



The Competition Index

A State-by-State Comparison

Government of Tasmania
May 2001

Foreword

The Competition Index is prepared by the Department of Treasury and Finance to provide an objective assessment of the attractiveness of Tasmania as a business location relative to the other states of Australia. The 2001 *Competition Index* updates the 2000 *Competition Index* that was released in May 2000.

The project is part of the Tasmanian Government's response to the Industry Audits released in August 1999. *The Competition Index* aims to highlight those areas in which Tasmania has a competitive advantage as a location for business and those where it is at a disadvantage compared to other Australian states. In this way, *The Competition Index* assists the Government in identifying how it might best focus its industry policy.

The Government is committed to improving the attractiveness of Tasmania as a business location. In the 2000 *Competition Index*, Tasmania's payroll tax burden was shown to be high, relative to some other states. The Government has addressed this in the 2001-02 Budget, significantly improving the competitiveness of Tasmania's payroll tax regime.

The 2001 *Competition Index* shows energy prices in Tasmania remain high, relative to some other states. A significant element of the 2001-02 Budget is the abolition of the electricity entities levy, which will improve the competitiveness of State's electricity prices.

The indices that are presented in this Paper are intended as a general guide to measuring the relative attractiveness of Tasmania as a business location. They should not be interpreted as precise measures of the costs that would be faced by individual firms.

In the development of the 2000 *Competition Index*, the methodology for calculating the indices was independently reviewed by consultants KPMG, who found it to be objective and not designed to favour Tasmania or any other state. The 2001 *Competition Index* uses the same methodology.

A number of Tasmanian businesses and industry organisations, including the Tasmanian Chamber of Commerce and Industry, and Unions Tasmania were consulted in the development of the 2000 *Competition Index* as part of the process of identifying those issues important to business location decisions. Treasury had further discussions with Tasmanian businesses prior to the preparation of the 2001 *Competition Index*. The input from these firms and organisations has been invaluable and the Government extends its thanks to all those who assisted in this project.

The work presented in this paper is ongoing. The indices that have been prepared will be refined over time and additional indices are being developed to attempt to capture a wider range of factors important to businesses in deciding where in Australia to invest.

David Crean
Treasurer

24 May 2001

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1 Executive Summary

- *The Competition Index* was first published in May 2000. *The Competition Index* provides an objective assessment of the advantages and disadvantages of undertaking business in Tasmania relative to the other Australian states.
- These indices have been updated to incorporate the most recently available data. Indices have been prepared for a number of cost categories and a number of industries. A summary of the rankings for each state for the composite indices is provided in Table 1 below. The Table also shows, for Tasmania only, the rankings in 2000.
 - New indices have been included in the 2001 *Competition Index* that reflect the relative cost of air freight and passenger travel for each of the states.
 - A comparison of mineral royalty regimes is also included, although it has not been possible to produce an index to reflect the relative cost of mineral royalties in each of the states because of differences in the royalty regimes.
- The indices have been developed by the Department of Treasury and Finance and can be expected to apply to average or representative firms in each state. They do not necessarily reflect the conditions that would exist for any individual firm. Also, the indices have been prepared on the basis of the costs that would be faced by a new firm setting up rather than those faced by existing firms. Assistance provided to new firms by state governments has not been included in the calculations.
- The very significant changes to Tasmania's payroll tax regime announced in the 2001-02 Budget have improved the State's labour cost competitiveness. Tasmania now has the second lowest payroll tax index number. In the 2000 *Competition Index* (2000 Index), Tasmania had the second highest payroll tax index number of all states.
 - Some other states have revised their payroll tax regimes since the 2000 Index. The payroll tax regimes for other states that are used in the calculation of the index are those announced prior to preparation of the 2001 Index, to be in place on 1 July 2001. This includes the recently announced changes by the Victorian Government in its *Better Business Taxes* report.
- Tasmania also has a stable workforce, with the lowest level of industrial disputation and the highest retention rate of all states. However, the skill base of the Tasmanian labour force is the lowest of all the states.
- Tasmanian land and accommodation costs are now the lowest of all states. In the 2000 Index, Tasmania had the second lowest land and accommodation costs behind South Australia. Tasmania's relatively low land and accommodation costs reflect the State's relatively low value and rental costs for industrial and commercial land and the lowest municipal rates. Data limitations for the municipal rates component mean that some caution needs to be exercised in the use of this component. The land tax burden for business in Tasmania is comparable with that in other states.

Table 1 Summary of Ranking of States* - 2001

	NSW	Vic	Qld	SA	WA	Tas	<i>Tas 2000 Index</i>
Cost-Based Indices							
Direct Labour Costs	6	5	3	2	4	1	<i>1</i>
Labour Skills	1	4	5	3	2	6	<i>6</i>
Labour Turnover	2	4	5	3	6	1	<i>1</i>
Industrial Disputes	5	6	3	2	4	1	<i>1</i>
Land and Accommodation	6	3	5	2	4	1	<i>2</i>
Energy Cost Index	1	2	3	4	5	6	<i>5</i>
Surface Freight Cost Index	3	5	1	2	4	6	<i>6</i>
Air Freight Cost Index	2	1	4	3	6	5	<i>na</i>
Air Travel Cost Index	2	1	5	3	6	4	<i>na</i>
Access to Ports Index	5	4	6	3	2	1	<i>1</i>
Port Charges Index	6	5	2	3	4	1	<i>1</i>
Forestry Endowment Index	3	4	2	5	6	1	<i>1</i>
Mineral Resource Endowment	3	6	2	5	4	1	<i>1</i>
Proximity to Markets Index	1	2	3	4	5	6	<i>6</i>
Industry-Based Cost Indices							
Mining	6	1	5	3	4	2	<i>2</i>
Manufacturing	6	3	4	1	2	5	<i>3</i>
Accommodation, Cafes and Restaurants	6	4	5	3	1	2	<i>3</i>
Finance and Insurance	6	4	5	1	3	2	<i>1</i>
Property and Business Services	6	3	5	2	4	1	<i>1</i>

* The most favourable ranking is 1 for all of the indices

- Energy prices in Tasmania remain relatively high, compared with those in other states, though the differential has declined marginally over the past year.
 - Tasmania's electricity price index has improved, resulting in Tasmania's ranking improving to third in the 2001 Index compared with fourth in the 2000 Index. Electricity prices in Tasmania for most customers are, however, higher than those in New South Wales and Queensland. Prices in Tasmania are marginally lower than those in South Australia and Victoria and are also lower than those in Western Australia. Victoria's electricity prices, in particular, have increased significantly since the calculation of the 2000 Index.

- Tasmania’s electricity cost index number, adjusted to reflect the impact of the removal of the electricity entities levy, has fallen to 117 in the 2001 Index from 139 in the 2000 Index, a fall of almost 16 per cent.
- Fuel prices in Tasmania are generally higher than in the other states, but the difference has decreased to a significant extent since the entry of Liberty Oil.
- The absence of natural gas means that Tasmanian businesses must rely on the significantly more expensive liquid petroleum gas (LPG). The introduction of natural gas via the Duke Natural Gas Project will significantly improve Tasmania’s energy cost competitiveness.
- Access to ports is much better in Tasmania than in other states, with a relatively high proportion of the State’s businesses within close range of a major port. Port charges also appear to be favourable compared with those in other states.
- Tasmania has a relatively high endowment of both timber and mineral resources, contributing to the State’s attractiveness to firms in the forestry and mining sectors.
- A major hindrance to Tasmanian businesses is the relative isolation of the State. While for some businesses, such as those that rely primarily on overseas markets, the relative isolation of Tasmania may not be a problem, it is a constraint on the establishment and growth of many businesses in the State. Tasmania’s relative isolation causes problems in relation to the marketing of goods and services, reduced access to business and financial services, increased freight and air travel costs and, in some cases, difficulty in attracting skilled labour to the State. The proximity to markets index reflects the significant disadvantage that Tasmania suffers as a business location through its isolation.
- The industry-based cost indices indicate the relative cost competitiveness of each of the states for selected industries. However, not all costs faced by businesses have been included in the indices and, for some businesses, the costs that have not been included may account for a significant proportion of total costs.
- Indices have not been prepared for the agriculture, forestry and fishing sector, which includes growth industries such as aquaculture, because there is less information available for this sector. In addition, inherent differences between states, such as climate, make comparisons difficult because of the very different nature of the sector in each state. For example, the relatively cold waters surrounding Tasmania make it the only State in which salmon farming is viable.
- In general, Tasmania has a number of cost advantages for businesses. Low labour costs (made more competitive by the reduction in payroll tax announced in the 2001-02 Budget), low land and accommodation costs, a stable workforce, good port access and a good endowment of natural resources make Tasmania an attractive location to undertake business.
- Of the five industries examined, Tasmania’s cost competitiveness has improved in one (accommodation, cafés and restaurants), declined in two (manufacturing, and finance and insurance) and remained unchanged in two (mining, and property and business services)
- An example of an industry in which Tasmania has a comparative advantage is the IT industry, which is included in the property and business services sector. Tasmania

emerges as having a cost advantage in this sector as proximity to a market is not essential and business conditions in Tasmania are very favourable.

- There is ongoing work being undertaken to develop more cost indices and to refine those that have been included in this document. This further work will be included in future reports.

2 Introduction

2.1 Purpose

This is the second edition of *The Competition Index: A State by State Comparison*. The first was presented prior to the 2000-01 Budget in May 2000.

The Competition Index was initiated as part of the Tasmanian Government's response to the Industry Audits in August 1999. Its aim is to highlight those areas in which Tasmania has a competitive advantage as a location for business and also to identify how the Government might best focus its industry policy.

The competitiveness of firms, their profitability and their ability to expand depend on a large range of factors. Differences in these factors between the states of Australia will influence where firms choose to locate. The purpose of this paper is to identify the relative advantages and disadvantages of undertaking business in Tasmania compared with the other states and to report on changes in these elements since 2000.

At the time of the first edition of this document, no other studies had been identified that compare between states a broad range of issues that impact on business. Since then, New South Wales and South Australia have produced similar comparisons. Both have an international focus, although some interstate comparisons are included.

