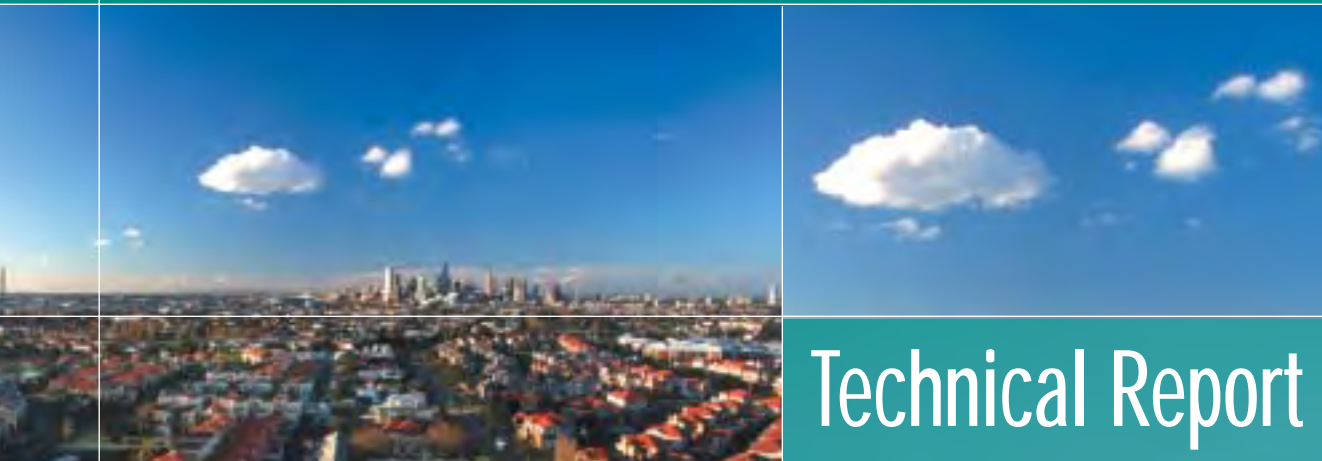


# Globalisation, Competitiveness and Metropolitan Strategy



## Technical Report 3

PLANNING MELBOURNE FOR THE 21ST CENTURY

## Message from the Ministers

By world standards Melbourne is a great city. The Bracks Government is committed to maintaining Melbourne's reputation as a highly liveable city and an attractive investment destination. The Government has embarked on the preparation of a Metropolitan Strategy to set a clear vision for Melbourne's future liveability, prosperity and, importantly, its long-term sustainability.

The preparation of the Metropolitan Strategy is drawing on inputs from a wide range of sources. It is vital that the strategy has a sound research and information basis. It is also especially vital that community aspirations for the city's future be well understood. The key inputs to the strategy therefore include both a wide ranging public consultation program as well as a series of research or technical papers on issues that may have an impact on Melbourne's future.

The Bracks Government has given an undertaking to make as much of this background information as possible widely available to stimulate discussion about the future of Melbourne.

This report is one of the technical reports commissioned by the Department of Infrastructure, which we hope will stimulate feedback. At this stage content and recommendations are only the views of its authors and not necessarily the views of the Government. The Strategy is still in its early stages of development and we remain open to hearing what the broader community would like it to encompass.

We encourage you to read this and other technical reports and, should you wish, to make your views known about the future of Melbourne by contacting us on:

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The technical report entitled, *Globalisation, Competitiveness and Metropolitan Strategy*, has been written for the Department of Infrastructure by Spiller Gibbins Swan Pty Ltd (SGS).

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Victorian Government  
Department of Infrastructure

# GLOBALISATION, COMPETITIVENESS AND METROPOLITAN STRATEGY

May 2000

*This paper has been produced as a background discussion document for the Melbourne Metropolitan Strategy Project. The contents of this paper do not necessarily represent the position of the Department of Infrastructure or its employees or of the State of Victoria.*

*Any representation, statement, opinion or advice, expressed or implied in this paper is made in good faith but is not intended to be nor should be relied upon by any person.*

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## **1 INTRODUCTION**

The Department of Infrastructure (DOI) commissioned Spiller Gibbins Swan Pty Ltd (SGS) to undertake a review of economic competitiveness with the underlying aim of informing the metropolitan strategy formulation process.

The specific study aims were:

- *To understand the competitive strengths and weaknesses of the metropolitan Melbourne region's economy, in a national and international context, across a range of economic and social factors.*
- *To relate the main factors affecting the performance of the metropolitan Melbourne region to the global economy to the existing 'strategic architecture' of the region (the current paradigm).*
- *To develop insights into the emerging factors that may affect the competitive performance of the metropolitan Melbourne region in the global economy and the impact they may have for a different 'strategic architecture' for the region (the emerging paradigms) to meet changing business needs.*
- *To identify which factors a metropolitan strategy might have a role in supporting.*

## **2 STRUCTURE**

In approaching this task SGS has drawn on the wide range of work previously undertaken by economic development, business strategy and urban management authors. We commence our analysis by documenting the movement from the industrially based processes of the old economy to the global production networks of the new.

Melbourne's emerging role in the global economy is then documented from a national perspective, recognising that Melbourne is part of a network of Australian cities which collectively contribute to our overall positioning. This is achieved by examining industrial employment changes over the past decade (Section 3).

The importance of economic regions within countries in the wealth creation process is then acknowledged in the review of theoretical

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frameworks commonly used to describe the drivers of economic competitiveness (Section 4). Such theories meld classically economic and social factors to a point where they become indistinguishable. Thus this report does not explicitly delineate between economic and social drivers of competitiveness, rather it explores the inter-relationships in regional economies. Section 4 also devises a hierarchy of foundations that are required to compete in the global economy, differentiating those foundations that are 'paramount' to less developed or resource based economies.

Section 5 lists specific drivers of competitiveness within the regime of economic foundations, whilst section 6 nominates a number of indicators which might be used to measure the status of each of the specified economic drivers. Section 7 'benchmarks' the performance of Melbourne's economic region (or proxies for that region) against comparable cities, indicating the competitive strengths and weaknesses of the regional economy. Section 7 also identifies a number of data gaps that impede the measurement of Melbourne's relative performance.

Section 8 examines how urban or metropolitan policy may influence the economic competitiveness of the region, and the study concludes with recommendations regarding policy initiatives that further the understanding of Melbourne's competitiveness and project that boost that competitiveness.

## **3 THE DRIVERS OF ECONOMIC COMPETITIVENESS**

### **3.1 Introduction**

Each approach to analysing economic competitiveness acknowledges that an economy is a 'system' that relies on the interaction of a number of variables. Generally those variables describe the cost and quality of inputs, processes and distribution of production processes.

Prior to the onset of globalisation the focus of competitive analysis revolved predominantly around the components of production cost. Firms would gravitate towards locations that offered suitable and inexpensive resource sets for production. Such approaches hinged on the assumption that firms needed to operate from under the one roof.

However, globalisation has shown that this assumption is no longer valid. Firms can now locate different activities of their value chains in locations that offer the least expensive set of inputs for that particular activity. Globalisation has also shown that the ability of firms to innovate and adapt is fundamental to success: increasing the relative values of knowledge, technology and improvement capacity in the overall production process. Thus, cost minimisation is no longer an absolute constraint. The focus is now more on cost effectiveness in rapidly changing markets.

### **3.2 The Emergence of the Global Economy**

At the start of the 20<sup>th</sup> century industry in America and Europe was beginning to assemble itself into large groups, largely because of America's cartel-busting Sherman ACT (1890). Firms could no longer collude under the ACT so they maintained their bargaining positions by merging into large, vertically integrated conglomerates (*The Economist*, 1998). The significant tariff barriers in existence also made it economic sense for firms to buy up their suppliers and scale up production to maximum capacity, knowing that their competitors would have to source relatively expensive imports, placing them at significant disadvantage (*Reich*, 1992). The processes of vertical integration were similarly widespread throughout Europe.

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Following WWII national governments further contributed to this self-containment of wealth creation, which was predominantly manufacturing-based. They did this by developing large fully integrated manufacturing centres, in strategic locations, as part of policies to promote self sufficiency, import substitution, regional development and employment (*Roberts, 1997*). Those fully integrated systems of production, either driven by public or private integration and ownership, remained intact until the 1970's.

However, a number of things happened in the 1970's that had marked effects on the structure of manufacturing and business operation in general.

First, the poor performances of western production techniques were exposed. Associated with vertically integrated conglomerates were massive levels of idle inventory, inflexible production processes, and a general attitude that consumers would be content with the standardised products made. On the other hand, Japanese manufacturers were benefiting from lean manufacturing techniques - the habit of carrying minimal stocks, having parts delivered direct to the assembly line 'just in time', making sure that the quality was right from the word go, and rejecting the idea that only enormous batches of production were paramount to success.

Subsequently, western manufacturers fully embraced lean manufacturing and notions of continuous improvement in the 1980's, hoping to replicate the success of the Japanese. And they did. The production improvements at Caterpillar's Illinois plant are a good example of the turnaround. Prior to the adoption of flexible automation and JIT, both of which fall under the auspicious of lean manufacturing, it took 6000 workers 25 days to make one back loader (i.e. to produce one unit of production). After adoption that fell to 3000 workers and 6 days. Improvements in new product commercialisation times also reflected the benefits of adopting a lean culture, with the time reducing 10 years to 27 months (*The Economist, 1998*).

Second, the removal of the gold standard and the promotion of free trade by the Bretton Woods agreement in 1972, and the subsequent General Agreement on Tariff and Trade (GATT) agreements<sup>1</sup>, led to major structural changes in trade, industry location and investment (*Roberts, 1997*). Most notably, those agreements facilitated foreign investment into the then termed 'developing world', particularly Asia.

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<sup>1</sup> Now administered by the World Trade Organisation (WTO).

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Access to cheaper factor inputs (predominantly labour), and the willingness of Asian governments to provide investment incentives, promoted a mass migration of core manufacturing activity to the developing world during the 1970's and 1980's. The simultaneous advent of and rapid improvements in communications technologies allowed the front (i.e. product design, R&D, innovation, etc.) and back ends (i.e. marketing, distribution) of the production processes, and the corporate administration (i.e. planning, finance, etc.) to be retained by their original home countries.

The ease of merchandise, service and capital flows across international boundaries led to the industrialisation of 'developing' countries and the relative de-industrialisation of the 'developed' world, particularly OECD economies, with those latter economies focussing more on the provision of services that supported production.

Thus, the entire production chain was no longer achieved under one roof or even within one country. The production chain became more spatially dispersed, with individual links of the chain locating in regions with the most propitious conditions.

This was one of the reason why developed economies rose so quickly in service provision. Jobs that were previously defined as manufacturing now fell into service classifications. Goodbye to the old dividing line between manufacturing and services.

Other reasons for the rise in services included the rising income levels<sup>2</sup> of populations worldwide and the improved ability of entrepreneurs to access previously untapped markets. The ever increasing demand in Asia associated with industrialisation, and the growing trade-openness of the former Soviet Union, China and other non-democratic states, reinforced trade integration of economies worldwide.

The rising status of the world market presented significant opportunities for entrepreneurs. However, sustained international sales required efficiency in the organisation of production, as competitive threats were often more diverse than those experienced at home. Furthermore, the size of world niche segments provided incentive for organisations to best meet the changing wants of consumers, themselves gradually becoming better informed and demanding customised goods and services. On going adaptability thus became essential to the competitive framework.

