

# **MANUFACTURING: A MOMENT OF OPPORTUNITY**

BY JIM STANFORD AND TOM SWANN  
CENTRE FOR FUTURE WORK AT THE AUSTRALIA INSTITUTE

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BRIEFING PAPER  
FOR THE NATIONAL MANUFACTURING SUMMIT 2017



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Level 1, Endeavour House, 1 Franklin St  
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The Centre will also develop timely and practical policy proposals to help make the world of work better for working people and their families.

## About the Authors

Jim Stanford is economist and director of the Centre for Future Work. Tom Swann is researcher with the Australia Institute.



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# Introduction and Summary

Australia's manufacturing industry has survived a difficult period, in the face of daunting domestic and global challenges. Other seemingly more vibrant sectors such as resource extraction, financial services, or property development capture considerable attention from the media and policy-makers. In contrast, manufacturing attracts relatively little attention in current economic reporting or policy-making – and much of the attention it does receive focuses on announcements of financial losses, factory closures, and redundancies. Australians would be forgiven for concluding that manufacturing has generally dim prospects on this continent.

But those who have “written off” manufacturing as a sector that could add to Australia's future growth and prosperity, are missing promising signs that the industry could be poised for a recovery. Several indicators suggest that the economic opportunities for domestic manufacturing have improved significantly. And despite the generally pessimistic tone of most manufacturing news over the last decade, the Australian public continues to express a robust commitment to the sector's economic importance and prospects. Indeed, there is wide public support for targeted policies to sustain and expand a viable domestic manufacturing base.

This research paper has been prepared by the Centre for Future Work at the Australia Institute, for the ***National Manufacturing Summit: From Opportunity to Action***, hosted by the two organisations at Australian Parliament House in Canberra on 21 June 2017. The Summit gathers leading representatives from all the major stakeholders in Australia's manufacturing sector – business, unions, universities, the financial sector, suppliers, and government – to reconsider the sector's prospects, and identify promising, pragmatic policy measures to support an industrial turnaround. The Summit is co-sponsored by partner organisations including: Australian Manufacturing Workers' Union, the Australian Steel Institute, Australian Super, the Australian Workers' Union, *Manufacturers' Monthly*, United Voice, the UTS Business School, and the Welding Technology Institute of Australia.

This paper contains two sections, describing the twin opportunities facing Australian manufacturing:

Part I, ***The Economic Opportunity*** reviews several economic indicators that suggest a more positive future for the industry in Australia. Contrary to past trends, manufacturing employment has actually increased in the past year, exports and profits have expanded, and business confidence is very positive. Moreover, despite the

challenges of the past decade, manufacturing retains a strategic importance in the national economy that is disproportionate to its share of direct employment or output. Its innovation record is second to none among Australian industries, it makes an outsized contribution to exports, and its long and complex supply chain generates extensive spill-over benefits for all regions and sectors of the national economy.

All of these trends suggest that manufacturing activity has stabilised after a very challenging decade, and now shows a greater potential for expansion than at any time in many years. To be sure, the industry still faces challenges - not least the coming cessation of mass motor vehicle assembly, volatile energy markets, and continuing large trade imbalances. But the overall improvement in business conditions suggests that, with appropriate actions by all stakeholders, the sector could have a much brighter future in Australia than has been commonly assumed.

Part II of the paper explores a parallel dimension of manufacturing's continuing resilience in Australia: ***The Political Opportunity***. New national polling by the Centre for Future Work and the Australia Institute, conducted in April and May 2017, confirms that Australians continue to see the success of manufacturing as critical to national economic prosperity. Perhaps influenced by the negative tone of much recent reportage and commentary, Australians consistently underestimate the importance of manufacturing in Australia's economy, relative to other industries, and very few are aware of the improving economic conditions in the sector (such as the job-creation that has been registered over the past year). However, despite this underestimation of manufacturing's continuing footprint, Australians nevertheless express remarkably strong agreement that manufacturing is vital to Australia's economic success.

Our polling results confirm Australians' conviction that manufacturing is crucial for quality jobs, success in international trade, and national prosperity. Most importantly, an overwhelming majority of Australians express support for pro-active, targeted policy measures to sustain and support manufacturing. Australians certainly reject the idea of joining a "race to the bottom" – trying to attract investment and jobs by weakening labour, environmental, and fiscal standards. But they endorse by overwhelming margins – five to one in some cases – targeted policies to support manufacturing investment in Australian research, capital assets, and exports. Support for active manufacturing policy is strong across all age and voting groups. These results suggest an important political opening for political leaders from all parties to recommit to manufacturing, and grant the sector greater priority in economic policy making.

The combination of more amenable macroeconomic conditions, and continuing public support, presents a potent and promising opportunity for all manufacturing

stakeholders. There is more economic space than at any time in recent years to expand investment, production, and employment in value-added manufacturing. And the public will support active measures that are consistent with this goal.

The ***National Manufacturing Summit*** aims to help stakeholders seize this moment, demonstrate their shared commitment to the future of the sector, and their reassert conviction that Australia can rebuild its status as a successful manufacturing power. The Centre for Future Work at the Australia Institute commits to undertake further research, building on the results of this Summit, into the sector's prospects and challenges, with the goal of making the most of this opportunity.

# Part I: The Economic Opportunity: Promising Signs

Australian manufacturing endured a devastating retrenchment in the years following the Global Financial Crisis and consequent worldwide recession. The industry's output, employment, investment, and exports were damaged by the combined impacts of weak global demand conditions, a substantially overvalued Australian currency and an ambiguous and inconsistent domestic policy context. Since 2008, the sector's real output has declined by 13 percent (compared to its pre-GFC peak), and employment by a similar proportion.

Despite this painful contraction, the industry subsequently stabilised and remains one of Australia's most important industries. Accounting for close to 1 million jobs, \$100 billion per year in value-added, and \$100 billion per year in exports, the industry's contribution to the national economy should not be taken for granted.

Moreover, the strategic importance of manufacturing is greater than indicated by its simple share of economic aggregates. After all, our interest in advancing Australian manufacturing does not derive from some kind of "industrial nostalgia." To the contrary, there are ongoing qualitative and structural features of manufacturing activity, which underpin its strategic importance.<sup>1</sup> These qualitative features include:

**Innovation Intensity:** No sector of the economy invests more, relative to its output, in new research and experimental development than manufacturing. Most recent data indicate the sector allocates almost 5 percent of its sector value-added to new R&D expenditure, more than any other sector – more even than the scientific and professional services sector.<sup>2</sup> Manufacturing is inherently more reliant on innovation activity, in both product and process, because of the natural applicability of automation in manufacturing processes. Moreover, applied innovation in other sectors almost universally requires the application of advanced machinery, equipment, and other manufactured products. For both reasons, therefore – the demand for innovation, and the supply of innovation-promoting outputs – a strong, healthy manufacturing sector is a prerequisite for successful, economy-wide innovation.

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<sup>1</sup> Some of these unique structural features of manufacturing were explored in more detail in our previous report, *Manufacturing (Still) Matters*, by Jim Stanford (Canberra: Center for Future Work at the Australia Institute, 2016), [http://www.futurework.org.au/manufacturing\\_still\\_matters](http://www.futurework.org.au/manufacturing_still_matters).

<sup>2</sup> Authors' calculations from ABS Catalogues 8104.0 and 5206.0.



**Export Orientation:** Manufactured products, because of their relative transportability, account for two-thirds of global merchandise trade. And thanks to strong economies of scale in production, and consumer preferences for variety, most manufacturing industries require strong engagement in international trade. Manufacturing accounts for a disproportionate share of Australian trade: almost 30 percent of total goods and services exports by value are manufactured products, or five times as much as manufacturing's share of national GDP.<sup>3</sup> Because of this strong trade-intensity, enhancing the domestic footprint of tradeable manufactures naturally strengthens a country's trade performance.

**Supply Chain:** The manufacturing sector as a whole possesses a uniquely developed and diverse supply chain, which provides manufacturing establishments with the myriad of inputs, machinery, and services required for successful production. Because of these extensive supply chain linkages, manufacturing demonstrates greater external spill-overs into other sectors of the economy than any other industry. The most recent data indicate the manufacturing sector purchases \$2.73 worth of inputs from other sectors for each dollar of its own value-added – a larger ratio of inputs to production than any other sector, and more than twice as much as the economy average.<sup>4</sup> Expanding the domestic manufacturing footprint, therefore, drives a substantial parallel expansion in demand for all those other industries which supply manufacturing, thereby multiplying the potential final benefits.

**Quality Jobs:** In an era marked by growing concerns over the rise of insecure, low-quality employment, the manufacturing sector continues to demonstrate superior outcomes in terms of job quality, stability, and compensation. For example, the incidence of part-time work in manufacturing is less than half that in the labour market as a whole, a smaller proportion of workers is paid at the minimum rates specified in modern awards, and average weekly earnings are about 10 percent higher than in the economy as a whole.<sup>5</sup> Preserving manufacturing work is thus an important dimension of the broader challenge of stabilising and rebuilding prospects for working class Australians to obtain secure, decently-paid work.

For these and other reasons, it is clear that manufacturing is not just “another sector” of the national economy. Manufacturing retains an enduring strategic importance to Australia's future growth and prosperity. The stereotypical view that manufacturing is an outdated, declining industry that cannot play a leading role in economic and social development is misplaced.

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<sup>3</sup> Author's calculations from ABS Catalogues 5368.0 and 5206.0.

<sup>4</sup> Authors' calculations from ABS Catalogue 8155.0, Table 3.

<sup>5</sup> Authors' calculations from ABS Catalogues 6306.0, Table 7, and 6291.0.55.033, Table 3, Data Cube 5.

To be sure, manufacturing must evolve and adapt to changes in technology, tastes, and global competition. Advanced manufacturing industries will need to exhibit greater reliance on innovation, customisation, and specialisation than did mass production industries of the past; this evolution is especially important in relatively high-cost jurisdiction like Australia, which must succeed on the basis of quality and innovation, not on the basis of low costs.<sup>6</sup>

But manufacturing in general remains central to the economy: manufacturing, after all, is the process by which the material resources we harvest from nature (hopefully in a sustainable manner) are transformed into more useful, value-added products. That dimension of economic life is eternal; humans cannot survive without manufactured food, clothing, shelter, transportation, machinery and equipment, and more. Consumers and businesses everywhere need an array of ever-more-sophisticated manufactured products to support their living standards, their investment and innovation, and their environmental goals. Global output and Australians' own demand for manufactured products continue to grow.

The critical question, therefore, is whether Australia will establish sufficient conditions to maintain a proportionate share of future manufacturing activity – and the broader economic benefits the sector carries with it. Fortunately several promising economic indicators show that conditions are improving for the stabilisation and potential revival of Australian manufacturing. This section will review evidence regarding several key indicators, which together suggest a greater positive potential for domestic manufacturing than has been the case for many years.

