

The Competition Index

Background and Methodology

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The Competition Index – An Inter-Jurisdictional Comparison is available on the Treasury web-site: www.treasury.tas.gov.au under 'publications'.

Section 1: Background

Purpose

The Competition Index is prepared annually by the Department of Treasury and Finance. It aims to provide comparisons of a broad range of factors affecting businesses. Comparisons are made between states and territories by aggregating data to reflect the situation that new firms may be expected to face. The analysis is therefore necessarily general in its approach and does not reflect the specific costs or market conditions that would exist for any one firm. Rather, it is intended to be a guide for relative advantages and disadvantages in general.

The comparisons focus on the situation that would be faced by a representative firm establishing its business in a particular jurisdiction rather than the situation faced by existing firms. Therefore, where some costs, such as electricity costs, were agreed in contracts under earlier market conditions that are not likely to be applicable now, those costs are not included in the analysis.

Scope

The *Competition Index* provides a comparison of the relative costs of undertaking business in the states and territories. New Zealand is also included for those indices where data are available, due to its proximity and similarity to Australia. Many Tasmanian producers, particularly primary sector producers, compete with New Zealand producers on the world market.

The focus of the paper is on the development of measurable indices. This means that some important factors, likely to influence individual business decisions, are not included.

The indices that have been included in this report relate to:

- state/territory and local government rates and charges;
- labour costs, skill levels, productivity and occupational health and safety;
- the cost of energy;
- the cost of water;
- telecommunication costs;
- transport and travel costs;
- market accessibility;
- licensing requirements;
- land and accommodation costs; and
- business confidence.

Methodology

A two-stage approach has been used in the preparation of *The Competition Index*.

- Consultations with industry, the Tasmanian Chamber of Commerce and Industry (TCCI) and Tasmanian Government agencies have helped to identify those factors that are of importance to businesses when deciding to establish or expand in a particular area.
- Quantitative information is gathered from a wide range of sources to provide a comparison of the factors that impact on the competitiveness of businesses. Most data are from the ABS. A set of indices has been developed that reflect the relative costs of specific inputs within each state and territory, and in some cases, New Zealand.

The indices, where possible, have been developed in such a way as to abstract from differences in factors between jurisdictions that result from differences in the industry composition of the states and territories. For example, payroll tax actually collected in each jurisdiction has not been used as the basis of payroll tax calculations because such data reflect not only differences in wage levels, payroll tax rates and payroll tax thresholds between states and territories, but also any differences in the size distribution of firms. Other things being equal, a state or territory with a relatively large proportion of large firms would have high payroll tax receipts compared to a state or territory with a larger proportion of small firms. This is because all states and territories have a threshold level of total wages paid below which payroll tax does not apply. The index has been calculated in such a way as to enable a comparison of the payroll tax burden to be made for firms of a given size across all states and territories.

The indices have been aggregated where appropriate. In the case of labour costs, for example, the index reflects the total cost of employing staff by including wages, payroll tax, superannuation, workers' compensation premiums and fringe benefits tax. This method enables a better comparison of the true costs of undertaking business in each of the states and territories as it is not possible to pay wages without paying these on-costs.

The methodology for calculating indices is largely unchanged from year to year to enable comparison over time, though improvements are introduced where feasible. KPMG has reviewed the Competition Index and found the methodology to be objective, robust and appropriate, and not designed to favour Tasmania or any other jurisdictions.

Further details regarding the calculation of the indices are contained in Section 2 of this paper.

Section 2: Calculation of Indices

Factors of Production Indices

Direct Labour Cost

Direct labour cost refers to the direct costs associated with employing labour and include wages and salaries, payroll tax, superannuation, fringe benefits tax and workers' compensation premiums.

Wages

The wages index has been determined using data from the ABS *Survey of Employee Earnings and Hours*. This measure provides wage data by occupation, which helps to eliminate some of the differences in average wages between jurisdictions resulting from variations in the industry structure of each jurisdiction. These data do not, however, eliminate differences in wages between jurisdictions that may arise from differences in the skill levels of the work forces.

