

# Manufacturing Futures

Achieving Global Fitness

April 2006

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The future of Australian manufacturing will be strongly influenced by the degree to which we are able to integrate into the international economy and keep pace with the necessary actions and investments to achieve global fitness.

# Preface





## International engagement has taken on new meaning and is having deep, broad and irreversible impacts on business, particularly for Australian manufacturing.

As a nation, from both sides of politics, Australia has been an early and eager embracer of globalisation.

We have freely floated the exchange rate of our currency; we have unilaterally reduced tariffs and imposed few if any non-tariff barriers – to the extent that we now have one of the most open economies in the Western world.

In 1997, Ai Group's predecessor organisation, the Metal Trades Industry Association (MTIA), commissioned The Economist Intelligence Unit to undertake the landmark study, *Make or Break: 7 Steps to Make Australia Rich Again*. It was produced at a time when globalisation was just beginning to impact on Australian industry.

Manufacturing Futures picks up the story at the start of 2006 when globalisation has hit the manufacturing sector with full force. Whether exporting or not, firms are competing in a global market.

As a consequence, the manufacturing industry is at yet another turning point.

The future of Australian manufacturing will be strongly influenced by the degree to which we are able to integrate into the international economy and keep pace with the necessary actions and investments to achieve global fitness.

The success of industry will also need to be viewed very differently. While manufacturers have long fought the battle to maintain plant and jobs in Australia, and many will continue the fight, the massive and swift changes in the global economy, particularly the addition of three billion people to the international labour force, has led many manufacturers to implement new strategies to survive and prosper.

These competitive pressures are leading to the emergence of a new breed of manufacturers who have a number or all of the following characteristics:

- A belief in their capacity to compete against overseas companies in Australia and overseas;
- A global outlook to their business with a desire to be world class operators;
- A focus on on-going business improvement, with every effort being made to be lean, strip out wasteful operations and improve productivity;
- A focus on building the capital intensity of production through automation and the rapid adoption of new technology;
- An emphasis upon lifting the skills capabilities of staff, through both apprenticeships and training to up-skill;

- A well developed supply chain, seeking out the most competitive suppliers whether they be, for example, in Australia, Mexico or China;
- A focus on product design and innovation that will deliver quality products at world competitive prices; and
- A focus on developing niche markets supported by strong customer relations and after-care services.

These characteristics constitute the benchmark for global competitiveness by which Australian manufacturers will judge success in the future.

This report has two purposes. First, it seeks to provide a voice for industry views on: the future of Australian manufacturing; the strategies they are implementing to remain competitive; and the role of government in shaping their future.

Second, the report provides an assessment of the investments and measures being undertaken by manufacturers to remain competitive. It proposes a range of policy strategies to support the further development of world class Australian industries.

The report was prepared by Ai Group's team of economists and researchers, including Peter Burn, Simon Calder, Gillian Gribble, Megan Lilly, Andrew Witheford and Tony Pensabene, who also led the project. It has been informed by:

- a major national survey of more than 800 manufacturers;
- consultation forums with over 200 CEOs and senior executives in nine workshops across Australia;
- in-depth interviews with 20 large corporations based in Australia, with half being affiliates of overseas corporations; and
- previous research efforts undertaken by Ai Group relating to China, the Australian dollar, research and development, and research commissioned by Ai Group for **World Class Skills**.

Taking both the views of members and assessment of current activity into account, Ai Group's National Executive has endorsed the policy directions to be put to Governments.

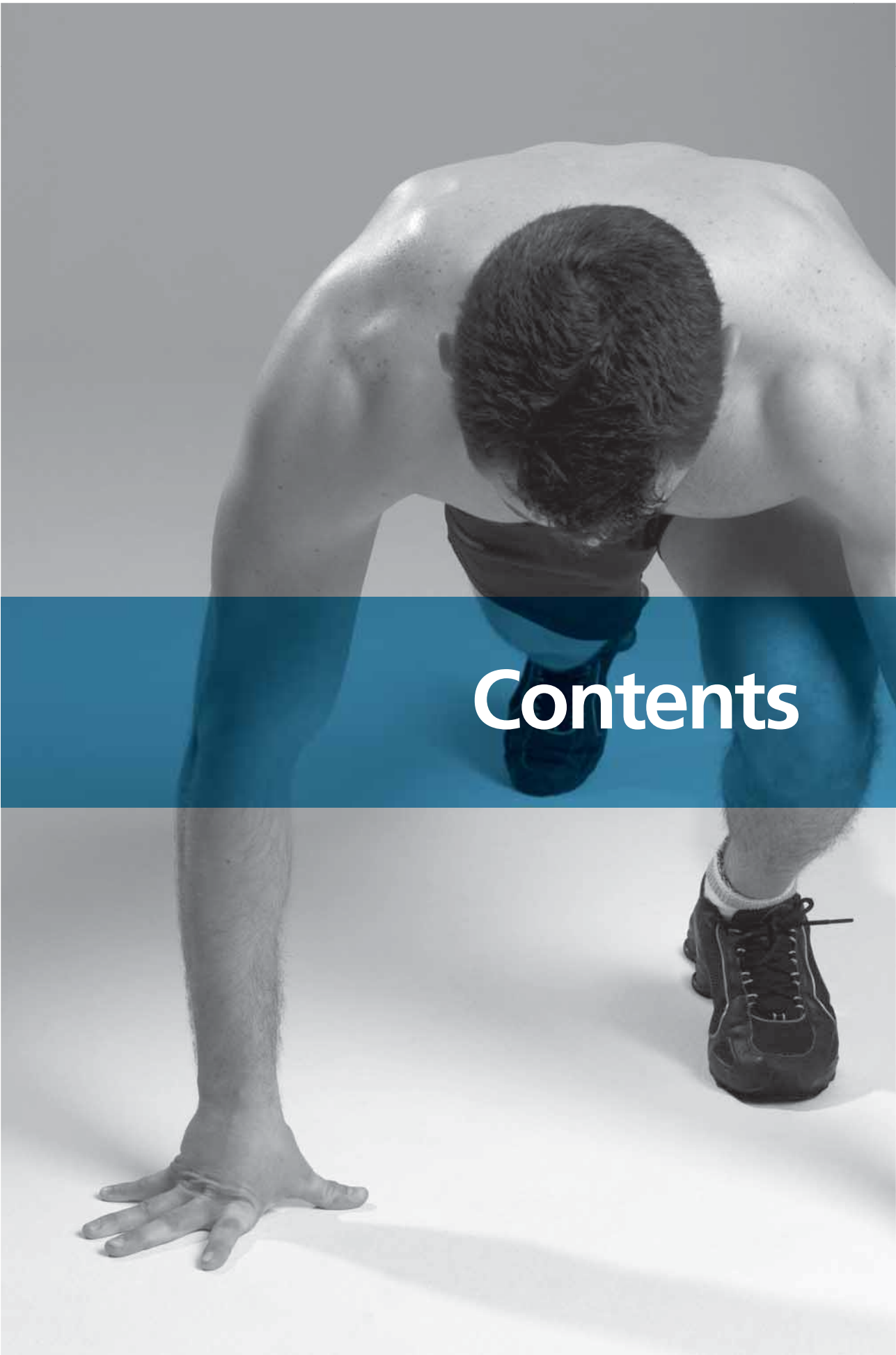
We thank the many hundreds of chief executives and senior managers of Australian industry for the contributions made to this project and look forward to a constructive debate with Government, unions and other organisations in taking the issues and policy positions forward.



**Heather Ridout**  
Chief Executive  
Australian Industry Group







# Contents

# Contents

<b>Preface</b>	<b>5</b>
<b>Executive summary</b>	<b>13</b>
<b>Introduction</b>	<b>19</b>
<b>The dynamics of change</b>	<b>23</b>
An uncompetitive currency	
A faster pace of import competition	
The squeeze on margins	
Global sourcing and supply chains	
The emergence of China	
Weakness in manufactured export growth	
A net outflow of manufacturing investment	
Skills shortages	
Growth of the regulatory burden	
<b>How industry views its future</b>	<b>35</b>
The next three years	
Sources of industry concerns	
Issues emerging from industry concerns	
<b>Strategies to remain globally competitive</b>	<b>41</b>
Priority strategies going forward	
Middle order strategies	
<b>Industry's view of government</b>	<b>49</b>
Role of government	
National manufacturing strategy	
Future policy priorities	
<b>Policy directions</b>	<b>55</b>
Building strength through capital investment	
Measures to further globalise Australian industry	
Building world class industry capabilities	
A more skilful global competitor	
Loosening the shackles of government red tape	
A more innovative global competitor	

## Figures and tables

<b>Figure 1</b>	Annual growth in manufacturing sales, chain volume terms	24
<b>Figure 2</b>	Loss of export earnings from Australian dollar appreciation	25
<b>Figure 3</b>	Imports as a percentage of manufacturing sales	26
<b>Figure 4</b>	Annual change in manufacturing profits, June 2005	27
<b>Figure 5</b>	Percentage of activity derived from offshore production	28
<b>Figure 6</b>	Manufacturing growth in selected countries	30
<b>Figure 7</b>	Manufacturing export growth in volume terms	31
<b>Figure 8</b>	Net foreign investment in Australian manufacturing	32
<b>Figure 9</b>	Manufacturing employment by skill levels	33
<b>Figure 10</b>	Prospects for manufacturing and the economy	36
<b>Figure 11</b>	Prospects by sector, very concerned	37
<b>Figure 12</b>	Prospects by size, very concerned	38
<b>Figure 13</b>	Sources of industry concerns	39
<b>Figure 14</b>	Import competition risk by sector	40
<b>Figure 15</b>	Strategies likely to be pursued by companies over the next three years	42
<b>Figure 16</b>	New product intensity by sales	43
<b>Figure 17</b>	Companies likely to use more imported materials	44
<b>Figure 18</b>	Companies likely to spend more on skills	45
<b>Figure 19</b>	Annual change in manufacturing investment	46
<b>Figure 20</b>	Annual change in manufacturing research and development	47
<b>Figure 21</b>	Major sources of manufacturing export increases	48
<b>Figure 22</b>	Company tax collection as a percentage of total receipts	58
<b>Figure 23</b>	Expenditure on educational institutions as a percentage of GDP	70
<b>Figure 24</b>	Growth in vocational education and training (VET) funding in real terms	72
<b>Figure 25</b>	Manufacturing research & development intensity	80
<b>Table 1</b>	Corporate and marginal effective tax rates on manufacturing investment	59
<b>Table 2</b>	Educational attainment: population aged 25 to 64 years, selected OECD countries, 2002	69
<b>Table 3</b>	Percentage of wages and salaries spent by employers on employee training: OECD countries, 2002	71

## Appendices

<b>Appendix 1</b>	Industry consultations	86
<b>Appendix 2</b>	Global investment incentives	92
<b>Appendix 3</b>	Australian National Audit Office recommendations on administration of the R&D Start Program	104





# Executive Summary

The diverse strategies manufacturers are adopting are doing more than making Australian manufacturing leaner and more productive: they are challenging how we think of “Australian manufacturing”.

Australian manufacturing has entered a new and acutely challenging phase of development.

In the face of these challenges, manufacturers are transforming their industries and laying the foundations for new waves of success. As with all upheavals, these transformations are not without their downsides. Many manufacturers are struggling in the changed environment and some are questioning their ability to survive. Furthermore, as manufacturers reconsider their businesses and build for the future, some are closing factories and relocating operations; all are looking for cost savings and many are reducing their workforces.

The new phase of manufacturing development raises important questions about the role of domestic manufacturing activity; about the steady increase in investment abroad by Australian-based manufacturers; about the ability of some local producers to bounce back as – and when – more favourable conditions re-emerge; and about the role of government policy in the light of these developments.

## A new phase of development

In the 1980s and 1990s, Australian manufacturers fought hard and with considerable success to develop domestic and export markets. In this period, manufacturers adapted to a much more open economy as tariff protection was wound down. In some sectors, notably automotive and textiles, the adaptation process was and continues to be facilitated by a more gradual phase-down of tariffs aided by programs involving other forms of sector-specific assistance. While, as is characteristic of developed countries, manufacturing has continued to decline as a share of the total economy, manufactured exports from Australia grew at a rate of over 10% p.a. during the two decades to the end of 2000. In this period, manufactured exports grew significantly faster than those of any other sector.

Now, in the early years of the 21st century, Australian manufacturing is encountering a considerable intensification of international competition associated with profound structural shifts in the global economy. At the same time, a range of domestic factors is placing additional pressures on the sector.<sup>1</sup>

As with most other developed countries, Australia has experienced a drop in export market share since the turn of the century. This reflects accumulating international competition – particularly from the fast-growing Chinese manufacturing and Indian service sectors. Looking specifically at manufacturing,

producers in “emerging” economies, most notably China, are competing by injecting relatively cheap labour into export-orientated manufacturing industries; by making considerable investments both in physical capital and technology; and through organisational developments that are seeing greater global co-ordination of production through the expansion of international supply chains.

These global pressures, which have accelerated markedly since the beginning of the current century, are compounded in Australia's case by a range of more specific factors. Chief among these is the strength of the Australian currency. While in some senses a reflection of the economic good fortune of the current commodity price boom, at the same time the high dollar has further eroded the ability of Australian producers to compete in domestic and export markets.<sup>2</sup>

Furthermore, the Australian economy is facing clear shortages of skilled labour across a large number of occupations. These shortages are particularly prevalent in a range of trades and engineering occupations of close relevance to manufacturing. These skill shortages are made more acute by the strong competition in national and regional labour markets from the booming minerals and non-residential construction sectors.

The testing environment for manufacturers is exacerbated by a squeeze in profit margins due to stagnant or falling selling prices and rising costs. The commodities boom has pushed up prices for energy, chemical and metal inputs in particular, and wages growth remains strong. At the same time, irresistible international pressures inhibit manufacturers from passing cost increases on to customers.

## The responses of manufacturers

This combination of forces is driving new dynamics of change in manufacturing. These changes are far from painless but are necessary for survival and for building the future opportunities that will underpin new waves of achievement for manufacturing.

The vast majority of manufacturers are responding actively in this new environment. The nature of these responses varies considerably across the sector.

Manufacturers are investing and engaging in product and process innovation to add value, reduce costs and seek competitive advantage. Others are going over their own operations with a fine tooth comb in the search for additional efficiencies and cost savings. Others are extending their workforce recruitment and training

<sup>1</sup> Source: Reserve Bank of Australia. Measured in chain volume terms manufactured exports grew at an annualised rate of 8.5% in the 1980s and at around 10.4% for the two decades to the end of 2000.

<sup>2</sup> In Ai Group's *Balancing the Risks: Building Australia's Economic Resilience*, December 2005, the extra loss of market share experienced by Australian exporters relative to those in the rest of the OECD is shown to be well explained by the rise of the Australian currency against the Trade Weighted Index.

programs to improve and sustain productivity, while still others are working closely along their domestic supply chains to extend the scope of these efficiency-seeking measures.

The efforts of manufacturers are not limited to sharpening operations in the domestic economy. Many manufacturers are looking to expand their presence in export markets; some are looking abroad for new, usually cheaper sources of supply; others are shifting production that has previously been domestically based (either in-house or outsourced in the local market) to offshore contractors; and others are investing directly abroad to take advantage of their capabilities in new markets and as a means of reducing costs.

Many of these strategies have accelerated in relevance with the rise in value of the domestic currency. While exporting from Australia is clearly not assisted by the rise of the currency, there is, nevertheless, a range of growing manufactured exports in areas such as medicinal and pharmaceutical products, precision instruments and a collection of manufactures hidden away in residual statistical categories that provide encouragement in the face of current adversities.<sup>3</sup>

The extent and variety of these global strategies point, in Ai Group's view, to a distinct new phase of global engagement on the part of Australia's manufacturers.

The local industry, including the local arms of foreign-owned multinational companies, is joining with manufacturers in other developed economies in the wave of new "outsourcing" and "off shoring" strategies. These strategies are driven by the desire to bring down costs and to regain and sustain competitive position. More than ever before Australian manufacturers are integrating themselves into global supply chains.

Australian manufacturers are also investing abroad. While a feature of Australia's broader economic development over the past couple of decades has been the offshore expansion by a number of Australian-based companies from a variety of sectors, the early years of the 21st century appear to be ushering in a new era of offshore investment in manufacturing from an Australian base. Since 2000, inbound investment into the sector, which has remained solid, has been overshadowed by outbound investments in manufacturing. In a reversal of long-established patterns, Australia is currently a net exporter of manufacturing investment.

The diverse strategies manufacturers are adopting are doing more than making Australian manufacturing leaner and more productive: they are challenging how we think of "Australian manufacturing" at two levels. First, the totality of Australian manufacturing can no longer be defined as Australian-sourced production as a greater share of production and inputs move offshore. Second, how we view and measure success and failure in the industry will need substantial revision. While measures such as manufacturing's share of GDP, growth in export earnings, and the number of people employed domestically will remain essential, these will need to be supplemented to capture overseas earnings, return to shareholders, and national benefits associated with Australian companies pursuing and realising opportunities offshore.

Alongside the innovative and adaptive strategies that are being undertaken by the majority of manufacturers, Ai Group has uncovered a significant proportion – about one-third - of manufacturing businesses that have not identified specific strategies to improve their businesses over the next few years. This is despite the fact that around 80% of all manufacturers record themselves as concerned about the prospects for manufacturing. Manufacturers that have not identified specific strategies to improve their businesses are predominantly smaller operations with less than 25 employees.

While this subset of manufacturers will include many with strong prospects, it also includes a significant proportion of businesses that are highly vulnerable in the face of the rapid changes in the manufacturing operating environment.

The rationalisation of the sector has brought, and may well bring further business closures, downsizings and labour shedding as business seeks new efficiencies.

For some workers, particularly those with high skill levels, the process of adjustment may be smooth. However, as the experience of earlier periods of restructuring has highlighted, many others with low skills will experience difficulty in finding suitable alternatives. To this end, there is a clear role for involvement by government agencies to improve on the experience with earlier phases of industrial restructuring by ensuring that such employees are informed and well-equipped to pursue alternative opportunities.

<sup>3</sup> These islands of growth in manufactured exports are discussed in Ai Group's, *Balancing the Risks: Building Australia's Economic Resilience*, December 2005. See also Barry Hughes' "Rise of new export stars", *Australian Financial Review*, 11 January 2006 and Tim Harcourt's "Now here's a shock – manufactured exports do have a future", *The Age*, 19 January 2006.



## Manufacturing's role in rebalancing the economy

Alongside the proactive efforts of producers to improve their businesses and to build new opportunities, the prospects of a lower dollar figure prominently in the hopes and expectations of many manufacturers. A restoration of the currency to more normal levels would stimulate domestic production and it would add to the ability of manufacturers to create new employment opportunities.

There is a more-than-reasonable probability that the dollar will retreat with a return to lower commodity prices. There are, however, critical uncertainties over how long the currency will remain high and how far back it will come.<sup>4</sup> Just as other sectors currently are drawing resources away from manufacturing – both directly and indirectly – looking ahead the sector will, once again, be called on to assist in rebalancing the economic structure as the steam goes out of the currently booming non-rural commodity and non-residential construction sectors.

The capacity of, and the speed with which, manufacturing will be able to fulfill this role will depend critically on the extent to which manufacturing capabilities are destroyed or displaced in the current phase of the cycle and the extent to which new capabilities are created and restored both in the lead-up to and during the rebalancing phase. Concerns over the lasting impacts of capability destruction and displacement are captured in terms such as “hollowing-out” and “loss of critical mass”. It is vital that, as areas of manufacturing do experience a diminution of capabilities, new capabilities are created and nurtured as a foundation of future successes.

## The role of government

While it is the industry itself that will lay the essential foundations for the future development of manufacturing, governments also have important roles.

Over the past couple of decades Australia has generally moved beyond a focus on industry-specific assistance. It is widely accepted that governments are not good at picking winners and that their involvement in these sorts of activities more often than not distorts and detracts from aggregate economic activity. At the same time, governments do have a role in facilitating, and in removing barriers to the responsiveness of the private sector.

The policy recommendations listed below are designed to help build a bigger and more robust economy. They are also aimed at better equipping the economy to adapt swiftly and effectively to shifts in economic circumstances. From the viewpoint of the current and prospective environment facing manufacturing, the policy recommendations are aimed at reinforcing the ability of the sector to build the capabilities that will underwrite its future growth. Critically these recommendations will improve the ability of manufacturers to assist the efficient rebalancing of the domestic economy as current boom conditions evident in the minerals and construction sectors recede.

The specific proposals include:

### *Building strength through capital investment*

1. A phased reduction in the company tax rate from 30% to 25% over a five-year period;
2. A thorough review of Australia's tax regime on investment compared with our trading partners and competitors to be undertaken by Ai Group; and
3. Invest Australia should be provided with additional flexibility to support multinational corporations who wish to continue to invest in Australia.

### *Measures to further globalise Australia industry*

4. Continued pursuit of trade liberalisation at the multilateral, regional and bilateral levels in order to pursue market access for Australian manufacturers;
5. Improved visa arrangements to ensure access to foreign markets by Australian skilled workers;
6. Expanding Australia's skilled migration program to assist the growth of Australia's skills base in support of domestic measures to address skills shortages;
7. Doubling the funding for, and implementing changes to the eligibility criteria of, the Export Market Development Grant (EMDG) Scheme, as well as examination of the reforms to administration that improve access for small and medium-sized enterprises; and
8. Changes to Australia's dividend imputation system so that it does not impede the ability of Australian companies to seek capital for offshore expansion.

### *Building world class capabilities*

9. Implementation of a whole-of-government strategy to lift business capability by: providing advisers that are able to assist business with growth strategies and link them to industry and government initiatives available to support their business plans;
10. The Building Capability Initiative being also

<sup>4</sup> See a more detailed discussion of factors that will influence the pace and extent of the currency correction in Ai Group's *Balancing the Risks: Building Australia's Economic Resilience*, December 2005.



charged with assisting enterprises to develop skill development strategies; and

11. The development of regional and industry collaboration networks nationally.

***A more skilful global competitor***

12. Increasing the focus of the training system in the upskilling of existing workers;
13. Increasing the overall spending on education and training;
14. Improved access to recognition of skills for existing employees;
15. Extending and refining incentive payments to employers;
16. Making Science and Engineering undergraduate programs a National Priority for concessional HECS eligibility; and
17. Broadening tax eligibility for self-education expenses for learning beyond current career.

***Loosening the shackles of government red tape***

18. Adoption of improved measures of the impacts of compliance burdens including private and public sector administrative costs; effective of regulations in achieving explicit goals and the opportunity costs of regulation-induced behavioural changes;
19. Commitment to reducing the compliance burden by 15% over three years;
20. Streamlining the application process for government grants through a two-tier approval process, with a greater focus on performance outcomes.
21. Introduction of an annual Regulatory Implementation Bills/Ordinances by all tiers of government to facilitate a annual regulatory reduction process;
22. Establishment of a Regulatory Review Unit operating with an independent Board to oversee the implementation of targets for review of institutional arrangements;
23. Regulation Impact Statements should be revitalised and expanded; and
24. A uniform national premium and national standards to be established for workers' compensation through the new Australian Safety and Compensation Council with a commitment to implement by 2010.

***A more innovative global competitor***

25. The Commercial Ready program is too recent to review, however, support is provided to the

Australian Government's decision to review the R&D tax concession;

26. Making the R&D tax concession more effective by allowing companies to credit their franking accounts by the amount of company tax saved as a result of the concession; and
27. Improving linkages between business and public sector research including addressing barriers to public/private research collaboration;
28. Improving access for Australian companies to tax concessions and grants for offshore research and development activities that benefit the national economy, by scrapping the current cap on overseas R&D; and
29. A grant scheme should be introduced to support small to medium enterprises in meeting the professional costs associated with intellectual property protection, particularly in overseas markets.

In addition to the policy directions recommended, Ai Group continues to support existing industry-specific programs, such as in the automotive and textiles industries. These programs have clear timelines attached and their continuity is an important element in the readjustment process to lower tariffs in these industries.

## Key highlights

“We’ve redesigned, we’ve developed new products and to try to get a foothold on this flood, we’ve sourced a lot of our raw materials from a couple of low cost countries. We’ve substantially increased our service to customers and increased speed of response... there’s probably improvement we can make, we’re down there trying.”

Sydney metal fabricator

- **Manufacturing Futures** addresses the future direction of Australian manufacturing, which in recent times has been subject to intense global competition, the emergence of China and an uncompetitive currency.
- It is not surprising given these dynamics that many manufacturing firms hold a high degree of uncertainty about the future. One-third of companies indicate they are very concerned about Australian manufacturing prospects. The major sources of concern were: competition from low cost countries (61% of companies); insufficient domestic market growth (49% of firms) inability to secure skilled staff (46% of firms); insufficient labour flexibility (35% of companies); and inability to keep pace with regulations (34% of firms).
- Despite the uncertainty, the overriding message is that manufacturers are building the foundations of a new phase of success that will equip the sector for future growth.
- The study identifies a new level of global engagement by Australian manufacturers. Globalisation has accelerated in pace with the percentage of manufacturing activity derived offshore (either from offshore production or use of imported materials) expected to increase from 15% to 25% over the next three years.
- Priority strategies being implemented by companies include: deriving greater income from new products (19.5% very likely to implement); using more imported components (17.5% very likely to implement), outsourcing more offshore (16% very likely to implement) and spending more on skills acquisition (13% very likely to implement). Middle order strategies include spending more on capital equipment, R&D and generating greater income from export markets (between 10 –13% very likely to implement).
- However, an important one-third of manufacturers have not identified new strategies to meet the current challenges identifying the potential to lift business capability.
- Industry recognises competitiveness will be a function of the strategies each company implements but see a role for Governments in removing obstacles and facilitating business efforts to improve competitiveness.
- In the view of industry, the highest importance in relation to action by government (with over half of firms strongly agreeing) were better company tax and depreciation arrangements and reducing business regulation. Also important were enhancing skill development (with over 38% strongly agreeing).
- Ai Group proposes five objectives for government action: building strength through capital investment; measures to further globalise Australian industry; building world class capabilities; a more skilful global competitor; loosening the shackles of government red tape; and a more innovative global innovator.

Australian manufacturers, irrespective of their size, focus and ownership, are now saying “we must be global to survive”.

# Introduction



Following on from the clear successes over the decade and a half from the mid-1980s, Australian manufacturers have entered a new, challenging phase of development.

Manufacturers, whether they are small family enterprises, a listed Australian company or an affiliate of an overseas entity, are facing intense competition for market share both domestically and in the export markets they fought so hard to develop in the 1980s and 1990s. These challenges are occurring against the backdrop of profound structural shifts in the global economy.

The Chinese dragon, now well and truly awake, is shaking the world and manufacturing in particular. With India following almost as rapidly, we are witnessing both a sharp boost to the quantity of world production and an accelerating shift in the balance of global economic activity. Thus, while global growth is strong, the established OECD economic powerhouses are finding their export market shares falling from the growth of Chinese manufacturing and Indian services industries.

In Australia, these forces are compounded as new sources of demand – mainly from China and India – have leapt ahead of supply, pushing commodity prices and the Australian dollar higher.

As Ai Group has argued in previous reports, the twin pressures of China and the currency, combined with shortages of skilled labour, a faster pace of import competition, input price pressures and growing tax and regulatory burdens, are accelerating a deep reorientation of manufacturing strategies.

This reorientation has a number of elements. Australian manufacturers are to be found among the drivers of a new wave of globalisation. They are playing this role as they:

- take advantage of the cost competitiveness of the emerging economies by outsourcing significant segments of activity to these centres;
- position themselves to take advantage of surging purchasing power in the rapidly growing economies; and
- invest around the globe in new ventures.

Australian manufacturers are also creating new capabilities to apply both domestically and as part of their global engagement. Manufacturers are:

- investing in skill creation and supplementation;
- automating production;

- investing in research and development;
- developing new products, services and processes; and
- restructuring business operations - both internally and throughout their supply chains.

“We are no longer an Australian company, but a global company based in Australia.”

Wollongong metal manufacturer

Manufacturers are no longer saying “we must export to survive”. This strategy may have provided the foundation for success in the sector’s post-tariff phase of development, but in the contemporary environment exporting is only one dimension of a strategy of broader global engagement.

Australian manufacturers, irrespective of their size, focus and ownership, are now saying “we must be global to survive”. Selling globally (exporting) remains important but so too is business engagement in the global opportunities for innovation, production and investment. As well, with high levels of import penetration, many domestic-based manufacturers are finding the need to act globally as well, looking to use more imported materials, build global supply chains, and invest in new technology to lower labour costs.

The future of Australian manufacturing will be determined by the extent to which all manufacturers are able to maintain their “fitness” to win and compete in the global marketplace, whether this is in domestic markets or overseas.

As a consequence, manufacturers are transforming their own industry and laying the foundation for a new wave of manufacturing success. They are also forcing a re-consideration of Australian manufacturing, its role in the domestic economy and its engagement in the ever-intensifying globalisation of economic activity.

Unquestionably, an increasing share of the future growth of Australian manufacturing incomes will be driven by the utilisation of Australian capabilities abroad. Australian engineering and design will combine with the low-cost manufacturing attributes of the emerging economies. Companies will earn more income abroad from the investments they make to add value in rapidly growing markets.

Many of these achievements will not be reflected in the contribution of manufacturing to Australian Gross Domestic Product (GDP); in the level of domestic

employment in manufacturing or even in the quantity of manufactured exports from Australia. Instead, some of these leading achievements will be reflected in the incomes earned abroad by highly skilled Australians; in dividends repatriated to the Australian shareholders of companies with multinational operations and in the share of global production undertaken by Australian-based multinational manufacturers.

These developments call for a rethink of the way we conceptualise manufacturing and they call for a rethink of policy directions. The present study is aimed at assisting the process of repositioning Australian manufacturing and government policy.

As with all upheavals, these transformations are not without their downsides. Many manufacturers are struggling in the changed environment. They find themselves under severe pressure to compete with goods manufactured at much lower cost abroad and they do not see how they will be able to regain lost export share even when the dollar returns to more competitive levels.

The manufacturing workforce will also continue to face a period of rapid change. This applies both in companies that are successfully re-orientating their businesses and in the concerns that are threatened and less well-positioned for a makeover. While the economy-wide shortage of skilled workers means there is considerable scope for alternative opportunities for many of these employees, for many others the future is considerably less certain.

In order to better understand the transformations underway in Australian manufacturing and to support companies and their workforces through this process, Ai Group has embarked on this present review. This is occurring almost eight years after our landmark study, *Make or Break, 7 Steps to Make Australia Rich Again* (1997). *Make or Break* highlighted how globalisation had started the process of change in Australian manufacturing. That process is now well advanced, and the changes forecast by the report have now become a reality – increasing use of imported materials, greater offshore production, a focus on domestic marketing and distribution, and progress on lifting export intensity, although this progress appears to have slowed.

*Manufacturing Futures* picks up the story at the start of 2006, with Australian manufacturing becoming more fully integrated into the global marketplace, and with new forces emerging that were absent in the mid-1990s.

This report is divided into five parts: an outline of the competitive forces at work; how manufacturers see their future; a review of what companies are doing to build global competitiveness, including their planned activities; industry's views on the role of government; and policy directions for the future.

This report combines new research with the considerable body of research Ai Group has carried out over the last two years. The new research involved close collaboration with Ai Group's manufacturing members and wider manufacturing industry. This collaboration took three forms:

- Consultations were undertaken throughout September 2005 with member companies. Nine workshops were conducted in New South Wales, Victoria and Queensland, covering both metropolitan and regional companies, with over 200 business leaders participating in discussions (Appendix 1). These workshops were supported by the release and distribution of a discussion paper, *Manufacturing Futures: competing and winning in the global economy*.
- A survey of over 800 companies in all states, based on a random sample of companies across all major manufacturing sectors and states, was undertaken in late August/early September 2005 to gauge companies' views on their future. The companies in the survey have an annual turnover of around \$50 billion, representing about 15% of total manufacturing activity. Around 38% of the respondents were companies with 25 or less employees (small); 34% were medium-sized firms; and 18% large firms, employing more than 100 people (with the remaining 10% not identifying employee numbers).
- Finally, in-depth interviews were conducted in October and November 2005 with around 20 large manufacturing companies in Sydney and Melbourne, roughly equally divided between Australian-owned firms and affiliates of multinational corporations.

As well, work currently underway by the Allen Consulting Group as part of an Ai Group initiative with funding from the Commonwealth, Victorian and Queensland governments to examine the future skills needs of industry, titled *World Class Skills for World Class Industries*, was fed into the analysis.

Ai Group thanks the hundreds of companies who gave their time to participate in the consultations and surveys that underpin this report.







# The dynamics of change

Australian manufacturing  
operates in one of the  
most globally exposed  
markets in the world.

The manufacturing sector remains the largest sector of the Australian economy, currently accounting for around 13% of annual value added activity (excluding ownership of property).

Annual manufacturing sales (in chain volume terms) are broadly estimated to be around \$290 billion a year, having grown from around \$230 billion a decade ago (Figure 1). Like the economy overall, the sector has sustained 13 years of continuous sales growth, although in the previous financial year (2004/5), the sector experienced falling sales volumes. Nevertheless, the rest of the economy generally outperformed the sector. As a consequence, the sector's share of the economy has fallen from 15% a decade ago, and from 18% two decades ago.

Relative to other developed economies, Australia's manufacturing sector is quite small. As a share of GDP in 2003, the manufacturing sector constituted around 20% of the Italian economy, 14% of the United States economy, 17% of the United Kingdom economy, and almost 19% of the New Zealand economy.

The share of manufacturing is also significantly lower than many of the emerging Asian giants, with

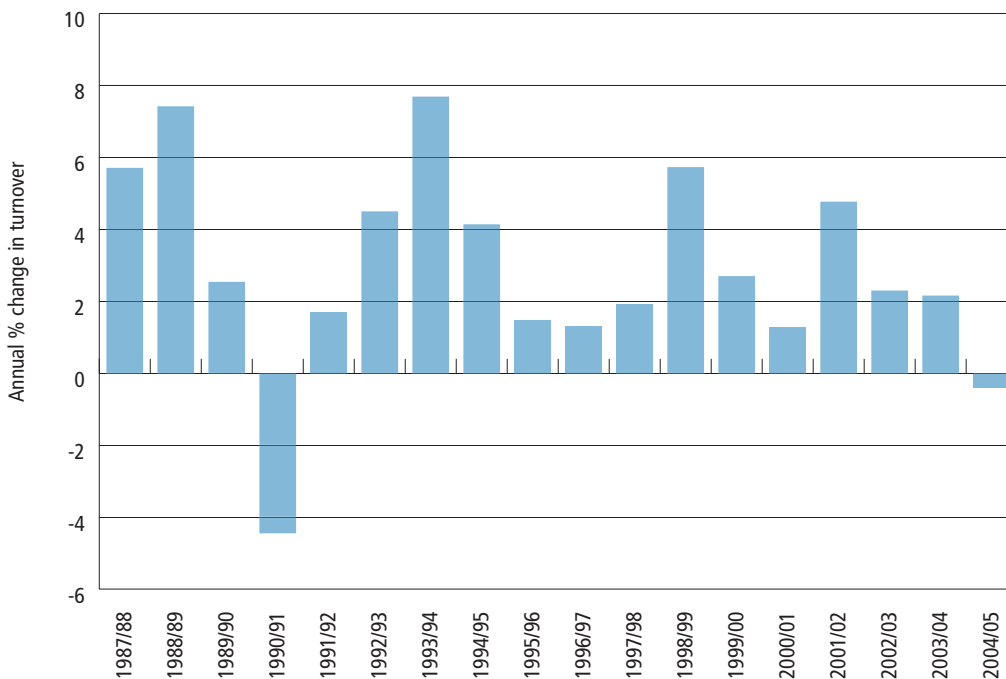
manufacturing constituting 39% of the Chinese economy, 31% of the Malaysian economy, and 25% of the Indonesian economy.<sup>5</sup>

Despite its small size by international standards, and its predominance of firms in the medium to low technology spectrum, Australia's manufacturing sector makes a very significant contribution to the Australian economy. It is the largest employer, makes up the largest component of business research and development, accounts for the largest share of merchandise exports (by industry of origin), and makes a significant contribution to Australia's capital stock.

