

Report to the
Department of the Environment, Water, Heritage and the Arts

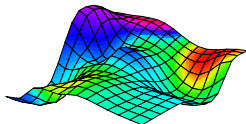
Economic Activity of Australia's World Heritage Areas

Final Report

July 2008



Gillespie Economics



BDA Group
Economics and Environment

Acknowledgement

The Australian Department of Environment, Water, Heritage and Arts (DEWHA) engaged Gillespie Economics, in collaboration with BDA Group, to undertake a desktop study of the economic activity of Australia's World Heritage Areas. Helpful comments on our draft report were provided by officers of DEWHA.

Despite every effort to clarify issues raised, any remaining errors or omissions are the responsibility of the authors. Accordingly this report does not necessarily reflect the views of DEWHA or the Australian Government.

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Glossary

Consumption-induced effects are flow-on economic activity effects associated with employees buying goods and services from other firms who in turn purchase goods and services from other firms etc.

Direct effects are the initial economic activity stimulus.

Economic activity refers to the stimulus to economies through spending, with this economic activity measured in terms of gross regional output, value-added, income and employment.

Employment is the number of people employed (including full-time and part-time).

Flow-on effects refer to production-induced and consumption-induced flow-on economic activity as a result of an initial expenditure.

Gross regional output (output) is the gross value of business turnover.

Gross regional product is the value-added to inputs through production activities in the region.

Income is the wages paid to employees including imputed wages for self employed and business owners.

Indirect effects is another term for flow-on effects and refers to production-induced and consumption-induced flow-on economic activity as a result of an initial expenditure

Input-output analysis is an economic method that uses an input-output model (transactions table) of an economy to analyse the direct and indirect economic activity impacts of an initial expenditure. Input-output analysis is the main method used to undertaken regional economic impact assessment.

Management expenditure is the money spent by an agency in day to day management of a protected area. The source of the money may be from the State or Territory government or Commonwealth Government or user fees or a combination of all of these.

Ratio multipliers are simply the ratio of the direct effect, production-induced impacts, consumption-induced impacts, total flow-on impacts and total effects to the direct effects.

Production induced effects are flow-on economic activity effects associated with firms buying goods and services from other firms who in turn purchase goods and services from other firms etc.

Regional economic impact assessment refers to a method of examining the economic impact of an activity on a regional economy, normally in terms of direct and indirect output, value-added, income and employment.

Total impact refers to the direct, production induced and consumption induced economic activity as a result of an initial expenditure.

Value-added is the difference between the gross value of business turnover and the costs of the inputs of raw materials, components and services bought in to produce the gross regional output.

Visitor expenditure is the money spent by visitors to a protected area during their trip to the region. .

EXECUTIVE SUMMARY

Australia currently has 17 properties on its World Heritage (WH) List. As well as protecting the cultural and natural heritage for which they are listed, these sites can stimulate economic activity nationally and in the region, state or territory where they are located.

This economic activity arises from expenditures associated with management of the sites as well as expenditure of visitors to the sites.

The aim of this study was to:

- analyse and report on the economic activity and contribution of 15 of Australia's World Heritage Areas (WHAs) to the regional, state/territory and national economies¹;
- analyse and report on the historical perspective of the financial costs and benefits of the operation of each WHA; and
- to the extent possible, separate and report on the financial costs of the World Heritage management component of each property (i.e. costs directly attributable to World Heritage status).

The framework used to undertake this study was Regional Economic Impact Assessment (REIA). REIA is primarily concerned with the effect of an impacting agent e.g. an individual or a business, on an economy in terms of a number of specific economic activity indicators, such as gross regional output, value-added, income and employment.

Based on visitation and management cost data provided by DEWHA and the state and territory agencies that manage the WHAs, input-output analysis was used to estimate the direct and indirect impacts of each WHA at the regional, state or territory and national level.

Regional Analysis Results

At the regional level, the 15 WHAs are estimated to contribute:

- \$7 011.4 million in annual direct and indirect regional output or business turnover;
- \$3 135.0 million in annual direct and indirect regional value added;
- \$2 117.3 million in direct and indirect regional household income; and
- 42 873 direct and indirect regional jobs.

State/Territory Analysis Results

NSW WHAs are estimated to contribute:

- \$4 203.3 million in annual direct and indirect state output or business turnover;
- \$1 898.2 million in annual direct and indirect state value added;
- \$1 252.1 million in direct and indirect state household income; and
- 21 704 direct and indirect state jobs.

¹ The Great Barrier Reef and Heard Island and McDonald Island World Heritage Areas have been excluded from the study due to their special complexities and governance arrangements.

Queensland WHAs are estimated to contribute:

- \$4 148.6 million in annual direct and indirect state output or business turnover;
- \$1 849.0 million in annual direct and indirect state value added;
- \$1 217.2 million in direct and indirect state household income; and
- 24 225 direct and indirect state jobs.

Victoria WHAs are estimated to contribute:

- \$948.9 million in annual direct and indirect state output or business turnover;
- \$973.8 million in annual direct and indirect state value added;
- \$267.8 million in direct and indirect state household income; and
- 5 235 direct and indirect state jobs.

Western Australia WHAs are estimated to contribute:

- \$83.7 million in annual direct and indirect state output or business turnover;
- \$37.6 million in annual direct and indirect state value added;
- \$24.7 million in direct and indirect state household income; and
- 503 direct and indirect state jobs.

South Australia WHAs are estimated to contribute:

- \$6.0 million in annual direct and indirect state output or business turnover;
- \$2.8 million in annual direct and indirect state value added;
- \$1.9 million in direct and indirect state household income; and
- 47 direct and indirect state jobs.

Tasmania WHAs are estimated to contribute:

- \$ 721.8 million in annual direct and indirect state output or business turnover;
- \$313.5 million in annual direct and indirect state value added;
- \$208.2 million in direct and indirect state household income; and
- 5 372 direct and indirect state jobs.

Northern Territory WHAs are estimated to contribute:

- \$ 257.1 million in annual direct and indirect territory output or business turnover;
- \$116.9 million in annual direct and indirect territory value added;
- \$70.4 million in direct and indirect territory household income; and
- 1 211 direct and indirect territory jobs.

National Analysis Results

At the national level, the 15 WHAs contribute:

- \$16 104.3 million in annual direct and indirect national output or business turnover;
- \$7 246.1 million in annual direct and indirect national value added;
- \$4 111.5 million in direct and indirect national household income; and
- 83 349 direct and indirect national jobs.

95 per cent of these impacts are from visitor expenditure with the remainder from management expenditure. The regional, state/territory and national impacts of each WHA are summarised in Tables ES1 and ES2.

An important caveat on the above results is that in accordance with standard practice in regional economic impacts assessments of protected areas, the methodology used analysed all expenditure associated with visitors to the WHAs. There is no way to tell from the secondary data utilised, how much of that visitor expenditure is attributable to the WHAs alone.

The relative contribution of each of the WHAs to total impacts on the Australian economy is illustrated in the following Figure.

Figure ES1a: Impact of WHAs on the Australian Economy

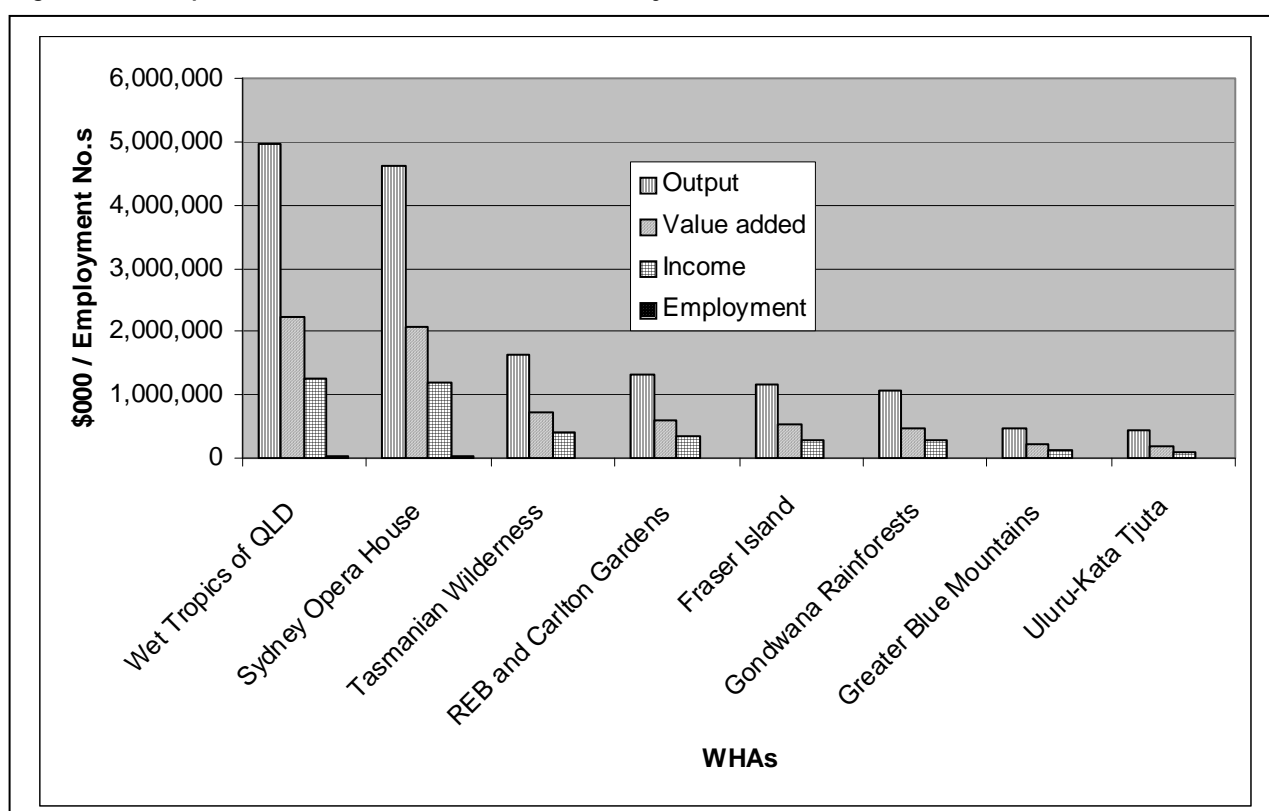
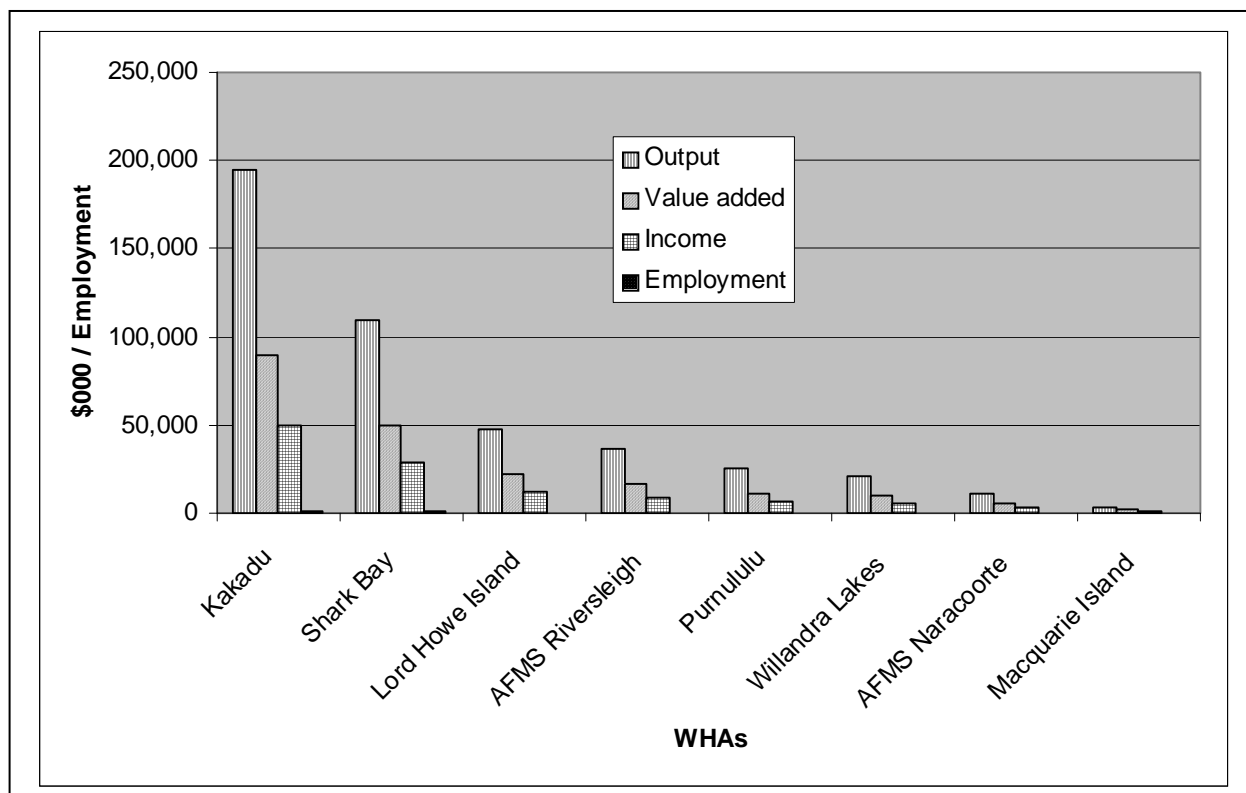


Figure ES1b: Impact of WHAs on the Australian Economy

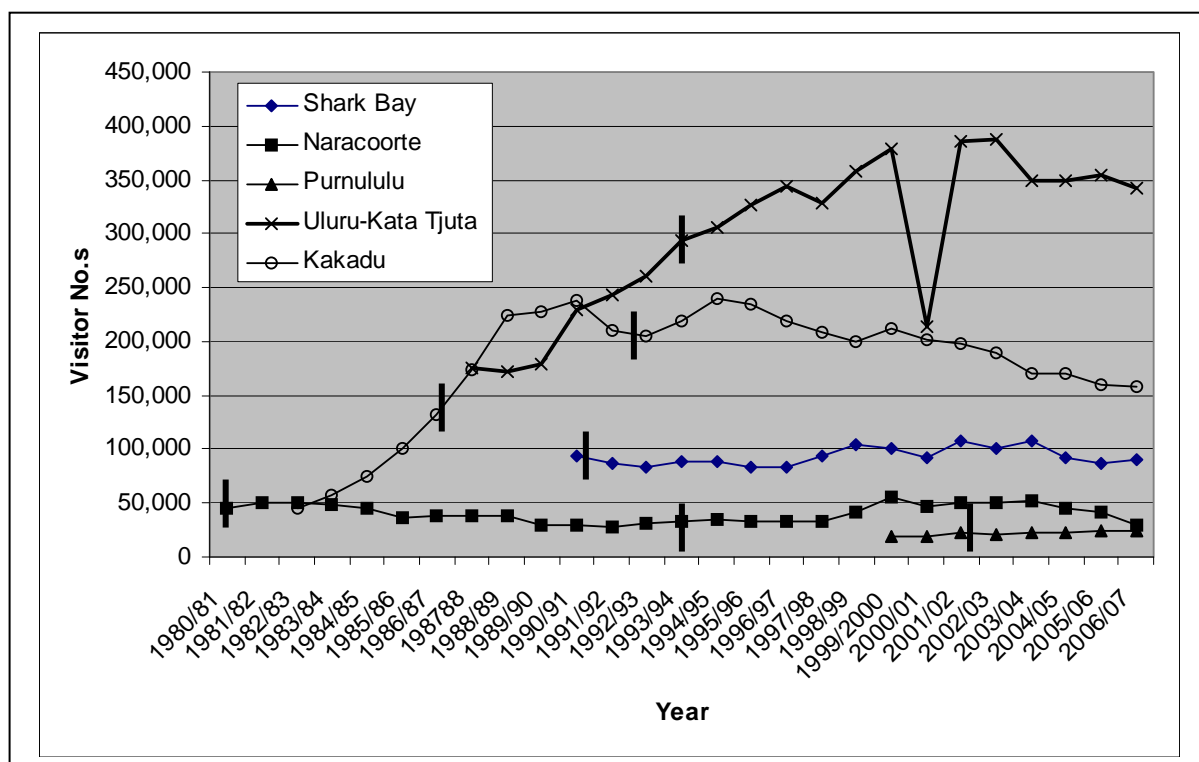


The Wet Tropics of Queensland and the Sydney Opera House are the two most significant WHAs in terms of economic impact. The Tasmanian Wilderness, Royal Exhibition Building and Carlton Gardens, Fraser Island and Gondwana Rainforests are the next most significant group of WHAs. The Greater Blue Mountains, Uluru-Kata Tjuta National Park and Kakadu National Park are the next most significant group. The other WHAs have more modest relative impacts at the national level.

These impacts relate to the expenditure of people who visit the WHAs and expenditure of the WHA management agency. However, management expenditure and visitation preceded inscription of these WHAs. An important question is therefore the degree to which designation of a site as WH status alters visitation and management expenditure and hence regional, state and national economic impacts.

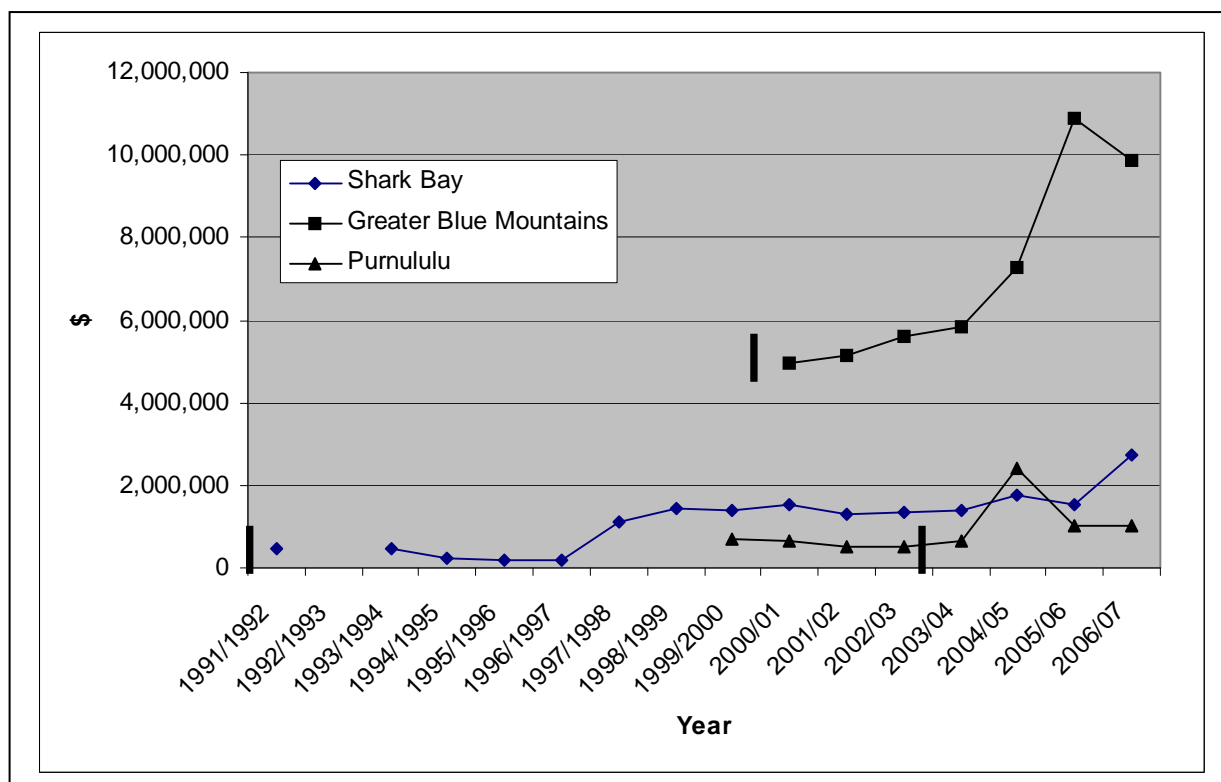
A starting point for considering this issue was to examine historical visitation and expenditure data spanning the WH inscription date, where this was available. This data is presented in Figure ES2 and ES3.

Figure ES2: Historical Visitation Data Spanning the WH Inscription Date



Denotes Inscription date

Figure ES3: Historical Management Expenditure Data Spanning the WH Inscription Date



Denotes Inscription date

For Shark Bay, Naracoorte and Purnululu there is no discernable change in visitation levels following WH inscription. For Kakadu, visitation levels do seem to have rapidly increased a couple of years after the first stage of WH listing. The second inscription was in the middle of a period of rapid growth in visitation levels with no change to this pattern after inscription. The third inscription was followed by an increase in visitation and then a gradual declining over time since 1995. For Uluru-Kata Tjuta National Park, WH listing was during a period of rapid growth in visitation, with no change in growth after inscription.

In relation to management expenditure patterns over time, for the Greater Blue Mountains, expenditure grew gradually for four years after inscription and then increased more rapidly to peak in 2005/06. For Shark Bay, management expenditure does not appear to have increased significantly until six or seven years after inscription. Management expenditure for Purnululu had a one-off increase a year or so after inscription and then dropped back more normal levels.

Interpreting this information is, however, difficult. Any before and after comparison is confounded by a number of factors. Firstly, we do not know what pattern we are looking for. Are we looking for changes at the listing date, before the listing date or after the listing date - because of the time taken for listing information to reach tourists etc.

Secondly, visitation levels and management expenditure over time may be affected by a wide range of economic, logistic and market factors as well as the WH listing itself. These factors include economic upturns and downturns, changes in oil prices, pilot strikes, major national tourism marketing campaigns etc. Attributing causal factors for any observed change in visitation or management expenditure is therefore problematic.

A key finding of the study is that the visitation and management cost data required to undertake a regional economic impact study was highly variable in quality. Some jurisdictions had little primary data regarding total visitation levels or total management expenditure and no jurisdiction held data regarding visitor characteristics and their expenditure patterns. Detailed historical data for both visitation and management costs was scant.

Future analysis of the regional, state and national economic impacts of WHAs and other protected areas would benefit from:

- more robust collection of data on visitation levels, demographic characteristics, length of stay, expenditure patterns in the region, state and nation and the importance of the WHA to the trip; and
- keeping management accounts on a WHA by WHA or park by park basis, including detail of expenditure items and location of expenditure.

Table ES1: Output and Value-added Impacts of World Heritage Areas at the Regional, State/Territory and National Level

	Output						Value-added					
	Impact of Management \$000			Impact of Visitors \$000			Impact of Management \$000			Impact of Visitors \$000		
	Regional	State/Territory	National	Regional	State/Territory	National	Regional	State/Territory	National	Regional	State/Territory	National
Wet Tropics of QLD	23,447	29,953	42,963	2,057,980	3,036,071	4,929,471	13,458	16,543	22,590	927,108	1,354,094	2,213,410
Sydney Opera House	187,306	222,195	273,668	2,409,538	3,221,314	4,332,166	95,436	112,342	135,426	1,069,617	1,447,520	1,947,549
Tasmanian Wilderness	13,709	19,652	35,841	424,088	700,445	1,590,124	6,102	9,037	16,577	182,556	303,576	711,357
REB and Carlton Gardens	4,771	6,329	7,775	687,943	940,552	1,315,845	1,941	2,670	3,354	292,674	671,140	589,803
Fraser Island	16,102	21,033	30,147	378,369	705,339	1,144,353	9,029	11,334	15,574	172,770	311,842	511,202
Gondwana Rainforests												
NSW		39,579			327,375			16,806			145,742	
QLD	34,133	12,932	68,486	357,167	336,613	994,352	14,465	6,191	30,181	158,081	148,777	444,150
Greater Blue Mountains	17,263	34,478	44,316	126,956	305,396	414,891	7,370	15,074	19,413	58,079	135,806	185,160
Uluru-Kata Tjuta	20,151	23,254	40,584	118,396	149,582	390,345	10,334	11,811	19,795	52,782	66,235	175,451
Kakadu	27,188	36,131	63,962	21,294	48,156	131,009	13,338	17,746	30,543	9,336	21,134	58,575
Shark Bay	4,105	6,416	9,053	30,534	60,763	100,339	2,735	3,798	5,046	13,796	26,751	44,868
Lord Howe Island	15,797	22,616	27,988	6,952	14,346	19,409	7,603	10,884	13,312	3,072	6,390	8,665
AFMS												
<i>Riversleigh</i>	198	324	474	7,396	21,893	35,698	128	189	257	3,350	9,666	15,937
<i>Naracoorte</i>	942	1,410	2,118	2,530	4,615	8,815	599	816	1,153	1,065	1,982	3,936
Purnululu	2,442	4,736	6,092	5,700	11,769	19,431	1,006	1,837	2,478	2,570	5,184	8,690
Willandra Lakes	3,758	6,418	7,992	3,797	9,557	13,014	2,103	3,383	4,094	1,689	4,242	5,802
Macquarie Island	867	958	1,825	552	749	1,702	539	579	984	240	325	761
Total	372,179	488,414	663,284	6,639,192	9,894,535	15,440,964	186,186	241,040	320,777	2,948,785	4,660,406	6,925,316

Table ES1: Output and Value-added Impacts of World Heritage Areas at the Regional, State/Territory and National Level

	Income						Employment					
	Impact of Management \$000			Impact of Visitors \$000			Impact of Management No.s			Impact of Visitors No.s		
	Regional	State/Territory	National	Regional	State/Territory	National	Regional	State/Territory	National	Regional	State/Territory	National
Wet Tropics of QLD	10,580	12,562	15,179	606,804	882,146	1,247,411	240	271	323	13,351	17,654	25,385
Sydney Opera House	77,979	86,089	91,630	758,404	943,588	1,099,875	1,179	1,348	1,638	12,165	16,448	22,246
Tasmanian Wilderness	4,828	6,716	10,431	123,395	200,761	399,687	194	228	287	3,886	5,131	8,205
REB and Carlton Gardens	1,523	1,962	2,112	203,958	265,853	335,028	31	39	45	3,787	5,196	6,814
Fraser Island	6,661	8,455	10,301	100,983	202,723	287,396	157	181	217	2,712	4,089	5,889
Gondwana Rainforests												
NSW		12,034			95,111			215			1,665	
QLD	10,064	4,404	19,034	87,053	97,077	250,747	225	90	377	2,314	1,938	5,076
Greater Blue Mountains	6,184	10,883	12,424	42,544	88,625	104,532	131	197	245	915	1,553	2,116
Uluru-Kata Tjuta	5,406	6,442	10,847	31,536	40,869	98,782	94	107	183	618	717	2,016
Kakadu	7,687	10,002	16,981	6,586	13,124	33,037	124	155	285	123	232	671
Shark Bay	2,074	2,774	3,335	8,573	17,360	25,222	36	46	58	247	366	517
Lord Howe Island	3,915	6,431	7,199	1,623	4,152	4,866	86	114	140	46	74	100
AFMS												
<i>Riversleigh</i>	107	146	176	2,288	6,301	8,985	2	3	4	51	126	183
<i>Naracoorte</i>	444	580	733	682	1,299	2,224	16	18	21	19	29	45
Purnululu	486	1,186	1,385	1,743	3,366	4,888	10	20	26	46	71	100
Willandra Lakes	1,575	2,434	2,660	967	2,773	3,281	31	42	50	26	48	66
Macquarie Island	463	482	685	169	214	428	7	8	11	4	5	9
Total	139,976	173,582	205,112	1,977,308	2,865,342	3,906,389	2,563	3,082	3,910	40,310	55,342	79,438

1 INTRODUCTION

Australia currently has the following 17 properties on its World Heritage (WH) List:

- Willandra Lakes Region (NSW);
- Tasmanian Wilderness (TAS);
- Lord Howe Island (NSW);
- Gondwana Rainforests of Australia (formerly Central Eastern Rainforest Reserves (Australia) (CERRA)) (NSW & QLD);
- Wet Tropics of Queensland (QLD);
- Shark Bay (WA);
- Fraser Island (QLD);
- Australian Fossil Mammal Sites, Naracoorte (SA) & Riversleigh (QLD);
- Greater Blue Mountains (NSW);
- Purnululu National Park (WA);
- Uluru-Kata Tjuta National Park (NT);
- Kakadu National Park (NT);
- Royal Exhibition Building and Carlton Gardens (VIC);
- Sydney Opera House (NSW);
- Macquarie Island (TAS);
- Heard Island and McDonald Island (NSW); and
- The Great Barrier Reef (QLD).

As well as protecting the cultural and natural heritage for which they are listed, these sites can stimulate economic activity nationally and in the region, state or territory where they are located.

This economic activity arises from expenditures associated with management of the sites as well as expenditure of visitors to the sites.

The aim of this study was to:

- analyse and report on the economic activity and contribution of 15 of Australia's World Heritage Areas (WHAs) to the regional, state/territory and national economies²;
- analyse and report on the historical perspective of the financial costs and benefits of the operation of each WHA; and
- to the extent possible, separate and report on the financial costs of the World Heritage management component of each property (i.e. costs directly attributable to World Heritage status).

² The Great Barrier Reef and Heard Island and McDonald Island WHAs have been excluded from the study due to their special complexities and governance arrangements.

Section 2 describes the study method while Section 3 reports the results of the data collection and the regional economic impact analysis for each WHA. Section 4 examines state and territory level impacts while Section 5 reports national level impacts. The incremental contribution of World Heritage status to economic activity is considered in Section 6. Conclusion and recommendations are outlined in Section 7.

2 METHOD

The framework used to undertake this study is Regional Economic Impact Assessment (REIA). REIA is primarily concerned with the effect of an impacting agent e.g. an individual or a business, on an economy in terms of a number of specific economic activity indicators, such as gross regional output, value-added, income and employment.

These indicators can be defined as follows:

- **Gross regional output** – the gross value of business turnover;
- **Value-added (gross regional product)** – the difference between the gross value of business turnover and the costs of the inputs of raw materials, components and services bought in to produce the gross regional output;
- **Income** – the wages paid to employees including imputed wages for self employed and business owners; and
- **Employment** – the number of people employed (including full-time and part-time).

An impacting agent may be an existing activity within an economy e.g. an ongoing tourism venture, or may be a change to a local economy e.g. a new tourism development. This assessment is concerned with the existing management and tourism associated with the existence and operation of 15 WHAs in Australia.

The economy on which the impact is measured can range from a township to the entire nation (Powell *et al.*, 1985). This study is concerned with examining the impacts of each of the 15 WHAs at three levels, the local region, the state or territory and nationally.

A range of methods can be used to examine the regional economic impacts of an activity on an economy including economic base theory, Keynesian multipliers, econometric models, mathematical programming models and input-output models (Powell *et al.*, 1985). Input-output analysis is perhaps the most cost-effective and straight forward approach to examining economic activity impacts and is the method used in this study.

Input-output analysis essentially involves two steps:

- construction of appropriate input-output tables (regional transaction tables) that can be used to identify the economic structure of the relevant region, state or territory, and country, and multipliers for each sector of the economy; and
- identification of the impact or stimulus of each WHA in a form that is compatible with the input-output equations so that the input-output multipliers and flow-on effects can then be estimated (West, 1993).

For this study, national, state and territory input-output tables were obtained from the Centre for Policy Studies, Monash University. Regional tables were developed from the relevant state or territory table using the Generation of Regional Input-output Tables (GRIT) method developed by University of Queensland and recognised internationally. Refer to Appendix 1.

The relevant region for each WHA was identified in consultation with the Department of the Environment, Water, Heritage and Arts (DEWHA) and WHA managers. Region identification attempted to encompass the main towns likely to capture local management and tourist expenditure but also needed to be consistent with Australian Bureau of Statistics (ABS) statistical boundaries. The regions used in the study are identified in Appendix 2 while a description of each region and state economy and the national economy is provided in Appendix 3.

Data on WHA management expenditure and visitation was provided by DEWHA and the state and territory agencies that manage the WHAs. Where necessary, assumptions about expenditure levels and disaggregation across industry sectors were made based on secondary sources of information. This was particularly the case for visitor expenditure where it was assumed that the visitation pattern (between domestic day visitors, domestic overnight visitors and international overnight visitors), length of stay in the region and expenditure levels was the same as for the tourist region within which the WHA was located. The expenditure pattern for domestic day visitors, domestic overnight visitors and international visitors was that reported generally by the Bureau of Tourism Research.

Expenditure patterns for WHA management and visitation were then adjusted for identified imports, allocated across 109 intermediate input-output sectors, three final demand sectors and an employment sector, converted to basic values³ (consistent with the input-output tables) and then adjusted again for imports based on state or territory and regional location quotients.

The input-output tables were then used to estimate the direct and indirect impacts of each WHA at the regional, state or territory and national level in terms of output, value-added, income and employment⁴. Ratio multipliers are also reported. These express flow-ons in terms of the initial own sector effects e.g. employment flow-ons in relation to direct employment effects. Refer to Appendix 4 for a discussion of multipliers.

The input-output tables were then used to estimate the direct and indirect impacts of each WHA at the regional, state or territory and national level in terms of output, value-added, income and employment. Finally, consideration is given to any evidence regarding the likely incremental impact of WH listing on the economic activity stimulus provided by the WHAs. This is based on historical data as well as published literature.

³ The conversion to basic values was undertaken using margin and tax data for each sector from the 2001-02 National input-output table.

⁴ It is important to understand that the focus of REIA is on the economic stimulus provided by WHAs and not on the economic costs and benefits of the WHA. Consideration of the economic costs and benefits of WHAs would require the undertaking of a benefit cost analysis of WHA listing. Refer to BDA Group and Gillespie Economics (2007) for a fuller exploration of the difference between REIA and BCA.

3 REGIONAL ECONOMIC ACTIVITY OF WORLD HERITAGE AREAS

3.1 Willandra Lakes Region (NSW)

3.1.1 Description

The Willandra Lakes Region covers 240 000 hectares of a semi-arid landscape mosaic comprising dried saline lake bed plains vegetated with saltbush communities, fringing sand dunes and woodlands with grassy under-storeys in the Murray Basin area in far south-western New South Wales.

The region was inscribed on the World Heritage List in 1981 for both outstanding cultural and natural universal values.

3.1.2 Historical Data

Historical management expenditure, excluding wages and salaries, for the Lower Darling Area of the NSW National Parks and Wildlife Services, which includes Mungo National Park (much of which is deemed the WHA) is provided in Table 1.

Table 1: Willandra Lakes Region WHA management expenditure*

Year	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Total Management Expenditure	\$361,771	\$327,160	\$456,187	\$472,689	\$422,110	\$530,514	\$874,562	\$826,562

* Amounts incorporate recurrent operating expenditure only, and exclude all salary costs

Total management expenditure for 2006/07, including wages to in the order of 23 staff, was estimated at \$2.3 million.

No historical visitation data was available, although visitation for 2006/07 was estimated at 35 881.

3.1.3 Economic Activity

The estimated regional economic impact of the management of the Willandra Lakes Region and visitation to the WHA on the region is summarised in the following tables.

Table 2: Impacts of management Willandra Lakes Region on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,170	645	943	1,588	3,758
<i>Ratio Multiplier</i>	1.00	0.30	0.43	0.73	1.73
INCOME (\$'000)	1,146	178	251	429	1,575
<i>Ratio Multiplier</i>	1.00	0.16	0.22	0.37	1.37
VALUE-ADDED (\$'000)	1,325	286	492	778	2,103
<i>Ratio Multiplier</i>	1.00	0.22	0.37	0.59	1.59
EMPL. (No.)	23	3	5	8	31
<i>Ratio Multiplier</i>	1.00	0.13	0.24	0.37	1.37

Management of Willandra Lakes contributes:

- \$3.7 million in annual direct and indirect output or business turnover;
- \$2.1 million in annual direct and indirect value added;
- \$1.6 million in annual direct and indirect household income; and
- 31 direct and indirect jobs.

Table 3: Impacts of visitors to Willandra Lakes Region on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,479	739	579	1,318	3,797
<i>Ratio Multiplier</i>	1.00	0.30	0.23	0.53	1.53
INCOME (\$'000)	630	183	154	338	967
<i>Ratio Multiplier</i>	1.00	0.29	0.24	0.54	1.54
VALUE-ADDED (\$'000)	1,065	322	302	624	1,689
<i>Ratio Multiplier</i>	1.00	0.30	0.28	0.59	1.59
EMPL. (No.)	19	4	3	7	26
<i>Ratio Multiplier</i>	1.00	0.19	0.18	0.36	1.36

Visitation to Willandra Lakes contributes:

- \$3.8 million in annual direct and indirect output or business turnover;
- \$1.7 million in annual direct and indirect value added;
- \$1.0 million in annual direct and indirect household income; and
- 26 direct and indirect jobs.

3.2 Tasmanian Wilderness (TAS)

3.2.1 Description

Covering approximately 20% of Tasmania, the Tasmanian Wilderness is one of the largest conservation reserves in Australia. At 13 800 km², it is one of the three largest temperate wilderness areas remaining in the Southern Hemisphere.

The Tasmanian Wilderness was inscribed on the World Heritage List in 1982 for its outstanding natural values, and re-nominated in 1989 for both its outstanding natural and cultural values.

3.2.2 Historical Data

Historical management expenditure, including both Parks and Wildlife Service and Department of Primary Industries and Water expenditure, is provided in Table 4.

Table 4: Tasmanian Wilderness management expenditure

1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/2001	2001/2002	2002/2003
\$7,187,000	\$8,438,000	\$9,425,000	\$8,004,000	\$7,804,000	\$8,685,000	\$8,844,000	\$10,416,000	\$10,011,000	\$12,685,000
2003/2004	2004/2005	2005/2006	2006/2007						
\$11,817,000	\$6,550,369	\$11,471,440	\$9,340,810						

Total management expenditure for 2006/07, including wages to in the order of 160 staff, was estimated at \$9.3 million.

No historical visitation data was available, although visitation for 2006/07 was estimated at 500 000.

3.2.3 Economic Activity

The estimated regional economic impact of the management of the Tasmanian Wilderness WHA and visitation to the WHA on the region is summarised in the following tables.

Table 5: Impacts of management Tasmanian Wilderness on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	9,324	2,618	1,767	4,385	13,709
<i>Ratio Multiplier</i>	1.00	0.28	0.19	0.47	1.47
INCOME (\$'000)	3,291	936	600	1,536	4,828
<i>Ratio Multiplier</i>	1.00	0.28	0.18	0.47	1.47
VALUE-ADDED (\$'000)	4,044	1,171	886	2,058	6,102
<i>Ratio Multiplier</i>	1.00	0.29	0.22	0.51	1.51
EMPL. (No.)	160	21	13	34	194
<i>Ratio Multiplier</i>	1.00	0.13	0.08	0.21	1.21

Management of the Tasmanian Wilderness contributes:

- \$13.7 million in annual direct and indirect output or business turnover;
- \$6.1 million in annual direct and indirect value added;
- \$4.8 million in annual direct and indirect household income; and
- 194 direct and indirect jobs.

Table 6: Impacts of visitors to Tasmanian Wilderness on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	320,165	58,758	45,165	103,923	424,088
<i>Ratio Multiplier</i>	1.00	0.18	0.14	0.32	1.32
INCOME (\$'000)	92,489	15,558	15,348	30,906	123,395
<i>Ratio Multiplier</i>	1.00	0.17	0.17	0.33	1.33
VALUE-ADDED (\$'000)	135,132	24,772	22,653	47,425	182,556
<i>Ratio Multiplier</i>	1.00	0.18	0.17	0.35	1.35
EMPL. (No.)	3,201	350	335	685	3,886
<i>Ratio Multiplier</i>	1.00	0.11	0.10	0.21	1.21

Visitation to the Tasmanian Wilderness contributes:

- \$424.1 million in annual direct and indirect output or business turnover;
- \$182.6 million in annual direct and indirect value added;
- \$123.4 million in annual direct and indirect household income; and
- 3,886 direct and indirect jobs.

3.3 Lord Howe Island (NSW)

3.3.1 Description

Located 700 kilometres north-east of Sydney and covering an area of 1 463 km², the Lord Howe Island Group comprises Lord Howe Island, Admiralty Islands, Mutton Bird Islands, Balls Pyramid and associated coral reefs and marine environments.

The Lord Howe Island Group was inscribed on the World Heritage List in 1982 for its outstanding natural universal values.

3.3.2 Historical Data

Historical management data for Lord Howe Island is provided below.

Table 7: Lord Howe Island management expenditure

Year	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Total Management Expenditure	\$5,317,900	\$6,521,845	\$6,575,878	\$7,471,954	\$7,779,085	\$8,277,257

Total management expenditure for 2006/07, including wages to in the order of 59 staff, is \$8.3 million.

Table 8: Lord Howe Island annual visitation

Year	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Visitor No.	13,090	12,575	11,166	11,806	12,791	12,658	12,733	14,980	15,715

Visitation in 2006/07 was 15 715.

3.3.3 Economic Activity

The estimated regional economic impact of the management of the Lord Howe Island WHA and visitation to the WHA on the region is summarised in the following tables.

Table 9: Impacts of management of Lord Howe Island on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	8,277	4,428	3,091	7,520	15,797
<i>Ratio Multiplier</i>	1.00	0.53	0.37	0.91	1.91
INCOME (\$'000)	2,543	697	675	1,372	3,915
<i>Ratio Multiplier</i>	1.00	0.27	0.27	0.54	1.54
VALUE-ADDED (\$'000)	4,540	1,438	1,625	3,064	7,603
<i>Ratio Multiplier</i>	1.00	0.32	0.36	0.67	1.67
EMPL. (No.)	59	12	15	27	86
<i>Ratio Multiplier</i>	1.00	0.20	0.25	0.46	1.46

Management of the Lord Howe Island contributes:

- \$15.8 million in annual direct and indirect output or business turnover;
- \$7.6 million in annual direct and indirect value added;
- \$3.9 million in annual direct and indirect household income; and
- 86 direct and indirect jobs.

Table 10: Impacts of visitors to Lord Howe Island on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	4,182	1,488	1,282	2,770	6,952
<i>Ratio Multiplier</i>	1.00	0.36	0.31	0.66	1.66
INCOME (\$'000)	1,005	338	280	618	1,623
<i>Ratio Multiplier</i>	1.00	0.34	0.28	0.61	1.61
VALUE-ADDED (\$'000)	1,780	617	674	1,291	3,072
<i>Ratio Multiplier</i>	1.00	0.35	0.38	0.73	1.73
EMPL. (No.)	33	7	6	13	46
<i>Ratio Multiplier</i>	1.00	0.20	0.19	0.39	1.39

Visitation to the Lord Howe Island contributes:

- \$7.0 million in annual direct and indirect output or business turnover;
- \$3.1 million in annual direct and indirect value added;
- \$1.6 million in annual direct and indirect household income; and
- 46 direct and indirect jobs.

3.4 Gondwana Rainforests of Australia (NSW & QLD)

3.4.1 Description

In 1986, a number of rainforest reserves located on the Great Escarpment of eastern New South Wales, known as the Australian East Coast Sub-tropical and Temperate Rainforest Parks were inscribed on the World Heritage List for their outstanding natural universal values. Large extensions to the area, including reserves in South East Queensland, were listed in 1994 as the Central Eastern Rainforest Reserves (Australia). The current listing, with the new title Gondwana Rainforests of Australia includes approximately 50 separate reserves located between Newcastle and Brisbane.

3.4.2 Historical Data

Annual management costs for the Gondwana Rainforests of Australia is estimated at \$17.2 million, comprising \$4.7 million of management costs for the Queensland part and \$12.5 million for the NSW part.

Annual visitation is estimated at 2.5 million, 1.3 million in Queensland and 1.2 million in NSW.

3.4.3 Economic Activity

The estimated regional economic impact of the management of the Gondwana Rainforests of Australia WHA and visitation to the WHA on the region is summarised in the following tables.

Table 11: Impacts of management of Gondwana Rainforests of Australia on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	17,227	8,954	7,952	16,906	34,133
<i>Ratio Multiplier</i>	1.00	0.52	0.46	0.98	1.98
INCOME (\$'000)	6,374	1,888	1,802	3,690	10,064
<i>Ratio Multiplier</i>	1.00	0.30	0.28	0.58	1.58
VALUE-ADDED (\$'000)	6,743	3,548	4,175	7,723	14,465
<i>Ratio Multiplier</i>	1.00	0.53	0.62	1.15	2.15
EMPL. (No.)	154	32	39	71	225
<i>Ratio Multiplier</i>	1.00	0.21	0.25	0.46	1.46

Management of the Gondwana Rainforests contributes:

- \$34.1 million in annual direct and indirect output or business turnover;
- \$14.5 million in annual direct and indirect value added;
- \$10.1 million in annual direct and indirect household income; and
- 225 direct and indirect jobs.

Table 12: Impacts of visitors to Gondwana Rainforests of Australia on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	211,199	77,179	68,789	145,968	357,167
<i>Ratio Multiplier</i>	1.00	0.37	0.33	0.69	1.69
INCOME (\$'000)	53,437	18,033	15,583	33,616	87,053
<i>Ratio Multiplier</i>	1.00	0.34	0.29	0.63	1.63
VALUE-ADDED (\$'000)	89,857	32,111	36,113	68,224	158,081
<i>Ratio Multiplier</i>	1.00	0.36	0.40	0.76	1.76
EMPL. (No.)	1,631	349	333	682	2,314
<i>Ratio Multiplier</i>	1.00	0.21	0.20	0.42	1.42

Visitation to the Gondwana Rainforests contributes:

- \$357.2 million in annual direct and indirect output or business turnover;
- \$158.1 million in annual direct and indirect value added;
- \$87.1 million in annual direct and indirect household income; and
- 2,314 direct and indirect jobs.

3.5 Wet Tropics of Queensland (QLD)

3.5.1 Description

The Wet Tropics of Queensland was inscribed on the World Heritage List in 1988 in recognition of its outstanding natural universal values. The Wet Tropics WHA lies between Townsville and Cooktown on the north-east coast of Queensland and covers an area of approximately 894 000 hectares

3.5.2 Historical Data

No historical expenditure or visitation data was available for the Wet Tropics of Queensland. Management expenditure for 2006/07, including wages to in the order of 180 staff, is \$11.4 million. Annual visitation was estimated at 5 million.

3.5.3 Economic Activity

The estimated regional economic impact of the management of the Wet Tropics of Queensland and visitation to the WHA on the region is summarised in the following tables.

Table 13: Impacts of management of Wet Tropics of Queensland on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	11,380	3,928	8,139	12,067	23,447
<i>Ratio Multiplier</i>	1.00	0.35	0.72	1.06	2.06
INCOME (\$'000)	7,219	1,029	2,333	3,361	10,580
<i>Ratio Multiplier</i>	1.00	0.14	0.32	0.47	1.47
VALUE-ADDED (\$'000)	7,446	1,722	4,290	6,012	13,458
<i>Ratio Multiplier</i>	1.00	0.23	0.58	0.81	1.81
EMPL. (No.)	180	16	44	60	240
<i>Ratio Multiplier</i>	1.00	0.09	0.24	0.34	1.34

Management of the Wet Tropics of Queensland contributes:

- \$23.5 million in annual direct and indirect output or business turnover;
- \$13.5 million in annual direct and indirect value added;
- \$10.6 million in annual direct and indirect household income; and
- 240 direct and indirect jobs.

Table 14: Impacts of visitors to Wet Tropics of Queensland on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,190,817	400,384	466,779	867,163	2,057,980
<i>Ratio Multiplier</i>	1.00	0.34	0.39	0.73	1.73
INCOME (\$'000)	354,834	118,193	133,777	251,970	606,804
<i>Ratio Multiplier</i>	1.00	0.33	0.38	0.71	1.71
VALUE-ADDED (\$'000)	509,518	171,535	246,055	417,590	927,108
<i>Ratio Multiplier</i>	1.00	0.34	0.48	0.82	1.82
EMPL. (No.)	8,807	2,019	2,525	4,544	13,351
<i>Ratio Multiplier</i>	1.00	0.23	0.29	0.52	1.52

Visitation to the Wet Tropic of Queensland contributes:

- \$2,058.0 million in annual direct and indirect output or business turnover;
- \$927.1 million in annual direct and indirect value added;
- \$606.8 million in annual direct and indirect household income; and
- 13,351 direct and indirect jobs.

3.6 Shark Bay (WA)

3.6.1 Description

Shark Bay, Western Australia was inscribed on the World Heritage List in 1991, and is one of the few properties listed for all four outstanding natural universal values. The property is located on the most western point of the coast of Australia and covers 2.3 million hectares.

3.6.2 Historical Data

Historical management cost data for Shark Bay is provided below.

Table 15: Shark Bay management expenditure

1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
\$475,000	\$0	\$475,000	\$210,000	\$169,000	\$872,985	\$1,091,055	\$1,448,970
1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
\$1,406,887	\$1,505,850	\$1,303,796	\$1,340,150	\$1,367,500	\$1,777,580	\$1,517,580	\$2,736,030

Total management expenditure in 2006/07, including wages paid to in the order of 28 staff was \$2.6 million⁵.

Table 16: Shark Bay annual visitation

1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	
93,317	86,383	83,220	88,220	88,892	83,294	83,672	93,208	
1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
105,000	100,751	92,555	107,285	100,875	108,554	91,743	86,155	90,298

Visitation to Shark Bay in 2006/07 was estimated at 90 298.

The above visitor figures are for entry to Monkey Mia. Visitation data is not available for all of the WHA property.

3.6.3 Economic Activity

The estimated regional economic impact of management of the Shark Bay and visitation to the WHA on the region is summarised in the following tables.

Table 17: Impacts of management of Shark Bay on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,586	188	1,331	1,519	4,105
<i>Ratio Multiplier</i>	1.00	0.07	0.51	0.59	1.59
INCOME (\$'000)	1,691	41	342	383	2,074
<i>Ratio Multiplier</i>	1.00	0.02	0.20	0.23	1.23
VALUE-ADDED (\$'000)	1,944	74	717	791	2,735
<i>Ratio Multiplier</i>	1.00	0.04	0.37	0.41	1.41
EMPL. (No.)	28	1	7	8	36
<i>Ratio Multiplier</i>	1.00	0.02	0.26	0.28	1.28

⁵ There is a small discrepancy between the total expenditure identified in the above table and that identified in the detailed breakdown of expenditure.

Management of the Shark Bay contributes:

- \$4.1 million in annual direct and indirect output or business turnover;
- \$2.7 million in annual direct and indirect value added;
- \$2.1 million in annual direct and indirect household income; and
- 36 direct and indirect jobs.

Table 18: Impacts of visitors to Shark Bay on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	19,968	5,066	5,500	10,566	30,534
<i>Ratio Multiplier</i>	1.00	0.25	0.28	0.53	1.53
INCOME (\$'000)	5,727	1,431	1,415	2,846	8,573
<i>Ratio Multiplier</i>	1.00	0.25	0.25	0.50	1.50
VALUE-ADDED (\$'000)	8,625	2,206	2,964	5,171	13,796
<i>Ratio Multiplier</i>	1.00	0.26	0.34	0.60	1.60
EMPL. (No.)	191	26	30	56	247
<i>Ratio Multiplier</i>	1.00	0.14	0.16	0.29	1.29

Visitation to Shark Bay contributes:

- \$30.5 million in annual direct and indirect output or business turnover;
- \$13.8 million in annual direct and indirect value added;
- \$8.6 million in annual direct and indirect household income; and
- 247 direct and indirect jobs.

3.7 Fraser Island (QLD)

3.7.1 Description

Fraser Island (K'gari) was inscribed on the World Heritage List in 1992 in recognition of its outstanding natural universal values. Stretching over 120 kilometres along the southern coast of Queensland and covering 184 000 hectares, it is the largest sand island in the world.

3.7.2 Historical Data

No historical expenditure or visitation data was available for the Fraser Island. Management expenditure for 2006/07, including wages to in the order of 117 staff, is \$8.0 million. Annual visitation was estimated at 1.4 million.

3.7.3 Economic Activity

The estimated regional economic impact of the management of Fraser Island and visitation to the WHA on the region is summarised in the following tables.

Table 19: Impacts of management of Fraser Island on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	8,036	3,298	4,768	8,066	16,102
<i>Ratio Multiplier</i>	1.00	0.41	0.59	1.00	2.00
INCOME (\$'000)	4,680	761	1,220	1,981	6,661
<i>Ratio Multiplier</i>	1.00	0.16	0.26	0.42	1.42
VALUE-ADDED (\$'000)	4,980	1,472	2,578	4,050	9,029
<i>Ratio Multiplier</i>	1.00	0.30	0.52	0.81	1.81
EMPL. (No.)	117	14	26	40	157
<i>Ratio Multiplier</i>	1.00	0.12	0.23	0.34	1.34

Management of Fraser Island contributes:

- \$16.1 million in annual direct and indirect output or business turnover;
- \$9.0 million in annual direct and indirect value added;
- \$6.7 million in annual direct and indirect household income; and
- 157 direct and indirect jobs.

Table 20: Impacts of visitors to Fraser Island on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	238,346	67,741	72,282	140,023	378,369
<i>Ratio Multiplier</i>	1.00	0.28	0.30	0.59	1.59
INCOME (\$'000)	64,564	17,920	18,499	36,419	100,983
<i>Ratio Multiplier</i>	1.00	0.28	0.29	0.56	1.56
VALUE-ADDED (\$'000)	103,818	29,864	39,087	68,952	172,770
<i>Ratio Multiplier</i>	1.00	0.29	0.38	0.66	1.66
EMPL. (No.)	1,953	359	400	759	2,712
<i>Ratio Multiplier</i>	1.00	0.18	0.20	0.39	1.39

Visitation to the Fraser Island contributes:

- \$378.4 million in annual direct and indirect output or business turnover;
- \$172.8 million in annual direct and indirect value added;
- \$101.0 million in annual direct and indirect household income; and
- 2,712 direct and indirect jobs.

3.8 Australian Fossil Mammal Sites (AFMS), Naracoorte (SA) & Riversleigh (QLD)

3.8.1 Description

Over 2 000 kilometres separate the two sites that form this World Heritage Area. Riversleigh (10 000 hectares), located in north-western Queensland, is confined to the watershed of the Gregory River. The site at Naracoorte, South Australia, covers 300 hectares and comprises limestone caves. It is located in flat country, punctuated by a series of stranded coastal dune ridges that run parallel to the present coastline.

3.8.2 Historical Data - AFMS, Naracoorte (SA)

Historical management cost data for the Naracoorte site was not available, however, management cost in 2006/07 was estimated at \$615 500 including wages paid to 14 people.

Annual visitation in 2006/07 was estimated at 29 322. An estimation of the historical visitor profile is provided below.

Table 21: Visitation to AFMS, Naracoorte (SA)

Year	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Visitor No.	44,321	50,523	50,548	48,903	44,703	36,211	38,766	37,740

Year	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Visitor No.	37,455	30,081	28,938	27,553	30,899	33,072	35,447	33,391

Year	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
Visitor No.	33,333	32,979	41,086	55,746	46,214	50,454	50,000	51,736

Year	2004/05	2005/06	2006/07
Visitor No.	45,026	42,423	29,322

3.8.3 Economic Activity AFMS, Naracoorte (SA)

The estimated regional economic impact of the management of the AFMS, Naracoorte site and visitation to the WHA on the region is summarised in the following tables.

Table 22: Impacts of management of AFMS, Naracoorte (SA) on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	616	74	252	326	942
<i>Ratio Multiplier</i>	1.00	0.12	0.41	0.53	1.53
INCOME (\$'000)	351	25	69	94	444
<i>Ratio Multiplier</i>	1.00	0.07	0.20	0.27	1.27
VALUE-ADDED (\$'000)	440	31	129	159	599
<i>Ratio Multiplier</i>	1.00	0.07	0.29	0.36	1.36
EMPL. (No.)	14	0	1	2	16
<i>Ratio Multiplier</i>	1.00	0.03	0.10	0.13	1.13

Management of the AFMS, Naracoorte contributes:

- \$0.9 million in annual direct and indirect output or business turnover;
- \$0.6 million in annual direct and indirect value added;
- \$0.4 million in annual direct and indirect household income; and
- 116 direct and indirect jobs.

Table 23: Impacts of visitors to AFMS, Naracoorte (SA) on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,669	475	386	861	2,530
<i>Ratio Multiplier</i>	1.00	0.28	0.23	0.52	1.52
INCOME (\$'000)	454	123	106	229	682
<i>Ratio Multiplier</i>	1.00	0.27	0.23	0.50	1.50
VALUE-ADDED (\$'000)	674	194	198	391	1,065
<i>Ratio Multiplier</i>	1.00	0.29	0.29	0.58	1.58
EMPL. (No.)	14	2	2	5	19
<i>Ratio Multiplier</i>	1.00	0.18	0.16	0.33	1.33

Visitation to the AFMS, Naracoorte contributes:

- \$2.5 million in annual direct and indirect output or business turnover;
- \$1.1 million in annual direct and indirect value added;
- \$0.7 million in annual direct and indirect household income; and
- 19 direct and indirect jobs.

3.8.4 Historical Data – AFMS, Riversleigh WHA (QLD)

Annual management expenditure for the AFMS Riversleigh site is estimated at \$126 000, including wages payments to 2 people.

Annual visitation is estimated at 35 000.

3.8.5 Economic Activity AFMS, Riversleigh (QLD)

The estimated regional economic impact of the management of the AFMS, Riversleigh site and visitation to the WHA on the region is summarised in the following tables.

Table 24: Impacts of management of AFMS, Riversleigh on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	126	19	53	72	198
<i>Ratio Multiplier</i>	1.00	0.15	0.42	0.57	1.57
INCOME (\$'000)	87	5	15	20	107
<i>Ratio Multiplier</i>	1.00	0.06	0.17	0.23	1.23
VALUE-ADDED (\$'000)	89	8	30	38	128
<i>Ratio Multiplier</i>	1.00	0.09	0.34	0.43	1.43
EMPL. (No.)	2	0	0	0	2
<i>Ratio Multiplier</i>	1.00	0.04	0.14	0.18	1.18

Management of the AFMS, Riversleigh contributes:

- \$0.2 million in annual direct and indirect output or business turnover;
- \$0.1 million in annual direct and indirect value added;
- \$0.1 million in annual direct and indirect household income; and
- 2 direct and indirect jobs.

Table 25: Impacts of visitors to AFMS, Riversleigh on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	5,299	972	1,125	2,097	7,396
<i>Ratio Multiplier</i>	1.00	0.18	0.21	0.40	1.40
INCOME (\$'000)	1,673	301	314	615	2,288
<i>Ratio Multiplier</i>	1.00	0.18	0.19	0.37	1.37
VALUE-ADDED (\$'000)	2,285	421	644	1,066	3,350
<i>Ratio Multiplier</i>	1.00	0.18	0.28	0.47	1.47
EMPL. (No.)	40	5	6	11	51
<i>Ratio Multiplier</i>	1.00	0.13	0.15	0.27	1.27

Visitation to the AFMS, Riversleigh contributes:

- \$7.4 million in annual direct and indirect output or business turnover;
- \$3.4 million in annual direct and indirect value added;
- \$2.3 million in annual direct and indirect household income; and
- 51 direct and indirect jobs.

3.9 Greater Blue Mountains (NSW)

3.9.1 Description

The Greater Blue Mountains World Heritage Area was inscribed on the World Heritage List in 2000 for its outstanding natural universal values. The Greater Blue Mountains consists of 1.03 million hectares of mostly forested landscape on a sandstone plateau 60 to 180 kms inland from central Sydney, New South Wales. The property is comprised of eight protected areas separated by a transportation and urban development corridor. The property includes a wide range of eucalypt communities and large tracts of wilderness and is equivalent in area to almost one third of Belgium.

3.9.2 Historical Data

Historical management expenditure (excluding salaries) for the three districts within which the Greater Blue Mountains is located is provided below.

Table 26: Greater Blue Mountains Historical management expenditure

Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Total Management Expenditure	\$4,939,009	\$5,121,502	\$5,625,720	\$5,860,757	\$7,271,125	\$10,877,583	\$9,872,517

Management expenditure for the three districts in 2006/07 was estimated at \$11.1 million including wages to 99 people.

Annual visitation was estimated at 1.5 million.

3.9.3 Economic Activity

The estimated regional economic impact of the management of the Greater Blue Mountains and visitation to the WHA on the region is summarised in the following tables.

Table 27: Impacts of management of the Greater Blue Mountains on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	11,100	2,438	3,725	6,163	17,263
<i>Ratio Multiplier</i>	1.00	0.22	0.34	0.56	1.56
INCOME (\$'000)	4,179	734	1,270	2,005	6,184
<i>Ratio Multiplier</i>	1.00	0.18	0.30	0.48	1.48
VALUE-ADDED (\$'000)	4,395	1,003	1,971	2,974	7,370
<i>Ratio Multiplier</i>	1.00	0.23	0.45	0.68	1.68
EMPL. (No.)	99	10	22	32	131
<i>Ratio Multiplier</i>	1.00	0.10	0.22	0.32	1.32

Management of the Greater Blue Mountains contributes:

- \$17.2 million in annual direct and indirect output or business turnover;
- \$7.4 million in annual direct and indirect value added;
- \$6.2 million in annual direct and indirect household income; and
- 131 direct and indirect jobs.

Table 28: Impacts of visitors to the Greater Blue Mountains on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	78,978	22,350	25,628	47,978	126,956
<i>Ratio Multiplier</i>	1.00	0.28	0.32	0.61	1.61
INCOME (\$'000)	26,212	7,592	8,740	16,333	42,544
<i>Ratio Multiplier</i>	1.00	0.29	0.33	0.62	1.62
VALUE-ADDED (\$'000)	34,556	9,962	13,561	23,523	58,079
<i>Ratio Multiplier</i>	1.00	0.29	0.39	0.68	1.68
EMPL. (No.)	655	109	150	260	915
<i>Ratio Multiplier</i>	1.00	0.17	0.23	0.40	1.40

Visitation to the Greater Blue Mountains contributes:

- \$127.0 million in annual direct and indirect output or business turnover;
- \$58.1 million in annual direct and indirect value added;
- \$42.5 million in annual direct and indirect household income; and
- 915 direct and indirect jobs.

3.10 Purnululu National Park (WA)

3.10.1 Description

Purnululu National Park, in the isolated east Kimberley region of Western Australia, was inscribed on the World Heritage List in 2003 for its outstanding universal natural heritage values. Purnululu National Park is located 300 kms by road south of the nearest population centre, the small regional town of Kununurra.

3.10.2 Historical Data

Historical management data for Purnululu is provided below.

Table 29: Purnululu management expenditure

1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
\$693,492	\$649,678	\$512,078	\$494,921	\$657,810	\$2,424,425	\$1,029,411	\$1,003,072

*These figures exclude salaries to employees.

Total management expenditure for 2006/07, including wages to in the order of 6 staff, is \$1.6 million.

Table 30: Purnululu annual visitation

1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
18,760	18,784	22,029	21,152	22,524	22,383	24,483	23,687

Visitation in 2006/07 was 23 687.

3.10.3 Economic Activity

The estimated regional economic impact of the management of the Purnululu and visitation to the WHA on the region is summarised in the following tables.

Table 31: Impacts of management of the Purnululu on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,579	569	294	863	2,442
<i>Ratio Multiplier</i>	1.00	0.36	0.19	0.55	1.55
INCOME (\$'000)	219	183	84	267	486
<i>Ratio Multiplier</i>	1.00	0.84	0.38	1.22	2.22
VALUE-ADDED (\$'000)	610	236	160	396	1,006
<i>Ratio Multiplier</i>	1.00	0.39	0.26	0.65	1.65
EMPL. (No.)	6	2	2	4	10
<i>Ratio Multiplier</i>	1.00	0.40	0.27	0.67	1.67

Management of Purnululu contributes:

- \$2.4 million in annual direct and indirect output or business turnover;
- \$1.0 million in annual direct and indirect value added;
- \$0.5 million in annual direct and indirect household income; and
- 10 direct and indirect jobs.

Table 32: Impacts of visitors to the Purnululu on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	3,750	895	1,055	1,950	5,700
<i>Ratio Multiplier</i>	1.00	0.24	0.28	0.52	1.52
INCOME (\$'000)	1,169	274	300	574	1,743
<i>Ratio Multiplier</i>	1.00	0.23	0.26	0.49	1.49
VALUE-ADDED (\$'000)	1,618	377	575	953	2,570
<i>Ratio Multiplier</i>	1.00	0.23	0.36	0.59	1.59
EMPL. (No.)	36	4	6	10	46
<i>Ratio Multiplier</i>	1.00	0.12	0.16	0.29	1.29

Visitation to the Purnululu contributes:

- \$5.7 million in annual direct and indirect output or business turnover;
- \$2.6 million in annual direct and indirect value added;
- \$1.7 million in annual direct and indirect household income; and
- 46 direct and indirect jobs.

3.11 Uluru-Kata Tjuta National Park (NT)

3.11.1 Description

Uluru-Kata Tjuta National Park was inscribed on the World Heritage List in two stages, initially for its outstanding universal natural values (1987) and then for its outstanding universal cultural values (1994). The park covers an area of 132 566 hectares of arid ecosystems and is located close to the centre of Australia in the traditional lands of Pitjantjatjara and Yankunytjatjara Aboriginal people (locally known as Anangu).