There are a number of other sources of interstate comparisons of issues that affect business costs and market conditions, but these tend to be limited to individual factors or a set of related factors. For example, New South Wales Treasury's *Interstate Comparison of Taxes* provides comprehensive details of state taxes. Several organisations, such as Access Economics and Econtech, undertake interstate comparisons of economic performance. From time to time, interstate comparisons of specific issues may be undertaken by Commonwealth government agencies, such as the Productivity Commission, in the course of an inquiry.

This paper aims to provide comparisons of a broad range of factors affecting business. Comparisons are made between states by aggregating data to reflect the situation that exists for firms on average. 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 to relative advantages and disadvantages in general.

The comparisons included in the paper focus on the situation that would be faced by a representative firm establishing in a particular state rather than the situation faced by existing firms. Therefore, where the costs, such as electricity costs, were agreed in contracts under different market conditions and are not likely to be applicable now, those costs have generally not been included in the analysis.

It should be noted that the states often provide additional assistance for new firms, which is often specific to the particular firm. Because of the general nature of the comparisons in this paper, it is not possible to capture the relative benefits of such

assistance. It is recognised, however, that in particular instances these assistance measures may be a key factor in determining where a firm will locate.

2.2 Methodology

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

- There has been a program of industry visits since 1999, together with discussions with the Tasmanian Chamber of Commerce and Industry, to help identify those factors that are of importance to businesses when deciding to establish or expand in a particular area. These visits also provide information on how businesses perceive their environment in Tasmania as being different from that in the other states.
- 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 Australian Bureau of Statistics (ABS). A set of indices has been developed that reflect the relative costs of specific inputs within each state.

The indices, where possible, have been developed in such a way as to abstract from differences in factors between states that result from differences in the industry composition of the states. For example, payroll tax actually collected in each jurisdiction has not been used as the basis of the payroll tax calculations because such data reflect not only differences in the wages, payroll tax rates and payroll tax thresholds between states but also any differences that may exist in the size distribution of firms. Other things being equal, a state with a relatively large proportion of large firms would have high payroll tax receipts compared to a state with a larger proportion of small firms. This is because all states 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.

The indices that have been calculated 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 as it is not possible, for example, to pay wages without also paying these on-costs. A breakdown of the components of the labour cost index is included in Appendix 2.

2.3 Scope

This document provides a comparison of the relative costs of undertaking business for the states. The Northern Territory and the ACT have not been included in the comparison because in a number of cases data are not available for the territories to allow a valid comparison. Also, as locations in which to invest, the territories are so different in many respects from Tasmania that comparison is not particularly helpful.

Factors that impact on businesses include:

- state and local government rates and charges;
- labour costs and productivity;
- the cost of inputs;
- telecommunications costs;
- the stability of government and government policy;
- the availability of natural resources or other important inputs;
- market accessibility;
- planning laws;
- ability to attract and retain employees; and
- land and accommodation costs.

The focus of the paper is on the development of measurable indices and this focus necessarily means that some important factors that are likely to influence business decisions are not considered in detail.

Those factors that have been included in the paper relate to:

- state and local government rates and charges;
- labour costs and productivity;
- the cost of energy;
- telecommunication costs;
- transport and travel costs;
- the availability of natural resources;
- market accessibility; and
- land and accommodation costs.

These factors can be categorised into two main groups:

- those that impact directly on business costs (energy, labour, freight, land and accommodation costs, and taxes and charges); and
- those that impact indirectly on businesses (such as availability of natural resources and market accessibility).

There is a third category of factors that this paper has not covered, namely those that may impact on business confidence, such as political stability and government policy. These have been excluded because of difficulties in determining appropriate measures.

The direct costs that have been included in this paper do not account for the full range of input costs and work is continuing to include additional costs in future reports.

The direct costs that have been included in the paper are estimated to account for over 35 per cent of industry costs in total. However, this percentage will vary across industries and tends to be lower for businesses that are capital intensive or for which raw material costs constitute a large proportion of total costs.

There are many reasons for differences in the costs faced by business in each state, such as differences in industry structure, the goods produced by the industries and the cost of inputs. Analysis of the reasons behind these differences is very complex and generally beyond the scope of this paper.

Aggregate indices are presented in Section 3 and have been grouped according to similarity of factors (for example, an aggregate labour costs index) and by industry. The industry-based cost indices have been determined only in respect of export and import-competing industries, as these industries generally have some choice as to where to locate. By contrast, some industries, such as construction, education and health services, must be close to their markets. Cost-based indices are applicable to all industries.

Section 4 contains a brief interstate comparison of:

- mineral royalty regimes;
- the telecommunication services; and
- planning systems.

Appendix 1 describes the methodology used in determining the indices and Appendix 2 details the component indices that have been used in the calculation of the aggregate indices presented in Section 3. Appendix 3 contains details of state payroll tax and land tax regimes from the New South Wales Treasury's *Comparison of State Taxes*, with the addition of recent changes announced by Tasmania and Victoria.

3 Findings

Each index has a base of 100 for the state with the lowest cost or, in other cases, lowest benefit. This method provides both a ranking for the states and a guide to the magnitude of the differences in the costs and benefits between the states.

For those indices that are based on costs, a low value index number reflects a favourable result (in the context of an assessment of competitiveness), while for those indices that measure the market advantages of undertaking business in each state, a high value index number is more favourable.

3.1 Cost-Based Indices

3.1.1 Labour Market

Discussions with industry representatives indicated that while labour costs are a critical cost component, the quality of the labour force has a significant impact on their operations. Four indices have been developed to reflect these two elements of the labour force. The first incorporates the direct costs of employing labour, including on-costs, and three others measure the stability and educational qualifications of the labour force in each state.

3.1.1.1 Direct Labour Costs

The labour cost index below incorporates all the major costs of employing labour: wages, payroll tax, fringe benefits tax, superannuation and workers' compensation premiums. Appendix 2 provides state-by-state data for the major components of this index.

These labour costs have been amalgamated in the index to better reflect the basis on which businesses make a decision to employ additional workers. To isolate individual costs, such as wages or payroll tax, would not provide a meaningful measure of the relative costs faced by businesses. The index has been designed to include all the unavoidable employee-related costs that an employer faces.

In general, the total cost of employing workers in Tasmania is less than in all other states, although only marginally less than in South Australia.

Compared with the 2000 Index, Tasmania retains its place as the lowest labour cost state. South Australia's relative competitiveness has improved compared with the 2000 Index. This improvement reflects relatively slower wages growth in that State over the period to which the data relate.

Labour Cost Index						
	NSW	Vic	Qld*	SA*	WA*	Tas*
2001 Index Number	112	106	103	100	103	100
Rank	6	5	3	2	4	1
<hr/>						
2000 Index Number	113	107	104	104	107	100
Rank	6	4	3	2	5	1

*Rank reflects index values before rounding.

An ongoing area of concern to business is the burden placed on employers by payroll tax. When measured on a consistent basis, Tasmania now has the second lowest payroll tax burden of all states. This is a significant improvement from the 2000 Index, which found that Tasmania had the second highest payroll tax burden using the same methodology. The improvement is attributable to the reduction in the payroll tax rate and the increased tax-free threshold announced in the 2001-02 Budget, effective from 1 July 2001. Appendix 2 shows details of the components of the labour cost indices for 2000 and 2001.

The payroll tax regimes used for all states in the calculation of the payroll tax component of the index are those announced prior to the preparation of the 2001 Index to be in effect on 1 July 2001. This includes the new payroll tax regime announced by the Victorian Government in its *Better Business Taxes* Report released on 26 April 2001. Further details are provided in Appendix 3.

The method used to calculate the labour cost index is designed to reflect the average cost of employment in each state. Therefore, average wages for each state have been used. If identical ordinary time earnings were applied to each state, Tasmania would emerge as having the third highest payroll tax burden of all states, between 5 and 8 per cent higher than Queensland, Western Australia and Victoria.

Using the same wage rates for all states, based on private sector wages, Tasmania has the lowest payroll tax burden of all states except Western Australia for payrolls up to \$4 million. This level of payroll equates to approximately 130 employees which, in Tasmania, represents over 90 per cent of all employers liable for payroll tax. More details of the payroll tax changes can be found in the 2001-02 Budget Paper No 1.

3.1.1.2 Labour Characteristics

During discussions with business it was generally noted that one of the advantages of undertaking business in Tasmania is the relatively high quality workforce and the relatively low turnover. Nevertheless, there was some concern that it is difficult to attract and retain certain skilled staff in those areas where working in Tasmania would be perceived as resulting in some degree of professional isolation.

The overall quality of the labour force has been assessed using three characteristics: labour retention rates; industrial disputation and labour skill levels.

Tasmania performs particularly well in the labour retention and industrial disputation indices, with the best industrial relations record of all states and the highest labour retention rates. However, Tasmania has the worst ranking of all states in the skills index.

Labour Skills Index						
	NSW*	Vic	Qld*	SA	WA*	Tas*
2001 Index Number	106	101	100	103	106	100
Rank	1	4	5	3	2	6

Unchanged from 2000 Index. No new data available.

* Rank reflects index values before rounding.

The labour skills index comprises two elements, the qualifications of persons in the labour force and the proportion of the labour force that is undertaking ongoing training.

While Tasmania performs well in the second of these elements, it does not perform as well in the first, with a relatively small proportion of the Tasmanian labour force having some form of qualification. In particular, Tasmania has a relatively small proportion of people who hold a bachelor degree or higher. This is consistent with the view of a number of the firms visited that it is difficult to attract and retain highly skilled people to the state.

The relatively small proportion of qualified people in Tasmania reflects in part the structure of the State's industrial base, with a smaller proportion of the workforce employed in skilled professions as these tend to be based in larger metropolitan centres, particularly Melbourne and Sydney.

Labour Turnover Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	110	115	124	111	128	100
Rank	2	4	5	3	6	1

<i>2000 Index Number</i>	<i>108</i>	<i>109</i>	<i>114</i>	<i>104</i>	<i>116</i>	<i>100</i>
<i>Rank</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>2</i>	<i>6</i>	<i>1</i>

Tasmania continues to have the lowest employee turnover of all the states and the best industrial relations record. The industrial disputes index is based on data for the past five years and reflects Tasmania's consistently low rate of industrial disputation, which is significantly below that of the other states. Workforce reliability, both in terms of labour turnover and rates of industrial disputation, can impact significantly on the competitiveness of businesses.