## **SIGN #1: MANUFACTURING JOB-CREATION**

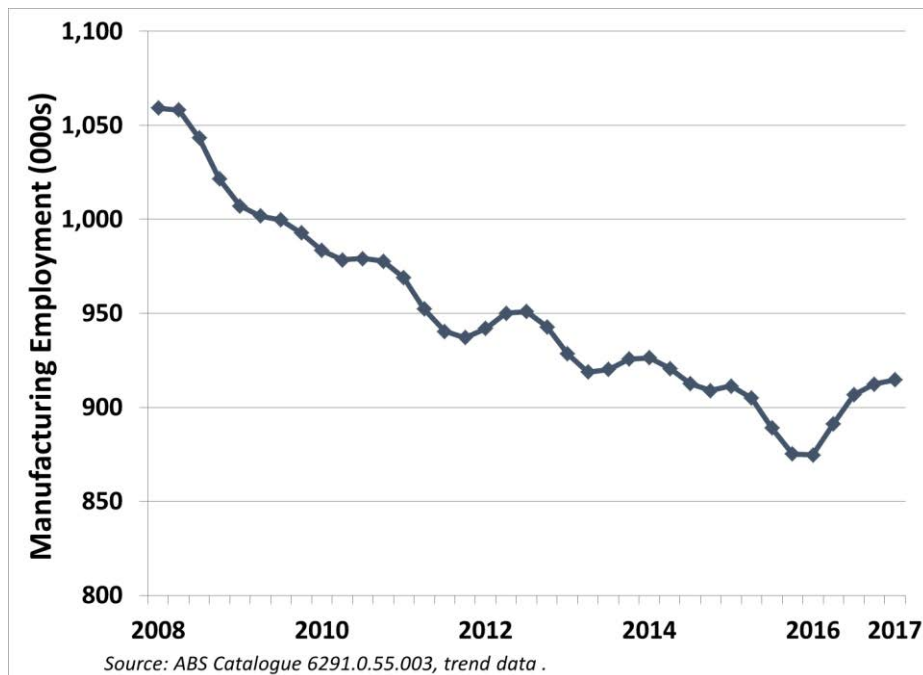
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Job losses from manufacturing firms were very severe in the years after the Global Financial Crisis, with a cumulative total of close to 200,000 positions disappearing in the eight years after the crisis hit. Since 2016, however, there are encouraging signs that manufacturing employment may have bottomed out and is now beginning to recover. Trend employment data published by the Australian Bureau of Statistics (ABS) indicate an increase of 40,000 in manufacturing employment over the last year. Surprisingly, that is the second-largest increase in jobs recorded over that period of any other sector in the Australian economy, surpassed only by public administration and safety (which added 80,000 positions).

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<sup>6</sup> These challenges are outlined and addressed in *Taking Australian Ingenuity to the World: Sector Competitiveness Plan 2017* (Canberra: Advanced Manufacturing Growth Centre, 2017), [https://12262-console.memberconnex.com/Attachment?Action=Download& Attachment\\_id=15](https://12262-console.memberconnex.com/Attachment?Action=Download& Attachment_id=15).

**Figure 1 - Manufacturing Employment, 2008-2017**



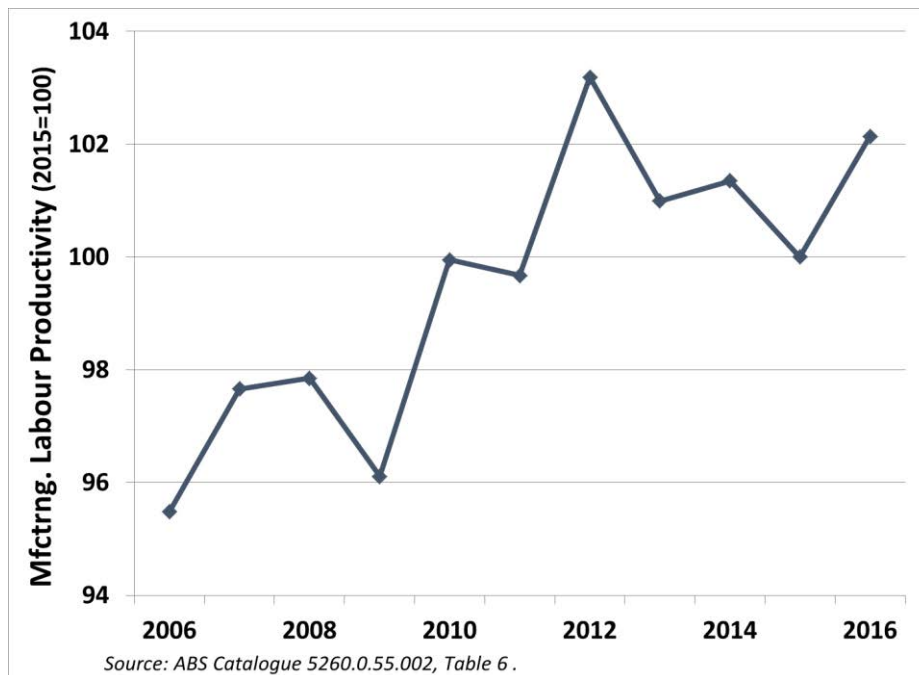
It is too early to know whether this encouraging rebound in employment marks the beginning of a longer recovery. The continuing decommissioning of Australia's motor vehicle assembly sector will certainly exert a negative impact on these numbers in coming months. But last year's job-creation nevertheless marks the largest and most lasting improvement in employment conditions in manufacturing in the last decade, and is welcome respite after a decade of downsizing.

## **SIGN #2: RECOVERING PRODUCTIVITY**

Not only are more people are working in manufacturing than a year ago, but the average output of each worker is increasing as well. As the sector adjusts to a smaller overall scale of output, it has consequently restored productivity performance.

It is very difficult to increase labour productivity in a shrinking industry, because the overhead tasks associated with any operations must be spread across an ever-smaller base of total output. This relationship between underutilisation and productivity has hampered the sector's efficiency levels. In the most recent data, however, the manufacturing sector has once again achieved significant productivity improvements, taking output per hour of work back towards its previous peak. If sustained as manufacturing activity stabilises and recovers, this would reinforce improvements in sector profitability and competitiveness.

**Figure 2 -Labour Productivity in Manufacturing, 2006-2016**

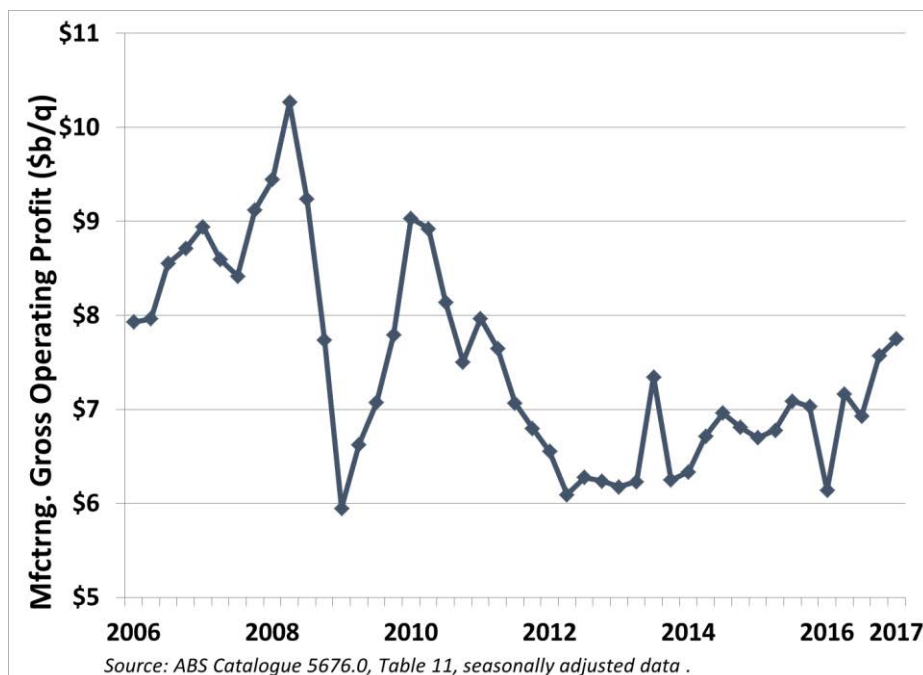


## **SIGN #3: RECOVERING PROFITABILITY**

Profit margins for Australian manufacturers were hammered during the downturn, by excess capacity, rising costs and falling revenues. The soaring Australian currency in particular reduced the landed value of export revenues, and supercharged import penetration in domestic markets. After a short-lived recovery in 2010, profits fell back again by 2012 to the same lows experienced in the worst periods of the GFC.

Since 2014, however, profits have begun to regain some of the lost ground, as companies adjust capacity to output, attain greater utilisation, and enjoy greater export revenues. Quarterly gross operating profits in manufacturing reached close to \$8 billion in the March 2017 quarter, the highest in several years. Recovering profits could enable future increases in capital spending, and encourage more hiring.

**Figure 3 - Manufacturing Profits, 2006-2017**



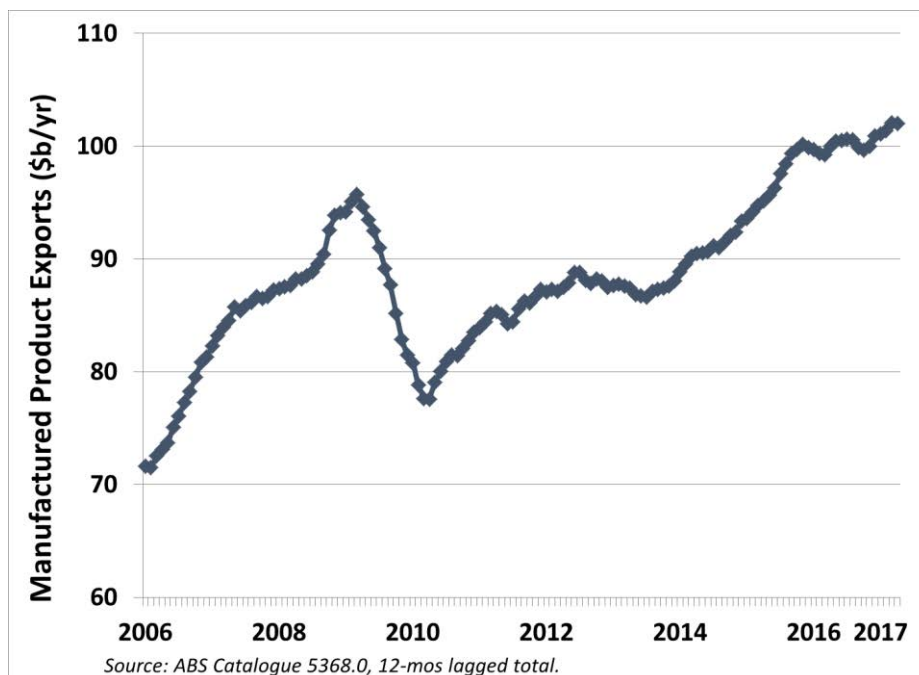
## SIGN #4: GROWING EXPORTS

Overall sales and output in domestic manufacturing have not yet bounced back from the long post-GFC downturn. But one area of manufacturing sales has shown promising strength in recent years: exports. From a low of \$80 billion in 2009, the value of Australian-made manufactures sold to international markets has grown by 25 percent – reaching an all-time high of over \$100 billion in the most recent 12 months.<sup>7</sup>

Some of the improvement in exports during this time reflects the beneficial effect of a lower currency on the net revenues received from export sales by Australian producers. Since prices for many products are set globally, a lower domestic currency translates into improved revenues (measured in Australian-dollar terms). Some of the improvement also reflects a greater quantity (or volume) of real exports. Growing export revenues generate needed cash flow, and reinforce business optimism for future investment and hiring.

<sup>7</sup> Authors' calculations from ABS Catalogue 5368.0.

Figure 4 - Exports of Manufactured Products, 2006-2017



## SIGN #5: ENHANCED INTERNATIONAL COMPETITIVENESS

One of the most important factors behind the increased optimism in Australian manufacturing is the retreat of the Australian currency to more normal levels. This currency adjustment reflects the collapse of global minerals prices after 2014. In the lead-up to the GFC, the Australian dollar had soared to unprecedented highs relative to the U.S. dollar and the currencies of other trading partners. The over appreciation was most acute between 2011 and 2013, when Australia's economy was performing better than most other OECD countries, supported by strong minerals exports and incoming foreign direct investment. At peak, with the Australian dollar worth as much as \$1.10 (U.S.), the currency was 60 percent above its purchasing power parity benchmark,<sup>8</sup> making it one of the most overvalued currencies in the world. The currency was driven upward by several temporary factors, including relatively high domestic interest rates, large inflows of foreign capital (for both portfolio purchases and for direct investment in the booming mineral sector), and expectations of continued high commodity prices.

