Knowledge is Power: Measuring the Competitiveness of Global Sydney

April 2013

Sydney as a Global City

A direct impact of contemporary globalisation on Sydney is its rise as a global city. As Australia’s foremost global city, Sydney is home to the country’s highest number of head offices for international institutions and foreign banks. It is an important cog in the national and international economy, linking Australia with the world through business transactions, knowledge sharing, and people movement. These links allow Australia to compete in an integrated world economy through Sydney and its other global cities.

Sydney’s status as a global city is reflected by its high concentration of knowledge-intensive industries, its skilled workforce, and capacity to innovate. Such attributes define the competitiveness of global cities, and determine Sydney’s positioning in the global city hierarchy.

Global Competitiveness Index (GCI)

Researchers from the ANZSOG Institute for Governance at the University of Canberra, and the Commonwealth Department of Immigration and Citizenship (DIAC), are embarking on a range of projects to better understand the competitiveness of Australian cities in the context of globalisation. One of these is the creation of a Global Competitiveness Index (GCI) for Sydney.

The GCI results are based on Census data from 2001 and 2011. They show where industries and occupations of high importance to global cities are concentrated within the Sydney region, as well as changes in workers’ qualification levels and income. This has been done by comparing results in each of the Sydney region’s 43 local council areas.

How the GCI is measured

The GCI is a weighted index that considers the following indicators based on place of work:

- Workers in knowledge-intensive industries;
- Workers in highly-skilled occupations;
- Workers with a university qualification; and
- Workers’ income.

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GCI findings: Sydney’s economic movers and shakers

- City of Sydney was by far the highest ranking local council in both 2001 and 2011.
- North Sydney ranked a clear second in both 2001 and 2011.
- Scores for City of Sydney and North Sydney reflect the high concentration of knowledge-intensive industries and highly-skilled occupations within central areas of global cities.
- High-ranking council areas are generally close to Sydney’s Global Arc (see below).
- Ryde, Willoughby, and Lane Cove made up the rest of the top five areas in the 2011 GCI. Ku-ring-gai, Canada Bay and Parramatta were also in the top ten.
- Lower-ranking councils are mostly on Sydney’s urban fringe. Wyong ranked the lowest in both 2001 and 2011, preceded by Camden, Wollondilly, Hawkesbury, and Fairfield.
- Ryde experienced the highest increase between 2001 and 2011. Canada Bay, Auburn, and City of Sydney also had considerable increases.
- Some council areas recorded noticeable decreases between 2001 and 2011 – including Lane Cove, Burwood, Mosman and Willoughby.

Please note:
- The Leichhardt council area was geographically smaller in 2011 than in 2001, due to some of its land being transferred to the City of Sydney council in 2003.
- 2001 results for City of Sydney also include the former South Sydney council area. The City of Sydney and South Sydney councils amalgamated in 2004.

### Sydney’s Global Arc

Sydney’s Global Arc is an economic corridor of jobs and major infrastructure stretching from Macquarie Park to Port Botany through Chatswood, St Leonards, North Sydney, the Sydney CBD and Sydney Airport.

The Global Arc has been built on the benefits that businesses involved in industries such as finance, legal services, information technology, engineering and marketing have gained from being close to each other and to Sydney’s transport infrastructure. This has seen the Global Arc emerge as a critical feature of Sydney and Australia’s economy.

From the NSW Government’s “City of Cities” Metropolitan Strategy (2005)

### Table 1: GCI results, 2001 and 2011

<table>
<thead>
<tr>
<th>2011 rank</th>
<th>Council name</th>
<th>GCI 2001</th>
<th>GCI 2011</th>
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<tr>
<td>1</td>
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<td>Camden</td>
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<tr>
<td>43</td>
<td>Wyong</td>
<td>-0.95</td>
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Figure 2: Change in GCI, 2001-2011

Global Competitiveness Index
Change 2001 to 2011
Local Government Area

Legend
-0.50 to -0.25
-0.20 to -0.01
0.00 to 0.27
0.45 to 0.50
Major road
Major rail

Map showing the change in Global Competitiveness Index (GCI) from 2001 to 2011, highlighting local government areas with different levels of change.
Knowledge-intensive industries

Number of people employed in knowledge-intensive industries

Using the Australian and New Zealand Standard Industrial Classification (ANZSIC), the following divisions were chosen to denote knowledge-intensive industries:

- Information Media and Telecommunications;
- Financial and Insurance Services;
- Rental, Hiring and Real Estate Services; and
- Professional, Scientific and Technical Services.

