workplace LLN program.
- Review Commonwealth employer apprenticeship incentives to include high skill (Diploma-level) traineeships that are Non-NSNL non-priority occupations.
- Fund the ongoing development and rollout of the Industry 4.0 Higher Apprenticeship.
- Encourage new employers of apprentices or employers with a poor track record of apprenticeship completions to participate in a workshop for apprentice supervisors to become eligible for Commonwealth incentives.
- Facilitate direct industry and employer engagement by establishing a national body to oversee the apprenticeship system, including the Skilling Australians Fund. The oversight would include programs for which each state has powers to declare apprenticeships and determine funding levels.

Australian Industry Group Submission to the 2019-20 Federal Budget

- Provide targeted funding of GTOs to support their activities to help disadvantaged groups, and to help SMEs participate in the apprenticeship system, similar to the previous Joint Group Training Program.
- Initiate a review of school-based apprenticeships to determine the reasons for low levels of participation and to develop strategies to facilitate greater participation by schools and industry.
- Implement measures to achieve full national consistency for all apprenticeships across Australia, including consideration of an oversighting body to ensure programs and arrangements meet current and emerging occupational needs.
- The Commonwealth and COAG should address declining investment in VET and increasingly uneven investment across jurisdictions, by examining the possibility of moving towards a nationally funded and nationally operated tertiary education system.
- Commit further resources to the incorporation of higher order skills development within VET qualifications.
- Fund pilots which examine a range of innovative models of connecting between industry and higher education providers, with the view to establishing new models of learning.
- Implement incentives to assist SMEs provide opportunities for higher education students to experience the workforce and develop broad enterprise-focussed capabilities.
- Investigate the establishment of a national independent coordinating agency to provide overall policy coherence for tertiary education.
- Establish a more equitable funding arrangement for tertiary education with the first priority to address the decline in the funding for the VET sector.
- Review the range of student loan schemes with a view to establishing a single, universal and more equitable system.
- Increase investment in programs that prepare students for work and transition to the post-compulsory years while at school.
- Fund programs to help young people deal with health and wellbeing challenges faced when moving out of the school environment.
- Fund transition programs for unemployed young people that increase involvement by industry through work-based activities.

Developing Business Capabilities

- The Entrepreneurs' Programme should continue to scale up in line with business demand and economic opportunity.

Australian Industry Group Submission to the 2019-20 Federal Budget

- The Government should sponsor a public program targeted to SMEs to provide advice on options and facilitate their investment in digital capabilities. This should build on and complement the bDigital service available to clients of the Entrepreneurs' Programme.
- Given the rapidly evolving state of cyber threats and attacks, it is essential that our law enforcement bodies are sufficiently resourced, not only for protecting our national security, but also to protect business and consumers against global cyber crime.
- It is critical that there is better collaboration between government and industry to tackle cyber security. Collaboration enables sharing of information about threats and helps build an innovative industry. In this context, Ai Group is working with our members to help them overcome these barriers, and we are open to working with industry and government to this end.
- While the recently introduced encryption legislation requires amendment, businesses in the meantime are struggling to understand its implications for their legal and contractual obligations, regulatory costs and global competitiveness. The Government needs to fund outreach and information resources to address this.
- Resource Austrade appropriately so it has the skills and resources to support Australian companies to access global value chains and to invest abroad.
- Increase the availability of one-on-one support for new and emerging exporters.
- Progressively increase the budget allocation for Export Market Development Grants (EMDG) by \$12.4 million per year over the next three years to \$175 million.
- Maintain the Defence funding path as set out in the previous budget, with an underlying commitment to grow to two per cent of GDP by 2020-21.
- Continue robust implementation of Australian Industry Capability plans in major Defence acquisition programs.
- Finalise and implement key supporting Defence industry policies, including the Defence Sovereign Industrial Capability Priority implementation plans, the Defence Policy for Industry Participation and the Skilling and STEM strategy to support the training and skilling of Australia's workforce to manage the ramp up of defence industry.
- Provide additional transparency of the Government's Defence investment plans through on-line access to the Integrated Investment Program.
- Refresh the National Energy Productivity Plan and facilitate the provision of finance for energy efficiency in SME industry and rental properties.
- Back the National Hydrogen Plan under development by the COAG Energy Council with finance for research, commercialization, skills and supporting infrastructure.
- Bolster the Emissions Reduction Fund with at least a further \$200m per year over four years as a stopgap while further climate policies are developed.

- Develop a program to support SME resource efficiency through information and the facilitation of funding.

Innovation and Commercialisation Policy

- Control the costs of the R&D Tax Incentive by adopting a \$2m cap on the refundable element and investing in smarter systems to scrutinize claims. Do not proceed with the previously proposed stepping of the R&DTI rate based on research intensity, which would amount to a substantial across-the-board reduction in support for innovation and not provide meaningful incentives. Commit to maintaining broad stability for the overall R&DTI.
- Provide additional funding of Defence research and development and innovation programs to help boost the ADF's capability edge, including a review of the national security innovation system as a whole.

Migration Policy

- The annual permanent migration planning level should be maintained at the current cap of 190,000.
- Stronger priority should be given to the skilled migration stream within the permanent migration program and especially to the demand-driven components of skilled migration.

2. Economic Outlook for Australian Business

2018 was a year of two distinct halves for Australian businesses. The first half of 2018 saw a welcome acceleration in business output, sales, employment and investment in response to improving global and local conditions. In the second half of 2018 however, global growth was decelerating again, under the weight of heightened trade tensions, geopolitical risk and slower industrial activity in China. Locally, Australia's growth looked relatively resilient and more broad-based than in the past, with a greater range of locations and industries growing their output and employment in 2018. This was supported by strong export earnings, high levels of public sector spending and investment (e.g. for large long-term programs such as the National Disability Insurance Scheme and urban transport infrastructure expansion and renewal) and relatively robust population growth. These positive factors were countered somewhat by ongoing weakness in consumer spending and business investment, long-term weakness in productivity growth and, more recently, by a shift downwards in residential property prices and construction rates.

For many businesses, higher input costs - and especially higher energy input costs - ate into margins in 2018, taking the shine off the increases in output and turnover that they were able to generate, and reducing their ability to invest. This year's annual Ai Group survey of Australian CEOs indicates that although 57% of CEOs reported an increase in turnover in 2018, only 41% improved their profit margins. 39% reported a fall in their margin in 2018. One third of CEOs said their general business conditions improved in 2018 versus one quarter who saw a deterioration, relative to one year earlier. In short, 2018 was a better year for many Australian businesses but it was not the 'stellar year' that had been hoped for.

2019 is expected to be a touch slower for Australian businesses than was experienced in 2018, and a touch slower than was previously expected for 2019. This reflects the very recent deceleration that is evident across local and global indicators in recent months plus the increasing range of risks on the horizon. This moderation in the outlook is apparent in the economic forecasts as well as in business leaders' expectations, plans and strategies. Heading into 2019, Ai Group's annual CEO survey reveals fewer CEOs are feeling optimistic about their general business conditions in 2019 than one year earlier. Indeed, on a net balance basis (optimists minus pessimists), fewer CEOs expect an improvement in business conditions in 2019 than in any year since 2015. This largely reflects their experiences in 2018 and especially the second half of 2018.

2.1 Australian economy in 2018: a year of two speeds

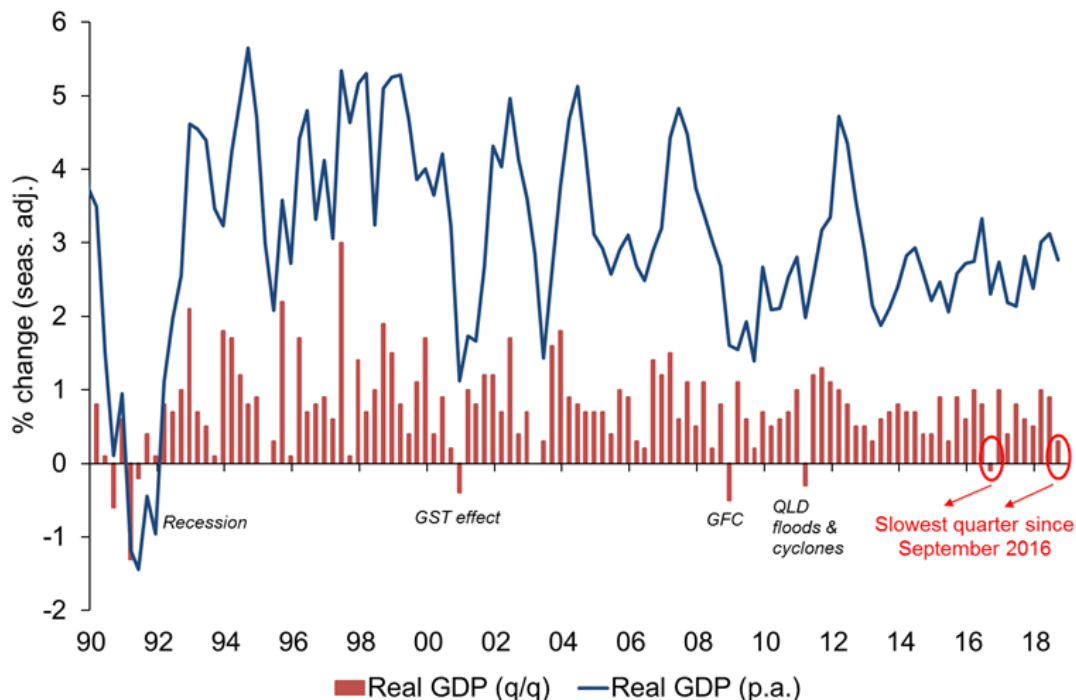
2018 was a year of two distinct halves for the Australian economy. The first half of 2018 saw a mild but welcome acceleration in activity, employment, business incomes and investment, in response to improving global and local conditions. In early 2018 commodity prices recovered but the Australian dollar stayed low; population growth supported residential development and major infrastructure projects; output increased across all industries except agriculture; and a solid run of employment growth pushed participation up and unemployment down, including in regional locations and among older Australians and Australian youth.

Agriculture and other industries in many regional locations were however, adversely affected by protracted drought conditions through NSW and Queensland. Towards the end of 2018 global conditions decelerated, under the weight of heightened trade tensions and geopolitical risk. And locally, the beginnings of a downturn in residential property markets spread across east coast metropolitan areas. These trends and emerging risks during the latter half of 2018 were evident across key data and information sources including the ABS regular economic indicators (GDP, CAPEX, employment), Ai Group’s monthly business surveys and the Ai Group annual CEO Business Prospects survey for 2018-19.

Australian output growth in 2018

2018 marked 27 years since Australia last experienced a recession (1991), setting a modern record among OECD countries. Australia’s real GDP grew at around its long-term average in the first half of 2018 (3.1% p.a. to June 2018) but then slowed in the second half, to 2.8% p.a. to September 2018 (chart 2.1). On the expenditure (demand) side of the economy, growth in 2018 was mainly driven by net exports and government spending and government investment. An early boost to demand from the residential construction boom had faded by mid-year, supplanted by major infrastructure projects. Household spending was the weak link throughout 2018, constrained by slow incomes growth and high housing debt.

CHART 2.1 Real GDP, annual and quarterly growth, 1990 to Q3 2018

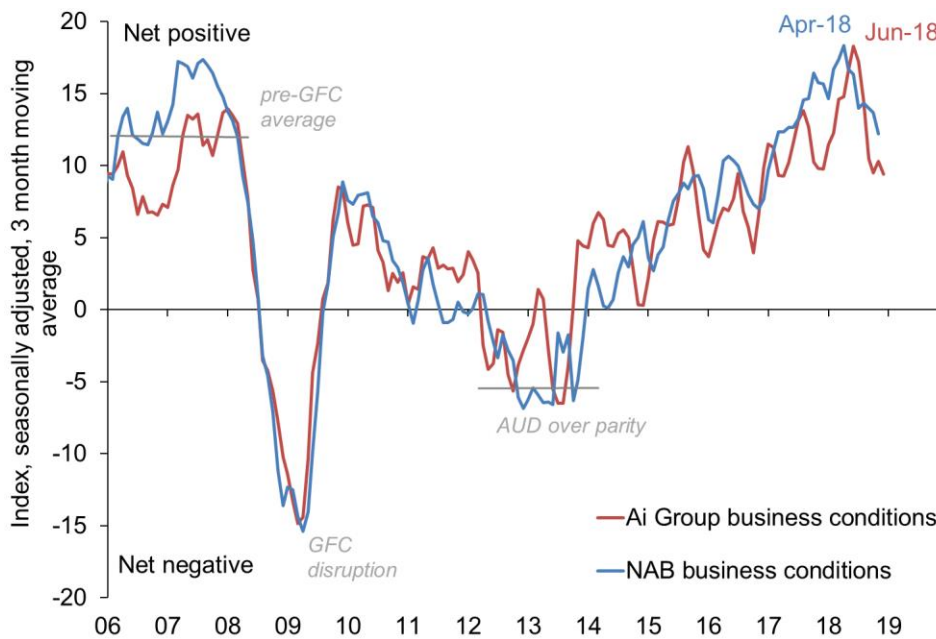


Source: ABS, *National Accounts*, Sep 2018.

The two-speed nature of 2018 is more evident in the monthly surveys of private sector business conditions conducted by Ai Group and the National Australia Bank (NAB). Both of these data series clearly show business conditions (reflecting a composite of sales, profitability, exports, forward orders and employment) improving through 2017 and into early 2018. Both series show a peak

during Q2 of 2018, with decelerating – but not yet net negative – conditions through Q3 and Q4 of 2018 (chart 2.2).

CHART 2.2 Australian business conditions: Ai Group and NAB surveys, to Dec 2018



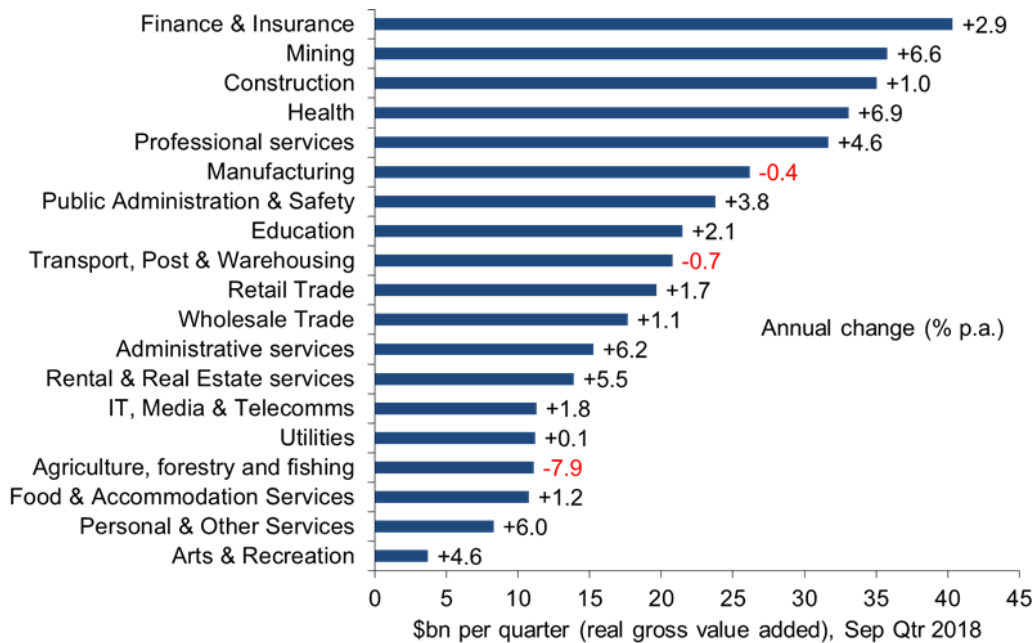
Sources: Ai Group Australian PMI, Australian PSI and Australian PCI; NAB Monthly Business Survey, to Dec 2018.

In line with improving local economic conditions in the first half of 2018, Australian CEOs participating in this year’s Ai Group Business Prospects survey reported a broadly positive year. In 2018, a greater proportion of Australian CEOs reported improved performance and higher spending on investment. Interestingly, more than half of respondents noted higher turnover in 2018 (57%) but only 41% of respondents reported improving profit margins, with almost the same amount reporting falling profit margins (39%). This can be at least partially explained by a high proportion of respondents reporting increased inputs costs, especially regarding energy prices. Gas and electricity prices increased to record highs in 2017, before easing partially in 2018. Most businesses commit to energy contracts of more than one year, and price increases take time to filter through, so many businesses may find themselves negotiating energy contracts that are much higher than their previous contract. Steep energy price rises are proving difficult to pass on to customers and are squeezing margins across a wide range of industries.

All industries except agriculture grew their output in the year to June 2018, but industrial sectors lost some ground in the second half of 2018. Growth was strongest in 2018 in healthcare (reflecting growth in the National Disability Insurance Scheme and other public sector programs) and in services industries linked to real estate and/or large infrastructure projects. Output stumbled in Q3 however, across all of the industrial-related sectors including construction, manufacturing, mining, utilities, agriculture, transport and telecommunications. Agricultural output was clearly affected by drought in 2018 (down by 1.6% q/q and 7.9% p.a. in Q3), due to reduced grains and other crops. (chart 2.3).

As always, some states performed better than others in 2018. Population growth, housing demand and government infrastructure projects all supported stronger activity in the large eastern states. NSW and Victoria enjoyed stronger jobs growth and lower unemployment rates than other states throughout 2018. A recovery in global commodity prices benefited Western Australia and, to a lesser extent, Queensland.

CHART 2.3 Real output size and growth, by industry, Q3 2018



Source: ABS, *National Accounts*, Sep 2018.

Australian income growth in 2018

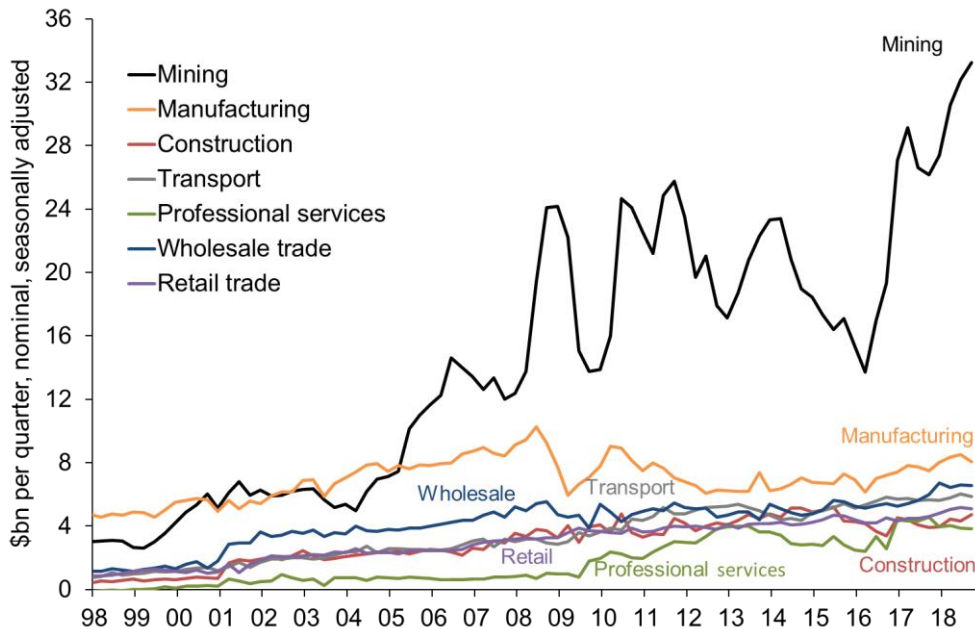
National income is influenced by more than just output volumes. The terms of trade is also a key factor. As of September 2018, recovering commodity prices had lifted Australia’s terms of trade by 2.7% p.a.. This helped push up real gross domestic income (GDI) by more than just output alone; real GDI rose by 0.4% q/q and 3.4% p.a., compared to 0.3%q/q and 2.8% p.a. for real GDP.

Nominal income growth was spread across all categories of income, including employees, financial corporations (banks, building societies, superannuation funds and related entities), non-financial private corporations and dwelling owned by individuals in 2018. The share of total income derived from each type of income remained relatively stable over the year, at 52% for employees, 20% for private sector non-financial corporations, 6.7% for private sector financial corporations, 9.6% to small businesses and self-employed individuals and 8% in rents earned from dwellings owned by individuals.

That said, income growth is extremely uneven across major industries, with most of the growth in aggregate company profits accruing to the mining sector. Nominal gross operating profits (GOP) in mining grew by 27% in the year to Q3 2018, accounting for 64% of all of the increase in profits and rising to 37% of all GOP earned in that year. Nominal GOP in the non-mining sectors grew by a modest 1.0% q/q and 6.8% p.a. in Q3. In contrast, nominal GOP in manufacturing fell by 5.1% q/q

to \$8.1 billion in Q3 2018, well below the industry's high point of \$10.1bn, which it reached just before the GFC in June 2008 (chart 2.4).

CHART 2.4 Nominal aggregate company profits in industrial & related sectors, to Q3 2018



Source: ABS, *Business Indicators*, Sep 2018.

Australian productivity growth in 2018

Productivity growth remains weak and patchy in 2018 and in the current ‘productivity cycle’. Across all of the industries for which productivity estimates are available, labour productivity fell by 1.3% in 2017-18 and multifactor productivity fell by 0.3%, on a quality adjusted hours worked basis. Over the latest (incomplete) productivity cycle since the last peak in 2011-12, labour productivity growth has averaged 1.0% p.a. and multifactor productivity has averaged 0.3% p.a. (chart 2.5).

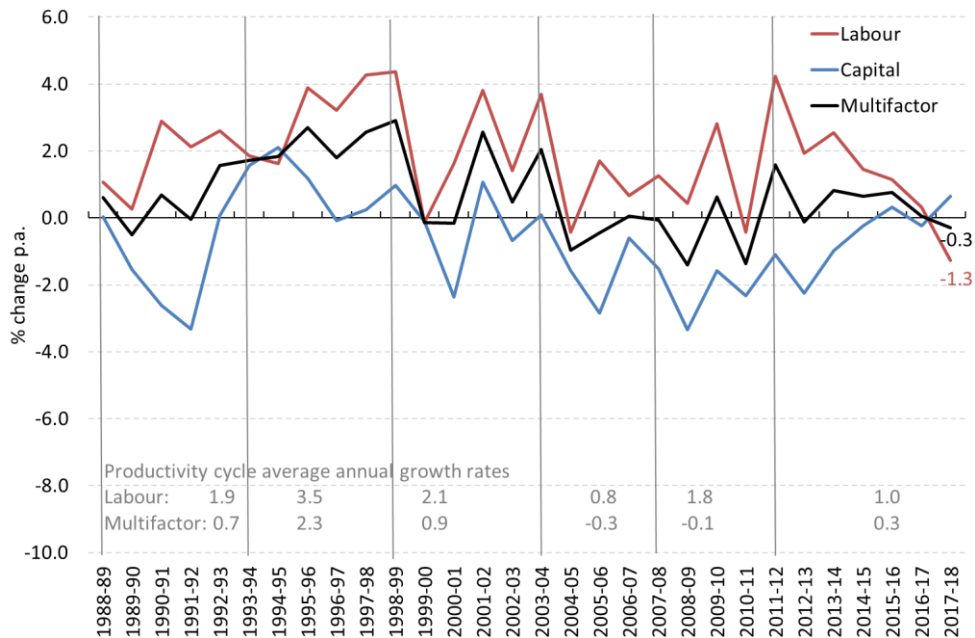
Reflecting this weakness in recent productivity growth, GDP growth per capita fell by 0.1% in Q3 2018 (to be up by just 1.2% p.a.) and gross value added output per hour worked dropped by 0.1%, to be up by just 0.6% over the year to Q3. This failure to generate meaningful productivity growth has weighed on real incomes over an extended period, and continues to do so. It implies a greater reliance on export prices, population growth and labour participation as key supports for Australia’s output and income growth.

Australian employment growth in 2018

The labour market tightened somewhat in 2018. Full-time employment has grown for two years, with an average increase of 20,300 per month. Part-time employment accounted for 31.5% of the workforce in October 2018, down from a record high in earlier 2018. In trend terms, the national unemployment rate fell to 5.1% by October 2018, its lowest level since June 2011. Most positively, the youth unemployment rate (for those aged 15-24 years) fell to 11.2% in October 2018 from a recent peak of 14.1% in November 2014. This was the lowest youth unemployment rate since the

GFC began to bite in 2008. The underemployment rate (that is, the proportion of the labour force who are working but able to work more hours) remained at 8.3% in October, which is relatively elevated by historical standards. This indicates a greater degree of ‘spare capacity’ in the labour market than is evident from the unemployment rate alone. This spare capacity continues to weigh on wage growth, albeit more lightly than in recent years.

CHART 2.5 Productivity growth, all selected industries*, 1988-89 to 2017-18



* Quality adjusted hours worked basis, for all industries for which estimates are available. Source: ABS, *Estimates of Industry Multifactor Productivity*, Dec 2018.