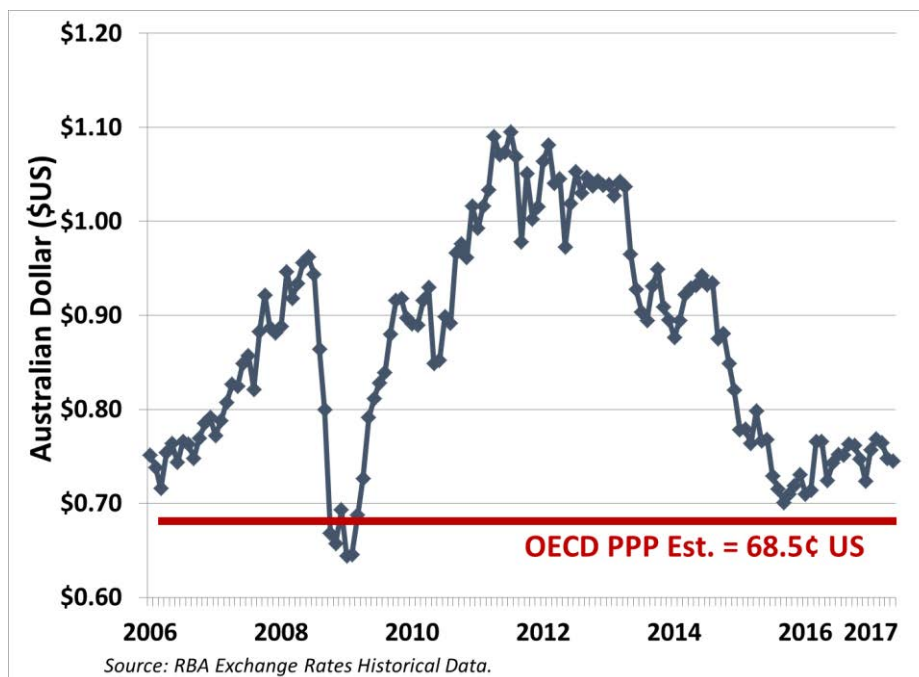
The manufacturing industry, and other export-oriented sectors, suffered severe side-effects from this appreciation. The cost competitiveness of domestic production

<sup>8</sup> Authors' calculations from OECD "Purchasing Power Parities for GDP," National Accounts at a Glance, [https://stats.oecd.org/Index.aspx?DataSetCode=SNA\\_TABLE4](https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE4).

deteriorated dramatically, not because of big changes in domestic labour costs and other input prices, but because the international expression of those costs was distorted by the misalignment of exchange rates.

There is no doubt that the overvaluation of the currency was a key contributing factor in the decisions of many manufacturing firms to downsize or close their Australian operations (including the devastating decision of global vehicle manufacturing companies to leave Australia entirely<sup>9</sup>).

**Figure 5 - Australia-U.S. Exchange Rate, 2006-2017**



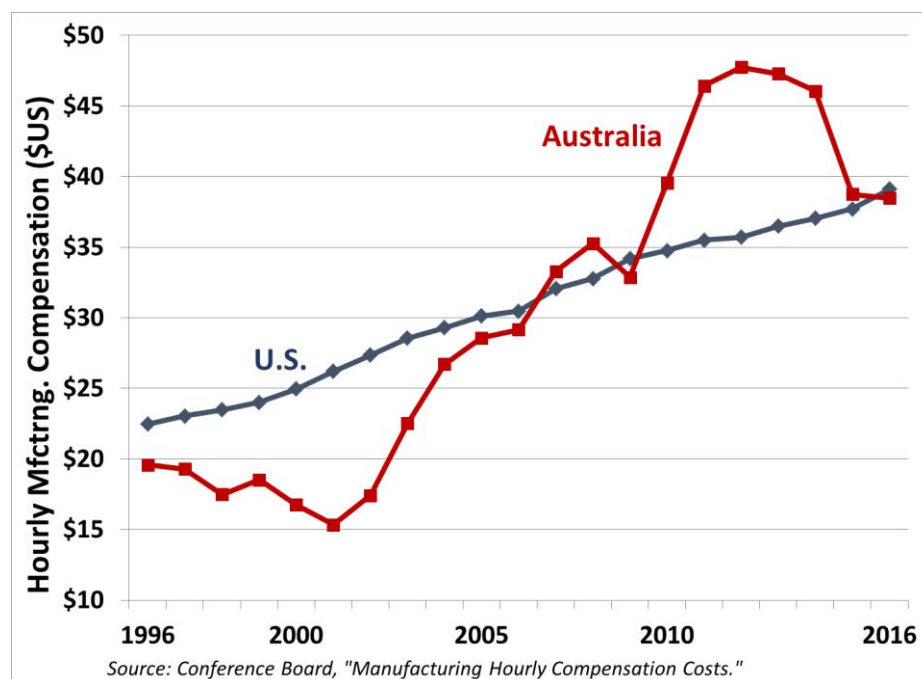
Now the Australian currency has come back to earth along with global commodity prices. The dollar has retreated by more than 30 percent from peak 2011 levels, and has been trading in the mid-70-cent (U.S.) range for the last 18 months. This has an enormous impact on the relative cost competitiveness of Australian-made products in export markets, and on the business case for new capital investments in Australian facilities.

It should be noted, however, that the challenges posed by currency fluctuations to domestic manufacturing have not been fully resolved. First of all, even at current levels the currency trades at a significant premium to its PPP benchmark (which the OECD estimates at around 68 cents U.S.). This means that Australian costs still appear higher

<sup>9</sup> For more detail on the role of exchange rates in the automotive shutdown see Jim Stanford, "Automotive Surrender: The Demise of Industrial Policy in the Australian Vehicle Industry," *Economic and Labour Relations Review* 28(2), 2017, pp. 197-217.

in international terms, than would normally be expected given the nominal level of domestic prices and costs. The currency is kept overvalued by interest rates that remain relatively high compared to other OECD countries, and by continuing inflows of foreign capital (now associated more with the banking and property sectors, rather than minerals). Secondly, manufacturers remain wary of the likely impact of future movements in commodity prices on the exchange rate – all the more so given the passive approach to the previous appreciation episode that was adopted by Australian government and monetary authorities.<sup>10</sup>

**Figure 6 - Manufacturing Labour Costs, Australia and the U.S., 1996-2016**



Nevertheless, the impact of the recent depreciation on the relative cost competitiveness of Australian manufacturing has been a game-changer. Consider the level of hourly total compensation costs (including non-wage benefits, payroll taxes, and superannuation payments) for manufacturing workers in Australia compared to those in the U.S. Five years of currency overvaluation imposed a large cost penalty on Australian operations: in 2012 hourly costs were one-third higher in Australia than in the U.S. (measured in U.S. dollars), a daunting disadvantage for manufacturers to overcome. As of 2016, Australian labour costs (in U.S. dollar terms) fell once again slightly below those in the U.S. – and this despite a currency that is still modestly overvalued. Many economists and forecasters argue that the Australian currency is

<sup>10</sup> Unlike some other countries where monetary authorities tried to influence the course of exchange rates, Australia's central bank largely endorsed the appreciation of the currency as being helpful in regulating inflation.

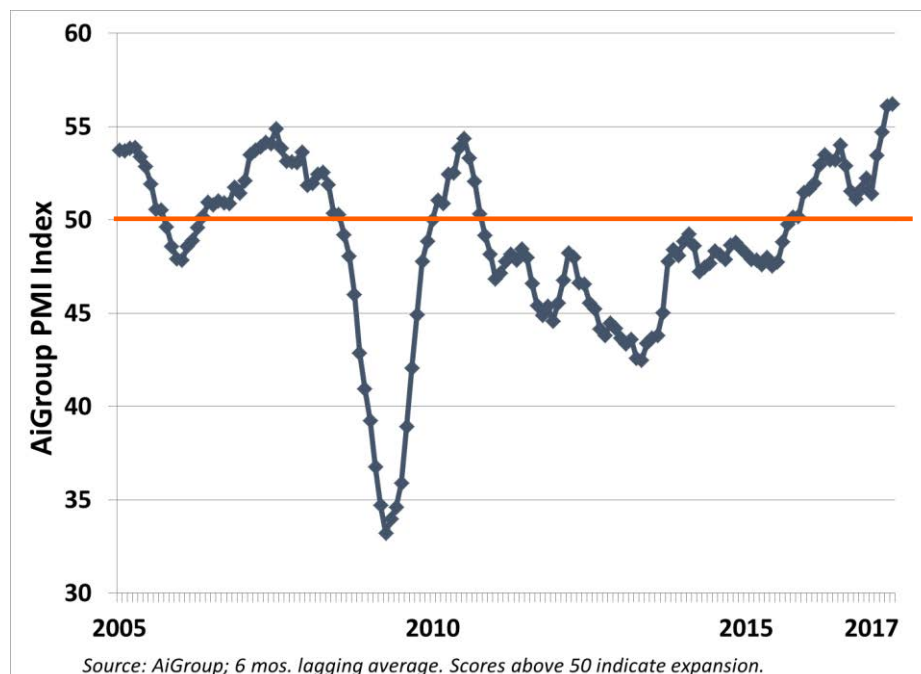


likely to depreciate further in future years, depending on the course of commodity prices, domestic housing prices, and other factors. In this case, Australian relative costs will become very appealing.<sup>11</sup>

## SIGN #6: OVERALL BUSINESS OPTIMISM

The combination of rising sales, especially to export markets, improved cost competitiveness, and rebounding employment, productivity, and profitability has together underpinned a significant and promising strengthening of general business attitudes in Australian manufacturing.

**Figure 7 -AiGroup Performance of Manufacturing Index**



The Performance of Manufacturing Index, published by the Australian Industry Group,<sup>12</sup> provides a useful composite portrait of business sentiment in the sector. The index gathers input on eight different indicators of manufacturing activity (including new orders, production, employment, and exports); scores higher than 50 indicate an expansion in industry activity, while those lower than 50 indicate contraction. The index fluctuates from month to month, but has remained above 50 for eight

<sup>11</sup> Figure 6 indicates that relative labour costs were significantly lower in Australia than the U.S. in the late 1990s and early 2000s, when the Australian currency was undervalued. Not coincidentally, that was a time of significant expansion for Australian manufacturing.

<sup>12</sup> See AiGroup, "Performance of Manufacturing Index," [http://cdn.aigroup.com.au/Economic\\_Indicators/PMI/2017/PMI\\_May\\_2017\\_73568p.pdf](http://cdn.aigroup.com.au/Economic_Indicators/PMI/2017/PMI_May_2017_73568p.pdf).

consecutive surveys. The average score so far in 2017 (from January through May) has been the highest since 2002 – with all eight sub-indices indicating expansion. Of course, positive business sentiment does not automatically translate into improved performance. Nonetheless, the informed optimism of industry stakeholders, combined with the other data outlined above, provides grounds for cautious optimism, and for serious consideration of policy options to take advantage of the opportunities for growth now before the industry.

## OTHER PROMISING SIGNS

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Several other factors help to round out this portrait of a broad improvement in business conditions facing the manufacturing sector. Ongoing developments in technology could have significant impacts on the location decisions of manufacturers. In particular, technologies which allow for the decentralisation of production, and the undertaking of smaller, more customised production runs (such as 3D printing techniques and others), could enhance the potential for smaller, higher-cost regions such as Australia to sustain their production footprint – and reduce the extent to which production migrates to lower-cost jurisdictions. The “internet of things” and so-called “Industry 4.0” technologies will also open new opportunities for innovation-intensive manufacturing, by reducing the relative importance of production costs and further expanding scope for customised, niche production.

Another positive sign for Australian manufacturing is the expansion of capital spending by governments at both the Commonwealth and State levels, responding to pressing needs for infrastructure improvements. This ramped-up capital program carries substantial implications for domestic manufacturing. Huge investment programs in defence and shipbuilding, public transportation and railways, energy infrastructure, and more will stimulate significant purchases of manufactured products – with positive spillovers into Australian production. Effective procurement strategies attached to these capital spending programs would enhance the spillovers accordingly. Major investments in energy infrastructure, and a stabilisation of regulatory and policy stance governing energy prices and supply, would degenerate two-fold benefits for manufacturing: by reducing recent uncertainty around prices and supply, and opening up major sales opportunities for domestic manufacturers (for infrastructure, renewable energy systems, and other features of the energy sector).

