

Ai GROUP SUBMISSION

2018-19 Federal Budget Submission

FEBRUARY 2018



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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.

About this Submission

Ai Group's Budget Submission was originally handed to the Government in December 2017. While there have been some minor adjustments, the analysis and the recommendations have not changed.

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1. Summary and recommendations

In framing the 2018-19 Federal Budget, the Government's should reinforce confidence in the path to fiscal sustainability while providing personal income tax relief for low and middle-income households, pursuing further strong employment growth and making targeted investments in the underlying drivers of domestic productivity and social inclusiveness.

The Government should stay the course on the proposed phase-down in the corporate tax rate over the coming decade and should use this initiative to build a program of more far-reaching tax measures that puts Australia's tax arrangements on the more solid foundation that will become all the more important in coming years.

The economic context this year is one of still slow global growth and promising but fragile local growth. The Australian economy improved through 2017, with stronger employment, incomes and business investment evident across a wide range of industries and locations. Any further recovery and acceleration is likely to be modest however, with risks and challenges from a wide range of sources.

The focus of this year's Budget should go beyond underwriting aggregate growth and performance. It must complement this with an emphasis on the promotion of social inclusiveness. This emphasis is reflected in the priority we recommend be given to:

- making further inroads into labour underutilisation;
- the proposed targeting of personal income tax relief to lower and middle-income households; and
- the fundamental emphasis we place on improving education and training outcomes.

Against this background, Ai Group's policy recommendations for the 2018-19 Budget are:

Fiscal policy

- Ai Group strongly supports the determination to return the Budget to a position of long-term sustainability and to provide room to put in place stimulatory fiscal measures in the event of a major threat to aggregate demand.
- Ai Group supports the enactment of the remaining provisions under the Government's Enterprise Tax Plan which would see a company tax rate of 25 per cent phased in over the coming decade. This should be accompanied by a program of broader tax reform measures.
- As always, the budget should pursue greater efficiency in programs.
- A good proportion of these savings, together with the improved bottom line revealed in MYEFO should be directed to accelerating the pace of consolidation towards a sustainable budget position.

- The accelerated pace of consolidation should nevertheless retain a degree of fiscal stimulus appropriate to the clear persistence of labour force underutilisation particularly in the form of underemployment.
- Consistent with the scope for a degree of stimulus, Ai Group supports personal income tax reform targeted to lower and middle-income households and modest increases in expenditure on the key growth drivers identified in this submission. These are aimed at achieving meaningful improvements to our workforce capabilities, business capabilities; and innovation capabilities.
- While we support the budgetary discipline of ensuring that recurrent outlays are covered by recurrent revenue, Ai Group believes there is a clear rationale for using public-sector borrowing to finance rigorously and transparently assessed public sector investment in productivity-enhancing, intergenerational infrastructure.

Skills, education and training policy

- Increase investment in the development of key categories of skills for the transforming economy through all education and training sectors.
- Fund a national industry skills development and training support program focussing on digital skills, organisational change, workplace innovation and management development.
- 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.
- 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.
- In consultation with industry, develop measures designed to increase the level of participation in apprenticeships/traineeships.
- Facilitate direct industry and employer engagement through the Skilling Australians Fund.
- 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.
- Review the employer incentive regime and develop incentives for first time participants in the system.
- Develop and effectively resource a national STEM skills strategy in conjunction with industry to expand the STEM-qualified workforce.
- Promote the findings and recommendations of the Strengthening School – Industry STEM Skills Partnerships Project on a national basis to encourage increased participation.

- Implement measures to increase the level of STEM participation in the VET sector, especially through apprenticeships and traineeships relevant to STEM skills.
- Introduce employer incentives for employers engaging apprentices and trainees in STEM-related areas.
- Develop specific measures to expand the STEM workforce in SMEs through cluster/network models.
- 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.
- Fund a widespread review of learning and teaching practices in higher education providers to embed employability, through work integrated learning approaches, into all curricula.
- 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 companies provide opportunities for students to experience the workforce and make meaning of their learning.

Innovation and digital capabilities

- Control the costs of the R&D Tax Incentive by adopting a cap on the refundable element. If further savings are required, a reduction in the headline rate for both the refundable and non-refundable elements are likely to be preferable to more distorting changes such as intensity thresholds.
- Work closely with industry to design a premium for R&D Tax Incentive claims related to employment of new PhD graduates or to collaborative projects.
- Commit to maintaining broad stability for the overall Incentive, while reviewing and refining the collaboration premium over time.
- The Australian Government, NBN Co and industry could work together to describe and communicate business approaches to making the most of broadband, including through case studies.
- Businesses need to look for opportunities to invest in and maximise the use and benefit of IoT and related digital technologies. Public support may be beneficial, including through: business capability policies such as the Entrepreneurs' Programme and facilitating collaboration with universities, Data61, other research institutions, and other businesses.

- Complementing this, businesses need to understand better the longer-term benefits of digitally upskilling staff. Government initiatives (such as the Entrepreneurs' Programme and Industry Growth Centres) could be avenues of support.
- Businesses could benefit from Government and industry support in increasing their cyber security skills and capabilities. We welcome working with Government and industry to raise business awareness and facilitate business access to appropriate experts and existing initiatives for cyber security.
- Incentives could be created to encourage businesses to take risks to determine how investment in technologies can benefit their business and people. Options include grants or tax concessions for investment in digital transformation, including demonstration projects.
- As an industry partner of the Entrepreneurs' Programme, we have observed that there is a gap around providing non-IT businesses with cyber security and digital transformation enablement. Many SMEs, particularly those outside of IT and digital, say that they find it very difficult to get impartial advice around these topics, rather than promotion of a provider's commercial product or service. There is an opportunity to provide additional resourcing to the Entrepreneurs' Programme to facilitate provision of specialist independent expert advice in this space, similar to the provision of independent business advice.
- 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.

Trade policy

- 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 at least \$12.4 million per year over the next three years to \$175 million.

Defence industry capabilities

- Maintain the funding path as set out in the previous budget, with an underlying commitment to grow to two per cent of GDP by 2020-21, including \$150 billion over the forward estimates;
- Implement supporting industry policies, including the Defence Export Strategy, the Defence Industry Capability Plan and the Skilling and STEM strategy;

- Support the training and skilling Australia's workforce to manage the ramp up of defence industry; and
- Support the improvement of exports of Australian-made defence equipment and services over the coming decade and beyond.

Energy policy

- Establish an Energy Capability Unit to help industry better manage in the new high-cost energy environment
- Establish an Energy Transition Fund with \$200m for grants to improve industrial energy management capability and implement opportunities; and
- Allocate additional funds to the Emissions Reduction Fund to ensure continuity.

Migration policy

- 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.

2. Economic Outlook for Australian Business

The Australian economy has improved in 2017, but growth remains fragile and vulnerable to shocks from domestic and international sources. GDP growth has improved through 2017 to date, and business conditions are relatively elevated across most (but not all) industries and states. After a surprising drop in GDP in Q3 of 2016 (-0.5% q/q and just 1.8% p.a.), annual GDP growth accelerated from 1.8% in Q1 and 1.9% in Q2 to 2.8% in Q3 2017. Output growth remains slower than long-run averages however, and is highly vulnerable to disruption. The labour market has also improved in 2017, with total employment growth accelerating to 3.1% (up from 0.9% at the end of 2016) and the unemployment rate falling to 5.4%, as of November (down from 5.8% at the end of 2016).

Australian growth is now being driven by a combination of: growth in export volumes; public sector investment and recurrent spending; relatively strong population growth; peaking residential construction; a large pipeline of public and private engineering construction projects; a resurgence in mining-related investment; and a very welcome (but long overdue) pickup in non-mining business investment. Growth has spread more evenly across industries and the states in 2017. Weak household incomes and spending (including poor local retail sales) are the most disappointing aspects of Australia's outlook for 2018. To some extent, slow incomes growth reflects longstanding weaknesses in Australian productivity growth but also relatively weak output (and hence income) growth per head; although GDP grew by 2.8% p.a. in Q3 2017, it was up by just 1.3% p.a. per capita.

Positively for the outlook in 2018-19, these improvements in 2017 suggest that the foundations are now in place for stronger growth in local output, productivity and incomes. In particular, the very recent pickup in business conditions and non-mining business investment – if supported by further progress in infrastructure development, skills development, innovation and energy policy – could provide the basis for repairing national productivity growth and boosting incomes growth for all.

The Federal Budget must be mindful of this improving but vulnerable and uneven economic context. New opportunities are always emerging, but significant risks abound, from both international and domestic sources. These risks demand a careful approach to fiscal policy.

2.1 Global economic outlook: slower for longer (again)

In its latest assessment of the global economy¹, the International Monetary Fund (IMF) reported that global growth in the first half of 2017 was better than forecast, due to “*notable pickups in investment, trade, and industrial production, coupled with strengthening business and consumer confidence*”. The IMF revised up its growth estimates for 2016 and upgraded its forecasts for 2017 and 2018 as a result (see chart 1 and table 1). This was the first time the IMF's half yearly forecasts had been revised up instead of down, in almost a decade (see chart 1).

Growth did not improve in all countries or regions however; better results in the euro area, Japan, China, emerging Europe and Russia were offset by downward revisions for the US, the UK and India. The IMF notes that many emerging market and developing economies are “experiencing stagnant

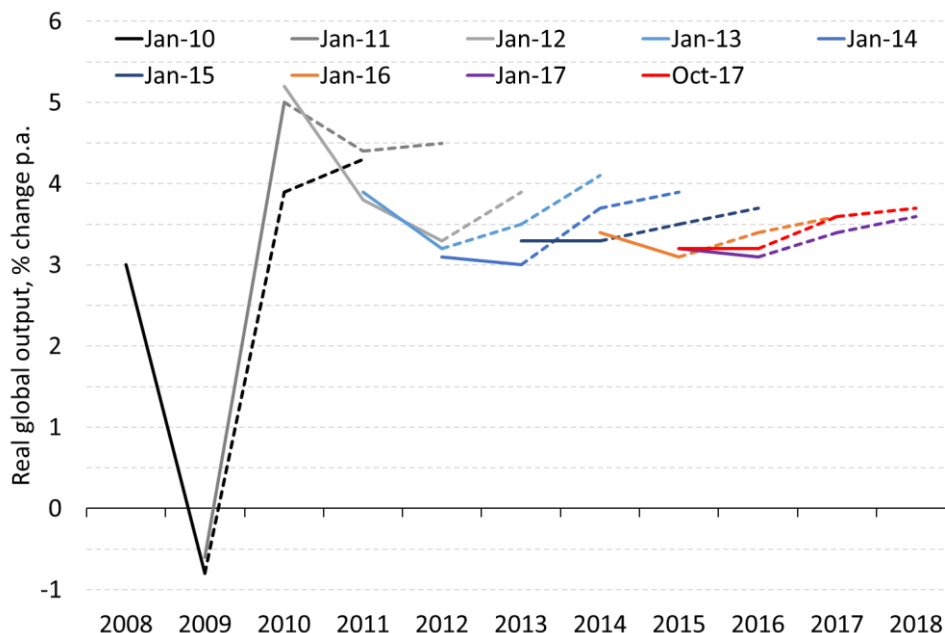
¹ IMF, *World Economic Outlook*, October 2017.

per capita incomes”, while fuel exporters have been hit by lower commodity prices. More positively for Australia, the IMF remains optimistic about China in 2017 and 2018, while Japan (Australia’s second largest trade partner) is expected to accelerate to 1.5% in 2017 and settle at 0.7% in 2018.

Global risks remain skewed to the downside due to elevated political, policy and financial market uncertainty in key economies (including but not limited to the US and the UK). Risks to trade from rising protectionism have not disappeared. The IMF notes that this ‘cyclical upturn’ is still tentative and fragile. It urges Governments and central banks globally to actively support it:

“Structural reforms and growth-friendly fiscal policy measures are needed to boost productivity and labor supply, with varying priorities across countries. In advanced economies, monetary policy should remain accommodative until there are firm signs of inflation returning to targets. Fiscal policy should be aligned with structural reform efforts, taking advantage of favorable cyclical conditions to place public debt on a sustainable path while supporting demand where still needed and feasible.”

Chart 1: Global growth 2008 to 2018: 10 years of IMF estimates and forecasts



Source: IMF, *World Economic Outlook*, Oct 2017.

The OECD largely concurs with this outlook for 2018. It expects an acceleration in 2018 for the global economy and for most but not all individual countries, but says this will be followed by another slower year in 2019, due to the lingering drags on growth from weak productivity and incomes. The IMF, the OECD and Australia’s RBA remain concerned about persistently weak inflation and wages growth globally. The OECD also highlights long-term problems arising from slow global business investment and productivity, which continue to hold back growth in production and incomes:

Annual growth of the world economy is projected to improve slightly in 2018, but remains below the pre-crisis [GFC] period and that of past recoveries. ... Persistent effects of prolonged sub-par growth on private sector performance include investment, trade and productivity. ... In the absence of a clear sign of change in [these] underlying trends, growth across the OECD

is projected to weaken in 2019. ... Countries should implement reform packages that catalyse the private sector to promote productivity, higher wages and more inclusive growth”

In this latest update, the OECD revised up its global growth expectations very slightly, to reflect better than expected growth in 2017 to date. The OECD now expects global GDP growth of 3.6% p.a. in 2017, 3.7% in 2018 and 3.6% in 2019. Advanced economies will be slower than developing and emerging economies such as China (table 1). Chinese GDP is projected to grow by 6.8% in 2017, 6.6% in 2018, and 6.4% in 2019, partly reflecting “the ongoing rebalancing in China’s growth model.”

Table 1: IMF and OECD forecasts for Global Growth

| Change in GDP, % p.a. | 2016 | OECD, Nov 2017 | | | IMF, Oct 2017 | |
|--|------------|----------------|------------|------------|---------------|------------|
| | | 2017 | 2018 | 2019 | 2017 | 2018 |
| World | 3.1 | 3.6 | 3.7 | 3.6 | 3.6 | 3.7 |
| World trade volumes | 2.6 | 4.8 | 4.1 | 4.0 | 4.2 | 4.0 |
| OECD / Advanced economies (IMF) | 1.8 | 2.4 | 2.4 | 2.1 | 2.2 | 2.0 |
| US | 1.5 | 2.2 | 2.5 | 2.1 | 2.2 | 2.3 |
| Euro area | 1.8 | 2.4 | 2.1 | 1.9 | 2.1 | 1.9 |
| UK | 1.8 | 1.5 | 1.2 | 1.1 | 1.7 | 1.5 |
| Japan | 1.0 | 1.5 | 1.2 | 1.0 | 1.5 | 0.7 |
| Non-OECD/developing economies (IMF) | 4.1 | 4.6 | 4.9 | 4.8 | 4.6 | 4.9 |
| China | 6.7 | 6.8 | 6.6 | 6.4 | 6.8 | 6.5 |
| India | 7.1 | 6.7 | 7.0 | 7.4 | 6.7 | 7.4 |
| ASEAN | 4.9 | - | - | - | 5.2 | 5.2 |

Sources: IMF, *World Economic Outlook*, Oct 2017; OECD *Economic Outlook*, Nov 2017.