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<sup>2</sup> Rising income levels allow consumers to dedicate more expenditure from non-essential food, shelter and clothing products.

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Not only did companies have to chase cheap labour for the simpler parts of their global supply chains, they also had to bow to customers' demand by providing customised products and services at their doorstep. *Enter the importance of focussing on core competencies, which required the shedding of non-core organisational functions, and the importance of knowledge, innovation and flexibility as the key determinants of corporate success.*

In order to facilitate knowledge commercialisation, adaptability and innovation large corporations restructured. Bureaucratic structures were minimised and autonomy was pushed down the 'chain of command'. But intra-company changes were and are not sufficient to guarantee ongoing success in an environment where transport and communications costs have been slashed and where labour intensive processes can be located in areas with comparative labour cost advantages.

*Porter (1998)* argues that what goes on *inside* companies is obviously important, but a vital role in the creation of competitive advantage can also be attributed to the business environment immediately *outside* the company. He points to the current success of Silicon Valley in semi-conductors, Hollywood in entertainment, Wall Street in finance, Japan in consumer electronics, Southern Germany in high performance automobiles, and Northern Italy in fashion and shoes.

Porter attributes such success to the development of clusters of industry in those geographic regions, defining clusters as geographic concentrations of interconnected companies and institutions in particular fields. He goes further to suggest that clusters form an alternative method of organising the value chain, with companies benefiting from close buyer-supplier relationships without the need for vertical integration and benefiting from innovation, knowledge and flexibility enhancements without associated management woes.

*Moore (1997)* goes as far to suggest that successful organisations see themselves as part of an evolving ecosystem, with everybody else as possible members of their combined value chain. In this new economic terrain, ecosystems will compete against similarly structured ecosystems, both straddling traditional industry definitions.

The *US Department of Housing and Urban Development (1996)* contrasted the ramifications of the above processes using dimensions of economic change to delineate between the 'old' and the 'new' (alternatively labelled 'global') economy (Table 3.1).

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The major changes in the paradigm of economic organisation include: the development of technological change and information as the key sources of productivity gain; the extension of trade from a home market to a global scale; and the concentration of both employment and industry within metropolitan regions in which specialisation has increased though the supporting industrial frameworks have diversified (i.e. the development of industry clusters in metropolitan regions).

*Table 3.1: Key Dimensions of Economic Change.*

<i>Key Dimension</i>	<i>Old Economy</i>	<i>New Economy (Global Economy)</i>
<i>Major Source of Productivity Gain</i>	Better and more efficient use of energy and raw materials	Better and more efficient use of knowledge
<i>Trade Patterns</i>	National	Global
<i>Successful Development Strategies</i>	Protectionism, import substitution	Free trade; producing for global market; metropolitan regional strategies
<i>Geographic Dimension</i>	Company- or industry-towns with little diversification or clustering	Metropolitan regional clusters of complementary firms and industries

*Source: US Department of Housing and Urban Development, 1996.*

### **3.3 Melbourne's Role in the Global Economy**

A simplistic but beneficial way of tracking Melbourne's emerging role in the global economy is to examine changes in the employment structure in recent years.

Such a method facilitates broad comparison with other Australian cities (i.e. economic regions), which, in itself, aids the identification of particular functions Melbourne might have in a national context. It also implicitly acknowledges that the quality of interaction between a network of cities might determine their collective prosperity given the increasing dominance of a few world cities in the global economy (i.e. London, Hong Kong, Tokyo, etc.) (Brain (1999), Brotchie *et al* (1995) and others).

Appendix A explores the interaction of the three eastern seaboard capitals of Australia by examining the changes in their employment structure between 1986 and 1996. The 'inner city' regions are analysed also, as separate areas, to demonstrate that they are in many ways driving industry development and job growth in their respective regional economies.

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What comes out of this analysis is Melbourne’s strength as a:

- ❑ Manufacturing centre, consolidating on its historical strength and moving into higher technology processing; and
- ❑ Cultural city, with strong growth in leisure and tourism industries, especially in the inner city area.

Past studies (see Text Box 1 and 2) suggest that the following can be added to Melbourne’s strengths:

- ❑ Transport hub, capitalising on the infrastructure advantage afforded through the Port of Melbourne; and
- ❑ Research & development centre, acknowledging the relatively high levels of business R&D in Victoria.

**Text Box 1**

Victoria leads the nation in seaport infrastructure. The Port of Melbourne is Australia’s largest, handling 38% of the nation’s container trade - it is well ahead of Sydney and almost double that of Brisbane, Fremantle and Adelaide combined.

In terms of airfreight competitiveness, the curfew free Melbourne Airport holds it own. Only 19% of the State’s possible air exports are uplifted through Sydney and even less through Adelaide, and these leakages primarily related to lower-value perishable commodities.

Source: *Spiller Gibbins Swan (2000)*.

**Text Box 2**

Victoria spends about 2% of Gross State Product (GSP) on R&D, compared to 1.5% for NSW and 1.6% for Australia.

Victoria’s lead primarily derives from its greater business spending on R&D, and possibly from the strong presence of Universities, not for profit health research organisations and Commonwealth institutions such as the CSIRO.

Business expenditure on R&D in Victoria grew at an average annual rate of over 11% between 1990/91 and 1996/97. This was approximately 30% faster than NSW.

Source: *Spiller Gibbins Swan (1998)*.

Sydney continues to dominate the national economy in terms of the finance & insurance and property & business service sectors, and in terms of its sheer size.

Brisbane, the fastest growing of all Australia capitals, appears to have strength in Government activity and health & community services but this may be due to its lack of critical mass in other industries.

## 4 THEORETICAL FRAMEWORKS OF ECONOMIC COMPETITIVENESS

This section reviews the work of noted commentators on the drivers of economic competitiveness. It then develops a framework for approaching the foundations of economic competitiveness in the global economy.

### 4.1 Diamond of Competitive Advantage

Michael Porter (1990) was the first to comprehensively document the interactions that underwrote competitiveness in the global economy. Porter attributed global competitive advantage to particular industries in economies that had conducive conditions in, and interrelationships between, the following:

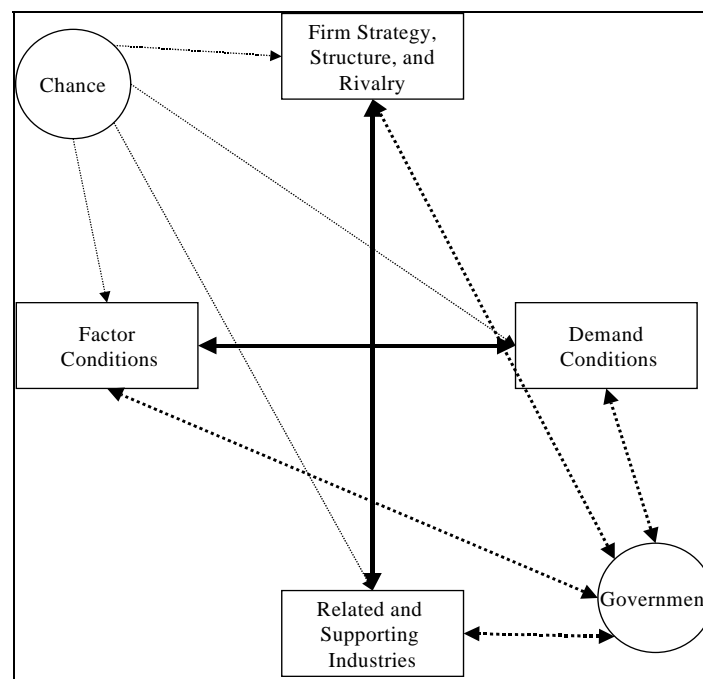
- **factor conditions:** the economy's position in factors of production such as skilled labour or infrastructure necessary to compete in a given industry;
- **demand conditions:** the nature of the local demand for the industry's product or service;
- **firm strategy, structure and rivalry:** the conditions in the economy governing how companies are created, organised, and managed, and the nature of domestic rivalry;
- **related and supporting industries:** the presence or absence in the economy of supplier industries and related industries that are internationally competitive;
- **chance:** acknowledging the extent to which an industry competitiveness is related to its historical path of development; and
- **government:** the ability of governments to manage other determinants of advantage to the benefit of their constituent industries.

He surmised that if those conditions were propitious within an economy that groups of industries would become mutually supporting, providing the basis for long term improvements in

prosperity. Porter illustrated the relationships between economic forces in his 'diamond' of competitive advantage (Figure 4.1).

Importantly, Porter recognised that regions within nations, and regions that transverse national borders, are the most appropriate geographical units of analysis when assessing the determinants of economic advantage.

*Figure 4.1: Porter's Diamond*



## 4.2 McKinsey & Company's Horizons Model

The competitiveness of an economy can be similarly traced using McKinsey & Company's three horizons model of business competitiveness. This holds that any business must maintain tight cost control to hold onto its traditional core business ('horizon 1'). But sustained prosperity must also involve the ongoing search for new business opportunities spinning off from the core ('horizon 2') and long term strategies to build entirely new business opportunities ('horizon 3').

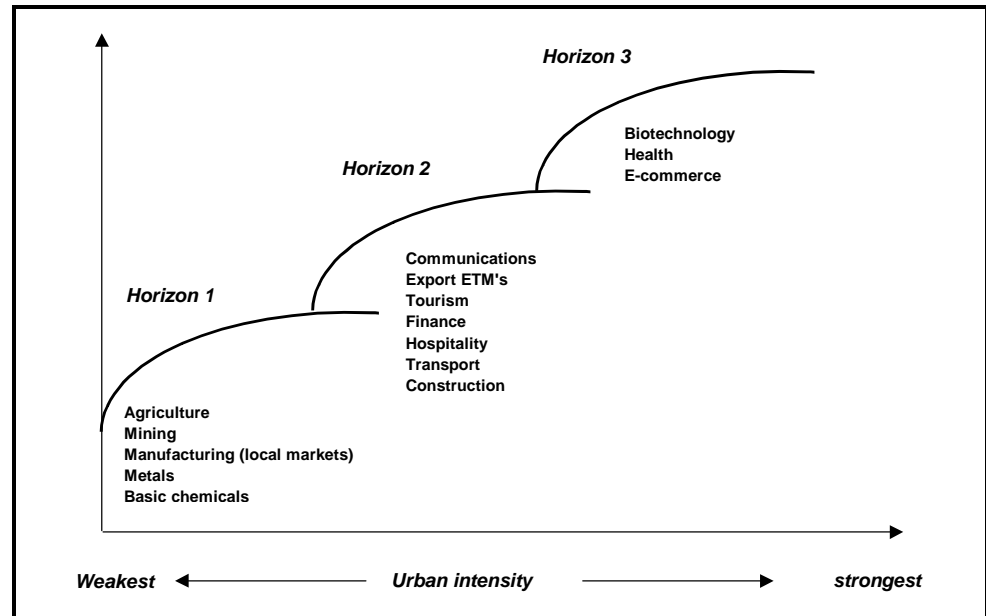
Thus, long term business prosperity is regarded as a function of business's ability to regenerate itself as an operating environment, regenerate its strategic focus, and to regenerate its products and

services for future markets. Such notions are consistent with the requirement for adaptability and flexibility in the global economy.