Industrial Disputes Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	354	381	280	121	318	100
Rank	5	6	3	2	4	1
<hr/>						
2000 Index Number	303	335	408	111	328	100
Rank	3	5	6	2	4	1

3.1.2 Land and Accommodation

In addition to the cost of land rental and purchase, land and accommodation costs include state government land tax and municipal rates. Land tax generally only applies to land that is used for purposes other than as a principal place of residence and primary production. Therefore, the major burden of land tax falls on businesses.

Tasmania has the lowest aggregate land and accommodation costs of all the states, a change from the 2000 Index, in which Tasmania had the second lowest costs. Tasmania's relatively low land and accommodation costs result from the low average land and property values in the State. Appendix 2 shows details of the components of the land and accommodation cost indices for 2000 and 2001.

Land and Accommodation Cost Index						
	NSW	Vic	Qld	SA*	WA	Tas*
2001 Index Number	216	107	172	100	117	100
Rank	6	3	5	2	4	1
<hr/>						
2000 Index Number	191	110	157	100	134	102
Rank	6	3	5	1	4	2

* Rank reflects index values before rounding.

The property rental and values component of this index for Tasmania is the lowest of all the states, primarily as a result of low property values. However, rental costs in Tasmania are relatively high in relation to property values. This may reflect the fact that

property owners are not prepared to accept low rental income in the expectation of a large capital gain, as they do not expect property values to appreciate as they have in some other states.

The land tax component indicates that the burden on businesses in Tasmania is the third lowest of all states, behind Victoria and South Australia. The highest land tax burden is in New South Wales. These rankings are unchanged from the 2000 Index.

Variations in the land tax burden arise from differences in both land values in each state and the rates of tax. In the case of New South Wales, the relatively high land tax burden reflects both the high land values in that State and a relatively high tax rate. In Victoria, the land tax regime is more progressive than in other states, with very low marginal rates of tax applying to lower valued land and very high marginal rates applying to higher valued land. About 80 per cent of commercial and industrial properties in Victoria are valued in the low tax range. Tasmania has a combination of relatively low land values and relatively high tax rates.

The land tax component of the index has been calculated in order to reflect the actual cost that may be incurred by businesses in each state and has therefore been based on average land values in each state. If a comparison of land tax is made by simply comparing land tax on properties of the same value in each state, Tasmania generally would have the highest land tax rates of all states, other than South Australia for certain properties. Details of land tax rates for each state are provided in Appendix 3.

The municipal rates component of this index for Tasmania is the lowest of all states. However, the data used for this component of the index may not be as reliable as for the other components of the index and should be treated with caution. In particular, the information used includes both residential and commercial rates, which may make the results unreliable. The fact that local government provides different services in each state also makes interstate comparison unreliable.

3.1.3 Energy

Energy is an important input for many firms, both directly and indirectly through transport costs. An aggregate energy cost index has been developed to compare the energy costs of the states and comprises components for each of the major types of energy: electricity, fuel and gas.

Energy Cost Index*						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	100	106	108	111	118	136/133
Rank	1	2	3	4	5	6
<hr/>						
2000 Index Number	108	100	116	117	138	136
Rank	2	1	3	4	6	5

*For Tasmania, two index numbers have been included. 136 is the index number using historic prices and 133 reflects the impact of the removal of the electricity entities levy.

The high costs for Tasmania mainly reflect relatively high costs for gas and fuel in the State.

3.1.3.1 Electricity

Electricity prices in Australia have changed dramatically in recent years, particularly in a number of mainland states, with the introduction of the National Electricity Market (NEM).

Prices for electricity vary from state to state due to a number of factors including the:

- principal method of generation in each state;
- length of transmission lines;
- the supply/demand balance in each state; and
- level of competition between electricity entities (both in retail and in generation).

Average Tasmanian electricity prices have historically been competitive with those in the mainland states due to the efficiency of hydro-generated electricity compared with coal or gas generated electricity. However, the primary beneficiaries of the lower prices have been major industrial customers.

Electricity prices in the NEM are generally expected to show some further increases in the next few years, as demand increases outweigh supply increases. There has been a marked increase in wholesale prices in Victoria over the past twelve months. As a result of this relative price increase in Victoria, Tasmania has improved from having the fourth lowest electricity prices in the 2000 Index to having the third lowest. However, the method of calculating the index for the current report was different from that used in the 2000 Index due to data constraints. Therefore, caution is required when inter-year comparisons are made.

Electricity Cost Index*						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	100	124	109	129	135	123/117
Rank	1	4	2	5	6	3
2000 Index Number	110	100	127	141	172	139
Rank	2	1	3	5	6	4

*For Tasmania, two index numbers have been included. 123 is the index number using historic prices and 117 reflects the impact of the removal of the electricity entities levy.

The electricity cost index is based on historical data. If Tasmania's electricity prices are adjusted to reflect the impact of the removal of the electricity entities levy on

Tasmania's electricity prices (with all other states' prices unchanged), Tasmania's index number falls to 117, still third lowest.

The lack of competition in the Tasmanian electricity market is seen by many businesses as the principal reason for Tasmania's relatively high electricity prices. The larger commercial businesses, in particular, are paying significantly more than some mainland counterparts who enjoy the benefits of competition.

Tasmania's connection to the national electricity grid through Basslink and the proposed introduction of natural gas are expected by many businesses to result in some decline in wholesale prices in Tasmania.

Electricity reliability may be as important to some businesses as electricity prices, particularly for those businesses where continuous electricity supply is a vital element of production. The component of the energy index that measures relative reliability of supply indicates that Tasmania has the second lowest supply reliability. By contrast, in the 2000 Index, Tasmania had the second highest supply reliability, probably reflecting the higher average age of Tasmanian assets in Tasmania relative to the other states. It should be noted in this regard, however, that Transend Networks, the transmission company in Tasmania, is part way through a \$500 million capital expenditure program principally designed to address this historical problem.

It should be noted that the measure used for this index, the number of minutes lost per customer per year, is volatile, as reflected in the significant difference in the index number for Tasmania in the 2001 Index compared to the 2000 Index.

Electricity Reliability Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	125	148	258	100	109	203
Rank	3	4	6	1	2	5
2000 Index Number	135	173	244	100	132	118
Rank	4	5	6	1	3	2

3.1.3.2 Fuel

Fuel prices vary across states, due principally to differences in the costs of transporting the fuel from refineries and in the competitive structure of the markets in each state.

On the basis of the fuel price component of the energy index, Tasmania has the highest fuel prices of all states. However, Tasmanian fuel prices have become much more competitive compared with the 2000 Index, which indicated that Tasmanian fuel prices were 24 per cent higher than the cheapest state (Queensland) rather than the 15 per cent difference in the current index.

	Fuel Cost Index					
	NSW	Vic*	Qld	SA*	WA*	Tas
2001 Index Number	112	111	100	111	111	115
Rank	5	3	1	2	4	6
2000 Index Number	116	112	100	114	117	124
Rank	4	2	1	3	5	6

*Rankings reflect variations before rounding

The 2000 Index noted that retail margins in Tasmania were relatively high compared to other capital cities, reflecting lower turnover Tasmania and the absence of an independent wholesaler. This situation has changed dramatically since the Government actively facilitated the establishment of Liberty Oil in the State in September 2000. Liberty's entry to the Hobart market resulted in significant price cutting and the Government Prices Oversight Commission noted in its March 2001 report that there was a negative retail margin early in March 2001. By the end of March 2001, discounting had eased and retail margins were estimated to have increased to between 1.8 and 2.5 cents per litre: well below the traditional retail margin of between 6 and 8 cents per litre that was experienced prior to the entry of Liberty.

3.1.3.3 Gas

Gas represents an important energy source for many mainland businesses because it is relatively cheap and readily available. A number of businesses indicated that they consider that Tasmanian businesses are significantly disadvantaged, as they are currently unable to access natural gas.

An index has been calculated to reflect the relative cost of gas in Tasmania compared with the other states. Tasmania fares poorly in the index due to the absence of natural gas within the State, making LPG the only gas supply available. LPG is imported from mainland Australia, or sourced from overseas, and transported to each individual location at regular intervals, whereas natural gas transported by pipelines is far less transport intensive and therefore less costly.

This index does not directly reflect the additional disadvantage faced by Tasmanian businesses from not having access to bulk gas supplies through a gas pipeline. However, the prohibitive cost of LPG for many businesses represents an indirect measure of this disadvantage.

The gas cost index for Tasmania increased significantly in the 2001 Index compared with the 2000 Index, due to a relatively stronger increase in Tasmania gas prices over the period to which the data refer.

Gas Cost Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	181	100	224	197	247	547
Rank	2	1	4	3	5	6
2000 Index Number	158	100	192	139	222	384
Rank	3	1	4	2	5	6

3.1.4 Freight

A significant cost of undertaking business in Tasmania is the cost of freight, both in terms of transporting inputs to production to the State and transporting finished goods out of the State.

Bass Strait represents a significant disadvantage to Tasmanian businesses. While the Tasmanian Freight Equalisation Scheme provides for some compensation arising from the costs imposed by Bass Strait, it falls short of full compensation. For example, some goods are not covered by the Scheme, such as bulk cargoes and inputs to production that are imported from overseas. In addition, no freight equalisation scheme is able to compensate for the problems faced by Tasmanian businesses as a result of the “tyranny of distance”, and the problems associated with undertaking business remote from major population centres.

One particular problem that was identified in the meetings with business was the disadvantage imposed on Tasmanian business by the additional time that was required to freight goods across Bass Strait, which could add several days to providing goods to distributors on the mainland, and places Tasmanian producers at a disadvantage compared to mainland producers. This has resulted in a number of producers in the State undertaking warehousing and distribution operations from the mainland. It has not been possible to factor this cost into the freight cost index.

The surface freight cost index reflects the relative cost of interstate freight and does not include the cost of transporting goods internationally. It should be noted that there have been some difficulties encountered in preparing this index and the figures shown may not be reliable. Work is continuing in developing a more reliable index.

Additional indices have been prepared in the 2001 Index to include the cost of air freight and passenger travel between states. Air freight is an important transport mode particularly for producers of premium quality fresh produce. Similarly, air travel represents an important business cost, particularly as businesses become increasingly centralised.