3.11.2 Historical Data

Historical management cost data for Uluru-Kata Tjuta National Park is provided below.

Table 33: Uluru-Kata Tjuta National Park management expenditure

1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
\$11.28	\$11.32	\$11.32	\$11.12	\$12.41	\$10.96	\$9.92	\$10.24

Note: Expenditure excludes asset payments and payments to Traditional Owners.

Total management expenditure in 2006/07, including wages paid to in the order of 44 staff was \$14.3 million.

Table 34: Uluru-Kata Tjuta National Park annual visitation

1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
105,970	110,160	not known	not known	175,495	172,652	179,448	230,112

1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
242,893	260,037	293,595	305,484	326,834	344,422	329,125	358,349

1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
379,117	213,563	385,723	388,046	348,882	348,471	353,702	341,700

Visitation in 2006/07 was estimated at 341 000.

3.11.3 Economic Activity

The estimated regional economic impact of the management of the Uluru-Kata Tjuta National Park and visitation to the WHA on the region is summarised in the following tables.

Table 35: Impacts of management of the Uluru-Kata Tjuta National Park on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	12,300	4,516	3,336	7,851	20,151
<i>Ratio Multiplier</i>	1.00	0.37	0.27	0.64	1.64
INCOME (\$'000)	3,019	1,685	701	2,387	5,406
<i>Ratio Multiplier</i>	1.00	0.56	0.23	0.79	1.79
VALUE-ADDED (\$'000)	6,297	2,131	1,906	4,037	10,334
<i>Ratio Multiplier</i>	1.00	0.34	0.30	0.64	1.64
EMPL. (No.)	44	39	11	50	94
<i>Ratio Multiplier</i>	1.00	0.89	0.25	1.14	2.14

Management of the Uluru-Kata Tjuta National Park contributes:

- \$20.2 million in annual direct and indirect output or business turnover;
- \$10.3 million in annual direct and indirect value added;
- \$5.4 million in annual direct and indirect household income; and
- 94 direct and indirect jobs.

Table 36: Impacts of visitors to the Uluru-Kata Tjuta National Park on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	83,695	15,243	19,458	34,701	118,396
<i>Ratio Multiplier</i>	1.00	0.18	0.23	0.41	1.41
INCOME (\$'000)	23,054	4,391	4,092	8,482	31,536
<i>Ratio Multiplier</i>	1.00	0.19	0.18	0.37	1.37
VALUE-ADDED (\$'000)	35,062	6,603	11,118	17,721	52,782
<i>Ratio Multiplier</i>	1.00	0.19	0.32	0.51	1.51
EMPL. (No.)	489	64	65	129	618
<i>Ratio Multiplier</i>	1.00	0.13	0.13	0.26	1.26

Visitation to the Uluru-Kata Tjuta National Park contributes:

- \$118.4 million in annual direct and indirect output or business turnover;
- \$52.8 million in annual direct and indirect value added;
- \$31.5 million in annual direct and indirect household income; and
- 618 direct and indirect jobs.

3.12 Kakadu National Park ((NT))

3.12.1 Description

Kakadu National Park was inscribed on the World Heritage List in three stages over 11 years, in 1981, 1987 and 1992. It is one of the few sites included on the List for both outstanding cultural and natural universal values. The park is located in the tropical north of Australia, 120 kilometres east of Darwin, covering an area of 19 804 square kilometres.

3.12.2 Historical Data

Historical management cost data for Kakadu National Park is provided below.

Table 37: Kakadu National Park WHA management expenditure

1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000
\$9.63	\$10.44	\$10.23	\$10.70	\$9.98	\$11.09	\$14.77
2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
\$14.51	\$15.02	\$16.47	\$17.13	\$16.98	\$17.24	\$17.26

Note: Expenditure excludes asset payments and payments to traditional owners.

Total management expenditure in 2006/07, including wages paid to in the order of 67 staff was \$22.1 million.

Table 38: Kakadu National Park annual visitation

1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
45,800	57,850	75,199	100,000	131,798	174,074	224,626	227,976	237,537
1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	
210,715	205,147	219,718	239,842	235,361	219,287	207,706	199,887	
1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	
211,491	200,752	197,527	189,134	170,423	169,955	160,236	158,468	

Visitation in 2006/07 was estimated at 158 000.

3.12.3 Economic Activity

The estimated regional economic impact of the management of the Kakadu National Park and visitation to the WHA on the region is summarised in the following tables.

Table 39: Impacts of management of the Kakadu National Park on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	18,797	5,751	2,640	8,391	27,188
<i>Ratio Multiplier</i>	1.00	0.31	0.14	0.45	1.45
INCOME (\$'000)	4,709	2,207	771	2,978	7,687
<i>Ratio Multiplier</i>	1.00	0.47	0.16	0.63	1.63
VALUE-ADDED (\$'000)	9,203	2,629	1,506	4,135	13,338
<i>Ratio Multiplier</i>	1.00	0.29	0.16	0.45	1.45
EMPL. (No.)	69	43	11	55	124
<i>Ratio Multiplier</i>	1.00	0.63	0.16	0.79	1.79

Management of the Kakadu National Park contributes:

- \$27.2 million in annual direct and indirect output or business turnover;
- \$13.3 million in annual direct and indirect value added;
- \$7.7 million in annual direct and indirect household income; and
- 124 direct and indirect jobs.

Table 40: Impacts of visitors to the Kakadu National Park on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	16,840	2,192	2,262	4,454	21,294
<i>Ratio Multiplier</i>	1.00	0.13	0.13	0.26	1.26
INCOME (\$'000)	5,208	718	660	1,378	6,586
<i>Ratio Multiplier</i>	1.00	0.14	0.13	0.26	1.26
VALUE-ADDED (\$'000)	7,086	959	1,290	2,250	9,336
<i>Ratio Multiplier</i>	1.00	0.14	0.18	0.32	1.32
EMPL. (No.)	103	10	10	20	123
<i>Ratio Multiplier</i>	1.00	0.10	0.09	0.19	1.19

Visitation to the Kakadu National Park contributes:

- \$21.3 million in annual direct and indirect output or business turnover;
- \$9.3 million in annual direct and indirect value added;
- \$6.6 million in annual direct and indirect household income; and
- 123 direct and indirect jobs.

3.13 Royal Exhibition Building and Carlton Gardens (VIC)

3.13.1 Description

The Royal Exhibition Building and Carlton Gardens, Melbourne, were inscribed on the World Heritage List in 2004 for outstanding cultural universal values. The Royal Exhibition Building was built in Melbourne's Carlton Gardens in 1880 for the 1880 Melbourne International Exhibition. It subsequently hosted Melbourne's second international exhibition, the 1888 Centennial International Exhibition. It is one of the great enduring monuments to the International Exhibition movement, which began in the mid-19th century.

3.13.2 Historical Data

Historical management cost data for REB and Carlton Gardens was not available.

Estimated management expenditure in 2006/07, including wages paid to in the order of 18 staff was \$1.9 million.

Table 41: Royal Exhibition Building and Carlton Gardens annual visitation

Year	2004/05	2005/06	2006/07
Visitor No.	2,582,683	2,515,323	2,544,175

Visitation in 2006/07 was 2 544 175 million.

3.13.3 Economic Activity

The estimated regional economic impact of the management of REB and Carlton Gardens and visitation to the WHA on the region is summarised in the following tables.

Table 42: Impacts of management of the REB and Carlton Gardens on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,919	1,353	1,499	2,852	4,771
<i>Ratio Multiplier</i>	1.00	0.71	0.78	1.49	2.49
INCOME (\$'000)	633	436	454	890	1,523
<i>Ratio Multiplier</i>	1.00	0.69	0.72	1.41	2.41
VALUE-ADDED (\$'000)	637	562	742	1,304	1,941
<i>Ratio Multiplier</i>	1.00	0.88	1.16	2.05	3.05
EMPL. (No.)	18	6	7	13	31
<i>Ratio Multiplier</i>	1.00	0.33	0.39	0.71	1.71

Management of the REB and Carlton Gardens contributes:

- \$4.8 million in annual direct and indirect output or business turnover;
- \$1.9 million in annual direct and indirect value added;
- \$1.5 million in annual direct and indirect household income; and
- 31 direct and indirect jobs.

Table 43: Impacts of visitors to REB and Carlton Gardens on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	317,150	170,040	200,753	370,793	687,943
<i>Ratio Multiplier</i>	1.00	0.54	0.63	1.17	2.17
INCOME (\$'000)	90,706	52,454	60,798	113,252	203,958
<i>Ratio Multiplier</i>	1.00	0.58	0.67	1.25	2.25
VALUE-ADDED (\$'000)	121,851	71,499	99,323	170,822	292,674
<i>Ratio Multiplier</i>	1.00	0.59	0.82	1.40	2.40
EMPL. (No.)	2,150	705	932	1,636	3,787
<i>Ratio Multiplier</i>	1.00	0.33	0.43	0.76	1.76

Visitation to the REB and Carlton Gardens contributes:

- \$688.0 million in annual direct and indirect output or business turnover;
- \$292.7 million in annual direct and indirect value added;
- \$204.0 million in annual direct and indirect household income; and
- 3,787 direct and indirect jobs.

3.14 Sydney Opera House (NSW)

3.14.1 Description

The Sydney Opera House is Australia's most recent World Heritage listing, being inscribed for outstanding cultural universal values in 2007.

3.14.2 Historical Data

Historical management cost data for the Sydney Opera House is provided below.

Table 44: The Sydney Opera House WHA annual management expenditure

2002/03	2003/04	2004/05	2005/06	2006/07
\$43M	\$48M	\$52M	\$56M	\$69M

Estimated management expenditure in 2006/07, including wages paid to in the order of 654 staff was \$69 million.

Visitation in 2007 was estimated at 7.25 million.

3.14.3 Economic Activity

The estimated regional economic impact of the management of the Sydney Opera House and visitation to the WHA on the region is summarised in the following tables.

Table 45: Impacts of management of the Sydney Opera House on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	68,913	43,279	75,114	118,393	187,306
<i>Ratio Multiplier</i>	1.00	0.63	1.09	1.72	2.72
INCOME (\$'000)	36,510	17,973	23,497	41,470	77,979
<i>Ratio Multiplier</i>	1.00	0.49	0.64	1.14	2.14
VALUE-ADDED (\$'000)	37,232	19,567	38,638	58,205	95,436
<i>Ratio Multiplier</i>	1.00	0.53	1.04	1.56	2.56
EMPL. (No.)	654	191	334	525	1,179
<i>Ratio Multiplier</i>	1.00	0.29	0.51	0.80	1.80

Management of the Sydney Opera House contributes:

- \$187.3 million in annual direct and indirect output or business turnover;
- \$95.4 million in annual direct and indirect value added;
- \$78.0 million in annual direct and indirect household income; and
- 1,179 direct and indirect jobs.

Table 46: Impacts of visitors to the Sydney Opera House on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,083,800	595,204	730,534	1,325,738	2,409,538
<i>Ratio Multiplier</i>	1.00	0.55	0.67	1.22	2.22
INCOME (\$'000)	334,631	195,246	228,527	423,773	758,404
<i>Ratio Multiplier</i>	1.00	0.58	0.68	1.27	2.27
VALUE-ADDED (\$'000)	440,897	252,937	375,783	628,720	1,069,617
<i>Ratio Multiplier</i>	1.00	0.57	0.85	1.43	2.43
EMPL. (No.)	6,536	2,381	3,248	5,629	12,165
<i>Ratio Multiplier</i>	1.00	0.36	0.50	0.86	1.86

Visitation to the Sydney Opera House contributes:

- \$2,409.5 million in annual direct and indirect output or business turnover;
- \$1,069.6 million in annual direct and indirect value added;

- \$758.4 million in annual direct and indirect household income; and
- 12,165 direct and indirect jobs.

3.15 Macquarie Island (Tasmania)

3.15.1 Description

Macquarie Island was inscribed on the World Heritage List in 1997 for its outstanding natural universal values. Macquarie Island is situated about 1 500km south-south-east of Tasmania, half way between Tasmania and Antarctica at around 55 degrees south. It is the only island in the World composed entirely of oceanic crust and rocks from the mantle – deep below the Earth's surface.

3.15.2 Historical Data

Historical management cost data for Macquarie Island is provided below.

Table 47: Macquarie Island annual management expenditure

Year	2005/06	2006/07
Management Expenditure	\$462,010	\$482,103

Estimated management expenditure in 2006/07, including wages paid to in the order of 5 staff was \$482 000.

Annual visitation is estimated at 750.

3.15.3 Economic Activity

The estimated regional economic impact of the management of Macquarie Island and visitation to the WHA on the region is summarised in the following tables.

Table 48: Impacts of management of the Macquarie Island on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	482	116	270	385	867
<i>Ratio Multiplier</i>	1.00	0.24	0.56	0.80	1.80
INCOME (\$'000)	340	36	87	123	463
<i>Ratio Multiplier</i>	1.00	0.11	0.25	0.36	1.36
VALUE-ADDED (\$'000)	344	49	146	195	539
<i>Ratio Multiplier</i>	1.00	0.14	0.43	0.57	1.57
EMPL. (No.)	5	1	2	2	7
<i>Ratio Multiplier</i>	1.00	0.12	0.31	0.43	1.43

Management of the Macquarie Island contributes:

- \$0.9 million in annual direct and indirect output or business turnover;
- \$0.5 million in annual direct and indirect value added;
- \$0.5 million in annual direct and indirect household income; and
- 7 direct and indirect jobs.

Table 49: Impacts of visitors to Macquarie Island on the region

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	369	84	98	183	552
<i>Ratio Multiplier</i>	1.00	0.23	0.27	0.49	1.49
INCOME (\$'000)	112	26	32	57	169
<i>Ratio Multiplier</i>	1.00	0.23	0.28	0.51	1.51
VALUE-ADDED (\$'000)	151	36	53	89	240
<i>Ratio Multiplier</i>	1.00	0.24	0.35	0.59	1.59
EMPL. (No.)	3	0	1	1	4
<i>Ratio Multiplier</i>	1.00	0.16	0.18	0.34	1.34

Visitation to the Macquarie Island contributes:

- \$0.6 million in annual direct and indirect output or business turnover;
- \$0.2 million in annual direct and indirect value added;
- \$0.2 million in annual direct and indirect household income; and
- 4 direct and indirect jobs.

4 STATE AND TERRITORY ECONOMIC ACTIVITY OF WORLD HERITAGE AREAS

4.1 New South Wales (NSW)

4.1.1 Introduction

There are five WHAs wholly or partly in the state of NSW:

- Willandra Lakes Region;
- Lord Howe Island;
- Gondwana Rainforests (partly in NSW, partly in Qld);
- the Greater Blue Mountains; and
- the Sydney Opera House.

4.1.2 Economic Activity

The impacts of each of the five NSW WHAs on the NSW economy are provided in Appendix 6. The total impacts of the five WHAs on the NSW economy are provided below.

Table 50: Impacts of management of all NSW WHAs on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	103,010	85,571	136,705	222,276	325,286
<i>Ratio Multiplier</i>	1.00	0.83	1.33	2.16	3.16
INCOME (\$'000)	48,652	29,369	39,848	69,216	117,868
<i>Ratio Multiplier</i>	1.00	0.60	0.82	1.42	2.42
VALUE-ADDED (\$'000)	51,993	36,864	69,632	106,496	158,489
<i>Ratio Multiplier</i>	1.00	0.71	1.34	2.05	3.05
EMPL. (No.)	937	360	619	979	1,916
<i>Ratio Multiplier</i>	1.00	0.38	0.66	1.04	2.04

Management of the five NSW WHAs contributes:

- \$325.3 million in annual direct and indirect output or business turnover;
- \$158.5 million in annual direct and indirect value added;
- \$117.9 million in annual direct and indirect household income; and
- 1,926 direct and indirect jobs.

Table 51: Impacts of visitors to all NSW WHAs on the state

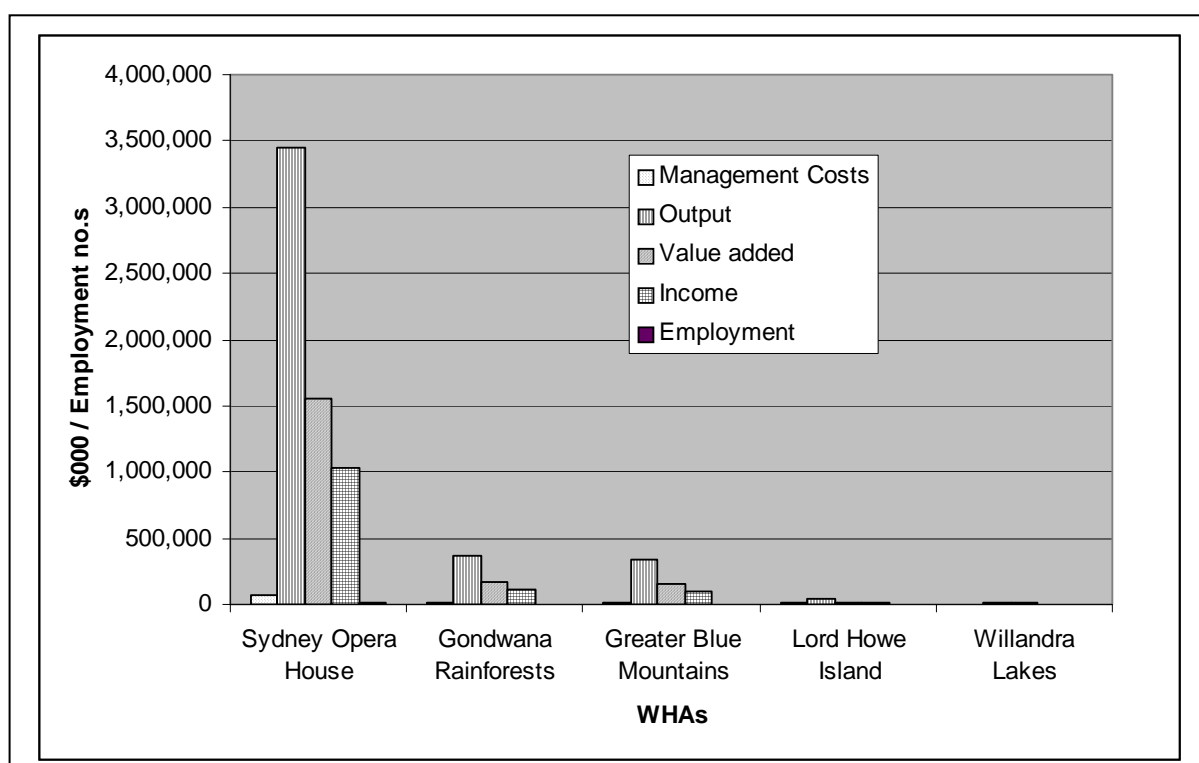
	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,504,209	1,058,274	1,315,504	2,373,779	3,877,988
<i>Ratio Multiplier</i>	1.00	0.70	0.87	1.58	2.58
INCOME (\$'000)	433,753	317,045	383,453	700,498	1,134,248
<i>Ratio Multiplier</i>	1.00	0.73	0.88	1.61	2.61
VALUE-ADDED (\$'000)	612,784	456,859	670,057	1,126,916	1,739,700
<i>Ratio Multiplier</i>	1.00	0.75	1.09	1.84	2.84
EMPL. (No.)	9,514	4,319	5,955	10,274	19,788
<i>Ratio Multiplier</i>	1.00	0.45	0.63	1.08	2.08

Visitation to NSW WHAs contributes:

- \$3,878.0 million in annual direct and indirect output or business turnover;
- \$1,739.7 million in annual direct and indirect value added;
- \$1,134.3 million in annual direct and indirect household income; and
- 19,788 direct and indirect jobs.

The relative contribution of each of the NSW WHAs to total impacts on the NSW economy is illustrated in the following Figure.

Figure 1: Impact of NSW WHAs on the NSW Economy



The Sydney Opera House is the largest contributor of economic activity to the NSW economy followed by the Gondwana Rainforests and Greater Blue Mountains, then Lord Howe Island and the Willandra Lakes Region.

4.2 QUEENSLAND

4.2.1 Introduction

There are four WHA wholly or partly in the state of Queensland:

- Gondwana Rainforests of Australia (partly in Queensland, partly in NSW);
- the Wet Tropics of Queensland;
- Fraser Island; and
- the Australian Fossil Mammal Site, Riversleigh.

4.2.2 Economic Activity

The impacts of the each of the four Queensland WHAs on the QLD economy are provided in Appendix 7. The total impacts of the four WHAs on the QLD economy are provided below.

Table 52: Impacts of management of all four QLD WHAs on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	24,220	14,431	25,590	40,021	64,241
<i>Ratio Multiplier</i>	1.00	0.60	1.06	1.65	2.65
INCOME (\$'000)	14,076	3,977	7,514	11,491	25,567
<i>Ratio Multiplier</i>	1.00	0.28	0.53	0.82	1.82
VALUE-ADDED (\$'000)	14,740	6,395	13,025	19,420	34,160
<i>Ratio Multiplier</i>	1.00	0.43	0.88	1.32	2.32
EMPL. (No.)	351	60	133	193	544
<i>Ratio Multiplier</i>	1.00	0.17	0.38	0.55	1.55

Management of the Queensland WHAs contributes:

- \$64.3 million in annual direct and indirect output or business turnover;
- \$34.2 million in annual direct and indirect value added;
- \$25.6 million in annual direct and indirect household income; and
- 544 direct and indirect jobs.

Table 53: Impacts of visitors to all four QLD WHAs on the state

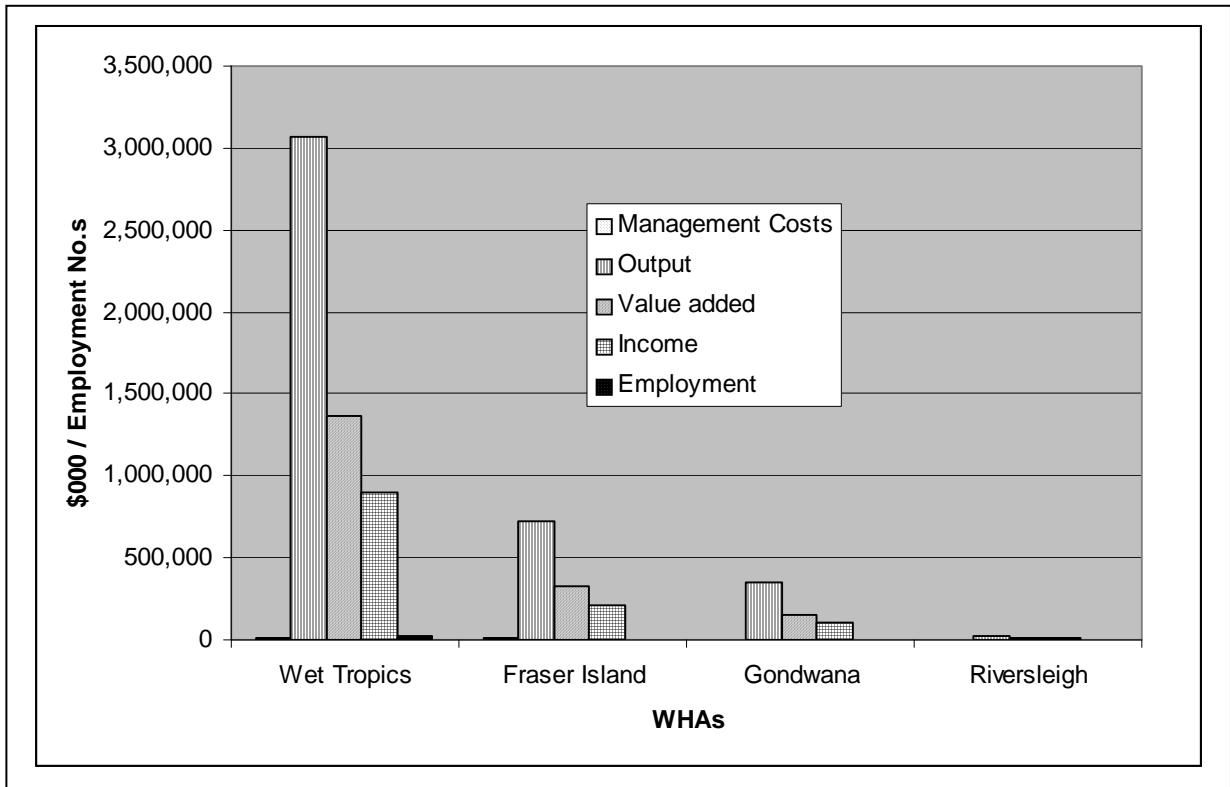
	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,869,769	1,040,798	1,189,348	2,221,746	4,084,324
<i>Ratio Multiplier</i>	1.00	0.56	0.64	1.19	2.19
INCOME (\$'000)	534,467	304,525	349,253	655,956	1,191,612
<i>Ratio Multiplier</i>	1.00	0.57	0.65	1.22	2.22
VALUE-ADDED (\$'000)	762,503	453,079	608,799	1,056,288	1,814,839
<i>Ratio Multiplier</i>	1.00	0.59	0.80	1.39	2.39
EMPL. (No.)	12,588	4,994	6,227	11,160	23,681
<i>Ratio Multiplier</i>	1.00	0.40	0.49	0.89	1.89

Visitation to the Queensland WHAs contributes:

- \$4,084.3 million in annual direct and indirect output or business turnover;
- \$1,814.8 million in annual direct and indirect value added;
- \$1,191.6 million in annual direct and indirect household income; and
- 23,681 direct and indirect jobs.

The relative contribution of each of the Queensland WHAs to total impacts on the Queensland economy is illustrated in the following Figure.

Figure 2: Impact of QLD WHAs on the QLD Economy



The Wet Tropics WHA is the largest contributor of economic activity to the Queensland economy followed by Fraser Island, the Gondwana Rainforests and the Australian Fossil Mammal Site, Riversleigh.

4.3 VICTORIA

4.3.1 Introduction

There is only one WHA located in Victoria, the Royal Exhibition Building and Carlton Gardens.

4.3.2 Economic Activity

The total impact of the WHA on the Victorian economy is provided below.

Table 54: Impacts of management of the REB and Carlton Gardens WHA on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,919	2,100	2,310	4,410	6,329
<i>Ratio Multiplier</i>	1.00	1.09	1.20	2.30	3.30
INCOME (\$'000)	634	661	667	1,328	1,962
<i>Ratio Multiplier</i>	1.00	1.04	1.05	2.10	3.10
VALUE-ADDED (\$'000)	639	894	1,137	2,031	2,670
<i>Ratio Multiplier</i>	1.00	1.40	1.78	3.18	4.18
EMPL. (No.)	18	10	11	21	39
<i>Ratio Multiplier</i>	1.00	0.54	0.60	1.14	2.14

Management of the REB and Carlton Gardens WHA contributes:

- \$6.3 million in annual direct and indirect output or business turnover;
- \$2.7 million in annual direct and indirect value added;
- \$2.0 million in annual direct and indirect household income; and
- 39 direct and indirect jobs.

Table 55: Impacts of visitors to REB and Carlton Gardens WHA on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	370,443	257,058	313,051	570,109	940,552
<i>Ratio Multiplier</i>	1.00	0.69	0.85	1.54	2.54
INCOME (\$'000)	100,489	74,998	90,366	165,364	265,853
<i>Ratio Multiplier</i>	1.00	0.75	0.90	1.65	2.65
VALUE-ADDED (\$'000)	110,462	154,097	406,581	560,678	671,140
<i>Ratio Multiplier</i>	1.00	1.40	3.68	5.08	6.08
EMPL. (No.)	2,653	1,071	1,472	2,544	5,196
<i>Ratio Multiplier</i>	1.00	0.40	0.55	0.96	1.96

Visitation to the REB and Carlton Gardens WHA contributes:

- \$940.6 million in annual direct and indirect output or business turnover;
- \$671.1 million in annual direct and indirect value added;
- \$265.9 million in annual direct and indirect household income; and
- 5,196 direct and indirect jobs.

4.4 WESTERN AUSTRALIA

4.4.1 Introduction

There are two WHAs located in Western Australia:

- Shark Bay; and
- Purnululu National Park.

4.4.2 Economic Activity

The impacts of each of the two Western Australian WHAs on the WA economy are provided in Appendix 8. The total impacts of the two WHAs on the Western Australian economy are provided below.

Table 56: Impacts of management of Western Australia WHAs on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	4,165	2,887	4,099	6,987	11,152
<i>Ratio Multiplier</i>	1.00	0.69	0.98	1.68	2.68
INCOME (\$'000)	1,923	853	1,185	2,037	3,960
<i>Ratio Multiplier</i>	1.00	0.44	0.62	1.06	2.06
VALUE-ADDED (\$'000)	2,367	1,205	2,062	3,267	5,635
<i>Ratio Multiplier</i>	1.00	0.51	0.87	1.38	2.38
EMPL. (No.)	34	12	20	32	66
<i>Ratio Multiplier</i>	1.00	0.35	0.59	0.94	1.94

Management of the two Western Australian WHAs contributes:

- \$11.2 million in annual direct and indirect output or business turnover;
- \$5.6 million in annual direct and indirect value added;
- \$4.0 million in annual direct and indirect household income; and
- 66 direct and indirect jobs.

Table 57: Impacts of visitors to Western Australia WHAs on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	31,150	19,929	21,453	41,382	72,532
<i>Ratio Multiplier</i>	1.00	0.64	0.69	1.33	2.33
INCOME (\$'000)	8,798	5,729	6,200	11,929	20,726
<i>Ratio Multiplier</i>	1.00	0.65	0.70	1.36	2.36
VALUE-ADDED (\$'000)	12,497	8,649	10,789	19,439	31,935
<i>Ratio Multiplier</i>	1.00	0.69	0.86	1.56	2.56
EMPL. (No.)	246	85	106	191	437
<i>Ratio Multiplier</i>	1.00	0.35	0.43	0.78	1.78

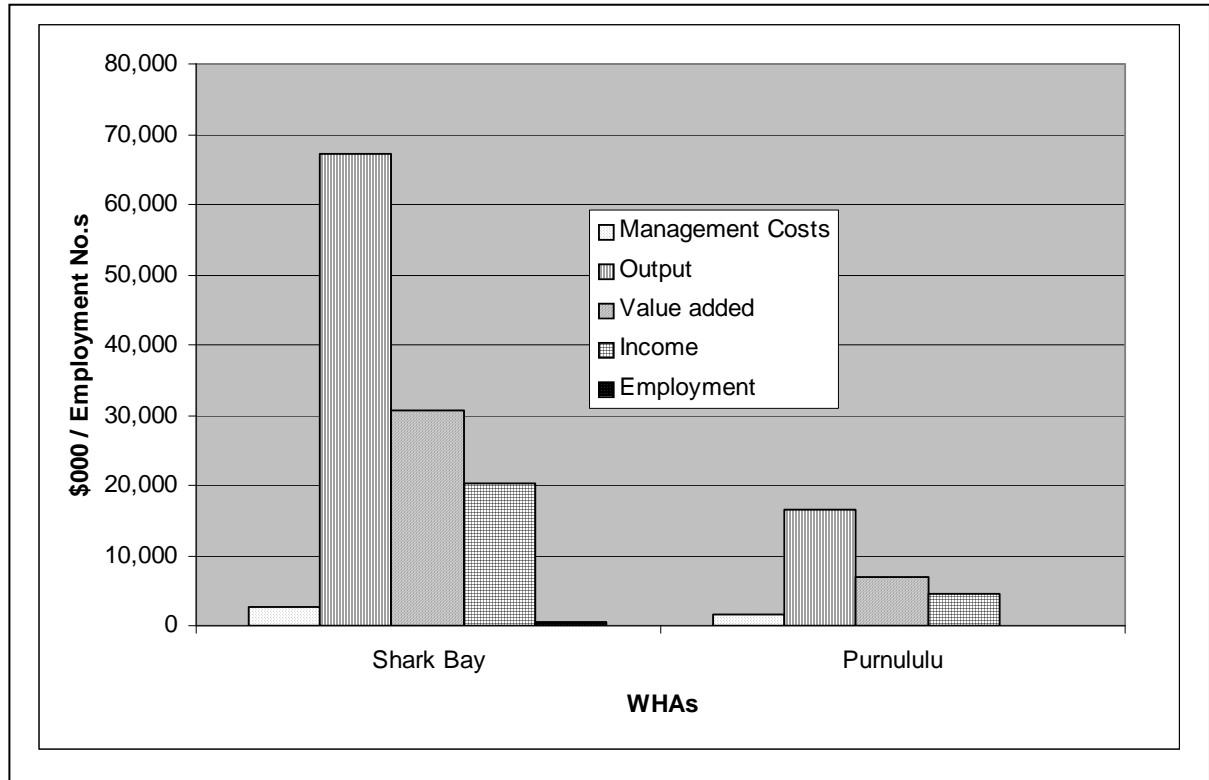
Visitation to the Western Australian WHAs contributes:

- \$72.5 million in annual direct and indirect output or business turnover;
- \$31.9 million in annual direct and indirect value added;
- \$20.7 million in annual direct and indirect household income; and

- 437 direct and indirect jobs.

The relative contribution of each of the Western Australian WHAs to total impacts on the Western Australian economy is illustrated in the following Figure.

Figure 3: Impact of WA WHAs on the WA Economy



Shark Bay is the largest contributor of economic activity to the Western Australian economy followed by Purnululu.

4.5 SOUTH AUSTRALIA

4.5.1 Introduction

There is only one WHA located in South Australia, the Australian Fossil Mammal Site (AFMS), Naracoorte.

4.5.2 Economic Activity

The total impact of the AFMS Naracoorte on the SA economy is provided below.

Table 58: Impacts of management AFMS, Naracoorte WHA on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	616	236	557	794	1,410
<i>Ratio Multiplier</i>	1.00	0.38	0.91	1.29	2.29
INCOME (\$'000)	352	71	157	228	580
<i>Ratio Multiplier</i>	1.00	0.20	0.45	0.65	1.65
VALUE-ADDED (\$'000)	442	96	278	374	816
<i>Ratio Multiplier</i>	1.00	0.22	0.63	0.85	1.85
EMPL. (No.)	14	1	3	4	18
<i>Ratio Multiplier</i>	1.00	0.08	0.21	0.29	1.29

Management of the AFMS Naracoorte WHA contributes:

- \$1.4 million in annual direct and indirect output or business turnover;
- \$0.8 million in annual direct and indirect value added;
- \$0.6 million in annual direct and indirect household income; and
- 18 direct and indirect jobs.

Table 59: Impacts of visitors to AFMS, Naracoorte WHA on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,223	1,143	1,249	2,392	4,615
<i>Ratio Multiplier</i>	1.00	0.51	0.56	1.08	2.08
INCOME (\$'000)	624	323	352	675	1,299
<i>Ratio Multiplier</i>	1.00	0.52	0.57	1.08	2.08
VALUE-ADDED (\$'000)	873	485	623	1,108	1,982
<i>Ratio Multiplier</i>	1.00	0.56	0.71	1.27	2.27
EMPL. (No.)	17	6	7	12	29
<i>Ratio Multiplier</i>	1.00	0.34	0.39	0.72	1.72

Visitation to the AFMS Naracoorte WHA contributes:

- \$4.6 million in annual direct and indirect output or business turnover;
- \$2.0 million in annual direct and indirect value added;
- \$1.3 million in annual direct and indirect household income; and
- 29 direct and indirect jobs.

4.6 TASMANIA

4.6.1 Introduction

There are two WHAs located in Tasmania:

- the Tasmanian Wilderness; and
- Macquarie Island.

4.6.2 Economic Activity

The impacts of each of the two Tasmanian WHAs on the Tasmanian economy are provided in Appendix 9. The total impacts of the two WHAs on the Tasmanian economy are provided below.

Table 60: Impacts of management of the two Tasmanian WHAs on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	9,806	5,723	5,082	10,804	20,610
<i>Ratio Multiplier</i>	1.00	0.58	0.52	1.10	2.10
INCOME (\$'000)	3,632	2,044	1,523	3,566	7,198
<i>Ratio Multiplier</i>	1.00	0.56	0.42	0.98	1.98
VALUE-ADDED (\$'000)	4,389	2,559	2,669	5,227	9,616
<i>Ratio Multiplier</i>	1.00	0.58	0.61	1.19	2.19
EMPL. (No.)	165	42	29	71	236
<i>Ratio Multiplier</i>	1.00	0.25	0.18	0.43	1.43

Management of the Tasmanian WHAs contributes:

- \$20.6 million in annual direct and indirect output or business turnover;
- \$9.6 million in annual direct and indirect value added;
- \$7.2 million in direct and indirect household income; and
- 236 direct and indirect jobs.

Table 61: Impacts of visitors to the two Tasmanian WHAs on the state

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	421,077	138,226	141,891	280,117	701,194
<i>Ratio Multiplier</i>	1.00	0.33	0.34	0.67	1.67
INCOME (\$'000)	119,708	38,756	42,510	81,267	200,975
<i>Ratio Multiplier</i>	1.00	0.32	0.36	0.68	1.68
VALUE-ADDED (\$'000)	170,132	59,241	74,528	133,769	303,901
<i>Ratio Multiplier</i>	1.00	0.35	0.44	0.79	1.79
EMPL. (No.)	3,547	770	820	1,590	5,136
<i>Ratio Multiplier</i>	1.00	0.22	0.23	0.45	1.45

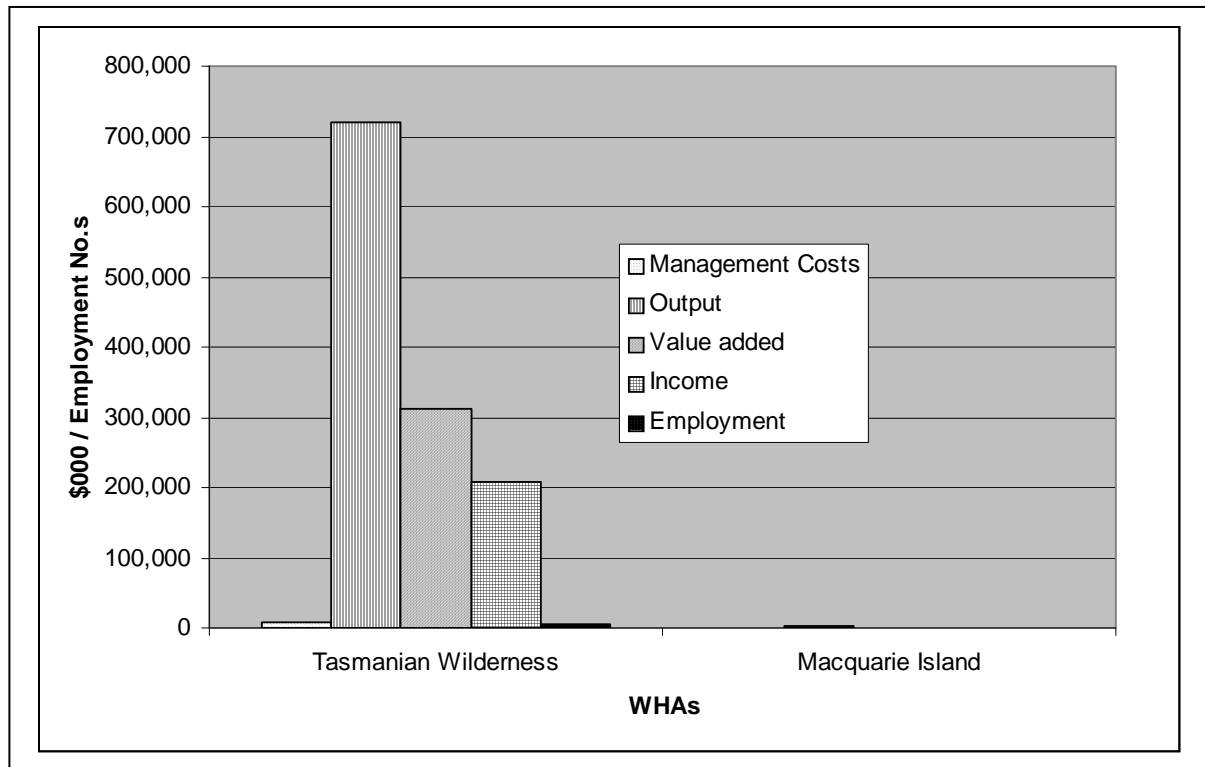
Visitation to the Tasmanian WHAs contributes:

- \$701.2 million in annual direct and indirect output or business turnover;
- \$303.9 million in annual direct and indirect value added;
- \$201.0 million in direct and indirect household income; and

- 5,136 direct and indirect jobs

The relative contribution of each of the Tasmanian WHAs to total impacts on the Tasmanian economy is illustrated in the following Figure.

Figure 4: Impact of Tasmanian WHAs on the Tasmanian Economy



The Tasmanian Wilderness WHA is by far the largest contributor of economic activity to the Tasmanian economy followed by Macquarie Island.

4.7 NORTHERN TERRITORY

4.7.1 Introduction

There are two WHAs located in the Northern Territory:

- Uluru-Kata Tjuta National Park; and
- Kakadu National Park.

4.7.2 Economic Activity

The impacts of the two Northern Territory WHAs on the Northern Territory economy are provided in Appendix 10. The total impacts of the two WHAs on the NT economy are provided below.

Table 62: Impacts of management of the two Northern Territory WHAs on the territory

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	31,097	16,056	12,233	28,288	59,385
<i>Ratio Multiplier</i>	1.00	0.52	0.39	0.91	1.91
INCOME (\$'000)	7,729	5,911	2,805	8,715	16,444
<i>Ratio Multiplier</i>	1.00	0.76	0.36	1.13	2.13
VALUE-ADDED (\$'000)	15,502	7,331	6,724	14,055	29,557
<i>Ratio Multiplier</i>	1.00	0.47	0.43	0.91	1.91
EMPL. (No.)	113	107	41	149	262
<i>Ratio Multiplier</i>	1.00	0.95	0.36	1.32	2.32

Management of the Northern Territory WHAs contributes:

- \$59.4 million in annual direct and indirect output or business turnover;
- \$29.6 million in annual direct and indirect value added;
- \$16.4 million in direct and indirect household income; and
- 262 direct and indirect jobs.

Table 63: Impacts of visitors to the two Northern Territory WHAs on the territory

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	121,735	35,840	40,164	76,003	197,738
<i>Ratio Multiplier</i>	1.00	0.29	0.33	0.62	1.62
INCOME (\$'000)	34,258	10,526	9,208	19,735	53,993
<i>Ratio Multiplier</i>	1.00	0.31	0.27	0.58	1.58
VALUE-ADDED (\$'000)	49,861	15,428	22,078	37,507	87,369
<i>Ratio Multiplier</i>	1.00	0.31	0.44	0.75	1.75
EMPL. (No.)	670	143	136	279	949
<i>Ratio Multiplier</i>	1.00	0.21	0.20	0.42	1.42

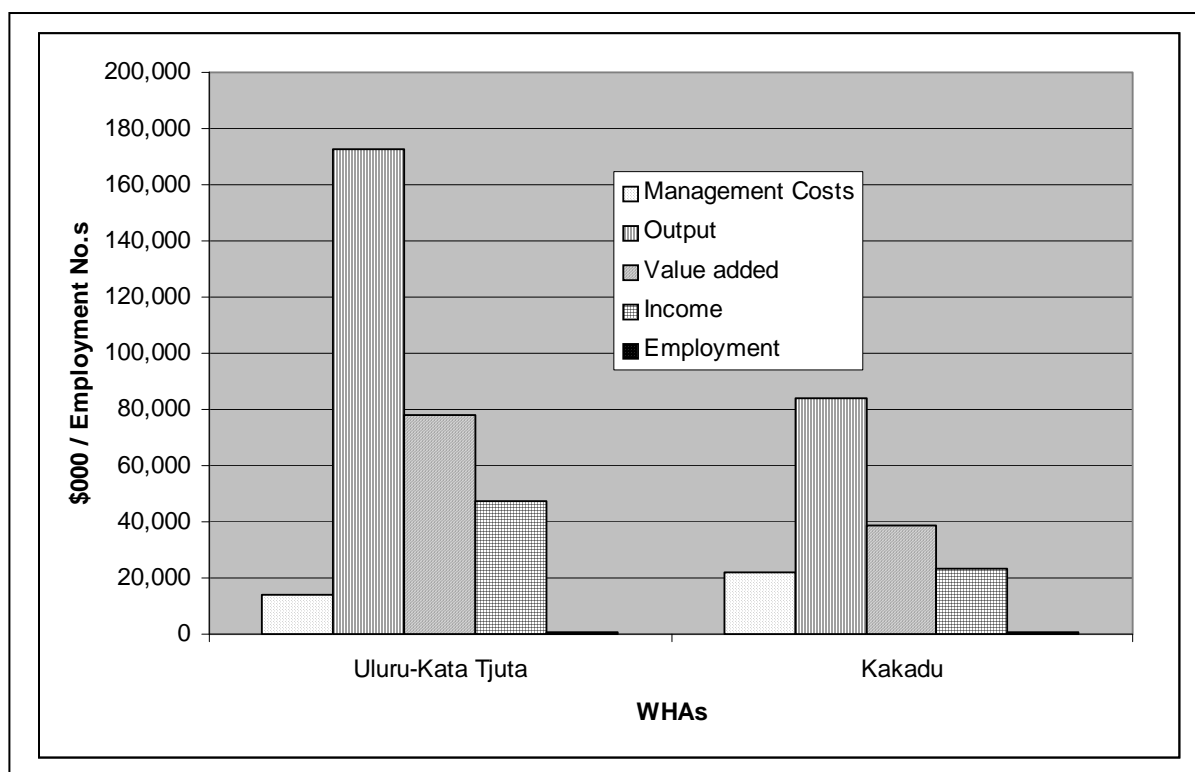
Visitation to the Northern Territory WHAs contributes:

- \$197.7 million in annual direct and indirect output or business turnover;
- \$87.4 million in annual direct and indirect value added;

- \$54.0 million in direct and indirect household income; and
- 949 direct and indirect jobs.

The relative contribution of each of the Northern Territory WHAs to total impacts on the Northern Territory economy is illustrated in the following Figure.

Figure 5: Impact of Northern Territory WHAs on the Northern Territory Economy



Uluru-Kata Tjuta National Park is the largest contributor of economic activity to the Northern Territory economy followed by Kakadu National Park.

5 NATIONAL LEVEL IMPACTS

5.1 Introduction

There are 15 WHAs in Australia that are part of this study:

- Willandra Lakes Region (NSW);
- Tasmanian Wilderness (TAS);
- Lord Howe Island (NSW);
- Gondwana Rainforests of Australia (formerly Central Eastern Rainforest Reserves (Australia) (CERRA)) (NSW & QLD);
- Wet Tropics of Queensland (QLD);
- Shark Bay (WA);
- Fraser Island (QLD);
- Australian Fossil Mammal Sites, Naracoorte (SA) & Riversleigh (QLD);
- Greater Blue Mountains (NSW);
- Purnululu National Park (WA);
- Uluru-Kata Tjuta National Park (NT);
- Kakadu National Park (NT);
- Royal Exhibition Building and Carlton Gardens (VIC);
- The Sydney Opera House (NSW); and
- Macquarie Island (TAS).

5.2 Economic Activity

The impacts of each of the 15 WHAs on the national economy are provided in Appendix 11. The total impacts of the 15 WHAs on the national economy are provided below.

Table 64: Impacts of management of the 15 WHAs on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	174,832	167,577	320,877	488,452	663,284
<i>Ratio Multiplier</i>	1.00	0.96	1.84	2.79	3.79
INCOME (\$'000)	77,001	44,950	83,157	128,108	205,112
<i>Ratio Multiplier</i>	1.00	0.58	1.08	1.66	2.66
VALUE-ADDED (\$'000)	90,079	73,283	157,412	230,696	320,777
<i>Ratio Multiplier</i>	1.00	0.81	1.75	2.56	3.56
EMPL. (No.)	1,632	735	1,545	2,278	3,910
<i>Ratio Multiplier</i>	1.00	0.45	0.95	1.40	2.40

Management of the 15 WHA contributes:

- \$663.3 million in annual direct and indirect output or business turnover;

- \$320.8 million in annual direct and indirect value added;
- \$205.1 million in direct and indirect household income; and
- 3,910 direct and indirect jobs.

Table 65: Impacts of visitors to the 15 WHAs on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	4,615,704	4,714,088	6,111,175	10,825,260	15,440,964
<i>Ratio Multiplier</i>	1.00	1.02	1.32	2.35	3.35
INCOME (\$'000)	1,186,113	1,136,535	1,583,739	2,720,273	3,906,389
<i>Ratio Multiplier</i>	1.00	0.96	1.34	2.29	3.29
VALUE-ADDED (\$'000)	1,873,652	2,054,438	2,997,224	5,051,664	6,925,315
<i>Ratio Multiplier</i>	1.00	1.10	1.60	2.70	3.70
EMPL. (No.)	31,396	18,620	29,427	48,044	79,439
<i>Ratio Multiplier</i>	1.00	0.59	0.94	1.53	2.53

Visitation to the 15 WHA contributes:

- \$15,441.0 million in annual direct and indirect output or business turnover;
- \$6,925.3 million in annual direct and indirect value added;
- \$3,906.4 million in direct and indirect household income; and
- 79,439 direct and indirect jobs.

The relative contribution of each of the WHAs to total impacts on the Australian economy is illustrated in the following Figure.

Figure 6a: Impact of WHAs on the Australian Economy

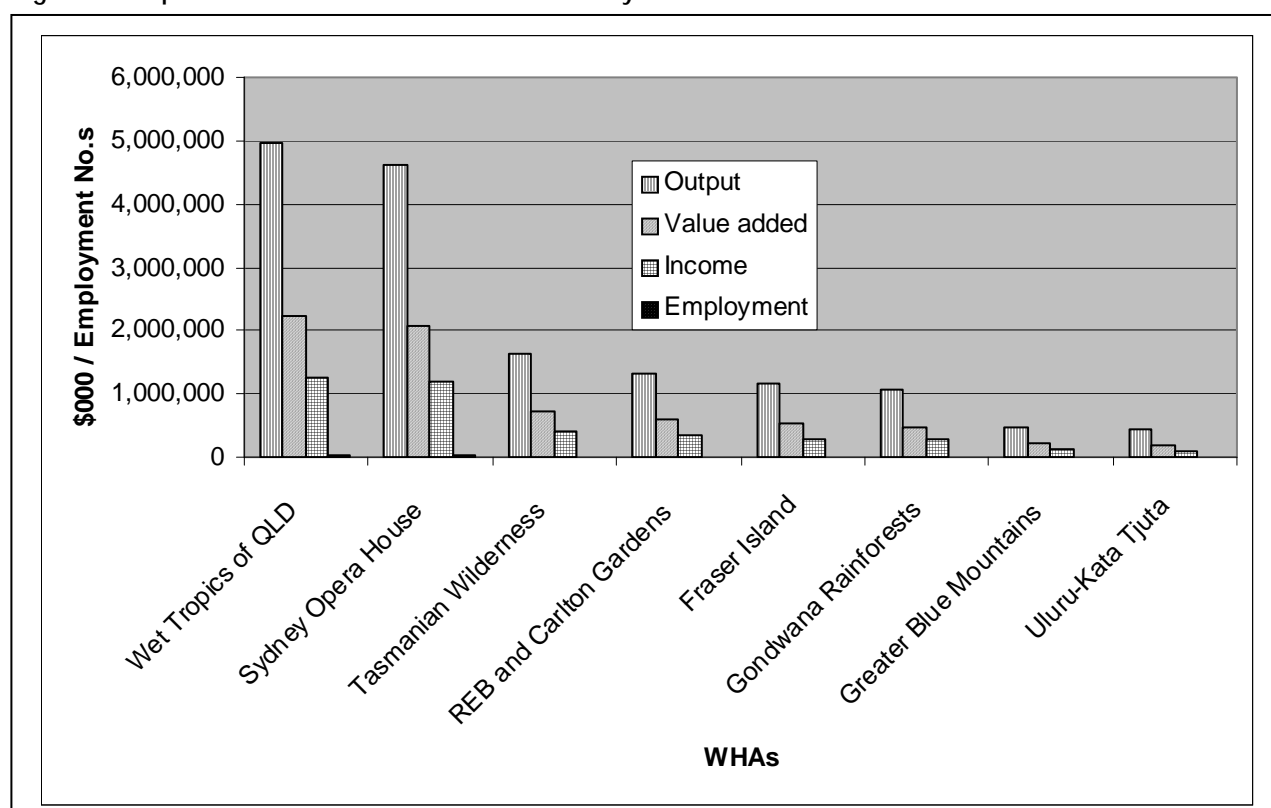
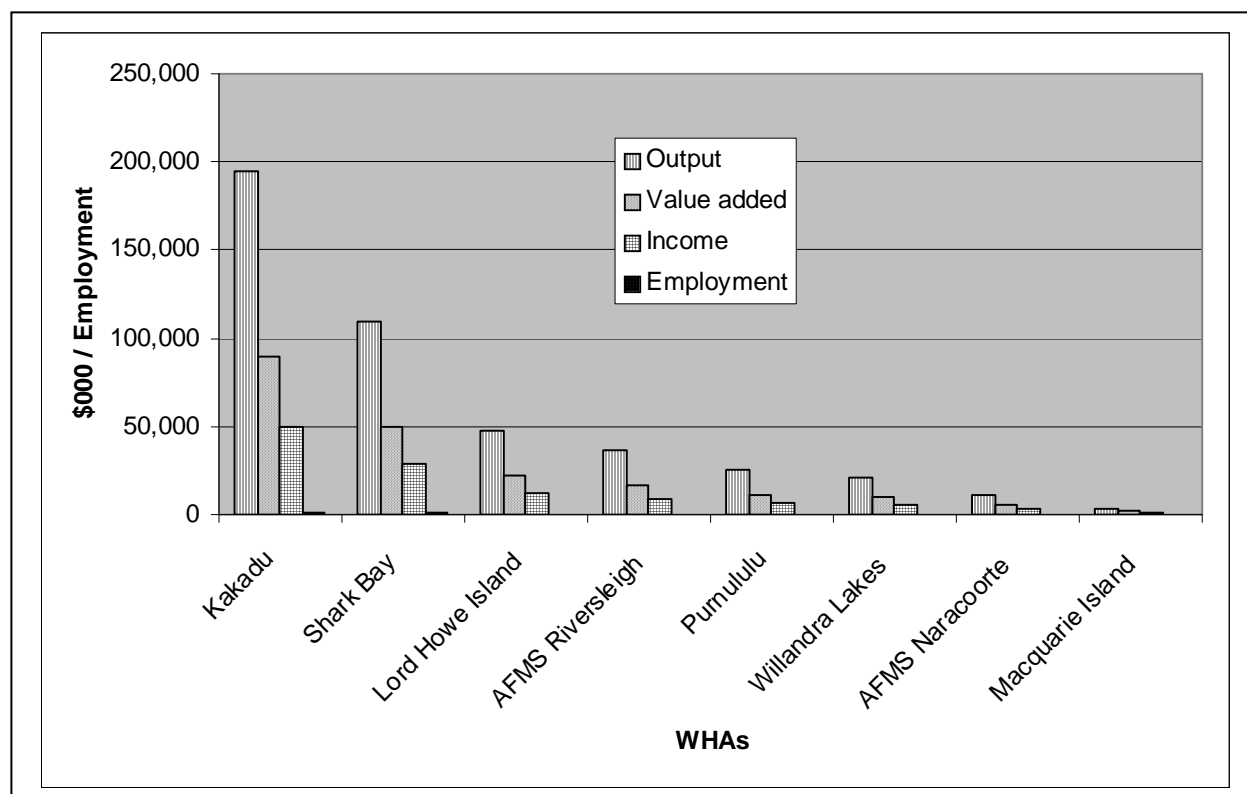


Figure 6b: Impact of WHAs on the Australian Economy



The Wet Tropics of Queensland and the Sydney Opera House are the two most significant WHAs in terms of economic impact. The Tasmanian Wilderness, REB and Carlton Gardens, Fraser Island and Gondwana Rainforests are the next most significant group of WHAs. The Greater Blue Mountains, Uluru-Kata Tjuta National Park and Kakadu National Park are the next most significant group. The other WHAs have more modest relative impacts at a National level.

6 IMPACT OF WORLD HERITAGE LISTING

The impacts reported in Section 5 relate to the expenditure in the region by people who visit the WHAs and expenditure in the region by the WHA management agency. However, management expenditure and visitation preceded inscription of these WHAs. An important question is therefore the degree to which designation of a site as of WHA status alters visitation and management expenditure and hence regional, state and national economic impacts.

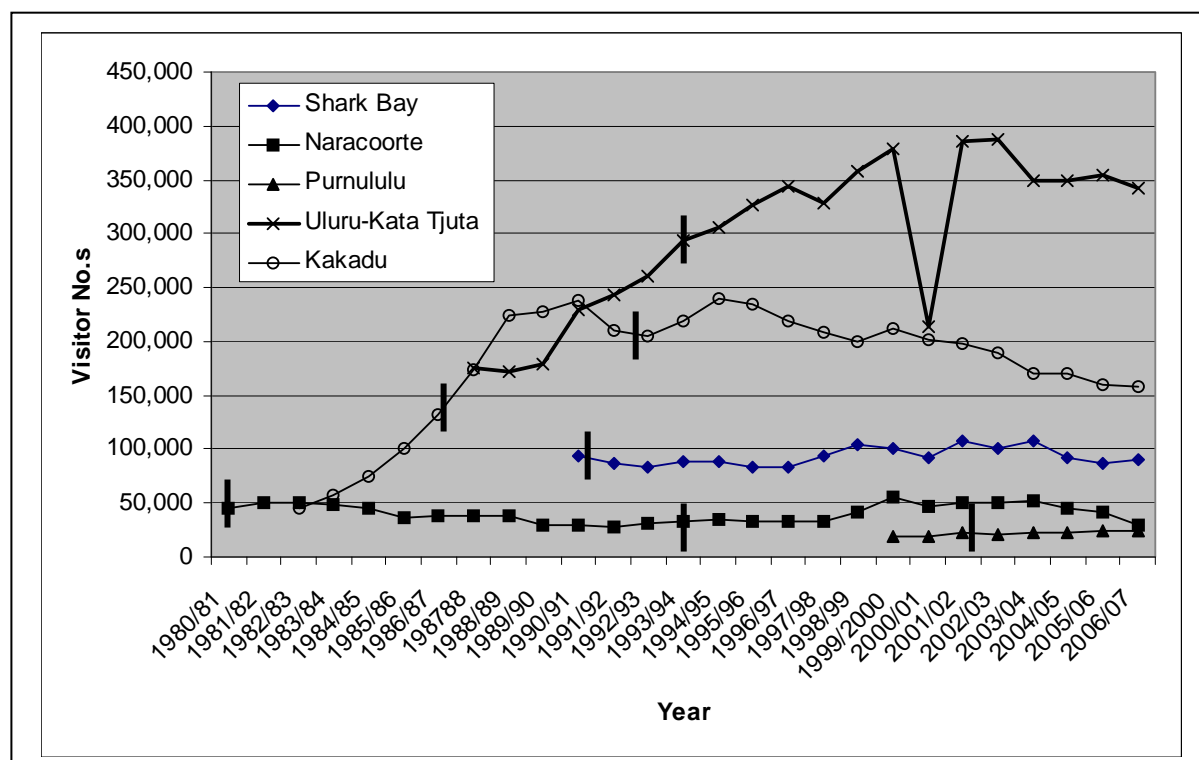
A start at examining this issue was to request historical visitation and expenditure data from the management agency for each WHA, ideally spanning the WHA inscription date. Table 90 summarises the historical data obtained for each WHA relative to the WHA inscription data.

Table 66: Availability of Historical Data for WHAs

	WHA	Inscribed	Historical Visitor Data	Historical Management Cost Data
1	Willandra Lakes Region	1981	None	Back to 99/00
2	Tasmanian Wilderness	1982	None	Back to 93/94
3	Lord Howe Island	1982	Back to 98/99	Back to 01/02
4	Gondwana Rainforests of Australia	1986, 1994	None	None
5	Wet Tropics of Queensland	1988	None	None
6	Shark Bay	1991	Back to 90/91	Back to 91/92
7	Fraser Island	1992	None	None
8	Australian Fossil Mammal Sites			
	Naracoorte	1994	Back to 80/81	None
	Riversleigh	1994	None	None
9	Greater Blue Mountains	2000	None	Back to 00/01
10	Purnululu National Park	2003	Back to 99/00	Back to 99/00
11	Uluru-Kata Tjuta National Park	1987	Back to 83/84	Back to 99/00
12	Kakadu National Park	1981, 1987, 1992	Back to 82/83	Back to 93/94
13	Royal Exhibition Building & Carlton Gardens	2004	Back to 04/05	None
14	The Sydney Opera House	2007	Back to 02/03	None
15	Macquarie Island	1997	None	Back to 05/06

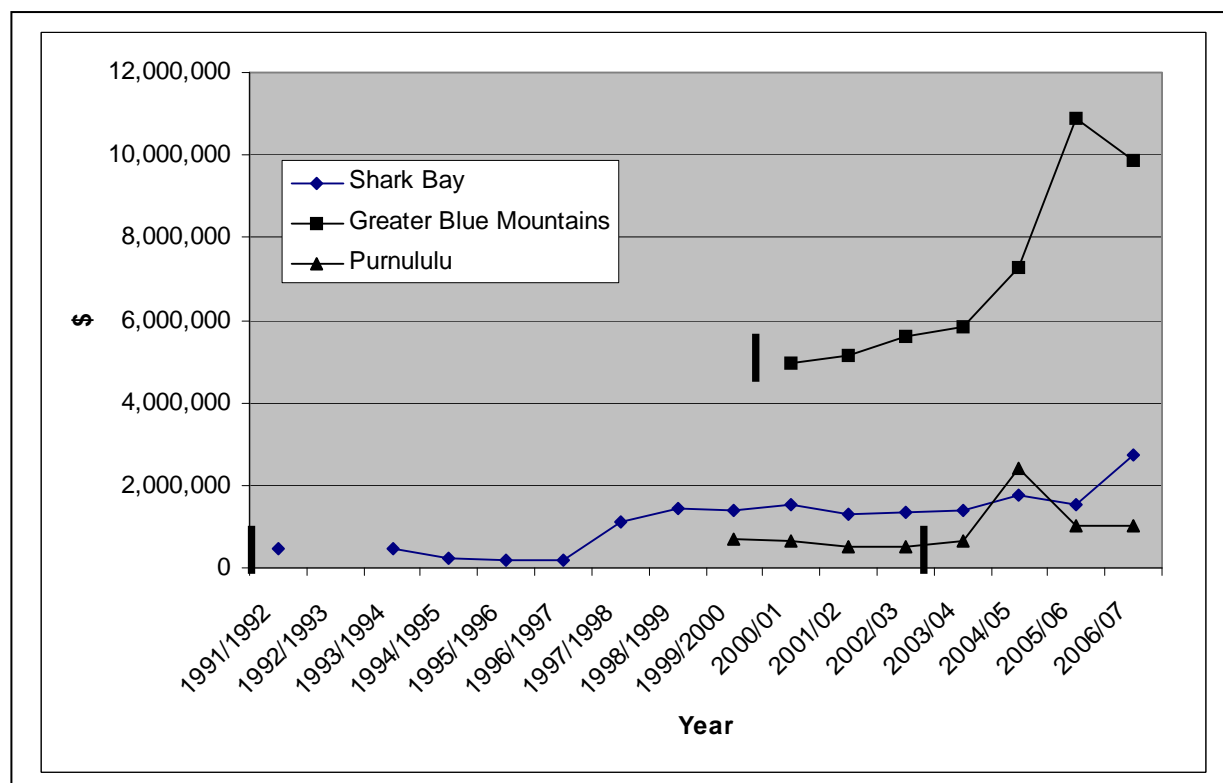
Historical visitation data spanning the WHA inscription date was only available for five WHAs. Historical management expenditure data spanning the WHA inscription date was only available for one but for two others data was available from the year of WHA inscription. This data is presented in Figure 7 and 8.

Figure 7: Historical Visitation Data Spanning the WHA Inscription Date



Denotes Inscription date

Figure 8: Historical Management Expenditure Data Spanning the WHA Inscription Date



Denotes Inscription date

For Shark Bay, Naracoorte and Purnululu WHAs there is no discernable change in visitation levels following WH inscription. For Kakadu visitation levels do seem to have rapidly increased a couple of years after the first WH inscription. The second inscription was in the middle of a period of rapid growth in visitation levels with no change to this pattern after inscription. The third inscription was followed by an increase in visitation and then a gradual declining over time since 1995. For Uluru-Kata Tjuta National Park WHA, WHA inscription was during a period of rapid growth in visitation, with no change in growth after inscription.

In relation to management expenditure patterns over time, for Greater Blue Mountains WHA, expenditure grew gradually for four years after inscription and then increased more rapidly to peak in 2005/06. For Shark Bay, management expenditure does not appear to have increased significantly until 6 or 7 years after inscription. Management expenditure for Purnululu had a once off increase a year or so after inscription and then dropped back to more normal levels.