White, Baghai and Everingham (1999) classified particular sectors of the Australian economy using the three horizon's model. Their work gives insight into the environments that economic regions need to foster to ensure economic prosperity. White *et al* (1999) classified traditional agriculture, mining and domestically focussed manufacturing as Australia's horizon 1 industries. They argued that sound productivity gains have been made in these sectors and that they will remain of great importance. However, Australia's enviable growth performance over the past 15 years (Australia's cumulative GDP growth over 1985-1998 was almost 50% compared to an OECD average of less than 38%) was attributed as much to strong investment in horizon 2 industries like ETM exports, communications, tourism and service exports. In the future, horizon 3 sectors like biotechnology and new services based on e-commerce will become increasingly significant as national economic drivers.

Importantly, the 'urban intensity' of sectors - i.e. reliance on a rich network of business services, access to universities and other key research institutions and availability of specialist skills - becomes more pronounced in moving up the horizons scale (Figure 4.2). This also underscores the strategic role which the major cities play in Australia's economic future.

*Figure 4.2: The Three Horizons of Australia*  
(After McKinsey and Company)



### 4.3 Institute for Management Development (IMD)

The IMD publishes the world competitiveness report each year which details the ability of nations to provide an environment which sustains the competitiveness of enterprises.

The methodology adopted by the IMD centres around the balancing of four forces. They include the trade offs within an economy of:

- Globality and proximity
- Assets and processes
- Aggressiveness and attractiveness; and
- Risk taking and social cohesion.

Though IMD limits its commentary on these forces it is generally understood that the tradeoff between

- globality and proximity refers to the 'containment' within an economy, recognising that external trading partners which provide cost effective inputs and markets may do so at the expense of local synergy development.
- assets and processes describes the importance of an economy's ability to create new wealth as opposed to its current consumption

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of inherited wealth (i.e. to add value rather than to focus on natural resource based output).

- aggressiveness and attractiveness refers to an economy's acquisition of resources through direct foreign investment (e.g. Japan, Korea), anti-competitive practice, etc. compared to the level of external investment into an economy due to its conducive operational environment (e.g. Ireland, Thailand); and
- risk taking, which refers to a culture of entrepreneurship and opportunism, versus the tendency towards less risky and socially cohesive inertia.

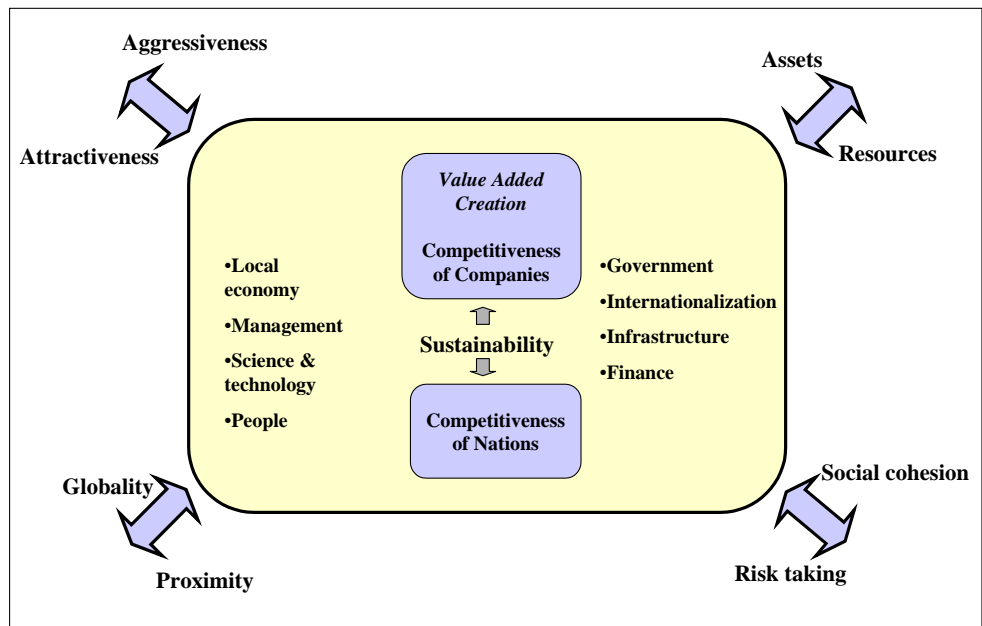
The IMD suggests that those tradeoffs are manifest in eight competitive input factors which regulate the competitiveness and sustainability of economies. These include the:

- Local economic strength;
- Internationalisation of trade and investment;
- Conduciveness of Government policy;
- Capital market performance and quality of financial services (i.e. finance);
- Extent to which resources and systems are adequate to service the basic needs of business (i.e. infrastructure);
- Extent to which enterprises are managed in an innovative, profitable and responsive manner;
- Scientific and technological capacity combined with success in basic applied research; and
- Availability and qualifications of human resources (i.e. people).

Figure 4.3 replicates the IMD's representation of the interactions of competitiveness.

*Figure 4.3: IMD Framework for Economic Competitiveness*

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Each of the previous perspectives on economic performance weighs the current efficiency and effectiveness of economies with the ability of the economy to engender the movement to new frontiers of activity in the future. That is, each specifically acknowledges the importance of current operating environments and the ability of firms to improve their environments in the longer term. Such is touted repeatedly by global economy commentators. Brain (1999) p.13 summarised much of the thoughts of others when he stated:

*“... competitiveness depends on a range of complex factors – including the macroeconomic environment, trading relationships, social and political stability, resource endowments, R&D, education and training systems, technological capabilities and the dynamism of entrepreneurial orientation of institutions and industries”.*

#### **4.4 Framework for Approaching Economic Drivers**

The proceeding sections detail some of the perspectives in which the drivers of economic competitiveness can be approached. They flagged some common drivers that are undoubtedly crucial to all economies that wish to share the benefits of long term prosperity.

However, prior to the specification of an exhaustive list of economic drivers, it is important to note that each region will focus on different drivers depending on its current economic position and therefore its

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primary impediments to competing in the global economy. This focus may stem from instability in labour markets, political attitudes, social inequities or from the plethora of other factors which influence economic stability. Shortages in the economy, inferior production systems or stagnation in entrepreneurial drive could similarly direct the focus.

*What is important to recognise is that economic foundations are required for each threshold of competitiveness, be they in resource-based economies, in 'old' industrially based economies, or in the new 'global' economic framework. The following examples highlight the significance of such 'economic foundations' and their required accumulation within regions in order to move to the next threshold of competitiveness.*

East Timor has recently suffered from a spate of civil unrest which resulted in significant violence, destruction, and looting and required the intervention of international peacekeepers. Similar situations have been experienced in Chechnya, Kosovo and Rwanda. Obviously, some primary issues for these economic regions are social stability, governance structures and the physical health of their people. Without improvement in such underlying infrastructures economic growth and competitiveness will be limited.

On the other hand isolated regions such as the North West of Western Australia have, on the whole, developed governance structures and benefit from well developed economic and social infrastructure links. Safety, health and basic education are no longer issues (i.e. they are assumed). However, the regional economy is heavily dependent on resource based income such as mining, agriculture and tourism, and as a result little value adding takes place within the region. It is a consumption-based economy. Similar situations are apparent in Alice Springs, Darwin, and parts of New Zealand, Greece and South Africa.

Some production based economies such as the Philippines, Southern China and Taiwan undertake extensive value adding, as global entrepreneurs capitalise on the availability of cheap production inputs - predominantly labour - and the proximity to large numbers of consumers. However, the corporate headquarters of the organisations locating in these regions usually locate externally from the production centre due to the lack of financial capacity, high level skills, capacity building institutions such as education and research centres and the disparity between such societies and 'western' culture, particularly the English language.

Brisbane, Perth and Adelaide have more developed and diversified economies than isolated, purely consumption-based and low to

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medium tech manufacturing regions. Quality education institutions operate within the economy yet much of the quality skills migrate to other regions because of the improved prospects of employment (i.e. brain drain to Sydney, Melbourne and various international locations). These destinations are better linked to the global economy due to the existence of greater levels of expenditure on R&D, better information and entrepreneurial networks and more intense concentrations of economic, social and cultural activity.

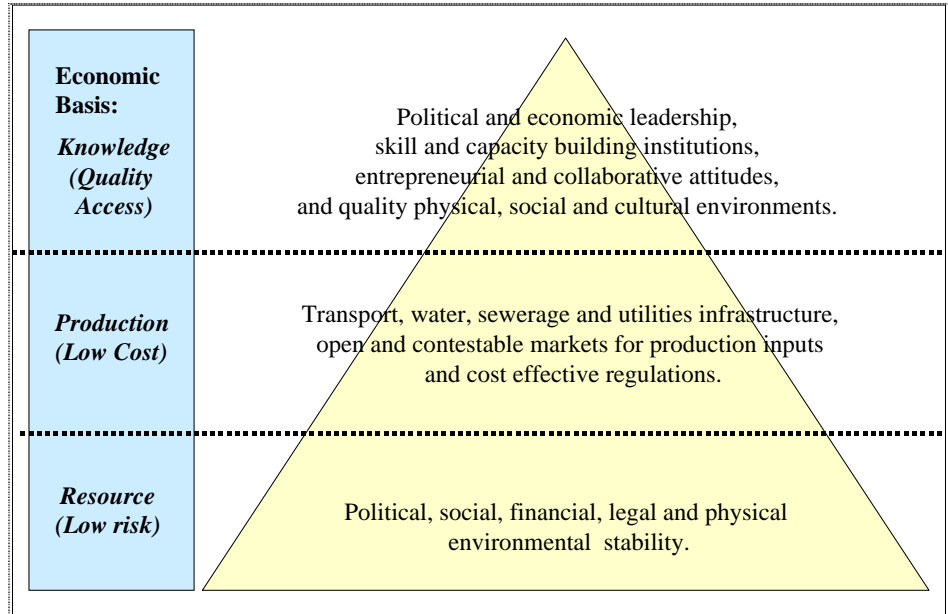
At the top echelon of economic competitiveness exist regions that are 'world cities' and/ or 'world class centres of excellence'. New York and London are world cities. They are concentrations of power – political, financial and economic. Income levels in these cities are high, at least for those knowledge-based workers embracing and driving the global economy.

Silicon Valley is the most famous example of a world class centre of excellence. Its entrepreneurial and collaborative business culture, its access to specialist and complementary skills and enabling infrastructure such as venture capital, IT test-beds, etc. combine with its amenable location to underwrite the world's most vibrant centres for information and communications technology. Business growth rates and start up rates are extremely high in such centres.

Yet although the competitiveness of these latter regions rely on higher level skills and infrastructures, they also implicitly rely on elements that make it attractive for knowledge workers to continually locate and reside there. That is, they still fundamentally require quality health, sanitation, transport and basic education systems, law and order, and various other factors that contribute to the perception of a 'quality' environment. Knowledge workers are highly mobile and any threat to their individual environment or to the environment in which they interact with other key players in the global economy would be detrimental to the economic region's competitiveness.

Figure 4.4 illustrates how the foundations for knowledge based economies build on those of production based economies, which in turn build on resource based economies. It also shows how the focus on product costs in the industrial economy is replaced by cost effectiveness and capacity boosting institutions in knowledge based economies.

Figure 4.4: **Hierarchy of Economic Foundations.**



In the subsequent sections only limited discussion of the resource base economy's foundations is made. This does not limit the analysis because it recognises that Melbourne and Victoria compete against other economies where the stability of political, social, financial and physical environments are assumed.

