Introduction

As the world becomes more urbanised and economic activity more globalised, trade between cities is growing at a faster rate than trade between nations.

Through agglomeration economies—that is, the benefits that result from the clustering of activities—and their flow-on effects on innovation and specialisation, cities can achieve a considerable productivity premium. Such a premium may be expanded through strategic city management of land use, amenity, infrastructure and labour market skill development.

To realise this productivity potential, businesses in Australian cities need to be globally competitive—not merely in cost terms but also in terms of access to the benefits of innovation and skilled labour markets that cities can provide. Cities are competing against each other to attract scarce globally skilled labour, harness creativity and innovation, and enhance their attractiveness as places to live, visit and do business.

National governments around the world have recognised the increasing significance of global comparison in influencing decisions to migrate, locate and relocate businesses. They are making substantial investment in infrastructure necessary to maintain or increase their attractiveness as world cities.

The global competitive imperative has seen the development of a number of global city indicators that enable cities to assess their relative global ranking. These indicators range from comprehensive indices measuring overall competitiveness to indices that measure relative performance in key areas such as economic size, global connectivity, financial significance, relative cost of living and quality of life.

It is important that Australian cities monitor and benchmark themselves not just against their national counterparts but also against other world cities, particularly their perceived competitors in the Asia-Pacific regions of the global economy, such as Singapore and Shanghai.

This chapter compiles a selection of available indices that measure the performance of Australian cities in this international context.
Summary indicators

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| Comprehensive global city indicators | Global City Index Report  
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| Economic outcomes and size      | City Gross Domestic Product (GDP) based on Purchasing Power Parity (PPP)  
                                                                                     | Gross Domestic Product (GDP) per capita of world cities based on Purchasing Power Parity (PPP) |
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| Quality of life                 | Mercer Quality of Living report  
                                                                                     | The Economist Quality of Living |
| Economic inequality             | UN-HABITAT State of the World’s Cities: Harmonious Cities |
| Global perceptions and branding | Anholt-GfK Roper City Brands index |

Key findings

Australian cities rank highly on an international comparison, particularly on indices that measure quality of life and global connectivity, and measures related to the social condition of people. There is evidence to suggest that Australian cities suffer with respect to infrastructure. Of concern is the evidence that suggests a decline in international relative performance and perception in the past five years.

Global city indicators

Every city, no matter how small in population terms, increasingly has a global component. Sydney and Melbourne are frequently referred to as Australia’s global cities. Increasingly Perth, Brisbane and the other Australian major cities have a larger global imperative and are appearing in global comparative analyses.

One problem in compiling a global city indicator set is the availability of the data on a comparable and consistent basis—at a city level—across nations. The consequence is that many supposed city-based comparisons end up using national data, which negates the city basis of the analysis.

Several other national governments from Europe, United Kingdom, Canada, South Africa and New Zealand have compiled ‘State of the Cities’ type reports from domestic data sources. Unfortunately, these are often ad hoc and the data are not readily comparable between cities globally because the data can often relate to different classifications, definitions and methodologies applied during development.
The United Nations HABITAT, the European Commission and the OECD have begun to collect and publish material at a city level through expanded programs highlighting the importance of consistent global databases.

This chapter looks at these global data sources and current results as they impact on Australian cities. Because these studies are global in scope, generally they require a selection of what are defined as global cities from each nation—not all cities are included. In the case of Australia, most of these studies select Sydney and, possibly, Melbourne. Occasionally, Brisbane, Perth, Adelaide and Canberra are also incorporated. However, the datasets are not comprehensive in their treatment of all major cities in Australia. Nonetheless, the inclusion of Sydney and Melbourne at least provides a touchstone for other cities in respect of global engagement.

Global City Index Report

The Urban Land Institute (2008) released a Global City Index report which reviewed approximately 30 major indices that measure factors ranging from investment prospects to climate change mitigation to overall community liveability. The emphasis of this report was not a ‘ranking’ of global cities, but an understanding of the drivers of global city success.