Meanwhile, the arena of international commerce is also being disrupted by unpredictable developments in trade practice and policy, opening potential new opportunities for Australia. Political developments in Europe and the U.S. have shaken the traditional faith in hands-off trade liberalisation, and introduced new uncertainties

into trade patterns and supply chains. Evolving purchasing patterns open new opportunities for Australian manufacturers to supply components and sub-assemblies into global supply chains. The stereotypical assumption that Australia cannot successfully participate in international manufactures trade (but instead should focus on a “comparative advantage” rooted in natural resources) is increasingly questioned. There are clear opportunities to improve Australia’s export promotion effort, targeting Australian participation in supply chains, stronger export engagement by SMEs, and more.

## CONCLUSION: CAUTIOUS OPTIMISM

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Manufacturing in Australia retains a strategic value to the national economy, generating external benefits that spread through all regions and sectors, far out of proportion to its share of aggregate GDP or employment. This vital industry has not just survived an unprecedented crisis. It has retained and is now improving its performance by many indicators (including employment, exports, and profits).

The potential turnaround in the trajectory of Australian manufacturing is not yet visible in all indicators of the sector’s activity. ABS data regarding total sales and value-added are not yet indicating increased total output. Capital spending intentions in the sector remain suppressed. And while total exports of manufactured products have grown, so have our manufactured imports. Hence the overall trade deficit in manufactured products remains enormous, with imports exceeding exports by about \$140 billion per year. So it would be premature to conclude from the preceding survey that Australian manufacturing has permanently turned the corner, and a healthier future is assured.

However, in every case the empirical trends indicate legitimate cause for cautious optimism. The worst of the post-GFC downturn in manufacturing is certainly over. Most indicators have stabilised, and some are recovering. The business case for incremental investment in Australian facilities has been enhanced, in light of improved profitability and a dramatic improvement in relative cost competitiveness. And through all the challenges of the last decade, the Australian manufacturing sector has continued to outperform other sectors in several strategic dimensions: including innovation effort, export-intensity, the maintenance of a large and sophisticated supply chain, and superior job quality.

None of the foregoing should be interpreted as reason to “stop worrying” about Australian manufacturing, and simply let a natural and automatic recovery continue to take hold. To the contrary, it is clear that the sector faces continuing, daunting

challenges – including inadequate capital spending, deeply asymmetrical trade patterns, insecure and expensive energy supplies, and more. At the same time, the data clearly refute the fatalism and complacency that has marked many recent discussions of the sector’s future in Australia.

What is now required is for all stakeholders in the sector, including government, to recommit to a positive, hopeful future for the sector – and to put in place the policies and practices that can make that vision a reality. Policy opportunities would include:

- Fostering stronger domestic clusters in key manufacturing sub-sectors, and a more vibrant industrial “eco-system” that fosters collaboration and spillovers between manufacturers, innovators, finance, and suppliers.
- Leveraging coming procurement by Australian governments and public agencies in defence, transportation, energy, and other key areas into a sustained boost for domestic manufacturing activity.
- Identifying pragmatic strategies to promote Australian manufactured exports, in light of the slowing or reversal of traditional trade liberalization efforts.

These policy opportunities, and more, will be considered in more detail at the National Manufacturing Summit, with the end goal of developing an action agenda that could win support from multiple stakeholders, and political leaders of all persuasions. The next section of this report confirms that a more pro-active approach to manufacturing policy would also win approval from an overwhelming majority of Australians.

# Part II: The Political Opportunity: Public Support

The previous section has outlined several economic opportunities that indicate a more conducive environment for manufacturing in Australia. This section describes a parallel political opportunity.

The Australia Institute's Centre for Future Work conducted a nationally representative poll of over 1,400 people regarding their views about manufacturing in Australia. The poll first tested knowledge of manufacturing's role and importance in Australia's economy. It then assessed attitudes towards manufacturing, and towards a wide range of possible policy measures to support the sector.

The poll results demonstrate that despite low levels of understanding of the importance of manufacturing to Australia's economy at present, there is wide support for manufacturing across all age and voting groups. This is consistent with earlier opinion surveys, which produced similar results.<sup>13</sup> Further, the present survey demonstrates that Australians support a range of pro-active, targeted policies to sustain and grow the sector.

The methodology of the poll is outlined in the appendix, along with more detailed results.

## TESTING AUSTRALIANS' KNOWLEDGE ABOUT MANUFACTURING

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Manufacturing is more important to the Australian economy than most Australians realise. Few Australians realise it is such a large employer. Few realise it is so important to national innovation and export performance. Australians consistently underestimate the size of its contribution relative to other industries.

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<sup>13</sup> See, for example, Fairfax/ANU *Political Person Project*; see Matt Wade and Josh Gordon, "Manufacturing proves the political issue that unites Australians," Sydney Morning Herald, February 6 2017, <http://www.theage.com.au/victoria/manufacturing-proves-the-political-issue-that-brings-together-australians-20170204-gu5oti.html>.

## Manufacturing Jobs

Manufacturing currently employs 915,000 people in Australia.<sup>14</sup> This makes it the sixth-largest employer of all industries in Australia (defined at the two-digit level), accounting for around 8 percent of all employment. However, the importance of manufacturing jobs appears to be widely underappreciated among Australians, perhaps because of the steady stream of negative headlines that have dominated most news about the sector in recent years.

To test the gap between impression and reality, we presented respondents with a list of six major industries, and asked them to select which one was the largest employer in Australia. Results are shown in Table 1.

**Table 1 - Largest Employer?**  
(among six selected sectors, ranked by actual employment)

	Thousands employed (ABS data)	Selected as largest (poll)
<b>Manufacturing</b>	<b>914.6</b>	<b>10%</b>
Public administration, defence and the law	828.5	38%
Banking and financial services	433.6	11%
Wholesale trade	376.4	7%
Agriculture	293.1	6%
Mining	240.8	13%
Don't Know / Not Sure		14%
Source: Poll results as described in appendix; actual employment from ABS Catalogue 6291.0.55.003, trend data February 2017.		

Compared with the other polled industries, manufacturing employs:

- 10 percent more workers than public administration and safety (including defence and law enforcement);
- twice as many workers as the broad finance and insurance sector;
- over three times as many workers as agriculture or wholesale trade;
- and nearly four times as many workers as mining.

Yet when presented with these industries, only 10 percent of respondents correctly identified manufacturing as the largest employer.<sup>15</sup>

<sup>14</sup> ABS Catalogue 6291.0.55.003, trend data.

<sup>15</sup> This is lower than a random response rate – even excluding those who said they did not know.

The answer most often selected was public administration, defence and the law (38 percent of respondents). More respondents chose mining (13 percent) and finance (11 percent) than the correct answer – a result likely influenced by the more positive tone of most media coverage of these sectors.

In addition to underestimating the relative level of employment in the manufacturing sector, respondents were also not aware of the recent trend in manufacturing jobs. As noted in Figure 1 above, trend manufacturing employment has increased by around 40,000 positions in the last year – the second-largest number of new jobs created in any industry in Australia. However, when asked how they thought manufacturing employment had changed over the last year (Table 2), only 7 percent of respondents correctly indicated that manufacturing employment had increased. By contrast, 71 percent of respondents thought it had decreased, while 13 percent thought it had stayed the same.

**Table 2 - Has Manufacturing Employment Increased or Decreased?  
(in 12 months ending February 2017)**

	Percent of Respondents (poll)
Decreased	71%
Stayed the same	13%
Increased	7%
Don't Know / Not Sure	9%
Source: Poll results as described in appendix.	

## Exports and Innovation

As well as being a large employer, the manufacturing sector is also a major exporter and investor in research and development (R&D) in Australia.

While the mining industry is widely known as Australia's largest exporter, it is not well known that manufacturing constitutes the second largest source of national exports. We presented respondents with a list of five important export industries, and asked them to select the largest exporter among them (thus the second-largest national export sector, after mining). Results are reported in Table 3.

**Table 3 - Largest Exporter?**  
(among five selected sectors, ranked by actual exports)

	Exports value (\$b, 2015-16)	Selected as largest (poll)
<b>Manufacturing</b>	<b>\$68.7</b>	<b>9%</b>
Agriculture	\$40.0	43%
Tourism (personal & business visitors)	\$20.9	21%
Education (overseas students)	\$19.9	16%
Banking and financial services	\$3.7	3%
Don't Know / Not Sure		9%
Source: Poll results as described in appendix; actual exports from Department of Foreign Affairs and Trade, <i>Composition of Trade 2015-16</i> , Tables 13 and 19. Food manufacturing & processing is here included in both manufacturing and agriculture, as it could be included in either this does not impact on the ranking,		

By far the largest number of respondents (43 percent) selected agriculture as the most important exporter from the list of selected sectors. Another 21 percent chose inbound international tourism, and 16 percent international education. Only 9 percent of respondents correctly selected manufacturing.<sup>16</sup>

Similarly, there was little awareness of the industry's contribution to innovation investment in Australia. Manufacturing demonstrates the strongest proportional commitment R&D of any sector of Australia's economy.. But very few Australians are aware of this.

Presented with a list of six industries, respondents were asked to select the largest investor in R&D, as a share of each sector's output. Results are shown in Table 4..

Respondents were most likely to select professional and scientific services (25 percent), information, media and telecommunications (20 percent) or mining (14 percent) as making the largest R&D investments. Only 7% selected manufacturing.<sup>17</sup> This is especially notable given recent government rhetoric about innovation; this rhetoric is yet to impart an accurate picture of which Australian industries are in fact investing most in innovation.

<sup>16</sup> Once again, this is far lower than a random response rate – even excluding those who said they did not know.

<sup>17</sup> Yet again, this is much lower than the number of responses that would have been generated by a random response rate.



**Table 4: Largest Investor in R&D?**  
(as share of output, among selected sectors, ranked by actual investment)

	R&D \$ as % of output (ABS)	Selected as largest (poll)
<b>Manufacturing</b>	<b>4.97%</b>	<b>7%</b>
Professional and scientific services	3.67%	25%
Banking and financial services	2.30%	5%
Mining	2.27%	14%
Information, Media & Telecommunications	1.60%	20%
Utilities (power, gas, waste etc)	0.72%	7%
Don't Know / Not Sure		22%
Source: Poll results as described in appendix; actuals from authors' calculations from ABS Catalogues 8104.0, 8155.0, and 5206.0.		