## 5 DRIVERS OF ECONOMIC COMPETITIVENESS

A specification of the drivers of economic competitiveness for specific regional economies is listed in Table 5.1 below. Each driver has been grouped under the low risk, low cost and quality access framework developed in section 4.4. When reading the Table note that some drivers could fall within a number of the regime groupings. For example, excellent civil regional and national leadership has been placed under the heading of 'low risk', yet it could equally be placed under the 'quality access' (i.e. to skills, knowledge and innovation capacity) heading as such leadership may facilitate access to new markets.

*Table 5.1: Drivers of Competitiveness in the Global Economy*

<b>Regime of Competitiveness</b>	<b>Economic Driver</b>
	<i>A competitive regional economy is characterised by....</i>
<i>(a) Low Risk Business Environment</i>	<ul style="list-style-type: none"> <li>▪ Stable government and judicial institutions.</li> <li>▪ Independent anti-corruption institutions.</li> <li>▪ Independent industry regulators (e.g. telecommunications, media, infrastructure, etc.)</li> <li>▪ Stable financial markets with strong prudential regulation and transparent trading.</li> <li>▪ Excellent civic, regional and national leadership.</li> </ul>
<i>(b) Low Cost Structures</i>	<ul style="list-style-type: none"> <li>▪ Competitive market structures for service and material inputs.</li> <li>▪ Flexible labour markets and industrial relations system.</li> </ul>

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Table 5.1: Continued

<b>Regime of Competitiveness</b>	<b>Economic Driver</b>
<i>Low Cost Structures (Continued)</i>	<p style="text-align: center;"><i>A competitive regional economy is characterised by....</i></p> <ul style="list-style-type: none"> <li>▪ "Natural monopoly" in energy generation, transmission and retailing reformed or regulated to produce competition like outcomes.</li> <li>▪ "Natural monopoly" in water supply and sewerage systems reformed or regulated to produce competition like outcomes.</li> <li>▪ "Natural monopoly" in telecommunications infrastructure reformed or regulated to produce competition like outcomes.</li> <li>▪ "Best practice" investment in and management of roads infrastructure.</li> <li>▪ "Best practice" investment in and management of rail freight infrastructure.</li> <li>▪ "Best practice" investment in and management of seaports infrastructure.</li> <li>▪ "Best practice" investment in and management of airports infrastructure.</li> <li>▪ High quality airline connectivity.</li> <li>▪ Cost effective regulatory environment</li> <li>▪ World competitive company tax regime.</li> <li>▪ Well organised urban regions/settlement pattern for production logistics.</li> </ul>

Table 5.1: Continued

<b>Regime of Competitiveness</b>	<b>Economic Driver</b>
	<i>A competitive regional economy is characterised by....</i>
<i>(c) Quality Access</i>	<ul style="list-style-type: none"> <li>▪ High incidence of scientific skills in the labour force.</li> <li>▪ High incidence of other professional skills in the labour force.</li> <li>▪ Secure supply of technical/trade skills.</li> <li>▪ A high quality university system.</li> <li>▪ A high quality school education system.</li> <li>▪ A pervasive R&amp;D culture.</li> <li>▪ An entrepreneurial and risk taking culture.</li> <li>▪ Liberal migration laws for people with professional skills.</li> <li>▪ A tolerant culture open to new ideas.</li> <li>▪ Liveable cities and regions with the capacity to attract and hold a highly skilled workforce.</li> <li>▪ Presence of globally recognised business clusters, engaging in high levels of international exports and facilitating strong inward investment.</li> </ul>

## 5.2 Emergent Keys to Competitiveness

As explained, the economic drivers set out above reflect a transition from 'old economy' models of competitiveness - which relied essentially on cost control (e.g. proximity to resource inputs, abundant unskilled labour suited to Fordist production technologies, efficient utilities and freight transfer systems and so on) to 'new economy' models which have put a new emphasis on value creation through innovation and specialisation.

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Thus, factors which relate to the creation and transformation of knowledge have become pre-eminent. In one sense, these drivers continue to be the emerging keys to competitiveness.

But the issue of 'emerging drivers' can also be addressed from the perspective of 'defendability'. That is, those advantages (related principally, though not exclusively, to knowledge creation and transformation) which are most difficult for competitors to replicate or match are likely to be those that demand special attention in policy development.

Advantage can be bought, acquired or engineered much more readily in some drivers than others. For example, effective management of natural monopolies in electricity or water supply infrastructures is, arguably, readily achieved given a will to do so by the governments in question. Progress on such matters is not contingent upon locally specific factors or difficult to replicate conditions but, rather, relies largely on a review of experience elsewhere and the 'short and sharp' injection of expertise. For these reasons, there is a tendency for convergence in infrastructure management practices across regions regardless of political system or stage of economic development. In other words, any boost in competitiveness that may be gained through the application of international best practice in these sectors – as important as this is – cannot be relied upon to deliver advantage in the longer term. The region's competitors face relatively low barriers in catching up.

This contrasts with, say, the competitive advantage deriving from a pervasive R&D tradition and an entrepreneurial and risk taking culture. These advantages form part of the fabric of the community and could take generations to build even with focussed policy effort on the part of national and regional governments.

Similarly, the drivers of competitiveness which stem from locally tied resources may be easier to defend. For example, those regions which have better managed planning for the aviation industry, including reservation of appropriately located land for secondary or support airports, will enjoy a robust advantage against those cities which must deal with constrained land stocks or a history of fragmented planning in this area.

An assessment of the robustness of advantage in the various drivers of competitiveness is made in Table 5.2. On this basis, the emergent 'strategic' drivers are as follows.

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- **Leading management of 'structural transportation infrastructure', especially airports and the urban arterial road system.** In larger cities within advanced economies, public intervention to retrofit appropriate arterial road infrastructure or airports is often very expensive and fraught with political risk. Such regional economies may be forced to resort to cost boosting rationing strategies, or default to management by congestion.
- **Well organised urban regions / settlement patterns for production logistics.** Similarly, it is financially and politically very costly to attempt to 'turn around' an inefficient urban structure. Moreover, the pay off period can be very long term, adding to the political risk associated with such policies.
- **High incidence of scientific and other 'symbolic analyst' skills in the community, and access to a high quality education system.** These skill stocks tend to be an echo of historic wealth creation capacity. Past prosperity in advanced regions enabled investment in the education, training and research institutions required to generate a consistent flow of premium skills. Such historically rooted production processes cannot be easily replicated, especially given the exponential accumulation of production capacity in research institutions through networking and clustering.
- **A pervasive R&D / innovation culture and a propensity towards risk taking entrepreneurship.** Although such drivers are often characterised as 'personality traits' of certain nations (most notably the US), they are, again, more likely to be a reflection of historically created wealth. The greater the unencumbered asset base of a household, firm or region, the greater the capacity to absorb exogenous economic shocks, to take risks and pursue alternative income generating opportunities. And, again, such historically created endowments are difficult to replicate in the near term.
- **A tolerant culture open to new ideas.** This takes a long time to build (witness Australia's 40 year program of multiculturalism - still an unfinished business) and can be fragile given the added pressure which globalisation places on marginal groups in the workforce (witness the *One Nation* phenomenon in Australia and the outbreaks of extreme right parties dedicated to 'cultural purity' in Europe).
- **Liveable cities.** While there are well documented cases of cities that have achieved an apparent elevation in liveability through a concerted program of investment (e.g. Barcelona, Glasgow), these transformations often relate to down town areas or other precincts

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of civic significance. Transformations of 'quality of life' for the great mass of residents - including quality affordable housing, access to a wide pool of jobs through an efficient transportation system, the opportunity to resort to areas of environmental and cultural significance for rest and recreation, access to wide range of lifestyle opportunities and so on, generally require a much longer time frame.

While such factors with high 'dependability' can be expected to take on greater strategic significance, this should not be interpreted as an opportunity to reduce performance on other factors, for example, maintaining the efficiency of basic utilities and sea ports. As emphasised in the McKinsey '3 horizons model', a successful economy will simultaneously take care of basic cost control as it searches for new wealth creation opportunities linked to its intellectual capital.

*Table 5.2: Defendability of Competitive Advantage*

<i>Regime of Competitiveness</i>	<i>Economic Driver</i>	<i>Potential for robust competitive advantage</i>
<i>(a) Low Risk Business Environment</i>	▪ Stable government and judicial institutions.	<b>Moderate</b>
	▪ Independent anti-corruption institutions.	<b>Moderate</b>
	▪ Independent industry regulators (e.g. telecommunications, media, infrastructure, etc.)	<b>Moderate</b>
	▪ Stable financial markets with strong prudential regulation and transparent trading.	<b>Moderate</b>
	▪ Excellent civic, regional and national leadership.	<b>Moderate</b>
<i>(b) Low Cost Structures</i>	▪ Competitive market structures for service and material inputs.	<b>Moderate</b>
	▪ Flexible labour markets and industrial relations system.	<b>Moderate</b>
	▪ "Natural monopoly" in electricity generation, transmission and retailing reformed or regulated to produce competition like outcomes.	<b>Low</b>
	▪ "Natural monopoly" in water supply and sewerage systems reformed or regulated to produce competition like outcomes.	<b>Low</b>

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▪ "Natural monopoly" in telecommunications infrastructure reformed or regulated to produce competition like outcomes.	<b>Moderate</b>
▪ "Best practice" investment in and management of roads infrastructure.	<b>High</b>
▪ "Best practice" investment in and management of rail freight infrastructure.	<b>Low</b>

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*Table 5.2 Continued*

<b>Regime of Competitiveness</b>	<b>Economic Driver</b>	<b>Potential for robust competitive advantage</b>
	▪ "Best practice" investment in and management of seaports infrastructure.	<b>Low</b>
	▪ "Best practice" investment in and management of airports infrastructure.	<b>High</b>
	▪ High quality airline connectivity.	<b>Moderate</b>
	▪ Cost effective regulatory environment - workers compensation, OH&S, corporate affairs and fair dealing.	<b>Moderate</b>
	▪ World competitive company tax regime.	<b>Low</b>
	▪ Well organised urban regions/settlement pattern for production logistics.	<b>High</b>
<i>(c) Quality Access</i>	▪ High incidence of scientific skills in the labour force.	<b>High</b>
	▪ High incidence of other professional skills in the labour force.	<b>High</b>
	▪ Secure supply of technical/trade skills.	<b>Moderate</b>
	▪ A high quality university system.	<b>High</b>
	▪ A high quality school education system.	<b>High</b>
	▪ A pervasive R&D culture.	<b>High</b>
	▪ An entrepreneurial and risk taking culture.	<b>High</b>
	▪ Liberal migration laws for people with professional skills.	<b>Low</b>
	▪ A tolerant culture open to new ideas.	<b>High</b>
	▪ Liveable cities and regions with the capacity to attract and hold a highly skilled workforce.	<b>High</b>
	▪ Presence of globally recognised business clusters, engaging in high levels of international exports and facilitating strong inward investment.	<b>Moderate</b>

## **6 INDICATORS THAT MEASURE THE QUALITY OF ECONOMIC DRIVERS**

Previous sections (i.e. Section 4.4 and Chapter 5) have established a framework for approaching the drivers of economic competitiveness, and have documented those specific drivers in terms of the low risk business environment, low cost structure and quality access economic foundations.

This chapter lists indicators that help measure the current ‘state of play’ for each of the economic drivers. Commentary is provided where appropriate, noting that Appendix B lists the method of calculation, the data source and the regions used to contrast the performance of Melbourne, Victoria or Australia in the global economy. Also note that the Dept. of Infrastructure constrained its data gathering brief to only secondary.

### **6.1 Low Risk Business Environment Indicators**

The following drivers form the basis for initial investment and operating decisions. They are a necessity for most types of enterprise regardless of their engagement with the global economy.