Tasmania is the worst ranked of all the states in the surface freight cost index. The calculation of the index includes the receipt of a subsidy for freight equalisation. In the absence of this subsidy, the freight index for Tasmania would be 168, or around 50 per

cent higher than the actual index value. Several firms have commented on how critical the freight equalisation payments are to enable them to be competitive in mainland markets.

Surface Freight Cost Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	108	111	100	105	109	117
Rank	3	5	1	2	4	6

Unchanged from the 2000 Index.

As with the surface freight index, the air freight and travel indices reflect air freight and air travel costs only within Australia and not internationally.

Air Freight Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	104	100	121	105	245	133
Rank	2	1	4	3	6	5

Tasmania is the fifth ranked state for the air freight index, ahead of Western Australia, which is disadvantaged by its distance from other major Australian population centres.

Tasmania is the fourth highest cost state for air travel, ahead of Western Australia and Queensland.

Air Travel Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	101	100	118	109	184	110
Rank	2	1	5	3	6	4

3.1.5 Transport-Related Infrastructure

Transport-related infrastructure includes road, rail, shipping and airfreight infrastructure. The absence of quantitative information in respect of road, rail and air transport infrastructure in all states has prevented the estimation of an index in respect of these modes of transport. However, an index illustrating the relative access to ports in each state has been calculated.

3.1.5.1 Ports

Those firms that rely on overseas markets for either the sale of their products or the supply of inputs have a heavy reliance on access to port facilities. In addition, sea transport is important for the transport of goods domestically, with the large distances between population centres and the location of most major population centres on the Australian coast making sea transport a viable alternative to road and rail transport.

During the industry visits, the feedback in respect of port access and charges was mixed, with a number of firms agreeing that relatively easy access to ports was important for their business, but also noting that the relatively large number of ports within the State may lead to higher port charges than otherwise.

Tasmania has the highest ranking of all the states for the port access index (in this case a high ranking implies a more favourable result), with a large proportion of the population relatively close to a port. It is assumed that the location of the population is a suitable proxy for the location of businesses within a state.

	Port Access Index					
	NSW	Vic	Qld	SA	WA	Tas
Index Number	112	129	100	140	145	166
Rank	5	4	6	3	2	1

Unchanged from the 2000 Index.

The port charges index indicates that Tasmania has the lowest port charges of all states, well below the other states. This index should be interpreted with some caution, however, as the data used relate to only one port in each state (Burnie in the case of Tasmania) and are for 1996. In addition, no index has yet been produced on relative port efficiency, which can have a significant impact on business. Work on this element is continuing.

	Port Charges Index					
	NSW	Vic	Qld	SA	WA	Tas
Index Number	142	130	120	125	126	100
Rank	6	5	2	3	4	1

Unchanged from the 2000 Index.

3.1.6 Proximity to Markets

Proximity to a large population base is important for many businesses for a number of reasons, including:

- access to the customer base;
- access to business and financial services; and
- capacity to attract skilled labour.

Proximity to a large customer base generally leads to low transport costs for goods and may be important for marketing. This is illustrated in the Tasmanian case with some Tasmanian manufacturers choosing to undertake marketing functions in mainland centres to permit greater access to customers.

However, the importance of a large local market differs between firms according to the nature of the product or service involved. For example, for commodities traded on the world market, ease of access to markets depends on access to, and the costs of, an international port and the quality and cost of international shipping services. Alternatively, for goods that are produced primarily for domestic consumption, the proximity to a large population base is important.

Even those firms that may have high levels of exports are advantaged by having access to a large local market. It provides them with some insulation from adverse world economic conditions and allows them to achieve economies of scale in production that may be necessary for them to be able to compete internationally. Therefore, as with many of the other factors that have been determined, the importance of this factor to each industry will vary significantly between industries and firms.

An index has been developed to reflect the proximity of the major population bases, which can be considered a proxy for access to domestic markets. The index indicates that Tasmania is most distant from these major markets.

Proximity to Markets Index						
	NSW	Vic	Qld	SA	WA	Tas
Index Number	689	587	437	216	210	100
Rank	1	2	3	4	5	6

Unchanged from the 2000 Index as Census data are used.

As would be expected, the range of the index values is large and reflects the significant disadvantage faced by Tasmanian businesses as a result of a small local market. New South Wales and to a lesser extent Victoria have an overwhelming advantage over Tasmania.

3.1.7 Resource Endowment

A major factor influencing the decision of firms to establish in a particular area is the availability of natural resources. Indices have been developed for forestry and mineral resources that compare the relative endowment of these resources between each of the states. It was considered inappropriate to make a meaningful comparison of the relative endowment of agricultural resources because of the significant differences between agricultural production in each of the states as a result of factors such as climate. It was also not possible to make a valid comparison of the relative availability of fisheries resources because of a lack of comparable data.

Forestry Endowment Index						
	NSW	Vic	Qld	SA	WA	Tas
Index Number	506	480	605	273	100	841
Rank	3	4	2	5	6	1

Unchanged from the 2000 Index.

The forestry index indicates that Tasmania has a significantly higher forestry endowment than any other state.

The following table provides an indication of the relative mineral resource endowment of each of the states. An index has not been produced in this case because of the difficulties associated with aggregating the different minerals. Rather a ranking has been produced as explained in Appendix 1.

Mineral Resource Endowment Index						
	NSW	Vic	Qld	SA	WA	Tas
Rank	3	6	2	5	4	1

Unchanged from the 2000 Index.

The ranking above demonstrates that Tasmania has a comparative advantage in terms of demonstrated mineral resources as a proportion of its land area when compared to other states. Indeed, Tasmania enjoys the highest density of mineral deposits of any state in relation to silver, tin and lead. Tasmania also has the second highest demonstrated mineral density of all the states in deposits of zinc, iron ore, gold and copper.

3.2 Industry-Based Cost Indices

Industry-based cost indices have been calculated for some industries in which firms have flexibility in deciding where to locate. The industries that have been included are:

- mining, defined to include the extraction of minerals but not downstream processing;
- manufacturing, defined to include the downstream processing of minerals and the processing of agricultural commodities;
- accommodation, cafés and restaurants;
- finance and insurance, which to a large extent services the local market, but for which there is flexibility for the firms in the location of centralised functions; and
- property and business services, which includes legal, accounting and architectural services, for which there is some potential for export, and call centres.

These industries account for about 30 per cent of Tasmania's Gross State Product (GSP).

The agriculture, fishing and forestry sector has been excluded from the analysis because labour cost data for this sector are not collected by the Australian Bureau of Statistics (ABS).

The industry-based cost indices have been based on the following cost component indices:

- labour costs;
- energy;
- interstate freight; and
- land and accommodation.

An important factor in assessing whether a particular state has a favourable business environment for a firm is the ability of the firm to access its market. This factor has not been included in the aggregate index for each industry because of the difficulty in weighting it relative to the other factors. For many businesses, the ability to access markets will be a key factor in the establishment of businesses within a state. For this reason, in section 3.2.6 separate consideration has been given to whether access to markets is a significant factor in the location decisions made by firms for each industry.

It is also worth noting that some costs within particular sectors are likely to reflect the relative attractiveness of establishing a firm within a particular jurisdiction. For example, if a jurisdiction has a relatively high resource base, it is likely that the relative profitability of the resource sector will lead to higher payments to labour. Similarly, land and accommodation costs are highest in the metropolitan centres, where demand is greatest.

In each of the industry-based cost indexes, a low index number indicates low costs.

3.2.1 Mining

A decision about whether to establish or maintain a mining operation within a state is influenced principally by the availability of a resource. Tasmania has a wide variety of rich and high-grade mineral deposits in a very compact area, making it an attractive location for mining operations. However, despite the relative concentration of minerals in Tasmania, the nature of the State's topography (and, in some cases, the climate) makes mining in the State quite difficult.

Notwithstanding this, decisions by firms to continue with or undertake mining operations in the State will be influenced by the competitiveness of the firm on the world market, which will ultimately be influenced by the costs of those operations.

In the mining cost index, Tasmania is ranked second lowest of all states after Victoria, but only marginally below South Australia. The favourably low cost for Tasmania primarily reflects low labour costs. It should be noted that the cost index does not include the cost of extraction of minerals, which has a significant bearing on the relative competitiveness of a state's mining industry.

Mining Cost Index						
	NSW	Vic	Qld	SA*	WA	Tas*
2001 Index Number	144	100	123	104	109	104
Rank	6	1	5	3	4	2
2000 Index Number	138	114	126	100	120	112
Rank	6	3	5	1	4	2

* Rank reflects index values before rounding.

Mining royalties in each state are likely to impact on the relative attractiveness of undertaking mining. A summary of the mineral royalty regimes in each state is included in section 4.

3.2.2 Manufacturing

The manufacturing sector in Tasmania accounts for about the same proportion of factor income and employment as for Australia as a whole. However, the composition of the Tasmanian manufacturing sector differs from that of the rest of Australia, with greater reliance on the processing of agricultural and mineral resources and less reliance on the production of machinery and equipment.

Manufacturing Cost Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	122	105	107	100	104	108
Rank	6	3	4	1	2	5
<hr/>						
2000 Index Number	117	103	107	100	108	105
Rank	6	2	4	1	5	3

Tasmania is ranked fifth highest in the manufacturing cost index. Tasmania is generally disadvantaged in this index by its relatively high energy costs, principally gas.

Tasmania's ranking has fallen from third to fifth as a result of Western Australia becoming the second lowest cost state compared with the second highest cost state in the 2000 Index. This in turn is due to electricity prices in Western Australia having fallen significantly from the 2000 Index.

3.2.3 Accommodation, Cafés and Restaurants

Labour and land and accommodation costs represent a significant proportion of overall costs for the accommodation, cafés and restaurants sector.

Tasmania has the second lowest cost index for this industry sector, behind Western Australia, where average labour costs were much lower than those in Tasmania for this industry sector.

Accommodation, Cafés and Restaurants Cost Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	150	104	135	103	100	102
Rank	6	4	5	3	1	2
<hr/>						
2000 Index Number	137	100*	130	100*	118	104
Rank	6	1	5	2	4	3

* Rank reflects index values before rounding.

