

# Melbourne's Second Speed Economy



Bob Birrell, Ernest Healy and T. Fred Smith  
Centre for Population and Urban Research  
Monash University

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# Preface

Studies of Australia's economic past and prospective future have been dominated by economists. Their tools of trade, when applied to the circumstances Australia faces tell us that there is only one economic pathway open to us. This is to go with the global economy and let market forces determine the outcome. But what happens if the resulting adjustments undermine Melbourne's inherited economic base without giving rise to a viable alternative.

Do we accept our fate and fall in behind the rest of the nation. This is what the Howard government wants us to do and what the Bracks government has accepted as the way forward as well. Or, alternatively, do we actively seek adjustments that will ameliorate the regional impact? We believe the latter.

The work reported here is designed to contribute to this objective. It builds on the latest labour force data. It also addresses what is happening at the Melbourne coalface, including industries that are most vulnerable to global competition as well as those which have taken on this competition and flourished.

Dealing with industry leaders in the front line has been an enlightening experience. We began with some scepticism about the prospects of Australian firms being able to compete in a world of ferocious competition, both in low-tech and hi-tech industries. We ended with admiration for the commitment and intelligence of leaders who have made a success of a very difficult situation and of the capacity of Australian engineers and technologists who have helped make this success possible.

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Yet, a key message from the coalface is that such success is at best temporary and contingent on continued competitive effort. For this to happen enterprises need assistance. We hope this study will make clear why this is the case and the appropriate form such assistance should take.

## Authors

Bob Birrell is Director of the Centre for Population and Urban Research (CPUR) at Monash University. Ernest Healy is Senior Research Fellow in the CPUR. T. Fred Smith is Honorary Professorial Fellow in the CPUR. He was previously Deputy Vice-Chancellor—Research at La Trobe University and CEO of the La Trobe University Research and Development Park.

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# Executive Summary

**T**here are winners and losers from Australia's resources boom. Sydney and Melbourne are the prime candidates for the loser's role, as capital and labour are sucked into Queensland and Western Australia.

So far, it is Sydney which exhibits the clearest sign of moving into second-speed mode. The engine of Sydney's previous strong growth, the property and business services sector, has spluttered since the Olympics in 2000. At the same time, housing construction has collapsed, partly because the city is experiencing a serious net loss of residents.

In Victoria, the Bracks government has assured the public that Melbourne will escape Sydney's fate. Why? Because the government claims to have laid the groundwork for Melbourne to become a global centre of hi-tech industry. This groundwork includes making Victoria the pacesetter for a Third Wave of Reform in Australia, in which it is asserted that the shock of global competition will help promote the renewal of the Victorian economy.

But what if these adjustments facilitate the mining industry boom and at the same time hasten the demise of industries dependent on the domestic market—the main core of which are located in Melbourne?

The Bracks government is remarkably confident on this issue. It has tacitly decided to let established industries sink or swim. Instead, it has put its rhetoric and to some extent its money behind enterprises which it believes can exploit research findings. Its strategy to this end includes attracting footloose capital and innovation skills by improving Melbourne's physical and cultural attractions.

Our analysis questions the assumptions behind the Bracks government strategy. The main reason why Melbourne has not slowed to Sydney's 'second speed' is that the property and

construction boom, which has been the main driver of employment growth in Melbourne, still has some steam left. This boom, along with accompanying retail, health and educational services has kept job growth relatively healthy.

Meanwhile, Melbourne is already being hit by a contraction of its manufacturing base, which will certainly intensify. The motor vehicle and parts industry is particularly vulnerable.

There is some good news. Some big firms based in Melbourne have found a niche in the global supply chains of their industry. Their comparative advantage lies in the engineering and technical skills available in Melbourne. However, even these industries are not assured of survival in the global marketplace and are vulnerable to the run-down of the established manufacturing base.

At the same time, on closer inspection, the glimmering hi-tech vision for the future looks like a mirage. State investments such as in Bio21 and the Australian National Synchrotron will give a welcome impetus to scientific research but not to globally-competitive product innovation in the near term.

Political rhetoric aside, Melbourne's economy is poised in a very delicate position. It seems likely that the property boom will abate, notwithstanding the state government's vigorous efforts to keep it going, thereby exposing the underlying weakness of the Victorian government's economic strategy. Should this slowdown occur, the city would lose its main employment driver.

It is time the community in Melbourne was made aware of this situation. There are ways to help maintain and improve the productivity of existing industries. However, while the government pursues its fanciful approach to innovation, they are likely to be ignored.

# Melbourne's dilemma: from protection to global competition

Melbourne has prospered during the economic boom of the past decade. However, serious concerns are emerging about the future prospects of the Victorian economy and the Melbourne economy in particular. In part, these concerns stem from the observation that Australia is now characterised by a 'two speed' economy—with the resource rich states motoring ahead of the remaining states. Progress in the resource rich states may be at the expense of the other states. It has been a staple of economic analysis in Australia that when the resource-based industries flourish this prompts concerns about the fate of other industries (and the locations in which they are concentrated) which are subject to international competition. This is in part because of the upward pressure placed on the Australian dollar when the value of resource-based exports increases sharply. It is also possible that people and capital will gravitate towards the boom states.

The Bracks government denies there is a problem. According to the Victorian Treasurer, John Brumby, Victoria is powering ahead nicely despite the resources boom. He recently claimed on radio that over the past year '... one in every three new jobs around Australia has been generated in Victoria'.<sup>1</sup> However, the situation in Melbourne belies Brumby's confidence. Table 1 shows the growth in employment in Melbourne over the four quarters (averaged) to August for the years 2003 to 2006. It indicates that employment growth in Melbourne is slowing both in numerical terms and as a share of the growth in employment across Australia. Whereas Melbourne accounted for 28.6 per cent of jobs growth in Australia in the

12 months to August 2004, its share had declined to only 10.2 per cent in the 12 months to August 2006. A further statistic, which should set the alarm bells ringing, is that between 2002–03 and 2005–06 employment in manufacturing in Melbourne fell from 263.5 thousand to 247.3 thousand (see Table 2).

Since it came to office in 1999, the Victorian state Labor government has staked out a distinctive position on these issues. It has developed policies which it claims will help make Victorian enterprises viable players in the global economy. These policies are designed to make Melbourne a locus of innovative industries which can sell into the international marketplace. This, it has reassured voters, will be facilitated by the state government's encouragement of hi-tech industries and its efforts to make Melbourne an exciting place that will attract the relevant skills and capital. All this will be accomplished, so the government assumes, in a context where Victorian firms, whether new or long established, are exposed to the full force of global competition.

The possibility that increased competition from enterprises outside Australia might have a harmful effect on the Victorian economy overall and not merely industries inherited from the protectionist past has not been countenanced.

**Table 1: Melbourne's share of Australian job growth over the years ending August 2003 to August 2006**

	2003–2004	2004–2005	2005–2006
Change in employment in Melbourne ('000s)	45.1	63.9	19.5
Change in employment in Australia ('000s)	157.8	326.4	191.2
Melbourne's share of Australia's growth (per cent)	28.6	19.6	10.2

Source: ABS, Labour Force Survey.

Note: the four quarters to August each year have been averaged

Rather, such has been the government's confidence in its innovation strategy that any casualties amongst existing industries along the way tend to be seen as part of the inevitable collateral damage to be expected from a progressive economic policy stance.

This policy stance, if nothing else, has created a good public relations impression while Victoria shared in Australia's post late-1990s economic expansion. This expansion was driven by a massive property boom unrelated to the state of hi-tech industry in Victoria. The state government could parade its 'innovative' policies without having to worry about being called to account as to their credibility. Now that the property boom is abating and Victoria is being threatened both from within and without Australia—by increased competition for people and capital from other states and the ferocious impact of Asian-origin imports—any weaknesses in the state government's economic strategy becomes a more urgent matter.

What if the innovation strategy does not work? What if, at the same time, the state's core manufacturing industries also begin to founder? Our review of the evidence concerning the state of the manufacturing sector in Melbourne indicates that manufacturing employment is beginning to crumble in the face of increased international competition, particularly low-cost competition from Asia.

The Victorian government is in a precarious position. Melbourne, like Adelaide, is vulnerable to the structural adjustment process which all the economic pundits predict will intensify as

Australia's resource-based industries flourish. The federal government is determined to let the process run, even though as the head of the Treasury, Ken Henry has acknowledged:

*The adjustment will be characterised by a sizeable shift in resources from import competing manufacturing to resources and to the sectors of the economy complementary with China's development needs.<sup>2</sup>*

Henry asserts that government's have no choice but to adapt:

*Our governments can embrace the challenges and opportunities presented by the globalising effects of the information and communications technology revolution and the re-emergence of China and India, or they can admit defeat by retreating to policy approaches of the past.<sup>3</sup>*

He makes it clear that the federal government will not retreat. Instead, the answer is ever more reform to make our markets more competitive. To this end, he notes the Council of Australian Governments (COAG) has begun the process on matters like 'pricing, competition and competitive neutrality—in transport, energy and water—that have prevented the development of national markets in vital infrastructure areas'.<sup>4</sup>

The reforms Henry advocates may make Australia a more competitive player in global raw material markets, thus prompting further structural adjustment and adding to the threat to Melbourne's existing industrial base. Where does the Bracks government stand on these issues? It does acknowledge that competition in the manufacturing sector is becoming more intense. However, far from stepping back from the federal agenda, it is one of the most enthusiastic supporters of it.

**Table 2: Persons ('000s) employed in manufacturing and total employment in Melbourne in the years ending August 2003 to August 2006**

	2002–03	2003–04	2004–05	2005–06
Manufacturing	263.5	261.4	256.7	247.3
Other industry sectors	1458.1	1505.4	1573.9	1602.7
Melbourne total	1721.6	1766.7	1830.6	1850.0

Source: ABS, Labour Force Survey, quarterly data

Note: the four quarters to August each year have been averaged

During 2005, the Bracks government sought to reinvent itself as the pacesetter in reform among Australian state governments. It did this on the basis of a carefully researched statement that justified the need for a new wave of reform. This statement, entitled *A Third Wave of National Reform*, argues that Australia has done well in terms of rates of productivity growth since the early 1980s from two waves of reforms. The first wave it credits to the Hawke/Keating government's opening of the Australian economy to international competition via the floating of the dollar, the deregulation of the financial system and reduced tariff protection. The associated shocks are seen as very positive. According to the paper, 'Greater integration with the world economy created both the pressure and the opportunity for enhanced competition and productivity'.<sup>5</sup> The second wave of reform and productivity growth are said to stem from COAG's embrace of National Competition Policy, as a result of which (amongst other consequences), government businesses had to accommodate to the entry of private sector competition.

It is maintained that a new 'Third wave of reform' is needed if Australia is to stay abreast with the rest of the world in the productivity stakes and to help Australian enterprises cope with new competitive challenges from China and India. This third wave should focus on the enhancement of human capital, including skills development. The Bracks government wants to put this 'third wave' perspective at the centre of the COAG decision-making. Bracks proposes that the states join with the national government in pressing this agenda for the benefit of all Australians. The document draws on modelling done by University of Melbourne economists, which claims that the proposed reforms will deliver a substantial productivity bonus.<sup>6</sup>

The Bracks reform agenda is remarkably upfront in its assessment of where the Australian economy is going. The policy implications of these competitive challenges are said to be that:

*Australia must continue to expand its influence in sectors where it has global opportunities. These*

*sectors, which include the traditional strengths of resources and agriculture (and associated downstream production) and, increasingly, emerging manufacturing and service industries are likely to help drive Australia's future prosperity.<sup>7</sup>*

This is essentially the federal perspective, as stated above by the head of the Treasury. It is implicit in this statement that the manufacturing enterprises, inherited from the protectionist era, have had their day. From the Victorian government's perspective, any job losses in manufacturing will be more than made up from prospective job gains from its 'innovation' strategy.

Meanwhile Victorians are faced with the immediate problem that structural change on the federal government's terms is likely to consolidate their 'second speed' status. The Bracks government has positioned itself as the champion of the very policies that will accelerate this process. Having entered the COAG reform process on these terms, it now has little room to manoeuvre in mounting a defence of alternative goals and policies. The Bracks government has finessed itself into a position which is arguably counter to the interests of its own people.



# The Bracks government's internationalist strategy for Melbourne

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When Steve Bracks and John Brumby were mobilising to take on the Kennett government before the 1999 Victorian state election, similar concerns to those being voiced today about the fate of the states which do not share in the resources boom were being raised. For example, one of the contributors to an election taskforce set up to guide Labor policy noted that:

*The Victorian economy has historically, largely as a result of protectionism, had a production base directed at the domestic economy. During the 1980s and 1990s, the reduction in protection and other forms of industry assistance saw the Victorian economy become more exposed to international pressures in a way that the 'growth states' were not. Financial deregulation, and in particular the floating of the exchange rate, saw the Australian dollar become a proxy for world commodity prices and as a result, Victoria now finds itself a victim of buoyant world commodity prices. When commodity prices rise, the Australian dollar rises undermining the competitiveness of the Victorian manufacturing sector by making imports cheaper and exports more expensive.<sup>8</sup>*

Bracks was Shadow Treasurer at the time. He was well aware of this issue. In his introduction to the taskforce report, he notes Victoria's 'over reliance on manufacturing, which is subject to greater competition as a result of declining tariffs'.<sup>9</sup> Quite sensibly, he declared that a new economic policy was required, which among other things would 'strengthen existing industries and clear the path to enable new industries to emerge'. Even the highly protected textiles, clothing and footwear industry is mentioned as a 'key industry' sector in need of support.<sup>10</sup>

As it turned out, the fears about Victoria's economic vulnerability at the end of the 1990s proved to be premature. There was a revival of economic and employment growth in both

Melbourne and the rest of Victoria from the late 1990s which has, until recently, served to allay fears such as those articulated above. This revival had little to do with the government's industry innovation strategy. Rather, the election of the Brack's government coincided with the acceleration of a massive property boom from which Melbourne has benefited. This boom has generated rapid growth of investment in construction activities and consequent employment in construction and associated business services.

Bracks and Brumby in particular are well aware of the extent to which they have benefited politically from the property boom. While they do not acknowledge the extent of their government's dependence on this boom, they never tire of declaring how important it is to promote its continuance. One of the policies directed to this end is the government's pursuit of high population growth. Prior to the 2002 election, the government announced a population target for Victoria of 6 million by 2025, including a specific annual growth target for regional Victoria of 1.25 per cent. In order to achieve this objective, the government has created a large state immigration department whose function is to exploit all the potential visa categories through which the state government can encourage settlement in Victoria. As is shown below, this activity has attracted thousands of additional people to Victoria, most of whom have ended up in Melbourne.

Notwithstanding its ongoing reliance upon population growth and associated construction activities as the basis for economic growth, innovation is the rhetorical centrepiece of the government's economic strategy. Leading Labor figures repeatedly assert that their program for turning Victoria into an internationally prominent 'innovative' economy will provide a

strong foundation for the state's economic future and that their policies are already working effectively to this end.

The favourite example in support of this claim are the achievements of Toyota, General Motors and to a less extent Ford in selling increasing numbers of built-up cars produced in Melbourne into global markets (see Table 4). This example is said to exemplify the capacity of Victorian manufacturers to incorporate the results of local research and development (R&D) into a competitive export market. In the government's May 2003 statement on manufacturing policy, it is stated that exports of advanced manufacturing (the main component of which was built-up vehicles) reached a record high of \$8 billion in 2001, up 32 per cent in 3 years.<sup>11</sup> However, as the discussion below indicates, imports have ravaged the production of vehicles for sale within Australia as well as locally produced motor vehicle components.