#### **6.1.1 Stable government and judicial institutions**

Indicators of this driver are:

- Political risk indices
- Country risk indices
- Bureaucracy indices
- Legal framework indices
- Credit ratings

Political and country risk assessments are likely to be prepared by specialist consulting firms, financial institutions or development agencies. However, it is unlikely that they would be published in a quantitative format that allowed ready comparison. One exception to this rule is the International Country Risk Guide (ICRG) (1999) which is cited in *Benchmarking Melbourne’s Advantages*.

It is arguable that the credit ratings placed on central government borrowers and Government Business Enterprises by organisations such as Moodys, Standard and Poors, Dun and Bradstreet, The World Bank and the International Monetary Fund rate the stability of government. However, such credit ratings reflect a range of political, social and financial issues and are provided only to fee-paying clients.

### **6.1.2 Independent anti-corruption institutions**

Indicators of this driver are:

- Corruption indices.
- The existence of anti – corruption institutions (i.e. yes or no).

It is feasible to determine if such institutions/ regulators exist in particular economies, but determining their effectiveness is another matter altogether.

### **6.1.3 Independent industry regulators**

Indicators of this driver are:

- Cost per unit of industries prone to natural monopoly status, such as energy, water, transport and telecommunication infrastructure.
- The existence of industry regulators (i.e. yes or no).
- The existence of competition policy (i.e. yes or no).

See comments at section 6.1.2.

### **6.1.4 Stable financial markets with strong prudential regulation and transparent trading**

Indicators of this driver are:

- Volatility levels in equity markets (i.e. share market indices).
- Volatility levels in debt markets (i.e. central bank ‘prime’ rates).
- Existence of financial regulators (i.e. yes or no).
- Liquidity risk indices.
- Average corporate credit rating (local companies only).
- Volatility of exchange rate.

Such indicators are unlikely to be available for economic regions within nations, and given the universality and ubiquity of today’s capital markets those indicators are likely to be highly correlated.

### **6.1.5 Excellent civic, regional and national leadership**

Indicators of this driver are:

- Not readily available.

However, indicators listed in section 6.1.1 might provide some insight into the leadership situation. Leadership also influences the capacity for economies to change, hence some of the drivers listed under 'quality access' are heavily influenced by quality leadership as they rely on visionary investments and actions e.g. high incidence of skill levels, quality education systems, risk taking, entrepreneurship, etc.

## **6.2 Low Cost Structure Indicators**

Low cost structures allow economic agents to effectively organise production given an acceptable but uncontrollable risk environment. They ensure that the processed natural resources and traditional merchandise goods can be delivered to consumers efficiently enough to guarantee domestic market competitiveness.

### **6.2.1 Competitive market structures for service and material inputs**

Indicators of this driver are:

- Gross operating surpluses of industry as a proportion of regional production.
- Proportion of competing imports to regional production.
- Proportion of regional exports to regional production.
- The existence and extent of World trade Organisation (WTO) sanctions.
- The existence and extent of import embargoes/ quotas.
- The existence and extent of import tariff structures.

Average gross and trading margins of firms are encapsulated in gross operating surplus figures, which are often published at the national level (Australian National Accounts), but unfortunately these surpluses are influenced by many other variables such as management ability, taxes and general economic conditions.

## **6.2.2 Flexible labour markets and industrial relations systems**

Indicators of this driver are:

- Union membership rates of workforce.
- Number of production days lost to industrial disputes.
- Number of arbitrated labour agreements.
- Mobility of labour.
- Labour force participation rate.
- Part time to full time employment ratio.
- Average income levels for particular occupation categories.

In delineating the range of occupation skills it might be useful to use Reich's (1992) conceptualisation of work in the global economy, which breaks global labour into three types: symbolic analysts; in-person service workers; and routine production workers (Text Box 3). O'Connor (1999) has initiated this process across Australian capital cities, however, international comparisons may be hampered by occupation classification inconsistencies and inadequacies.

### *Text Box 3:*

#### *Symbolic Analysts*

High skilled information and knowledge workers which dominate value creation in the world economy. Jobs in finance, business services, design, information technology and research are included in this group. Also included would be certain classes of 'hi-touch' workers, artists, musicians, writers and other content producers. Symbolic analysts have high economic wealth, relative job security and good career prospects. These workers are increasingly 'footloose' at an international level; they have the ability to market themselves as independent enterprises working for a several clients and pursuing several careers simultaneously.

#### *In-Person Service Workers*

The symbolic analysts are driving demand for low skilled service work in hospitality, cleaning, security and entertainment. The in-person service workers support the lifestyles of the symbolic analysts. Relative to the symbolic analysts, workers in this group have low economic wealth, job insecurity and uncertain career prospects. These workers are also casualised in the sense that they may not have a permanent employer. However, they do not have the control and choices open to the symbolic analysts.

#### *Routine Production Workers*

These include factory workers and clerks who require a reasonable level of education but who are nonetheless vulnerable to job loss through automation, or job export to lower wage regions around the world. Routine production workers may well have (so called) permanent jobs and tend to be in highly unionised sectors.

### **6.2.3 “Natural monopoly” in energy generation, transmission and retailing reformed or regulated to produce competition like outcomes**

A natural monopoly arises in a market where the costs of production are minimised when one firm supplies the market. This can arise when supply involves a capital intensive distribution system, such as for energy, telecommunications, transport and water. It can also arise when economies of scale are not fully utilised at the level of output that will be purchased by the market, such as for steel and certain specialised equipment.

In the case of utilities and transport which have traditionally been operated by government agencies but are now subject to contestability due to competition policies, the regulation of new structures should aim to ensure that economies of scale are maximised and duplication minimised. The success of that regulation will be reflected in the indicators in this and the two subsequent sections. On the whole these indicators measure the infrastructure network access charges, usage charges per unit of consumption and quality of service.

Indicators of this driver are:

- Price per kilowatt/hr.
- Price per megalitre of natural gas.
- Standard network connection fees.
- Network coverage (as a proportion of land space or population served).
- Number of competing providers.
- Service quality measured by response times for connection, reconnection, or repairs and maintenance.
- Service quality measured by the proportion of time not available, or proportion of time below ‘normal’ quality levels (eg. blackouts/brownouts/power surges).
- Number of blackouts/brownout/power surges p.a.

#### **6.2.4 “Natural monopoly” in water supply and sewerage systems reformed or regulated to produce competition like outcomes**

Indicators of this driver are:

- Price per megalitre.
- Standard network connection fees.
- Network coverage (as a proportion of land space or population served).
- Number of competing providers.
- Service quality measured by response times for connection, reconnection, or repairs and maintenance.
- Service quality measured by the proportion of time not available, or proportion of time below ‘normal’ quality levels.
- Number of days water unavailable p.a.

#### **6.2.5 “Natural monopoly” in telecommunications infrastructure reformed or regulated to produce competition like outcomes**

In the global economy ‘connectivity’ is crucial to success as it facilitates integration with other economic agents. Modern communications technologies utilise a range of media, but at this stage of development fixed handset and mobile telephones and Internet are dominant.

Indicators of this driver are:

- Fixed handset telephones per capita.
- Mobile telephones per capita.
- Internet connections per capita, including home and work connections.
- Charge per connection minute – international.
- Charge per connection minute – local.
- Charge per connection minute – Internet (standard).
- Proportion of land area or population serviced by broadband communications infrastructure.
- Average Internet download rates (in KB per second).
- ISP servicing rate per capita.
- Number of competing infrastructure providers.
- Service quality measured by response times for connection, reconnection, or repairs and maintenance.
- Percentage of total time networks unavailable or below normal’ quality.

### **6.2.6 “Best practice” investment in and management of roads infrastructure**

Investment in and management of road infrastructure ensures efficient travel times for commuters and freight movements.

Although it is arguable that the relative value of bulk merchandise goods and commodities have diminished in the global economy, efficient transport networks are still vital due to the increased emphasis placed on response times and the downward pressure on operational costs.

Indicators of this driver are:

- Journey to work travel times (peak and off-peak).
- Traffic density (No. of vehicles per km of road).
- Average intra-regional freight times.
- Average cost per tonne and/ or cubic metre by market destination.
- Number of road accidents per annum.
- Average vehicular speed.
- Proportion of road public transport versus private vehicles.
- Airport travel times\*

(\*Indicator also used to measure “best practice” investment and management of airports infrastructure).

### **6.2.7 “Best practice” investment in and management of rail infrastructure**

Indicators of this driver are:

- Average cost of freight per km/tonne.
- Average cost per tonne and/ or cubic metre by market destination.
- Proportion of land area or population served by rail freight infrastructure.
- Average vehicular speed.
- Proportion of journeys to work by rail.
- Number of rail accidents per annum.

### **6.2.8 “Best practice” investment in and management of seaports infrastructure**

A major seaport acts as a draw-card for industries that need to import and export bulky goods.

Indicators of this driver are:

- Tonnage capacity p.a. of port infrastructure.
- Container traffic p.a.
- Average sea freight costs per tonne and/ or per cubic metre by market destination.
- Average turnaround time for container ships.

### **6.2.9 “Best practice” investment and management of airports infrastructure**

Indicators of this driver are:

- Flight capacity per 24 hour period.
- Number of international carriers.
- Airport travel times\*
- Number of international airports within the region.
- Number of terminal gates.

(\*This indicator is also used to measure the ‘best practice’ investment and management of road infrastructure).

### **6.2.10 High quality airline connectivity**

High quality airline connectivity is important for connecting people to other regions for business with minimal ease, and for moving airline freight to different markets with ease.

Indicators of this driver are:

- Passenger traffic volumes p.a.
- Distance of airport from CBD (km).
- Travel times from CBD to Airport (minutes). This indicator should be compiled for both private and public transport.
- Number of airlines with direct international air links.
- Frequency of flights per week to major economic centres.
- Cost of travel to the airport by taxi.

### **6.2.11 Cost effective regulatory environment**

The indicators included within this section may best be estimated using ‘compliance’ costs or total employee ‘on-costs’ but may also be well represented by the number of claims/ incidents per employee p.a.

#### **Workers compensation**

Indicators of this driver are:

- Estimated compliance costs per employee.
- Number of claims per employee p.a.
- Levy per employee p.a.

#### **Occupational Health and Safety**

Indicators of this are:

- Average number of days without accident.
- Number of workplace accidents pa.
- Estimated compliance costs per employee.

#### **Corporate affairs and fair dealing**

Indicators of this driver are:

- Not readily available.

### **6.2.12 World competitive company tax regime**

Indicators of this driver are:

- Corporate tax rate.
- Existence and extent of indirect, sales, payroll taxes and other excises (i.e. complicity of taxation structure).
- Average administrative and compliance costs per business establishment p.a.
- Number of countries with complementary tax treaties.
- Existence of tax incentives.
- Hierarchy of personal income tax rates may also influence the attractiveness of locations from an employees perspective.

### **6.2.13 Well organised urban regions/settlement pattern for production logistics**

The level and pattern of development activity in an urban region reflects the opportunities that exist for investment and the demand by users of property. However, specific property development indicators reflect broad assessments of the attractiveness of particular regions and are heavily influenced by macroeconomic variables.

More accurate measures of the quality of settle patterns may need to focus on the level of constraints to further development, be that more consolidated or fringe development.

Indicators of this driver are:

- Not readily available.

However, some insight might be gained from the indicators listed in sections 6.2.1, 6.2.6 and 6.2.7.