2.2 Australian economic outlook: improving but vulnerable

Confirming the slow and vulnerable nature of the Australian economy in 2016-17, Australian real GDP fell by 0.5% in Q3 2016, the first quarterly fall since Q1 2011. GDP growth recovered through 2017, reaching 0.6% q/q and 2.8% p.a. in Q3 2017. This improvement in growth is welcome, but it remains below long-run averages and slower than RBA or Treasury estimates of ‘trend’ or ‘potential’ growth (currently thought to be around 3.0% p.a. but formerly estimated at 3¼ % p.a.).²

In 2017, the main drivers of growth have been exports, housing construction, public sector spending and – most recently and most promisingly for the outlook – non-mining business investment. The all-important investment cycles are shifting again; housing investment is now over its peak, public sector investment is elevated, while engineering construction and investment in non-residential buildings and intellectual property are recovering from recent low points (chart 2).

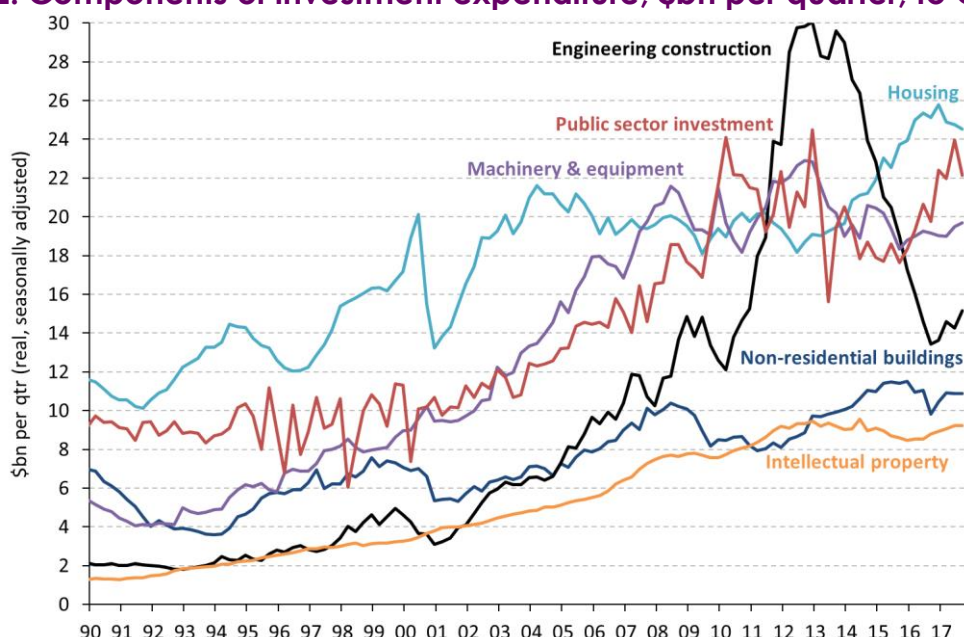
The pattern of growth in 2017 has spread the benefits across more industries and locations, instead of being overly concentrated (in contrast to the mining investment boom, which was concentrated in Western Australia and Queensland). In Q3 2017, 17 out of 20 major industry groups grew in the quarter, with all except agriculture growing over the year (chart 3).

² Robert Ewing, Sian Fenner, Steven Kennedy and Jyoti Rahman, “Recent productivity outcomes and Australia’s potential growth”, The Treasury *Economic Roundup*, Winter 2007.

Manufacturing output grew by 2.4% p.a. to Q3 2017, despite the final stage of closure for automotive assembly in Australia occurring during this period. Within manufacturing, growth in food, beverages, consumables, chemicals, building materials and packaging has outweighed the exit of car assembly and further shrinkage in metals production, in output and employment terms. This is in line with Ai Group's Australian Performance of Manufacturing Index (PMI®), which had indicated positive or neutral conditions for manufacturers in every month since September 2016.

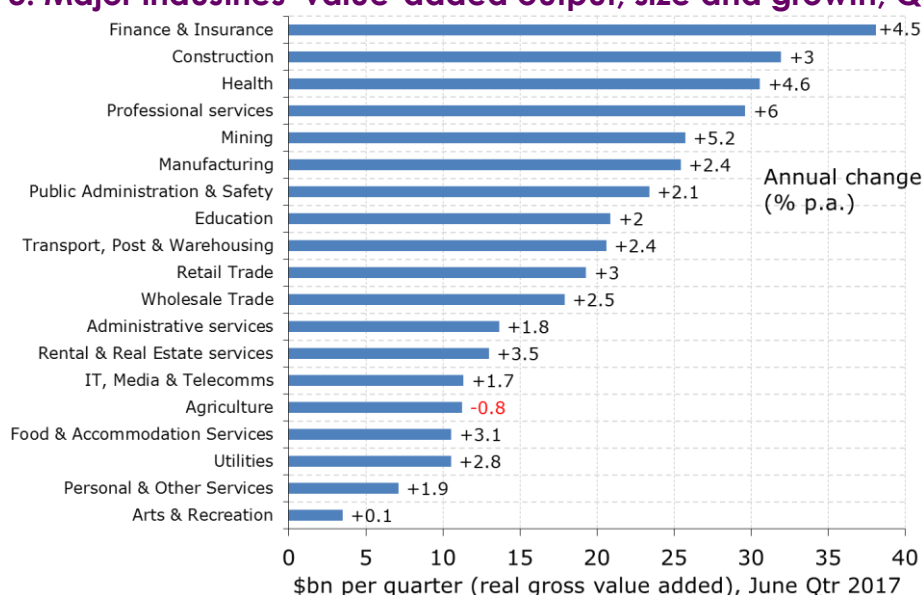
In aggregate, the more timely monthly business surveys indicate that business conditions have been relatively elevated across the board through late 2017, with positive conditions evident in most sectors. Industrials and business-oriented sectors are performing better than consumer-oriented sectors and especially retail trade, because of reluctant consumer spending (chart 4).

Chart 2: Components of investment expenditure, \$bn per quarter, to Q3 2017



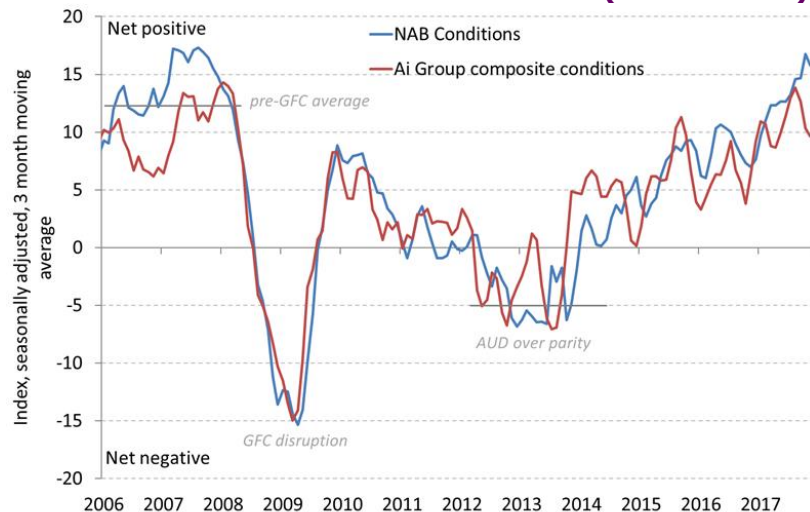
Source: ABS, *National Accounts*, Sep 2017.

Chart 3: Major industries' value-added output, size and growth, Q3 2017



Source: ABS, *National Accounts*, Sep 2017.

Chart 4: Ai Group composite index of business conditions (to Nov 2017) and NAB index of business conditions (to Nov 2017)



Source: Ai Group (weighted composite of Australian PMI® Australian PSI® Australian PCI®) and NAB.

Australia's labour market has improved through 2017, although significant pockets of 'spare capacity' remain in the form of unemployment, underemployment and discouraged workers (those out of the labour market who might re-enter if conditions improve). As of November, the national unemployment rate had fallen to 5.4%, the underemployment rate had edged lower to 8.4% (though still close to historical high levels) and total employment had grown by 3.1% (seasonally adjusted year to end of November). More of the new jobs in 2017 have been full-time than part-time and so the rate of part-time work has fallen to 31.5% of the workforce and the number of total hours worked across the economy has grown by 3.4% p.a. (seasonally adjusted).

Commensurate with this lower rate of part-time work, 1.09 million people are now underemployed (in paid work but wanting more work hours), down from an all-time peak of 1.17 million in December 2016. The number of unemployed people fell to 707,000 in November, the lowest number since 2013. Among the unemployed, 31% are looking only for part-time work, including 23% of unemployed men and 40% of unemployed women.

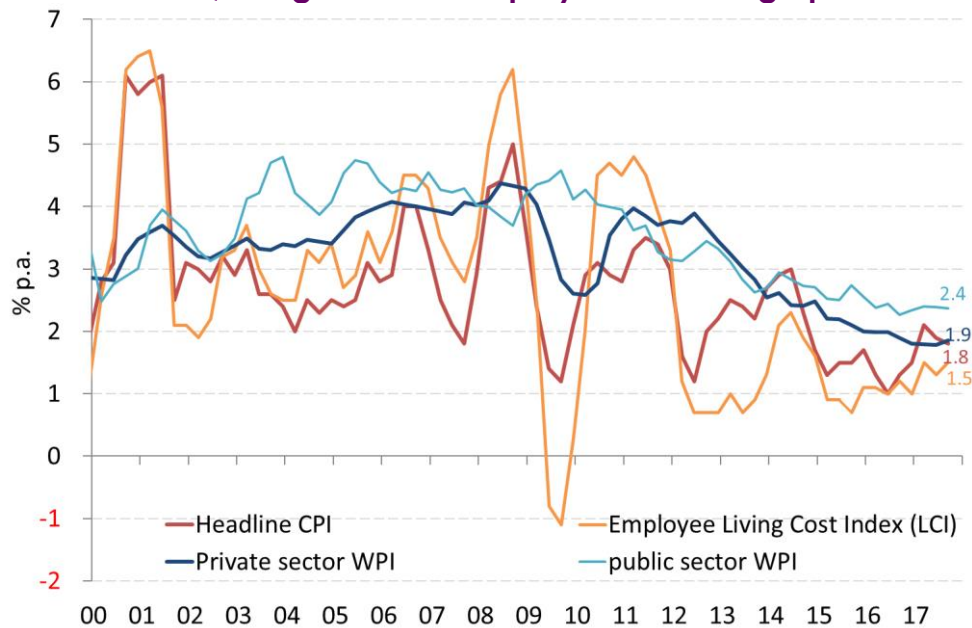
Reflecting these improvements in the labour market in 2017, more people are actively coming back into it, to work or to seek work. At 65.4% of the adult population, labour force participation is now approaching Australia's record high of 65.7% achieved in December 2010. Labour force participation for Australian women is at a record high of 60.1% (trend). Rising job advertisement numbers (published monthly in the SEEK and ANZ job ads series), suggest further jobs growth into 2018, which is likely to attract even more non-participating people into active participation and jobseeking.

Despite a larger (and somewhat tighter) labour market, annual wages growth accelerated only slightly in Q3 2017. At 2.0% p.a. – and 1.9% p.a. in the private sector – wage growth remains weak and at the bottom of the RBA's inflation target of 2-3% p.a. Annual wages growth in the private sector (1.9% p.a.) has tracked lower in line with headline inflation. Private sector wage growth is now just above headline inflation (1.8% p.a.) and remains well above the ABS estimate of annual changes in living costs for employees in Q3 (1.5% p.a.). Annual wages growth is faster in the public sector, at 2.4% p.a. in Q3 (chart 5). Australia's minimum wage rose by 3.3% from 1 July 2017.

Slow growth in nominal wages and prices has been persistent globally as well as in Australia over

the past decade. Concerns about low inflation and its implications for growth are widespread. In a recent speech about Australia's economic outlook for example, RBA Governor Lowe noted that *"in a number of countries, low rates of unemployment are coexisting with below-average inflation. Low inflation, in turn, means low interest rates."* This situation is finally starting to improve, across a range of local and international indicators. Wages growth might not pick up however, because *"in Australia, we are still some way short of our estimates of full employment of around 5%, so it is not surprising that wage growth is below average. ... structural factors are likely to be at work as well. ... the economy is less inflation prone than it once was. Both workers and firms feel more competition, and it is plausible that the wage- and price-setting processes are adjusting in response."*³ That is, more competition in various domestic and international markets is helping to keep a lid on inflation, by forcing workers to accept smaller (nominal) pay rises and businesses to accept smaller margins.

Chart 5: Inflation, living costs for employees and wage price indexes



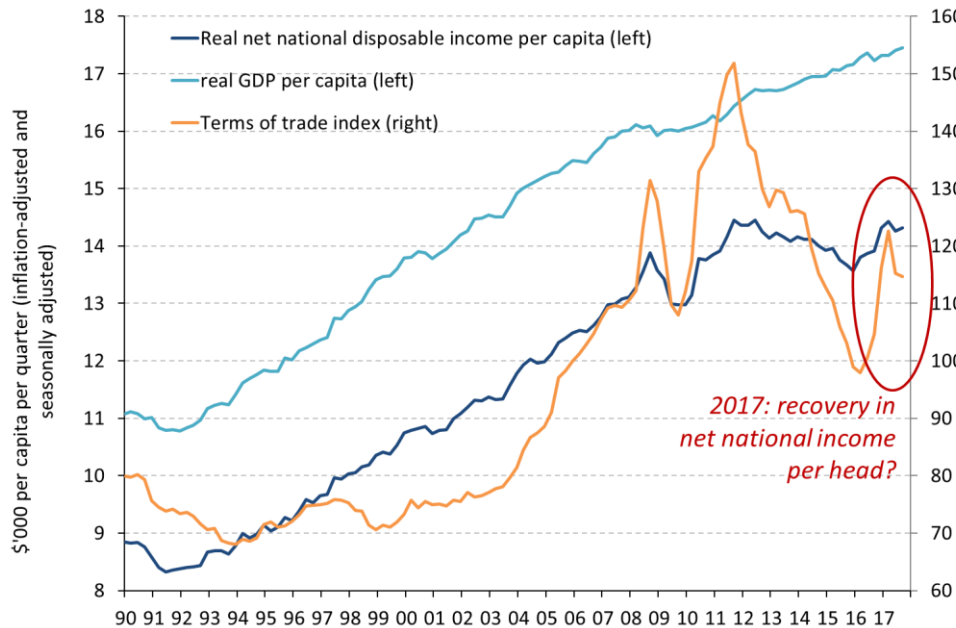
Source: ABS Wage Price Index, Consumer Price Index, Living Cost Indexes, Sep 2017.

At the same time, negligible productivity growth (globally and in Australia) is continuing to limit real incomes growth, in aggregate and per capita. Real GDP per capita grew by just 0.3% in 2016-17, but accelerated to 1.3% p.a. in Q3 2017. Real GDP per hour worked grew by just 0.8% in 2016-17 and value added per hour worked in the market sector up just 1.3%. Real net national disposable income per capita accelerated to 2.9% p.a. in Q3 2017, but remains below its recent peak in Q1.