Interpreting this information is, however, difficult. Any before and after comparison is confounded by a number of factors. Firstly, we do not know what pattern we are looking for. Are we looking for changes at the listing date, before the listing date or after the listing date - because of the time taken for listing information to reach tourists etc. Secondly, visitation levels and management expenditure over time may be affected by a wide range of economic, logistic and market factors as well as the WH listing itself. These factors include economic upturns and downturns, changes in oil prices, pilot strikes, major national tourism marketing campaigns etc. Attributing causal factors for any observed change in visitation or management expenditure is therefore problematic.

For this reason, Buckley and Blackwell (2004) when examining this very issue attempted to use control sites for each WHA, arguing that short-term peaks and troughs in visitor trend lines which occur simultaneously at control sites as well as WHAs are unlikely to be due to WH listing.

Nevertheless, Buckley and Blackwell (2004) were forced to conclude that even this approach is constrained by a lack of truly comparable control sites. Their overall conclusion, which is borne out by this study, was that for most WHAs there is inadequate data to determine whether there is a significant WHA icon value. They did, however, also conclude that WH designation appears to yield significant increases in proportions of international visitors to individual sites.

However, there was no primary data available to this study to accurately determine trends in international tourism to WHAs.

7 CONCLUSIONS AND RECOMMENDATIONS

Management of, and visitation to, WHAs can have significant economic impacts at the regional, state and national levels.

This study found that total impacts of management expenditure to the nation were in the order of:

- \$663 million in annual direct and indirect output or business turnover;
- \$320 million in annual direct and indirect value-added;
- \$205 million in annual direct and indirect income; and
- 3 910 direct and indirect jobs.

The impacts of visitor expenditure to the nation were in the order of:

- \$15 441.0 million in annual direct and indirect output or business turnover;
- \$6 925.3 million in annual direct and indirect value added;
- \$3 906.4 million in annual direct and indirect household income; and
- 79 439 direct and indirect jobs.

In total, and for all WHAs except Lord Howe Island and Macquarie Island, the expenditure of visitors provides the major economic stimulus. As such, WHAs with high visitation levels such as the Wet Tropics of Queensland, Sydney Opera House, Tasmanian Wilderness and Royal Exhibition Building and Carlton Gardens, Fraser Island and Gondwana Rainforests had the greatest economic impacts.

In this respect, however, there is an important caveat. In accordance with standard practice in regional economic impacts assessments of protected areas, the methodology used analysed all expenditure associated with visitors to a WHA. There is no way to tell from the secondary data utilised, how much of that visitor expenditure is attributable to the WHAs alone.

A key finding from the study is that the visitation and management cost data required to undertake a regional economic impact study was highly variable in quality. Some jurisdictions had little primary data regarding total visitation levels or total management expenditure and no jurisdiction held data regarding visitor characteristics and their expenditure patterns. Detailed historical data for both visitation and management costs was scant.

Future analysis of the regional, state and national economic impacts of WHAs and other protected areas would benefit from:

- more robust collection of data on visitation levels, demographic characteristics, length of stay, expenditure patterns in region, state and nation and the importance of the WHA to the trip; and
- keeping management accounts on a WHA by WHA or park by park basis, including detail of expenditure items and location of expenditure.

8 REFERENCES

- ABS (1995), *Information Paper, Australian National Accounts: Introduction to Input-Output Multipliers*, Australian Government Publishing Service, Canberra, Catalogue No. 5246.0.
- BDA Group and Gillespie Economics (2007) *The economic and social impacts of Protected Areas in Australia*, prepared for the Department of Environment and Water Resources.
- Buckley, R.C. and Blackwell, B. (2002) *Heritage icon value: contribution of World Heritage branding to nature tourism*, Fenner Conference, Nature Tourism and the Environment. Canberra
- Centre for Farm Planning and Land Management (1989) *Consultants report to State plantations impact study*, CFPLM, University of Melbourne.
- Jensen, R. and West, G. (1986) *Input-output for Practitioners: Theory and Applications*, prepared for Department of Local Government and Administrative Services, Local Government and Regional Development Division, Australian Government Publishing Service.
- Powell, R. and Chalmers, L. (1995) *The Regional Economic Impact of Gibraltar Range and Dorrigo National Park*. A Report for the NSW National Parkes and Wildlife Service.
- Powell, R., Jensen, R., and Gibson, A. (1985) *The Economic Impact of Irrigated Agriculture in NSW*, A report to the NSW Irrigators' Council Limited.
- West, G. (1993) *Input-Output Analysis for Practitioners*, Version 7.1, User's Guide.

Appendix 1: The GRIT Procedure for Developing Regional Input-output Tables

"The GRIT system was designed to:

- combine the benefits of survey based tables (accuracy and understanding of the economic structure) with those of non-survey tables (speed and low cost);
- enable the tables to be compiled from other recently compiled tables;
- allow tables to be constructed for any region for which certain minimum amounts of data were available;
- develop regional tables from national tables using available region-specific data;
- produce tables consistent with the national tables in terms of sector classification and accounting conventions;
- proceed in a number of clearly defined stages; and
- provide for the possibility of ready updates of the tables.

The resultant GRIT procedure has a number of well-defined steps. Of particular significance are those that involve the analyst incorporating region-specific data and information specific to the objectives of the study. The analyst has to be satisfied about the accuracy of the information used for the important sectors; in this case the national parks sectors. The method allows the analyst to allocate available research resources to improving the data for those sectors of the economy that are most important for the study. It also means that the method should be used by an analyst who is familiar with the economy being modelled, or at least someone with that familiarity should be consulted.

An important characteristic of GRIT-produced tables relates to their accuracy. In the past, survey-based tables involved gathering data for every cell in the table, thereby building up a table with considerable accuracy. A fundamental principle of the GRIT method is that not all cells in the table are equally important. Some are not important because they are of very small value and, therefore, have no possibility of having a significant effect on the estimates of multipliers and economic impacts. Others are not important because of the lack of linkages that relate to the particular sectors that are being studied. Therefore, the GRIT procedure involves determining those sectors and, in some cases, cells that are of particular significance for the analysis. These represent the main targets for the allocation of research resources in data gathering. For the remainder of the table, the aim is for it to be 'holistically' accurate (Jensen 1980). That means a generally accurate representation of the economy is provided by the table, but does not guarantee the accuracy of any particular cell. A summary of the steps involved in the GRIT process is shown in Table A1 (Powell and Chalmers 1995, p13-14)

Phase	Step	Action
PHASE I	1	ADJUSTMENTS TO NATIONAL TABLE Selection of national input-output table (106-sector table with direct allocation of all imports, in basic values).
	2	Adjustment of national table for updating.
	3	Adjustment for international trade.
PHASE II		ADJUSTMENTS FOR REGIONAL IMPORTS <i>(Steps 4-14 apply to each region for which input-output tables are required)</i>
	4	Calculation of 'non-existent' sectors.
PHASE III	5	Calculation of remaining imports.
	6	DEFINITION OF REGIONAL SECTORS Insertion of disaggregated superior data.
	7	Aggregation of sectors.
PHASE IV	8	Insertion of aggregated superior data.
	9	DERIVATION OF PROTOTYPE TRANSACTIONS TABLES Derivation of transactions values.
	10	Adjustments to complete the prototype tables.
PHASE V	11	Derivation of inverses and multipliers for prototype tables.
	12	DERIVATION OF FINAL TRANSACTIONS TABLES Final superior data insertions and other adjustments.
	13	Derivation of final transactions tables.
	14	Derivation of inverses and multipliers for final tables.

Appendix 2: Regions for Each WHA

Table 1: Study regions

	WHA	Region	Main Towns in Region
1	Willandra Lakes Region	Far West SD and Murray-Darling SSD, Mildura Rural City - Part A	Balranald, Wentworth, Dareton, Broken Hill, Mildura, Buronga, Ivanhoe
2	Tasmanian Wilderness	Lyalb SSD and Central Highlands (M) SLA, Derwent Valley (M) – Part B SLA, Huon Valley (M) SLA, Meander Valley (M) - Part B	Zeehan, Queenstown, Strahan, Hobart, Launceston, Derwent Bridge, Sheffield, Cradle Valley, Devonport, Mole Creek / Deloraine, Maydena, Geeveston, Dover, Burnie
3	Lord Howe Island	Mid North Coast SD	Port Macquarie, Iluka (where barge leaves from), Yamba, Coffs Harbour,
4	Gondwana Rainforests	Hunter SD balance, Northern Tablelands SSD, Mid North Coast SD, Richmond Tweed SD, Beaudesert (S) - Part B, Boonah (S)	Singleton, Musswellbrook, Scone, Port Macquarie, Taree, Kempsey, Coffs Harbour, Dorrigo, Tenterfield, Glen Innes, Guyra, Uralla, Lismore, Casine, Ballina, Kyogle, Tweed Heads, Boonah, Beaudesert, Gloucester, Grafton, Iluka, Armidale, Alstonville,
5	Wet Tropics of Queensland	Northern SD, Far North SD	Townsville, Charter Towers, Cairns, Port Douglas, Cooktown, Mossman, Kuranda, Mareeba, Yungaburra, Babinda, Innisfail, Mission Beach, Cardwell, Ingham, Cooktown, Cape York
6	Shark Bay	Gascoyne SSD	Denham, Carnarvon, Exmouth
7	Fraser Island	Hervey Bay City Part A, Hervey Bay (C) - Part B, Maryborough (C)	Hervey Bay, Maryborough, Eurong (on Fraser Island)
8	Australian Fossil Mammal Sites		
	<i>Naracoorte</i>	Sth East SD	Naracoorte, Mr Gambier, Roe, Millicent, Penola, Bordertown
	<i>Riversleigh</i>	Nth West SD	Burketown, Mt Isa, Hughenden, Cloncurry, Normanton, Camooweal
9	Greater Blue Mountains	Blue Mountains SLA	Glenbrook, Woodford, Wentworth Falls, Blackheath, Mt Victoria, Katoomba,
10	Purnululu National Park	Kimberley SD	Halls Creek, Kununurra, Wyndham, Fitzroy Crossing, Derby, Warmun, Broome
11	Uluru-Kata Tjuta National Park	Central NT SD and Barkly SD	Alice Springs, Yulara Tourist Village, Yuendumu and Tennant Creek
12	Kakadu National Park	Lower Top End NT, Daly, Finnis, Alligator, East Arnhem, Litchfield Shire and Bathurst -Mellville	Darwin, Katherine, Jabiru
13	Royal Exhibition Building & Carlton Gardens	Melbourne SD	Melbourne
14	The Sydney Opera House	Sydney SD	Sydney
15	Macquarie Island	Greater Hobart SD	Hobart

Appendix 3: Economy Descriptions Based on the Input Output Tables

A3.1 Willandra Lakes Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.1. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.1
Aggregated transactions table: Willandra Lakes Region WHA regional economy 2006 (\$'000)

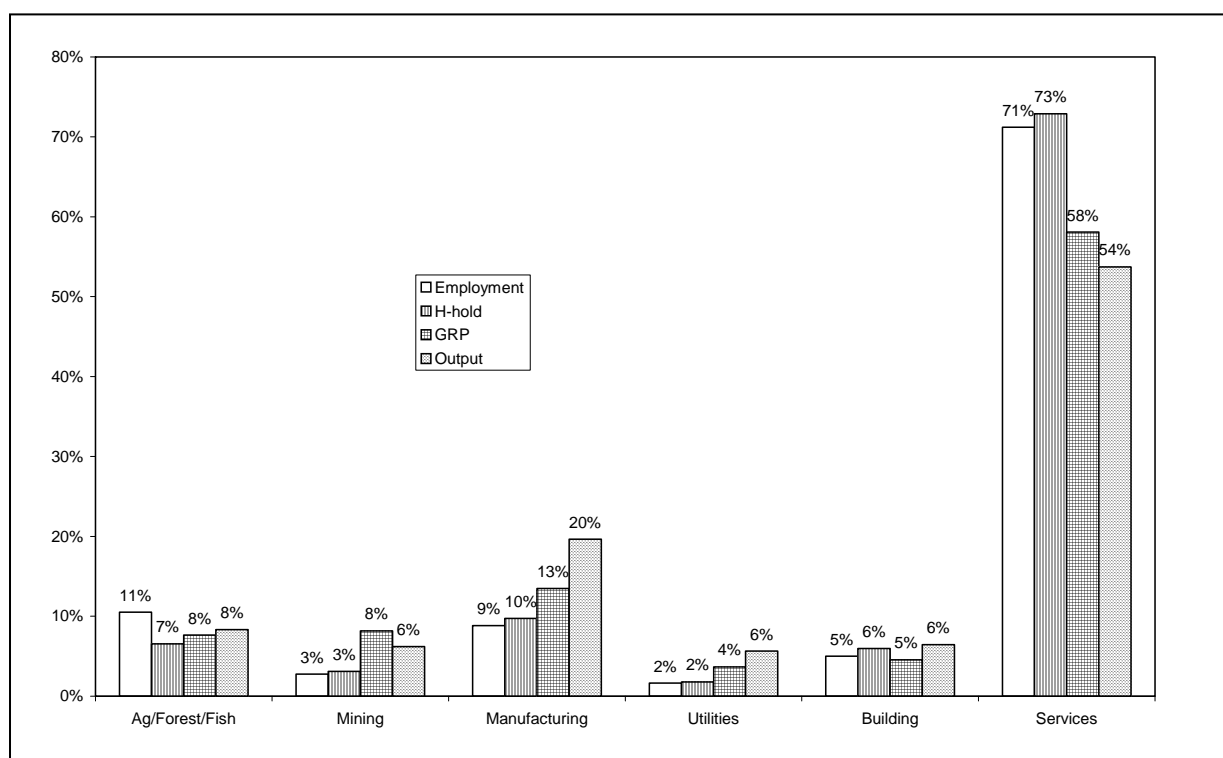
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forestry, fishing	36,817	27	36,831	7	120	3,644	77,446	6,340	23,487	361,367	468,640
Mining	25	24,874	2,261	485	416	246	28,305	119	7,737	313,425	349,586
Manuf.	16,849	7,422	86,705	2,118	27,539	84,859	225,492	52,998	50,172	777,292	1,105,954
Utilities	5,724	5,227	9,468	128,084	1,782	28,973	179,257	20,946	11,065	105,967	317,234
Building	1,297	1,785	1,756	3,538	63,497	17,645	89,518	0	223,611	49,435	362,564
Services	40,290	14,495	166,324	9,942	31,987	474,827	737,864	622,470	684,094	977,295	3,021,723
TOTAL	101,000	53,830	303,345	144,173	125,341	610,194	1,337,883	702,872	1,000,166	2,584,780	5,625,701
Household Income	88,800	41,938	132,233	24,199	80,932	989,264	1,357,365	0	0	0	1,357,365
OVA	120,266	181,139	235,774	75,404	43,519	596,774	1,252,877	80,939	35,364	4,646	1,373,825
Imports	158,573	72,679	434,601	73,458	112,773	825,491	1,677,576	683,108	190,005	183,244	2,733,933
TOTAL	468,640	349,586	1,105,954	317,234	362,564	3,021,723	5,625,701	1,466,918	1,225,535	2,772,670	11,090,825
Employment	2,982	782	2,510	470	1,420	20,179	28,342				

Gross regional product (GRP) for the regional economy is estimated at \$2.730 million, comprising \$1.357 million to households as wages and salaries (including payments to self employed persons and employers) and \$1 373 million in Other Value Added (OVA).

The employment total was 28 342 people.

Compared to the NSW economy (Figure A3.17.1), regional economy (Figure A3.1.11) has a greater relative reliance on agriculture, mining and manufacturing (output and GRP) and utilities. Building and services are of lesser relative importance.

Figure A3.1.1
Summary of aggregated sectors: Willandra Lakes Region regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.1.2 to A3.1.4. In the agriculture, forestry and fishing sectors, the *Other Agriculture* sector that contains horticulture activities is the dominant sector across all indicators including imports and exports. In the mining sector, *Non-Ferrous Metal Ore Mining* (mainly silver-lead-zinc ore and mineral sands) is the dominant activity across all indicators. The main manufacturing activity in the region is food manufacturing comprising mainly the *Wine and Spirit Manufacturing Sector* followed by the *Fruit and Vegetable Products Manufacturing Sector*. *Retail Trade Sector*, *Health Services Sector* and *Education Sector* are the main services sectors in the region. The *Business Services Sectors* are also important.

Figure A3.1.2 - Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

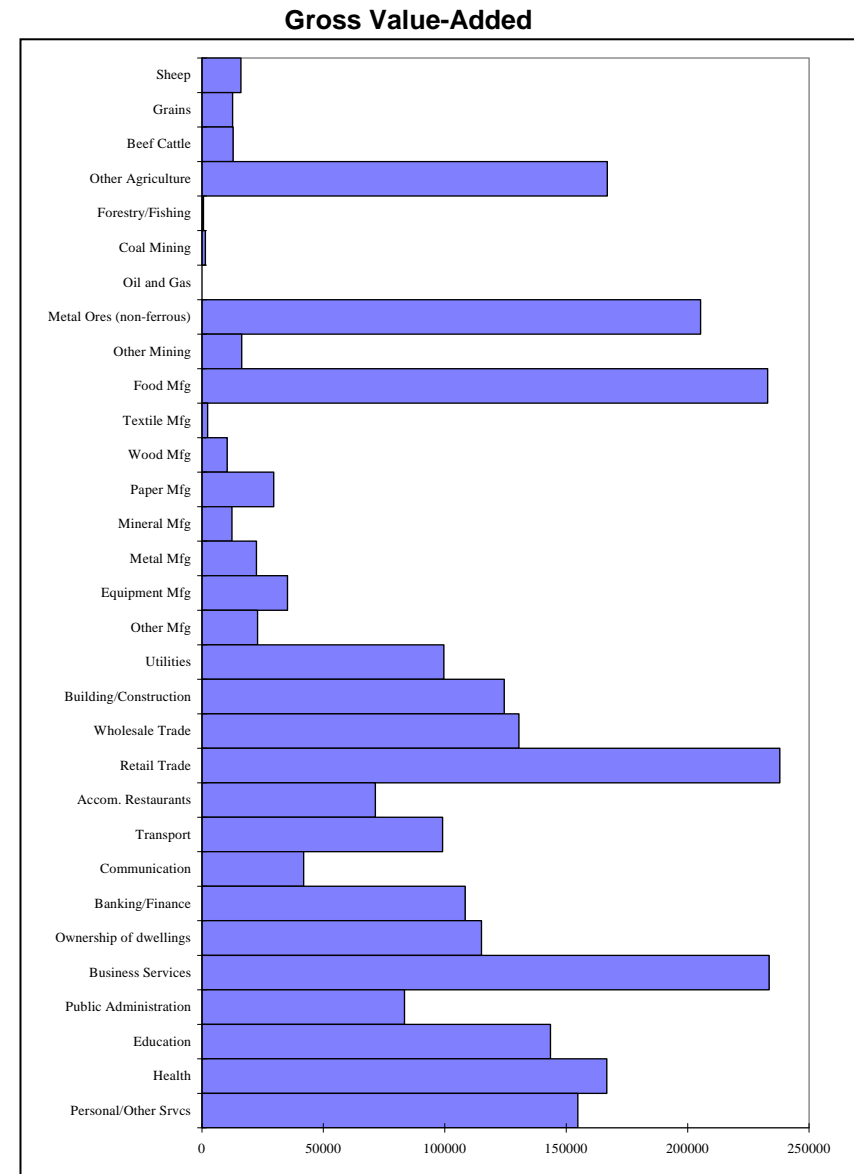
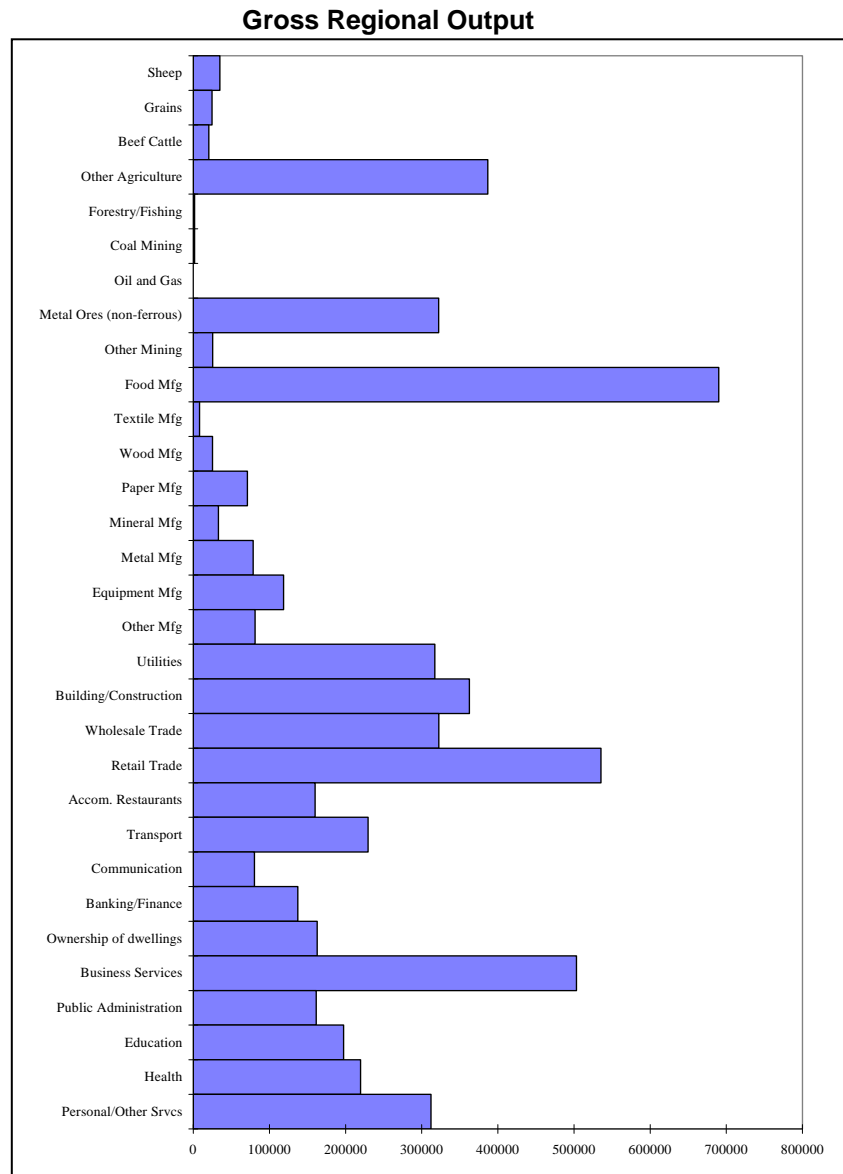


Figure A3.1.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

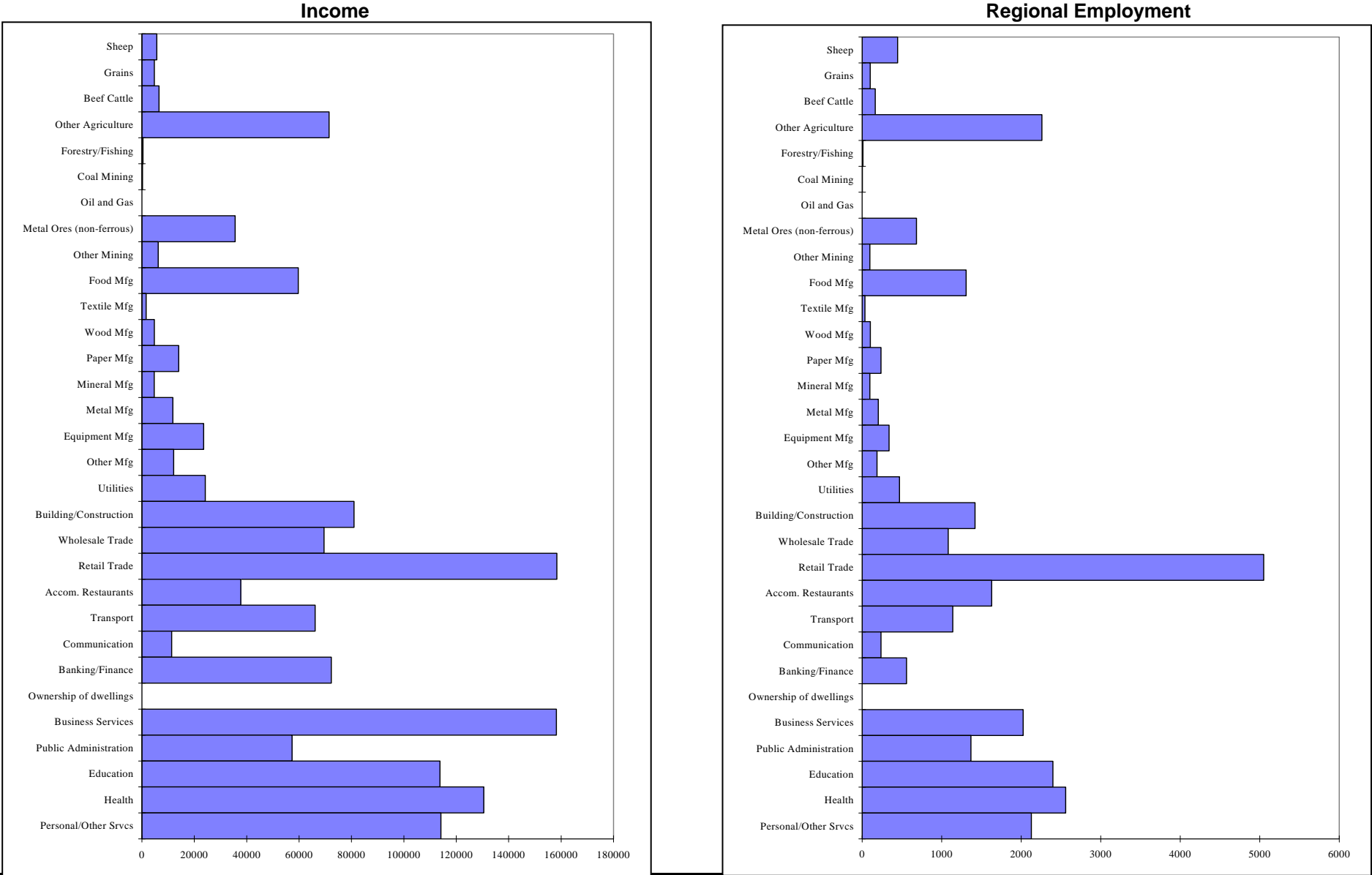
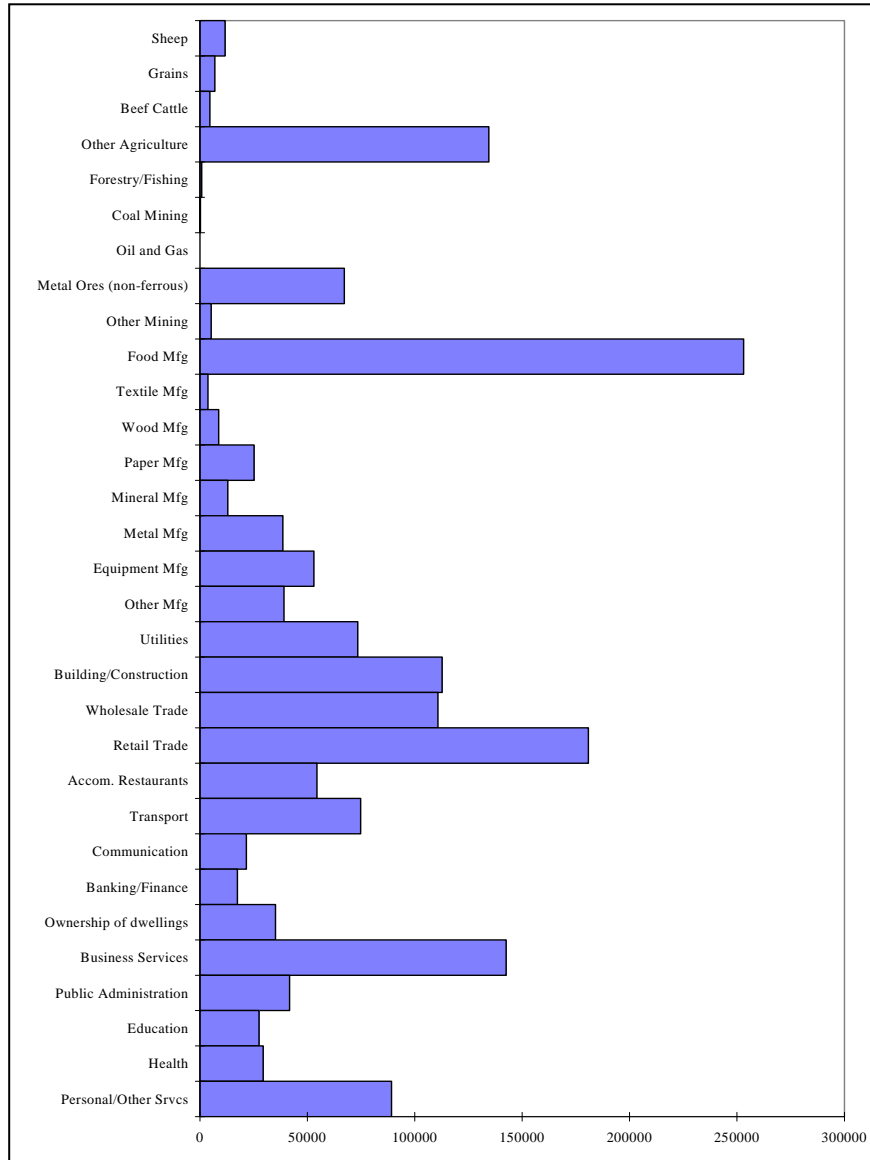
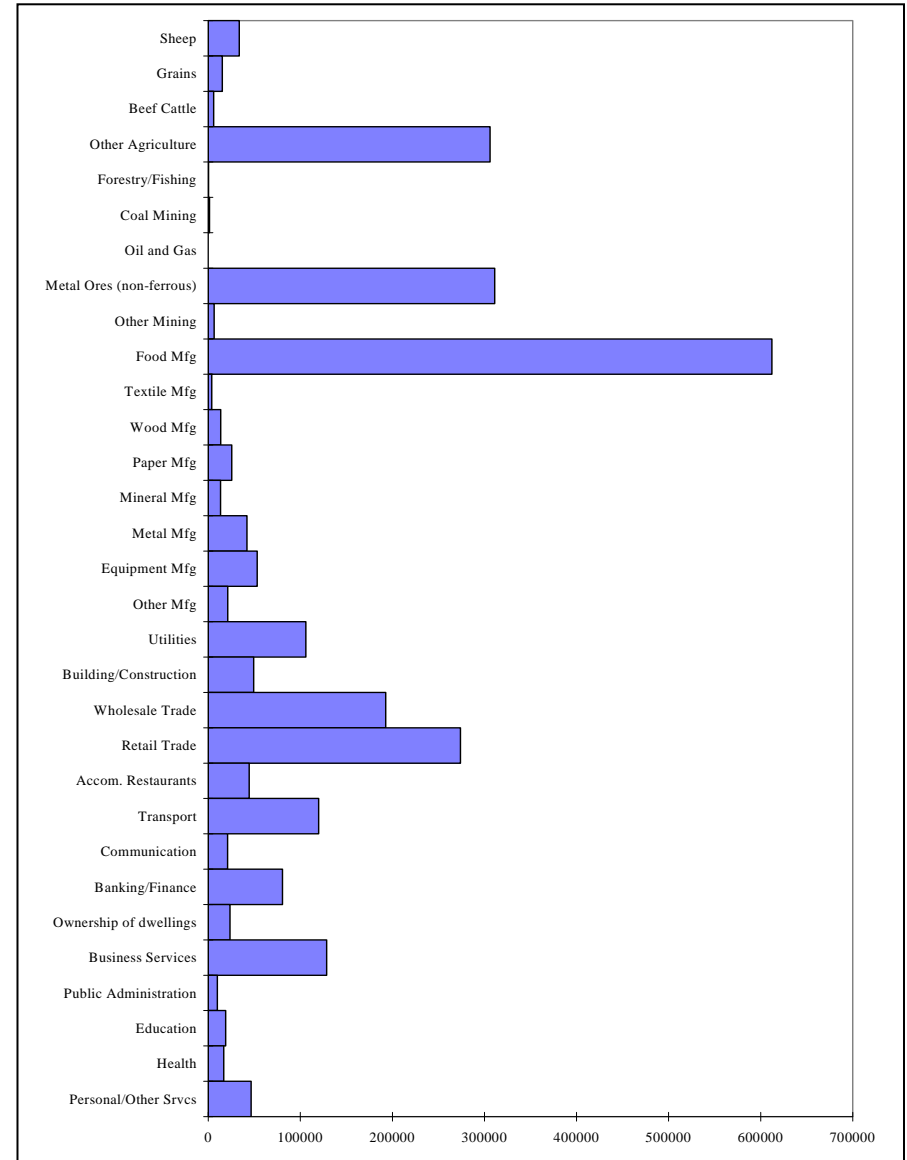


Figure A3.1.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.2 Tasmanian Wilderness Area Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.2. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.2
Aggregated transactions table: Tasmanian Wilderness WHA regional economy 2006 (\$'000)

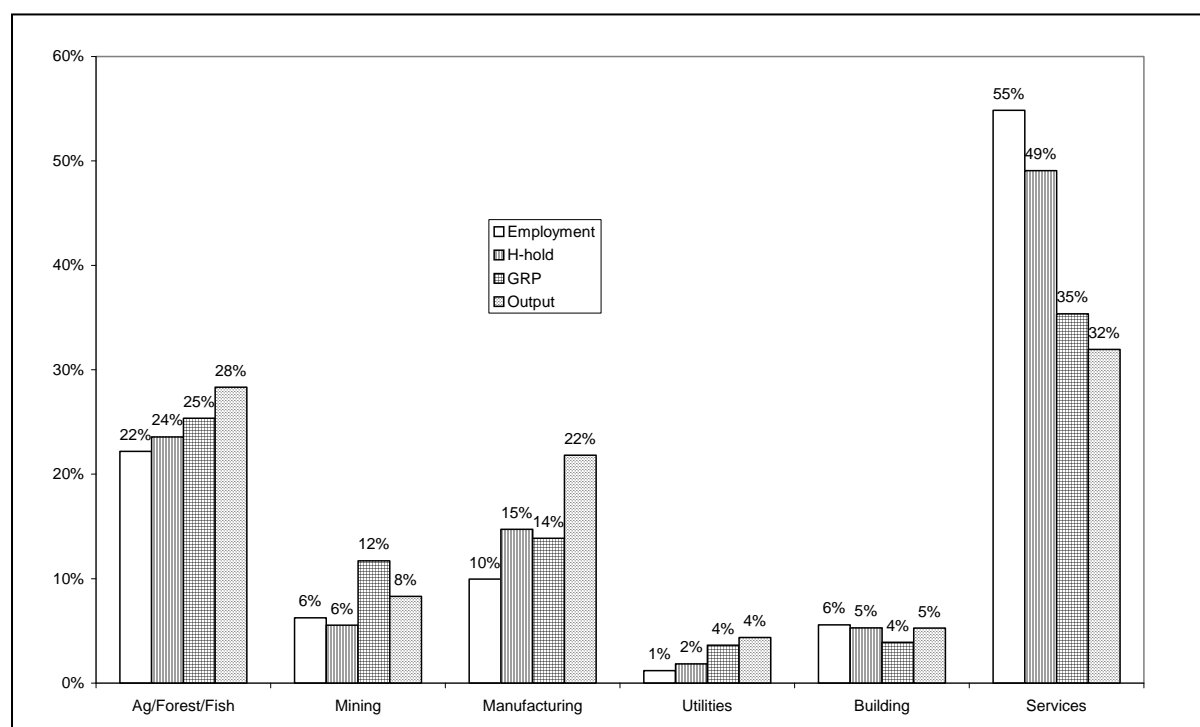
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	12,675	59	19,407	3	71	1,992	34,207	6,319	57,565	450,250	548,340
Mining	15	10,499	1,332	16	77	27	11,966	47	3,416	145,227	160,656
Manuf.	21,377	1,743	23,781	443	6,975	12,099	66,419	27,664	26,569	301,630	422,282
Utilities	2,930	1,449	4,048	23,997	395	4,125	36,943	7,720	225	39,412	84,301
Building	2,074	878	665	1,368	17,679	3,721	26,384	0	68,844	6,680	101,908
Services	26,535	4,205	33,743	1,496	4,698	49,571	120,246	187,139	122,238	188,569	618,192
TOTAL	65,605	18,833	82,976	27,322	29,895	71,534	296,165	228,889	278,857	1,131,767	1,935,678
Household Income	114,854	26,993	71,739	8,951	25,766	239,199	487,503	0	0	0	487,503
OVA	111,726	77,479	52,043	23,421	9,173	76,503	350,344	40,129	14,153	803	405,430
Imports	256,155	37,350	215,525	24,607	37,074	230,955	801,666	454,179	142,417	135,597	1,533,860
TOTAL	548,340	160,656	422,282	84,301	101,908	618,192	1,935,678	723,197	435,428	1,268,168	4,362,471
Employment	2,164	609	972	117	543	5,350	9,756				

Gross regional product (GRP) for the regional economy is estimated at \$893 million, comprising \$487 million to households as wages and salaries (including payments to self employed persons and employers) and \$405 million in OVA.

The employment total was 9 756 people.

Compared to the Tasmanian economy (Figure A3.22.1), the regional economy (Figure A3.2.1) has a greater relative reliance on agriculture and mining. Utilities, building and services are of lesser relative importance while manufacturing is a similar importance.

Figure A3.2.1
Summary of Aggregated Sectors: Tasmanian Wilderness WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.2.2 to A3.2.4. In the agriculture, forestry and fishing sectors, the *Commercial Fishing Sector*, *Forestry Sector* and *Other Agriculture Sector* (mainly apple and pear growing) are the dominant sector across all indicators including imports and exports. In the mining sector, *Non-Ferrous Metal Ore Mining* (mainly silver-lead-zinc ore, gold and copper mining) is the dominant activity across all indicators. The main manufacturing activity in the region is Other Manufacturing (mainly medicinal and pharmaceutical product manufacturing) and Food Manufacturing (mainly seafood processing). The *Retail Trade Sector* is the largest services sector in the region with *Health Services Sector*, *Education Sector* and *Personal/Other Services Sectors* also important.

Figure A3.2.2 - Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

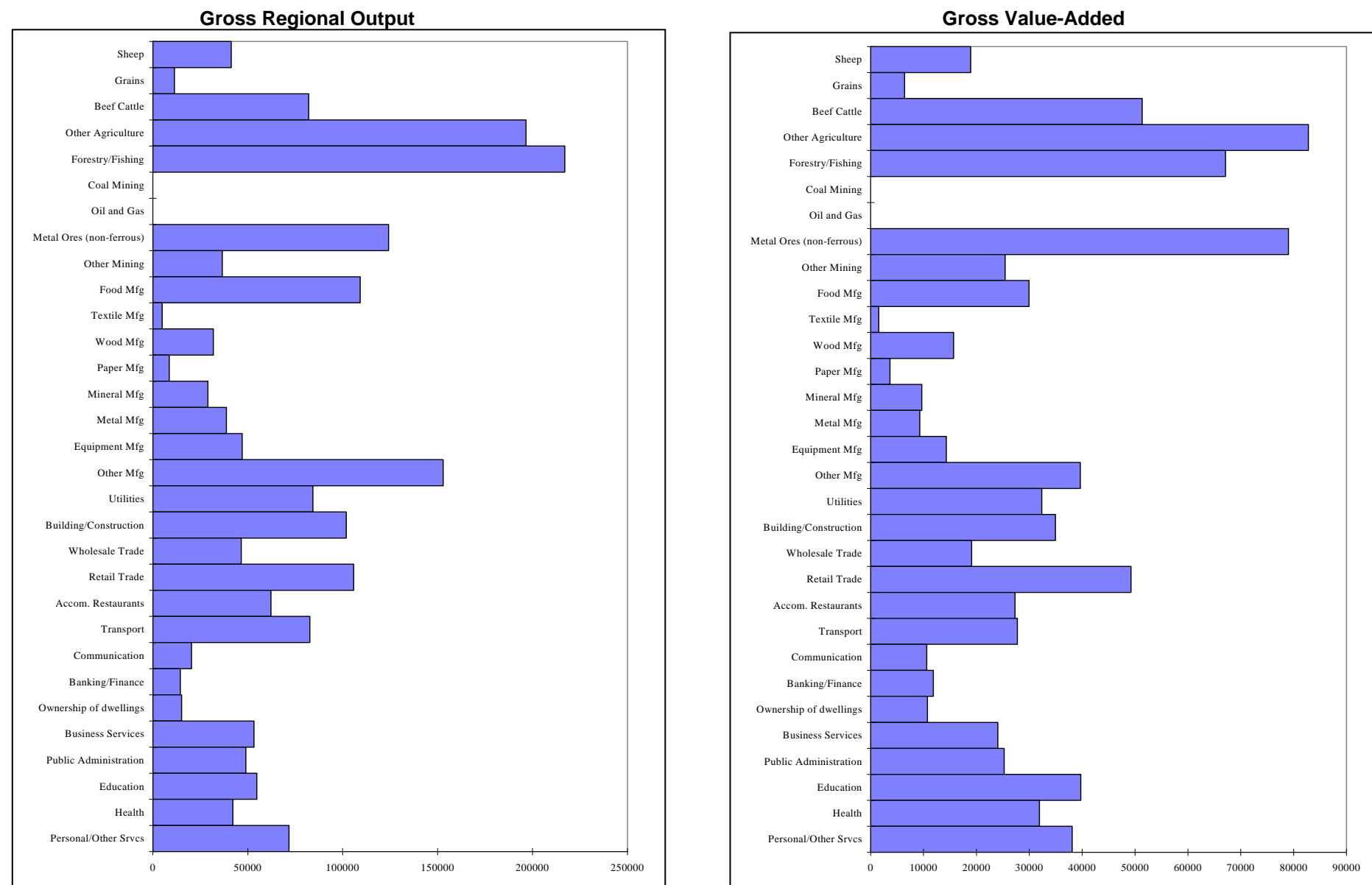


Figure A3.2.3 - Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

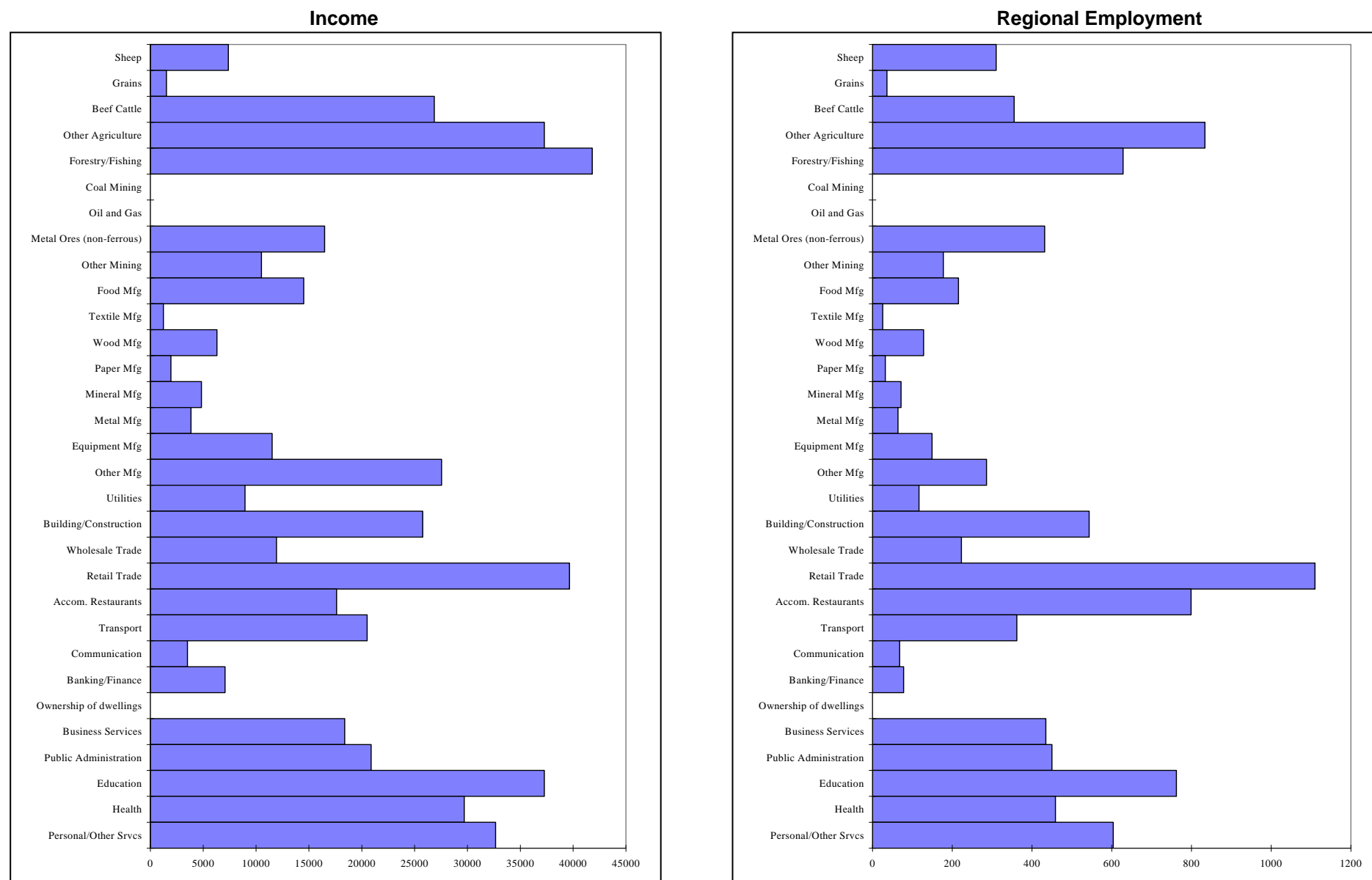
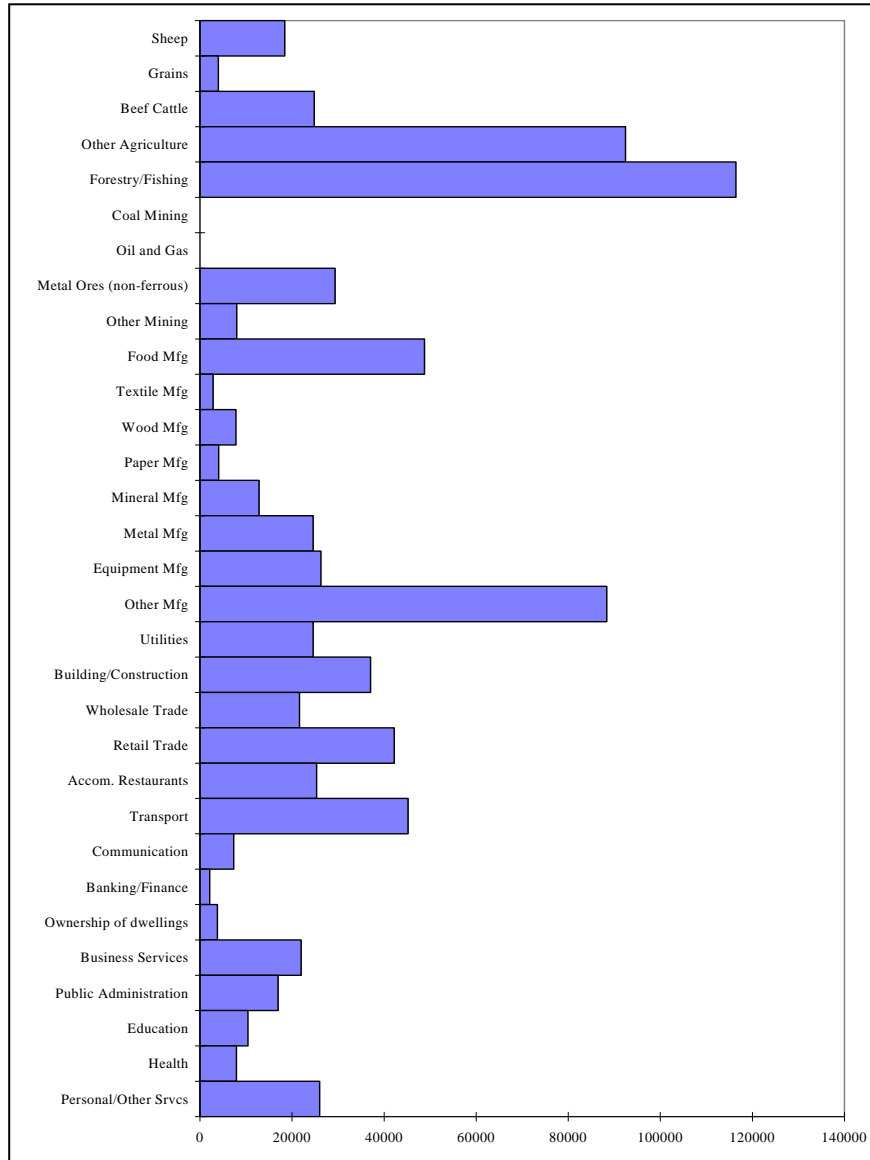
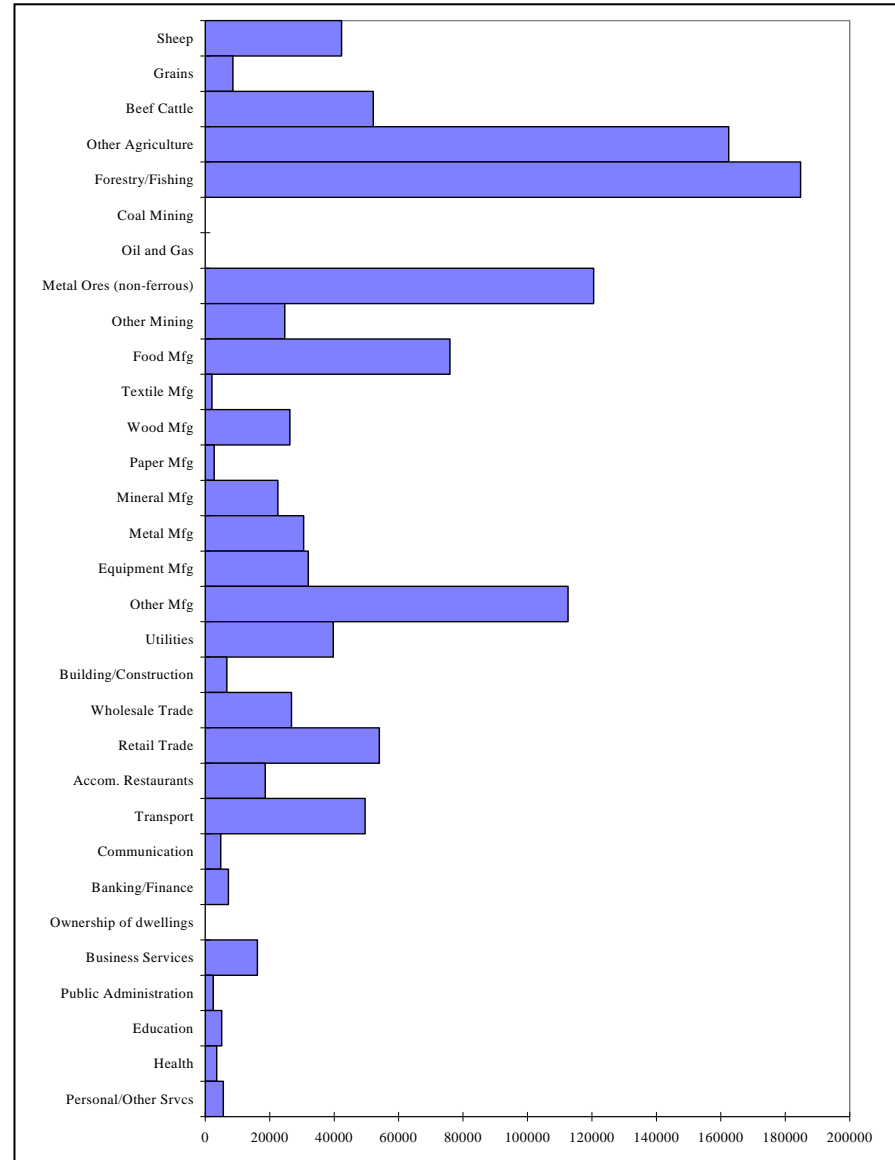


Figure A3.2.4 - Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.3 Lord Howe Island Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.3. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.3
Aggregated Transactions Table: Lord Howe Island WHA regional economy 2006 (\$'000)

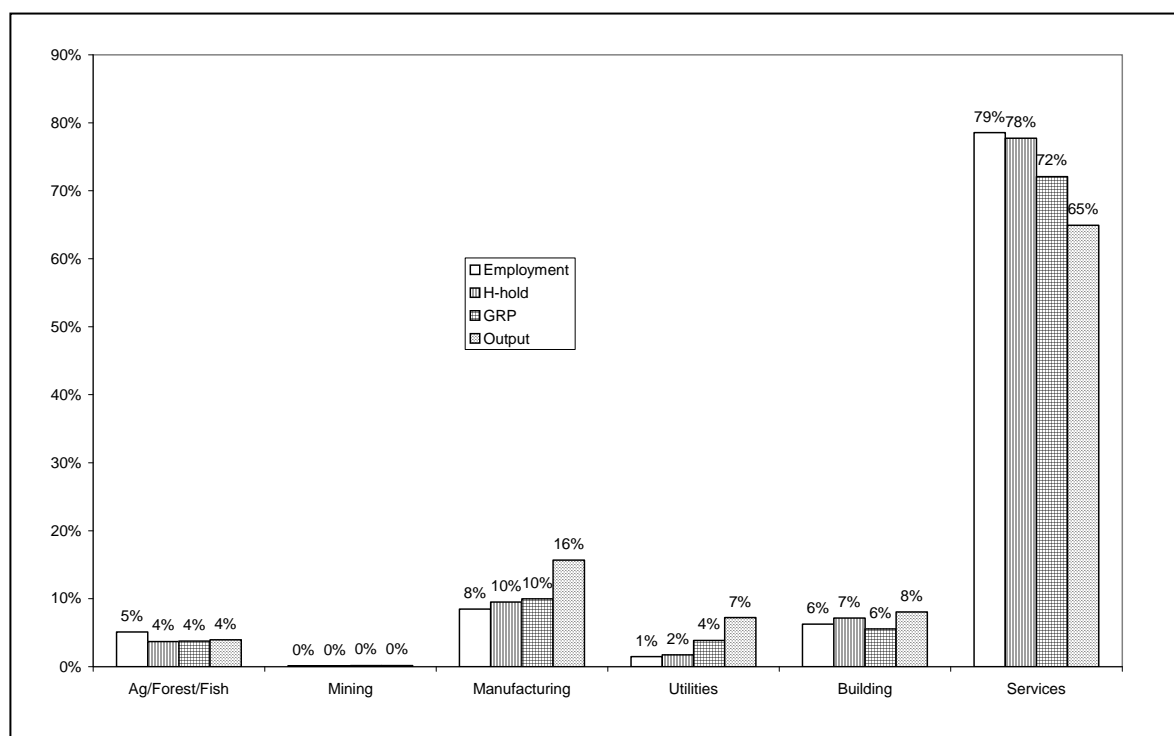
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	26,637	7	106,319	19	512	17,053	150,547	23,152	178,706	370,645	723,051
Mining	30	74	9,310	910	1,481	748	12,553	320	-1,302	17,971	29,541
Manuf.	35,552	1,041	286,817	9,644	175,421	398,259	906,734	265,962	168,273	1,522,996	2,863,965
Utilities	5,665	134	31,169	611,286	5,840	89,834	743,929	52,905	17,032	507,468	1,321,334
Building	2,748	483	5,061	16,013	311,839	93,967	430,112	0	937,284	102,722	1,470,119
Services	67,635	2,987	351,303	37,942	144,198	1,976,999	2,581,066	2,484,314	2,713,856	4,083,972	11,863,209
TOTAL	138,268	4,727	789,980	675,816	639,291	2,576,860	4,824,941	2,826,653	4,013,849	6,605,774	18,271,217
Household Income	163,466	6,320	421,810	77,925	317,401	3,441,055	4,427,977	0	0	0	4,427,977
OVA	172,262	9,317	462,451	263,287	174,075	2,951,737	4,033,130	251,991	141,923	11,873	4,438,917
Imports	249,054	9,178	1,189,723	304,305	339,353	2,893,557	4,985,170	1,488,389	762,523	468,307	7,704,389
TOTAL	723,051	29,541	2,863,965	1,321,334	1,470,119	11,863,209	18,271,217	4,567,033	4,918,295	7,085,954	34,842,500
Employment	4,677	118	7,750	1,343	5,717	71,793	91,398				

Gross regional product (GRP) for the regional economy is estimated at \$8 866 million, comprising \$4 428 million to households as wages and salaries (including payments to self employed persons and employers) and \$4 438 million in OVA.

The employment total was 91 398 people.

Compared to the NSW economy (Figure A3.17.1), the regional economy (Figure A3.3.1) has a greater relative reliance on agriculture, utilities and services (employment and household income only). Mining, manufacturing and building are of lesser relative importance.

Figure A3.3.1
Summary of Aggregated Sectors: Lord Howe Island WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.3.2 to A3.3.4. In the agriculture, forestry and fishing sectors, the *Other Agriculture Sector* (mainly banana, fruit growing and sugar cane growing) is the main sector. The main manufacturing activity in the region is Food Manufacturing Sector (meat processing), Equipment Manufacturing Sector (mainly motor vehicles and parts), Metal Manufacturing Sector (mainly structural metal products) and Wood Manufacturing. Utilities sectors in the region are mainly electricity. The *Retail Trade Sector* is the largest services sector in the region with the *Ownership of Dwelling Sector* and *Business Services Sectors* also important.