As a general rule, every \$1 generated from the manufacturing sector flows through to an additional \$1.25 expenditure in the rest of the economy (the multiplier effect).

Australian manufacturers operate in one of the most globally exposed markets in the world. Given that multinational corporations figure prominently in the business landscape of Australia, this is not surprising, as these corporations are often leading the charge to respond to global pressures and are taking advantage of

**Figure 1 Annual growth in manufacturing sales, chain volume terms**



Source: Australian Bureau of Statistics, Business Indicators, Australia, 5676.0

<sup>5</sup> The World Bank, World Development Indicators, Washington, 2005



global supply chains to maximise their efficiencies. In turn, the actions of multinational corporations impact on related suppliers and businesses, which are also required to be globally competitive.

There are around 2,300 affiliates of over 680 overseas-owned corporations based in Australia. Many are affiliates of US corporations, with one-third of the top 200 foreign owned companies being US-owned. While they constitute less than 0.3% of all Australian business, they exert a powerful influence on the overall economy, with an operating income of over \$300 billion in 2001, accounting for 23.7% of the total operating income of business<sup>6</sup>. These companies account for over 40% of business expenditure on research and development (45% for manufacturing) and over 40% of manufactured exports.<sup>7</sup>

The strong presence of multinational corporations is acting to draw Australian-owned companies more rapidly into integrated regional and global production strategies, including the need for cost-downs, greater use of global supply chains, pressure to source low cost imports, and moving production closer to offshore markets. These developments have heightened competition and accelerated the need for change.

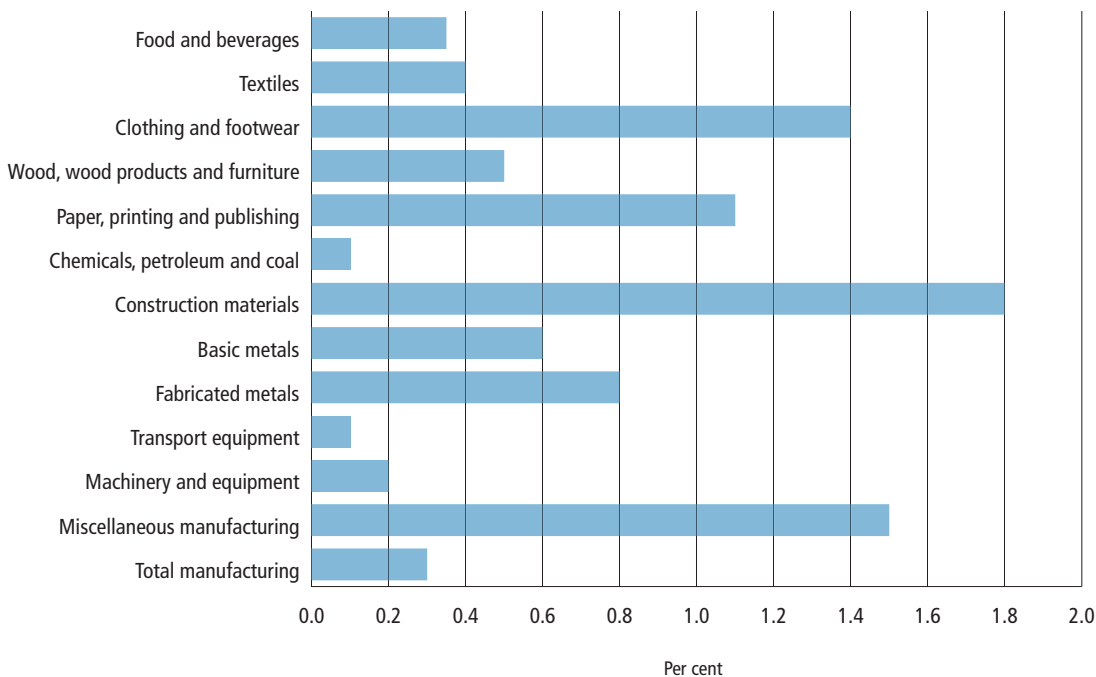
Manufacturing is at yet another critical turning point in its development. It is being shaped by a combination of interacting short and medium term influences. For example, while the Australian currency may be seen as a short term influence, the sustained period of Australian dollar strength is turning this into a medium term influence, shaping the nature of activity and competition. Similarly, skills shortages reflect both the strength of business activity up to the start of 2005, as well some fundamental changes in composition.

The following provides an outline of the main dynamics of change.

### An uncompetitive currency

The World Economic Forum (WEF) in its most recent release of the *Global Competitiveness Report* stated that despite Australia's solid performance, rising four places to 10th out of 117 countries, "a possible source of concern in this otherwise bright outlook is the strength of the currency which suggests the need to continue to implement structural reforms to improve productivity"<sup>8</sup>.

Figure 2 Loss of export earnings from Australian dollar appreciation



Source: Ai Group, Aussie Dollar Challenges Manufacturing Competitiveness, January 2004, p11

<sup>6</sup> Department of Foreign Affairs and Trade, Australia and the United States, DFAT, 2005, p.3

<sup>7</sup> Department of Industry, Tourism and Resources, Mapping Australian Science and Innovation, 2003; Australian Bureau of Statistics, Foreign Ownership of Australian Exporters and Importers, 2004;

<sup>8</sup> Australian media release to World Economic Forum, Global Competitiveness

“You can work your guts out to improve labour productivity, but the benefits can be just as quickly wiped out by the dollar.”

“We can compete on quality, on low batch sizes, and on meeting customers’ wishes, but we can’t compete on price and the biggest sole reason is the currency.”

“The dollar screws around with profitability more than any of these other factors... It is forcing us to become more strategic in the currencies and the markets in which we deal.”

Melbourne manufacturers

Compared to the average level of the Australian dollar since 1990, the WEF noted that in 2005 the Australian dollar was 14.7% higher than its average level since 1990. It ranked Australia’s currency as 113 out of 117 in

terms of being a competitive currency, a significant drag on Australia’s performance.

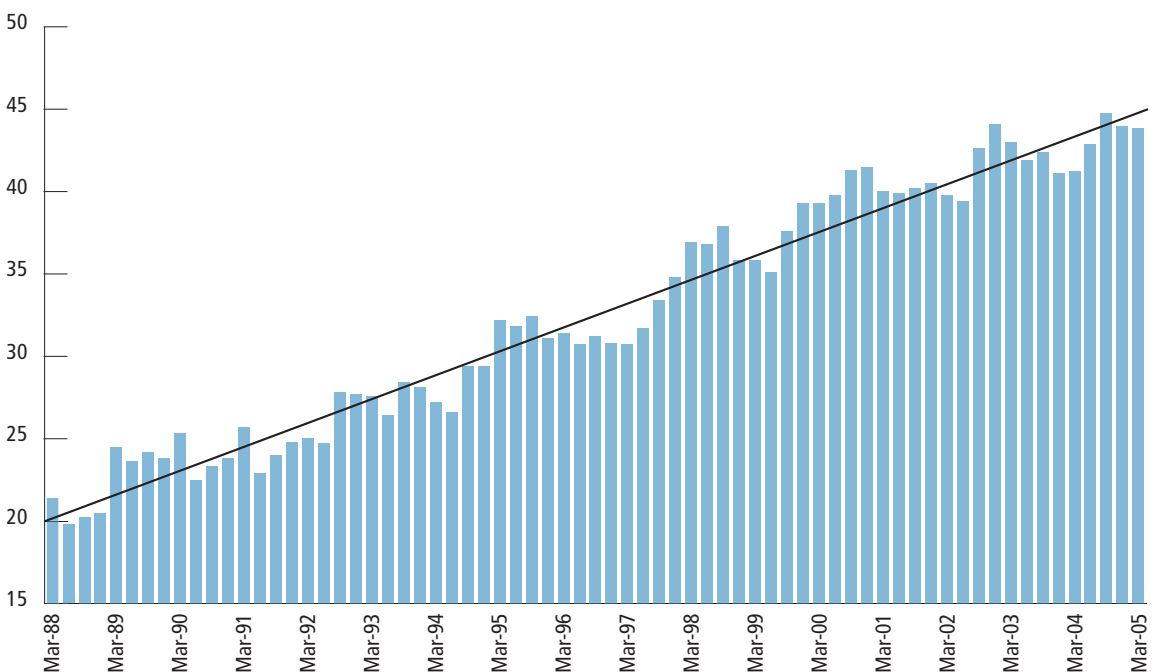
The implications of a high Australian dollar for manufactured exports and growth was highlighted in an Ai Group report, *Aussie Dollar Challenges Manufacturing Competitiveness* (2004).

The study found the US\$0.70 mark was a critical point for the manufacturing sector as a whole. At this level, our most sophisticated manufactured exports become uncompetitive on world markets, and for basic manufacturers, the exchange rate threshold is even lower.

The study found that for each one cent appreciation of the Australian dollar against the US dollar, export earnings for manufacturing overall were reduced by around 0.3 per cent. This amounts to an annual loss of \$210 million for every one cent appreciation (Figure 2).

Those sectors with export earnings highly sensitive to upward movements in the Australian dollar include clothing and footwear; fabricated metal products; basic metal products; construction material products; paper, printing and publishing; and miscellaneous manufacturing. Sectors with less sensitivity to

**Figure 3 Imports as a percentage of manufacturing sales**



Sources: Derived from ABS publications, Business Indicators, Australia, 5676.0 and International Merchandise Imports, 5439.0

movements in the value of the Australian dollar include chemicals, petroleum and coal products; transport equipment; and machinery and equipment. These sectors are generally involved in the production of more elaborate manufactured products.

The strength of the Australian currency is partly a consequence of the commodity boom (with the emergence of China) and the impact it has had on Australia's terms of trade.

The terms of trade measures the movement in Australia's export prices relative to import prices. Like the 1970s, Australia's terms of trade is near record levels. It has benefited the Australian economy overall by raising the spending power of the nation, and has benefited economic activity related to minerals and resources. However, manufacturers have been hurt through a higher dollar, a squeeze on selling prices and margins. As a recent Australian Treasury paper acknowledged, "if the economic environment is generating a sizeable boom in one part of the economy, significant restraint needs to be imposed on other parts to ensure that the economy overall does not overheat"<sup>9</sup>

### A faster pace of import competition

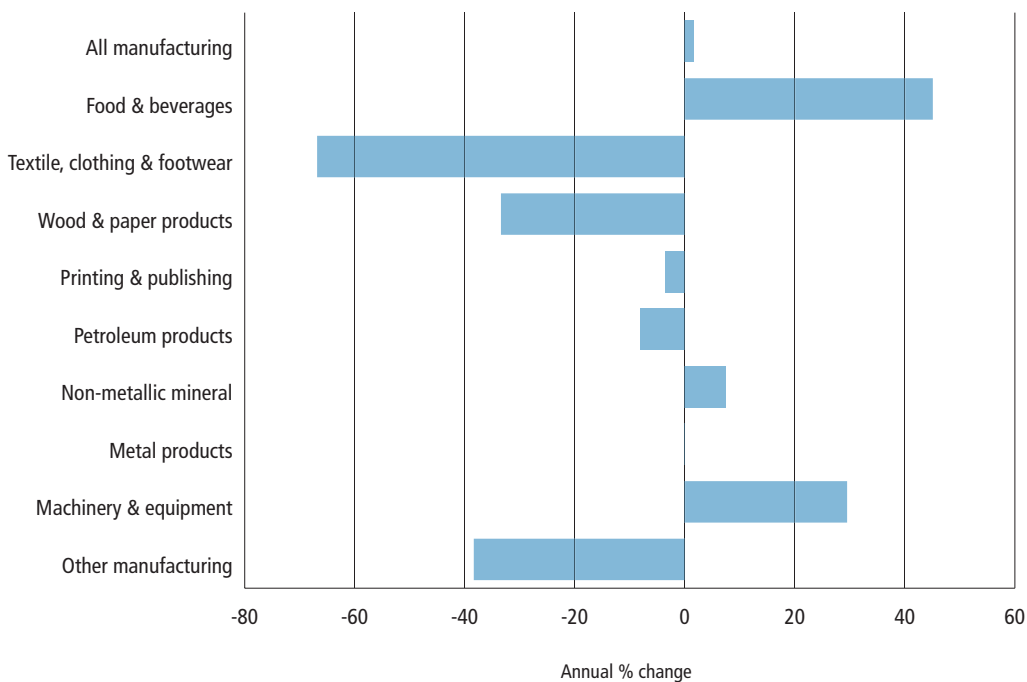
The higher Australian dollar has been doubly felt by manufacturers through its impact on import penetration. Companies faced much stronger global competition than they did almost a decade ago. Figure 3 shows how imports of manufactured goods have grown, equivalent to about 44% of manufacturing sales in 2005 compared with 27% a decade ago.

"Once we would come up with a cost for an item of let's say \$10, we're now expected to come up with a price at around about \$6 to match global competition, which is usually from a low cost country, and/or a plan to get to that level."

Bendigo auto component manufacturer

The rapid increase in import penetration has been driven by falling prices. Since the start of 2002, prices of imported final products have fallen in 11 of the 14

Figure 4 Annual change in manufacturing profits, June 2005



Source: Australian Bureau of Statistics, Business Indicators, Australia, 5676.0

<sup>9</sup> Given, D, "A Tale of Two Terms-of-Trade booms", Address to Economy 2006, Australian Treasury, P7

quarters (to June quarter 2005). For manufacturing, over the same period, the price of manufactured goods (SITC 6) has declined by 9.8%; chemical products (SITC 5) by 11.5%; machinery and transport equipment (SITC 7) by 27.5%; and miscellaneous manufactures (SITC 8) by 25%.

**The squeeze on margins**

The squeeze on manufacturers’ margins was examined in Ai Group’s report, *The Surge in Manufacturers’ Input Costs* (August 2005). The study confirmed substantial increases in a wide range of manufacturing input costs over the previous year, and across all 12 major sectors. Manufacturers absorbed over half of these cost increases. While a majority of companies raised selling prices, the increases generally lagged the rises in costs. A significant proportion of manufacturers was unable or unwilling to increase prices, and even lowered prices.

Despite a substantial majority of manufacturers lifting selling prices, and the implementation of other measures to counter the impact of rising costs, the study found there had been a clear deterioration in manufacturing profit margins in the past year.

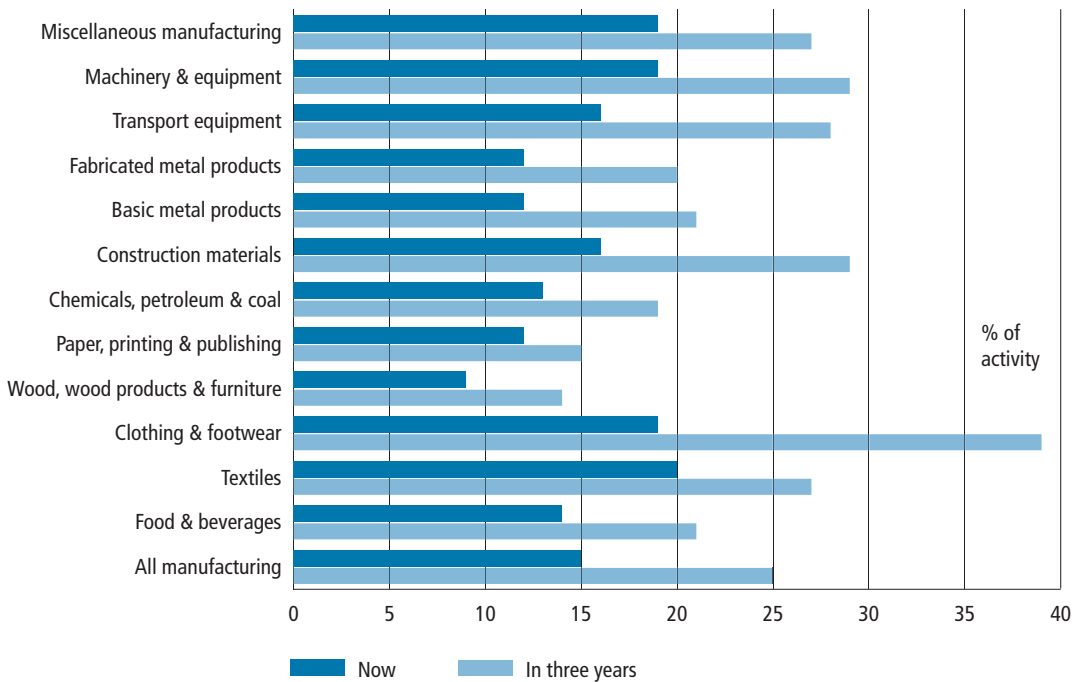
The latest official data shows company profits before income tax in the manufacturing sector grew by just 1.7% in trend terms over the year to the June quarter 2005 (Figure 4). It was the weakest annual increase since 2000/01 and well down on 12 months ago, when manufacturing profits were growing by 32.7%. By comparison, pre-tax company profits in the remainder of the economy (excluding manufacturing) increased by 13.2% over the same period.

The aggregate increase in manufacturing profits was largely attributable to the food and beverages manufacturers (the largest sub-sector), where pre-tax profits jumped by 45.1% over the year. Excluding this sub-sector, manufacturing profits actually fell by 8.8% over 2004/05.

Across the nine manufacturing sub-sectors, only food and beverages, machinery and equipment, and non-metallic mineral product manufacturers reported profit growth in trend terms in the same period.

Profits fell in six of the nine manufacturing sub-sectors in 2004/05, with the worst declines experienced in textiles, clothing and footwear (down 66.8%), other

**Figure 5 Percentage of activity derived from offshore production**



Source: Ai Group, Survey on Manufacturing Futures, September 2005

manufacturing (down 33.4%), and wood and paper manufacturing (down 33.4%)<sup>10</sup>.

“The major retailers and brand owners are putting pressure on (our) customers in terms of product positioning. It has big implications for our customers and for us. If the brand owners can get new products more cheaply from overseas, then they’ll tend to do that.”

Melbourne packaging manufacturer

## Global sourcing and supply chains

McKinsey has referred to a third wave of globalisation that has seen outsourcing move from companies in developing countries taking advantage of wage differentials to establish offshore facilities (and then export the finished product back home), to companies specialising in component production and final assembly in the countries or regions with the strongest comparative advantage (and then sell within these markets). This is most typified in recent times by Australia’s automotive manufacturers who are adopting global sourcing arrangements and buying components from China, Thailand, US, Europe, Mexico and a range of other countries. As McKinsey states, “business-process offshoring is all the rage, and the hundreds of companies that have taken this route often cut their costs by as much as half”<sup>11</sup>.

With the wages of a manufacturing worker in a low cost country frequently a fraction of the cost of an Australian worker, the pressure of cost-downs and falling prices for manufactured goods has heightened the drift to outsourcing, particularly when the production process involves a high labour content.

Figure 5 shows the percentage of manufacturing activity derived from offshore activity is expected to accelerate over the next three years. Offshore activity can consist of two elements – production of final goods overseas or the use of imported components or materials in domestic production. The results are based on Ai Group’s recent national survey on manufacturing futures. In total, about 15% of manufacturing activity was reported as being sourced overseas, with the textiles, clothing and footwear; machinery and equipment; and miscellaneous manufacturing sub-sectors making the greatest use of offshore production. In three years’ time, the percentage of offshore production is expected to rise to 25%. Offshoring is expected to be spread more

evenly across the sub-sectors of manufacturing, with construction material products and transport equipment manufacturing lifting their intensity.

The move to greater offshoring has the potential to lower costs of production, improve competitiveness, enhance productivity and free workers to undertake more technically complex and sophisticated roles. Companies not participating in offshoring in one form or another may well struggle to remain competitive, which could contribute to further industry restructuring and downward pressure on employment levels.

“We can’t compete here, it isn’t on a level playing field, it is too hard, workers’ comp, public liability, unfair dismissal, taxation, the list just goes on and on and on. We decided that we would invest in our future and we’re now a global manufacturer... For us, our competitive strength was in developing overseas capacity, taking advantage of labour efficiencies, investing heavily into that and equally we invest heavily into R&D.”

Sydney tool manufacturer

## The emergence of China

For Australian manufacturers, China is a major force. The transformation underway in the Chinese economy, while providing Australian manufacturers with opportunities, has also presented major challenges.

“And if I just rattle off a few things that come to my mind, petrol in China three weeks ago when I was there was only 80c a litre. Here we were paying at the time \$1.20. By Monday morning at lunchtime I’ve paid my worker what the Chinese guys are going to pay in the month. We have the second dearest interest rates in the world.”

Ballarat fabricated metals manufacturer

Over the past decade, Australia’s exports to China have grown by 15% a year (currently valued at \$11 billion).

<sup>10</sup> Australian Bureau of Statistics, Business Indicators, Australia, June quarter 2005

<sup>11</sup> Agrawal, V, Farrell, D and Remes, J K, “Offshoring and beyond”, McKinsey Quarterly, 2003 Special Edition, p.25

These exports are dominated by raw materials such as iron ore, wool, aluminum, coal and petroleum. Imports to Australia from China, however, have grown by an average of over 20% a year for the last decade (valued at more than \$18 billion in 2004) and are comprised mostly of manufactured goods.

China’s manufacturing sector has been growing rapidly over the last decade - on average around 12% a year<sup>12</sup> since 1990, compared with around 2% for Australia (measured in annual value terms). As well, as Figure 6 highlights, China’s manufacturing sector constitutes about 39% of its economy.

In August 2004, Ai Group released a report examining the implications of China on Australian manufacturing, titled *Australian Manufacturing: Opportunities and Challenges*. The study found over 68% of firms surveyed had been affected by China in either customer or supplier markets. While some had benefited from China’s emergence as an export market and as a source of low cost inputs, China was having an overall negative net impact on activity and profits through its competitiveness in the domestic and export markets of Australian firms. It was estimated that the net financial

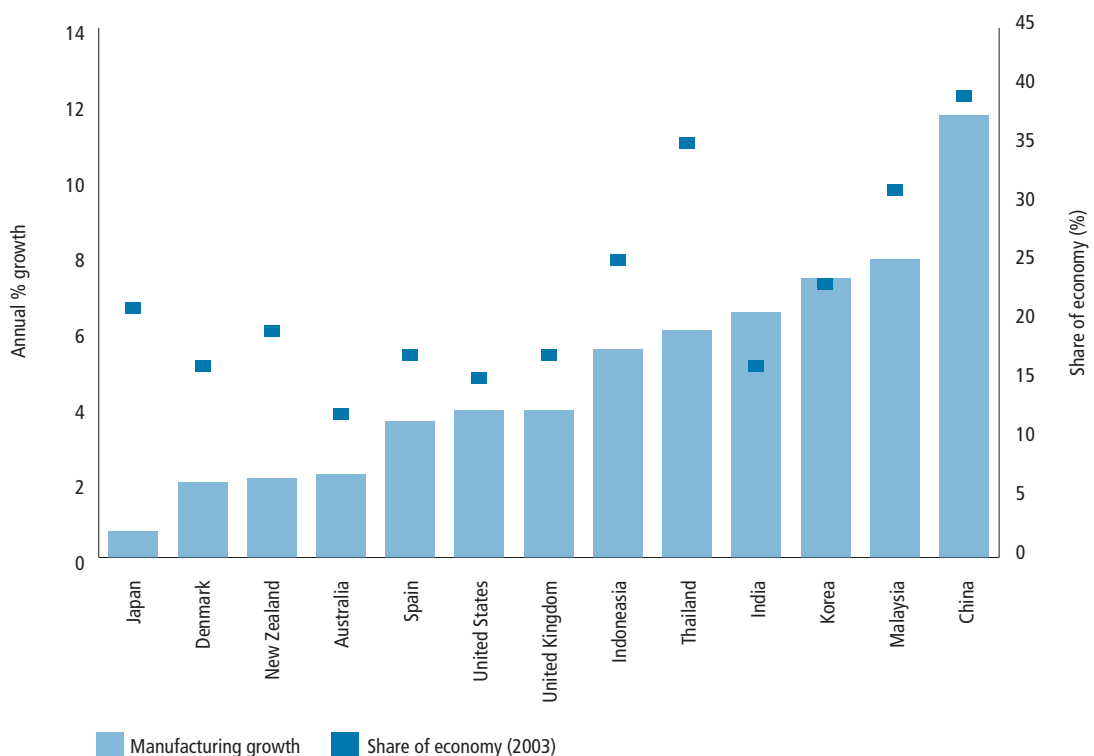
loss to manufacturers was in the order of \$560 million in 2004.

“We’ll be looking to capitalise on China, particularly through developing higher quality products as its consumers become more sophisticated. Our strategies are now incorporating low cost inputs being sourced from China, as well as investing in developing a Chinese market for exports.”

Melbourne food and beverage manufacturer

Firms are aggressively responding to the opportunities and confronting the challenges presented by China, with around 88% of firms implementing some change to company strategies. The most frequent responses were an accelerated pursuit of production efficiencies (39% of firms); sourcing more imports from China for use in domestic production (32%); accelerating the adoption of new technologies (30%); and moving up or down the company’s supply chain.

**Figure 6 Manufacturing growth in selected countries**



Source: The World Bank, World Development Indicators, 2005

<sup>12</sup> World Bank. Notes data relates to the period 1990 to 1997

### Weakness in manufactured export growth

Related to the emergence of China is the impact it and the strong Australian dollar are having on Australia’s manufactured exports, in terms of contributing to a declining share of world trade and significantly lower volume growth compared with the last decade.

The Reserve Bank of Australia, in its analysis of Australia’s manufactured exports, contrasted the strong performance of the 1990s, when the Australian dollar value of manufactured exports grew by an average of 12% a year, with the period 2000 to 2004 when exports grew by an average of under 3%. This is in contrast to China, where growth in manufactured exports accelerated from around 17% to 26% a year respectively.

The decline in manufactured export growth since 2000 has also been experienced by other developed countries, including the USA, UK and Canada, highlighting China’s impact in global manufactured goods markets. This has contributed to a decline in global export market share. The OECD has estimated that since 2001 Australian exporters have lost a fifth of their previous market share.

While other industrialised OECD economies have lost market share to China and other emerging producers, the loss has been much greater for Australia. Thus over the same four years, the average OECD economy has lost market share to the tune of nearly six percentage points. Australia appears to have suffered proportionately more than three times the inroads of the average economy<sup>13</sup>.

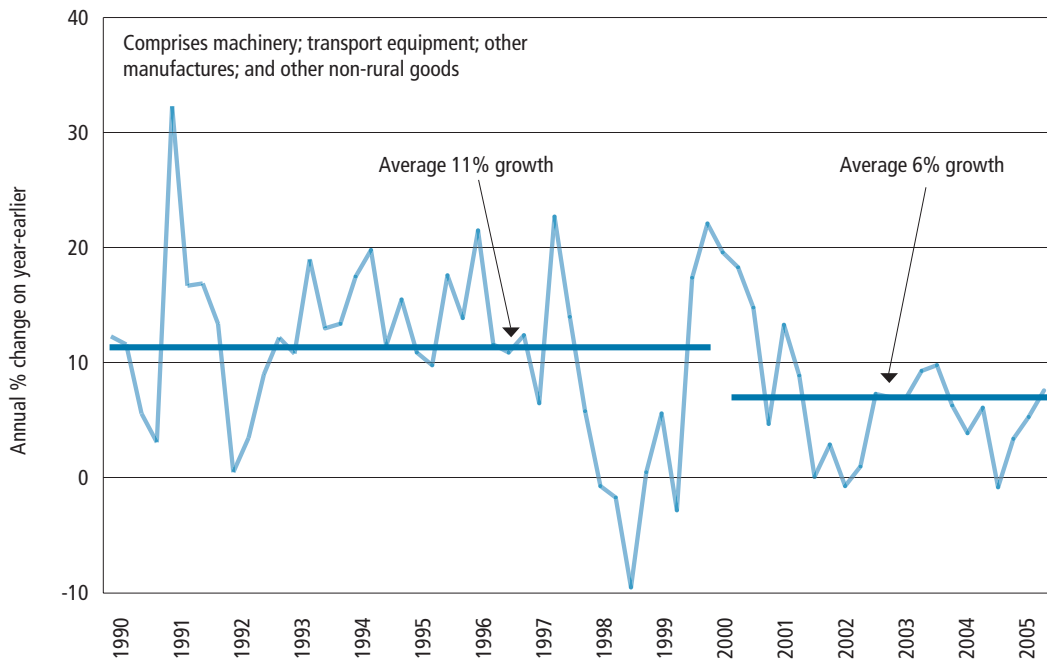
More recent export data (June quarter 2005) have highlighted some improvement in manufactured export volumes growth at 7.5% (Figure 7). Despite this, the total value of manufactured exports in money terms remains around \$2 billion below the peak of November 2001, when manufactured exports totalled over \$70 billion.

### A net outflow of manufacturing investment

The increasing global integration of Australian manufacturing reflects more than changes in the balance of trade in manufactured goods.

Inward-bound foreign investment has long played a critical role in the development of Australian manufacturing, providing local industry with capital,

Figure 7 Manufacturing export growth in volume terms



Source: ABS, Balance of Payments and International Investment Position, Australia, 5302

<sup>13</sup> Ai Group, Balancing the Risks, Economic Brief, December 2005

technology and access to international markets. As Figure 8 reveals, net foreign investment in Australian manufacturing averaged 0.8% of GDP between 1989 and 1995 (and most likely the continuation of a broadly similar trend in place since at least the mid-1940s).

“Exports are limited because a lot of the countries that we have to compete against have protection barriers still in place ... We’ve gone to the extent now of actually shifting part of our production to Spain in order to get away from that. And we’ve done some of it in Thailand, and well, quite frankly, if it’s the only way that companies are going to be able to survive, I think that’s where we are going to go.”

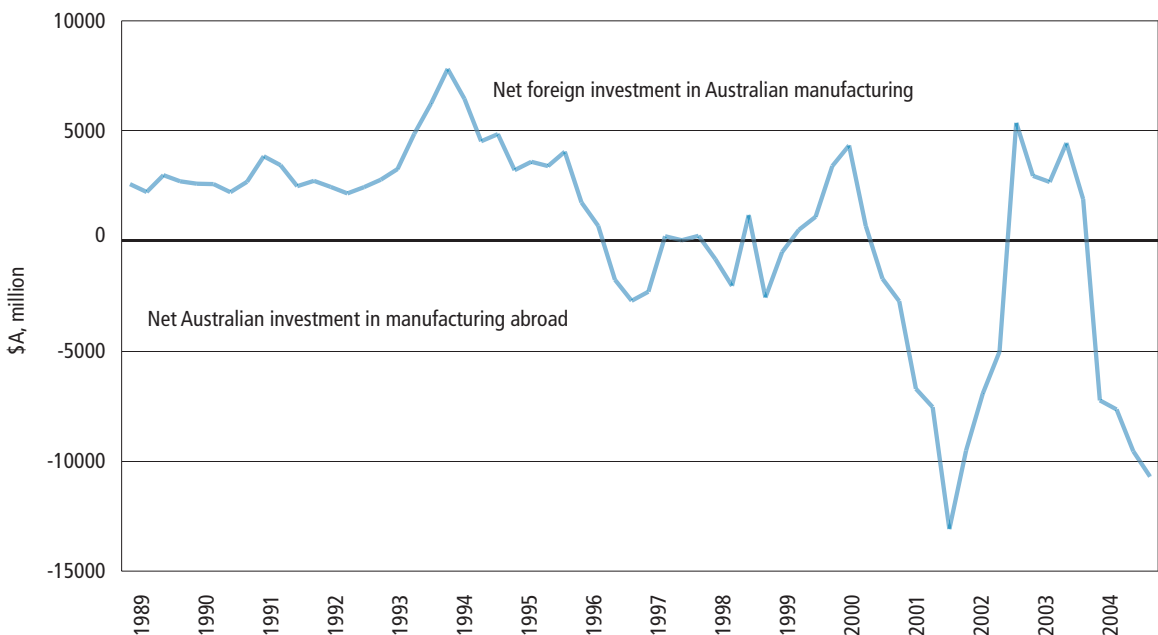
Geelong food processor

Importantly, the ABS notes a proportion of this investment has been for the purpose of establishing regional headquarters in the Asia-Pacific region. And, to this end, it appears to have been a major factor behind the strong growth in manufactured goods exports during the 1990s. Indeed, fewer than 600 local affiliates of internationally owned companies produced over 40% of Australian manufactured goods exports in 2002/03.

Since the middle of the previous decade, however, the pattern of international investment in Australian manufacturing has shifted markedly. If anything, Figure 8 reveals Australia in the mid-2000s became a net investor in manufacturing offshore. While sharp exchange rate movements demand a cautious interpretation of the data, there has been a steady increase in Australian manufacturing investment offshore since the turn of the decade (indeed, the rapid appreciation of the Australian dollar in 2002 and 2003 would probably understate the foreign currency value of assets acquired in the past two years).

In an increasingly open and integrated global market place, much of the impetus for these flows is the pursuit of new growth opportunities (and the growing

**Figure 8 Net foreign investment in Australian manufacturing**



Source: ABS, Balance of Payments and International Investment Position, Australia, 5309



need to relocate more closely to major customers). The United States, the United Kingdom and New Zealand remain the three dominant destinations for Australian investment abroad. However, some of this direct investment appears to have been at the expense of former export markets. Moreover, the evidence from the survey, the company consultations and the interviews all suggest offshoring to low cost economies is also becoming an increasingly important force.

Against this backdrop, many respondents reported they had already outsourced assembly or basic manufacturing to affiliates in lower cost economies. Some respondents also noted new capital investment was frequently undertaken solely to reduce labour costs and improve productivity, even when there was little case to expand local capacity. Furthermore, in some industries current and earlier government incentives was also the only difference between winning and losing capital investment (particularly in the automotive sector).

### Skills shortages

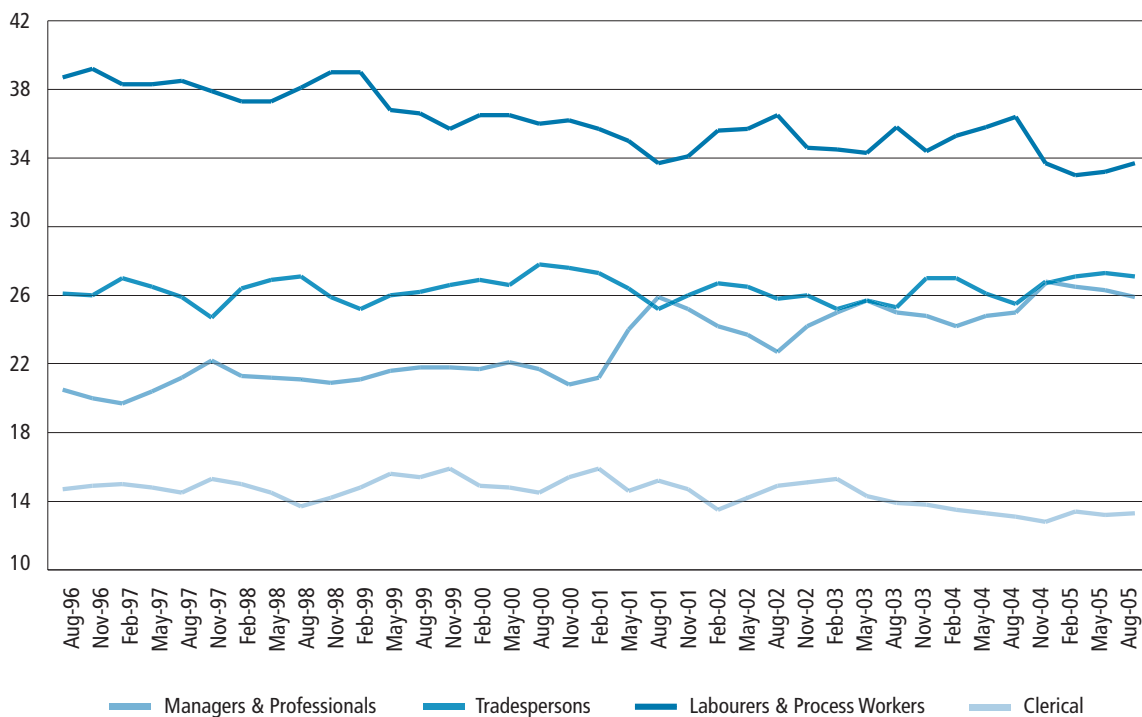
Compounding the competitive pressures facing Australian industry is the presence of skills shortages.