The calculation applies equal weighting to each of the occupation categories for which data are available.

Payroll Tax

Payroll tax has been determined on the basis of the amount a notional firm paying the average wage in each jurisdiction, based on the above calculation, would be required to pay in each of the jurisdictions. The notional firm is based on an average of five firms with employment levels of 50, 75, 160, 300 and 570. This method of calculation allows for the comparison of payroll tax liability on a consistent basis across all jurisdictions. Two issues arise as a result of the calculation of relative payroll tax burden under this method:

- As firm size increases, the payroll tax liability per employee increases at a greater rate in Tasmania than in most of the other states and territories because Tasmania has a relatively high marginal rate of payroll tax. Therefore, the comparison used is more favourable for Tasmania than one incorporating a much larger firm size, such as 1 000 employees. However, as the vast majority of firms in Tasmania are small to medium sized enterprises, this is considered an appropriate basis for comparison.
- The payroll tax liability calculated will not be the same as the payments actually made because of the absence of allowance for part-time staff and overtime payments in these calculations. This may result in the weighting given to payroll tax in the calculation of the composite direct labour cost index being higher or lower than the actual relative liability. This is not considered to be a major problem, given that wages and salaries, the major component of the index, have been calculated on the same basis.

The payroll tax regimes used in the preparation of this index are those effective from the time the Competition Index is released each year.

Other Labour Costs

Other labour costs include fringe benefits tax, superannuation and workers' compensation premium figures. These data used in the calculation have been taken from ABS *Labour Costs, Australia*.

As these data are based on the actual amount paid by the firms surveyed, the results may vary between states and territories if there are significant differences in the structure of the workforce among the jurisdictions. For example, those states and territories with a higher proportion of their workforce in relatively more risky industries might be expected to have higher workers' compensation premium costs.

Each of the components of the direct labour cost index has been weighted according to their relative contribution to overall labour costs in each state and territory.

Labour Turnover

Labour turnover index has been based on data from the ABS *Labour Mobility* survey which is conducted every two years. The index reflects the proportion of employees who had been in their current job for three or more years. Three years is considered to be an appropriate threshold to reflect labour stability. TCCI was consulted about this approach and, while noting that the selection of the appropriate threshold was arbitrary, agreed that the use of three years was considered acceptable.

Industrial Disputes

The industrial disputes index has been determined using the ABS industrial disputes data and is based on the number of disputes per thousand employees. The average number of disputes per thousand employees over the past five years for which data are available has been included to ensure that the index reflects the industrial relations record of each of the states and territories.

Occupational Health & Safety

The occupational health and safety index is calculated as a ratio of actual incident rates of serious injury and disease claims per 1 000 employees to the incident rate that the jurisdiction would experience if it had the national industry incident rate. As a result, this index takes into account the impact of the different industry composition in each jurisdiction on its occupational health and safety performance.

Qualifications

The qualifications index is sourced from the ABS annual publication *Education and Work* and reflects the proportion of the working age population that has some forms of vocational qualification, which includes Certificate I and above.

Training Courses

The training courses index is based on the ABS publication - *Education and Training Experience, Australia* which is released every four years. The index shows the percentage of people aged 15 to 64 who undertook training courses in the 12 months prior to the survey. Training courses are structured courses that are undertaken with the aim of obtaining, maintaining or improving employment related skills or competencies. The following activities are excluded from the ABS definition of training:

- on-the-job training or any type of 'learn as you go' training;
- attendance at conferences, seminars, workshops etc, where the primary focus was not skills acquisition; and
- study for an educational qualification.

Participation in VET

Participation in Vocational Education and Training (VET) is based on data obtained from *Australian Vocational Education and Training Statistics: Students and Courses – Summary*, published by the National Centre for Vocational Education Research. It is calculated as the percentage of the population aged 15 years and over participating in a VET course in the previous year.