This inconvenient reality has not deterred the Bracks government from pursuing its 'innovation' strategy and its parallel neglect of established manufacturing industries. Indeed, as the economic boom of recent years has waned, Labor leaders, particularly Treasurer Brumby, have become more assertive in their belief that Victorian industry will flourish in the global economy and disdainful of those enterprises that cannot survive the competitive shock.

### **Making Melbourne attractive**

The 'innovation' program is focussed on the creation of an economic setting that the Victorian government believes will encourage the location of new industries in Melbourne. This includes support for scientific infrastructure which is allegedly needed for cutting-edge industrial innovation. The Australian National Synchrotron is the most lavish of such expenditures.

The Brack's government also wants to attract 'footloose' skills and capital to Melbourne from elsewhere in Australia and the rest of the world. To this end, there has been heavy investment in promoting Melbourne as an internationally-

recognised 'place to be'. This objective is built on the belief that economic innovation and global competitiveness can be achieved through the attraction of globally-mobile creative people. As a consequence, the provision of a physical and cultural setting that is attractive to such persons has become a preoccupation of the Brack's government. The Docklands project is the centrepiece of this strategy. Government spokespersons repeatedly assert that the makeover of inner Melbourne is achieving this goal. Here is a typical example of government place-marketing rhetoric from Premier Bracks, in responding to Melbourne being judged the 'world's most liveable city':

*... It's a great international capital city ... We have a diverse and culturally rich society with great services and world class infrastructure ... We have already seen a turnaround in the population drift away from Victoria ... this adds to our reputation as a stylish, cosmopolitan location internationally, attracting an ever increasing number of visitors from overseas ... Melbourne is the best city in the world to visit, or to live and work.*<sup>12</sup>

This is fine rhetoric. But where is the evidence of links between this sprucing up of Melbourne, the government's 'innovation' strategy and the creation of significant numbers of new jobs? Our investigation indicates that there are some impressive hi-tech winners located in Melbourne. But even these successes have a continuing fight on their hands to survive in a world of fierce competition.

### **People-driven growth**

Meanwhile, the one industry which continues to drive investment and job creation (albeit without any significant contribution to economic renewal) is construction. For this to be maintained, Victoria needs to continue to fuel demand for apartments and houses. In effect, the heart of the Victorian economy is now not about technological innovation, but about population growth and the associated expansion of 'people servicing'. This point is documented in our analysis of the property boom and its flow-on effects as regards employment creation below.

This is a precarious strategy. For a start, it is extremely expensive. Melbourne has a ravenous appetite when it comes to providing the infrastructure needed to accommodate further population growth. Transport infrastructure provides an example. As studies of traffic congestion in Melbourne have shown, the city's anticipated population growth (and accompanying increases in trip numbers) is expected to be the major source of additional road traffic (and thus worsening of the city's congestion problems) over the next thirty years.<sup>13</sup>

More fundamentally, what happens if and when population growth stops? This concern is not fanciful. The Victorian government's own Department of Treasury and Finance recently issued an econometric study which concludes that, as a consequence of the resources boom, Victoria's economy is vulnerable to competition from northern and western Australia for capital *and people*.<sup>14</sup> The experience of Sydney (detailed below) provides some insight into the wider implications of a deflated property market for the overall economic health of the metropolitan economy.

# The real world: manufacturing in Melbourne

## The protectionist heritage

Historically, manufacturing has played a crucial role in Victoria's economic development. Victorian politicians led the movement after Federation in 1901 to convert the Australian government to a policy of national economic protection. The protectionist approach to nation building was inspired by the belief that, without economic protection to ensure the growth of manufacturing industry, Australia would remain in a position of economic dependency in the world. As Alfred Deakin put it in 1906 Australians 'should not all remain hewers of wood, drawers of water, shearers of wool and growers of wheat'.<sup>15</sup> Victoria has since been the main beneficiary of this policy, at least with regard to the encouragement of manufacturing enterprises dependent on protection from overseas competition. During the 1950s and 1960s Melbourne's population exploded from 1.3 million in 1951 to 2.0 million in 1961 and 2.6 million in 1971, largely because Melbourne was the main settlement point in Australia for overseas migrants. The main reason for this concentration was the availability of employment in the city's expanding manufacturing sector. This expansion was closely linked with enormous growth in the housing and related urban infrastructure industries, as Melbourne's suburban frontier spread in order to accommodate the extra population.

By 1986, there were around 300,000 persons employed in manufacturing in Melbourne. Despite the early 1990s recession and the initial impact of the reductions in tariff levels implemented by the Hawke Labor Government, by 1996 the number employed in the sector in Melbourne was still at this level.<sup>16</sup> This outcome partly reflected the tendency for manufacturing employment in Australia to concentrate in Melbourne. As of 1996, around 25 per cent of Australia's manufacturing employment was located

in Melbourne. By 1996, manufacturing employed far more people than any other industry sector in Melbourne (around 18.5 per cent of the total employed population). These numbers do not tell the full story about the importance of manufacturing to Melbourne. Many of those employed in the growing business services sector depended on demand for their services from manufacturing enterprises.

## Manufacturing in decline

All of this is now under threat. Manufacturing employment is precariously situated. Employment levels in manufacturing in Melbourne remained fairly stable to 2000–01, after which time they contracted markedly. Employment in manufacturing is estimated to have fallen by 36,000 over the years 2000–01 to 2005–06, during which time Melbourne's share of manufacturing employment in Australia fell from 26 per cent to 24 per cent (see Table 3).<sup>17</sup> Manufacturing employment is precarious because most enterprises evolved here in a protected environment, which allowed them to compete against imported products in the Australian domestic market. According to the Victorian government, only 12 per cent of all Victorian manufacturers are significant exporters of their product.<sup>18</sup> As a consequence, manufacturers are vulnerable to the removal of tariffs and other protective barriers.

One response may be that while this removal of protective barriers has been going on for two decades, employment levels in manufacturing in Melbourne had not declined much by the start of this century. However, Australia's tariff walls are still in the process of being dismantled. Moreover, this dismantling is occurring in the context of the recent emergence of ferocious new competitors, notably those located in mainland China. The competitive advantage of enterprises situated in China, given the extraordinary low rates of pay,

yet strong labour discipline, is enormous. Further, as the Victorian Department of Treasury and Finance discussion paper cited above has acknowledged, the strength of the Australian dollar due to the minerals and energy export price boom is adding to these competitive pressures. The resources boom and its accompanying demand for skilled workers is also making life tougher for manufacturers because this demand is adding to the costs of employing engineers and tradespersons and is limiting their availability.

Table 3 tells the story. As noted, manufacturing employment in Melbourne fell by 36,000 between 2000–01 and 2005–06 from 285,000 to 249,000. Furthermore, 70 per cent of the net decline in manufacturing employment in Australia during this five-year period (of 51,000) occurred in Melbourne. The decline has been severe in industries like clothing, where labour accounts for a high share of overall costs. As detailed in Table 3, there were 31.3 thousand persons employed in the textiles, clothing and footwear industry in Melbourne in 2000–01. By 2005–06, that number had fallen to 17.5 thousand persons. The loss of employment in these low-skilled industries may not be lamented by everyone. Nevertheless, given the high concentration of non-English-speaking-migrants in Melbourne, the collapse of the clothing industry will have severe social ramifications within the Indochinese community, as in Springvale, where the clothing industry has been strong in the past.

With a few exceptions, employment has fallen across a wide spectrum of manufacturing industries in Melbourne between 2000–01 and 2005–06. Among those industries affected are the basic chemical and other chemical industries. The former includes organic and inorganic chemicals, both crucial ingredients in modern industry. The latter includes the pharmaceutical industry as well pesticides, detergents and cosmetics. Another notable industry to decline in employment (from an already low base) is the electronic equipment industry, which encompasses computers, telecommunications and other electronic equipment.

There are some manufacturing success stories which counter this gloomy record. As part of the preparatory work for this study the Head of the Department of Mechanical Engineering at Monash, Professor John Sheridan, organised a forum (held on 2 August 2006) in which some twenty local manufacturers were invited. Some of those present have flourished, including ANCA, the Australian-owned machine tool producer located in Bayswater, which is selling high precision grinding machines and other machine tools into the global market are deservedly well publicised. ANCA employs some 230 persons at its Bayswater plant, including around 65 engineers. Davey Water Products which produces pumps sold both in local and overseas markets was another. The key to their success appeared to be their sustained effort to improve the performance and reduce the costs of their products. For this purpose the availability of creative, but practical, locally-trained engineers was critical. Blue sky, new product innovation which builds on scientific research, had little to do with their success.

There would be less concern if the manufacturing employment figures hid a record of high productivity, where lower employment levels were accompanied by rising output. Unfortunately, estimates of production levels for industry in Melbourne are difficult to procure. Nevertheless, gross-value-added data, which estimate physical production levels for Australia as a whole, are available. These show very limited gains in manufacturing output this century. Total manufacturing output, in value added terms, grew by just 5.7 per cent between 2000–01 and 2004–05.<sup>19</sup> By contrast, gross value added in the construction industry grew by 43.8 per cent. Other indicators of this malaise are well known, including the declining share that Australian manufacturers hold of the Australian domestic market. One estimate indicates that the share of imports in the domestic market for manufactured goods has increased from 24.1 per cent in 1990 to 35.4 per cent in 2000 and 42.4 per cent in 2005.<sup>20</sup> There has been no compensating increase in exports of manufactures, at least over the past five years. Rather, exports have stabilised.<sup>21</sup>

Some local manufacturers may survive import competition, but often this requires moving part of their production process offshore. As the channels available for such relocation broaden and experience deepens in dealing with offshore providers, it is inevitable that further off-shoring will occur. According to the Australian Industry Group's 2006 survey of Australian manufacturers, the level of offshore intensity, as measured by the proportion of sales which include components drawn from overseas, is forecast to increase from 30.2 percent in 2005 to 37.8 percent in 2006.<sup>22</sup>

Representatives of manufacturers are now beginning to make their voices heard about the situation outlined above. They are being aided by the stream of distress stories of workers displaced by factory closures in Melbourne and

elsewhere across Australia. For the most part, the Victorian Labor government (the government's submission to the House of Representatives inquiry into the automotive parts manufacturing industry, discussed below is a notable exception) has maintained a discreet silence on the increasing level of discontent among manufacturers. To acknowledge the decline in manufacturing employment detailed above would be to hand the Bracks government's political opponents a serious political weapon. Yet, behind the scenes (as is detailed further below), economic analysts within the Treasury as well as the Treasurer, John Brumby, have no illusions about the vulnerability of the manufacturing industries. Their hope is that out of the ashes a new set of innovative and internationally-competitive industries will emerge.

**Table 3: Persons ('000s) employed in selected manufacturing sectors in Melbourne and Melbourne's share of Australia, May 2000–01 and May 2005–06**

	2000–01	2005–06	Change 2001–01 to 2005–06	Change as percentage of 2000–01	Share of Australia 2000–01	Share of Australia 2005–06
<b>Melbourne</b>	<b>numbers</b>				<b>per cent</b>	
Textiles, clothing and footwear	31.3	17.5	-13.9	-44.2	37.2	31.2
Basic chemical manufacturing	5.3	2.1	-3.1	-59.2	39.9	28.7
Other chemical product manufacturing	13.3	12.5	-0.9	-6.5	32.6	35.3
Rubber product manufacturing	4.3	1.6	-2.6	-62.1	52.1	28.7
Plastic product manufacturing	13.6	9.5	-4.1	-30.0	46.1	36.5
Iron and steel manufacturing	4.5	6.6	2.1	45.9	11.4	13.6
Fabricated metal product manufacturing	12.4	9.2	-3.2	-25.7	23.4	24.9
Motor vehicle and part manufacturing	30.8	35.4	4.6	14.9	44.8	44.8
Photographic and scientific equipment manufacturing	4.6	3.7	-0.9	-20.2	35.1	28.5
Electronic equipment manufacturing	7.4	5.4	-2.0	-27.3	29.6	27.3
Electrical equipment and appliance manufacturing	8.8	9.3	0.5	5.4	22.5	31.5
Industrial machinery and equipment manufacturing	11.6	9.2	-2.4	-20.7	21.3	16.9
Other manufacturing	99.3	90.0	-9.2	-9.3	13.6	12.7
Total manufacturing	284.8	249.4	-35.5	-12.5	25.6	23.5
<b>Balance of Victoria</b>						
Total manufacturing	77.1	83.2	6.2	8.0	6.9	7.8

Source: ABS, Labour Force Survey, 2000–01 and 2005–06; customised data set held by CPUR.

Note: the quarterly data for each year have been averaged in order to reduce sampling error.

### The protectionist era—what have we lost?

Any defence of the outcomes of past industrial policies is sure to attract a derisory response from the free-trade proponents who dominate public discourse on economic policy. Our comments are not intended to be a blanket endorsement of protectionist policies. Rather, it is important that Victorians understand how deep the losses in economic activity may be under the current policy settings and what they might imply for the state government's innovation policy. As noted, the Victorian manufacturing enterprises of today are largely a product of the original protectionist policies. In some cases, this includes a significant R&D element. Critics of the protectionist heritage are often blind to the scale of this presence. If production for the domestic market eroded due to international competition, any capacity to compete in international markets, whether through exports of particular products or the provision of R&D services, could be undermined as well.

The development of Australian manufacturing around tariff and import quota walls meant that both locally-owned and multinational companies had to establish a production base here if they were to gain access to Australia's domestic market. Some of these firms were active in R&D. ICI, for example, established a large research laboratory at Ascot Vale in Melbourne in 1955, which employed over 100 professional research scientists.<sup>23</sup> BHP had significant research laboratories in Melbourne. The CSIRO did significant R&D industrial work, including the development of the atomic absorption spectrometer. Telecom, in the days when it monopolised the telecommunications industry, had its own research laboratories adjacent to Monash University in Clayton. Telecom also specified Australian design standards for its equipment, which required suppliers to produce to these standards. To do so, suppliers had to develop products that met Australian-specific standards. This is why Ericsson, the Swedish electronic supplier, established a production base at Broadmeadows in 1963 that employed 1000 persons at its peak and a large R&D facility in 1982.

The exposure of Australian industry to global competition, including the sourcing of components or services once restricted to Australian suppliers, has put an end to some of this R&D capacity. The Telecom (now Telstra) labs currently operate on a very limited scale. Telstra no longer specifies unique Australian components. Instead, it draws from global suppliers. Partly as a consequence, Ericsson ceased manufacturing its products at Broadmeadows in 1998 and closed its R&D facility in 2002 (discussed further below). The BHP labs are gone too. The ICI research laboratory at Ascot Vale has been replaced by a housing estate. Since the parent company offloaded its Australian assets (mainly in the explosives area) to Orica, this research activity has diminished and its operations have moved to Newcastle. The dominant pattern within the firms listed above is to outsource R&D to wherever it can be done most cost efficiently.

Some of this outsourcing has gone to the CSIRO. These days, however, most of CSIRO's product development work is confined to industry contract work, such as helping industry solve immediate production problems, like how to more efficiently transport fluids or measure pollutants. This may be a useful contribution to the overall productivity of Australian industry. However, the CSIRO no longer provides a setting where it is likely that new hi-tech products like the atomic absorption spectrometer could be developed. The spectrometer is one of the great hi-tech success stories in Australian manufacturing history. It was the product of CSIRO research and subsequent close collaboration with a few small Australian-owned instrument manufacturers in the product development stage. One of these firms was Techtron. As the historian of this achievement has written:

*In little more than five years Techtron grew from a tiny company employing a handful of people making small electronic instruments, mostly for the local market, to a major producer of sophisticated scientific equipment of which 60–70 per cent was exported. By 1966 the company was producing more than 12 per cent of the total world output of atomic absorption spectrometers.<sup>24</sup>*

The legacy of this research is still evident in the form of the US-owned Varian Australia, which includes the original Techtron business. Varian continues to manufacture scientific instruments at its Mulgrave plant in Melbourne.