The report divides the indices into four key clusters that illustrate the core strengths and weaknesses of cities: Global Economic Reach; Quality of Life; Investment and Fiscal; Image and Attractiveness. Sydney (the only Australian city included) is clustered with Paris and London, together with Vancouver, Venice and Vienna in equal third place in the Image and Attractiveness criteria.

Global Power City Index

Given the increased global competition among cities economically, the Japan-based Mori Memorial Foundation (2009) has released a comprehensive ranking of the world’s major cities in its Global Power City Index (GPCI). The Global Power City Index examines a variety of functions representing the strengths of cities to create a comprehensive ranking of the world’s cities.

Thirty-five of the world’s major cities (including Sydney) are objectively evaluated on six main functions: Economy, Research and Development, Cultural Interaction, Liveability, Ecology and Natural Environment, and Accessibility. The study also examines these cities from the subjective perspectives of Managers, Researchers, Artists, Visitors and Residents—that is, those related to the perspectives of business, science, the arts, those not from the city and those that live in the city. A total of 69 indicators are used for the functional analysis.

Among the 35 cities studied, Sydney ranked 14th overall, in the company of Toronto, Frankfurt and Los Angeles, behind the familiar New York, London, Paris and Tokyo leaders. Within the Asia-Pacific region, Sydney ranked 5th behind Tokyo, Singapore, Hong Kong and Seoul, but ahead of Shanghai, Osaka and Beijing.

However, the study points to several key aspects of concern for Sydney (and, indirectly, for all Australian cities), highlighted in Figure 2.1 which shows the deviation from the median score for Sydney on each of the six function-specific scores. Sydney ranks relatively highly on a global scale for Cultural Interaction functions (resources for attracting visitors, volume
of interaction and ‘trendsetting’ potential) and in the Ecology and Natural Environment score. However, it ranks relatively poorly on the Accessibility score reflecting international and inner-city transportation infrastructure. It also ranks below the median on Liveability, which incorporates a number of indicators related to ‘life support functions’, security and safety, and the working environment.

**Figure 2.1**  Function-specific ranking of Sydney, deviation from the global medians

![Graph showing function-specific ranking of Sydney.](source: Power City Index (GPCI) 2009)

**PricewaterhouseCooper Cities of Opportunity study**

In partnership with New York City, PricewaterhouseCooper (PwC) (2007a) conducted a comprehensive study of 20 world hubs of finance and commerce. This study included Sydney in its examination of 51 variables classified into 10 overall indicators: Intellectual Capital; Technology IQ and Innovation; Transportation and Infrastructure Assets; Demographic Advantages; Cost; Financial Clout; Lifestyle Assets; Health, Safety and Security; Ease of Doing Business; and Sustainability.

The objective of the study was to analyse how cities are moving to take advantage of the opportunities offered by an interconnected world. The study noted that Sydney’s natural strengths and forward-looking policies pull it up from the lowest third in power (16th) to the highest grouping when size is removed from the equation (6th). Sydney also attained a competitive advantage in terms of cost versus purchasing power (7th out of the 20 cities examined).
Sydney lagged in terms of economic strength to attract global business (18th) but rose to 3rd in terms of ‘rolling out the welcome mat for a global economy’. In terms of the quality characteristics to build tomorrow through intellect and innovation, Sydney ranked 6th.

However, in terms of Infrastructure Assets, Sydney ranked 20th of the 20 cities examined. This result needs to be qualified by the fact that many of the variables used in the study are absolute measures that favour the largest cities in the study. However, Sydney is assessed as still performing relatively poorly on a number of ‘Quality’ infrastructure variables. It should be noted that the infrastructure variables utilised are predominantly related to transport, and are not as broad as variables used in other comparative studies.

Conversely, Sydney ranked relatively highly (4th) on a number of Sustainability indicators and only marginally behind the score for the three equal top ranked cities: Frankfurt, New York and Paris.
Economic outcomes and size

Based on estimated City Gross Domestic Product (GDP), the Sydney Metropolitan area ranks 26th among the world's 150 major cities (PricewaterhouseCooper 2007). To adjust for price differences between cities, comparison is based on the concept of Purchasing Power Parity (PPP). Expressed in $US billion, Sydney produced a total of $172 billion output in 2005. This put it in the company of Moscow, Madrid and Seattle. It was ranked in the top 10 (5th) among Asia-Pacific cities.