Stronger employment growth is attracting more people into the labour market and pushing up the national participation rate (those that are working or looking for work). As of October, Australia’s participation rate was 65.60%, just shy of the record high of 65.64% in December 2010 (trend). A strong rise in female participation has more than offset a long-term fall in male participation. This has occurred despite the long-term ageing of our population, which more typically sees participation rates decline.

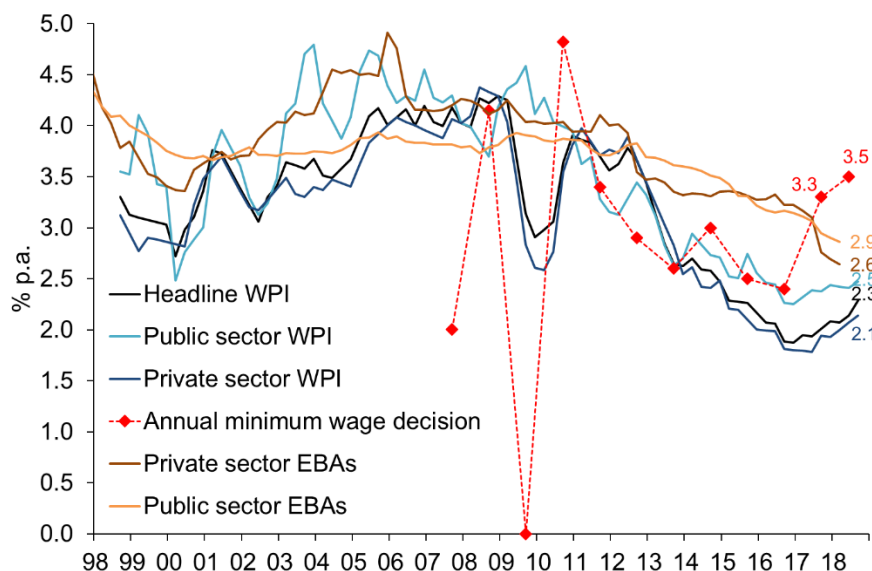
Australian wages and prices in 2018

Wage growth accelerated in 2018, from record slow rates in 2016 and 2017. The ABS Wage Price Index (WPI) for the September quarter (Q3) of 2018 grew by 0.6% q/q and 2.3% p.a. This was its fastest annual growth rate since Q3 2015. The ABS noted that “September quarter wages growth was mainly influenced by increases to the national minimum wage [3.5% in 2018], regularly scheduled enterprise agreement increases, modern awards and salary reviews timed to coincide with the financial year.”

All wage setting methods contributed to wage growth over the year to Q3 2018, suggesting wage growth has lifted from its slowest point in this cycle after reaching a recent low of 1.9% p.a. in 2016. Public sector wages grew by 0.6% q/q and 2.5% p.a. in Q3 2018 and have been stronger than wage increases in the private sector since 2014. Private sector wages excluding bonuses grew by 0.5% q/q

and 2.1% p.a., their fastest annual growth rate since Q2 2015. Private sector wages including bonuses rose by 2.7% p.a. in Q3, which suggests that more firms are now paying higher bonuses instead of raising base rates (for example, in order to retain flexibility and reward stronger performances) (chart 2.6).

CHART 2.6 Australian wage growth indicators, 1998 to 2018



Sources: ABS, *Wage Price Index*, Sep 2018; Fair Work Commission; Department of Jobs and Small Business, *Trends in Federal Enterprise Bargaining*, June 2018.

Inflation remained weak in 2018, with the headline consumer price index (CPI) slowing to 1.9% p.a. in the September quarter of 2018 (Q3), just below the RBA’s target band of 2 to 3% over the cycle. Underlying inflation was slightly lower, easing to its slowest rate since early 2017, at 1.8% p.a., but up from its lowest point in 2016. This deceleration in 2018 reflected modest price rises for housing-related costs such as utilities, rents, property rates and charges, as well as price falls for out-of-pocket childcare services expenses, communications and household equipment and services. On the upside, weak national inflation means that relatively weak wages growth is still enough to generate (very modest) real income growth.

Inflation is not quite so benign however, for all businesses. Input costs are, on average, rising more strongly than output prices for producers of Australian goods and services. Price growth in preliminary (+5.2% p.a.) and intermediate (4.7% p.a.) producer inputs strongly outpaced price growth in producer outputs (+2.1% p.a.) in Q3 of 2018. This ‘growth gap’ between price rises for final products versus preliminary and intermediate inputs indicates that business margins were further compressed in Q3 2018.

In response to this mixed picture – and more particularly, in response to the glacial pace of change in prices and wages - the Reserve Bank of Australia (RBA) left the cash rate on hold at a record low of 1.50% for all of 2018, where it had been since August 2016 (a record length of time with no movement).

Australian well-being in 2018

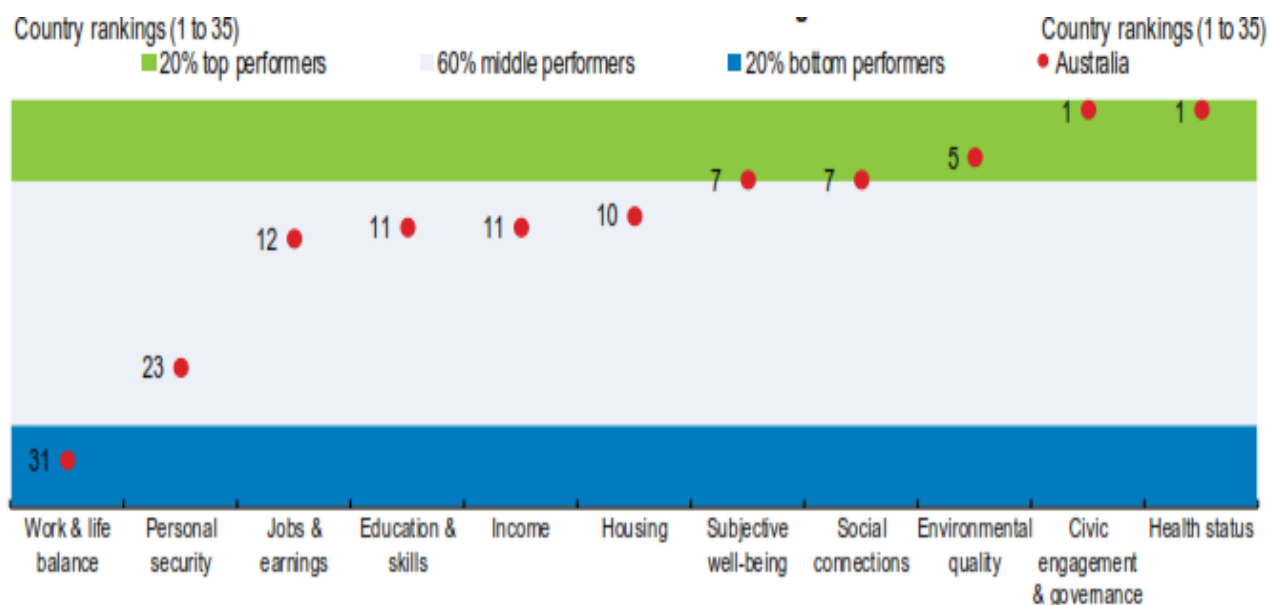
Despite this mixed scorecard of economic factors, the OECD was strongly positive in its latest assessment of Australia’s economic, personal and community well-being (chart 2.7). In Dec 2018 it concluded:

“Australia's long span of positive output growth continues, demonstrating the economy's resilience to shocks. The labour market has been equally resilient, with rising employment and labour-force participation. Life is good, with high levels of well-being, including health, and education.

... During the global financial crisis, comparatively limited exposure, but also good economic management, saw output growth hold up well. Also, the economy's adjustment in the wake of the commodity super-cycle has been reasonably smooth. This good macroeconomic performance has strengthened the country's standing in terms of GDP per capita.

...scores are favourable on many other indicators of well-being. Australia scores particularly well in health status, ranking first among OECD countries with life expectancy of 82.5 years compared with an OECD average of 80.1 years and a high score in self-reported health. It also scores well in terms of air pollution, ranking 5th in the OECD, subjective well-being and social connections (both 7th place in the rankings). Immigration has played a fundamental role in the demographic, economic and cultural development of Australia, and continues to do so with broadly successful integration.” (pp. 6 and 11)

CHART 2.7 Australia’s ranking on OECD indicators of national well-being, 2018



Source: OECD 2018, *OECD Economic Surveys: Australia*. December 2018.

2.2 Australian economic outlook: soft landing expected for 2019

After a stronger period of activity during 2017-18, the Australian economy looked to be slowing again by the end of 2018. Reflecting this deceleration, the latest expectations for growth in 2019 remain cautiously positive but are a touch slower than was experienced in 2018, and a touch slower than were previously expected for 2019. The risk profile has risen, locally (see below) and globally.

Government expectations for 2019

This moderation in the outlook is apparent in the economic forecasts as well as in business leaders' expectations, plans and strategies. In its latest quarterly Statement on Monetary Policy (published in November 2018, before the latest GDP estimates for Q3 2018 had been released), the RBA slightly upgraded its forecasts for GDP growth to 3.5% for the end of 2018. This seems optimistic given the latest data for 2018 to date, despite quarterly volatility and recent revisions to the published estimates. The RBA expects GDP growth to then moderate to 3.25% in 2018-19 and 3.0% by the end of 2020, as production volumes of new resource commodities (mainly LNG exports) come on stream, stabilise and then cease to contribute to growth, albeit at a new, significantly higher level of production volumes (see table 2.1).

As of the end of 2018, Treasury was feeling more circumspect than the RBA about headline GDP growth rates for Australia in 2019, as was the OECD. Treasury forecasts GDP growth of 2.75% in 2018-19 and 3.0% in 2019-20 (and the OECD forecasts 3.0% for the 2019 calendar year), significantly slower than the RBA's forecast of 3.25% in both years (table 2.1). Both central government agencies expect growth of around 3.0% in 2020 and beyond, which is around the long-run average for Australian GDP growth, but rather faster than our average annual growth rate of 2.7% achieved since 2010 (or 2.9% since 2000).

During 2019, the RBA and Treasury expect GDP growth to be supported by large-scale public spending programs that are already under way, particularly for infrastructure projects and the implementation of the National Disability Insurance Scheme (NDIS). They also expect better non-mining business investment, after many years of weak spending. This should help to counter falls in residential investment and building activity after the recent boom of 2018, when construction of new apartments hit an all-time peak.

Strong jobs growth in 2018 may moderate in 2019, but it is still likely to push the unemployment rate lower from the recent rate of 5.1% (as of October 2018). Indeed, unemployment is well on track to falling below the RBA and Treasury's expectation of 5.0% by the end of 2018-19. It has already exceeded the OECDs' estimate of 5.4% by December 2018. This recent tightening in the labour market is already feeding through into wages growth, which bottomed out during 2018 and is now accelerating gently. Ongoing long-term weakness in productivity growth plus slow background inflation (CPI of 1.9% p.a. in Q3 2018) however, means wages growth seems unlikely to accelerate from the current rate of around 2.3% p.a. (Wage Price Index, Q3 2018) all the way to 3.0% in 2019-20 and 3.5% in 2020-21.

A cautious mood among households (encouraged by slow wages growth, high household debt and falling house prices in Sydney, Melbourne and some other cities and regions), means that the key uncertainty in the local economy for 2019 is the outlook for discretionary household spending. Treasury hopes that household spending growth will pick up to 3.0% by 2020 as the labour market

tightens and household incomes rise more strongly, but the OECD is expecting growth in real household spending to slow to just 2.0% over the next two years (in line with its less positive assessment of the labour market).

More positively, exports of services and manufactured goods are expected to keep growing in 2019 and beyond, supported by solid trading partner growth (mainly in Asia) and the depreciation of the exchange rate since the start of 2018. Globally, growth has slowed in some economies but is expected to remain above trend in major advanced economies. The risk of trade disruption and protectionism are increasing however, which could slow global GDP, trade business confidence and investment.

TABLE 2.1 Australian Economy: Latest Annual Growth Rates And Forecasts

RBA SoMP (Nov 2018)	2016-17 e	2017-18 e	2018-19 f	2019-20 f	2020 f	
GDP, % change p.a., year end	1.8	3.1	3.25	3.25	3.0	
Unemployment rate, %, year end	5.6	5.4	5.0	4.75	4.75	
Inflation (CPI), % change p.a., year end	1.9	2.1	2.0	2.25	2.25	
Treasury MYEFO (Dec 2018)	2016-17 e	2017-18 e	2018-19 f	2019-20 f	2020-21 p	2021-22 p
GDP, % change p.a., year average	2.1	2.8	2.75	3.0	3.0	3.0
Household consumption, % p.a., yr ave.	2.6	2.8	2.5	3.0		
Dwelling investment, % p.a., yr ave.	2.8	0.1	1.0	-4.0		
Business investment, % p.a., yr ave.	-4.0	6.0	1.0	5.0		
Employment growth, % p.a., year end	1.9	2.7	1.75	1.75	1.5	1.5
Unemployment rate, %, year end	5.6	5.4	5.0	5.0	5.0	5.0
Inflation (CPI), % change p.a., year end	1.9	2.1	2.0	2.25	2.5	2.5
Wages (WPI), % change p.a., year end	1.9	2.1	2.5	3.0	3.5	3.5
Terms of trade, % change p.a., yr end	14.4	1.9	1.25	-6.0		
OECD (Dec 2018), calendar years	2016 e	2017 e	2018 f	2019f		
GDP, % change p.a., year end	2.6	2.2	2.9	3.0		
Household consumption, % p.a., yr end	2.9	2.7	2.0	2.0		
Dwelling investment, % p.a., year end	8.7	-2.2	-2.1	-2.2		
Business investment, % p.a., year end	-9.5	2.6	3.8	5.3		
Employment growth, % p.a., year end	1.7	2.3	2.0	1.8		
Unemployment rate, %, year end	5.7	5.6	5.4	5.3		
Inflation (CPI), % change p.a., year end	1.3	2.0	2.1	2.3		

e = estimates, as of December 2018. f = forecast p = projection. Sources: ABS various data; RBA Nov 2018 *Statement on Monetary Policy* (SoMP); Australian Treasury Dec 2018, *Mid-Year Economic and Financial Outlook 2018* (MYEFO); OECD Dec 2018, *OECD Economic Surveys, Australia*.

In its latest assessment of the “resilient” Australian economy, the OECD identifies three key risks for 2019:

- Disruptions to the local housing market and residential construction sector, predicated by falling residential dwelling prices in Melbourne and Sydney. The OECD says “*The housing market poses macroeconomic risks. Australia's housing market is a source of vulnerabilities due to elevated prices and related household debt. House prices have fallen, although only gradually since late last year; the current trajectory would suggest a soft landing, but some risk of a hard landing remains*”;

Australian Industry Group Submission to the 2019-20 Federal Budget

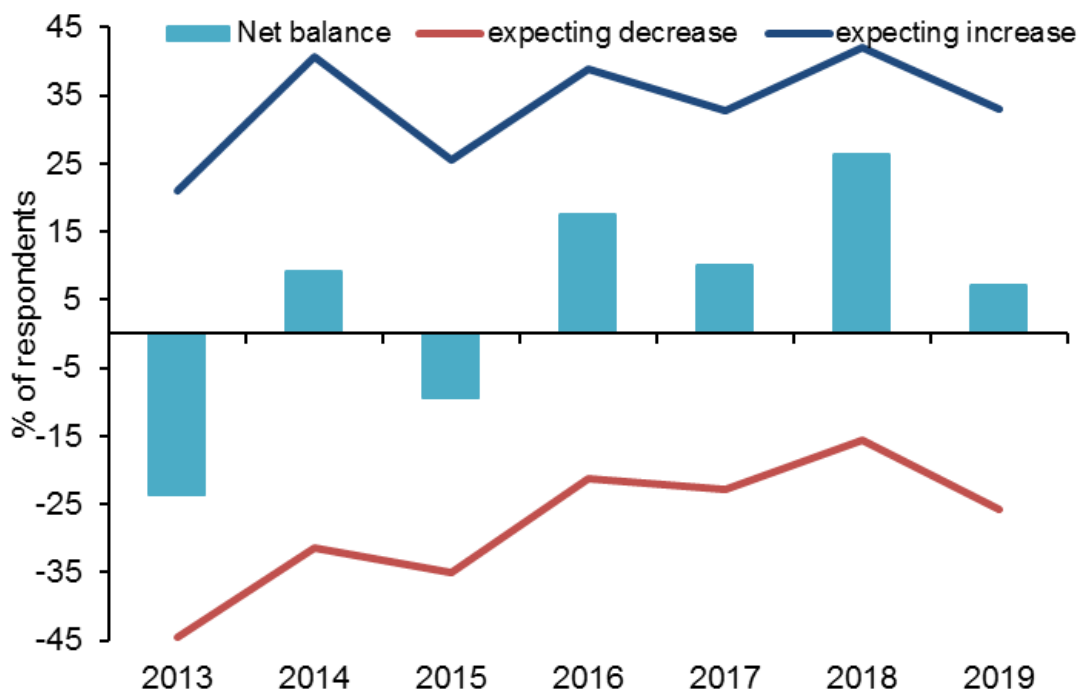
- Disruptions to export markets due to rebalancing policies inside China. The OECD says “Australia’s concentration of exports in commodities is a key element in Australia’s risk profile. Most critical are developments in demand and prices for iron ore and coal, particularly the impact of China’s economy on these. China is also of growing importance for Australia’s trade in services, notably in tourism”; and
- Disruptions to export markets due to an escalation of international trade disputes. The OECD says “the impacts on Australia of higher US tariffs on imports from China and Mexico are probably not large but a widespread increase in tariffs globally could have substantial impact”.

Drought conditions are an additional, short-term drag on output growth in Australia during 2018-19. A Federal election will be held during 2019, which might depress sentiment and delay spending.

Business expectations for 2019

Australian business expectations for 2019 are generally positive, albeit milder than one year earlier (when they were asked about their expectations for 2018) and broadly similar to initial expectations for 2016 and 2017. For 2019, one third of CEOs expect better general business conditions and a further 41% expect no change in 2019. One quarter expect a deterioration in general business conditions (chart 2.8). The single biggest caveat on this mildly positive outlook for most businesses is concern about rising input costs and especially rising energy costs in 2019; 63% of CEOs expecting their input prices to rise and a whopping 68% expecting their energy input costs to rise in 2019.

CHART 2.8 Expected Business Conditions*, 2013-2019



* ‘Net balance’ is the proportion of all survey respondents that improved minus the proportion that deteriorated. Aggregate results include respondents from all surveyed industries and are weighted by ABS estimates of output from each industry.

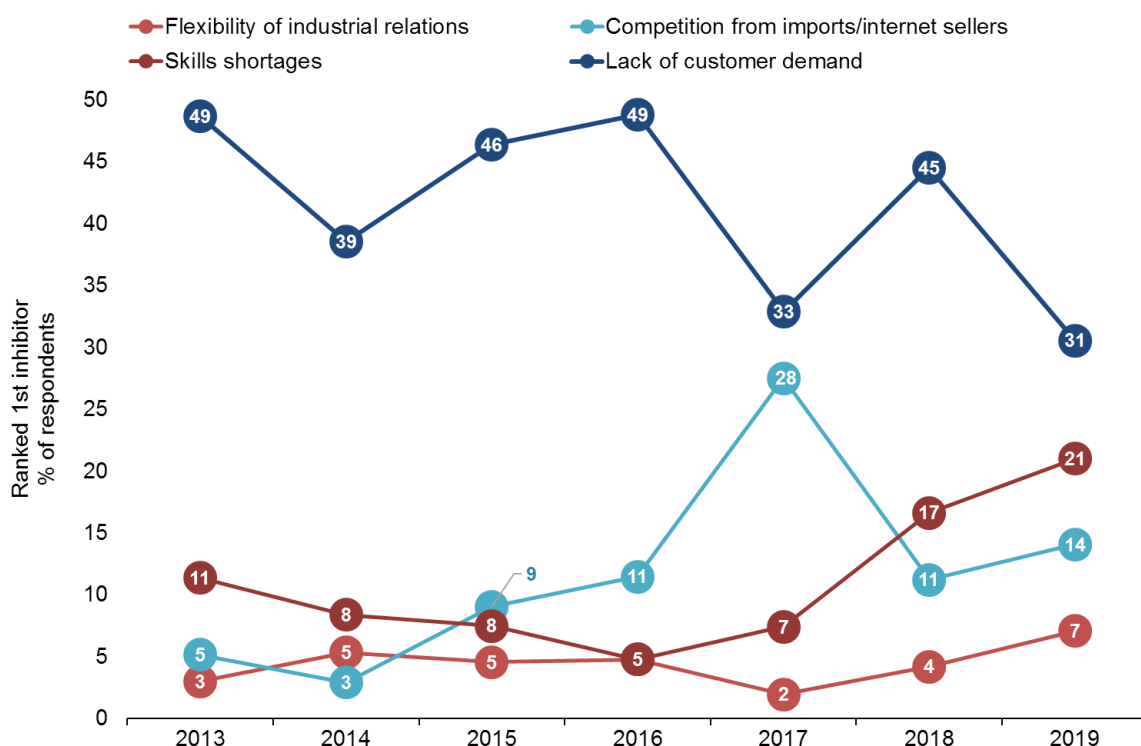
Opportunities and challenges for Australian businesses can arise offshore and onshore, from external and internal factors. When asked which factors would provide the biggest challenge to business in 2019, 31% of CEOs identified a ‘lack of customer demand’ as their most significant

constraint, down from 45% of CEOs who said the same in 2018 (and down from most previous years, since 2013) (see Chart 2.9).

Labour market concerns feature prominently for businesses in 2019. The second most pressing concern for CEOs in 2019 is skill shortages with 21% of businesses nominating this as their top concern. This is up from 17% of leaders that identified skill shortages as an impediment for 2018 and triple the proportion in 2017 (7%). These concerns reflect rising demand for labour seen in 2017 and 2018, as was indicated across a range of data sources including the monthly ABS Labour Force surveys and Ai Group’s Australian PMI®, PSI® and PCI®. A further 7.5% of CEOs said the flexibility of industrial relations is their top concern in 2019, up from 4% in 2018. Despite these widespread (and growing) concerns about skill shortages and flexibilities, only 5% of CEOs ranked wage pressures as their greatest inhibitor in 2019, similar to 2018 but well down from 12% of CEOs in 2017.

As reported in Ai Group's 2018 publication on workforce skill needs¹, businesses note that employee capabilities for both current and future-oriented occupations are not meeting demand with 75% of respondents reporting shortages in the technician and trades worker category. Difficulties remain for businesses recruiting employees with STEM skills and shortages were reported for those needing skills in automation, Big Data and artificial intelligence.

CHART 2.9 Expected Inhibitors To Business Growth*, 2013 To 2019



* Percentage of respondents who ranked each factor first in each year, out of a list of possible inhibitors.

Competition from imports and online sources (14%) increased as a constraint for 2019 compared to 2018 (11%) but was well down from the recent peak in 2017 when it was a primary inhibitor for 28% of responding businesses. Following the recent peak of the Australian dollar in January 2018 concerns about high and/or variable exchange rates was the main issue for 4% of businesses, which

¹ Australian Industry Group, 2018, *Skilling: A national imperative*.

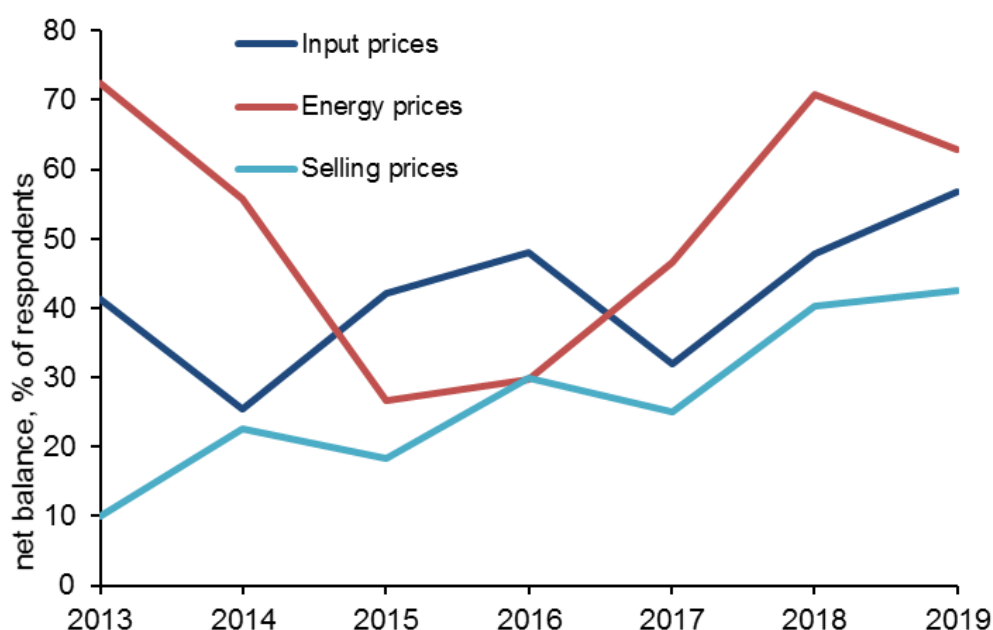
was slightly up from 2018 (3%). This was much lower than the 10% of businesses that had nominated this in 2015, when the trading range for the dollar had been much higher.