There are two elements to this issue - first, the ageing of the population will see outflows of skilled workers accelerate beyond the availability of new entrants. This has been affected by the reduction in the number of apprentices in training in the 1990s. While there is evidence that these trends have reversed, there will be a period of time in which skills shortages will become worse as industry attempts to play catch up.

“There are going to be some real problems in that area (skills shortages) as we move forward into high levels of technology. It’s going to increasingly become difficult for us. Hence a propensity to actually sign up maintenance contracts with the suppliers of the equipment rather than to even deal with your own workforce.”

Bendigo food processor

Figure 9 Manufacturing employment by skill levels



Source: ABS, Employed Persons Data Cube, E09, August quarter 2005

Second, as manufacturing activity becomes more sophisticated and technically complex, the demand for more skilled workers increases. This is highlighted in Figure 9, which shows over the last decade, the workforce has shifted away from labourers, process workers and clerical staff to professionals and tradespersons<sup>14</sup>. The percentage of labourers and process workers has fallen from 38.7% to 33.7%, while the percentage of managers and professionals has jumped from 20.5% to 27.1%. The proportion of tradespersons in the workforce has largely remained unchanged at 25.9%.

As well, more skills are required of people at each occupational level, in many cases blurring the traditional boundaries of occupations. For example, the process and production workers have now taken on more of the maintenance and diagnostic skills once the domain of the tradesperson. Equally, tradespeople are also taking on higher post-trade skills that encroach on the traditional occupations of technicians and para professionals.

The skills shortage is forcing many companies to consider a range of options to deal with this situation, including retraining existing staff, lifting capital intensity and engaging additional apprentices/student placements. Ai Group research into skills shortages (*Australia's Skills Gap Costly, Wasteful and Widespread*, September 2004) identified almost 60% of firms were focusing on retaining existing staff.

## Growth of the regulatory burden

A recurring theme throughout Ai Group consultations and interviews was the impact that government regulations were having on business costs. In the words of one company, "it's regulation galore, regulation galore and paperwork galore".

Business compliance costs stem from the full range of regulatory areas. These include, but are not limited to taxation; local and state government planning regulations; industrial relations; occupational health and safety; environmental laws and regulations; product safety, fair trading and competition policy requirements; governance and reporting obligations; training arrangements; the requirements involved in

transacting with the public sector (including through procurement and Public Private Partnerships); and the requirements involved in accessing government programs.

"If we're going to compete in Australia it's not going to be through protectionism, its going to be by keeping in front of what our low cost competitors can do. So if there was a message to go back to government, it would be on regulation. To reduce regulation so that we can innovate quicker."

Newcastle engineering manufacturer

In a recent study, the Victorian Department of Treasury and Finance estimated the cost of complying with regulation in Australia at around 2.5 percent of GDP.<sup>15</sup> This admittedly conservative estimate equates to around \$20 billion per year. A 2004 study by Ai Group<sup>16</sup> of the regulatory burden faced by Australian manufacturers lends support to this estimate.

The Victorian study estimated the boost to the national economy that could be generated by a concerted assault on red tape at around 1% of GDP or around \$8 billion. This accords with the findings of a Government-commissioned report in the UK.<sup>17</sup>

The Business Council of Australia has noted that more pages of legislation have passed the Commonwealth Parliament in the 14 years since 1990 than were passed in the preceding 90 years. In 2003 alone, the Commonwealth and State Parliaments added 33,000 pages of new law to the statute and rule books.

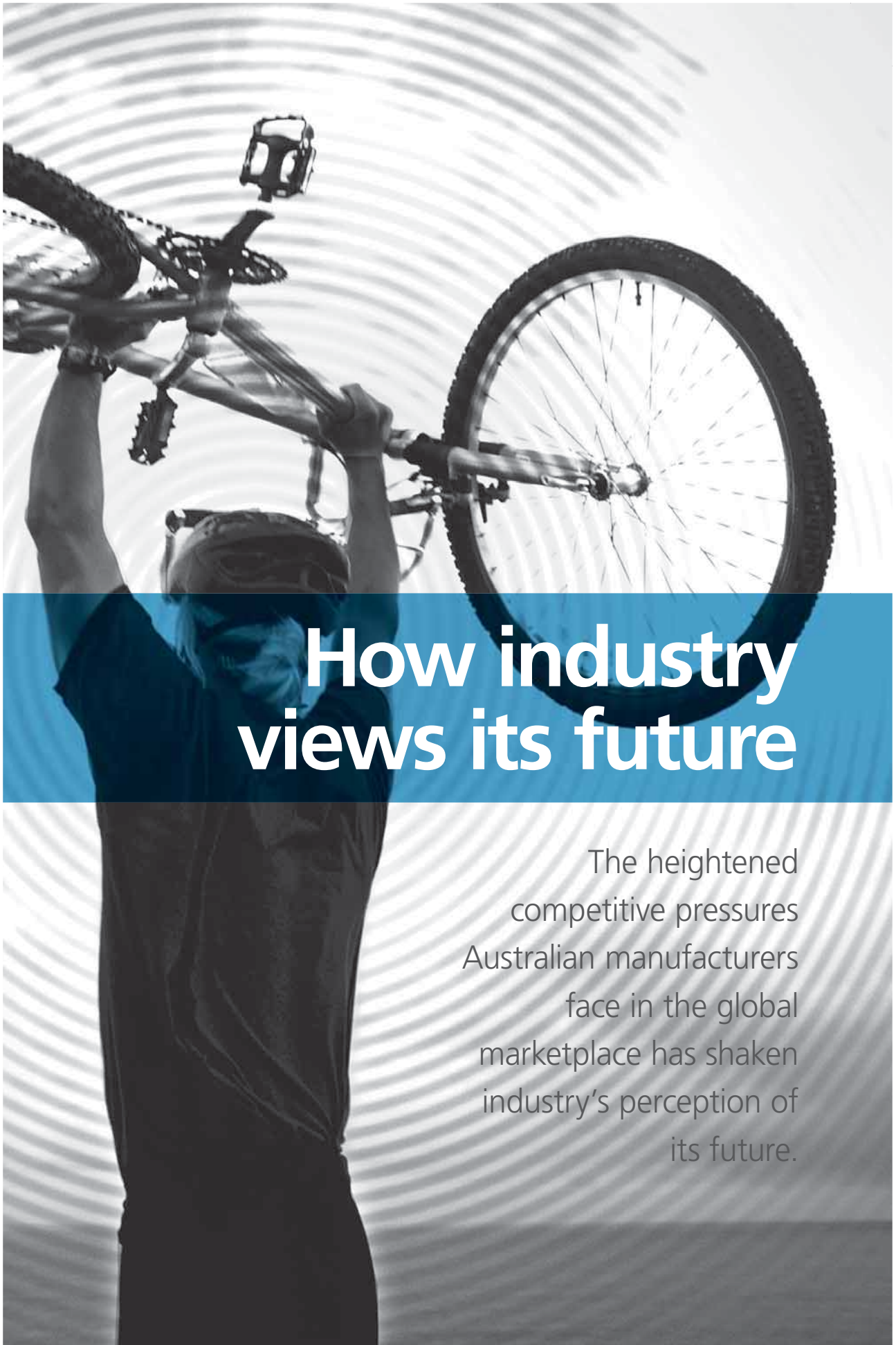
In a competitive environment, where Australian companies must compete with manufacturers from low cost countries, every additional cost weakens their competitiveness. The view from industry is that these costs have become an excessive burden.

<sup>14</sup> Note ABS categories have been regrouped as follows: Professionals and managers includes Managers and administrators, Professionals and Associate Professionals; Labourer and Process Workers includes Intermediate Production and Transport Workers Labourers and Related Worker

<sup>15</sup> Department of Treasury and Finance (Victoria), Rewards from Reform: Higher Productivity and Labour Participation, Preliminary Modeling Results, August 2005 and Better Regulation Task Force (UK), Regulation - Less is More: Reducing Burdens, Improving Outcomes, March 2005

<sup>16</sup> Ai Group, Compliance Costs Time and Money, November 2004

<sup>17</sup> Department of Treasury and Finance (Victoria), Rewards from Reform: Higher Productivity and Labour Participation, Preliminary Modeling Results, August 2005 and Better Regulation Task Force (UK), Regulation - Less is More: Reducing Burdens, Improving Outcomes, March 2005



# How industry views its future

The heightened competitive pressures Australian manufacturers face in the global marketplace has shaken industry's perception of its future.

“Manufacturing plays a vital role, however, I think we’ve got to face reality, and the reality is that for manufacturing to survive it needs to think very differently ... the only way that we can succeed is by effectively providing or developing a service position in the market that cannot be challenged. The other thing that we have done quite successfully is reduce the labour content of our process... and that’s the only way we can continue to compete.”

Sydney textile manufacturer

The heightened competitive pressures Australian manufacturers face in the global marketplace has shaken industry’s perception of its future. This is despite the continuing sound performance of the Australian economy. As will be highlighted, the change in attitude reflects a view about the long term future of the industry rather than a response to a cyclical downturn.

This has been epitomised in the automotive sector, a traditional industry leader, where a number of recent studies have identified the impact global purchasing strategies are having on market competitiveness and profitability.<sup>18</sup>

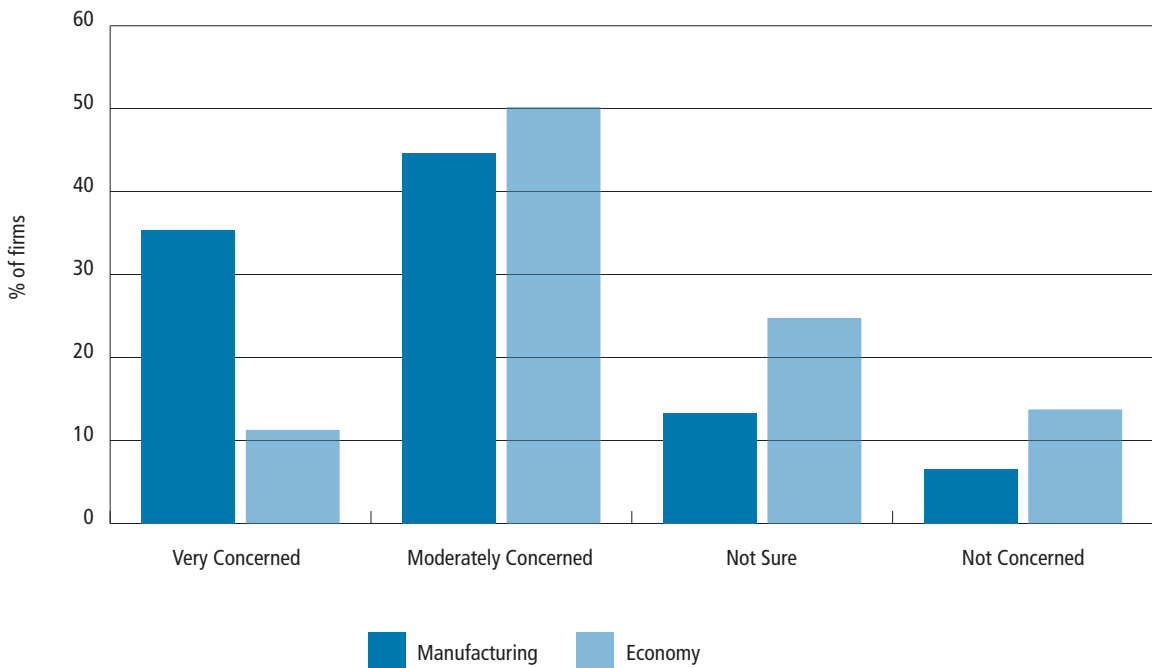
Consultations with companies for this study have highlighted, for the vast majority, a high degree of uncertainty about the future. Ai Group’s manufacturing futures survey of over 800 companies, a more quantitative measure of perceptions undertaken for this study, shows that these concerns are widespread across the industry.

**The next three years**

Companies were asked to identify the level of concern they had about prospects for manufacturing over the next three years. In order to provide a yardstick about these concerns, companies were also asked to assess prospects for the economy overall.

Figure 10 shows companies were generally more concerned about the future of manufacturing than they were about the economy. Companies were three

**Figure 10 Prospects for manufacturing and the economy**



Source: Ai Group, Survey on Manufacturing Futures, September 2005

<sup>18</sup> Ai Group and FAPM, The Victorian Automotive Components Industry, March 2005 and FAPM, A Vision for the Australian Automotive Industry, April 2005

times more likely to be very concerned about manufacturing prospects than about the Australian economy. In total, 35% of companies were very concerned about manufacturing prospects, compared with 11% for the economy. At the other end of the spectrum, almost 14% were not concerned about the economy’s prospects over the next three years, compared with around 7% for manufacturing. The results suggest that companies have a clear (and strong) view of the future of manufacturing.

The concern about prospects for Australian manufacturing was also more intense in particular sub-sectors. Figure 11 shows the percentage of companies within each sector, who were very concerned about prospects for their industry over the next three years. Not surprisingly, the three sectors with the highest percentage of very concerned firms were the ones most exposed to global competition, particularly from low cost countries, through tariffs reductions over the last decade – textiles, clothing and footwear; and transport equipment. Around one in three firms were very concerned about prospects for their sector. In contrast, paper, printing and publishing and basic metal products had the lowest

percentage of firms who were very concerned about future prospects.

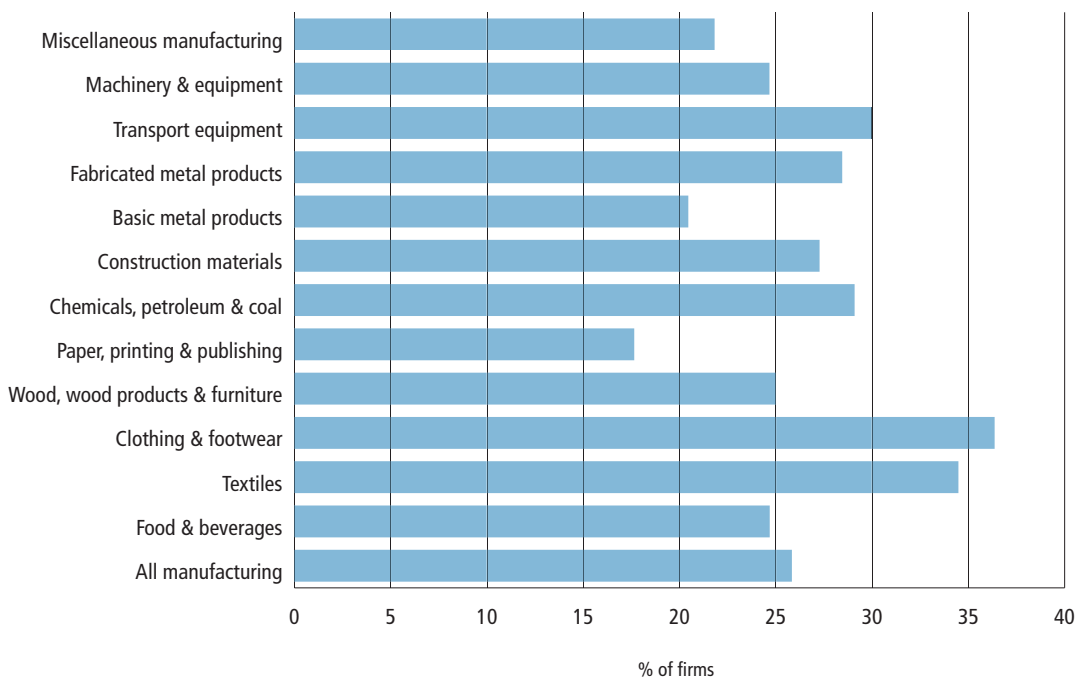
Figure 12 shows that large firms, a significant number of which have head offices overseas, were the least likely to express concerns about future prospects (22% of large firms). This is in contrast to medium-sized firms who were the most concerned (30%). Surprisingly, small-sized firms had the smallest percentage of very concerned firms, possibly reflecting the extent to which small firms service local markets where the customer base is on a more personal basis.

### Source of industry concerns

The Ai Group survey also sought to identify the sources of underlying industry concern for the future, by seeking to identify areas of high risk.

Overwhelmingly, the major source of concern is coming from import competition from low cost countries, such as China, with 61% of companies identifying this as a high risk (Figure 13). In contrast, only 26% of firms identified competition from domestic producers as a high risk to business prospects.

Figure 11 Prospects by sector, very concerned



Source: Ai Group, Survey on Manufacturing Futures, September 2005

Compounding the difficulties industry was facing was a recognition that the size of the domestic market made it harder for companies to achieve sufficient scale to be competitive and achieve efficiencies. Around 49% of firms identified this as a high risk to their future business viability. As well, skills shortages (identified by 46% of firms as a high risk) were compounding the problems for firms to remain competitive and grow.

Excessive regulations and insufficient labour flexibility were identified as middle order risks, with about one in three firms citing these as a source of high risk. Finally, inability to secure export markets and insufficient innovation focus were classified as low order risks to business remaining competitive.

The extent of concerns about import competition varied by sector (Figure 14). Concern was highest in the textiles, clothing and footwear sectors, with over four in five firms identifying this as a high risk. Among the metal based sectors, over 60% of companies faced high risks from import competition. The sectors with the least concern about import competition in contrast tended to be those which were largely supplied by domestic producers, namely food and beverages;

construction material products; wood, wood products and furniture; and paper, printing and publishing.

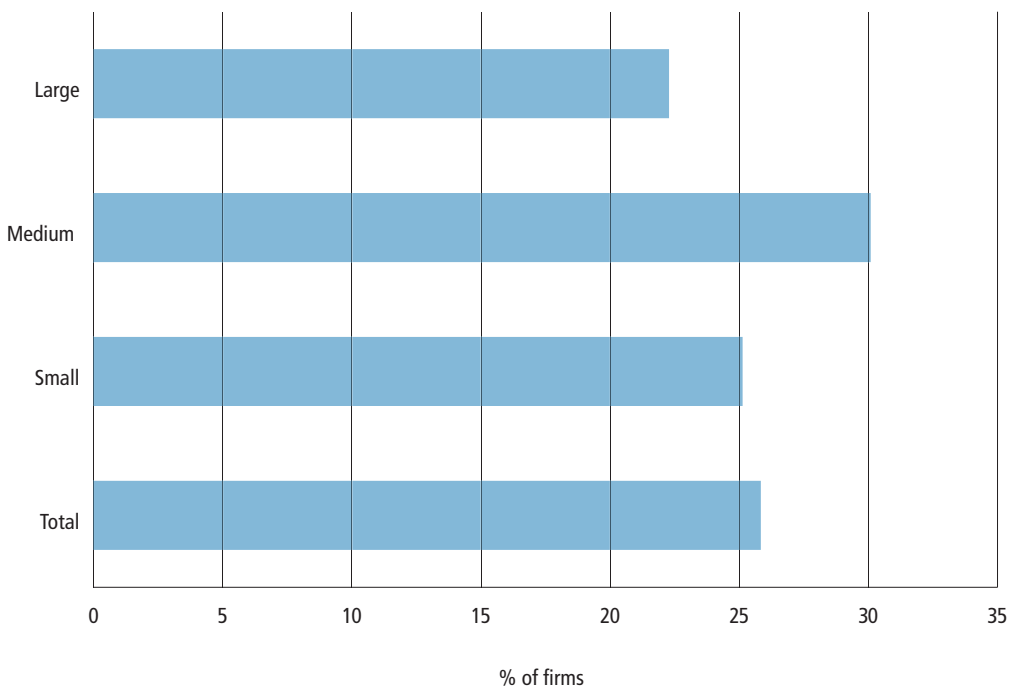
By size, small firms had the lowest concern about import competition (with 42% of firms identifying this as a high risk), while medium-sized firms had the greatest concern, with four out of five firms citing this as a risk. For large firms, just over half saw import competition as a high risk to their future prospects.

### Issues emerging from industry concerns

Not unexpectedly, the uncertainty about the future of manufacturing raised an emotional response from a number of senior executives of companies, particularly family-owned companies that have grown over a number of decades from small beginnings. As one Brisbane manufacturer put it:

*“I was born in town where, one side of the tracks was industrial area and on the other side all the hobnobs lived. The workers in the factory lived close to the industrial area.*

**Figure 12 Prospects by size, very concerned**



Source: Ai Group, Survey on Manufacturing Futures, September 2005



And the people with all of the money and who owned the businesses lived up the hill. Usually the railway line was the barrier. Have you noticed that? That happened in small towns. Well, today it's the ocean. Today it's an ocean and today all the workers live on one side and all the rich people live on the other. And there's not much you can do about that because as any industry person has said, well I want to get the cheapest labour and all those sorts of things."

Such responses reflect a realisation that Australian manufacturing has globalised and that the skills and expertise that have been built over many decades could be lost to future generations as jobs go offshore.

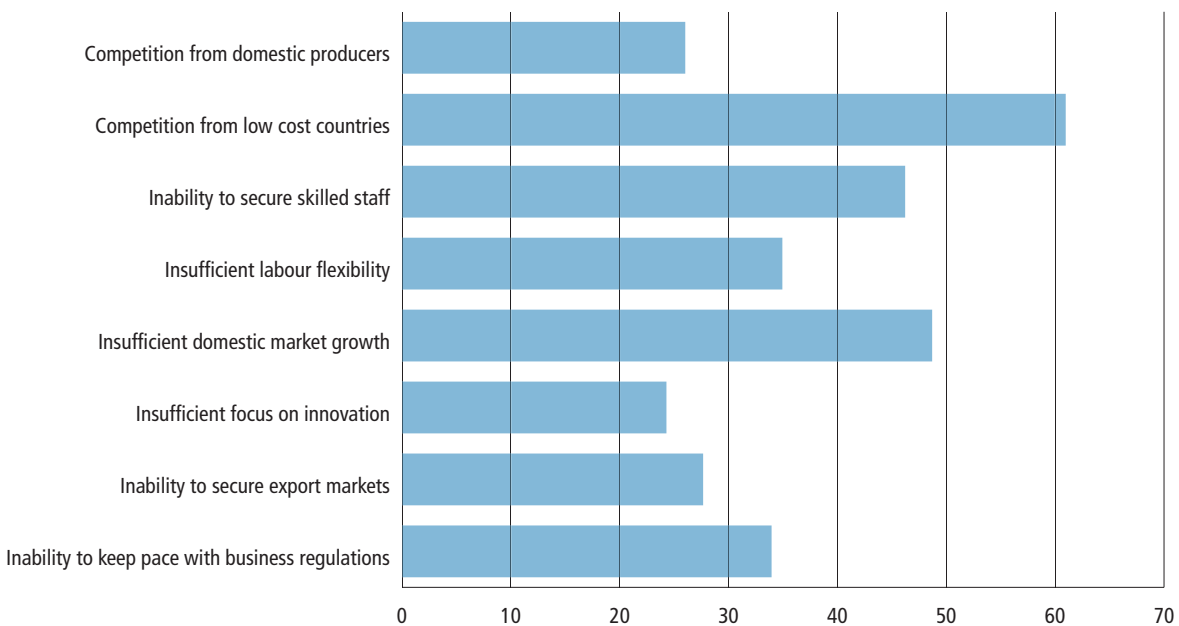
"As the sector gets smaller it loses critical mass and you get this downward spiral effect. We don't have as many suppliers

to work with. We don't have the range of equipment that we might have had at our disposal. We don't have the range of expertise. We don't have the amount of R&D capabilities that we might have had. These bigger economies, with a broader manufacturing sector, they have the critical mass and that's something that we're losing rapidly."

Ballarat technology manufacturer

Underlying this emotional response is a more fundamental concern about the loss of critical mass in the industry. "Once it is gone, it is gone forever" was a recurring theme of industry consultations. Loss of critical mass or scale means that not only will the sector continue to decline as a share of the economy, but the sector also loses capabilities built over a long period of time. The result is a smaller pool of skills, reduced innovative capabilities, weaker domestic supply chains, and poor technology transfer. For the

Figure 13 Sources of industry concerns



Source: Ai Group, Survey on Manufacturing Futures, September 2005

economy as a whole, Australia's dependence on imports grows. Among manufacturers there is a belief that while Australia is currently experiencing a commodity boom driven by demand from China and India, it will not be possible for manufacturing to pick up the slack when the boom comes to an end (as it inevitably will), because critical mass and capability will be gone.

*"We now find ourselves living no longer even off the sheep's back but out of the dirt. That is what we use to balance our books and we are running down our competitive manufacturing base."*

*Ballarat manufacturer*

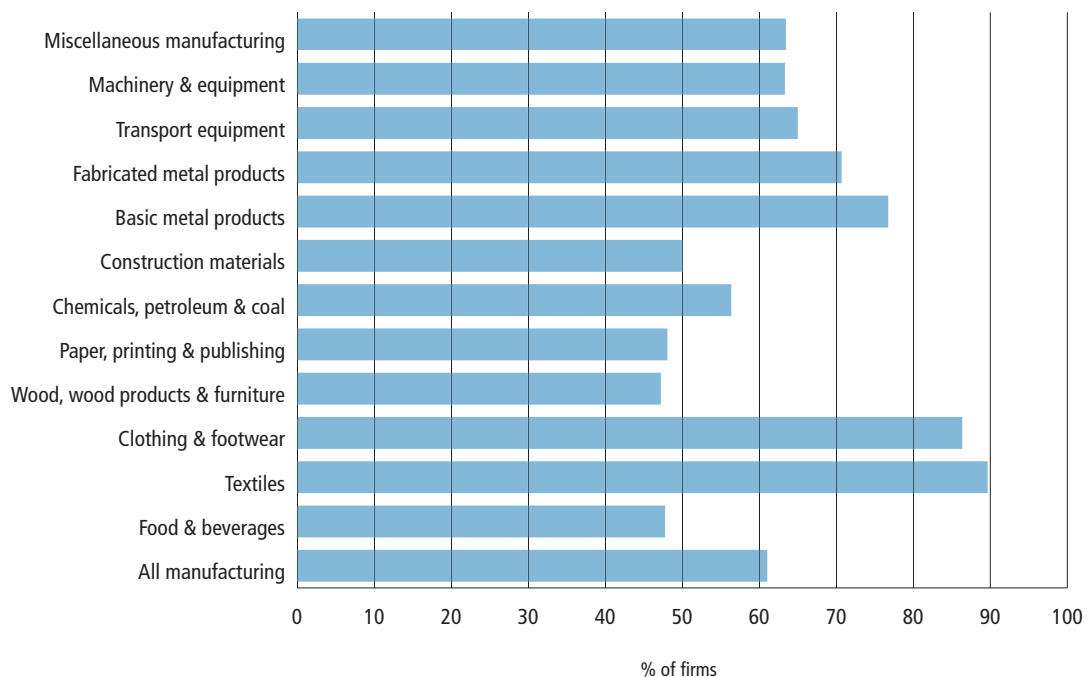
As well, for a number of companies, it raises issues about the desirability of balanced growth being sustained in the Australian economy. While there is no yardstick to define a balanced economy, the more diverse the economic base of an economy, the more likely it is able to benefit from that diversity, through having many sectors contributing to growth and by limiting the impact of weakness in one sector at any point in time.

Finally, the concern about industry's future raises issues regarding the role of government in setting a framework for the economy. As one regionally based Victorian manufacturer stated:

*"At a national level we need a business plan. We need a clear set of objectives so we know where we're going, where infrastructure is taken into account and the issues of developing people, getting good leadership, looking at ways that we can be smarter and finding niche markets are taken into account."*

Often companies saw it as government simply providing the right signals that industry matters to the future of Australia, rather than necessarily seeking special treatment or handouts. Such statements can provide confidence and remove uncertainty for companies to invest in the future, particularly as they go through structural change. How companies are investing for the future to remain globally competitive is the subject of the next section of this report.

**Figure 14 Import competition risk by sector**







"We are simple metal benders... We've redesigned, we've developed new products and to try and get a foothold on this flood, we've sourced a lot of our raw materials from a couple of low cost countries. We've taken the labour content down to near nothing..."

## Strategies to remain globally competitive

Australian manufacturing in a resolute manner is responding to the challenges presented by an intensely competitive global marketplace.

Change is occurring at a number of levels. For manufacturers of low to moderately complex goods, often involving a significant labour content, there is a focus on being lean and looking to introduce new technology to automate production and drive down labour costs. Where these manufacturers also face significant import competition, and internal savings are insufficient to meet competitor prices, many are moving all or parts of their production offshore to take advantage of low labour costs.

“The first thing we do is we’re constantly upgrading our plant and I mean on a daily basis... it’s an exhausting and unrelenting job but if we want to be here in 10 years we just have to keep doing this because what we make is a relatively low tech product.”

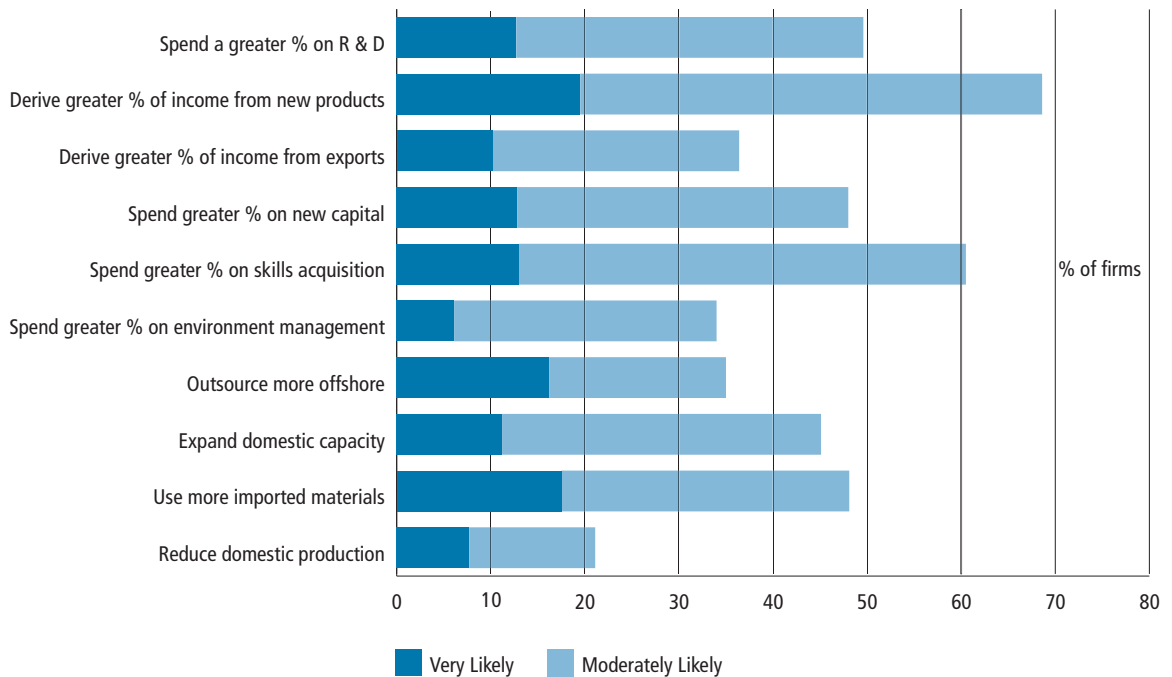
Newcastle machinery and equipment manufacturer

“We’re constantly trying to reinvent ourselves. The company I work for is over 70 years old, so it’s reinvented itself more times than one could count and looking back over the history of the company, it’s been evolution. It hasn’t been a case of somebody’s waking up one morning and turning on the light bulb and saying ‘eureka, I’ve got it’. So you find the niche market, whatever it is, you find a new product line, development, whatever it is that takes you on into the next period. I guess it’s getting harder to find the niche.”

Bendigo fabricator

Another group of manufacturers is focusing on developing niche products, which have the potential to also build exports markets, and are relying on

**Figure 15 Strategies likely to be pursued by companies over the next three years**



Source: Ai Group, Survey on Manufacturing Futures, September 2005

innovation, product development and skilled labour inputs to retain a competitive edge. These firms often produce complex and more elaborately transformed manufactures. But as the automotive component sector is highlighting, such companies are increasingly facing competition from developing countries moving rapidly up the technology path.

A fourth group of companies, largely dependent on the domestic market, is concentrating on delivering high quality support services to customers, focusing on customisation, timely delivery and after-care services. Staying close to their customers is the key to remaining competitive, provided of course they can deliver a competitive price.

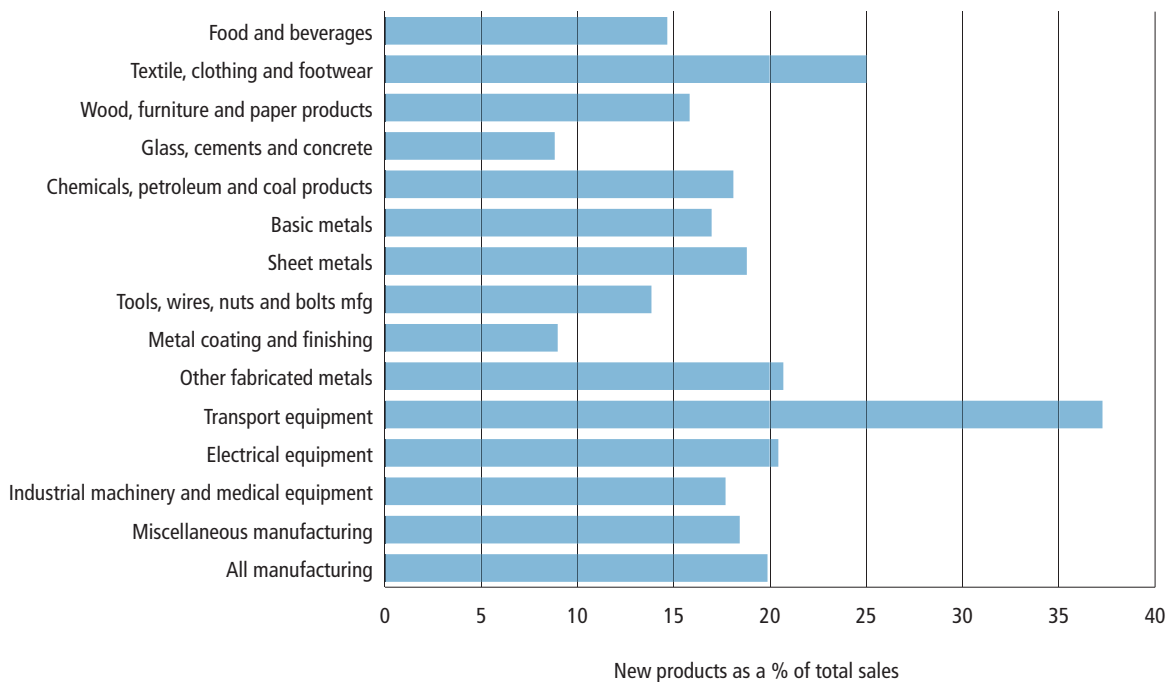
Among exporters, the focus appears to be turning to building brand knowledge of products as being of high quality, reliable, innovative and competitive. A number of these companies suggested that “Australian-made” could be promoted overseas in trade shows and missions as a mark of quality and high standards, reinforcing individual company efforts to competitively market product brands to overseas clients.