Melbourne's estimated GDP of $US135 billion ranked it 33rd in the world. This places it in the company of Barcelona, Shanghai and Istanbul. Based on estimates using a similar methodology to the PricewaterhouseCooper study, Brisbane and Perth would rank relative to Athens, Manchester and Hamburg, and Adelaide in the company of Oslo and Prague.

As outlined in Figure 2.2, in comparison, New York and Tokyo are the world cities producing the most output, at approximately $US1150 billion each on a comparative basis. London, Paris and Chicago each produced approximately $US460 billion. Between them the 50 largest cities in the world produced 20 per cent of the world's economic output, and the top 20 more than one-eighth of world output.

To account for mere differences in population size, per capita output is used as a more valid basis of comparison of the economic performance of world cities. As outlined in Figure 2.3, Sydney and Melbourne rank slightly higher in such comparison behind New York and other US cities as well London, Paris and the European finance city of Frankfurt.

This comparative economic study used 2005 data. The current global economic recession may well have substantially altered these rankings as the cities in different nations have been impacted and responded to changed economic circumstances. Similarly, changes in population growth, urbanisation and per capita income growth could well alter these output results into the future, particularly with the emergence of a number of global cities in China and India.

The OECD (2006) in its *Competitive Cities in the Global Economy* report undertook an analysis that suggested that the additional productivity of major cities in Australia (over and above national labour productivity) was one of the lowest of the OECD member nations examined. Note that the OECD report are derived from state estimates of GDP and productivity for Australia and, for Sydney and Melbourne, use New South Wales and Victorian productivity estimates which are then compared to city-specific productivity estimates for cities in other countries. According to the OECD, the rankings under this criterion were led by the central European nations of Austria, Hungary and the Czech Republic, as well as Portugal and the United States.
Figure 2.2 GDP of international and Australian cities

Note: Figure only shows a subset of cities that were included in the study.
Source: PricewaterhouseCooper 2007b and estimates derived from Australian Bureau of Statistics, National Accounts
Figure 2.3 GDP per capita of world cities

Source: Derived from PricewaterhouseCooper 2007b
Commerce and finance

Given the significance of the advanced producer services sector, including finance, in the global economy, many studies have concentrated upon these industries as a basis for global city comparison.

Global connectivity

The most comprehensive of these comparisons is the database built by the Global and World Cities project (GaWC) (2008), originating from Loughborough University in the United Kingdom. Studies in this project have examined the degree of connectivity of cities to the global economy through analysing activity by global firms operating in the areas of finance, law, accountancy and business services.

The 2009 update of this information (Taylor et al. 2009), incorporating data from Asia and China in particular, has resulted in a substantial re-assessment of each city’s degree of global connectivity. In particular, cities based on the East Asian arc, including Sydney, Singapore, Shanghai and Beijing, have risen considerably in relative ranking as shown in Figure 2.4.

Figure 2.4 The world according to the Global and World Cities project

Source: Global and World Cities Project 2008.

In this ranking of global connectivity, Sydney is classified as an ‘Alpha +’ city, with the 7th highest level of connection to the global economy behind New York, London, Tokyo, Paris, Hong Kong and Singapore.
Melbourne is rated a ‘Beta +’ city (ranked approximately 41st in connectivity, in the company of Barcelona and Los Angeles) and Brisbane as ‘Gamma+’ (ranked approximately 88th, with Stuttgart and Vancouver). Perth is designated a ‘Gamma’ city (in the company of Rotterdam, Philadelphia and Manchester). Adelaide and Canberra also feature as cities of ‘high sufficiency’ in terms of global connectivity.

**Financial centres**

The annual MasterCard (2008) survey of what it considers the world’s 75 major commercial and financial centres placed Sydney 12th in 2008, an increase in its ranking of 14th in 2007. This placed it adjacent to Madrid and Toronto. In 2008, Melbourne was ranked 34th, ahead of Bangkok and just behind Barcelona. No other Australian cities are included in this annual survey.