Some of these changes in net national income relate to the effects of the terms of trade (chart 6), but this boost to national incomes from volatile global resources pricing is not a reliable source of income growth, and does not spread reliably and easily beyond the mining industry that earns it. Indeed, although nominal profits for private non-financial corporations rose by 19.7% p.a. in Q3 2017, the more detailed *Business Indicators* data confirm that half of this increase was in the mining sector, with a further 12% going to financial services and 17% going to professional services. In contrast, profits in many of the larger private-sector employing sectors such as manufacturing, transport, retail and hospitality were stagnant or declined over the year to Q3 2017 (chart 7).

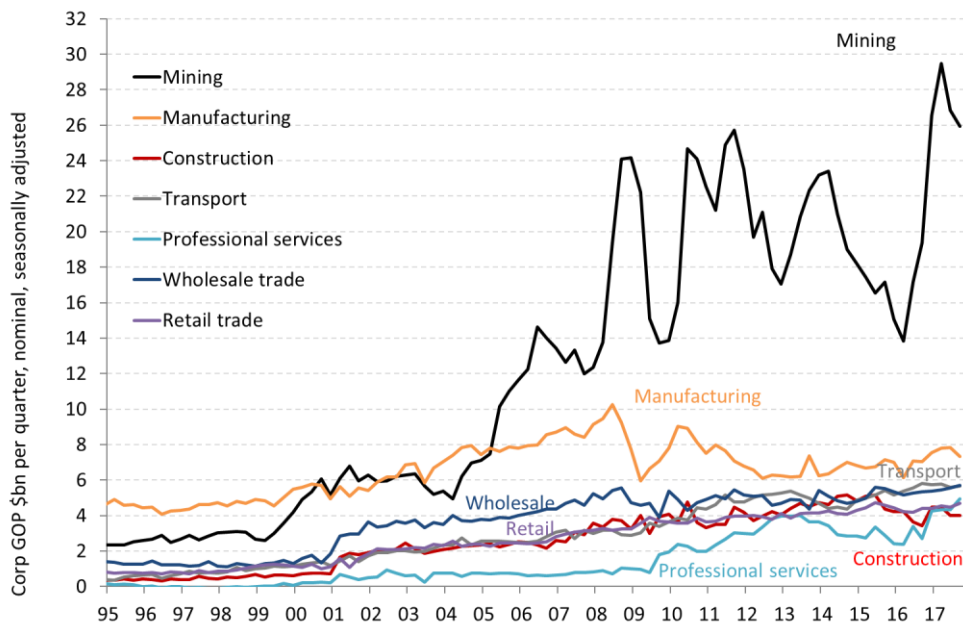
³ RBA Governor Lowe, "Some evolving Questions", Address to the Australian Business Economists Annual Dinner, Sydney, 21 November 2017.

Chart 6: GDP per capita, national income per capita and the terms of trade



Source: ABS, *National Accounts*, Sep 2017.

Chart 7: nominal profits per quarter, major market sectors, to Q3 2017



Source: ABS, *Business Indicators*, Sep 2017.

In contrast to somewhat stagnant incomes and prices, recent improvements in business conditions are finally leading to stronger (but still relatively cautious) non-mining business investment. Over the year to Q3 2017, private sector business investment (CAPEX) by all industries other than mining rose by 8.7% p.a., with rises of 9.8% p.a. for manufacturing CAPEX and 8.5% p.a. for other industries. Even with mining-related investment still falling from boom-time peaks, the *National Accounts* indicate that total national spending on non-dwelling construction rose 12.9% p.a. in Q3, new machinery and equipment rose by 2.9% p.a. and intellectual property products rose by 4.8% p.a.

Looking ahead, the latest CAPEX data indicated that Australian businesses plan to invest a total of \$108,922m in 2017-18. Once adjusted for probable realisations (based on an average realisation

ratio of the past five years), this implies total CAPEX in 2017-18 will be around \$105,436mn, which is 7.8% lower than the actual amount of CAPEX in 2016-17 (in nominal terms). All of this fall however, is due to lower CAPEX in the mining industry, which is still coming down from record-high peaks.

Outside of mining, CAPEX looks likely to rise by 8.8% to \$82,316mn in 2017-18. This will include a stable level of CAPEX in manufacturing (+0.1% p.a.) and an increase of around 10% among businesses outside mining and manufacturing, compared to 2016-17. This is a significant step up from just 1.8% p.a. growth in non-mining CAPEX in 2016-17.

In its latest quarterly *Statement on Monetary Policy* (November 2017) the RBA forecasts GDP growth to remain at around the current rate of 2.8% p.a. (as of Q3 2017) in 2017-18 before accelerating to 3.5% in 2018-19 (see Table 2). The RBA sees headline inflation accelerating modestly into the lower end of its 2-3% p.a. target band in 2018-19. The RBA expects GDP growth to be supported over the forecast period by a continued lift in public demand and non-mining business investment, as the drag from falling mining investment comes to an end. Stronger gains in employment and a gradual improvement in wages growth are expected to support household consumption. A key positive for the economy is higher levels of public investment, led by transport and telecommunications projects. In addition, the RBA notes the substantial pipeline of residential construction work will continue to contribute to growth in 2018-19, as will improving conditions in the non-residential building sector.

The RBA identifies five sources of high risk for the Australian economy over the next two years:

1. The Chinese economy and commodity prices (e.g. China's intention to cut steel production, iron ore imports and coal imports, and to regulate financial markets and capital outflows);
2. Spare capacity in the Australian labour market (i.e. unemployment and underemployment);
3. Slow growth in wages, household income and consumption;
4. Inflationary and margin pressures (i.e. *"Heightened competitive pressures and their effect on the ability of businesses to pass on cost pressures"* arising from energy and wages); and
5. Slow business investment. The RBA notes that *"Over the forecast period, non-mining investment is forecast to continue increasing, but the pace of the pick-up is still expected to be relatively gradual and less than what has been typical in previous expansions"*.⁴

Table 2: RBA forecasts for Australia in 2018 & 2019

| | 2015-16 <i>actual</i> | 2016-17 <i>actual</i> | Jun '18 <i>f</i> | Jun '19 <i>f</i> | Dec '19 <i>p</i> |
|--|--------------------------|--------------------------|---------------------|---------------------|---------------------|
| GDP, % change p.a., year end | 3.1 | 1.8 | 2.75 | 3.5 | 3.25 |
| Unemployment rate, %, year end | 5.8 | 5.6 | 5.5 | 5.5 | 5.25 |
| Inflation (CPI), % change p.a., year end | 1.0 | 1.9 | 2.0 | 2.25 | 2.25 |

f = forecast. p = projection.

Source: RBA *Statement on Monetary Policy* (SoMP), November 2017.

The IMF concluded its latest assessment of Australia's economy on 19 November. Like the RBA, it expects a modest pickup in growth in 2018 and 2019 due to a stronger global economy (good for export demand) and stronger local infrastructure investment by state governments. The IMF agrees

⁴ RBA, "Economic Outlook" in *Statement on Monetary Policy*, Nov 2017.

with the RBA that slow prices and wages growth is likely to continue to weigh down household incomes and consumption until unemployment and underemployment are ‘sufficiently reduced’. That is, the labour market needs to tighten further before nominal (or real) wages will rise.

In response to this modestly positive outlook, the IMF advises the Australian Government to develop “*a strong structural reform agenda [to] renew the foundation for productivity increases and higher longer-term growth*” including:

- higher infrastructure spending to improve “physical and digital interconnectivity”;
- comprehensive tax reform aimed at shifting the tax base from mobile factors of production (i.e. capital and labour) to consumption and fixed factors and inputs (e.g. lower company and income taxes in favour of a higher GST, or replacing stamp duty on property transfers with a national land tax), plus a simplified system of tax concessions, welfare payments and tax revenue distributions across the states and territories;
- fostering innovation, research and workforce skills (e.g. expanding business incentives for R&D and expanding the ‘National Innovation and Science Agenda’); and
- structural reforms in health, education, urban development, and regulatory aspects of market efficiency, as recommended by the Productivity Commission in its inaugural ‘Five yearly Productivity Review’ and by the Competition Policy Review (the Harper report).

The OECD is more circumspect on Australia’s growth prospects than the RBA or IMF. In its November assessment of Australia, the OECD expects “robust” annual GDP growth of 2.8% in 2018 and 2.7% in 2019 (up from 2.5% in 2016 and 2017), with the unemployment rate dropping to 5.3% (currently 5.5%) (see table 3). This implies little or no acceleration from current GDP growth of 2.8% (as of Q3 2017). The OECD notes that stronger jobs growth should push up wages and inflation by enough to enable the RBA to begin to raise the cash rate from its current record low of 1.50% in late 2018.

For the Australian Government, the OECD recommends policies and tax settings that are more supportive of business investment, innovation, trade and social inclusion. It says Australia has

“scope for further tax reforms that make greater use of efficient tax bases, such as the GST and land tax, in lieu of corporate tax and inefficient taxes. Improved competition policy would boost productivity and encourage market entry by innovative businesses.”

Table 3: OECD forecasts for all OECD countries and Australia in 2018 & 2019

| | All OECD member countries | | Australia | |
|------------------------------------|---------------------------|------------|------------|------------|
| | 2018 | 2019 | 2018 | 2019 |
| GDP, % change p.a. | 2.4 | 2.1 | 2.8 | 2.7 |
| Unemployment rate, % | 5.5 | 5.3 | 5.4 | 5.3 |
| Business investment, % change p.a. | 3.3 | 3.3 | 1.6 | 3.4 |
| Consumption, % change p.a. | 2.3 | 2.1 | 2.0 | 2.6 |
| Export volumes, % change p.a. | 4.3 | 4.2 | 6.3 | 3.7 |
| Headline inflation, % change p.a. | 2.1 | 2.3 | 2.0 | 2.2 |

Source: OECD, *Economic Outlook*, Nov 2017.

3. Fiscal position

Putting the Federal budget on a sustainable footing remains an outstanding policy priority.

While fiscal sustainability is often equated with the objective of retaining or regaining a AAA credit rating from the rating agencies, for Ai Group this is a lesser order issue than the more fundamental fiscal objectives of:

- Rigorously assessing and prioritising spending;
- Raising taxation revenue as efficiently as possible;
- Ensuring that recurrent spending is comfortably covered by recurrent revenue; and
- Rebuilding a fiscal buffer against the possibility of another crisis that will again call for expansionary fiscal measures to underwrite aggregate demand.

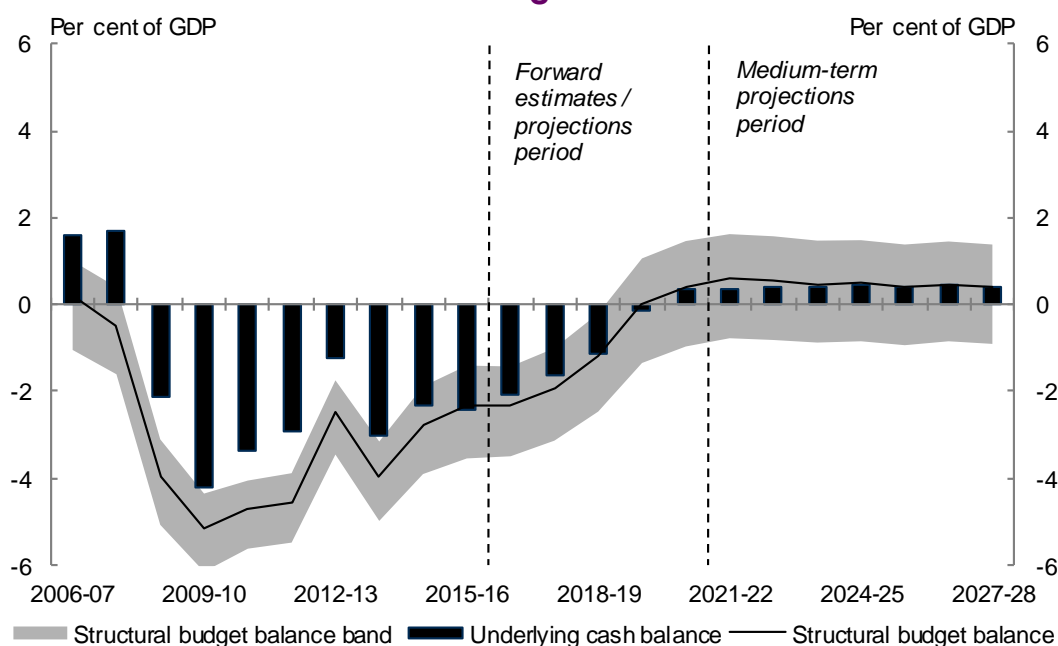
With the net operating deficit for the 2017-18 year estimated in the Budget at \$19.8 billion (or 1.1 per cent of GDP) and with the underlying cash deficit estimated at \$29.4 billion (1.6 per cent of GDP), we are clearly well short of these objectives.

With additional savings identified in the Budget process and with the economy picking up and on track to achieving trend growth rates there is a strong case now to reinforce the strategy of fiscal consolidation. A healthy proportion of savings together with the improved bottom line revealed in MYEFO should be directed to accelerating the pace of consolidation towards a sustainable budget position while retaining a degree of fiscal stimulus appropriate given the persistence of relatively high labour force underutilisation (now dominated by high rates of underemployment).

This stimulus should also provide scope for personal income tax relief - particularly for lower and middle-income households - that unwinds at least some of the fiscal drag that has contained disposable income growth in recent years. There should also be scope for a modest and selective lift in areas of expenditure that will lift economic capacity (and the future tax base) including by improving incentives to work.

Noting that the trajectory to structural surplus mapped in Chart 8 includes the fiscal impact of the foreshadowed company tax cuts, we anticipate that there will be scope for a modest bring-forward of the current trajectory of fiscal consolidation; for affordable income tax relief targeted to lower and middle-income households and for modest and carefully targeted expenditure on the key drivers of growth identified in this submission: lifting the capabilities of the future and current workforce; developing business capabilities; and further supporting advances in Australia's innovation record.

Chart 8: Structural Budget Balance Estimates



Source: 2017-18 Budget Papers, Budget Paper 1, Statement 3, May 2017.

We also favour further efforts to remove waste and inefficiencies in Commonwealth programs and, where the Commonwealth has a leadership role across the federation, in state and territory programs. Such savings and productivity improvements should be reallocated to underwrite sustainable rises in domestic living standards by accelerating the expansion of economic and social opportunities including by funding carefully-assessed improvements in health and education services.

In relation to the end point of fiscal consolidation, Ai Group does not have an ideological adherence either to running a cash surplus or to achieving a position of zero net debt. We certainly support a highly disciplined approach to spending and taxation and ensuring that recurrent spending is comfortably covered by recurrent revenue over the course of the business cycle. We also support rebuilding a fiscal buffer that could be deployed in the event of another crisis that posed a substantial threat to aggregate demand.