Some of the multinational branch plants have also gone, as their head offices realise that they no longer need to keep these branches operational when Australia's tariff walls were dismantled. Kodak is a case in point. In this case, the advent of digital technology undermined the operational base of the local operation. All of its local operations, including its product development branch, have gone.

As indicated, Ericsson closed its Asia-Pacific research laboratory in October 2002. The laboratory had produced dozens of registered patents in core switch and signalling technology. It employed 450 researchers, and was the largest privately owned R&D research facility in Australia at the time.<sup>25</sup> By 2002 the laboratory had ceased work on components designed to meet Australian specifications. Almost all its work was for products utilised within Ericsson's global operations. Before moving its facility, Ericsson's R&D operations were reported to represent 15 per cent of Victoria's R&D funding.<sup>26</sup> Ericsson management stated that the decision to cease its Australian research and development activity was part of a global rationalisation of the corporation's operations in the aftermath of the dotcom crash in 2000. The Australian operation simply could not compete in this rationalisation against the many other Ericsson R&D centres, partly because of the remoteness of the Australian operation from the firm's major customer base. The Victorian government's response to the closure likewise emphasised global-market factors and denied the possibility that unattractive investment conditions in Victoria may have played a role. Treasurer, John Brumby, pointed to '... the parlous state of Ericsson's international finances' and added: 'We cannot change what is a global reaction'. The Treasurer remained upbeat: 'Victoria remains one of the best locations in the world for IT and science R&D'.<sup>27</sup>

Other commentary, however, including that from the managing director of the laboratory itself, Ric Clarke differed. He admitted that there was nothing that could immediately be done to prevent the closure. Nevertheless he argued that state and federal incentives were focussed on attracting investment, rather than on the retention of R&D activity.<sup>28</sup> Mr Clarke stated to a House of Representatives inquiry that there '... should be no expectation that jobs or investment once lost will be recaptured'.<sup>29</sup>

Meanwhile, the state government is talking up Melbourne's potential to be a hi-tech innovative hub in a Victorian economy open to global competition. These cautionary tales imply some scepticism about this optimism. Nonetheless, the state Labor government, like the current federal Coalition government does not shy away from exposing the manufacturing sector to further competitive shocks.

Given what is happening to the established manufacturing sector, it continues to astound how confident the Victorian government leaders are that all is well. Here are some more comments like those drawn from Mr Bracks' reform agenda paper, this time from the Victorian Treasurer, John Brumby:

*On the international front, we're facing a new generation of economic superpowers and growing regional economies that will transform the global economic landscape ...*

*We're also facing increasing competition from countries in our region with low labour costs and large workforces—such as China, India and the Asian Tiger economies.*

*And just as new economic leaders will emerge, so too will new technologies—such as biotechnology and nanotechnology—create economic challenges and opportunities.*

*With these major international shifts on the horizon, it is vital for Victoria and Australia to position ourselves as innovators and reformer—or risk falling behind ...*

As to the context in which enterprises will have to survive in order to create these new products,



Brumby indicates:

*I remember when the Hawke and Keating Governments knuckled down to the task of serious economic reform—and it was not an easy exercise. But tough decisions were made—cutting tariffs, de-regulating financial markets, floating the dollar, enterprise bargaining, competition policy, compulsory superannuation—a decade down the track, Australia is still benefiting from those reforms.<sup>30</sup>*

These are brave sentiments. Melbourne's productive base must accommodate further competitive reform. If that means further reduction in industry support, as with reduced tariffs, the Victorian Treasurer has made it crystal clear that he will lend his weight to such measures. Yet, such reforms could be terminal for some manufacturing industries, including important sectors of the automotive industry.

## 12

### The motor vehicle industry

The motor vehicle industry deserves close attention. This is because it has been portrayed as the great success story in Australia's industrial restructuring. As indicated earlier, the Bracks government claims that developments in this industry illustrate the success of its hi-tech innovation strategy. The motor vehicle industry has succeeded in developing export markets, particularly for fully-built-up passenger motor vehicles. The industry is particularly important for Melbourne. As of 2000–01 there were some 30,791 persons employed in motor vehicle and parts manufacturing in Melbourne (see Table 3). At this time, nearly half of all employment in this industry in Australia was located in Melbourne. According to Table 3, employment in this industry increased over the five years to 2005–06. However, as detailed later (see Table 5), more recent data up to the August quarter of 2006 shows that in the aftermath of recent troubles in the industry the employment level is now well below the 2000–01 level.

Any decline in the motor vehicle industry will affect multiple suppliers of materials, including steel, plastics, glass and fabrics to the parts manufacturers and motor vehicle assembly firms. It may also affect the survival prospects of some

motor vehicle parts producers like Bosch, which have been active in new product development for export purposes, but whose viability in Australia depends on a strong motor vehicle assembly industry in Australia.

The motor vehicle was once the flag bearer for Australian manufacturing. It was a potent symbol of Australia's standing as a developed nation. Nonetheless, the Hawke Labor government decided to diminish protection levels in the interests of re-orientating the Australian economy towards industries that were competitive in world markets. The Hawke government legislated that, from 1990, tariff protection for the motor vehicle assembly industry, which had reached 57 per cent in 1984, would be reduced each year by 2.5 percentage points until it reached 15 per cent in 2000. The Coalition government continued the process when it decided to further reduce this protection to 10 per cent in 2005 and again to 5 per cent in 2010.

A distinctive feature of the motor vehicle industry is that the federal government does have a policy in place which will continue to provide substantial financial support until 2015. The Victorian Labor government has also added some highly specific financial assistance as well (detailed below), which again has not been available to other established manufacturing industries. From the federal Coalition government's point of view, the end product by 2015 will be a motor vehicle and parts industry operating in a global market place with only minimal, five per cent tariff protection. Whether this can be described as an industry policy with the objective of maintaining a viable motor vehicle industry, as distinct from presiding humanely over its demise if it cannot compete internationally, is another matter.

The federal government's assistance comes through the Automotive Competitiveness and Investment Scheme (ACIS). This scheme was originally intended to run for five years ending December 2005. It has since been extended by two additional five year periods. The Commonwealth incentives amounted to \$2.8 billion over the first

stage to December 2005. The same level of support will apply for the next five-year stage. During the third phase (2010 to 2015) the support will decline to \$1.4 billion. The assistance is entirely in the form of credits for excise duty on vehicles and parts imported into Australia.<sup>31</sup> One reason for this focus, rather than a direct subsidy to exporters, is that such subsidies are not usually permitted under the World Trade Organisation's guidelines, to which Australia is a signatory.

Australian motor vehicle manufacturers can claim these credits firstly, on the basis of their annual level of production in Australia. The more they produce the more the potential credit that can be derived from the firm's imports of vehicles or parts. In the second phase (2005–2010), now underway, this situation continues. There is a second way credits can be claimed, which is linked to the level of R&D expenditure and capital investment of either vehicle or parts manufacturers. However, there has been one modification for this second phase. The federal government has allocated \$150 million of the available credits to vehicle producers on a competitive basis determined by their level of R&D. Again, the credits are available against excise duties for imported vehicles or parts. Manufacturers who do not import can sell their credits in the marketplace to those who do import.

We now explore the outcome of the above arrangements for motor vehicle and parts manufacturers, beginning with the former. Table 4 provides a statistical picture of the industry. It shows that production of motor vehicles in

Australia did increase through the late 1990s until 2004. In 2005, local production fell to 388,985 vehicles followed by a further fall of 18 per cent in first eight months of 2006 relative to the same period in 2005.<sup>32</sup> Exports of motor vehicles have risen though the period covered by the table. However, the scale and growth of motor vehicle imports has dwarfed exports during the 1997 to 2005 period. In 2005, nearly three-quarters of a million motor vehicles were imported as against exports of 140,073. By 2005, the share of the Australian motor vehicle market supplied by domestic producers had fallen to 25.2 per cent.

The four local vehicle manufacturers have decided to focus their production on the large car market. This is largely a product of decisions taken decades ago when it was believed that this style of car best suited Australian consumers. All have made very considerable investments in the design, testing and tooling phase to produce new large car models, which build on their past experience with these cars—notably the Ford Falcon, Holden Commodore and Toyota Camry. On the other hand, all have decided to draw on imports to provide for the rapidly growing small car market. Toyota, for instance, ceased producing Corollas in 1999. There is no prospect of the Australian firms manufacturing small cars in the foreseeable future because of the huge economies of scale available to producers outside Australia and the strength of the Australian dollar.

The big car focus now looks like a mistake. The increase in fuel prices, the competitive advantage of small imported cars as the dollar has

**Table 4: Motor vehicles produced in Australia, imported to Australia and Australian-made as a share of total motor vehicles sold in Australia, 1997, 2000, 2004 and 2005**

	Exported	Produced in Australia Sold in Australia	Total	Imported	Total imported and Australian-made sold in Australia	Australian-made as % of total sold in Australia
1997	51,759	267,509	319,266	450,102	717,611	37.3
2000	101,018	258,618	359,686	553,554	812,172	31.8
2004	131,474	276,063	407,537	694,737	970,800	28.4
2005	140,073	248,912	388,985	739,357	988,269	25.2

Source: Department of Industry, Tourism and Resources, Key Automotive Statistics, various tables.

strengthened, the reduction in tariffs and availability of economies of scale to overseas producers, which are not available to local producers, all suggest a bleak picture for the local manufacturers of large cars. The decline in local production in 2005 and 2006 is biting. Ford announced on 17 October that it was reducing its production of Falcons by 20 per cent, from 450 to 350 a day.<sup>33</sup>

How has the ACIS scheme affected these outcomes? The decision to produce new models may well have been influenced by the credits available through ACIS. We cannot be sure, since company-specific information as to credit levels is not available on the grounds that it is 'commercial in confidence'. Nevertheless, the inducement must have been considerable, given that over the period 2005 to 2009, under the second stage of ACIS program, the motor vehicle industry will have access to \$2.8 billion from import duty credits, of which \$150 million have been set aside for motor vehicle research and development projects. In May 2006, industry minister Ian McFarlane announced that Ford would receive \$47 million for the development of alternative fuel engine technology on the Ford Territory and for the E8 platform expansion. Holden was also the recipient of \$48.3 million for several innovative design projects including its hybrid power train development. Toyota received a further \$5.15 and Mitsubishi \$1.1 million.<sup>34</sup>

This is the positive side of ACIS. On the negative side, ACIS adds to the incentive to import vehicles and components, since the credits available for production and R&D investment can be used to offset excise duties and thus in effect reduce the cost of imports. Alternatively, the local producers can and do sell their credits to specialist motor vehicle importers who do not manufacture in Australia. Either way, ACIS serves to subsidise imports. As it turned out, the import side of the motor vehicle industry has flourished relative to local production. By the time the ACIS scheme comes to an end in 2015, only vestiges of a local motor vehicle production industry may be in place. Much depends on whether the local

producers maintain an export market for their large cars. Ford which has not been active in these markets to date hopes that its new-generation Falcon, codenamed Orion, will generate exports of 30,000–40,000 vehicles per year.<sup>35</sup>

On this analysis, ACIS is not serving to maintain a viable domestic motor vehicle industry, but is rather providing temporary assistance to 2015, during which time the local industry must prove it is competitive in international markets. During this time, ACIS will actually be facilitating competition from imports. If, as seems possible, the local industry does not survive, this is an outcome that the current federal government appears to accept as one of the many consequences of globalisation. The only qualification to this assessment concerns the industry's capacity to provide R&D services to the global motor vehicle industry. Ford Australia's achievement in this regard (detailed later) indicates that this is possible.

### **Motor vehicle component manufacture**

Component producers face a two-pronged attack on their viability. The first stems from the decline in the volume of motor vehicles assembled in Australia since 2004. Other things being equal, the lower this volume the smaller local production of components will be. The second derives from the changes in the procurement policies of the assemblers. Over the past few years, they have begun to jettison long-standing local suppliers if they can source from overseas at a lower cost. The ACIS scheme provides an additional incentive since the assemblers can offset the excise on their imports from credits gained through production or investment as described above. The local producers who survive will generally have to do so on much lower margins than before. As a recent survey of 70 Victorian component suppliers reported:

*The Original Equipment Manufacturers (OEMs) are typically comparing the ex-works prices of offshore components manufacturers often without regard to quality or freight considerations. The*

*survey and case studies indicate a majority of component manufacturers experienced price decreases of between 5 % and 8 % over the last 12 months as a result of the OEM demands'.<sup>36</sup>*

The seriousness of the outcome of these policies for Victorian firms, most of which are located in Melbourne, is documented in the Victorian government's March 2006 submission to a House of Representatives inquiry into the automotive component manufacturing sector. At the time the submission was made, Holden had recently completed its contract placement process for components to be included in its new VE Commodore range. The outcome was that local content was expected to fall from 73 per cent on the existing VZ model to 56 per cent for the VE model.<sup>37</sup> As a consequence, there were a number of casualties amongst the local firms previously supplying Holden. One was Autoliv Australia, which manufactures seatbelts and airbags. It has announced redundancies at its Campbellfield plant and the imminent closure of its subsidiary, Webco, by December 2006. According to the Victorian government submission, job losses of some 565 from the two plants are expected. They are the direct result of Holden awarding its VE Commodore contract to TRW Europe, which is said to be GMH's worldwide preferred supplier.<sup>38</sup>

Some of the component producers have reacted by moving segments of their production offshore, in order to reduce their production costs. The study of the Victorian Components Industry cited above reports that: 'approximately 40% of all Victorian automotive component manufacturers expect to have outsourced some or all of their production process to lower-cost countries by 2006'.<sup>39</sup>

In principle, some of the component manufacturers could shift to international markets. However, as the industry representative body notes in its

submission to a Productivity Commission inquiry:

*While export markets can be developed independently of the four local assemblers and a significant domestic after-market exists for automotive components, vehicle production provides the base that underpins component manufacturing.<sup>40</sup>*

If local companies do turn to the international market, they are likely to move their production to locations near to the assembly industry they seek to serve. This is because, to be competitive, they cannot afford to pay the costs of long-distance delivery from Australia and because the 'just in time' inventory practices of contemporary assemblers usually requires component manufacturers to locate nearby.

These circumstances explain why component manufacturers are reported to be in crisis situations almost every week. The latest is Global Engineered Fasteners, which supplies Holden, the Pacifica Group and others manufacturers with nuts and bolts for engines and suspension parts as well as fasteners for other parts of cars assembled in Australia. The company has been hit by the combination of reduced demand for its product consequent on the decline in assembly production volumes described above, a sharp increase in steel costs, which it apparently could not pass on to its customers, and the appreciation of the Australian dollar. Even before the latest crisis, the company was in process of restructuring which included transferring production overseas from its Braeside site.<sup>41</sup>

Table 3 shows that employment in the motor vehicle and parts manufacturing industry in Melbourne rose by 4,500 over the five years to

**Table 5: Employed persons ('000s) in motor vehicle and parts manufacturing, Melbourne, May 2001, May 2006 and August 2006**

	May 2001	May 2006	August 2006
Motor vehicle and parts manufacturing	33.3	30.1	28.8

Source: ABS, Labour Force Survey, quarterly data.