Half of the variables used to construct a score for ranking are based upon national and not city-based data. Conversely, information on national regulatory and legal frameworks clearly has an influence on comparative competitiveness of cities in terms of international standards of transparency, corruption and macro-economic policy settings.

The financial services workforce of Sydney is nearly half the size of London’s and more than 40 per cent of the size of New York City’s. A number of studies based on capital flows and transactions have placed Sydney about 10th and 11th in significance as a financial centre. Increasingly, as they expand and diversify, Melbourne and Brisbane are considered as emerging financial centres.

The City of London (2009) issues a six-monthly Global Financial Centres Index (GFCI) of competitiveness between 75 of the world’s financial centres. This is based on five areas of competitiveness—people, business environment, market access, infrastructure and general competitiveness.

The index confirms London and New York as the dominant global financial centres, well ahead of the two Asian centres of Hong Kong and Singapore. In 2009, Sydney ranked 11th and Melbourne 34th—the only two Australian cities included in the study. The notable result was the rise of Asian cities. In the 2007 report, where Sydney ranked 7th, the authors made the comment:

> A strong national centre with good regulation, offering a particularly good quality of life. Sydney is strong in four of the key competitiveness areas but falls outside the top ten for people—many financial professionals leave for large English-speaking centres (City of London 2007).

One of the key messages here is the need to retain skilled labour and avoid a ‘brain drain’ to other global centres.

Given the concentration of such advanced producer industries within the central business districts of Australia’s major cities, a broader proxy indicator of global activity can be obtained from the stock of Premium and A-Grade office stock in international cities from global real estate organisations, such as Colliers, CBR Ellis, Knight Frank and Jones Lang LaSalle. Generally, Australia’s mainland state capital cities are included in such comparison. In this index, Sydney’s central business district ranks 14th in terms of office floorspace stock, and its metropolitan area 23rd. Office rents in Australian cities are in the middle range of the rankings produced by these agencies.
Relative cost of living

The Mercer Human Resource Consulting Corporation (2009a) conducts an annual cost of living survey. This survey is designed to collect prices of over 200 standard goods and services in more than 250 cities in 39 countries. These data are then used to calculate a cost of living index that accommodates differences in shopping habits.

Since the basis of Mercer’s analysis is to advise clients on appropriate remuneration adjustments for US expatriates, New York is used as the base city for the index and scores 100 points. All cities are then compared against New York and currency movements are measured against the US dollar. This means that significant variations can occur between years based on currency movements. For instance, in the latest 2009 cost-of-living survey Sydney remains the most expensive city in the Australasian region but has dropped from 15th in 2008 to 66th. Melbourne follows in 92nd place, down from 36th. Auckland has moved down to 138th place from 78th. The principal reason for such dramatic falls lies in the significant exchange rate variation of Australian and New Zealand dollars against the US dollar at the time of the survey.

The Economist Intelligence Unit (2010) does a similar Worldwide Cost of Living survey based on 160 products and services in over 130 cities across 86 countries, as does ECA International. However, currency movements again play a major role in cost-of-living ranking movements.

Notwithstanding such currency fluctuations, Australian cities are generally perceived as being considerably cheaper than European cities, but relatively expensive compared to Asian cities, although Tokyo generally vies with London for ‘most expensive city’ ranking. Australian cities have tended to cluster in the middle of the rankings.

The Union Bank of Switzerland (UBS) (2009) produces a tri-annual comparison of purchasing power in 73 cities around the globe that is more geared towards companies than consumers. This includes detailed information on both prices and wage-levels for specific occupations and data on hotel accommodation. Based on a similar methodology to the other studies in relating cities to a New York standard, the results confirm that Sydney lies in the middle of rankings of world cities for price levels, while its wages for specific occupations tend to be in the higher side of the middle. For 2009, the UBS Survey ranked Sydney 38th out of 73 world cities for relative price expensiveness, 20th for gross wage levels and 16th for after-tax income levels.