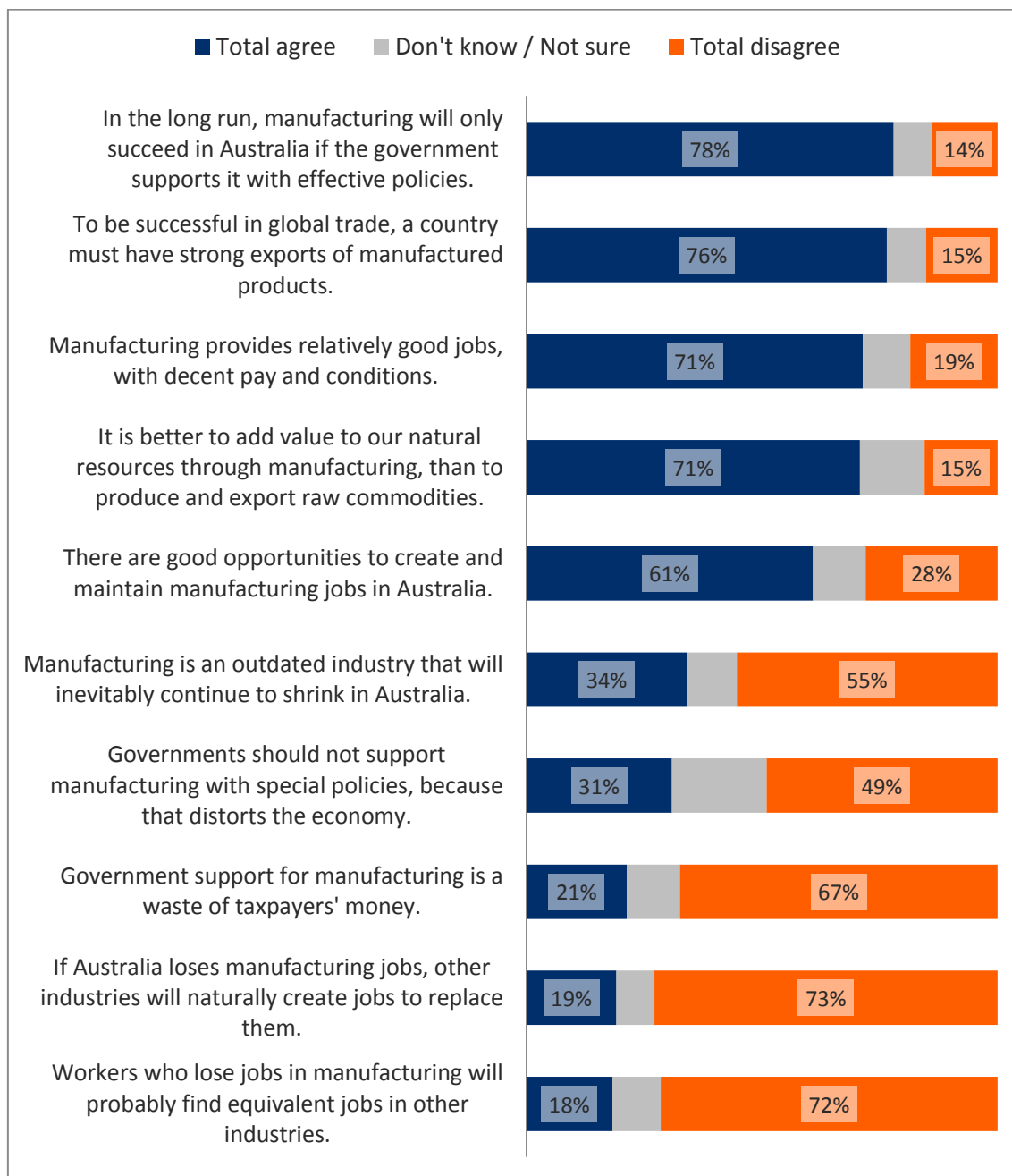
## ATTITUDES TOWARDS MANUFACTURING'S CONTRIBUTIONS & PROSPECTS

Despite the public's consistent underestimation of the scale and qualitative strengths of Australia's manufacturing sector (including its employment, export performance, and R&D investment), our polling results nevertheless confirmed that Australians retain strong positive attitudes towards manufacturing.

First, respondents were presented with several statements about manufacturing policy and jobs, in randomised order, and asked if they strongly agreed, agreed, didn't know, disagreed or strongly disagreed. Results are shown in Figure 7 and outlined below.<sup>18</sup>

<sup>18</sup> The appendix provides a more detailed breakdown of the results, including the disaggregation of agreed/strongly agreed and disagreed/strongly disagreed figures.

**Figure 7 – Attitudes Towards Manufacturing**



Among respondents there was widespread support for the view that manufacturing exports are important for Australia's economy. 76 percent agreed or strongly agreed that success in global trade requires strong manufacturing exports, and 71 percent agreed or strongly agreed it is better to add value to natural resources through manufacturing than to export raw commodities.

Respondents also showed a generally widespread positive assessment of the value of manufacturing jobs. 71 percent agreed manufacturing provides relatively good jobs, with decent pay and conditions (a view validated by the job quality data cited above).

Respondents also expressed concern about consequences of job losses in manufacturing. While the traditional assumption of many economists is that alternative employment will naturally be generated through the operation of market mechanisms, respondents were sceptical of this view. 73 percent disagreed or strongly disagreed that if Australia loses manufacturing jobs, other industries will naturally create jobs to replace them. Similarly, 72 percent disagreed that workers who lose jobs in manufacturing will probably find equivalent jobs in other industries.

Most people agreed there were good opportunities to create and maintain manufacturing jobs in Australia (61 percent agreed), while few disagreed (28 percent). Similarly, most disagreed with the general view that manufacturing is an “outdated” industry that will inevitably continue to shrink in Australia (55 percent disagreed), while about one-third agreed (34 percent).

But while there was majority support for the general view that there are positive opportunities in manufacturing, there was even stronger agreement with the idea that attaining those positive outcomes will require active government policy. Over three-quarters of respondents (78 percent) agreed that in the long run, manufacturing will only succeed in Australia if the government supports it with effective policies.

Similarly, there was broad opposition to the view that government support for manufacturing is a waste of money or distorts the economy. Just over two-thirds of respondents (67 percent) disagreed that government support for manufacturing is a waste of taxpayers' money. Almost half of respondents (49 percent) disagreed that governments should not support manufacturing with special policies, because that distorts the economy, while 31 percent agreed.<sup>19</sup>

The results described above were consistent across age groups – as detailed in Figure 8 below. In all age categories, there was wide support for manufacturing policy, positive attitudes to manufacturing jobs and exports, and concern about loss of manufacturing jobs. There were also some notable variances:

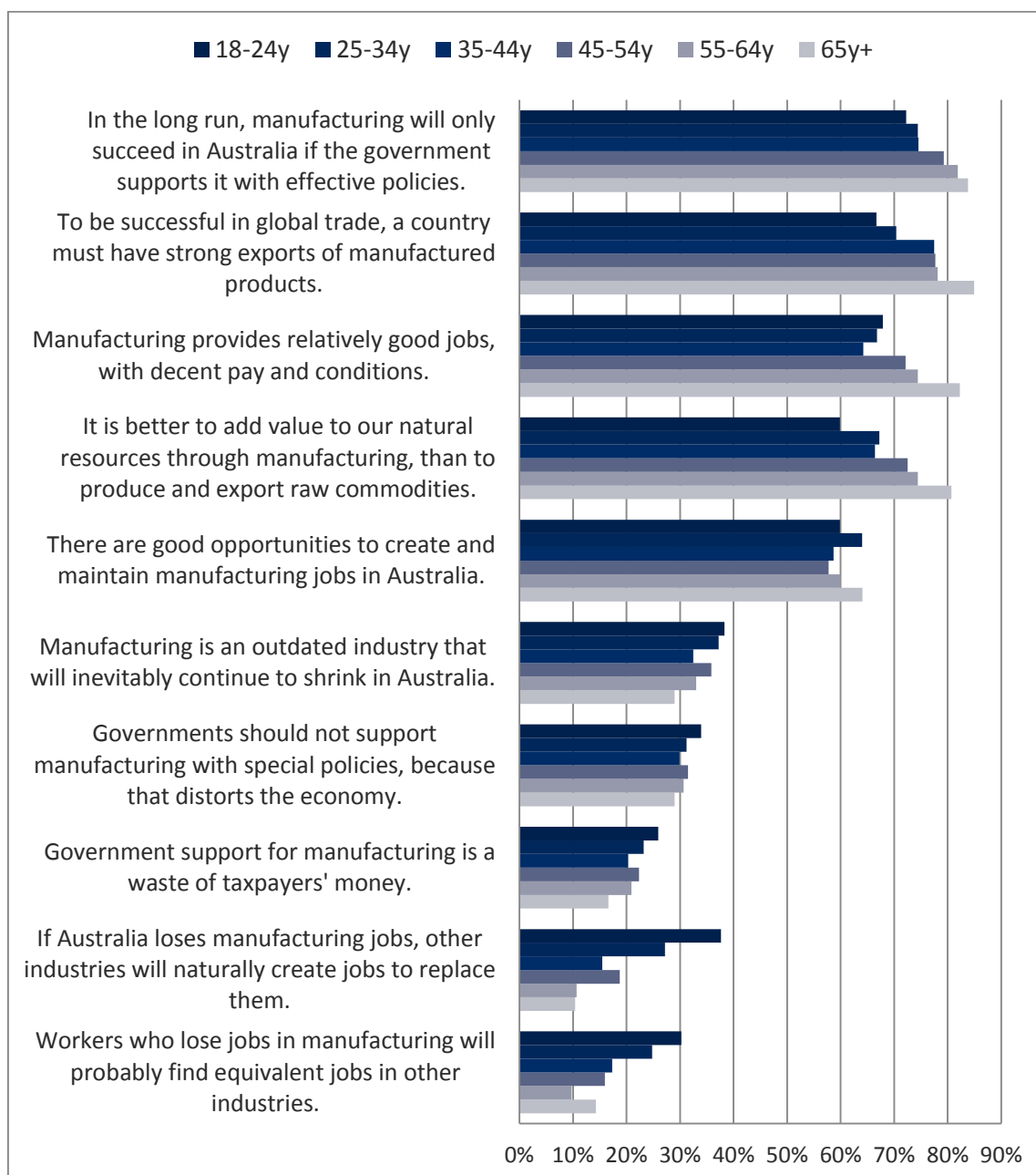
- Generally, older respondents were more likely to agree that manufacturing growth requires government policy, that manufacturing exports are necessary for success in trade, and that adding value through manufacturing is better than exporting raw materials.
- Younger respondents were more likely to agree that manufacturing will inevitably decline, that government support is a waste of money and that job losses will be compensated with new jobs in other sectors.

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<sup>19</sup> 20 percent of respondents to this question said they did not know – the highest rate for any statement. Respondents possibly were concerned that they did not understand the term ‘distort’.

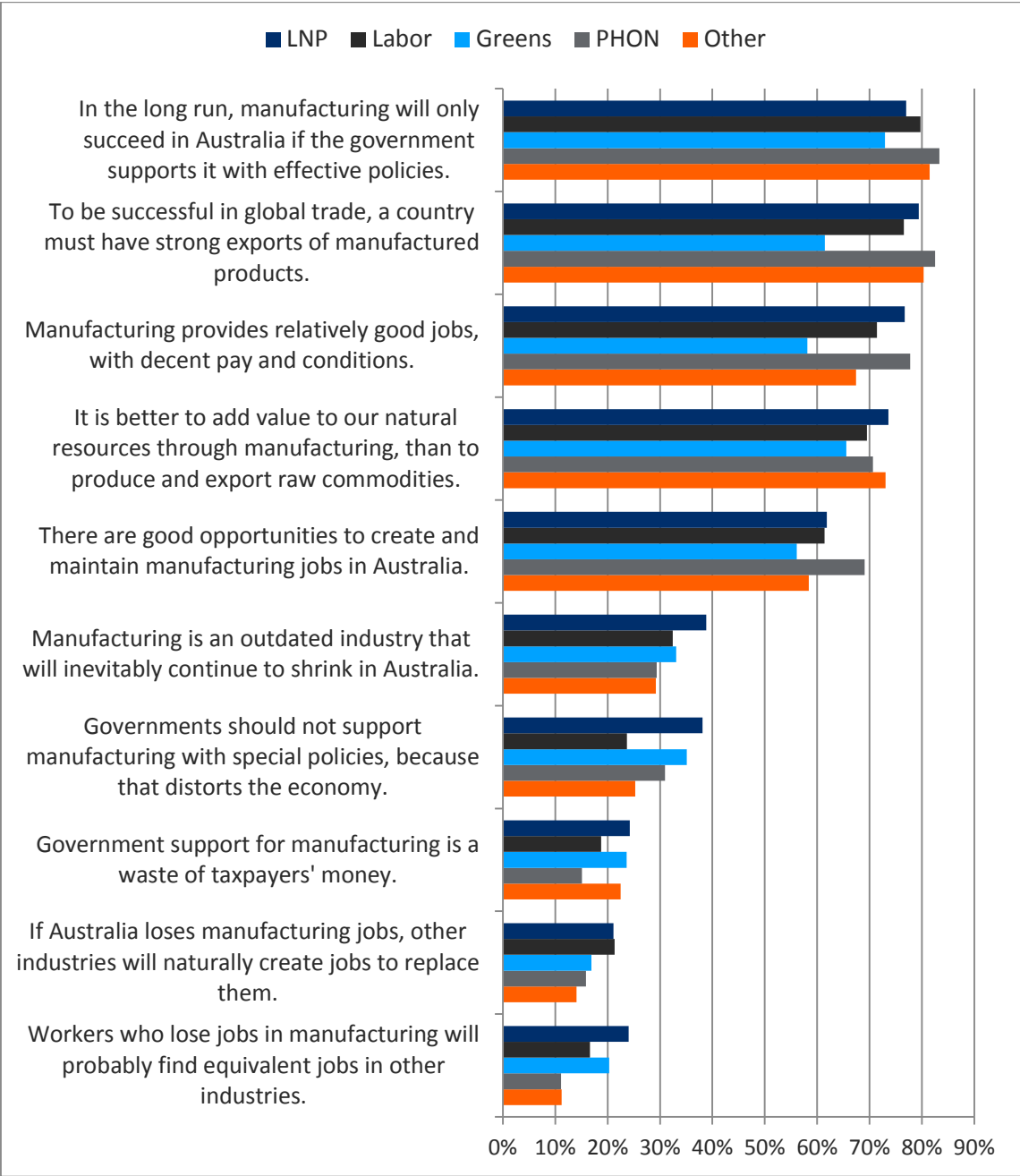
- The largest difference was in response to whether other industries will replace jobs lost in manufacturing – 38% agreed amongst the youngest age group, while only 11% agreed amongst the two oldest age groups. One factor here could be different experiences with manufacturing jobs in the economy, with younger respondents less likely to have ever held or be familiar with such jobs.