However, we do not see advantages in denying the scope for governments to borrow to finance investments that would generate a return sufficient to manage risks and cover borrowing costs, maintenance and depreciation. While in many cases such investments will be better financed by the private sector, in other cases – such as where there are highly dispersed benefits (including intergenerational spillovers) that cannot be adequately captured with user-charges – public investment and ownership can be the most efficient approach.

Where publicly-owned assets can be better managed under private-sector ownership, such as in electricity generation and transmission, we strongly support asset sales or long-term lease arrangements coupled with appropriate regulatory arrangements that address market power and performance concerns. As demonstrated in several Australian jurisdictions, tapping into the private sector to realise the value of publicly-owned assets can be a fruitful way to finance new investment

or to reduce the stock of public-sector debt. We strongly support further consideration by the Commonwealth of potential asset sales and any encouragement that it can provide to the states and territories.

Recommendations:

- **Ai Group strongly supports the determination to return the Budget to a position of long-term sustainability and to provide room to put in place stimulatory fiscal measures in the event of a major threat to aggregate demand.**
- **With the likelihood of MYEFO revealing an improvement in the budget bottom line, a good proportion of any improvement should be directed to accelerating the pace of consolidation towards a sustainable budget position.**
- **The accelerated pace of consolidation should nevertheless provide a degree of fiscal stimulus appropriate to the clear persistence of labour force underutilisation particularly in the form of underemployment.**
- **Consistent with the scope for a degree of stimulus, Ai Group supports personal income tax reform targeted to lower and middle-income households and modest increases in expenditure on the key growth drivers identified in this submission. These are aimed at achieving meaningful improvements to Australia's workforce capabilities, business capabilities; and innovation capabilities.**
- **While we support the budgetary discipline of ensuring that recurrent outlays are covered by recurrent revenue, Ai Group believes there is a clear rationale for using public-sector borrowing to finance rigorously and transparently assessed public sector investment in productivity-enhancing, intergenerational infrastructure.**

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).

Australia has a high recourse to the taxation of income. Relative to the OECD as a whole, Australia also stands out for having one of the highest company tax to GDP ratios. Australia also has a relatively high recourse to personal income taxation. This is despite Australia's lower-than-average overall tax to GDP ratio. Further, the gap between the Australian experience and the OECD average has tended to widen since the mid-1980s as the share of company tax to GDP in Australia has trended higher (against a more gently rising OECD trend).

As of 2014, 19% of Australia's taxation revenue came from company income taxes versus 9% across all OECD countries (see table x). In its latest assessment of the Australian economy in November 2017, the OECD (again) recommended that Australia reform its taxation arrangements in order to reduce this heavy reliance on company taxation and 'production side' taxation sources and to *"boost productivity and encourage market entry by innovative businesses"* (see section 2.2 above).

In response to this high taxation burden and the associated erosion of national competitiveness, Ai Group supports the policy changes proposed in the Enterprise Tax Plan No 2 2017 which would gradually introduce reduce the company tax rate to 25 per cent by the start of the 2026-27 year.

Reducing the rate of company tax can be expected to have a positive impact on the health of the economy. Lowering the company tax rate can be expected to lift investment in Australia with the following ramifications:

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

At the same time, we recognise that many other aspects of the tax system should be changed contributing to a comprehensive remodeling of the tax system that better meets the fundamental objectives of revenue adequacy and sustainability, economic efficiency, simplicity and fairness.

Securing support for the broader remodeling of our tax arrangements will require extensive community-wide and cross-jurisdictional discussion and consultation. Australia's experience suggests that it would take considerable time and effort to secure support and then design and begin implementing such a program. This should not deter launching the exercise which could be scheduled around the proposed timetable for the company tax phase-down.

In the meantime, advantage should be taken of fiscal capacity to make affordable improvements to taxation arrangements consistent with the broader direction of reform. As discussed in the previous

section, in anticipation of a sufficient improvement to the budget bottom line being unveiled with the release of MYEFO later in December, Ai Group supports personal income tax reforms targeted to lower and middle-income households in the 2018-19 Budget.

Table 4: Structure of Australian and OECD Taxation (2014)

| | Australia | | OECD |
|--|-----------------|------------|---------------------------|
| | Millions AUD | % | unweighted average (%) |
| Taxes on personal income, profits and gains | 162,993 | 39 | 24 |
| Taxes on corporate income and gains | 78,735 | 19 | 9 |
| Social security contributions | - | 0 | 27 |
| Payroll taxes | 21,447 | 5 | 1 |
| Taxes on property | 35,962 | 9 | 5 |
| Taxes on goods and services | 116,751 | 28 | 33 |
| <i>Of which GST is</i> | <i>50,300</i> | <i>12</i> | <i>20</i> |
| Other | - | 0 | 1 |
| TOTAL | 415,888 | 100 | 100 |

Source: OECD, *Revenue Statistics Australia*, 2014

5. Skills, education and training reform

Ai Group has identified a number of skills, education and training problems that must be addressed within this year's budget as a matter of urgency. These are discussed in detail below.

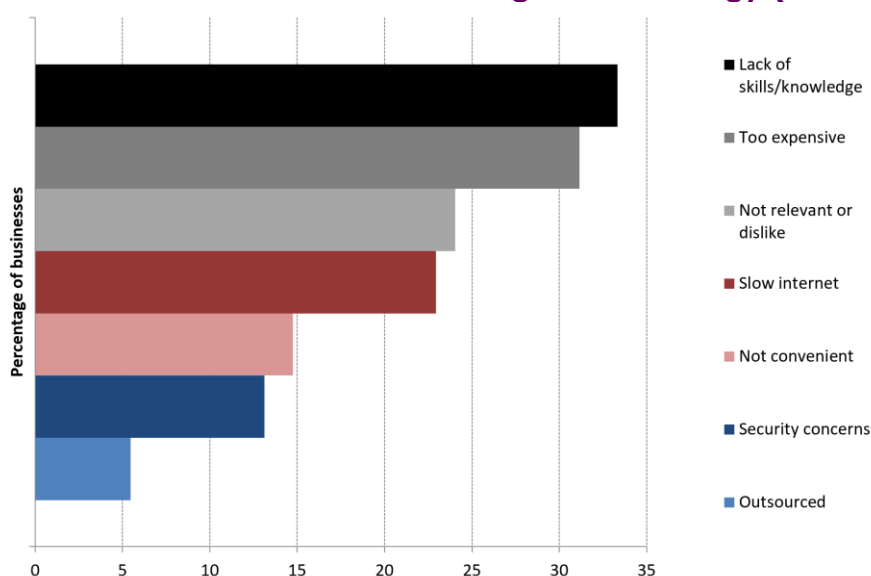
5.1 Skills gaps arising from digital transformation

The transformation of the workplace and disruption caused by digital technologies is having a widespread effect on skills needs and creating skills shortages. 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.

Workers need higher level skills and the capacity to be transferred between functions and processes. Industry increasingly needs workers who have the relevant specialist technical (STEM) skills, foundational skills including digital literacy and, importantly, new boundary-crossing capabilities in creativity, problem solving, advanced reasoning, complex judgement, social interaction and emotional intelligence. Further, capable leadership and management is needed to drive the effective utilisation of these skills and significant organisational change.

The Ai Group's recent Business Beyond Broadband report found a lack of skills to be the highest barrier to investment in digital technology. Only 15 per cent of businesses believe they have a high level of digital skills. While it was positive that businesses were generally digitally upskilling their workforce through training or recruitment, almost 20 per cent of businesses expected to do nothing to improve skills.⁵

Chart 9: Barriers to business investment in digital technology (% of businesses)



Source: Ai Group, "Business beyond broadband: Are Australian businesses ready for the Fourth Industrial Revolution? (May 2017).

⁵ Ai Group, "Business beyond broadband: Are Australian businesses ready for the Fourth Industrial Revolution? (May 2017).

Digital transformation is also leading to a significant shift in the skill composition of the workforce. There has been a range of reports highlighting the rapid and extensive change in this area. The CSIRO's latest report on megatrends for Australia's future workforce in the next 20 years highlights the need for a paradigm shift of mindsets for workers, employers, education sectors and governments to accommodate for the predicted jobs of the future.

A 2015 CEDA report notes that the share of high-skill jobs is significantly increasing while the share of low-skilled jobs is decreasing.⁶ Similarly the OECD has reported on the long-term movement away from low -skilled occupations to higher skilled occupations in the context of the expanding knowledge economy.⁷ The Foundation For Young Australian research has characterised this as a growth in 'high skill' and 'high touch' occupations and a decline in lower skill occupations⁸

Chart 10: Growth in occupations over the past 25 years, % change



All of these changes in the nature of work are producing skill needs in a number of categories that must be better integrated into school, VET and higher education curricula/standards as well as teaching, training and learning strategies. These broad categories fundamental for work into the future include:

Digital Literacy

Evidence suggests that despite an increasing diffusion of digital technologies in business, a large proportion of people do not effectively use digital technologies at work or do not have adequate ICT skills. The OECD's Survey of Adult Skills indicates that on average more than half of the adult population can only perform the simplest set of computer tasks, or have no ICT skills at all. Only about one third of workers have the skills to evaluate problems and find solutions. Australia's performance is higher than the OECD average in this regard.⁹

⁶ Committee for Economic Development of Australia, Australia's future workforce?, 2015.

⁷ OECD Skills Outlook 2013.

⁸ The New Basics: Big data reveals the skills young people need for the New Work Order, Foundation For Young Australians, 2016.

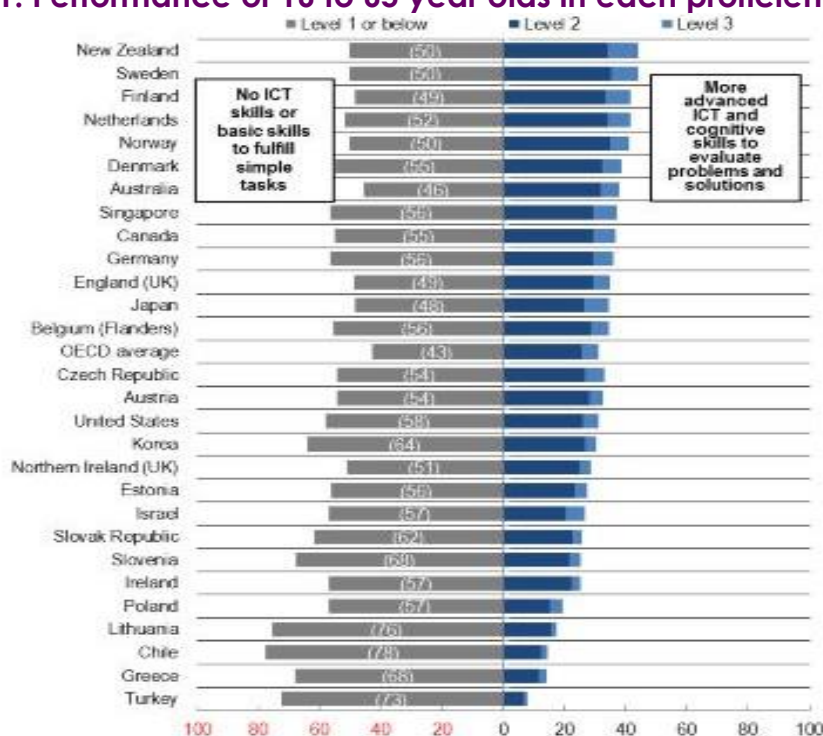
⁹ Skills for a Digital World, OECD, December 2016.

To enter the labour market of the future all Australians will need to be literate, numerate and digitally literate: to be able to use digital technology purposefully and confidently to communicate, and find information. These capabilities will be threshold requirements for most jobs. While numeracy and literacy have long been on the radar for education providers, digital literacy is relatively new. A challenge is the rapid change in computer software and hardware, which can make learned skills redundant. However, there are likely to be fundamental and enduring concepts of digital literacy which will be important for future job seekers to have mastered.¹⁰

A more involved digital worker needs to be able to evaluate, configure/program and use complex digital systems. More advanced skills are needed for 'Digital Makers' to build digital technologies such as software development, complex excel macros and additive manufacturing data files.¹¹

Increasing use of digital technologies at work is raising the demand for new skills. Workers across an increasing range of occupations need to acquire generic ICT skills to be able to use such technologies in their daily work. The production of ICT products and services – software, web pages, e-commerce, cloud and big data – requires ICT specialist skills to programme, develop applications and manage networks.

Chart 11: Performance of 16 to 65 year olds in each proficiency level, %



Notes: Individuals in Level 2 or Level 3 have more advanced ICT and cognitive skills to evaluate problems and solutions than those in Level 1 or below.

Source: OECD (2015c), Survey of Adult Skills (PIAAC) 2015.

¹⁰ Hajkowicz, S, Reeson, A, Rudd, L, Bratanova, A, Hodgson, L, Mason, C, & Boughen, N 2016, Tomorrow's Digitally Enabled Workforce, Commonwealth Scientific and Industrial Research Organisation, <https://www.csiro.au/~media/D61/Files/16-0026_DATA61_REPORT_TomorrowsDigitallyEnabledWorkforce_WEB_160204.pdf>

¹¹ Digital Skills for Tomorrow's World, UK Digital Skills Taskforce, 2014

STEM skills

Another key component of the future workforce will be the acquisition of Science, Technology, Engineering and Mathematics (STEM) skills. A number of reports have highlighted the importance of STEM skills to the economy and that these skills are needed for the fastest growing occupations.¹² According to Ai Group's Workforce Development Needs Surveys¹³, employers continue to experience difficulties recruiting STEM qualified workers. One fifth reported they had difficulty recruiting professionals with STEM. Section 5.4 discusses the problems and recommendations to secure a base in these skills for Australia.

Boundary-crossing skills

Workers must increasingly develop the boundary-crossing skills of communication, leadership, problem solving and design thinking. These are generic skills that can be coupled with technical capability to build a broader set of capabilities for application in different environments¹⁴. Fostering innovation begins with building the necessary foundation and generic skills needed by the workforce. These enterprise-focussed skills are not just for entrepreneurs, they are skills required in all jobs.

The new digital environment relies on a much 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 will need to act more often on their own initiative, have excellent communication skills and be able to organise their own work.¹⁵

Flexibility and adaptability are also key future capabilities in the context of the rising 'platform' or 'gig' economy – another important structural change. More workers need to engage quickly with work tasks through their gig-based work – another important structural change.¹⁶ There will be a significant call on these capabilities given that already in Australia over four million people, or 32 per cent of the workforce, had freelanced between 2014 and 2015.¹⁷ The largest categories for this type of work are web, mobile and software development (44 per cent), design and creative (14 per cent), customer and administrative support (13 per cent), sales and marketing (10 per cent) and writing (8 per cent).

¹² See for example Strengthening School -Industry STEM Skills Partnerships, Australian Industry Group, June 2017; STEM Country Comparisons, Australian Council of Learned Academies, May 2013; The Case for STEM Education, R. Byee, NSTA Press, 2013; and Science, Technology, Engineering and Mathematics: Australia's Future, Office of the Chief Scientist, September 2014.

¹³ The Australian Industry Group, Workforce Development Needs Survey 2012 and 2014.