## **6.3 Quality Access Indicators**

Quality access indicators measure the capacity of an economy to engender change, to be flexible and to exploit opportunity. They relate predominantly to competitiveness in non-traditional industries (i.e. in the new economy) and the ability of traditional industries to rewrite their operating paradigms.

### **6.3.1 High incidence of scientific skills in the labour force**

Indicators of this are:

- Proportion of workforce holding graduate and post graduate engineering and science degrees.

### **6.3.2 High incidence of other professional skills in the labour force**

Once again Reich's conceptualisation of symbolic analysts may be appropriate (Text Box 3).

Indicators of this driver are:

- Proportion of workforce with tertiary or higher degrees.
- Proportion of workforce in 'symbolic analyst' occupations.
- Within the confines of Australia, proportion of workforce in management and administration, professional and para-professional occupations.
- Number of corporate headquarters locating within the region.

### **6.3.3 Secure supply of technical/trade skills**

Indicators of this driver are:

- Proportion of population with trade qualifications.
- Proportion of workforce employed as 'routine production workers'.
- Within the confines of Australia, proportion of workforce in trade and related occupations.
- Proportion of population currently enrolled in technical or trade institutions.

### **6.3.4 A high quality University system**

Indicators of this driver are:

- Enrolment rate in higher education.
- Proportion of international students to local students enrolled in higher education.
- Number of PhDs awarded p.a.
- Average ratio of students to lecturers in higher education institutions.
- Public expenditure per capita on higher education institutions.
- Number of universities within the region.

### **6.3.5 A high quality school education system**

Indicators of this driver are:

- Literacy rates per capita.
- Public expenditure on primary and secondary education per capita.
- Primary school enrolment ratios.
- Secondary school enrolment ratios.
- Average years of schooling.

### **6.3.6 A pervasive R&D culture**

Innovation and commercialisation capacities are increasingly major sources of competitive advantage in economies, as they challenge and sometimes replace existing industry paradigms that govern overall performance. The City of Melbourne (1998) has proclaimed its view by stating:

*“The most prosperous cities, regions, and nations will be those that go beyond their ‘natural’ advantage and seek ‘creative’ advantage”*

Indicators of this driver are:

- Within Australia, share of Large Grants Research Funding from Australian Research Council (ARC).
- R&D expenditure by business sector as a proportion of gross regional product (GRP).
- Patent registrations per capita p.a.
- Proportion of university research directly funded by the private sector.
- Innovation indices.

- The existence and extent of patent, copyright and other intellectual property protection\*

(\*This indicator is also used to measure 'entrepreneurial and risk taking culture').

### **6.3.7 An entrepreneurial and risk taking culture**

An entrepreneur is defined as an economic agent who perceives market opportunities and assembles the factors of production to exploit them in a firm (Bannock, Baxter and Davis, 1992).

Section 3.2 (and 4.4) implicitly includes entrepreneurship and risk taking as a determinant of economic performance, as those 'cultures' are necessary for economic agents to identify new opportunities and take action to exploit them prior to their exploitation by another agent. Although the economic environment benefits in the longer term from entrenched innovation and adaptability, often risk must be assumed in the shorter term.

Indicators of this driver are:

- Innovation expenditure per business establishment.
- Proportion of businesses undertaking technological innovation.
- Number of venture capital investments made p.a.
- Quantum of venture capital investments made p.a.
- Number of venture capital investors located in the region.
- Bankruptcy rate per business establishment.
- Number of business 'start ups' per capita p.a.
- The existence and extent of patent, copyright and other intellectual property protection\*.

(\*This indicator was also used to proxy for 'a pervasive R&D culture').

### **6.3.8 Liberal migration laws for people with professional skills**

Indicators of this driver are:

- Average skill levels of new migrants.
- Current migration rates.
- The existence of business migration programs (i.e. yes or no).

### **6.3.9 A tolerant culture open to new ideas**

Indicators of this driver are:

- Ethnicity of population.
- Rates of fluency in non-English languages.
- Number of major Arts events/ activities.

#### **Text Box 4:**

Professor Peter Dawkins from the Institute of Applied Economic and Social Research compared the attitudes and values of Melbourne residents with residents of 17 other cities in Australia and throughout the world, using the results of a 1995-96 social science survey.

One of the major themes of the survey was the residents' acceptance of immigrants. He found that Melbourne was significantly more open to accepting those from overseas, other religions and non-English speaking persons than most cities in the survey.

## **6.4 Liveable cities and regions with the capacity to attract and hold a highly skilled workforce**

A region's ability to attract and hold a highly skilled workforce depends on the liveability of the region and the quality of life derived from residing there.

Indicators of this are:

- Quality of life indices, which might measure generally accepted elements of quality such as climate, health levels, cultural diversity, accessibility of goods and services, the strength of social networks, housing standards, education levels, personal security, natural environment amenity, and extent of isolation.
- Average income levels.
- Polarisation of income levels.
- Cost of living estimates.
- Domestic purchasing power.
- Rates of reported crime.
- Life expectancy.
- Number of hospital beds per capita.
- Climatic indicators such as annual days 'sunny' and average temperature by season.
- Number of cultural events p.a.

## **6.5 Presence of globally recognised business clusters**

Michael Porter (1990) received great attention for his treatise<sup>3</sup> which argued that a region's economic competitiveness is determined by the inter-relationships within and between a number of variables (see Porter's diamond in section 4.1). He argued further that where the inter-relationships were mutually supportive clusters of competitive industries drove growth and prosperity.

In a study conducted by the US Department of Housing and Urban Development (1996) eighteen major cluster categories were identified in the US economy contributing 54 per cent of employment. In a prior study conducted by DRW/McGraw Hill, 350 individual clusters accounted for 57 percent of employment, 62 percent of output, and 78 percent of exports (cited in Williams (1996)). Both of these studies add weight to Porter's summation that clusters drive economic performance and are underwritten by the drivers specified in his diamond.

Unfortunately clusters cannot be readily identified using employment concentrations, the only official statistics readily available, as the linkages within and between various economic sectors are fundamental to their performance. For instance, one of Silicon's Valley greatest attribute as a IT cluster is its availability of venture capital, its level of knowledge diffusion between economic agents and its entrepreneurial drive.

Indicators of these drivers are:

- Specialisation rates of industries.
- Strength of relationships between industry value chain members.
- Export earnings per capita.
- Value added per capita.

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<sup>3</sup> Porter, M.E. (1990) *The Competitive Advantage of Nations*, The Macmillan Press, London.

## **7 COMPETITIVE STRENGTHS AND WEAKNESSES OF MELBOURNE'S REGIONAL ECONOMY**

### **7.1 The Geography of Comparable Regions**

Prior to examining the relative position that Melbourne sits in relation to other economic regions, it is important to note that the rationale by which the comparative regions are chosen.

In theory, there are numerous ways of viewing the urban (or economic) hierarchy in the global economy. One of the most accepted theories describes the emergence of world cities as effective 'control centres' for the global network of capital flows (economic, human and cultural) that sustain the economy. These sites house most of the leading financial markets, NGOs and IGOs, transnational corporate headquarters, media organisations and advanced business services.

Within this context, second tier cities link into the global economy via world cities and via their trading relationships with other second and third tier cities. Second tier cities often house 'specialist' firms that have over the preceding decades clustered together to give power in specific industries. Thus, second tier cities are often world class centres of excellence (e.g. Silicon Valley) in specific areas of industrial expertise. Second tier cities also form the economic focus of their surrounding hinterland which is often significant in national terms.

Third tier cities and then regional centres feed off specific supply and demand relationships with their 'superior' cities, forming the lower levels in this hierarchy or network of economic strength.

However, within such theory there exists considerable 'grey' area in what delineates world from second tier cities, and in turn, second and third tier cities from their respective subordinates. Those grey areas concern the connectivity of the city, be that through information, goods or people movements, the human capital encapsulated in the area, levels of international migration, and importantly, the economic power and foci of the city.

Sydney's position within world city parameters is debatable, suggesting that Melbourne could well be placed as either a second or

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third tier city. That makes it difficult to accurately compile a list of comparable cities to benchmark Melbourne against. And this dilemma takes no account of the ability, whether that is realistic or not, of Melbourne to eventually position itself as a world city.

In practice, there have been a number of perspectives from which comparable cities to Melbourne have been framed. Underpinning all such perspectives has been a 'consensual' not rigorously 'scientific' selection criterion.

The first, undertaken by the City of Melbourne in a series of workshops, nominated cities that were

- subordinate to national capitals (in Australia's case – Sydney);
- similar in population size;
- similar in terms of historic development (i.e. manufacturing/port cities with relatively open trading relationships); and
- either a competitor for, or a source of, investment.

Cities identified using this and subsequent processes are listed in Table 7.1 (overleaf). The City of Melbourne also listed a number of other cities useful for benchmarking due to their excellence in particular fields. These included: Glasgow (culture); Helsinki (culture); London (world); New York (world); Paris (world); and Tokyo (world).

The perspective adopted by The Queensland Government, the Property Council of Australia and Telstra was similarly consensual in nature. It basically viewed Australia as an attractive location for global companies' regional headquarters, servicing Asia Pacific. Thus, the cities nominated were seen to be competitors in that investment market.

Business Victoria has undertaken two benchmarking studies. Their first – *Advantage Melbourne* – gives no rationale for their choice of comparative cities. Their second cites 'relevant cluster metrics' as the key selection criterion. Although there is little supporting commentary, it has been confirmed<sup>4</sup> that the comparative locations were chosen because of their apparent strength in industries which Melbourne could potentially be globally competitive in. These industries or functions included regional headquarters/ shared services; multimedia, IT and telecommunications; R&D; biotechnology/ pharmaceuticals; advanced manufacturing; resource intensive (based) industries; and food processing and beverages.

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<sup>4</sup> Barry Ferguson DSRD

*Table 7.1: Comparative cities used in previous benchmarking studies.*

City of Melbourne	Qld Government, Property Council of Australia and Telstra)	Business Victoria ( <i>Advantage Melbourne</i> )	Business Victoria ( <i>Benchmarking Melbourne's Advantages</i> )
<ul style="list-style-type: none"> <li>▪ Bangkok</li> <li>▪ Barcelona</li> <li>▪ Boston</li> <li>▪ Brisbane</li> <li>▪ Copenhagen</li> <li>▪ Hamburg</li> <li>▪ Kuala Lumpur</li> <li>▪ Manchester</li> <li>▪ Milan</li> <li>▪ Montreal</li> <li>▪ Osaka-Kobe</li> <li>▪ San Francisco</li> <li>▪ Santiago</li> <li>▪ Seattle-Tacoma</li> <li>▪ Singapore</li> <li>▪ Sydney</li> <li>▪ Tianjin</li> <li>▪ Toronto.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adelaide</li> <li>▪ Brisbane</li> <li>▪ Dublin</li> <li>▪ Hobart</li> <li>▪ Hong Kong</li> <li>▪ Los Angeles</li> <li>▪ Malaysia</li> <li>▪ Manila</li> <li>▪ Mumbai</li> <li>▪ New York</li> <li>▪ Perth</li> <li>▪ Singapore</li> <li>▪ Sydney</li> <li>▪ Taipei</li> <li>▪ Tokyo</li> </ul>	<ul style="list-style-type: none"> <li>▪ Auckland</li> <li>▪ Bangkok</li> <li>▪ Brisbane</li> <li>▪ Guangzhou</li> <li>▪ Hong Kong</li> <li>▪ Jakarta</li> <li>▪ Kuala Lumpur</li> <li>▪ Los Angeles</li> <li>▪ Osaka</li> <li>▪ Shanghai</li> <li>▪ Singapore</li> <li>▪ Stuttgart</li> <li>▪ Sydney</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bangalore</li> <li>▪ Bangkok</li> <li>▪ Berlin</li> <li>▪ Boston</li> <li>▪ Chicago</li> <li>▪ Dublin</li> <li>▪ Hong Kong</li> <li>▪ Jakarta</li> <li>▪ Kuala Lumpur</li> <li>▪ London</li> <li>▪ Manila</li> <li>▪ Osaka</li> <li>▪ San Francisco</li> <li>▪ Seoul</li> <li>▪ Singapore</li> <li>▪ Stuttgart</li> <li>▪ Tel Aviv</li> </ul>

## 7.2 Melbourne's Position

Appendix C and D score the relative competitiveness of Melbourne when compared to other economic regions. Unfortunately, not all the indicators of competitiveness are available at the metropolitan level. This is caused primarily by data inadequacies and the over-riding institutional frameworks impacting on the competitiveness drivers that nationally or state based.