**Figure 8 - Attitudes Toward Manufacturing**  
(by age group, percent total agree and strongly agree)



Similarly, as detailed in Figure 9, response rates between supporters of different political parties were also substantively similar. Indeed, there was even closer similarity in responses to these questions across parties, than across age groups.

**Figure 9 - Attitudes Towards Manufacturing**  
(by voting intention, percent total agree and strongly agree)



Notable variances between voting groups include:

- Green voters were the least likely to agree that manufacturing exports are needed for success in trade, or that manufacturing provides relatively good jobs. However, even here a wide majority of Greens voters agreed.
- Voters for the Liberal/National Party (LNP) and Pauline Hanson's One Nation (PHON) were generally more likely to express positive attitudes towards manufacturing exports and jobs, but only slightly more so.
- Interestingly, LNP voters were slightly more likely than PHON voters to agree that manufacturing was in decline, that government support was a waste of money, and that manufacturing jobs would be replaced through economic forces. Again, even in these cases, there was very little variance between groups.
- Labor voters showed strong and consistent support for the importance of manufacturing, and for supportive policy; they were least likely to support the view that government support for manufacturing distorts the economy.

Despite these differences between groups, in every group there was strong agreement with the view that manufacturing has a unique importance to the Australian economy and faces positive prospects, if the government gets the policy settings right. These results confirm that the economic opportunities hinting at a brighter future for Australian manufacturing could also be political opportunities for the leaders who are willing to seize them.

## BROAD SUPPORT FOR TARGETED POLICIES

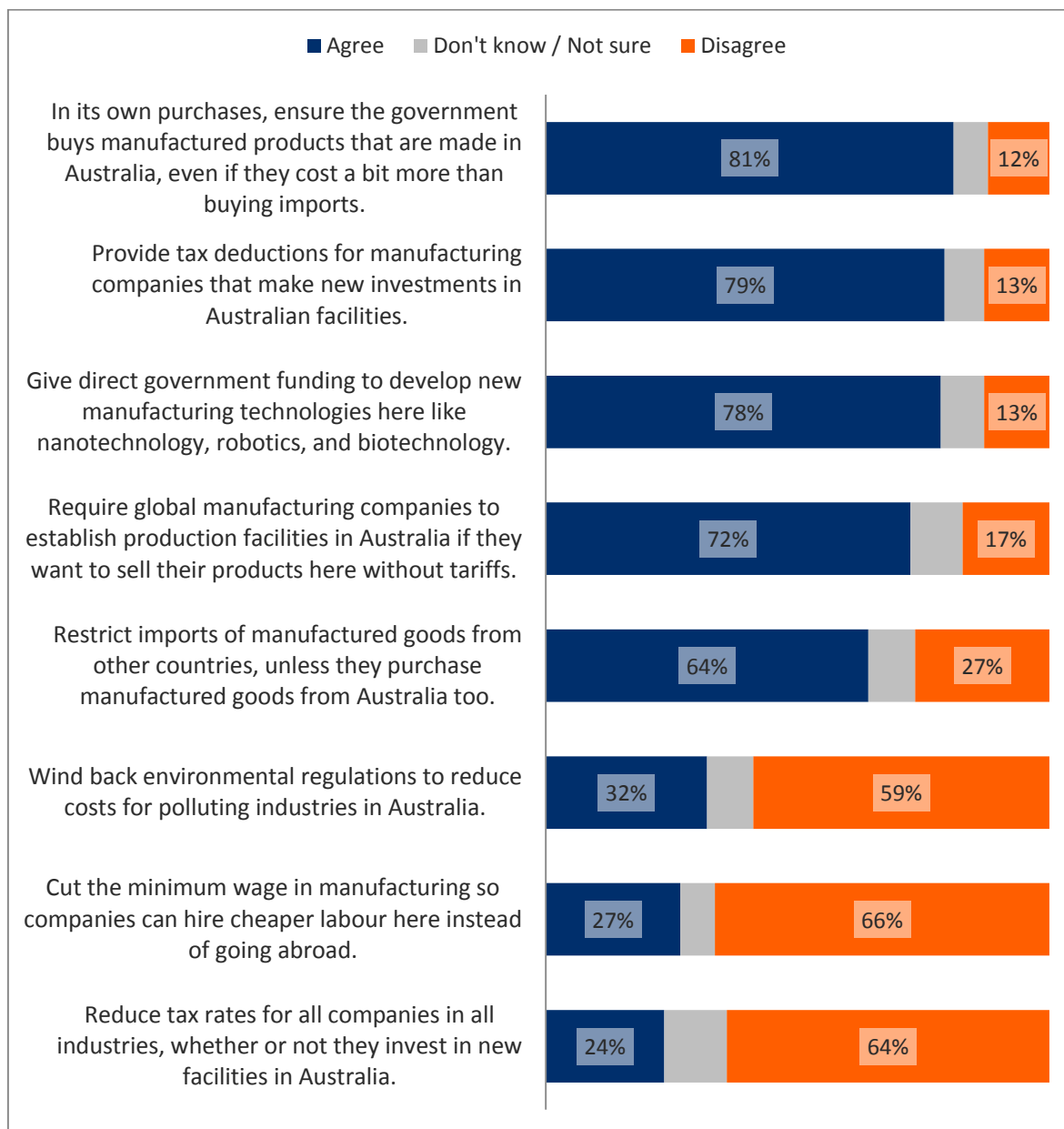
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Finally, respondents were presented with a number of more specific policy options for supporting manufacturing, in randomised order, and asked if they strongly agreed, agreed, didn't know, disagreed or strongly disagreed with those policies.<sup>20</sup> The results of these questions are summarised in Figure 10.

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<sup>20</sup> Again, a more detailed disaggregation of results is provided in the appendix.

**Figure 10 - Attitudes Towards Manufacturing Policy Options**



The strongest level of policy support was expressed for active government procurement strategies. Over four-fifths of respondents (81 percent) supported the idea that governments should purchase Australian-made manufactured goods in their own procurement, even if that cost somewhat more than purchasing imports. Only 12 percent of respondents disagreed with this proposal. Support for active procurement thus outweighs disagreement by more than six-to-one.

There was also very strong support for direct government fiscal support for new advanced manufacturing research and technology initiatives, such as nanotechnology,

robotics and biotech. Over three-quarters of respondents (78 percent) agree with that approach, six times more than those who opposed (13 percent).

Most respondents also supported trade policy measures targeted to manufacturing. This included requirements to establish manufacturing facilities in Australia in order to avoid trade tariffs for imports (72 percent agreed) and restricting imports from other countries unless they also purchase manufactured goods from Australia (64 percent agreed). This sentiment runs counter to the approach embodied in traditional trade agreements, in which market access is not contingent on reciprocity in trade flows or investment location decisions. But the results are consistent with broader hardening of attitudes toward traditional free trade policy in the wake of deindustrialisation and domestic job loss.

On the subject of tax policy, a strong majority (79 percent) agreed with policies that provide targeted tax deductions for manufacturing companies investing in Australian facilities. At the same time, however, respondents opposed (by more than two-to-one) the idea of unconditional across-the-board tax reductions for all companies, regardless of whether they invested in additional Australian capital projects. Respondents are willing to grant favourable tax treatment to manufacturing, but on the condition that those concessions are tied to investments in the domestic industry.

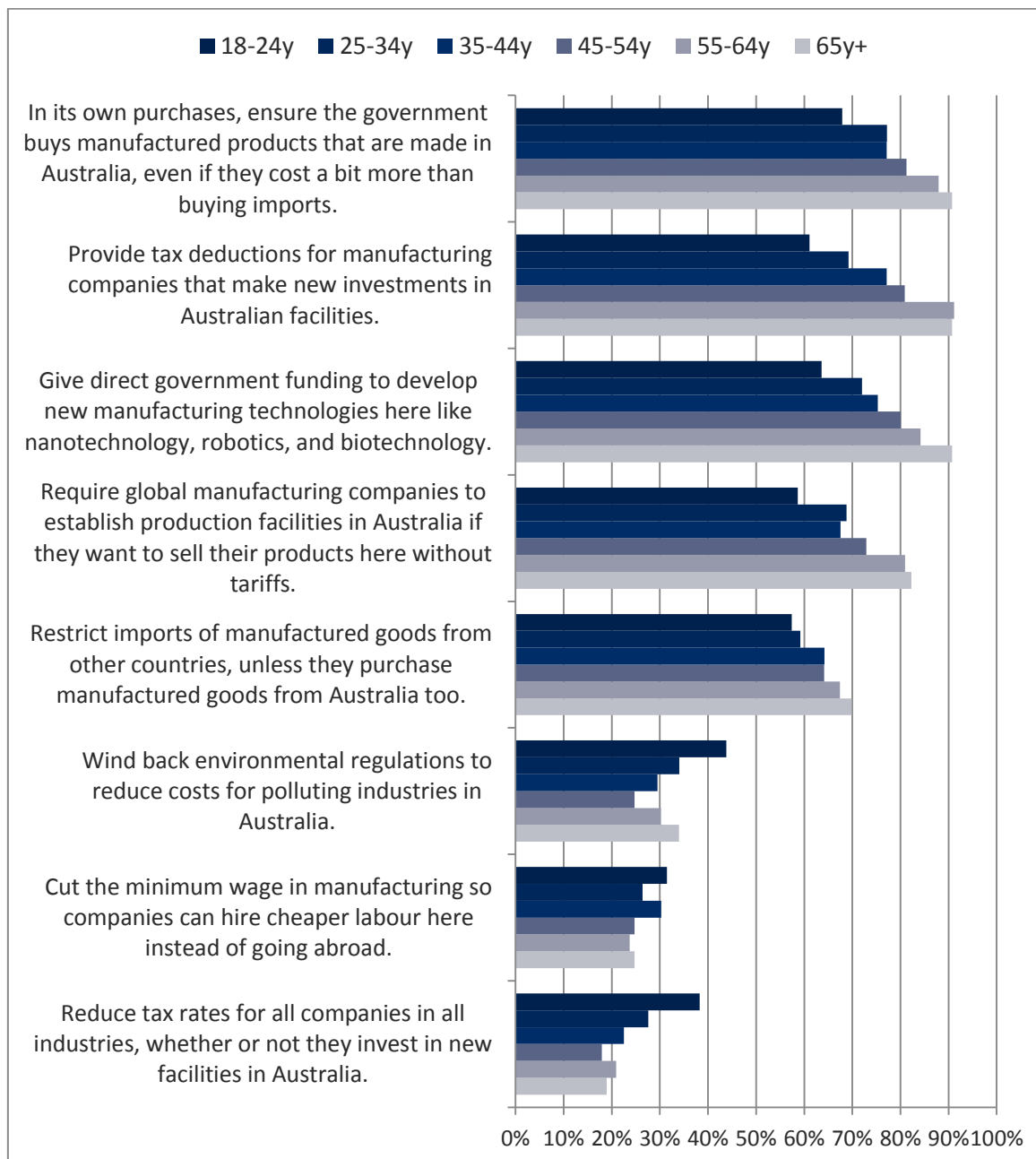
Finally, it is occasionally suggested that Australia must reduce its labour costs and regulatory burden (such as environmental regulations) in order to attract more business investment, given the competitive pressures posed under globalisation. Our respondents rejected those proposals, again by roughly two-to-one. Two-thirds of respondents disagreed with trying to attract manufacturing by cutting the minimum wage, with only 27 percent supporting it. Similarly, 59 percent rejected weaker environmental regulations as a lever for attracting manufacturing.