Labour Productivity

Labour productivity index is a ratio of the real Gross State Product (GSP) to the total hours worked.

Unit Labour Cost

The unit cost of labour is obtained from the ABS State Accounts and is the ratio of total compensation of employees to GSP.

Land and Accommodation

Total land and accommodation costs for business include the purchase or rental of property, state or territory government land tax and municipal rates. The aggregate index for land and accommodation costs has been calculated from data in respect of each of these three components, which have been weighted according to their relative contribution to the total land and accommodation cost in each jurisdiction.

Land and Accommodation Costs

The relative values of land and accommodation vary significantly both between and within state and territories. The data that have been used to compare land and accommodation costs between states and territories comprise rental and value data for commercial and industrial properties in capital cities in all states and the ACT. The Northern Territory has been excluded due to the lack of available data. The validity of this measure depends on the assumption that the capital city prices reflect the relative prices for properties in each jurisdiction.

In the case of New South Wales and to a lesser extent Queensland, very high capital city property values mean that Sydney or Brisbane prices alone may not provide a true reflection of relative property values for those states as a whole. Property values for areas outside Sydney (Hunter, Illawarra and Newcastle) and Brisbane (Gold Coast) have therefore been included in the calculation of the indices for New South Wales and Queensland respectively.

The data used for this measure are taken from data collated by CPM Research, an independent property consultancy. The data are presented on the basis of the cost-per-square-metre of property. In order to combine this component with the rates and tax components, two conversions to the data have been made. First, the property values have been converted to annual rates by assuming that rent payable in respect of a property is six per cent of the value of the property. Second, a 300 square metre property has been assumed for the determination of the total annual costs of land and accommodation.

Land Tax

Progressive land tax regimes apply in each jurisdiction in which land tax is payable and the rates that apply vary significantly. Land tax applies to the unimproved value of land.

The index for land tax has been calculated using a range of land values that are representative of average land values in each state and territory. The tax payable in respect of three land sites in each state and territory has been calculated and the average tax payable in respect of the three sites has been used as the basis for the index. The values of the three sites are the average value of a commercial or industrial site, half the average value and one and a half times the average value. Using the three different values allowed the calculation to reflect changes in the marginal tax rates in each jurisdiction.

Land values used are from the Commonwealth Grants Commission's (CGC's) *Report on State Revenue Sharing Relativities Update - Working Papers Volume 2*.

Municipal Rates

The level of municipal rates has been calculated using data from two sources. The total amount of rates collected is from the ABS. In order to make a comparison between jurisdictions, rates per property have been calculated using the number of properties from the above-mentioned CGC's report.

This measure has a number of shortcomings. Data were only available for combined residential and business properties, which may distort the results. In addition, local government provides different services in each of the states and territories and this may also cause distortions.

Regulatory Indices

Taxation Severity

The taxation severity index was compiled from data in the CGC's *Report on State Revenue Sharing Relativities Update – Supporting Information*.

The taxation severity index is based on the ratio of actual revenue to standardised revenue for selected taxes. The CGC calculates standardised revenue by applying a national average tax rate to the tax base for each jurisdiction.

The taxes included in the index are:

- duties on conveyances, shares and marketable securities and motor vehicle registrations and transfers;
- financial transaction taxes;
- motor vehicle fees and taxes; and
- insurance tax.

Business Licensing Costs

This index is based on the state or territory and local government licensing arrangements in each jurisdiction. The requirements are determined for businesses with identical activities in each jurisdiction. For example, the mixed farm in every jurisdiction is assumed to have a fixed number of cows, sheep, poultry and desexed dogs, and the operator owns long arm rifles. Similarly, each petrol station is assumed to sell food served on the premises, has a tow truck and repairs cars.

In each case, data have been obtained on all licences and permits needed, together with the fees where these are known, which generally comprise application fees and annual or other periodic fees. These data are available from the statutes and local government bylaws in each jurisdiction.