![Figure 3: Numbers of workers in knowledge-intensive industries, 2001-2011](image)

Workers in knowledge-intensive industries are heavily concentrated in Central Sydney. Numbers in City of Sydney were much higher than in any other council area in both 2001 and 2011, while North Sydney was a distant second. Together, City of Sydney and North Sydney hosted more workers in knowledge-intensive industries in 2011 than all other 41 council areas in the Sydney region combined.
Other leading locations for knowledge-intensive industries include Ryde, Parramatta, Willoughby, and The Hills Shire, all of which had between 10,000 and 20,000 workers in such industries in 2011. Areas with lower numbers of knowledge industry workers were generally very small councils close to central Sydney, or on Sydney’s urban-rural fringe. Hunters Hill – geographically the smallest council area in the Sydney region, ranked the lowest with only 605 workers in knowledge-intensive industries in 2011. Wollondilly, Ashfield, Camden and Hawkesbury had the next lowest numbers of workers in these industries.

Aside from City of Sydney, which attracted almost 30,000 extra knowledge industry workers between 2001 and 2011, the largest increases were found in Ryde (up by 7,700 workers to 19,000), Auburn, Canada Bay, and The Hills Shire. Parramatta had the largest reduction in knowledge-intensive industry workers (down by 4,500 to 16,700), followed by Willoughby, Blacktown and Burwood.

**Proportion of workers employed in knowledge-intensive industries**

North Sydney has the Sydney region’s highest proportion of workers in knowledge-intensive industries. Almost 51 per cent of people working in the North Sydney council area were employed in knowledge industries in 2011.
City of Sydney was second, with almost 47 per cent in 2011. Willoughby, Lane Cove and Ryde had the next highest percentages of workers in knowledge-intensive industries. Areas with the lowest percentages of workers in knowledge industries were generally in Sydney's west and southwest. Blacktown was the lowest-ranking council area, with less than 6 per cent of its workers in knowledge industries. Holroyd, Fairfield, Liverpool and Campbelltown had the next lowest percentages. The largest increases in percentage between 2001 and 2011 were in similar areas to the largest numerical increases. Ryde had the largest increase, rising by 5.7 percentage points to 27.4 per cent. Auburn, Canada Bay, Marrickville and City of Sydney all had increases of between 1.5 and 3.5 percentage points. Burwood had the largest proportional decrease, falling by 15.4 percentage points. It was followed by Strathfield, Willoughby, and Parramatta.

**Highly-skilled occupations**

**Number of workers in highly-skilled occupations**

Using the Australian and New Zealand Standard Classification of Occupations (ANZSCO), the following occupation groups were selected as highly-skilled occupations:

- Managers; and
- Professionals.

![Figure 6: Numbers of workers in highly-skilled occupations, 2001-2011](image-url)
Highly-skilled occupations are heavily concentrated in Central Sydney. In 2001 City of Sydney had more than 140,000 people working as managers and professionals. This was more than four times the number of such workers in North Sydney, which was the second-ranked council area at 32,000. This concentration had increased in the ten years to 2011, resulting in City of Sydney having more than five times North Sydney’s number of workers in highly-skilled occupations. Ryde and Parramatta had the next highest numbers in 2011, followed by Willoughby and Blacktown. Together, the top six council areas contained more than half of the Sydney region’s managerial and professional jobs in 2011.

![Figure 7: Workers in highly-skilled occupations, 2011](image)

Council areas with lower numbers of managerial and professional workers were generally small and close to the centre of Sydney, or in the Sydney region's outer southwest. Hunters Hill had the least in both 2001 and 2011, despite an increase from 1,300 to 1,600. Wollondilly had the next lowest numbers in both years, with a considerable rise from 1,600 in 2001 to 2,500 in 2011. Mosman, Ashfield, Camden and Manly were the next lowest, with less than 5,000 managers and professionals in 2011.

The largest growth in the number of highly-skilled occupations was in City of Sydney, which increased by almost 80,000 between 2001 and 2011. This was more than a third of all additional managerial and professional jobs in the Sydney region. Ryde had the next largest growth at 16,500, followed by The Hills, Parramatta and North Sydney. The largest proportional growth was in Canada Bay, which more than doubled from 6,000 in 2001 to 12,300 in 2011. In all, 41 of the Sydney region's 43 council areas experienced growth in their numbers of managerial and professional jobs. The two exceptions were Lane Cove (down by 1,160) and Leichhardt (down by 325).
North Sydney edged out City of Sydney to have the highest percentage of workers in highly-skilled occupations. North Sydney had more than 60 per cent of its workers employed in managerial and professional roles in 2011, up from more than 51 per cent in 2001. City of Sydney jumped from 40 per cent in 2001 to 55 per cent in 2011. Other top-ranking areas in 2011 were predominantly in Sydney’s north – including Ryde, Willoughby, Lane Cove and Ku-ring-gai.

Most areas with lower percentages were in Sydney’s outer suburbs – Holroyd was the lowest in both 2001 and 2011, while Wollondilly, Camden, Wyong and Fairfield had the next lowest percentages in 2011.