Figure A3.3.1 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

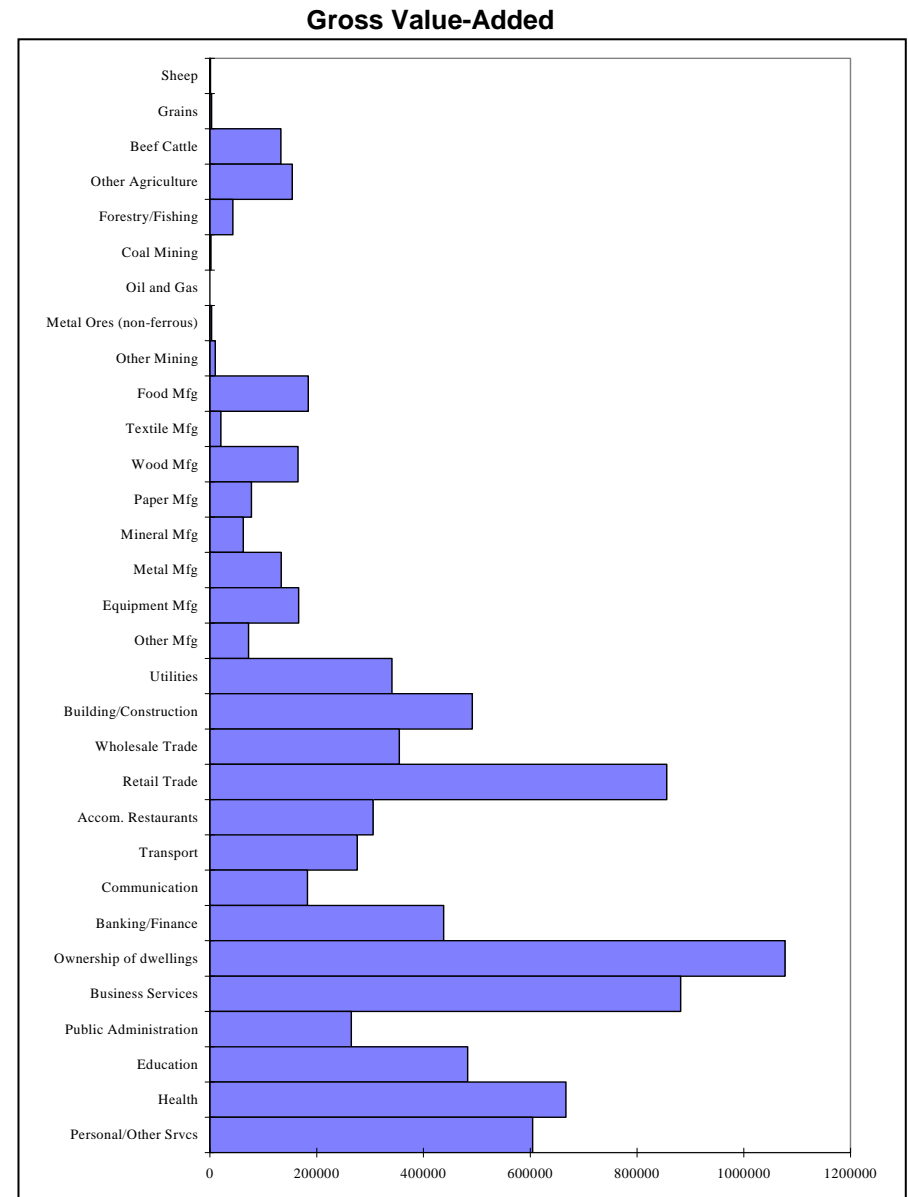
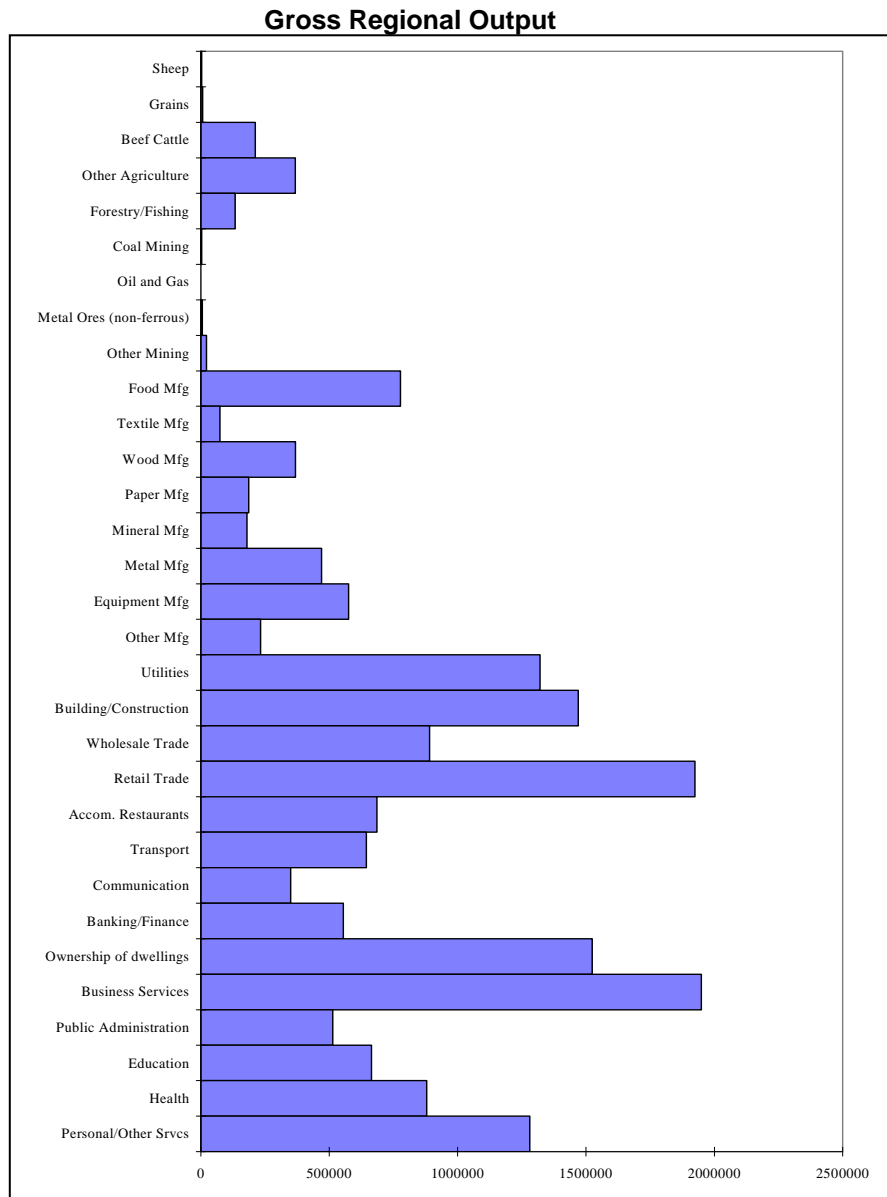


Figure A3.3.2 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

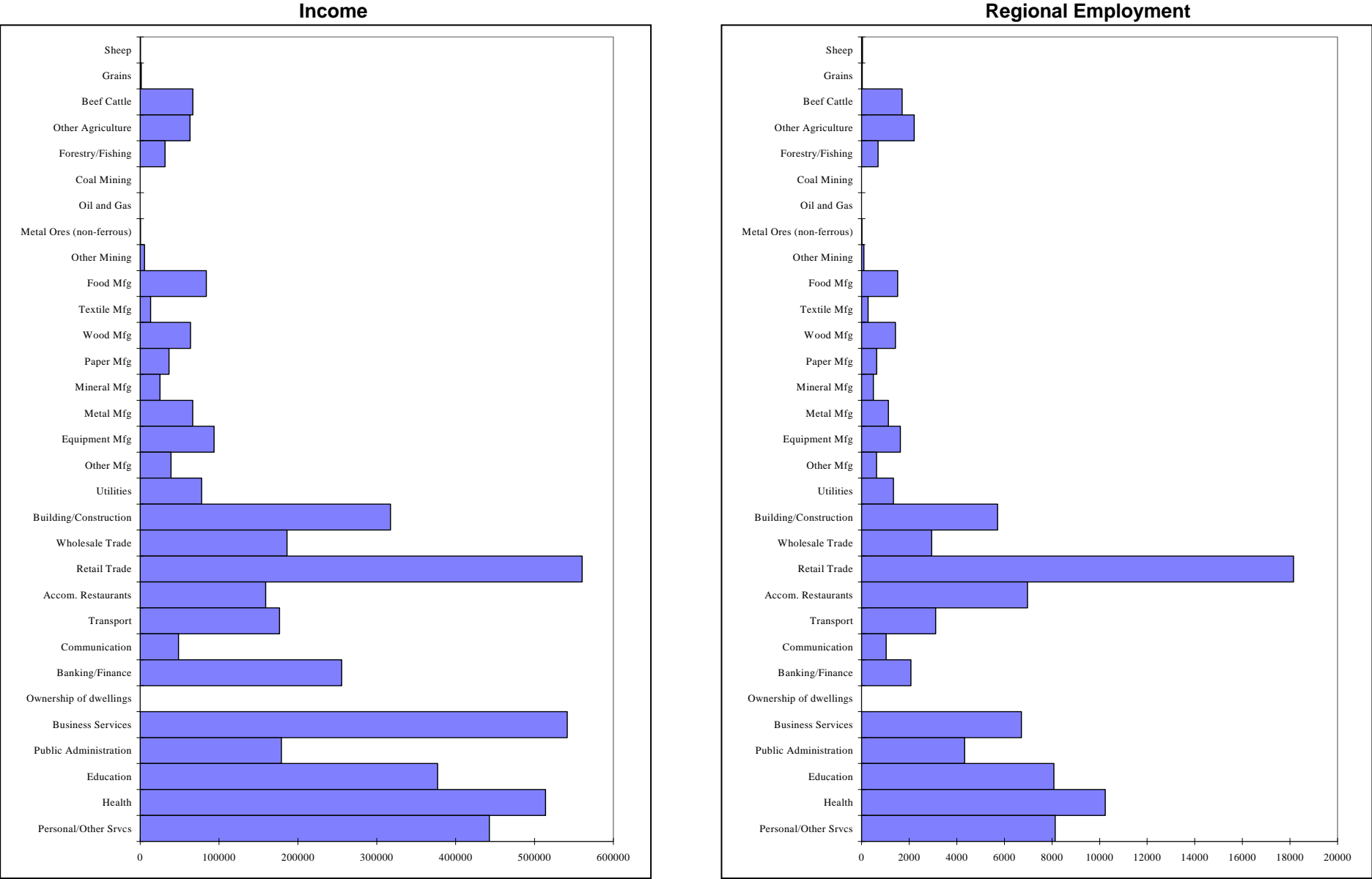
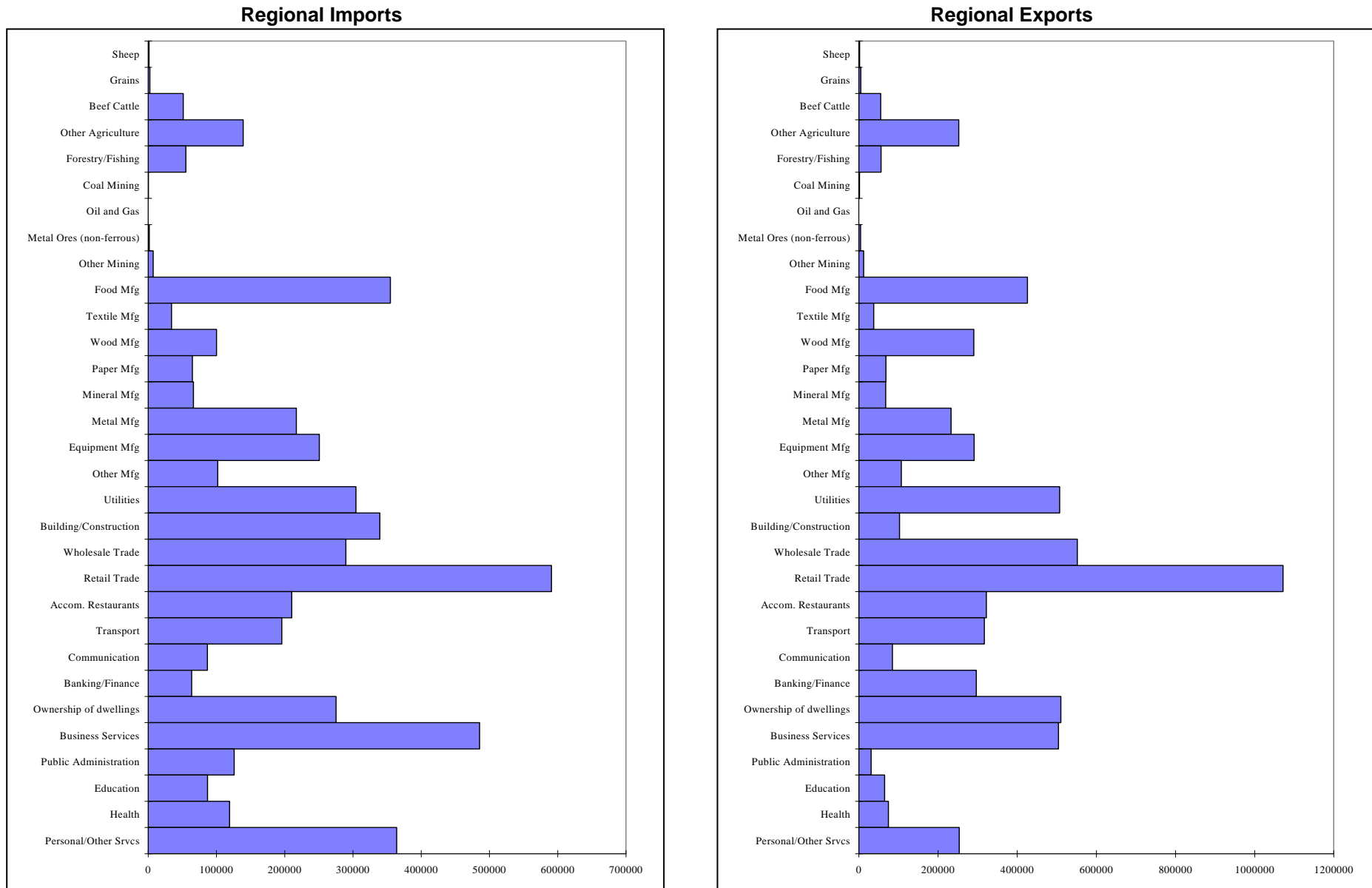


Figure A3.3.3 Sectoral Distribution of Imports and Exports (\$'000)



A3.4 Gondwana Rainforests of Australia Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.4. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.4
Aggregated Transactions Table: Gondwana Rainforests of Australia WHA regional economy
2006 (\$'000)

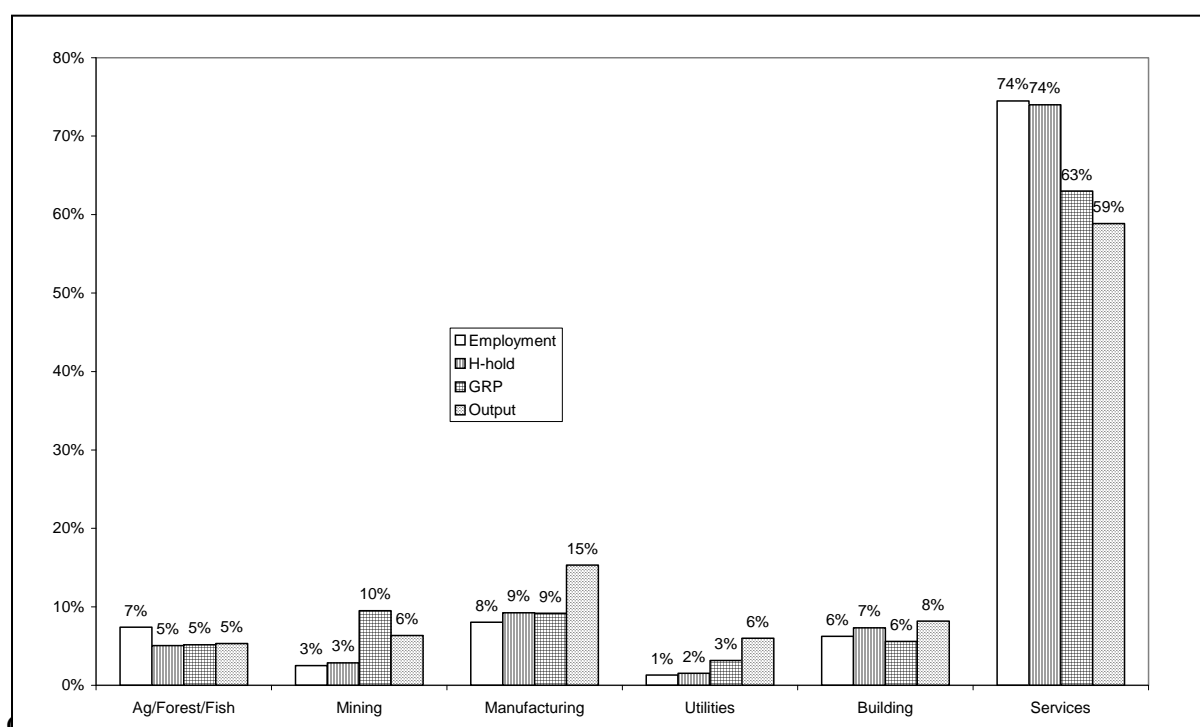
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	151,975	483	449,058	44	1,611	54,760	657,931	63,914	582,182	1,228,152	2,532,179
Mining	179	111,997	33,900	167,894	7,099	6,747	327,816	1,802	-89,741	2,770,796	3,010,673
Manuf.	98,700	50,938	641,634	15,964	386,640	956,956	2,150,833	737,571	489,206	3,903,831	7,281,441
Utilities	20,400	19,740	81,303	1,309,390	17,882	220,931	1,669,645	142,714	35,408	1,010,887	2,858,654
Building	11,872	20,030	11,714	34,752	791,287	233,685	1,103,340	0	2,528,670	262,495	3,894,504
Services	229,816	135,710	886,896	78,675	386,137	4,595,253	6,312,487	6,514,600	6,379,652	8,790,232	27,996,972
TOTAL	512,941	338,899	2,104,505	1,606,718	1,590,657	6,068,333	12,222,052	7,460,600	9,925,377	17,966,393	47,574,422
Household Income	592,316	333,786	1,082,520	178,946	857,827	8,667,883	11,713,277	0	0	0	11,713,277
OVA	629,339	1,919,341	1,089,662	571,706	468,084	6,265,434	10,943,565	664,282	350,945	32,292	11,991,084
Imports	797,583	418,647	3,004,754	501,283	977,937	6,995,323	12,695,527	3,914,416	1,885,553	1,273,703	19,769,199
TOTAL	2,532,179	3,010,673	7,281,441	2,858,654	3,894,504	27,996,972	47,574,422	12,039,298	12,161,875	19,272,387	91,047,982
Employment	17,210	5,866	18,675	3,011	14,493	172,980	232,236				

Gross regional product (GRP) for the regional economy is estimated at \$23 704 million, comprising \$11 713 million to households as wages and salaries (including payments to self employed persons and employers) and \$11 991 M in OVA.

The employment total was 232 236 people.

Compared to the NSW economy (Figure A3.17.1), the regional economy (Figure A3.4.1) has a greater relative reliance on agriculture, mining and utilities and a lesser relative reliance on manufacturing, building and services. Compared to the Queensland economy (Figure 69), the regional economy has a greater relative reliance on agriculture, utilities and services and a lower relative reliance on mining, manufacturing and building.

Figure A3.4.1
Summary of Aggregated Sectors: Gondwana Rainforests WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.4.2 to A3.4.4. In the agriculture, forestry and fishing sectors, the *Beef Cattle Sector* and *Other Agriculture Sector* (mainly fruit and vegetable growing) are the main sectors. The main mining sector is *Coal Mining*. Manufacturing activity in the region is mainly the Food Manufacturing Sector (mainly meat processing). Utilities sectors in the region are mainly electricity. The *Retail Trade Sector* is the largest services sector in the region with the *Ownership of Dwelling Sector* and *Business Services Sectors* also important.

Figure A3.4.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

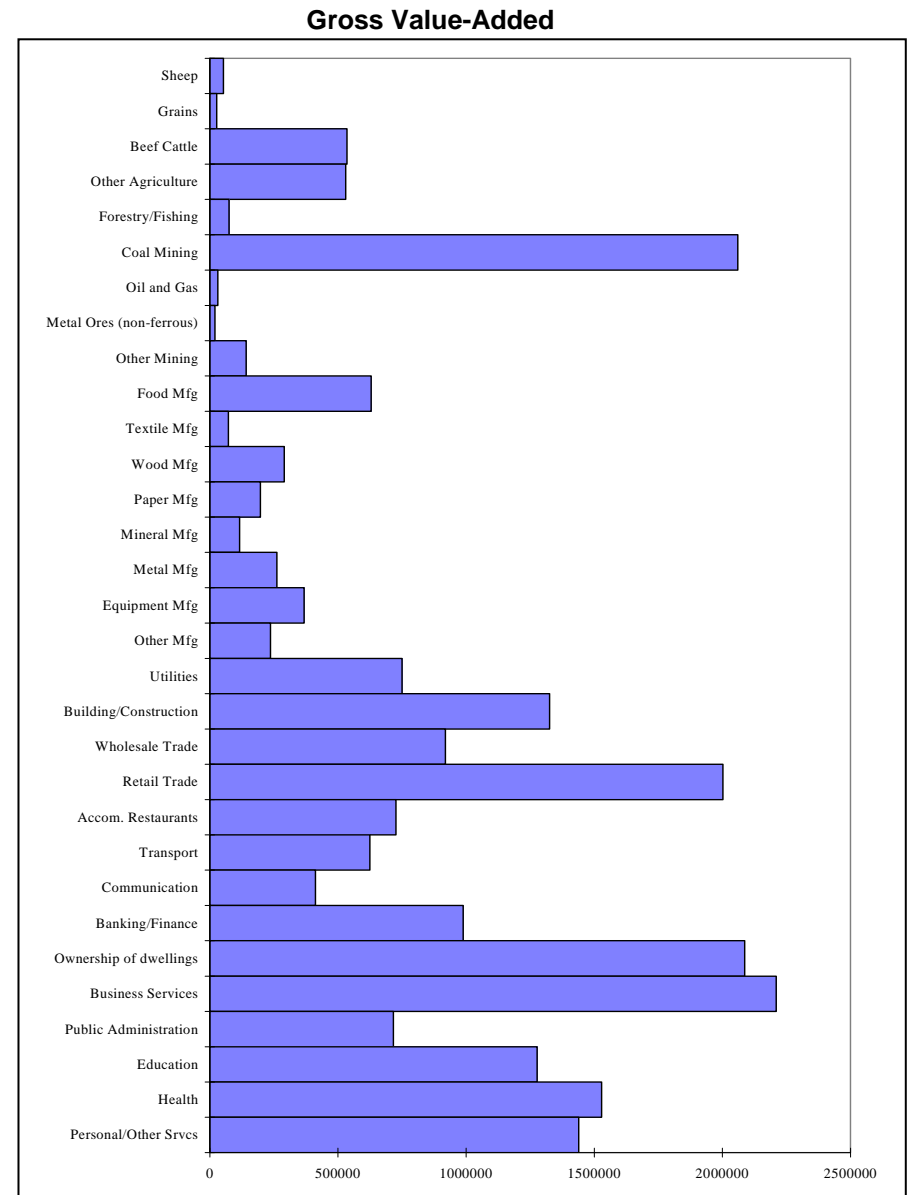
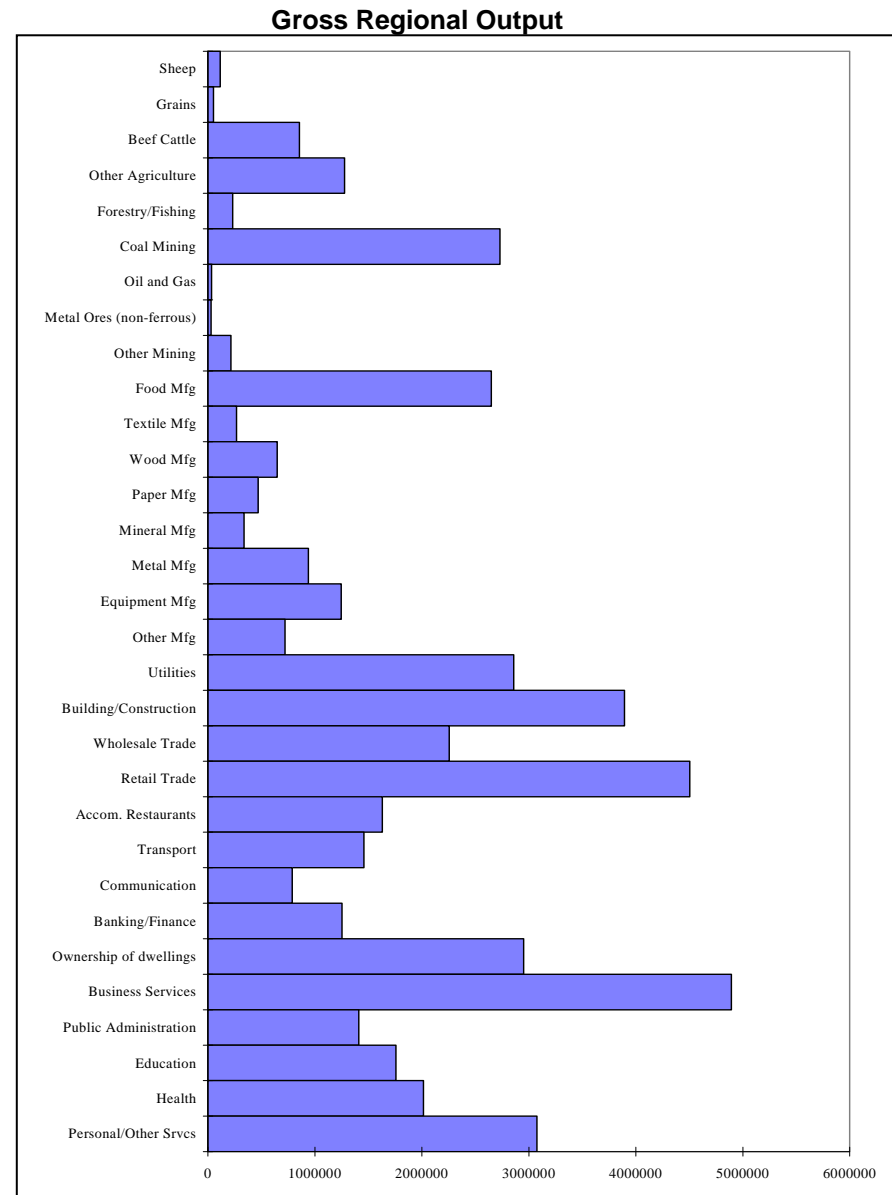


Figure A3.4.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

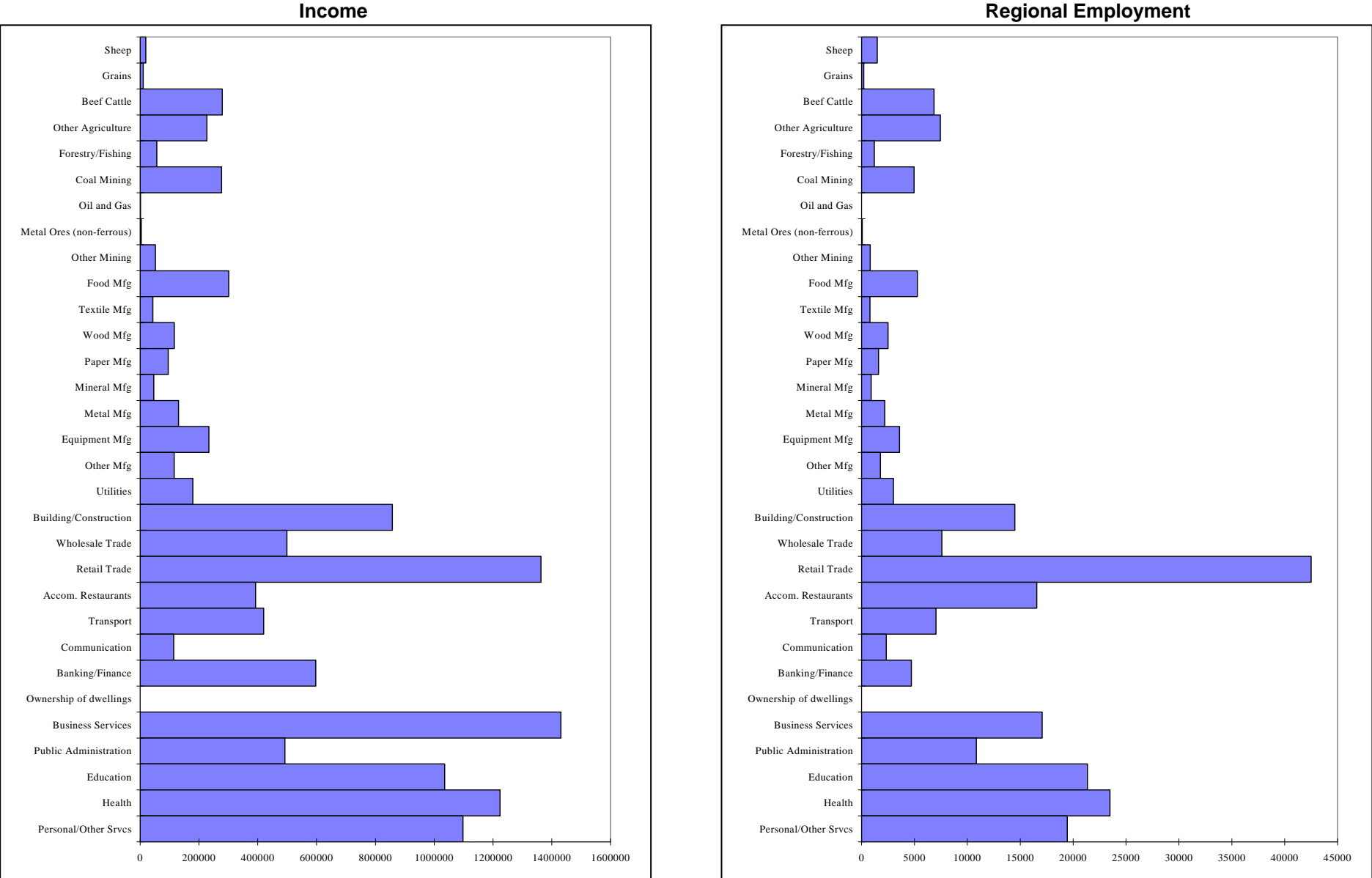
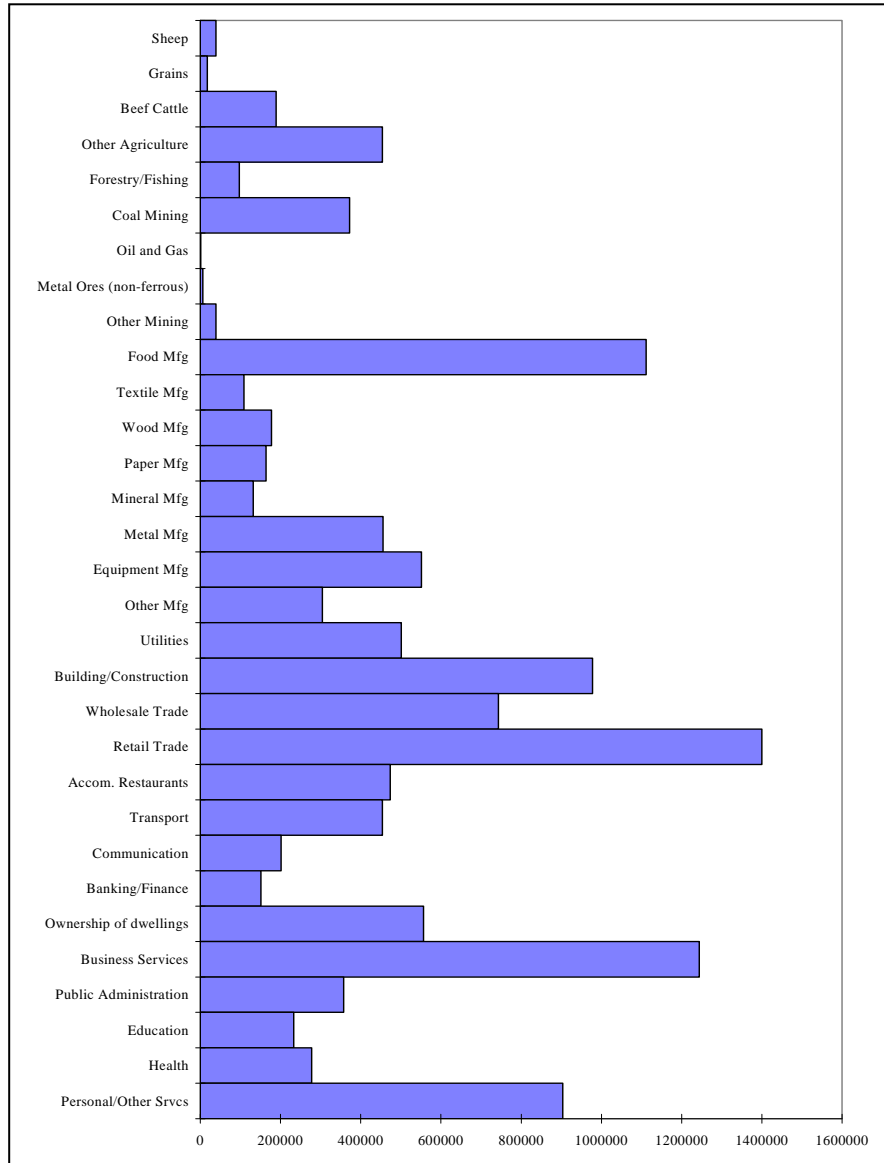
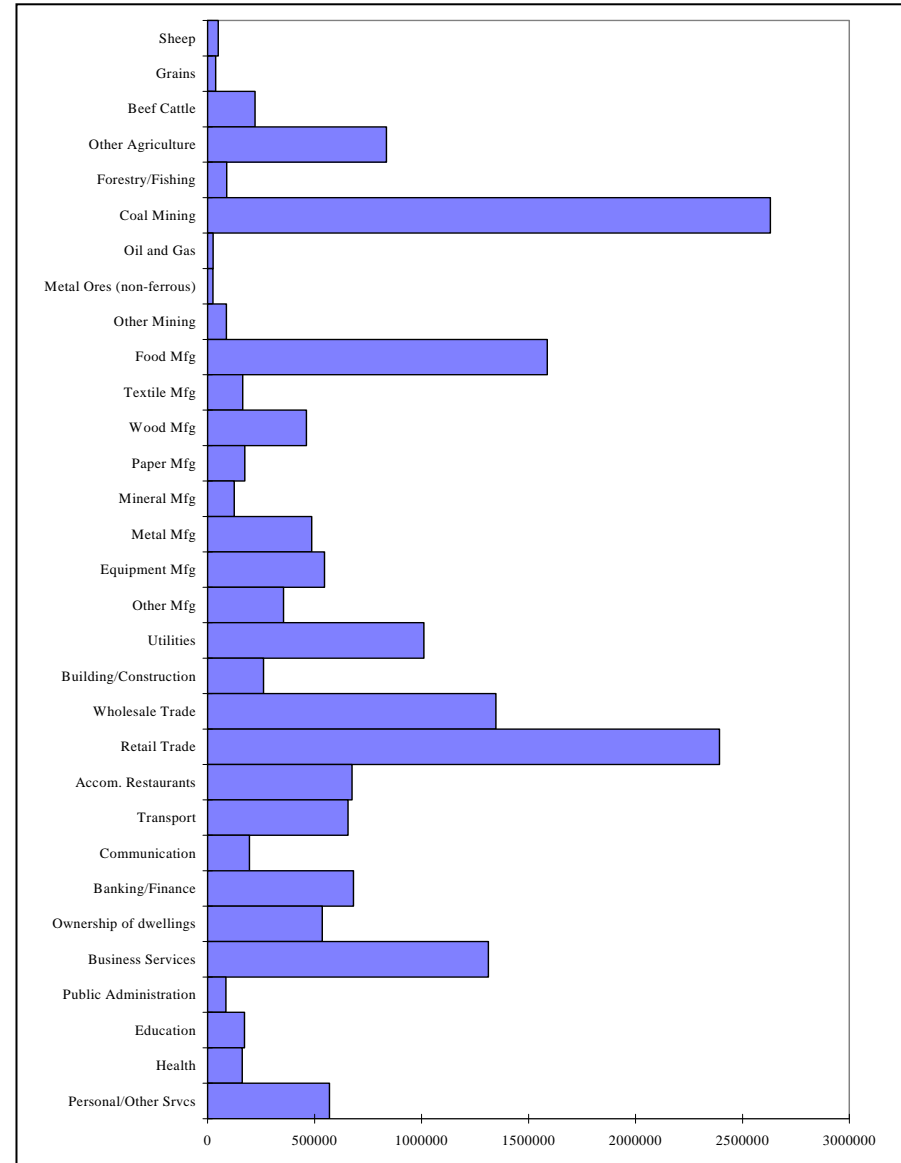


Figure A3.4.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.5 Wet Tropics of Queensland Regional Description

A highly aggregated 2006 input-output table for the Wet Tropics WHA regional economy is provided in Table A3.5. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.5
Aggregated Transactions Table: Wet Tropics of Queensland WHA regional economy 2006
(\$'000)

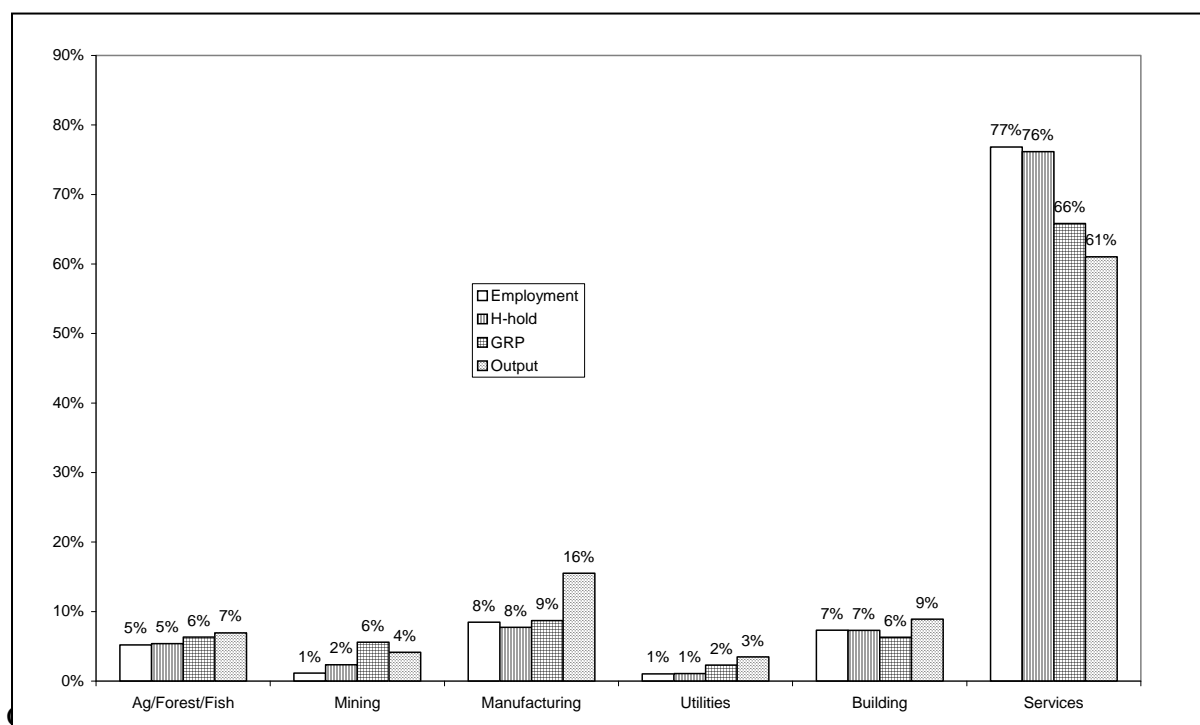
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	274,367	459	248,840	42	2,344	57,626	583,678	121,092	178,780	1,536,240	2,419,790
Mining	394	82,474	354,048	1,850	7,716	6,407	452,890	2,654	21,557	967,291	1,444,392
Manuf.	132,737	31,745	682,911	8,789	269,081	740,202	1,865,465	463,368	211,849	2,865,709	5,406,391
Utilities	15,193	14,882	66,293	384,021	13,087	147,315	640,790	93,206	5,677	469,869	1,209,542
Building	9,719	10,920	7,923	16,227	556,893	248,095	849,776	0	1,992,764	260,567	3,103,107
Services	233,901	74,921	625,277	42,304	320,996	3,595,498	4,892,897	5,517,189	5,039,041	5,826,690	21,275,817
TOTAL	666,311	215,400	1,985,293	453,233	1,170,117	4,795,143	9,285,497	6,197,509	7,449,667	11,926,365	34,859,038
Household Income	554,317	240,613	793,736	111,458	750,663	7,834,599	10,285,386	0	0	0	10,285,386
OVA	501,099	691,035	655,743	270,303	302,498	3,132,385	5,553,063	545,449	277,180	4,740	6,380,432
Imports	698,064	297,343	1,971,619	374,548	879,829	5,513,690	9,735,093	3,425,536	1,839,991	769,557	15,770,177
TOTAL	2,419,790	1,444,392	5,406,391	1,209,542	3,103,107	21,275,817	34,859,038	10,168,494	9,566,838	12,700,662	67,295,033
Employment	9,225	2,007	15,010	1,855	12,968	136,049	177,115				

Gross regional product (GRP) for the regional economy is estimated at \$16 665 million, comprising \$10 285 million to households as wages and salaries (including payments to self employed persons and employers) and \$6 380 million in OVA.

The employment total was 177 115 people.

Compared to the QLD economy (Figure A3.18.1), the regional economy (Figure A3.5.1) has a greater relative reliance on agriculture and services. Mining, building and manufacturing (employment and income) are of less relative importance. While the situation for utilities is similar.

Figure A3.5.1
Summary of Aggregated Sectors: Wet Tropics of Queensland WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.5.2 to A3.5.4. In the agriculture, forestry and fishing sectors, the *Other Agriculture Sector* (mainly sugar cane growing and fruit growing not elsewhere specified (nec) e.g. banana and avocado) is the main sector followed by the *Beef Cattle Sector*. Mining in the region is mainly gold, copper, bauxite, nickel and lead-zinc-silver. The main manufacturing activity in the region is the Metal Manufacturing Sector (Aluminium Smelting and Basic Non Ferrous Metal Manufacturing nec) and Food Manufacturing Sector (mainly sugar). The *Retail Trade Sector* is the largest services sector in the region with the *Business Services Sectors* and *Public Administration* also important.

Figure A3.5.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)
Gross Regional Output **Gross Value-Added**

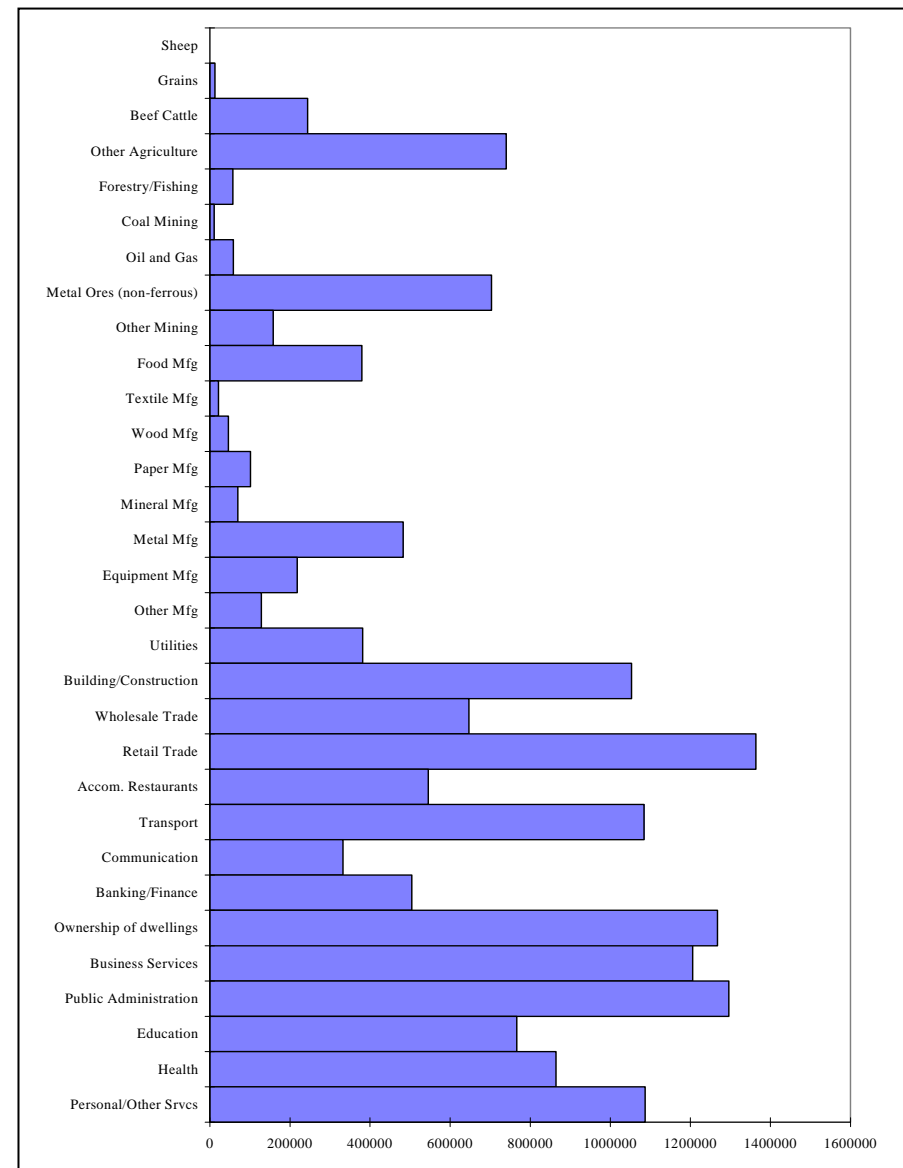
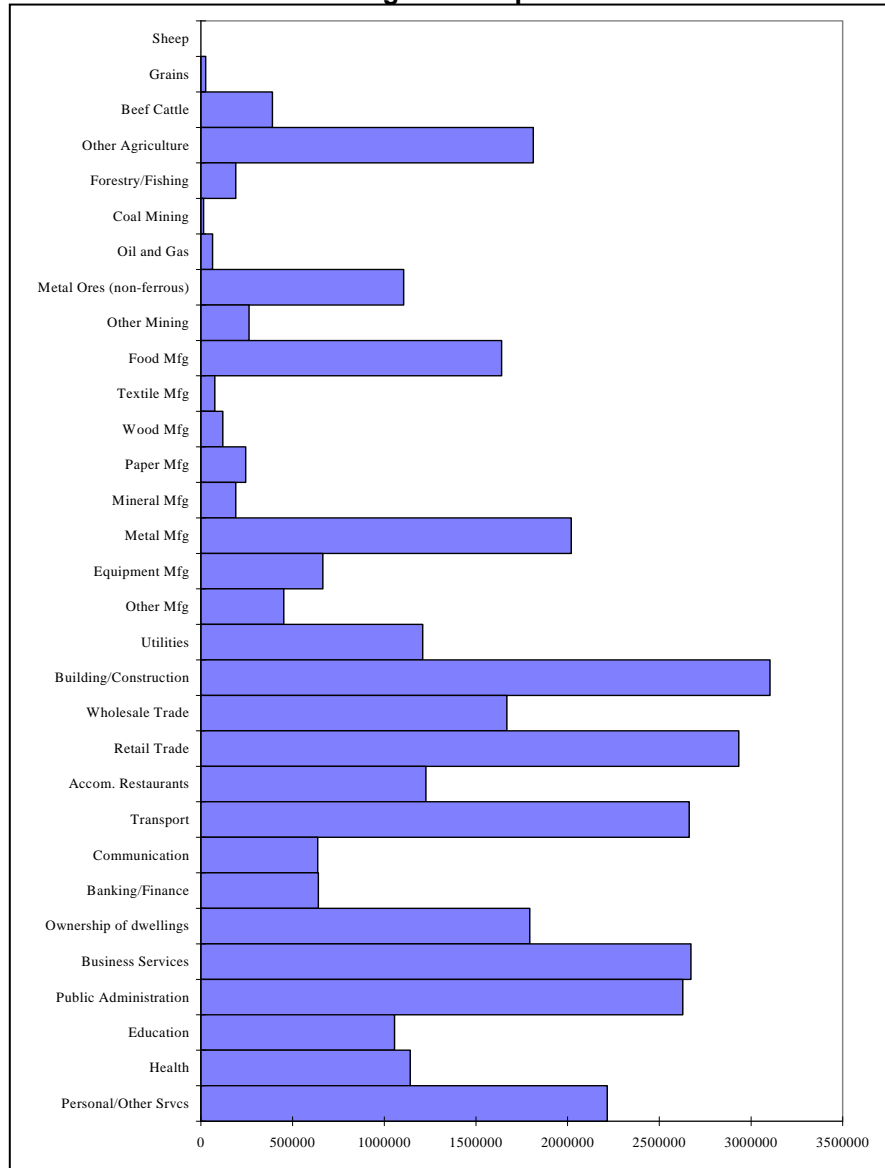


Figure A3.5.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

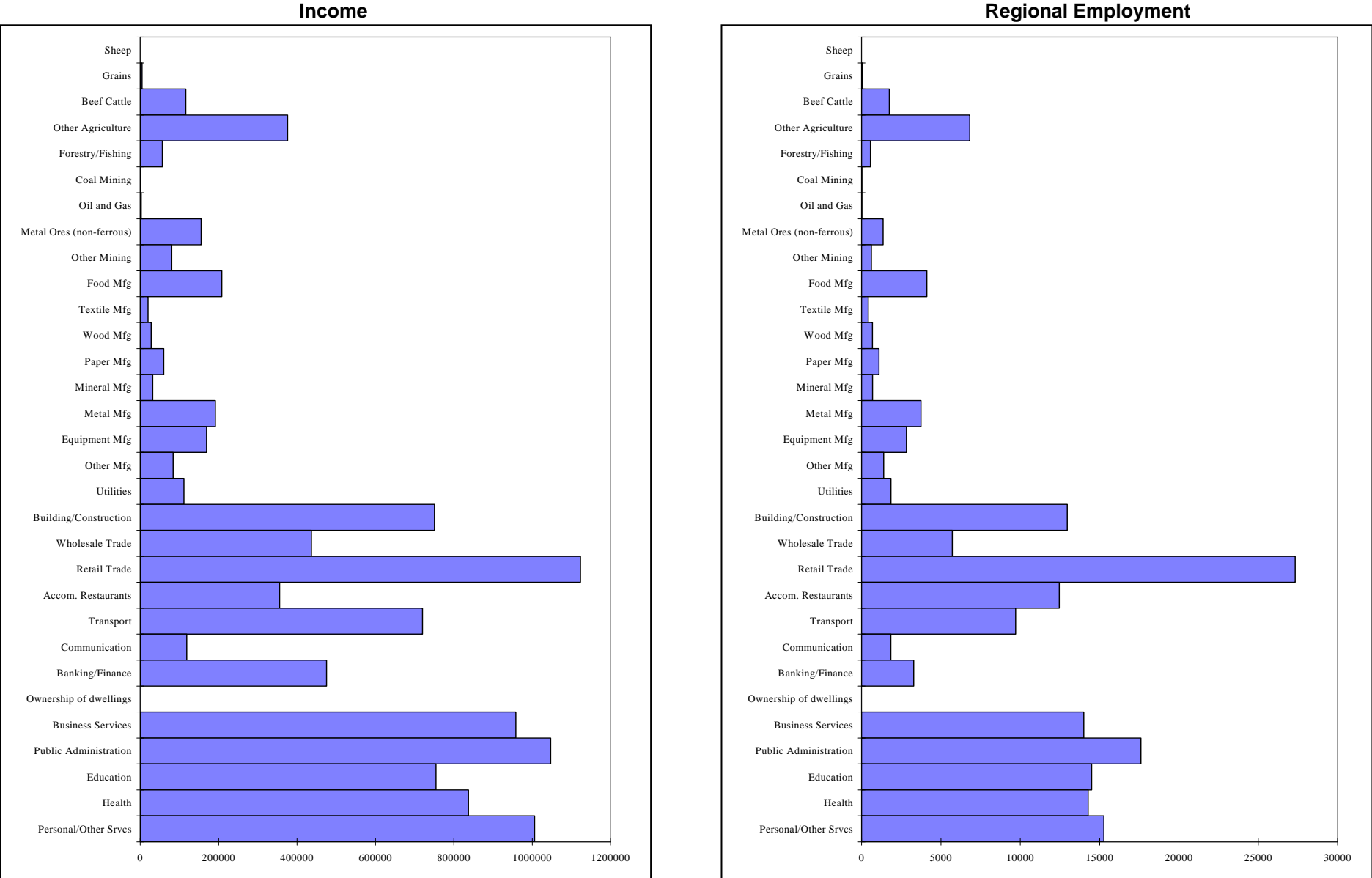
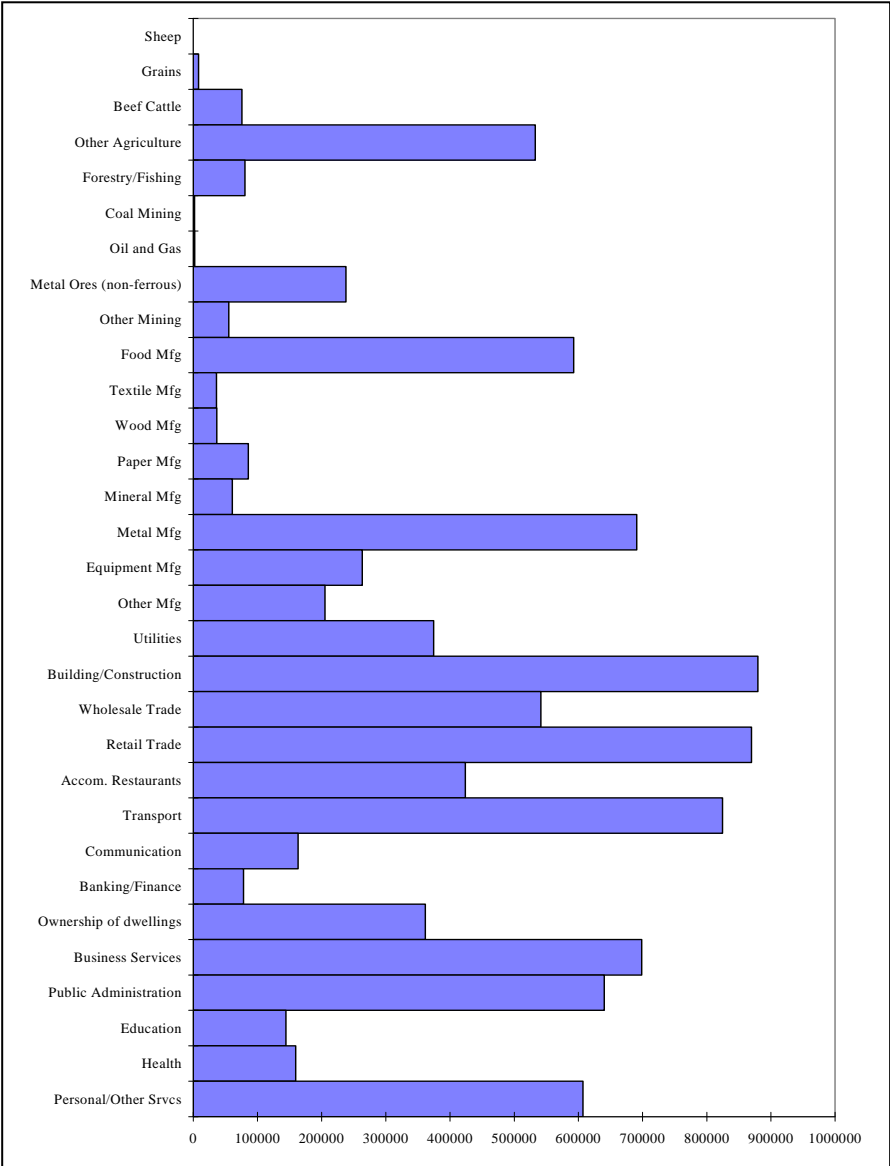
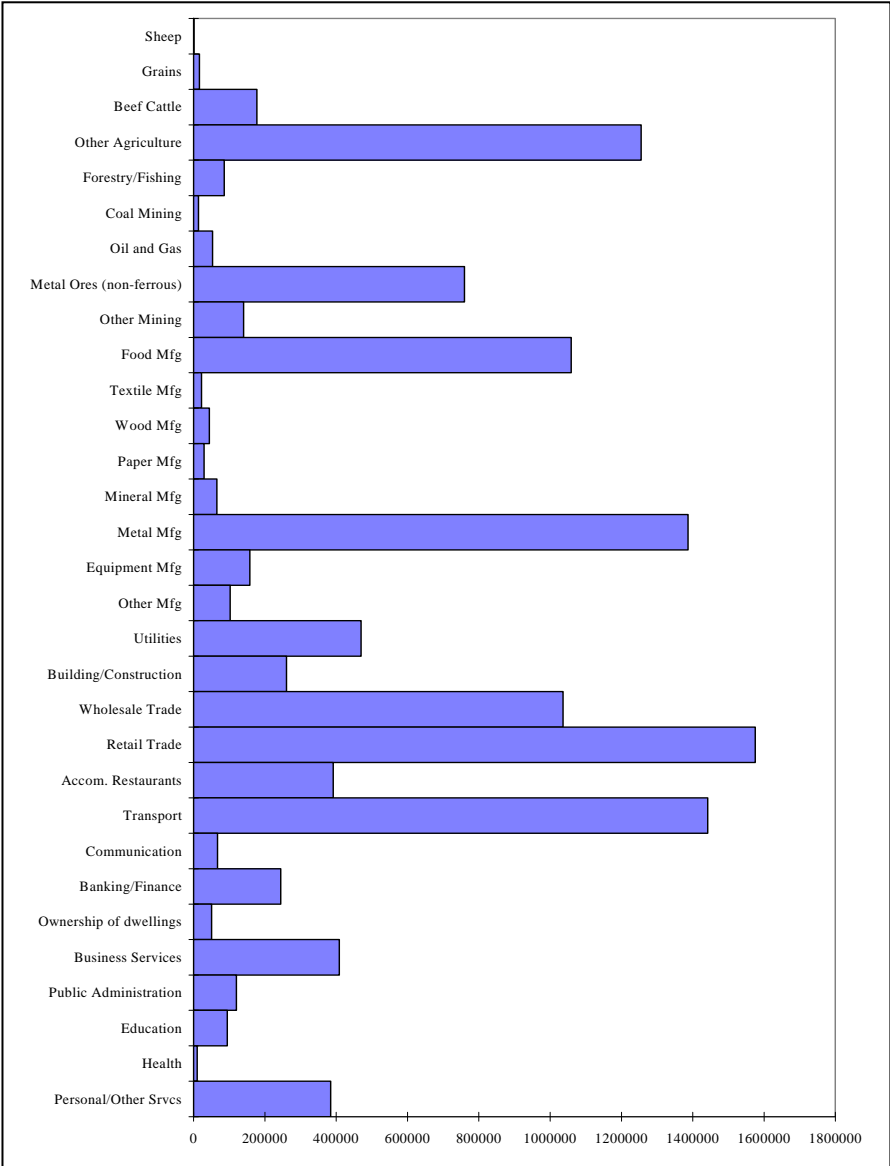


Figure A3.5.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.6 Shark Bay Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.6. A brief guide to interpreting the table is provided in Appendix 4.

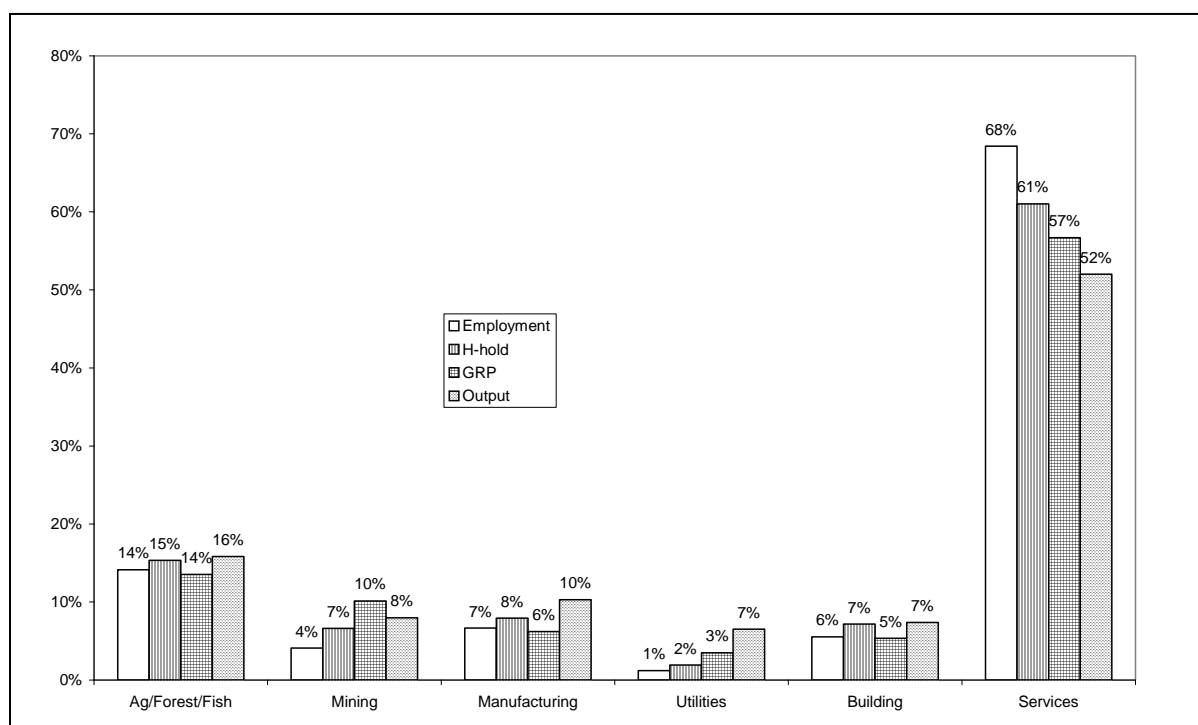
Table A3.6
Aggregated Transactions Table: Shark Bay WHA regional economy 2006 (\$'000)

	Ag. forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditu re	OFD	Exports	Total
Ag. forest., fishing	11,750	25	4,912	2	43	1,185	17,917	1,672	14,837	111,383	145,809
Mining	31	1,196	1,744	287	191	234	3,682	89	-1,137	70,689	73,323
Manuf.	3,016	348	3,776	63	1,875	5,125	14,203	3,068	11,148	66,290	94,709
Utilities	1,249	258	1,045	29,203	390	4,224	36,370	2,969	379	20,168	59,886
Building	440	782	142	478	9,360	3,455	14,656	0	42,919	10,247	67,822
Services	13,216	5,431	13,263	1,180	5,343	64,468	102,900	91,007	116,647	168,078	478,632
TOTAL	29,701	8,040	24,882	31,212	17,202	78,691	189,727	98,805	184,793	446,857	920,181
Household Income	34,535	14,926	17,872	4,354	16,175	137,593	225,455	0	0	0	225,455
OVA	25,099	29,659	9,463	10,967	7,429	112,482	195,100	9,772	9,985	698	215,556
Imports	56,474	20,699	42,492	13,352	27,017	149,867	309,899	75,799	57,462	80,996	524,156
TOTAL	145,809	73,323	94,709	59,886	67,822	478,632	920,181	184,376	252,240	528,551	1,885,348
Employment	565	164	266	48	221	2,738	4,001				

Gross regional product (GRP) for the regional economy is estimated at \$440 million, comprising \$225 million to households as wages and salaries (including payments to self employed persons and employers) and \$215 million in OVA. 4 001 people work in the region.

Compared to the WA economy (Figure A3.20.1), the regional economy (Figure A3.6.1) has a greater relative reliance on agriculture/forestry/fishing, utilities (only for GRP and output) and services (but only for output and GRP). Mining, manufacturing and building are of lesser relative importance as are services (in relation to employment and income).

Figure A3.6.1
Summary of Aggregated Sectors: Shark Bay WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.6.2 to A3.6.4. In the agriculture, forestry and fishing sectors, the *Other Agriculture Sector* (mainly vegetable growing) and Forestry/Fishing (mainly commercial fishing) are the main sectors. Other Mining (mining nec) is the main mining sector. The main manufacturing activity in the region is the *Food Manufacturing Sector* (seafood processing). Utilities sectors in the region are mainly electricity supply and water supply. The *Retail Trade Sector*, *Ownership of Dwellings Sector*, *Transport Sector and Accommodation, Cafes and Restaurants Sector* are significant in the region.