In the case of environmental licences, many jurisdictions are now using a risk management or cost recovery calculation to determine the fees payable. Many applicants will not know the fee payable until after the business has commenced. It was therefore not possible to include these licences in the calculation of the index.

The index does not include charges, such as water and wastewater charges, as these are costs associated with the provision of ongoing services, rather than regulatory costs. In addition, these costs are rarely known in advance.

Data were also obtained on where applications are lodged for these licences and permits. In some cases, there are state government bodies, such as *Service Tasmania* and *Service SA*, which accept and process applications for licences and permits on behalf of other agencies. While these bodies greatly facilitate the application process, for many businesses this can only occur after extensive discussions or negotiations with the relevant agency, including discussions on the content of documents that must be included in the application. For these reasons, the index does not reflect the fact that final applications can be lodged with these other bodies.

While many licences and permits are annual, some apply for two to five years and others are perpetual. Therefore, to ensure that licence and permit fees can be compared, the costs over a ten year period were calculated, on the basis of the current fees.

In the calculation of the index, the weighting applied was as follows:

- number of licences and permits required – 40 per cent;
- number of different regulatory authorities – 10 per cent; and
- licence and permit fees over ten years – 50 per cent.

Utility Indices

Energy Costs

The energy index comprises three components: electricity prices and reliability of electricity supply, gas costs and fuel costs. The indices have been determined for each of the components and were aggregated using weightings based on industry consumption of each type of energy from the ABS 1998–99 Australian Input-output Tables. The weightings used were: electricity 58 per cent (electricity reliability was weighted 10 per cent and electricity prices 90 per cent), gas 11 per cent and fuel 31 per cent.

Electricity Costs

Tasmania Treasury has used electricity price information provided by the Office of the Tasmanian Economic Regulator (OTTER). Many customers now take supply under contracts with retailers, rather than under published tariffs. There is no public disclosure of current contract prices.

Electricity Reliability

The index for electricity system reliability has been constructed using data from the Energy Supply Association of Australia publication *Electricity Gas Australia*. The measure used is the number of minutes of electricity lost per customer per year from outages in the distribution network.

Fuel Costs

Petrol prices are obtained from the Australian Automobile Association (AAA) website. The AAA has commissioned FuelTrac to collect petrol price data in each capital city and other major regional centres around Australia. In total, FuelTrac monitors 98 regional and rural centres and the eight capital cities.

The price of unleaded petrol in each capital city was used as a basis for comparison between the jurisdictions and is the average price over a 12 month period. Given the often marked variations in petrol prices from month to month, the 12-month average is considered a more representative measure than data from the most recent month.

A separate diesel price index has not been compiled as the petrol price index is considered an appropriate guide to price relativities for all fuel costs.

Gas Costs

Gas prices have been obtained from OTTER and relate to an average commercial user with annual demand of 500 GJ.

Water Costs

The water cost index was constructed for three representative businesses with water usage of 100, 500 and 1000kL per annum and covers water, sewerage and waste water. The assessed annual value is determined by the estimated yearly rental value of the property. The property rent and values used were state and territory averages for industrial and commercial properties (assuming 300 square metre property). The water charges information was sourced from the websites of water authorities for each capital city for commercial users.

The capital cities in South Australia, Western Australia and Tasmania currently have some proportion of their water charges determined by the assessed annual value of the property. All other things being equal, an increase in property prices would result in a relative increase in water charges. The reliance on property-based charging for commercial properties, in conjunction with the relatively high value of those properties, means that businesses that consume relatively small volumes of water pay a relatively high average price for the water they use in those jurisdictions.

In Tasmania, two-part pricing of water services will be phased in from 1 July 2009 to early 2012. Two-part pricing approach reflects the amount users pay based on the amount of water they use. Therefore water prices will no longer be linked to the assessed annual value of property.