Finally, a growing number of manufacturers are globalising their operation by building offshore facilities, mainly to get closer to growing markets in developing countries.

While fundamental changes are taking place, the extent and pace of reform however is not uniform across manufacturing. To some extent this is to be expected, as one size should not fit all, and each sector, indeed each business, needs to respond in a measured way to the intensity of competition it is experiencing.

There is evidence of change within each sub-sector and across firms of different size, but the data collected through consultations and the survey suggest that many firms (as a minimum, around one-third) have a long way to go to match the pace of change. These firms have indicated no additional strategies they intend to pursue over the next three years. Indeed, as the Ai Group study into *World Class Skills for World Class Industries*, undertaken by the Allen Consulting Group, highlights only 18% of companies (participating in the study) believe they are currently world class.<sup>19</sup>

Figure 16 New product intensity to sales



Source: Ai Group, Industry in the Regions 2004, p79

<sup>19</sup> The Allen Consulting Group, World Class Skills for World Class Industries, Ai Group, forthcoming

The survey data would suggest that those companies who are less active in developing strategies to respond to competition are more likely to be firms employing 25 or fewer people, and mainly located in the food and beverages, basic metal products and machinery and equipment sectors. A greater proportion of these companies appears less concerned about competition from low cost countries than manufacturing overall (54% with 61% respectively), and there is little to suggest they are any more concerned than manufacturing overall in regard to domestic competitors.

Inevitably for some of these firms, the failure to pursue these strategies over the next three years may well lead to them becoming uncompetitive.

### Priority strategies going forward

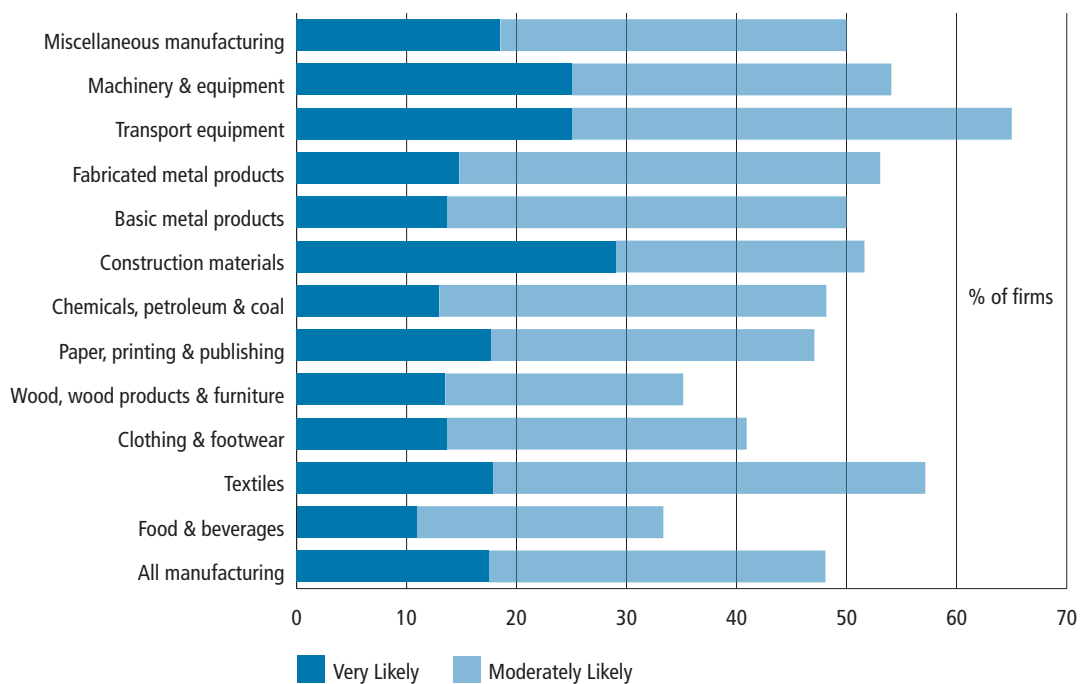
The Ai Group survey asked companies to identify a number of broad strategies likely to be pursued to remain competitive (Figure 15). They were asked to rank these according to whether they were very likely or moderately likely to pursue these in response to emerging risks.

Based on “very likely” responses (the strongest commitment to change), the most important strategy to remain competitive was to look to derive a greater percentage of sales from new products (19.5% of firms), emphasising the importance of innovation and research and development. A further 49.1% of firms also suggested they were moderately likely to pursue this strategy, a total of 86.8% of firms.

Large firms were the most likely to want to pursue this strategy (with 26.0% very likely and 51.4% moderately likely to become more reliant on new products), while small firms were least likely (13.1% and 61.6% respectively). Among sectors, transport equipment; textiles; chemicals, petroleum and coal products; and machinery and equipment manufacturers were likely to increase their dependence on new products for sales.

Data previously collected by Ai Group (2004) suggest there is plenty of scope for firms to pursue this strategy. Figure 16 shows revenue derived from new products (over the previous three years) as a percentage of total sales. Transport equipment manufacturers set the benchmark for industry with around 31% of sales being generated from new products. Not unexpectedly,

**Figure 17 Companies likely to use more imported materials**



Source: Ai Group, Survey on Manufacturing Futures, September 2005

the sector has the highest expenditure on research and development.

The textile, clothing and footwear (TCF) sector also ranked highly, with one in every four dollars derived from new products. Both the automotive and textiles sectors benefited from specific government incentives to facilitate innovation.

“Without R&D you are probably not going to be around for much longer.”

Newcastle engineering firm

“We’re relying on our growth through R&D, which is very costly, and you need good commercialisation plans to bring it to fruition.”

Sydney manufacturer

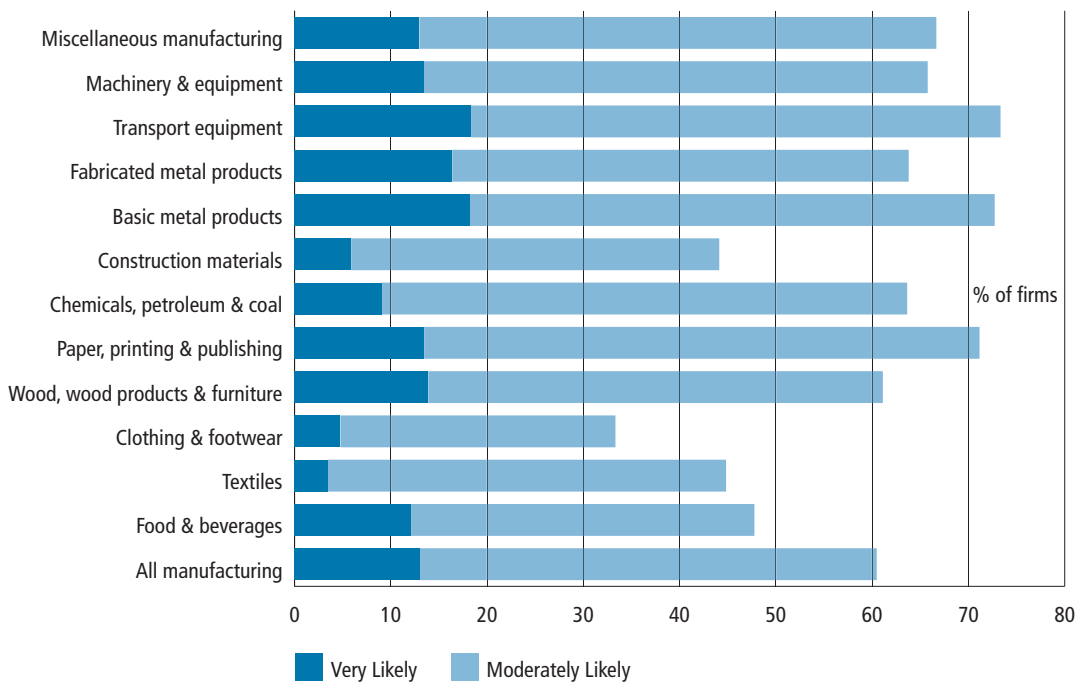
Overall, new products generate about one in every five dollars of manufacturing sales. Only four sectors have percentages above 20% - textiles; transport equipment;

machinery and equipment; and (other) fabricated metals manufacturers. The remaining sectors are all below 20%, with glass, cement and concrete and metal coating and finishing manufacturers having the lowest new product intensity.

The second and third most likely directions for manufacturers involve cutting costs either through using imported materials (17.5% stating very likely) or outsourcing more offshore (16.2% very likely). A further 30.6% and 18.8% respectively indicated they were moderately likely to follow these strategies. Data on offshoring by sector were discussed earlier in this report.

The drift towards using more imported materials by sector is shown in Figure 17. Manufacturers of transport equipment, machinery and equipment, and construction material products were the most likely to use more imported materials in production in order to remain competitive, with over one in four firms saying they are very likely to proceed down this path. Taking into account those firms indicating they are moderately likely to use more imported materials, the transport equipment and textiles sectors have around 60% or more of firms moving towards greater use of imported materials.

Figure 18 Companies likely to spend more on skills



Source: Ai Group, Survey on Manufacturing Futures, September 2005

On the basis of companies indicating a likelihood to use more imported inputs, across all sectors between a third and half of companies were likely to lift their import dependence. The move to use more imported materials is most prominent among medium and large firms (with 21.0% being very likely and around 35% moderately likely to do so), compared with small firms, where only 25.2% were very likely and 40.0% moderately likely.

The other significant strategy identified by companies was skills acquisition (Figure 18). Around 60% of firms identified this as a strategy to remain competitive, with 13.0% indicating they are very likely to spend more on skills acquisition. The basic metals and transport equipment sectors had the highest percentage of firms (over 18%) very likely to spend more on skills training. Most other sectors were looking to lift their spending, with only the textiles; clothing and footwear; and construction material products sectors reporting a significantly lower focus on skills acquisition. As with other strategies, the intensity of focus moderates as firm size became smaller. For large firms, 19.3% were very likely and 51% moderately likely to spend more in skills acquisition, compared with 9.2% and 45.1% respectively for small firms.

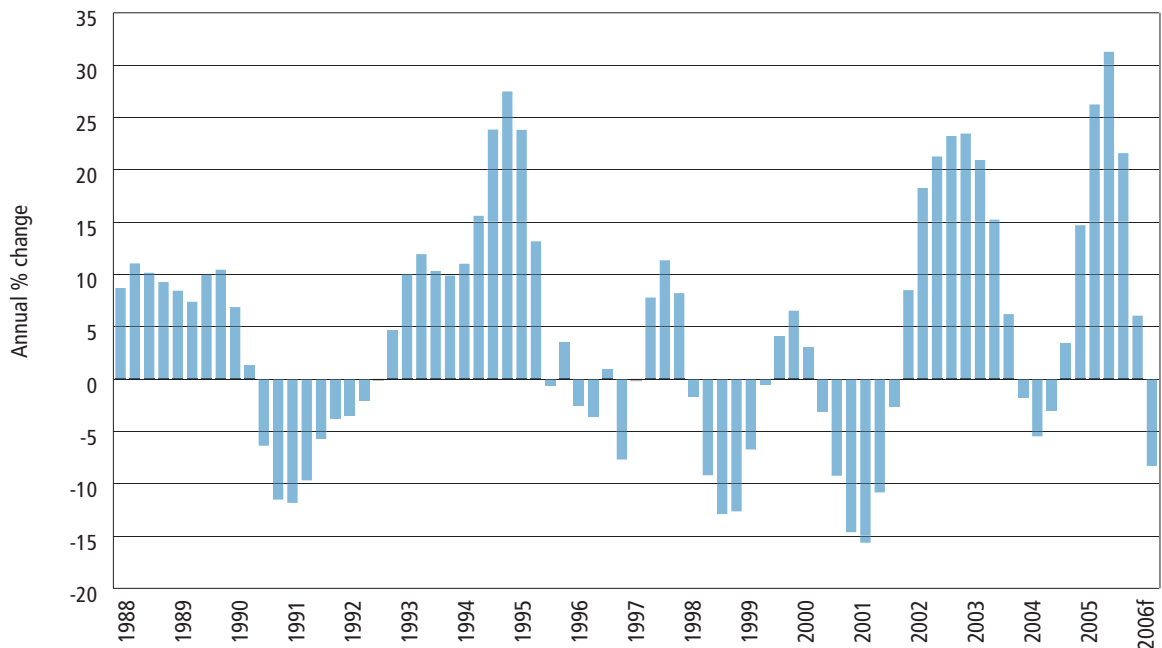
The growing importance of skills acquisition was highlighted in a recent Ai Group, Dusseldorp Skills Forum and Group Training Australia study into apprenticeship training, *Getting It Right*.<sup>20</sup> The study of apprenticeships in New South Wales identified a significant lift in apprentice numbers in 2004, with more employers than ever taking on apprentices for the first time. The lift in apprentices was a response to the rising workload many companies were experiencing due to a strongly growing economy and companies seeking to lift productivity.

### Middle order strategies

A second group of strategies that appears to be of middle order importance to companies is identified in Figure 13 – spending more on new capital equipment; spending more on research and development; and deriving a greater share of income from exports. Between 10% and 13% of companies described these strategies as very likely for their business, well down on the four previous strategies discussed.

Given the critical role these strategies can play in enhancing global competitiveness, the result is

**Figure 19 Annual change in manufacturing investment**



Source: Private New Capital Expenditure and Expected Expenditure, Australia, September quarter 2005

<sup>20</sup> Toner, Phillip, *Getting It Right: What Employers and Apprentices have to say about Apprenticeships*, Ai Group, Dusseldorp Skills Forum and Group Training Australia (November 2005)

somewhat disappointing and in contrast to the emphasis given to these in industry consultations.

Comments made by companies in industry consultations reflecting the importance of these strategies include:

“We need to focus on trade and exports. Unless they’re dealt with we are going to continue to struggle.”

“If you look at Hong Kong, they can depreciate machinery at 100% in one year. They can depreciate computers in one year, software in one year and this is what we’re up against if we’re going to continue to invest.”

“Without R&D, we are not going to be around for much longer.”

“R&D is very important for us. We have traditionally built a business model

around proprietary technologies.”

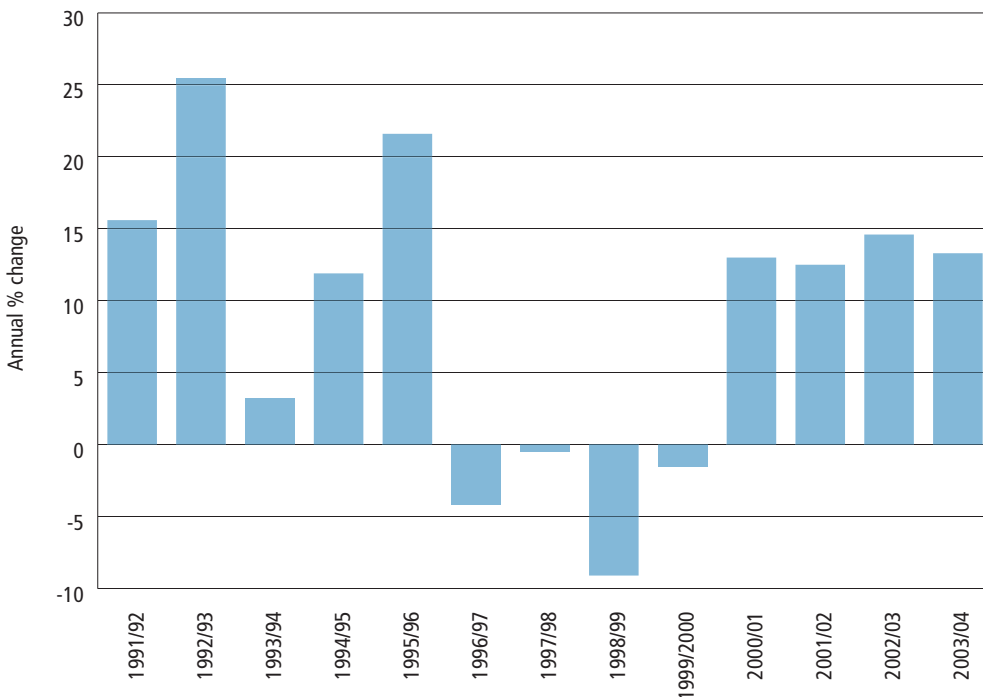
“In China, the level of automation is actually threefold that of a typical Australian company.”

The profits we make are being pushed back into updating manufacturing equipment to try and make ourselves more economical, to be competitive on a world stage.”

“There’s room for people to invest in a lot more advanced technology and I’m talking about significant investments of a million dollars or more.”

The reasons for this divergence vary according to the particular strategy. In regard to capital investment, the response may partly reflect the fact that after a strong period of profit growth in 2004, manufacturing

Figure 20 Annual change in manufacturing research & development



Source: Research and Experimental Development, Business, Australia, 2003-04, 8104.0

companies up to recently have been investing strongly in new machinery and equipment. For the year ending June 2005, the annual trend growth in capital expenditure on building, plant and equipment (based on quarterly data) has been growing strongly at 26.2%. Quarterly investment appears to have peaked in the September quarter 2005, and the Australian Bureau of Statistics has forecast investment to fall to an annual growth rate of about -8% by June 2006 (Figure 19), with growth in investment in plant and machinery to slow.<sup>21</sup>

Consequently, the moderate ranking of investment as a strategy for dealing with risks reflects the lower investment expectations after a solid year, which in turn reflects the significant weakening in manufacturing activity in the past year.

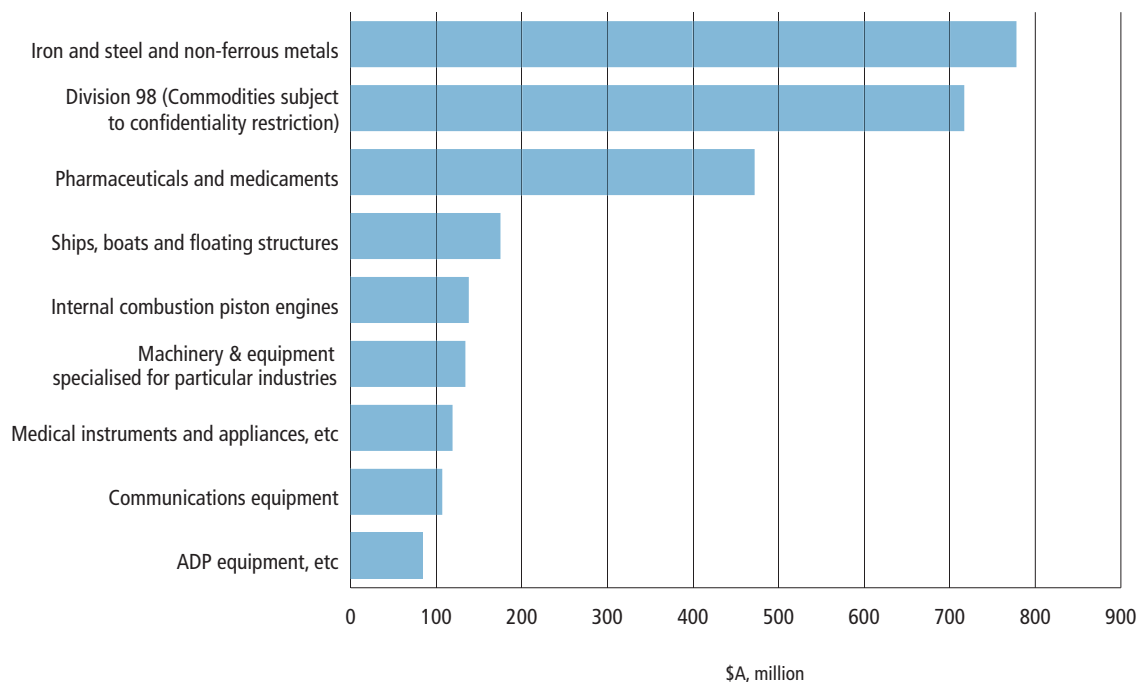
Similarly, the finding in regard to research and development reflects the steady improvements over recent years, with R&D expenditure growing by around 13%<sup>22</sup> per annum (Figure 20) and R&D intensity rising from 0.89% of total turnover in 2001/2 to 1.03% in 2003/4. Again, while the improvement has been important, the nature of global competition points to the need for further sustained improvement. The Ai Group survey does not indicate this is likely.

Finally, as noted earlier, while manufactured exports have improved over the last year, both the industry consultations and survey suggest that manufacturers are adopting a more cautious approach to building export growth into their business strategies. This partly reflects the erosion in international competitiveness, with the improvement in the last year confined to a narrow range of manufactured commodities (Figure 21).

Overall, Australian industry is taking significant action to maintain global competitiveness in the face of intense import and global competition. Companies recognise they need to do more in regard to new product development, outsourcing, use of (cheaper) imported materials, and skills upgrading, and are making plans to do so in the next few years.

While these efforts also entail a significant focus on capital investment, research and development and exports, there appears to be scope for industry to do more in these areas, recognised by companies themselves as being critical to their future. Indeed, the pace of global competition necessitates greater effort on the part of business. This raises the question of the role of public policy in driving such activity.


**Figure 21 Major sources of manufacturing exports increases over last year**



Source: International Merchandise Trade, Australia, 5422.0

<sup>21</sup> Australian Bureau of Statistics, Private New Capital Expenditure and Expected Expenditure, September quarter 2005  
<sup>22</sup> Australian Bureau of Statistics, Research and Experimental Development, Business, 2003-04





“At a national level, we need a business plan. We need a clear set of objectives so we know where we are going.”

## Industry's views of government

The challenges facing Australian manufacturing raise important questions for both industry and government. While an often repeated message told at industry consultations was “this is our problem and we in manufacturing need to fix it”, demonstrating that there are no expectations of “handouts” (if indeed there ever were such expectations), there was equally a recognition that state and federal governments could do more to both foster an environment to remain competitive, as well as ensure that specific programs are meeting the changing needs of industry.

Indeed, the issue of manufacturing’s future and the role of government have received considerable media attention over the last year. In its editorial on Wednesday 28 September 2005, the *Australian Financial Review (AFR)* called for the Federal Government to intervene to ensure we preserve a balanced economy. It stated that Australia needed a manufacturing sector that plays a role as a producer of technology, as well as a producer of goods and services with intellectual property.

In regard to industry policy, the AFR concluded: “Industry policy has moved a long way since manufacturing was equated with high levels of industry protection. But now there is a need to do more than simply leave manufacturing to its own devices – as long as we follow the incentive route and do not revert to protection”.<sup>23</sup>

This is an issue affecting not only Australia, but other developed economies as they seek to assess the future role of domestic manufacturing in a global marketplace.

In the **United States**, the downturn in manufacturing, which resulted in a fall in employment of 2.6 million between 2000 and 2003, led the US Secretary of Commerce to call for a comprehensive review of the US manufacturing sector. In January 2004, the Department of Commerce released its report *Manufacturing in America* that put into place a number of major initiatives to support American industry. These included the creation of a President’s Manufacturing Council to oversee a range of initiatives targeted at manufacturing, and that were designed to lower the cost of business, boost growth and investment, enhance innovation through incentives, strengthen education and training, and advance free trade developments.

In **Europe**, the European Commission appointed a High-Level Group to review the future of manufacturing in Europe. Its message was simple: “Standing still means moving backwards.” Its report, *ManuFuture – A Vision for 2020* released in November

2004, outlines five broad strategies for action by EU countries – encouraging innovation, addressing societal issues (such as ageing), promoting knowledge generation, adapting education and training, and creating the infrastructure for innovation and best practice. In contrast to the US approach that focused on manufacturing specific initiatives, the European approach was more generic in its emphasis.

In the **United Kingdom**, the Department of Trade and Industry in July 2004 released its review of the government’s manufacturing strategy, *Competing in the Global Economy – The Manufacturing Strategy Two Years On*. The report argues for manufacturing to move up the value chains, with the sector being increasingly made up of highly skilled, knowledge intensive, highly productive and innovative manufacturing businesses. The strategy establishes a new Manufacturing Forum and puts into place measures to promote science and innovation, enhance skill levels, develop best practices, and facilitate investment in new technology and infrastructure.

Closer to home, **New Zealand**, established a Workplace Productivity Working Group in February 2004 to address how improvements in workplace productivity can contribute to economic growth and living standards. In November, the Government responded to its report, *The Workplace Productivity Challenge*, by agreeing to implement a range of strategies designed to share knowledge, undertake further research and develop best practice diagnostic tools and technologies. Further, Business NZ, Ai Group’s partner industry body in New Zealand, recently released a discussion paper, *Manufacturing Perspectives*, outlining a strategy for manufacturing to maintain its international competitiveness in order to secure future economic growth, through policies aimed at infrastructure, regulatory efficiency and trade. As well, the paper calls for the development of both manufacturing-specific strategies and an overarching policy that links manufacturing to national economic development.

In **Australia**, the only significant recent analysis of the manufacturing sector was undertaken by the Productivity Commission in August 2003, with the release of its Commission Research Paper on *Trends in Australian Manufacturing*. While representing an invaluable insight into manufacturing trends and conditions, the report fell short of detailed policy and strategic considerations implicit in the overseas reviews. The Commission has, however, undertaken strategic reviews of the automotive and textiles, clothing and footwear sectors as part of the Federal government’s consideration of future tariffs and industry assistance.

<sup>23</sup> Australian Financial Review, Editorial, 28 September 2005, p.56

More recently, in December 2005 the Australian state and territory governments agreed to establish a National Manufacturing Forum to develop a strategic action plan for manufacturing by September 2006.

It is within this context that Ai Group sought to gather industry views on the role of Government, the need for a national manufacturing strategy, and future policy priorities.

## Role of government

A number of key messages have emerged from industry consultations and the company survey on the role of government.

“I agree entirely that it is our problem and we in manufacturing need to fix it, but government can help. In my view the main game is productivity and the government can help there.”

Melbourne glass manufacturer

First, industry recognises that competitiveness is an imperative that every company must deal with on a daily basis. Cutting costs, introducing new technology, building markets and fighting off competitors is what business must do to remain profitable. Consequently, the task of responding to global competition is primarily for business alone.

Companies believe the role government can play to best support industry is through maintaining strong economic growth and building Australia’s macroeconomic foundations to provide the necessary support for industry competitiveness. This includes improving competitiveness through better incentives for innovation; encouraging export market development; reducing regulatory burdens, promoting skills development, building our infrastructure of transport and other business facilitation; further tax reform; environmental sustainability; and enhancing competitive business practices.

“I am looking for a public stand from the Federal Government to tell everybody that manufacturing industry is a necessity ... As soon as John Howard mentions manufacturing industry in every second speech, people all of a sudden start to recognise there is a manufacturing industry.”

Melbourne manufacturer

Second, industry believes it is important for government to articulate a clear message about the importance of manufacturing to the future development of the nation. Industry feels that it has done much to support the Government’s path towards free trade and lower tariffs, but as these goals become closer to achievement, the future becomes more uncertain. Undoubtedly, the concerns industry has about its future partly reflects a need for greater clarity from the Federal Government about manufacturing’s role.

Third, there was an overwhelming feeling from industry that the nature of government involvement, particularly in relation to the administration of grants and programs, has become too complex and costly. Many companies stated that they were reluctant to apply for grants because of the time demanded to apply, the costs involved and the uncertainty of funding.

“In regards to the export development grants, it costs you more to get it than the money you were receiving, so I certainly don’t bother with that anymore.”

“The AusIndustry R&D Grant basically takes six month. Now six months in an R&D cycle is ridiculous, absolutely ridiculous.”

“We’ve just finished an R&D Start Grant and the cost of applying for that was horrendous not in terms of having to pay for applying but in terms of the documentation required and the absolute finite detail that was applied. You almost



had to know the end result before you applied for the R&D.”

“I am a little disappointed with NewStart. They are so complicated to get through that you’ve really got to go outside and engage outside consultants who know how to weave their way through it.”

As well, there was a feeling that communications with industry by the Federal Government on what is on offer did not always filter down to individual companies, a situation contrasted for example with Queensland, where companies felt they were kept well informed on industry issues, programs and developments.

“Government as a consumer can play an enormously beneficial role in helping smaller companies get their products to market. And provide good reference sites and those sorts of things.”

Brisbane manufacturing agency

Finally, many companies felt that governments could make better use of their procurement strategies to support industry development, particularly in regard to the development and commercialisation of new technology. While accepting that governments must achieve a cost effective return on their purchases, it was argued that the return to taxpayers needed to be seen over the medium term, and include benefits such as building stronger supply chains, the value of domestic ongoing support to contracts, and other potential spin-offs from the development of innovation.

## National manufacturing strategy

The frustrations industry experienced with government inevitably flowed through to perceptions on the need for a national manufacturing strategy.

Among the states, while all have developed policies to provide broad industry support, Queensland, Victoria and South Australia have developed specific manufacturing strategies. In **Queensland**, the Government manufacturing strategy, *Making Queensland’s Future - A Manufacturing Development Plan* has made available \$26 million over four years to drive sustainable growth in manufacturing. In **Victoria**, the Government in 2002 launched an *Agenda for New Manufacturing*, which set aside \$27 million over four

years to build manufacturing capabilities as a centre for excellence in the Asia-Pacific region. In South Australia, the Government recently announced a blueprint for manufacturing under the banner of *Global horizons local initiatives: A Framework for South Australia’s Manufacturing Future*, which focuses on innovation, workforce development, infrastructure, exports, supportive government and business environment, and sustainable growth.

At the Federal level, the Government provides a range of financial, tariff and other assistance to manufacturing. In total, just under \$6 billion in net subsidy equivalent support is provided to manufacturing (the bulk in tariff assistance), equivalent to about 4.5% of the annual value added of manufacturing (known as the effective rate of assistance). A large proportion of this assistance goes to the textiles, clothing and footwear and automotive sectors.

The Federal Government offers significant budgetary assistance to industry through a range of policy initiatives, including research and development/innovation programs, skills and apprenticeship support, general industry assistance, and specific support to the automotive and the textile, clothing and footwear sectors. As well, the Federal Government has developed a range of industry Action Agendas, with the most recent being developed for Advanced Manufacturing.

“There’s no doubt, specific targeted industry programs at a State level have been working really well ... I think we should be applauding the State Government for those initiatives.”

Ballarat manufacturer

While industry was of the view that the states had done a good job in developing manufacturing strategies (where they exist), there was some uncertainty as to whether such a strategy was needed at the Federal level. This wasn’t because companies felt that programs to support industry were not required, but that these should be part of a national strategy for building the overall economy. Again, this reflected the view that industry was looking to better understand where it fits into the national economy going forward.

“The SIP program has been exceedingly valuable and has really enabled us to get where we are today because the program is structured to encourage innovation and we’ve used it that way.”

Sydney manufacturer

There was overwhelming support for the Federal Government’s microeconomic reform initiatives, including tax cuts, support given to the automotive and textiles sectors, and programs aimed at developing innovation and exports, although concerns were expressed about funding levels and eligibility. As well, many companies expressed a need for the Government to do more in providing a more favourable environment, including improving tax and other incentives, for investment.

“Any national manufacturing strategy can only ever have some broader objectives. The issues confronting each individual sector are very different.”

Melbourne auto component manufacturer

Industry also was mindful that “sector by sector” solutions were often required to respond to needs. Despite this, many companies were either unaware of the Federal Government Action Agenda initiative or felt that it had little impact on business.

## Future policy priorities

In order to gauge industry views on where government should focus its efforts to support industry, the Ai Group Manufacturing Futures survey asked companies to identify where they strongly agree that governments need to do more to support industry policy.

There is strong recognition of the need to ensure that State and Federal Governments articulate a clear view on the future of manufacturing, its importance to the Australian and State economies, and its place in a national economic strategy. Whether this is described as a manufacturing strategy is immaterial to industry; the important policy need is to be clear about the future role of manufacturing in the broader economy.

More specifically, the results point to three levels of policy response. Of the highest importance, with over half of firms strongly agreeing, were better company tax and depreciation arrangements (important

in investment decisions) and reducing business regulations. Also important was skills training and development, which ranked third as a future priority (with over 38% strongly agreeing).

“There’s a side of me that says I wonder whether we wouldn’t be better off with lowered taxes, particularly payroll tax and those things. Get our costs down and our profits up and then have the freedom to do what we think we should be doing. Rather than going through the process of saying the government should be doing this, this and this and finding that you spend a lot more of your time going through the bureaucratic system and wasting a lot of money.”

Ballarat manufacturer

Of middle importance, with more than one in four firms strongly agreeing, were improved arrangements for business innovation and research and development; export assistance; and direct support for new investment and technologies. These were seen as supporting an overall industry strategy where about one in three firms strongly agreed on the need for governments to do more.

Finally, with around one in five firms strongly agreeing, was government support for companies to introduce best practice efficiencies. Not unexpectedly, small manufacturers showed the least support for these initiatives, with such initiatives being not well supported in the past and companies finding it difficult to find extra resources to devote to this area. Yet it was these companies who could well benefit most from taking part in business improvement initiatives. Large companies in contrast were generally more supportive of business improvement initiatives.

Action on the part of State and Federal governments in each of these areas can play a critical role in enhancing business competitiveness, growing jobs and the economy. Policy options that can be pursued are the subject of the last section of this report.





The key question is whether current policy settings help or hinder Australian industry as it competes in the global marketplace.

# Policy directions



**Manufacturing Futures** has identified that Australian industry is going through a process of rapid transformation as it responds to the changing forces of global competition.

A strong Australian dollar combined with a highly exposed domestic market, pressure from low cost countries such as China and the development of global supply chains among other factors are requiring Australian manufacturers to think and operate as global companies, even within the confines of the domestic market. To do otherwise is to face the risk of becoming uncompetitive.

These competitive pressures are causing the emergence of a new breed of manufacturers who have a number or all of the following characteristics:

- A belief in their capacity to compete against overseas companies in Australia and overseas;
- A global outlook to their business with a desire to be world class operators;
- A focus on ongoing business improvement, with every effort being made to be lean, strip out wasteful operations and improve productivity;
- A focus on building the capital intensity of production through automation and the rapid adoption of new technology;
- An emphasis upon lifting the skills capabilities of staff, through both apprenticeships and training to up-skill;
- A well developed supply chain, seeking out the most competitive suppliers whether they be, for example, in Australia, Mexico or China;
- A focus on product design and innovation that will deliver quality products at world competitive prices; and
- A focus on developing niche markets supported by strong customer relations and after-care services.

This is the benchmark for which Australian manufacturers must strive to remain globally competitive in both domestic and overseas markets.

In the past there was a tendency for companies who embody these characteristics to be confined to particular sectors, such as in the automotive sector, but now new global Australian manufacturers are emerging across all sectors of industry. And while these changes are occurring in firms of all sizes, it is most intense for Australia's largest firms.

**Manufacturing Futures** has identified that many companies are actively pursuing strategies to enhance competitiveness, whether that be to develop new

products, use more imported material, outsource production offshore, or to build the capacity of staff. There is strong recognition that companies will need to do more to lift their intensity in these areas.

While many companies also recognise that future strategies must involve a greater focus on investment in new capital equipment, research and development expenditures, and growth of export markets, there remains a significant gap between such recognition and plans to lift business efforts in these areas.

As well, there appears to be a large percentage (around one-third as a minimum) of companies who are yet to recognise the need to respond to the changed dynamics of global competition.

Industry recognises that government can do more to better position industry's role for the future development of the Australian economy. This in itself does not mean that industry has any expectation of "handouts", but there is a role for well-structured policy initiatives that build global industry competitiveness.

The key question is whether current policy settings help or hinder Australian industry as it competes in the global marketplace. Would the right policies ensure that manufacturing continues to contribute to growth, prosperity and job creation in the future?

**Manufacturing Futures** points to the need for government action to achieve the following objectives:

- To accelerate the pace of introduction of new capital investment;
- To build the skills capabilities of workers employed within industry;
- To encourage industry to look for greater global opportunities;
- To free industry from the costs associated with government regulations;
- To build industry's capacity to undertake business improvement; and
- To encourage industry to be more engaged in research and development.