Figure A3.6.2 - Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

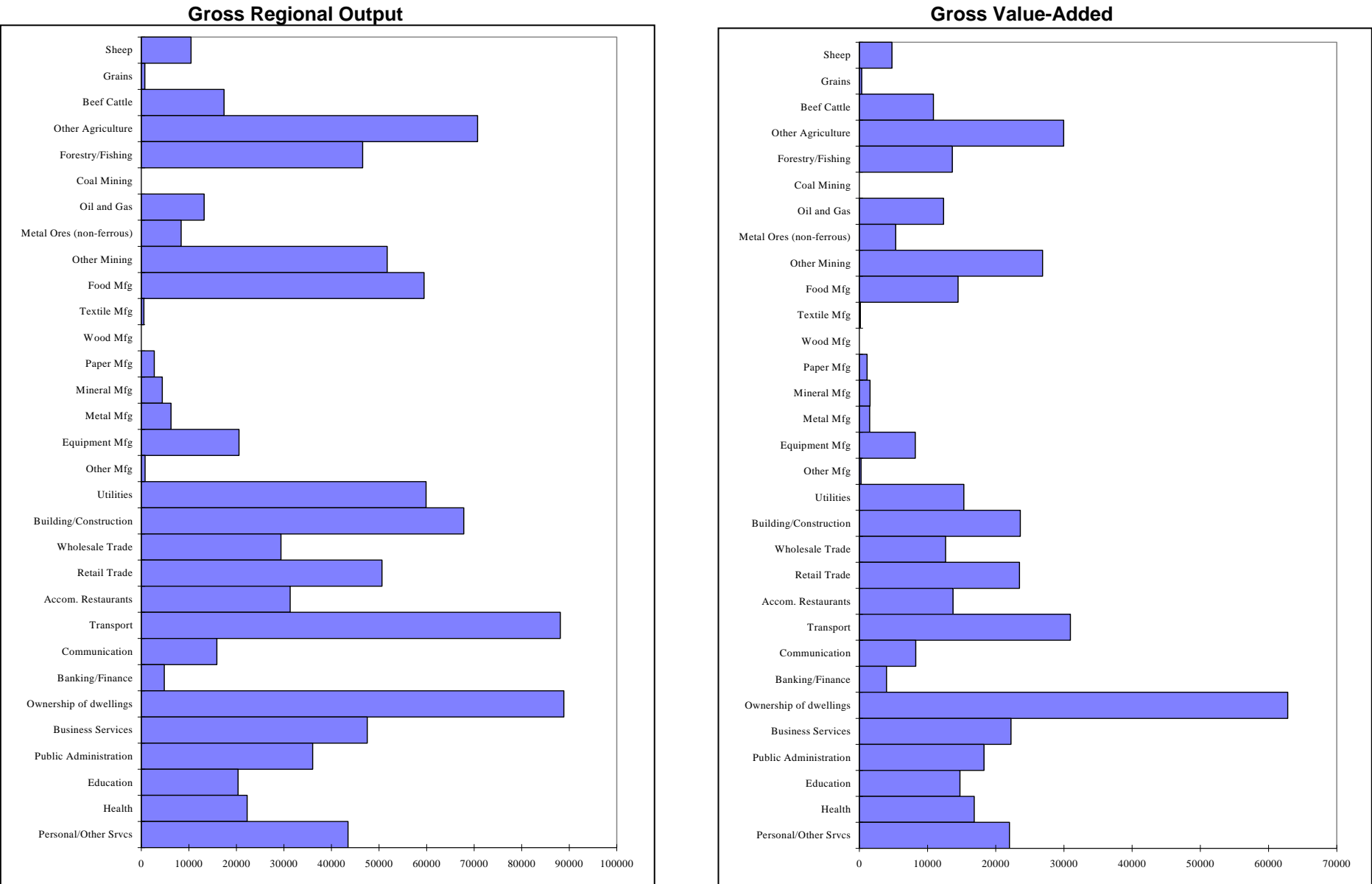


Figure A3.6.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

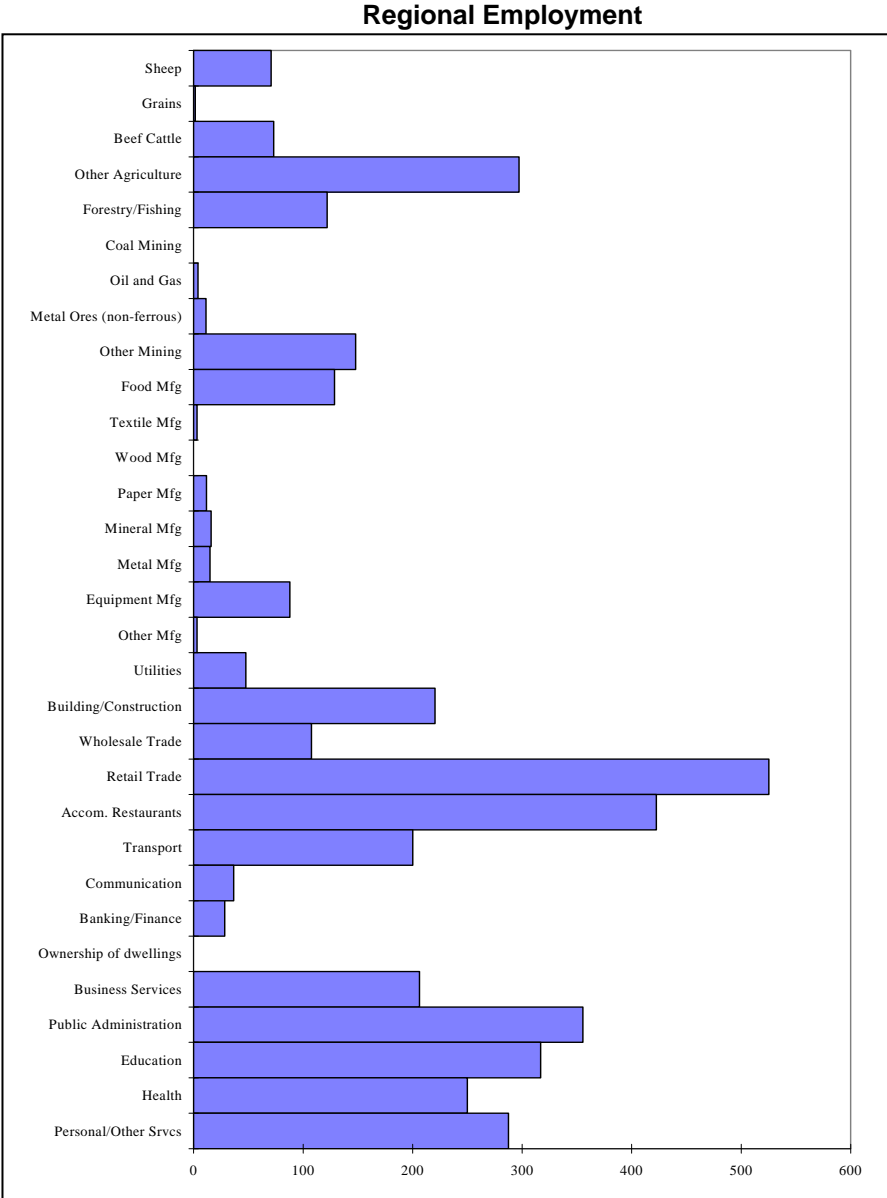
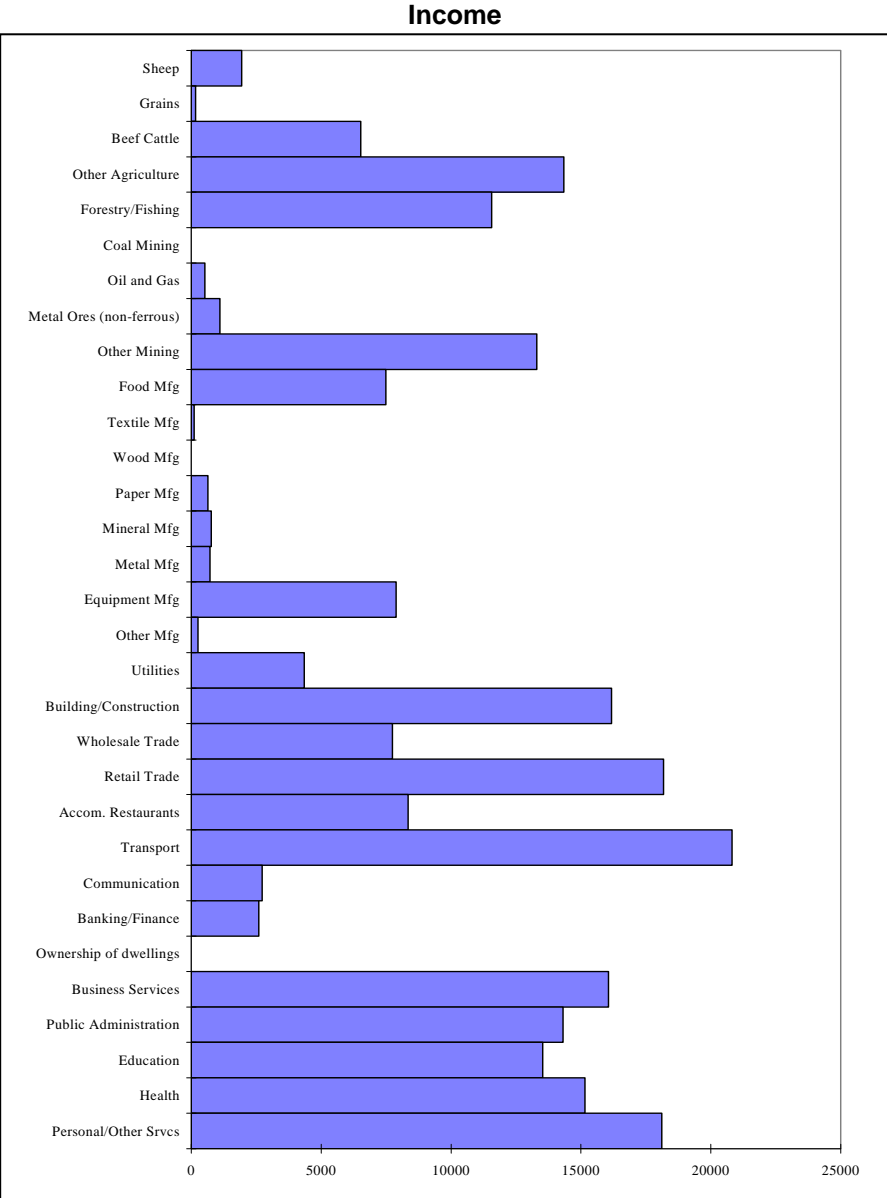
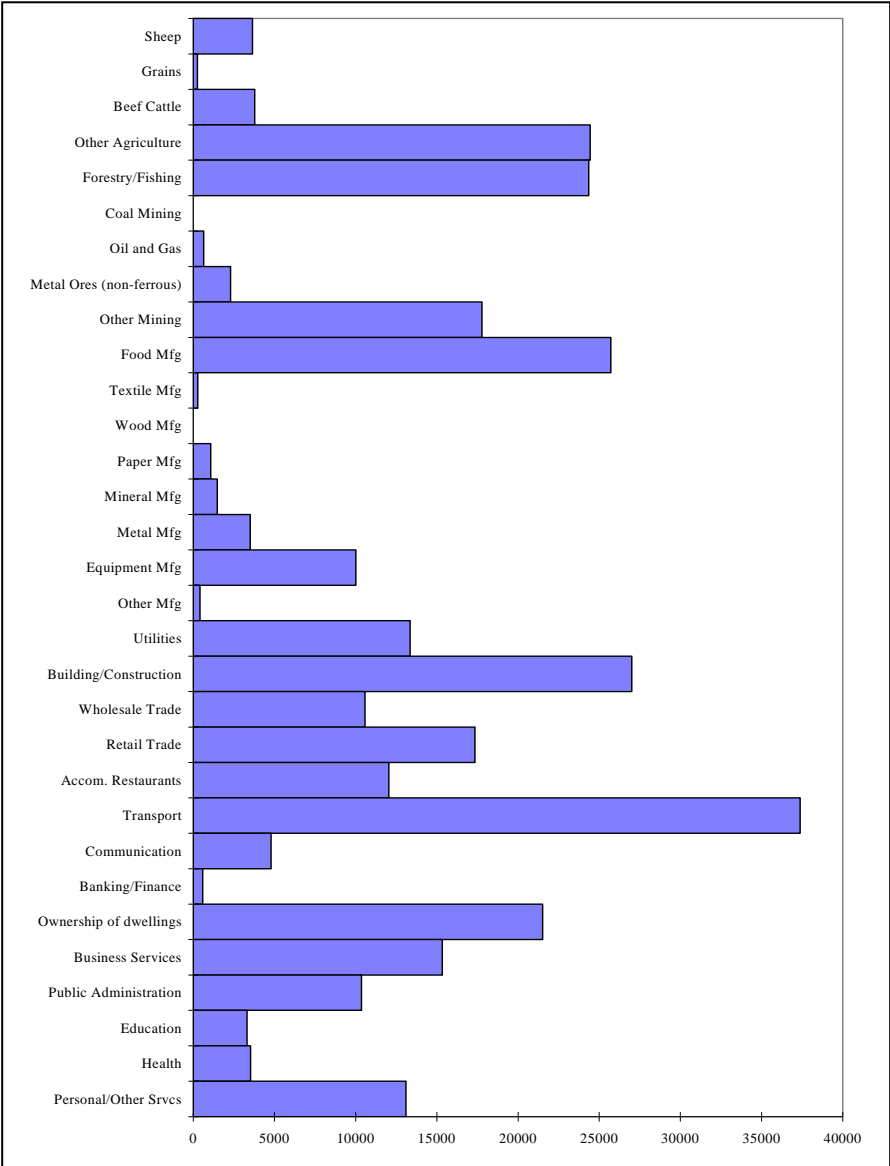
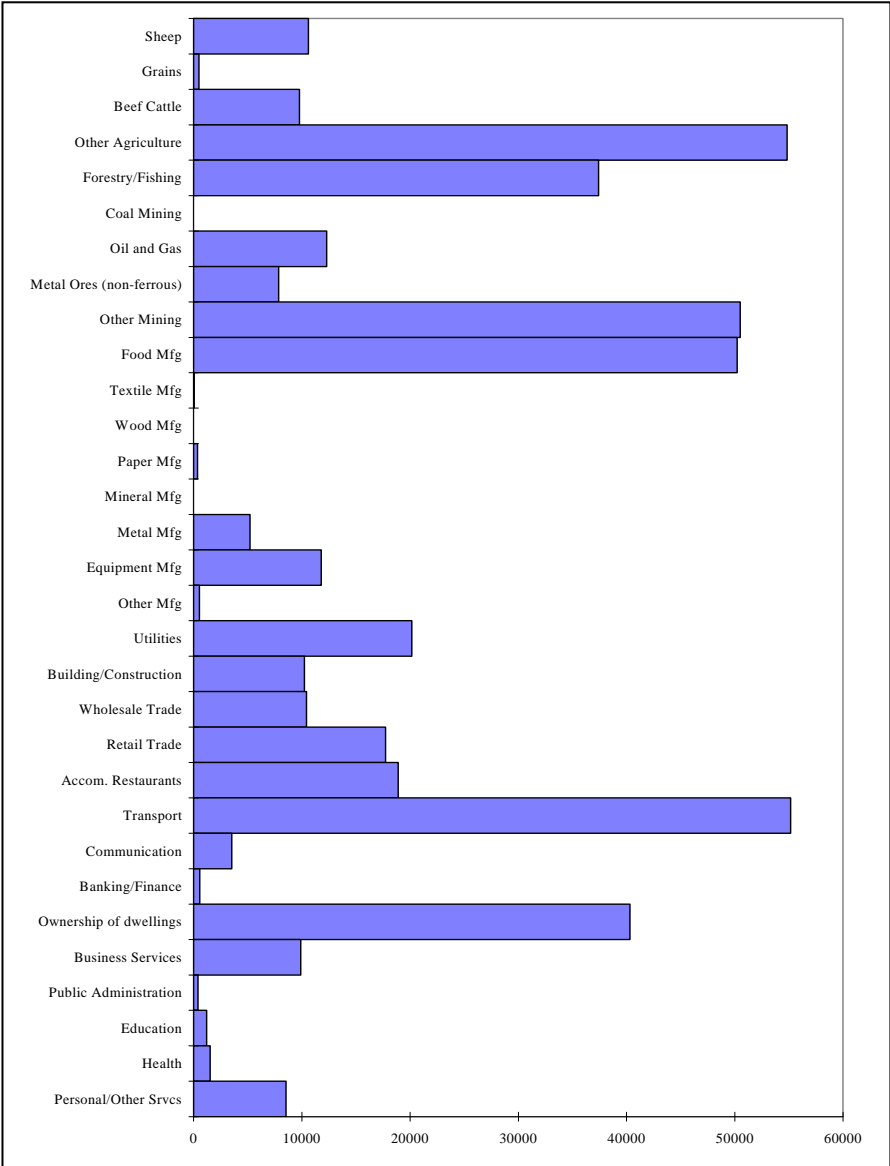


Figure A3.6.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.7 Fraser Island Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.7. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.7
Aggregated Transactions Table: Fraser Island WHA regional economy 2006(\$'000)

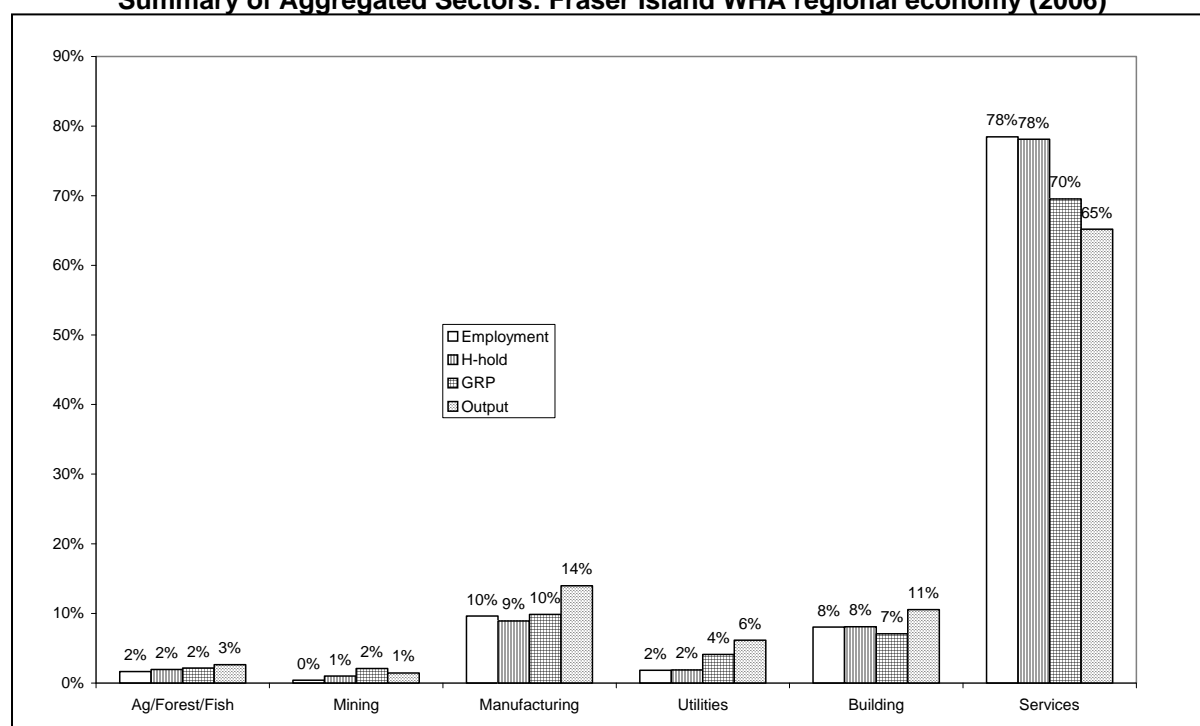
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	5,014	7	18,345	8	204	5,684	29,262	10,405	10,604	63,013	113,283
Mining	15	1,801	2,780	544	578	747	6,463	295	2,175	53,057	61,990
Manuf.	6,095	995	66,321	1,559	37,087	70,720	182,777	50,903	65,539	298,319	597,538
Utilities	832	153	5,399	80,081	1,972	22,708	111,145	15,188	6,081	131,128	263,542
Building	453	378	1,613	4,043	94,896	23,103	124,486	0	289,687	36,681	450,854
Services	11,029	4,476	67,128	9,337	43,306	454,258	589,535	702,863	604,426	889,922	2,786,746
TOTAL	23,439	7,810	161,585	95,572	178,044	577,219	1,043,669	779,653	978,511	1,472,119	4,273,952
Household Income	23,630	12,346	108,103	22,862	98,022	946,352	1,211,315	0	0	0	1,211,315
OVA	22,292	32,477	102,057	64,890	53,178	534,564	809,457	72,035	36,408	585	918,485
Imports	43,922	9,356	225,793	80,219	121,610	728,611	1,209,511	491,224	241,682	94,990	2,037,407
TOTAL	113,283	61,990	597,538	263,542	450,854	2,786,746	4,273,952	1,342,912	1,256,601	1,567,694	8,441,159
Employment	414	100	2,386	455	1,994	19,461	24,810				

Gross regional product (GRP) for the regional economy is estimated at \$2 129 million, comprising \$1 211 million to households as wages and salaries (including payments to self employed persons and employers) and \$918 million in OVA.

Total employed in the region is 24 810 people.

Compared to the Queensland economy (Figure A3.18.1), the regional economy (Figure A3.7.1) has a greater relative reliance on the services sectors and utilities and lesser relative reliance on agriculture/forestry/fishing, mining, manufacturing and building.

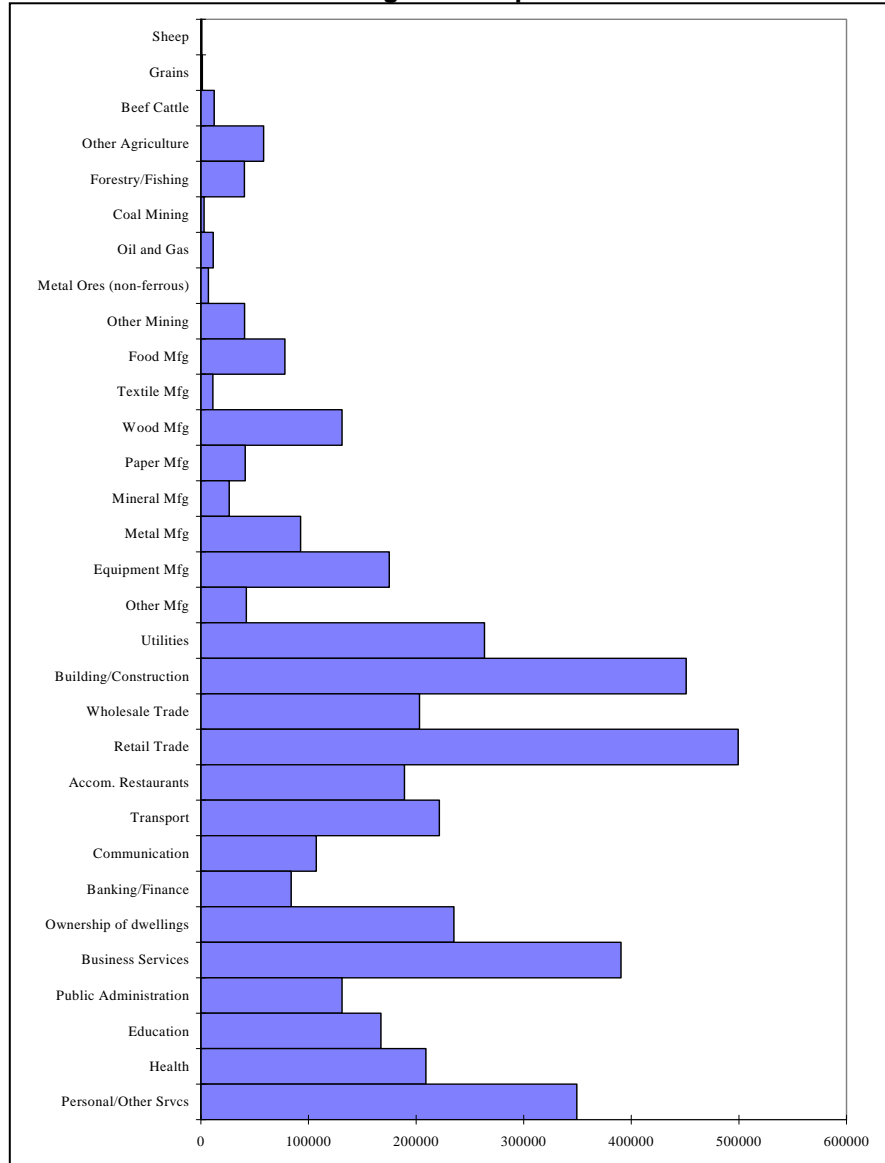
Figure A3.7.1
Summary of Aggregated Sectors: Fraser Island WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.7.2 to A3.7.4. In the agriculture, forestry and fishing sectors, the *Other Agriculture Sector* (mainly sugar cane, fruit growing and nurseries) is the main sectors. The mining sector is small and predominantly Services to Mining. The main manufacturing activity in the region is the *Wood Manufacturing Sector* (sawmills) and *Equipment Manufacturing Sector* (mainly Railway equipment manufacturing). Utilities sectors in the region are mainly electricity supply. The *Retail Trade Sector*, *Ownership of Dwellings Sector*, *Business Services Sectors*, *Health Sector* and *Person/Other Personal Services Sectors* are significant in the region.

Figure A3.7.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

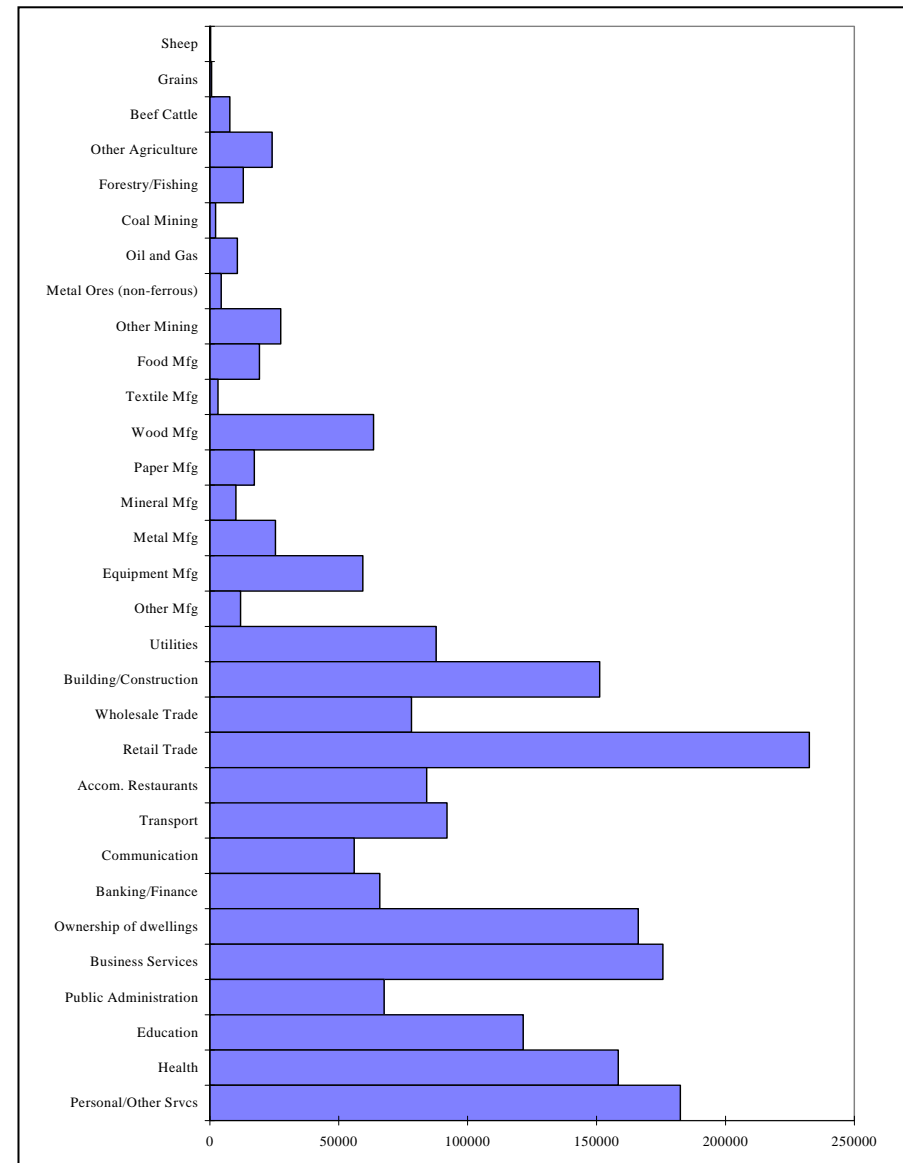


Figure A3.7.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

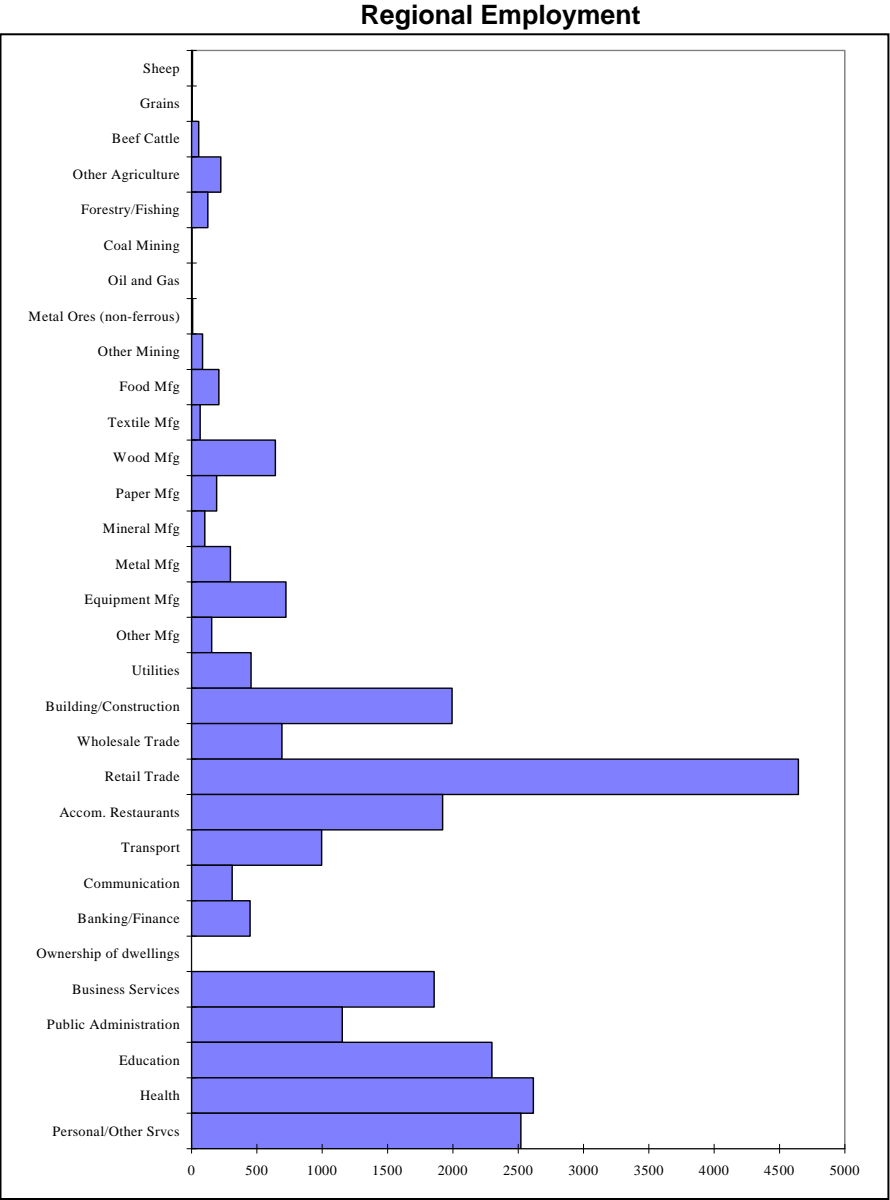
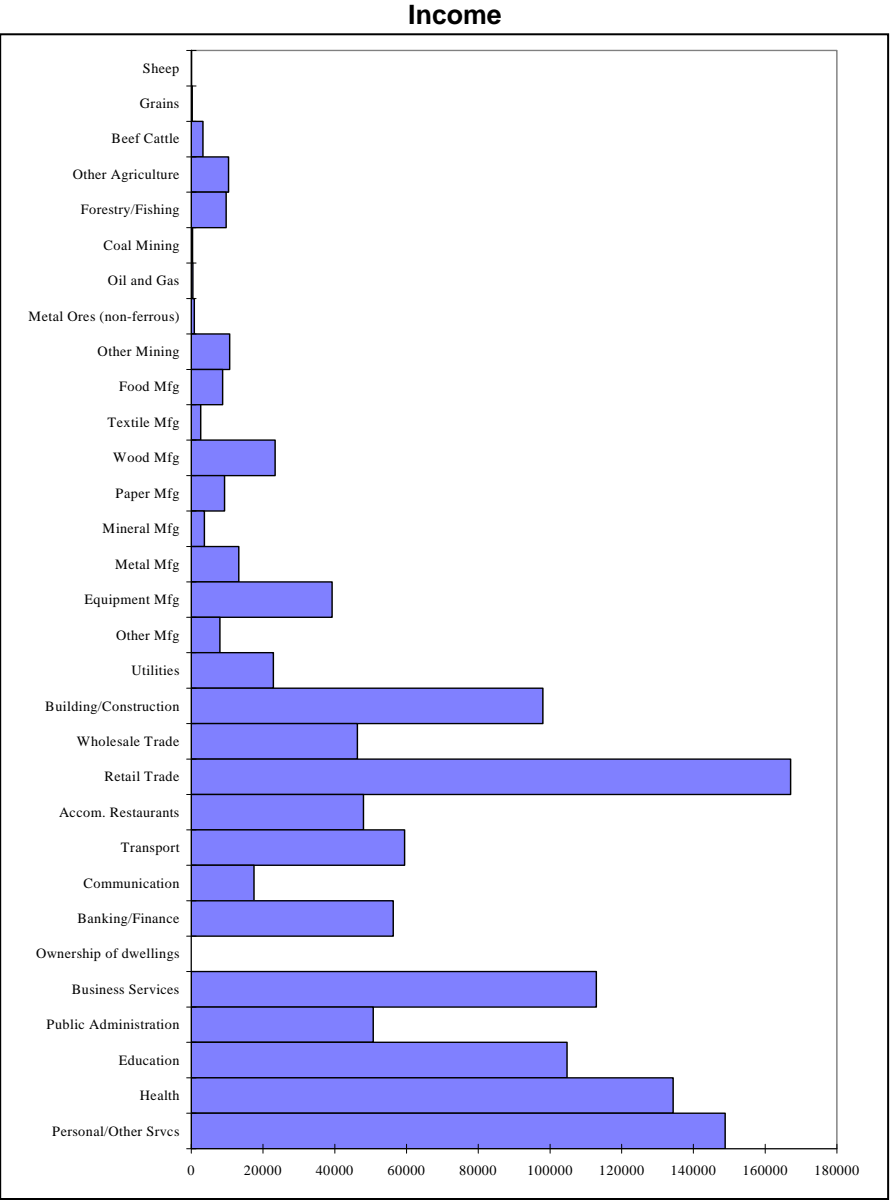
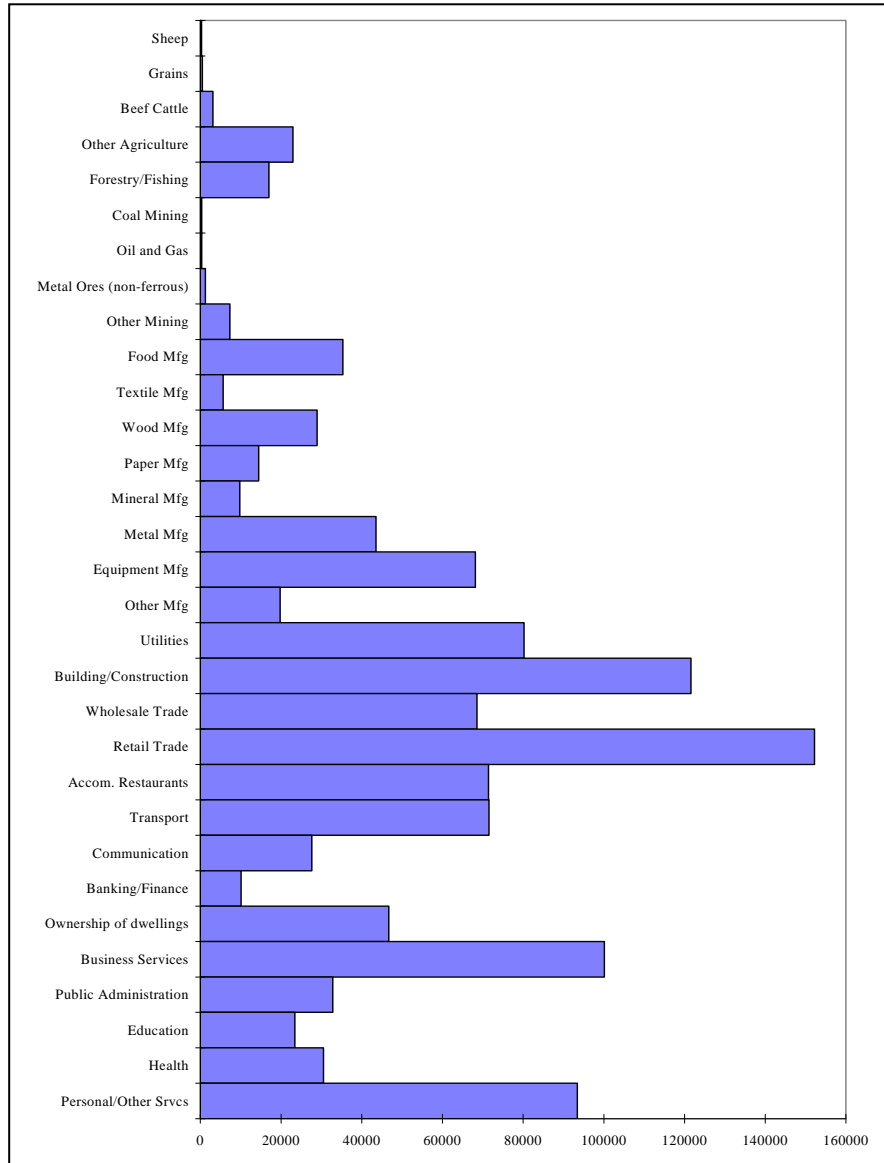
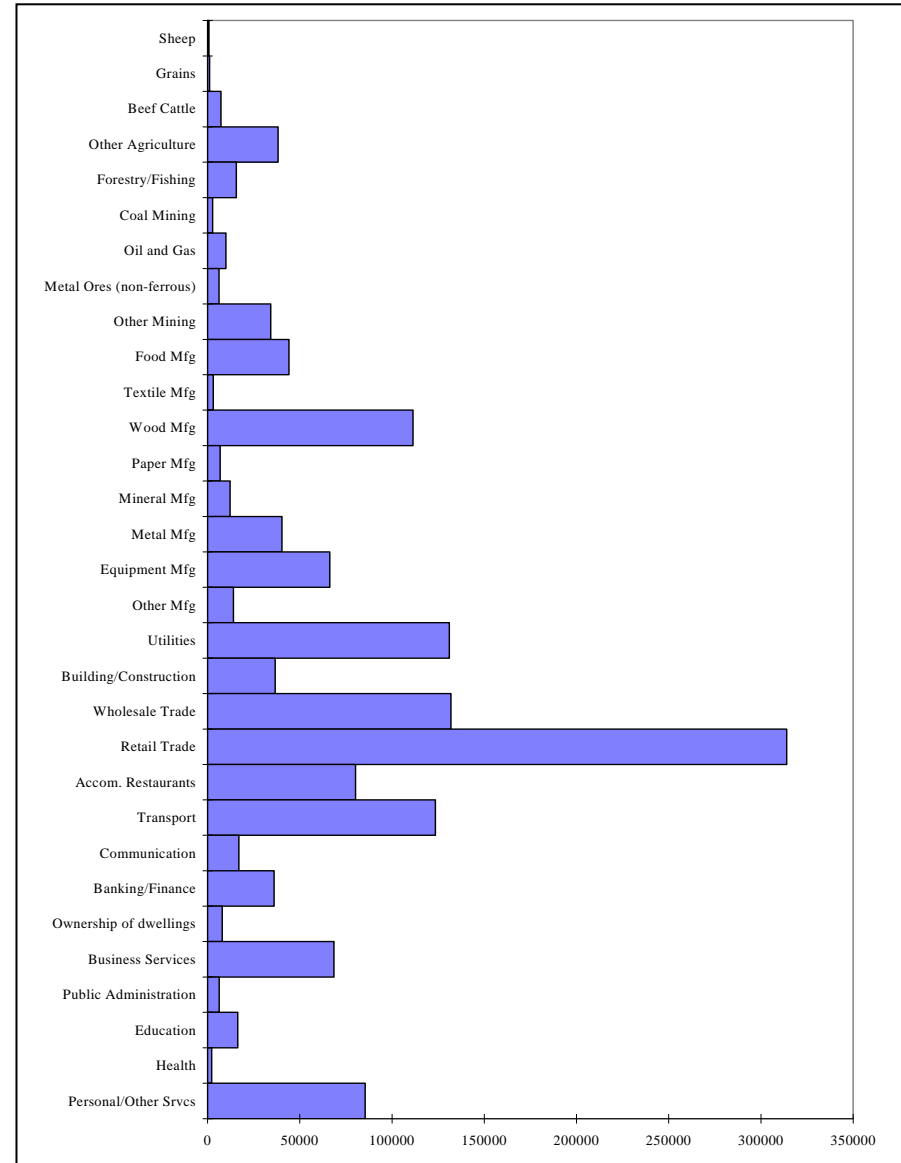


Figure A3.7.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.8 AFMS Naracoorte Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.8. A brief guide to interpreting the table is provided in Appendix 3.

Table A3.8
Aggregated Transactions Table: AFMS, Naracoorte WHA regional economy 2006(\$'000)

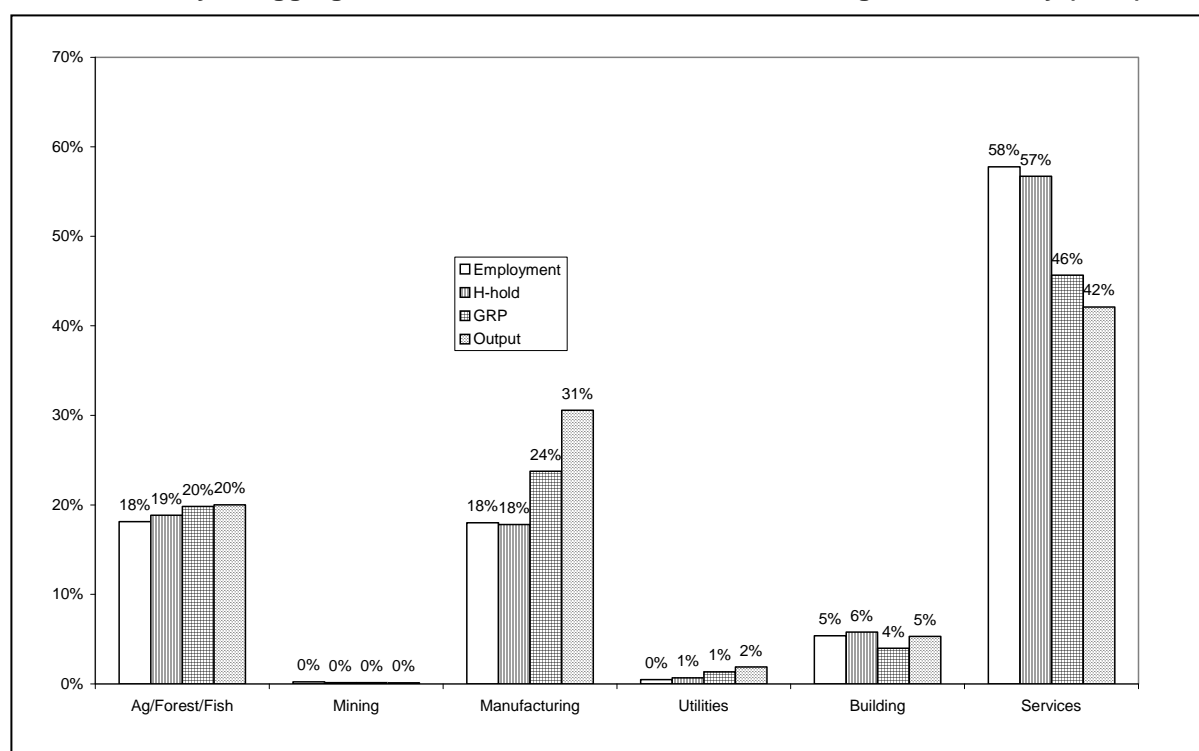
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	90,357	2	171,364	4	186	5,745	267,659	14,477	135,528	651,818	1,069,482
Mining	28	43	697	4	139	63	975	69	72	5,911	7,027
Manuf.	44,801	150	120,661	622	20,949	66,218	253,401	79,837	50,646	1,249,375	1,633,258
Utilities	4,477	5	8,730	20,469	572	9,268	43,520	15,699	1,006	40,025	100,250
Building	3,790	106	2,964	1,513	63,437	14,061	85,871	0	156,286	40,734	282,891
Services	78,635	560	158,351	2,335	18,599	256,534	515,014	625,494	362,201	746,692	2,249,401
TOTAL	222,088	866	462,768	24,948	103,881	351,889	1,166,440	735,576	705,740	2,734,554	5,342,309
Household Income	264,482	2,202	249,935	9,509	81,194	795,562	1,402,885	0	0	0	1,402,885
OVA	228,177	1,666	340,387	23,862	17,604	338,773	950,470	87,975	30,406	12,573	1,081,424
Imports	354,735	2,291	580,168	41,931	80,212	763,177	1,822,514	748,353	333,190	227,669	3,131,726
TOTAL	1,069,482	7,027	1,633,258	100,250	282,891	2,249,401	5,342,309	1,571,903	1,069,336	2,974,796	10,958,344
Employment	4,982	64	4,946	131	1,483	15,878	27,484				

Gross regional product (GRP) for the regional economy is estimated at \$2 483 million, comprising \$1 402 million to households as wages and salaries (including payments to self employed persons and employers) and \$1 081 million in OVA.

Total employed in the region is 27 484 people.

Compared to the SA economy (Figure A3.21.1), the regional economy (Figure A3.8.1) has a greater relative reliance on the agriculture, forestry and fishing sectors and manufacturing and a lesser relative reliance on mining, utilities, building and services.

Figure A3.8.1
Summary of Aggregated Sectors: AFMS, Naracoorte WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.8.2 to A3.8.4. In the agriculture, forestry and fishing sectors, the *Beef Sector*, *Sheep Sector* and *Grains Sector* are the main sectors. The *Other Agriculture Sector* which is composite of other agricultural sectors (but is dominated by grape growing) is also important. The main manufacturing activity in the region is the *Wood Manufacturing Sector* (sawmills) and the *Food Manufacturing Sector* (mainly Wine, Spirits and Tobacco and Meat Products). Utilities sectors in the region are mainly *Electricity Supply* and *Water, Sewerage and Drainage*. The *Retail Trade Sector*, *Ownership of Dwellings Sector*, *Business Services Sectors* in the region. *Health Sector*, *Education Sector* and *Person/Other Personal Services Sectors* are significant

Figure A3.8.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

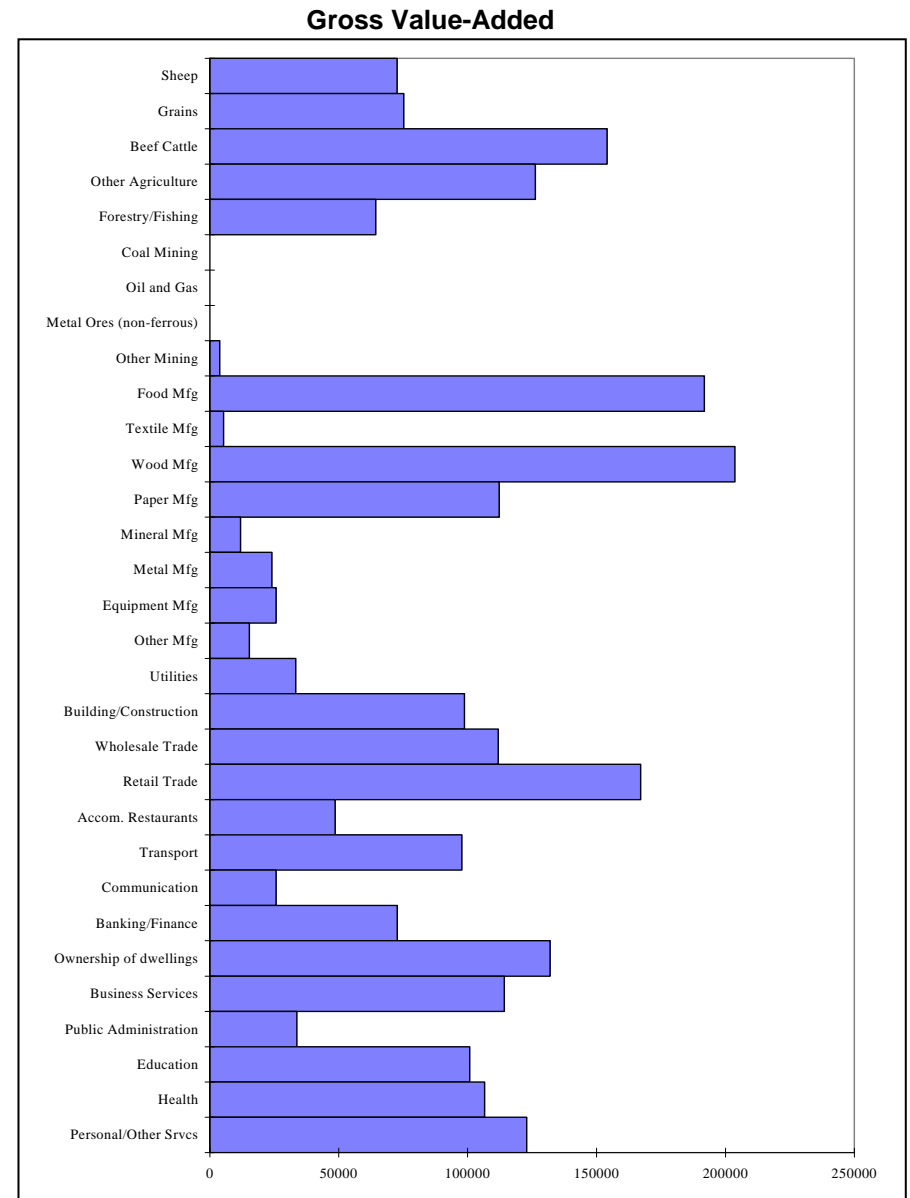
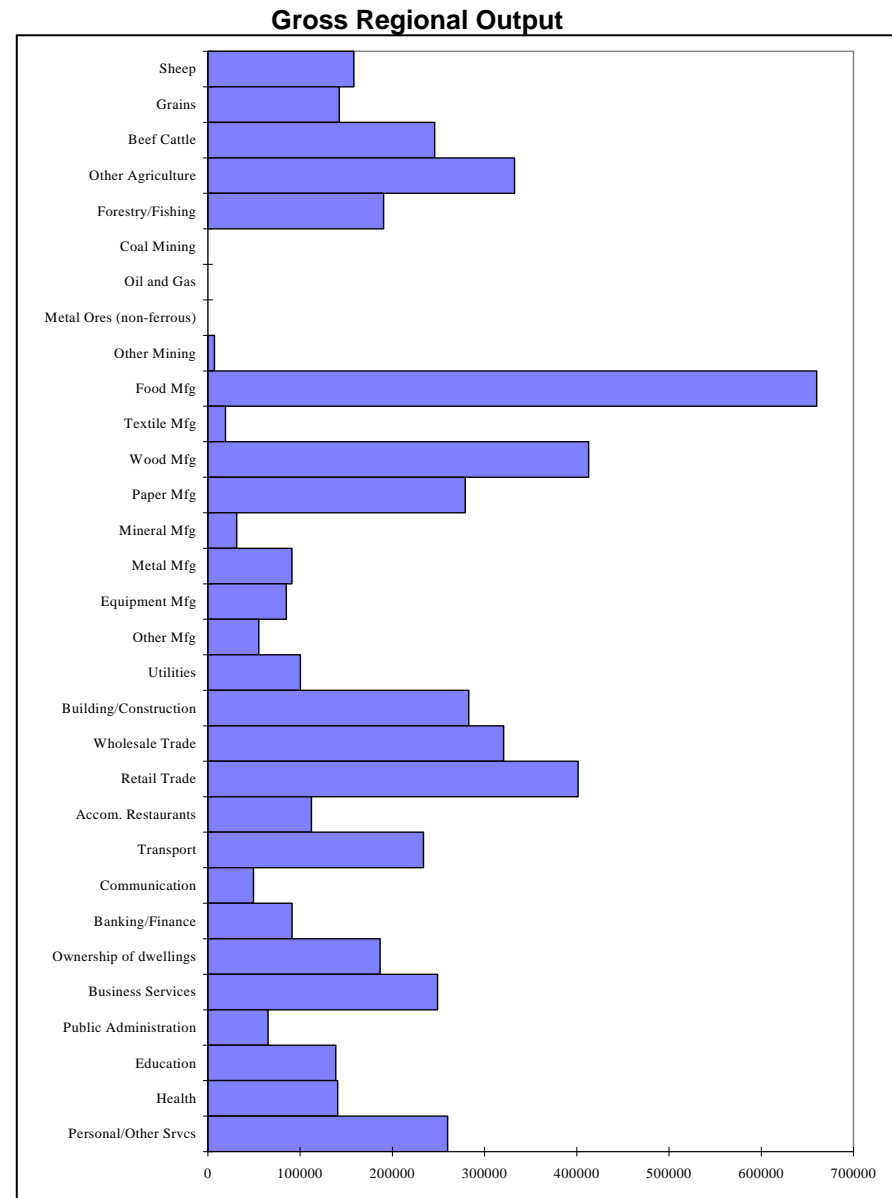


Figure A3.8.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

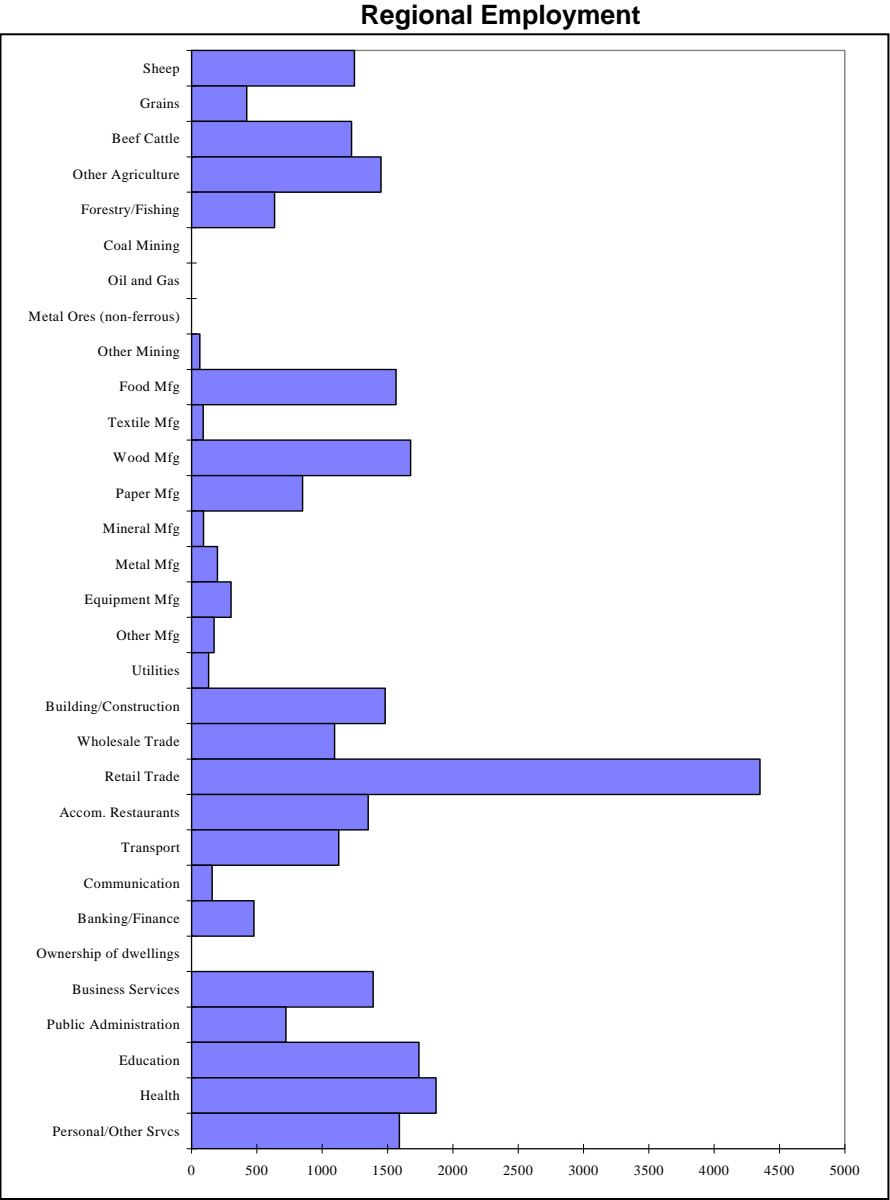
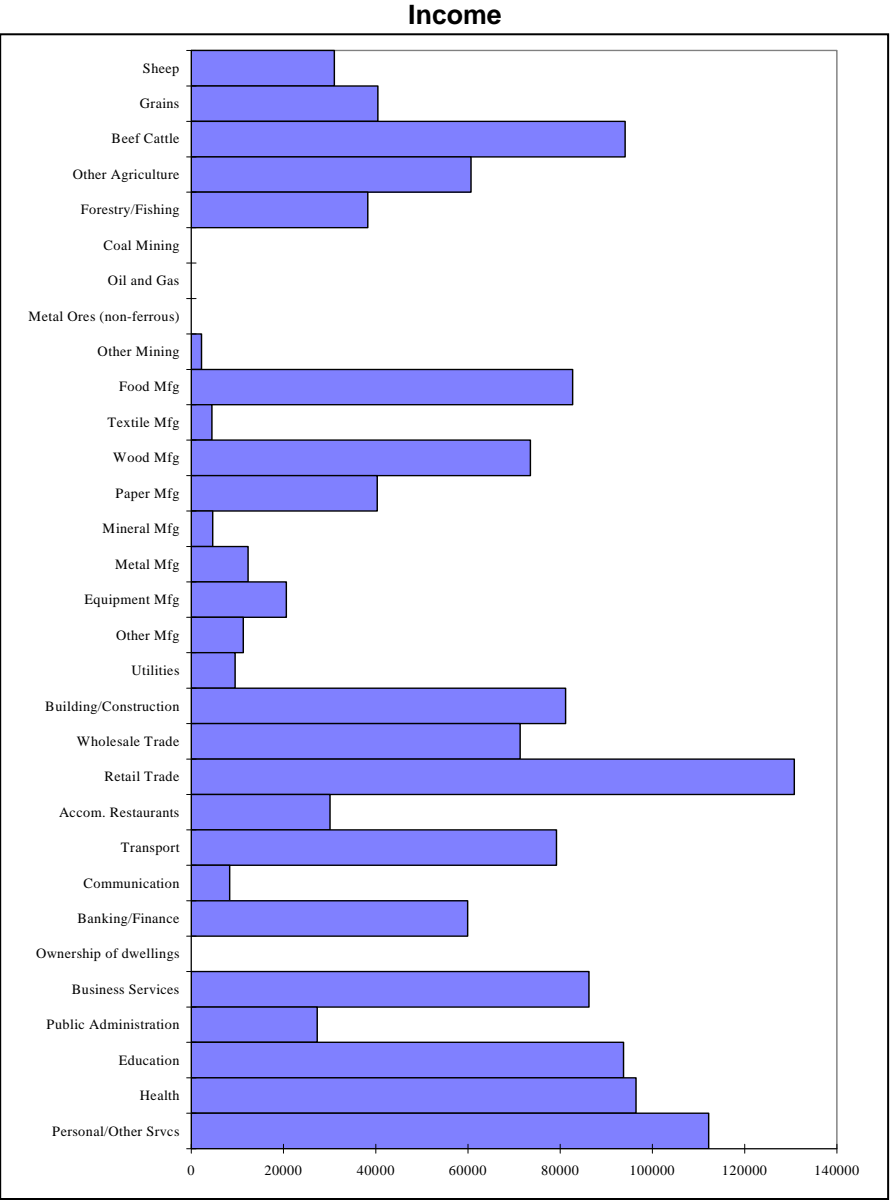
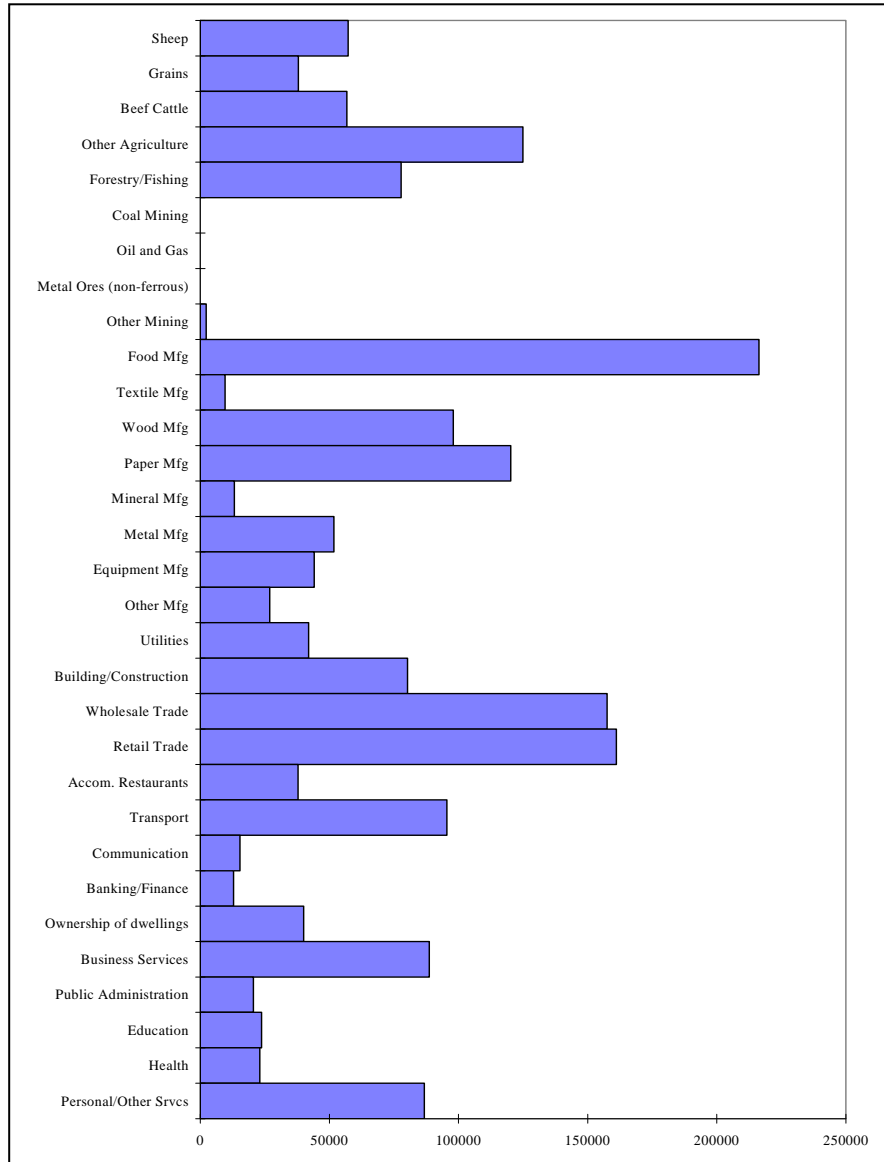
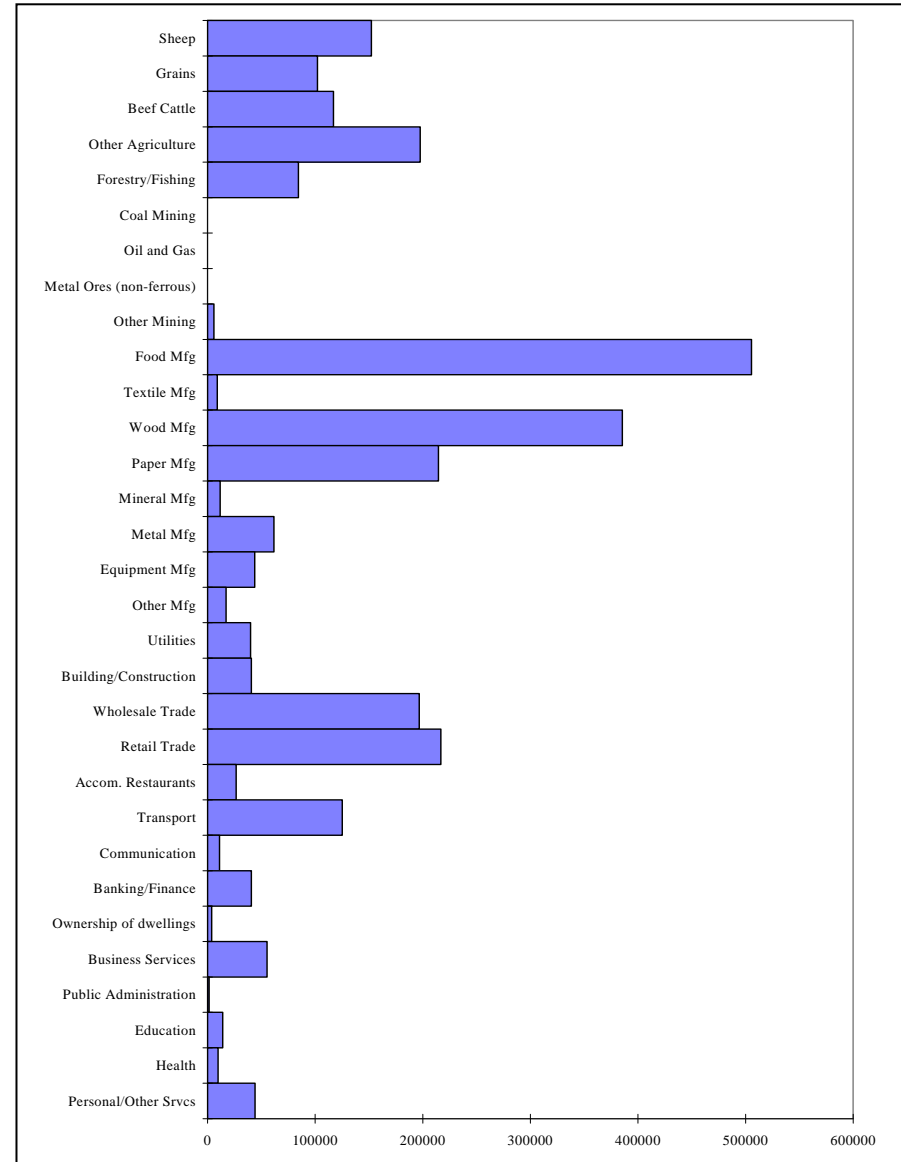


Figure A3.8.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



AFMS Riversleigh Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.9. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.9
Aggregated Transactions Table: AFMS, Riversleigh WHA regional economy 2006(\$'000)

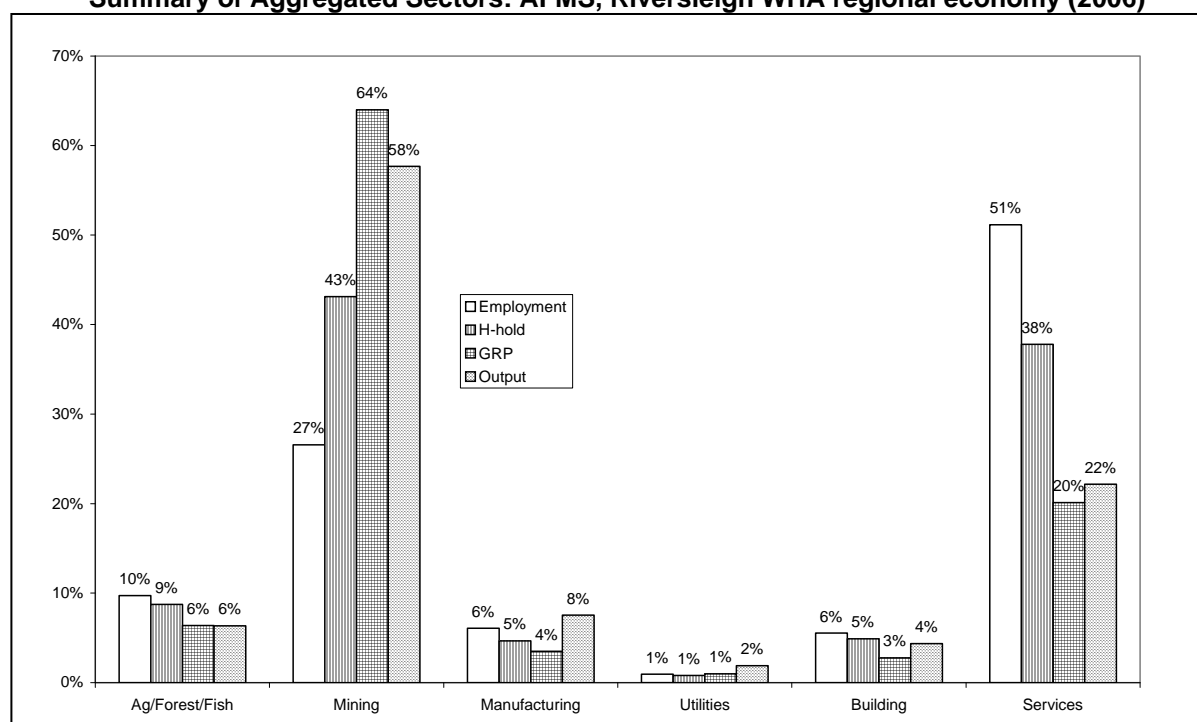
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	19,188	0	3,262	0	37	1,463	23,950	1,706	119,515	209,425	354,595
Mining	8	362,605	35,505	560	705	210	399,593	171	72,131	2,757,854	3,229,749
Manuf.	8,344	64,820	50,874	443	12,860	21,221	158,562	13,143	-1,202	252,575	423,079
Utilities	1,195	37,402	8,156	34,984	1,372	8,399	91,509	7,417	-109	7,112	105,929
Building	2,050	27,228	549	1,079	29,392	10,617	70,915	0	139,946	33,383	244,243
Services	17,704	91,536	30,518	2,500	16,935	134,084	293,278	384,981	247,442	315,127	1,240,828
TOTAL	48,490	583,591	128,864	39,567	61,301	175,994	1,037,807	407,417	577,723	3,575,476	5,598,424
Household Income	103,421	511,076	55,333	9,442	58,161	448,081	1,185,513	0	0	0	1,185,513
OVA	103,491	1,564,931	58,235	22,542	31,771	204,900	1,985,871	50,381	21,495	1,421	2,059,168
Imports	99,193	570,152	180,647	34,378	93,010	411,853	1,389,233	481,426	142,692	230,710	2,244,060
TOTAL	354,595	3,229,749	423,079	105,929	244,243	1,240,828	5,598,424	939,224	741,910	3,807,607	11,087,166
Employment	1,536	4,194	960	149	874	8,080	15,792				

Gross regional product (GRP) for the regional economy is estimated at \$3 244 million, comprising \$1 185 million to households as wages and salaries (including payments to self employed persons and employers) and \$2 059 million in OVA.