2005–06. However, as the discussion indicates, the employment situation in the industry is changing rapidly. By the May and August quarters of 2006, employment in the industry was estimated to have fallen to 30.1 and 28.8 thousand respectively, both figures well below the May quarter 2001 estimate of 33.3 thousand (Table 5).

### **Globalisation success stories in the motor vehicle and parts manufacturing industry**

There is a positive side to developments in the motor vehicle industry. This is that some multinationals have become more open to sourcing their product development activities where it is most efficiently performed, even if that is at the expense of R&D activities in the home country in Europe, Japan or the USA. In a few celebrated cases this willingness has led to significant R&D operations being located in branches of these multinationals in Melbourne, particularly those engaged in the motor vehicle industry.

Bosch, the German-owned maker of motor vehicle parts (mainly electronic components) is a case in point. Bosch has a large manufacturing plant in Clayton. Bosch established this production facility in order to get behind Australia's protectionist walls—in this case the local content rules which required assemblers to draw most of their parts from Australian-based suppliers. As of mid-2006, Bosch employed around 1600 staff. Apart from producing parts for Australian use, it has also engaged in product development within the global Bosch supply chain. Bosch permits its various branches to compete within this supply chain. Currently, about 74 per cent of what Bosch produces in Australia is exported. The Australian branch plant spends around \$55 million on R&D annually. It employs some 178 engineers in R&D work. It has successfully developed new products, including an motor vehicle computer, which is to be manufactured by a Bosch subsidiary in Hungary.

According to senior executives at Bosch, the company can successfully compete because of the

high quality and enterprising nature of the Australian-trained engineers it has attracted. However, the willingness of the Bosch corporate leaders to maintain the Australian operation depends on the company being able to sustain a viable production base in Australia. The executives we interviewed were very worried that the downturn in local demand consequent on the weakening fortunes of Australian assemblers described above could threaten this viability. This is because Bosch exports packages of new products and the productive systems needed to manufacture the products elsewhere. The existence of the local production line is crucial for the testing of the productive systems associated with new product lines. In its absence, Bosch would have no motive to maintain an R&D facility in Australia.

Ford Australia provides a similar success story. Like Bosch, Ford has succeeded in carving out a product development role within the international Ford supply system. Ford international divides the globe into product zones. Ford Australia is part of the Asia-Pacific group, whose headquarters are in Bangkok. Ford Australia's long history of motor vehicle manufacture (since 1925) and its product development capacity—the Falcon has been entirely developed in Australia—has provided the company with a springboard for the provision of product development services within the Asia-Pacific group. The first breakthrough was the company's role in the design of the Fiesta, a small car which has been manufactured in India since late 2005. The next and most important advance is the company's success in winning the contract (in competition with other Ford international branches) to undertake the product development work on the T6 truck. This truck is to be manufactured across the Ford Asian and Latin American production network. It is specifically designed for these markets. It will not be manufactured in Australia. The Ford product development division is currently preparing for the intensive design, development and testing work needed to complete this contract. Some 400 engineers will be involved in this work for several

years. They will be in addition to the existing 700–800 who are engaged in the product development work for the next generation Ford Falcon and Territory models.

This project indicates the enormous gains that can flow from successful engagement at the hi-tech end of the manufacturing process. As indicated, Ford Australia could not have won this contract in the absence of its manufacturing base in Australia. In tendering for the truck contract the product development group built on the existing investment in development infrastructure, including its clay milling prototype facility and its product testing grounds at Lara. As with Bosch, Australian engineering expertise was also important. There are fewer comparable product development skills within the Ford Asia-Pacific network. This, plus the slightly lower costs of engineers relative to Europe and North America, provided an added advantage.

Ford's T6 Truck initiative has also benefited from specific federal and state government financial assistance. In May 2006, the federal government announced a \$52 million grant to facilitate Ford's development work. \$40 million is to be contributed to the Falcon/Territory project and \$12.5 million for the T6 project.<sup>42</sup> This grant is in addition to the assistance that Ford and other motor vehicle manufacturers received from ACIS as described above. According to the state Labor government, the two Ford projects will involve a \$1.8 billion investment on the part of Ford Australia.<sup>43</sup> The state Labor government also made a financial contribution, which according to the federal government's press release also assisted both projects.<sup>44</sup> Curiously, the state government at the time did not state the level of its assistance or which project it was directed towards. However, according to Tom Gorman, president of Ford Australia, the total federal and state grant was \$105 million.<sup>45</sup> Thus the state grant appears to have matched the federal grant.

Do these examples vindicate the claims of the state government that the motor vehicle industry can set the pace in developing a flourishing hi-

tech future for Melbourne? To some extent they do. The Victorian government commissioned IBM Consulting (Brussels) to provide an evaluation of Victoria's competitive position for various industry sectors as of 2005. The results of this study for the automotive components and automotive design sectors are reported in the government's submission to the House of Representatives inquiry noted above.<sup>46</sup> They show that, for the automotive component sector, the costs of production of producers located in Kuala Lumpur, Shanghai and Bangkok are well under 50 per cent of those in Melbourne. However, in the case of automotive design, the cost advantage of the Asian locations, while still substantial, is less than for automotive component manufacturing. Also, Australian design costs are well below those in key European centres. The government submission concludes that:

*A key policy imperative for the Australian automotive sector will therefore, be to ensure that we 'move up the value chain' in order to remain globally competitive. This will require investment in ongoing innovation and up-skilling of our current workforce to keep apace of global automotive sourcing trends.<sup>47</sup>*

The Ford and Bosch experiences indicate that, if given the opportunity, local engineers and scientists have the capacity to compete in global product development. In the case of the design area, while costs may be lower in Asia, to this point the potential Asian locations have not reached the skill or experience levels of their Australian engineering counterparts.

The problem is that the opportunities for Australian product development and design appear to be limited. In the case of the motor vehicle industry, it is unlikely that there will be another product design project on the Ford scale among the other Australian original equipment manufacturers. Toyota's product design and development process is highly centralised. This work is done in Japan for all its key models, after which the design and production specifications are distributed to the company's production centres around the world. The local engineering work (though still substantial) is about adapting

the basic design to meet local production specifications. By contrast, in the case of locally produced models, including the VE Commodore, Holden does most of the product development in Australia. However, it has not had any role in the larger General Motors supply chain for product development and design services. There is an R&D unit within Holden. It currently employs about 30 engineers (though more are anticipated). Their role is at the pre-product development stage. They explore the design future for motor vehicle components. The Holden group competes with other similar R&D units within the global General Motors operation for this work. The potential scale of this work seems limited, at least by comparison with the task of product design and development Ford Australia has taken on with its T6 Truck project.

### Other globalisation success stories

What about manufacturing firms outside the automotive industry? Is there a record of success of firms located in Melbourne in penetrating niches within the global marketplace? Our interest here is with cases where such firms have been able to sell R&D services or specialist products into the global supply chains, like Bosch and Ford Australia. The prospects of start up firms operating in new hi-tech products, as in the bio-tech industry will be explored in a later section, where the Bracks government initiatives in biotechnology and the synchrotron are examined.

The three case studies selected do not exhaust the list of successes. They have been chosen because of their outstanding success and because (along with the automotive case studies) they help to provide an empirical foundation for conclusions about the factors shaping the prospects of local manufacturing industries being able to find an international niche.

Two of these cases come from the aerospace industry. The first is Hawker de Havilland which has been established in Australia since 1927. It originally produced various commercial and military planes, but since the 1990s has focussed

on producing components for military and civilian aircraft manufactured outside Australia. The firm has been remarkably successful in finding a production niche in the global supply chain of Boeing, Airbus and other aerospace producers, a niche which it has been developing for some 30 years. In 2000, the company was taken over by Boeing.

By the 1990s, Hawker de Havilland had won contracts with Boeing to produce rudder and elevator control surfaces. These were equivalent to 0.8 per cent of the entire cost of the Boeing 777. More recently, it has been contracted to produce the wing trailing edge for the Boeing 787, a contract which is equivalent to 3 per cent of the aircraft cost and worth \$4 billion over a thirty year period.<sup>48</sup> Hawker de Havilland redesigned the wing flaps for the C130J Lockheed Transport from metal to carbon fibre material and is currently manufacturing these wing flaps. The company has also secured contracts to produce wingtips for the A380 Airbus which are produced in its Sydney factory.

Hawker de Havilland employs around 800 in its Melbourne operations, of whom 160–170 are fully-qualified engineers. They have put on some 60 engineers for the Boeing 787 project, most of whom are drawn from local graduates.

Hawker de Havilland's success appears to be a product of a commitment to continuing research, particularly the development of new composite materials and the incorporation of these materials into the manufacturing of aircraft components. This has included involvement with Australian universities in a longstanding Cooperative Research Centre on Advanced Composite Structures. The availability of good quality engineers has also been critical. According to the company, competition for contracts within the global industry supply chains is fierce, with Asian competitors in particular keen to gain an extended foothold.<sup>49</sup> Thus, continued success depends on constant effort to advance the company's materials and manufacturing process research.

The firm's progress is significant because the international sourcing of components of the production process, from initial design to final assembly, is becoming a characteristic of contemporary manufacturing. In the case of the Boeing 787, components are sourced in a diversity of locations, including landing gear in Japan, engines with Rolls-Royce in England, and the rudder with Chengdu Aircraft Company in China.

GKN Aerospace is another successful aerospace story for a Melbourne-based firm. This British-based, but now global manufacturer was originally established in Australia in order to gain access to the Australian motor vehicle market for the components it produced. It has since also engaged in the aerospace industry, where it too, is involved in the product development and production of components for the global aircraft industry. The local branch has been able to build this business on the basis of the technical capacity of its original automotive engineering workforce. According to GKN staff, the parent company decided to develop the business in Melbourne because of difficulties in finding staff capable of doing the required aerospace work in Europe. It has taken on several hundred locally-trained engineers over the past two years.

A third case is Ericsson. As noted, Ericsson ceased production activities in 1998 and R&D work at its laboratories in Melbourne in 2002. The firm remains a major telecommunication supplier in Australia, most recently having won the contract to design and supply Telecom's new wireless broadband system. Many hundreds of engineers and technologists have been engaged for the local articulation and installation work.

The company has developed a significant engineering service capacity in Melbourne. Ericsson currently employs some 400 persons in the Broadmeadows factory that once housed the firm's manufacturing operations. Most are engineers and IT professionals who predominantly service Ericsson products in Asia, both in the initial installation and maintenance of these products. It is an operation that has grown from nothing a

decade ago. Ericsson is taking on 30–50 local engineers and IT specialists a year, with more expected in the immediate future.

This outcome reflects the changing nature of the electronics industry. The service end of the product chain now dominates employment—rather than the design, development and manufacturing of electronic products. Within Ericsson's global operations, around 75–80 per cent of staff are engaged in this end of the business.<sup>50</sup>

Australian engineers have found a niche in this service activity by virtue of the competitive advantage they hold in engineering and IT expertise, in the global market place. According to several of the employers interviewed, to the present, Australian engineering skills are more advanced than those of their Asian counterparts.

### Policy implications

Structural change within the manufacturing industry is well and truly underway. Large chunks of Melbourne's industrial heritage are under severe competitive pressure as a consequence of the opening up of their markets to international competition. A few firms have managed to move away from dependence on the domestic market by opening export markets for their product, such as Toyota and ANCA. Some others have found niches in the international supply chain of products manufactured outside of Australia, such as Ford Australia with its product design and development of the T6 truck, and the aerospace companies discussed above.

As far as the aggregate employment impact of these changes is concerned, there have been more losses than gains. The losses tend to be in firms where there is still a heavy reliance on blue-collar trade and assembly workers, as in the motor vehicle parts industry. The gains are all in industries which, as the case studies cited above indicate, employ large numbers of tertiary-trained engineers.

All of the industrial leaders spoken to in the course of this inquiry emphasised that continued



success in the global marketplace was uncertain. There are no guarantees of continuity in a setting where competition on both price and quality is fierce. Just because Ford Australia won the contract to design the T6 truck does not guarantee future similar contracts. These have to be won via competitive tenders. Likewise, Australian informants were all acutely conscious of the technical advances in India and China. It was repeatedly stated that Australian engineering and IT skills are well ahead of those in Asia. But it is equally evident that at the elite end of the R&D spectrum Asian engineers are becoming competitive. Microsoft's establishment of large research centres in Hyderabad (currently 900 staff) and in Beijing is an indication of the changing situation.<sup>51</sup>

The key policy relevant conclusions from this review are:

1. The competitive position of local firms in international markets is closely linked to an increased supply of well-trained engineers, IT specialists and other science graduates.
2. Success in these markets also appears to depend on the presence of a solid corporate base in Australia. All of the successful firms cited have had a long history of production in Australia. They have been able to launch into new markets in part because of this manufacturing experience and in part on the basis of the organisational and financial strength which derives from past success in Australia. Our interviews with management also suggest that the drive to enter international markets often derives from leaders within existing research or product development teams who know that if they don't do this, their jobs and those of their colleagues will not survive. In a number of cases, the corporate base is vulnerable to erosion of the Australian production base. Neither Bosch nor Ford, for example, is likely to continue to engage in product development for their firm's international supply chain if production for the Australian domestic market continues to decline.
3. A notable feature of the firms that have adapted to international opportunities is that they have largely done so via offering products or services which built on existing outputs. The successes are not based on new products, but rather the refinement of existing products and continual attention to costs. The examples of ANCA and Davey Water Products are cases in point.

This last conclusion is in sharp conflict with some of the implicit assumptions underpinning the Bracks' government view of Melbourne's industrial future. The government assumes that enterprises based on footloose capital and skills can be attracted to or evolve in Melbourne, where with the benefit of scientific research new products will be discovered and put into the global market.

# The Bracks government's hi-tech innovation vision

## The vision

The current Victorian Labor government, like its Liberal and Labor predecessors in the 1980s and 1990s, has put great store on the prospects of new technologically-intensive enterprises selling into the growth markets of Asia. It has been argued that Melbourne is a logical locus for such developments because many of Australia's leading centres of education and research are located in the city.

In the lead up to the 2002 state election, the Bracks government declared its economic priorities in a pre-election statement titled *Jobs for Tomorrow: Labor's Plan for Jobs and Economic Development*. By this time, existing manufacturing industries, including textiles, clothing and footwear barely received a mention. All the attention was on innovation targeted at international markets. Electors were told that:

*Our ability to innovate is now more important than ever. We need to step up our ability to develop new products and services and better ways to make, market and deliver them to the world.*<sup>52</sup>

Some outlandish goals were set including:

*Our goal is to position Victoria to take advantage of the opportunities presented by an increasingly global economy. We believe that innovation is the key to boosting exports and unlocking the opportunities presented by the world economy ...*

And:

*This is an ambitious task that we have set ourselves—to make Victoria one of the world's most innovative and international focused economies. But it is a very necessary one.*<sup>53</sup>

Perhaps this rhetoric was just election spin. Certainly it lacked clear mechanisms by which these objectives would be met. Yet, these aspirations were backed up by serious money.

This money could have been disbursed so as to help firms seeking to make their existing products or services more competitive in international markets. Instead, the focus was scientific research out of which, it was hoped, would emerge quite new, and by definition, unknown products. The government promised to put \$310 million into strategic scientific and technology infrastructure, the centrepieces of which were the investment in the Australian National Synchrotron at Monash University and the Bio21 project in Parkville. These investment decisions were accompanied by another expansive declaration, to the effect that:

*This initiative is geared towards making Victoria internationally recognised in the fields of science, technology, innovation and commercialisation: in short, a world leader in the 21st century drivers of prosperity.*<sup>54</sup>

Did the politicians believe this rhetoric? Their investment decisions suggest that they did. These statements may have been influenced by the scientific research establishment in Melbourne.