¹⁴ Position Paper on the New Skills Agenda for Europe, CEEMET, 2017

¹⁵ Key Issues for Digital Transformation in the G20, OECD, 2017

¹⁶ The Emergence of the Gig Economy, Australian Industry Group, August 2016.

¹⁷ Australia's freelance economy grows to 4.1 million workers, study finds, Frank Chung, 27 October 2015.

Management capabilities

The Ai Group's 2016 Workforce Development Needs Survey found that over 50 per cent of employers believe a lack of leadership and management was having a high impact on business.

Managers who are decision-makers adept at dealing with uncertainty and constantly changing landscapes are needed in a networked-knowledge economy.¹⁸ To understand and recognise the upcoming changes in digitalisation and automation, leaders need to identify where their own organisation will be transformed and then put in place plans to migrate to new business processes enabled by digitalisation.¹⁹

Leadership and management capability must enable companies to steer the interconnectivity between systems, machines and people – across companies, countries and value networks. Managers need to develop the digital strategies required, develop workforces with proficiency in problem solving in technology rich environments and ensure workers continue to utilise their information processing skills.

The greater challenges for leaders are the workforce and organisational changes that will have to be put in place as automation upends entire business processes, as well as the culture of organisations. 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.

Another new management challenge in a world where knowledge is dispersed across firms, industries and countries is the globalisation of innovation. The increasing geographic dispersion of knowledge, research and development also requires new forms of collaboration and levels of coordination.²⁰

Recommendations

Increase investment in the development of key categories of skills for the transforming economy through all education and training sectors.

5.2 Existing worker up-skilling

Whilst there needs to be an expansion of digital literacy across all education sectors and flowing into the future workforce, a crucial contributor to industry's success will be the re-skilling of Australia's existing workers to possess the digital skills needed for today's jobs.

The more rapid changes in the economy mean individuals will need regular upskilling throughout their working lives. Companies must up-skill existing workers in order to take advantage of growth opportunities and adapt to the digital economy. By assessing their own capability and training when

¹⁸ The Future of Manufacturing Education Initiative, Final Report, Australian Business Deans Council, 2014.

¹⁹ Chui, Maniyika and Meremadi, Where machines could replace humans – and where they can't (yet), McKinsey Quarterly, 2016

²⁰ Australian Business Deans Council, op. cit.

necessary using trainers, supervisors, managers and leaders, companies will develop employees more capable of taking control of their roles, needing less supervision and being more engaged.

Support is needed for industry to assess existing workers' digital capabilities and train where necessary, resulting in employees who are more capable of undertaking productive and engaged roles and able to better contribute to innovation in the workplace. Management development to build the capabilities described above is crucial. And learning must continue throughout a career in order to acquire new capabilities as the unknown new technologies and roles emerge.

The Ai Group's Business Beyond Broadband report found that businesses are prepared to digitally upskill their workforce through training or recruitment. A minority will be outsourcing digital functions. Alarming, 17 per cent of businesses plan to do nothing to improve technology skills because employee skills, costs, perceived lack of relevance and slow internet capacity inhibited them from investing.

A successful model for supporting companies to develop and implement training in line with new directions and strategies involves the assistance of skills advisers, such as those that operated under the Australian Government's Industry Skills Fund. The Fund included subsidies for existing workers to undertake training. A similar scheme, in particular for SMEs, that delivers expert advice and information on workforce development planning and skills opportunities, including addressing digital skill needs, language, literacy and numeracy issues, leadership and management challenges and other unmet demand for training to assist company growth, would assist the business sector with digital transformation.

Recommendations

Fund a national industry skills development and training support program focussing on digital skills, organisational change, workplace innovation and management development.

5.3 Investment in Australia's VET system

Australia's VET system must be viewed as the skills engine room for industry's workforce. It is therefore deeply concerning that the funding of the VET system continues to be inadequate, in terms of both the level and composition of its funding.

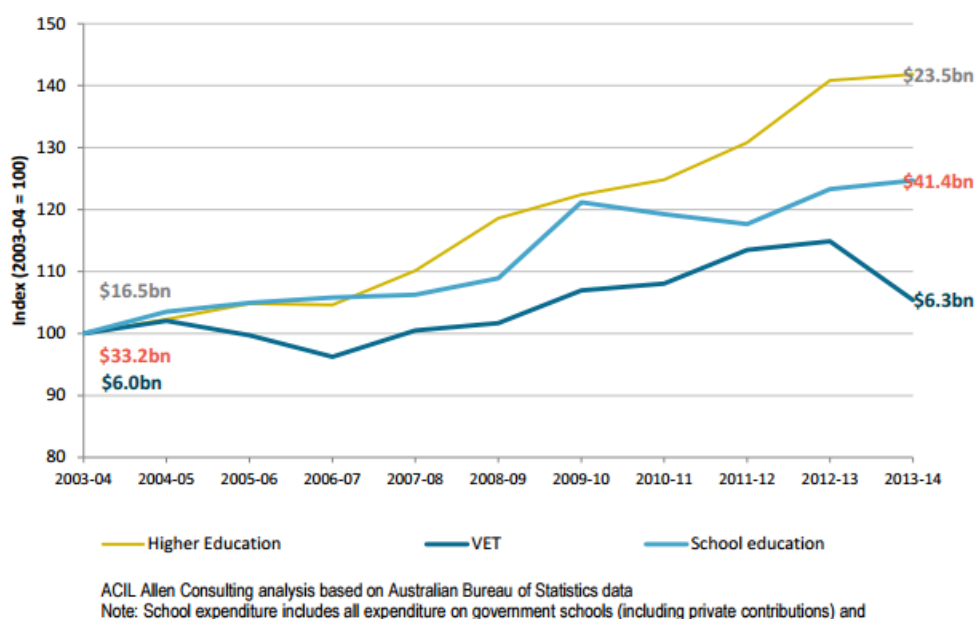
Firstly, the levels of total VET funding are not sufficient to meet existing and future skills needs of the workforce. The level is too low in absolute terms and relative to the funding arrangements in both the higher education and school sectors (see Chart 11). The most recent national analysis of VET demand was undertaken by the former Australian Workplace Productivity Authority in 2011.²¹ This report recommended a 3 per cent p.a. increase to 2020 to meet the demand for VET qualifications required by the workforce. Current VET funding levels are well short of this. Further, there is an increasing gap in the public expenditure for VET compared to other sectors of education.

More recent research by the Mitchell Institute shows there has been a much lower rate of growth in VET spending compared with other education sectors. Expenditure on VET has grown much more

²¹ Skills for prosperity: a roadmap for vocational education and training, Skills Australia, 2011.

slowly, by around 15 per cent in total until 2012-13, before experiencing a sharp decline in 2014. This left total VET expenditure in 2013-14 only around 5 per cent higher than 2003-4 levels.²²

Chart 12: Expenditure on education by sector, 2003-04 to 2013-14



This lack of VET funding and the growing gap between VET and the higher education sector makes any movement towards a national tertiary system more difficult.

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 is falling in absolute terms and also relative to Commonwealth expenditure. 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.²³

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 2016.²⁴

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.

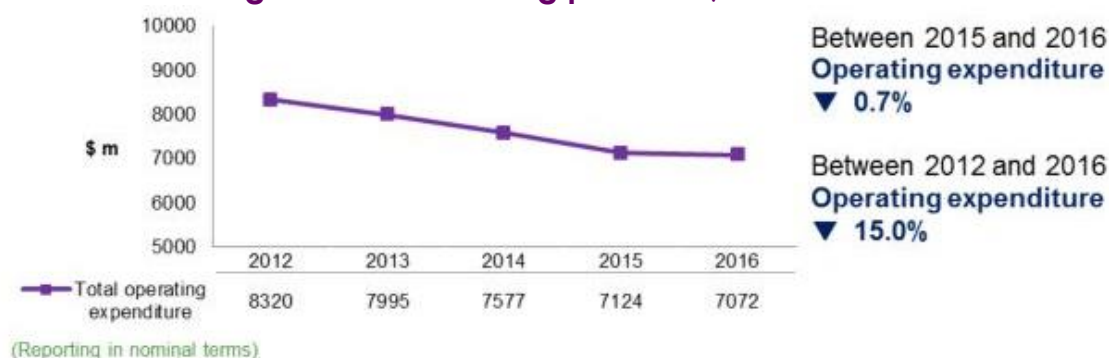
²² VET funding in Australia, Peter Noonan, March 2016, Mitchell Policy Paper 2016.

²³ Kaye Bowman and Suzy McKenna, NCVER, Jurisdictional approaches to student entitlements: commonalities and differences, 2016

²⁴ Financial information 2016, NCVER, November 2017.

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

Chart 13: VET operating expenditure for government training departments and government training providers, 2012-16



Total operating expenditure decreased by:

- \$52.3 million (0.7%) from \$7124.3 million in 2015 to \$7071.9 million in 2016
- \$1248.1 million (15.0%), between 2012 and 2016.

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 boundary-crossing 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 cross sector projects underway through the training product development system should help to address needs.

A 2017 NCVER report has found that the VET system contains a significant amount of digital training content, although much of this is elective rather than part of the core.²⁵ The training is also geared towards the development of lower levels of skills. This is counter to the 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.

The sector is also potentially a rich source of applied research and collaboration with industry. The sector needs to be further included in the government's innovation initiatives – a recommendation included in the House of Representatives report of its Inquiry into innovation and creativity.²⁶ A 2017 NCVER paper and practical guides provide directions by addressing the potential and exploring

²⁵ Developing appropriate workforce skills for Australia's emerging digital economy: working paper, NCVER, 2017.

²⁶ Inquiry into innovation and creativity: workforce for the new economy, House of Representatives Standing Committee on Employment, Education and Training, May 2017.

the capabilities that are needed and how RTOs and practitioners can build off their existing connections and skills.²⁷

Finally, industry requires a steady supply of VET graduates to the workforce and has indicated difficulty in recruiting trades and technician workers. It 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.

The Ai Group believes the proposed expansion of approved sub-bachelor courses to the demand driven funding system at public universities would likely result in the rapid expansion of diplomas and advanced diplomas by higher education institutions and a decrease in provision by the VET sector, including TAFE. There is no guarantee that this action would lead to a more effective alignment with industry needs. The VET sector has formal arrangements to enable industry endorsement of qualifications. The higher education sector does not have such arrangements or the capacity to respond effectively to industry needs.

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.

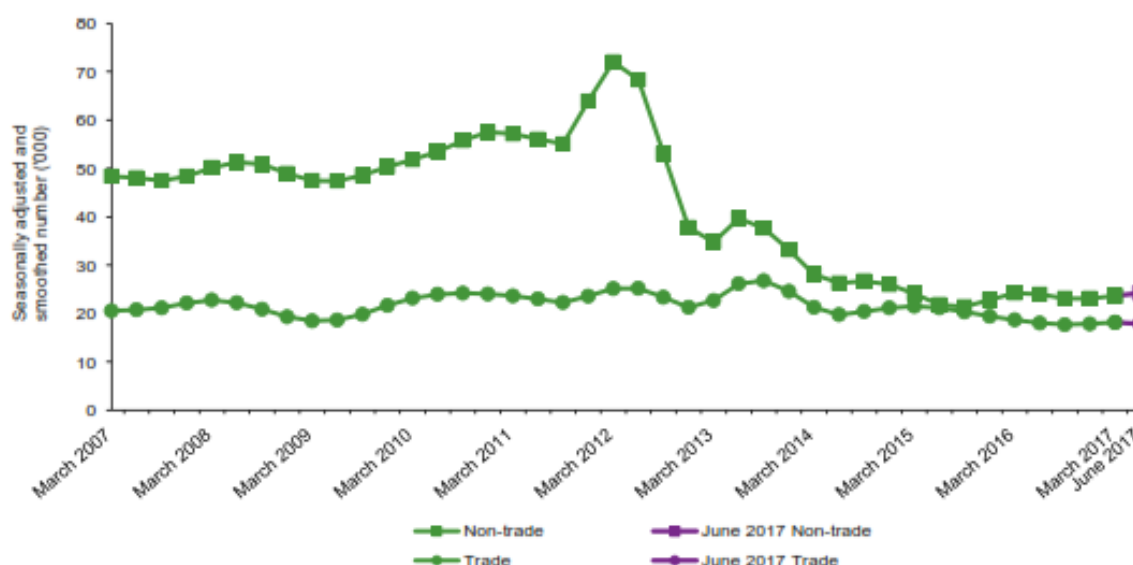
5.4 Reform of Australia's apprenticeship system

The most recent data from the NCVER indicates that there were 275,200 apprentices and trainees in training as at the end of March 2017. This represents a fall of 3.7 per cent compared to the March 2016 level. Nevertheless, this represents an increase on the last quarter (December 2016) when the level was 264,200 which was the lowest for a decade. Commencements in the trades fell by 9 per cent in this period whereas non-trade traineeships increased by 4.3 per cent. What appears to be developing is a new and lower plateau of participation. The national level fell below 300,000 for the first time in September 2015. Since December 2015 the quarter levels of participation have ranged between 264k and 285k.

However, disaggregation of the data reveals a more nuanced situation. Training rates in many of the key industrial trades increased from 2015 to 2016. This reflects infrastructure and related projects, i.e. construction-based trades. However, printing, hairdressing and TCF continue to decline. This does not lift the overall quantum of apprentices in training, however, it does demonstrate improvement in some key areas. This analysis demonstrates the need for targeted government invention.

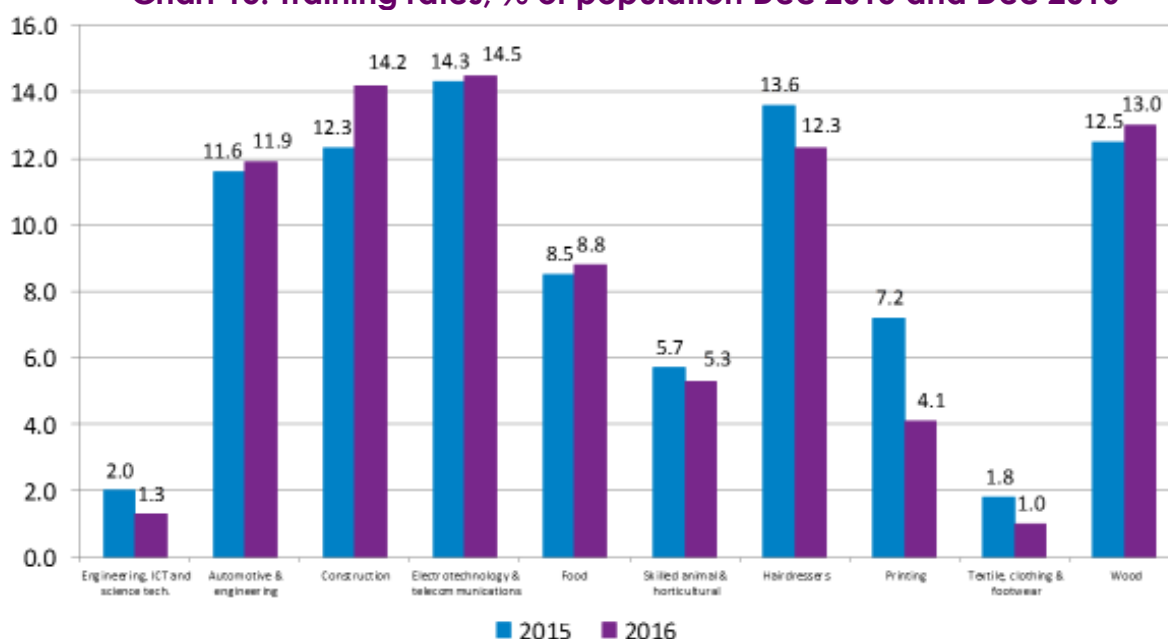
²⁷ Beddie, F and Simon, L, VET applied research: driving VET's role in the innovation system, NCVER, September 2017.