Total employed in the region is 15 792 people.

Compared to the Queensland economy (Figure A3.18.1), the regional economy (Figure A3.9.1) has a greater relative reliance on the agriculture and mining sectors and less relative reliance on the other aggregate sectors.

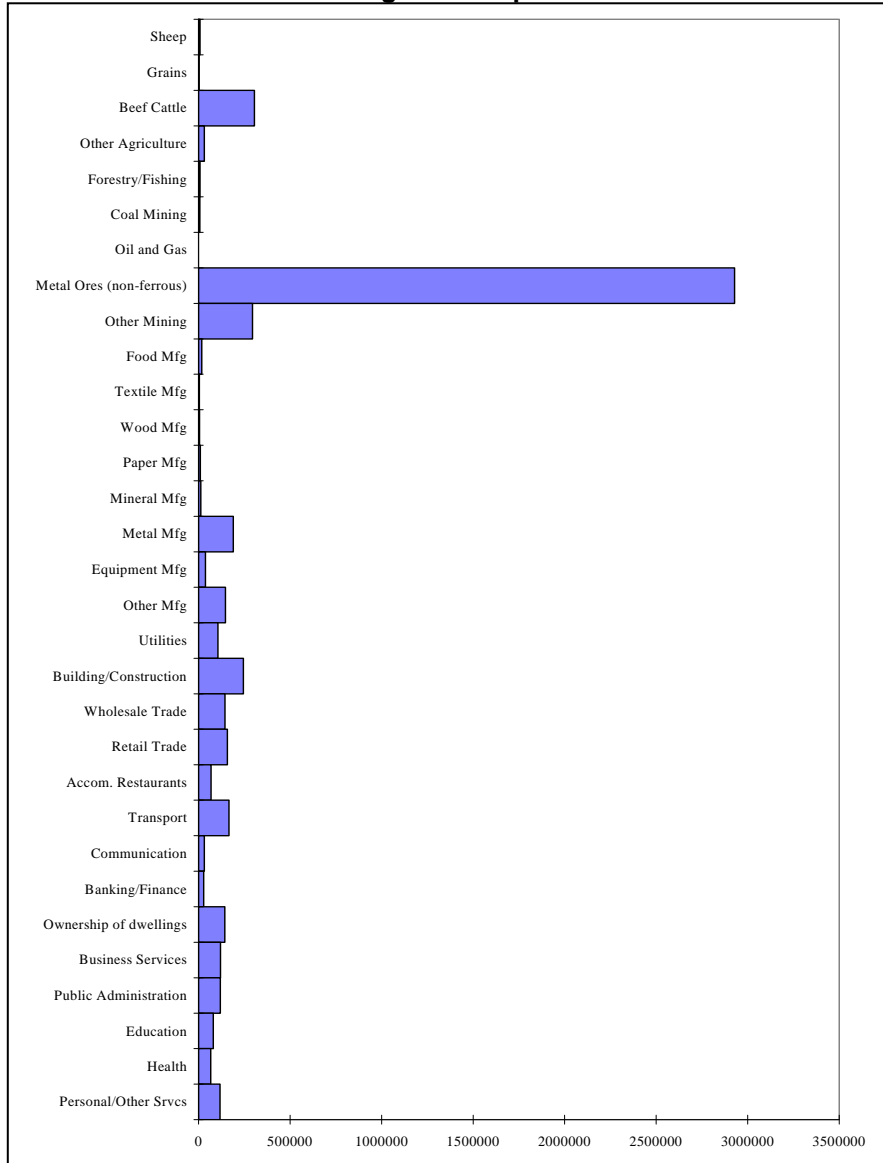
Figure A3.9.1
Summary of Aggregated Sectors: AFMS, Riversleigh WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures 34 to 36. In the agriculture, forestry and fishing sectors, the dominant sector is the *Beef Sector*. The *Mining Sector* (mainly copper ore mining) dominates the economy. The *Retail Trade Sector*, *Ownership of Dwellings Sector*, *Health Sector*, *Education Sector* and *Person/Other Personal Services Sectors* are the main services sectors in the region.

Figure A3.9.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

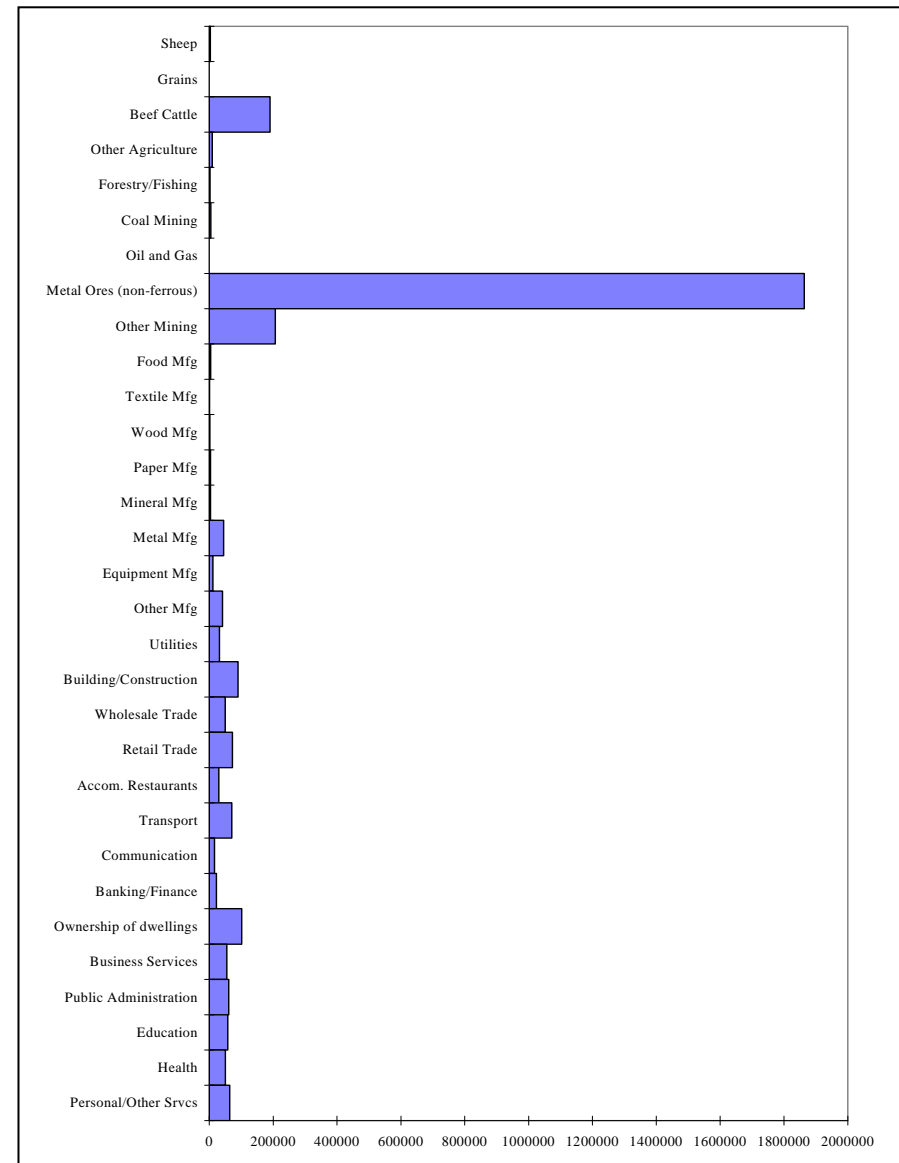


Figure A3.9.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

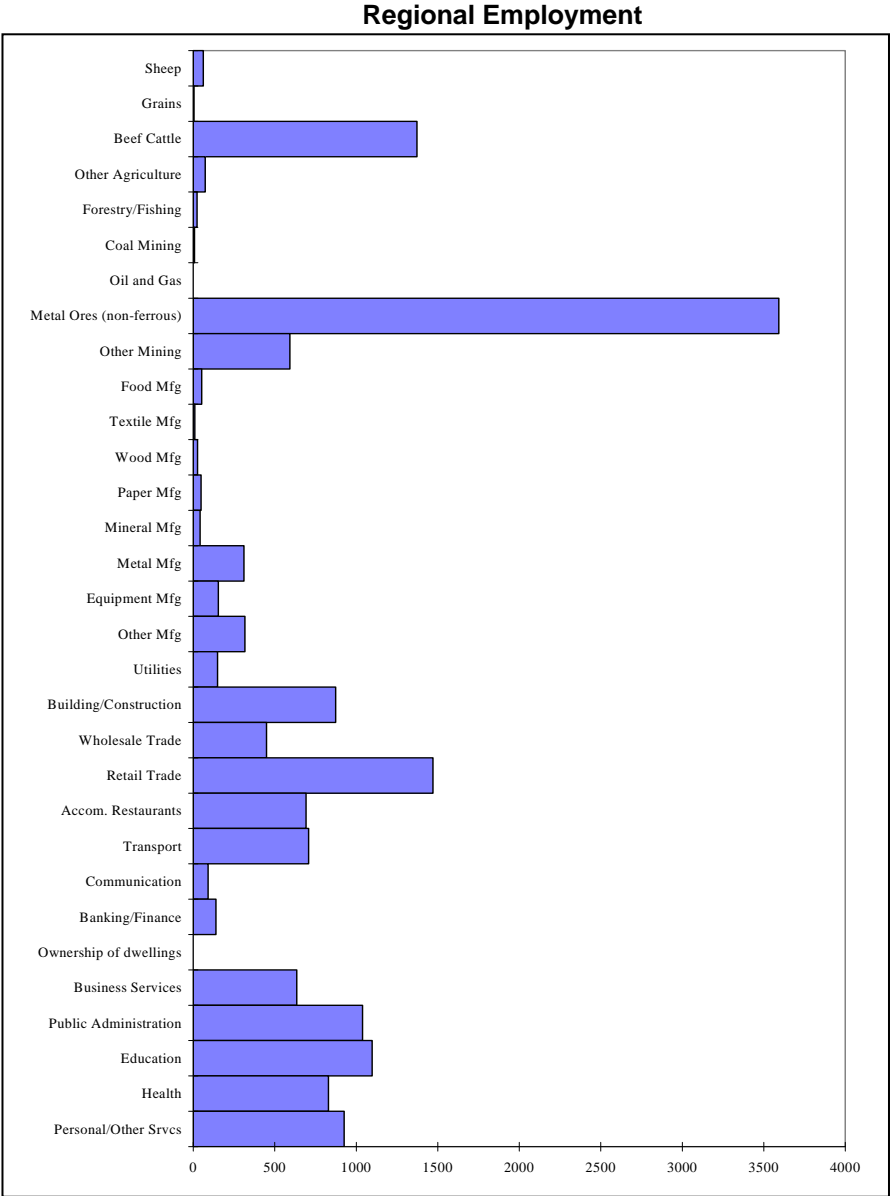
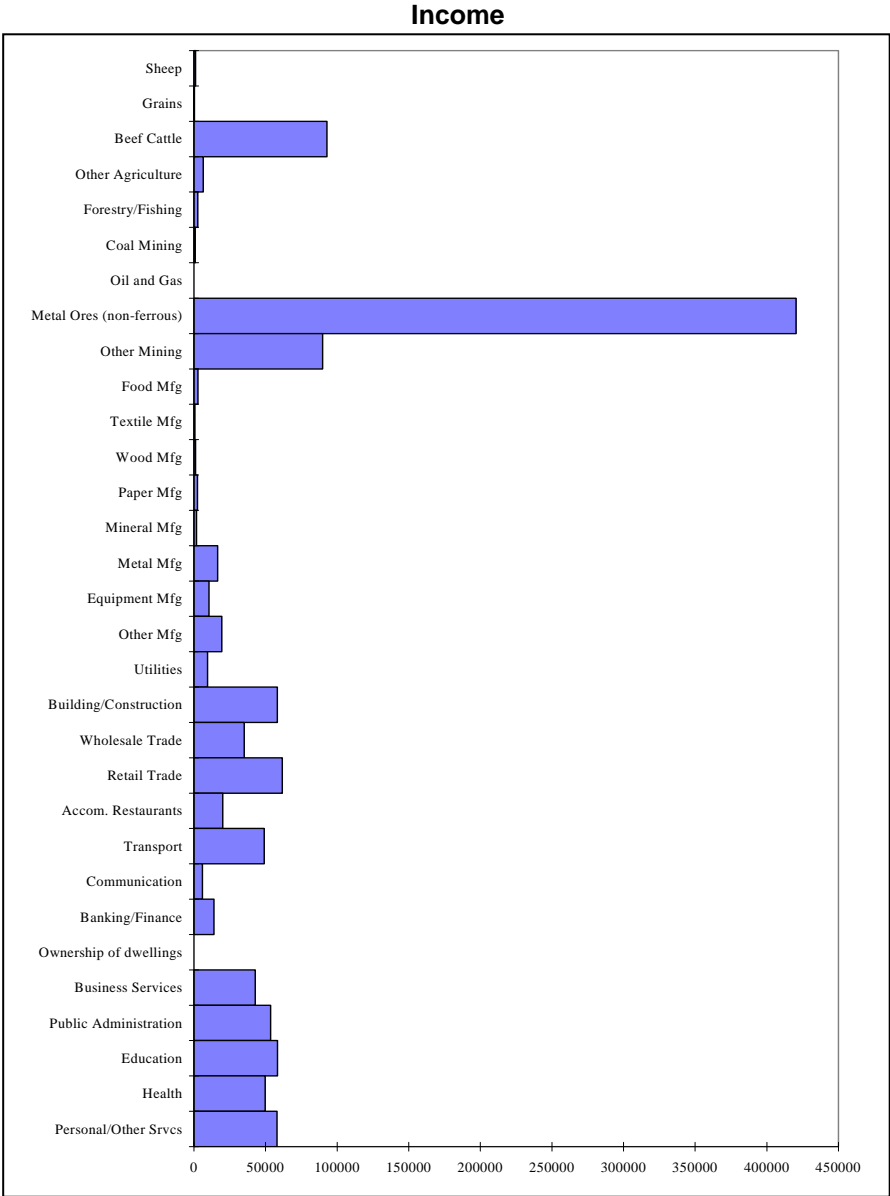
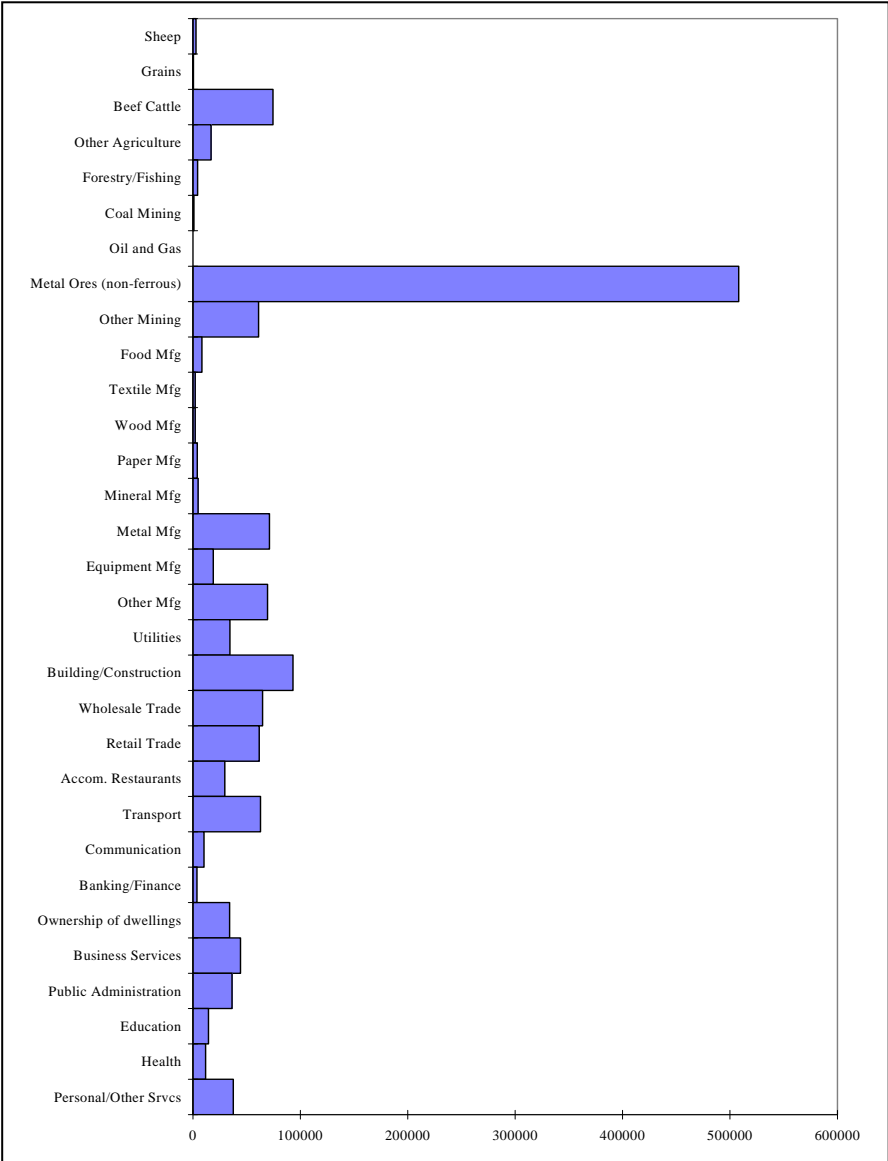
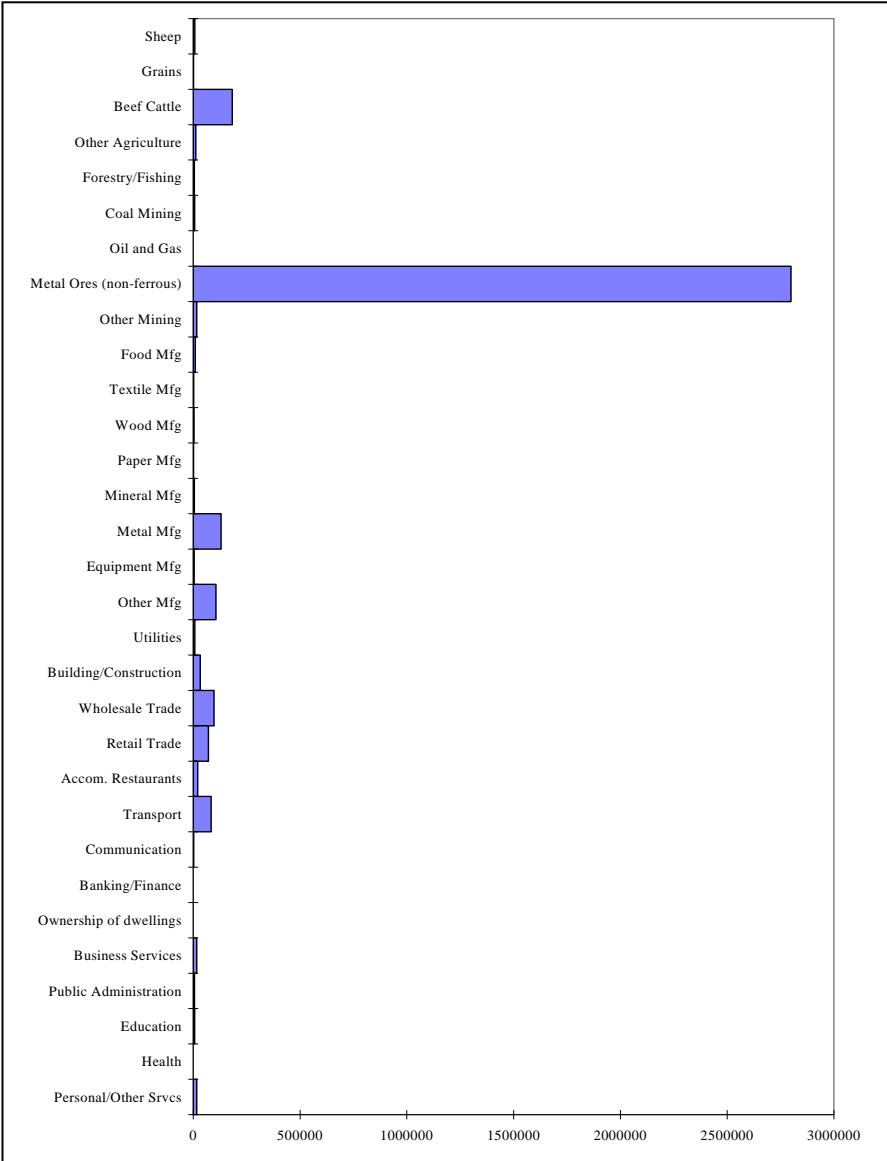


Figure A3.9.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.10 Greater Blue Mountains Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.10. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.10
Aggregated Transactions Table: Greater Blue Mountains WHA regional economy 2006(\$'000)

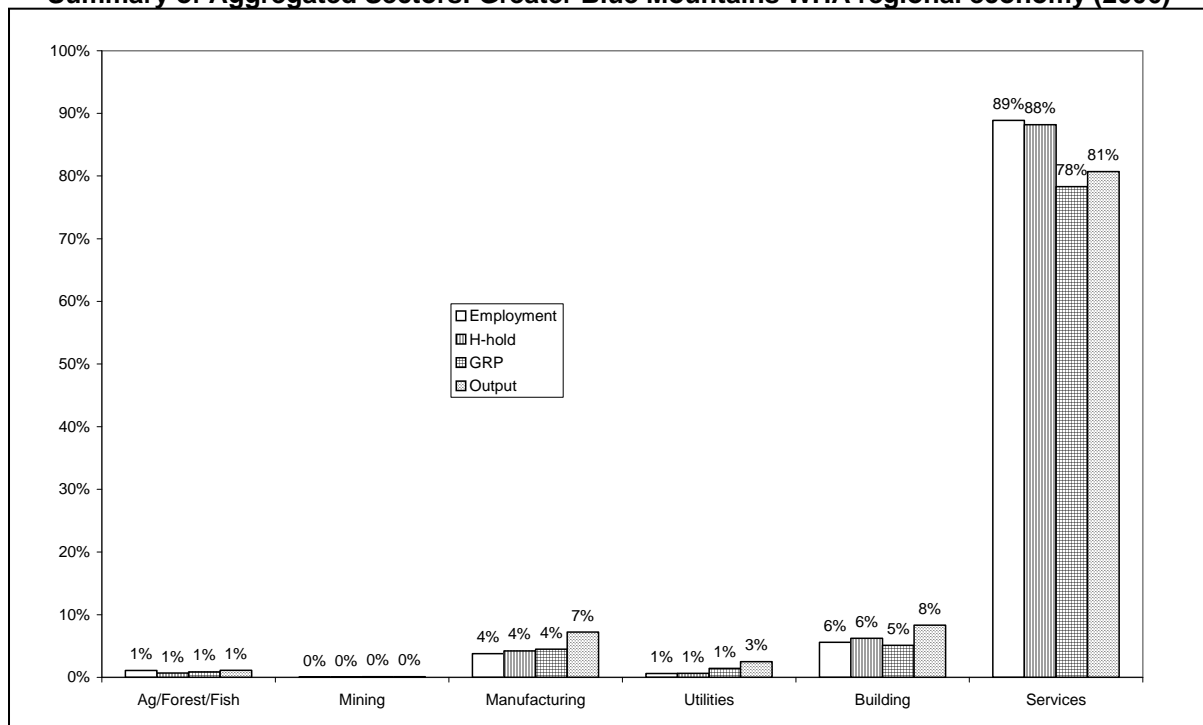
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditu re	OFD	Exports	Total
Ag, forest., fishing	883	0	664	2	55	1,937	3,540	9,403	2,667	14,033	29,642
Mining	1	1	240	1	56	40	337	37	-17	1,710	2,067
Manuf.	303	21	11,297	297	13,116	46,441	71,475	47,410	6,194	67,876	192,955
Utilities	214	14	1,190	15,258	548	12,475	29,699	18,190	-194	19,494	67,188
Building	70	17	266	798	45,044	17,340	63,535	0	134,836	23,467	221,838
Services	2,579	124	26,559	2,208	21,718	378,752	431,940	979,402	402,193	336,973	2,150,508
TOTAL	4,050	177	40,215	18,564	80,537	456,985	600,527	1,054,441	545,679	463,553	2,664,199
Household Income	7,255	414	43,536	6,465	64,475	911,499	1,033,645	0	0	0	1,033,645
OVA	5,601	793	20,943	14,230	9,101	216,503	267,172	119,526	19,294	833	406,825
Imports	12,736	683	88,261	27,929	67,726	565,521	762,856	992,295	103,664	32,863	1,891,678
TOTAL	29,642	2,067	192,955	67,188	221,838	2,150,508	2,664,199	2,166,263	668,637	497,249	5,996,347
Employment	178	6	612	97	911	14,432	16,236				

Gross regional product (GRP) for the regional economy is estimated at \$1 439 million, comprising \$1 033 million to households as wages and salaries (including payments to self employed persons and employers) and \$406 million in OVA.

Total employed in the region is 16 236 people.

Compared to the NSW economy (Figure A3.17.1), the regional economy (Figure A3.10.1) has a greater relative reliance on the service sectors and a lower relative reliance on the agriculture/forestry and fishing sectors, mining sectors, manufacturing sectors, utilities sectors and building sectors

Figure A3.10.1
Summary of Aggregated Sectors: Greater Blue Mountains WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.10.2 to A3.10.4. In the agriculture, forestry and fishing sectors, the dominant sector is the Other Agriculture Sector comprising mainly plant nurseries. The main manufacturing sectors are the *Paper Manufacturing Sectors* (mainly recorded media and publishing) and *Textile Manufacturing Sectors* (mainly clothing, textile products and leather products). The *Retail Trade Sector*, *Business Services Sectors*, and *Personal/Other Services Sectors* are the main services sectors in the region.

Figure A3.10.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

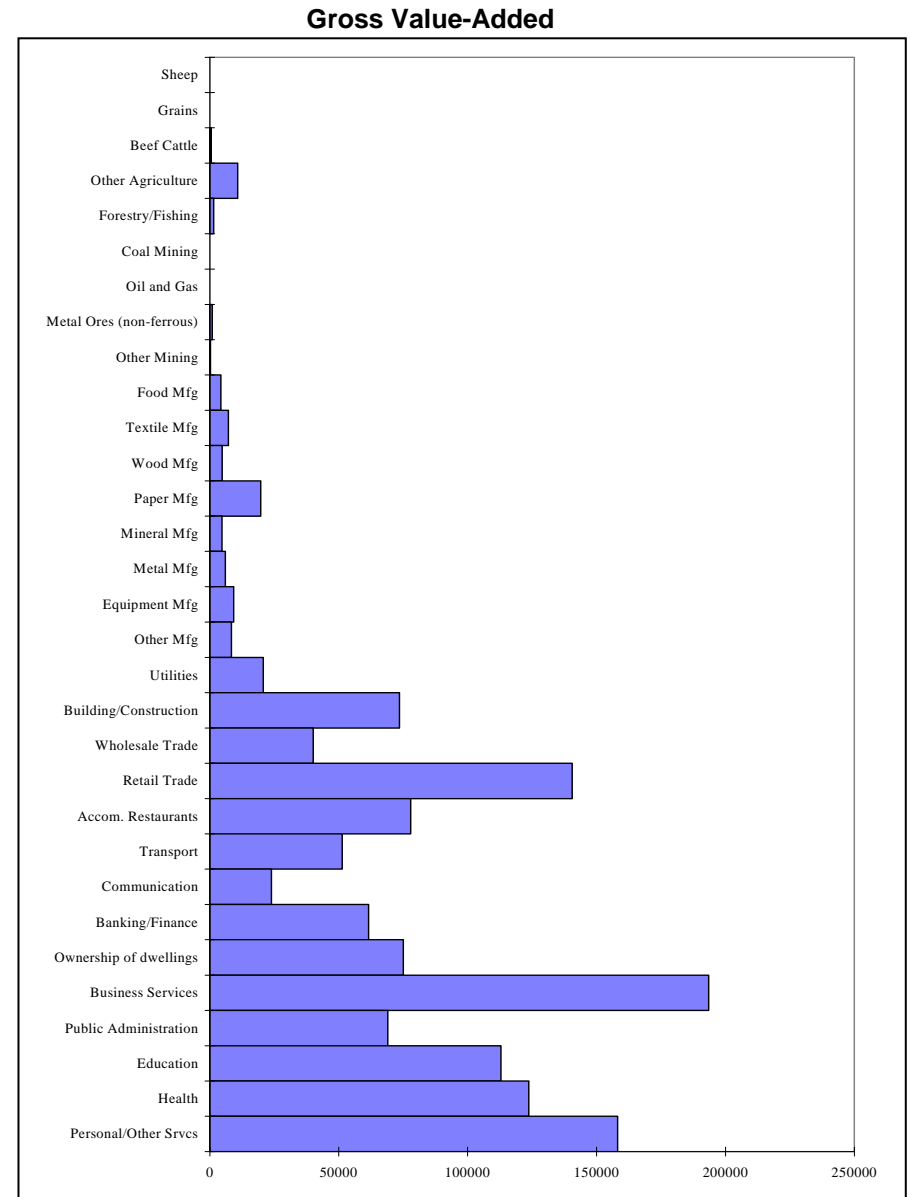
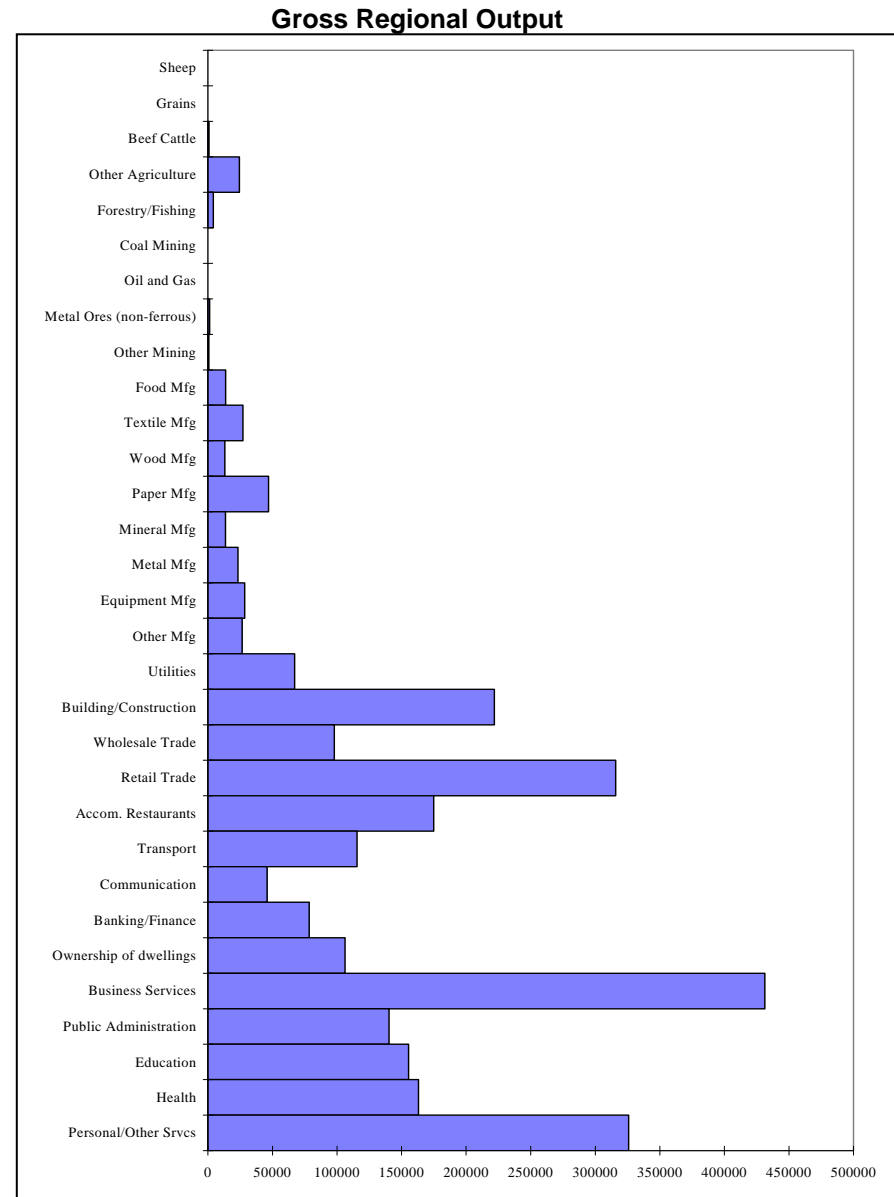
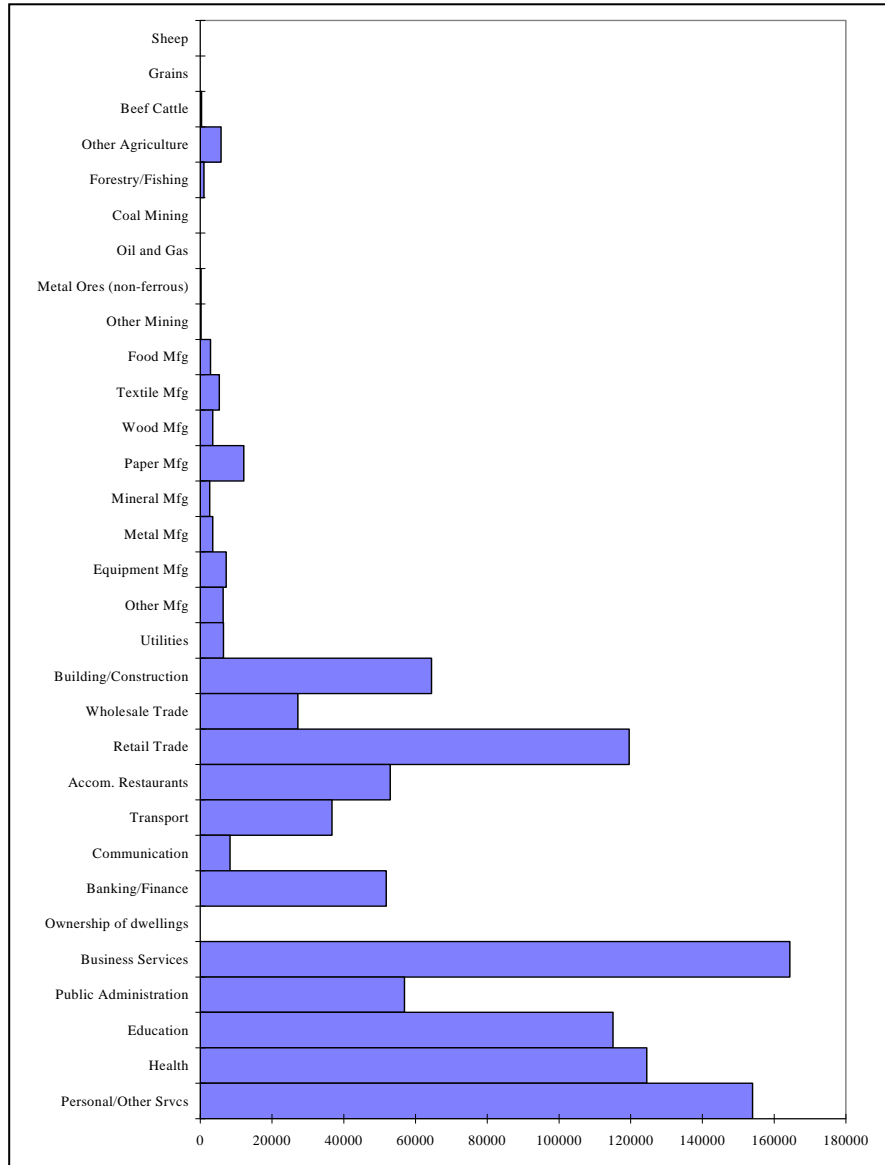


Figure A3.10.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

Income



Regional Employment

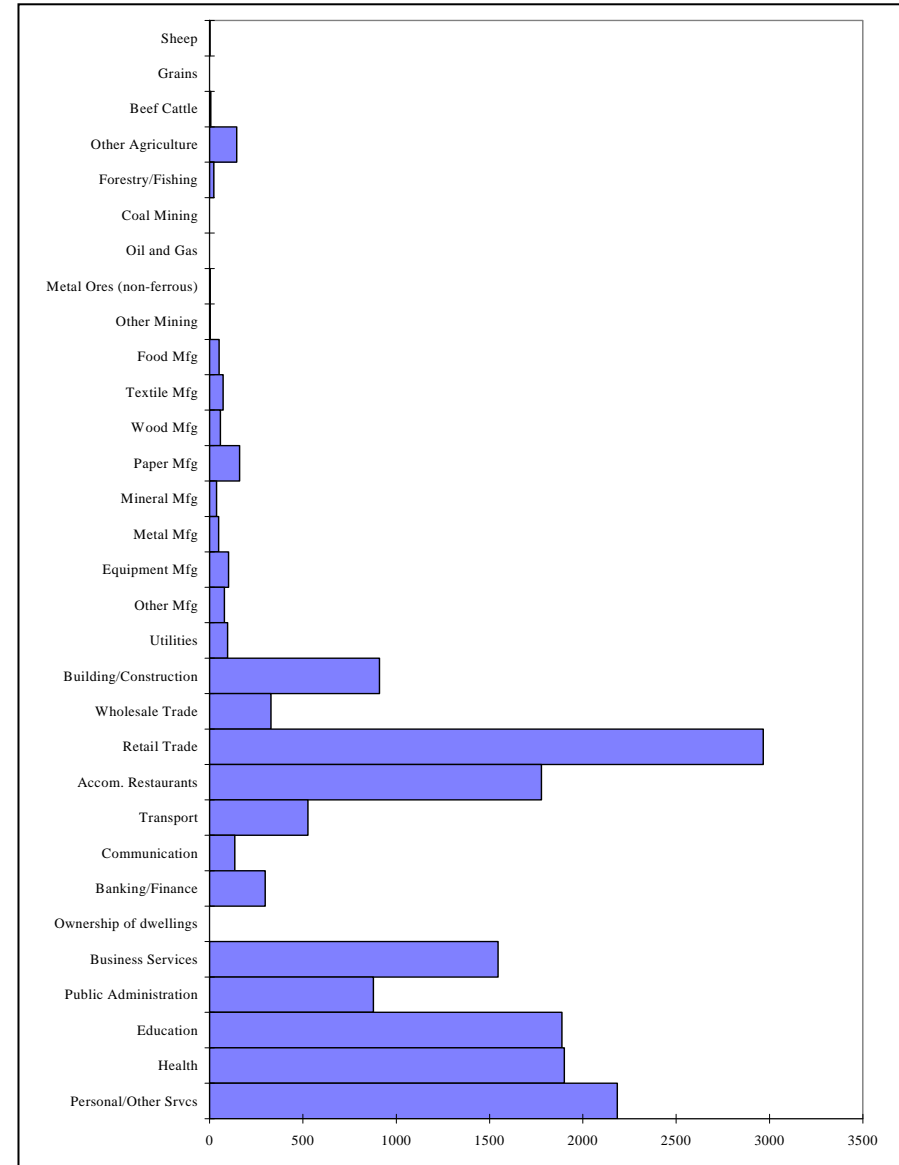
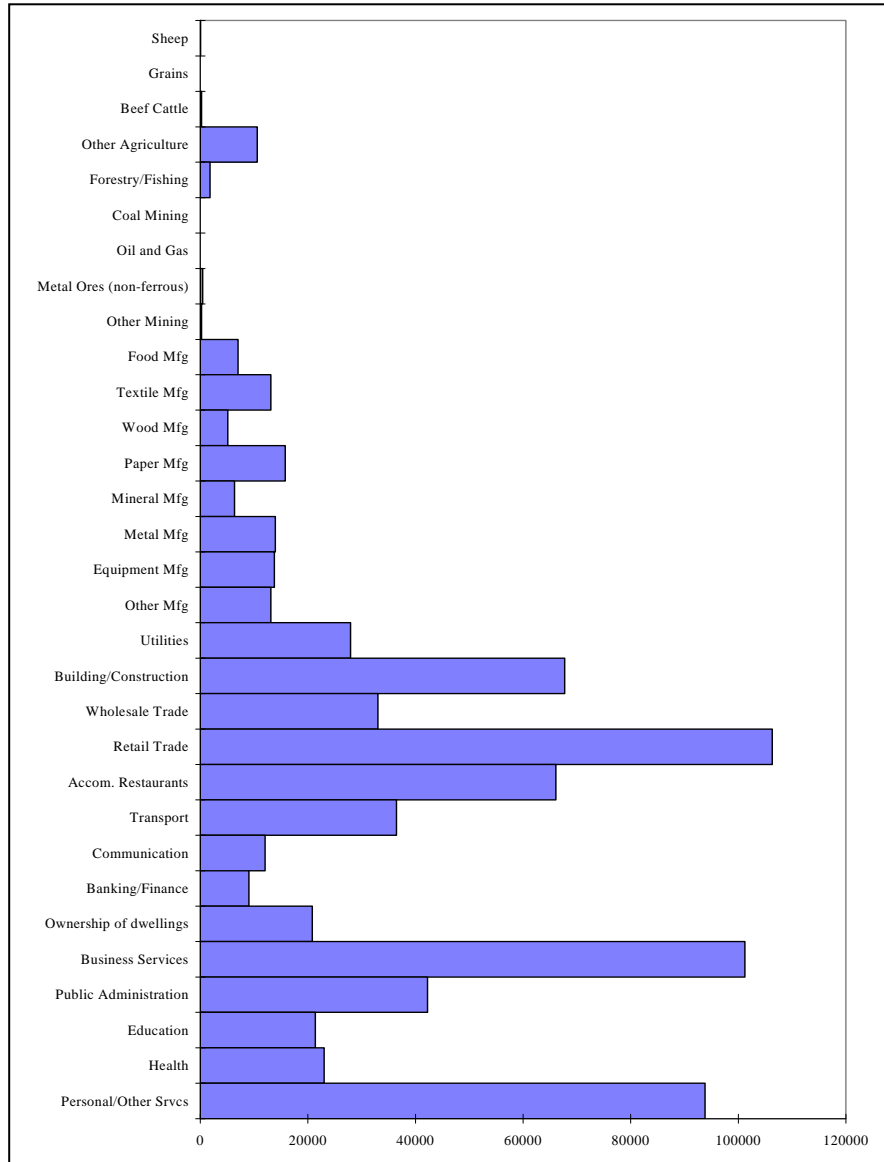
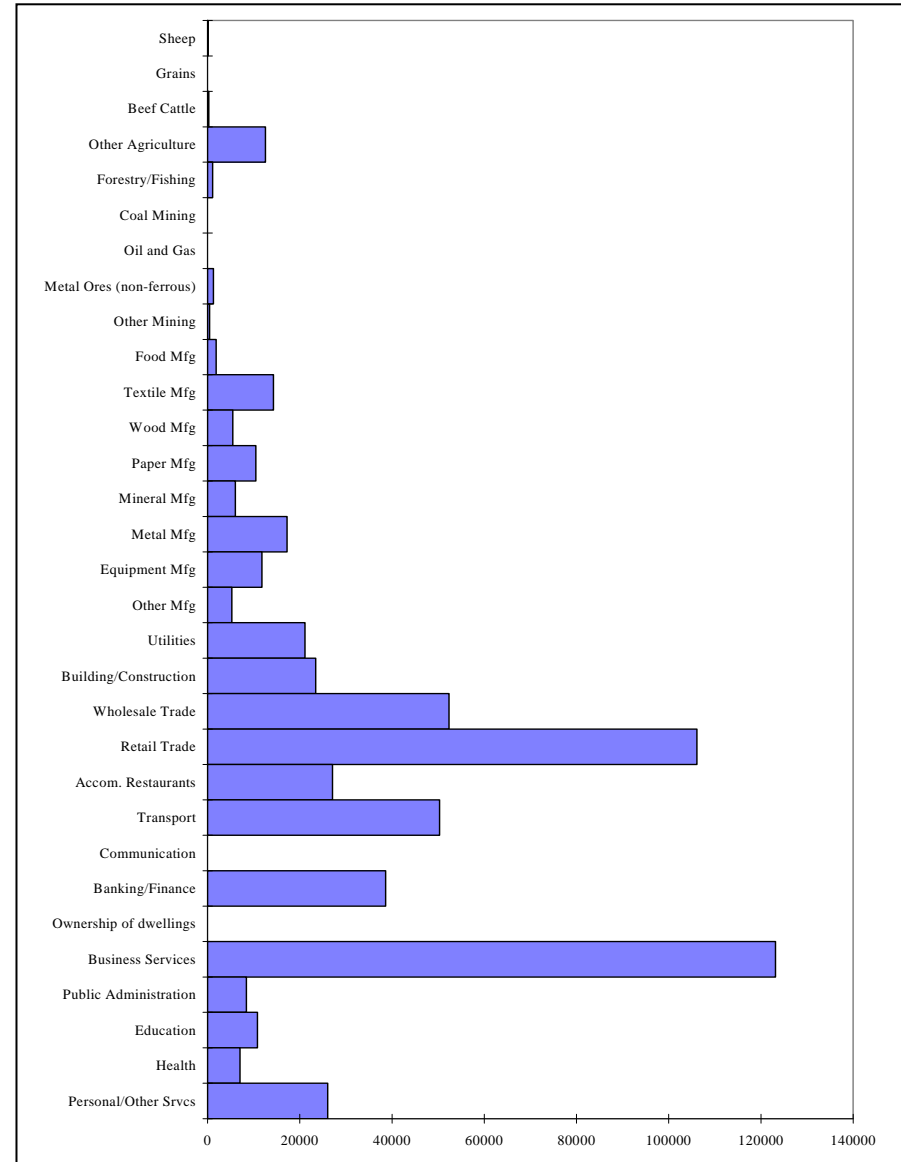


Figure A3.10.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.11 Purnulu Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.11. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.11
Aggregated Transactions Table: Purnululu WHA regional economy 2006(\$'000)

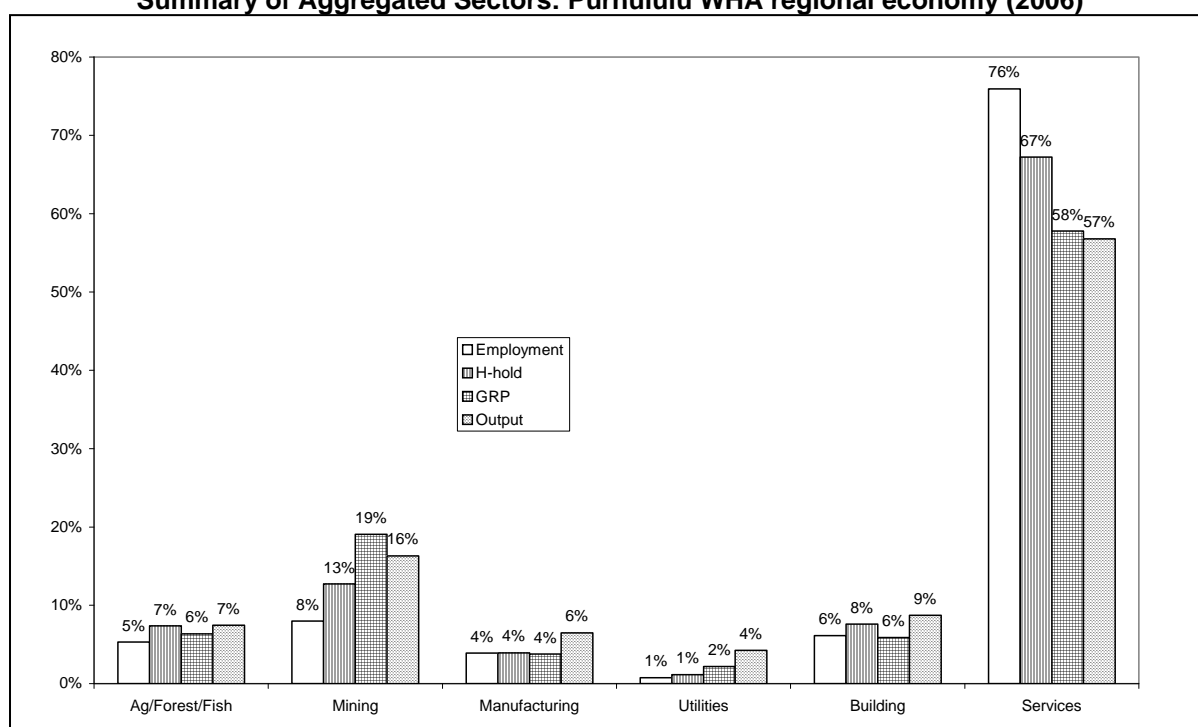
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	15,758	147	3,364	3	139	2,612	22,022	4,728	39,983	141,506	208,239
Mining	24	29,690	11,563	27	712	290	42,306	129	-6,979	419,936	455,391
Manuf.	6,692	9,129	9,675	298	10,697	25,100	61,591	7,905	13,240	98,063	180,799
Utilities	1,121	1,757	2,436	54,226	1,163	13,056	73,758	7,320	814	36,642	118,535
Building	678	5,028	250	1,065	38,441	11,986	57,448	0	151,932	34,028	243,408
Services	16,016	30,013	16,216	2,202	17,814	224,188	306,450	261,551	529,562	488,203	1,585,766
TOTAL	40,290	75,764	43,503	57,821	68,966	277,231	563,575	281,633	728,552	1,218,378	2,792,138
Household Income	61,701	106,598	32,803	9,600	63,768	563,445	837,914	0	0	0	837,914
OVA	28,770	164,768	20,985	21,368	20,094	259,128	515,113	29,314	39,366	1,904	585,698
Imports	77,479	108,262	83,507	29,746	90,580	485,962	875,536	242,134	226,547	220,840	1,565,056
TOTAL	208,239	455,391	180,799	118,535	243,408	1,585,766	2,792,138	553,082	994,464	1,441,122	5,780,807
Employment	706	1,062	520	99	814	10,091	13,292				

Gross regional product (GRP) for the regional economy is estimated at \$1 422 million, comprising \$837 million to households as wages and salaries (including payments to self employed persons and employers) and \$585 million in OVA.

Total employed in the region is 13 292 people.

Compared to the WA economy (Figure A3.20.1), the regional economy (Figure A3.11.1) has a greater relative reliance on the agriculture/forestry/fishing sectors, mining sectors and the service sectors (in relation to employment and income only). The regional economy has a lower relative reliance on the manufacturing sectors, utilities, building sectors and the services sectors (gross regional product and output).

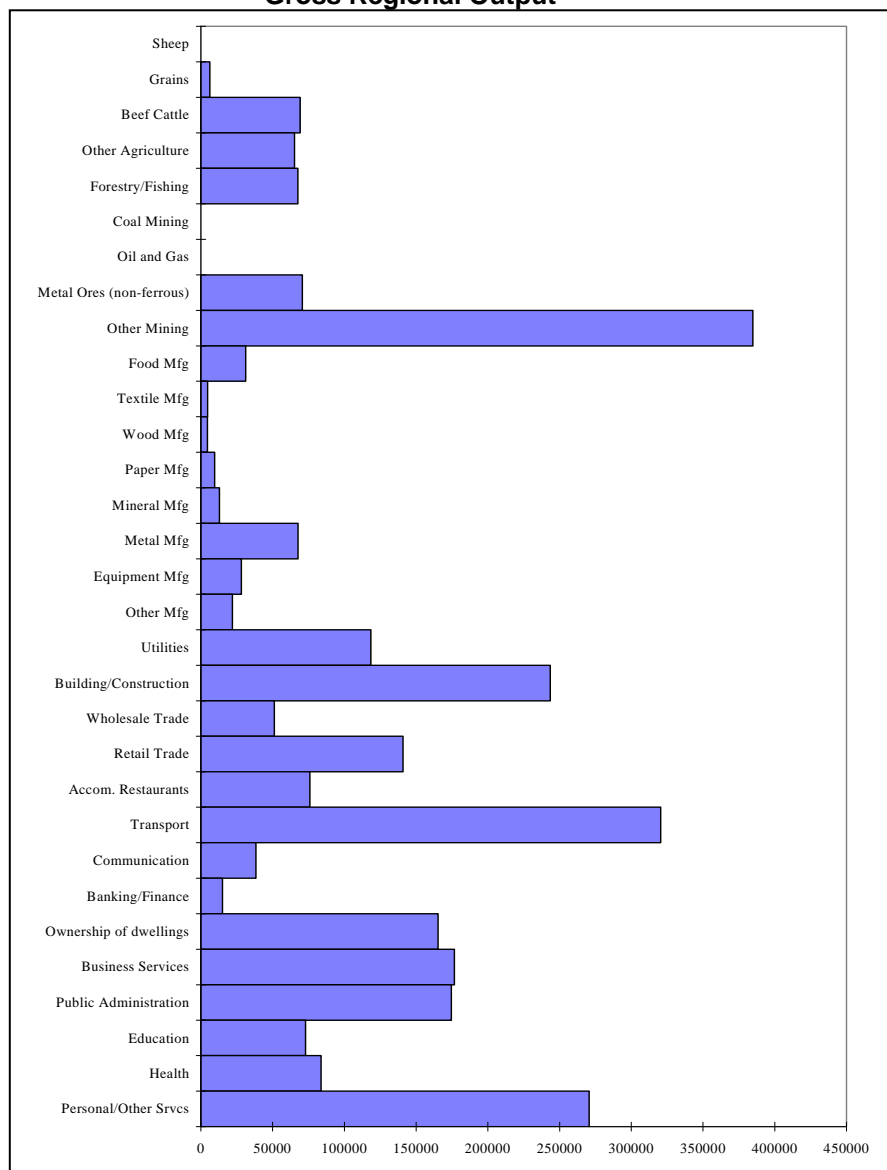
Figure A3.11.1
Summary of Aggregated Sectors: Purnululu WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.11.2 to A3.11.4. In the agriculture, forestry and fishing sectors, the dominant sectors *Beef Cattle Sector*, *Other Agriculture Sector* (comprising mainly vegetable growing and sugar cane) and the *Forestry and Fishing Sectors* (mainly commercial fishing). The main mining sectors are the *Other Mining Sectors*. The main manufacturing sectors are the *Metal Manufacturing Sectors* (mainly basic non-ferrous metals manufacturing) and *Equipment Manufacturing Sectors* (mainly aircraft, agricultural and other machinery). The *Transport Sector* and *Personal/Other Services Sectors* are important sectors in the region.

Figure A3.11.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

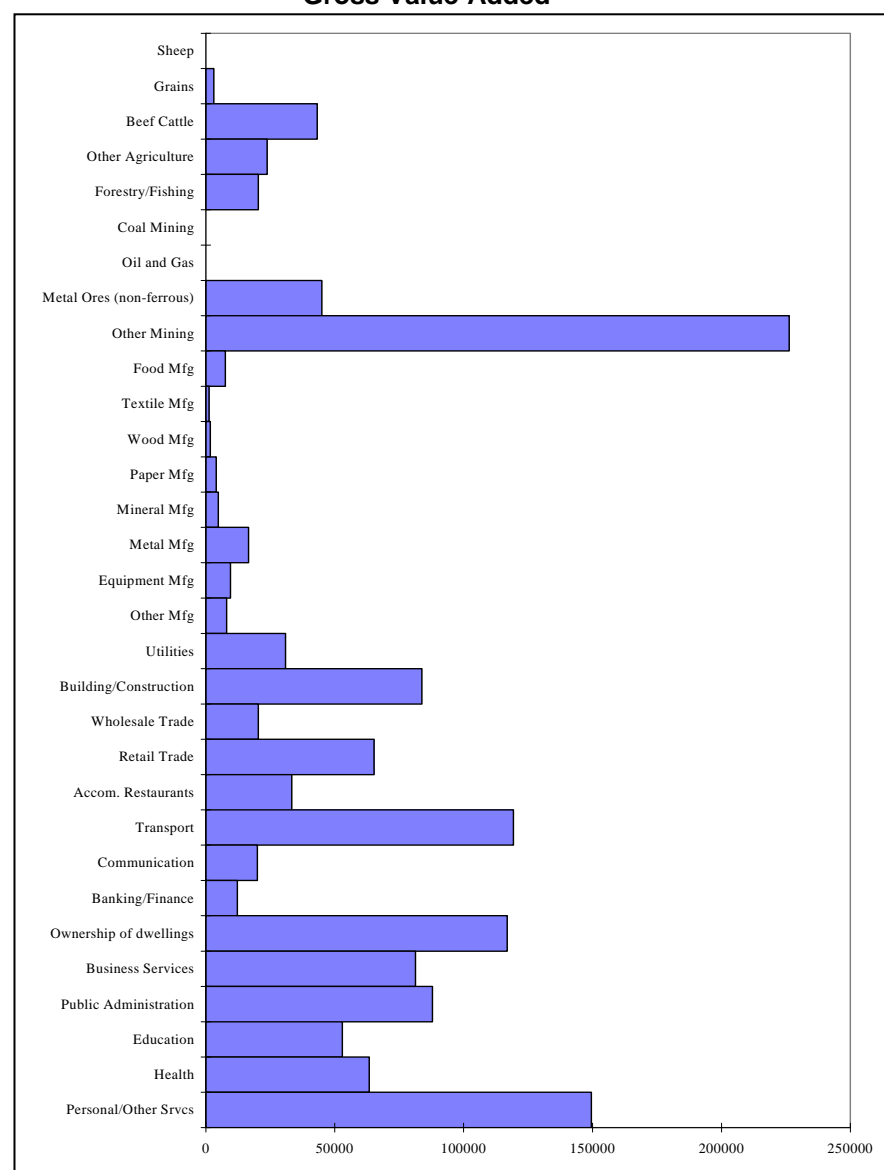


Figure A3.11.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

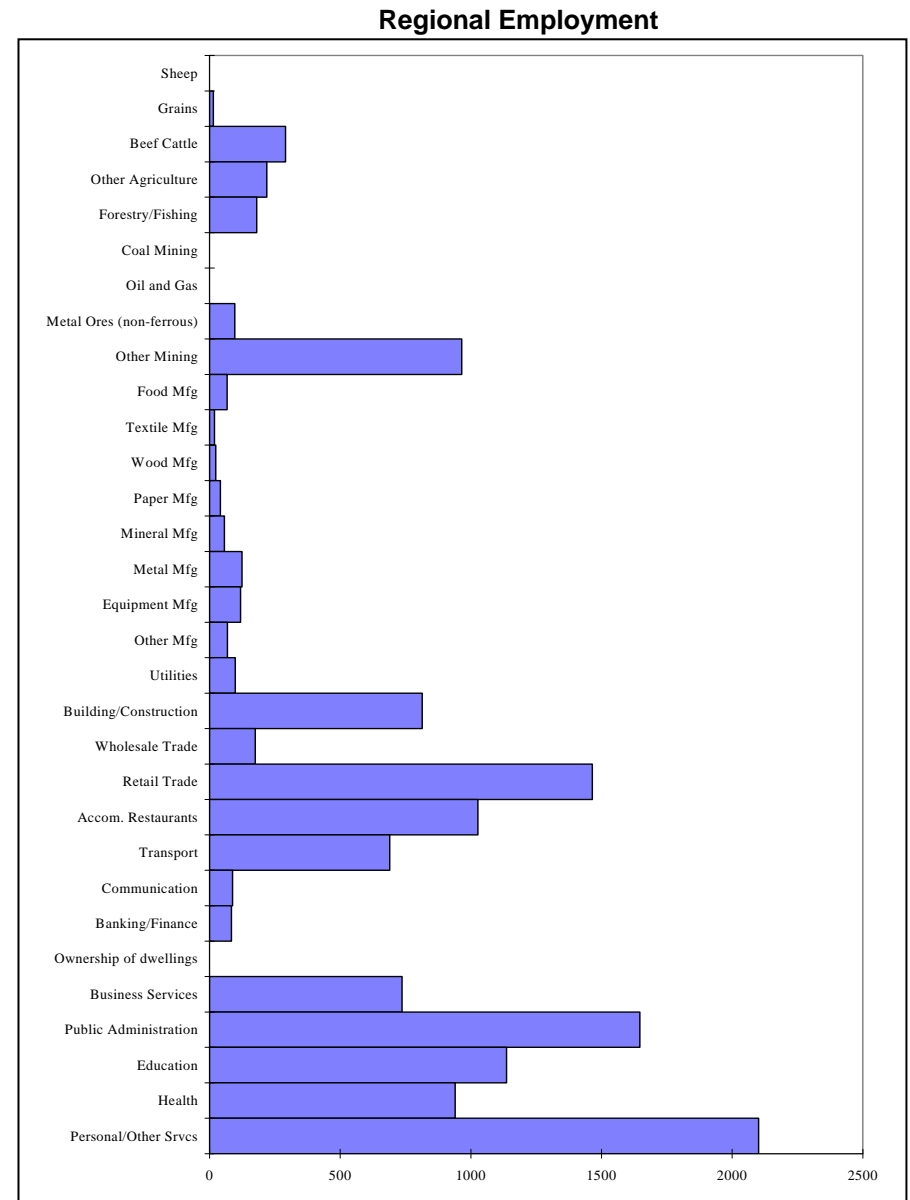
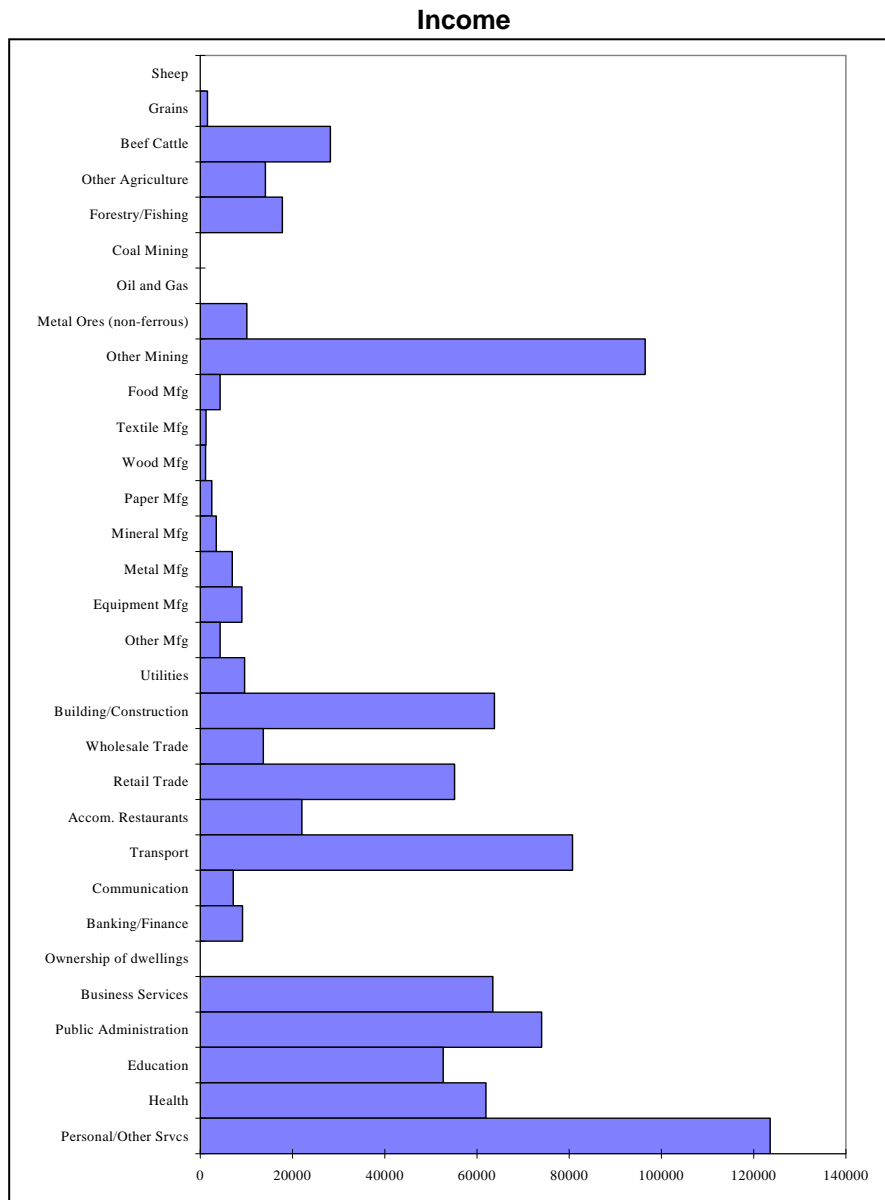
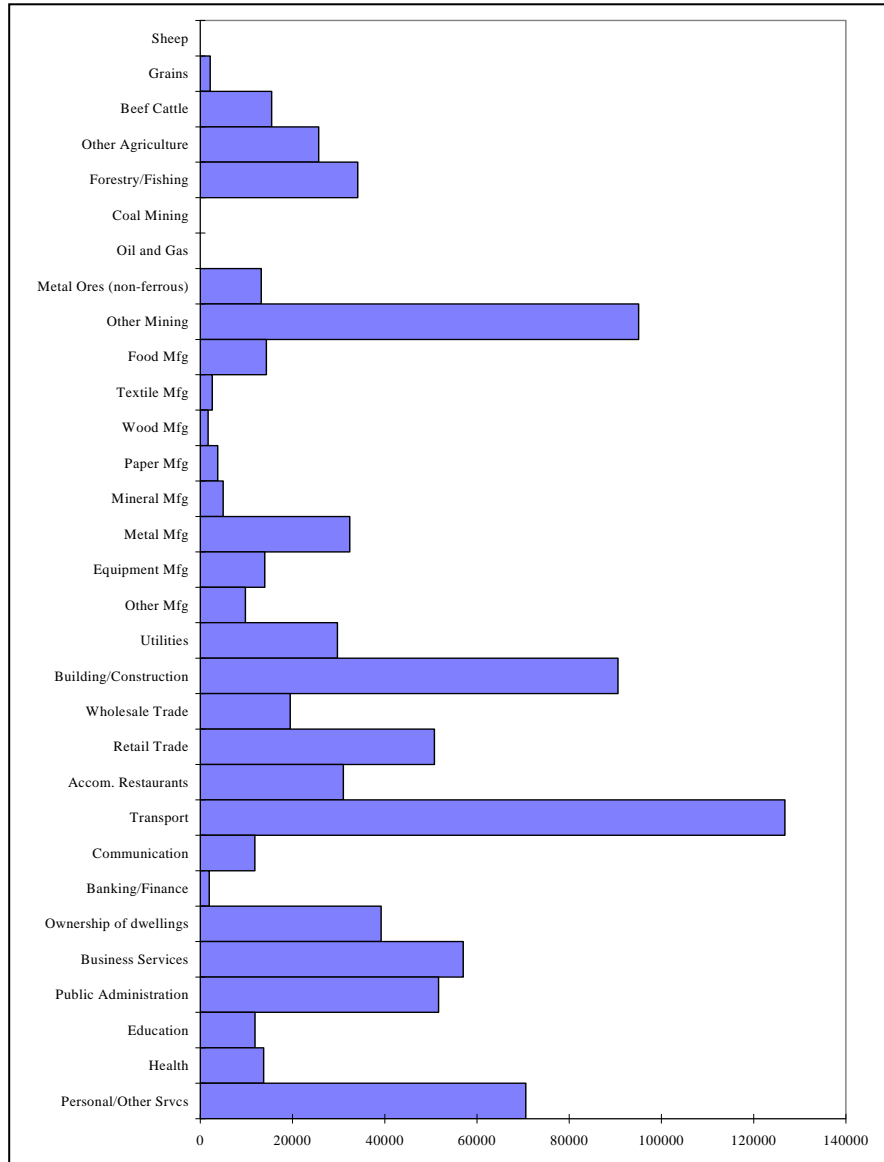
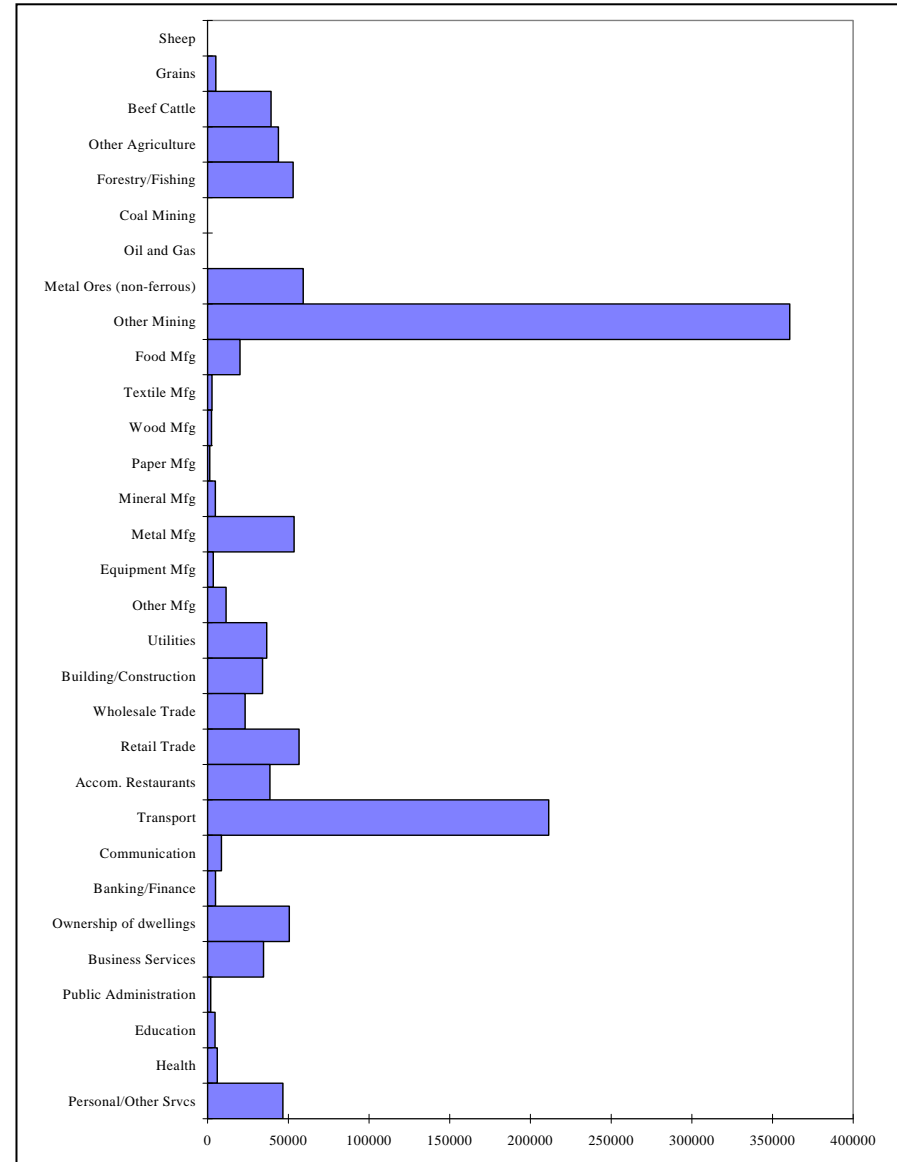