Melbourne is the site of a major share of Australia's scientific and medical research institutes. It has produced several high-profile and articulate leaders, including Professors Adrienne Clark, Gus Nossal and David Pennington in the medical and bioscience fields. It is currently the home of Nobel Lauriat Professor Peter Doherty. These leaders have been and are well placed as advisors to successive Victorian governments and all have a vested interest in engaging the state government in a research-based innovation agenda.

## Attracting the 'creative class'

A second influence has been a belief that Melbourne's charms as a metropolitan setting are such that with suitable embellishment and

promotion the city can attract footloose investors, visitors and residents, including skilled individuals in global demand. The notion has been in vogue in contemporary public policy circles for some time. The Kennett Liberal government sought to make Melbourne 'the place to be' by promoting the city as a venue for a sequence of exciting events—the Grand Prix, the Commonwealth Games, the Melbourne Park Grand Slam, the Grand Final—as well as the creation of exciting locations, such as the Melbourne Casino.

The best known propagandist of this view is Richard Florida, who is famous for his exploration of the linkages between the attractions of place and economic activity. His 2002 book, *The Rise of the Creative Class*,<sup>55</sup> argues from American experience that the presence of creative people (who include those with a university degree) is the key to whether an urban area or region is a leader in hi-tech innovation. That is, it is not investors or firms with the cash and will to finance R&D, or markets that are crucial in the hi-tech area, but a critical threshold of these creative individuals.

This theory fits snugly within the Victorian government's innovation strategy. The Bracks government appears to believe that the combination of a fluid, cosmopolitan cultural setting and high-amenity urban development will attract internationally-mobile, creative people who will make a significant contribution to its hi-tech innovation objectives. The government's embrace of the Docklands precinct exemplifies the attachment to this strategy.

The Docklands redevelopment project long predates any awareness of the Bracks government of the ideas of Richard Florida. Nonetheless, Florida has since been taken up because of the nice fit between his ideological schema and the Brack's government's innovation strategy. Florida was brought to Melbourne as a consultant and his ideas are now up in lights as guiding principles for the current phase of the Docklands project. Florida provided the foreword to a lavish coffee-

table volume on the development, published in 2005. He asserts in this foreword that:

*The key to Melbourne's current and future success lies in its Stuart Hornery 'live/work/learn/play' attitude, perfectly encapsulated by the mixed-use Docklands area. In these kinds of spaces—where people of all walks of life are inspired to make great products, think great thoughts and live great lives—the cutting edge of the emerging global creative economy is being sharpened and put to good use. Not only does Melbourne's population benefit culturally, socially and economically, but Australia and indeed the world also gain an invaluable creative asset.*

*In turn, an increasing number of creative types from around the globe will begin to congregate in Melbourne, which will further increase the creative capital of the region, which will further attract creative types and grow the native creative population, and so on and so on, in an extremely beneficial virtuous cycle.*

*I wouldn't be all surprised to see Melbourne emerge as one of the defining global creative centres of the 21st century—and that transforation will be made possible in large part by the creative spirit that the Docklands reconstruction both embodies and enables.*<sup>56</sup> (our emphasis)

As another quotation drawn from the Docklands publication indicates, the Treasurer, Mr Brumby, has embraced the Florida creed.

*As Victoria's Minister for Innovation John Brumby puts it, the challenge now is to make Melbourne not just Australia's creative capital, but to establish and brand Melbourne internationally as one of the world's leading creative centres and a magnet city for new ideas and smart people. 'Building up our creative capital also helps raise our profile internationally as an innovative and dynamic economy with a world-class quality of life—bringing in more investment and more visitors and opening up more doors for our skills, services and products abroad' says Mr Brumby.*<sup>57</sup>

These statements suggest a 'cargo cult' mentality. Attract the 'creative class' and enterprise will flourish. Even assuming for the moment that Docklands provides the appropriate setting for hi-tech activity, the statement begs the question, where is the money and backing going to come from to support this enterprising mental activity? This is a chronic problem for entrepreneurs.

As Dr. Jim Fox, one of the few hi-tech entrepreneurs who have successfully created an international enterprise in his Vision Systems business headquartered in Mount Waverley, has indicated, there were only 44 companies in Australia that spent more than \$10 million on R&D in 2003–04.<sup>58</sup>

It does not follow that a culturally-vibrant city, which may attract many degree-qualified people, will on that account alone become a hi-tech dynamo. The direction of causality may be opposite to that claimed by Florida. It is just as likely that an urban area that contains a successful hi-tech core will, on this account attract more professionals and that they, in turn, will generate a demand for culturally sophisticated leisure services and 'events'.<sup>59</sup>

Nevertheless, the Victorian Labor government is deeply committed to Docklands. Private entrepreneurs have built the apartments and more recently office developments have flourished. The Docklands project also includes a hi-tech precinct. This is Digital Harbour at Comtechport, which its proponents hope will become a '\$300 million hi-tech campus-style development, boasting a potent mix of blue-chip companies and IT start-ups, along with educators, trainers and start-up company managers'.<sup>60</sup> For its part, the state government has invested heavily in the associated infrastructure, including the reconstruction of the Spencer Street Railway Station which cost some \$350 million. Further massive public investment is anticipated, including a new \$370 million Melbourne Exhibition and Convention Centre that will link Southbank and Docklands.

Just how much of the latter hi-tech component will come to fruition remains to be seen. It is most unlikely that the technology precinct just described will function as intended. The costs of establishing start up R&D operations in Docklands are way beyond the scope of most would-be innovators. Instead, Docklands seems to be developing as a site for new office blocks which are attracting tenants now located in the existing CBD and for speculative apartment towers.

### The hi-tech 'master-plan' in practice

The 2003 policy document, *Jobs for Tomorrow: Labor's Plan for Jobs and Economic Development*, outlines the Victorian government's key science and technology initiatives.<sup>61</sup> Foremost among these is the establishment of the synchrotron facility near Monash University at a cost of \$157 million, a contribution of \$10 million dollars to the Biotechnology Centre of Excellence (with a focus on stem cell research), an unspecified contribution to the \$400 million dollar Bio21 project in Parkville in inner Melbourne and the drafting of a development plan for the information communication technology industry.<sup>62</sup>

The projected state investment in scientific infrastructure does add to one of Melbourne's strengths—its high share of Australia's employment in scientific services. By 2005–06, according to ABS Labour Force Survey estimates, there were some nine thousand persons employed in the scientific services industry (which includes researchers, managers and all others employed in the sector) in Melbourne (up from just five thousand in 2000–01).

The ABS defines scientific services as research activity occurring outside the university setting. This nine thousand represented 25 per cent of the 37 thousand employed throughout Australia in this industry. The state government can rightly claim that Melbourne is the main scientific research centre of Australia. Furthermore, it is rapidly growing. There has been a remarkable expansion in scientific research both in and out of the university sector in recent years. Some of

this growth reflects increased Commonwealth expenditures on Cooperative Research Centres and Centres of Excellence programs. The former require an input from industry, but usually derive from initiatives from within the university sector. It is likely that much of the growth in employment in scientific services has been in publicly-financed research in medical, primary industry and CSIRO laboratories.

But, basic research is just the starting point for the product innovation phase that the state government has so extravagantly proclaimed is the essence of its industry policy.

The biotechnology industry illustrates how tough it is to move from research to commercial product innovation even where substantial funds have been committed to the infrastructure stage.

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The biotech industry has grabbed the imagination of state governments across Australia. The Queensland, South Australian and NSW governments have all allocated funds to support aspects of the industry. The attraction appears to be that bio-tech innovation has shown striking results across several fields, including diagnostic testing, drug development, new varieties of cereal and other crops and animal genetics. There is a global race for innovation in these fields.

The notion that Australian researchers have some prospect of success in such a competitive field stems from the heritage of Australian academic and applied research (as within the CSIRO), particularly in the food and fibre industries. In addition, as noted earlier, there is a vocal and influential scientific lobby, principally associated with the University of Melbourne, notably at the Walter and Eliza Hall Institute, which has put the case for aggressive investment in this research arena.

The reality is that, even with top class research, the ratio of good ideas to potential commercial prospects is perhaps one in a thousand. From the point of view of researchers, good ideas are the

key performance indicator - not any subsequent commercialisation. From their point of view, any addition to the funds needed to extend their research capacity is welcome, since it facilitates the production of scientific papers.

The Victorian state government appears to be operating on the assumption that, if an exciting social and physical setting for research is established, and bright people are assembled, the gap between an idea and a product will be somehow straddled.

The experience to date indicates that this assumption is not justified. In 2003, the Allen Consulting Group prepared a report for the Australian Institute for Commercialisation on the economic impact of publicly-financed infrastructure in Australia. It noted that there were very few commercial companies which had achieved large-scale commercial operations from such publicly-funded research. The report examined ten case studies where there were successful commercial outcomes. These included Cochlear and ResMed (which specialises in the sleep disorder remedies), which are both international success stories. These two companies accounted for a majority of the employment and exports generated by the case studies investigated.<sup>63</sup> However, the report concluded that, even in the case of these success stories, it took one to two decades to convert the basic research into an economically significant commercial operation.<sup>64</sup> Among the other cases which have achieved commercial operations are a few biotechnology companies, two of which, Amrad and Biota, are based in Melbourne. Amrad specialises in drugs for asthma and other respiratory diseases as well as oncology. Biota is well known for its development of the anti-influenza drug Relenza.<sup>65</sup> Both companies employed about 50 staff at the time the report was prepared.

### Bio21

At present, biotechnology is an infant industry in Victoria. The Victorian government's has decided to encourage its expansion by contributing an

unspecified amount to the Bio21 Project. It has made a financial contribution to the construction of a building in the Parkville research precinct, adjacent to the University of Melbourne, which incorporates office space and laboratories with state of the art experimental equipment, including a 800MHz magnetic nuclear resonance facility. The activities taking place within these laboratories are orientated towards academic research, and most of the research staff are drawn from the University of Melbourne and the Walter and Eliza Hall Institute. As of June 2006 there were 17 founding, joining and associate members of Bio21, almost all of which were research institutes. None of these members were private companies engaged in the biotech industry.<sup>66</sup>

To the extent that any biotech commercialisation is occurring it is in association with the member research institutes. Much of this research precedes Bio21, though it may well be facilitated by the new building and its state-of-the-art equipment. The 2005–06 annual report does not detail any specific commercial outcomes attributable to Bio21.

Bio21 should be applauded as a courageous long-term investment in the state's scientific infrastructure, but there should be no expectation of short to medium term commercial returns.

### **The Australian National Synchrotron**

The situation with the synchrotron is analogous to Bio21.

The investment in this area of infrastructure deserves close analysis. The Victorian state government has highlighted its initiative in locating the synchrotron in Melbourne and its role in placing Victoria in the vanguard of product innovation economies.

The original proposal for the synchrotron came from a group of scientists in Victoria in the late 1990s. It was for a 'desk-top' model, about three metres in diameter, intended for industrial application. Participants engaged in the project at

this stage indicate the estimated cost was \$35 million.

The original 'desk-top' concept did not meet with approval within the scientific community, particularly with those scientists wishing to study the structure of protein molecules. To meet their requirements a much more elaborate and expensive machine was needed. After lobbying of the state government by high profile leaders of Victoria's scientific community, the design of the instrument was changed to embrace these scientists' preferences.

Interest in the proposal mounted, not just in Victoria, but elsewhere, with the Queensland government, in particular, expressing interest in being involved. The expectation was that the federal government would provide infrastructure support, including support for the running costs of the instrument. Since there could be only one national synchrotron the interested states became competitors in the race for its location.

In 2001 the Victorian state government put a detailed proposal to the federal government for assistance in building the larger scale version of the instrument. Funding was sought under the federal government's Major National Research Facility Program (MNRFP). The proposal was costed at \$159 million. The Victorian government sought \$45 million from the MNRFP. Another \$15 million was to come from the private sector. The Victorian government proposed to match the MNRFP investment.<sup>67</sup> Before a decision was made on this proposal, the Bracks government pre-empted further detailed federal negotiation by announcing that it would invest \$157 million in the capital cost of the building and the accelerator ring, which is the basic component of the instrument. It took this pre-emptive action because it saw there was a competing bid from the Queensland government.

This is a huge sum which dominates the state's industry investment budget. It represents the single largest investment in scientific infrastructure since the building of the Lucas

Heights nuclear reactor. The state government has in effect gone alone on this investment. Industry has not provided any capital contribution to the construction of the instrument.

The synchrotron building and accelerator ring is now complete. It is anticipated that some 30 beam lines will be constructed which utilise the light generated by the synchrotron. Each beam line will cost an additional \$1 to \$5 million. According to Professor F. P. Larkins, Chair of the Australian National/International Synchrotron Scientific Advisory Committee, the annual running costs for the synchrotron will be \$15–20 million.<sup>68</sup>

The instrument phase of the construction (underway) is dominated by scientific research objectives. The interest on the part of scientists is understandable. The use of synchrotrons is now an established component of cutting edge scientific research. Some 300–400 research experiments utilising a synchrotron have been conducted overseas by Australian scientists.<sup>69</sup>

Consistent with this interest, the initial investment in the beam lines is coming from Australian universities, and publicly funded research organisations, including the CSIRO and ANSTO. To this point there has been no industry financial contribution. MiniFab, a small private firm specialising in micromachining, has indicated an interest in investing in one of the beam lines. However much of the proposed investment appears to derive from an infrastructure grant from the Victorian state government.<sup>70</sup>

According to Professor Larkins, international experience suggests that only 5–10 per cent of the operating costs of the instrument are likely to come from industry.<sup>71</sup>

The Bracks government is to be congratulated for its generous support to scientific research. It will give a major boost to the research capacity of the Victorian, Australian and international research communities.

The key point from the perspective of this analysis is that these investments will not deliver, even in the medium term, any industry innovation dividend.

# The role of property, business and financial services

Some may argue that we should not be too concerned about what is happening to the manufacturing sector because the future of big cities is about the provision of services. Both Melbourne and Sydney have a claim to the status of global cities, in the sense that they are the key interfaces between Australian and global businesses, including those active as service providers to the mineral industry.

The rapid growth in the property and business services sector, particularly in the late 1990s, in both cities, gives some credence to this argument. The experience of the past five years, however, is not consistent with this interpretation. During this period, employment growth in the property and business services in both Melbourne and Sydney was below the overall rate of growth in employment in each city. This was emphatically the case in Sydney. Table 6 shows that employment growth in Melbourne was far more rapid in the health and community services sector. Also, as the subsequent analysis shows, Melbourne's stronger growth in property and business services—relative to Sydney—seems largely a consequence of the stronger property market in Melbourne. If so, much of the gain in employment in property and business services may prove as ephemeral as the property boom itself.

## Melbourne and Sydney compared

Table 6 compares employment growth in Melbourne and Sydney over the decade to 2005–06. There is a distinct change of pattern between the five year period 1995–96 to 2000–01 and the subsequent period to 2005–06. The rate of employment growth in Sydney was the same as it was in Melbourne in the first period, but well below that of Melbourne in the second five-year period.