Support for targeted policies, and opposition to race to the bottom policies, was reflected across all age and voting groups.

Attitudes across age groups are shown in Figure 11. Note there is some variation across the age spectrum, somewhat clearer than with the attitudinal statements about manufacturing considered above.



**Figure 11 - Attitudes Towards Manufacturing Policy Options  
(by age group, total agree and strongly agree)**



Key variances across the age spectrum include:

- Younger respondents in general were less likely to support government purchase mandates, targeted tax deductions, direct government grants and trade measures.
- Older age groups, in contrast, agreed with the same positions more strongly.
- Gaps in total support (agreed and strongly agreed) between the youngest age group (18-25) and oldest age group (over 65) ranged from 13 percentage points

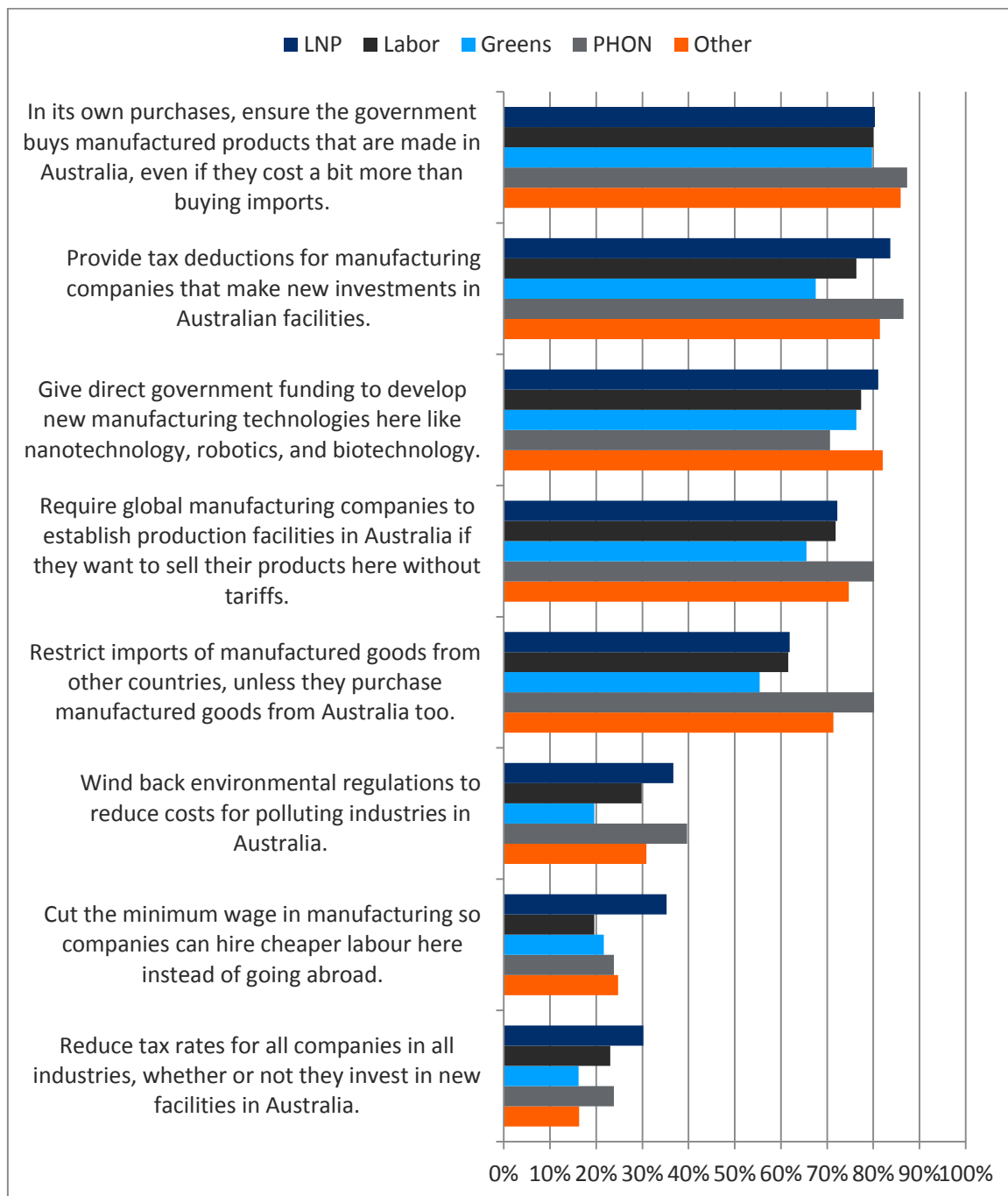
(for restrictions on imports to address trade imbalances) to 30 percentage points (for targeted tax deductions).

- Older respondents were also somewhat less likely to agree with cutting minimum wages, environmental regulations, or across-the-board tax rates.

Nonetheless, a clear majority in all age groups (even the youngest group) supported all the targeted policy measures – including targeted tax concessions, direct support for technology, preferential procurement, and more activist trade policy.

Responses by voting intention were even more consistent than by age group. Varying levels of support for the same set of policy options, according to voting intention, is summarised in Figure 12.

**Figure 12 - Attitudes Towards Manufacturing Policy Options  
(by voting intention, total agree and strongly agree)**



On only a few questions were there clear differences in response rates by voting intention.

- LNP voters were somewhat more likely to support cutting the minimum wage as a tool for attracting manufacturing (35 percent), but even among this group more respondents disagreed (59 percent).

- Greens supporters were least likely to support cutting environmental regulations; they were also least likely to support trade measures or tax preferences (whether across the board, or targeted at new investments in Australian facilities).
- One Nation voters were most likely to support active trade measures, especially restricting imports of manufactured goods from other countries unless they purchase goods from Australia too.

Nonetheless, differences between voting groups were modest compared to the consistent overall support demonstrated for active policy across the political spectrum. No matter political affiliation, respondents showed consistent support for more active policy support for domestic manufacturing. In all voting groups there was majority support for targeted tax deductions, direct grants for innovation, government procurement mandates, and trade measures; in all voting groups there was majority opposition to efforts to boost manufacturing by cutting general fiscal capacity, environmental regulations, or minimum wages.

# Conclusion

Manufacturing retains an important, strategic role in any modern economy. Humans' needs for material products, transformed from materials harvested from nature, implies an ongoing requirement for manufacturing industries to undertake that transformation. Technology, tastes, and trade do not evolve in a predictable, unidimensional manner, and the stereotypical assumption that manufacturing will inevitably and naturally recede in importance, and/or migrate to low-cost developing countries is clearly wrong. Many developed, high-cost countries are retaining and even growing their share of global manufacturing activity (which itself continues to expand), with the support of a myriad of effective and targeted levers addressing all aspects of innovation, investment, skills, production, and trade. There is no inherent reason why Australia cannot do the same. And the once-common complacency that Australia does not need to worry about manufacturing – given our abundant endowments of natural resources – has been discredited by the continuing commodity price roller-coaster, declining global demand for many of Australia's unprocessed resources, and increasingly binding environmental constraints. The age-old challenge of adding value to our natural resources, and building a more diversified and innovation-intensive economy in the process, has once again become more apparent – to both policy-makers, and the public at large.

This is an opportune moment, therefore, to remind ourselves of the lasting strategic importance of manufacturing – and many economic indicators suggest that the sector could indeed have a brighter future here. This includes recovery in a number of key economic parameters, including employment, productivity, and profitability, as well as a noted improvement in Australia's relative competitive position thanks to the moderation of the extreme currency misalignment that contributed so much to the sector's challenges over the last decade. There is clearly more economic space to think about preserving, modernising, and growing the manufacturing footprint in Australia.

What's more, the original polling conducted for this report shows that even while indicating a somewhat inaccurate understanding of manufacturing's contribution to the Australian economy, an overwhelming majority of Australians still hold positive attitudes towards manufacturing jobs, exports and the sector's future in Australia. Most Australians agree that manufacturing is a strategically important industry that provides relatively good jobs. Most believe that if manufacturing jobs are lost, they will not be automatically replaced with similar jobs. At the same time, most Australians also think manufacturing has positive growth prospects, despite the industry's recent

challenges – but the overwhelming majority think realising those opportunities will require government support and policy. Few agree with traditional claims that supporting manufacturing is wasteful or distortionary. Despite some differences between age groups and voting intention, these trends are broadly reflected across the whole population.

These polling results show broad support for an active policy stance on the part of government toward manufacturing investment, production, balanced trade, innovation, and employment. Measures clearly targeted at manufacturing, and tied to increased activity in Australian industry, received the strongest support. This includes preferential procurement strategies, trade policies aimed at attaining more reciprocity in international trade patterns, targeted tax incentives, and direct funding for the development of advanced manufacturing technologies. However, there was opposition to unconditional fiscal incentives (such as across-the-board tax reductions), and strong opposition to policies involving a “race to the bottom” in labour, environmental, or regulatory policies.

In sum, manufacturing in Australia faces a dual moment of opportunity: improving economic conditions, and a sustained base of political support for policies that would make the most of those conditions. It is incumbent on all manufacturing stakeholders to now make that most of that opportunity.

# Appendix - Poll Methodology and Detailed Results

Between 26 April and 5 May 2017 the Centre for Future Work at the Australia Institute conducted a national opinion poll of 1,408 people through Research Now, with nationally representative samples by gender, age and state or territory.

Cross-tabulations for political orientation are by voting intention in the House of Representatives. Those who were undecided were asked which way they were leaning. These leanings are included in voting intention crosstabs. Undecided results also shown separately. “LNP” includes separate responses for Liberal and National. “Other” includes Nick Xenophon Team, Australian Conservatives and Independent/Other.