Consequently, it is often impossible to directly compare Melbourne's economic region with that of other competing economic regions. In such circumstances country to country comparisons form the bulk of available information This is particularly the case for the following drivers:

- Stable government and judicial institutions;
- Stable financial markets with strong prudential regulation and transparent trading;
- Flexible labour markets and industrial relations systems;

- World competitive company tax regime; and
- Liberal migration laws for people with professional skills.

In other circumstances the published information is inconsistent when contrasting Melbourne against competing regions. This stems from the different underlying purposes for the initial data collection. Sometimes states are used, sometimes countries, and sometimes specific domestic and international cities. This comparative inconsistency combined with the outright 'lack of information' concerning some drivers makes it difficult to assess the intensity of relative strength or weakness.

Noting this, Table 7.2 (overleaf) ranks Melbourne for each driver as an obvious strength, a likely strength, as neither a strength nor weakness (i.e. as average), or as an obvious or likely weakness. Where the data gaps are too large to make an assessment that is indicated.

### **7.2.1 Melbourne's Strengths**

Melbourne has a number of potential strengths but only four drivers of those have been ranked as 'obvious strengths', with the rest ranked as 'likely strengths'. This is primarily due to the lack of international data which might support Melbourne's superior position over the domestic capitals at an international level.

The obvious strengths from an international perspective include Melbourne (and Australia's):

- Stable government and judicial institutions;
- Independent anti-corruption institutions based on the corruption index. Note that the existence and, more importantly, the effectiveness of anti-corruption institutions are difficult to ascertain;
- High incidence of scientific skills in the labour force; and
- High incidence of other professional skills in the labour force.

The likely strengths Melbourne has a region competing in the global economy include its:

- Independent industry regulators, which have ensured competitive pricing of utilities and which enforce competition and trade practices legislation;
- Reformed natural monopoly in energy, water and sewerage systems, rating well in terms of unit cost but which go largely un-scored in terms of service availability and quality;

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- Reformed natural monopoly in telecommunications, with the availability and cost of services consistently scoring better than average;

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*Table 7.2: Melbourne's Competitive Strengths and Weaknesses*

Economic Driver	Obvious Strength	Likely Strength	Neither Strength nor Weakness	Likely Weakness	Obvious Weakness	Data gap
▪ Stable government and judicial institutions.	✓					
▪ Independent anti-corruption institutions.	✓					
▪ Independent industry regulators		✓				✓
▪ Stable financial markets with strong prudential regulation and transparent trading.			✓			✓
▪ Excellent civic, regional and national leadership.						✓
▪ Competitive market structures for service and material inputs.						✓
▪ Flexible labour markets and industrial relations system.						✓
▪ "Natural monopoly" in energy generation, transmission and retailing reformed or regulated to produce competition like outcomes.		✓				✓
▪ "Natural monopoly" in water supply and sewerage systems reformed or regulated to produce competition like outcomes.		✓				✓
▪ "Natural monopoly" in telecommunications infrastructure reformed or regulated to produce competition like outcomes.		✓				
▪ "Best practice" investment in and management of roads infrastructure.			✓			✓
▪ "Best practice" investment in and management of rail freight infrastructure.						✓
▪ "Best practice" investment in and management of seaports infrastructure.		✓				
▪ "Best practice" investment in and management of airports infrastructure.			✓			
▪ High quality airline connectivity.			✓			
▪ Cost effective regulatory environment.						✓
▪ World competitive company tax regime.			✓			
▪ Well organised urban regions/settlement pattern for production logistics.						✓
▪ High incidence of scientific skills in the labour force.	✓					
▪ High incidence of other professional skills in the labour force.	✓					
▪ Secure supply of technical/trade skills.		✓				
▪ A high quality university system.		✓				✓
▪ A high quality school education system.			✓			
▪ A pervasive R&D culture.		✓				✓
▪ An entrepreneurial and risk taking culture.				✓		✓
▪ Liberal migration laws for people with professional skills.						✓
▪ A tolerant culture open to new ideas.			✓			✓
▪ Liveable cities and regions with the capacity to attract and hold a highly skilled workforce.		✓				
▪ Presence of globally recognised business clusters.				✓		✓

- Best practice investment in the management of seaports infrastructure, when interstate comparisons of freight movements and capacities and international freight costs are cited;
- Secure supply of technical trade and skills, at least from an interstate point of view, but this may require adjustment after viewing international data;
- A high quality university system, if that can be measured in terms of enrolment rates and institutional availability;
- Protection offered to IP creators via patent, copyright and other protection, which is further boosted by Melbourne's competitive position in terms of interstate R&D and innovation expenditure comparison; and
- Liveability as a city, scoring well in quality of life and domestic purchasing power indices, though these measures obviously exclude the non-financial elements of liveability.

## **7.2.2 Melbourne's Weaknesses**

There is no obvious weaknesses shown in the data available. This might be influenced by the promotional nature of the documentation containing the data. It might also stem from the significant data gaps uncovered.

Noting this, it is reasonable to conclude that Melbourne has likely weaknesses in at least the following areas:

- An entrepreneurial and risk taking culture, with Australian business consistently highlighting the difficulty in attracting seed and development capital; and
- Presence of globally recognised business clusters, with prior experience suggesting that firms located within Melbourne have poorly developed collaborative links with their local value chain members when compared to various international locations. This general lack of collaboration possibly influences the 'commercialisation' of R&D and innovation expenditure, the level of private sector leadership and the competitiveness of service and material input markets all of which suffer from data gaps.

## **7.3 Identified Data Gaps**

Major data gaps have emerged in the analysis. They relate specifically to the:

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- Existence and effectiveness of anti-corruption institutions and industry regulators, especially in international locations;
- Stability of financial markets, noting that markets are globally integrated and thus volatility levels are highly correlated;
- Quality of civic, regional and national leadership;
- Competitiveness of market structures for service and material inputs;
- Flexibility of labour markets;
- Service quality, network connection fees and network coverage of energy, water and sewerage systems;
- Effectiveness of road and rail transport systems;
- Cost effectiveness of regulatory requirements imposed on business<sup>5</sup>;
- Quality of organisation of settlement patterns from a production/logistic perspective;
- Quality of education systems and their output;
- Availability of private funds to support R&D, innovation, entrepreneurship and risk taking; and
- Presence of globally recognised business clusters. Although substantial work has been done in terms of identifying concentrations of industries little exists regarding the containment of value chain members within the regional economy and the relationships between those entities.

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<sup>5</sup> Limited information exists concerning the workers compensation, OH&S and corporate affairs and fair dealing environments between Australian State capitals, and no information is readily available with respect to international locations. However, the labour 'on-costs' measure recorded in *Advantage Melbourne* considers payroll tax, workers injury insurance, holiday pay loading, employer superannuation contributions, training levies and other miscellaneous labour costs to the employer, suggesting that Melbourne is about average in competitiveness.

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## **8 THE INFLUENCE OF URBAN POLICY**

### **8.1 Scope of Urban Policy & Metropolitan Strategy**

Because most endeavours in public policy become evident in some way within the built environment or the geography of economic activity, there is a temptation to construe 'urban planning policy' as having a very wide mandate. Taking this view, it could be argued that the policy levers within the 'urban planning portfolio' extend to such matters as education and training programs, housing assistance, arts and cultural development and even micro-economic reform initiatives such as the restructuring of the utilities sector.

However, for the purposes of this study, a more conventional definition of the scope of planning policy has been adopted. The focus here is on those policy instruments which directly influence settlement patterns, embracing such issues as the form and density of development, the hierarchy of activity centres, the means of interaction between land uses and the management of impacts on sensitive environments.

### **8.2 Planning Policy and Competitiveness**

While there is a growing body of literature on the general connections between urban management and national prosperity (see, for example, Property Council of Australia & Council of Capital City Lord Mayors, 2000), we have not been able to source any texts which explore the influence of *specific* planning levers on *particular* drivers of economic competitiveness as defined in this report. The discussion in this section is therefore based on a first principles analysis (and is demanding of empirical testing requiring resources beyond those available to the current study).

Table 8.1, commencing overleaf, provides an assessment of the influence which urban policy and metropolitan strategy in particular might have on the various drivers of competitiveness discussed in Chapter 5. This assessment involves three ratings. Where adequate performance in respect of a nominated driver cannot be achieved without effective planning policy, the influence of the latter has been

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rated as '*critical*', notwithstanding that a range of other policy ingredients need to be in place.

A rating of '*secondary*' has been used to describe those situations where planning policy can make a substantial and sometimes strategic contribution, but where it cannot be deemed to be a *necessary* condition for success.

Planning policy has been dubbed '*supportive*' in those areas where linkages to competitive performance are more diffuse and indirect.

Qualitative analysis on this basis suggests that urban policy – narrowly defined – has an important part to play in regional economic competitiveness. Planning measures have a critical or secondary role in 8 of the 30 nominated drivers. When its supportive role is included, urban policy could be claimed to influence more than half of the drivers.

Perhaps of greater importance is an assessment of the role of planning policy in building robust competitive advantage. Of the 11 drivers in which are adjudged to have high robustness as competitive advantages (see Section 5.2 for discussion), planning policies can be seen to play a critical, secondary or supportive role in 7 - see Table 8.1. This is not surprising. It reflects the fact that urban policy generally deals in locationally specific factors, in entities which generally take a long time to reshape or redirect (eg metropolitan areas in advanced countries) and environmental attributes which can have a major bearing on quality of life and the ability to attract and retain skills.