How could this be? Both cities have lost jobs in manufacturing. Both also show very striking gains in the retail sector—which mirror the boom in retail expenditure and the accompanying growth in household indebtedness. The health/education/culture and recreational services areas also saw rapid growth in employment in both cities. This reflects the well known relationship between increased affluence and demand for such services.

But Table 6 shows that employment growth in the health and community services sector was much more rapid in Melbourne than in Sydney, particularly in the period 2000–01 to 2005–06. This partly reflects the priority the Bracks government is giving to expenditure in the health area for more hospitals, nurses and doctors and partly the increasing scale of demand for these services stimulated by Victoria's rapid population growth. There is, of course, nothing intrinsically wrong with the increased provision of such services, if they are linked to the growth of industries capable of competing in the international marketplace and thus growth in tax revenue.

Most employment analysts see the two cities, particularly Sydney, as the main beneficiaries of the globalisation of the Australian economy. Sydney and to a lesser extent, Melbourne, are the main sites of Australian corporate headquarters, and of multinationals with branches in finance, trade and investment in Australia. The expectation has been that firms located in Sydney and Melbourne would gain from the demand for technical, scientific, marketing, legal, accounting and other business services that these corporations utilise. The finance sector too would also be expected to benefit from the globalisation process given the



Table 6: Employed persons ('000s) by industry sector and per cent change 1995–96 to 2000–01 and 2000–01 to 2005–06, Melbourne and Sydney

Industry group	Melbourne			Sydney		
	1995–96	2000–01	2005–06	1995–96	2000–01	2005–06
	numbers*	numbers*	per cent	numbers*	per cent	per cent
Agriculture, forestry and fishing	15.4	15.5	13.0	13.8	9.8	11.3
Mining	1.7	2.8	3.5	3.5	2.3	2.6
Manufacturing	282.0	285.1	249.4	251.1	240.7	214.8
Electricity, gas and water supply	8.5	8.3	11.8	17.1	13.2	14.6
Construction	98.1	110.9	156.6	136.5	164.7	171.0
Wholesale trade	105.5	84.5	95.5	144.7	116.0	111.9
Retail trade	221.8	227.9	261.8	254.8	264.8	299.1
Accommodation, cafes and restaurants	55.6	72.9	74.0	79.3	99.0	101.8
Transport and storage	74.6	76.9	87.1	91.7	103.8	113.3
Communication services	38.0	48.5	44.7	42.3	52.4	51.2
Finance and insurance	68.5	76.3	83.9	112.0	125.4	142.5
Property and business services	175.6	237.8	259.7	205.4	312.4	315.1
Government administration and defence	57.7	57.7	59.3	67.9	57.0	80.0
Education	98.9	110.7	125.2	123.4	124.1	149.0
Health and community services	131.7	156.8	192.9	160.4	181.3	211.3
Cultural and recreational services	36.5	49.1	59.1	46.3	55.1	64.8
Personal and other services	59.5	55.0	64.7	70.9	73.4	9.6
Total	1529.5	1676.3	1845.8	1820.9	1995.1	2147.4
			9.6			10.1
			0.5			-15.9
			62.3			26.4
			1.1			-12.5
			-2.7			43.4
			13.0			41.3
			-20.0			13.0
			2.7			14.9
			31.0			1.6
			3.1			13.3
			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
			1845.8			1995.1
			1676.3			2147.4
			9.6			10.1
			0.5			-15.9
			62.3			26.4
			1.1			-12.5
			-2.7			43.4
			13.0			41.3
			-20.0			13.0
			2.7			14.9
			31.0			1.6
			3.1			13.3
			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
			1845.8			1995.1
			1676.3			2147.4
			9.6			10.1
			0.5			-15.9
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			13.0			41.3
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			3.1			13.3
			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
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			12.0			13.1
			19.1			23.0
			34.5			20.3
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			11.4			9.9
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			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
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			-2.7			43.4
			13.0			41.3
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			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
			1845.8			1995.1
			1676.3			2147.4
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			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
			1845.8			1995.1
			1676.3			2147.4
			9.6			10.1
			0.5			-15.9
			62.3			26.4
			1.1			-12.5
			-2.7			43.4
			13.0			41.3
			-20.0			13.0
			2.7			14.9
			31.0			1.6
			3.1			13.3
			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
			1845.8			1995.1
			1676.3			2147.4
			9.6			10.1
			0.5			-15.9
			62.3			26.4
			1.1			-12.5
			-2.7			43.4
			13.0			41.3
			-20.0			13.0
			2.7			14.9
			31.0			1.6
			3.1			13.3
			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
			1845.8			1995.1
			1676.3			2147.4
			9.6			10.1
			0.5			-15.9
			62.3			26.4
			1.1			-12.5
			-2.7			43.4
			13.0			41.3
			-20.0			13.0
			2.7			14.9
			31.0			1.6
			3.1			13.3
			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2.8
			12.0			13.1
			19.1			23.0
			34.5			20.3
			-7.5			17.7
			9.6			10.1
			1845.8			1995.1
			1676.3			2147.4
			9.6			10.1
			0.5			-15.9
			62.3			26.4
			1.1			-12.5
			-2.7			43.4
			13.0			41.3
			-20.0			13.0
			2.7			14.9
			31.0			1.6
			3.1			13.3
			27.6			-7.7
			11.4			9.9
			35.4			9.2
			-0.1			2

entry of overseas players to our market consequent on the deregulation of the dollar in the early 1980s and the opening up of Australia's financial sector to new competitors.

As far as the finance sector is concerned, Table 6 does show that Sydney has done relatively well with employment growth of 11.9 and 13.7 per cent in 1995–06 to 2000–01 and 2000–01 to 2005–06 respectively. By comparison, growth in Melbourne was 11.4 and 9.9 per cent.

What about the property and business services sector? This sector did set the pace in Sydney in the late 1990s. There was a massive 52 per cent expansion in employment in the property and business services between 1995–96 and 2000–01 in Sydney (Table 6). Indeed, some 61 per cent of all growth in employment in Sydney in this period occurred in this industry sector. The experience in Melbourne was similar, if not quite so spectacular. However, since 2000–01 the situation has changed. Employment growth in the property and business service sector has slowed in both cities, but far more so in Sydney than in Melbourne. There was next to no growth in employment in the sector in Sydney over the five years to 2005–06, but modest growth of nine per cent in Melbourne over the same period.

How is it that, at a time when the Australian economy was growing strongly, the property and business services sector stalled, especially in Sydney? In order to explore these issues, more detail on the make up of the property and business services sector is needed. This is provided in Table 7. The table shows the ABS Labour Force Survey estimates for employment in the components of the property and business services sector (to three digit level) for Sydney and Melbourne for the years 2000–01 and 2005–06.

One of the attention-grabbing features of the table is the overall decline in Sydney's share of total Australian employment in the property and business services sector. This fell from 29.0 to 26.3 per cent over the five years to 2005–06. The

main contributor to this fall was the computer services industry. As Table 7 indicates, employment in this industry in Sydney is estimated to have fallen from 66.5 thousand in 2000–01 to 50.8 thousand in 2005–06. During this time the city's share of national employment in the computer services industry fell from 40.6 per cent to 34.3 per cent. There were also slight declines in Sydney's share of national employment in most of the other industries listed. Employment in the computer services industry in Melbourne also fell, but not to the same extent as has occurred in Sydney. Melbourne's share of national employment in this (shrinking) industry increased between 2000–01 and 2005–06.

In the case of the computing services industry, the high concentration of national employment in Sydney by 2000–01 (as noted above, 40.6 per cent of total employment in Australia) has left the industry in Sydney vulnerable to market shocks. These came in two forms at the turn of the century. One was the completion of Y2K projects and the other following the implementation of GST, both of which involved large numbers of temporary IT staff. A further, difficult to quantify factor is the trend towards off-shoring IT contract services.

The other notable points of difference between the experience of Melbourne and Sydney in the property and business services sector was in the property operators and developers, real estate agent and scientific services industries. In each of these three industries there was stronger growth in Melbourne than in Sydney over the period 2000–01 to 2005–06.

The experience of the decade to 2005–06 suggests that the impetus which globalisation gives to job generation in the property and business service sector may have been exaggerated. In retrospect, it appears that the rapid growth of employment in property and business services in Sydney in the late 1990s may have had more to do with economic activity associated with preparation for the Olympics,

than with the globalisation of the economy. The basis for this hypothesis derives from the following analysis, which indicates that there has been a close correspondence between trends in the property markets and related construction activity in Melbourne and Sydney and employment in the property and business service sector.

Table 7 shows that much of the growth in the property and business services sector in Melbourne occurred in the property operators and developers and real estate industries. In Sydney, employment in the real estate industry actually fell over these years. There was also a lower rate of growth in the property operators and developers industry in Sydney than in Melbourne. A similar pattern is evident in the technical services industry. One component of this industry is engineering, architectural and related consulting services provided to property developers.

On the other hand, Table 7 shows that employment in the legal and accounting services and marketing and business management services industries has grown more rapidly in Sydney than in Melbourne over the period 2000–01 to 2005–06. These figures suggest the disturbing conclusion that Sydney continues to do reasonably well (by comparison with Melbourne) in generating jobs in the parts of the business service sector and finance sector which are linked to its role as a business centre, but relatively poorly in those parts related to the property industry. It is disturbing because, as argued below, the latter industry may be built on an insecure base, that is, further population growth. This expansion is by no means guaranteed in a two speed national economy, as Sydney has already discovered to its cost.

### **The property industry and employment in Melbourne and Sydney**

The reason why employment in the property and business service industry has been more rapid in Melbourne is because the city saw much stronger growth in employment in the

components of this sector that relate to the property industry. The key indicator of the strength of the property industry is the construction industry. Table 6 shows that employment in construction in Melbourne between 2000–01 and 2005–06 grew by 45.7 thousand compared with just 6.3 thousand in Sydney. This in turn is linked, in large part, to the state of the residential building situation in the two cities.

Table 8 shows that in the 1990s dwelling construction approvals were much higher in Sydney than Melbourne. Over recent years, however, they have fallen well below the level in Melbourne. Dwelling approval numbers in Melbourne increased from 30,831 in 1998–99 to 39,240 in 1999–2000. Apart from a hick-up in 2000–01, at the time of the introduction of the GST, this high dwelling approval (and subsequent construction activity) held up through the first years of the 21st century.<sup>72</sup> Dwelling approvals in Melbourne only declined significantly in 2005–06 when they fell to 24,810.

These differences in the residential property market appear to account for much of the contrast between Melbourne's relatively robust employment growth between 2000–01 and 2005–06 (10.1 per cent) by comparison with Sydney (7.6 per cent). The 45.7 thousand increase in construction employment amounts to 27 per cent of the 169.5 thousand overall growth in employment in Melbourne during this period. By contrast, the 6.3 thousand growth in employment in construction in Sydney during this period accounts for just 4.1 per cent of Sydney's overall growth in employment of 152.3 thousand.

For Sydney, the decade 1995–96 to 2005–06 divides into two sharply contrasting eras, one up to the 2000 Olympics and the other the period since that event. There was a construction boom in Sydney prior to the Olympics, which reflected the refurbishment of the city's transport infrastructure and the construction of the Olympic sites, as well as solid growth in dwelling

**Table 7: Employed persons ('000s) in property and business services industries in Sydney and Melbourne and share of Australian total 2000–01 and 2005–06**

	2000–01	2005–06	Melbourne change as per cent of 2000–01	national share 2000–01	national share 2005–06
Property and business services nfd	*	*	*		*
Property services nfd	0.3	0.7	146.3	22.9	10.7
Property operators and developers	2.3	5.9	160.3	9.7	15.2
Real estate agents	12.3	17.1	39.3	15.1	18.1
Non financial asset investors	*	*	*	*	*
Machinery and equipment hiring and leasing	3.4	4.2	22.6	14.4	15.4
Business services nfd	0.5	*	*	59.4	*
Scientific research	5.0	9.3	87.6	22.0	25.2
Technical services	22.1	30.2	37.0	19.4	19.7
Computer services	43.1	40.4	-6.3	26.3	27.2
Legal and accounting services	39.4	40.4	2.5	21.4	18.8
Marketing and business management services	35.3	39.9	12.9	28.0	28.0
Other business services	74.2	71.6	-3.4	22.2	21.6
Total	237.8	259.7	9.2	22.1	21.7
			Sydney		
Property and business services nfd	*	*	*	*	*
Property services nfd	*	2.2	*	*	32.1
Property operators and developers	6.8	10.8	58.2	29.6	28.1
Real estate agents	22.7	20.3	-10.5	27.9	21.5
Non financial asset investors	*	*	*	*	*
Machinery and equipment hiring and leasing	5.3	5.2	-0.9	22.2	19.1
Business services nfd	*	0.7	*	*	54.5
Scientific research	4.8	7.3	50.5	21.4	19.7
Technical services	26.4	33.7	27.7	23.2	21.9
Computer services	66.5	50.8	-23.7	40.6	34.3
Legal and accounting services	57.9	64.7	11.8	31.4	30.1
Marketing and business management services	39.1	45.3	15.6	31.0	31.8
Other business services	82.7	74.2	-10.4	24.8	22.4
Total	312.3	315.1	0.9	29.0	26.3
			Australia		
Property and business services nfd	*	*			
Property services nfd	1.3	6.9			
Property operators and developers	23.2	38.6			
Real estate agents	81.2	94.4			
Non financial asset investors	*	*			
Machinery and equipment hiring and leasing	23.9	27.4			
Business services nfd	0.9	1.2			
Scientific research	22.5	36.9			
Technical services	113.9	153.8			
Computer services	164.0	148.2			
Legal and accounting services	184.5	215.3			
Marketing and business management services	126.2	142.3			
Other business services	333.8	331.0			
Total	1075.2	1196.1			

Source: ABS, Labour Force Survey, 2000–01 and 2005–06, customised data set held by CPUR.

Note: the quarterly data for each year have been averaged in order to reduce sampling error.

\*figure unreliable due to sampling error; unreliable figures not included.