3.2.4 Finance and Insurance

Tasmania has the second lowest cost index for the finance and insurance sector, marginally behind South Australia.

Labour costs represent an important component of finance and insurance sector costs and the relatively low labour costs for Tasmania contribute to the relatively low cost index for this factor.

Finance and Insurance Cost Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	137	110	122	100	102	101
Rank	6	4	5	1	3	2
2000 Index Number	146	121	122	109	110	100
Rank	6	4	5	2	3	1

It should be noted that the structure of the finance and insurance industry in each state varies significantly, with Tasmania generally having a lower proportion of staff in higher level positions compared with some other states, in particular New South Wales and Victoria. The index has been calculated in such a way as to eliminate, as much as possible, the different employment structure in each state. However, it is unlikely that this effect has been fully eliminated.

3.2.5 Property and Business Services

This sector comprises a broad range of industry sectors, including:

- real estate agents and property developers;
- machinery and equipment hiring and leasing;
- ‘technical’ services (architectural, surveying and consultant engineering services);
- computer services;
- legal and accounting services;
- marketing and business management services; and
- ‘other’ business services (for example, employment placement and call centres).

Tasmania continues to have the lowest cost index for the property and business services sector of all states, with slightly lower costs than in South Australia.

Property and Business Services Index						
	NSW	Vic	Qld	SA	WA	Tas
2001 Index Number	184	109	150	102	114	100
Rank	6	3	5	2	4	1
<hr/>						
<i>2000 Index Number</i>	<i>168</i>	<i>109</i>	<i>137</i>	<i>102</i>	<i>125</i>	<i>100</i>
<i>Rank</i>	<i>6</i>	<i>3</i>	<i>5</i>	<i>2</i>	<i>4</i>	<i>1</i>

3.2.6 Access to Markets

While Tasmania performs relatively well in terms of many of the cost indices, there are many other factors that will determine the ability of a particular jurisdiction to attract and retain businesses. For many businesses, access to markets, more than any other factor, is likely to be a critical factor in determining whether to invest in a particular location. The importance of having access to a large local market is considered below for each industry.

3.2.6.1 Mining

Access to a large local market is generally not important for high value minerals such as copper, tin and zinc. The relatively high value of the mineral means that transport costs associated with a firm being isolated from its market are of less importance than other factors, such as availability and quality of the resource and extraction costs. In addition, a large proportion of these minerals is exported internationally, which means that a large local market is not an important issue for firms in this part of the industry.

In that section of the industry that is involved in the supply of relatively widely available low value minerals, such as gravel, access to local markets is likely to be of greater importance because transport costs to distant markets will increase the total costs significantly.

3.2.6.2 Manufacturing

Manufacturing incorporates a diverse range of businesses and the nature of the product will determine the importance of access to markets. Those products that are relatively high value-added products, for which additional transport costs represent a relatively small proportion of the value, are unlikely to be significantly affected by location.

Similarly, those firms involved in the processing of resources, such as smelting, are not likely to be influenced by the location of its customer base because transport costs represent a relatively small proportion of total costs. Other factors such as resource availability, port facilities and costs and the cost of key inputs such as electricity are likely to be more important considerations.

On the other hand, those firms involved in the manufacture of low value added products and/or products with relatively high transport costs will be disadvantaged by having a location that is relatively remote from their major markets.

3.2.6.3 Accommodation, Cafés and Restaurants

The hospitality industry services both the local market and the tourist/convention market. Greater access to a large local market is critical to most firms in this industry.

3.2.6.4 Finance and Insurance

The finance and insurance sector is one in which technology has made it possible to carry out business far from the customer base. Therefore, proximity to the market is, in principle, less important an issue than it has been in the past for this sector. However, it remains the case that the finance and insurance sector tends to remain close to its major markets. It is likely that other factors that are reflected in the population proximity index are likely to be important for this industry. For example, access to a suitably trained workforce and access to other businesses with appropriate levels of expertise are likely to be important in the banking and finance sector, making access to a relatively large local population important.

3.2.6.5 Property and Business Services

The industry covers a wide range of businesses for which access to markets will generally be of some importance. For example, businesses such as those providing accounting and architectural services are likely to be significantly advantaged by having ready access to a large local population.

For other businesses in this category though, ready access to markets is likely to be of less significance. Call centres and some IT businesses, for example, do not require close proximity to a large local market in order to be competitive.

Other Issues

3.3 Mineral Royalties

Royalties are a payment by the users of natural resources to the owners of those natural resources. Mineral royalties are generally paid to the government of each state as the owner of mineral resources within that state, on behalf of the community. However, in some cases, mineral resources may be privately owned.

A range of royalty regimes operate within the different states.

Specific rate or quantity-based royalties are calculated on the volume of material produced and generally apply to low value construction materials.

Ad valorem or value-based royalties are calculated on the basis of the value of the mineral produced.

Profit-based royalties are based on the net profits of mines.

A summary of the types of royalty systems that apply to metallic minerals in each state is provided below.

New South Wales	4 per cent of the “ex-mine value” of production.
Victoria	2.75 per cent of the value of minerals.
Queensland	Rate elected: fixed 2.7 per cent or a variable rate between 1.5 and 4.5 per cent depending on metal prices. For gold and silver a \$30 000 exemption applies annually. For metals other than gold and silver, a \$4 million half royalty threshold applies and discounts apply where product is processed within the State to 95 per cent contained metal.
South Australia	2.5 per cent of the assessed value ex mine lease.
Western Australia	Minerals subject to limited treatment – 7.5 per cent of the realised value. Concentrate material – 5.0 per cent of the realised value. Metal – 2.5 per cent of the realised value.
Tasmania	Tasmania’s mineral royalty regime combines an ad valorem component and a profit component. Total royalties are equal to 1.6 per cent of net sales plus a profit component, to a maximum of 5 per cent of net sales. Rebates of 10 or 20 per cent are payable to companies that undertake downstream processing to produce a metal or gold doré.

The royalties specified above are those that generally apply in each state. In some cases, specific royalty regimes apply to particular operations.

The development of an index measuring the relative level of mineral royalties in each state has been examined, but confidentiality of data and problems in comparing data between states has meant that such an index has not yet been completed. Work is continuing on the development of an index, which will draw on work being undertaken by some other states, and a mineral royalties index is expected to be included in the 2002 *Competition Index*.

3.4 Telecommunications

Telecommunication services have become increasingly important for the business sector due to the increasing demands in the modern business environment for services such as: mobile telephones; paging; facsimile; satellite communications; video conferencing; electronic mail; and the internet.

The lack of relevant statistical data, especially cost data, makes the compilation of a telecommunications index for each Australian state almost impossible. Additional information will be released by the Productivity Commission in July 2001 that may facilitate additional work in this area.

Tasmania's market for telecommunications services is both small by national standards and located away from major mainland markets and from the trunk routes that service them. With the possible exception of the Hobart metropolitan area, Tasmania's telecommunications services resemble the Australian Communications Authority's (ACA) "regional centres" classification for geographic markets. This means that, for the majority of Tasmanians, the availability of infrastructure and services is generally good and most areas have access to local points of presence. However, the limited competition in Tasmania among carriers has generally led to higher prices, where prices are not fixed nationally, and in some cases limited availability and lower service quality when compared to major mainland metropolitan markets.

As with many services in Tasmania, competition in corporate telecommunications provision is limited, and where it exists it is largely competition based on the resale of Telstra services. Telstra's infrastructure roll-out in Tasmania enables it to offer high quality services in most areas, which are both nationally and internationally competitive. However, the lack of competition contributes to higher prices relative to the eastern seaboard cities of Melbourne, Canberra, Sydney and Brisbane, all of which are markets with strong competition. The lack of competition with regard to the provision of corporate telecommunications services in Tasmania is demonstrated by Telstra's market share of the business mobile phone market.

Business Mobile Phone Market Share

Service Provider	Market Share
	%
Telstra	81.5
Optus	5.6
Vodafone	0.9
Don't Know / Other	12

Source: eServices Group, Tasmania's Telecommunications Market Snapshot, January 2001

Tasmania's percentage of businesses connected to the internet (57 per cent) is behind the national average (61 per cent), but is comparable with the percentage in South Australia, Queensland and Victoria.

Business Connected to the Internet

	NSW	Vic	Qld	SA	WA	Tas
	%	%	%	%	%	%
Internet Connection	66	59	57	55	64	57

Source: The Yellow Pages Small Business Index 2000

The ACA collects quarterly statistics on carrier performance in the fixed and mobile telecommunications networks. For the December quarter 2000, the ACA's statistics show that Tasmania's mobile phone drop out rates, reconnection of in-place services, connection of new services and fault clearance are largely in-line with the other states.

The deregulation of the Australian telecommunications industry has not, at this stage, led to a significant increase in the number of carriers or resellers operating in Tasmania. Notwithstanding this, several carriers and carriage service providers have achieved some market penetration, such as in the long distance phone calls market, which may become more significant in future years.

3.5 Planning and Appeals

During the industry visits that were undertaken to assist with the preparation of this report, a number of participants expressed concern at the apparent ease with which developments within Tasmania could be stopped by the objection of a third party. The perception among business is that it is relatively easy in Tasmania for individuals to delay or prevent major developments.

The primary areas of concern were:

- the fact that the objecting third party did not need to be directly affected by the proposed development;
- it is not clear on what basis the Resource Management and Planning Appeal Tribunal assesses the cases of third party objectors and the developer when hearing appeals; and
- there is little recourse for developers if the Appeal Tribunal upholds the appeal of third party objectors.

A comparison of the planning systems in Australian states¹ indicates that there are some differences in the planning and appeals system between states.

In relation to the specific concerns raised by industry:

- In Tasmania, New South Wales, South Australia and Queensland any person may object to a development. In Victoria only persons affected by the development may object. Western Australia has a large number of Acts and schemes that cover planning and the objection provisions vary between them.
- Objectors have the right to appeal against a proposed development in all states other than Western Australia. In New South Wales, the right of appeal is restricted to appeals on environmental grounds.
- In all states other than Queensland, appeal to a higher court against the decision of the relevant appeal authority is permitted only if the further appeal is based on a matter of law. In Queensland, the appeal authority may grant the right to appeal to a higher court.
- Tasmania is the only state that has a timeframe imposed on the announcement of an appeal decision.
- Tasmania is the only state in which there is no Ministerial intervention in the planning system, other than for Projects of State Significance. The potential for intervention may result in some degree of assistance in having a project approved but may equally, under some governments, create some uncertainty for developers.
- All states have a different planning and development system for projects that are considered to be of state significance.