*Table 8.1: Competitiveness and Planning Policy.*

<i>Regime of Competitiveness</i>	<i>Economic Driver</i>	<i>Potential for robust competitive advantage</i>	<i>Influence of urban planning policy/metropolitan strategy</i>	<i>Relevant Levers</i>
<i>(a) Low Risk Business Environment</i>	<ul style="list-style-type: none"> <li>▪ Stable government and judicial institutions.</li> <li>▪ Independent anti-corruption institutions.</li> </ul>	<b>Moderate</b>		
	<ul style="list-style-type: none"> <li>▪ Independent industry regulators (e.g. telecommunications, media, infrastructure, etc.)</li> </ul>	<b>Moderate</b>		
	<ul style="list-style-type: none"> <li>▪ Stable financial markets with strong prudential regulation and transparent trading.</li> </ul>	<b>Moderate</b>		
<i>(b) Low Cost Structures</i>	<ul style="list-style-type: none"> <li>▪ Excellent civic, regional and national leadership.</li> <li>▪ Competitive market structures for service and material inputs.</li> </ul>	<b>Moderate</b>	<b>Supportive</b>	<ul style="list-style-type: none"> <li>▪ Overarching planning legislation facilitating community involvement in strategic planning and clear partnerships between the spheres of government.</li> </ul>

Table 8.1: Continued

<b>Regime of Competitiveness</b>	<b>Economic Driver</b>	<b>Potential for robust competitive advantage</b>	<b>Influence of urban planning policy/metropolitan strategy</b>	<b>Relevant Levers</b>
<b>(b) Low Cost Structures (Continued)</b>	<ul style="list-style-type: none"> <li>▪ Flexible labour markets and industrial relations system.</li> <li>▪ "Natural monopoly" in electricity generation, transmission and retailing reformed or regulated to produce competition like outcomes.</li> </ul>	<p><b>Moderate</b></p> <p><b>Low</b></p>	<p><b>Supportive</b></p> <p><b>Supportive</b></p>	<ul style="list-style-type: none"> <li>▪ Public transport strategies</li> <li>▪ Activity centre policy</li> <li>▪ Transportation pricing policy</li> <li>▪ Infrastructure co-ordination systems and land release strategies.</li> <li>▪ Development standards (to facilitate efficient cable roll out).</li> </ul>
	<ul style="list-style-type: none"> <li>▪ "Natural monopoly" in water supply and sewerage systems reformed or regulated to produce competition like outcomes.</li> </ul>	<p><b>Low</b></p>	<p><b>Supportive</b></p>	<ul style="list-style-type: none"> <li>▪ Infrastructure co-ordination systems and land release strategies.</li> <li>▪ Catchment protection policy</li> <li>▪ Development standards (to facilitate efficient roll out and maintenance of reticulated infrastructure).</li> </ul>
	<ul style="list-style-type: none"> <li>▪ "Natural monopoly" in telecommunications infrastructure reformed or regulated to produce competition like outcomes.</li> </ul>	<p><b>Moderate</b></p>	<p><b>Supportive</b></p>	<ul style="list-style-type: none"> <li>▪ Infrastructure co-ordination systems and land release strategies.</li> <li>▪ Development standards (to facilitate efficient cable roll out).</li> </ul>

<i>Regime of Competitiveness</i>	<i>Economic Driver</i>	<i>Potential for robust competitive advantage</i>	<i>Influence of urban planning policy/metropolitan strategy</i>	<i>Relevant Levers</i>
<i>(b) Low Cost Structures (Continued)</i>	<ul style="list-style-type: none"> <li>▪ "Best practice" investment in and management of roads infrastructure.</li> <li>▪ "Best practice" investment in and management of rail freight infrastructure.</li> <li>▪ "Best practice" investment in and management of seaports infrastructure.</li> <li>▪ "Best practice" investment in and management of airports infrastructure.</li> <li>▪ High quality airline connectivity.</li> <li>▪ Cost effective regulatory environment</li> <li>▪ World competitive company tax regime</li> </ul>	<p><b>High</b></p> <p><b>Low</b></p> <p><b>Low</b></p> <p><b>High</b></p> <p><b>Moderate</b></p> <p><b>Moderate</b></p> <p><b>Low</b></p>	<p><b>Critical</b></p> <p><b>Critical</b></p> <p><b>Secondary</b></p> <p><b>Critical</b></p> <p><b>Critical</b></p> <p><b>Critical</b></p> <p><b>Critical</b></p>	<ul style="list-style-type: none"> <li>▪ Public transport strategies</li> <li>▪ Road network planning reservation of rights of way.</li> <li>▪ Activity centre policy</li> <li>▪ Transportation pricing policy</li> <li>▪ Parking policies</li> <li>▪ Activity centre policy</li> <li>▪ Employment zone policy and standards</li> <li>▪ Activity centre policy</li> <li>▪ Employment zone policy and standards</li> <li>▪ Activity centre policy</li> <li>▪ Employment zone policy and standards</li> <li>▪ Strategic reservation of airport sites.</li> <li>▪ Activity centres policy</li> <li>▪ Employment zone policy and standards</li> <li>▪ Overarching legislation regarding land use 'licensing', including</li> </ul>

Table 8.1: Continued

<i>Regime of Competitiveness</i>	<i>Economic Driver</i>	<i>Potential for robust competitive advantage</i>	<i>Influence of urban planning policy/metropolitan strategy</i>	<i>Relevant Levers</i>
<i>(b) Low Cost Structures (Continued)</i>	<ul style="list-style-type: none"> <li>▪ Well organised urban regions/settlement pattern for production logistics.</li> </ul>	<b>High</b>	<b>Critical</b>	<ul style="list-style-type: none"> <li>▪ Metropolitan form and density</li> <li>▪ Activity centre policy</li> <li>▪ Public transport strategies</li> <li>▪ Road network planning</li> <li>▪ Transportation pricing policies</li> </ul>
<i>(c) Quality Access</i>	<ul style="list-style-type: none"> <li>▪ High incidence of scientific skills in the labour force.</li> </ul>	<b>High</b>	<b>Supportive</b>	<ul style="list-style-type: none"> <li>▪ Policies to enhance 'urban quality' residential planning standards heritage conservation activity centre policy (especially vibrancy of metropolitan central activities district) commuter / business integration with regional centres (maximising lifestyle choices) urban design policies and conventions</li> </ul>
	<ul style="list-style-type: none"> <li>▪ High incidence of other professional skills in the labour force.</li> </ul>	<b>High</b>	<b>Supportive</b>	<ul style="list-style-type: none"> <li>▪ Policies to enhance 'urban quality' (see above)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Secure supply of technical/trade skills.</li> </ul>	<b>Moderate</b>	<b>Supportive</b>	<ul style="list-style-type: none"> <li>▪ Policies to enhance 'urban quality' (see above)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ A high quality university system.</li> </ul>	<b>High</b>		

Table 8.1: Continued

<b>Regime of Competitiveness</b>	<b>Economic Driver</b>	<b>Potential for robust competitive advantage</b>	<b>Influence of urban planning policy/metropolitan strategy</b>	<b>Relevant Levers</b>
<i>(c) Quality Access (Continued)</i>	<ul style="list-style-type: none"> <li>▪ A high quality school education system.</li> <li>▪ A pervasive R&amp;D culture.</li> </ul>	<b>High</b>		
	<ul style="list-style-type: none"> <li>▪ An entrepreneurial and risk taking culture.</li> </ul>	<b>High</b>		
	<ul style="list-style-type: none"> <li>▪ Liberal migration laws for people with professional skills.</li> </ul>	<b>Low</b>		
	<ul style="list-style-type: none"> <li>▪ A tolerant culture open to new ideas.</li> </ul>	<b>High</b>	<b>Supportive</b>	<ul style="list-style-type: none"> <li>▪ Policies to enhance 'urban quality' (see above)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Liveable cities and regions with the capacity to attract and hold a highly skilled workforce.</li> </ul>	<b>High</b>	<b>Critical</b>	<ul style="list-style-type: none"> <li>▪ Policies to enhance 'urban quality' (see above)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Presence of globally recognised business clusters, engaging in high levels of international exports and facilitating strong inward investment.</li> </ul>	<b>Moderate</b>	<b>Secondary</b>	<ul style="list-style-type: none"> <li>▪ Activity centre policy</li> <li>▪ Employment zone policy and development standards</li> </ul>

### **8.3 Priority Areas in Planning Policy**

By relating the types of planning policy levers relevant to each driver of competitiveness to the robustness of the drivers, it is possible to set priorities on policy development effort within urban planning and metropolitan strategy formulation.

Generally speaking, the policy levers which are most relevant to drivers with a high degree of robustness are:

- Policies to enhance '*urban quality*' for example:
  - ❑ Road network planning;
  - ❑ Activity centres policy;
  - ❑ Employment zone policy and standards; and
  - ❑ Airports policy.

Planning policy initiatives in the following areas are undoubtedly important, but they cannot be expected to yield sustainable advantage from a regional economic development point of view.

- ❑ Overarching planning legislation facilitating clear partnerships between the spheres of government
- ❑ Land use 'licensing', including transparent and accountable administrative review processes
- ❑ Planning scheme structure and legibility.
- ❑ Infrastructure co-ordination and land release systems.

## **9 RECOMMENDATIONS**

### **9.1 Ground-truthing Competitiveness**

It is recommended that the drivers of economic competitiveness be 'bounced off' corporate leaders in Melbourne to ensure their accuracy and concision. Presentation of the study findings to an invited room of corporate leaders would most likely be the best means for achieving this. Such a presentation may also lift private/ public ownership of specific projects which boost specific drivers of competitiveness.

### **9.2 Monitoring Competitiveness**

Numerous studies benchmarking Melbourne's competitiveness with respect to certain economic drivers have been completed. Though these may have been initiated for different purposes there is certainly a common interest in the results from numerous public sector organisations, including the Dept. of Infrastructure, the Dept. of State and Regional Development and the City of Melbourne not to mention other State Capital based Governments.

Alternatively, it may be appropriate for a national body such as the Council of Capital City Lord Mayors to establish a common framework for undertaking further benchmarking studies. Such a national focus will allow common economic foundations to be researched more efficiently and may promote sufficient resource allocation to remedy the numerous data gaps discovered during this study.

### **9.3 Implications for Planning Policy**

This study has not been directed at developing specific planning policies to promote Melbourne's and Victoria's competitiveness. However, as illustrated in the foregoing Chapter, it provides a conceptual framework for rating the contributions which different types of planning policies might make in building a prosperous State.

In particular, the study has identified where planning policy can contribute to long lived competitive advantage. Some examples of specific initiatives which, prima facie, could have such an effect are

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indicated in the table below. It should be noted that the listed initiatives are illustrative rather than exhaustive of the possibilities.

***Priority field of  
planning policy***

***Possible initiatives***

*Urban quality*

- Expand Victoria's lifestyle 'offer' through better integration of key regional centres within metropolitan Melbourne. Fast train links and telecommunications infrastructure have a vital role to play, but should be matched by policies to preserve landscape and environmental quality in the regions.
- Retain a strong emphasis on capital city policy, continuing to invest in down town cultural, educational, entertainment and sporting infrastructure. Improve regional access to the City, rather than spread available investment and risk losing critical mass.
- Substantially increase resources for urban design 'consciousness raising', to build a metropolitan wide reputation for quality design and living.

*Public transport  
strategies*

- Address key system gaps and deficiencies- e.g. City Loop capacity constraints, CBD - airport rail link.
- Consider deployment notional car parking contributions for public transport enhancement.

*Road network planning*

- Develop shadow tolling policies and strategies to maintain private sector interest in arterial road investment.
- Re-examine the feasibility and utility of more generic tolling of key arterial roads or 'cordon pricing'.

*Activities centres policy*

- Retain and renew policy for a limited number of major centres in Melbourne's suburbs and regional Victoria - principally to provide the urban quality to support advance business service formation.

*Employment zone  
policy*

- Abandon official distinctions between various forms of industry (with the possible exception of 'Hazardous'), in favour of more generic employment zones providing for a mix of uses, including residential, retail and entertainment, linked to the onsite employment or production processes. Focus on design quality and environmental performance standards in regulating land use - as opposed to arbitrary land use categories.

*Airports policy*

- Resolve the site for Melbourne's second international airport.
- Develop a specific economic development strategy for the CBD - Airport corridor.

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