The proportion of workers in highly-skilled occupations increased in all council areas across the Sydney region between 2001 and 2011. Areas experiencing the greatest increases were generally close to the centre of Sydney. City of Sydney had the greatest increase – up by 15 percentage points between 2001 and 2011. Ryde, Canada Bay, Woollahra, Manly, and North Sydney also experienced growth of more than ten percentage points. The lowest increase was in Lane Cove at 1.6%, preceded by the outlying councils of Hawkesbury, Camden and Wollondilly.
Workers’ qualifications

The GCI also considers workers within Sydney who have obtained a university qualification. Using the Australian Standard Classification of Education (ASCED), a university qualification includes the following educational levels:

- Postgraduate degree;
- Graduate diploma and graduate certificate; and
- Bachelor’s degree.

North Sydney had the highest percentage of workers holding a university qualification in both 2001 and 2011. This jumped from 40 per cent in 2001 to more than 54 per cent in 2011. City of Sydney was also above 50 per cent in 2011, having jumped from 37 per cent in 2001. Other areas with high proportions of university-educated workers were mostly in Sydney’s north – including Ryde, Ku-ring-gai, and Willoughby.

Areas in Sydney’s south-west and urban fringe tended to have the lowest percentages of workers with a university qualification. Wollondilly had the lowest readings, at 11 per cent in 2001 and 14 per cent in 2011. Camden, Wyong, Hawkesbury, Holroyd and Fairfield were the next lowest, with less than 20 per cent of workers holding a university qualification in 2011.

The proportion of workers with a university qualification increased in all 43 council areas across the Sydney region between 2001 and 2011, with the most notable rises along or close to Sydney’s Global Arc. Ryde’s proportion of university-educated workers increased the most – up by 16 percentage points to 47 per cent. City of Sydney (15 percentage points) was closely behind, followed by Canada Bay, North Sydney and Willoughby. The outlying areas of Camden, Hawkesbury and Wollondilly had the lowest increases, by a little over 3 percentage points.

Figure 9: Proportion of workers with a university qualification, 2001-2011

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Workers’ income

Workers’ median income was measured in the GCI to reflect the concentration of knowledge-intensive industries, highly-skilled occupations, and higher education qualifications, which are important indicators of a location’s competitiveness in attracting business and talented workers.

North Sydney had the highest median incomes for both 2001 and 2011, jumping sharply in nominal terms from $940 in 2001 to $1420 in 2011. City of Sydney was second in both years, having also grown considerably from around $870 in 2001 to $1,340 in 2011. Ryde, Lane Cove and Botany Bay were the other council areas with a median income above $1,100 in 2011.

Council areas with lower median incomes were geographically spread. The Blue Mountains had the lowest median income in both 2001 and 2011, while Wyong, Gosford, Canterbury and Hurstville recorded the next lowest median incomes in 2011.

Median incomes increased in all council areas across the Sydney region between 2001 and 2011, with the largest increases occurring mostly in areas east of Parramatta. Ryde’s change in median income was the greatest, up by $500 to $1,240. North Sydney and City of Sydney also recorded income growth of more than $450, while median incomes in Parramatta, Randwick and Canada Bay all increased by around $350. The smallest rise, of just under $200, was in the Blue Mountains. Canterbury, Hurstville and Fairfield had the next smallest increases in median income, of between $200 and $215.
Future releases

The Global Competitiveness Index is part of a research cluster investigating Global Cities and Migration. Future releases to come include:

Connecting Australia with Asia

This involves the use of passenger flight data to map people movement and Australia’s increasing engagement with Asia. Focusing on the Global Cities of Sydney and Shanghai, we will be able to see patterns and trends of Australia’s network with the world, through the flows of people movement. This includes the major reasons for travel between major centres, how long people stay, and the social and economic impacts on sending and receiving cities.

Global Mobility (GloMo) Index

The GloMo Index will show the concentrations of residents across the Sydney region, who have relocated from other parts of Australia and overseas.

About the Globalisation and Cities Research Program

This program is investigating the social, economic, political, and cultural changes of major cities in the context of globalisation. It aims to unravel the complexities of globalisation and urbanisation, their contributory and resultant factors, and their associated challenges for policy and planning. Key research issues include global cities, urban competitiveness, urban planning and governance, migration, and space of flows in cities.

This program is particularly interested in capturing the positioning of Australian cities in a global urban network or hierarchy, and the way Australia integrates with the world through its key urban centres. It attempts to uncover the interrelationships between Australian cities and their counterparts in the Asia-Pacific, the internal and external dynamics of such interrelationships, and the resulting priorities for urban planning and policy. Understanding Australian cities in this global context will inform strategies and decision-making at global, national, regional, and local levels. It will also help effectively address ‘globalised’ challenges, such as competitiveness, innovation, migration, sustainability, liveability, and social cohesion.