*Which of the following industries do you think is the largest employer of Australian workers? (options randomised)*

	Total	Male	Female	18-24y	25-34y	35-44y	45-54y	55-64y	65y+
Public administration, defence and the law	<b>38%</b>	40%	36%	19%	28%	31%	39%	48%	59%
Mining	<b>13%</b>	11%	15%	23%	20%	12%	13%	8%	5%
Banking and financial services	<b>11%</b>	10%	12%	12%	14%	17%	9%	10%	7%
Manufacturing	<b>10%</b>	12%	8%	14%	13%	11%	12%	8%	5%
Wholesale trade	<b>7%</b>	10%	5%	12%	9%	7%	8%	5%	4%
Agriculture	<b>6%</b>	7%	6%	11%	6%	7%	5%	5%	6%
Don't Know / Not Sure	<b>14%</b>	11%	17%	10%	11%	14%	15%	16%	15%

	LNP	Labor	Greens	PHON	Other	Undec
Public administration, defence and the law	47%	30%	36%	38%	37%	37%
Mining	9%	17%	12%	18%	11%	13%
Banking and financial services	11%	13%	11%	10%	9%	8%
Manufacturing	10%	11%	12%	12%	7%	8%
Wholesale trade	7%	8%	5%	6%	7%	7%
Agriculture	6%	6%	7%	5%	9%	7%
Don't Know / Not Sure	10%	14%	16%	11%	20%	20%



***Which of these industries in Australia do you think invests the biggest share of their total output in research, development, and innovation?  
(order randomised)***

	Total	Male	Female	18-24y	25-34y	35-44y	45-54y	55-64y	65y+
Professional and scientific services	<b>25%</b>	24%	26%	20%	24%	24%	27%	22%	30%
IT, Media and Telecommunications	<b>20%</b>	22%	18%	23%	22%	20%	17%	18%	20%
Mining	<b>14%</b>	14%	14%	15%	13%	18%	16%	11%	11%
Utilities (power, gas, waste etc)	<b>7%</b>	8%	7%	12%	8%	8%	7%	6%	4%
<b>Manufacturing</b>	<b>7%</b>	8%	5%	7%	6%	6%	8%	10%	5%
Banking and financial services	<b>5%</b>	6%	4%	11%	10%	4%	5%	3%	1%
Don't Know / Not Sure	<b>22%</b>	18%	26%	12%	17%	20%	21%	31%	29%

	LNP	Labor	Greens	PHON	Other	Undec
Professional and scientific services	27%	23%	27%	26%	24%	19%
IT, Media and Telecommunications	21%	21%	21%	17%	16%	23%
Mining	15%	14%	15%	18%	12%	11%
Utilities (power, gas, waste etc)	6%	9%	7%	6%	7%	7%
<b>Manufacturing</b>	9%	5%	4%	8%	6%	6%
Banking and financial services	5%	6%	6%	2%	3%	5%
Don't Know / Not Sure	17%	23%	20%	23%	30%	29%

*The following industries are Australia's biggest exporters, after mining, in terms of the total value of goods and services they sell to overseas customers. To the best of your knowledge, which of the following industries is the largest exporter? (order randomised)*

	Total	Male	Female	18-24y	25-34y	35-44y	45-54y	55-64y	65y+
Agriculture	<b>43%</b>	44%	41%	30%	40%	47%	45%	47%	44%
Tourism (visitors coming to Australia)	<b>21%</b>	20%	21%	22%	17%	20%	20%	23%	23%
Education (overseas students coming to Australia)	<b>16%</b>	16%	15%	17%	20%	13%	14%	15%	16%
<b>Manufacturing</b>	<b>9%</b>	8%	9%	15%	10%	8%	10%	5%	5%
Banking and financial services	<b>3%</b>	4%	3%	10%	6%	1%	3%	0%	2%
Don't know / Not sure	<b>9%</b>	8%	10%	7%	6%	11%	9%	10%	10%

	LNP	Labor	Greens	PHON	Other	Undec
Agriculture	48%	39%	38%	48%	41%	41%
Tourism (visitors coming to Australia)	22%	21%	21%	16%	23%	22%
Education (overseas students coming to Australia)	16%	19%	18%	9%	12%	11%
<b>Manufacturing</b>	6%	9%	8%	13%	10%	9%
Banking and financial services	3%	4%	3%	2%	3%	4%
Don't know / Not sure	5%	8%	13%	13%	11%	13%

*To the best of your knowledge, in the last twelve months, Australian jobs in manufacturing have*

	Total	Male	Female	18-24y	25-34y	35-44y	45-54y	55-64y	65y+
Increased	7%	9%	5%	18%	11%	6%	7%	1%	2%
Decreased	71%	70%	72%	48%	59%	69%	78%	85%	81%
Stayed about the same	13%	15%	11%	21%	18%	13%	8%	8%	11%
Don't know / not sure	9%	6%	13%	14%	12%	12%	7%	6%	5%

	LNP	Labor	Greens	PHON	Other	Undec
Increased	9%	7%	3%	8%	5%	4%
Decreased	71%	71%	62%	79%	75%	70%
Stayed about the same	14%	12%	17%	7%	12%	11%
Don't know / not sure	6%	10%	18%	6%	8%	15%

*To what extent do you agree or disagree with the following? (order randomised)*

	Total Agree	Total Disagree	Strongly agree	Agree	Disagree	Strongly Disagree	Don't know/ Not sure
In the long run, manufacturing will only succeed in Australia if the government supports it with effective policies.	78%	14%	20%	58%	11%	3%	8%
To be successful in global trade, a country must have strong exports of manufactured products.	76%	15%	18%	58%	13%	3%	8%
Manufacturing provides relatively good jobs, with decent pay and conditions.	71%	19%	8%	63%	16%	3%	10%
It is better to add value to our natural resources through manufacturing, than to produce and export raw commodities.	71%	15%	23%	48%	12%	4%	14%
There are good opportunities to create and maintain manufacturing jobs in Australia.	61%	28%	10%	51%	22%	6%	11%
Manufacturing is an outdated industry that will inevitably continue to shrink in Australia.	34%	55%	5%	29%	42%	14%	11%
Governments should not support manufacturing with special policies, because that distorts the economy.	31%	49%	5%	26%	38%	11%	20%
Government support for manufacturing is a waste of taxpayers' money.	21%	67%	4%	17%	49%	18%	11%
If Australia loses manufacturing jobs, other industries will naturally create jobs to replace them.	19%	73%	3%	16%	54%	19%	8%
Workers who lose jobs in manufacturing will probably find equivalent jobs in other industries.	18%	72%	2%	16%	54%	17%	10%

***Total agree (agree + strongly agree) by gender and age***

	Total	Male	Female	18-24y	25-34y	35-44y	45-54y	55-64y	65y+
In the long run, manufacturing will only succeed in Australia if the government supports it with effective policies.	<b>78%</b>	78%	78%	72%	74%	75%	79%	82%	84%
To be successful in global trade, a country must have strong exports of manufactured products.	<b>76%</b>	78%	75%	67%	70%	77%	78%	78%	85%
Manufacturing provides relatively good jobs, with decent pay and conditions.	<b>71%</b>	76%	67%	68%	67%	64%	72%	74%	82%
It is better to add value to our natural resources through manufacturing, than to produce and export raw commodities.	<b>71%</b>	77%	64%	60%	67%	66%	73%	74%	81%
There are good opportunities to create and maintain manufacturing jobs in Australia.	<b>61%</b>	62%	60%	60%	64%	59%	58%	60%	64%
Manufacturing is an outdated industry that will inevitably continue to shrink in Australia.	<b>34%</b>	36%	32%	38%	37%	32%	36%	33%	29%
Governments should not support manufacturing with special policies, because that distorts the economy.	<b>31%</b>	35%	27%	34%	31%	30%	31%	31%	29%
Government support for manufacturing is a waste of taxpayers' money.	<b>21%</b>	27%	15%	26%	23%	20%	22%	21%	17%
If Australia loses manufacturing jobs, other industries will naturally create jobs to replace them.	<b>19%</b>	23%	15%	38%	27%	15%	19%	11%	10%
Workers who lose jobs in manufacturing will probably find equivalent jobs in other industries.	<b>18%</b>	22%	14%	30%	25%	17%	16%	10%	14%

***Total agree (agree + strongly agree) by voting intention***

	LNP	Labor	Greens	PHON	Other	Undec
Workers who lose jobs in manufacturing will probably find equivalent jobs in other industries.	24%	17%	20%	11%	11%	16%
If Australia loses manufacturing jobs, other industries will naturally create jobs to replace them.	21%	21%	17%	16%	14%	14%
Government support for manufacturing is a waste of taxpayers' money.	24%	19%	24%	15%	22%	17%
Governments should not support manufacturing with special policies, because that distorts the economy.	38%	24%	35%	31%	25%	25%
Manufacturing is an outdated industry that will inevitably continue to shrink in Australia.	39%	32%	33%	29%	29%	30%
There are good opportunities to create and maintain manufacturing jobs in Australia.	62%	61%	56%	69%	58%	56%
It is better to add value to our natural resources through manufacturing, than to produce and export raw commodities.	74%	70%	66%	71%	73%	67%
Manufacturing provides relatively good jobs, with decent pay and conditions.	77%	71%	58%	78%	67%	63%
To be successful in global trade, a country must have strong exports of manufactured products.	79%	77%	61%	83%	80%	71%
In the long run, manufacturing will only succeed in Australia if the government supports it with effective policies.	77%	80%	73%	83%	81%	74%

***Here are several policy tools which government could use to support manufacturing activity in Australia. To what extent do you support or oppose these options?***

	Total agree	Total disagree	Strongly agree	Agree	Disagree	Strongly Disagree	Don't know / Not sure
In its own purchases, ensure the government buys manufactured products that are made in Australia, even if they cost a bit more than buying imports.	<b>81%</b>	<b>12%</b>	28%	53%	11%	2%	7%
Provide tax deductions for manufacturing companies that make new investments in Australian facilities.	<b>79%</b>	<b>13%</b>	16%	63%	11%	2%	8%
Give direct government funding to develop new manufacturing technologies here like nanotechnology, robotics, and biotechnology.	<b>78%</b>	<b>13%</b>	20%	58%	11%	2%	9%
Require global manufacturing companies to establish production facilities in Australia if they want to sell their products here without tariffs.	<b>72%</b>	<b>17%</b>	17%	56%	13%	4%	10%
Restrict imports of manufactured goods from other countries, unless they purchase manufactured goods from Australia too.	<b>64%</b>	<b>27%</b>	15%	49%	22%	5%	9%
Wind back environmental regulations to reduce costs for polluting industries in Australia.	<b>32%</b>	<b>59%</b>	7%	25%	34%	25%	9%
Cut the minimum wage in manufacturing so companies can hire cheaper labour here instead of going abroad.	<b>27%</b>	<b>66%</b>	5%	22%	40%	27%	7%
Reduce tax rates for all companies in all industries, whether or not they invest in new facilities in Australia.	<b>24%</b>	<b>64%</b>	4%	19%	45%	19%	12%

***Total agree (agree + strongly agree) by gender and age***

	Total	Male	Female	18-24y	25-34y	35-44y	45-54y	55-64y	65y+
In its own purchases, ensure the government buys manufactured products that are made in Australia, even if they cost a bit more than buying imports.	<b>81%</b>	81%	81%	68%	77%	77%	81%	88%	91%
Provide tax deductions for manufacturing companies that make new investments in Australian facilities.	<b>79%</b>	81%	77%	61%	69%	77%	81%	91%	91%
Give direct government funding to develop new manufacturing technologies here like nanotechnology, robotics, and biotechnology.	<b>78%</b>	80%	76%	64%	72%	75%	80%	84%	91%
Require global manufacturing companies to establish production facilities in Australia if they want to sell their products here without tariffs.	<b>72%</b>	72%	73%	59%	69%	68%	73%	81%	82%
Restrict imports of manufactured goods from other countries, unless they purchase manufactured goods from Australia too.	<b>64%</b>	61%	67%	57%	59%	64%	64%	67%	70%
Wind back environmental regulations to reduce costs for polluting industries in Australia.	<b>32%</b>	36%	28%	44%	34%	30%	25%	30%	34%
Cut the minimum wage in manufacturing so companies can hire cheaper labour here instead of going abroad.	<b>27%</b>	30%	23%	31%	26%	30%	25%	24%	25%
Reduce tax rates for all companies in all industries, whether or not they invest in new facilities in Australia.	<b>24%</b>	29%	18%	38%	28%	23%	18%	21%	19%



***Total agree (agree + strongly agree) by voting intention***

	LNP	Labor	Greens	PHON	Other	Undec
In its own purchases, ensure the government buys manufactured products that are made in Australia, even if they cost a bit more than buying imports.	80%	80%	80%	87%	86%	78%
Provide tax deductions for manufacturing companies that make new investments in Australian facilities.	84%	76%	68%	87%	81%	76%
Give direct government funding to develop new manufacturing technologies here like nanotechnology, robotics, and biotechnology.	81%	77%	76%	71%	82%	74%
Require global manufacturing companies to establish production facilities in Australia if they want to sell their products here without tariffs.	72%	72%	66%	80%	75%	71%
Restrict imports of manufactured goods from other countries, unless they purchase manufactured goods from Australia too.	62%	62%	55%	80%	71%	64%
Wind back environmental regulations to reduce costs for polluting industries in Australia.	37%	30%	20%	40%	31%	34%
Cut the minimum wage in manufacturing so companies can hire cheaper labour here instead of going abroad.	35%	20%	22%	24%	25%	30%
Reduce tax rates for all companies in all industries, whether or not they invest in new facilities in Australia.	30%	23%	16%	24%	16%	17%