From industry's perspective, Tasmania would appear to have a planning and development system that is relatively open to the delay or prevention of new developments. In particular, the right of objection by any person, whether or not that person is affected by the development, is equal to the most generous objection rights in any of the other states and there is less scope for Ministerial support for developments with a significant public benefit.

¹ Comparisons of the states' planning systems in this paper are those undertaken by the Tasmanian Department of State Development and by Collie Planning and Development Pty Ltd for the National Office of Local Government.

A more thorough comparison would require case study analysis of the experience in each state to assess whether, in practice, there is a greater propensity for projects to be stopped in Tasmania as a result of objections and appeals.

Additional work is being undertaken in comparing the planning and appeal systems of each state.

3.6 The Tasmanian Lifestyle

While the focus of this paper is on the factors influencing the capacity of businesses to be competitive in Tasmania, factors related to the quality of life experienced by current and potential employees are a substantial component of Tasmania's comparative advantage. This next section provides some quantitative measures of the lifestyle benefits that firms located in Tasmania can offer potential employees.

Housing Affordability				
June 2000				
State	Median House Price, Capital City	Median Annual Family Income	Ratio: Median House Price to Family Income	Proportion Family Income Devoted to Home Loan Repayments
New South Wales	\$315 000	\$48 256	6.5	30.7%
Victoria	\$253 000	\$48 152	5.3	24.7%
Queensland	\$145 000*	\$44 252	3.3	24.8%
South Australia	\$135 000	\$41 340	3.3	21.7%
Western Australia	\$157 800	\$47 996	3.3	22.0%
Tasmania	\$130 000	\$38 272	3.4	18.0%

Source: Real Estate Institute of Australia, Market Facts - A Quarterly Review of Major Residential Property Markets in Australia: Annual Review 1999-00, Table 14.

*Estimate only.

Tasmania has much to offer prospective residents - spectacular scenery, unique flora and fauna, a refreshing climate and a rich heritage. Hobart offers a lifestyle that many consider to be unsurpassed by other major population centres in Australia. Particular advantages include:

- **Affordable housing.** In general, Tasmanian house prices are much lower, both in absolute terms and as a proportion of median incomes, than in mainland capital cities, particularly Sydney and Melbourne. Indeed, selling a heavily mortgaged property in either of these two cities can, in some cases, allow a person relocating to purchase a house in Hobart and still retain funds to invest. The table above shows that Tasmania ranks very favourably on housing affordability.

- **Stress-free travel.** Because Tasmania is relatively small and the necessities of life are closer, Tasmania's working environment is less pressured. Almost 60 per cent of the population get to and from work or school in less than 18 minutes, regardless of their mode of transport. Fewer than 2 per cent of Tasmanians take more than an hour to get to school or work² and traffic congestion is almost unknown.

² Australian Bureau of Statistics, *9201.8 Transport Patterns and Preferences, Tasmania* October 1997

4 Conclusion

The above analysis indicates that Tasmania has a number of cost advantages for businesses. In particular, low labour costs and land and accommodation costs, good port access and good access to natural resources make Tasmania an attractive location for many firms to undertake business. However, Tasmania's relative isolation may be a barrier to the establishment of firms that rely on access to a large customer base or specialised financial and business services.

Tasmania's relatively low labour costs and the stability of the workforce were identified by many businesses as important benefits of establishing in Tasmania. This is reflected in the indices.

Payroll tax is an area of concern for business and Tasmania was shown in the 2000 Index to be uncompetitive in respect to this component of labour costs. The changes to the State's payroll tax regime announced in the 2001-02 Budget have largely eliminated the State's uncompetitiveness in this regard.

Relatively low land and accommodation costs in Tasmania were also identified in the industry visits as a benefit of establishing an operation in Tasmania.

While it has been identified that there are many businesses that may not be attracted to Tasmania because of its relative isolation, there are many firms that are benefiting from establishing in the State. For example, the IT industry, which is included in the property and business services sector, is one in which Tasmania has a comparative advantage. Tasmania emerges as having a cost advantage in this sector and, if proximity to a market is not essential, business conditions in Tasmania are favourable for the establishment of many firms in the sector.

The Government recognises that the State's relative isolation may hamper some businesses. However, this is not the case for all businesses and the Government is focussing its policies on areas in which Tasmania is not disadvantaged. Also, the Government has provided additional funding to the Department of State Development to help identify the measures needed to ensure that Tasmania is able to develop competitive and successful businesses.

Another issue that was highlighted in the industry audits which has been reflected in the competitiveness indices is the relatively lower skill levels of Tasmanian employees. To address this issue, the Government has committed funds to TAFE Tasmania to allow additional training. The Skills Response Unit in the Department of State Development is assisting in ensuring that training is directed to those skills that are most in need.

The absence of gas as a feasible energy option for many businesses in the State has also been highlighted in the 2000 and 2001 indices. This issue is being addressed by the development by Duke Energy International of a pipeline from Victoria to Tasmania and some trunk transmission pipelines within Tasmania, together with the reticulation of natural gas within Tasmania by one or more other gas businesses. Work is scheduled to begin in late 2001.

In addition, the establishment of Basslink and Tasmania's entry to the National Electricity Market will assist in making the electricity industry in Tasmania more competitive and is likely to result in electricity prices being lower than they would otherwise be.

The entry of Liberty Oil into the Tasmanian fuel market in September 2000, with the encouragement of the Tasmanian Government, has contributed to a significant reduction in petrol prices relative to what they would otherwise have been, particularly in the south of the State. While Tasmania remains the highest cost state in this regard, the difference between petrol prices in Tasmania and in the other states has decreased appreciably.

Appendix 1 - Calculation of Indices

The indices have been split into two categories in order to analyse the comparative costs and benefits of undertaking business in Tasmania. Cost-based indices group similar factors together, while industry-based indices compare certain costs for selected industries between states.

All the indices have a base of 100, which is the index for the state with the lowest value for each factor. For the indices that measure a quality element, a high value index number reflects a more favourable result, while for the cost-based indices, a low value is more favourable.

A1.1 Cost-Based Indices

A1.1.1 Labour Costs

The relative costs and benefits associated with the labour market in each jurisdiction fall into two broad categories.

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

Labour characteristics comprise those factors that are less easily linked with the employment of an individual and may be difficult to quantify. These factors relate to the quality of the workforce and specific factors that have been measured in this paper are labour turnover, training and education and level of industrial disputation.

A1.1.1.1 Direct Labour Costs

The wages and salaries component of the labour cost index has been determined using data from the ABS 2000 Survey of Employee Earnings and Hours. This measure provides wages data by occupation, which helps to eliminate some of the differences in average wages between states resulting from variations in the structure of the industry of each state. These data do not, however, eliminate differences in wages between states 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 has been determined on the basis of what a notional firm paying the average wage in each state, based on the above calculation, would be required to pay in each of the states. 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 states. Two issues arise as a result of the calculation of relative payroll tax burden under this method.

- The selected firm sizes. As firm size increases, the payroll tax liability per employee increases at a greater rate in Tasmania than in most of the other states 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. Nevertheless, since more than 95 per cent of firms, and almost all new firms, employ less than 570, the calculation is relevant for the vast majority of firms.

- The method of calculating the wages bill for each firm. The payroll tax liability calculated will not be the same as that actually payable because of the absence of allowance for part-time staff and overtime payments. 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, has been calculated on the same basis.

Details of the payroll tax rates that apply in each state are included in Appendix 3.

A number of the states are phasing in new payroll tax regimes. The payroll tax regimes used in the preparation of this index are those that had been announced prior to the preparation of *The Competition Index* as being in place or becoming effective on 1 July 2001. Therefore, the payroll tax regime for Tasmania announced in the 2001-02 Budget to commence on 1 July 2001 has been included. In addition, the payroll tax rate for Victoria, was that announced in the Victorian Government's *Better Business Taxes* report to commence from 1 July 2001.

Fringe benefits tax, superannuation and workers' compensation premium figures used in the calculation have been taken from ABS labour costs data. Because these data are based on the actual amount paid by the firms surveyed, the results may vary between states if there are significant differences in the structure of the workforce in each state. For example, those states with a higher proportion of their workforce in relatively dangerous industries might be expected to have higher workers' compensation premium costs. A further shortcoming of these data is that they relate to 1997-98, the most recent available, and do not reflect recent changes to these factors.

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

A1.1.1.2 Labour Characteristics

Three indices have been calculated to reflect the importance that businesses place on having a good-quality, stable workforce. The indices relate to industrial disputes, the skill base of the labour force and labour turnover.

The industrial disputes index has been determined using 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 five years to 1999-00 and the six months to December 2000 have been included to ensure that the index reflects the industrial relations record of each of the states.

The skill index comprises two components: an education and training component and a qualifications component. The education and training component is based on ABS data on the education and training experience of the workforce. This information is released

on an irregular basis and the most recent data available relate to 1997. The index has been based on the number of persons who undertook education or training courses in the year prior to the survey. Training courses included are structured courses that were undertaken primarily with the aim of obtaining, maintaining or improving employment related skills or competencies.

The qualifications component is based on 1996 census data and reflects the proportion of the population over 15 years of age that has some form of vocational qualification.

Labour turnover has been based on 2000 ABS labour mobility data. 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. The Tasmania Chamber of Commerce and Industry 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.

A1.1.2 Land and Accommodation

Total land and accommodation costs for industry include the purchase or rental of property, state 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 state.

A1.1.2.1 Land and Accommodation Costs

The relative values of land and accommodation vary significantly between states and within states. The data that have been used to compare land and accommodation costs between states comprise rental and value data for commercial and industrial properties in capital cities in each state. The validity of this measure depends on the assumption that the capital city prices reflect the relative prices for properties in each state.

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.

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 6 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.

A1.1.2.2 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. A copy of the tax rates that apply is included in Appendix 3.