Chart 14: Trades and non-trade apprenticeship commencements, '000 per quarter, March 2007 – June 2017



Source: Apprentices and trainees 2017, March quarter, NCVER

Chart 15: Training rates, % of population Dec 2015 and Dec 2016



Source: Apprentices and trainees 2017, March quarter, NCVER

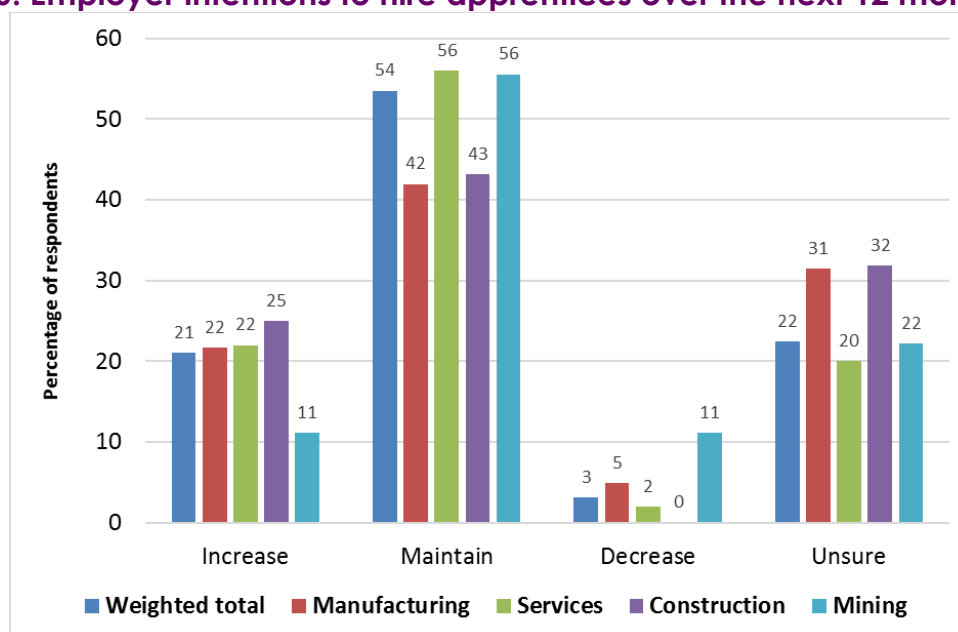
There is an urgent need to stimulate and support this vital training pathway. In the Ai Group survey of workforce development needs in 2016, only 21% of all employers intended to increase apprentices and trainee numbers over the next twelve months.²⁸

A contributing factor to this general concern is the data released about VET in Schools participation for 2016. In 2016 there were 243,300 VET in Schools students, a decrease of 5.4 per cent on 2015. Of particular concern, is the state of school-based apprentices and trainees which make up only 7.1 per cent of all VET in Schools students. These have decreased by 14.4 per cent on the previous year

²⁸ Workforce Development Needs Survey, Ai Group, 2016.

to 17,200, the lowest since 2012. Most states and territories recorded a fall in participation with Northern Territory (44.7 per cent), Western Australia (36.7 per cent) and Queensland (21.4 per cent) recording the heaviest falls in participation.

Chart 16: Employer intentions to hire apprentices over the next 12 months, 2016



Source: Australian Industry Group Workforce Development Needs Survey 2016

Table 5: school-based apprentices and trainees, by state, 2012 to 2016

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2015-16 |
|--|-------------|-------------|-------------|-------------|-------------|--------------|
| | ('000) | ('000) | ('000) | ('000) | ('000) | % change |
| School-based apprentices and trainees | | | | | | |
| New South Wales | 2.3 | 2.5 | 2.8 | 2.2 | 2.2 | 1.0 |
| Victoria | 4.2 | 3.6 | 3.9 | 3.6 | 3.3 | -7.7 |
| Queensland | 13.2 | 13.1 | 11.7 | 11.1 | 8.7 | -21.4 |
| South Australia | 0.9 | 0.9 | 0.3 | 1.1 | 1.3 | 12.9 |
| Western Australia | 1.2 | 1.1 | 1.2 | 1.2 | 0.8 | -36.7 |
| Tasmania | 0.7 | 0.6 | 0.7 | 0.6 | 0.6 | -8.6 |
| Northern Territory | 0.1 | - | 0.2 | 0.2 | 0.1 | -44.7 |
| Australian Capital Territory | 0.4 | 0.3 | 0.2 | 0.1 | 0.2 | ** |
| Total school-based apprentices and trainees | 23.0 | 22.1 | 21.0 | 20.1 | 17.2 | -14.4 |

Source: VET in Schools 2016, NCVER

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

To facilitate greater industry involvement in apprenticeship arrangements the current regime of employer incentives needs to be reviewed and rationalised. In particular, there needs to be a focus on employer incentives for first time participants in the arrangements. European research suggests

that direct subsidies are effective in encouraging companies to start training rather than for companies which are already training.²⁹

The introduction of the Skilling Australians Fund has the potential to make a difference in the number of apprenticeships.³⁰ It is appreciated that this initiative is in the relatively early months of implementation and that it requires the collaborative participation of the States and Territories. The potential of this initiative would be significantly enhanced by working directly with industry which would also increase the likelihood of national approaches.

A national body is needed to manage the implementation of these 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.³¹ It is timely for Australia to review the governance arrangements for apprenticeships with a view to providing a genuinely national approach.

Recommendations:

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.

In consultation with industry, develop measures designed to increase the level of participation in apprenticeships/traineeships.

Facilitate direct industry and employer engagement through the Skilling Australians Fund.

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.

Review the employer incentive regime and develop incentives for first time participants in the system.

5.5 Developing Australia's Science, Technology, Engineering and Maths (STEM) capabilities

Some progress has taken place, especially in the school sector, through the establishment of the STEM Partnership Forum as recommended in the Education Council's National STEM School Education Strategy.³² The Ai Group research project Strengthening School-Industry STEM Skills

²⁹ The effectiveness and cost-benefits of apprenticeships: results of the quantitative analysis, European Commission, September 2013.

³⁰ <https://www.education.gov.au/skilling-australians-fund>

³¹ <https://apprenticeships.blog.gov.uk/2017/11/23/the-institute-for-apprenticeships-breaking-the-chain/>

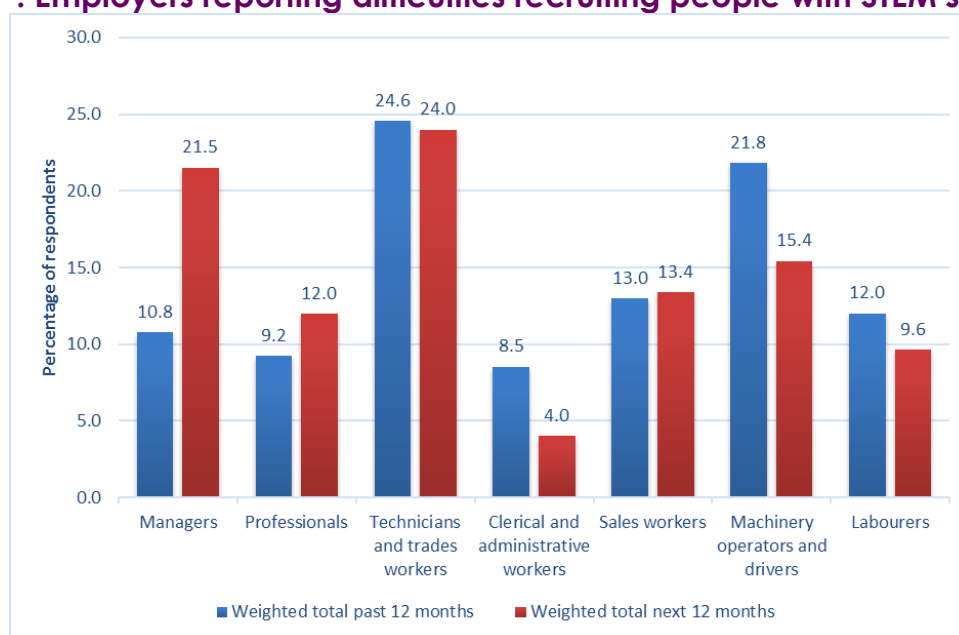
³² *National STEM School Education Strategy*, Education Council, December 2015.

Partnerships, produced a number of models and recommendations that need to be promoted nationally to encourage further participation³³

However, there are still gaps in the national approach to STEM skills. The initiatives released to date do not constitute an overall national strategy. In particular, there is little focus on measures to support and expand the STEM-qualified workforce and no reference to the importance of Vocational Education and Training (VET) sector in this policy area.

Ai Group's long-standing concerns about the state of STEM skills and the impact on the economy are well documented.³⁴ A major focus needs to be on growing the STEM workforce. Modelling by PwC finds that shifting just 1 per cent of the workforce into STEM roles would add \$57.4 billion to GDP.³⁵ Skilled technicians are often the most pressing area of shortage for companies rather than graduates as Ai Group workforce development surveys reveal. The latest data indicates that around a quarter of employers anticipated difficulties recruiting technicians and trade workers with STEM skills. Accordingly, there needs to be a renewed focus on apprenticeships and traineeships in STEM-related areas. Employer incentives could be targeted in these areas.

Chart 17 : Employers reporting difficulties recruiting people with STEM skills, 2016



Source: Australian Industry Group Workforce development needs Survey 2016

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.

³³ Strengthening School – Industry STEM Skills Partnerships, Final Project Report, Australian Industry Group, June 2017.

³⁴ *Progressing STEM Skills in Australia*, Australian Industry Group, February 2015.

³⁵ *A smart move*, pwc, April 2015, page 4.

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

The Industry Growth Centres initiative has significant potential to promote and implement STEM skills. All six of the Centres announced to date overlap with STEM skill areas. The centres are tasked with improving the management and workforce skills of key growth centres.³⁶ The long-term strategies to be developed by each of these centres needs to focus on the development of workforce STEM skills. There has been research by NCVER about the readiness of five of these growth industries to meet the demand for skills. Among a number of findings to overcoming limitations this research found there is a requirement to have

“a priority focus on STEM, including the development of workplace skills in STEM undergraduate or research degrees and opportunities for continuing professional development in STEM disciplines.”³⁷

To address this issue the Ai Group supports the call for an overall national STEM skills strategy. The government can take a leadership role, potentially through the Commonwealth Science Council, 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.

Recommendations:

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

Promote the findings and recommendations of the Strengthening School – Industry STEM Skills Partnerships Project on a national basis to encourage increased participation.

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

Introduce employer incentives for employers engaging apprentices and trainees in STEM-related areas.

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

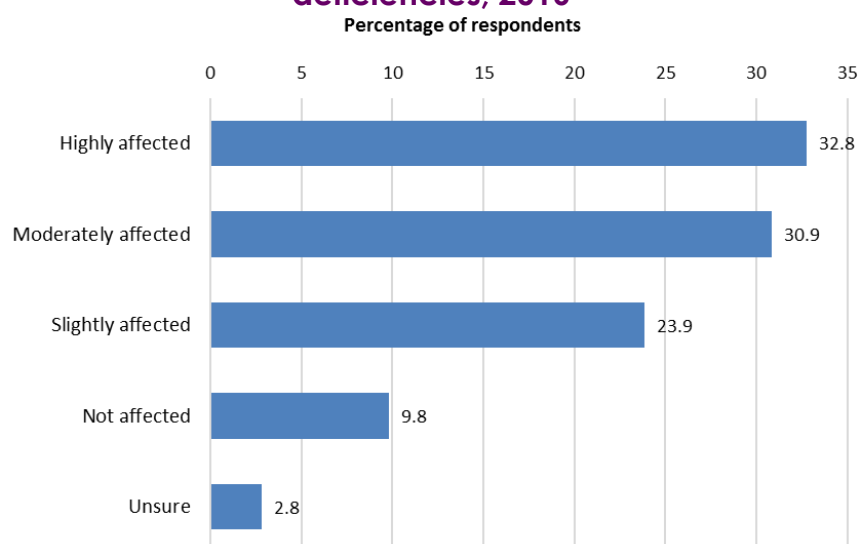
³⁶ www.business.gov.au/advice-and-support/IndustryGrowthCentres

³⁷ Francesca Beddie et al; *Readiness to meet demand for skills: a study of five growth industries*, NCVER, 2014.

5.6 Developing Australia's workplace literacy and numeracy capabilities

Ai Group research confirms that the low levels of workplace literacy and numeracy are a major concern to employers. The most recent survey indicates that over 87 per cent of employers reported low levels of literacy and numeracy having an impact on their business.³⁸

Chart 18: Employers affected by workplace language, literacy and numeracy deficiencies, 2016



Source: Australian Industry Group Workforce development needs Survey 2016

This has 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.

The Ai Group has conducted a return on investment to employers' program with very positive results.³⁹ 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 needs to be program for them to invest in.

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 employer including direct linkages to productivity. The program could also be nationally accredited through the use of the Foundation Skills Training Package adapted to suit particular workplace needs. The Ai Group conducted a small pilot study with three workplaces

³⁸ Workforce Development Needs Survey 2016, Ai Group, December 2016.

³⁹ *Investing in Workforce Literacy Pays*, Australian Industry Group, August 2015.

during 2016 based on these approaches with significant success.⁴⁰ This combination of measures could be implemented through a larger national pilot program in concert with industry.

Ai Group urges the government to develop a national workforce literacy and numeracy program in concert with industry.