Telecommunications

Telecommunications Cost Index

Service prices were sought from Internet service providers for ADSL services suitable to “entry level” and “intermediate” users, using the following definitions:

- entry level – a 256/64 Kbps (download/upload speed) plan offering at least a 500 MB monthly download allowance; and
- intermediate – a 1500/256 Kbps plan offering a 10 GB monthly download allowance.

Where providers did not offer services matching the above specifications, prices were obtained for the nearest equivalent service from that provider. In most cases, this involved selecting a service offering with a higher download allowance than was specified.

To ensure a valid comparison, the following factors were excluded from the pricing comparison:

- bundling – only stand-alone plans were used (those which do not include discounting if the plan is purchased with other services as part of a bundled offer); and
- promotional offers – plans that are offered only on a temporary basis as part of a special promotion.

The cost index was constructed using the average of the entry and intermediate level pricing plans in each jurisdiction.

This methodology for comparing telecommunications costs was adopted for the *2005 Competition Index* and subsequent reports. Therefore, comparisons with rankings prior to 2005 are not appropriate.

Telecommunications Reliability Index

The construction of telecommunications reliability index was based on the publication by the Australian Communications and Media Authority (ACMA) - *Telecommunications Performance Report* and supplementary data. These data detail the performance of service providers against the Customer Service Guarantee Standard, which is one of the major legislative safeguards with regard to the fixed phone network. The three areas of reliability performance were all weighted equally.

Transport Indices

Surface Freight Costs

The surface freight charges index has been calculated using freight rates for road and sea transport from the Bureau of Transport and Regional Economics' Information Sheet 19.

The index was constructed by combining the cost of freighting a 23 tonne gross container from each capital city to each other capital city (full container load). The cost of freight in each case was weighted by the population of each destination jurisdiction. The weighting assumes that more goods will be transported to the larger markets.

This methodology therefore assumes that the amount of freight destined for each capital city is related to the population in that city. The surface freight costs for Tasmania have been adjusted to reflect the subsidy received under the Tasmanian Freight Equalisation Scheme.

Air Freight Costs

The air freight index is based on air freight rates from a major transport company. The index is constructed by calculating the cost of receiving a 10 kilogram parcel from the closest major population centre to each capital city.

Air Travel Costs

The air travel index is calculated using one-way economy class airfares between each of the capital cities using Qantas/Jetstar and Virgin Blue. The cheapest airfares on the next available flight are used. A weighted average fare between each city pair has been calculated using 65 per cent of the Qantas/Jetstar fare and 35 per cent of the Virgin Blue fare to reflect the approximate market shares of the two carriers. This fare is then weighted by the population of each destination capital city. This weighting reflects the fact that more travel will occur to the larger jurisdictions.

Access to Ports

This index has been calculated on the basis of the proportion of the population of each jurisdiction that is within 50 kilometres of a major port. The 41 largest ports throughout Australia have been used. Those jurisdictions that have a relatively high proportion of their population within this distance from ports are considered to have relatively good access to ports.

This index therefore assumes that the location of a jurisdiction's population is representative of the location of businesses within each jurisdiction.

Port Charges

The port charges index has been calculated from data published by the Bureau of Transport Regional Economics (BTRE) in its *Waterline* publication for the major ports in each jurisdiction. The costs determined by the BTRE are based on the costs faced by a ship of a specific size in each port to permit comparison among the jurisdictions. Stevedoring charges, a major component of port charges, have been included in the BTRE's calculations, but a uniform charge is applied across all ports.

As Tasmania is not included in the BTRE report, the Tasmanian index has been calculated using the BTRE methodology and data provided by the Tasmanian Ports Corporation Pty Ltd (TasPorts).

The BTRE port charges index includes customs brokers' fees and road transport charges. These have not been included in this comparison because of the unavailability of current data for Tasmania and because the BTRE's measure of road transport costs is designed for comparing the costs for a given port over time and is not suitable for comparing costs between different ports in any year.