These are the essential elements that **Manufacturing Futures** has identified as critical to the continued development of a globally competitive and productive Australian industry sector. They aim to enhance industry's capacity to compete in a more highly competitive and open Australian economy, remove existing impediments to competition, and give weight to current national economic priorities.

The Australian economy and industry will benefit through the potential to achieve stronger growth, generating a boost to investment, innovation, exports and human capital.

The choice of these objectives reflects a combination of factors. First, they are a response to industry's own recognition of priority areas for policy, namely a lower regulatory burden, greater skills training and improved tax incentives. Second, they reflect the finding that for some areas, despite their importance to future competitiveness, current and planned action by industry is inadequate, namely in new investment, R&D intensity and exports.

Third, action on regulations and investment will remove impediments that are hindering Australian industry. Fourth, action on skills, research and development, exports and business improvement, in contrast, would help Australian industry to improve competitiveness.

Action on the majority of these six critical objectives must first and foremost come from industry, with a realignment of policy initiatives designed to accelerate change and add to the overall quantum of reform.

## BUILDING STRENGTH THROUGH CAPITAL INVESTMENT

### Reduce the burden of income tax on business

Throughout Ai Group's consultations, companies emphasised the need to invest to bring and keep their business operations at the forefront of global practice. Businesses needed to improve efficiency by reducing labour intensity, lifting productivity and lowering unit costs.

A common observation of business was that the pace of technological change is now so rapid that capital equipment needed to be updated every second or third year, rather than every four to five years.

For the many businesses that were part of global organisations, whether they were foreign or Australian-owned, there was a requirement to compete internally with overseas operations for the global allocation of capital. These companies emphasised the need for Australia to be seen as an attractive place for investment, particularly because they were now competing with emerging countries, such as China and India, who could offer both a low wage cost environment and a rapidly growing domestic market base.

"The only way we are really going to be able to compete as an industry is to take out as much labour costs as we can and invest in high technology, semi-automated or fully-automated equipment due to the size of our market here in Australia."

Sydney tool manufacturer

While investment decisions are determined by a range of factors, including the rate of economic growth and domestic demand for goods and services, empirical studies have shown that taxation can affect investment decisions, particularly capital flows across countries. An OECD Working Paper (1997), which reviewed the impact of taxation on the cost of capital in OECD countries, concluded "the cost of capital to be a significant influence on total physical investment, so that reducing the effective marginal tax rate should raise investment in the long term".<sup>24</sup> This was particularly the case for foreign direct investment.

Because of the diverse range of compensating investment incentives and tax relief relating to financial arrangements across countries, the corporate tax rate provides a poor measure of the cost of taxation on investment. A better measure is provided by the marginal effective tax rate (METR) on investment. This is the tax rate that accrues on an incremental dollar of income from investment.

"In China, the level of automation is actually threefold that of a typical Australian company."

Newcastle electronics manufacturer

The impact of corporate tax and the METR on the cost of investment for 36 countries has recently been analysed by the C.D. Howe Institute. Table 1 summarises the finding on investment by a medium to large firm in manufacturing. It is based on an assessment of the tax incidence on buildings, inventory, capital and land.<sup>25</sup>

Table 1 shows that the METR can be very different from the corporate tax rate. For example, Singapore, which has a corporate tax rate of 20%, has a METR of 5.8% on manufacturing investment due to the accelerated depreciation and other tax incentives available. At the opposite end, China, which also has a corporate tax rate of 20%, has an apparent METR of 45.5%, largely due to payment of indirect tax on new machinery. When the

<sup>24</sup> Leibfritz, W, Thornton, J and Bibbee, A, Taxation and Economic Performance, OECD Economics Department Working Paper, 176, 1997, p.8

<sup>25</sup> C.D. Howe Institute, Commentary: The 2005 Tax Competitiveness Report, September 2005, p.6 and published data provided by the Institute, p.5

Chinese authorities exercise their discretion to refund the indirect tax paid on machinery, this reduces the METR to 17%.

“If you look at Hong Kong, they can depreciate machinery 100% in one year. They can depreciate computers in one year, software in one year and this is what we’re up against if we’re going to continue to invest.”

Sydney manufacturer

Australia’s METR of 29.4% varies only slightly from the headline corporate tax rate of 30% rate. (The rate of 30% was reduced from 36% as part of the “revenue neutral” New Tax System reforms to business taxation that also removed accelerated depreciation and a range of other income tax provisions). As a consequence, Australia ranks only a moderate 23rd (out of 36) in terms of the attractiveness of its METR.

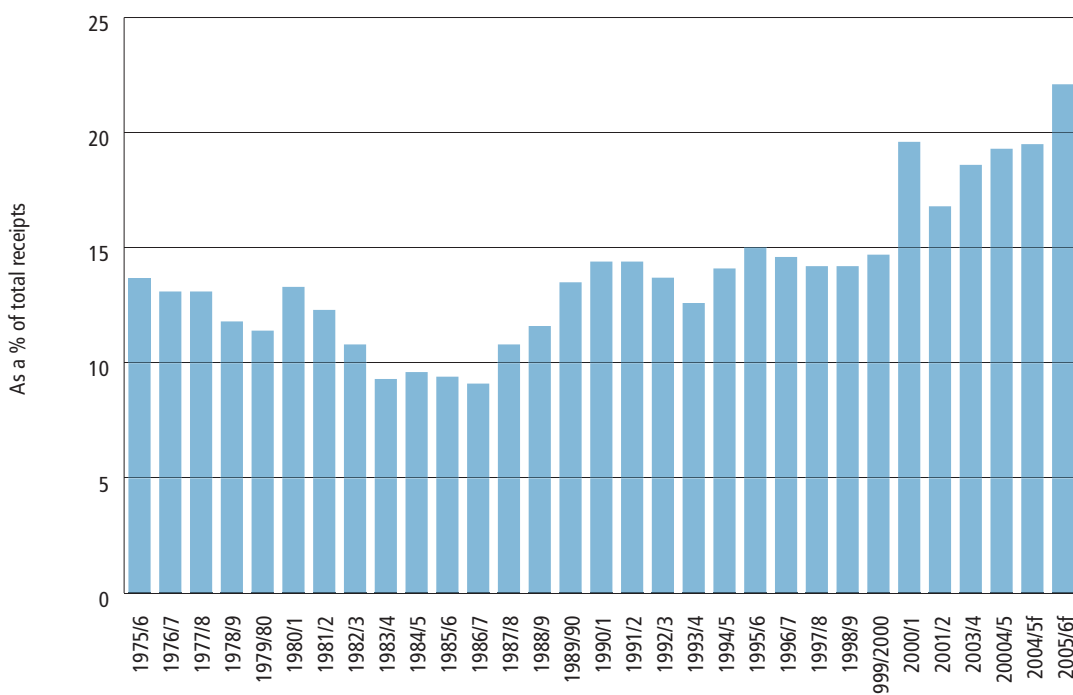
It can be noted that, although the New Tax System changes to business taxation were put forward as

“revenue neutral”, the share of corporate tax in the growing level of Federal Government collections itself has grown markedly since the New Tax System changes were introduced (see Figure 22). While a portion of this climb can be attributed to strong growth of company incomes stemming from the commodity boom and general strong corporate profitability, there is also a strong case to say that the New Tax System reforms have generated much more revenue than was initially anticipated.

The simplest and most non-distorting way of reducing Australia’s effective tax rate on company earnings is to lower the corporate tax rate. While a reduction in the tax rate from 30% to a more competitive level of 25% would, on the surface, result in a reduction in company tax collections in the order of \$8 billion, if personal income tax rates and the tax rate applying to superannuation fund income remained unchanged, a considerable portion of this cost would be clawed back through the lower value of imputation credits in the hands of shareholders.

Ai Group strongly supports the phased reduction in the company tax rate from 30% to 25%. An announcement that the rate of tax was to be reduced to 25% over the

**Figure 22 Company tax collection as a percentage of total receipts**



Source: Federal Government, Budget Strategy and Outlook, 2005-06, Table G3, p.5-39. It is important to note that there are several breaks in this data series in recent years. In particular, the sharp rise in the share of company tax collections in 2000-01 is strongly influenced by two factors - the decision of the Commonwealth Government not to include the revenue it collects from the GST and allocates to the States as Commonwealth revenue and a bring forward of business income tax associated with significant changes to the timing of collections. The steep rise in the share of company tax collections in the years since these two measures took effect (i.e. from 2001-02) is a better reflection of the extent of the growth of corporate tax collections.

**Table 1 Corporate and marginal effective tax rates on manufacturing investment**

Country	Corporate Tax Rate	METR	Building	Machinery	Inventory	Land
Singapore	20.0	5.8	12.3	-1.0	12.6	12.1
Hong Kong	17.5	6.1	16.9	-4.6	14.0	7.9
Turkey	30.0	7.3	18.2	-4.6	16.6	16.6
Slovak Republic	19.0	9.6	12.3	7.1	12.3	6.8
Portugal	27.5	11.7	18.9	7.9	9.8	9.8
Sweden	28.0	12.8	19.7	6.0	18.7	15.2
Iceland	18.0	13.1	19.4	12.3	3.8	6.0
Ireland	12.5	14.1	14.6	12.9	17.1	7.1
Switzerland	22.0	16.9	21.0	13.2	20.5	13.6
Mexico	30.0	17.2	18.0	15.6	20.1	20.1
Hungary	16.0	18.8	18.6	18.8	19.9	3.2
Austria	25.0	20.3	29.4	15.6	17.2	9.6
Denmark	30.0	20.6	20.2	19.0	25.6	13.9
Poland	19.0	20.6	23.5	15.6	28.8	17.5
Czech Republic	26.0	21.3	24.3	21.0	17.2	11.0
Belgium	34.0	21.4	24.4	19.1	23.7	12.3
Luxemburg	30.4	21.4	27.7	15.0	26.6	13.2
United Kingdom	30.0	22.7	25.0	19.9	27.1	12.2
India	33.0	23.2	24.3	17.5	35.4	6.2
Finland	26.0	23.5	27.2	21.5	23.5	16.0
Netherlands	31.5	25.3	37.2	17.7	23.6	17.0
Norway	28.0	26.1	33.9	22.3	23.4	13.2
Australia	30.0	29.4	34.1	26.6	30.1	8.5
Spain	35.0	29.9	36.5	27.8	25.0	8.0
New Zealand	33.0	30.1	34.2	30.3	23.2	9.1
Korea	27.5	31.9	23.3	39.3	18.8	8.5
Greece	32.0	33.0	19.3	37.7	36.9	2.8
France	35.4	33.3	33.4	35.2	27.7	19.1
Italy	39.4	33.3	34.0	34.7	28.8	18.3
Japan	41.9	34.4	45.0	29.0	28.8	29.3
United States	39.2	34.6	-	36.0	10.7	28.6
Russia	22.0	35.0	32.8	47.9	-78.0	-58.1
Canada	34.3	35.5	45.4	28.2	36.7	19.9
Germany	38.4	37.1	41.3	35.9	37.3	23.7
Brazil	34.0	40.1	37.3	38.2	49.4	-19.4
China	24.0	45.5*	15.9	59.2*	9.6	9.6

\* The Chinese Government can provide a full refund on VAT on machinery purchases, reducing the METR to 17.0%.

Source: C.D. Howe Institute, Commentary: The 2005 Tax Competitiveness Report, September 2005, p.6 and unpublished data provided by the Institute.

period to the start of the 2011/12 year (i.e. over five years) would represent a substantial improvement in the returns to investment. In view of the close integration of Australia's personal and company tax systems, the lower company tax rate would be particularly effective in improving the attractiveness of Australia as a destination for foreign investment.

An additional focus should be placed on improving the taxation of small business. While the Simplified Tax System (STS) was intended to provide some relief for small businesses, the relatively low take up of this option among eligible businesses is a clear signal that it is not perceived as having large advantages either in terms of the amount of tax paid or, perhaps more importantly, in terms of compliance costs.

Ai Group strongly supports the initiative of the Federal Treasurer in asking the Board of Taxation to investigate the compliance costs associated with the taxation of small businesses in Australia. This review provides a welcome opportunity to consider far-reaching changes to small business taxation.

In particular, there is strong scope for the taxation of smaller companies to be significantly streamlined by using measures such as a presumptive assessment of income tax based on GST information. In view of the relation between Australia's personal and company tax systems and the essential nature of the latter as a withholding tax, there would appear to be strong scope to introduce very simple assessment methods at the company level. Much of any reduction (or increase)

in revenue collected at the company level would be made up by an increase (or decrease) in taxes paid by individual shareholders.

Additional avenues for the reform of the taxation of small business could be informed by a thorough reconsideration of the STS for small business. Options could involve simplification of assessment provisions and raising the threshold for eligibility.

In addition to these taxation measures, Ai Group foreshadows its own investigation comparing the returns to investment in different countries.

This should complement the work already underway to benchmark Australia's tax arrangements with other OECD countries. In announcing the review, the Federal Treasurer stated that it would cover personal, business, indirect and international taxes. However, given the wide range of taxes to be examined, it remains unclear whether the analysis will take significant account of the diversity of investment incentives offered by OECD countries, hereby necessitating the need for a separate review.

There is a need to better understand the diversity of tax incentives offered by other countries (particularly among developing economies) as these can have a major effect on the effective tax rate. Appendix 2 provides a "first cut" summary of investment incentives offered in 20 countries, a useful starting point for building a more detailed study. *Manufacturing Futures* highlights how industry believes that attracting and retaining investment from foreign entities, as well as facilitating continued business investment domestically, is essential to Australia's future growth and productivity.

### Supporting continued investment by multinational corporations

One further area that has been identified by Ai Group through its consultations is the need to support affiliates of overseas corporations in their efforts to continue to invest in Australia.

"We are an international company that has got operations all over the world... If we want to acquire new technologies, international companies have to compete against their operations in these low cost countries."

Melbourne manufacturer

While interviews with the local affiliates of multinational companies identified that access to capital from parent companies was not a particular constraint on local operations, all were required to build a sufficiently attractive business case for new investment relative to competing affiliates within the global organisation. The deterioration in international competitiveness, the small and mature nature of the Australian market, and in some instances, well-defined 'geographic footprints', were frequently major impediments against generating target returns on new local investment.

In a number of cases, Invest Australia had played a role in attracting foreign owned entities to locate and/or invest in Australia. While Invest Australia is empowered to consider supporting such investment decisions, once a company has located within Australia, it is unable to continue to support these companies in attracting further investment in Australia rather than an alternate overseas location.

A capacity for Invest Australia to support established multinational corporations to continue to invest in Australia should therefore be considered by the Federal Government.

## MEASURES TO FURTHER GLOBALISE AUSTRALIAN INDUSTRY

There is an increasing incidence of Australian manufacturers relocating some aspects, or all, of their manufacturing operations offshore in order to be closer to market, to take advantage of lower labour costs, and other benefits. Other Australian manufacturers have become successful exporters through their integration in global manufacturing supply chains. The structure and philosophy of government industry policy to some extent lags behind the commercial realities of an Australian manufacturing sector where globalised Australian companies play a fundamental role.

While Australia's export promotion resources have, to a limited extent, been available for Australian investors exploring international investment opportunities, there is a need for a more coordinated suite of policies to assist successful Australian companies to globalise their operations in a more comprehensive manner.

This would include more focused support for Australian investors exploring offshore opportunities, tax concessions for offshore company income, increased support for Australian subsidiaries of foreign multinational companies considering establishing operations in Australia and more effective export

support measures. While the inbound investment functions are performed through Federal and State Government investment promotion activities, this role could be expanded to foster the development of Australian international manufacturers.

## Strengthening manufacturing exports

The slow growth in manufactured export volumes in recent years outlined in this report indicates that further measures are required to encourage Australian manufacturers to identify and market their products in new export markets. Revitalising manufactured exports is fundamental to the continued growth of the Australian economy, and all levels of government have a critical role to play in fostering the environment for the continued operation of an internationally competitive and viable Australian manufacturing export sector. This environment comprises three components:

- The existence of appropriate domestic policy settings and programs to foster an internationally competitive manufacturing sector;
- Improved market access conditions through both multilateral, regional and bilateral trade policy efforts; and
- Effective export promotion programs to ensure the development and growth of Australian exports.

## Improving market access conditions

Since the end of the 1980s, Australia has unilaterally reduced tariffs on all manufactured products. Australia now has one of the most open economies in the world with tariffs averaging around 3.5%. Despite this, many of our trading partners, particularly those in rapidly industrialising countries maintain high levels of tariff and other non-tariff barriers in order to protect their manufacturing industries.

For this reason, it is important that the offshore markets for Australian manufactured products are liberalised. The growing phenomenon of Australian industry manufacturing offshore also increases the stake Australia has in achieving liberalisation of global trade.

Australia has been a long-running supporter of the liberalisation of global trade through the General Agreement on Tariffs and Trade and its successor, the World Trade Organisation (WTO). While this mechanism has proved successful in lowering trade barriers to manufacturing in OECD countries, much of the task of global trade liberalisation remains, with high barriers to trade in manufactured products in

many developing countries. The slow progress of the current Doha Development Round of negotiations remains a cause for concern in both industrialised and developing countries.

Bilateral and sub-regional arrangements are consequently assuming far greater importance as a means of maintaining momentum on market access. Greater trade access at these levels needs to be pursued as a complement to global trade negotiations and, if pursued in a manner that is consistent with the spirit and letter of the WTO, will promote its objective of freer global trade.

In recognition of this, Australia, building upon the pioneering efforts of the Closer Economic Relations agreement with New Zealand, has executed Free Trade Agreements (FTAs) with Singapore, Thailand and the United States, and is currently negotiating FTAs with ASEAN, China, Malaysia and the United Arab Emirates. Other agreements, including with Japan and India, are also being considered. Australia has also pursued trade liberalisation through the regional groupings such as the Asia Pacific Economic Cooperation (APEC) grouping and the Association of South East Asian Nations (ASEAN) dialogue process.

Australia must continue to pursue trade liberalisation at the multilateral, regional and bilateral levels in order to continue improving market access for internationally competitive Australian manufacturers, and Australian companies engaged in manufacturing overseas.

It is important to note that Australia's efforts with regard to tariff liberalisation in overseas markets must be complemented by improvements in addressing the range of non-tariff barriers that continue to characterise many potential markets. Notably among these, improving the enforcement of intellectual property rights and removing technical barriers to trade in many export destinations will significantly assist Australian exports. Both issues must be key aspects of Australia's trade negotiations, with an emphasis on establishing ongoing bilateral mechanisms that will operate after the completion of a trade agreement. Such mechanisms would need to operate to address specific issues as they arose on a systematic basis, thereby improving market access in a meaningful and effective way.

The removal of unwarranted restrictions on the free movement of managerial and skilled labour both into and out of Australia would also greatly assist in improving the globalisation of Australian industry. The Federal Government has, in recent years, increased the emphasis on skills in Australia's immigration program,



increasing the number of skilled migrants by around 20,000 places in 2005-06. Given the demographic challenges facing Australia, the number of skilled migrants should increase by this amount again in 2006-07, and consideration be given to further expanding Australia's skilled migration program thereafter, to ensure that Australia maintains the skills base necessary for continued economic growth. This initiative must be closely coordinated with domestic measures to address the current skills shortages.

At the same time, access to foreign markets by Australian managers and skilled workers would also greatly assist the process of globalising Australian industry. Whether this is achieved through gaining preferential access or removing existing impediments, freer movement of key managers and skilled Australians overseas would assist industry to better utilise the opportunities provided by trade liberalisation. One example is the recent decision by the United States to create a specific visa enabling 10,500 Australian professionals and businesspeople temporary entry to work in that country. Australia should place an emphasis in market access negotiations on ensuring that Australian business migration to overseas markets, both temporary and permanent, is as free as possible.

### Effective export promotion programs

Beyond improving market access for Australian exporters to overseas markets, there needs to be an effective network of information and advice to assist potential and existing exporters in the task. It is important that the Federal Government maintain its support for Austrade's extensive international network, which provides in-country expertise and assistance to exporters.

The Federal Government's long-running Export Market Development Grants (EMDG) Scheme has provided exporters with a partial reimbursement of the costs incurred in developing export markets. The EMDG Scheme has played an important role in helping to build Australia's export base. The Scheme currently assists about 3,000 Australian companies a year to enter and develop export markets, with a total expenditure of \$123.9 million in 2004-05. It has provided many SMEs with critical funding during the costly and complex initial phases of identifying and establishing export markets, and provides some base support until exports are consolidated.

The Scheme is mutually supportive of other government programs and policies. It plays a key role in supporting the Government's aspirational objective of doubling the

number of exporters by 2006, which is being actively pursued by organisations such as Ai Group, working under partnership arrangements with Austrade. This objective is a commendable one, given the major disparity that exists between one-fifth of Australian jobs being generated by exports while fewer than one in 20 businesses are exporters. As the centrepiece of the Federal Government's export assistance programs, the EMDG Scheme has become integrated with some State and Territory export promotion programs, which have been specifically designed or fine-tuned to complement the EMDG Scheme.

An analysis undertaken as part of the 2004-05 Review of the Scheme found that for companies constrained by a lack of finance, the boost to exports for each EMDG dollar could be as high as \$220 over the future life of the business. This analysis found that even if all EMDG Scheme participants had easy access to finance, the boost in exports for each dollar grant was between \$7.50 and \$28. Given this relationship, the Review data itself provides a compelling argument for the Government to focus on the Scheme as the primary vehicle for fostering the expansion of manufactured exports.

However, the last decade has seen significant erosion in funding for the EMDG Scheme and a substantial narrowing of its eligibility criteria, to the point where the Scheme's effectiveness is now seriously threatened. Ai Group believes the Scheme should be funded appropriately and its accessibility to exporters improved so that it can continue to perform this crucial role of supporting Australian companies' ability to identify and develop export opportunities, which would also contribute substantially to the process of improving the international competitiveness of Australian industry.

Accessibility to the EMDG Scheme goes beyond concerns about the eligibility criteria. Many SMEs are discouraged by the onerous application documentation requirements. About two-thirds of applications were prepared for SMEs by consultants, involving additional expense. Some companies located in regional areas reported there was relatively poor access to ongoing support and follow up provided by Austrade for more isolated users of the Scheme.

The Government's response to the recently concluded 2004-05 Review of the EMDG Scheme made some welcome changes to the operation of the Scheme, notably increasing the market visit allowance, widening the eligibility of claims relating to the overseas use of intellectual property and removing the export performance test, which will provide more incentive for SMEs to explore potential export markets.



Unfortunately, these initiatives fall substantially short of addressing the twin key issues of ensuring that the Scheme is accessible to a critical range of Australian exporters and consequently providing increased funding to support their activities.

Since 1996 there has been a gradual erosion in the real value of the Scheme's budget, which in that year was capped at \$150 million. This budgetary restriction was accompanied by a substantial narrowing of the Scheme's eligibility criteria over the last decade, with the result that the effectiveness of a Scheme that had successfully promoted exports for decades is now significantly impaired.

The announcement in 2004 of a \$30 million increase in funding over three years was certainly welcomed by Ai Group, but it does not address the fundamental problems posed by the narrowing of the eligibility to claim reimbursement. Ai Group has urged the Government to significantly enhance the Scheme, including increasing its annual budget. A yearly allocation of \$300 million would be more appropriate for what is the keystone of Australia's efforts to foster and develop a diverse and sustainable export sector. This increase in funding would enable an urgently needed substantial widening of the eligibility requirements for participation by existing and potential exporters in the Scheme.

A key aspect in succeeding to bring new entrants into export markets is the leverage new entrants often receive from the activities of existing exporting companies. This is why it is so crucial to restore the wider accessibility that had existed before eligibility conditions and grant levels were pared back. Ai Group believes the present restrictions on eligibility have substantially resulted in a situation where it is becoming difficult to disburse the Scheme's existing budget. The uncertainty surrounding full payment of eligible claims and the long lags in receiving the rebate further undermine the efficacy of the Scheme.

Ai Group proposes that the eligibility criteria of the Scheme should be expanded along the following lines:

- Increasing the turnover ceiling on eligible companies from \$30 million to \$50 million;
- Raising the maximum grant payable under the Scheme from \$200,000 to \$300,000;
- Extending the eligibility period for funding from seven to eight years;
- Allowing companies to re-enter the Scheme when they are attempting to enter new markets, or existing markets with new products;
- Permitting companies to commence a new claim process when there has been a substantial change in ownership or policy, and three years have elapsed since the first or second claim;
- Reducing the level of spending that is required before being eligible to claim for a grant from \$15,000 to \$10,000 over the first three years;
- Extending eligibility to cover the costs of international registration of patents and trademarks; and
- Creating a new category of eligible expenditure of export skills professional development and training for staff.

Given the cash flow restrictions many SMEs face, it is also recommended that the delay between grant application and full reimbursement for eligible expenditure be limited to 90 days. An examination should also be made of the potential utility of the Scheme to maximise the growth in exports possible from existing and proposed FTAs.

These substantial reforms are needed to the EMDG Scheme to ensure that it remains effective in encouraging both existing manufactures exporters to expand their markets and potential exporters to start exporting.

## Removing tax obstacles to offshore investment

A clear strategy being adopted by Australian manufacturers in the face of contemporary pressures is direct investment offshore.

The motives for this strategy are diverse and include the cost advantages of positioning assembly and/or manufacturing facilities close to expanding markets and the desire to exert closer control over offshore production (including in relation to the protection of intellectual property) than can be achieved through arms' length contracting.

- Offshore expansion in general and investment abroad more particularly makes clear sense for many Australian manufacturers. It also makes clear sense for the Australian economy.
- By investing abroad, Australian companies can exploit their own capabilities in a broader range of markets thereby securing economies of scale on their investments.
- Offshore investment can also facilitate access to lower-cost inputs; it can generate significant transport cost savings and/or it can assist a company penetrate larger markets than would

be possible from a purely domestic base. Where these benefits are available, offshore investment captures for Australian companies a share of global manufacturing that would otherwise not have an Australian involvement.

As a general rule, the benefits of offshore investment accrue to both the recipient country and to the country in which the investing company is domiciled.<sup>26</sup>

- For Australia as a whole the benefits of outbound investment in manufacturing accrue in the form of higher incomes and Australian tax on this income both at the company level and at the level of the domestic shareholder.
- In addition, Australian companies active abroad will readily employ Australians in those operations including as managers, engineers and technologists. A share of the income earned by these Australians will find its way back to Australia and be reflected in the higher living standards and savings of Australian families.
- Further, even if not directly subject to Australian income tax, future income flows as well as Australian consumption attributable to this income will boost Australian tax collections.

While the strategy of greater global engagement through direct investment abroad by Australian manufacturers carries these domestic benefits, a number of tax barriers face companies interested in the pursuit of this strategy. The leading barrier arises from the inequitable tax treatment of dividends paid to the Australian owners of Australian companies investing abroad. Whereas the Australian imputation system provides relief against the double taxation of dividends paid from domestic income, equivalent relief is denied when dividends are paid from income earned abroad.

In 2003, the Review of International Tax Arrangements (RITA) conducted by the Board of Taxation at the request of the Treasurer recommended that this inequity be addressed to “ensure that Australia’s dividend imputation system does not impede the ability of Australian companies to attract capital for offshore expansion”. The Board recommended that the Federal Government “provide a credit of 20% for unfranked dividends paid out of foreign-source income (FSI) ... and allow streaming of FTI”.

In making this recommendation the Board noted that “the Board considers that the bias in the imputation system of restricting franking credits to Australian

source income increases the cost of capital for Australian companies wishing to expand offshore - for example, to expand to achieve economies of scale to compete more globally or to grow”.<sup>27</sup>

Ai Group supports this recommendation as a key element in the modern agenda to support the development of Australian manufacturing and to remove the barriers to its global engagement.

## BUILDING WORLD CLASS INDUSTRY CAPABILITIES

“Industry must own their solutions” – this was a consistent theme among manufacturers in consultations for *Manufacturing Futures*. Yet at the same time, many believed that there was still a considerable core of the industry that had to lift its game if it was to achieve global fitness. These perceptions among industry were reinforced through the survey work that showed a disjuncture between the identified need to pursue strategies to remain competitive and levels of investment and activity among an important proportion of manufacturers.

“If we are going to up-skill our labour force, if we are going to innovate, if we are going to automate, if we are going to pursue overseas markets, then we need good management skills. People who are well trained. People with vision. People who know what they have got to do in the future to make manufacturing grow in this country.”

Newcastle engineering firm

Business capability in the new reality is about mastering complexity to meet the global challenge. In chapter three we explored the range of strategies being pursued by companies. These include alternative sourcing strategies; outsourcing activity offshore; expanding production capacity; deriving a greater source of income from overseas markets; and spending more on skills acquisition, new capital, R&D, and environmental management. While a core of industry is implementing strategies, a minimum of around one-third of firms are not enhancing or implementing additional strategies.

<sup>26</sup> It is worth noting that, even where offshore investment by an Australian manufacturer is associated with a vacation of Australian operations, offshore investment will generally carry net benefits to the Australian economy when assessed against the alternative scenario. The vacation of a particular manufacturing space will release Australian resources (labour, material inputs, plant, and equipment) for alternative uses. If the closure of the Australian operations indicated its future lack of viability, any new uses to which the released resources are put will almost certainly yield greater domestic benefits than would have been the case if the non-viable operations continued. If, on the other hand, the company investing abroad was leaving behind viable Australian operations in favour of the new opportunities abroad, a new and more interested owner of the Australian operations would be likely to emerge. A complete assessment would add these benefits would need to be added to the domestic benefits from the foreign investment.

<sup>27</sup> The Board of Taxation, 2003, Review of International Taxation Arrangements: A Report to the Treasurer, Volume 1 p.10.

## International experience

The gaps in levels of business capability could make all the difference to business survival in the global marketplace. Other developed countries with smaller markets and similar competitive challenges as those facing Australian industry, have implemented whole-of-government strategies aimed at lifting world competitiveness.

## United States Manufacturing Extension Partnership

The Manufacturing Extension Partnership is a nationwide network of not-for-profit centres in 350 locations across the United States linked together through the Department of Commerce's National Institute of Standards and Technology. The Centres are funded by federal, state, local and private resources and target small and medium sized manufacturers.

Each centre works directly with the area's manufacturers to provide expertise and services tailored to their most critical needs. Solutions are offered through a combination of direct assistance from centre staff and outside consultants. These services include lean techniques; strategic management; quality systems; growth planning; environmental management; human resource and organisational development.

## Enterprise Ireland

One of the most well resourced examples of government-sponsored capability programs is found in Ireland. The Enterprise Ireland strategy is designed to provide a holistic approach to business creation and development.<sup>28</sup> Its mission is to "accelerate the development of world class Irish companies to achieve strong positions in global markets resulting in increased national and regional prosperity". The strategy assists key Irish industry groups to compete and grow by developing their capabilities in internationalisation; research, innovation and technology; and competitiveness and management capabilities.

Under the Enterprise Ireland strategy, eligible clients are appointed development advisers to act as the business primary point of contact to the full range of Enterprise Ireland services. These include working with the business to: build profitable growth; agree on a plan and responsibilities; and help access the services and resources needed to execute the growth plan. In particular, advisers can assist business access services relating to: understanding competitiveness; developing people; financing growth; accessing technology; and ebusiness.

## UK Manufacturing Advisory Service

The DTI Manufacturing Advisory Service (MAS) was launched in 2002 and delivers services through 11 regional centres covering England, Wales and Scotland. The service assists UK manufacturers to share knowledge, and improve productivity.

MAS delivers an integrated service to UK manufacturers including the following key activities:

- Direct helpline support through the regional centres;
- A free one-day on-site diagnostic visit by a MAS manufacturing specialist to review a company's entire manufacturing operation;
- Regional centres can follow up to deliver up to 10 days' in-depth consultancy - to introduce, for example, lean manufacturing techniques, product or process innovations, or design advice; and,
- Best practice, training and workshop activities for manufacturers.

The services are delivered through three main components: MAS regional centres, specialist support organisations and the MAS website. The network of specialist support organisations provide additional, specialised assistance to businesses involved in manufacturing to supplement the support available from the regional centres. This network includes technology institutes and manufacturing centres, centres of expertise in skills and training, industry sector bodies (such as trade associations and industry forums), centres of knowledge and research (such as university departments with particular manufacturing expertise including many of the Engineering and Physical Sciences Research Council's Innovative Manufacturing Research Centres, Faraday Partnerships and certain commercial Research and Technology Organisations).

## NZ Workplace Productivity Agenda and Cluster Development Programme

The NZ Government has adopted a Workplace Productivity Agenda that involves the pursuit of a number of strategies:

- Strategic communications to raise the profile for workplace productivity;
- Sharing knowledge by supporting the distribution of research and diagnostic tools and technologies with the support of all the key stakeholders;
- Creating or commissioning new diagnostic support tools and other assistance to help identify possible

<sup>28</sup> Enterprise Ireland, Transforming Irish Industry, Enterprise Ireland Strategy 2005-2007

- workplace productivity improvements;
- Facilitating productivity improvements by providing a catalyst for learning, such as bringing firms together for business-to-business exchanges;
- Providing funding support for capacity building activities and workplace productivity improvements;
- Undertaking research and knowledge-deepening activities, including developing links to international productivity organisations and commissioning and reporting on research into workplace productivity issues; and,
- Reviewing government programs to ensure that resources are focused, targeted and relevant.

The New Zealand Department of Labour established a Reference Group consisting of representatives from industry, firms, unions and key government agencies to support delivery of concrete actions over the short to medium term.

The New Zealand *Cluster Development Programme* assists companies and related organisations collaborate in business development. The 2002 Budget “provides support for groups of businesses to get together to share experience, talent and innovative ideas so they can take on the world and win”. The programme consists of a range of support tools including workshops, and financial rewards to facilitate the development of commercial, regional or national clusters. More than 180 clusters have now developed in New Zealand.

## Australian experience

Many of the business capability initiatives that exist in other countries have some form within Australia at the Federal or State level, including support for new start-ups, technology transfer, R&D, skill development and exports. Examples of business capability programs include:

- **Business Enterprise Centres** - community-based, not for profit, business assistance organisations that are owned and supported by locally managed incorporations. They are focused on small business designed to facilitate the creation, retention, and development of sustainable business enterprises and foster local economic development. The centres offer free or low cost assistance to new and existing businesses through business advice; referral to specialist advisers (accountants, lawyers, etc.); assistance with government programs and regulations; business workshops; business information; and problem solving.
- **Small Business Assistance Program**, operating through AusIndustry to link small businesses in

regional and remote areas to Australian and State and Territory Government programs; develop the business skills of small business operators; and, support a network of around 60 Small Business Field Officers.

- The **Industry Cooperative Innovation Program** (ICIP), a merit-based grants program aimed at encouraging business-to-business cooperation on innovation projects that enhance productivity, growth and international competitiveness in Australian industries.
- The NSW Government **Stepping Up Program** assists eligible small businesses with mentors and small group workshops/ seminars on topics such as cash flow management, pricing and costing, marketing, risk management, strategic planning and innovation planning.
- The NSW Government supports an **Innovation Clusters** program that supports management capability through sharing of experience relating to strategic planning, best practice, continuous improvement and enterprise resource planning. However, only two are listed as developed clusters.
- The Victorian Government has implemented the **Agenda for Manufacturing** delivering a range of initiatives aimed at building capability such as the Business Innovation Workshops, Value Chain Management Workshops, and the Balance Sheet Ready Program. It also supports networking activities such as the High Performance Manufacturing Consortia initiative, which brings together high achieving Victorian companies to work on health, safety, logistics, environmental standards and innovative practices. The Innovation Insights program assists businesses visit best practice firms to gain experience and advice on innovative practices.
- The Queensland Government has established a number of initiatives to support business capability under the **Smart State** strategy. The **Smart Small Business Program** assists industry to assess the performance of their business through diagnostic tools and provides a range of workshops and seminars aimed at lifting capability.
- The South Australian Government has recently announced a blueprint for manufacturing under the banner of **Global Horizons Local Initiatives: A Framework for South Australia’s Manufacturing Future**, which focuses on innovation, workforce development, infrastructure, exports, supportive government and business environment and sustainable growth.