Government regulations were a primary constraint for around 7% of CEOs, down slightly from the past couple of years. Other constraining factors for business in 2019 included: rising input costs due to higher energy prices (the most commonly listed 'other' factor); uncertainty about international trade; drought conditions and access to funding for operational and/or investment purposes.

With regard to prices, the majority of CEOs expect prices to rise for both their inputs (63% of CEOs) and their outputs (52% of CEOs) in 2019 (chart 2.10). Indeed, a higher proportion of businesses plan to implement price rises for their own goods and services in 2019 than in any of the preceding six years. Just 10% of businesses plan to cut their selling prices in 2019, which is a lower proportion than had planned to cut prices from 2013 to 2017.

At the same time, more businesses are expecting price volatility on the input side in 2019. A higher proportion of businesses expect their input costs to rise in 2019 (63%) than in any of the previous six years, but there is also a higher proportion (6%) who expect their input prices to fall in 2019. As a result, a smaller proportion of businesses (30%) expect their input costs to remain unchanged in 2019, compared to CEOs' pricing expectations for the previous six years (2013-18). This increase in input price volatility adds an additional layer of uncertainty to business planning, that may not have been present previously.

CHART 2.10 EXPECTED BUSINESS PRICING INDICATORS*, 2013-2019



* 'Net balance' is the proportion of all survey respondents that improved minus the proportion that deteriorated. Aggregate results include respondents from all surveyed industries and are weighted by ABS estimates of output from each industry.

This concern about input price changes largely (but not solely) relates to energy pricing. Over two-thirds of CEOs (68%) expect energy input costs for their business to rise further in 2019. This comes on top of reported energy price increases for 63% of businesses in 2018. Rising energy prices (and reliability of energy supply) are becoming a key risk for an increasing number of Australian

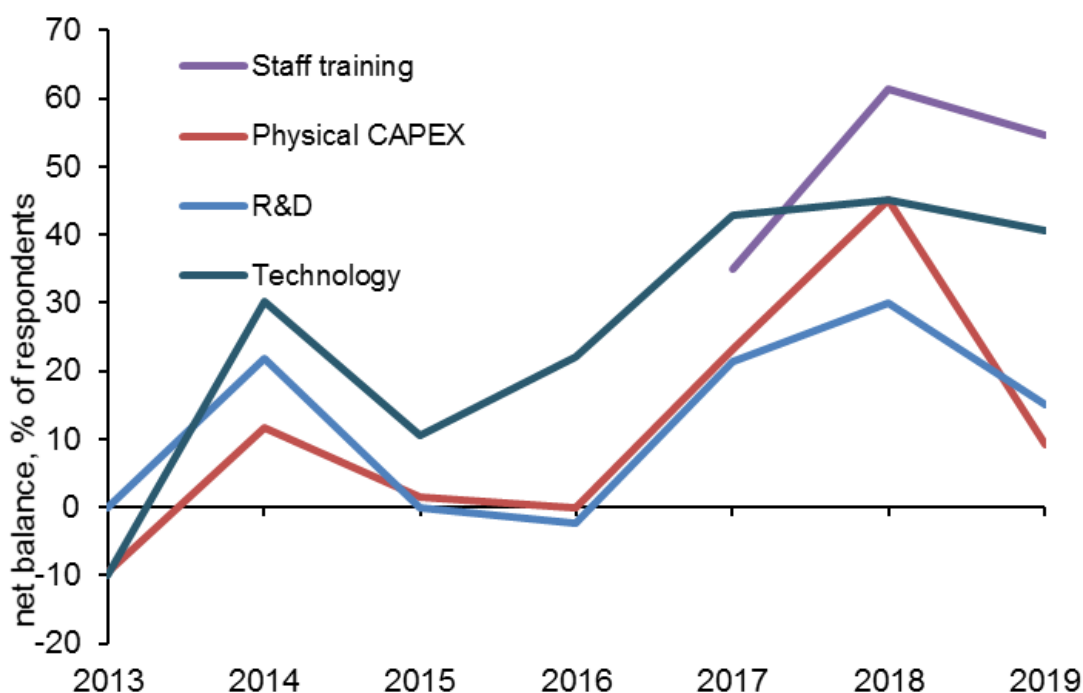
businesses, and across an increasing range of industries.

At the start of 2017, 50% of business expected energy prices to increase, compared to 64% of business at the end of 2017 that reported higher energy prices. Energy costs were expected to get worse in 2018, with almost three quarter of CEOs (71%) expecting energy costs for their business to rise. At the end of 2018, 63% of CEOs reported higher energy prices. In 2019, 68% of CEOs expect further increases to energy prices, 5% expect lower energy prices (+63% net balance) and 27% expect no change in energy prices.

These significant input cost increases help to account for the more subdued expectations for profit margins than for turnover in 2019, with 58% of CEOs expecting their turnover to improve in 2019 but only 46% expecting their profit margins to improve.

These price rises are denting an otherwise positive outlook for sales and margins. Nevertheless (or possibly in response), the great majority of CEOs plan to maintain or grow their employment and investment in 2019, albeit in fewer numbers than one year earlier. Most CEOs do not plan to change the amount spend on staff training, physical CAPEX and R&D. 39% expecting to spend more on staff training, 33% expecting to spend more on physical CAPEX and 23% expecting to spend more on R&D. Very few CEOs intend to spend less on investment in 2019 (chart 2.11)

CHART 2.11 Expected Business Investment Indicators*, 2013-2019

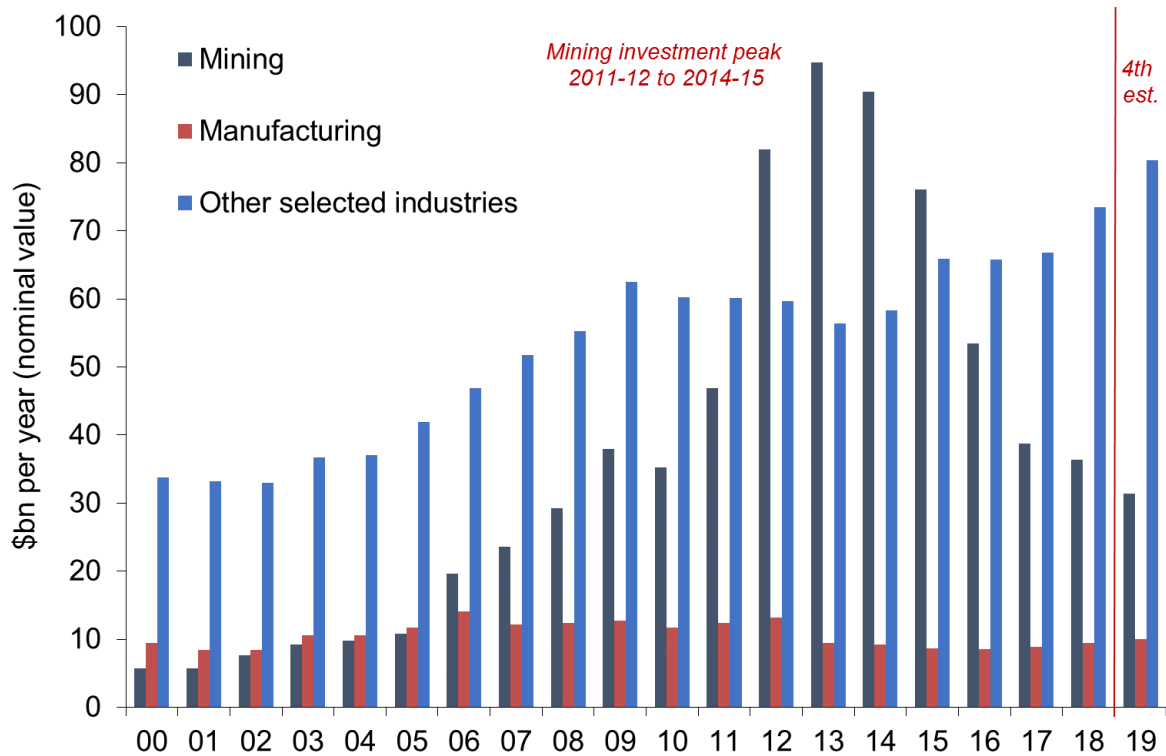


* 'Net balance' is the proportion of all survey respondents that improved minus the proportion that deteriorated. Aggregate results include respondents from all surveyed industries and are weighted by ABS estimates of output from each industry.

These expectations for business investment are in line with the latest estimates of non-mining business investment collected by the ABS. As of Q3 2018, the ABS's fourth estimate of annual Private New Capital Expenditure and Expected Expenditure (CAPEX) for 2018-19 indicated total CAPEX is likely to fall by 2.1% from the previous year, due to a 14% fall in mining CAPEX. Mining CAPEX accounted for 29% of all CAPEX in 2018, down from a peak of 59.4% at the height of the mining investment super-cycle (chart 2.12).

Outside of mining, CAPEX is expected to grow by around 9% p.a. (in nominal dollars), including a rise of 6% among manufacturing businesses and 9.3% among other selected industries. Manufacturing accounted for 8.3% of total CAPEX in 2018, down from around 20% in the early 2000s and a record high of 27% during the last recession of 1991. CAPEX by selected industries outside mining and manufacturing was back up to 62.5% of total CAPEX in 2018, after falling to an all-time low of 34% during the mining super-cycle. In 2019 it will rise further in absolute terms and as a share of CAPEX, as mining recedes.

CHART 2.12 Private Business Capital Expenditure (CAPEX), Actual Annual Value And Expected Annual Value* In 2018-19



* five year average realisation ratio applied. Source: ABS, *Private New Capital Expenditure and Expected Expenditure*, Sep 2018.

2.3 Global outlook, challenges and risks in 2019

2018 saw an improvement in economic growth rates in most but not all larger advanced economies. The risks are growing that 2019 may see global growth rates flatten out or even decelerate, due to:

- trade tensions between the world’s largest and most influential economies including the USA, China, the UK and the eurozone, which are already disrupting trade and investment;
- regional conflicts in the middle east and elsewhere which have the potential to further disrupt trade flows and to affect oil prices and other key commodity prices;
- slower growth in the US as the benefits of temporary stimulus measures wane. Growth rates in US employment, incomes and investment appear to have already peaked; and
- slower growth in China as its Government seeks to rebalance the economy, contain financial risks and pursue non-financial goals such as pollution containment and urban consolidation. The

RBA recently noted that Chinese authorities are easing fiscal policy in some areas to avoid overly slow growth, while responding to financial stability risks. In the very long-term, growth in China is expected to slow, reflecting structural factors such as a shrinking working age population.

In its last major assessment of the global economy for 2018, Australia’s RBA noted that trade tensions are the single biggest risk for 2019. It said that the global outlook remains broadly positive, but that current trade tensions between major economies run the risk of escalating and/or spreading to involve other countries. The effect of these tensions on business investment decisions in affected countries and globally are a separate but related concern, any cancelled or delayed investment will also weigh on future growth.

For these and other reasons, by late 2018 the RBA had marked down its expectations for growth among Australia’s trade partners in 2019 and 2020. In addition to a slower outlook for China, Australia will face slower growth in Japan (partly due to consumption tax increases in 2019) and stable growth rates at best throughout Southeast Asian economies that are trade-exposed to a slower China. More positively, growth appears to be accelerating in New Zealand and India, which are also major trade partners for Australia.

Similarly, the OECD² downgraded its outlook for the global economy due to slower trade growth. In December 2018, the OECD said global growth has already peaked and is set to weaken over the next two years. The OECD is now forecasting “a soft landing”, with global output growth projected to slow from 3.7% in 2018 to 3.5% in 2019 and 2020 (see Table 2.2). Growth in the OECD countries is set to slow gradually from 2.4% p.a. in 2018 to 1.9% in 2020. This is partly because of slowing growth in the United States in the coming two years, as the short-term benefits of recent tax cuts wear off and trade tensions with China start to bite. The OECD says the risk of a harder landing has risen since mid-2018 due to:

- escalating trade tensions and the fragmentation of multilateral rules-based trade systems;
- financial market instability and tightening financial conditions (e.g. rising interest rates); and
- China slowing more than expected as its authorities try to balance growth against stability.

TABLE 2.2 OECD Growth Forecasts, Selected Economies, November 2018

Real GDP, % change p.a.	2017e	2018f	2019f	2020f
World output	3.6	3.7	3.5	3.5
OECD countries	2.1	2.5	2.4	2.1
US	2.2	2.9	2.7	2.1
Euro area	2.5	1.9	1.8	1.6
Japan	1.7	0.9	1.0	0.7
Australia	2.2	3.1	2.9	2.6
Non-OECD countries	4.6	4.7	4.7	4.7
China	6.9	6.6	6.3	6.0
India	6.7	7.5	7.3	7.4
World trade volumes, % change p.a.	5.2	3.9	3.7	3.7

e = estimate, f = forecast. Source: OECD *Economic Outlook*, November 2018.

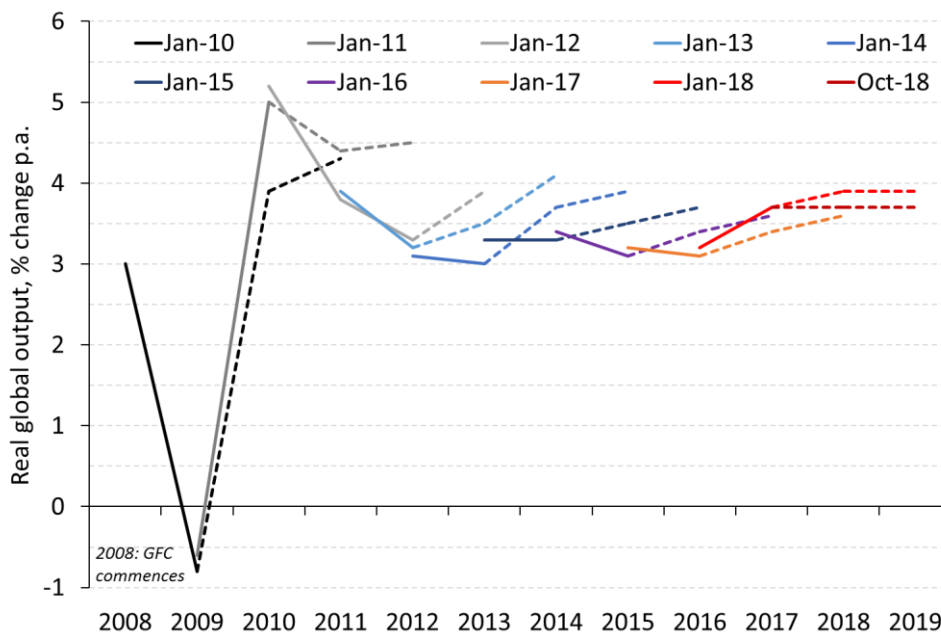
The International Monetary Fund (IMF)³ had already downgraded its global growth outlook in

² OECD November 2018, *Economic Outlook*.

³ IMF October 2018, *World Economic Outlook*.

October 2018 , and for similar reasons, as it has in almost every update over the past decade. Indeed, the pattern among all of the international economics agencies since the disruptions of the GFC has been to over-estimate the growth outlook and subsequently revise it down (see chart 2.13). This reflects a very protracted period of slow growth for many advanced economies since the GFC commenced in 2008. In a detailed analysis attached to its latest World Economic Outlook, the IMF says the GFC reduced long-term potential global growth by reducing fertility rates, migration, trade and income equality in the countries that were most directly affected by it. Specific policies have affected outcomes in individual countries. More positively for Australia, the IMF says countries such as Australia that were in “*better fiscal shape, with better regulated and supervised banks, and flexible exchange rates generally suffered less [long-term] damage.*”

CHART 2.13 Global GDP: Actual Annual Growth and IMF Forecasts*



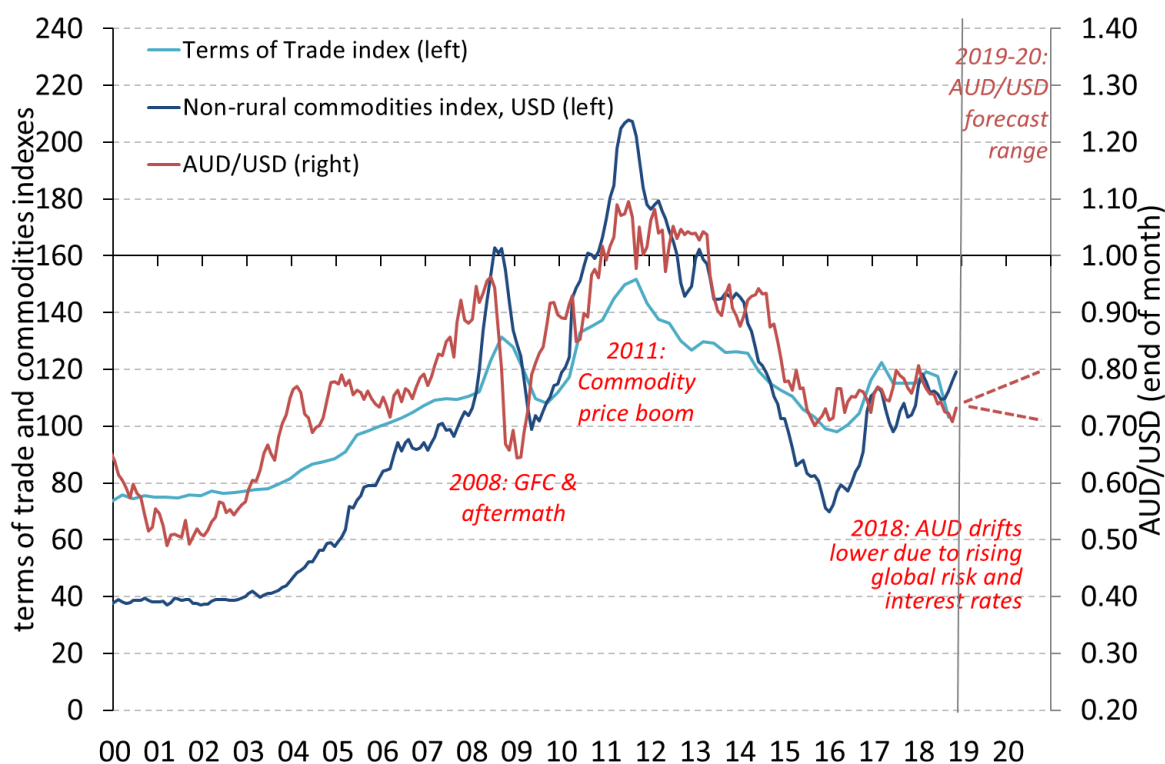
* Solid lines = actual, Dotted lines = forecasts.

Sources: IMF October 2018, *World Economic Outlook*, and earlier editions.

2.4 Australian global competitiveness in 2019

Australia’s global competitiveness received a solid boost through 2018 from a sustained drop in the trading range for the Australian dollar, to values below its long-run average of around 75 US cents (see chart 2.14). This drop was influenced by external factors including lower global commodity prices, rising perceptions of global risk and rising US interest rates and bond returns relative to Australia’s during 2018. In 2019, recovering commodity prices could push the Australian dollar higher once more, but this upward influence is likely to be countered by higher global interest rates and financial market risk perceptions, which have historically pushed the Australian dollar lower against the US dollar and other currencies.

CHART 2.14 Australian Dollar, Commodity Prices and Terms Of Trade



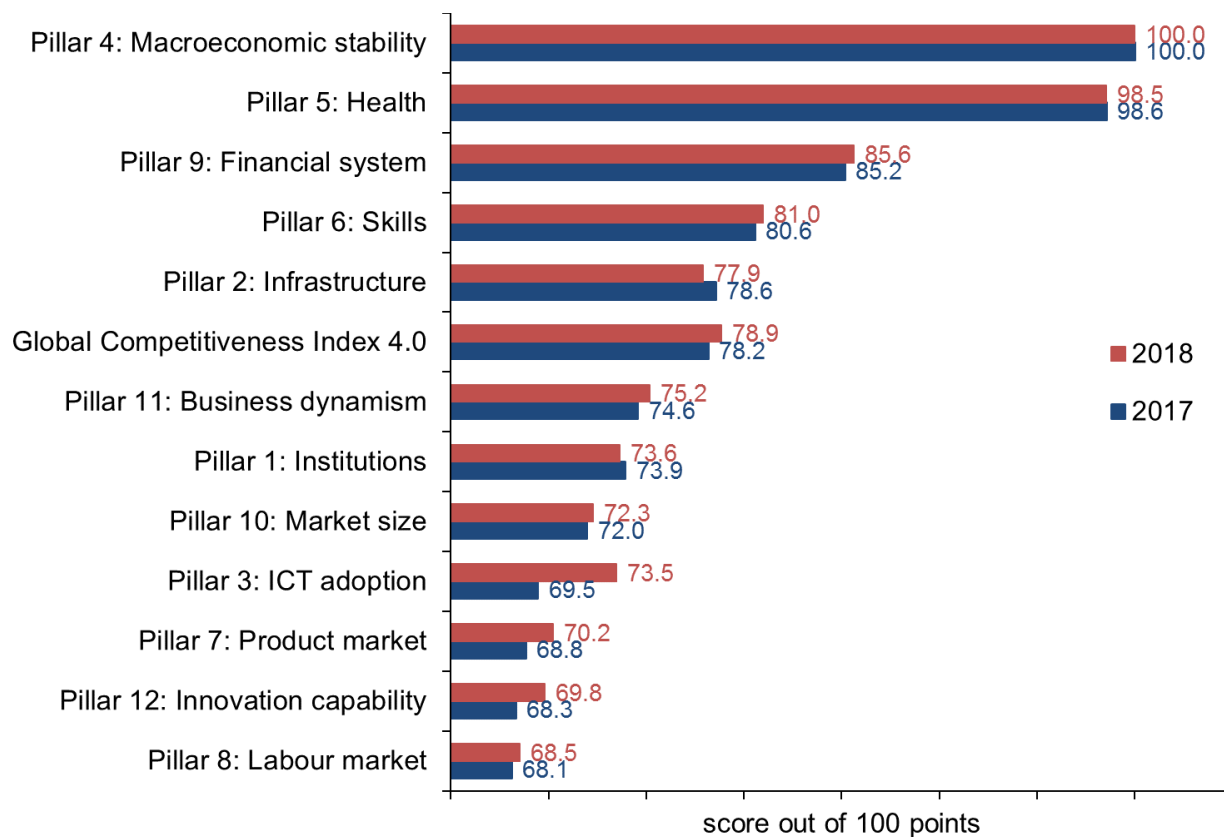
Sources: RBA, end of month exchange rates, to end of Nov 2018; RBA, end of month commodity price indexes, to end of Nov 2018; ABS, *National Accounts*, to Sep 2018.

Looking past the effects of movements in the dollar, the World Economic Forum (WEF) ranked Australia as the 14th most competitive business environment in 2018 in its (revised) annual Global Competitiveness Report, up one place since 2017. Australia scored 78.9 points out of a possible 100 points in 2018, up slightly from 78.2 points in 2017. This suggests a modest improvement in Australia’s absolute competitive performance (the score) as well as its relative performance (the rank). In the WEF’s 12 ‘pillars’ of performance, Australia shared top spot with 31 other countries for ‘macroeconomic stability’ and obtained a near perfect score for public health. Australia also obtained high scores for the size and stability of the national financial system and for national workforce skills (based on average education attainment, literacy rates and other metrics). Compared to 2017, the WEF results for 2018 indicate Australia’s performance deteriorated most notably in infrastructure (transport, communications and energy). This was balanced out by improvements in ICT adoption, product markets and innovation capability (chart 2.15).

Australia’s lowest scores are in the pillars for ‘labour market’ and ‘innovation capability’. Australia’s innovation capability score is almost 20 points below that of best-ranking Germany and Australia is ranked 18th for this ‘innovation’ pillar. Looking at the individual indicators that make up the ‘innovation’ pillar, Australia performs well with regard to research and development (78.8 points) but performs relatively poorly on the softer dimensions of the innovation ecosystem including ‘interacting and diversity’ (60.8 points) and ‘entrepreneurial culture’ (61.6 points) indexes. Relatively poor labour market scores and rankings for Australia in the WEF global competitiveness index reflect Australia’s centralised wage-setting system through a national minimum wage and

industry awards, which tend to get lower scores than enterprise and individual agreements, due to their lack of flexibility for workers and businesses. Australia also scores relatively poorly in the labour market pillar due to lower gender diversity and larger wage gaps.

CHART 2.15 Australia's Global Competitiveness in 2017 And 2018: the WEF Global Competitiveness Index 4.0 and 12 'Pillars' of competitiveness



Source: WEF October 2018, *Global Competitiveness Report 2018*.

Australia's ranking of the 14th most competitive economy in 2018 means Australia continues to lag behind Canada (12th), Japan (5th), the UK (8th), the US (1st) and Singapore (2nd) but ahead of New Zealand (18th). Australia's largest trade partner, China, was ranked the 28th most competitive economy.