The index for land tax has been calculated using a range of land values that are representative of average land values in each state. The tax payable in respect of three land sites in each state 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 Report on State Revenue Sharing Relativities 2001 Update - Working Papers Volume 2* and relate to 1999-00. The land tax rate for Victoria reflects the increase in the tax-free threshold announced in the Victorian Government's *Better Business Taxes* report to commence on 1 July 2001.

A1.1.2.3 Municipal Rates

The level of municipal rates has been calculated on the basis of data from two sources. The total amount of rates collected is from ABS data for 1998-99. In order to make a comparison between states, rates per property have been calculated using the number of properties from the Commonwealth Grants Commission's 2001 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 this may also cause distortions.

A1.1.3 Energy

The energy index comprises three components: electricity prices and reliability of electricity supply, gas costs and fuel costs. Indices have been determined for each of the components and were aggregated using weightings based on industry consumption of each type of energy taken from the 1994-95 national input-output tables.

A1.1.3.1 Electricity Prices and Reliability of Supply

The index for electricity prices has been compiled using unpublished data from the Office of the Tasmanian Electricity Regulator. The measure used is the average electricity retail price for business customers in 2000-01. For Tasmania, a second index number has been calculated to determine the impact of the removal of the electricity entities levy announced in the 2001-02 Budget. This second index number has been determined by discounting the electricity prices for Tasmania by five per cent.

Since 1 July 2000, customers in the southern and eastern states whose annual consumption exceeds 160 MWh have been contestable and take supply under contracts

with retailers, rather than under tariffs. There is no public disclosure of current contract prices. For this reason, the electricity price index is based on smaller business customers taking supply under general business tariffs.

The index is based on the retail prices that three representative businesses would face in each of the states. Following the approach adopted by the Regulator, the three representative businesses are assumed to have demand of 600 kWh per quarter, 2 100 kWh per quarter and 4 800 kWh per quarter. For each state, an arithmetic average of the tariff prices for each of the representative businesses was used as the basis for calculating an average retail electricity price.

The index for electricity system reliability has been compiled using data from the Electricity Supply Association of Australia (ESAA) publication *Electricity, Australia 2000*. The measure used is the number of minutes of electricity lost per customer per year and is for 1998-99.

A joint electricity index was calculated by combining the electricity price index and the reliability of supply index using a ratio of 9:1. It was not possible to determine an objective weighting of each factor in this case and the weighting selected is believed to provide a useful guide to the relative importance of each of the factors.

A1.1.3.2 Fuel Prices

Petrol prices were obtained from the *Australian Petrol Pricing Reports*, available from the *Informed Sources* internet site, which provides a comprehensive breakdown of petrol prices for all states. The monthly report on petrol prices prepared by the Tasmanian Government Prices Oversight Commission contains similar data but the series is incomplete.

The price of unleaded petrol in each capital city was used as a basis for comparison between the states and is for March 2001.

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

A1.1.3.3 Gas Prices

Gas prices have been obtained from the Tasmanian Office of Energy, Planning and Conservation (OEPC). Average industrial natural gas prices for 1998 were used for all states except Tasmania, where there is no natural gas supply. The price of LPG in Tasmania has been converted to gigajoules and used as a basis for comparison of Tasmanian gas prices with mainland gas prices.

More recent information on commercial and industrial gas prices is not available. Therefore, 1998 data has been indexed in accordance with movements in the gas component of each state's consumer price index (CPI), up to March 2001. The gas component of the CPI relates to household gas. No similar information is available for commercial and industrial gas.

A1.1.4 Freight Charges

4.1.1.1 Surface Freight

The surface freight charges index has been calculated from information collected from a major national transport company.

The index was constructed by combining the cost of freighting a 24 tonne gross container from each capital city to each other capital city. The cost of freight in each case was weighted by the population of each destination capital.

This methodology assumes that the amount of freight destined for each capital city is related to the population in that city. A preferable weighting would be freight movements between capital cities, but this information is not available.

The surface freight costs for Tasmania have been adjusted to reflect the subsidy that would be received under the Tasmanian Freight Equalisation Scheme.

4.1.1.2 Air Freight

The air freight index is based on Australia Post express rates for a 20 kilogram package using the same methodology as was used in the surface freight index. That is, the index is constructed by combining the cost of sending the 20 kilogram parcel from each capital city to each other capital city, with the cost of freight in each case weighted by the population of each destination capital city.

4.1.1.3 Air Travel

The air travel index is calculated using the same methodology as the freight indices, using the cost of a one-way full economy class airfare between each of the capital cities. Discount fares that have been offered by certain airlines are not included, as these are often short term, in some cases unavailable for business use, and businesses are not likely to include these fares in their business planning.

A1.1.5 Transport-Related Infrastructure

A1.1.5.1 Access to Ports

This index has been calculated on the basis of the proportion of the population of each state that is within 50 kilometres of a major port. The 41 largest ports throughout Australia have been used. Those states 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 assumes that the location of a state's population is representative of businesses within that state.

A1.1.5.2 Port Charges

The port-charges index has been calculated from data published by the Bureau of Transport Economics (BTE) in its *Waterline* publication for the major ports in each state: Sydney, Melbourne, Brisbane, Adelaide, Fremantle and Burnie. The costs determined by the BTE are based on the costs faced by a ship of a specific size in each port to permit comparison between the states. Stevedoring charges, a major component of port charges, have been included in the BTE's calculations, but a uniform amount is applied across all ports.

The data relate to the period June to December 1996. While more recent data are available for other ports, the data was produced for Burnie on a once-off basis in its 1997 publication.

A1.1.6 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 the distance to other major population centres within Australia.

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

$$\frac{\text{OwnPopulation}}{25} * \sum \frac{\text{Population}_i}{\text{Distance}_i}$$

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 i, where i is all the other states.

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

The construction of the index on this basis means that the benefit derived from distant populations reduces at an increasing rate the further that population centre is from the focus state. For example, if population A is twice the distance from the focus state 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 lowest state as a base.

Census data from 1996 have been used in the determination of this index and so the relative position of Tasmania will have worsened in recent years as a result of the reduction in the State's population while the populations of other states continued to grow. The impact of marginal changes in population is not, however, expected to significantly affect any of the state rankings.

AI.1.7 Resource Endowment**AI.1.7.1 Forestry**

The forestry component of this index is based on the proportion of total state land area which is available forest, that is total forest area with allowance made for areas set aside for conservation purposes. This measure reflects potential relative importance of forestry-related industries to each state rather than the absolute amount of the forest resource available in each state. That is, while one jurisdiction may have a greater area of forestry available, it may only represent a relatively small proportion of total land area and therefore forestry activities may not be expected to contribute as much to state production as might be the case in some other states.

AI.1.7.2 Minerals

The mineral resources availability rankings have been calculated on the basis of demonstrated mineral resource data for selected minerals from the Australian Geological Survey Organisation. In order to make the information comparable across states, the amount of demonstrated mineral resources has been divided by the total area of each state.

The rankings have been calculated by taking the average of the rankings for each state for each mineral.

Endowment of Selected Minerals (Demonstrated Mineral Resources)							
Commodity	Unit	NSW	Vic	Qld	SA	WA	Tas
Copper	Mt copper per hundred million hectares	4.49	0.44	3.76	25.51	0.55	20.65
Gold	tonnes gold per hundred million hectares	672.41	593.15	243.75	896.34	1 356.56	1 002.95
Iron ore	Mt ore per hundred million hectares	3.74	26.36	141.27	29.47	7 935.45	3 171.09
Nickel	Mt nickel per hundred million hectares	0.78	0	0.37	0	4.88	0
Tin	kt tin per hundred million hectares	118.51	0	33.17	0	6.68	1 814.63
Silver	kt silver per hundred million hectares	7.61	1.32	23.39	6.20	0.87	23.60
Zinc	Mt zinc per hundred million hectares	9.36	1.32	17.72	0	1.31	17.70
Lead	Mt lead per hundred million hectares	5.61	0.044	8.05	0	0.55	16.22

Mt = Megatonne
kt = Kilotonne

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 1994-95 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 state are only available for labour. It is assumed in this analysis that the relative costs for the other inputs (those listed below) are as reflected in the category-based indices presented above. That is, it is assumed that for a given state, the relative cost of a specified input, such as electricity, faced by all that state's industries is as reflected in the electricity cost index. Hence all New South Wales industries are taken to face relatively cheap 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. The sum of all cost categories was generated for each industry group, with this number then being re-based at 100 for the state 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, in its Input-Output tables, makes no attempt to "impute" the rental value in these cases. 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.

For the mining industry, the (four year average) national level of capital expenditure on land and buildings is known. It was found that in mining, annual expenditure on land and buildings was around 4.6 times greater than expenditure on property services, both

expressed as a proportion of total mining costs. This multiplier factor was then applied to all the other industries to convert the ABS estimate of the expenditure on property services to an estimate of the industries' expenditure on land and accommodation costs.

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 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 value of total output 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.

The new ratio for mining, divided by the previous ratio (developed in the same way as the other cost categories, using the other property services category) was used as a multiplier to determine the relative weighting for land and accommodation costs in each of the other industries. This methodology assumes that the ratio of total land and accommodation costs to property and business services costs is the same for all industries.

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 calculations 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, which helps ensure that the wages figures used do not reflect the structure of the industry in each state. An average wage has been calculated giving equal weighting to each occupation.

Appendix 2 – Component Indices

Direct Labour Cost Component Indices

2001	NSW	Vic	Qld	SA	WA	Tas
Wages	110	106	104	100	103	101
Payroll Tax	127	109	100	114	104	103
Other Labour Costs	143	126	101	111	123	100

2000						
Wages	<i>111</i>	<i>106</i>	<i>105</i>	<i>104</i>	<i>107</i>	<i>100</i>
Payroll Tax	<i>126</i>	<i>109</i>	<i>100</i>	<i>113</i>	<i>103</i>	<i>114</i>
Other Labour Costs	<i>143</i>	<i>126</i>	<i>101</i>	<i>111</i>	<i>123</i>	<i>100</i>

Land and Accommodation Component Indices

2001	NSW	Vic	Qld	SA	WA	Tas
Rent and Values	235	127	185	113	135	100
Land Tax*	1,346	100	1,058	103	406	353
Municipal rates	177	114	132	120	135	100

2000						
Rent and Values	<i>202</i>	<i>124</i>	<i>160</i>	<i>109</i>	<i>154</i>	<i>100</i>
Land Tax*	<i>2,464</i>	<i>100</i>	<i>2,256</i>	<i>256</i>	<i>1,079</i>	<i>893</i>
Municipal rates	<i>148</i>	<i>116</i>	<i>128</i>	<i>127</i>	<i>136</i>	<i>100</i>

* The relatively lower land tax index numbers for most States in 2001 reflects a relative increase in average land values in Victoria, the base State.