In summary, while Sydney is generally at the high, more expensive end of the ranking for cost of living among major cities within Australia, it is reasonably competitive in terms of international price levels for both businesses and consumers. Thus, Australian cities are generally competitive internationally as far as domestic costs are concerned.

There are, however, important exceptions to this—particularly in the area of housing affordability. Similarly, these international cost-of-living studies rarely include international costs of transport for both freight and passengers, which may adversely affect the ability of Australian cities to compete effectively with other world cities over cost/price.
Quality of life city ranking

Increased globalisation of the national economy and ageing of the population on the global scale is resulting in a demand for increasingly scarce skilled labour able to participate in that global economy. Education programs are an important adjunct to training this new workforce but immigration and attracting skilled workers are becoming increasingly important aspects of a city’s global competitiveness. For that reason business and governments around the world are recognising the economic value of quality-of-life indicators.

As a global remuneration consultant, the Mercer Human Resources Consulting group (2009b) conducts an annual quality-of-living survey designed to provide an objective assessment of the quality of living in 235 cities worldwide. The aim of the survey is for multinational operating companies to use it to determine where they will open offices or plants and to assess how much to pay their global employees.

The outputs of the research are used to produce a quality-of-living city ranking. The ranking is based on an assessment and evaluation of 39 quality-of-life determinants grouped into various categories. These include the natural environment; political and social environment; public services; infrastructure and transportation; schools and education; housing; economic environment; consumer goods; socio-cultural environment; medical and health considerations; and recreation opportunities and facilities. New York is again used as a base with a score of 100 points.

Recent studies have revealed that the five Australian cities included in the survey (Sydney, Melbourne, Perth, Brisbane and Adelaide) have remained at the top of the list of most liveable cities.

Australian cities have been ranked in the top 35 of these 235 cities for each year for the past 5 years. For 2009, Sydney is ranked 10th, Melbourne 18th and Perth 21st on the Mercer Quality of Living index. Adelaide ranks 30th and Brisbane 34th.

The upper echelons of the rankings are dominated by cities in Germany, Switzerland and Austria, with some Canadian and New Zealand cities in the top 20. However, closer analysis reveals that many of these cities are of a population range between 500,000 and 1 million. Sydney, Melbourne and Brisbane are among the few, along with the German cities (Munich, Frankfurt and Berlin) and Canadian cities (Toronto and Montreal), that are in the order of 2 million and above population.

Each year Mercer undertakes a more specific examination of one aspect of city quality. For 2009, this was infrastructure. Mercer identified cities with the best infrastructure based on electricity supply, water availability, telephone and mail services, public transport provision, traffic congestion and the range of international flights from local airports. The results of this saw Sydney ranked 11th, Melbourne 35th and the other major Australian cities—Adelaide, Brisbane and Perth—ranked equal 38th. Singapore was at the top of this index followed by Munich in second place and Copenhagen third.

However, despite their high ranking, Australian cities are slipping in comparison to other international cities (Figure 2.5).
Compared to 2004, Sydney has slipped in this quality-of-living ranking from 5th to 10th; Melbourne from 12th to 18th; Perth from 20th to 21st; Adelaide from 24th to 30th; and, Brisbane from 24th to 34th. Mercer (2009b) attributes the rise of cities that have supplanted the Australian cities to investment in infrastructure such as transport and housing.

The other major quality-of-living survey of international cities is conducted by The Economist Intelligence Unit (EIU) (2009). The study assesses cities on the basis of stability, health care, education, infrastructure, and culture and environment.

This annual report also consistently places Australia’s major cities as among the world’s most liveable cities. For the 2009 study, Australian cities occupy five of the top 20 places in the ranking of the liveability of 140 of the world’s major cities. The other top places are dominated by cities from Canada, Switzerland and Austria. Melbourne ranked third in the world, behind Vancouver and Vienna. Perth was equal 5th with Calgary in Canada, with Sydney sharing 9th place with Zurich, Adelaide in 11th place and Brisbane 16th on the list.

Cities that score best in the research tend to be mid-sized, in developed countries with a low population density, benefiting from cultural or recreational availability but with lower crime levels or infrastructure problems that can be caused by large populations.