**Table 8: Total new dwelling\* approvals Melbourne and Sydney, 1996–97 to 2005–06**

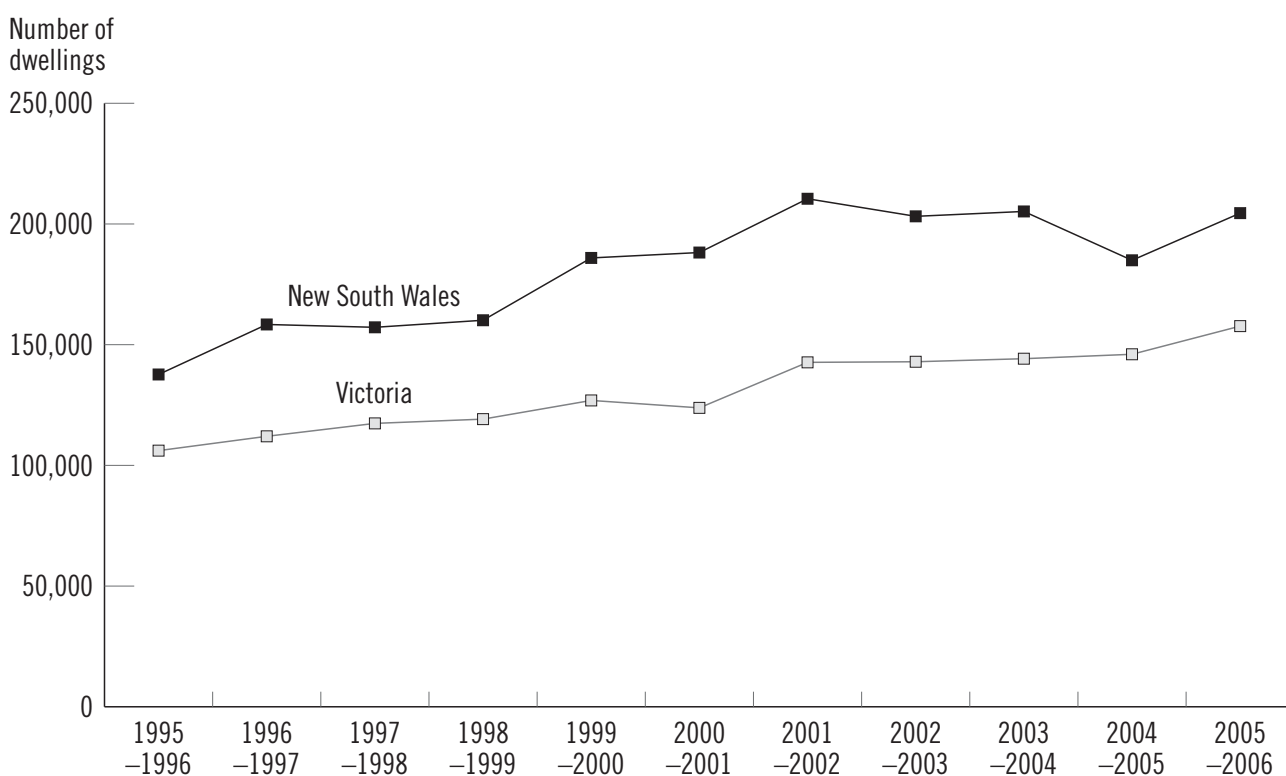
	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06
Melbourne	21305	28252	30831	39240	27871	36247	35540	32661	29078	24810
Sydney	32349	35847	35044	32881	21899	31481	30363	27841	20796	16801

Source: ABS Building Approvals NSW and Building Approvals Victoria, catalogue no. 8731.0, various issues.

\*detached houses and other dwellings.

industry. Dwelling approval numbers were around 35,000 per year in the late 1990s in Sydney (see Table 8). Following the Olympics, the number of new dwelling approvals in Sydney ebbed to around 30,000 a year (2001–02 to 2003–04). In 2004–05 they slumped to 20,796, with a further fall to just 16,801 in 2005–06. In these latter two years there have been about 8,000 more dwelling approvals in Melbourne than Sydney. This is extraordinary given that by 2005, Sydney's population was 600,000 larger than that of Melbourne (4.2 million compared with 3.6 million). This disparity goes a long way to explaining the different construction employment outcomes in the two cities.

Dwelling approval levels are also indicators of the well being of the land development industry and associated shopping centre and other people service providing industries. Another link to these service industries from the state of the property market is the scale of buying and selling property on the part of investors, new home owners seeking to enter the housing market and existing home owners looking to upgrade their residence. These transactions help keep legions of real estate agents, accountants and other business service providers in work. Figure 1, which details the annual number of dwellings for which the banks and other lenders have transacted loan

**Figure 1: Number of dwellings financed, Victoria and New South Wales 1995–96 to 2005–06**

Source: ABS, Catalogue no. 5609.0, Table 9

arrangements for owner-occupiers, gives a good indication of the volume of these transactions. Unfortunately, trend data was only available at the state level. Nevertheless, because Sydney and Melbourne dominate their respective states in these matters, the figure provides some insight into trends in these transactions in the two cities.

Figure 1 confirms the earlier observation about the good fortune of the Bracks government in the timing its election victory in late 1999 just as the property boom took off. The figure shows that there was sizeable lift in financing transactions in 2001–02 in Victoria. Their number continued to rise thereafter, especially in 2005–06. The contrast with NSW is striking. After a parallel lift in dwelling financing transactions in 2001–02, the numbers subsequently subside, especially in 2004–05. By 2005–06 dwelling financing transactions in NSW were still a little below the peak 2001–02 level. As a result, the difference between the number of dwelling financing transactions in NSW and Victoria has narrowed significantly since 2001–02.

# Victoria's people servicing strategy

## The population growth driver

Why has Melbourne overtaken Sydney on the construction front? Could it be that the Bracks government is correct in its judgement that population growth is the key to prosperity in the property markets? There is some correlation between the two, in that since the Olympics there has been a drop in the rate of population growth in Sydney relative to Melbourne. The details are provided in Table 9. During the years 1995–96 to 2000–01 both Melbourne and Sydney experienced rapid population growth. Since that time Melbourne's rate of population growth has ebbed, to 1.1 per cent by 2004–05. But the decline in Sydney has been far more precipitous—to just 0.7 per cent in 2004–05.

The key difference between Melbourne and Sydney is that since 2000–01 Sydney has been losing substantial numbers of people to the rest of NSW and particularly to interstate destinations. Until the 2006 Census data becomes available, it is not possible to assess the magnitude of these losses. By contrast, Melbourne is likely to have gained slightly through intra and interstate migration since 2000–01. Again, it is not possible

to assess the magnitude of these gains. In both cities the level of settlement of international migrants has held up, in part because the overall level of international migration has increased (see Table 11).

Extra people mean extra households and thus demand for extra dwellings, assuming the new households can afford the price of housing. The costs of establishing a new house on the suburban frontier of Sydney is far higher than in Melbourne, as is the cost of existing houses and apartments. The Bracks government is determined to maintain that advantage. As shown below, its policies of generous land release on the suburban frontier and low infrastructure charges are designed to keep the price of new house and land packages cheap relative to Sydney. The cost of establishing a residence in Sydney is probably prompting some households to locate elsewhere in Australia. The relatively slow growth in the job market in Sydney may also be deterring some people from locating in Sydney.

The greater scale of housing development on Melbourne's frontier has also given an impetus to

**Table 9: Population growth in Melbourne/rest of state and Sydney/rest of state**

	1996–2001	2001–02	2002–03	2003–04	2004–05
	Number of persons				
Melbourne	228,395 (annual average 47,736)	52,478	42,270	37,654	41,258
Rest of Victoria	43,035 (annual average 8607)	15,334	13,563	13,615	18,452
Sydney	256,031 (annual average 51,206)	42,655	34,491	26,545	29,806
Rest of New South Wales	77,035 (annual average 8607)	22,483	18,043	12,193	23,652
	Per cent increase				
Melbourne	7.3 (1.5)	1.5	1.2	1.1	1.1
Rest of Victoria	3.5 (0.7)	1.2	1.1	1.0	1.3
Sydney	6.8 (1.4)	1.0	0.8	0.8	0.7
Rest of New South Wales	3.4 (0.7)	0.9	0.7	0.5	0.9

Source: ABS, Australian Demographic Statistics, catalogue no. 3101.0, various quarters; 2001 Time Series Data for New South Wales, Sydney, Victoria and Melbourne

demand for industrial land. At the end of 2005, the Victorian government responded by rezoning large tracts of land on the suburban periphery of Melbourne for industrial purposes. However, this does not mean that manufacturing industry is on the rise. Rather, as Table 10 shows, most of this private sector industrial building has been for warehouses rather than factories. Over the period 2001–2001 to 2004–05, \$1.8 billion was approved for investment in warehouse construction in Melbourne compared with \$1.0 billion in factories. For the most part, the function of these warehouses is to deliver (mainly imported) goods to Melbourne's rapidly spreading population. According to Barry Marks, Colliers International Industrial Director: 'This year 71 per cent of Melbourne's industrial leases were signed by warehouse and production distribution companies ... while only 11 per cent of the lease deals were for manufacturing companies—a far cry from the days when Melbourne was considered to be the heartland of Australian manufacturing'.<sup>73</sup>

The Bracks government does have an empirical foundation for its enthusiasm for population boosting. Melbourne's better employment record since 2000–01 than Sydney is partly attributable to the relative health of the property market in Melbourne. It is also the case that Melbourne's higher rate of population growth during this time has contributed to this outcome. The issue is whether it makes sense to build Victoria's

economic strategy around continued expansion of the property industry and indeed whether it is possible to do so.

### Is Melbourne's property boom sustainable?

The lessons of the early 1990s recession, when an incumbent Labor government was voted out of office in disgrace, are still remembered. Victoria was one of the worst hit areas of Australia. One consequence was that Victoria experienced a sharp increase in the net loss of its residents to interstate destinations. By 1993–94 this loss reached almost 30,000. The effect, when combined with a fall in the number of overseas immigrants settling in Victoria, was to reduce the rate of population growth in Victoria from 1.35 percent in 1989–90 to 0.34 per cent in 1993–94.<sup>74</sup> While this decline was largely a consequence of a preceding decline in employment opportunities, the slow down in population was seen by politicians and industry leaders as a major contributor to the contraction of the state's property markets and building industries at the time.

The Kennett government kept the population issue at the top of its agenda. It set the pace among state governments in pressing the federal government to increase the migrant intake. The Bracks government, since coming to office in 1999, has pursued a similar policy. Indeed, population growth seems to be one issue the premier feels particularly strongly about.

Reflecting these commitments, in 2002 the Victorian government announced a population target for Victoria of six million by the year 2025 (from around five million in 2005). This target has since been dressed up in a formal population policy, published in 2005 and entitled *Beyond five million: the Victorian government's population policy*.<sup>75</sup>

In reality, the Victorian government has little capacity to determine the state's demographic future, since people movements within Australia largely reflect the health of the respective state economies and people movement to and from Australia is determined primarily by the federal

**Table 10: Estimated value of private sector investment (approvals) in factories and warehouses, Melbourne, 2001–02 to 2004–05**

	Factories and other secondary production buildings	Warehouses (excluding produce storage)
2001–02	217,789,965	464,122,764
2002–03	180,239,150	446,682,013
2003–04	294,734,529	332,111,669
2004–05	350,198,370	539,097,553
<b>2001–05</b>	<b>1,042,962,014</b>	<b>1,782,013,999</b>

Source: ABS, construction approvals data, financial years 2001–2002 and 2004–2005, customised data set held by CPUR.



government through its immigration policy. The latter's main priority is to ensure that migration is targeted to meet Australia's skill needs, which for the foreseeable future are likely to be most acute in Western Australia and Queensland.

Nonetheless, the Victorian government has had some limited success in promoting its own migration policy.

### The population outlook

The expansion of Australia's overall immigration program by the Howard government over the past few years has, for the time being, helped the Victorian government achieve its population building objectives. Although the migration program is supposed to be directed at filling skills shortages, which are most evident in Queensland and Western Australia, Sydney and Melbourne continue to receive some 60 per cent of total settler arrivals (see Table 11). This is because most skilled and family migrants locate where there are substantial co-ethnic communities, and in the case of those sponsored by family members, in communities close to their families. Australia's migration program is predominantly drawn from Asian and Middle Eastern source countries. Since the great majority of previous migrants from these countries are located in Sydney and Melbourne, most continue to locate in these cities. Similarly, the great majority of humanitarian category entrants locate in Sydney and Melbourne.

The state governments have also lobbied the federal government to give them a role in attracting migrants. The federal government has capitulated via the establishment of a suite of state-specific and regional visa categories. The most important of these, is the Skilled Designated Area Sponsored (SDAS) category. This visa category was introduced in the late 1990s. It allows persons resident in Australia to sponsor their relatives (brothers/sisters, uncles/aunts, cousins—even nieces and nephews—since 1 November 2005) under concessional terms. There is no skill-based points test for this visa category. All that is required is that the sponsored relative live in certain designated areas, be aged

45 or under, and have an occupation requiring post-school qualifications. Potential sponsors living in Sydney, Newcastle and Wollongong, Brisbane and the Gold Coast and Perth are excluded from sponsoring their relatives. However, those living in Melbourne are eligible. This absurd arrangement was negotiated by the Kennett government at the end of 1990s and has been sustained since then, despite criticism from other states. Nearly two-thirds of all those sponsored under the SDAS visa category settle in Melbourne.<sup>76</sup> This visa category is by far the largest of the state-specific and regional suite—with 2,579 principal applicants visaed in 2003–04, 2,247 in 2004–05 and 3,339 in 2005–06.

The Victorian government, along with South Australia, has also been the most active direct sponsor of migrants under the State and Territory Nominated Independent (STNI) and Skilled Independent Regional (provisional) SIR visa subclasses. The SIR visa, which is the smaller of the two, is distinctive in requiring the sponsored migrant to locate in a regional area. There are no residential restrictions on those sponsored under the STNI program. The numbers are smaller than with the SDAS subclass, but are growing as the Victorian government builds up its now substantial immigration bureaucracy, one of whose tasks is to promote these regional visa programs across Victoria.

These circumstances explain the outcomes shown in Table 11. As can be seen, Victoria's share of the much enlarged national migration program has

**Table 11: Settler arrivals, New South Wales and Victoria, 2001–02 to 2004–05**

	2001–02	2002–03	2003–04	2004–05
	Number of settlers			
NSW	35301	36431	40561	44746
Victoria	21374	23109	28028	30581
	Share of Australia			
NSW	39.7	38.8	36.3	36.3
Victoria	24.0	24.6	25.1	24.8

Source: DIMA, Immigration Update, various issues.

been sustained at around 25 per cent. As a consequence the number of migrants locating in Victoria has increased. The NSW share (which again is almost entirely located in Sydney) has fallen somewhat, from 40 per cent to 36 per cent. The different experience of the two states is largely explained by Victoria's domination of the State Specific and Regional visa programs.

### Keeping housing cheap in Melbourne

Another important part of the Victorian Labor government's development strategy is its low-cost housing policy. In sharp contrast to the New South Wales government, the Victorian government has pursued suburban development on the cheap. One key aspect of this policy is the very limited contributions required of land developers for local infrastructure and local recreation and social purposes. These vary between \$3,000 and \$5,000 per lot. Where a subdivision is very large in scale, a contribution may also be required for arterial roads, usually via the provision of some construction work.<sup>77</sup> But normally developers do not contribute to the costs of arterial roads, trunk water services or mains sewerage and drainage services. By contrast, developers in Sydney have to pay \$90,000 to \$100,000 per block as their contribution to local infrastructure and for arterial road and trunk water, sewerage and drainage service.<sup>78</sup> The NSW government has also been far more restrictive in releasing land for development on the Sydney suburban frontier than has its Victorian counterpart, thus increasing the scarcity value of such land.

These policies help explain why new blocks can be put on to the market for as little as \$120,000 in Melbourne, yet their equivalent in Sydney sell for between \$300,000 and \$400,000. They also explain why only about one third of new dwellings in Sydney are detached houses, compared with about two thirds in Melbourne and why the underlying rate of construction of new dwellings has fallen so far behind that in Melbourne.

The Victorian Labor government is determined to maintain this advantage, even at the expense of

compromising other policy initiatives. In November 2005, the state government announced a set of major policy initiatives regarding metropolitan planning. These tell us a great deal about the priority the Labor government places on sustaining Melbourne's property industry.

The original *Melbourne 2030* planning scheme was introduced in late 2002. Its stated objective was to constrain Melbourne's frontier spread and instead focus most future housing construction within the established urban area. To this end, *Melbourne 2030* laid down the procedures whereby developers were to be encouraged to build medium-density apartment projects in some 115 activity centres across the city. The municipalities responsible for drafting the strategic planning schemes embodying this objective are at a various stages of completion. This is partly because the planning process has been dogged by controversy. There has also been uncertainty about whether there is a viable market for medium-density apartments, if and when the right to build such apartment blocks in activity centres is embodied in planning schemes. The uncertainties derive firstly from doubts about the interest of 'empty nesters' in apartment living, and secondly from the high costs of building multi-storey apartments in Melbourne, given that the building unions cover such work.<sup>79</sup>

*Melbourne 2030* incorporated a legally enforceable Urban Growth Boundary (UGB), which prevented development outside of it. Its ostensible purpose was to give added teeth to the objective of limiting Melbourne's outward spread. However, there has always been uncertainty about how 'flexible' this UGB would be. Would the government expand the boundary when there was any sign of a raw land shortage? If the answer was yes, then the UGB would not function to constrain the outward spread of the city. In other words a 'flexible' UGB and the goal of consolidating Melbourne would be in conflict.