Recommendations:

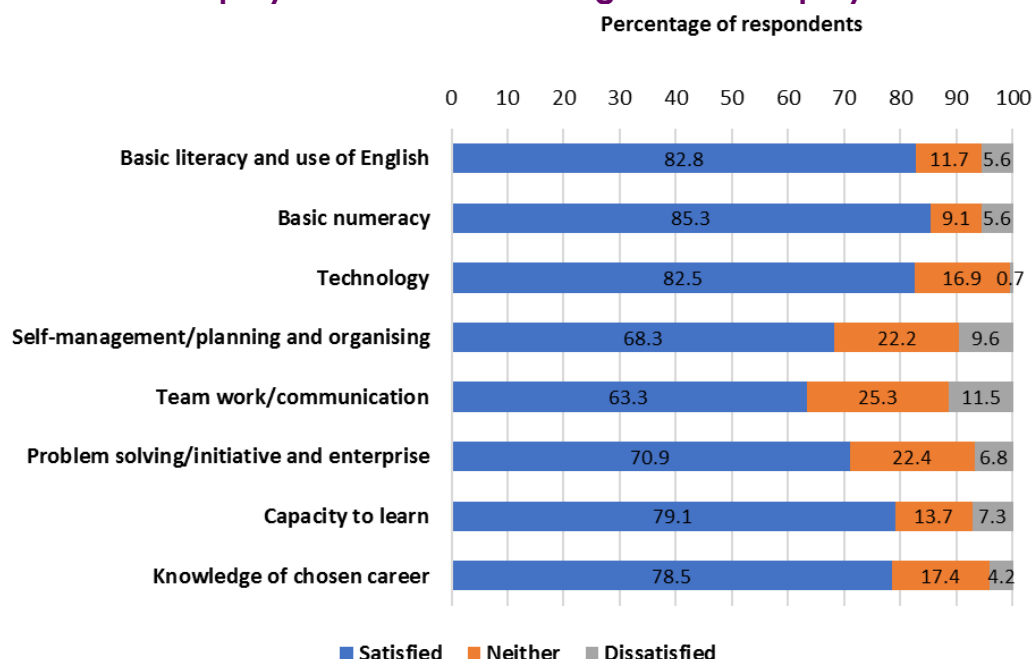
A national foundation skills strategy needs to be provided with a sufficient budget to support workforce literacy and numeracy programs.

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

5.7 Challenges to higher education

The Ai Group recognises the importance of a well-placed higher education sector to drive a successful business sector. As industry meets the challenges of new business models, new ways of working, and new technology, there continue to be questions around the ability of university graduates recruited to meet these challenges. Data from members gathered through Ai Group's 2016 Workforce Development Needs Survey found their highest levels of dissatisfaction focussed on graduates' levels of team work, self-management and problem solving.⁴¹

Chart 19: Employers satisfaction with graduate employment skills



The 2017 Graduate Outcomes data show that short term employment outcomes have declined in recent years with graduates taking longer to find full-time work.⁴²

⁴⁰ *Foundation Skills Pilot Program Success*, Australian Industry Group, July 2017.

⁴¹ *Workforce Development Needs Survey Report*, Australian Industry Group, December 2016.

⁴² *Graduate Outcomes Survey – Longitudinal, QILT*, Department of Education and Training.

Graduates need to be sophisticatedly technically proficient no matter what discipline, with higher level cognitive skills dominated by STEM. However higher level soft (or employability) skills are needing to be more closely integrated within an individual's technical specialisation. This is because changes being driven by automation are about new processes for the way we do things. Problem solving, creativity, communication, collaboration, adaptability and initiative will all increasingly need to be part of an individual's package.

Employability skills are built over time⁴³ through a number of complementary activities.⁴⁴ In today's world all graduates are better prepared to contribute productively in the workplace if they have had opportunities to integrate theoretical knowledge with practice. The benefits of it have been well documented and researched.⁴⁵ Initiatives in work integrated learning (WIL) are bringing about broad collaboration between industry and universities, with many innovative arrangements for cooperation – not only around WIL but for research and development.

Goodwill exists across the education and business sectors to expose students to authentic work environments. It is noted that all universities now include a major strategy to drive employability through WIL. Ai Group is working to build the frameworks that allow increased connections between industry and universities through our representation on national multi-sector strategy groups and projects; through a graduate employment service to help companies find and mentor suitable graduate; and by providing a guide for employers.

A newly released report on the state of university-business cooperation found differing motivations and differing time horizons to be the main barriers to collaborating. Successful relationships are driven by a business strategy existing for cooperation and shared goals that foster relationships.⁴⁶ Innovative models of connecting industry and higher education providers need to be more widespread, where, for example, university campuses are located in business and vice versa for each to be at the coalface of each other's activity. Innovative examples include micro-internships⁴⁷, students running incubators for start-ups, and students researching IP issues for SMEs. There is also innovation around the organisers of work integrated learning activities. There are a number of successful online services connecting businesses with students, including Ribit (part of Data61/CSIRO) that runs speed-networking events. The documentation and national circulation of innovative models of cooperation would be of great benefit to both sectors.

Businesses involved with universities in WIL activities achieve benefits for the company and the individuals. However the capacities and resources of large, medium and small businesses to collaborate are broad and different. Many large companies have long standing projects with universities and run placement programs, or share facilities. However for SMEs providing work exposure for higher education students in the form of WIL activities is resource intensive. A key

⁴³ Yorke and Knight, 2006.

⁴⁴ Jackson, 2015

⁴⁵ Jackson, Ferns, Rowbottom and McLaren, Working together to achieve better WIL outcomes, 2015; PhillipsKPA, Engaging employers in work integrated learning, 2014; NCVER, Work integrated learning in STEM disciplines: employer perspectives, 2015; OECD Workshop, Engaging employers in skills development for the 21st century, 2016.

⁴⁶ Plewa, C, Davy, T, Meeran, A and Golan-Muros, V, The State of University Business Cooperation, Global University Engagement Monitor, 2017.

⁴⁷ University of Oxford Micro-internship Programme.

factor in business-university relationships at the local level involves exploring the range of possibilities that are not too onerous for each particular business, using flexible and differentiated strategies. This is more likely to develop into cooperative long term relationships.

The Canadian Government has allocated a significant budget to supporting companies to engage with students for WIL, linking the initiative to advancing its Innovation Agenda to spur economic growth. A similar initiative within Australia should be considered.

A further challenge to higher education, brought about by rapidly changing jobs and new business structures concerns the relevance of degrees, in their current form, into the future. Anecdotal evidence suggests that businesses are increasingly demanding shorter, sharper education and training. Micro-credentialing is gaining steam as a way to quickly build capabilities. Current delivery models are also facing complex challenges as the use of 'nano-learning', that is, two to ten minute blocks of quick learning, grows. Educational content needs to be delivered faster, more cheaply and on demand, with new learning experiences – ensuring more focus is on questioning, exploration and authentic environments. Whilst the qualitative experience of higher learning must not be lost, a balance needs to be met between the traditional degree program and the demands for 'stacked' learning to cater for both new learners and those in the workforce needing to constantly update their skills.

Recommendations

Fund a widespread review of learning and teaching practices in higher education providers to embed employability, through work integrated learning approaches, into all curricula.

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 companies provide opportunities for students to experience the workforce and make meaning of their learning.

6. Improving Australia's innovation and digital capabilities

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.

6.1 Innovation and research capabilities

The major innovation issue for resolution in 2018 is the response to the Review of the Research and Development Tax Incentive. The R&D Tax Incentive 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. While the Review produced some valuable ideas, it is very important to return a measure of continuity and stability to the policy.

The Review recommends two measures that would reduce the cost of the R&D Tax Incentive, including: a cap on the annual cash refund payable to smaller claimants in a tax loss situation; and limiting non-refundable claims to spending above an R&D intensity threshold of between 1 and 2 per cent of total business costs.

Ai Group broadly supports the proposed cap, which appears necessary to control extreme growth in the refundable element of the Incentive reflecting a shift to business models entirely predicated on the Incentive rather than traditional finance options. Assuming it is indexed to preserve its real value over time, a cap appears adequate to support reasonable activity by startups in most fields. However, the Government should consult further with the biomedical sector to ensure that the proposed level does not damage the ability of startups to conduct clinical trials and establish a growth path.

Ai Group does not support an R&D intensity threshold, which would cut the value of the incentive for all businesses in a highly uneven and arbitrary fashion. It would also substantially increase the compliance and accounting burden relative to the value of the incentive, since spending below the threshold would also need to be substantiated, and reduce the reliability of the incentive, since the amount claimable would depend heavily on final costs elsewhere in the business.

An increase in the value of incentive claims is no bad thing if it represents an increase in Australian innovation activity. There does not seem to be a strong policy case for further savings from the Incentive. If broader budgetary pressures do require such savings, a cut to the headline rate of the Incentive would be substantially simpler and less distorting than an intensity threshold.

The Review also proposes encouraging collaborative innovation through a new premium of 10 to 20 per cent for claims relating to employment of recent PhD graduates or to collaborative projects. Ai Group research strongly supports the value of collaboration in easing innovation and increasing its value. The collaboration premium is a positive initiative, but it needs to be designed in close consultation with industry to ensure a design that encourages genuine collaboration both between

businesses and between business and research organisations, while having workable definitions and evidentiary requirements.

An experimental initiative like the collaboration premium will certainly need to be refined and reviewed over time, and the proposed four-year cycle is appropriate. However, the broader Incentive badly needs stability and the Government should commit to maintain its settings and value to eligible businesses over the medium term following the amendments now under consideration.

Recommendations:

- **Control the costs of the R&D Tax Incentive by adopting a cap on the refundable element. If further savings are required, a reduction in the headline rate for both the refundable and non-refundable elements is likely to be preferable to more distorting changes such as intensity thresholds.**
- **Work closely with industry to design a premium for R&D Tax Incentive claims related to employment of new PhD graduates or to collaborative projects.**
- **Commit to maintaining broad stability for the overall Incentive, while reviewing and refining the collaboration premium over time.**

6.2 Digital capabilities

In a report that Ai Group published in May this year, Ai Group surveyed 248 Australian businesses about their use of and investment in digital technologies, as well as barriers to this investment. We found that the main barriers to business investment in digital technologies were lack of employee skills (33%), costs (31%), perceived lack of relevance (24%) and slow internet (23%) (Chart 3).⁴⁸

Drilling down into skills, we found only 15% of businesses believe they have a high level of digital skills. While it was positive that businesses were generally digitally upskilling their workforce through training or recruitment, 17% of businesses expected to do nothing to improve skills. That is not insignificant.

We have also heard anecdotally from members about possible reasons for the slow adoption of digital technologies, particularly among SMEs:

- They do not have the time to assess digital technologies to know what's relevant to them and what the benefits may be;
- They do not know where to start;
- They would like to know what others are doing to determine the benchmark; and
- The speed of change makes it hard to keep up and adapt, even for innovative manufacturers.

⁴⁸ Ai Group, "Business beyond broadband: Are Australian businesses ready for the Fourth Industrial Revolution (Report, May 2017).

We have also heard from both end users and suppliers that while there may be interest from businesses in digital technologies, development and implementation of a business case is the real challenge.

Recommendations:

To tackle the digital capability challenges facing industry, especially SMEs, we propose the following areas where government and public support could be of value to industry:

- **The Australian Government, NBN Co and industry could work together to describe and communicate business approaches to making the most of broadband, including through case studies.**
- **Businesses need to look for opportunities to invest in and maximise the use and benefit of IoT and related digital technologies. Public support may be beneficial, including through: business capability policies such as the Entrepreneurs' Programme and facilitating collaboration with universities, Data61, other research institutions, and other businesses.**
- **Complementing this, businesses need to understand better the longer-term benefits of digitally upskilling staff. Government initiatives (such as the Entrepreneurs' Programme and Industry Growth Centres) could be avenues of support.**
- **Businesses could benefit from Government and industry support in increasing their cyber security skills and capabilities. We welcome working with Government and industry to raise business awareness and facilitate business access to appropriate experts and existing initiatives for cyber security.**
- **Incentives could be created to encourage businesses to take risks to determine how investment in technologies can benefit their business and people. Options include grants or tax concessions for investment in digital transformation, including demonstration projects.**
- **As an industry partner of the Entrepreneurs' Programme, we have observed that there is a gap around providing non-IT businesses with cyber security and digital transformation enablement. Many SMEs, particularly those outside of IT and digital, say that they find it very difficult to get impartial advice around these topics, rather than promotion of a provider's commercial product or service. There is an opportunity to provide additional resourcing to the Entrepreneurs' Programme to facilitate provision of specialist independent expert advice in this space, similar to the provision of independent business advice.**

6.3 Cyber security capabilities

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

There are currently regulatory measures in place to tackle cyber security including the Telecommunications Sector Security Reform, Mandatory Data Retention, and the forthcoming 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 providing businesses with the adequate capability and resources to ensure their systems are secure. Law enforcement resources are an especially critical constraint.

Ai Group's recent report⁴⁹ found that only 22% of businesses used cyber security technology – that is anything beyond the default protection bundled with their operating system or basic antivirus software. Cyber security experts regard such default protections as the last line of defence. We also found that just 13% of businesses considered cyber security to be an inhibiting factor for business investment in digital technologies. This goes against trends overseas, as reported by The Boston Consulting Group and McKinsey Digital.

This low business priority suggests to us that there is an underlying lack of organisational appreciation of the importance of cyber security. The combination of low investment and low concern suggests a dangerously unfounded confidence that things will be okay.

We have also heard directly from SMEs who have lost significant amounts of money from more sophisticated and targeted cyber attacks. Some of these incidents arose from business emails that were compromised through fraud attempts.

In one example, the business reported the incident to a law enforcement agency (who registered the matter on the Australian Cybercrime Online Reporting Network). They were told that this type of crime happened all the time and it would take up to 18 months to investigate the matter which had cost the company up to a quarter of a million dollars, not including the psychological impact of such a loss. As can be imagined, 18 months is ample time for a cyber criminal to convert the money and disappear, and potentially commit the same criminal act numerous times just by the click of a mouse button.

These incidents are becoming more frequent, partly enabled – ironically – by advances in technology, leading to innovative criminal business models like Ransomware-As-A-Service and use of cryptocurrency to enable payment to hackers who can shield their identity. It has also been argued that cyber criminals are more responsive compared to enforcement bodies who have limited resources to address these threats.

Experts also suggest that global cyber crime is more lucrative than the narcotics trade.⁵⁰ Unfortunately, law and enforcement resources expended for tackling cyber security is significantly less than against narcotics.

In partnership with industry experts, Ai Group runs cyber security awareness events for businesses from time to time. Based on the anecdotal feedback, there appears to be a range of reasons for why there may be perceived barriers which can be categorised into three areas: cost; resources and capability; and awareness and education.

⁴⁹ Ibid.

⁵⁰ Cybersecurity Ventures, "2017 Cybercrime Report" (Report, November 2017), p. 3.

Some businesses have told us that the cost to invest and implement cyber security measures is expensive compared to the risk of an attack. For example, for medium-size to larger businesses, the cost of insurance against attacks may be disproportionately more expensive than the option of paying for a ransomware attack.

For smaller businesses, the resources and capability to manage cyber security are likely to be limited – often little more than the use of basic cyber security technology, allocation of responsibility to an employee with general IT skills or an outsourced IT service provider.

The problem may be further exacerbated by the lack of awareness about good cyber security hygiene. A recent example was about a local defence subcontractor who was infiltrated by a hacker, which made global news. According to reports, this local company lost a significant number of commercially sensitive documents for defence-related projects including the Joint Strike Fighter program. This incident had three particularly alarming features. Firstly, the company was made more vulnerable by a combination of several poor cyber hygiene practices, including use of very basic default passwords and old unpatched software. Secondly, the breach began in July 2016, was not discovered until November 2016, and only publicly reported in October 2017 (almost one year on). Thirdly, and of most concern, the company in question is a small engineering firm of about 50 employees, with just one IT staff member, which could describe a great many Australian businesses. They may have thought “my business is too small to attract the attention of hackers”, which is a common response that we hear from smaller businesses.

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.

7. 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.