Again, it is notable that it is only the Australian and Canadian larger cities that make the top rankings of this study. However, as with the Mercer study, while still ranking highly, Australian cities have slipped in ranking in recent years. Compared to 2004, all the Australian cities have slipped backwards. Melbourne has gone from equal 1st with Vancouver to 3rd; Perth from 4th to 5th; Sydney from equal 6th to 9th; Adelaide from 6th to 11th; and, Brisbane from 6th to 16th. Generally, the rising cities are those from Canada, including Toronto and Calgary.
Economic inequality

While economic inequality is essentially established structurally at a national level, cities, through urban pattern, accessibility and infrastructure can act to either exacerbate or mitigate economic inequality outcomes among their residents. There may be significant income distribution differences among cities, even within the same country, which shows that national aggregates are not necessarily reflected at the local level. Given the connection between economic and social inequality, this can reflect the level of social capital among those citizens and therefore represent an important component of social cohesion in global terms.

The United Nations Human Settlements Programme (UN-HABITAT) (2008) has begun to compile a database of estimated inequality of cities of the world, with results first published in the State of the world's cities 2008/09: Harmonious cities. The inequality measure utilised is the Gini Coefficient (which ranges from 0 for absolute equality to 1 for absolute inequality, with 0.4 being an international alert line) and the data relate to household income and the years 2003–2006.

However, because the data differs slightly in the concepts of income used, the results can only be reported in broad terms. With that caveat, the data show that Western European cities tend to be the most equal in the world, followed by East Asian cities. Both Sydney and Melbourne are in the top 20 among European cities. Canadian cities are slightly more unequal, and US cities even more so. Finally, large cities in South America and South Africa head up the inequality list. Generally, this reflects a national ranking of economic inequality. Moreover, there are suggestions that inequality tends to be greater in cities of greater population size.

Global perceptions and branding

The final set of global city indicators centre around perceptions that overseas people have of our cities. Since these are based on panel or reader assessments, they are highly subjective. However, they can reveal important elements of our cities’ strengths and weaknesses as perceived by others.

Various international travel magazine surveys have consistently placed Sydney and other Australian cities at the very top of ‘favourite city destination’ surveys. While they could readily be discounted as serious research, there is an economic value in the in-bound tourism industry. All of these readers’ surveys consistently refer to the warmth and friendliness of the people, complemented by natural climatic attributes and the variety of available experiences. Again, the latest 2009 results of these surveys show a decline in Sydney’s dominance, although this could be a response to the distance and cost of Sydney from the market for such surveys (USA and UK) at a time of economic recession (Conde Naste Traveler 2009).

However, of greater relevance for this report is the Anholt-GfK Roper City Brands index (2010) based on interviews with more than 10,000 people from 20 countries across the globe. The index attempts to measure the quality of the City’s ‘brand’ globally. This survey asks participants to judge cities on the basis of Presence (knowledge of city and perception of its global contribution); Place (cleanliness, aesthetic qualities and climate); Prerequisites (affordable accommodation and quality of public amenities); People (friendliness, personal encounters and cultural diversity); Pulse (interesting events, activities and lifestyles); and Potential (perception as a good place to do business, to find a job and go to school).
Sydney was ranked as the top city brand in 2007 and 2008, ahead of Paris, London, New York, Rome and Barcelona. According to the survey directors, this was largely due to Sydney’s ability to score highly on perception in all categories, rather than being outstandingly good or bad in any—its ‘well-rounded’ perception. However, they noted that most of the study participants had not actually visited Sydney but their perceptions had been formed by the memory of the 2000 Olympics.

For 2009, Sydney has been overtaken by Paris for the top City Brand spot.

Sydney was still ranked in first place in the People, Place and Pre-requisites categories. Melbourne also ranked third in the People brand category. However, Paris' big lead over Sydney in the Presence and Pulse dimensions were sufficient to push Paris into the top position overall.

These dimensions relate to perceptions of a city’s global contribution and knowledge of a city’s diversity of interesting events and activities. They highlight the challenge that Sydney and all the Australian cities have to affect perceptions of them on a global scale and their ability to realise their potential.

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