Figure A3.11.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.12 Uluru-Kata Tjuta Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.12. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.12
Aggregated Transactions Table: Uluru-Kata Tjuta National Park WHA Regional Economy
2006(\$'000)

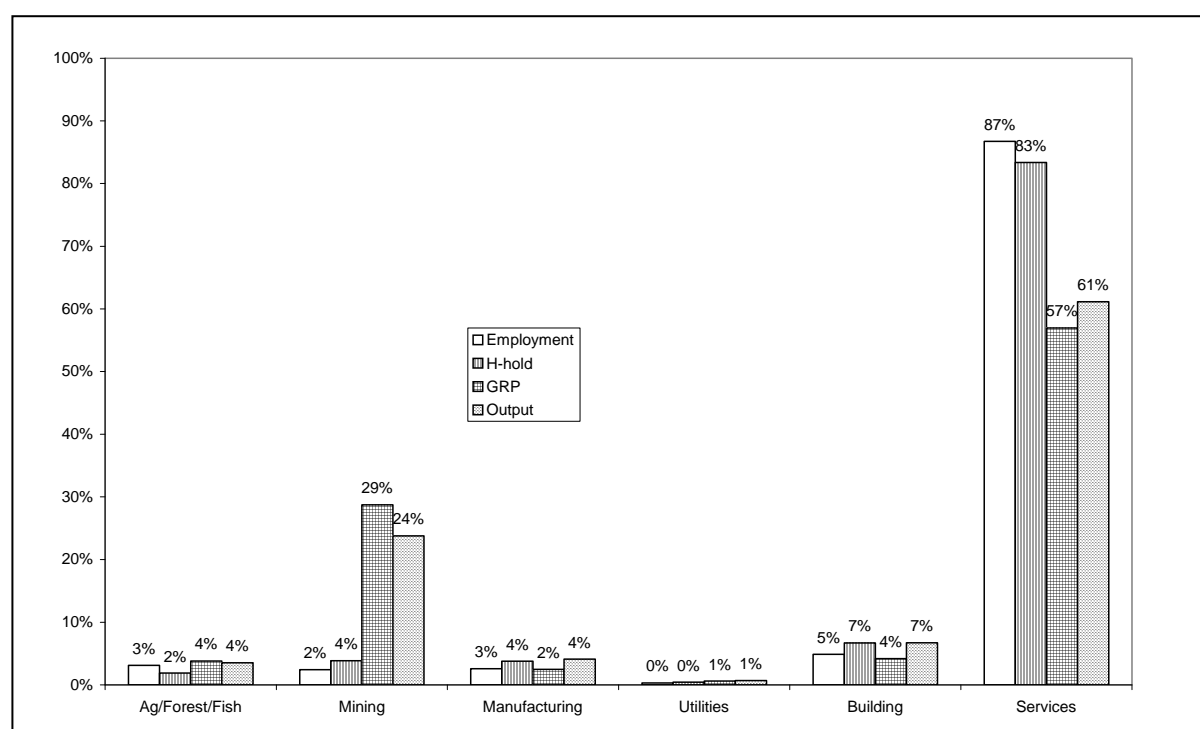
	Ag. forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditu re	OFD	Exports	Total
Ag. forest., fishing	5,326	145	1,733	1	55	1,381	8,640	2,524	19,718	112,825	143,706
Mining	3	91,769	2,747	23	518	490	95,550	153	14,161	860,237	970,100
Manuf.	985	5,704	8,551	161	11,140	29,578	56,118	14,823	7,721	89,814	168,476
Utilities	403	1,613	282	602	308	4,998	8,205	3,311	193	17,115	28,824
Building	431	4,176	196	449	42,134	16,526	63,911	0	148,793	62,035	274,740
Services	8,479	33,447	17,723	1,216	20,601	308,858	390,324	539,088	469,288	1,096,153	2,494,853
TOTAL	15,626	136,853	31,230	2,452	74,756	361,831	622,748	559,899	659,874	2,238,177	4,080,698
Household Income	18,614	37,781	37,207	4,282	65,847	820,413	984,145	0	0	0	984,145
OVA	65,777	599,326	17,899	9,423	27,052	442,377	1,161,854	49,598	19,780	854	1,232,086
Imports	43,689	196,140	82,139	12,667	107,084	870,232	1,311,952	415,583	234,744	564,415	2,526,693
TOTAL	143,706	970,100	168,476	28,824	274,740	2,494,853	4,080,698	1,025,080	914,397	2,803,446	8,823,622
Employment	495	383	407	47	771	13,733	15,835				

Gross regional product (GRP) for the regional economy is estimated at \$2 216 million, comprising \$984 million to households as wages and salaries (including payments to self employed persons and employers) and \$1 232 million in OVA.

Total employed in the region is 15 835 people.

Compared to the Northern Territory economy (Figure A3.23.1), the regional economy (Figure A3.12.1) has a greater relative reliance on the agriculture/forestry/fishing sectors, mining sectors and the service sectors. The regional economy has a lower relative reliance on the manufacturing sectors, utilities and building sectors.

Figure A3.12.1
Summary of Aggregated Sectors: Uluru-Kata Tjuta National Park WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.12.2 to A3.12.4. In the agriculture, forestry and fishing sectors, the dominant sector is the *Beef Cattle Sector*. The main mining sector are the *Non-ferrous Metal Ore Mining Sector* (mainly gold and bauxite). The main manufacturing sector is the *Equipment Manufacturing Sectors* (mainly basic non-ferrous metals manufacturing) and *Equipment Manufacturing Sectors* (mainly scientific equipment and other machinery). *Personal/Other Services sectors and the Public Administration Sector* are important tertiary sectors of the economy.

Figure A3.12.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

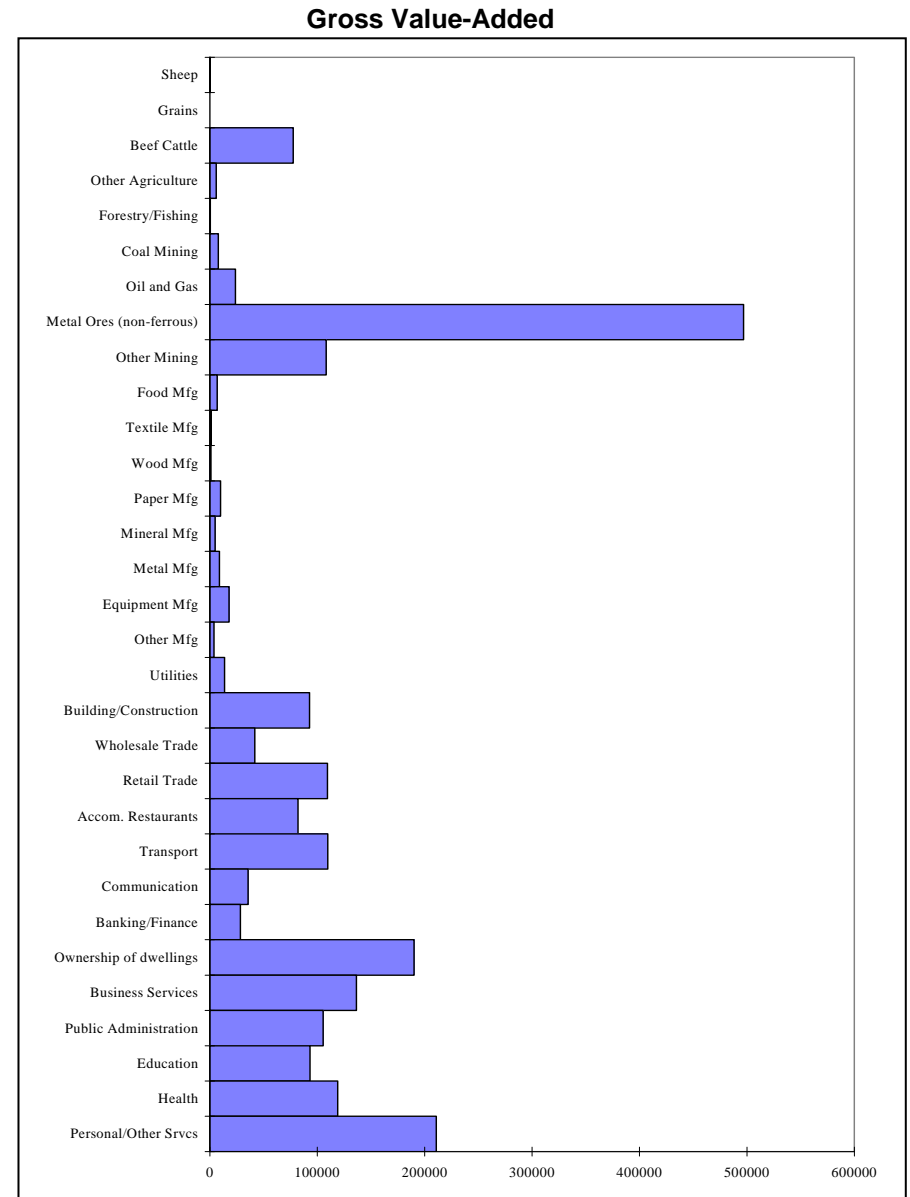
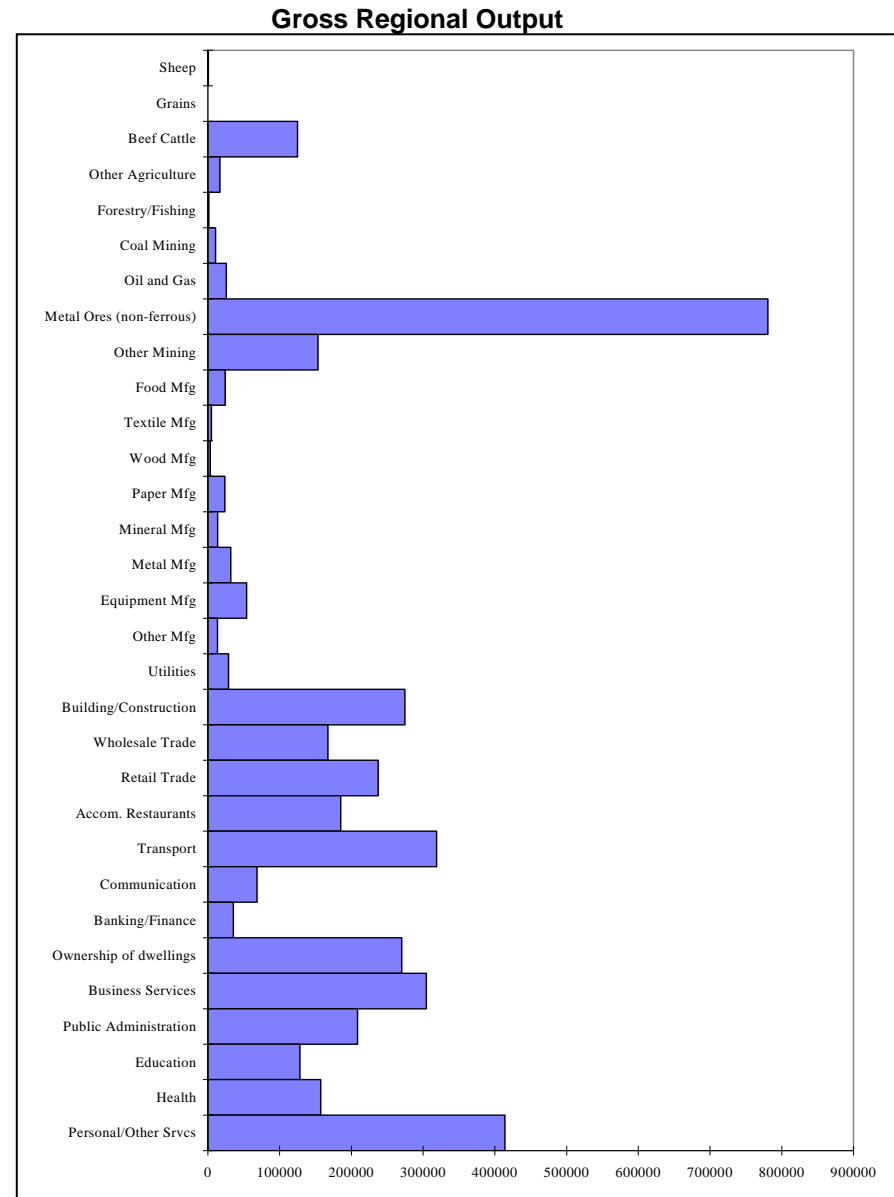
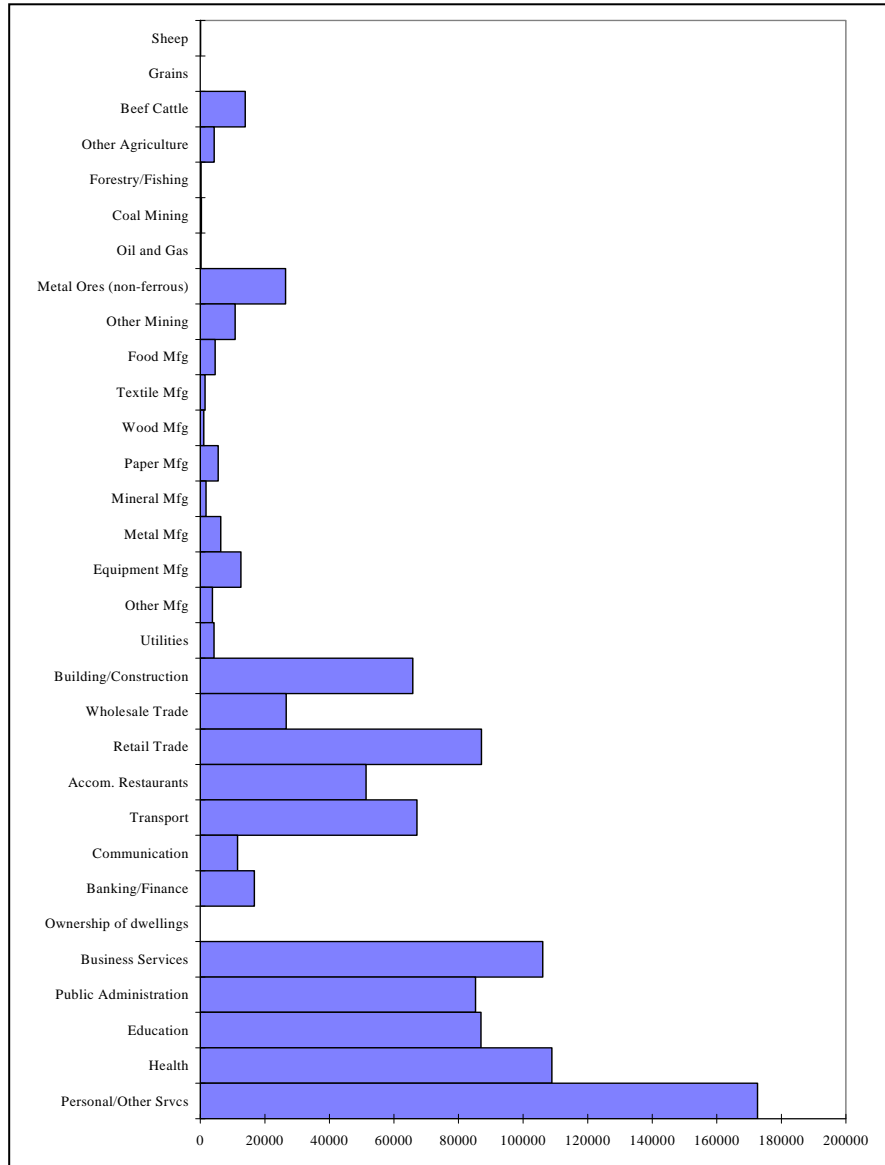


Figure A3.12.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

Income



Regional Employment

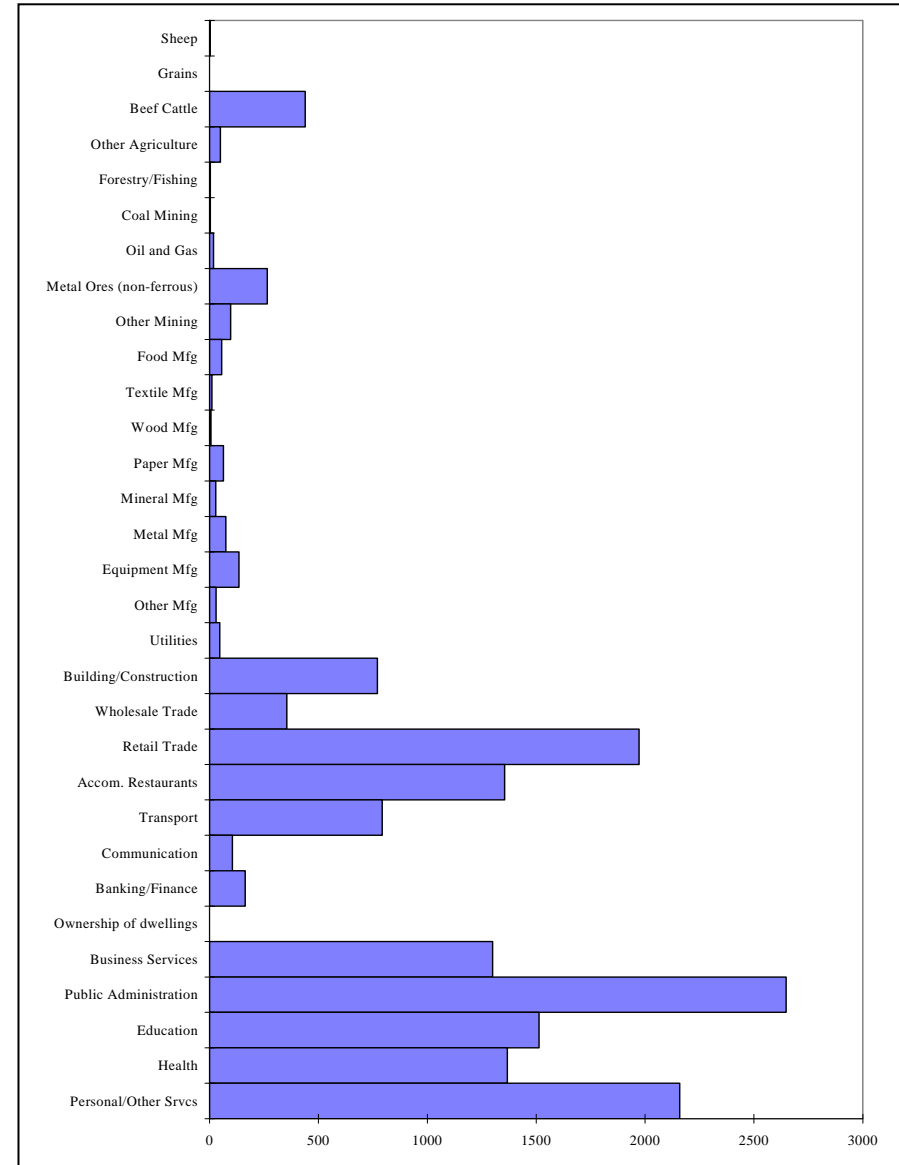
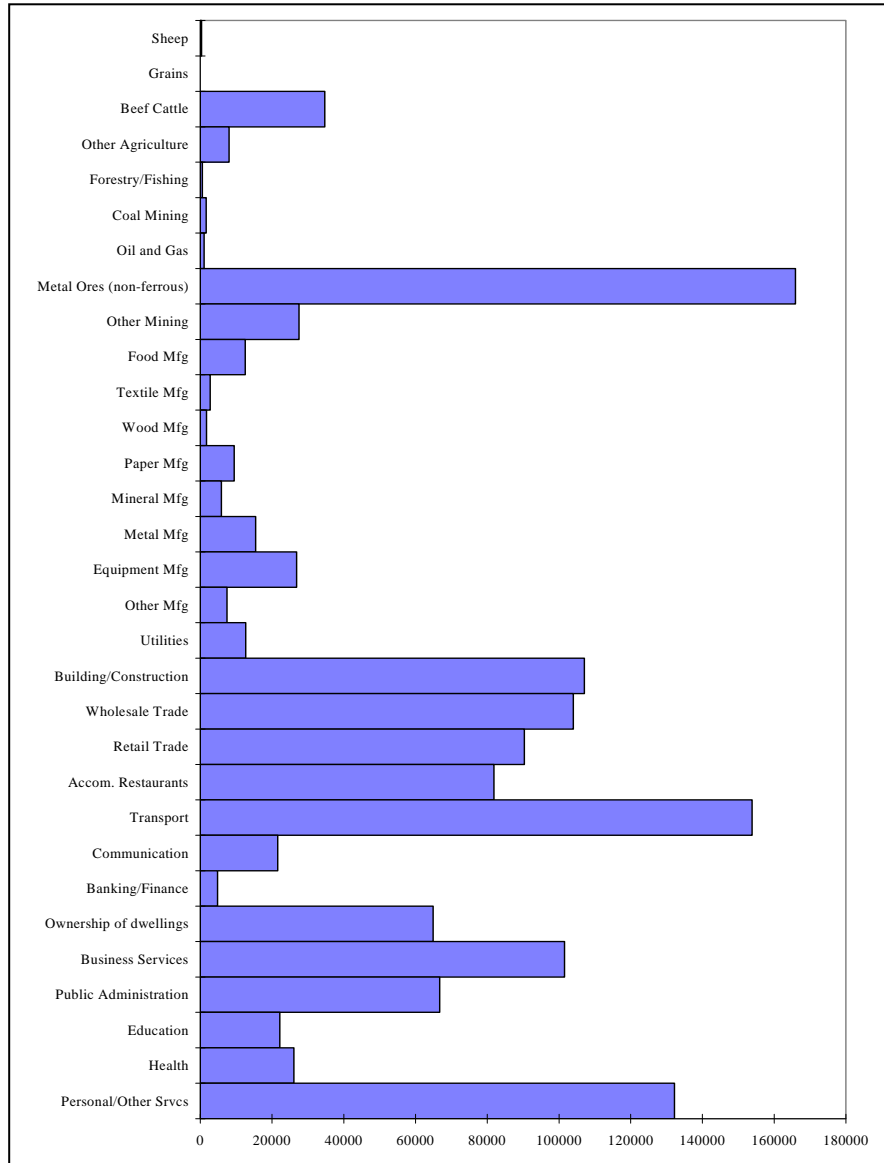
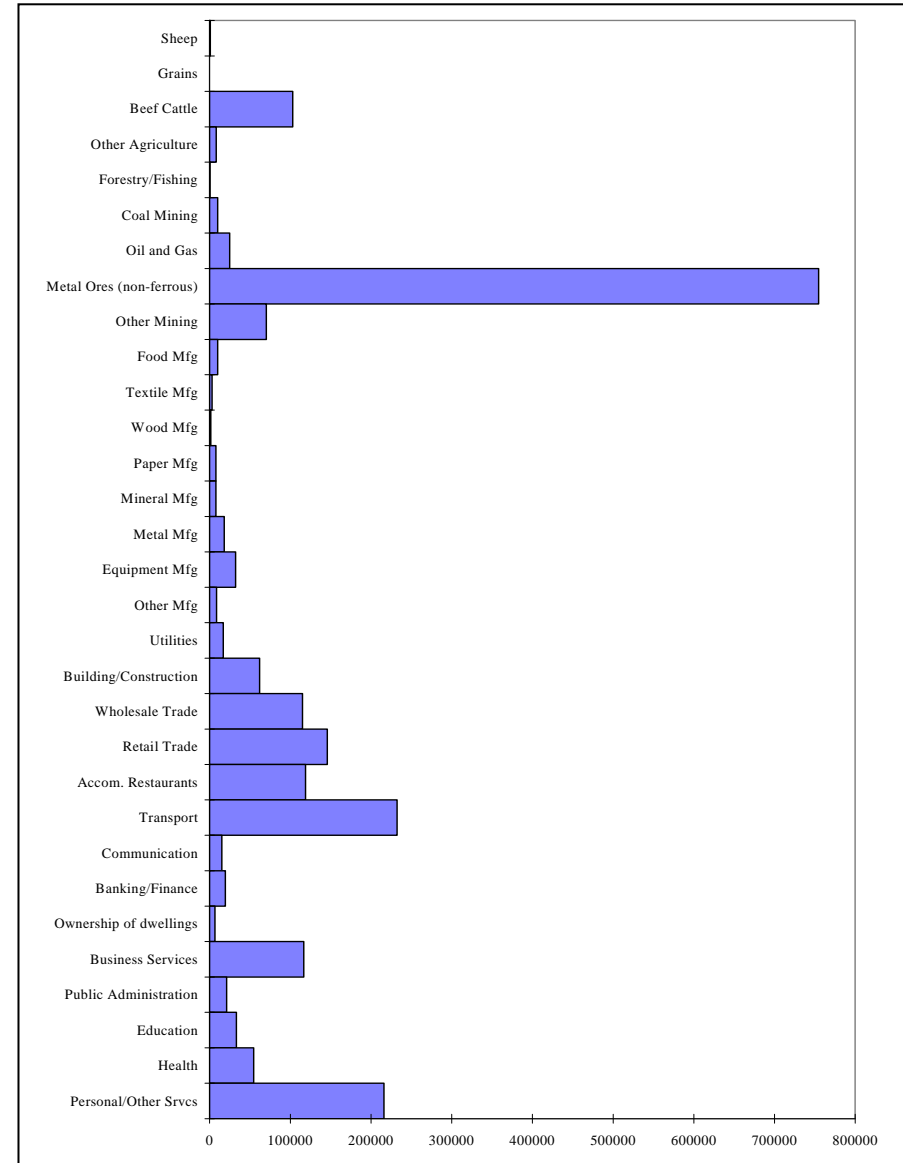


Figure A3.12.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.13 Kakadu Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.13. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.13
Aggregated Transactions Table: Kakadu National Park WHA regional economy 2006(\$'000)

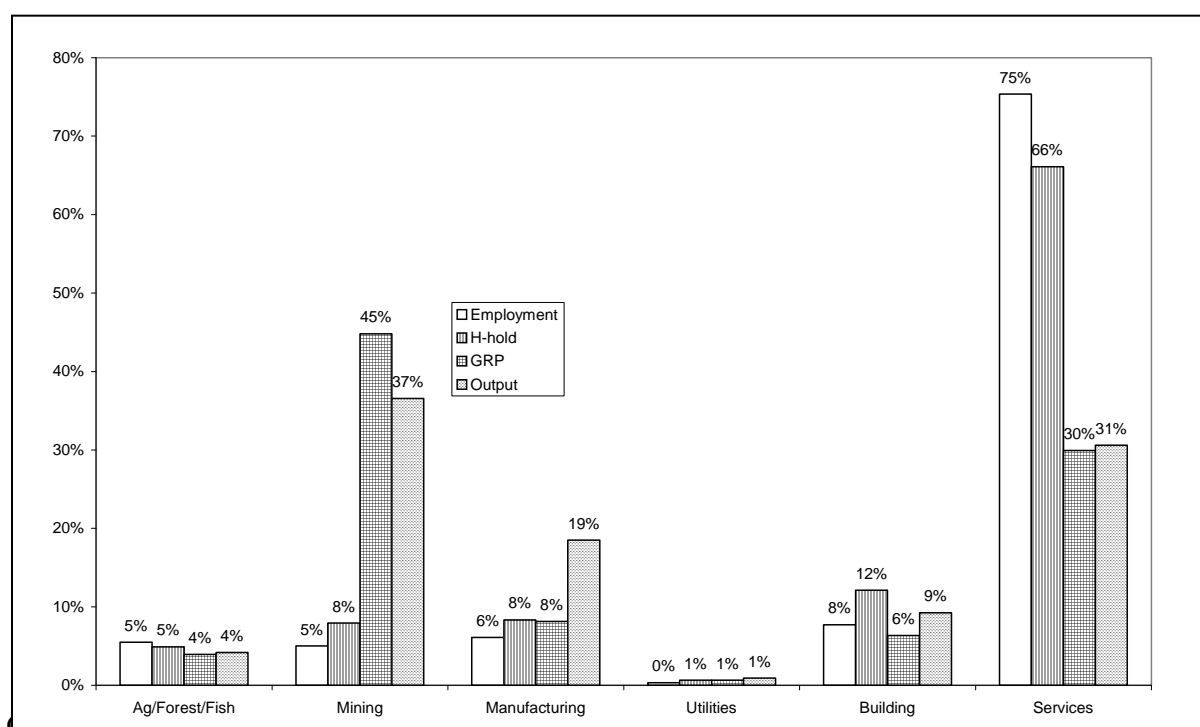
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	19,892	1,094	5,080	2	468	3,010	29,545	37,746	31,175	241,959	340,425
Mining	33	291,985	415,565	80	3,137	579	711,381	1,210	49,665	2,204,819	2,967,074
Manuf.	7,144	16,345	73,948	238	21,662	29,141	148,478	48,644	-2,191	1,307,296	1,502,227
Utilities	695	9,891	7,139	5,568	1,285	4,733	29,312	12,726	-88	32,788	74,738
Building	1,896	27,778	1,770	1,458	137,669	67,650	238,221	0	370,429	140,792	749,442
Services	14,715	59,780	39,388	1,614	42,484	192,242	350,224	1,394,848	586,641	152,081	2,483,794
TOTAL	44,375	406,873	542,891	8,961	206,706	297,355	1,507,161	1,495,174	1,035,630	4,079,735	8,117,701
Household Income	70,068	113,752	119,299	9,330	173,570	947,020	1,433,039	0	0	0	1,433,039
OVA	98,578	1,798,555	227,650	18,629	97,280	330,366	2,571,058	230,966	31,044	1,557	2,834,625
Imports	127,405	647,894	612,387	37,819	271,886	909,053	2,606,443	3,047,391	368,415	1,028,811	7,051,061
TOTAL	340,425	2,967,074	1,502,227	74,738	749,442	2,483,794	8,117,701	4,773,532	1,435,089	5,110,104	19,436,425
Employment	1,166	1,066	1,296	68	1,638	16,004	21,238				

Gross regional product (GRP) for the regional economy is estimated at \$4 267 million, comprising \$1 433 million to households as wages and salaries (including payments to self employed persons and employers) and \$2 834 million in OVA.

Total employed in the region is 21 238 people.

Compared to the Northern Territory economy (Figure A3.23.1), the regional economy (Figure A3.13.1) has a greater relative reliance on the agriculture/forestry/fishing sectors, mining sectors, manufacturing sectors and building (employment and income only). The regional economy has a lower relative reliance on the building (gross regional product and output only) and the services sectors.

Figure A3.13.1
Summary of Aggregated Sectors: Kakadu National Park WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.13.2 to A3.13.4. In the agriculture, forestry and fishing sectors, the dominant sector is the *Beef Cattle Sector* and *Other Agriculture Sectors* (mainly fruit and vegetable growing). The main mining sector are the *Non-ferrous Metal Ore Mining Sector* (mainly gold, bauxite, silver-lead-zinc and metal ore mining nec). The main manufacturing sector is *Metal Manufacturing Sectors* (mainly alumina production). *The Public Administration Sector* dominates the services sector.

Figure A3.13.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

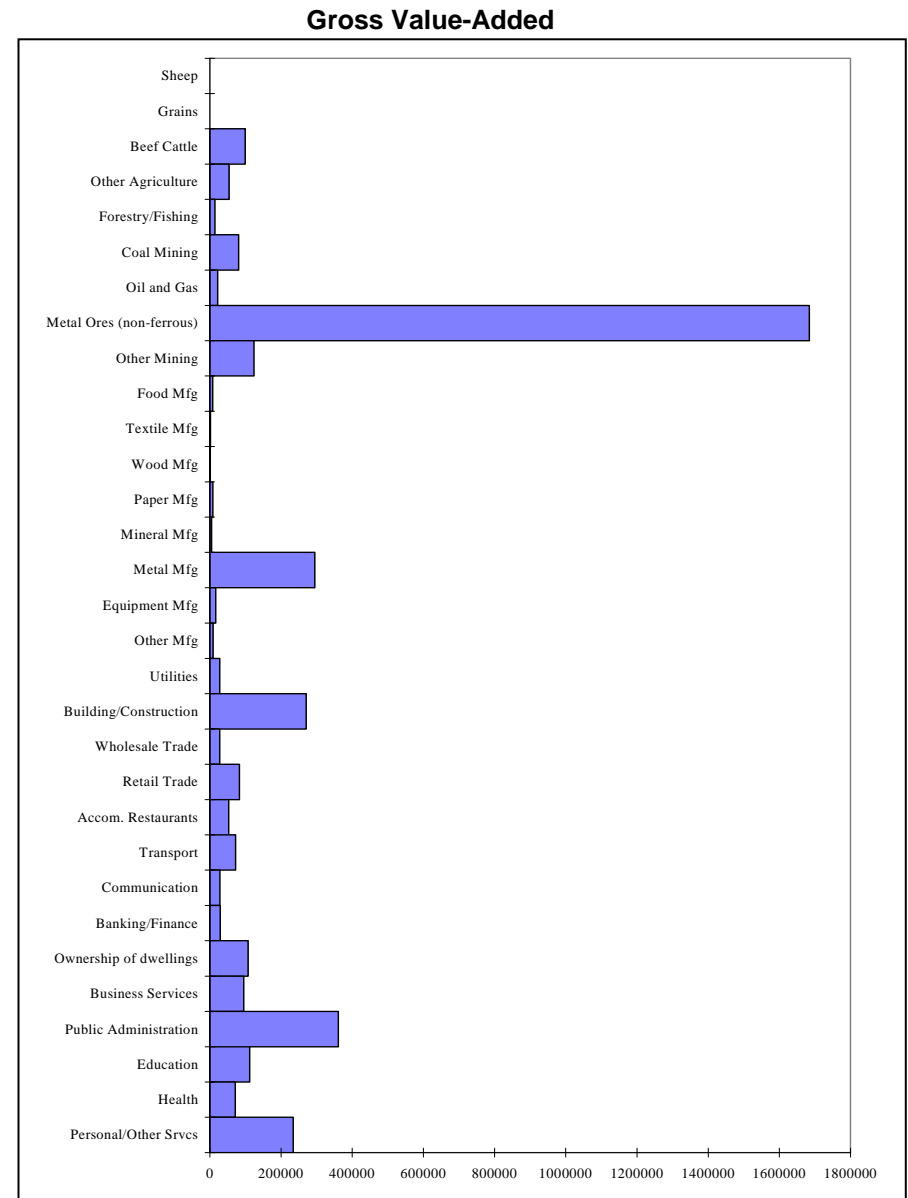
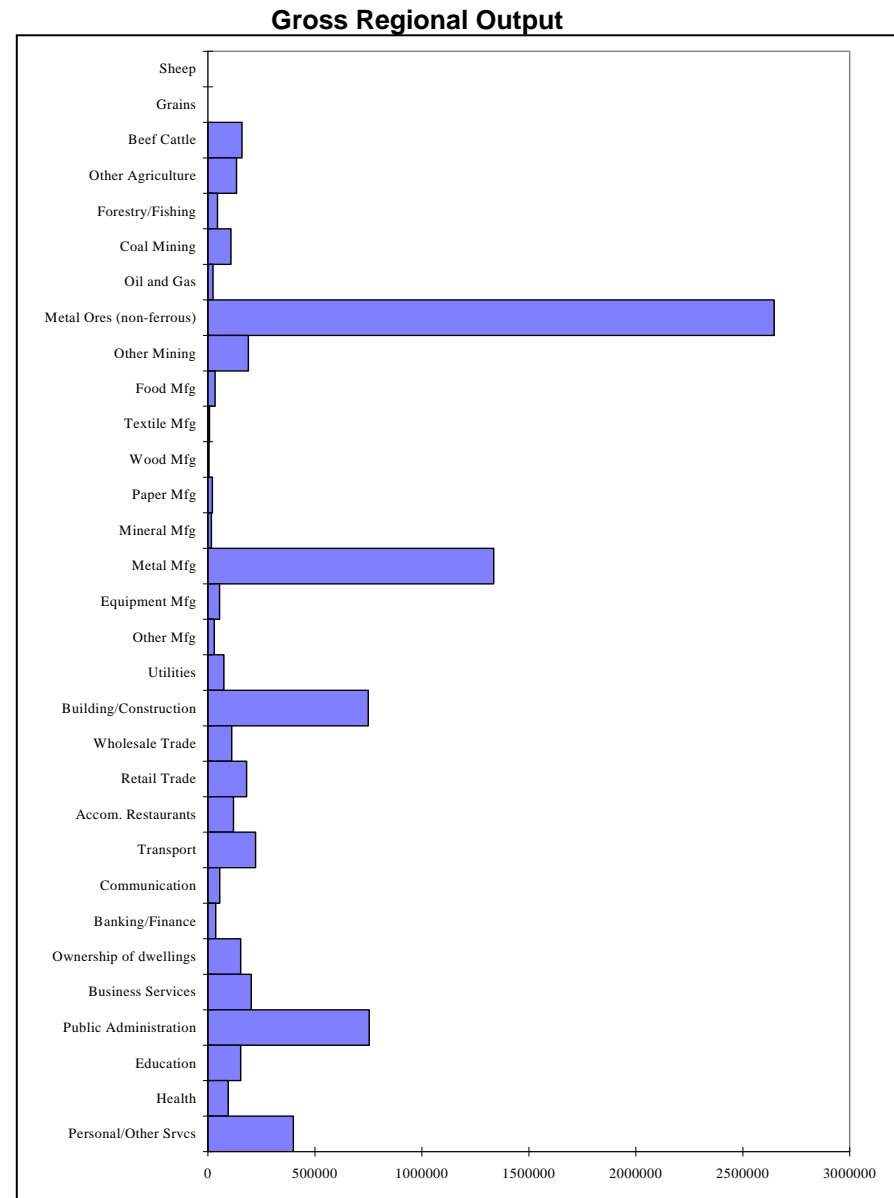
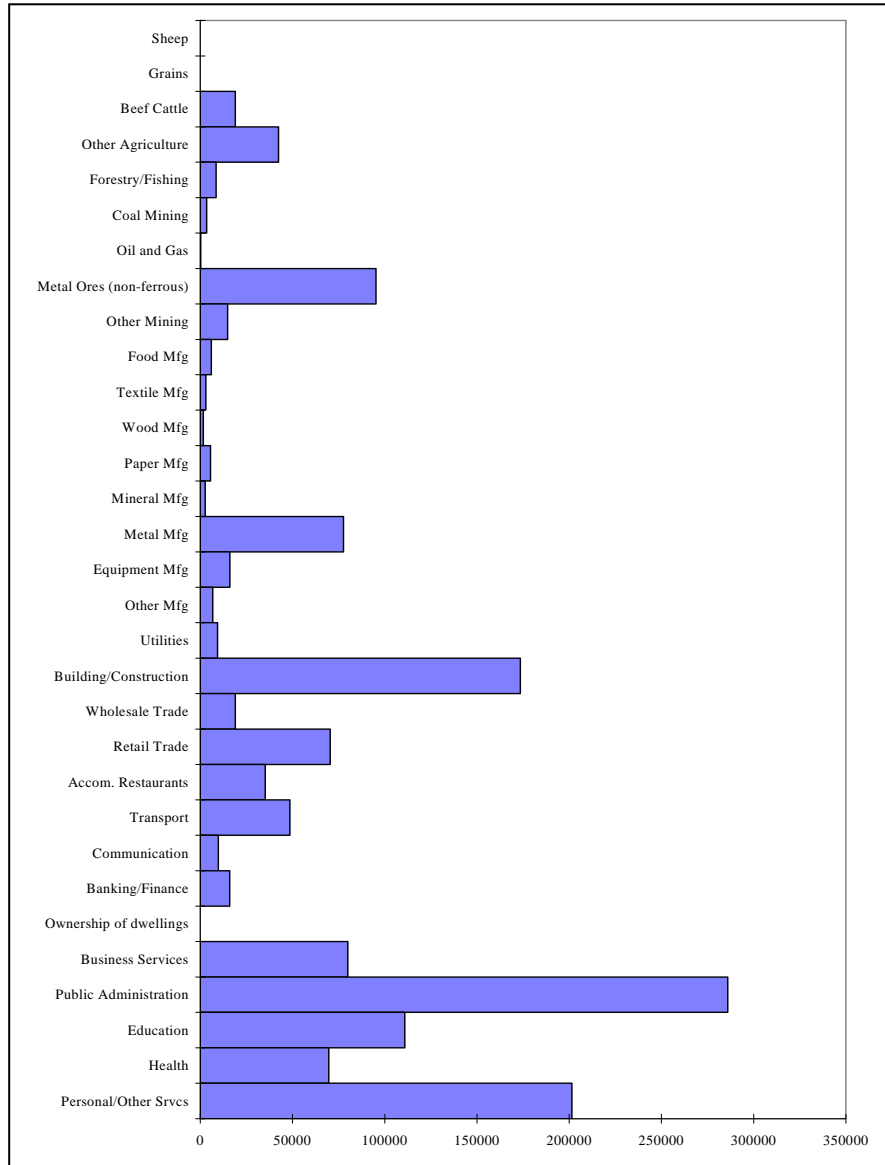


Figure A3.13.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

Income



Regional Employment

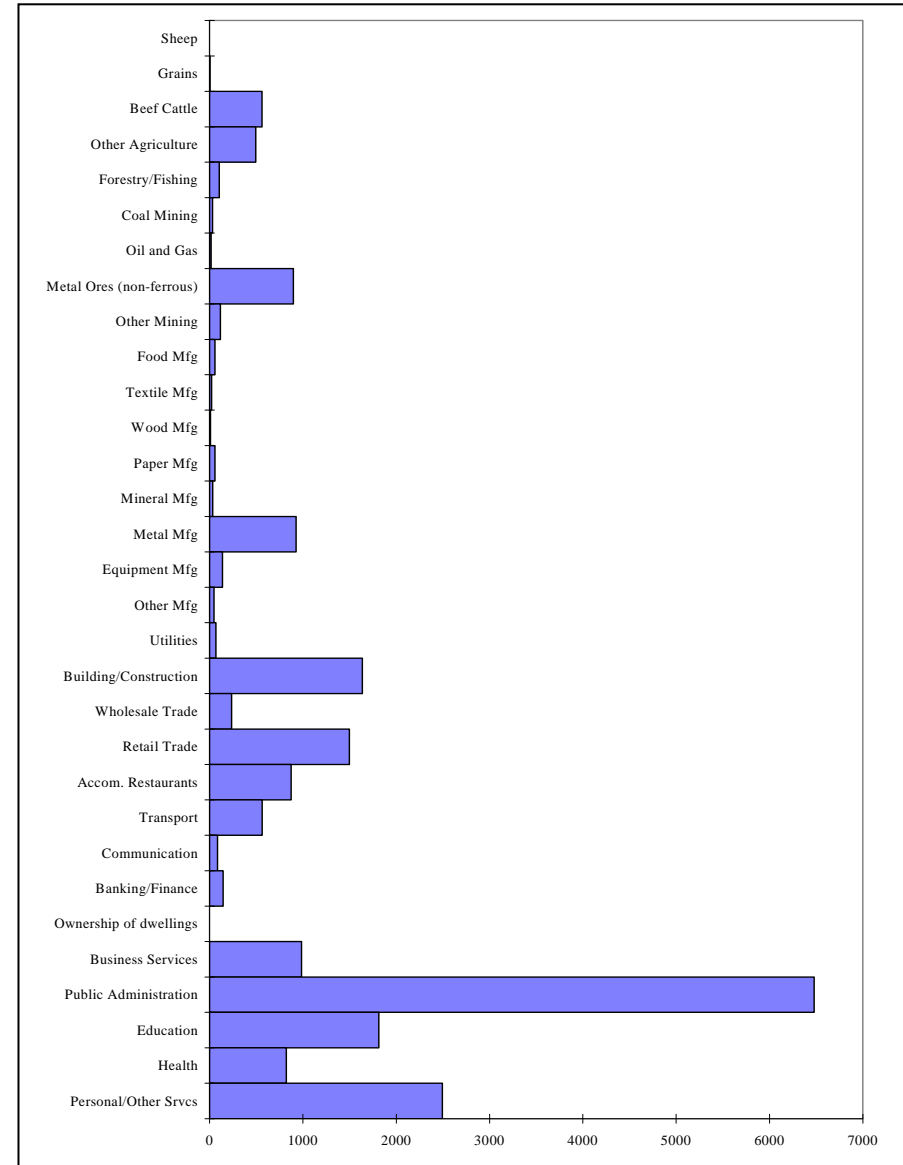
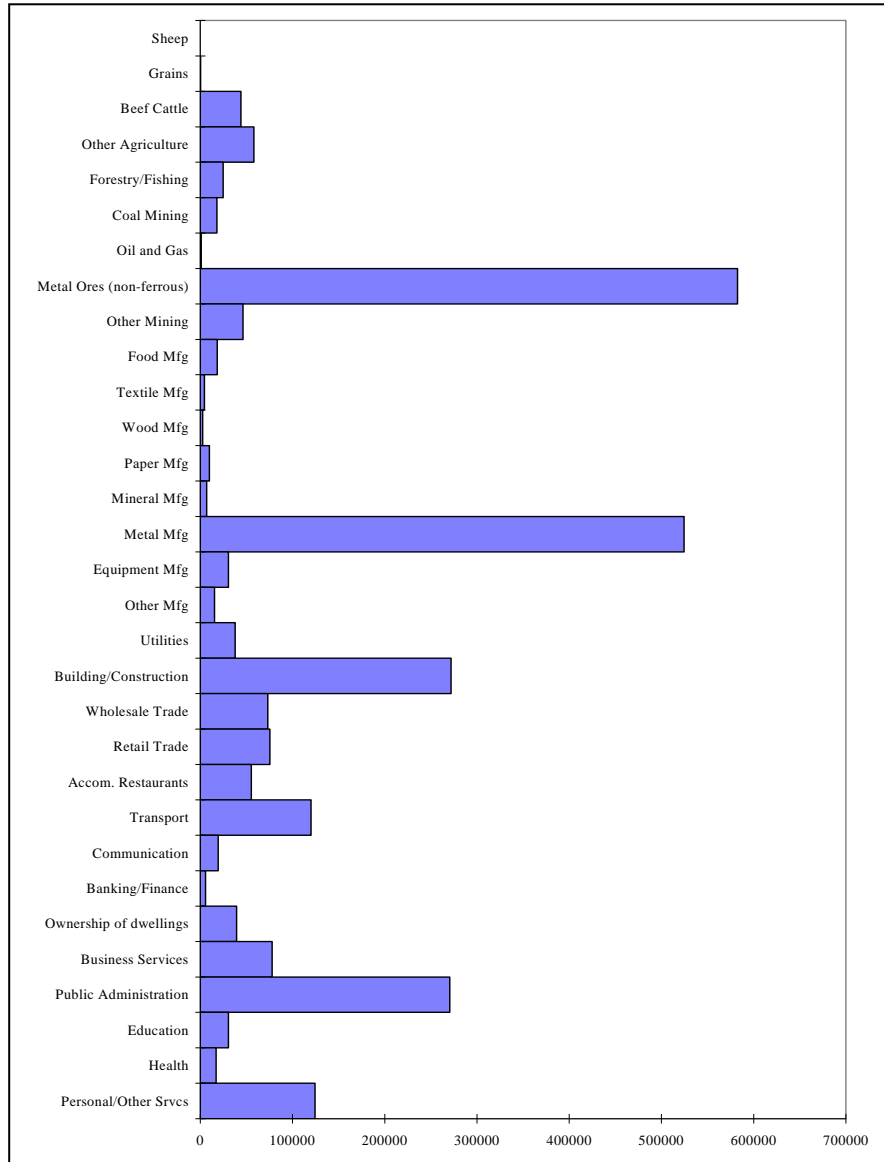
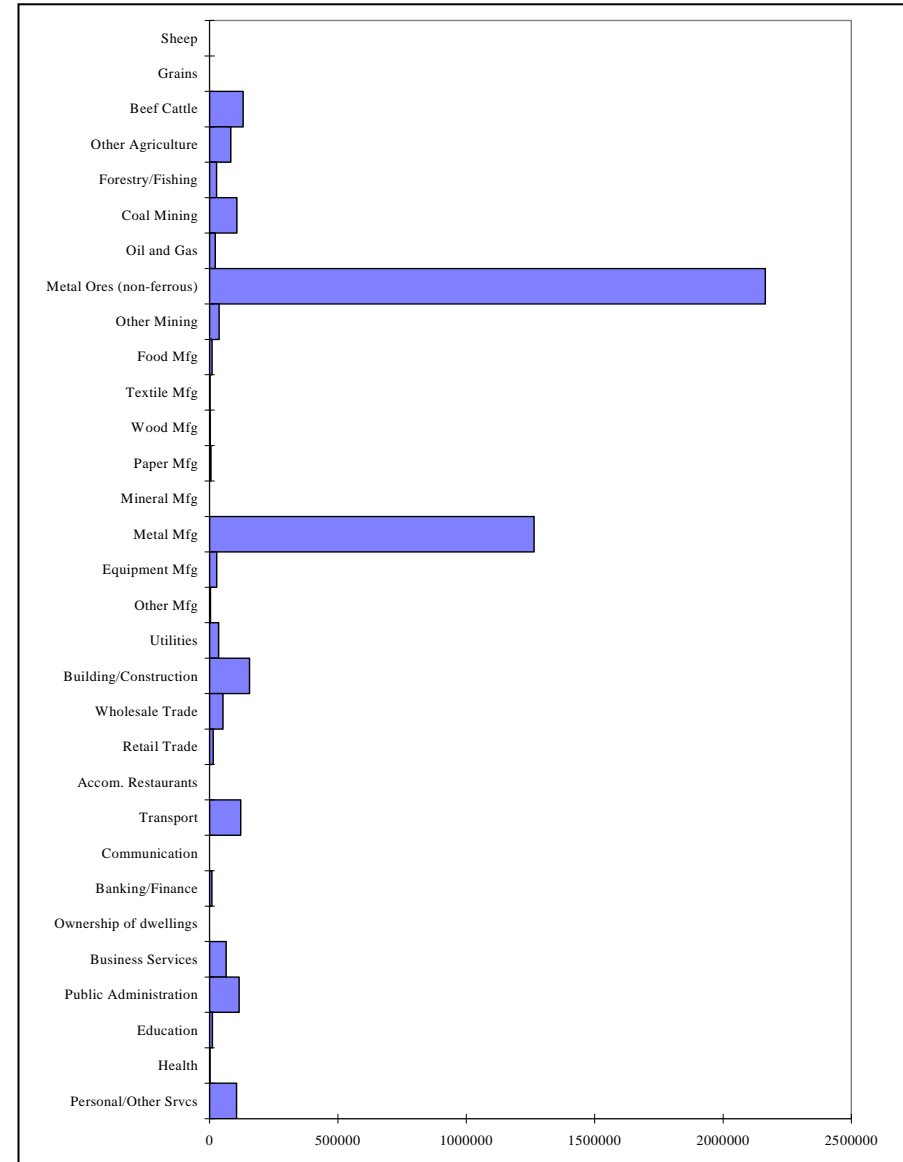


Figure A3.13.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.14 Royal Exhibition Building and Carlton Gardes Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.14. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.14
Aggregated Transactions Table: REB and Carlton Gardens WHA regional economy 2006(\$'000)

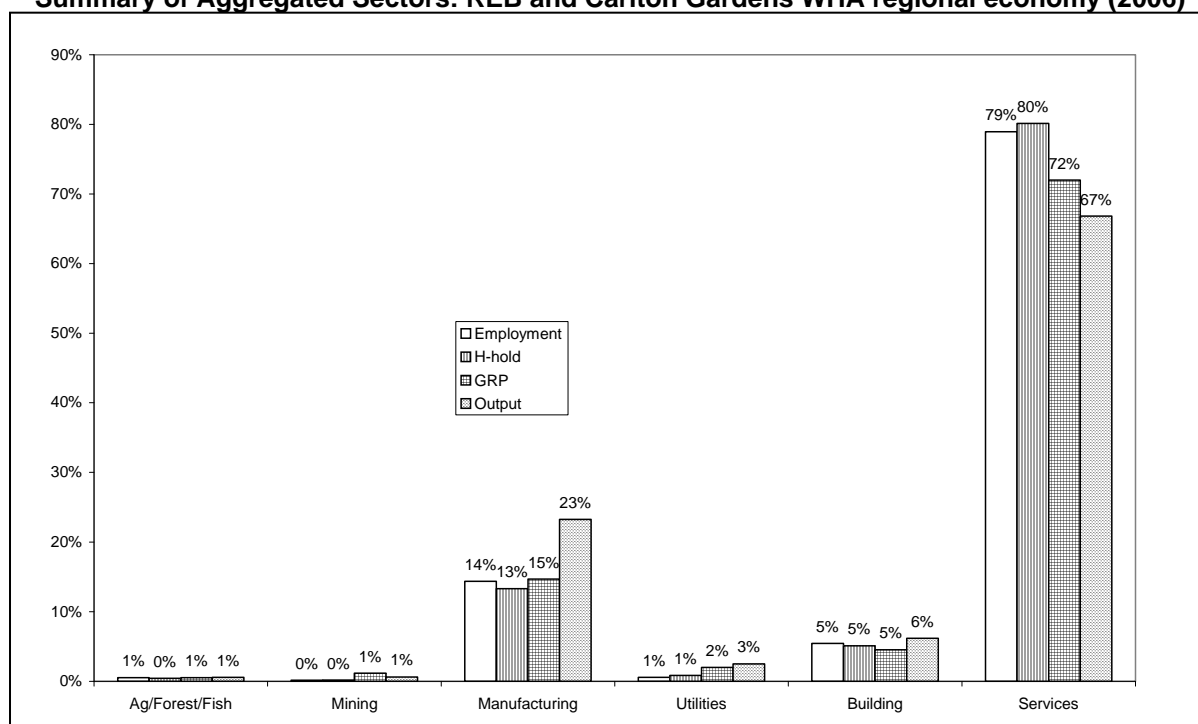
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	44,592	60	361,758	87	3,899	123,602	533,998	361,991	151,885	868,223	1,916,098
Mining	702	21,601	461,799	39,240	21,446	182,369	727,156	63,969	27,754	1,327,082	2,145,962
Manuf.	201,971	34,079	12,478,438	162,523	2,578,832	12,200,373	27,656,217	12,017,763	4,996,856	33,744,801	78,415,638
Utilities	12,233	4,338	678,150	2,234,195	78,855	1,312,347	4,320,118	1,359,994	54,184	2,753,672	8,487,969
Building	9,050	7,327	126,149	139,185	3,330,514	1,542,132	5,154,356	0	14,436,201	1,281,518	20,872,075
Services	240,694	83,234	14,660,465	674,457	2,994,482	55,408,706	74,062,038	60,640,230	30,305,775	60,271,096	225,279,138
TOTAL	509,243	150,639	28,766,759	3,249,687	9,008,028	70,769,528	112,453,885	74,443,948	49,972,655	100,246,391	337,116,879
Household Income	511,257	203,523	15,261,325	966,836	5,857,255	91,918,592	114,718,789	0	0	0	114,718,789
OVA	307,159	1,651,341	7,994,820	2,198,525	1,304,465	22,008,325	35,464,636	5,960,291	1,823,830	294,114	43,542,872
Imports	588,438	140,459	26,392,734	2,072,920	4,702,327	40,582,692	74,479,569	27,330,045	12,145,400	6,670,926	120,625,940
TOTAL	1,916,098	2,145,962	78,415,638	8,487,969	20,872,075	225,279,138	337,116,879	107,734,284	63,941,885	107,211,432	616,004,480
Employment	8,214	2,476	222,467	8,909	84,386	1,222,306	1,548,758				

Gross regional product (GRP) for the regional economy is estimated at \$158 261 million, comprising \$114 718 million to households as wages and salaries (including payments to self employed persons and employers) and \$43 542 million in OVA.

Total employed in the region is 1 548 758 people.

Compared to the Victorian economy (Figure A3.19.1), the regional economy (Figure A3.14.1) has a greater relative reliance on the services sectors and a lower relative reliance on all other amalgamated sectors apart from manufacturing which is similar.

Figure A3.14.1
Summary of Aggregated Sectors: REB and Carlton Gardens WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.14.2 to A3.14.4. In the agriculture, forestry and fishing sectors, the dominant sector is the *Other Agriculture Sectors* (mainly fruit and vegetable growing). The main mining sector is the *Oil and Gas Sector*. The main manufacturing sector is *Equipment Manufacturing Sectors* (the largest being motor vehicles and parts). Important Services Sectors include *Business Services*, *Wholesale and Retail Trade*, *Ownership of Dwellings* and *Banking and Finance*.