Our **Manufacturing Futures** research raises concern over awareness among manufacturers of government programs and frustration with government program

application processes. In their view, industry members believed the application process for many of the Federal Government grant initiatives are overly bureaucratic, and are inconsistent with the innovative requirements of global business in the 21st century. Despite this, there were members of the business community who felt assistance from the right people to access programs had allowed them to implement new strategies they would otherwise have found difficult.

There are a number of factors impacting on the ability of existing programs to influence outcomes:

- There is uneven awareness of relevant programs across size and state;
- The plethora of programs can often be confusing to industry;
- Most programs have developed at the state level, and can be inconsistent with the needs of many businesses whose operations extend beyond state borders;
- If not placed in an appropriate context and focused on achieving business outcomes rather than program objectives, industry becomes frustrated with the program.

## Business Capability Initiative: a proposal to lift business capability

Ai Group proposes a new **Business Capability Initiative** aimed at lifting business performance among manufacturers. The initiative draws upon the success of overseas programs and involves the following elements:

- Establishment of a reference group to oversee the delivery of services under the **Business Capability Initiative** and identify tools that may need to be developed to support services;
- Network of advisers, employed by industry organisations, to assist businesses identify improvement strategies tailored to their specific needs as well as link them with government programs across all levels of government;
- Formation of a network of established specialist organisations that provide additional specialised services to industry;
- Specialist brokerage services linking business with service providers relating to skill development;
- The development of **regional and industry collaboration networks** linked nationally to maximise the benefits of shared learning and experience of world class practices among the business community.

Implementation of this initiative would provide a number of benefits:

- Accelerate the pace of implementation of competitiveness measures among industry;
- Reduce current level of frustration among industry with government programs;
- Avoid unnecessary duplication of effort among government levels and departments; and
- Provide for greater sharing of learning experience across industry, increasing the value of public investments.

The **Business Capability Initiative** would require the cooperation of all tiers of government and involve a stocktake of existing government programs and assistance at all levels. This element of the initiative seeks to address the concern that efforts on the ground are often thwarted by the lack of coordination across levels of government and duplication among programs. The stocktake will also assist in ensuring programs are appropriately targeted to industry needs.

Industry organisations would tender for the delivery of services under the **Business Capability Initiative**. These advisers would be the central point of contact for businesses to government programs and provide initial advice regarding growth strategies. These strategies may include R&D and innovation; people management, education and training; productivity improvement; finance; technology access; ebusiness; and export development depending on the needs of the business.

Advisers would broker relationships with available government programs (Commonwealth and State), including an early indication of the possibility of success in attaining government grants, and the network of specialist organisations. Specialist brokerage services would, for example, link businesses with training providers to meet skill development needs.

The development of **industry and regional collaboration networks** is aimed at sharing ideas, experience and expertise on the range of business performance activities. Initial start up funds would be available to establish new networks. This element of the **Business Capability Initiative** also seeks to enhance the current networking activities to a new level. Where networking arrangements are already established, the initiative would provide a national forum to maximise the level of shared experience and learning. Funding would be required to facilitate the national networking process.



“The sharing of lessons and ideas, getting into each other’s businesses, having people see your own business with different eyes and sharing some experiences ... Clearly in a group of 17 not all of you are experts but certainly there will be someone who is a standout in a particular area that we can all learn from.”

Victorian regional manufacturer.

Business advisers established under the **Business Capability Initiative** would also link in with these collaboration networks. This would have a two-fold benefit of identifying requirements to support business capability as well as linking industry with those that had benefited from their participation in government programs, adding greater value to the public investment.

The **Business Capability Initiative** would establish targets on the numbers of companies taken through the program, and measure the benefits to these businesses through growth. This may include an assessment of the increase in a firm’s:

- R&D expenditure;
- exports as a proportion of sales;
- training expenditure;
- productivity; and
- capital investment.

This initiative would need to be supported initially by an intensive marketing campaign aimed at raising awareness of the new program and overcoming current sentiment around the value proposition of government programs. While the **Business Capability Initiative** would not necessarily be confined to manufacturing industries, delivery through industry organisations would allow targeting to specific sector needs.

## A MORE SKILFUL GLOBAL COMPETITOR

There is widespread recognition within industry of the importance and urgency in the task of significantly building up the capabilities of the workforce. Companies consistently, through the consultations, identified skills as essential to maintaining competitiveness.

“Our business strategy is to be multi-focused, making the best use of outside expertise to introduce new ideas, new technologies, new processes, while striving to get the best out of people by increasing their skills and knowledge.”

Melbourne engineering firm

The importance of developing a skilled workforce is not new. The reforms of the Australian vocational education and training system over the past decade have primarily focused upon this goal. However, most of the reforms have had their central focus on entry-level training arrangements or the skilling of individuals enabling them to obtain employment.

In the past, companies were largely happy with these arrangements. The training system was seen as primarily designed to help develop skills for young people embarking upon their vocation. In fact, completion of this training was often the last formal educational experience of many individuals. Those days are long gone and employers are acutely aware of this. The competitive pressures that employers contend with on a daily basis have necessitated the development of a range of strategies to ‘stay ahead’. A key strategy is the ongoing skill development of the existing workforce.

It is difficult to formally gauge skill levels in the Australian labour force. The most useful mechanism available is data relating to the qualification levels of the Australian population. By May 2004 half of Australia’s population had obtained a qualification in addition to schooling. This figure has been steadily rising since 1994, when only 40% of the population had post-school qualifications. However, not all of these holders of qualifications are in the labour force. They may be unemployed, at home or retired. Furthermore, the distribution of these post-school qualifications is uneven across industry sectors, geography, age and gender.

While the above trend appears positive, Australia does not compare favourably with other OECD equivalent countries. In 2002, 39% of Australians had left school and never returned to formal education. This is compared with the OECD average of 32% leaving school and never returning to formal education. Comparisons for individual countries are contained in Table 2.

The existing workforce is comprised of workers of all ages. In fact, it ranges from those who have just completed their apprenticeship (may be only 19 years

**Table 2 Educational attainment: population aged 25 to 64 years, selected OECD countries, 2002**

Selected OECD country	Lower secondary education (a) (%)	Upper secondary education (%)	Post-secondary education (%)	Tertiary education (%)	Total (%)
Australia	39	30	(b)	31	100
Canada	18	28	12	43	100
Germany	17	55	5	23	100
New Zealand	24	39	8	30	100
United Kingdom	16	56	(c)	27	100
United States	13	49	(b)	38	100
OECD average	32	41	3	23	100

Note: (a) includes lower secondary, pre-primary and primary.

(b) Not reported separately. Included in upper secondary.

(c) Not reported separately, included in the total.

Source: OECD 2004, Education at a Glance: OECD Indicators 2004, table A1.1.

old) to those nearing retirement. All of these workers are required to develop and continually keep their skill base current. Not surprisingly, employers reinforced the trend away from unskilled employment – saying the demands of production in the 21st century meant that workers needed to be more highly skilled and they also needed to have a flexible and adaptable skills base coupled with strong communication and problem solving skills.

## 1. Increase the focus of the training system in the upskilling of existing workers

The *Manufacturing Futures* consultations put a sharp focus on the need to increase the focus of the training system from the entry level to upskilling and re-skilling of existing workers.

The increased focus on the importance of the skills of existing workers appears to be driven by the following factors:

- Decreasing pool of younger entrants into skilled occupations;
- Perceived reduction in quality of the pool of new entrants into skilled occupations;
- Difficulties in recruiting skilled workers into vacancies;
- Increasing enterprise and technology specific skill requirements; and
- Recognition of the importance of investing in existing workers.

“We’re employing 100 people and we’ve got 17 apprentices. We’ve taken a decision, we know because of the shortage of labour at the end of the four years we’ll probably lose two-thirds of those kids, but we’re just going to keep pumping them in at the bottom end and that’s the only way we can see we’re going to make it work.”

Ballarat machinery manufacturer

Employers consistently bemoaned the difficulty in recruiting skilled labour into their workplace. In a previous study *Skills Gaps – Costly, Wasteful & Widespread*<sup>29</sup>, Ai Group identified that over half of all firms surveyed were experiencing considerable difficulty in filling vacancies. This problem was across the board.

In addition to this, employers have long been expressing their concern about the quality and number of applicants seeking to undertake an apprenticeship. It is true there has been a strong surge in the uptake of traditional apprenticeships in the past 12 months. In fact, the training rates for traditional apprenticeships are at its highest levels since 1992. The recently released report *Getting it Right: What Employers & Apprentices think about Apprenticeships*<sup>30</sup> contends that over the past decade there has been a structural break in that strong economic growth has not translated, until very recently, into a strong recovery in the training rate. The recent surge in apprenticeships is a response to employers ‘hitting the wall’, having exhausted all other options in meeting demand. However, current rates of training will have to be maintained for another decade to compensate for the reduced training effort in the previous decade. A change in economic conditions

<sup>29</sup> Ai Group, Skills Gap – Costly, Wasteful & Widespread, 2004

<sup>30</sup> Ai Group, Dusseldorp Skills Forum and Group Training Australia, Getting it Right: What Employers and Apprentices Think about Apprenticeships, October 2005



could see a sharp reduction in the training effort. Employers are training more young people in an attempt to build their skill base. However, they are aware that this strategy alone, one that they relied upon in the past, is insufficient in meeting their needs.

Ai Group is aware of the limitations of the current traditional apprenticeship system in delivering the skills required in the workplace. As part of the recently released policy *Contemporary Apprenticeships for the Twenty First Century*<sup>31</sup>, Ai Group has advocated developing new and more relevant apprenticeship arrangements for adult and existing workers. This proposal involved understanding that adults bring skills to any new training experience. Hence, an adult apprenticeship should utilise RPL to recognise what skills and experiences they have and therefore what they can do. From this point a meaningful and relevant skill development program can be structured. Incentive payments should be re-considered for adults and existing workers, and be premised upon a mandated recognition process. Furthermore, the contract of training for adult apprentices should be removed.

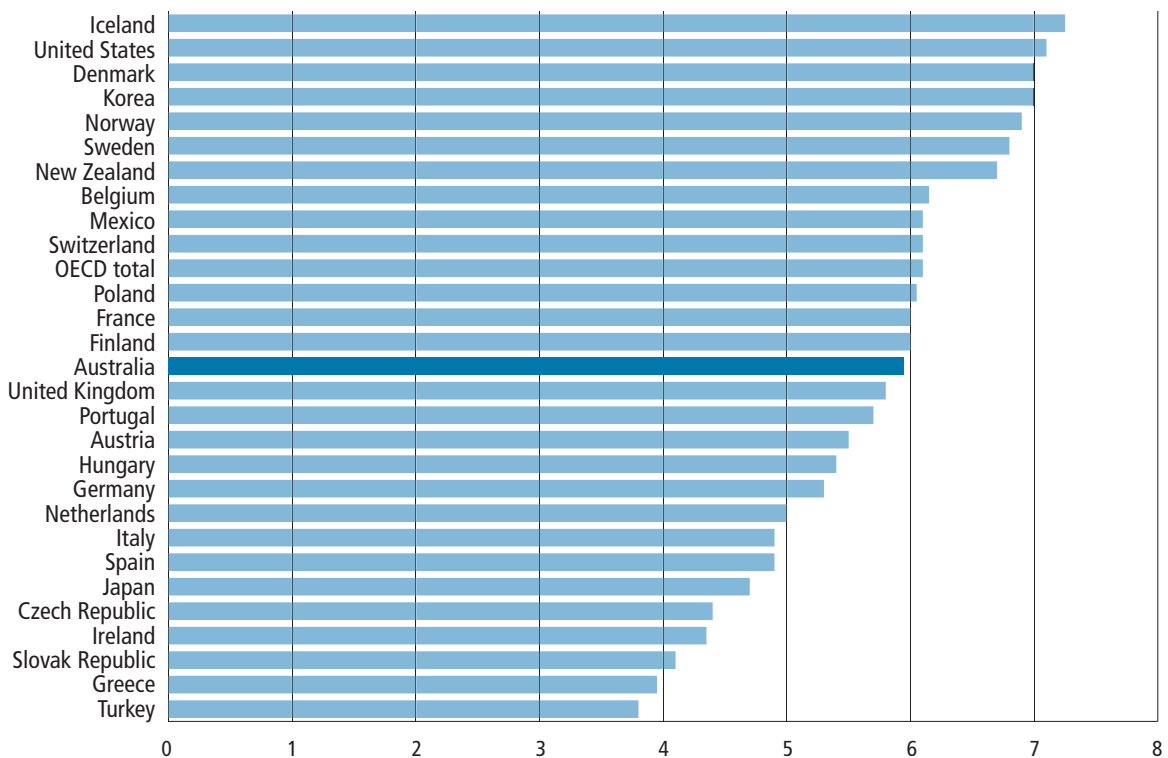
Ai Group has been aware of this important shift in company requirements from the training system and has embarked upon a major piece of research to explore the issues and policy implications in great detail. This work is entitled *World Class Skills for World Class Industries*. The specific aims of this project are to:

- Provide an analysis of the current state of skilling in Australia;
- Develop an understanding of future skilling needs;
- Provide a map of strategic policies that would positively impact on skilling, consistent with government policy; and
- Raise technical issues of implementation.

While this major piece of research is not complete, many of the initial findings through focus groups and survey work share many of the themes contained in this piece of research. Employers are reinforcing *Manufacturing Futures* in their identification of the importance of skill development as the key strategy in remaining competitive.

Employers have clearly identified the importance of upskilling existing workers. In fact, one large

**Figure 23 Expenditure on educational institutions as a percentage of GDP**



Source: OECD, Education at a Glance, OECD Indicators 2002, OECD, 2005, p.30

<sup>31</sup> Ai Group, Contemporary Apprenticeships for the Twenty First Century

**Table 3 Percentage of wages and salaries spent by employers on employee training: OECD countries, 2002**

Country	% payroll	Country	% payroll
Australia (2002)	1.3	France	1.3
Denmark	1.7	Finland	1.3
Netherlands	1.7	Germany	0.9
Norway	1.6	Austria	0.8
Ireland	1.5	Spain	0.5

Source: NCVER, Funding and financing vocational education and training, research findings, NCVER, 2005, p.100

manufacturing employer identified that the skilling cycle has shortened to two years. Every two years employees need some form of upskilling simply to remain relevant.

The increased importance of 'soft' or employability skills has also continued to emerge as being of major importance. Indeed, many employers acknowledged that beyond the generic skills base and 'standard' technical skills, the skills required in today's workplace are specific to either the enterprise or the technology. This makes the workplace the most critical context for skill development – an on-going challenge for the formal training system.

Despite these pressures, many companies are struggling with the implementation of effective and meaningful formal skills development systems within their enterprise. This need is a challenge for both the individual enterprise and future policy settings.

*World Class Skills for World Class Industries* will be released in mid-2006. It will contain a series of recommendations that will be a companion to the policy considerations identified in *Manufacturing Futures*. In addition to the need to rebalance the training system, Ai Group in *Manufacturing Futures* has identified four additional policy areas that require consideration prior to the release of its major skills study.

## 2. Increase the overall spending of education and training.

Individual employers and industry on the whole are strongly articulating the need for sustained improvements in the Australian skill base as a key strategy for business competitiveness. In stressing this message, companies simultaneously call for an overall increase in the expenditure on all forms of education and training.

Examining the OECD data (2002) on expenditure on educational institutions as a percentage of GDP for all levels of education supports this view. On average OECD countries spend 6.1% of their collective GDP on their educational institutions. Australia's percentage spend in relation to GDP on educational institutions at 5.9% is below the OECD average (Figure 23). Notably, countries like the United States, Korea, New Zealand, etc all expend significantly more than Australia.

Increasing the spending on education and training is not viewed as only the responsibility of government. Employers, in both the focus groups conducted through this project and also in the *World Class Skills for World Class Industries* project clearly stated their intentions over the next three years to significantly increase their expenditure on skills development. Many companies are anticipating lifting their expenditure by almost 30% during the next three years.

Comment is too readily levied at employers claiming that Australian employers do not sufficiently contribute to the costs of the attainment of education & training regardless of how it is accessed. This assertion can be challenged. Comparable data from both the ABS and the European Union suggests that Australian employer expenditure on training of existing workers is in the middle of the normal range expressed as a percentage of payroll costs. Notably, Australian employers expend a greater percentage than do employers from countries such as Germany, France and Finland (Table 3).

Government funding for vocational education and training (VET) grew in real terms from the early 1990s, but this growth, after a decline in the late 1990s, has largely remained static (Figure 24). However, as Figure 24 highlights, this does not take into account the not inconsiderable amounts of expenditure that lie outside the remit of the Commonwealth & States funding agreement. Much of this expenditure relates to the growth and expansion of the New Apprenticeship Schemes and includes Commonwealth Employer subsidies, Australian Technical Colleges,

### New Apprenticeship Centres, Commonwealth Trade Learning Scholarships and Tools for Your Trade.

It is the view of the Australian Industry Group that there are considerable reasons to lift the overall expenditure on education and training. Indeed, NCVER data shows that real expenditure per hour (measured in \$A in 2003) declined by 16% between 1997 and 2001 from \$15.5 per hour to \$13.0 per hour, before increasing by 6% between 2001 and 2003 to \$13.8.<sup>32</sup> Countering this decline necessitates an increase in expenditure both from government (Commonwealth and state) and employers.

## 3. Recognising the skills of individuals

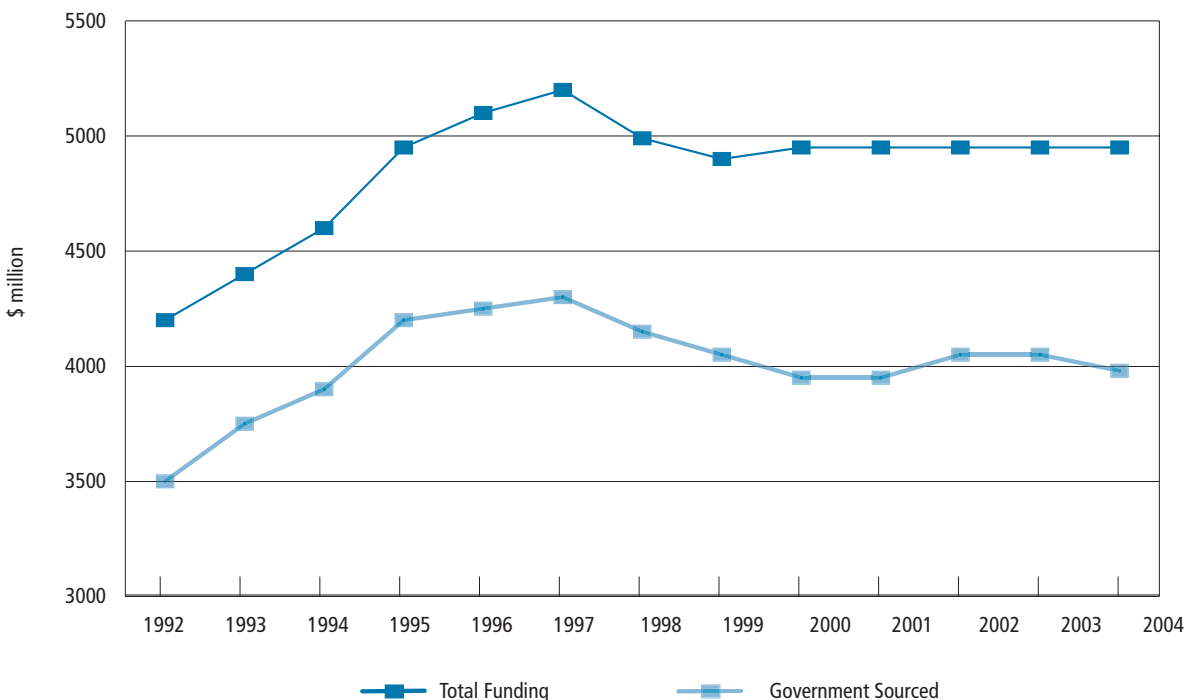
Workforces are comprised of individuals. Individuals have skills – some of which are formally recognised, some are not. To ensure maximisation of the competitive capability of enterprises the actual level of individual's skills needs to be identified.

Many individuals obtain their skills informally, either through experience in the place of employment or bring

with them skills obtained from previous experiences. A process to formally identify these 'hidden' skills will help enterprises unleash the full productive potential of their workforce. Recognition of prior learning has been a feature of the national vocational education and training system for over a decade, yet has failed to deliver sufficient recognition for existing workers. Critical national work must be pursued to achieve a cost-efficient, timely recognition system. This work must include:

- Development of a model for recognition as the mandatory commencement point for adult apprenticeships. Commonwealth Incentive payments to employers of adult apprenticeships should be linked to this recognition process;
- Exploration and implementation of models for RPL that relate to the needs and requirements of industry sectors and organisation. Industry and employer associations should be funded to drive the development of these systems; and
- Removal of disincentives for registered training organisations to effectively and efficiently provide timely RPL service.

**Figure 24 Growth in VET funding in real terms**



Source: Noonan, P "VET funding – past trends and future issues" Centre for the Economy of Education and Training Conference, October 2005, P.8

<sup>32</sup> NCVER, Funding and financing vocational education and training, research findings, NCVER, 2005, p.79

## 4. Extending and refining incentive payments

The economy is now wrestling with skill shortages in many of the traditional trades and there is every indication that these skill shortages will continue given the structural changes in the economy which have impacted on training; the forecast of sustained demand, particularly from China and to a lesser extent India, which is outstripping supply; and the ageing of the workforce which is seeing many of our tradespeople preparing to leave the workforce in the next few years.

Incentives are a powerful driver of training levels and have successfully underpinned sustained increases in training at each of the times they have been reviewed and restructured.

A range of initiatives have been introduced by governments to seek to address skill shortages, but there is an opportunity to better utilise incentives to more closely align skill development with the skills needed by industry. This would include;

- Increasing the level of incentives paid to skill rich industries;
- Extending access to incentives to higher skill levels and broadening eligibility; and
- Increasing the level of incentives paid to skills in short supply.

The Australian Government provides a range of financial incentives to employers with the aim of encouraging the development of "...a more skilled Australian workforce that delivers long-term benefits for our nation and our international competitiveness. This is achieved by encouraging employers to open up genuine opportunities for skills-based training of their employees"<sup>33</sup>

In 2003/04 the Australian Government paid over \$510 million in training incentives.<sup>34</sup>

There are standard commencement incentives (\$1,375 for a Certificate II/\$1,650 for a Certificate III) and standard completion incentives (\$2,750 for a Certificate III or IV).

These incentives are supplemented by a range of special incentives for Women in non-traditional trades (\$1,100), Innovation (\$1,210), School-Based New Apprenticeships (\$825), Rural and Regional Skills Shortages (\$1,100), Declared Drought Areas (\$825 additional commencement/\$1,650 special completion), Mature Aged Worker (\$825 special commencement/

special completion), Recommencement (\$825), School-Based New Apprentice retention (\$825). Other assistance includes for apprentices with a disability, living away from home allowances, and the Commonwealth Trade Learning Scholarship which provides two tax exempt \$500 payments to eligible New Apprentices undertaking qualifications in the skill needs trades.<sup>35</sup>

State Governments also offer a much narrower range of training incentives.

### Why incentives are important?

The clearest demonstration of the impact of training incentives is seen in the response from employers in the increase in the numbers of apprentices taken on when the incentive arrangements are restructured. There have been four rounds of incentives introduced or substantially altered through reviews (1973, 1977, 1985, 1998) and after each there has been a significant increase in numbers in training. (There was another review in 2002.) Incentives can't be considered in isolation, as the link between apprentice numbers and economic demand is well proven but the research suggests that the increase driven by the incentives is above the expected trend.<sup>36</sup>

Consideration should be given to;

- Extending incentives to VET qualifications beyond Certificate IV;
- Undertaking a skill benefit analysis by industry; and
- Developing new incentive arrangements for existing workers and adult apprentices.

Incentives were reviewed in 2002 and it is our view that the intervening three years have consolidated some shifts in the economy which would not have been fully apparent then, particularly with the emergence of China and India. Australia's economy is truly a global economy and our companies are competing with the best in the world – both at home and abroad if they are exporters. We are also working to meet new sources of demand – mainly from China and India – which have in some sectors outstripped supply. This in turn puts pressure on the training system, which is already operating in the context of skills shortages in many areas.

Our research clearly demonstrates that companies are responding to the increasing competitive pressures they face by increasing the skills of their workforce. Building their skill base is a key element of their strategy to maintain and improve their competitiveness over the next few years, along with finding opportunities to grow

<sup>33</sup> DEST website, viewed on 2 December 2005

<sup>34</sup> SAPfihre Financial Reports as at 30 June 2004

<sup>35</sup> DEST website, viewed on 2 December 2005

<sup>36</sup> SAPfihre Financial Reports as at 30 June 2004

and innovate. Companies are demanding higher levels of skills and a more frequent updating of skills. They are looking at new strategies to find or train the people they need and our work with companies suggests there will be a big step up in firms' efforts to better meet their skill needs over the next few years.

A strategic repositioning of the incentive structure at this time could help to reinforce this industry direction and give it added momentum – again, as we have seen in the past, help to lift training levels even higher than would be expected given recent trends.

## 5. Include Science and Engineering undergraduate programs in the National Priority area for concession

In 2002, 8% of Australian tertiary students graduated from courses in engineering, manufacturing and construction. This figure is a cause of concern. The OECD average for the same graduation category is 13%. Similar or competitor countries with notably higher levels of graduates include: Germany 18%; Japan 21%; Korea 27%; and the United Kingdom 10%.<sup>37</sup>

Ai Group recommends that the Australian Government include undergraduate science and engineering degrees in the National Priority for concession program.

This strategy aims to increase the attraction and stimulate demand for these undergraduate programs for school leavers. This strategy needs to be accompanied by an effective communication campaign to deliver increased levels of skilled professionals in the science and engineering fields.

## 6. Broadening tax eligibility for learning beyond current career

The twin forces of technological change and globalisation are having a profound impact on the nature of work, the way it is organised and the skills it requires. These changes are now so rapid that people cannot expect to be working in the same areas even for a part of their working lifetimes. Many specific skills now have a very short 'half life'.

On the supply side, the workforces of most countries, including that of Australia, are ageing. There will be relatively fewer young people entering the workforce than in the past. Skill formation policies will therefore need to be more heavily focused on the adult workforce than in the past, and include reskilling older workers. Continuous learning is required.

Skilling can involve moving up an existing career path or branching out into new career paths. Despite this recognition, there are few tax incentives for encouraging individuals to pursue new career options.

Current tax legislation precludes tax deductibility for self-education in regard to career change. In general terms, self-education expenses are deductible, provided it can be demonstrated that there is a direct nexus between the course being undertaken and how an individual derives their assessable income. It is necessary to satisfy any of the following tests for self-education expenses to be tax deductible:

- The expenses have a relevant connection to the taxpayer's current income earning activities;
- The self-education undertaken enables the taxpayer to maintain or improve their skills or knowledge to carry out their income earning activities; or
- The self-education leads to, or is likely to lead to, an increase in the taxpayer's income from current earning activities in the future.

A number of tax rulings over the years have led to deductions for self-education for career-changing purposes being excluded as eligible. These include:

- Getting employment in a new field of endeavour (for example, an electrician becoming an architect);
- Getting employment or obtaining a qualification to enable a taxpayer to enter a restricted field of employment (for example, getting a degree to practice as a nurse); or
- Opening up new income earning opportunities in the future (whether in business or in the taxpayer's current employment) because the self-education is incurred at a point too soon to be regarded as being incurred in gaining or producing the assessable income of the individual.

Ai Group believe that the changing skills needs of the workforce necessitate a more flexible approach to self-education deductions to provide an incentive for life-long learning. There should be scope for a taxpayer to receive a deduction where the new qualification sought falls within the Australian Qualification Framework.

## LOOSENING THE SHACKLES OF GOVERNMENT RED TAPE

*"We want these blokes to come up with a fair dinkum way of reducing costs to do business here so we're competitive."*

Ballarat metal fabricator

<sup>37</sup> OECD, At a Glance: OECD Indicators, 2004

The survey responses, industry consultations and case studies all identified government regulation and compliance as a crucial factor affecting the competitiveness of Australian industry. Individual government regulations and imposts (including those relating to workers' compensation and the environment) were frequently cited as a source of international competitive disadvantage, particularly with many competitors in low cost economies rarely bound by the same constraints.

Nevertheless, it is equally clear from the discussions that the impact of specific regulations, in terms of both the compliance burden and the distortion to efficient resource allocation, varies significantly across industry, region and size of enterprise. That regulation and compliance continues to be viewed almost unanimously as a major impediment reflects more the cumulative impact on businesses and business competitiveness.

The Business Council of Australia recently estimated the stock of regulations by Federal and State Governments was growing at a rate of around 10% per annum, more than double the growth in GDP<sup>38</sup>. Similarly, the Australian Government Regulation Taskforce has identified over 40 separate pieces of legislation or regulations potentially impacting business (including, *inter alia*, product labeling requirements; product liability laws; manufacturing standards; quarantine requirements; corporate governance regulation; native title; Centrelink compliance requirements; customs procedures; industrial chemicals regulations; and so on).<sup>39</sup>

The growth in the breadth and complexity of government regulation has produced both duplication and inconsistencies across various jurisdictions. This development is of particular concern to medium and larger enterprises with operations in more than one state. Moreover, while industry accepts some regulation is necessary to meet the community's social, environmental and economic objectives, it is clear many regulations fail to deliver the prescribed objectives. In many of these cases, businesses believe they are bearing the economic costs of these objectives (in addition to the compliance costs), rather than consumers or taxpayers.

The considerable cost to business of regulatory compliance has been the subject of earlier research by both the Victorian Government and Ai Group. As discussed, the Victorian Department of Treasury and Finance has estimated the cost to business of complying with government business regulations at around 2.5% of GDP. Reducing these costs could be expected to significantly enhance economic growth.

More specifically, Ai Group has estimated manufacturers spend 102 hours on average per month managing compliance issues (the equivalent of one hour 47 minutes per employee)<sup>40</sup>. Ai Group also found disproportionately larger costs for smaller companies, where the average employee spends four hours 51 minutes per month on compliance (and compared with two hours 39 minutes per month among medium-sized companies and 47 minutes among larger companies). The estimated total annual cost to Australian manufacturers was approximately \$680 million, or an average for each manufacturer of over \$35,000.

The study also found tax administration the single most demanding area, utilising 31% of all resources devoted to regulatory compliance. Almost 25% of compliance costs related to environmental regulations, while all other regulations comprised 44% of total compliance costs.

*"If we're going to compete in Australia it's not going to be through protectionism, it is going to be by keeping in front of what our low cost competitors can do. So if there is a message to go back to government it would be on regulation. To reduce regulation so that we can innovate quicker."*

Newcastle transport equipment manufacturer

Unsurprisingly, industry believes reducing the regulatory and compliance burden is one of the top two priorities for government policy action. And, despite presiding over the explosive growth in regulation in recent years, all Australian governments are supportive in principle of reducing compliance costs. At present there are at least five regular or ad hoc reviews of government regulation, or aspects of regulation, some of which involve all three levels of Australian government:

- The review by the Council of Australian Government's of the National Competition Policy (including the legislative review process);
- The Board of Taxation's review of aspects of the taxation legislation;
- The Financial Services Reform Refinements project;
- Annual reviews of Australian government regulation by the Productivity Commission (the Office of Regulatory Review); and
- The Australian Government Regulation Taskforce.

<sup>38</sup> Business Council of Australia, Business Regulation Action Plan, May 2005.

<sup>39</sup> Australian Government Regulation Taskforce, Taskforce Issues Paper, October 2005.

<sup>40</sup> Australian Industry Group, Compliance Costs Time and Money, November 2004



Ai Group strongly supports these efforts to streamline the regulatory framework. Ai Group particularly welcomes the establishment of the Australian Government Regulation Taskforce, the terms of reference for which demand ‘practical’ options to alleviate the compliance burden and a report to government in January 2006.

More broadly, however, in assessing the most effective way of lowering compliance and other costs on industry (and reducing the distortions to efficient resource allocation), while concurrently fulfilling the underlying community objectives, it is important to emphasise a number of key overarching themes. In particular, it is evident the growth in government regulation is partly attributable to the lack of balance in social attitudes to risk of adverse outcomes and expectations about the management of risk.

Ai Group believes an adequate balance requires a full consideration of the costs of ameliorating - or shifting - risk.

This must include consideration of the costs of compliance with additional regulatory burdens, and the costs of behavioural changes brought about by additional regulation. In short, the impulses to legislate and regulate need to be tempered with a greater accounting of - and accountability for – the costs imposed by regulation.

There appears to be a lack of attention on the part of policy makers, legislators and regulatory authorities to the compliance costs associated with the policies they design, the laws and regulations they enact and the regulatory burdens they call on business and other members of the community to meet. While this lack of attention is evident across the spectrum of regulatory activity, it is highlighted in the latest Review of Regulation conducted by the Productivity Commission.<sup>41</sup>

Some indicative features of that report are:

- That Regulatory Impact Statements (RISs) are only required for a relatively small proportion of Commonwealth legislation;
- That attention to regulatory impacts is often injected into bureaucratic processes very late in the preparation of regulatory instruments; and
- The lack of penetration of regulatory impact considerations into departmental and agency practices and cultures.

It is clear that in Australia, political and bureaucratic processes and practices do not place adequate emphasis on the costs of regulation and the impacts of imposing

new regulation. Where procedures currently exist, for example in requirements related to Regulatory Impact Statements, these appear to be regarded as irritating add-ons rather than being indicative of a root-and-branch focus on the efficiency of regulation and the level of regulatory burdens.

Against this backdrop, Ai Group has proposed a three-step approach to the review of government regulation and reducing business compliance costs: measuring the burden; ensuring political commitment to a targeted reduction; and an organisational structure that provides incentives to achieve the specified target.

## 1. Measurement

Measures of the impacts of compliance burdens must be adopted, improved and further developed. The maxim ‘if you can measure it, you can manage it’ applies.

Measurement should seek to capture an index of the total compliance burden as well as burdens associated with particular regulatory instruments. In relation to the regulatory impacts of specific regulatory instruments, measurement should capture:

- The private and public sector administrative costs;
- The effectiveness of regulation in achieving explicit goals; and
- The opportunity costs of regulation-induced behavioural changes.

Approaches to measurement should be subject to independent scrutiny and development.

## 2. Commitments and accountabilities

There should be a clear political commitment to reduce the costs of compliance and to adopt world’s best practice in regulatory approaches. For example, the leader of each government could commit to reducing the aggregate compliance burden by 15% over a three-year period.

Each department and agency should be called on to identify areas of regulatory improvement and should commit to:

- Reducing the compliance burden associated with the stock of existing regulation on a progressive basis; and
- Adopting world’s best practice in any additional regulation.

<sup>41</sup> Productivity Commission, Regulation and its Review 2003-04, Annual Report Series, November 2004.



The responsible Ministers should report to their respective Parliaments annually on progress against pre-set targets.

### 3. Institutional arrangements

Ai Group strongly believes the relevant institutional arrangements should cover regulations administered by the individual levels of government and also the inter-jurisdictional dimensions of Australian regulation. To this end, the regulatory reform agenda needs to be embraced by all Australian governments.

Ai Group supports the adoption of annual Regulatory Improvement Bills dedicated to reducing regulatory burdens. All tiers of government should reserve time in their parliamentary timetables to consider a Bill (or ordinances in the case of councils) that removed or made technical improvements to existing regulatory regimes. This would provide a powerful mechanism that would facilitate regulatory improvements by giving administrators an opportunity that presently does not exist to refine and re-design legislation underpinning regulatory arrangements. Such an arrangement could also dovetail with administrative measures that involved setting annual targets for reducing compliance costs.