Proximity to Markets

This index is based on two elements: the size of the population within 200 kilometres of the capital city in each state and territory and the distance to other major population centres within Australia.

Access to markets is calculated for each state and territory on the basis of the following formula:

$$\frac{OwnPopulation}{25} + \sum \frac{Population_i}{Distance_i}$$

Where:

OwnPopulation = the population within 200 kilometres of the capital city of the state for which the factor is being determined.

Population_i = Population within 200 kilometres of the capital city of the state or territory i, where i is all the other states and territories.

Distance_i = distance in kilometres between the capital cities of state and territory i and the state and territory for which the factor is being determined.

The construction of the index on this basis means that the benefit derived from distant populations falls at an increasing rate the further that population centre is from the focus state or territory. For example, if population A is twice the distance from the focus state or territory as population B, there is more than twice the benefit derived by the focus state from population B than there is from population A. An index is then calculated using the factor for the most remote state as a base.

Industry-Based Indices

In order to apply the information from the cost-based indices to the selected industries, it has been necessary to determine the relative importance of the cost categories to each of the selected industries. The 1998–99 Australian Input-Output tables produced by the ABS were used to allocate these costs across the relevant industries.

Cost data at an industry level for each jurisdiction are only available for labour. It is assumed in this analysis that the relative costs for the other inputs (those listed below) are reflected in the category-based indices presented above. That is, it is assumed that for a given jurisdiction, the relative cost of a specified input, such as electricity, faced by all that jurisdiction's industries is as reflected in the electricity cost index. Hence all New South Wales industries are taken to face relatively low electricity costs and all Queensland industries have low fuel costs.

The following cost categories were included in the industry-based indices. The ABS category and number used to allocate these costs is signified in brackets:

- electricity and gas costs (3601 Electricity; 3602 Gas);
- fuel costs (2501 Petroleum and Coal Products);
- land and accommodation costs (7702 Other Property Services);
- freight (6101 Road Transport; 6201 Rail, Pipeline and Other Transport; 6301 Water Transport, 6401 Air and Space Transport); and
- labour costs (P1 Compensation of Employees).

For each category (except for land and accommodation costs), the level of each input cost as a proportion of the total output for each industry group was measured. This ratio was then multiplied by the computed cost index for each state and territory. The sum of all cost categories was generated for each industry group, with this number then being scaled to be 100 for the state or territory with the lowest cost.

Land and accommodation costs are not measured as direct inputs by the ABS in its Input-Output Tables, as these inputs are not directly consumed in the production process. While depreciation and rental charges may be appropriate to use, such measures are not provided by the ABS for any major industry for land and buildings. In addition, many businesses actually purchase their own land and buildings and therefore do not pay rent. The ABS makes no attempt to "impute" the rental value in these cases in its Input-Output Tables,. However, the ABS does provide estimates of property services obtained by each industry.

To obtain an estimate of the relative importance of land and accommodation costs, a measure was developed based on information only available in the mining sector. It is assumed that there is a close correlation between land and buildings costs, and the level of property services purchased for all industries.

It is assumed that property services expenses are proportional to total land and accommodation costs and the property services category is used to allocate land and accommodation costs to the industries. While this should provide a reasonable measure of land and accommodation costs in one industry relative to land and accommodation costs in other industries, it does not provide an accurate measure of such costs relative to other inputs within an industry.

In order to determine the relative weighting of land and accommodation costs for each industry, the average level of capital expenditure on land and buildings in the mining industry as a proportion of the total output value of the industry in the four years to 1997–98 was taken. This ratio was then used as a proxy measure of the relative importance of land and accommodation charges to the mining industry.

It should be noted that this methodology does not result in land and accommodation having the same weighting across all industries. The purpose of applying the multiplier is to determine an appropriate weighting for land and accommodation costs within each industry based on expenditure on property and business services costs for each industry. Because property and business services costs vary between industries, the calculated weighting for land and accommodation costs will also vary across industries.