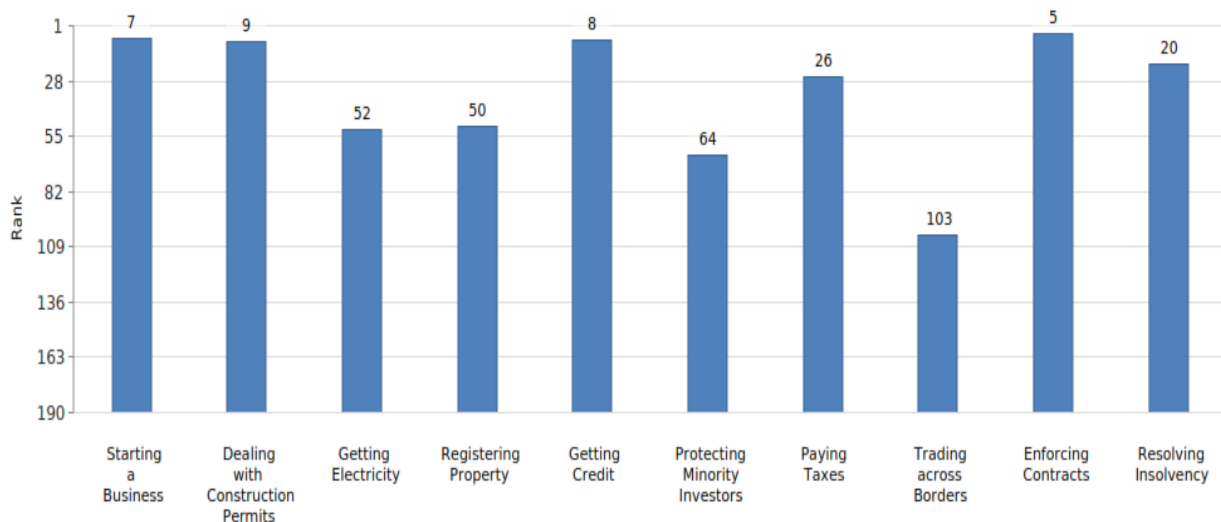
In 2018 the WEF's Top Ten economies continue to be dominated by advanced open economies including the US, Singapore, the UK, Japan, Germany and Hong Kong, as well as smaller northern European economies such as Switzerland, The Netherlands and Sweden. These economies are not the cheapest locations of production globally. Instead, they share key competitive characteristics such as:

- very open and competitive trade access and facilities (including large and efficient ports);
- advanced manufacturing sectors and/or advanced manufacturing design and distribution;
- strong promotion of innovation, ICT, R&D and new technologies;
- very high education participation and education quality outcomes; and
- strong and stable financial, legal and political systems.

Australia ranked lower in the World Bank’s Doing Business Index for 2019 than in these latest WEF results (chart 2.16). Based on a (narrower base) of 10 topics that measure the effects of comparable business regulations, the World Bank ranked Australia as the 18th best place to do business out of 190 economies, well below New Zealand (1st) and the US (8th) but above Canada (22nd) and above the OECD average.

Across the 10 topics in the World Bank Index, Australia ranked best in 2019 for legal and financial regulatory processes such as enforcing contracts (5th best), access to credit for business (8th), and registering a new business (7th). Like the WEF report, the quality of infrastructure – in this case new electricity connections for business – was judged to be relatively poor. Cross-border trade arrangements was the lowest-ranked area of business regulation for Australian business.

CHART 2.16 Australia’s Competitiveness In 2019: World Bank ‘Doing Business’ Topics

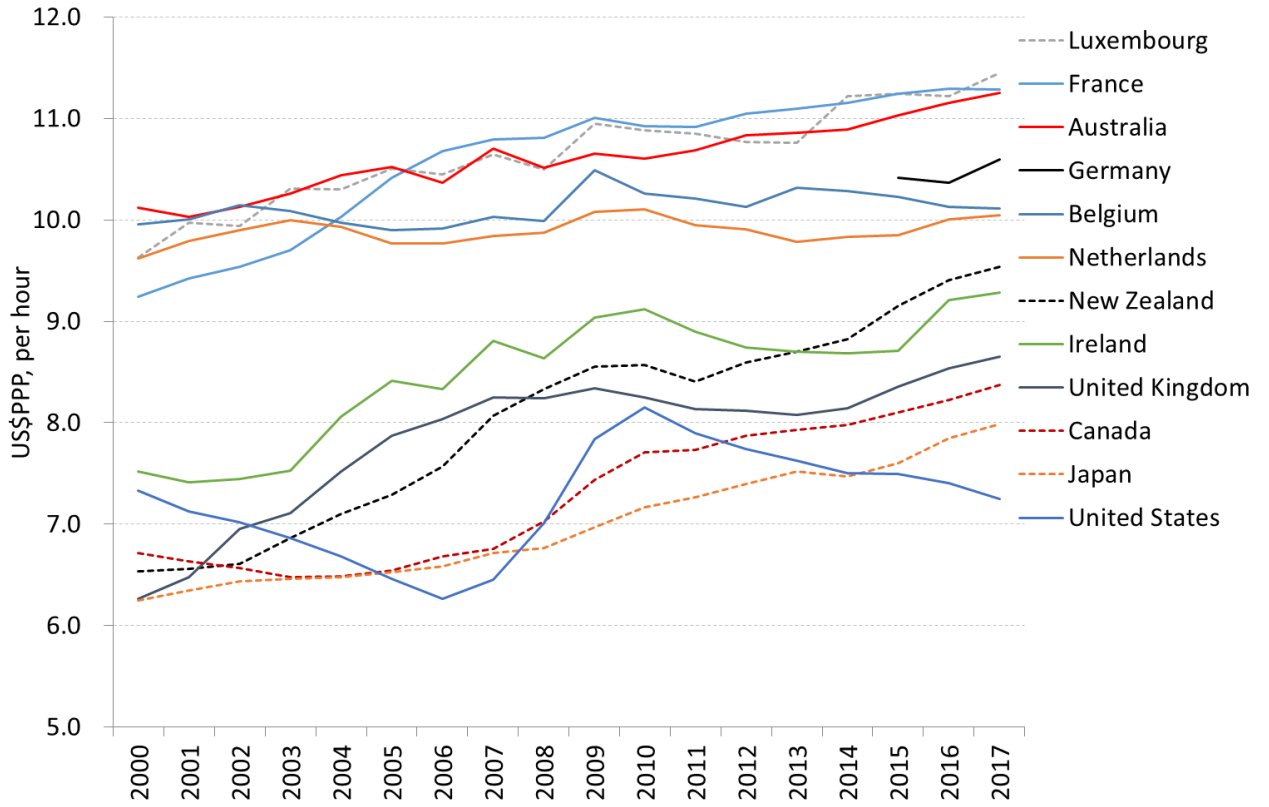


Source: World Bank 2018, *Doing Business 2019: Australia*.

Neither the WEF nor World Bank reporting methods compare direct business costs or labour costs across countries as part of their assessment of ‘competitiveness’. Cost comparisons can change markedly over time due to fluctuations in exchange rates, purchasing power and relative living costs across countries.

To try to address this, the OECD compares wage rates using ‘purchasing power parity’ (PPP) rates instead of current or average exchange rates. This method shows that Australia continues to track at the highest end of global labour costs. As of 2017, Australia’s minimum wage was the second highest globally, among countries that have a national minimum wage. It was equal second with France and behind only the tiny principality of Luxembourg (see chart 2.17). Since then, Australia’s minimum wage has risen by a further 3.5% (on 1 July 2018) so it may have moved back into the top spot globally, as it was in the early 2000s.

CHART 2.17 Real Minimum Wages, 2017 Constant Dollars, USD PPP



Source: OECD Employment and Labour Market Statistics database, www.oecd-ilibrary.org/

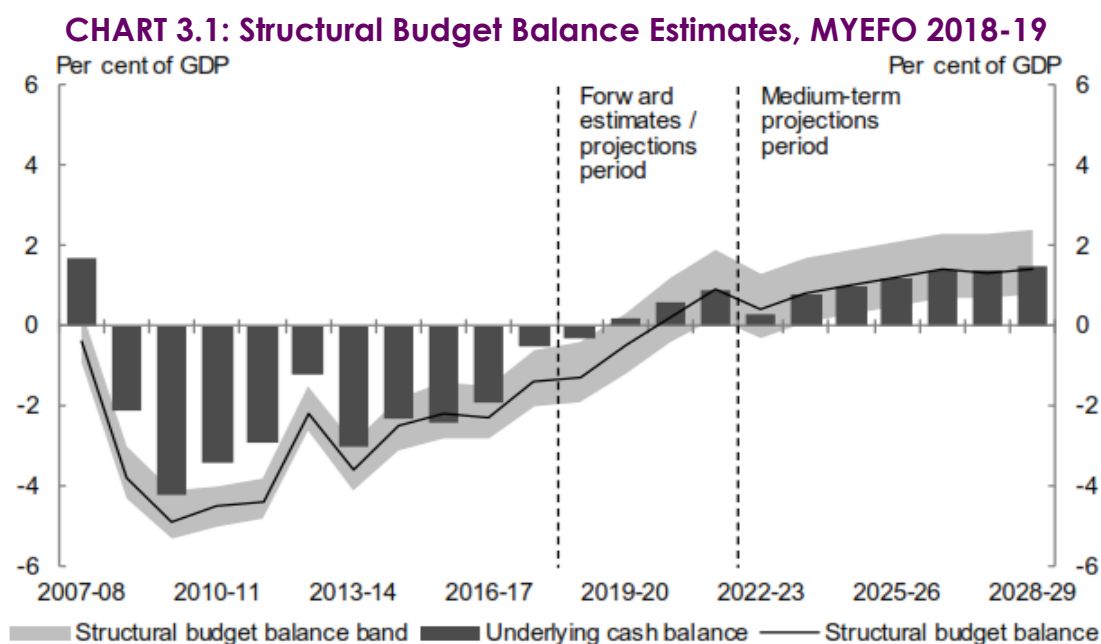
3. Fiscal position

Ai Group supports a highly disciplined approach to fiscal policy that includes:

- Rigorously assessing and prioritising spending;
- Raising taxation revenue as efficiently as possible;
- Ensuring that recurrent spending is comfortably covered by recurrent revenue over the course of the business cycle;
- Having a national balance sheet of sufficient strength to permit the use of public-sector borrowing to finance rigorously and transparently assessed public sector investment in productivity-enhancing, intergenerational infrastructure where this is the optimum approach to funding; and
- Rebuilding a fiscal buffer against the possibility of another crisis that will again call for expansionary fiscal measures to underwrite aggregate demand.

While the net cash balance and the fiscal position remain in deficit, with the net operating balance for the 2018-19 year estimated in December’s MYEFO (at page 51) to edge into a surplus of \$4.9 billion (or 0.3 % of GDP) and total operating balances over the forward estimates put at \$65.2 billion, we are now approaching the position where inroads can be made into the debt that has accumulated from funding recurrent expenditure over the past decade and begin the task of rebuilding a fiscal buffer similar to the one that served Australia so well in our response to the GFC.

However, as suggested by the estimates of the structural budget balance contained in MYEFO and reproduced in Chart 3.1 below, it is easy to overstate the strength of the budget.



Source: MYEFO 2018-19, Dec 2018, p. 60.

The structural balance is not anticipated to edge into positive territory until 2020-21 and, despite the shelving of most of the Enterprise Tax Plan's phased improvements to the competitiveness of company taxation in Australia, the structural budget balance is only expected to rise modestly over the medium term.

Thus, despite the recent gains, Australia's fiscal position is not as strong as it should be and over the medium term we should seek to accelerate the repayment of accumulated debt and bring forward the re-building of a fiscal buffer.

At the same time, with the pace of growth likely to slow into the 2019-20 year, there is a risk there may be some slippage of fiscal position relative to that reported in last December's MYEFO. In this circumstance, Ai Group would caution against tightening fiscal policy in an attempt to preserve the thin surplus currently estimated for 2019-20. A fiscal tightening could worsen the slowdown in momentum and could expose the frailties in the labour market most evident in the form of high underemployment.

Further, with domestic productivity growth in need of revitalisation, Ai Group advocates modest and targeted investments in initiatives to boost the advance of longer-term productivity gains as a prerequisite for sustainable improvements in Australian living standards and to help make inroads into entrenched youth unemployment and underemployment.

As developed in more detail in the sections below, we see room for additional effort in areas of:

- Skills, education and training - including as a means of addressing some of the structural barriers to employment of segments of the workforce (particularly young people);
- Business capability development; and
- Innovation and commercialisation.

4. Taxation Reform

Ai Group strongly supports a phased overhaul of Australia’s taxation arrangements both at the Commonwealth and State/Territory levels and we continue to see considerable merits in many of the directions canvassed in the Australia’s Future Tax System Report (Henry Tax Review).

Relative to other OECD countries, Australia is overly reliant on the taxation of income and especially the taxation of investment income, despite a lower-than-average overall tax to GDP ratio (primarily due to relatively lower rates of GST). This is evident across a number of tax measures (table 4.1):

- As of 2018, Australia’s standard statutory corporate tax rate of 30% was well above the OECD average of 23.7%. Among OECD countries, only France (34.4%), Portugal (31.5%) and Mexico (30.0%) had statutory corporate income tax rates equal or higher than Australia in 2018.
- Moving beyond the headline company tax rate, the OECD calculates a ‘composite effective average tax rate’ of 31.4% for Australian corporate entities in 2017, compared to an OECD average of 22.5%.
- Australian corporate tax comprised 16.5% of total government tax revenue in 2016 (including federal and state governments), compared to an average of 9.0% for all OECD countries. This underscores Australia’s over-reliance on income tax and especially on corporate income tax. This over-reliance leaves Australian Government revenue highly vulnerable to cyclical volatility in corporate incomes, including from mining, commodity and financial sector corporate income. In contrast, other OECD countries typically derive more of their taxation revenue from consumption taxes (e.g. a VAT or GST) than from income taxes. The OECD has repeatedly recommended that Australia shift more of its taxation revenue to a similar consumer tax base.

Non-OECD countries (typically developing and less developed nations) typically have significantly lower rates and collections of corporate income taxation (but comprising a higher share of taxation revenue), which reflects their lower development status and lack of other viable revenue streams.

TABLE 4.1: Taxes On Income, Profits And Capital Gains Of Corporate Entities, Australia And Selected International Comparison Rates

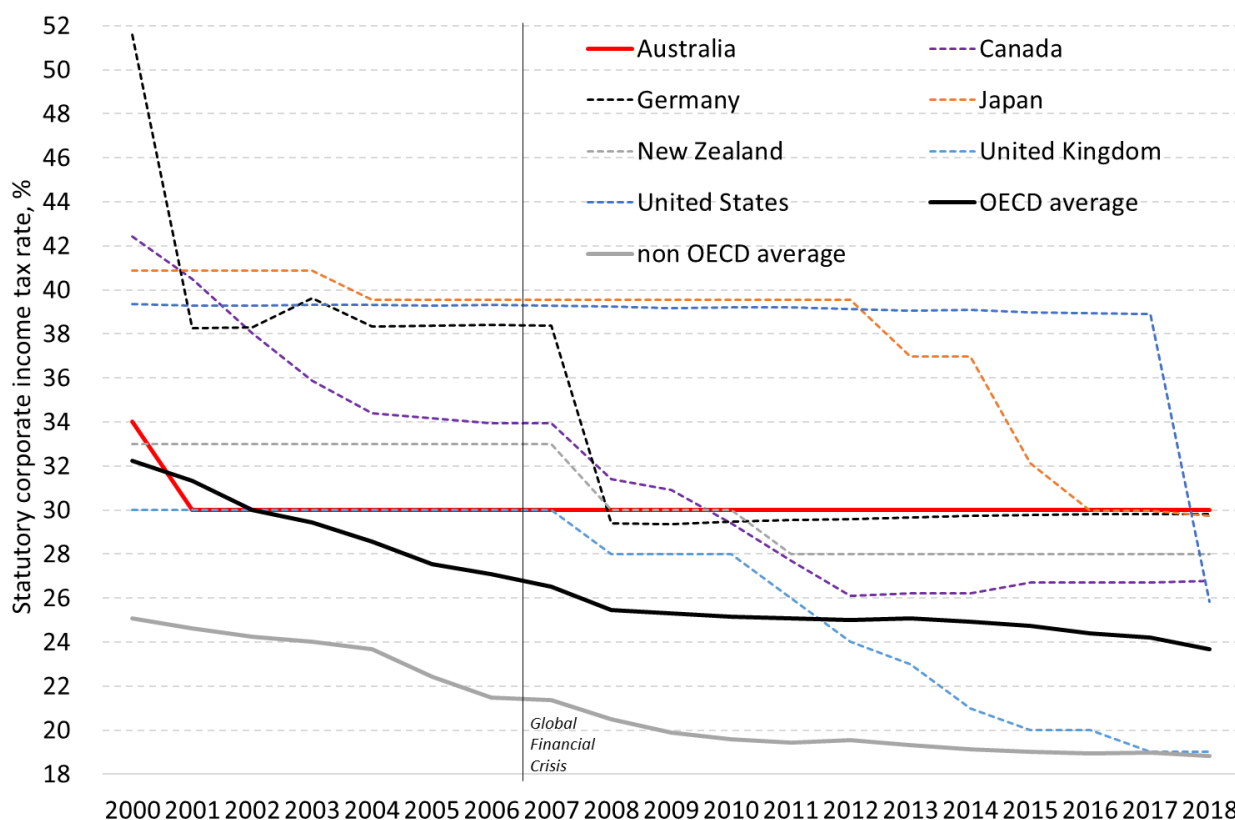
	Statutory combined corporate income tax rate, 2018	Composite effective average tax rate*, 2017	% of GDP, 2016	% of total tax revenue, 2016
Australia	30.0	31.4	4.6	16.5
Canada	26.8	24.7	3.4	10.5
France	34.4	33.0	2.0	4.5
Germany	29.8	27.3	2.0	5.2
Japan	29.7	27.5	3.7	12.0
New Zealand	28.0	26.8	4.9	15.5
South Korea	27.5	23.2	3.6	13.6
UK	19.0	19.0	2.7	8.3
USA	25.8	34.2	2.0	7.6
OECD average	23.7	22.5	2.9	9.0
Non-OECD average	18.8	18.6	3.2	16.3

* 2017 data with scenario of “low interest and inflation rates”.

Source: OECD, *Global Revenue Statistics Database; Corporate Tax Statistics Database*, Jan 2019.

Over the decade since the GFC disruptions commenced in 2007, Australia’s unchanged statutory corporate income tax rate of 30% has become a global outlier, since many other OECD (and non OECD) countries dropped their tax rates in response to the GFC and its aftermath (chart 4.1). As a result, the margin between Australia’s corporate tax rate and international comparison rates has grown, which erodes the global competitiveness of Australia’s business environment.

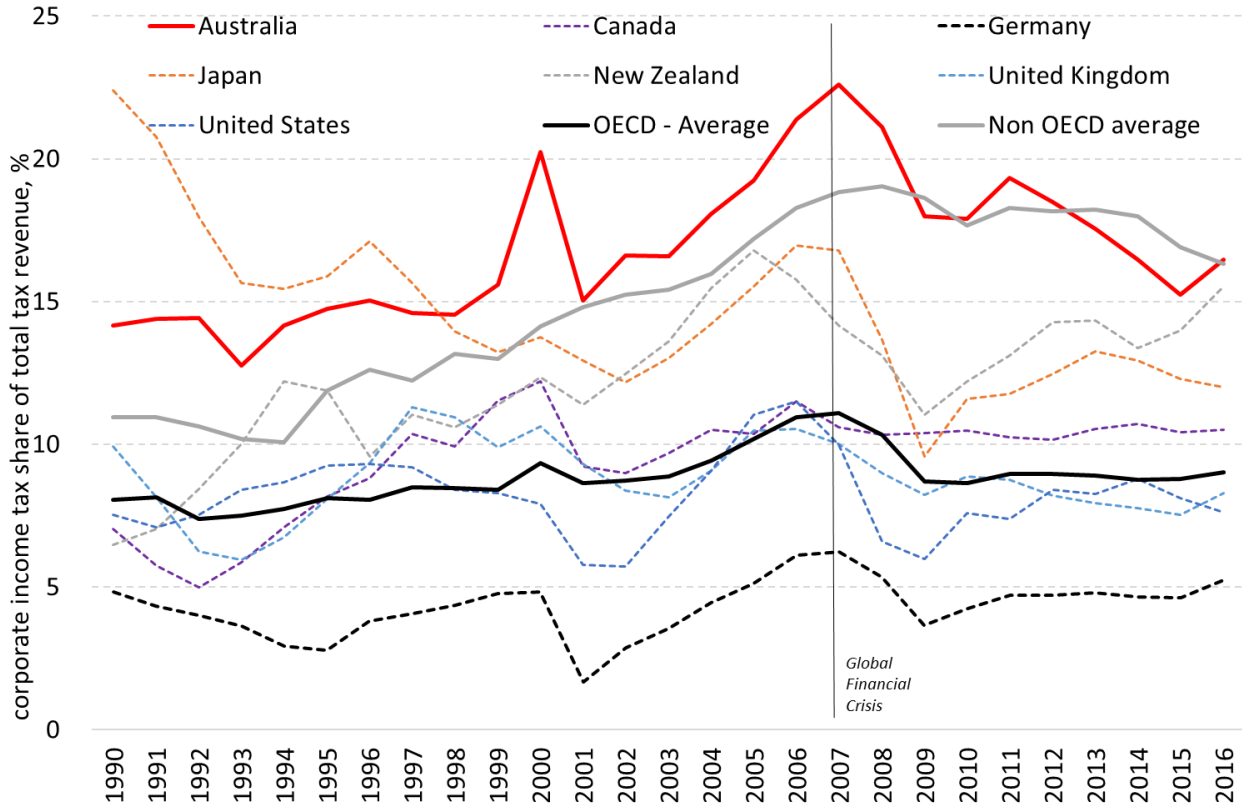
CHART 4.1: Statutory Tax Rate On Corporate Income, Australia And Selected International Comparison Rates



Source: OECD, *Global Revenue Statistics Database*; *Corporate Tax Statistics Database*, Jan 2019.

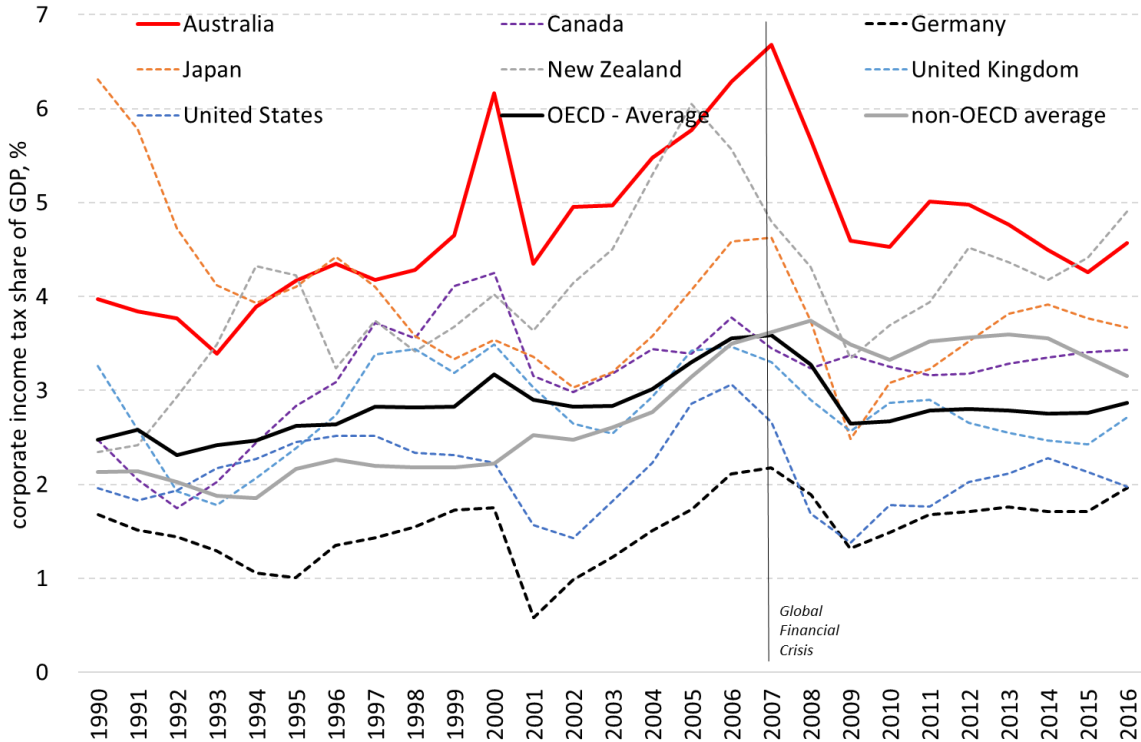
As a share of total taxation revenue and as a share of GDP, Australian corporate income tax peaked prior to the GFC and has since declined (reflecting a decline in corporate taxable incomes). Even after this decline, Australia’s reliance on corporate income taxation remains significantly higher (16.5% of total taxation revenue and 4.6% of GDP in 2016) than most other OECD countries or even non-OECD countries (charts 4.2 and 4.3 and table 4.1).