Ai Group also urges the Council of Australian Governments (COAG) to endorse the establishment of a Regulatory Review Unit (RRU). In keeping with the principle of ‘one in, one out’, moreover, the RRU should replace the existing Office of Regulatory Review. It is intended the RRU oversee the implementation of targets, and operate with an independent Board to monitor the conduct of the Unit.

Institutional changes should be aimed at transforming the internal cultures of administrative agencies, and extend to the allocation of responsibilities and accountabilities for reducing compliance costs in line with pre-set targets. The leader of each government should also oversee the adoption of regulatory reform objectives and principles and should commit to meeting targets to reduce regulatory burdens.

#### Existing and new regulations

With respect to the existing stock of regulation, Ai Group believes every department and agency should immediately focus on reducing the regulatory burdens for which it is responsible. To assist in meeting initial targets, a “one in, one out” model to regulation again should be adopted.

In relation to new regulation, the process of Regulation Impact Statements should be revitalised and expanded.

Greater accountability should be injected into the RIS process and post-implementation reviews should assess the adequacy of Regulatory Impact Statements.

In summary, Ai Group believes opportunities to avoid or to remove regulation altogether should be thoroughly investigated and implemented. Where these options are not available or would not yield satisfactory results, alternative forms of regulation should be assessed and the most appropriate form chosen. In assessing alternative approaches to regulation, due weight should be given to the costs of compliance imposed and the diversion of activity into relatively unproductive channels.

#### Workers’ compensation and OHS arrangements

While it was noted at the outset that the impact of individual regulations tended to vary across industry, region and size of enterprise, and that the concern among industry rests largely with the overall compliance burden, the industry consultations and the case studies revealed relatively widespread dissatisfaction with current workers’ compensation and OHS arrangements.

Just a few examples of the comments include:

“We have to pay on-costs that are not required in competing economies. Workcover and EPA licences all factor into our international competitiveness. Unless they are dealt with in a way that is equitable on an international market we’re not even going to be able to compete on an international level.”

“The OHS area is a problem for us. We fully support having high safety standards but I think we’re over-regulated these days ... I think the legislation is aimed at some of these organisations who pay the token interest in safety matters; and maybe there needs to be a focus on them, but I think there are a lot of organisations who have pretty good standards and they are paying the price of those who don’t.”

“Government charges have gone up for workers’ compensation, insurance and the like, but we can’t put up our prices when we’re competing with overseas.”

Much of this antipathy was related to the level of workers’ compensation premiums, both in terms of their absolute level and their inconsistency with improvements in industry safety performance. For example, one New South Wales manufacturer observed the annual premium for a single employee was equivalent to the annual wages of around one unskilled worker in China. In the same vein, many businesses contended workers’ compensation premiums were a significant source of the differential in total labour costs between Australia and the developing economies. Indeed, in recently announcing a 5% reduction to workers’ compensation premiums, the New South Wales Government estimated a company with a wages bill of \$12 million would save over \$72,000 annually.<sup>42</sup>

A further issue (especially among larger manufacturers) was the variation in schemes across different states, which resulted in additional administrative and compliance costs. Other interviewees lamented the lack of appropriate acknowledgement for improvements in workplace safety records (including premium discounts), and the underlying need in some jurisdictions to tighten employee access to compensation schemes.

Ai Group applauds recent moves by the Victorian, New South Wales and Tasmanian Governments to improve the financial position of workers’ compensation schemes and to cut premiums. Nevertheless, Ai Group believes there is an urgent need for co-ordinated reform of workers’ compensation arrangements, including further premium reductions in most states and territories.

The establishment of the Australian Safety and Compensation Council (ASCC), replacing the former National Occupational Health and Safety Commission, offers the potential for a unified approach to workers’ compensation. In addition to driving further improvements in occupational health and safety, a key task of the ASCC is to draft a set of national standards as a model for workers’ compensation legislation in the states and territories. Ai Group strongly believes the proposed national standards on access and benefits should be built around a uniform national premium system, and that there is scope to deliver uniform premiums well below the current Australian average.

Furthermore, the states and territories should commit to achieving these targets by 2010. Ai Group also believes the national standards should continue to encourage and reward individual workplaces with strong safety records.

### Streamlining government grant schemes

“The AusIndustry R&D grant basically takes six months. Now six months in an R&D cycle is ridiculous, absolutely ridiculous.”

Melbourne metal manufacturer

“Rather than introduce something new, the Government should clean up their act as far as the programs they have got. My view is that these programs should be run as any business is run and that they should be run on business principles, you introduce assistance programs, you introduce incentive programs on the basis of KPIs that add value.”

Sydney industry organisation

Ai Group recommends that application processes for government grant schemes be streamlined. Ai Group understands the need for accountability but, as indicated by our industry forums, the current processes are not in line with the needs of innovative business. These comments were not limited to one program area. There were also examples provided by industry where they experienced less frustration by receiving support throughout the process. Extending this positive experience is the intent of advisers employed under the **Business Capability Initiative**. However, the need to streamline the application process goes beyond access to good advice.

Government grant schemes are reviewed on a regular basis. In November 2005, a review more specifically related to the administration of a grant scheme was undertaken by the Australian National Audit Office relating to the R&D Start Program. “The ANAO concluded that the delivery of the R&D Start program is generally well managed by AusIndustry. Improvements in some areas would further strengthen the framework, improve the efficiency of the delivery of grant financial assistance, and provide greater transparency to stakeholders.”<sup>43</sup>

<sup>42</sup> As reported in the Australian Financial Review, 10 November 2005, p5

<sup>43</sup> Australian National Audit Office, Administration of the R&D Start Program, November 2005, p.18.

A series of recommendations made to the Department of Industry, Tourism and Resources (DITR) and the Industry Research and Development (IR&D) Board were subsequently adopted by both parties and agreement reached to extend the same recommendations to the new Commercial Ready program. (see Appendix 3).

The willingness of DITR and the IR&D Board to extend the review recommendations to other programs provides an indication of the ability to more widely apply the outcomes of this review.

A common theme among our forums was the need for government grant schemes to focus more on performance outcomes. This is also noted in the findings of the ANAO review. “The program’s performance measurement framework has some limitations that affect its usefulness in measuring the achievement of objectives and outcomes. For example, the relevance of some Key Performance Indicators to measure program outcomes is not clear. Also, specific targets have not been defined for Key Performance Indicators, to enable performance to be assessed.”<sup>44</sup>

However, the ANAO review was clearly focused on the aspects of accountability rather than whether the grant schemes were meeting business requirements. The report makes reference to those who have used the program but does not include any further evidence from business more widely and therefore excludes those who found the application process too cumbersome to continue.

Using the R&D Start Review as a basis for examination, the report includes a review of the application process. This included four stages.

“We’ve just finished an R&D Start Grant and the cost of applying for that was horrendous, not in terms of having to pay for applying, but in terms of the documentation required and the absolute finite detail that was applied. You almost had to know the end result before you applied for the R&D.”

Sydney manufacturer

First, eligibility is determined by AusIndustry officers. The findings of the report include at point 24, “AusIndustry implemented several initiatives to improve the ability of its staff to determine eligibility but has not measured the effectiveness of these initiatives.”<sup>45</sup>

Second, AusIndustry compiles an assessment of the application made for the grant, including strengths and weaknesses and makes a recommendation to the authorising committee about whether it should be funded. This is then put to the Committee for its determination.

The report notes a high correlation between AusIndustry recommendations and supports through committee processes. “In 2003–04, 80% of AusIndustry’s assessments of the competitiveness of applications were the same as those of the relevant committee. In 20% of cases, committees recommended the application be rejected, whereas AusIndustry recommended it be supported.”<sup>46</sup>

Given this high correlation, Ai Group believes that more could be done to streamline the first and second stage of the application process by providing AusIndustry staff with greater ability to advise industry of the likelihood of a successful application, beyond broad eligibility. This would necessitate a greater accountability requirement for officers but reduce the current levels of frustration by industry.

Finally, the approval or rejection of the application by the Financial Delegate. At this stage it is confirmed that the recommendation was consistent with the program’s objectives and there were sufficient uncommitted funds to meet the new financial obligations. This process appears more to be in reaction to an over subscription to the scheme in 2002 and consequent need to formally suspend the program. Throughout the first three steps the responsibility for meeting program objectives has already been vested in at least two other parties. All steps should be taken to ensure that this stage does not cause undue delay in the process.

Ai Group believes that government programs more widely should be reviewed to streamline the application process, focus on performance outcomes in line with the recommendations made by the ANAO and proposals contained in *Manufacturing Futures*.

<sup>44</sup> ANAO 2005, op. cit., p.13.

<sup>45</sup> ANAO 2005, op. cit., p.15.

<sup>46</sup> ANAO 2005, op. cit., p.15.

## A MORE INNOVATIVE GLOBAL COMPETITOR

“We have to become innovative... Simplistically the only way we can compete is through equipment, process and technology and anything we can do to foster that in this country would be constructive.”

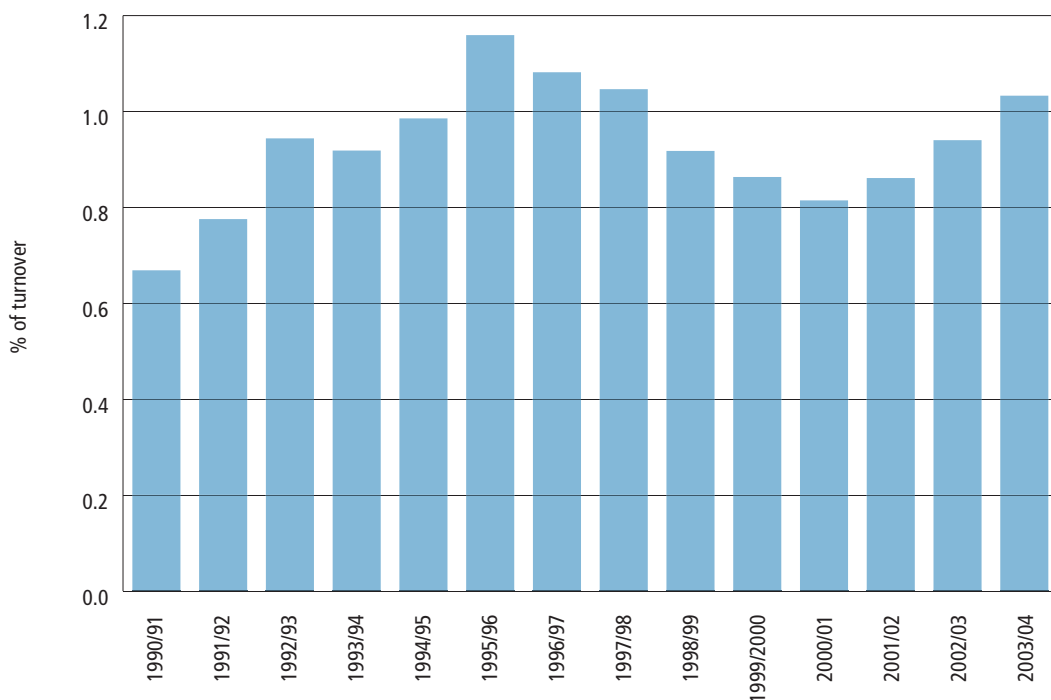
“If you have just invested in capital, all you become is another producer of the same stuff as opposed to the inventor and producer of the stuff and that is the clear distinction in our group of companies. The ones who perform the best are those who are actually inventing and investing. That’s the key difference.”

“Without R&D you are probably not going to be around for much longer.”

*Manufacturing Futures* has identified a dichotomy between the recognition of the importance of innovation, particularly research and development (as highlighted above), and companies’ stated intention to increase their efforts in becoming more R&D intensive. This is particularly so given that companies see developing new products and services as the chief strategy for maintaining competitiveness.

As indicated previously, this may be partly due to a significant improvement in research and development expenditure by manufacturers over recent years. Expenditure on research and development has been growing at around 13% per annum over the last four years, after falling for much of the second half of the ‘90s, and research and development intensity has lifted from 0.81% of total turnover to around 1.03% (Figure 25). Even if manufacturers were to maintain a steady growth in R&D expenditure of half of the current pace, R&D intensity will continue to rise to around 1.30% of total turnover over the next decade.<sup>47</sup>

**Figure 25 Manufacturing research and development intensity**



Sources: ABS, Research and Experimental Development, Businesses, Australia, 8104.0 and Business Indicators, Australia, 5676.0

<sup>47</sup> This assumes a growth rate of manufacturing turnover of around 4% per annum.

## “We need to innovate to survive.”

Melbourne electronics manufacturer

While this performance is encouraging, there still remains an underlying concern that the pace of improvement is insufficient to meet the challenges of competition going forward. Research and development expenditure depends on strong profit and business growth. Indeed, the sharp upturn in R&D spend in 2000/01 corresponded with a restoration of profit growth (after a number of years of decline) in the preceding year. The poor outcome sales and profit over the last year could well see a significant slowing in growth in expenditure of research and development.

Ai Group’s proposal to lower the corporate tax rate to give a stimulus to new investment by manufacturing will also help to improve the pace of research and development, given that there are strong links between R&D intensity and capital expenditure. The empirical link runs both ways with more R&D causing more capital expenditure and more capital expenditure causing more R&D.<sup>48</sup>

The importance of business R&D expenditure to economic growth cannot be underestimated. The OECD in its study into *The Sources of Economic Growth in OECD Countries*<sup>49</sup> has estimated that a persistent 0.1% increase in business expenditure on R&D (BERD) as a percentage of GDP raises real output per capita by 1.2%. Importantly, the study also found no statistically significant effect of public R&D spending on growth, which in Australia’s and New Zealand’s case is where the majority of expenditure resides.

Ai Group is aware that a number of programs designed to support research and development, such as the Australian Competitiveness and Investment Scheme (ACIS) for the automotive sector, the Strategic Investment Program (SIP) for the TCF sector, and Commercial Ready grants (incorporating the old Start Grants) have been well supported by industry. However, while R&D tax concessions have been used by industry, the take-up rate remains low, with only about one in 20 manufacturers undertaking any research and development in any given year.

The Commercial Ready program only commenced operation in September 2005, and consequently it is too early to evaluate the impact of the changes on R&D expenditure.

## Research and development policy priorities

Ai Group continues to remain committed to the view that there are four major policy priorities for research and development: namely, getting more firms involved in R&D; promoting a higher R&D intensity among firms already engaged in R&D; encouraging overseas companies with bases in Australia to allow R&D to remain in Australia; and encouraging greater collaboration between industry and public R&D institutions.

Not enough companies are engaged in research and development activity. Improving Australia’s R&D effort requires a more broad base involvement by industry. While firms undertaking R&D for the first time can apply for Commercial Ready grants, the competitive nature of these grants means that new players are at a disadvantage to those with many years of R&D experience. Indeed, in assessing R&D grant applications, applicants are ranked according to whether they have a “solid track record in commercialisation of R&D”.<sup>50</sup> Business does, however, have access to the 125% tax concession.

The Department of Industry, Tourism and Resources has recently announced it is undertaking a review of tax concessions to determine the extent to which firms have accessed and benefitted from the concessions, and the extent to which it has increased the level of business R&D expenditure and compliance costs. Ai Group clearly welcomes this evaluation. As well, a recent Audit Office investigation of the R&D Start Program has noted that the “program has had positive impacts on companies that have received R&D Start grants” and that for every dollar spent on the program there has been a \$4.50 additional national economic benefit<sup>51</sup>.

Indeed, little is available to support firms who lack experience in research and development activities. The proposed *Business Capabilities Initiative* will be an important vehicle for supporting companies who are seeking to undertake research and development for the first time, and to gain expertise in applying for funding under the Commercial Ready program.

<sup>48</sup> Chiao, C. “Relationship between Debt, R&D and Physical Investment, Evidence from US Firm-Level Data”, *Applied Financial Economics*, vol.12, issue 2, 2002, pp.105-21 and OECD, *Science, Technology and Industry Scoreboard 2001 – Towards a Knowledge-Based Economy*, OECD, 2001

<sup>49</sup> OECD, *The Sources of Economic Growth in OECD Countries*, OECD, 2003, pp.89 -90

<sup>50</sup> Australian National Audit Office, *Administration of the R&D Start Program*, Department of Industry, Tourism and Resources, November 2005, p.54

<sup>51</sup> *Administration of the R&D Start Program*, p.19



## R&D tax concession arrangements

Further, in regard to the tax concession, the real value of the R&D tax concessions is much smaller than is frequently assumed.

- For each \$100 of eligible expenditure on R&D, the standard 125% concession available delivers a bottom line benefit at the company level of \$7.50 (30% of the extra \$25 deduction).
- However, while the company's tax bill is reduced and its own bottom line is lifted, the addition to its franking account is \$7.50 lower than it would have been if the tax concession were not available.
- As a result of the lower franking account balance, *domestic* shareholders stand to pay \$7.50 *more* tax on dividends received.
- If the company distributes all its profits or if it *exhausts its franking account and pays partially franked dividends* in the year the tax concession is claimed, the value of the tax concession is fully clawed back by the higher amount of tax paid by shareholders and no net benefit arises from the concession.
- A similar shortcoming applies to the premium 175% tax concession.<sup>52</sup>

This clawback at the shareholder level of the R&D tax concessions means that investors in companies that receive the benefit of the concession are themselves disadvantaged because of the higher amount of tax they have to pay on their dividends. As a consequence, the interests of the company and the shareholders will diverge and shareholders are less likely to be sympathetic to proposals by the company to invest in R&D.

The R&D tax concessions can be made effective simply by allowing companies to credit their franking accounts by the amount of company tax saved as a result of the R&D tax concession.

This measure is administratively simple and would carry no additional paperwork burden for business.

While the value of the standard R&D concession would still amount to 7.5% of eligible R&D expenditure, this 7.5% would no longer be clawed back at the shareholder level. As a result, investors in companies making investments in R&D would not be disadvantaged and the interests of both the company and its shareholders in supporting private sector R&D would be aligned.

## Offshore R&D by Australian firms

*Manufacturing Futures* has highlighted how remaining globally competitive requires industry to make better use of global supply chains. This extends not only to maximising supply efficiencies in the production process, but also in taking advantage of global human resources, including innovation expertise.

As companies move to lift their intensity of new products as a proportion of sales, there will be increasing pressure to take advantage of such global research and development expertise. The development of partnerships with overseas entities will inevitably involve collaboration on research and development outside of Australia. Indeed, many large multinational corporations have moved in recent years to establish substantial innovation facilities in China and India.

If Australian manufacturers are to take advantage of global research expertise, then government programs need to be more flexible in facilitating such engagements. Current funding arrangement under the R&D tax concession and Commercial Ready program, extending more broadly to grants under the Australian Research Council, severely limit eligibility for overseas-based research. Generally, overseas R&D is limited to 10% of the total expenditure on an R&D project. While eligible projects can incorporate a larger overseas R&D component, expenditure above the 10% cap is ineligible for funding.

This limitation arises from the definition of Australian R&D activities in the Income Tax Assessment Act 1936 which requires the qualifying activity to be carried out in Australia or an Australian Territory. There has been concern that foreign entities, while technically complying with the requirement, may exploit the assistance thereby limiting the flow-on benefits of R&D expenditure to Australian industry. Consequently, for example, while the government has provided \$55.5 million over five years for International Science Linkages to support international research collaborations, such expenditures to date have generally been for activity based in Australia.

In order for an Australian company to receive funding support that involves more than 10% of eligible expenditure, there is a need to demonstrate why the activity needs to be undertaken overseas and how the project will generate national benefits. For many Australian companies, these benefits can include the transfer of overseas technology and know-how (recognised under the "Adequate Australian Content"

<sup>52</sup> The situation is somewhat different if the company retains profits and does not pay partially franked dividends or if it has foreign shareholders (who do not get the full benefit of franking credits). However, even in these cases the value of the tax concession is partially eroded as a result of the claw-back (either now or in the future).

guidelines of the Industry Research and Development Board).<sup>53</sup> Less clearly recognised under current arrangements, but equally important, are the benefits derived to the nation from Australian companies maintaining and enhancing their global competitiveness.

Ai Group believes that the current 10% cap on overseas R&D is too prohibitive and should be scrapped. Rather proposals for funding support or tax concessions should be assessed on a case-by-case basis taking account of the benefits accruing to the national economy.

## Protection on intellectual property

“People are taking our appliances to China and they copy them to a T.”

*Geelong appliance manufacturer.*

A significant barrier to innovation for small to medium businesses is the cost of developing, registering and protecting intellectual property (IP) rights, particularly in markets subject to competition from emerging nations such as China.

Patents can take many forms, including know-how copyright, patents, trademarks and designs. A patent is legally enforceable and give the owner the exclusive right to commercially exploit the invention for the life of the patent. A patent can give effective protection to innovations and technologies that can result in commercial gain.

In recent years, there has been increasing concern that patent rights may be inhibiting research and development, particularly in biotechnology<sup>54</sup>. It is believed that inadequate use of patents has resulted in insufficient returns of investment by business and public research institutions.

For many SMEs, the costs of international protection is out of their reach, preferring to rely on “first to market” advantages rather than formal registration. Moreover, many businesses do not have the skills or have in place the necessary processes to record and capture basic information on their intellectual property.

The introduction of innovation patents (in May 2001) has helped to provide a relatively inexpensive path to patent rights. Nevertheless, Ai Group believes that greater use of patents would be facilitated by SMEs if small grants were available to assist companies to meet the cost of identifying and protecting intellectual property, particularly in overseas markets. Consequently the Federal Government should introduce a grants scheme to support SMEs in meeting the professional costs associated with the auditing and management of intellectual property including the costs of legal, commercial or intermediary services.

Ai Group will undertake further work on this issue, given the importance of IP protection in enhancing global competitiveness.

<sup>53</sup> AusIndustry, IR&D Board Guidelines – Adequate Australian Content, April 1995, p.2

<sup>54</sup> Advisory Council on Intellectual Property, Completed reviews, consideration of patents and experimental use, p2







# Appendices

## Appendix 1

# Industry Consultations

### Meetings

#### Merrylands – 5 September 2005

Mr Bob Lundi-Jenkins – Austool Pty Ltd  
 Mr Ian Robb, Chairman – Australian Railway Industry Corporation  
 Mr Peter Morrison – Universal Anodisers  
 Mr Tony Case – Universal Anodisers  
 Mr John Wisby – Wisby & Leonard Pty Ltd  
 Mr Ezro Allemand, Managing Director - Ontera Modular Carpets Pty Ltd  
 Mr Len Asplet, General Manager - Kanweld Products Pty Ltd  
 Mr Stephen Black, Manufacturing Manager - Procnem Pipeline Products  
 Mr Kevin Bliim, Managing Director - Mantova Marketing Pty Limited  
 Mr Neal Byrne, Financial Manager - Finished Products Pty Ltd  
 Mr Les Chegwiddden, Human Resources Manager - Pilkington (Australia) Limited  
 Mr Colin Christian, General Manager - Finished Products Pty Ltd  
 Mr Peter Cummin - Warren Centre  
 Mr Peter Driver, Chairman - Asia Oceania - SMC Pneumatics (Aust) Pty Ltd  
 Mr Christian Fleming, Accountant - Powell General Sheet Metal Pty Ltd  
 Mr John Gollings, Managing Director - WOFTAM Display and Handling Pty Ltd  
 Mr Nigel Long, General Manager - Doric Products  
 Mr Chris Muir, Group Operations Manager - Wattyl Limited  
 Mr Dinesh Patel, Director - Aluminex Security Window System (Australia) Pty Ltd  
 Mr Jayanti Patel, Director - Aluminex Security Window System (Australia) Pty Ltd  
 Mr Russell Ricketts, Director - R K Ricketts Pty Ltd  
 Mr Andrew Turner, Manufacturing Manager - Pandrol Australia Pty Ltd  
 Ms Christine Wilkey, Human Resources Manager - Bonds Pacific Brands  
 Mr Neil Wilson, Managing Director - Romar Engineering Pty Ltd  
 Mr Edward Wong, General Manager - A W Faber-Castell (Aust) Pty Ltd  
 Mr Ross Cummings, Managing Director - Alpha Label Printing Pty Ltd  
 Mr Adrian Zaoro, Austel Panel Systems Australia

#### Newcastle – 6 September 2005

Dr Alan Broadfoot, Chief Executive Officer - Ampcontrol Pty Ltd  
 Dr Andrew Johnson, Research Development Manager - University of Newcastle  
 Mr Andrew Collison, Facility Manager - EDI Rail Pty Ltd  
 Mr Brett Neal, General Manager - P J Berriman & Co  
 Mr Chris Schafferius, Location Manager, Steel & Tube Newcastle - Onesteel Distribution  
 Mr David Broadhurst, Business Development Manager - Priority Powder Coating Pty Ltd  
 Mr Dominic Posavec, General Manager – NSW - Anderson Group of Companies  
 Mr Garry Marsden, Chief Executive Officer - Treloar Group Limited  
 Mr Graeme Vennell, General Manager - CCI Engineering Pty Ltd  
 Mr Jeff Phillips, Managing Director - Varley Group  
 Mr John Armitage, Managing Director - Sandvik Australia Pty Ltd  
 Mr John Coyle, Executive Officer - HunterNet  
 Mr John Gambrell, General Manager - Field Maintenance Services  
 Mr John Wayland, Chief Executive Officer - Lovells Springs Pty Ltd

Mr Keith Horan, Faculty Director, Engineering - Hunter Institute of Technology  
 Mr Kerry Smith, General Manager - PWG King & Sons Pty Ltd  
 Mr Lee Baines - MIM Management Services Pty Ltd  
 Mr Mal Leishman - Onesteel Distribution  
 Mr Mark Jones, Operations Manager - Waratah Engineering Pty Ltd  
 Mr Mark Kingshott, Managing Director - Waratah Engineering Pty Ltd  
 Mr Michael van Dijk, Managing Director - Steel River Manufacturing Pty Ltd  
 Mr Peter Clarke - N J Phillips Pty Ltd  
 Mr Sandy Hidas, Managing Director - Newcastle Machine Shop  
 Mr Simon Crane - Lovells Springs Pty Ltd  
 Mr Steve Rapley, HR Manager - A T B Morton  
 Mr Tim Hardy, General Manager - Newcastle Machine Shop  
 Mr Tony Masters, Business Development Manager - Mowlem Power & Mining Pty Ltd  
 Mrs Debbie Hansen, Director - Priority Powder Coating Pty Ltd  
 Ms Libby Wood, Financial Controller - P J Berriman & Co

## Wollongong – 7 September 2005

Mr Desmond Kisten, General Manager – AGI Engineering  
 Mr Steve Sanders, Regional Manager – AusIndustry  
 Mr Noel Cornish, President Aus & NZ Industrial Markets – BlueScope Steel  
 Mr Mike O’Loughlin, Vice President HR Industrial Markets – BlueScope Steel  
 Mr Peter Fluder, Senior HR Adviser – BlueScope Steel  
 Mr Wal Nicolussi, Marketing Management Manufacturing – BlueScope Steel  
 Mr Karl Fort, Operations Manager – Edmen  
 Mr Neil Gatenby, Factory Manager – Bredero Shaw  
 Mr Richard Bufill, Senior Consultant – Industry Capability Network  
 Mr Carlos Carneiro, Industrial Relations Rep – Labour Cooperative  
 Mr Peter Green, Manufacturing Manager – M M Kembla Products  
 Mr Rob Hodgson, HR Coordinator – Orrcon  
 Mr Dagmar Parsons, General Manager – Serco Illawarra  
 Mr Robert Spiers, Managing Director – Spiers Engineering  
 Mr Pete Jeans, CEO – Strategic Marketing Outsourcing  
 Ms Tina Chen, Director – Wonderful Technology

## Geelong – 12 September 2005

Mr Ken Beatty, HR Manager – Kempe Services Pty Ltd  
 Mr Patrick McCaffrey, Director – Southern Region – Bartter Enterprises Pty Ltd  
 Mr Geoff Charnley, Managing Director – Huyck Australia Pty Ltd  
 Mr Bill Parker, Managing Director – Parker Electroplating Pty Ltd  
 Mr Trevor Arklay, Managing Director – G D Manufacturing Engineers Pty Ltd  
 Mr Jeff Lawrence, Managing Director – Jeff Sykes & Associates Pty Ltd  
 Mr Lindsay Black, Operations Director – Melba Industries  
 Mr Geoff Collins, General Manager – Alloy Engineers  
 Mr Ross McDonald, Manager, Assembly – Blackwell IXL Pty Ltd  
 Mr Brian Hanrahan, Managing Director – Balhan Industrial Company Pty Ltd  
 Mr David Sinclair, HR Manager – Basell Australia Pty Ltd  
 Mr David Greig, Operations Manager - Air Radiators Pty Ltd  
 Ms Bernadine Mynott, HR Manager – Air Radiators Pty Ltd  
 Mr David Peart, Executive Officer – Geelong Manufacturing Council

## Albury – 13 September 2005

Mr Elie Jarrous, Plant Manager – Treofan Australia Pty Ltd  
 Mr John McKenzie, HR & OHS Coordinator - Bradken  
 Mr Jon Retford – Wilson Transformer Co Pty Ltd  
 Mr Kevin Fogarty, Plant Manager – Huhtamaki Australia Pty Ltd  
 Mr Neil Collins – Geofabrics Australasia Pty Ltd  
 Mr Peter Moran, Manufacturing Manager – Parker Hannifin (Australia) Pty Ltd  
 Mr Rad Gavrilovic, Accountant – PBA Safety Pty Ltd  
 Mr Raymond Bertazzo, Owner – Bertazzo Engineered  
 Mr Stephen Wainwright, Human Resources Manager – Macquarie Textiles Group Ltd  
 Mr Vance Wheeler, General Manager – W V Management Limited

## Ballarat – 14 September 2005

Mr Barry Wright, Executive Officer – Highlands Local Learning & Employment Network  
 Mr Christian Carthew, Business Development Manager – AME Systems Pty Ltd  
 Mr Frank Paton, General Manager – Hilton Fabrics  
 Mr Garry Lyons, Joint Managing Director – Lyco Innovations Pty Ltd  
 Mr Les Gason, Managing Director – A. F. Gason Pty Ltd  
 Mr Mark Dwyer, Managing Director – K & K Fasteners Pty Ltd  
 Mr Peter Deutscher, Director – Deutscher Mowers Pty Ltd  
 Mr Peter Veal, Director – Veal Industrial & Engineering Solutions  
 Mr Richard Tantau, Director – SED Consulting Ballarat Pty Ltd  
 Mr Simon O'Brien, Branch Manager – Catalyst Recruitment Systems Pty Ltd  
 Mr Stephen Nicholson, Director – Albins Off Road Gear Pty Ltd  
 Ms Carla Reading, Head of School – Manufacturing Services, University of Ballarat  
 Ms Susan Honeyman, Workforce Relations Manager – FMP Group (Australia) Pty Ltd

## Bendigo – 15 September 2005

Mr Barry Ellis, Chief Executive – Keech Casting Australia Pty Ltd  
 Mr David Bartholomew – Empire Rubber  
 Mr David Smith, Production Manager – ADI Limited  
 Mr Harold Kanost, Managing Director – Ceramic Oxide Fabricators (Aust) Pty Ltd  
 Mr Ian Ross, General Manager – Empire Rubber  
 Mr Peter Bertolus, Group Employee Relations Manager – SPC Ardmona Operations Limited  
 Mr Rod Thomson, Managing Director – Bendigo Pottery (Australia) Pty Ltd  
 Mr Russell Steddar, OHS Officer – SPC Ardmona Operations Limited  
 Mr Wayne Lodge, Manager – Gatic-Milnes  
 Ms Trish Harris, Empire Rubber

## Brisbane – 19 September 2005

Mr Andrew Dettmer, State Secretary – AMWU  
 Mr Bill Martin - Brisbane North Institute of TAFE  
 Mr Bob Newton, Director – Laser Central  
 Mr Colin Pickering, Managing Director - Mercury Mufflers (Aust) Pty Ltd  
 Mr Damien Richards - Tasman Aviation Enterprises  
 Mr David Blower, General Manager Finance - Century Yuasa Batteries  
 Mr David Muncaster - Bristle Roofing  
 Mr Jim Box - ICN QLD

Mr Keith Bailey, Director - Blueprint Business Solutions  
 Mr Michael Carroll, Chief Executive Office - Neumann Associate Companies Pty Ltd  
 Mr Noel Frost, General Manager – Technology Development - QMI Solutions Limited  
 Mr Paul Loder - Growforce Fertilisers  
 Mr Peter Flynn - Reliance Worldwide  
 Mr Peter Laing, Education Manager – Moreton Institute of TAFE  
 Mr Robert Battle, Managing Director - Sicame Australia Pty Ltd  
 Mr Rod Payne, Manager - Hyteco (Aust) Pty Ltd  
 Mr Rohan Ackroyd, Managing Director - Ackroyd Engineering Services  
 Mr Ron Bower, Managing Director - CBM Pty Ltd  
 Mr Wesley Moxey, Managing Director - The Riviera Group  
 Ms Cheryl Holden, Branch Manager - ATS Workforce  
 Ms Eleanor Mak - Department of State Development  
 Ms Kim Herbert - Tasman Aviation Enterprises  
 Ms Libby Cervetto, Recruitment HR - Bradken  
 Unnamed representative, Department of State Development

## Melbourne – 25 September 2005

Mr Roger Leeming, President - Pilkington Australasia Limited  
 Mr Graeme Addison, Managing Director - Graeme Addison & Associates  
 Mr Norman Anderson, Director - Anderson Rubber Products  
 Mr Shaun Chandra - Citibureau Collections Pty Ltd  
 Mr Melvin Santiago - Citibureau Collections Pty Ltd  
 Mr Les Boelckey, Managing Director - United Pumps Australia  
 Ms Thalia Brazdil - AusIndustry  
 Mr Anthony Breach - Incarus Design Pty Ltd  
 Mr Sandy Cameron, National Manager OE - Automotive, South Pacific Tyres  
 Mr Ben Clarke, Managing Director - Kraft Foods Limited  
 Mr Glenn Clivaz, Director of Operations - S G E International Pty Ltd  
 Mr Warren Cram, Chief Financial Officer - National Springs & Wire Products Pty Ltd  
 Mr Peter Doyle, Managing Director - Hella Australia Pty Ltd  
 Mr Ian Dunston, National Sales Manager - Industrial, Fuchs Lubricants (Australasia) Pty Ltd  
 Ms Jo Fallshaw Bishop, Managing Director - Fallshaw Holdings Pty Ltd  
 Mr Allan Firth, Executive Director - Carpet Institute of Aust Ltd  
 Mr Les Goding - Andrew Engineering (Aust) Pty Ltd  
 Mr Brian Hamill, Manager Sales & Marketing - Lasslett Rubber & Plastics Pty Ltd  
 Mr Ian Hocking, Managing Director - Flexible Drive Agencies Pty Ltd  
 Mr Kevin Hooper, Chief Executive Officer - Front-Line Australasia Pty Ltd  
 Mr Paul James, Policy Analyst - FAPM  
 Mr Graeme Key, Managing Director - Unbrako Pty Ltd  
 Mr Ric Lasslett, Managing Director - Lasslett Rubber & Plastics Pty Ltd  
 Mr Malcolm Macaulay, Financial Controller - FASCO  
 Mr Peter MacLeod, Managing Director - Amalgamated Casket Company Pty Ltd  
 Mr Ken Maher, Managing Director - Generator Rentals Australia  
 Mr Frank Marchesani - Mercedes Printing Co Pty Ltd  
 Mr Peter McDonald, Director - Ramsay McDonald Pty Ltd  
 Mr John Monteath, General Manager OE Sales & Marketing - Mark IV Automotive Pty Ltd  
 Mr Allan Moore, Managing Director Australasia - Exide Technologies – Asia Pacific  
 Mr Robert Murphy, Manufacturing Manager & Thomastown Plant Manager - Armstrong World Industries (Australia) Pty Ltd  
 Mr Neil Parkins - Obara Australia Pty Ltd  
 Mr Charles Partridge, Director Operations - Bradley Technologies Pty Ltd  
 Mr Russell Pettis, Managing Director - Australian Automotive Air Pty Ltd  
 Ms Barbara Sault - Autoliv Australia Pty Ltd



Ms Sharon Smith, National Manager - Industrial Markets, KPMG  
Mr Douglas Smith, Managing Director - Robot Technologies Systems Aust Pty Ltd  
Mr Andrew Stobart, Managing Director - Olex Australia Pty Limited  
Mr G. Thomson, General Manager - Teson Trims  
Ms Kim Trotter, Executive Director - Aspire Training & Consulting Limited  
Mr Egon Vetter, Chief Executive Officer - Ceramet Technologies Australia Pty Ltd  
Mr Noel Williams, Managing Director, Australia & NZ - Dow Chemical (Australia) Ltd  
Mr Robert Wilson, Managing Director - Palm Plastics & Tooling  
Mr Gaetan Limsowtin, Research Director - Australian Starter Culture Research Centre  
Mr Ivan James, Managing Director - Automotive Components Limited  
Mr Daryl Carter, Customer Services Manager - AusIndustry  
Ms Joy Meffam - AusIndustry  
Mr Harry Hickling - Australia Performance Vehicles  
Mr Paul Hogan - Sustainable Energy Authority

## Individual consultations

Mr John Egan, Senior Executive Adviser - Office of the President, Toyota Motor Corporation Australia Ltd  
Mr Paul Mracek, Managing Director - Fasco Australia Pty Ltd  
Mr Peter Doyle, Chief Executive Officer - Hella Australia Ltd  
Mr Victor Maslaris, Financial Controller - Unidrive Pty Ltd  
Mr Chris McKenna, Managing Director - Black & Decker (Australia) Pty Ltd  
Mr Rob Murphy, Manufacturing Manager - Armstrong World Industries (Australia) Pty Ltd  
Mr Brendan McManus, Executive Adviser - NEC Australia Pty Ltd  
Mr Gino Butera, Managing Director - Cummins Engine Co.  
Mr Ian Unwin, Chief Operating Officer - Carter Holt Harvey Ltd  
Mr Greg Sedgewick, Managing Director - Crane Group  
Mr Steve Mann, Executive Vice-President (Strategy and Business Development) - BlueScope Steel Ltd  
Mr Stephen O'Rourke, Managing Director - Murray-Goulburn Co-op Co. Ltd  
Mr David Brookes, General Manager Public Affairs and Environment - Amcor Australia Ltd  
Mr Ian Campbell, Managing Director - GUD Holdings Ltd  
Mr John McKenzie, Managing Director - Pacifica Group Ltd  
Mr Richard Leupen, Chief Executive Officer - United Group Ltd  
Mr Andrew King, Chief Executive Officer - Victa Ltd



# Global investment incentives

## Appendix 2

# Global investment incentives

### Country case studies – Summary information

Country	National Corporate Tax (%)	Corporate Marginal	Depreciation Allowances (%)	Investment Incentives	Other Incentives
		Effective Tax Rate (manufacturing) (%)			Offered (including Manufacturing)
Australia	30	29.4	5-30	No uniform policies	Yes
Canada	21	35.5	4-100	Federal and Provincial policies	Yes
China	30	45.5	5-20	Tax concessions	Yes
Denmark	30	20.6	0-25	No uniform policies	No
Germany	25	37.7	5-33	Tax concessions and subsidies	Yes
Hong Kong	16	6.1	4-100	Tax concessions and subsidies	No
India	35	23.2	0-100	Tax concessions and Free Trade Zones	Yes
Ireland	12.5	14.1	15-100	Tax concessions and grants	Yes
Italy	33	33.3	3-10	Tax concessions and grants	Yes
Korea	13	31.9	Not available	Tax concessions and Free Trade Zones	Yes
Malaysia	28	Not available	10-20	Tax concessions and subsidies	Yes
Mexico	30	17.2	5-25	Tax concessions and Free Trade Zones	Yes
New Zealand	33	30.1	20	No uniform policies	No
Portugal	25	11.7	2-25	Tax concessions and Free Trade Zones	Yes
Singapore	20	5.8	5-100	Tax concessions and grants	Yes
Spain	35	29.9	3-30	Tax concessions and Free Trade Zones	No
Sweden	28	12.8	2-30	Tax concessions and grants	No
Switzerland	3.63	16.9	3-40	Tax concessions	No
United Kingdom	19-30	22.7	6-100	Tax concessions and grants	No
United States	35	34.6	0-100	Tax concessions and grants	Yes

## Australia

**Corporate Tax Rate:** 30%

**Corporate Marginal Effective Tax Rate (manufacturing):** 29.4%

**Nature of Depreciation Allowances:** The Uniform Capital Allowance applies to depreciating assets from 1 July 2001. Under the Allowance depreciating assets of less than \$1,000 are immediately written-off. Most other depreciating assets are pooled and deducted at a rate of either 30% or 5% depending on their effective life.