Ai Group welcomed the 2015-16 Budget's commitment to boosting FTA awareness among Australian businesses. Another important element in the success of converting opportunities from free trade agreements into commercial outcomes is the role of Austrade as well as State trade mission agency staff operating in market and advising companies in Australia. Such commitments are expensive and resource-intensive, but the significant investment by the Government has made in negotiating these agreements – \$350 million according to the Productivity Commission Report into Bilateral and Regional Trade Agreements – indicates warrants a significant investment post implementation to ensure that Australian companies benefit from the gains secured by DFAT.

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 inconsistency 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 at least \$12.4 million per year over the next three years to \$175 million.**

8. 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 2018-19 Federal Budget offers an opportunity to confirm the Turnbull Government's commitment to Defence spending in three key areas, as identified in the previous budget:

- Firstly, ongoing commitments to Defence operations around the globe, ensuring national security continues to be protected;
- Secondly, capability plans set out in the 2016 Defence White Paper through the Defence Integrated Investment Program. It is critical that the Integrated Investment Program be kept up to date and becomes available on line to inform industry of upcoming opportunities and enable clear investment plans; and
- Finally, the strategies and activities outlined in the Defence Industry Policy Statement, including the \$1.6 billion for industry and innovation programs.

It is vital that the Government maintain the funding path as set out in the previous budget, with an underlying commitment to grow to two per cent of GDP by 2020-21, including \$150 billion over the forward estimates.

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 Defence Export Strategy, the Defence Industry Capability Plan and the Skilling and STEM strategy.

The investment program emphasises the Federal Government's commitment to one of the most extensive and ambitious shipbuilding activities anywhere in the world to modernise the Royal Australian Navy. This includes continuous Australian naval ship and submarine build programs which will see 12 new conventional submarines, 12 new Offshore Patrol Vessels and 9 new anti-submarine frigates to replace 8 Anzac frigates. The Naval Shipbuilding Plan, released in 2017, sets out a strategic plan for the nation to help realise our shipbuilding capability. Ai Group supports the continued investment in this critical underpinning strategy – including the required investment in modern infrastructure and the Naval Shipbuilding College.

The first two F-35A Joint Strike Fighter Aircraft were delivered to the RAAF during 2016 and made their first Australian appearance at the Avalon Airshow in February 2017. The Government has

contracted to acquire 72 F-35s at a cost amounting to some \$15 billion. Australia's defence industry has been contracted to provide over \$800 million in local design and production work, with an estimated return of at least \$1.5 billion over the life of the JSF production phase. The Minister for Defence Industry, Christopher Pyne, also announced Australia was selected as the JSF sustainment and maintenance hub for Asia and the Pacific.

On 28 July 2016, Defence announced that two tenderers – BAE Systems Australia and Rheinmetall – had been selected to participate in the next stage of evaluation for Land 400, Phase 2, Army's Mounted Combat Reconnaissance capability to replace the existing ASLAV fleet of vehicles. Land 400 Phase 3 will focus on replacement of the ageing MII3 fleet of armoured personnel carriers. Land 400 Phase 2 is a \$4-5 billion project to purchase the Combat Reconnaissance vehicles. Defence completed a nationwide series of workshops late in 2016 to provide Australian companies with opportunities to showcase their capabilities. Ai Group commends this manner of industry engagement with Defence and prime companies.

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 priority is to further improve exports of Australian-made equipment and services over the coming decade and beyond. This will include Thales Australia's new Hawkei armoured support vehicle designed and built in Bendigo. This program will see 1,100 vehicles for the Australian Army with potential sales to regional partners. This kind of export will be further facilitated through the upcoming Defence Export Strategy, an initiative applauded by Ai Group.

Recommendations

Government should:

- **maintain the funding path as set out in the previous budget, with an underlying commitment to grow to two per cent of GDP by 2020-21, including \$150 billion over the forward estimates;**
- **implement supporting industry policies, including the Defence Export Strategy, the Defence Industry Capability Plan and the Skilling and STEM strategy;**
- **Support the training and skilling Australia's workforce to manage the ramp up of defence industry; and**
- **Support the improvement of exports of Australian-made defence equipment and services over the coming decade and beyond.**

9. Energy and environment policy priorities

Eastern Australia faces a severe energy cost challenge, with gas and electricity prices rising to extraordinary levels in 2017 and expected to remain far above their historic averages for the foreseeable future. The Government has taken some important actions to put downward pressure on prices, including the use of the Australian Domestic Gas Security Mechanism to achieve a two year supply agreement with major gas exporters. The proposed National Energy Guarantee is a potentially viable solution to the deep uncertainty over climate policy that is damaging investment in electricity supply. These and other sensible supply-side steps will need continued focus and effort. However, there are limits to what supply can achieve. There seems no prospect that gas prices will return to their old pre-export levels, nor that wholesale electricity prices will fall back to their long term average. Demand-side measures are also critical.

Moderating energy demand, whether through improvements in overall efficiency and productivity or through demand response during peak periods, provides two sorts of benefit:

First, it can deliver direct cost reductions to energy users who are able to reduce their demand, improving profitability and competitiveness for business and affordability for households. Ai Group's business surveys reveal deep and widespread concern about the extent of energy price rises. We also understand that stresses on vulnerable households are increasing.

Second, it can reduce costs system-wide by reducing pressure on tight wholesale markets, limiting the need for the most expensive sources of supply, and deferring or avoiding expensive investments in additional network infrastructure.

The Government has worked with the States and Territories on a National Energy Productivity Plan (NEPP), which includes some useful regulatory initiatives. However, the NEPP suffers overall from a lack of meaningful resources to help identify or implement energy improvement opportunities. Some of the States have worthwhile policies of their own, but these lack consistency and have many gaps in coverage.

Some businesses have strong internal capability to address energy issues, particularly where energy has long been a prominent part of their cost structure. But until recently energy has been cheap and a minor cost for most businesses, which often consequently lack the skills, experience and structures to manage energy.

Some businesses are able to mobilise significant financial resources to pursue energy improvements. But many others face substantial pressure on their capital budgets and willingness to borrow, particularly given the speed with which energy prices have surged.

Ai Group proposes that the Federal Government make a significant new push into energy efficiency, energy productivity and demand response as part of an overall strategy for energy affordability and competitiveness. This should involve:

Establishing a business-facing 'Energy Capability Unit', preferably within an existing business-facing body such as the Clean Energy Finance Corporation (CEFC) or AusIndustry. The Unit would provide

and coordinate training for energy managers, support the uptake of energy management systems, disburse grants and provide end-to-end support to help energy users engage with experts and upgrade their sites. The program would need staff and partners with deep expertise in energy management, and adequate departmental and administered resources.

Establishing an 'Energy Transition Fund' to support industrial energy savings by addressing capital constraints and capability gaps, with at least \$200 million over four years and the potential to scale up funding in future Budgets based on program performance and the speed of industry adjustment to higher energy prices. The Fund should be developed in close consultation with industry and the Energy Capability Unit, and be administered by the Unit's parent body.

The Fund should play a different role to the Clean Energy Finance Corporation, which facilitates loans with minimal concessionality for energy projects with a direct payback or revenue model, and has found only modest uptake for efficiency projects; the Australian Renewable Energy Agency, which can provide grants for commercialization or development of new technology, but is less relevant for the extension of already well-established efficiency technologies; and the Emissions Reduction Fund (ERF), which in theory can pay for the emissions reductions associated with industrial efficiency (but in practice is not accessible for this purpose, even if it receives further funding).

The Fund should provide grants in two forms:

1. Grants for measures that identify opportunity, rather than having direct paybacks, such as energy audits and sub-metering. These grants should require minimal co-investment.
2. Grants for capital projects to improve energy efficiency or productivity, or enable greater demand response capability. These grants should require 1:1 private matching and should be refundable where the sum granted exceeds a reasonable threshold and the project meets financial milestones.

Funding criteria for both elements should be designed to achieve the maximum outcomes, including both for competitiveness and system-wide benefits, for minimum government contribution. To further ensure that both energy users and the public get the best value from grants, the Unit should work with applicants to help them refine energy saving projects and implement ongoing energy management systems. This would include structuring energy audits to ensure that they identify broader improvements in productivity, such as more efficient use of raw materials.

Emissions reduction

At the time of writing the ERF was expected to commit the last of its unallocated funds through its sixth auction. Australia appears likely to meet our second Kyoto Protocol commitment – to ensure that emissions average at 99.5% of 1990 levels across the 2013-20 commitment period. However, we appear far off track to achieve the political commitment to reduce emissions to 5% below 2000 levels by 2020. Recent emissions projections would see Australia miss our current Nationally Determined Contribution under the Paris Agreement, to reduce emissions by 26-28% below 2005 levels by 2030.

The Government is pursuing several policy processes to reduce emissions, including the National Energy Guarantee, efficiency standards for light vehicles, a phase down of certain refrigerant gases, and a broader review of climate policy. However, these may take some time to bed down or deliver results. In the immediate term the Government should commit further funds to the ERF to allow further regular auction processes and the acquisition of additional abatement, particularly beyond 2020. A healthy Australian domestic offset sector, which will be a critical element for delivering on national commitments, alongside other domestic policies and the judicious use of quality international emissions units.

Recommendations:

- **Establish an Energy Capability Unit to help industry better manage in the new high-cost energy environment**
- **Establish an Energy Transition Fund with \$200m for grants to improve industrial energy management capability and implement opportunities; and**
- **Allocate additional funds to the Emissions Reduction Fund to ensure continuity.**

10. Annual skilled migration program

The whole Australian community benefits significantly from a well-planned program of permanent migration which includes skilled, humanitarian and family entry streams. In 2016 the Productivity Commission (PC) formally reviewed Australia's migration program (April 2016). It found that both the level and the composition of migration matter. 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 '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.

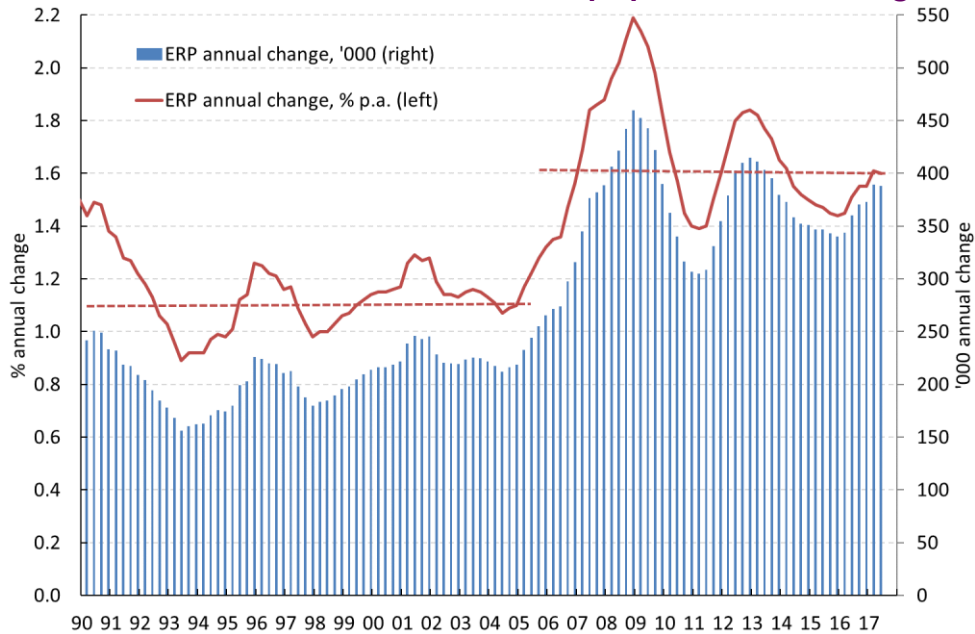
*The results reinforce the importance of age and skills in the migrant intake. Increasing the average age structure of NOM to reflect that of the Australian population is projected to reduce real GDP per person, **while increasing the share of migrants entering in higher skilled occupations is projected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

Ai Group strongly supports the Productivity Commission finding that Australia's permanent migration program should strengthen 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 and seek work after arrival.

As noted by the PC, in the absence of a national population policy, the annual migration program is an important policy lever for the Government in meeting these ongoing labour force needs, especially as the population ages. This presents a compelling argument for maintaining the annual migration intake at its current cap of 190,000, in order to maintain a steady population growth rate. 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 20), through a combination of net migration (permanent and long-term arrivals less departures) and natural increase (births less deaths). With natural increases fixed at around 0.6% to 0.7% p.a., Australia largely depends upon net migration for the bulk of its population growth.

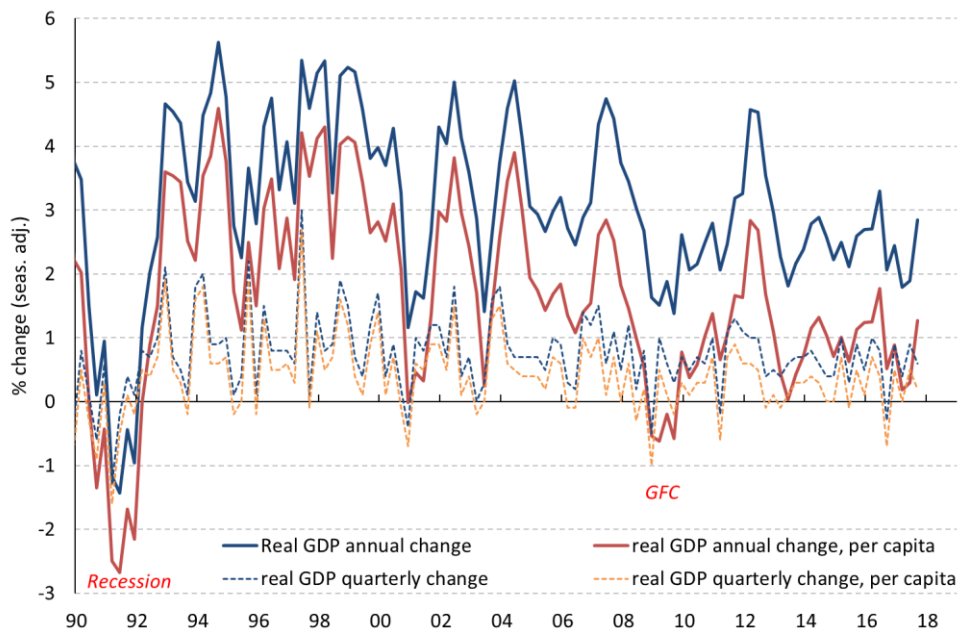
The direct influence of population growth on economic growth can be seen in Australia's GDP growth rates. Real GDP grew by 2.8% over the year to Q3 2017, but by only 1.3% p.a. in per capita terms. The gap – 1.5% p.a. – is due to the direct contribution of population growth. The contribution to GDP growth from population growth has been around this order of magnitude (1.5%) over the past decade (chart 21). So without it, our national growth would have been substantially slower.

Chart 20: Australian estimated resident population, annual growth



Source: ABS *Demographic statistics*, March 2017.

Chart 21: Australian GDP and GDP per capita, % change p.a. and per quarter



Source: ABS *National Accounts*, September 2017.

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.