CHART 4.2: Corporate Income Tax Revenue As A Share Of Total Taxation Revenue, Australia And Selected International Comparisons



Source: OECD, *Global Revenue Statistics Database*; *Corporate Tax Statistics Database*, Jan 2019.

CHART 4.3: Corporate Income Tax Revenue As A Share Of GDP, Australia And Selected International Comparisons



Source: OECD, *Global Revenue Statistics Database*; *Corporate Tax Statistics Database*, Jan 2019.

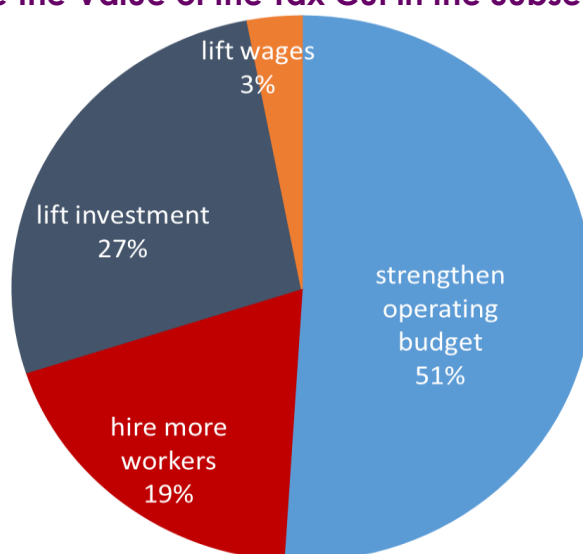
The changes to business taxation enacted in October 2018 will reduce the tax burden for many SME-sized. These are an important step forward for the competitiveness of Australia's taxation system and will see the rate of company tax lowered in stages to 25 per cent by 2021-22 for most companies with an annual turnover of up to \$50 million. A commensurate phasing-in of a higher rate Small Business Income Tax Offset will deliver reduced tax burdens for unincorporated businesses.

Over time the advantages of a reduced tax burden on business income can be expected to flow from a lift of investment in Australia with the following ramifications:

- Higher quantities of capital per employee;
- More rapid modernisation of the capital stock;
- Increased labour productivity; and
- Reduced unemployment, higher real wage rates and higher living standards.

In 2015 Australia's company income tax rate was cut to 28.5% from 30% for small businesses with annual turnover under \$2 million. Research by Alpha Beta (based on business accounting data held by Xero software) indicates that as a result, small incorporated businesses received an average tax saving of \$2,940. In the subsequent year, half of this tax saving went into business operating budgets (including reducing debt and improving cash flow) and half went into business investment and employment (chart 4.4). At an aggregate level, this small tax saving across a very large number of businesses resulted in a significant boost to small business investment and employment, which in turn provided support for business productivity and aggregate household incomes. A further cut to 27.5% in 2016, for all incorporated businesses with turnover under \$10mn, appear to have been similarly beneficial. Indeed, these tax cuts may have contributed to the record level of jobs growth observed in Australia through 2017. These benefits to investment and employment now need to be consolidated and spread more evenly, across all Australian corporate entities.

**CHART 4.4: Business Responses To The Cut To Corporate Income Tax Rate in 2015:
How Did You Use the Value of the Tax Cut in the Subsequent 12 months?**



Source: Alpha Beta and Xero 2018.

The desire to extending these benefits was the motivation behind Ai Group's support for the Government's Enterprise Tax Plan which would have gradually reduced the company tax rate to 25 per cent for all companies by the start of the 2026-27 year.

This support was coupled with Ai Group's urging of the development of a more ambitious suite of tax measures over this same timeframe to complement the phased reduction in the company tax rate. We argued that a more comprehensive approach to taxation remodelling was necessary for a more balanced approach to tax reform that delivered not only improved business competitiveness but also greater resilience, higher efficiency of taxation and greater confidence in the fairness of our approach to raising tax revenue.

Unfortunately neither the extended program to improve the competitiveness of Australia's company tax arrangements nor the more comprehensive tax remodelling were pursued leaving Australia still in need of a program of modernisation of our approaches to taxation.

While, at present, there is not widespread support for significant changes to Australia's taxation arrangements, Ai Group maintains that the ambition of reform should be rekindled and that the Government and indeed others in the community should foster a dispassionate and informed discussion about the need to improve our tax arrangements and the options we have for improving their efficiency, fairness and resilience.

5. Skills, Education and Training Policies

Education and training has been identified as one of the most critical factors shaping workforce outcomes that lead to future-focused companies in the global environment. Yet in its Skills Outlook 2017 the OECD reports that Australia does not have the skills base needed to effectively engage in global value chains.⁴

Rapidly changing opportunities in the labour market are increasing the need for relevant education and training outcomes that are more closely connected and with industry.

Ai Group has identified the major challenges and government actions needed to develop and maintain a highly skilled, adaptable and resilient Australian workforce for globally competitive companies now and into the future. Discussion and recommendations cover:

- changing and emerging skill and capability needs
- STEM skills deficiencies
- existing worker re-skilling
- workplace literacy and numeracy levels
- apprenticeships and higher apprenticeships take-up and completions
- the VET system
- higher education and
- tertiary education system reform.

In addition to the national economic rationale of the initiatives we propose, a major underpinning of the policies we develop in this section is their contribution to addressing Australia's high rates of youth unemployment and underemployment. Most of our policy recommendations would contribute directly or indirectly to this important area of social policy and our discussion closes with initiatives that would have an explicit focus on lifting youth employment opportunities and prospects.

5.1 Strategy to meet emerging skill needs

Automation is disrupting the skills that education and training systems strive to supply. It is leading to reallocations of employment between roles, tasks, sectors and regions. Changes to skill requirements in industry are occurring at all levels of the workforce. The workforce needs to be able to operate with emerging new technologies and systems and engage in more complex work and relationships in environments that are constantly changing.

As automation is increasingly adopted by industry, it is recognised that capital deepening and increased competitiveness can be achieved by not only replacing workers with machines, but by

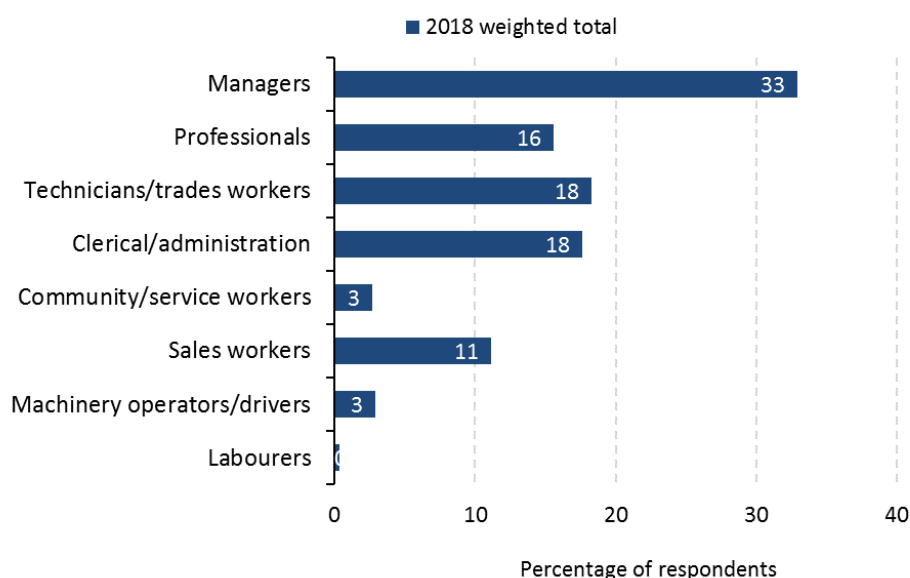
⁴ Skills Outlook 2017, OECD.

building innovative capital – developing well-educated and well-skilled workers. For innovation to occur, physical capital must be complemented by qualified workers.⁵

Labour demand is shifting towards higher level and more cognitive skills for which many workers are not adequately trained and it is contributing to the hollowing out of middle level skill jobs. It is demanding, as a threshold requirement, that all workers have mastered enduring concepts of digital literacy to be enabled to adjust to new ICT.⁶ OECD research has found 38 per cent of Australian adults only have basic ICT skills that allow them to browse and email.⁷ More advanced digital workers need to evaluate, configure and use complex digital systems and yet more advanced skills are needed to build digital technologies.⁸

Ai Group’s 2018 workforce development needs survey asked employers about the priorities in their workforce for digital technology training and development, and changes anticipated or caused by its rollout.⁹ Managers are the largest priority (33 per cent), followed by technicians and trades workers and administration staff (both 18 per cent). Professionals were rated next at 16 per cent.

CHART 5.1: PRIORITY FOR DIGITAL TECHNOLOGY TRAINING AND DEVELOPMENT



Source: Australian Industry Group, Skilling: a National Imperative, 2018.

The new workplace increasingly relies on a more complex operational and organisational structure relating to decision making, coordination, control and support services. This means there are significantly higher demands placed on all members of the workforce in terms of managing complexity and higher levels of abstraction and problem solving. Employees are needing to act more

⁵ European Commission, The Future of Work: empowering people, Social Agenda No. 53, November 2018, <http://europa.eu/!Qb38gF>

⁶ Hajkowicz, S, Reeson, A, Rudd, L, Bratanova, A, Hodgers, L, Mason, C, & Boughen, N, Tomorrow’s Digitally Enabled Workforce, Commonwealth Scientific and Industrial Research Organisation, 2016

⁷ OECD, Survey of Adult Skills First Results: Country Note Australia, 2016

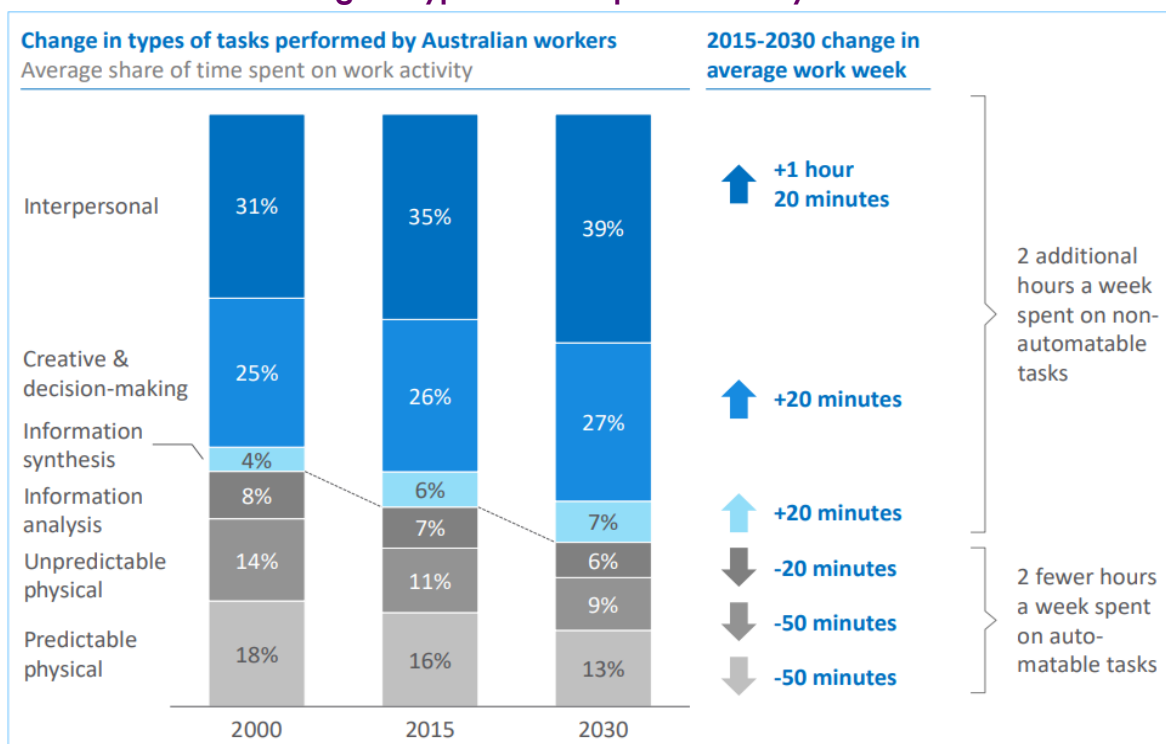
⁸ Digital Skills for Tomorrow’s World, UK Digital Skills Taskforce, 2014

⁹ Australian Industry Group, Skilling: a National Imperative, 2018

often on their own initiative and be able to organise their own work.¹⁰ Enterprise skills (such as advanced reasoning, design thinking and social interaction) need to be coupled with technical skills to build a broader set of capabilities for application in different environments.

AlphaBeta research has found task level changes have meant less time spent on routine and manual tasks and more time on interpersonal, creative and decision-making tasks (Chart 5.2).¹¹ The research also uncovered new tasks altered by technology changes and process improvements.

Chart 5.2: Change in types of tasks performed by Australian workers



Source: Mapping Australian workforce change, AlphaBeta, 2018.

While the share of high skill work increases, the share of low-skilled work is decreasing.¹² However low skilled workers will still be required as the digital economy evolves. These workers will have an advantage over machines where they have the capacity to adapt to situations. Machines are less able to react to unexpected circumstances and communicate on that basis.

The major workforce skill changes outlined are in large part responsible for current skills shortages. The skills supply has been unable to adequately match the needs via our education and training sectors. While the OECD¹³ has reported that Australia’s skill shortages are on par with global skill shortages, recent Ai Group research has found this to be a major pressure point for businesses.¹⁴ Employers are experiencing greater challenges finding the skills they need, with the percentage reporting skills shortages increasing over four years to 75 per cent in 2018.

¹⁰ Key Issues for Digital Transformation in the G20, OECD, 2017

¹¹ Mapping Australian workforce change, AlphaBeta, 2018

¹² Committee for Economic Development of Australia, Australia's future workforce, 2015

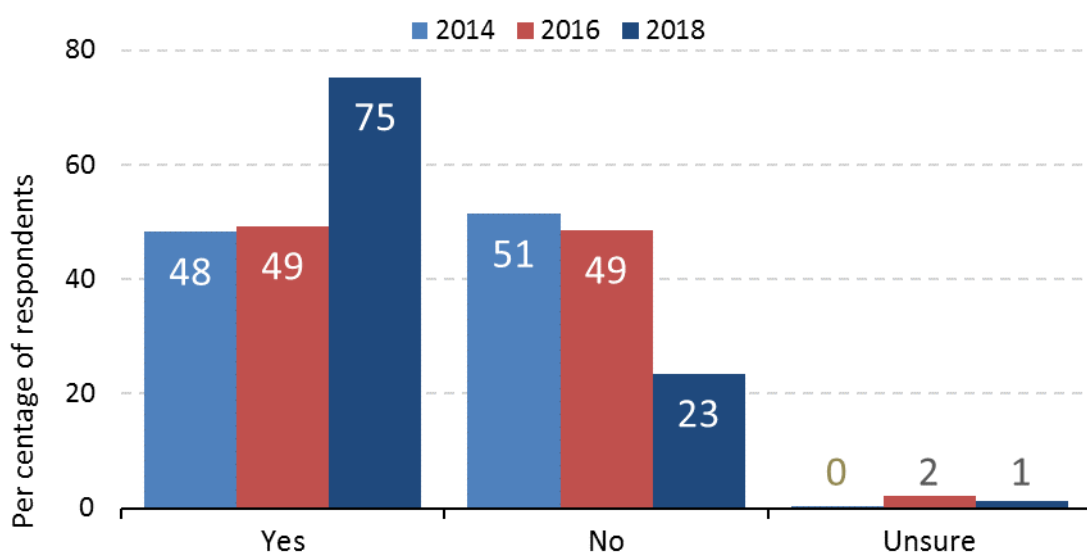
¹³ OECD, Getting Skills Right Australia, 2018

¹⁴ Australian Industry Group, Skilling: a National Imperative, 2018

Employers continue to experience difficulties recruiting professionals, technicians and trades workers with STEM capabilities.¹⁵ Occupations experiencing skills shortages for the first time in Ai Group’s survey include those needing skills in business automation, big data and artificial intelligence solutions.

Skills shortages are a mixture of technical shortages, skills mismatches and skills quality gaps.¹⁶ Ongoing skills alignment between education and training provision and industry needs more regular skills forecasting to collect better information. As a skills-based approach to skills assessment and anticipation this should include identifying sets of competencies in demand rather than qualifications. This would assist workers to build on existing skills by adding those in demand.¹⁷

Chart 5.3: Current experience of skills shortages



Source: Australian Industry Group, Skilling: a National Imperative, 2018.

It is clear that in moving forward all improvement actions need to be underpinned by closer partnerships between industry and all education and training sectors. Rapidly changing work environments and skills are best served by learning that is connected to and closely reflects workplace skill needs, such as work-based and work integrated learning models. Increasingly, where learning experiences are not in the workplace they must be designed to reflect a company’s workplace; to be engaging and social, and to be anchored by outcomes and assessments.¹⁸ The European Commission’s twenty guiding principles for WBL, provide a solid framework for workplace collaboration in all education and training sectors.¹⁹

¹⁵ Australian Industry Group, Skilling: a National Imperative, 2018

¹⁶ S. Richardson, What is Skill Shortage?, NCVET, 2007.

¹⁷ Getting Skills Right Australia, OECD, 2018

¹⁸ Seven gamification strategies for corporate training, The Tech Advocate, <https://www.thetechadvocate.org>

¹⁹ Twenty guiding principles for effective WBL, European Commission, 2015

Recommendations

Invest in a renewed national skills forecasting system that incorporates increased regularity of reporting and assesses against sets of competencies that can be mobilised to perform tasks related to a job.

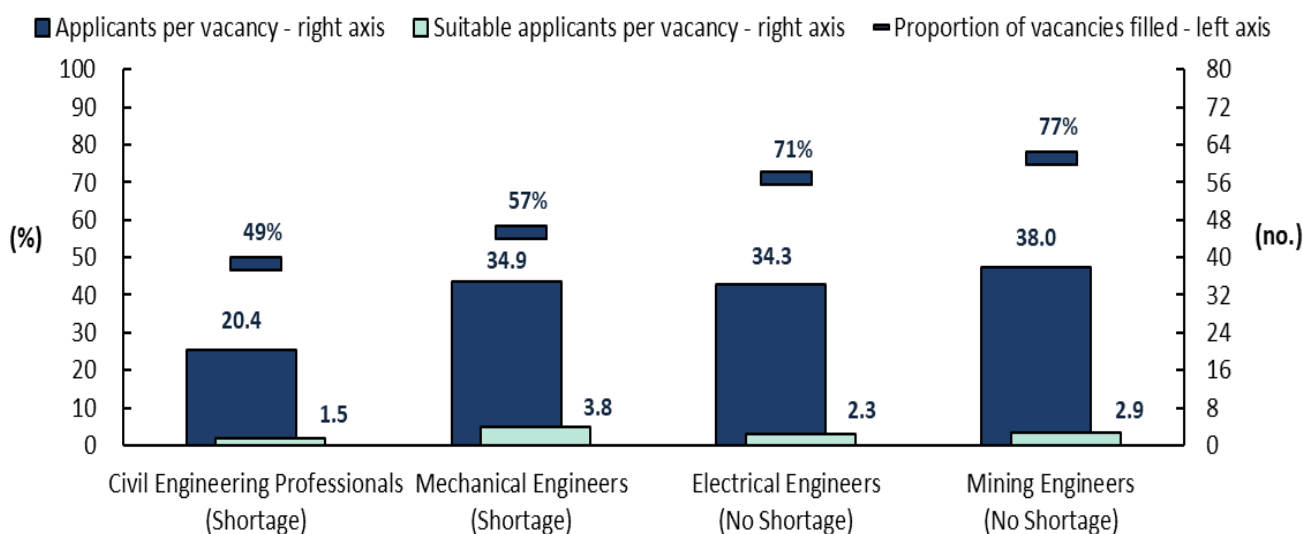
Implement a national workforce strategy that provides industry-relevant workplace opportunities for students by coordinating partnerships between industry and the school and post-secondary education sectors.

5.2 Developing Australia’s STEM (STEM) capabilities

Ai Group’s long-standing concerns about the state of STEM skills and the impact on the economy are well documented.²⁰ A major focus needs to be on growing the STEM workforce, especially in areas of the economy where there are critical skills shortages.

To illustrate current challenges in the engineering profession, a STEM field, only 59% of job vacancies in engineering were filled in 2017-18, with over 80% of candidates considered not suitably qualified for advertised positions. Employers cited a lack of experience and employability skills as a challenge to filling vacancies.²¹

Chart 5.4: Proportion of vacancies filled, average number of applicants, suitable applicants per vacancy, and national rating, Engineering Professions, Australia, 2017-18



Source: Australian Government, *Engineering Professions Australia 2017-18*, Department of Jobs and Small Business.

Skilled technicians are the most pressing area of shortage for companies rather than graduates, as the most recent Ai Group workforce development survey reveals. The latest data indicates that 58% of employers anticipated difficulties recruiting technicians and trade workers with STEM skills.

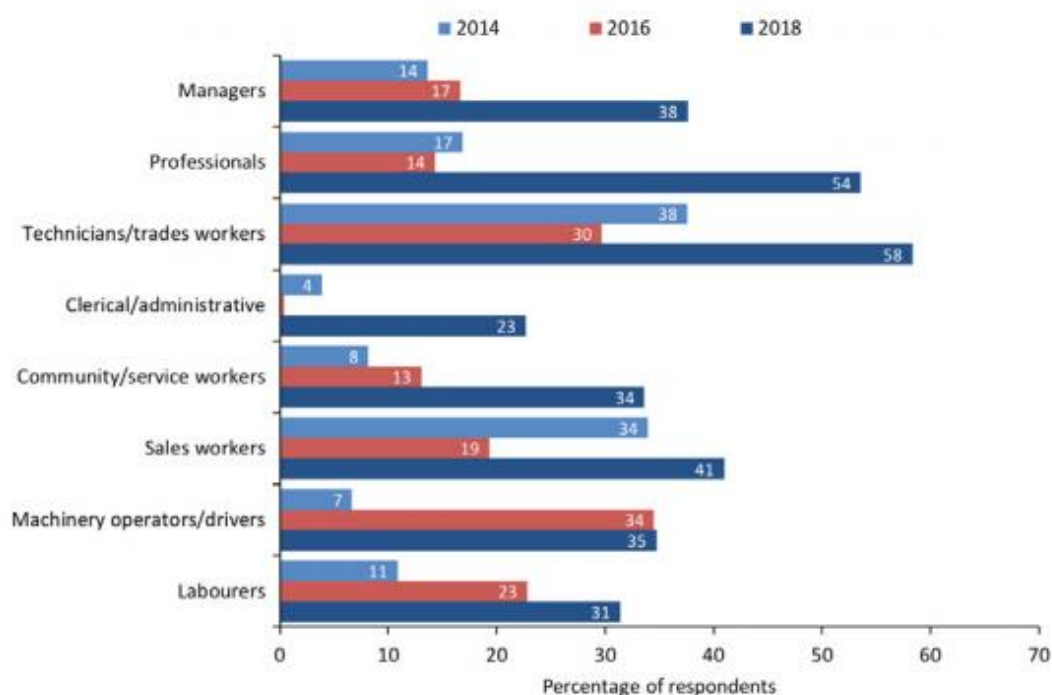
²⁰ Progressing STEM Skills in Australia, Australian Industry Group, February 2015.

²¹ Australian Government, *Engineering Professions Australia 2017-18*, Department of Jobs and Small Business <https://docs.jobs.gov.au/documents/engineering-professions-australia>

There is ongoing concern about the state of STEM education in schools given the declining participation rates and student achievement in maths and science, and the way STEM subjects are integrated into the curriculum and are delivered by teachers, many of whom lack proficiency and qualifications in those subject areas.

Some progress has taken place in the school sector, through the STEM Partnership Forum, as recommended in the Education Council’s National STEM School Education Strategy.²² The Ai Group contributed to the Forum through its research project *Strengthening School-Industry STEM Skills Partnerships*, which produced a number of models and recommendations that need to be promoted to encourage further participation.²³ The Forum’s April 2018 final report, *Optimising STEM Industry-School Partnerships*, includes a number of valuable recommendations involving industry partnerships.²⁴

Chart 5.5: Employers reporting difficulties recruiting people with STEM skills, 2018



Source: Australian Industry Group, *Workforce Development Needs Survey*, 2018

While longer-term solutions to the STEM skills shortfall properly concentrate on the school sector, there is much to be done to reduce short-term pressure on current shortages. In addition, support for existing workers to retrain in STEM areas would also assist to meet the relatively short-term needs of the economy.

Strategies are also required to meet the particular needs of SMEs given their prominence in the economy. Government could support these companies via networks or clusters and engagement

²² National STEM School Education Strategy, Education Council, December 2015.

²³ Ai Group, *Strengthening School – Industry STEM Skills Partnerships*, Final Project Report, 2017.