**Nature of Investment Incentives:** The Australian Government does not provide uniformly available investment incentives. The States provide a range of incentives (e.g. Victoria's Agenda for New Manufacturing) to promote manufacturing investment.

**Other Incentives:** The Federal Government provides approximately \$4b in assistance to manufacturing annually. These incentives include:

- *R&D Tax Concession (125%)* – provides a benefit of 7.5 cents for every \$1 of eligible R&D, once the 30% corporate tax rate has been applied;
- *Premium R&D Tax Concession (175%)* – limited to companies with a turnover of less than \$5m and an annual R&D expenditure of \$1m;
- *The Automotive Competitiveness and Investment Scheme* – provides guidance to the development of the automotive industry. The Scheme rewards production, investment and R&D through the quarterly issue of import duty credits to registered participants; and
- *Strategic Investment Program* – provides financial incentives for investment in the Textiles, Clothing, and Footwear sector.

## Canada

**Corporate Tax Rate:** 21% Federal and 15% Provincial. As of April 2005, the Federal corporate tax rate for large corporations is 22.12%. Provincial corporate tax rates vary as follows:

Province	Manufacturing Companies (%)	Non- Manufacturing Companies (%)
Alberta	11.5	11.5
British Columbia	13.5	13.5
Manitoba	15	15
New Brunswick	13	13
Newfoundland	5	14
Nova Scotia	16	16
Northwest Territories	14	14
Nunavut Territory	12	12
Ontario	12	14
Prince Edward Island	7.5	16
Quebec	8.9	8.9
Saskatchewan	10	17
Yukon Territory	2.5	15

**Corporate Marginal Effective Tax Rate (manufacturing):** 35.5%

**Nature of Depreciation Allowances:** Capital depreciation is covered under the Capital Cost Allowance. The Allowance varies from 4-100%. For most manufacturing equipment and machinery, the Allowance rate varies between 25-30%.

**Nature of Investment Incentives:** Canada provides a range of Federal and Provincial investment incentives, centering on tax credits for R&D-based manufacturing industries.

**Other Incentives:** Canadian investment policy is centered on shifting manufacturing toward high valued-added activities. Consequently, the government has introduced an immediate write-off of both current costs and R&D machinery and equipment costs, as well as a 20% tax credit, with the rate of R&D tax credit increasing to 35% for small companies.

## China

**Corporate Tax Rate:** 30% national plus 3% local tax

**Corporate Marginal Effective Tax Rate (manufacturing):** 45.5%

**Nature of Depreciation Allowances:** Rates vary as follows:

Asset Type	Annual Depreciation (%)
Buildings	20
Electronic Equipment	5
Intangible Assets	10
Machinery	10

**Nature of Investment Incentives:** Investment incentives centre on low labour costs and minimal restrictions on business activity (e.g. profit remittance). Incentives are geared toward labour-intensive manufacturing in Special Economic Zones. The Chinese Government has introduced preferential corporate tax rates of 15% in Special Economic Zones across the country. In addition, the government provides the following incentive:

- *Re-Investment Incentives* – applicable only if profits remain in China and must remain in the business for five years. Incentives include tax concessions that can be as high as 40-100%.

**Other Incentives:** Targeted through Special Economic Zones. Special Economic Zones are located in Guangdong, Fujian, Hainan, Hunchun, and Shanghai. These zones provide significant tax incentives, including zero taxation during the first few years without profit, tax exemption for first and second year of profitable operation, plus 50% tax reduction for third and fourth year of profitable operation.

## Denmark

**Corporate Tax Rate:** 30%

**Corporate Marginal Effective Tax Rate (manufacturing):** 20.6%

**Nature of Depreciation Allowances:** 25% annually for machinery and equipment. Individual assets costing less than 11,000DKK or with an expected life of less than three years may be written-off in the year of acquisition. Depreciation rates for machinery and equipment are calculated at 0-25%.

**Nature of Investment Incentives:** A range of incentives is available, predominantly through European Union agencies, and focused on R&D. As a general rule, incentives offered by the Danish Government vary depending on the industry sector, the size of the company, and the investment location. The government provides the following incentives:

- Cash grants, low-interest rate loans, and leasehold contracts with particular benefits;
- Corporate income tax exemptions; and
- Exemptions from social security contributions

**Other Incentives:** None

## Germany

**Corporate Tax Rate:** 25%

**Corporate Marginal Effective Tax Rate (manufacturing):** 37.7%

**Nature of Depreciation Allowances:** Rates vary as follows:

Asset Type	Annual Depreciation (%)
Aircraft	5
Computers	33.3
Machinery and equipment	6-10
Office equipment	6-14
Vehicles	16.6

**Nature of Investment Incentives:** A range of incentives is available, predominantly through European Union agencies.

**Other Incentives:** Manufacturing firms, craft industries, and wholesale and retail businesses may be entitled to a tax free investment grant in respect to new movable fixed assets. An investment subsidy may be claimed for the acquisition or manufacture of new depreciable movable fixed assets or for the purchase or construction of buildings. For movable fixed assets, an investment subsidy of up to 15% of the acquisition or manufacturing cost is granted. The rate applicable for small and medium-sized companies rises to a maximum of 27.5%. The purchase or construction of new buildings attracts a standard grant rate of up to 15% of the purchase or building cost. The investor is required to provide an appropriate portion of the equity (at least 25%) to attract the grant. Investment subsidies are generally granted only if the project will be completed within 36 months. All assets attracting subsidies must remain in the manufacturing facility claiming the grant for at least five years. These tax incentives do not apply to acquisitions of low-value assets (where the costs do not exceed €410). For the period 1991-2002, subsidies of approx.€32.5b were granted.

## Hong Kong

**Corporate Tax Rate:** 16%

**Corporate Marginal Effective Tax Rate (manufacturing):** 6.1%

**Nature of Depreciation Allowances:** Deductions are allowed for capital expenditure incurred in the construction of industrial buildings and structures for use in certain trades (including manufacturing). The initial allowance is 20%, with an additional 4% annually thereafter. Capital expenditure on machinery and plant is eligible for an initial allowance of 60% for the year of assessment during which the expenditure is incurred, with an annual wear and tear allowance on the recorded value at rates ranging 10-30% according to the estimated working life of the particular category of plant or machinery. Furthermore, 100% first year allowances are provided for manufacturing plant and machinery. 60% of the cost of all other plant and machinery can be written-off in the first year with a rate of 10-30%.

**Nature of Investment Incentives:** Incentives are categorised as: fiscal incentives, financial incentives, and land concessions. Fiscal incentives include full or partial exemption from profit/corporate tax, industrial tax, property tax, stamp duty for transfer of properties, and consumption tax. Financial incentives include government-funded interest subsidies (ranging from 4-6%) on loans for buying/leasing new equipment or construction/leasing of industrial buildings. Land concessions are granted to investors with a significant investment in Macau.

**Other Incentives:** None



## India

**Corporate Tax Rate:** 35% for a local company and 40% for a foreign company, with the addition of a 2.5% surcharge as well as an education tax of 2%

**Corporate Marginal Effective Tax Rate (manufacturing):** 23.2%

**Nature of Depreciation Allowances:** Depreciation is allowed at half the normal rate if the asset is used for less than 180 days in that year. Depreciation at 100% is allowed for machinery and equipment provided that the unit cost does not exceed 5,000Rs. Depreciation is allowable on intangible assets at the rate of 25% on the declining balance method except for computer software, which is depreciated at 60%.

**Nature of Investment Incentives:** A range of incentives is available:

- 100% tax deduction for the first five years and 30% for the subsequent five years for new industrial undertakings/ establishments in backward areas;
- 100% of the profits and gains derived by an undertaking located in any Special Economic or Export Processing Zones; and
- Profits and gains derived by an undertaking located in any Export Processing Zone or Industrial Area/Estate, Industrial Growth Centre, Industrial Park, Integrated Infrastructure Development Centre, or Backward areas are tax deductible. The tax deduction is either 100% for 10 consecutive years or 100% for the first five years and 30% thereafter, depending upon the time of starting the manufacturing activities in these locations.

**Other Incentives:** Targeted through Special Economic Zones. India has a number of Special Economic Zones. Companies in the Zones are eligible for a total exemption from tax for the first five years and a 50% exemption from tax due for the following two years.

## Ireland

**Corporate Tax Rate:** 12.5%

**Corporate Marginal Effective Tax Rate (manufacturing):** 14.1%

**Nature of Depreciation Allowances:** Substantial capital allowances are available to Irish companies. An annual wear and tear allowance of 15% (10% in the seventh year) is given on plant and machinery and 'free depreciation' allowances of 100% are available to companies in the Shannon Free Zone and the International Financial Services Centre.

**Nature of Investment Incentives:** Investment incentives are offered through the Ireland Development Agency. The Agency provides grants that are usually up to 60% of capital cost in areas designated for special treatment and 45% in non-designated areas. Projects are subjected to a detailed cost benefit analysis before final grant levels are decided. This includes assessment of expenditure on wages and Irish raw materials and Irish services.

**Other Incentives:** A number of Free Trade Zones exist throughout the country (e.g. Shannon Free Trade Zone).

## Italy

**Corporate Tax Rate:** 33%, plus 4.25% local tax

**Corporate Marginal Effective Tax Rate (manufacturing):** 33.3%

**Nature of Depreciation Allowances:** Depreciation rates vary as follows:

Asset Type	Annual Depreciation (%)
Goodwill	10
Patents	33.3
Trademarks	10
Vehicles and Equipment	3-5

**Nature of Investment Incentives:** A range of incentives is available, predominantly through European Union agencies. A wide range of incentives is provided by the Italian Government, including financing for the purchase of machinery and equipment. The government provides the following incentives:

- R&D costs – a grant covering no more than 50% of R&D expenditure.
- Export loans – loans of up to 85% of the amount of product exported to cover capital costs.

**Other Incentives:** Targeted through Special Economic Zones. Two free trade zones exist in Venice and Trieste. The zones provide companies with an exemption from taxes on imported raw materials for re-export as manufactured goods.

## Korea

**Corporate Tax Rate:** The rate is 13% for income to 100mKRW or 13% plus 25% of the amount in excess of 100mKRW

**Corporate Marginal Effective Tax Rate (manufacturing):** 31.9%

**Nature of Depreciation Allowances:** Not available

**Nature of Investment Incentives:** The Ministry of Finance and Economy administers tax and other incentives to stimulate advanced technology transfer and investment in high-technology services. Widespread tax exemptions and reductions have been instituted. Corporate and income taxes have been exempted or reduced for foreign investment in targeted industries and other local taxes are exempted for eight to 15 years at the discretion of local and provincial governments. Special incentives for small to medium enterprises include concessional finance and exemptions or reductions on corporate tax, property tax, acquisition tax, and registration tax.

**Other Incentives:** Targeted through Special Economic Zones. Free Investment Zones provide numerous incentives, including:

- Full exemption from national taxes for a period of seven years and thereafter a 5% reduction for the following three years; and
- Full exemption from local taxes for a period of eight to 15 years at the discretion of the local authority.

## Malaysia

**Corporate Tax Rate:** 28%

**Corporate Marginal Effective Tax Rate (manufacturing):** Not available

**Nature of Depreciation Allowances:** Rates vary as follows:

Asset Type	Annual Depreciation (%)
Heavy Machinery	20
Plant and Machinery	14
Others	10

**Nature of Investment Incentives:** The Malaysian Government provides a significant number of tax incentives to encourage investment (particularly FDI) in Malaysia through the Malaysian Industrial Development Authority:

- Pioneer Status – 100% exemption from income tax may be given to strategic projects of national importance. Such projects involve heavy capital investment and high technology that can generate extensive linkages to Malaysian industries and transfer or develop technological processes to Malaysia. Other companies granted pioneer status are provided a tax holiday for five years;
- Investment Tax Allowance – a company granted ITA is permitted to set-off an amount equal to a percentage of the capital expenditure incurred on a factory and the provision of plant and machinery against its taxable profits. The company may be granted ITA of 60% of the qualifying expenditure incurred within a period of five years. The maximum amount that can be abated for each year is 70% of the statutory income (i.e. profits after deduction of capital allowances);
- Incentives for Companies Located in the Multimedia Super Corridor – companies with MSC status enjoy special incentives, including a tax free holiday for a period of up to 10 years or Investment Tax Allowance of 100%;
- Industrial Adjustment Allowance – ‘industrial adjustment’ is defined as any activity proposed to be undertaken within a particular sector in the manufacturing industry to restructure by way of reorganisation, reconstruction or amalgamation within that particular sector with a view to strengthening the basis for industrial self-sufficiency, improving industrial technology, increasing productivity, enhancing the efficient use of natural resources, or the efficient management of manpower. These companies are eligible to apply for the IAA of up to 100% of qualifying capital expenditure incurred on ‘industrial adjustment’ programs; and
- Reinvestment Allowance – to encourage existing industries to reinvest their profits for the purposes of expanding, modernising, or diversifying existing operations into related products within the same industry, a reinvestment allowance of 60% is provided on capital expenditure incurred in respect of a factory, plant and machinery. The reinvestment allowance is deductible against 70% of the company’s statutory income.

**Other Incentives:** A company granted an investment tax allowance gets an allowance of 60% of qualifying capital expenditure (such as factory, plant, machinery or other equipment used for the approved project) incurred within five years from the date on which the first qualifying capital expenditure is incurred. Companies can offset this allowance against 70% of their statutory income for each year of assessment. Any un-utilised allowance can be carried forward to subsequent years until fully utilised. The remaining 30% of statutory income is taxed at the prevailing company tax rate. A high-technology company qualifies for Investment Tax Allowance of 60% of qualifying capital expenditure incurred within five years. Any un-utilised allowance can be carried forward to subsequent years until the whole amount has been fully utilised. The allowance can be utilised to off-set against 100% of a company’s statutory income for each year of assessment.

## Mexico

**Corporate Tax Rate:** 30%, plus a Federal Tax on Corporate Assets at 1.8%

**Corporate Marginal Effective Tax Rate (manufacturing):** 17.2%

**Nature of Depreciation Allowances:** Depreciation allowances range between 5%-25%, but can be up to 50% on pollution-control equipment.

**Nature of Investment Incentives:** Comprehensive packages to attract investment include programs to train workers and fiscal incentives that promote investment through reductions of up to 100% in the payment of taxes.

**Other Incentives:** Targeted through Special Economic Zones. Free trade zones exist throughout the country.

## New Zealand

**Corporate Tax Rate:** 33%

**Corporate Marginal Effective Tax Rate (manufacturing):** 30.1%

**Nature of Depreciation Allowances:** The New Zealand depreciation system is complex. In general, approximately 20%.

**Nature of Investment Incentives:** No special investment incentives are provided as the government believes that economic growth, macroeconomic stability, and a liberal investment regime are sufficient to attract investment.

**Other Incentives:** None

## Portugal

**Corporate Tax Rate:** 25%, plus local tax of 2.5%, or 27.5% in total. Companies in the free trade zone of Madeira are eligible for a reduced tax rate of between 2% - 12.5%.

**Corporate Marginal Effective Tax Rate (manufacturing):** 11.7%

**Nature of Depreciation Allowances:** Rates vary as follows:

Asset Type	Annual Depreciation (%)
Industrial Buildings	5
Machinery and Equipment	12.5-25
Office Buildings	2

**Nature of Investment Incentives:** A range of incentives is available, predominantly through European agencies. The government provides the following incentives:

- Madeira Free Trade Zone – corporate entities licensed to operate under the Free Trade Zone legislation are exempt from corporate income tax until the year 2011; and
- Research and Development Allowances – part of the value of an investment in R&D that has not been subsidised by the State can be deducted from income at a basic rate of 20%. An incremental rate allows companies to deduct 50% of the value of any investment in R&D above the average of such investment in the previous two tax years, up to a maximum of €500,000.

**Other Incentives:** Provided through the Portuguese Investment Agency (API). API is empowered to negotiate a tailored incentive package for large investment projects on a case-by-case basis, including tax cuts and subsidised or interest-free loans. The principal incentive scheme covers investments larger than €150,000. For tangible investments, such as buildings, equipment, and technology transfers, the loan can be 30-60% of the total, depending on the location of the investment, the size of the company, and the age of the entrepreneur. On successful completion of the project, loan forgiveness from 15% (for large companies in the Lisbon region) to 60% (for small companies in the less-developed regions of the country) may be granted. For certain preferred intangible investments, such as R&D and employee training, API can provide non-reimbursable grants equal to 30-70% of the investment.

## Singapore

**Corporate Tax Rate:** 20%

**Corporate Marginal Effective Tax Rate (manufacturing):** 5.8%

**Nature of Depreciation Allowances:** Initial level of 20% with the balance depreciated at 5-20%. Accelerated depreciation of 33% for each of three years subsequent to purchase is applied on plant and machinery; a company can alternatively opt for an initial allowance of 20% and annual allowances ranging from six years to 16 years on a straight-line basis. Certain plant and machinery (e.g. automation equipment, robots) can receive 100% depreciation in the first year. Further, 100% capital allowance for machinery and plant items costing less than \$1,000 each (to an aggregate claim of \$30,000 per year).

**Nature of Investment Incentives:** A comprehensive range of investment incentives are offered by the Singapore Government:

- Pioneer Status – usually provided to high-tech companies that introduce high-tech skills to the economy. Profits are fully exempted from corporate income tax for a period of 5-15 years;
- Development and Expansion Scheme Status – available to companies whose pioneer status has expired and which are engaged in capital investment to upgrade or modernise production capacity. The investment must have significant economic spin-offs. Income relating to qualifying activities is subject to a corporate income tax rate of not less than 10% (usually 13%) for a period of 10 years (extendable on application for a further period of 10 years). Non-qualifying activities are taxed at the normal corporate income tax rate of 20%;
- Expansion Incentives – fiscal benefits aimed at encouraging companies to boost productivity through increased mechanisation and automation. Expansion incentive certificates are available to growth-orientated manufacturing and service companies, including entities which have pioneer status. All income which exceeds the level of income earned prior to the expansion plan being put into operation is exempt from corporate income tax. The concession is available for a period of 10 years (extendable for a further 10 years in the case of service companies). The relief is usually granted to companies incurring expenditure of at least S\$10m on the purchase of productive equipment used for the manufacture of approved products;
- Export Incentives – the purpose of this incentive is to increase the value of exports through the provision of the following fiscal incentives. 90% of qualifying export income is exempt from corporate income tax. Qualifying export income refers to any annual increase in export income. The exemption period is 5-10 years in the case of companies engaged in the provision of services (with a provision for extension) and 3-15 years in the case of companies engaged in the production of manufacturing products;
- Investment Allowance Incentive – investment allowance incentives entitle a corporation to set off against profits up to 50% of the cost of qualifying capital expenditure which has been incurred on the purchase of plant, machinery and factory buildings for the purpose of an approved project which involves either research and development, the provision of specialised engineering or technical services, the promotion of tourist industries, or the manufacture of any product. The allowance is in addition to the right of every corporation to annually depreciate the cost of a fixed asset and set off the amount of depreciation against taxable profits. In this respect investment allowances represent a form of double deduction. The allowance is granted as an alternative and not in addition to pioneer status and export incentives; and
- Overseas Enterprise Incentives: Companies engaged in providing designated services to approved overseas projects

are entitled to the following fiscal concessions. Qualifying export services income is taxed at the concessionary rate of 10% for a maximum initial period of 10 years. The recipients of the services cannot be Singaporean residents or companies with permanent establishments in Singapore. The company providing the service must at least be 50% owned by Singaporean citizens or permanent residents and must be incorporated and resident in Singapore for tax purposes.

**Other Incentives:** Yes; but incorporated in incentives outlined above.

## Spain

**Corporate Tax Rate:** 35%

**Corporate Marginal Effective Tax Rate (manufacturing):** 29.9%

**Nature of Depreciation Allowances:** Rates vary as follows:

Asset Type	Annual Depreciation (%)
Buildings	3
Machinery	12
Tools	30

**Nature of Investment Incentives:** A range of incentives is available, predominantly through European agencies. The central government grants incentives from the annual budget. These incentives usually match EU financing. The government provides the following incentives:

- Bonuses for acquisition of certain material;
- Customs exemption for certain imported goods;
- Exemption from certain taxes;
- Financial subsidies;
- Guarantee of dividends;
- Guarantees granted in credit operations;
- Loans with low interest, long maturities, and grace periods;
- Preferential access to official credit;
- Real estate grants, and gratuitous or favorable land grants; and
- Reduction of burdens, with social security discounts to companies.

**Other Incentives:** None

## Sweden

**Corporate Tax Rate:** 28%

**Corporate Marginal Effective Tax Rate (manufacturing):** 12.8%

**Nature of Depreciation Allowances:** One method applied to equipment allows depreciation at 30%. Alternatively, depreciation can be calculated at a rate of 20% annually based on the acquisition value of the equipment. The cost of equipment with a shorter economic life (i.e. less than three years), as well as equipment of a lesser value (i.e. below 2,000SEK, while for larger companies the limit is 10,000SEK) can be deducted in its entirety. In the case of buildings, depreciation is allowed at a rate of 2-5% of the acquisition cost.



**Nature of Investment Incentives:** The government provides the following incentives:

- Nuntek Technical Projects Loans – in the initial phase of developing technical projects, small and medium sized enterprises may receive conditional loans, capital in return for royalty, and project guarantees. All three forms of financing may amount to a maximum of 50% of the project costs, however not exceeding 2mSEK;
- The Swedish Industrial Development Fund – all forms of financing may amount to a maximum of 50% of the project cost, which has to be at least 4mSEK; and
- Nordic Industrial Grants: Companies may receive grants for Nordic research and development projects. Grants up to 50% of the project costs are available, but normally not more than 5.9mSEK. The Nordic Industrial Fund concentrates on short-term projects of a maximum term of three years.

**Other Incentives:** None

## Switzerland

**Corporate Tax Rate:** Due to the federal structure of Switzerland there is no centralised tax system, with some taxes being levied exclusively by federal authorities whereas other taxes are concurrently levied at cantonal, communal, and federal levels. The basic federal tax rate is 3.63% of taxable profits with an additional percentage based on a formula that relates trading profits to net worth (i.e. capital and reserves). The maximum rate of 9.8% is arrived at if profits exceed 23.15% of net worth. Cantonal tax rates vary between 17-35% and like the federal tax are progressive (i.e. a scale based on the relationship of profits to net worth).

**Corporate Marginal Effective Tax Rate (manufacturing):** 16.9%

**Nature of Depreciation Allowances:** Depreciation is allowed against all assets that decline in value. Federal rates (under the declining-balance method) include 7-8% for industrial buildings, 3-4% for commercial and office buildings, 25% for office furniture and equipment, 30-40% for manufacturing machinery and 40% for motor vehicles.

**Nature of Investment Incentives:** Many of Switzerland's 26 cantons make significant use of fiscal and other incentives to attract companies to establish operations and invest in their jurisdictions. Some of the more aggressive cantons will waive taxes for new firms for up to 10 years. Individual income tax rates vary widely from the 12% national average rate, from about 7% in Zug, to about 15% in Jura. The Swiss Confederation may grant guarantees, subsidies to interest costs and federal tax relief in favour of companies that make innovative and economically significant investments. On the basis of this decree, the Confederation can give guarantees on investments through a security loan for up to one-third of the total project cost and for a duration of up to eight years. The Confederation may also grant subsidies on interest on bank credits for a maximum one-third of the total project cost for a maximum credit of 5mCHF and for a duration of up to five years. Companies may benefit from a complete or partial exemption from Direct Federal Tax for a period of up to 10 years provided that the cantons allow tax relief within their legislation. Direct financial support consists of subsidies for amounts that range from 10-25% of tangible and intangible investments that are considered as innovative according to this law.

**Other Incentives:** None

## United Kingdom

**Corporate Tax Rate:** The tax system is complex, but as a broad guide:

- If a company's profits are under £10,000 there is no corporation tax, unless a dividend is paid. Then corporation tax is payable on the dividend at a rate of 19%;
- If a company's profits are more than £10,000 but less than £50,000 the corporation tax is charged at a marginal rate on all of its profits, such that at £50,000 all profits are taxed at 19%;

- If a company's profits are over £50,000 but less than £300,000 the corporation tax is charged at a rate of 19% on all of its profits; and
- If a company makes over £300,000 the corporation tax is 30% of all profits.

**Corporate Marginal Effective Tax Rate (manufacturing):** 22.7%

**Nature of Depreciation Allowances:** Normally 25%, but 6% for certain assets with a life of at least 25 years, if annual expenditure on such assets exceeds £100,000. First-year allowance of 40% for plant and machinery bought by small and medium sized businesses.

**Nature of Investment Incentives:** The government provides a range of incentives, centering on tax credits, for R&D investment in manufacturing.

**Other Incentives:** None

## United States

**Corporate Tax Rate:** 35%

**Corporate Marginal Effective Tax Rate (manufacturing):** 34.6%

**Nature of Depreciation Allowances:** Varies by State

**Nature of Investment Incentives:** There are few investment incentives at the Federal level, although there are a number of support programs aimed at particular sectors of the economy (e.g. oil and gas). At the State level there is intense competition for investment and almost all states have extensive programs of incentives that typically include the following elements:

- Enterprise zone – provides a tax credit for each net new job created in specially designated areas. May provide for a rebate of State sales/use taxes on building materials and operating equipment. Local sales/use taxes may also be rebated. Credits can be used to satisfy state corporate income and franchise tax obligations; and
- Inventory tax credit – provides tax credits against State corporate income and franchise tax obligations for the full amount of inventory taxes paid. When credits are in excess of tax obligations, a cash refund may be made.

**Other Incentives:** Varies by state, but in general:

- Industrial property tax exemption - Exempts a manufacturing establishment from State, parish, and local property taxes for a period of up to 10 years; and
- Construction or improvement of facilities - Gives an investment tax credit of 10% or more of the cost of tangible assets, including buildings and structural components of buildings located within a designated economic development zone.

## Appendix 3

# Australian National Audit recommendations on administration of the R&D Start Program

<p>Recommendation No.1 Paragraph 2.40</p>	<p>The ANAO recommends that AusIndustry and the Innovation Division of DITR strengthen the performance management framework for R&amp;D Start and Commercial Ready by:</p> <ul style="list-style-type: none"> <li>■ Improving the relevance of KPIs for measuring the achievement of program objectives and outcomes; and</li> <li>■ Setting targets for KPIs, so that performance can be assessed.</li> </ul> <p><b>DITR and the IR&amp;D Board Responses:</b> Agreed.</p>
<p>Recommendation No.2 Paragraph 2.51</p>	<p>The ANAO recommends that AusIndustry improve information available to evaluate program outcomes by:</p> <ul style="list-style-type: none"> <li>■ Regularly analysing the non-response rate for biannual surveys of grant recipients to identify the nature of the non-response, and any associated bias;</li> <li>■ Including this information in any reports of the survey data; and</li> <li>■ Implementing strategies to encourage grant recipients to supply information requested by AusIndustry, in accordance with their grant obligations.</li> </ul> <p><b>DITR and the IR&amp;D Board Responses:</b> Agreed.</p>
<p>Recommendation No.3 Paragraph 4.18</p>	<p>The ANAO recommends that AusIndustry undertake regular structured analysis of the reasons for any differences between AusIndustry and committee recommendations for the new Commercial Ready program, in order to develop strategies to improve the quality of advice given to committees.</p> <p><b>DITR and the IR&amp;D Board Responses:</b> Agreed.</p>
<p>Recommendation No.4 Paragraph 4.30</p>	<p>The ANAO recommends that, for transparency and accountability to stakeholders, committees apply consistent minimum total rating scores to Commercial Ready applications, or a rationale for any differences be documented.</p> <p><b>DITR and the IR&amp;D Board Responses:</b> Agreed.</p>
<p>Recommendation No.5 Paragraph 4.43</p>	<p>The ANAO recommends that AusIndustry strengthen quality assurance by:</p> <ul style="list-style-type: none"> <li>■ Evaluating committee recommendations for Commercial Ready grant applications to identify reasons for differing rates of approval across committees; and</li> <li>■ Assessing the extent to which any differences are reflected in the subsequent commercial success of projects.</li> </ul> <p><b>DITR and the IR&amp;D Board Responses:</b> Agreed.</p>
<p>Recommendation No.6 Paragraph 6.26</p>	<p>The ANAO recommends that AusIndustry set clear and consistent site visit targets for Commercial Ready and R&amp;D Start projects, and where discretion for conducting visits is allowed, monitor the use of such discretion in order to inform decisions about the targets.</p> <p><b>DITR and the IR&amp;D Board Responses:</b> Agreed.</p>

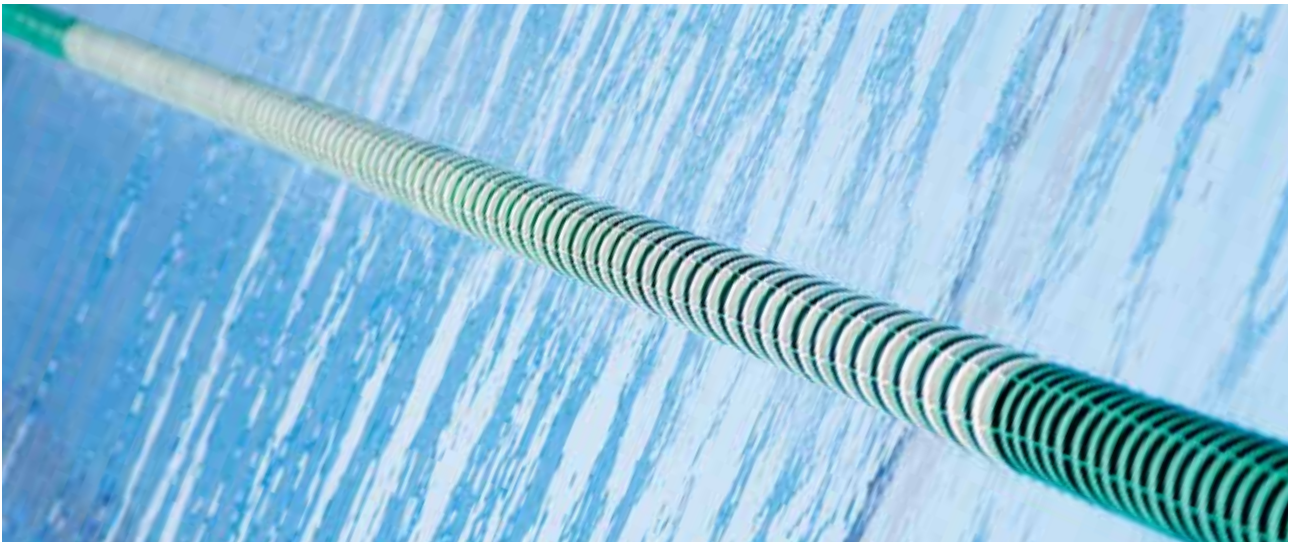




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