The wages data used in the calculation of these indices are for specific occupations within each industry. For example, in the finance and insurance sector, average weekly wages are calculated using wage rates for a range of different occupations within that industry, including business and information professionals and clerical staff employed in that sector. The categories of employees for each sector are the same for each state and territory, which helps ensure that the wages figures used do not reflect the structure of the industry in each jurisdiction. An average wage has been calculated giving equal weighting to each occupation.

Other Indices

Business Confidence

This index has been constructed using the *Sensis Business Index – Small and Medium Enterprises*. Sensis uses a panel of 1 800 randomly selected owners of small and medium sized businesses nationally (including 150 from Tasmania, of which 90 are ‘metro’ and 60 ‘non-metro’). Small businesses are defined as those employing 19 people or fewer, while medium sized businesses are defined as those employing between 20 and 199 persons.

Business Confidence in State and Territory Government

This index is based on an equal weighting (a third each) of both credit rating reports (Standard and Poor’s and Moody’s) and the Sensis survey on business attitudes towards state and territory government policies. The credit ratings impact on the State’s borrowing costs and represent an independent assessment of the Tasmanian Government’s economic management and credit worthiness.

Section 3: Comparison with New Zealand

Labour Cost

Wages data were sourced from the Statistics New Zealand publication *Labour Market Statistics*. This average weekly earnings figure from this publication served as the base to which the labour on-costs were added.

Comparable data were not available for labour on-costs: fringe benefits tax (FBT); superannuation or workers' compensation premiums. Some of these components were derived as explained below.

From information available, FBT as a proportion of GDP was determined to be approximately 80 per cent less in New Zealand than in Australia. This was used as the basis for determining the FBT component of labour costs.

The Accident Compensation Corporation administers workers' compensation in New Zealand. The average employer levy for 2001–02 was applied to the base earnings figures to determine the workers' compensation cost.

Industrial Disputes

New Zealand industrial disputes data were sourced from the Statistics New Zealand work stoppages series and is similar to the equivalent ABS measure.

Qualifications

The proportion of the working-age population with some form of post-school qualification was taken from the Statistics New Zealand publication *Labour Market Statistics*.

Training Courses

The data from Statistics New Zealand's one-off Education and Training survey gives the percentage of people in the 15–64 age group undertaking some form of training in the twelve months to September 1996, the most recent information available. This appears to be comparable with the training information used for Australia.

Land and Accommodation

The data for prime industrial and commercial rents and values in Auckland and Wellington CBD were obtained from CB Richard Ellis market research reports. Municipal rates were ignored in compiling the property costs index because of the lack of comparable data.

Energy Cost

Information available on electricity retailers' websites has been used to construct a cost per kilowatt using electricity demand assumptions as used in the Australian state and territory comparison.

The New Zealand electricity reliability figures are sourced from *Electricity Information Disclosure Statistics 2003* from the New Zealand Ministry of Economic Development. More recent data are unavailable due to changes in data disclosure requirements.

The fuel index for New Zealand was calculated using the average unleaded 91 octane retail petrol price for the most recent calendar year, which was obtained from the New Zealand Ministry of Economic Development.

New Zealand natural gas prices were obtained from the New Zealand's Ministry of Economic Development's *Energy Data File*. These prices were derived from a sample of commercial prices charged by gas retailers.

Water Costs

The New Zealand water cost was calculated using the methodology which is the same as that used for the Australian states and territories. For New Zealand, information was sourced from Metro Water in Auckland.

Air Travel Cost

The air travel index is calculated using one-way economy class airfares between each of the capital cities using Qantas/Jetstar and Virgin Blue. The cheapest airfares on the next available flight are used. A weighted average has been calculated using 65 per cent of the Qantas/Jetstar fare and 35 per cent of the Virgin Blue fare to reflect the approximate market shares of the two carriers.

Proximity to Markets

The methodology is the same as that used for the Australian states and territories. The New Zealand population figures have been sourced from Statistics New Zealand.



Tasmania

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