²⁴ *Optimising STEM Industry-School Partnerships: Inspiring Australia’s Next Generation*, STEM Partnerships Forum, Education Council, April 2018.

with group training companies. Support for sectoral and supply-chain companies working with larger companies also warrants consideration.

There remains a need for an overarching national STEM skills strategy. The federal government can take a leadership role, in the development of this strategy in conjunction with industry. A multi-pronged approach is needed to address school, university, VET and industry involvement. Sufficient resourcing is required to develop a co-ordinated and systemic response to the issue.

Initiatives to enhance the vocational education and training sector's role in filling STEM skills gaps, and promotion of apprenticeships and traineeships delivered through the VET sector, together with business and industry, such as Ai Group's Industry 4.0 Higher Apprenticeships Program should be prioritised for funding by government.

Recommendations

Develop and effectively resource a national STEM skills strategy in conjunction with industry to expand the STEM-qualified workforce.

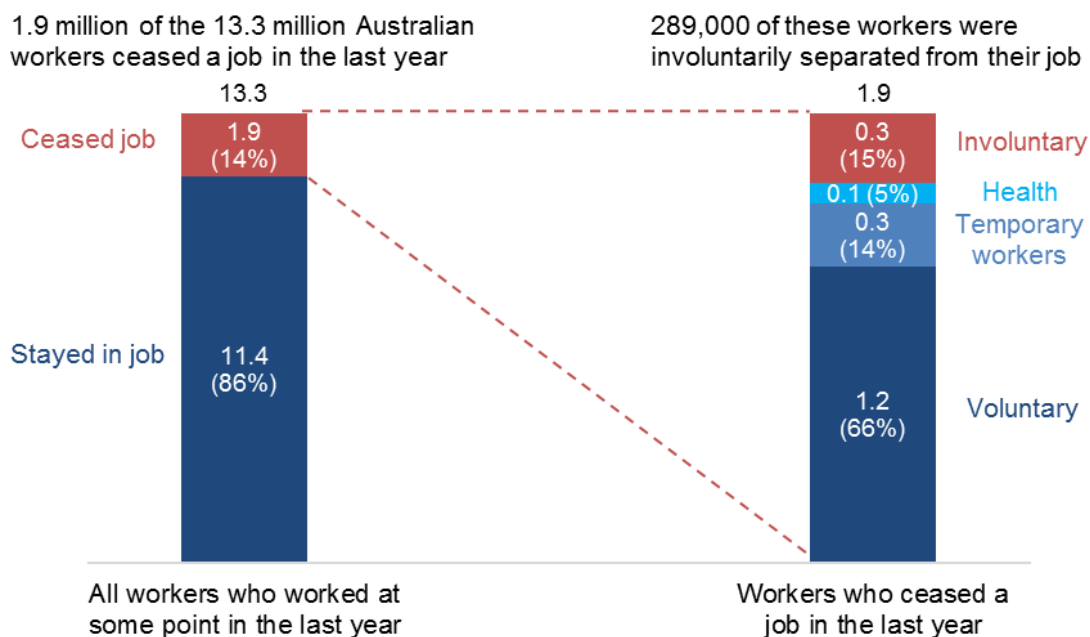
Implement measures to increase the level of STEM participation in the VET sector, especially through apprenticeships and traineeships relevant to STEM skills.

Develop specific measures to expand the STEM workforce in SMEs through cluster/network models.

5.3 Investment in continuous learning by existing workers

With technological change affecting nearly all industries different skills and new practices need to be adopted by existing workers throughout their working lives. Workers more capable of undertaking productive and engaged roles are better able to contribute to innovation in the workplace, while displaced workers represent a clear social and economic cost to Australia. In the twelve months to February 2018, 289,000 or 15% of workers who changed jobs, did so involuntarily (chart 5.6).

Chart 5.6: Australian workers who changed jobs in the last 12 months, Feb 2018



Note: Voluntary reasons include retiring, returning to studies, to obtain a better job, family reasons, starting a new business, unsatisfactory work arrangements and other voluntary reasons. Involuntary includes those who were retrenched or dismissed. Temporary is seasonal or temporary work and health related reasons are due to own illness or injury.

Source: ABS, *Participation, Job Search and Mobility*, February 2018.

Australia needs more than the current one-fifth of workers aged 15-64 years to be studying.²⁵ Linking lifelong learning to workforce productivity is now essential. A 2014 UNESCO statement makes the direct link between lifelong learning and economic growth and prosperity²⁶. Without efforts by government, education and training sectors and industry to normalise cultures of continuous learning in the workplace the Australian economy will not prosper to the extent that is necessary for our future.

Because of constant change workers will need to take ownership of their own learning and have the opportunity to undertake training and development as they move through working lives. A 2018 Deloitte study found that study-interested workers prefer education and training linked closely to their job and industry.²⁷

The acquisition of new skills by existing workers and the refreshing of existing skills needs to be available in a range of environments (virtual, physical) and through access to bite size training. The introduction of micro-credentials by education institutions to meet on-demand learning must increase. The growing emphasis by education and training sectors now on developing capabilities in enquiry, agility, adaptability, creativity and problem-solving will assist future workers in gaining a robust base to build skills through their working lives.

²⁵ABS, Education and Work, Australia, Cat. No. 6227.0, May 2018

²⁶ UNESCO, Education Strategy, 2014

²⁷ Higher Education for a changing world, Deloitte, 2018

In terms of re-skilling, Ai Group's research shows that employers are currently prioritising managers for digital technology training and changes anticipated or caused by its rollout.

However, re-skilling extends beyond digital skills development in order to equip workers with the broader capabilities required in more autonomous workplaces. The digital economy requires a cultural change in the way work is done and managed. In the past, much of the role of a senior manager was tied up in expertise and knowledge. Now that is becoming less important and instead it is the ability to locate knowledge, assess how valid it is and then put it to use in collaboration with other people.

Businesses will need to assess their own capabilities and train when necessary using education and training partners, supervisors, managers and leaders. These companies will develop employees more capable of taking control of their roles, needing less supervision and better able to contribute to innovation in the workplace. However, support is needed for industry to develop digital strategies and workforce plans, assess existing workers' capabilities and train where necessary.

Recommendations

Provide incentives for industry, focussing on SMEs, to assist with workforce planning to continue re-skilling its transitioning workforce.

Build capability for continuous learning in individuals through the curricula frameworks and teaching and learning practices of all education and training sectors.

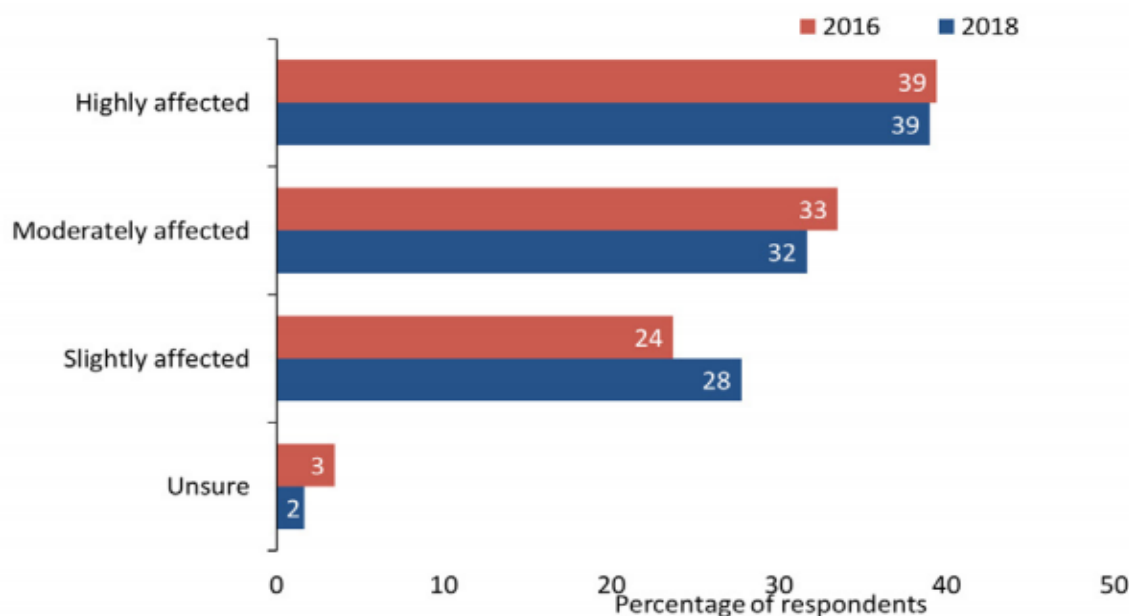
5.4 Developing Australia's workplace literacy and numeracy capabilities

Poor literacy and numeracy have a negative impact on productivity, labour mobility and the capacity of the economy to achieve the higher levels of skills needed for the increasingly knowledge-based economy. There remains an urgent need to address the language, literacy and numeracy needs of the Australian workforce.

Ai Group research reveals that the low levels of workplace literacy and numeracy are a major concern to employers. The most recent survey indicates that 99 per cent of employers reported that low levels of literacy and numeracy have an impact on their business.²⁸

²⁸ Ai Group, *Skilling: a National Imperative*, 2018

Chart 5.7: Businesses affected by low levels of language, literacy and numeracy



Source: Australian Industry Group, *Workforce Development Needs Survey*, 2018

The OECD's most recent survey of adult skills, measuring literacy and numeracy in Australia's adult population, found that 12.6 per cent of adults score at the lowest levels in literacy and 20.1 per cent score low in numeracy.²⁹

An individual with poorly developed literacy and numeracy skills is at greater risk of disengaging from learning and fully participating in the workforce. It is estimated the economic impact of an individual disengaging from school early would cost the government, and taxpayer, around \$334,600 per early school leaver over their lifetime.³⁰ The Australian Bureau of Statistics' recent Survey of Education and Work reveals that there are over 286,000 persons aged 15 to 24 years not engaged in study or employment at the time of the survey.³¹

The Ai Group conducted a return on investment to employers participating in a literacy and numeracy support program with very positive results.³² In addition to the benefits for participating employees, there is also now a firm business case for employer investment in workforce literacy and numeracy. There need to be programs within which they can invest.

A national literacy and numeracy strategy needs support especially for workplaces. A key component of this is the development and implementation of a new co-contribution program specifically for workplaces. Such a program would be based on tight outcomes for both individual participants and employers.

The use of the Australian Core Skills Framework could be mandatory to measure individual improvement and return on investment measures could be utilised to demonstrate benefits to the

²⁹ Education GPS, OECD, 11/14/2018, 3:06:42 PM <http://gpseducation.oecd.org>

³⁰ Lamb, S. and Huo, S. Counting the costs of lost opportunity in Australian education. Mitchell Institute report No. 02/2017. Mitchell Institute, Melbourne

³¹ Australian Bureau of Statistics, Education and Work, Australia, May 2018

³² Investing in Workforce Literacy Pays, Australian Industry Group, August 2015.

employer including direct linkages to productivity. The program could also be nationally accredited through the Foundation Skills Training Package adapted to suit particular workplace needs. The Ai Group conducted a small pilot study with three workplaces during 2016 based on these approaches with significant success.³³ This combination of measures could be implemented through a larger national pilot program in concert with industry.

It is encouraging that the recent review of the Foundation Skills Training Package has recognised that literacy and numeracy now involves digital literacy skills, with relevant units in the process of being added to the Package.

Ai Group urges the government to fund, develop, and promote a national workforce language, literacy and numeracy (LLN) strategy and program in connection with industry. Additionally, the strategy and program should incorporate the development of digital literacy skills to ensure employees – and employers – are adequately equipped to deal with developments in the digital economy.

Recommendations

A national foundation skills strategy needs to be provided with a sufficient budget to support workforce literacy and numeracy programs.

The Government commence discussions with industry and other appropriate stakeholders about the development of a new workplace LLN program.

5.5 Reform of Australia's apprenticeship system

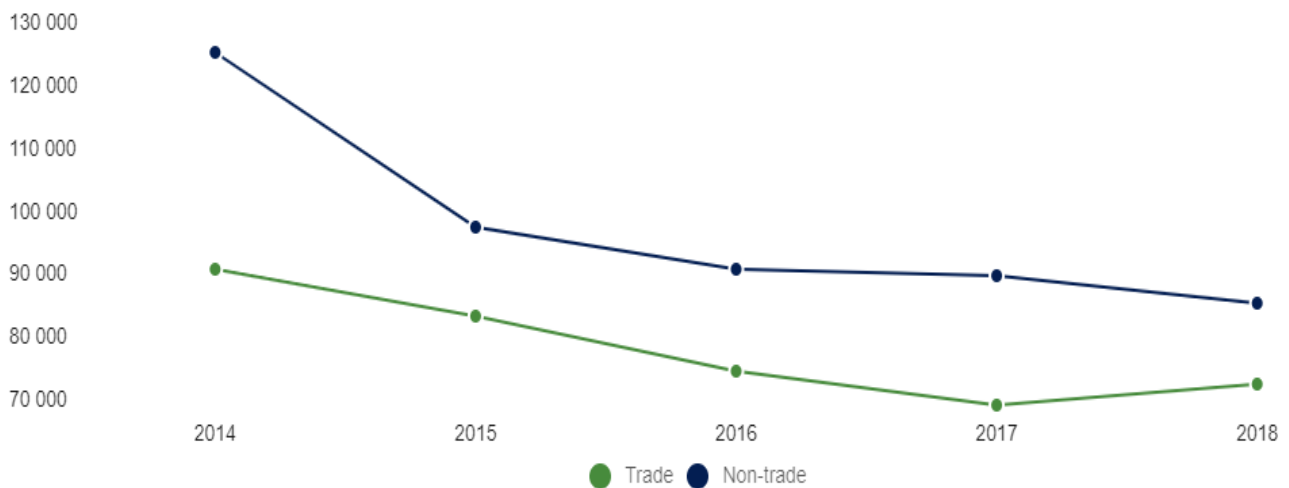
The level of apprenticeship commencements is an ongoing concern for the nation's industry sector. The most recent data from the NCVER indicates that there were 269,720 apprentices and trainees in-training as at 30 June 2018. This represents a fall of 1 per cent compared to the June 2017 level. Overall commencements fell by 0.6 per cent during the period, however trade commencements increased by 4.6 per cent while non-trade commencements fell by the same number³⁴.

The data is showing that the gradual decline in apprenticeships in trade occupations since 2014 may be showing signs of improvement, at least in some states. It also shows that the steep decline in non-trade occupations, mainly traineeships, continues to decline and will plateau at a new level well below what was recorded before 2012.

³³ Foundation Skills Pilot Program Success, Australian Industry Group, July 2017.

³⁴ Apprentices and trainees 2018: June quarter – Australia, NCVER, 2018

Chart 5.8: Apprenticeship and traineeship commencements – Australia June 2014 – June 2018



Source: NCVET, Apprentices and trainees 2018: June quarter - Australia

Disaggregation of the data reveals a more nuanced situation. Training rates in some of the key industrial trades increased yearly from 2014 to 2018. This reflects infrastructure and related projects, i.e. construction-based trades. Automotive and engineering trades also increased in the past 12 months. However, printing, hairdressing and food trades continue to decline. This demonstrates improvement in some key areas, but also shows the need for targeted government invention in others.

In non-trade occupations, the biggest declines in commencements since 2012 have been for hospitality workers (60.5 per cent), clerical and administrative workers (74.3 per cent) and sales workers (77.2 per cent). Commonwealth incentives for existing workers and for qualifications higher than Certificate IV in these occupations were withdrawn in 2012. In other non-trade occupations that are identified as priority (predominantly carers and aides) and retain some of these incentives, commencement numbers have declined by only 28.5 per cent since 2012. It is possible that a broader identification of priority occupations may improve commencement numbers for high skill occupations. These could include Diploma-level traineeships in technical occupations that develop STEM skills and para-professional occupations that develop management skills.

One example is the Diploma of Applied Technologies, which underpins the Industry 4.0 Higher Apprenticeship Project piloted by Ai Group and focuses on high level digital skills for technicians in manufacturing and other sectors. The pilot has proved very successful, with a second intake commencing in Victoria in 2018. Victoria and South Australia have now approved and funded the qualification as a traineeship and other states are considering applications. An incentive for employers would help defray the higher cost of training and encourage early adopters to employ Higher Apprentices. This will in turn make the training viable for training providers in each state.

The introduction of the Skilling Australians Fund has the potential to make a difference in the number of apprenticeship commencements despite Victoria and Queensland not participating.³⁵ The potential of this initiative would be significantly enhanced through direct projects with industry, which would also increase the likelihood of national approaches.

³⁵ <https://www.education.gov.au/skilling-australians-fund>

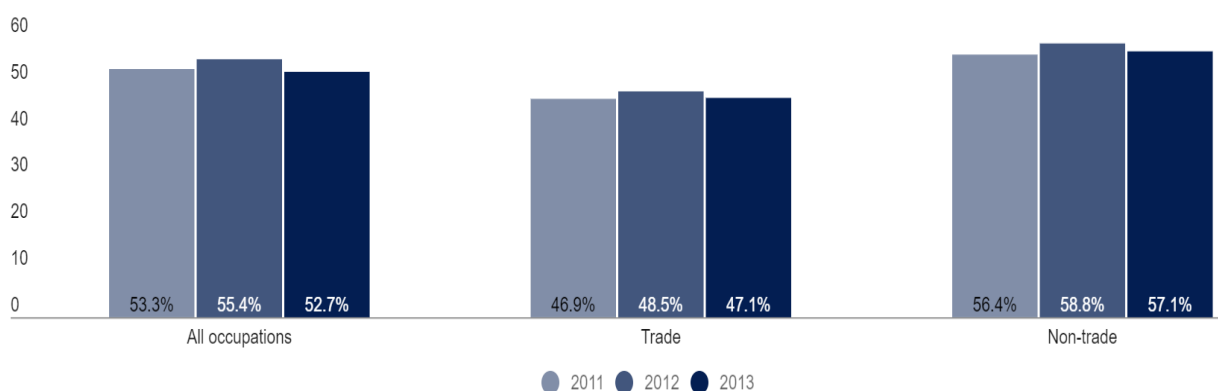
More new employers must be encouraged to engage with the apprenticeship system if it is to grow. The recent announcement to trial incentives for employers in regional and rural communities who have not previously employed an apprentice or have not employed an apprentice for three years is a positive step, including the intention to include group training in the trial.

The recent announcement to provide incentives to employers of apprentices aged 21 – 24 years is also likely to boost apprentice numbers.

Completion Rates

Completion rates for apprenticeships continue to worsen. NCVER’s latest annual completion data was released on 5 July 2018 and shows national completion rates have declined to 52.7 per cent for all occupations and 47.1 per cent for trades.

Chart 5.9: Australian contract completion rates for commencement in 2013.



Source: Completion and attrition rates for apprentices and trainees 2017, NCVER

Most employers that take on apprentices operate small businesses. These employers need to be supported to help their apprentices complete. They need help to improve their recruitment practices and help to improve how they manage their apprentice after they commence, including understanding their obligations. Professional development workshops for apprentice supervisors have been trialled at different times with positive results, however they have not always reached those employers who need help the most. Encouragement for new employers, or employers with a poor track record, to attend a workshop to be eligible for incentives could help extend the intended audience. Some countries, including Germany, the Netherlands and Switzerland make targeted training mandatory for apprentice supervisors.³⁶

Group training

Collectively, group training is the largest employer of apprentices in Australia, employing almost 25,000 apprentices and trainees across the country. Group training organisations (GTOs) have been operating for nearly 40 years and provide important support for SMEs. GTOs will rotate apprentices to different work sites so they gain broad exposure to skills that smaller companies can’t offer, and they can guarantee continuity of employment for apprentices and trainees when companies

³⁶ OECD, Seven Questions about Apprenticeships: Answers from International Experience, 2018

operating on short-term projects cannot. GTOs also provide mentoring support and specialise in helping disadvantaged people into apprenticeships and traineeships.

The Australian Government previously supported GTOs in their activities through the Joint Group Training Program, so-called because of joint funding arrangements with state governments. National funding was discontinued in 2015/16, but some states continue to provide funding. Targeted funding of GTOs to support their activities to help disadvantaged groups, and to help SMEs participate in the apprenticeship system may help improve commencement and completion numbers.

Attracting new apprentices

Ai Group’s latest Workforce Development Needs Survey asked employers about their main issue of concern around apprentices and trainees. 31 per cent noted a lack of suitable apprentices. This compares to 25.7 per cent in 2016 and reflects increasing frustration with sourcing apprenticeship candidates³⁷. Some states have implemented programs to promote apprenticeship careers, however a national approach would have greater reach.

A contributing factor to this general concern is the data released about VET in Schools participation for 2017. In 2017 there were 242,145 VET in Schools students, a decrease of 0.5 per cent from 2016, and 3.3 per cent from 2013. Of particular concern, is the state of school-based apprentices and trainees which make up only 9 per cent of all VET in Schools students. These have decreased by almost 10 per cent since 2013 to 19,960. Most states and territories recorded a fall in participation although South Australia and Western Australia recorded modest increases.

Table 5.1: State and Territory summaries of school-based apprentices and trainees, 2013 -17

		School-based apprentices and trainees		Other VET in Schools programs	
		<i>Students</i>		<i>Students</i>	
		2013	2017	2013	2017
State or territory of school	NSW	2 500	2 495	58 270	47 670
	Vic	3 605	3 015	45 680	47 425
	Qld	13 100	11 295	78 035	72 865
	SA	900	1 025	11 695	10 350
	WA	1 090	1 285	23 820	35 500
	Tas	600	530	4 525	2 850
	NT	0	135	1 700	2 550
	ACT	350	185	4 450	2 975
Total		22 150	19 960	228 170	222 185

Source NCVET, VET in Schools 2017

There needs to be a Commonwealth sponsored review of these arrangements to determine the reasons for the under-utilisation of this pathway and develop strategies to assist schools and

³⁷ Ai Group, Skilling: a National Imperative, 2018

industries to more actively participate. The Head Start Apprenticeship program announced by the Victorian Government and designed to make school-based apprenticeships more user-friendly for employers, is one strategy that could be considered nationally.

WorldSkills is one long-standing initiative that has helped promote trades, apprenticeships and the value of VET training to generations of Australians. It has been hosting regional competitions since 1982 and sent its first skills team to compete internationally in 1983. WorldSkills Australia national competitions attract thousands of visitors, many of them school children, and regional competitions held throughout Australia attract many more. The successful Try'aSkill activity also promotes trades and skilled professions. These activities are important to help attract apprentice candidates, and it is pleasing to see that the Australian Government has demonstrated its support for WorldSkills Australia through a three-year funding agreement.

A national body is needed to manage the implementation of new measures including overseeing national consistency and ensuring programs and arrangements meet current and future workforce needs. Confronted with similar apprenticeship issues, the UK has established an independent and employer-led body, the Institute for Apprenticeships, to regulate the quality of apprenticeships in the context of anticipated rapid expansion of the program.³⁸ It is timely for Australia to review the governance arrangements for apprenticeships with a view to providing a genuinely national approach.

Recommendations

Review Commonwealth employer apprenticeship incentives to include high skill (Diploma-level) traineeships that are Non-NSNL non-priority occupations.

Fund the ongoing development and rollout of the Industry 4.0 Higher Apprenticeship.

Encourage new employers of apprentices or employers with a poor track record of apprenticeship completions to participate in a workshop for apprentice supervisors to become eligible for Commonwealth incentives.

Facilitate direct industry and employer engagement by establishing a national body to oversee the apprenticeship system, including the Skilling Australians Fund. The oversight would include programs for which each state has powers to declare apprenticeships and determine funding levels.

Provide targeted funding of GTOs to support their activities to help disadvantaged groups, and to help SMEs participate in the apprenticeship system, similar to the previous Joint Group Training Program.

Initiate a review of school-based apprenticeships to determine the reasons for low levels of participation and to develop strategies to facilitate greater participation by schools and industry.

³⁸ <https://apprenticeships.blog.gov.uk/2017/11/23/the-institute-for-apprenticeships-breaking-the-chain/>

Implement measures to achieve full national consistency for all apprenticeships across Australia, including consideration of an overseeing body to ensure programs and arrangements meet current and emerging occupational needs.