Appendix 3 – Land Tax and Payroll Tax

Extract from: *Interstate Comparison of Taxes 2000-01*
New South Wales Treasury
December 2000

Includes changes announced in the 2001-02 Tasmanian Budget
and the Victorian Government's *Better Business Taxes* report

<i>TAX</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>WA</i>	<i>SA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>
PAYROLL TAX								
Basic Flat Rate:	6.40% (Effective 1.7.99) 6.20% (Effective 1.1.01) 6.00% (Effective 1.7.02)	5.75% (Effective 1.7.99) (5.45% from 1 July 2001, reducing to 5.35% on 1 July 2003. Announced on 26 April 2001)	4.90% (Effective from 1.7.00) 4.80% (Effective from 1.7.01)	Marginal rates apply. (see below)	6.00%	6.53% (6.3% from 1 July 2001. Announced in 2001-02 Budget)	6.60%	6.85%
Method of calculation of Tax:	Single Marginal Rate.	Single Marginal Rate.	Deduction System.	Marginal Rates.	Single Marginal Rate.	Single Marginal Rate.	Single Marginal Rate.	Single Marginal Rate.
Tax Scale and Small Business Concession:	First \$600,000 exempt.	First \$515,000 exempt. (First \$550 000 exempt from 1 July 2003. Announced on 26 April 2001)	First \$850,000 exempt. For payrolls \$850,000 to \$3.4m, deduction of \$850,000 reducing by \$1 for every \$3 payroll exceeds \$850,000. No deduction for payrolls in excess of \$3.4m.	First \$675,000 exempt. \$0.675m-\$2.7m: 4.87% of excess. \$2.7m-\$4.5m: \$98,550 + 6.03% of excess. \$4.5m-\$5.625m: \$207,000 + 9.4% of excess. >\$5.625m: 5.56% Flat.	First \$456,000 exempt.	First \$606,000 exempt. (First \$1.0 million exempt from 1 July 2001. Announced in 2001-02 Budget)	First \$600,000 exempt.	First \$800,000 exempt. From 1.1.01 first \$900,000 exempt. From 1.7.01 first \$1.25m exempt. From 1.1.02 first \$1.50m exempt.
	Employer superannuation contributions included in the tax base.	Employer superannuation contributions included in the tax base.	Employer superannuation contributions included in the tax base from 1.1.00.		Employer superannuation contributions included in the tax base.	Employer superannuation contributions included in the tax base.	Employer superannuation contribution and fringe benefit included in the tax base.	Employer superannuation contributions included in the tax base.
Reference Period:	Receipts relate to the previous month's payroll.	Receipts relate to the previous month's payroll.	Receipts relate to the previous month's payroll.	Receipts relate to the previous month's payroll, including superannuation and non remote fringe benefits.	Receipts relate to the previous month's payroll.	Receipts relate to the previous month's payroll.	Receipts relate to the previous month's payroll.	Receipts relate to the previous month's payroll.

LAND TAX								
<p>Tax Scale:</p> <p>Marginal rates apply to excess above the lower limit of the range unless explicitly specified.</p>	<p>From 31.12.00</p> <p>Less than \$205,000: Nil</p> <p>not less than \$205,000: \$100+1.7%.</p> <p>Threshold indexed annually to estimated increases in state-wide land values for commercial, industrial and residential properties.</p> <p>(No adjustment if state-wide land values decline.)</p>	<p>Less than \$85,000: Nil</p> <p>(Tax-free threshold to increase to \$125 000 from 1 July 2001. Announced on 26 April 2001)</p> <p>\$85,000-\$200,000: \$85 and 0.1c for each \$1 of the value that exceeds \$85,000.</p> <p>\$200,000-\$540,000: \$200 and 0.2c for each \$1 of the value that exceeds \$200,000.</p> <p>\$540,000-\$675,000: \$880 and 0.5 cents for each \$1 of the value that exceeds \$540,000.</p> <p>\$675,000-\$810,000: \$1,555 and 1 cent for each \$1 of the value that exceeds \$675,000.</p> <p>\$810,000-\$1,080,000: \$2,905 and 1.75 cents for each \$1 of the value that exceeds \$810,000.</p> <p>\$1,080,000-\$1,620,000: \$7,630 and 2.75 cents for each \$1 of the value that exceeds \$1,080,000.</p> <p>\$1,620,000-\$2,700,000: \$22,480 and 3 cents for each \$1 of the value that exceeds \$1,620,000.</p> <p>\$2,700,000 and over: \$54,880 and 5 cents for each \$1 of the value that exceeds \$2,700,000.</p>	<p>\$200,000# deduction for all natural persons (exemption threshold of \$100,000 for companies, trustees and absentees). All land tax payers receive a general 15% rebate from 1999-00 onwards.</p> <p>Up to \$3,999: 0.20%</p> <p>\$4,000-\$5,999: \$8+0.36%</p> <p>\$6,000-\$9,999: \$15.20+0.52%</p> <p>\$10,000-\$29,999: \$36+0.70%</p> <p>\$30,000-\$49,999: \$176+0.87%</p> <p>\$50,000-\$199,999: \$350+1.03%</p> <p>\$200,000-\$349,999: \$1,895+1.20%</p> <p>\$350,000-\$499,999: \$3,695+1.37%</p> <p>\$500,000-\$649,999: 5,750+1.54%</p> <p>\$650,000-\$799,999: \$8,060+1.71%</p> <p>\$800,000-\$949,999: \$10,625+1.89%</p> <p>\$950,000-\$1,099,999: \$13,460+2.01%</p> <p>\$1,100,000-\$1,249,999: \$16,475+2.23%</p> <p>\$1,250,000-\$1,299,999: \$19,820+2.44%</p> <p>\$1,300,000-\$1,349,999: \$21,040+2.66%</p> <p>\$1,350,000-\$1,399,999: \$22,370+2.87%</p> <p>\$1,400,000-\$1,449,999: \$23,805+3.09%</p> <p>\$1,450,000-\$1,499,999: \$25,350+3.30%</p> <p>\$1,500,000 and over: 1.8% Flat.</p> <p># Resident natural persons receive a deduction of \$200,000 from the total unimproved value of land before arriving at the taxable value.</p>	<p>\$0-\$10,000: Nil</p> <p>\$10,001-\$100,000: \$15+0.15% of excess.</p> <p>\$100,001-\$190,000: \$150+0.25% of excess.</p> <p>\$190,001-\$325,000: \$375+0.45% of excess.</p> <p>\$325,001-\$550,000: \$982.50+0.8% of excess.</p> <p>\$550,001-\$850,000: \$2,782.50+1.2% of excess.</p> <p>\$850,001-\$1,250,001: \$6,382.50+1.6% of excess.</p> <p>over \$1,250,001: \$12,782.50+2.0% of excess.</p> <p>The Metropolitan Region Improvement Tax is levied on the unimproved value of land situated in the metropolitan region at the rate of 0.15c per \$1.</p>	<p>\$0-\$50,000: Nil</p> <p>\$50,001-\$300,000: 0.35%</p> <p>\$300,001-\$1m: \$875+1.65%</p> <p>Over \$1m: \$12,425+3.7%</p>	<p>From 1997-98</p> <p>\$0-\$1,000: Nil</p> <p>\$1,001-\$15,000: \$25.00</p> <p>\$15,001-\$40,000: \$25.00+0.75%</p> <p>\$40,001-\$68,750: \$212.50+1%</p> <p>\$68,751-\$100,000: \$500.00</p> <p>\$100,001-\$125,000: \$500.00+1.25%</p> <p>\$125,001-\$170,000: \$812.50+1.5%</p> <p>\$170,001-\$210,000: \$1,487.50+1.75%</p> <p>\$210,001-\$250,000: \$2,187.50+2%</p> <p>\$250,001-\$500,000: \$2,987.50+2.25%</p> <p>Exceeding \$500,000: \$8,612.50+2.5%</p>	<p>Not imposed.</p>	<p>Up to \$100,000: 1% Flat.</p> <p>\$100,001-\$200,000: 1.25% Flat.</p> <p>above \$200,000: 1.5% Flat.</p> <p>(upon unimproved value)</p> <p>Liability is assessed quarterly.</p>

<p>LAND TAX (CONT.)</p> <p>EXEMPTIONS:</p> <p>Primary Residence:</p>	<p>Exempt, apart from places of principal residence whose unimproved land value is not less than \$1,319,000 (from 31.12.00) which are liable at the rate of \$100+1.7% of the value in excess of \$1,319,000. Threshold indexed annually to estimated increase in Sydney residential values. (No adjustment if Sydney values decline).</p>	<p>Principal place of residence.</p> <p>Exemptions available to various charitable organisations upon qualification.</p>	<p>Exempt with conditions.</p>	<p>Exempt.</p>	<p>Exempt with conditions.</p>	<p>Exempt.</p>		<p>Exempt, apart from parcels of land with more than one dwelling where one or more of the dwellings are rented.</p>
<p>Primary Production Land:</p> <p>(Note: Generally Charitable, Religious and Educational Bodies are exempt with conditions.)</p> <p>Reference Period:</p>	<p>Exempt.</p> <p>Based on value of land as at 1 July of the previous year.</p>	<p>Exempt with conditions.</p> <p>Based on aggregate value of land owned as at midnight 31 December of the previous year to the assessment year.</p>	<p>Exempt with conditions.</p> <p>Based on value of land as at midnight on 30 June of the previous year.</p>	<p>Exempt.</p> <p>Based on value of land as at 30 June of the previous year.</p>	<p>Exempt with conditions.</p> <p>Based on value of land as at 30 June of the previous year.</p>	<p>Exempt.</p> <p>Based on value of land as at 30 June of the previous year.</p>		<p>Exempt.</p> <p>Based on the rolling three year average of property values.</p>

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