In November 2005 the state government made its priorities plain. It rezoned some 4,500 hectares of

land outside the existing UGB for future residential purposes (in areas adjoining the existing growth corridors). This additional residential land will accommodate at least another 40,000 dwellings. This is over and above the dwelling potential of some 130,000 already available on land designated for residential development within the original UGB. This 170,000-lot potential represents a huge stock of land, enough to provide for half of Melbourne's current dwelling needs for at least 13 years. The stated aspiration in the *Melbourne 2030* document is to reduce the share of Melbourne's housing construction on the frontier to just 31 per cent by 2030.

The government has been quite open about its priorities. The Minister for Planning, Rob Hulls, referred to the November 2005 rezoning initiative in the following terms:

*Importantly, the adequate availability of land will protect housing affordability and ensure Melbourne retains its competitive edge over Brisbane and Sydney.*<sup>80</sup>

The accompanying planning document states that the zoning of additional land will place 'downward pressure on residential land prices'.<sup>81</sup> Clearly, urban consolidation is a second-order priority. What matters to the state government is the maintenance of Melbourne's comparative advantage in new dwelling costs.

On the other hand, the November 2005 planning initiatives package included the announcement that a new system of development levies for new housing estates was to be introduced. There is to be a more systematic basis for assessment of development levies. Developers of new estates within the UGB will henceforth have to contribute at least \$40,000 and up to \$80,000 per hectare, depending on the time of their project. According to the government, these figures translate into \$3,000 to \$5,000 per block.<sup>82</sup> These amounts are little more than the existing levies. As noted, they compare with the levies required on the Sydney frontier of \$90,000 to \$100,000

per block. They will not breach the state government's cheap housing policy, and will do little to improve the abysmal standard of infrastructure provision on the current housing frontier of Melbourne.

Nonetheless, the state government's policies will help sustain the property industry, relative to the situation in Sydney where a house and land package on the frontier is well beyond the means of most aspiring first home buyers.

The state government appears to imagine that, as long as population growth continues, people will build and locate on the spreading frontiers of Melbourne, if only because of the accessible price structure. However, what jobs are these new settlers going to take on after they settle on the periphery, tens of kilometres from established employment centres? After the construction phase is complete a minority will gain employment in providing retail, educational, health and other services for the new community. For the rest, aside from the long-distance commuters, the government has wisely included in its rezoning measures a substantial increase in land for commercial and industrial purposes in the vicinity of the new residential land. There are, for example an additional 448 hectares of industrial land in the Casey–Cardinia growth area and 1175 in the Hume growth corridor. The planning statement states that this land is sufficient for tens of thousands of additional jobs. According to Mr Bracks, these jobs will flow from the state's existing economic policies. In his words:

*Victoria's healthy economic climate has contributed to Melbourne being the nation's leading research and manufacturing centre. Manufacturing is continuing to grow despite international competition and a wide range of industries such as advanced automotive manufacturing, higher education, biotechnology and financial services choose to locate here.*<sup>83</sup>

If our analysis is correct this sunny outlook will not come to pass. If warehouses rather than factories take up most of the new industrial land

(as is currently the case) the job generation will be far less than the government anticipates. In these circumstances, will people continue to flock to outer suburbia? Some of the people affected by the employment situation will choose to commute into the job heartland of Melbourne. Others may seek work elsewhere, including interstate.

Our main point is that the state government's current heavy dependence on the property industry as a fundamental driver of the city's economy is unwise. It is unwise because the boom of the past decade may not be repeated, especially if Australia enters a new era of higher interest rate settings. It is also unwise because it is 'dumb' growth that has nothing to do with the capacity of the population in question to produce goods and services which can compete in the international marketplace.

Its downside also includes doubts about whether the level of debt involved in financing property purchases is sustainable. The property boom of the last decade was partly a product of low interest rates and an increased willingness of home buyers (mainly home owners upgrading their home investment and investors in real estate, but also first home buyers) to take on higher debt levels. As is well known, this has led to an escalation of household debt. For Australia as a whole, by 2005 the average Australian household was paying around nine percent of average household disposable income in interest on housing mortgage debt, up from around half this level in the late 1990s.<sup>84</sup> It is all too evident that much of the finance derives from foreign borrowings, thus the mountainous level of net debt now held by foreign interests (\$493 billion as of March 2006).<sup>85</sup>

# Conclusion

Sydney and Melbourne are the two major Australian cities thought likely to run at second speed relative to the resource driven states of Western Australia and Queensland. Our data supports this expectation, though Sydney's slow-down has been sharper than has been the case in Melbourne.

The analysis shows, however, that there is no room for complacency in Melbourne. Over the past few years Melbourne's share of the growth of additional jobs in Australia has dropped precipitously, from 29 per cent in the year to August 2004 to 10 per cent in the year to August 2006. The main drag on this relative decline is employment in manufacturing. There is a similar situation Sydney. The difference between the two cities is that employment levels in the people servicing industries have grown more rapidly in Melbourne than in Sydney. Dwelling construction levels, though falling recently in Melbourne, have held up better than in Sydney. So has employment in the business services and construction industries, which are linked to urban development. Employment in the health sector, which is mainly driven by the state and which again is related to population growth, has been far more rapid than in Sydney.

The Bracks government has promoted population growth because it understands that Melbourne's economy has become hooked on the housing construction and city building activities flowing from rapid population growth. There are two problems with this strategy. One is that population growth itself is not guaranteed, especially given a possible net exodus of people to Queensland and Western Australia. The other is that such growth deflects from the challenge of transforming the Victorian economy into one that is globally competitive. This is because it channels scarce capital and expertise away from

industries capable of competing internationally and obscures the underlying economic realities. Melbourne is currently growing faster than Sydney. This is not because of any underlying success in transforming the Melbourne economy, but a temporary artefact of the population and urban development setting.

Melbourne will have a continuing role as a national commercial and financial centre. It will gain some benefits from its role in helping to service mineral producers and exporters. But just as in Sydney there is no need for a larger population for this role to be fulfilled.

The state Labor government claims that Melbourne can become a site for hi-tech innovation, particularly in product innovations serving a global market. The government has situated this strategy around large investments in advanced scientific research, notably the Australian National Synchrotron and Bio21. Our analysis indicates that this is a precarious way forward, certainly in the short term. There is little prospect that these investments will generate significant private sector employment growth in the immediate future.

It may well be that heavy state investment in Melbourne as a scientific centre of excellence will pay off in the long term. But so far the state government has not accompanied its big-ticket projects with accompanying investment in Victoria's universities. This should be an urgent priority given that the Bracks' government manifesto regarding national reform initiatives places a high priority on enhancing the 'advanced skills' of younger people.<sup>86</sup> The manifesto notes the neglect of the higher education sector under the Coalition and cites our work to the effect that there has been no increase in domestic undergraduate commencements

since the Coalition came to office in 1996.<sup>87</sup> Yet so far, the Bracks government has not provided any additional funds to pay for additional places at Victoria's universities, whether to advance the scientific research agenda or for the more practical purpose of training additional engineers or scientists.

Meanwhile, the state government has tacitly given up on industries limited to the domestic market. It has aligned itself with the federal government's objective of ruthless restructuring such that only those industries which can compete in the face of global competition will survive. This is not a sensible stance. There is far too much at stake as regards employment for Melbourne residents and the corporate organisational base. In our view, if goods and services are to be delivered to international markets it is much more likely to come from manufacturing enterprises already established in Melbourne than from start-ups. A central concern is that if local production continues to decline, it will remove one of the foundations needed for tackling international markets—as was evident with the case of Bosch, Ford and Hawker de Havilland.

There is no magic solution. The die has been cast as regards the removal of tariff protection for domestic producers. Nonetheless much could be done via an industry policy targeted to assist local producers maintain their base. The relevant policies include:

1. Additional R&D assistance. There was universal agreement among manufacturers that the federal government should provide additional financial assistance for product development that is essential for their competitiveness. This could involve an increase in the present 125 per cent tax concession level for R&D expenditures to the 150 per cent level in place when the Coalition first came to power.
2. An explicit industry policy. The days of big funding for prospective industry winners are probably over. The state and federal

governments have made it clear that it is the international marketplace which will determine who survives. The reality is, however, that both governments do have a de facto industry policy. As this study has shown, the motor vehicle industry has received very large sums via ACIS and by specific hand-outs, including some \$50 million for Ford from the state government alone. Have other firms received such grants? If not, why just Ford? The point is that industry policy should be open and transparent.

3. We favour the establishment of an innovation fund available to a wide variety of firms and not just those involved in developing new products. Those involved in the enhancement of existing products would also be eligible. This initiative could be dovetailed with the recent announcements from the federal Labor opposition. It proposes that, if elected, it would replace the existing system of broadly based tax concessions for research and development in favour of a more targeted process of selective industry loans or grants.<sup>88</sup>
4. Manufacturers and service providers (like Ericsson) universally agreed that good quality engineering, IT and science graduates are one of the key ingredients in product innovation and hi-tech service provision overseas. The state government should be contributing to this output in Victoria through the support of additional university places, but as noted, has so far not done so.

# Endnotes

- <sup>1</sup> Radio Melbourne 774, Jon Faine Program (with Chris Clarke), Wednesday 4 October 2006. The Treasurer's statement was based on ABS labour force estimates for the August quarters 2005 and 2006. Where possible we have used full year data in which estimates for each of the four quarters have been averaged. As to the August quarterly data for 2005 and 2006, they show remarkably high growth figures, especially for regional Victoria. These will need to be confirmed in later estimates.
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- <sup>4</sup> *ibid.*
- <sup>5</sup> Victorian Government, *A Third Wave of National Reform: A New National Reform Initiative for COAG*, the proposals of the Victorian Premier, August 2005, p. 14
- <sup>6</sup> *ibid.*, p. 21
- <sup>7</sup> *ibid.*, p. 17
- <sup>8</sup> Warren Mundy, Victorian employment: current patterns and future prospects', in Dennis Glover, Ed. *Taskforce 2nd Report: Victoria's Economy and Employment in the 21st Century*, Australian Fabian Pamphlet, no. 54, 1997, p. 18
- <sup>9</sup> Steve Bracks, 'Economic policy challenges for Labor', *ibid.*, p. 4
- <sup>10</sup> *ibid.*, p. 5
- <sup>11</sup> Victorian Government, *Agenda for New Manufacturing*, May 2003, p. 9
- <sup>12</sup> Victorian Government, media release, 'Melbourne world's most liveable city', 4 October, 2002
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- <sup>18</sup> Victorian Government, manufacturing policy, *Agenda for New Manufacturing*, May 2003 p. 9
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- <sup>21</sup> *ibid.*
- <sup>22</sup> Australian Industry Group, *Business Prospects for Australian Manufacturing in 2006*, February 2006, p.
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- <sup>24</sup> J. B. Willis, 'Three little companies—the birth of a major Australian scientific instrument industry' in *Historical Records of Australian Science*, vol. 14, no. 4, 2003, p. 422
- <sup>25</sup> *The Australian*, 'Dwindling lab staff still upbeat', 1 April 2003, p. 32; *The Australian*, 'R&D—picking up the pieces, 15 October, 2002, p. 33
- <sup>26</sup> *The Age*, 'Lab closure pain will spread', 8 October 2002, p. 3
- <sup>27</sup> *The Age*, 'Closure will take the best and brightest', 4 October, 2002, p. 3
- <sup>28</sup> *The Australian Financial Review*, 'R&D incentives lacking, says Ericsson', 29 October, p. 39
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- <sup>30</sup> John Brumby, 'In the national interest: a new cooperative federalism', speech to the Sustaining Prosperity Conference, 1 April 2005, pp. 6–7
- <sup>31</sup> The list of items eligible under ACIS is listed in Section 41e of the Tariff Act
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- <sup>43</sup> The Premier of Victoria, media release, '\$1.8 billion investment for Victoria's automobile industry', 5 May, 2006
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- <sup>48</sup> Murray Gillin, 'International leadership through strategic innovation: a case study of Hawker de Havilland', paper delivered at the 2006 Engineering Leadership Conference, Melbourne, August 2006
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- <sup>59</sup> This point is thoughtfully explored in Mike Berry 'Melbourne—is there life after Florida?' *Urban Policy and Research*, Vol. 23, no. 4, December 2005, pp. 386-387
- <sup>60</sup> Mark Kestigian, 'Safe harbour for technology', in *Waterfront Spectacular*, op. cit., p. 250
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- <sup>78</sup> Urban Development Institute of Australia (New South Wales), *Managing Sydney's Growth Centres*, Submission to the Department of Planning, September 2005, p. 15.
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- <sup>81</sup> *ibid.*, p. 8
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- <sup>84</sup> Reserve Bank of Australia, *Bulletin*, May 2006, p. 24
- <sup>85</sup> *ibid.*, July 2006. p. S93
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# Addendum

## The 2006 election campaign

We are under no illusion that in an election context, the Victorian government will take the electorate into its confidence as to the serious challenges the state faces. Indeed there has been remarkably little debate about how the challenges of structural change that we and other observers have pointed to, including *The Age* in its *The State of Victoria* publication in October 2006.

Not surprisingly, there is no acknowledgment of the recent decline in manufacturing employment in Melbourne and what it augurs for the future. All we have in the 2006 electoral platform is that 'Labor is committed to the development of a new national manufacturing policy underpinned by industry sector plans.'<sup>1</sup> There is no detail provided about these plans.

There is no sign of any industry planning that might involve significant financial assistance to existing enterprises. We know that when pressed, the government is willing to invest heavily in individual enterprises, as with its unproclaimed grant of \$50 million to Ford Australia early in 2006. This grant is not acknowledged in the Platform nor is there any indication as to whether it will be repeated.

The focus remains on innovation. Labor's optimistic vision is to 'place Victoria as a global leader in emerging innovative industries and frontier technologies ... and to make Victoria the centre of manufacturing excellence in the Asia-Pacific'.<sup>2</sup> Bio 21 and the Australian National Synchrotron continue to be billed as exemplars of this strategy.

Given the government's welcome commitments to enhancing the human capital of the state's residents and the centrality of this objective to the innovation strategy, some commitment to provide additional funding for research and training at the tertiary level might have been

expected. Instead, the platform makes it clear that the government will not go beyond appeals to private industry and the federal government to expand funding for university places.<sup>3</sup>

One policy objective that the government is consistent with, is its anxiety about continued population growth and to this end to 'make Victoria the most affordable state on the eastern seaboard'.<sup>4</sup> The platform makes it clear that population growth is viewed as a key driver of economic activity in the state. Among other actions, it is stated that 'Labor will take steps to further increase net interstate and overseas migration to Victoria'.<sup>5</sup>

## Endnotes

<sup>1</sup> *ALP 2006 Election Platform*, p. 78

<sup>2</sup> *ibid*, p. 77

<sup>3</sup> *ibid*, pp. 31–32

<sup>4</sup> media release, Victorian Government, '\$600 million package to keep housing affordable', 29 October 2006

<sup>5</sup> *ibid*. p. 70