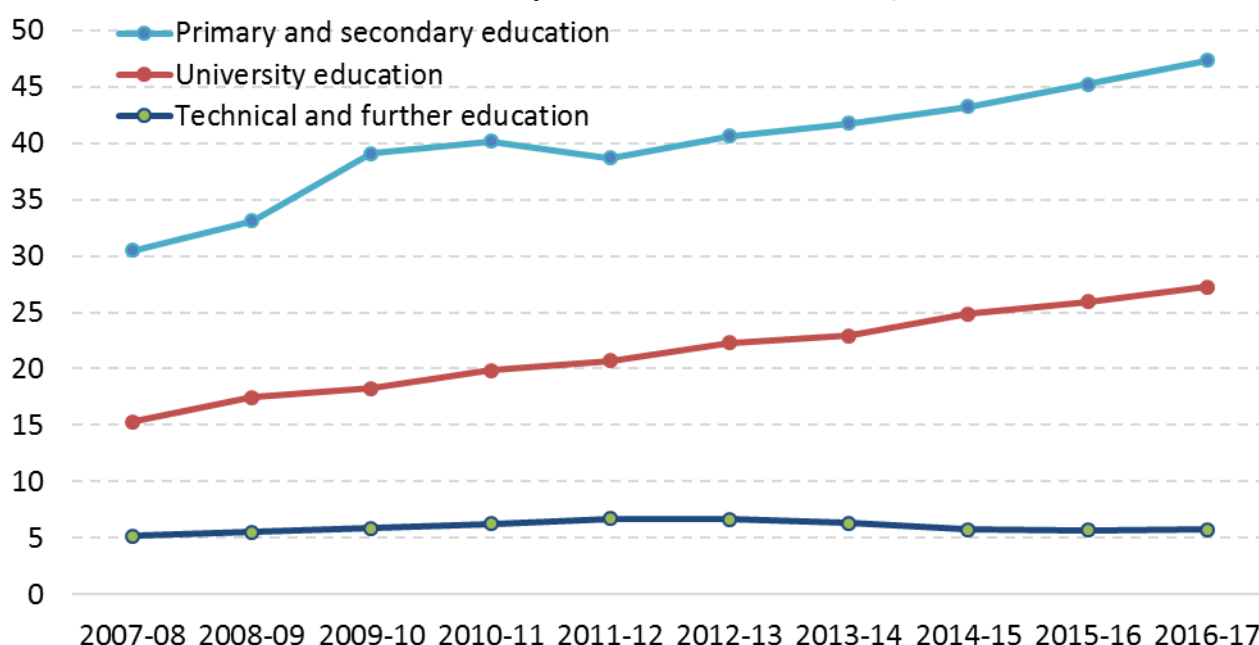
5.6 Investment in Australia’s VET system

Australia’s VET system is critical to ensuring industry has the skilled workforce it needs to grow and to compete internationally. It provides the technicians, the tradespeople, the supervisors and the para-professionals that form a large part of Australia’s workforce. The Department of Jobs and Small Business estimates that occupations requiring Skill Levels 2 to 4 (commensurate with qualifications ranging from Certificate II to Advanced Diploma) currently make up 50.8 per cent of the workforce. These occupations are expected to grow by 6.3 per cent over the next five years³⁹.

The current review of VET is a welcome exercise and should consider the pressing needs outlined here. It is deeply concerning that the funding of the VET system continues to be inadequate, in terms of both the level and composition of its funding.

Firstly, the levels of total VET funding are not sufficient to meet existing and future skills needs of the workforce. The level is too low in absolute terms and relative to the funding arrangements in both the higher education and school sectors. The growth in occupations estimated by the Department of Jobs and Small Business is not reflected in the stagnation in funding over the past decade. It also contrasts with steady growth in funding for other sectors of education.

Chart 5.10: Government expenditure on education, \$bn, 2007 to 2017



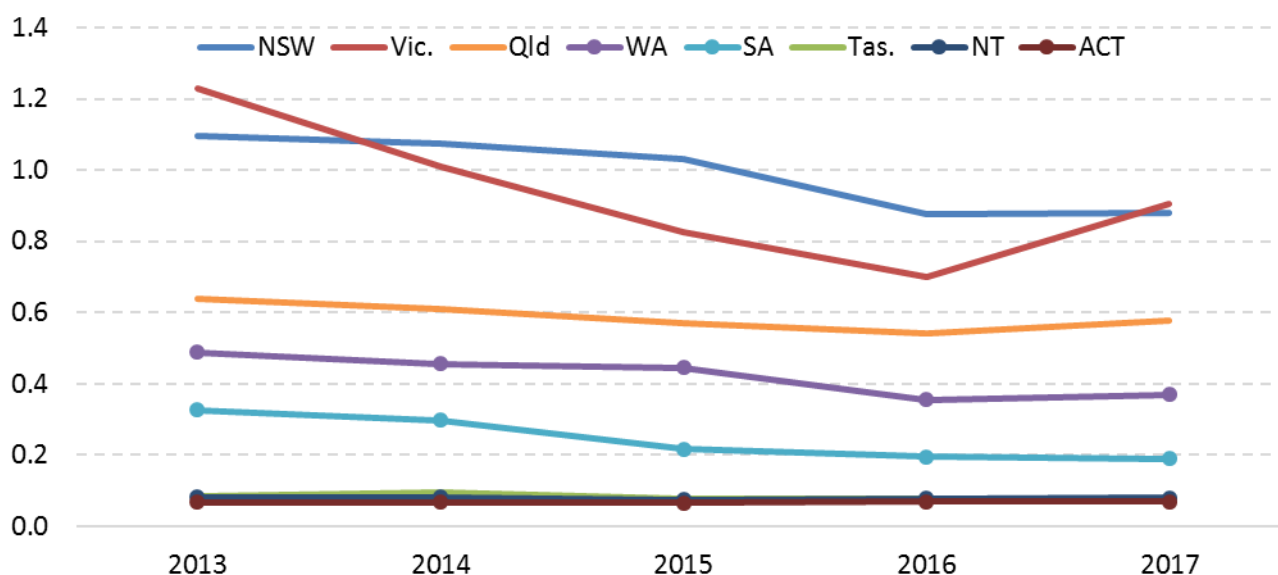
Source: ABS *Government Finance Statistics, Education, Australia, 2016-17*.

³⁹ Department of Jobs and Small Business, *Industry Employment Projections, 2018*.

The second problem is the composition of public funding for VET, or more precisely, the shared contributions of the Commonwealth and the States/Territories. The funding by the jurisdictions has fallen in absolute terms since 2013 and also relative to Commonwealth expenditure, although there was an increase in 2017 due largely to Victoria. A recent finance report from the NCVER highlights a continuing decline in government expenditure which amounts to a 15 per cent decrease between 2012 and 2016.⁴⁰

The relative funding shares between the Commonwealth and the jurisdictions vary significantly. These differences have been aggravated by the introduction of differential student training entitlement funding models by all states and territories. The jurisdictions have used in-built flexibility parameters resulting in differences in the eligibility requirements, the courses eligible for an entitlement, course subsidy levels, the quality requirements of providers, and the information provided to students.⁴¹

Chart 5.11: State Government expenditure on VET, \$bn, 2007 to 2017



Source NCVER Financial information 2017

The shared funding arrangements are impacting on the effectiveness of the VET system. Different mixes of Commonwealth and States and Territories funding and different ways of funding each VET system are causing confused messages for employers engaging with the system, particularly those operating nationally. In some instances, within individual state systems the needs of industry, businesses and students have not been met.

The Ai Group believes that genuine national funding of tertiary education including VET must be established. By addressing and clarifying the excessively complex and duplicative Commonwealth

⁴⁰ Financial information 2017, NCVER, November 2018.

⁴¹ Kaye Bowman and Suzy McKenna, NCVER, Jurisdictional approaches to student entitlements: commonalities and differences, 2016

and State/Territory roles and responsibilities in the training system, a genuinely national training system may be possible.

Further challenges exist for the VET sector. As with other education sectors, it is under pressure to develop people with higher order STEM skills and enterprise skills for the digital economy. The current training product reform initiatives by the Department of Education and Training that are reviewing competency definitions, skill sets and common units promise to improve the quality of VET provision and are welcomed. Similarly, the work of the cross sector projects convened by the Australian Industry and Skills Committee to consider digital skills and related technologies including automation, big data and cyber security, and the ongoing work to implement their recommendations, should help to address needs.

There is growing evidence of the increasing need for higher-order skills in data analytics, cyber security, social media and mobile-related digital skills. The Ai Group is piloting a higher level skills approach in our Australian Government-funded partnership project with Siemens and Swinburne University on the Industry 4.0 Higher Apprenticeships Project. This project has proved successful and we are currently in the process of expanding the higher apprenticeship to other states.

Finally, industry requires a steady supply of VET graduates to the workforce and has expressed difficulty in recruiting trades and technician workers. Ai Group's latest Workforce Development Needs Survey found that 75 per cent of employers experienced skills shortages in the last 12 months, and that the majority of skills in demand fell into those two categories⁴². Industry needs to be assured that students are best suited to the level and emphasis of the programs they are undertaking, and that they have the opportunity to undertake courses that are most relevant to them, thereby creating the best talent pipeline for the workforce.

Recommendations

The Commonwealth and COAG should address declining investment in VET and increasingly uneven investment across jurisdictions, by examining the possibility of moving towards a nationally funded and nationally operated tertiary education system.

Commit further resources to the incorporation of higher order skills development within VET qualifications.

5.7 Connecting higher education

The transforming economy will continue to rely heavily on higher education to develop higher critical enquiry. It must provide the high-level skills, research base and culture of innovation that the new economy needs. It is one of the key enablers in the development of our human capital and is crucial to the business sector.

In the last decade the employment of professionals has increased by 35 per cent in the context of overall employment growth of 17 per cent.⁴³ Higher education is largely responsible for the

⁴² Ai Group, *Skilling: a National Imperative*, 2018

⁴³ The Skilled Labour Market 2016-17 at www.employment.gov.au/skill-shortages

development of the STEM-based advanced technology knowledge and skills increasingly required in many workplaces. Australian Government data show that from 2011-2016 the proportion of university students in STEM related fields of education including natural sciences, information technology and health increased, while they decreased in architecture, environmental and related studies.⁴⁴ Regardless of discipline, graduates need to be sophisticatedly technically proficient, with higher level cognitive skills.

Corresponding with the introduction of the demand driven funding model, participation in the sector has been growing significantly.⁴⁵ Notwithstanding this growth, recent enrolment patterns indicate that higher education numbers will plateau over the next few years.⁴⁶

A number of the features of Australia's higher education system are under stress, partially as a result of the transforming economy. Stable policy settings are required for Australia's higher education institutions to perform in the long term. Yet uncertainty remains over funding with the demand driven system currently constrained by the Government's freezing of the Commonwealth Grants Scheme funding at 2017 levels. In 2018 the Commonwealth Government is spending less in real terms on tuition subsidies than in 2017, and only just over a third of research expenditure is financed by Commonwealth research grants.⁴⁷

Debate exists over the blurred boundaries between higher education and the VET sector. Student retention and the quality of outcomes have been under scrutiny, including for equity groups. Flexible study options are being demanded by student populations and changes to credentialing and qualification structures are needed to meet the needs of undergraduate student participation patterns and industry skill needs. Creative collaboration with industry to enable engagement by students and teaching staff must reach a new level to ensure learning relevance.

In the new economy industry needs universities to have the capacity to provide shorter amounts of training in a range of environments. An increased proportion of students are studying through external study modes in both full time and part time capacities.⁴⁸ A balance needs to be met between the traditional degree program and the demands for 'stacked' learning.

There are indications that the sector is transforming by innovating its teaching and learning approaches and infrastructures and creating outward-looking strategies that are building comprehensive engagement with industry partners. While there is goodwill and agreement across the education and industry sectors that greater employability is enabled by exposing students to authentic work environments, employers are least satisfied with graduates' capabilities of self-managing, problem solving and interacting with people.⁴⁹

⁴⁴ Higher Education Student Data, Australian Government, 2017

⁴⁵ Noonan, P., A new system for financing Australian tertiary education, Mitchell Institute, September, 2016

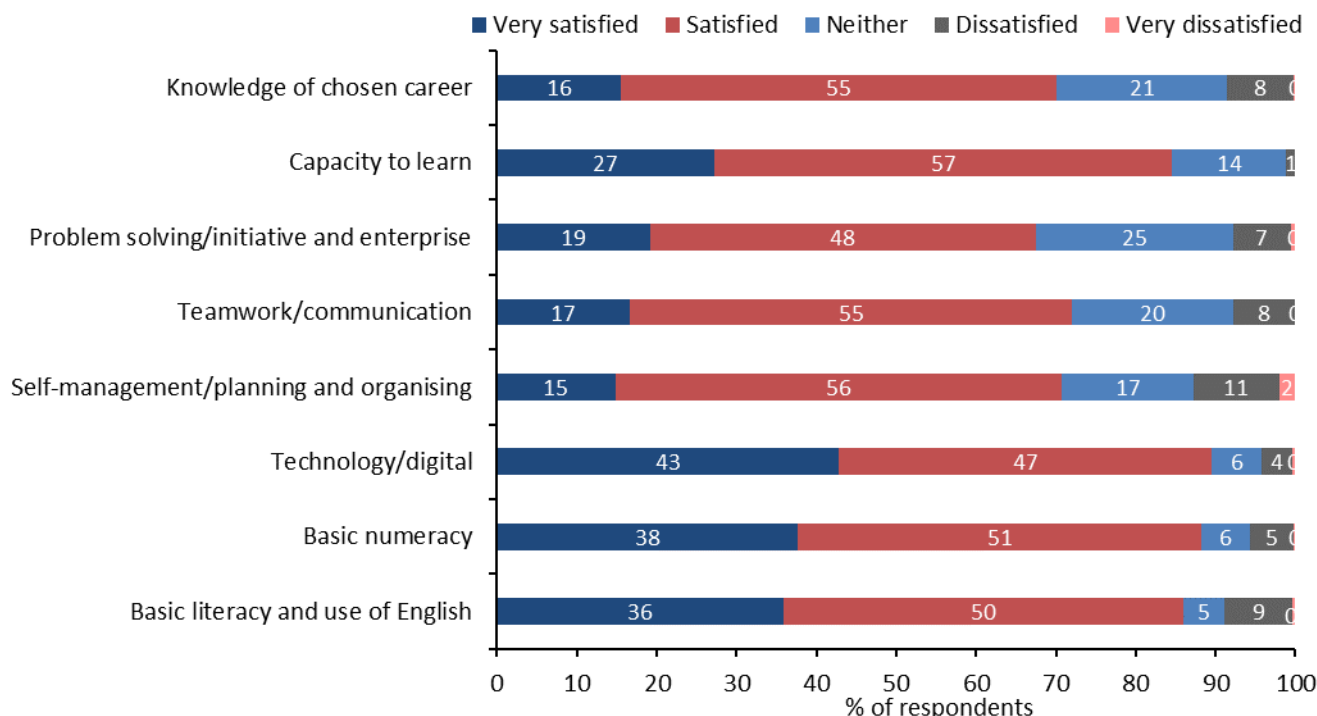
⁴⁶ Norton, A., Cherastidham, I., and Mackay, W. Mapping Australian higher education, Grattan Institute, 2018.

⁴⁷ *ibid*

⁴⁸ Higher education for a changing world, Deloitte, 2018

⁴⁹ Workforce Development Needs Survey Report, Australian Industry Group, December 2016.

Chart 5.12: Satisfaction with university/higher education graduates



Source: Australian Industry Group, *Workforce Development Needs Survey*, 2018

Ai Group’s 2018 survey found that employer links with universities increased for work placements, partnering for research and project work from 2016 to 2018. Employers considered the most important form of support for companies to link with universities is accessing examples of student activities that could assist the business. A relevant point of contact at a local university, and information on supervising and mentoring students are also considered important.

Many universities now include a strategy to drive employability through work integrated learning models. Ai Group has championed work integrated learning, through our work with the National Strategy for Work Integrated Learning in University Education, our representation on a number of national WIL projects, and our two guides for employers for activities with both undergraduate and post-graduate students.

However, the models of connection between industry and higher education providers will need to become closer as change quickens. The Australian Business Deans Council has suggested the use of ‘pracademics’ – industry practitioners who bring industry experience into business schools and partner to solve real world problems.⁵⁰ There are some examples of well-established shared campus-business operations that can facilitate both work integrated learning and research but these must become more widespread.

The diverse nature of industry is relevant to the search for ways that the two sectors can better connect. The capacities and resources of large, medium and small businesses to collaborate is broad and different. Many large companies have long standing projects with universities and operate placement programs or share facilities. Smaller companies do not always have the resources to take

⁵⁰ ABDC, Business School-Industry Engagement Report, 2018.

long placements, but they may be able to offer less resource intensive engagements. Universities working with employers to ensure these smaller engagements can be designed to encourage as most student reflection as possible will assist the development of relevant-based and enterprise skills.

A leader in the establishment of beneficial links between higher education and industry, the Canadian Government has allocated a significant budget to programs supporting companies to engage with students for work integrated learning. It is linking the initiative to advancing its Innovation Agenda to spur economic growth. A similar initiative within Australia should be considered.

Recommendations

Fund pilots which examine a range of innovative models of connecting between industry and higher education providers, with the view to establishing new models of learning.

Implement incentives to assist SMEs provide opportunities for higher education students to experience the workforce and develop broad enterprise-focussed capabilities.

5.8 Towards a better-connected tertiary education system

Australia is experiencing a significant movement towards universal participation in tertiary education, which includes both the higher education and VET sector. School completion, while necessary, is no longer considered sufficient for effective participation in the economy and society. Between 2005 and 2015 the proportion of the workforce holding a bachelor degree or higher qualification increased from 23 to 31 per cent while the holding of VET qualifications increased from 26 to 32 per cent. In the same decade to 2015 the proportion of the workforce without post-school qualifications fell from 42 to 32 per cent.⁵¹ Tertiary education is vitally important for the development of the highly skilled workforce the economy needs.

In recent years there has been a significant shift by young people into higher education rather than VET. Participation has been growing significantly in higher education for both the 15 - 19 year-old students and the 20 – 24 years of age students, especially since 2008. In the VET sector both of these age cohorts grew until around 2012, but they have been in decline since thus creating a significant imbalance.⁵² This development of a binary system is characterised by seriously unbalanced participation between the sectors. The recent dramatic falls in VET have also been accompanied by declining funding levels which seriously jeopardise the sector. While recognising the distinct features of each sector, more needs to be done to make overall provision more coherent and connected.

Analysis of the trends in real expenditure across the various sectors reveals a highly imbalanced situation. Higher education expenditure has grown very rapidly with a 52.6 per cent increase over the ten-year period from 2005-6 to 2015-16, despite some levelling off in the final year. Similarly,

⁵¹ Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.

⁵² Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.

school sector expenditure has increased by 30 per cent over the same period with some slowing in the final year. In the VET sector, the situation is the reverse. Expenditure has fallen by 4.7 per cent over this period. The level is now lower than at the beginning of the period. Not only is overall VET expenditure in decline but the gap with higher education expenditure is increasing.⁵³

There is a lack of overall policy direction and governance of the system. Consideration needs to be given to the formation of a central and independent coordinating agency to provide common approaches across the sectors and levels of government. For policy coherence an independent co-ordinating agency is required to engage in consistent, continuous and longer-term strategy development led by a board comprised of representatives from key industry and societal sectors to ensure the articulation of views needed for the effective development and monitoring of a national tertiary education strategy. An independent co-ordinating agency and any resulting national strategy requires the inclusion of both higher and vocational education.

While more effective methods of governance require more than addressing funding levels, a more equitable funding strategy needs to be developed. The VET sector is in need of immediate attention in this area. In this context, demand-driven funding models need to be retained but improved to be more equitable than current practice.

It is essential to address the decline in participation and funding in the VET sector and to restore a better balance between higher education and VET. There have been some indications that there may well be an oversupply of some higher education graduates in some fields. The demand-driven funding system has been more responsive to the labour market than previous mechanisms. Skills shortages for professional occupations have been reduced to only five occupations. On the other hand, there are thirty technical and trade occupations currently in skill shortage which could be addressed by a re-invigorated VET system.⁵⁴

A further issue concerns the current situation in regard to student loans schemes. There are inconsistencies in eligibility criteria for a student loan across the two sectors. All undergraduate students at Australian public universities have access to stable Commonwealth subsidies and HELP. In the VET sector, students undertaking advanced diplomas may or may not have access to an often variable State subsidy or VET student loan. Similarly, VET students in Certificate courses face upfront fees and cannot access the VET Student Loans program. The different levels of public subsidy and access to student loans programs have made accessing higher education loans more attractive.⁵⁵ The current situation concerning student loans is discriminatory and unacceptable. A way needs to be found to introduce a loans scheme with common characteristics across the sectors, initially for diploma level courses and above.

⁵³ Pilcher S and Torii K., Expenditure on education and training in Australia 2017, Mitchell Institute, December 2017.

⁵⁴ Norton A., To fix higher education we also need to fix vocational education, The Conversation, September 5, 2018.

⁵⁵ Croucher G., Noonan P. and Chew J.: Funding an expanded tertiary system: designing a coherent financing architecture, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.

Recommendations

Investigate the establishment of a national independent coordinating agency to provide overall policy coherence for tertiary education.

Establish a more equitable funding arrangement for tertiary education with the first priority to address the decline in the funding for the VET sector.

Review the range of student loan schemes with a view to establishing a single, universal and more equitable system.

5.9 Addressing youth unemployment

There are many barriers to employment for young people. Lack of experience and work-readiness are commonly cited examples. Equipping individuals with the right skills that enable them to more fully participate in the workforce and understand the dignity of work can be achieved by keeping young people engaged in learning and providing alternative pathways to employment and further education.

At December 2018, Australia's youth unemployment trend rate was at 11.3 per cent (down from 12.4 per cent in January 2018), but is more than double the overall unemployment trend rate of 5 per cent.⁵⁶ The underemployment rate for the same age cohort (15-24 years) sits at 17.4 per cent,⁵⁷ and those classified as being not in employment, education or training (NEET) is at 12.2 per cent.⁵⁸

The Foundation for Young Australians estimates that having so many young people out of the workforce costs the Australian economy 790 million lost hours of work each year, equating to up to \$15.9 billion per annum in lost GDP to the Australian economy.⁵⁹ And while a dollar figure can be placed on the economic impact of unemployment, the impact on the mental health and wellbeing of those persons represents a less visible and more personal cost.

Students disengaged from studies at school are at greater risk of being out of work or employed in industries most prone to digital disruption, where automation may replace those jobs involving low-skill, routine tasks.

A 2015 PISA survey of students' sense of belonging in school found that Australian students have shown declining results over time, and rate lower when compared to the OECD average.⁶⁰ These feelings of disconnectedness can influence a student's ambition to remain at school or continue to further studies.

Managing the transition from school to a life beyond can be a difficult path for many young people to navigate without the right support and guidance. Sixty-eight per cent of young Australians say

⁵⁶ Australian Bureau of Statistics, Labour Force (cat. no. 6202.0), Australia, Dec 2018

⁵⁷ *ibid*

⁵⁸ Australian Bureau of Statistics, Education and Work, Australia, May 2018

⁵⁹ Foundation for Young Australians (2014), *Unlimited Potential*, p.3

⁶⁰ ACER, *PISA Australia in Focus Number 1: Sense of belonging at school*, 2018

that school does not prepare them for the real world.⁶¹ It is essential that adequate support is applied while in school and is readily available at the point of and beyond transition from school, with timely follow-up and after-care services provided by schools.

It is important to equip those at-risk of disengagement with the necessary life skills to survive and thrive in the new economy. Developing capabilities around interpersonal, creative and decision-making tasks will be beneficial in finding employment in jobs where routine and manual tasks are increasingly performed by machines.⁶² The OECD advocates the need for school curricula to prioritise the development of critical thinking, collaborative skills, and personal attributes of mindfulness, curiosity, courage and resilience.⁶³

A recent inquiry into careers advice in Victorian schools heard that information provided to students does not meet their needs, and that advice is generally not administered in junior secondary years, before students tend to disengage from their studies.⁶⁴

While career education has been given priority in schools through a National Career Education Strategy, much action is still required. The over-emphasis on academic success in traditional subjects has led to a lack of exposure to vocational options even when students may be better suited to, and have better work outcomes, within these pathways.

The attraction to vocational education and training, and in particular apprenticeships and traineeships has been declining among young people.⁶⁵ Year 13, for example, reports that 56 per cent of students still do not consider an apprenticeship when leaving school.⁶⁶

There is concern that careers teachers do not adequately understand or promote the opportunities in the VET sector. It is important for those providing careers advice to be aware of industry's emerging skill needs including an increasing requirement for higher level skills at the trades and para professional levels.

In striving to make school more relevant to students who are disengaging, or to work with those young unemployed who have disengaged, workplace experiences must be at the centre of school-based and job support programs. Through practical activities such work-based experiences can be effective for learners in developing their industry awareness; understanding the relevance to them; allowing learners to feel valued and make connections; and supporting them to build their skills and capabilities. Closer partnerships between industry, the school sector and job centres will enable more of this activity.

⁶¹ Year 13 (2018), *After the ATAR II: Understanding How Gen Z Make Decisions About Their Future*, p.30

⁶² AlphaBeta, *Mapping Australian workforce change*, 2018

⁶³ Schleicher, A., *Educating for the 21st Century*, 2015

⁶⁴ Dandolo Partners, *Review of career education in Victorian government schools*, a report for Department of Education and Training, Victoria, 2017

⁶⁵ NCVET (2018), Apprentices and trainees <https://www.ncver.edu.au/research-and-statistics/collection/apprentices-and-trainees-collection>

⁶⁶ Year 13 (2018), *After the ATAR II: Understanding How Gen Z Make Decisions About Their Future*, p.13

Recommendations

Increase investment in programs that prepare students for work and transition to the post-compulsory years while at school.

Fund programs to help young people deal with health and wellbeing challenges faced when moving out of the school environment.

Fund transition programs for unemployed young people that increase involvement by industry through work-based activities.

6. Developing Australia's business capabilities

Alongside the development of Australia's workforce skills, Ai Group sees building the capabilities of our businesses as central to lifting national productivity, creating challenging and rewarding employment opportunities and accelerating the advance of domestic living standards and broader community well-being. There is strong scope to achieve these gains by giving particular focus to lifting the capabilities and ambitions of Australia's SMEs.

6.1 Industry 4.0

Industry 4.0 is rapidly transforming practices across businesses and industries. Digitalisation is breaking down barriers between sectors, eroding previous sources of competitive advantage and creating new markets and market competitors. Businesses must act and respond faster than ever before, all the while dealing with ambiguity and constant change. Identification and capture of the productivity potential of new technologies will be critical to businesses' competitive advantage, as will collaboration across value chains. Manufacturing will become increasingly data-driven and the trend towards manufacturing businesses offering an ongoing service relationship beyond point of sale will intensify.

The Entrepreneurs' Programme plays an important role in directly assisting transformation of businesses in key sectors by facilitating improvement in business capability and business model innovation, connecting businesses to relevant specialist independent expert advice and facilitating collaboration with research organisations and across supply chains.

As a key partner of Government in the delivery of the Entrepreneurs' Programme, Ai Group has seen first-hand the strong contributions the programme makes to the outlook and success of businesses. Analyses of the programme substantiate that it is generating real and sustained benefits in terms of strong employment growth, turnover and exports by businesses that have accessed the business evaluation, supply chain improvement and growth services. Further, analysis of business participants in the Innovation Connections stream of the Programme identified that a significant proportion had developed an entirely new product or process, accessed new markets and established an ongoing commercial relationship with the researcher.

Recommendation

The Entrepreneurs' Programme should continue to scale up in line with business demand and economic opportunity.

6.2 Digital capabilities

Speaking at an Ai Group function in 2018, the Governor of the Reserve Bank of Australia, Philip Lowe, commented on the nature of recent technological progress, noting that it has been heavily focused on software and information technology and, drawing on OECD research, that there was a wide dispersion of take up of these technologies between leading and lagging firms. Mr Lowe also expressed confidence that over time there would be a greater diffusion of these technologies beyond the leading firms thus boosting aggregate productivity and incomes. These observations

provide a useful point of reference on both the current status of digitalisation and Industry 4.0 in Australia and what the future holds.

It is fair to say that substantial progress in embracing Industry 4.0 and digitalisation more broadly has so far been confined to a relatively small number of leading firms – both multinational and domestically-based. Embracing Industry 4.0 and digitalisation, under various labels, has stretched the gap between these leaders and the majority of businesses. Some businesses are progressing well with the uptake of new technologies, many others are still grappling with the concept and potential of digitalisation. The ongoing rollout of the NBN is creating more potential for digitalisation, new business models and new services, but businesses are not all in a position to make the most of these. Leading economies recognise the national interest in avoiding or bridging a digital divide, whether in industry or wider society.

We welcome the Government's release in December 2018 of its report "Australia's Tech Future: Delivering a strong, safe and inclusive digital economy". We look forward to working with all sides of government, industry and the broader community to ensure that Australia's vision for the future is sustainable for the long term.

The increasing frequency of reports of skills shortages relating to the adoption of Industry 4.0 approaches suggests that current capacity is constrained. But more encouragingly, it also points to an increased pace of adoption and further diffusion of Industry 4.0 beyond early adopters. The recommendations at section 5.3 for support for continuous employee learning would help improve the digital skills of existing employees.

In addition to this, there is scope to accelerate business efforts to digitalise production, services and supply chains; to enhance their digital readiness; to take-up digitally enabled business models; and to enhance data flows and analysis. Small and medium sized enterprises, in particular, are often constrained in their growth by lack of technology capability and access to finance.

Recommendation

The government should sponsor a public program targeted to SMEs to provide advice on options and facilitate their investment in digital capabilities. This should build on and complement the bDigital service available to clients of the Entrepreneurs' Programme.

6.3 Cyber security capabilities

Industry clearly has commercial interests in ensuring that their business and customers' transactions are protected.

There is much to celebrate in terms of Government and industry cyber security success. The Australian Cyber Security Centre provides strong advice to businesses of all sizes and sectors on how to protect themselves. AustCyber fosters the growth of our local cyber security industry, which has strong export prospects. But there are areas for improvement.

At the last Federal Budget, we identified regulatory measures in place to tackle cyber security including the Telecommunications Sector Security Reform, Mandatory Data Retention, and the Mandatory Data Breach Notification Scheme.

While these laws are well intentioned, we suspect that many businesses will likely treat these as compliance issues. Based on anecdotal feedback, compliance with these new laws is a big concern for many businesses. However, compliance alone does not address the underlying issue of ensuring businesses have adequate capability and resources to ensure their systems are secure. Law enforcement resources are an especially critical constraint.

Regrettably, this problem has been further compounded with less helpful steps such as the Federal Government's recently passed Assistance and Access Bill, also known as the Encryption Bill, which potentially undermines confidence in the security of all networked systems in Australia. Encryption of communications and information passed between businesses and their customers is fundamental and there is a clear risk that the measures in the Bill could weaken the security of these businesses. It could make them more vulnerable to hacking and undermine trust between business and their customers. The law requires further consultation to ensure its potentially broad impacts are tested by exposure to a cross-section of industry and the broader community, and we welcome the Parliamentary Joint Committee on Intelligence and Security recently announcing the commencement of a new review into this new law.

In the meantime, cyber security incidents including data breaches, scams and fraud continue to grow and evolve, and businesses and the community are continually challenged and expected to respond to these effectively. As business and society continue to embrace digitalisation, the future blueprint for a digitally enabled society should include initiatives to help industry and the population at large understand cyber-security risks and how they can protect themselves online.

Recommendations

Given the rapidly evolving state of cyber threats and attacks, it is essential that our law enforcement bodies are sufficiently resourced, not only for protecting our national security, but also to protect business and consumers against global cyber crime.

It is critical that there is better collaboration between government and industry to tackle cyber security. Collaboration enables sharing of information about threats and helps build an innovative industry. In this context, Ai Group is working with our members to help them overcome these barriers, and we are open to working with industry and government to this end.

While the recently introduced encryption legislation requires amendment, businesses in the meantime are struggling to understand its implications for their legal and contractual obligations, regulatory costs and global competitiveness. The Government needs to fund outreach and information resources to address this.

6.4 Improving Australia's export capabilities

Australia has completed a number of high-profile trade agreements, and is continuing to negotiate agreements with important trading partners. Now work is needed to ensure that Australian companies are in a position fully engage with the opportunities available to them. Market access is only one factor in successful exporting, finding the right customer is the most important factor

As a consequence of successive years of efficiency targets, the frontline presence of business capacity building agencies such as Austrade have diminished to unacceptable levels, and are inconsistent across Australia. Using ABS data and the published tender documents for Austrade's national frontline service, TradeStart, we have learnt that there is one TradeStart Advisor for 400 existing exporters in Tasmania whereas in Victoria the ratio is 1 export advisor for 5120 existing exporters. We make the distinction on existing exporters, as with those ratios, it is difficult for potential or emerging exporters to access services in Victoria to transition to established exporters.

Opening markets through FTAs is only one element of creating a successful exporter. Companies, particularly SME's require additional coaching to ensure that they export efficiently and successfully. TradeStart has been an important partnership program for Austrade to deliver export coaching services across the country.

The Export Market Development Grants scheme (EMDG) plays an important role in encouraging small and medium-sized businesses to export new products and services, and to access new markets. Ai Group supported the review of the scheme by Mr Michael Lee Implement selected findings of Michael Lee's June 2015 review of the Export Market Development Grants Scheme

Mr Lee's report shows a strong return for the money invested in EMDG scheme:

"KPMG found that each EMDG dollar generates an economic benefit of \$7.03 when industry spillovers and productivity gains are taken into account. The scheme effectively redistributes productive resources from Australian taxpayers (including firms) to new and emerging exporters. To the extent that this transfer of resources results in an increase in community welfare than would otherwise be the case, the scheme can be judged to be efficient."

The success of the program ultimately depends on the funding committed in the Budget and we encourage the Government to continue funding the program so that it remains a viable program where the benefits to applicants outweigh the costs of applying.

Recommendations

Resourcing Austrade appropriately so it has the skills and resources to support Australian companies to access global value chains and to invest abroad.

Increase the availability of one-on-one support for new and emerging exporters.

Progressively increase the budget allocation for EMDG by \$12.4 million per year over the next three years to \$175 million.

6.5 Improving Australia's defence industry capabilities

The Ai Group Defence Council (the peak body for the Australian defence industry) strongly supports a well-resourced Defence budget for the safety and security of the nation, as well the significant economic implications of a thriving domestic industry. The overwhelming feedback from our members has been support for the Government's defence industry policies and the associated funding to support Australian industry.

The 2019-20 Federal Budget offers an opportunity to confirm the Government's commitment to Defence spending, as well as build on the recent significant gains made by the Australian defence industry through:

- Confirmation of the commitment to Defence funding of 2% of GDP by 2020-21;
- Continued commitment to Australian Industry Capability plans, particularly in the larger acquisition projects and naval shipbuilding programs; and
- Ongoing support for the strategies and activities outlined in the Defence Industry Policy Statement, including the \$1.6 billion for industry and innovation programs.

The \$200 billion investment program over the next decade represents a huge investment for the nation, and this level of funding in the program must be maintained to deliver the dual objectives of national security and economic growth. A key priority for the Ai Group Defence Council is to ensure recognition of Australian defence industry capabilities and the incorporation of local supply chains to the greatest extent possible. This will be critically important in the major programs announced by the Government, particularly the Naval Shipbuilding Plan.

To support further development of our local defence industry, Ai Group seeks the implementation of supporting industry policies, including the implementation of the Sovereign Industrial Capability Priority plans, as well as publication of the proposed Defence Policy for Industry Participation.

Training and skilling Australia's workforce to manage the ramp up of defence industry involvement in this major capital investment program is a high priority, one supported fully by the Ai Group. A key plank of this strategy will be the release of the upcoming Defence Skilling and STEM strategy.

Research and analysis has demonstrated that Australia still lags behind in R&D funding in many areas, including national security. Recent Defence innovation efforts to address this issue have been applauded by our members, including the Defence Innovation Hub. Our view is that these initiatives should be expanded upon to capitalise on their success, including a review of the national security innovation system as a whole.

Recommendations

Maintain the Defence funding path as set out in the previous budget, with an underlying commitment to grow to two per cent of GDP by 2020-21;

Continue robust implementation of Australian Industry Capability plans in major acquisition programs;

Finalise and implement key supporting industry policies, including the Defence Sovereign Industrial Capability Priority implementation plans, the Defence Policy for Industry Participation and the Skilling and STEM strategy to support the training and skilling Australia's workforce to manage the ramp up of the defence industry; and

Provide additional transparency of the Government's defence investment plans through on-line access to the Integrated Investment Program.

6.6 Energy and environment policy priorities

Energy and the environment present multiple critical challenges for Australia and Australian industry, many of them connected:

- Energy prices remain extremely high, and while new renewable generation coming online is set to somewhat moderate electricity prices in 2020, gas prices are likely to remain high for as long as they are shaped by parity with oil-linked export prices. Energy prices are a serious challenge to the competitiveness of many trade exposed businesses, which are otherwise well positioned for growth.
- Reliability of electricity supply is challenged by ageing and retiring generators, extreme weather, increased variable resources without commensurate flexible resources, and a lack of investment. Adequacy of gas supply is under longer-term challenge given the decline of existing resources, large export commitments, and regulatory barriers to resource development in NSW and Victoria.
- Greenhouse gas emissions are rising and are projected to exceed Australia's current 2030 Paris commitments, let alone the deeper long-term reductions at which the Paris Agreement and most Australian governments aim.
- Waste management and reduction efforts remain in crisis following the imposition by China of much tighter standards for the acceptance of plastics for recycling. Both the immediate sustainability of recycling activities and the longer term development of markets for recovered materials are in question.

Budget measures are only part of the response to all of this. In some cases they can be counterproductive: Ai Group is concerned that the current version of a proposal for the Commonwealth to underwrite new electricity generation risks undermining wider investment. By contrast, a more durable framework for energy and climate policy is urgent and would greatly improve the conditions for investment in meeting all of our energy challenges. Such a framework should be developed outside the Budget cycle through deep consultations with stakeholders and the States. But there are measures addressable through the Budget that would also make a useful contribution.

Energy efficiency: While the largest and most energy intensive businesses tend to have strong internal capabilities and resources for efficiency, many other energy users across business do not – and many households lag further, particularly in rental properties. Low energy efficiency hurts individual users, who are more exposed to rises in energy prices. But it also increases the vulnerability of the whole electricity system, which notably struggled in early 2019 to meet demand during extreme heat events. The National Energy Productivity Plan (NEPP) agreed through the COAG Energy Council in 2015 contains many initiatives but few resources. The NEPP should be revised, strengthened and financed appropriately, including with additional capital injections to the Clean Energy Finance Corporation. Measures developed should include at a minimum:

- Finance facilitation for energy monitoring enhancements (at a high match) and energy efficiency improvement capital upgrades (at a lower match) at SME industrial and commercial sites;
- Connecting businesses with verified high quality efficiency advisors;
- Recommencing development of efficiency standards for light road vehicles and investing where appropriate in infrastructure such as public charging points to support high-efficiency vehicles; and
- Raise the efficiency performance and thermal comfort of existing housing, particularly rental properties.

Hydrogen: Hydrogen is already a vital part of Australia’s fertiliser and explosives production, but it is likely to grow much more important as the global economy decarbonizes in line with the goals of the Paris Agreement. Hydrogen has potential to play a big role in taking emissions out of transport, synthetic fuels, chemistry and steelmaking, and provide seasonal-scale energy storage too. Any of these opportunities would imply a large expansion from current global hydrogen production, and would also require substantial increases either in clean electricity or in carbon capture and storage.

The opportunities for an Australian hydrogen supply chain and associated industries could be colossal. But there is much uncertainty in timing and pathways. It is hard to predict the speed with which the world pursues emissions goals and the future performance of hydrogen alternatives like batteries and biofuels. There is a strong role for public investment and public-private partnerships to foster experience and establish the foundations for growth should conditions prove as favourable as they appear.

There is already activity afoot, including pilot hydrogen projects taking shape in Victoria, Queensland and WA. The COAG Energy Council has called for a national hydrogen plan by the end of 2019. Backing that plan with substantial Commonwealth finance for research, commercialization, skills and supporting infrastructure makes good sense.

Emissions Reduction Fund: The most recent national emissions projections indicate that Australia is currently on track to exceed its emissions targets without additional policy and action. While a range of additional steps can be taken, these will take time to develop and implement and in the meantime the ERF is the main current plank of national climate policy. The ERF has allocated nearly all of its original funding (though some funds are being freed up as contracts are cancelled for non-delivery).

A healthy and growing offset pipeline is likely to be needed to complement whatever other policy measures Australia adopts. As we have argued now for many years, the ERF should therefore be allocated additional funding, of the order of at least \$200m per year over four years, to sustain activity in quality offsets.

Waste: The continuing development of targets and actions under the updated National Waste Policy will require national financing resources when fleshed out. An immediate positive action would be to develop a program to support business resource efficiency, particularly in SMEs, with both information resources about circular economy concepts and opportunities, and access to capped matched funding for improvement investments. This program should coordinate as far as possible with the patchwork of relevant State programs.

Recommendations

Refresh the National Energy Productivity Plan and facilitate the provision of finance for energy efficiency in SME industry and rental properties;

Back the National Hydrogen Plan under development by the COAG Energy Council with finance for research, commercialization, skills and supporting infrastructure;

Bolster the Emissions Reduction Fund with at least a further \$200m per year over four years as a stopgap while further climate policies are developed; and

Develop a program to support SME resource efficiency through information and the facilitation of funding.

7 Innovation and Commercialisation Policies

Innovation remains central to Australia's prosperity. It is an essential plank in the national pathway to stronger, more stable and more inclusive economic growth.

The Research and Development Tax Incentive (R&DTI) has been heavily and repeatedly amended over the past decade, to the point where it has become so unstable and unreliable that it is growing more difficult for it to have its intended effect of underpinning sustained increases in innovation investment. In the 2018-19 Budget the Government proposed a major net reduction in financial support for innovation, to be realised through two major changes to the R&DTI. One is a cap on the annual cash refund payable to smaller claimants in a tax loss situation, a sensible and broadly supported step. The other introduces new brackets and rates for claims under the non-refundable incentive, which vary according to the intensity of the claimant's innovation spending as a share of their total cost base. The effect of the latter change is that the small minority of claimants spending more than 13.5% of total costs on innovation may see an increase in the value of the incentive, while the overwhelming majority of businesses with R&D intensity below this level will see the value of their claims cut by up to half. The intensity steps between brackets are so large that most businesses would have to make impractically large increases in their research budgets to qualify for a higher rate. Businesses that are successful in commercialising innovation and growing production and sales will naturally see an increase in these parts of their cost base, reducing their R&D intensity. As a result the proposed system does not provide positive or effective incentives. Overall, it is simply a reduction in support for innovation.

Ai Group opposes the intensity-based stepping to the rate of R&DTI claimable, and the overall reduction in support for innovation. We recognise the importance of ensuring that support is well targeted to genuinely innovative activity – an objective that the intensity steps do not advance since they reduce the value of most claims irrespective of merit. The Government should develop a more sophisticated approach to screening and checking R&DTI claims for innovative merit. This could involve modern data analytics and artificial intelligence technologies to, for instance, compare claims in detail against Australian and global research databases.

Picking up on the discussion in 6.5 above, there is also strong scope to build long-term domestic defence industry capability by investing in related R&D.

Recommendations

Control the costs of the R&D Tax Incentive by adopting a \$2m cap on the refundable element and investing in smarter systems to scrutinize claims. Do not proceed with the previously proposed stepping of the R&DTI rate based on research intensity, which would amount to a substantial across-the-board reduction in support for innovation and not provide meaningful incentives. Commit to maintaining broad stability for the overall R&DTI.

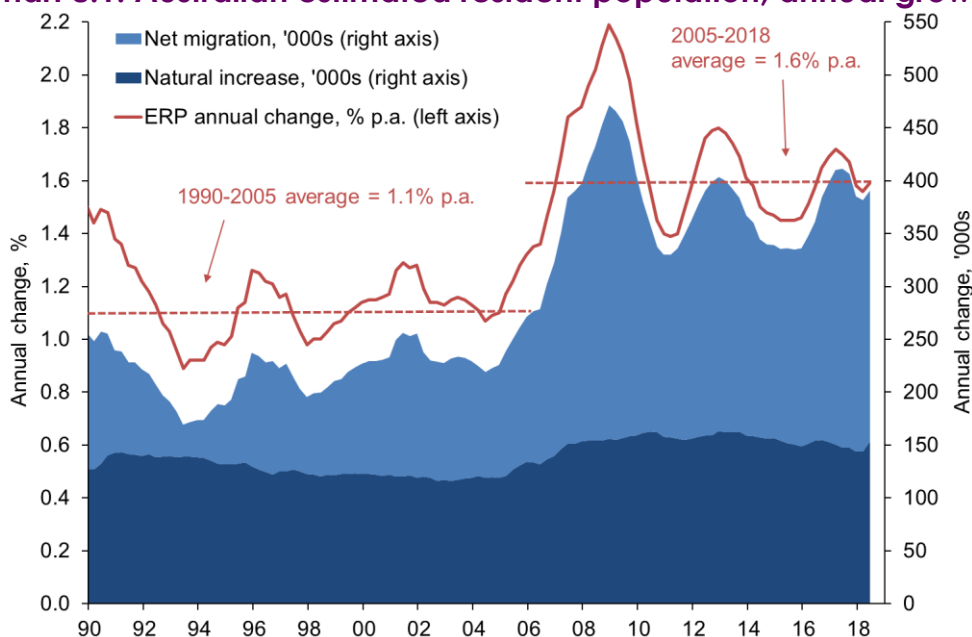
Provide additional funding of Defence research and development and innovation programs to help boost the ADF's capability edge, including a review of the national security innovation system as a whole.

8 Annual skilled migration program

Ai Group strongly supports Australia’s permanent migration program and its focus on skilled migration. Skilled migrants generate the greatest benefits to the Australian community, since they contribute directly to our national employment and skills base. Many also bring specialist knowledge that provide even bigger benefits, by deepening our entrepreneurship, innovation and international linkages. Those that enter via the ‘demand-driven’ streams such as employer sponsored migration experience a better skills match and faster entry to the labour market - therefore utilising more of their skills more quickly on arrival in Australia – than those who arrive independently to seek work.

Australia has an ageing population and relatively low ‘natural’ population growth rates (that is, births less deaths). Net migration is therefore crucial to maintaining Australia’s total population growth rate, as well as maintaining a reasonable rate of labour force growth and participation. Over the past decade, Australia’s Estimated Resident Population (ERP) has grown by an average of 1.6% or 400,000 people per year (chart 8.1), through a combination of net migration (permanent and long-term arrivals less departures) and natural increase (births less deaths). With the net natural increase fixed at around 0.6% to 0.7% p.a., Australia largely depends upon net migration for the bulk of this necessary population growth.

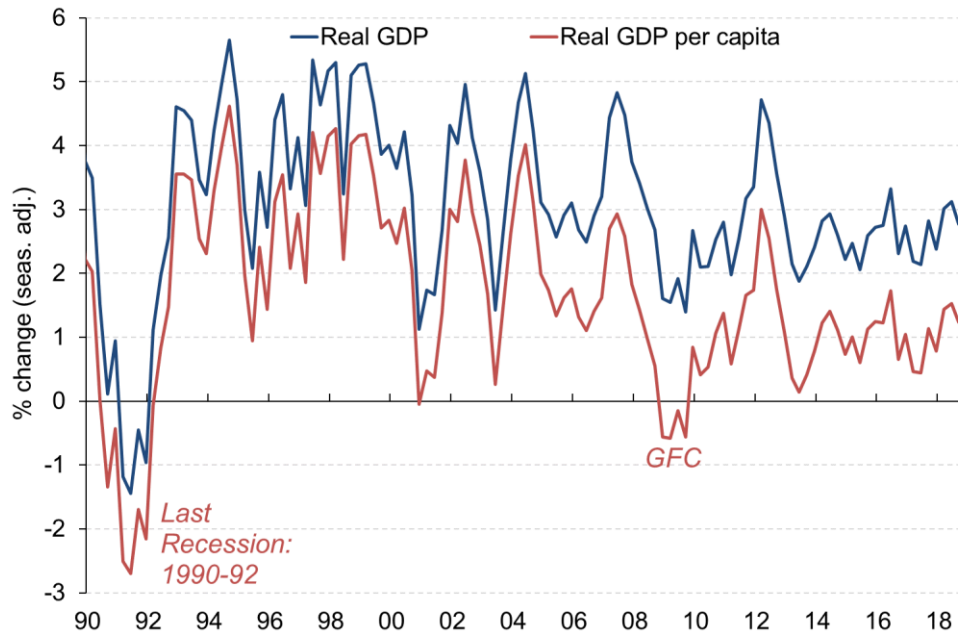
Chart 8.1: Australian estimated resident population, annual growth



Source: ABS *Demographic statistics*, June 2018.

The direct influence of population growth on aggregate economic growth can be seen in Australia’s GDP growth rates. Real GDP grew by 2.8% over the year to Q3 2018, but by only 1.2% p.a. in per capita terms. The gap – 1.6% p.a. – is due to the direct contribution of population growth. The contribution to GDP growth from population growth has been around this order of magnitude (1.5%) over the past decade (chart 8.2). Without it, our national growth would have been substantially slower.

Chart 8.2: Australian real GDP and real GDP per capita, annual change



Source: ABS National Accounts, Sep 2018.

In 2016 the Productivity Commission (PC) formally reviewed Australia’s migration program (April 2016). It found that the greatest benefits to the community come from younger, highly skilled migrants. In the long-term, the PC found that the current immigration program delivers a measurable ‘demographic dividend’ which will raise output and incomes for everyone:

*“Continuing [Net Overseas Migration] NOM at the long term historical average rate [of 0.6% of the population] and assuming the same young age profile as the current intake is projected to increase GDP per person by around 7 per cent (equivalent to around \$7000 per person in 2013 14 dollars) in 2060 relative to a zero NOM scenario. **Increasing or decreasing the level of NOM from this rate is projected to have a corresponding impact on GDP per person, all other factors equal.***

*The results reinforce the importance of age and skills in the migrant intake. Increasing the average age structure of NOM to reflect that of the Australian population is projected to reduce real GDP per person, **while increasing the share of migrants entering in higher skilled occupations is projected to lead to an expansion in real GDP per person.**” (PC, p. 15).*

The benefits of migration – and especially skilled migration - to national *per capita* output and income present a compelling argument for maintaining the annual migration intake at its current cap of 190,000 and for strengthening the focus on skilled migration categories.

Recommendations:

- **The annual permanent migration planning level should be maintained at the current cap of 190,000; and**
- **Stronger priority should be given to the skilled migration stream within the permanent migration program and especially to the demand-driven components of skilled migration.**