Figure A3.14.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

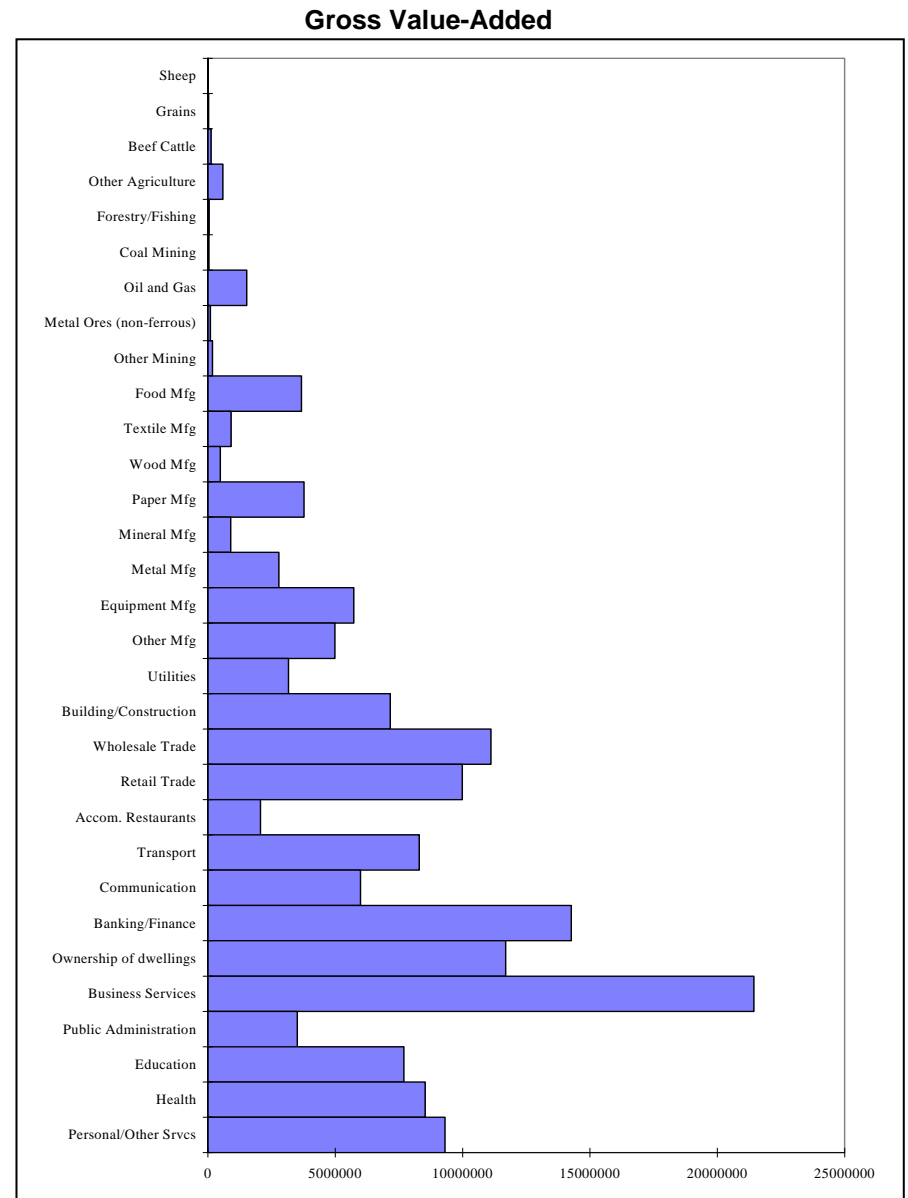
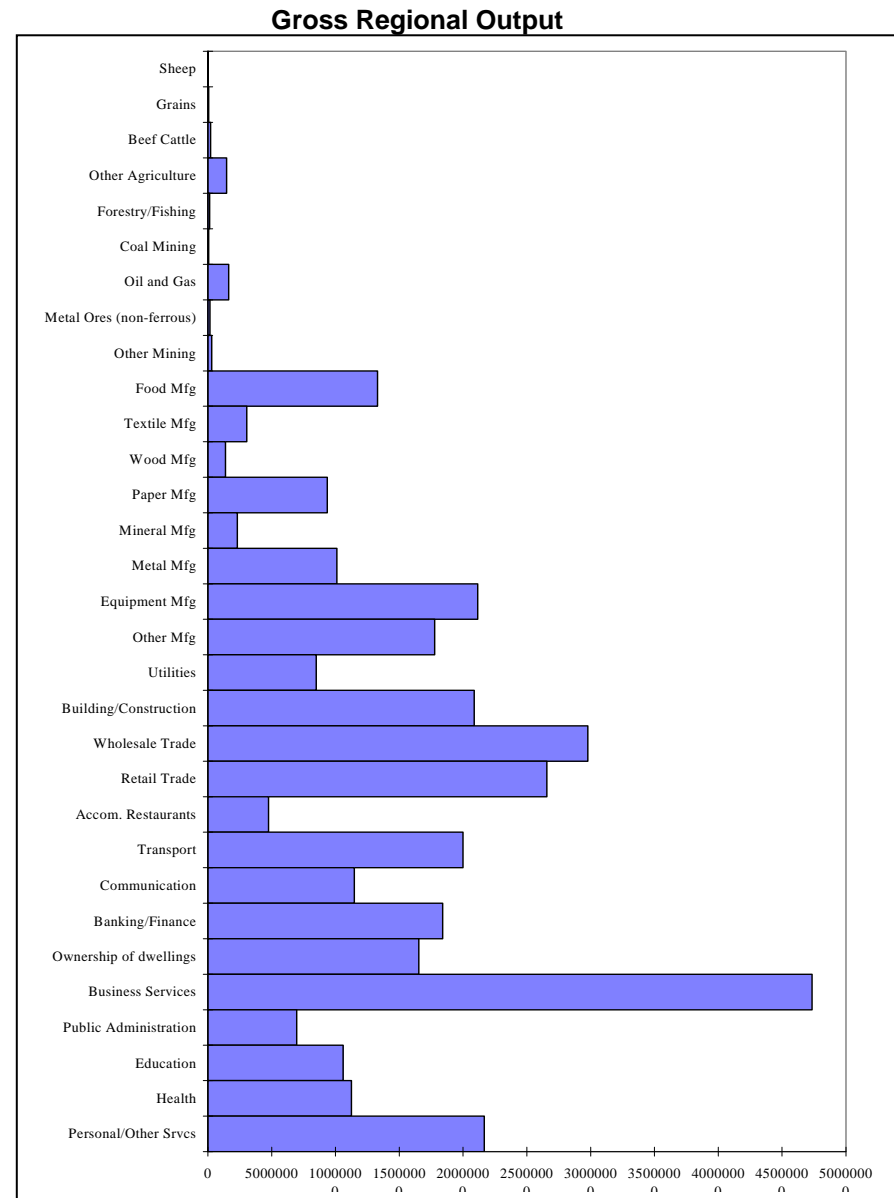
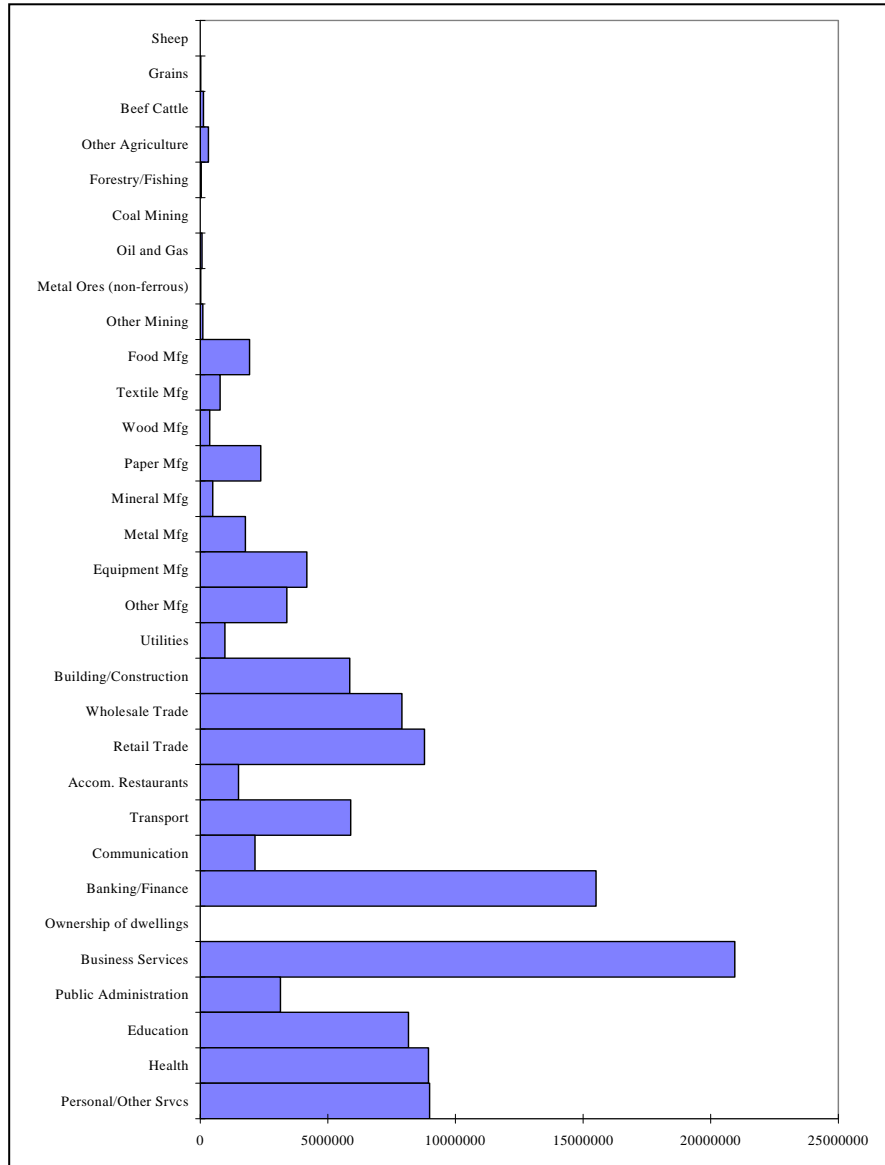


Figure A3.14.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

Income



Regional Employment

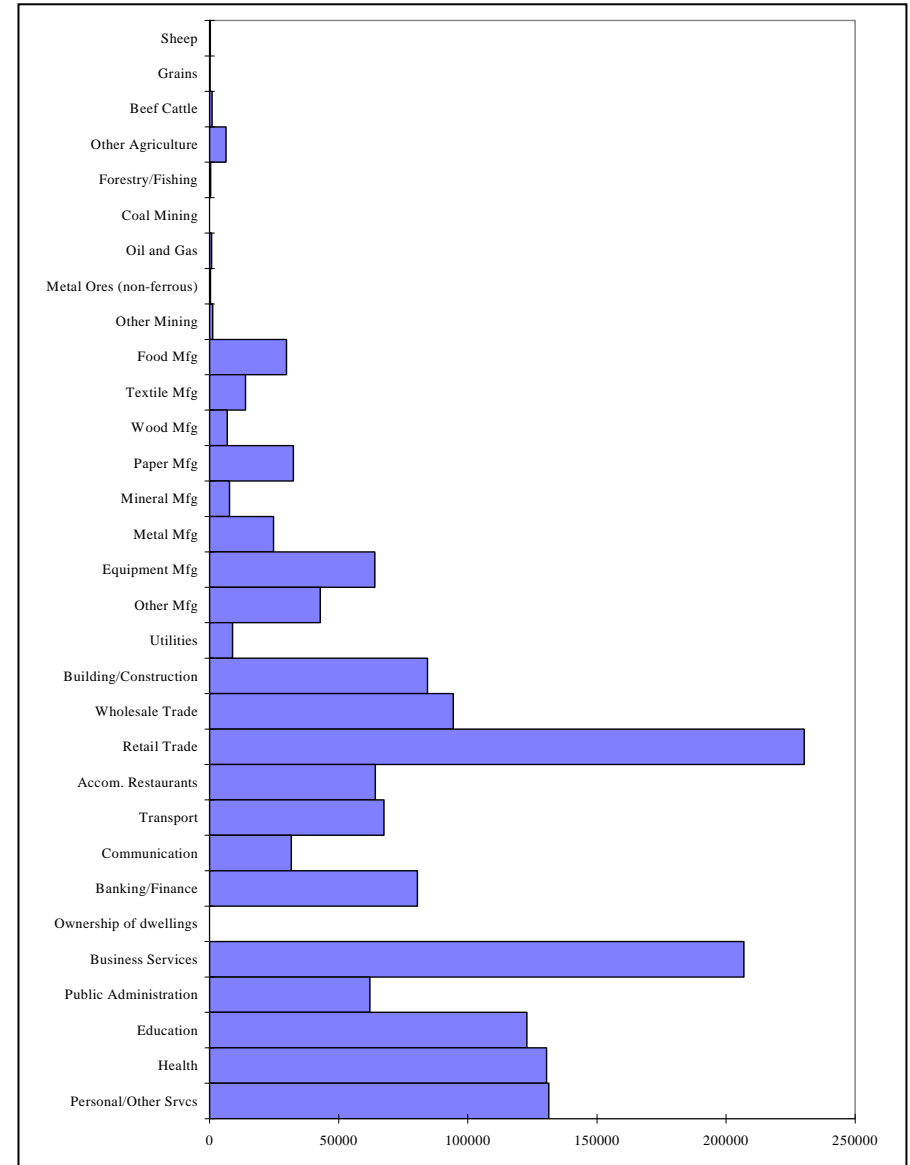
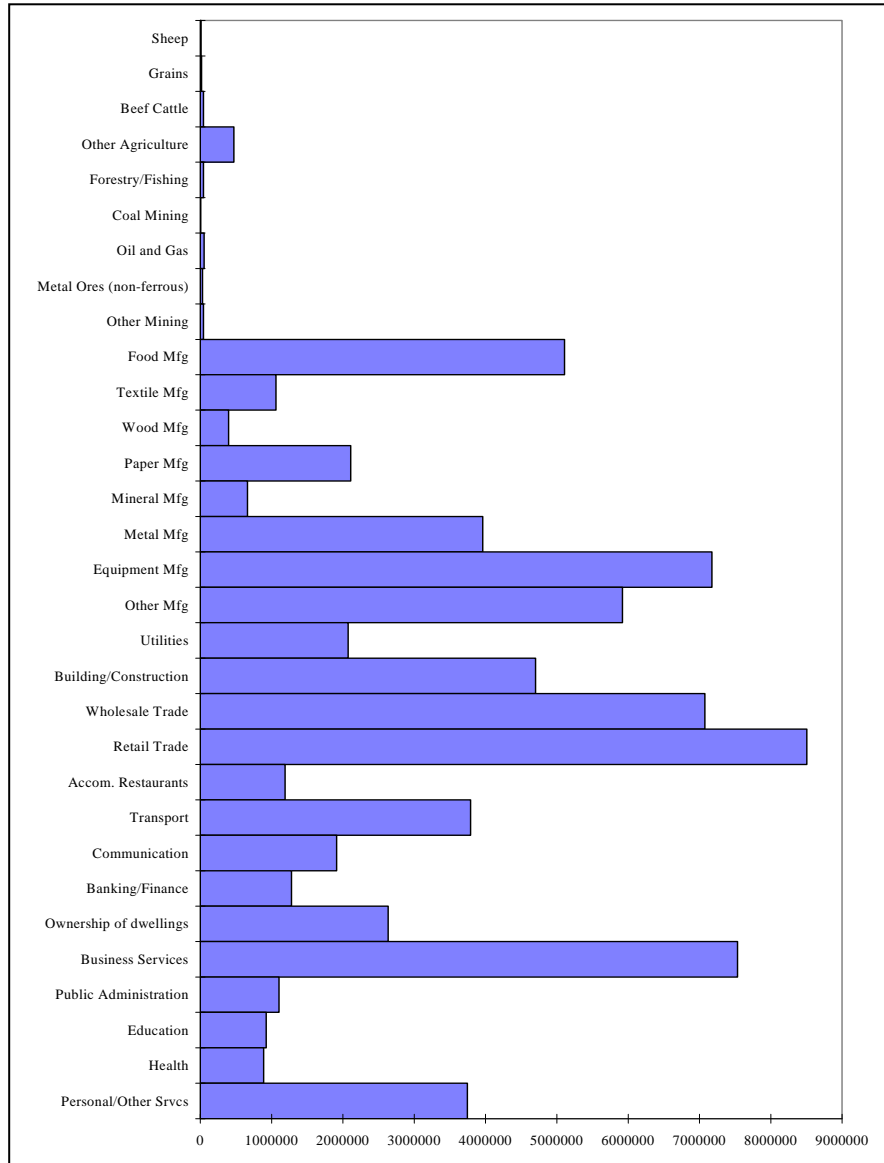
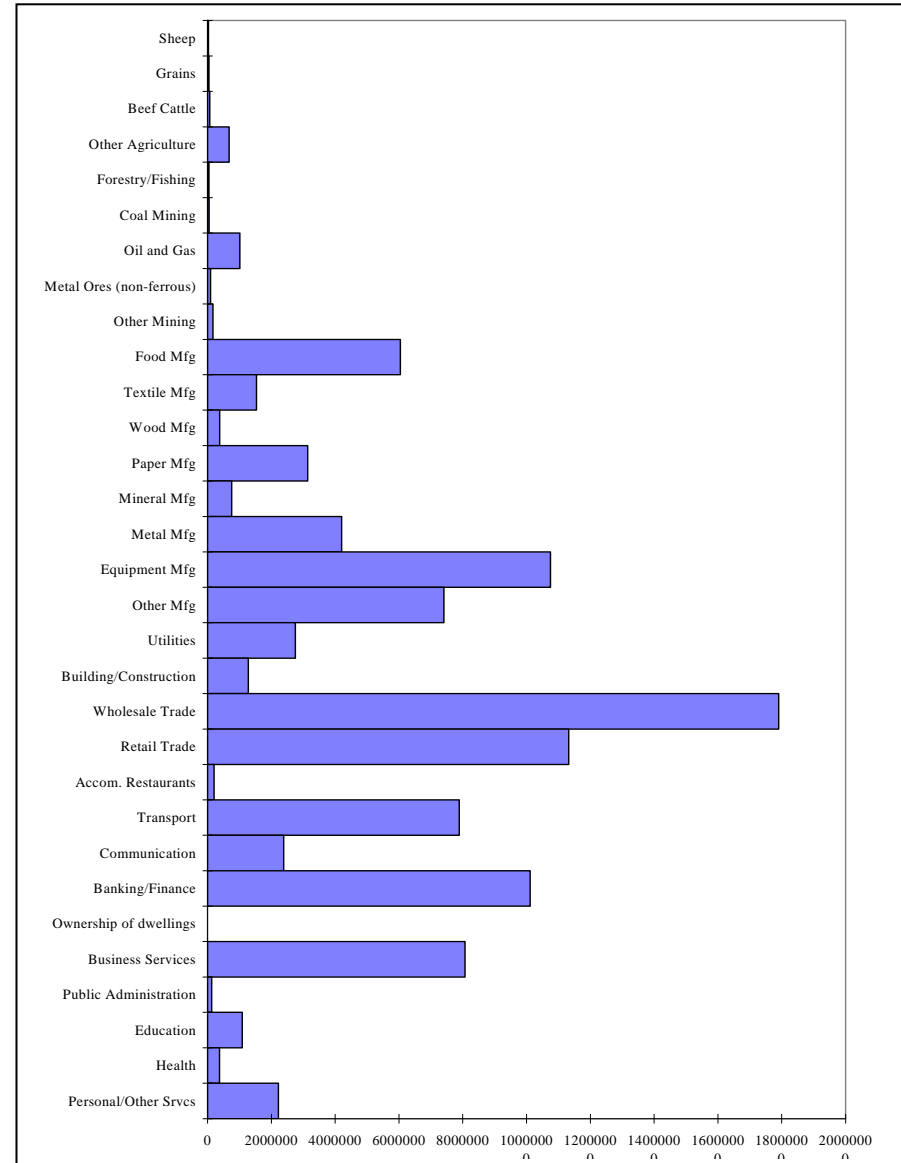


Figure A3.14.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.15 Sydney Opera House Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.15. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.15
Aggregated Transactions Table: The Sydney Opera House WHA regional economy 2006(\$'000)

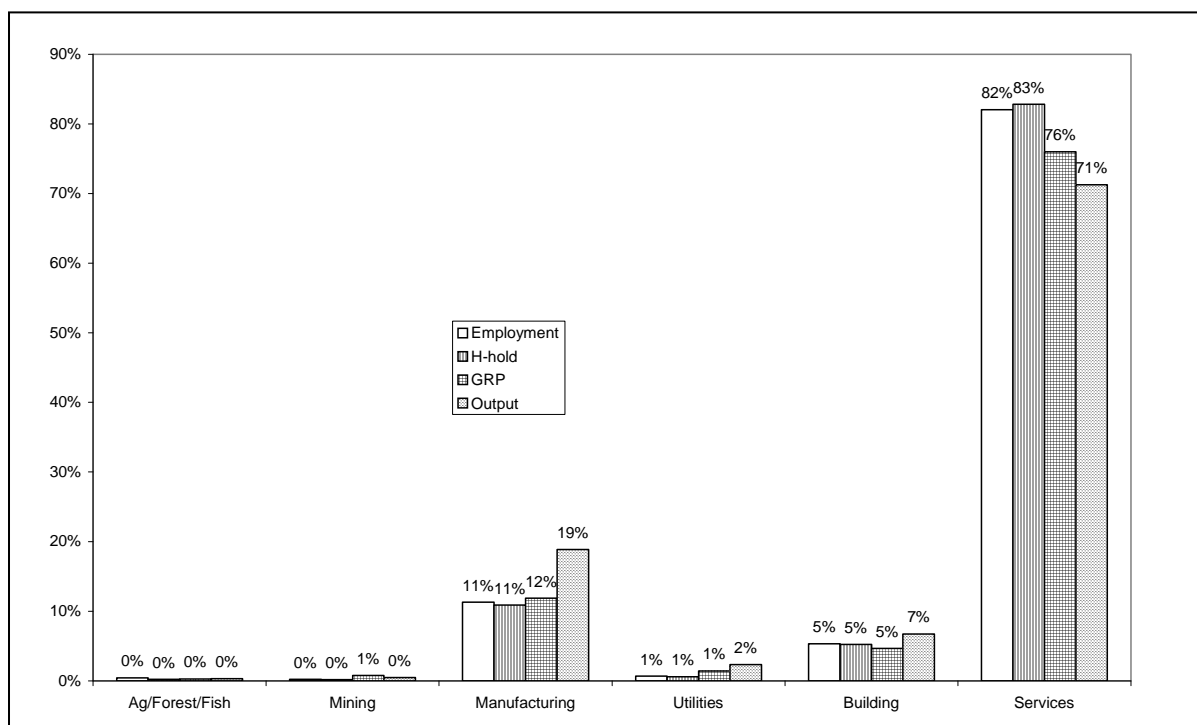
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	16,171	87	244,355	74	3,700	111,423	375,809	297,915	108,565	509,768	1,292,058
Mining	137	24,849	217,151	122,765	22,285	66,147	453,334	21,735	-10,343	1,489,750	1,954,476
Manuf.	148,992	61,056	10,579,259	155,041	3,250,592	15,012,615	29,207,555	11,594,884	5,397,920	28,497,096	74,697,455
Utilities	9,828	7,080	681,469	2,849,193	103,188	1,708,472	5,359,231	1,217,892	62,722	2,624,491	9,264,335
Building	5,807	10,455	147,449	101,245	4,190,361	2,064,991	6,520,307	0	18,286,371	1,797,671	26,604,349
Services	174,396	132,103	14,074,531	488,863	3,875,391	71,867,752	90,613,036	76,212,008	38,030,637	77,282,227	282,137,908
TOTAL	355,330	235,630	25,944,214	3,717,181	11,445,517	90,831,400	132,529,272	89,344,434	61,875,872	112,201,002	395,950,581
Household Income	323,255	293,321	15,734,564	878,356	7,541,662	119,544,392	144,315,550	0	0	0	144,315,550
OVA	217,194	1,212,442	7,245,935	1,843,127	1,490,710	27,433,454	39,442,862	7,270,913	2,187,827	201,664	49,103,266
Imports	396,279	213,083	25,772,742	2,825,671	6,126,460	44,328,663	79,662,897	35,161,043	11,754,742	7,954,335	134,533,018
TOTAL	1,292,058	1,954,476	74,697,455	9,264,335	26,604,349	282,137,908	395,950,581	131,776,391	75,818,441	120,357,001	723,902,414
Employment	7,388	3,665	196,044	11,683	92,469	1,422,568	1,733,816				

Gross regional product (GRP) for the regional economy is estimated at \$193 418 million, comprising \$144 315 million to households as wages and salaries (including payments to self employed persons and employers) and \$49 103 million in OVA.

Total employed in the region is 1 733 816 people.

Compared to the NSW economy (Figure A3.17.1), the regional economy (Figure A3.15.1) has a greater relative reliance on the services sectors and a lower relative reliance on all other amalgamated sectors apart from manufacturing and utilities which are similar.

Figure A3.15.1
Summary of Aggregated Sectors: The Sydney Opera House WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.15.2 to A3.15.4. In the agriculture, forestry and fishing sectors, the dominant sector is the *Other Agriculture Sectors* (mainly vegetable growing and nurseries). The main mining sector is the *Coal Sector*. The main manufacturing sectors are Food Manufacturing Sectors, Paper Manufacturing, *Equipment Manufacturing Sectors* and *Other Manufacturing Sectors*. Important Services Sectors include *Business Services*, *Wholesale and Retail Trade*, and *Banking and Finance Sectors*.

Figure A3.15.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

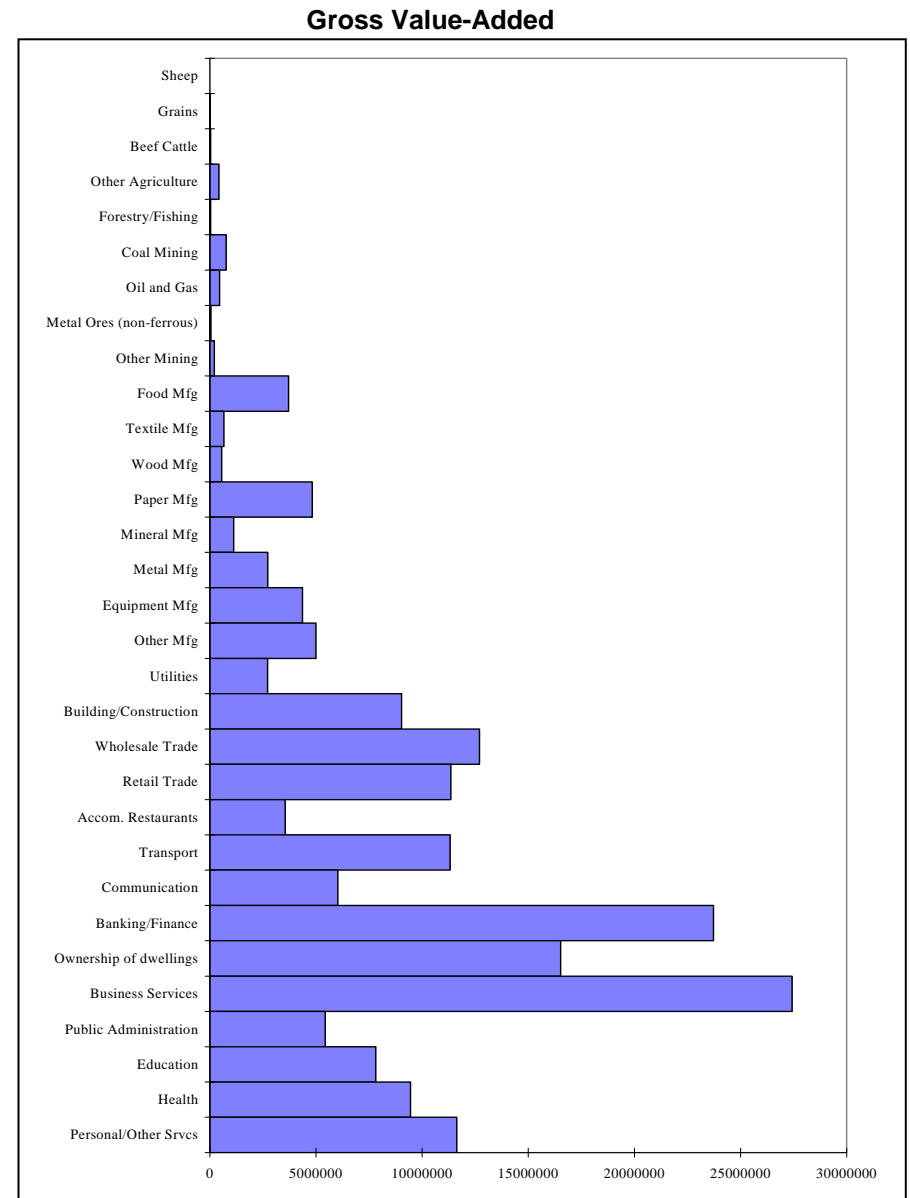
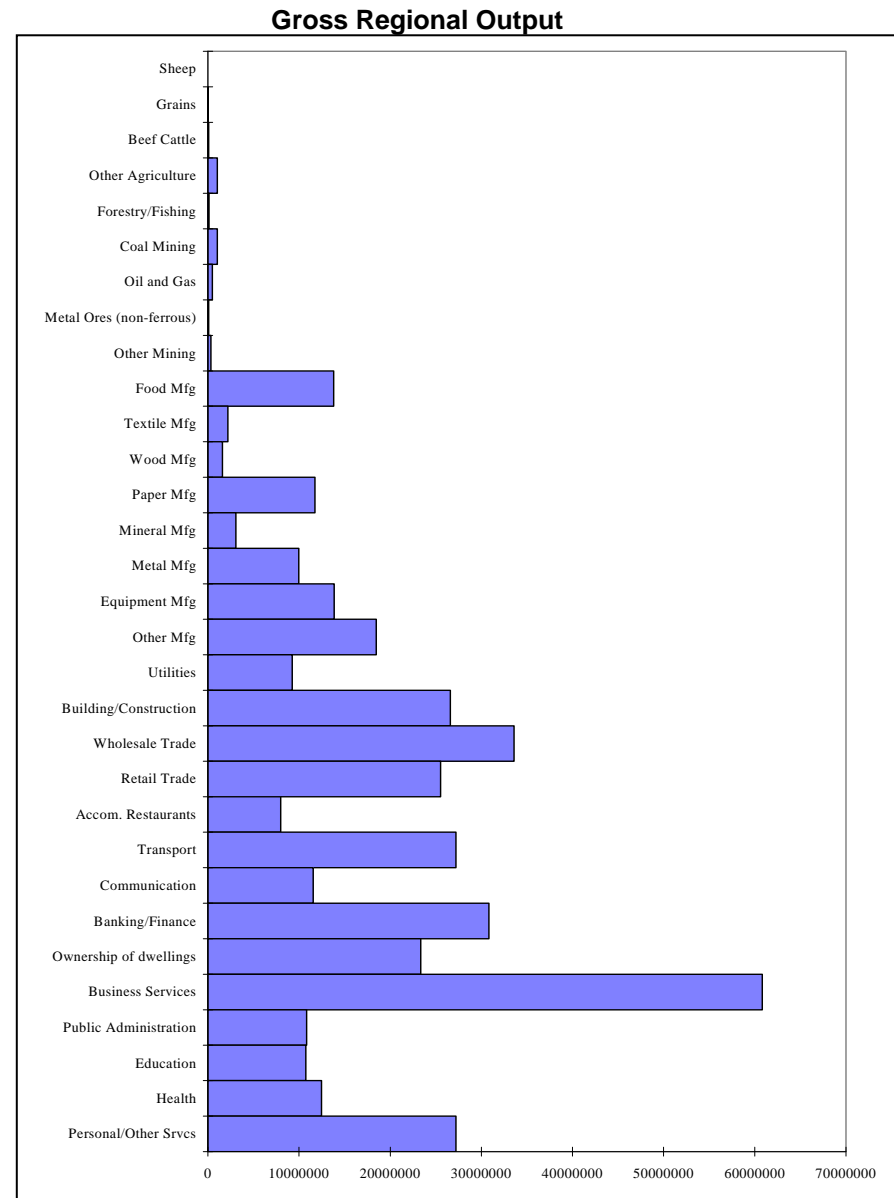
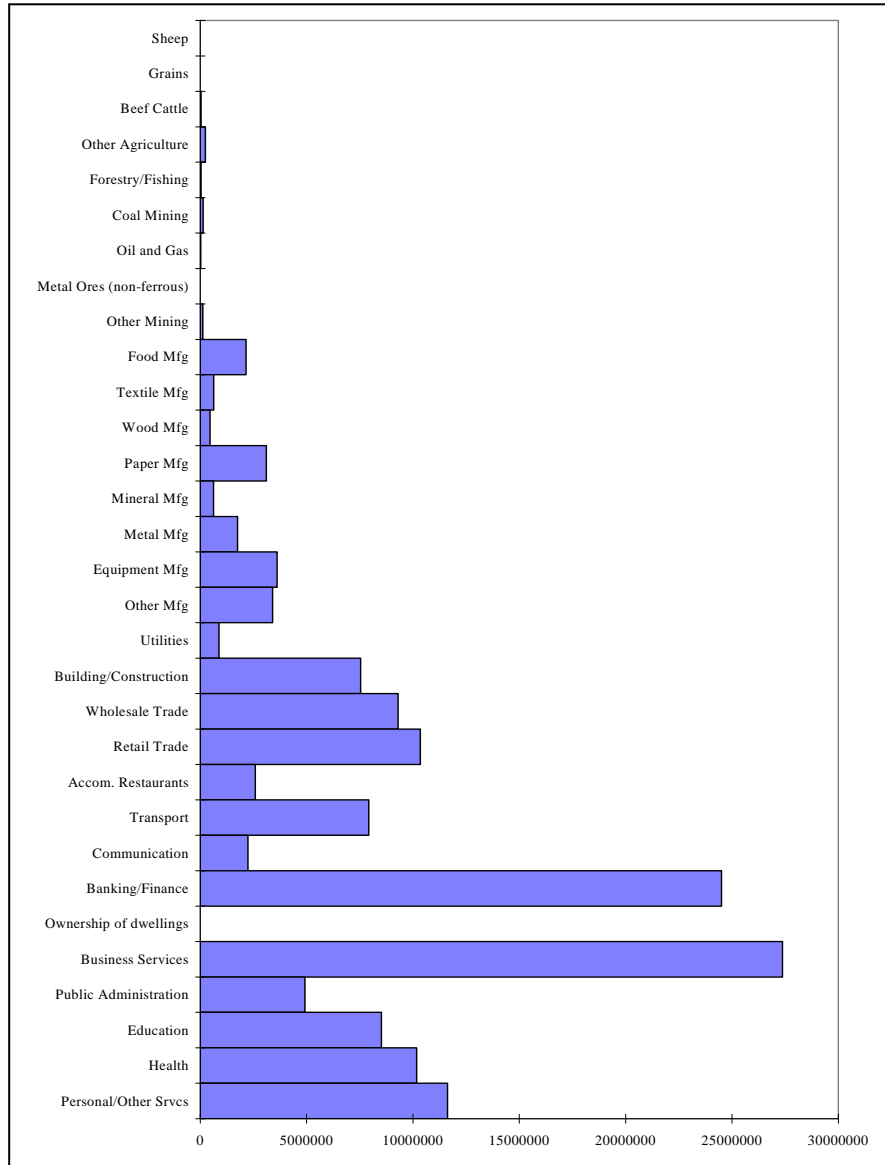


Figure A3.15.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

Income



Regional Employment

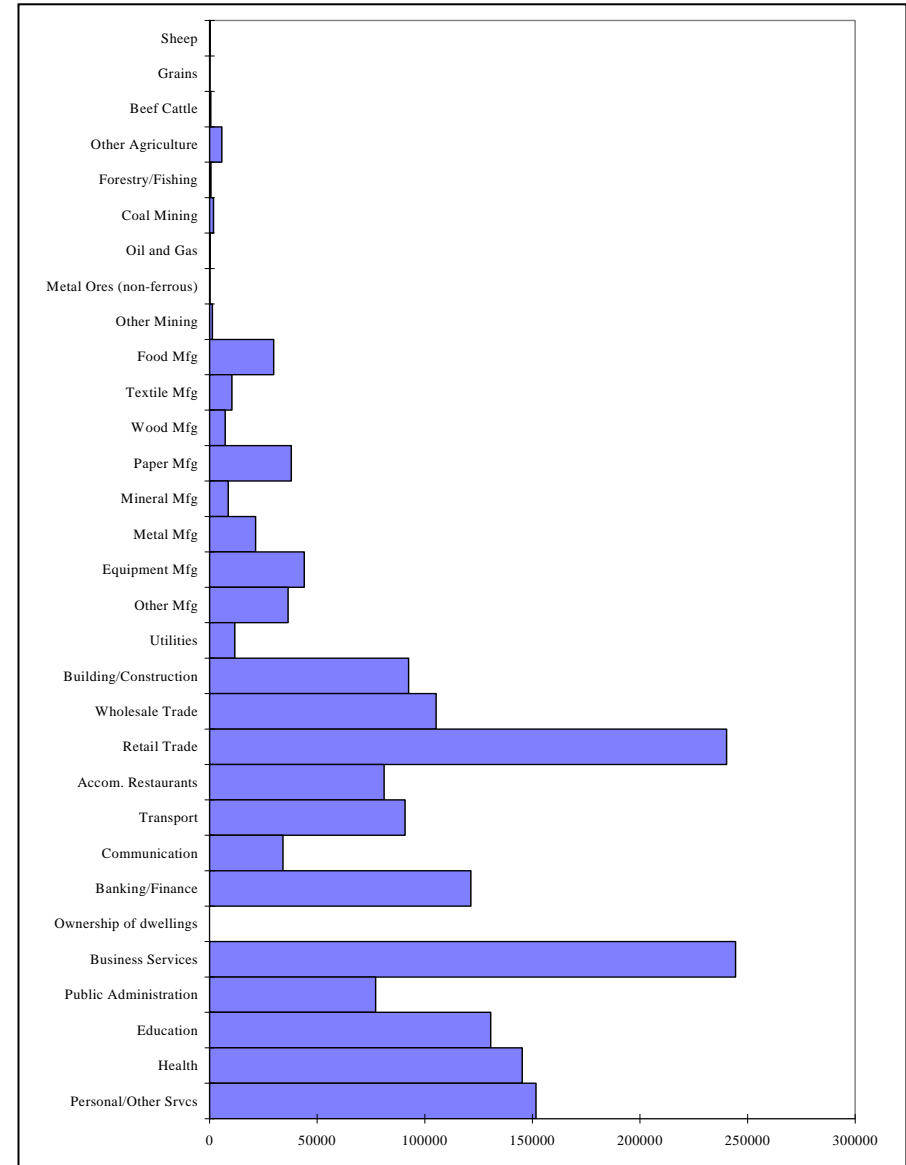
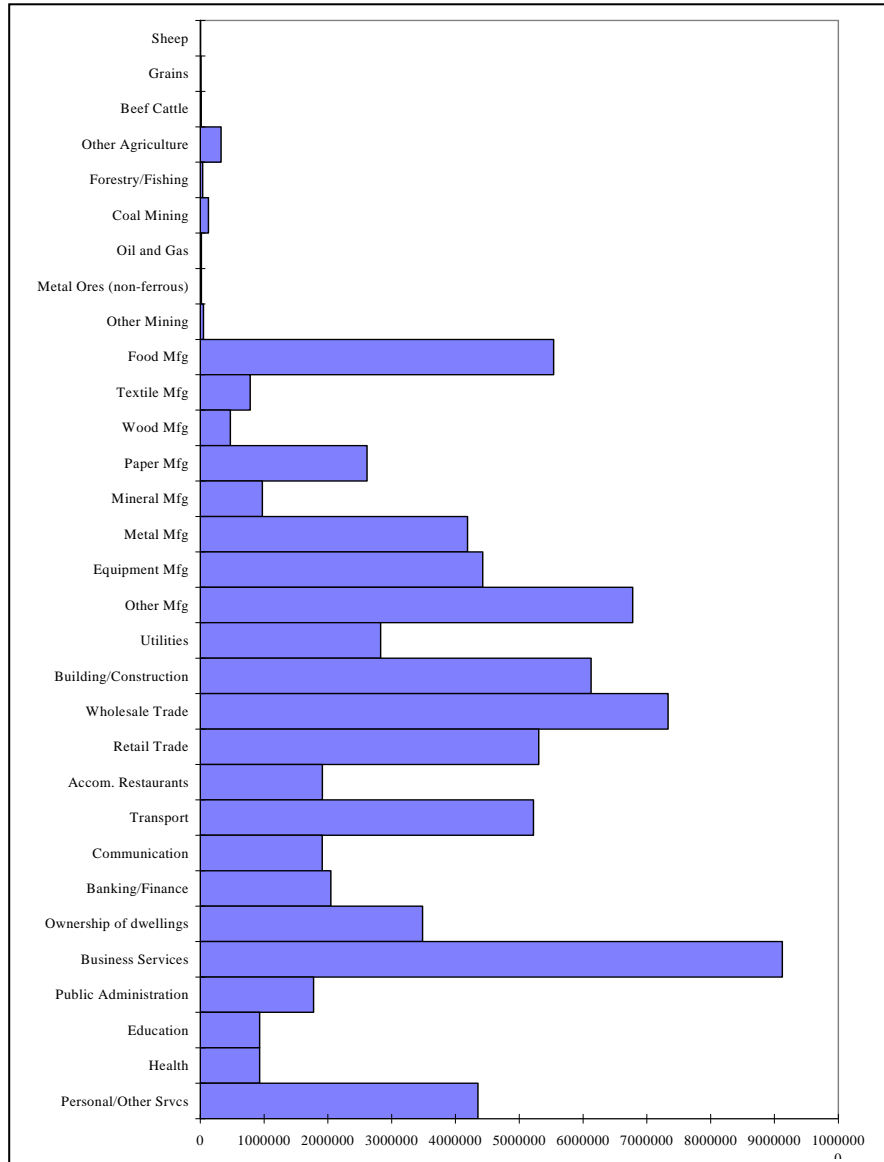
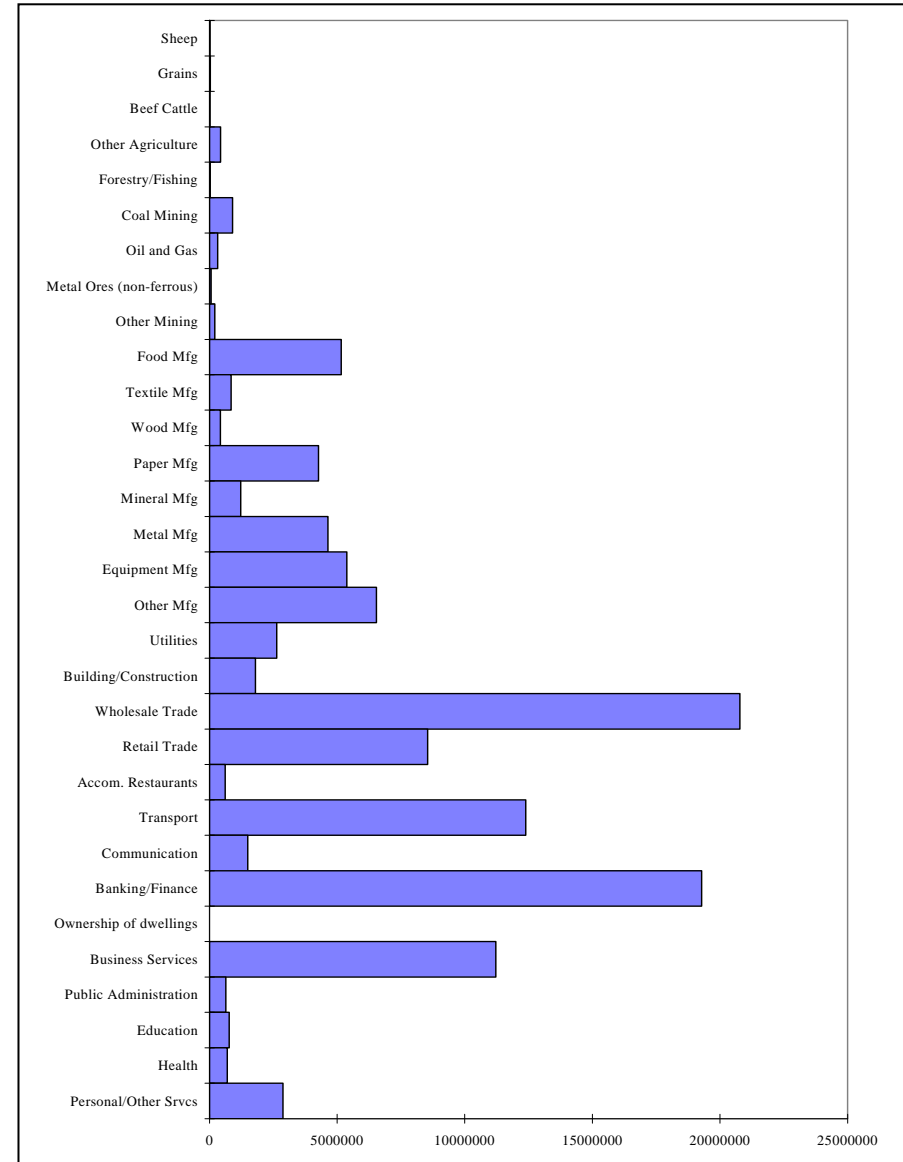


Figure A3.15.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.16 Macquarie Island Regional Description

A highly aggregated 2006 input-output table for the regional economy is provided in Table A3.16. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.16
Aggregated Transactions Table: Macquarie Island WHA regional economy 2006(\$'000)

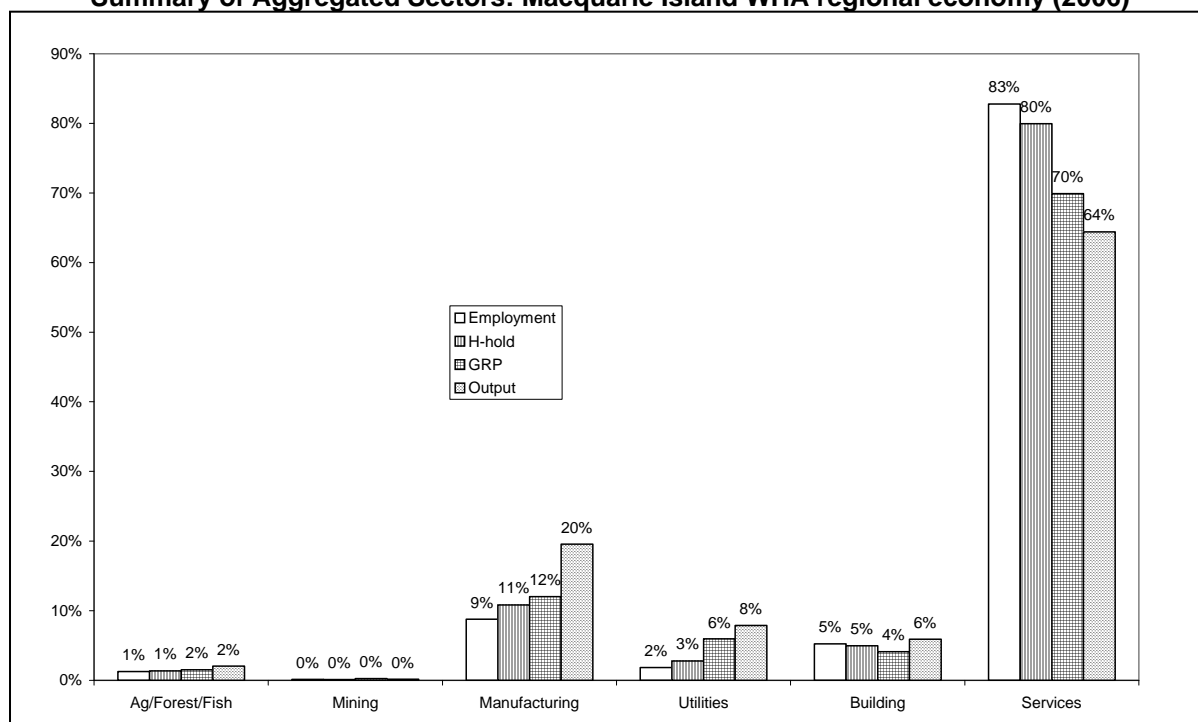
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	4,855	3	25,438	12	172	7,102	37,582	15,026	18,210	234,370	305,188
Mining	6	232	3,406	40	255	180	4,120	126	220	21,859	26,325
Manuf.	16,229	418	264,449	8,445	58,773	253,624	601,938	222,552	58,946	2,033,241	2,916,677
Utilities	1,081	175	33,683	378,996	3,856	56,797	474,587	59,831	4,812	636,780	1,176,011
Building	1,117	191	4,604	16,605	134,248	66,128	222,892	0	620,244	39,690	882,826
Services	22,869	1,223	234,947	31,384	63,165	1,163,739	1,517,328	2,373,140	2,334,777	3,379,313	9,604,557
TOTAL	46,159	2,243	566,526	435,481	260,468	1,547,569	2,858,447	2,670,675	3,037,209	6,345,253	14,911,584
Household Income	66,293	5,595	525,318	134,472	241,066	3,878,020	4,850,765	0	0	0	4,850,765
OVA	46,395	11,531	362,882	304,362	63,276	1,283,057	2,071,503	300,606	154,153	4,503	2,530,767
Imports	146,341	6,956	1,461,950	301,695	318,015	2,895,911	5,130,869	2,446,210	1,551,159	760,226	9,888,463
TOTAL	305,188	26,325	2,916,677	1,176,011	882,826	9,604,557	14,911,584	5,417,491	4,742,521	7,109,983	32,181,578
Employment	1,062	110	7,523	1,570	4,476	70,897	85,639				

Gross regional product (GRP) for the regional economy is estimated at \$7 380 million, comprising \$4 850 million to households as wages and salaries (including payments to self employed persons and employers) and \$2 530 million in OVA.

Total employed in the region is 85 639 people.

Compared to the Tasmanian economy (Figure A3.22.1), the regional economy (Figure A3.16.1) has a greater relative reliance on the services sectors and utility sectors and a lower relative reliance on all other amalgamated sectors.

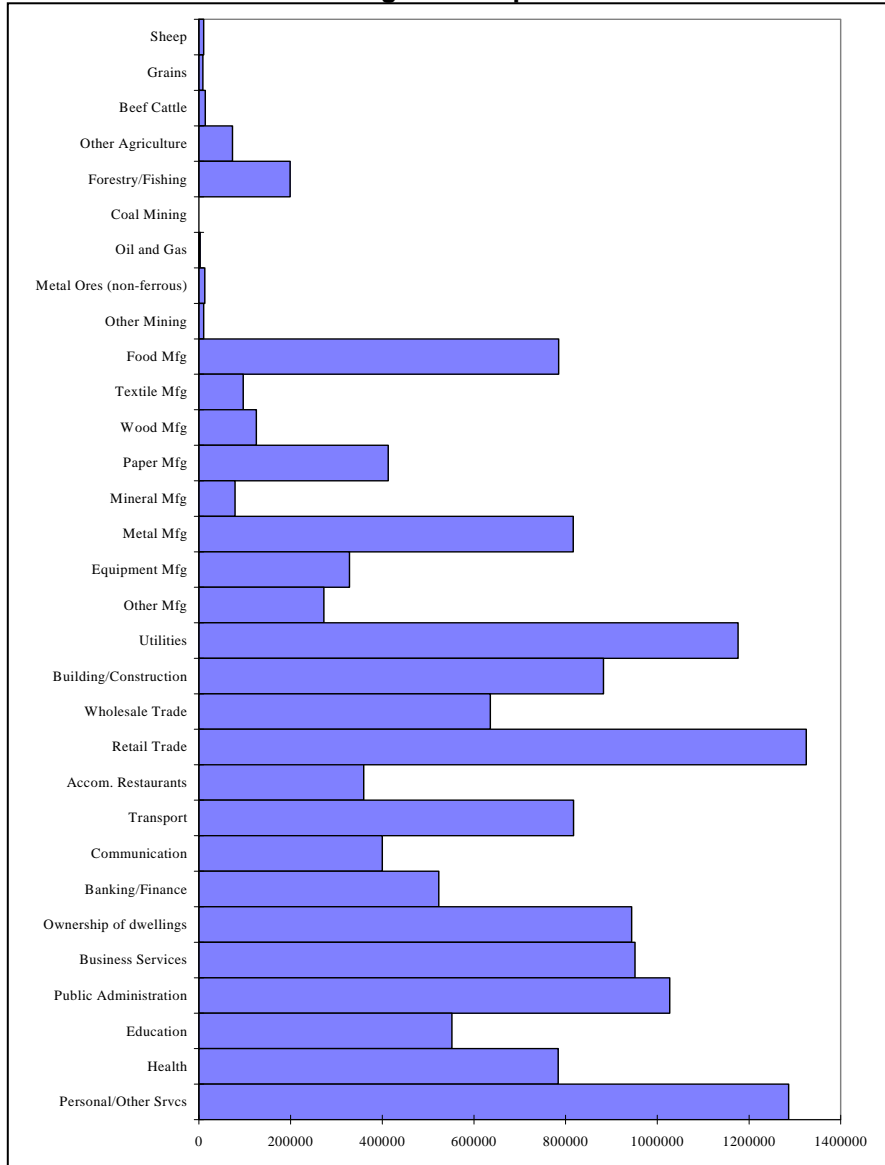
Figure A3.16.1
Summary of Aggregated Sectors: Macquarie Island WHA regional economy (2006)



A more detailed description of the regional economy is provided in Figures A3.16.2 to A3.16.4. In the agriculture, forestry and fishing sectors, the dominant sectors are the *Forestry Sector and Commercial Fishing Sector* (mainly aquaculture). The main manufacturing sectors are *Food Manufacturing Sectors, Paper Manufacturing, Metal Manufacturing Sectors and Equipment Manufacturing Sectors*. Important Services Sectors include *Retail Trade, Ownership of Dwellings, Public Administration, Health and Personal/Other Services*.

Figure A3.16.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

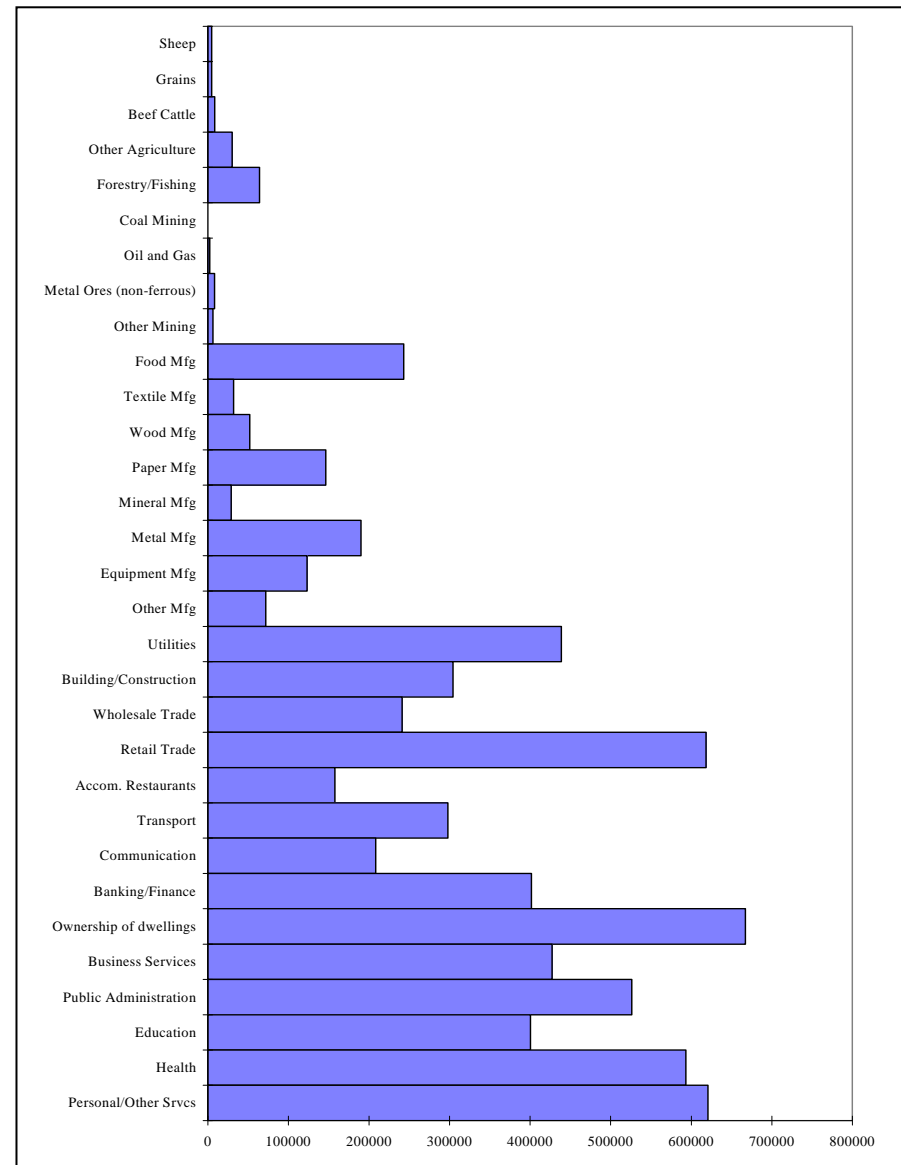
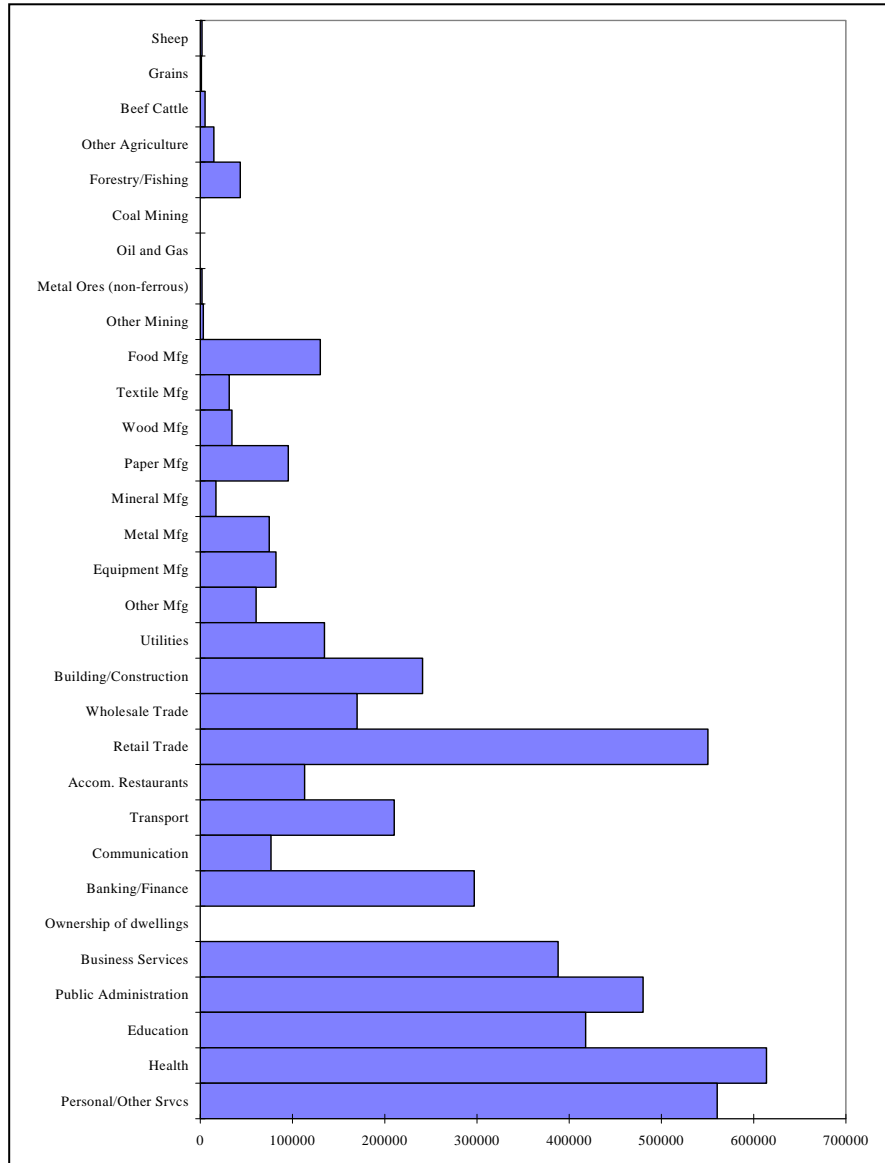


Figure A3.16.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

Income



Regional Employment

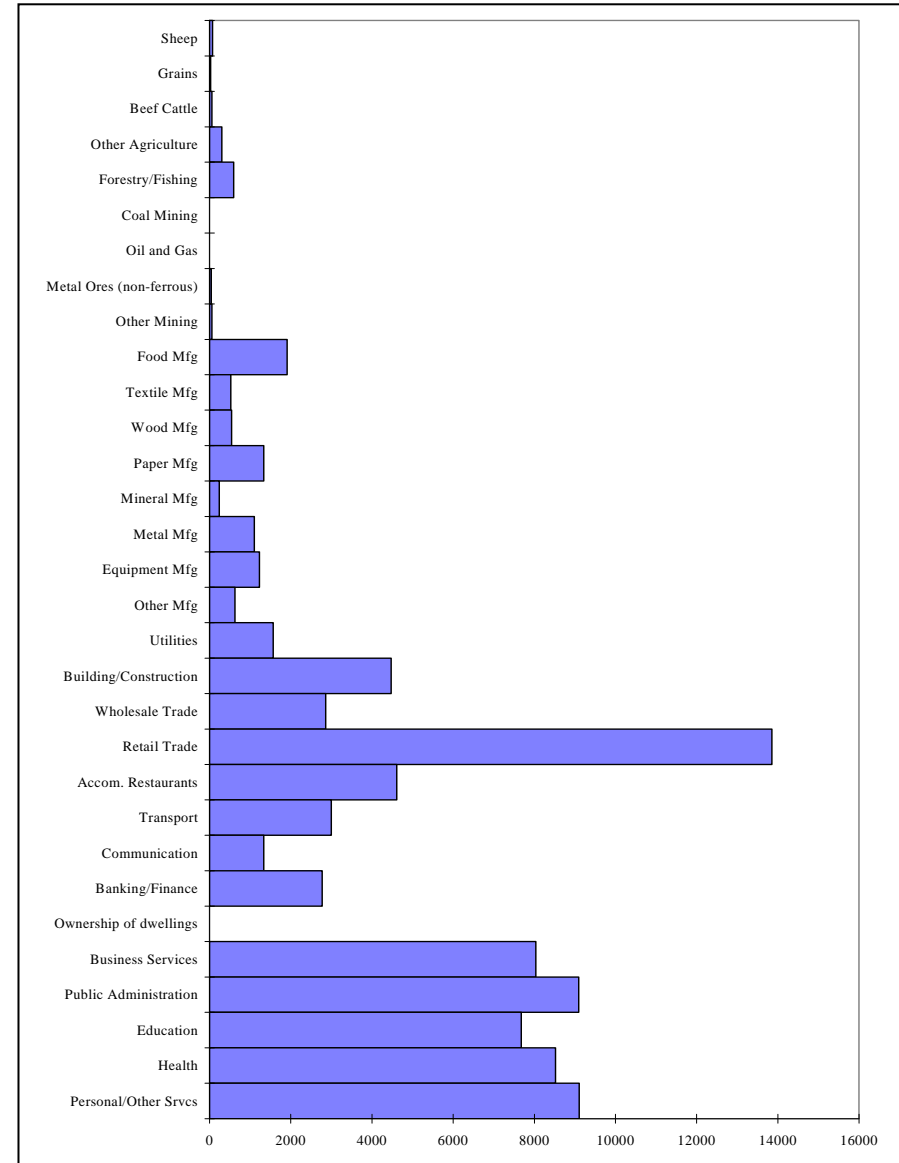
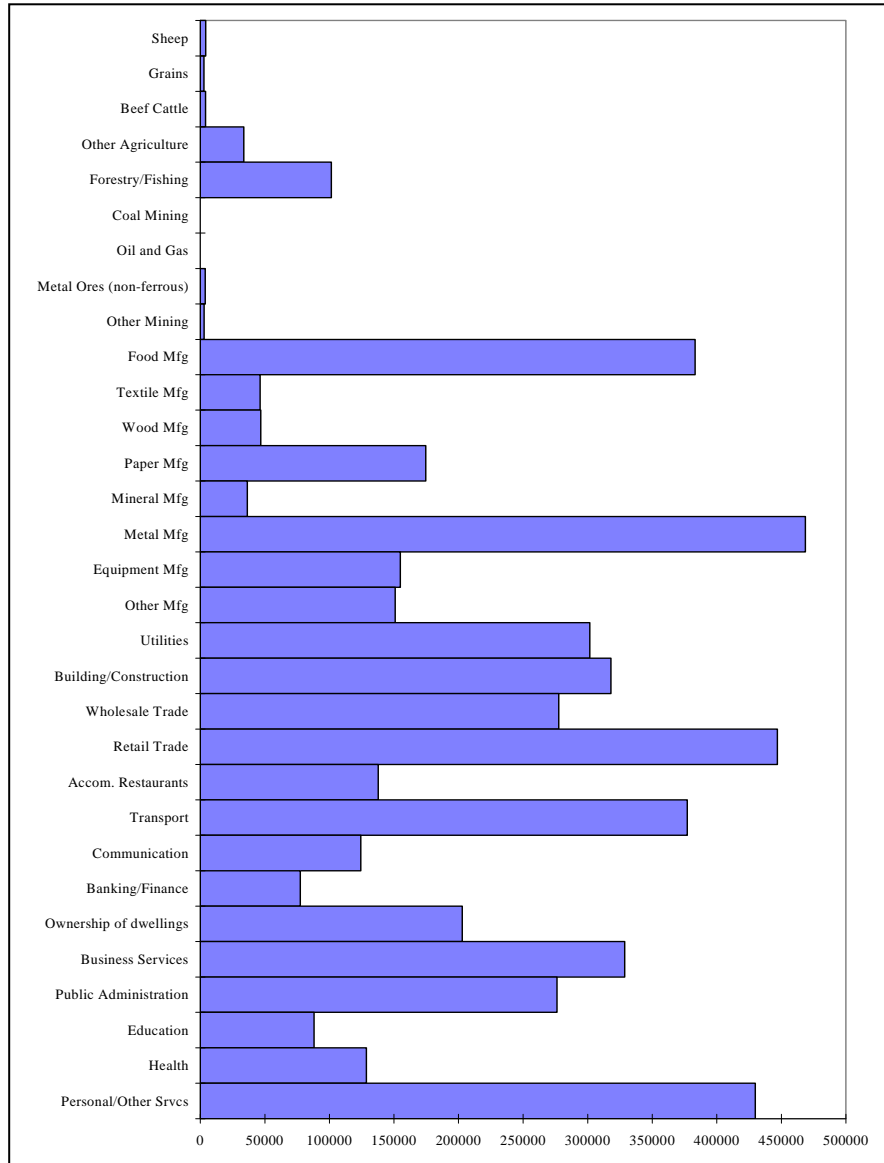
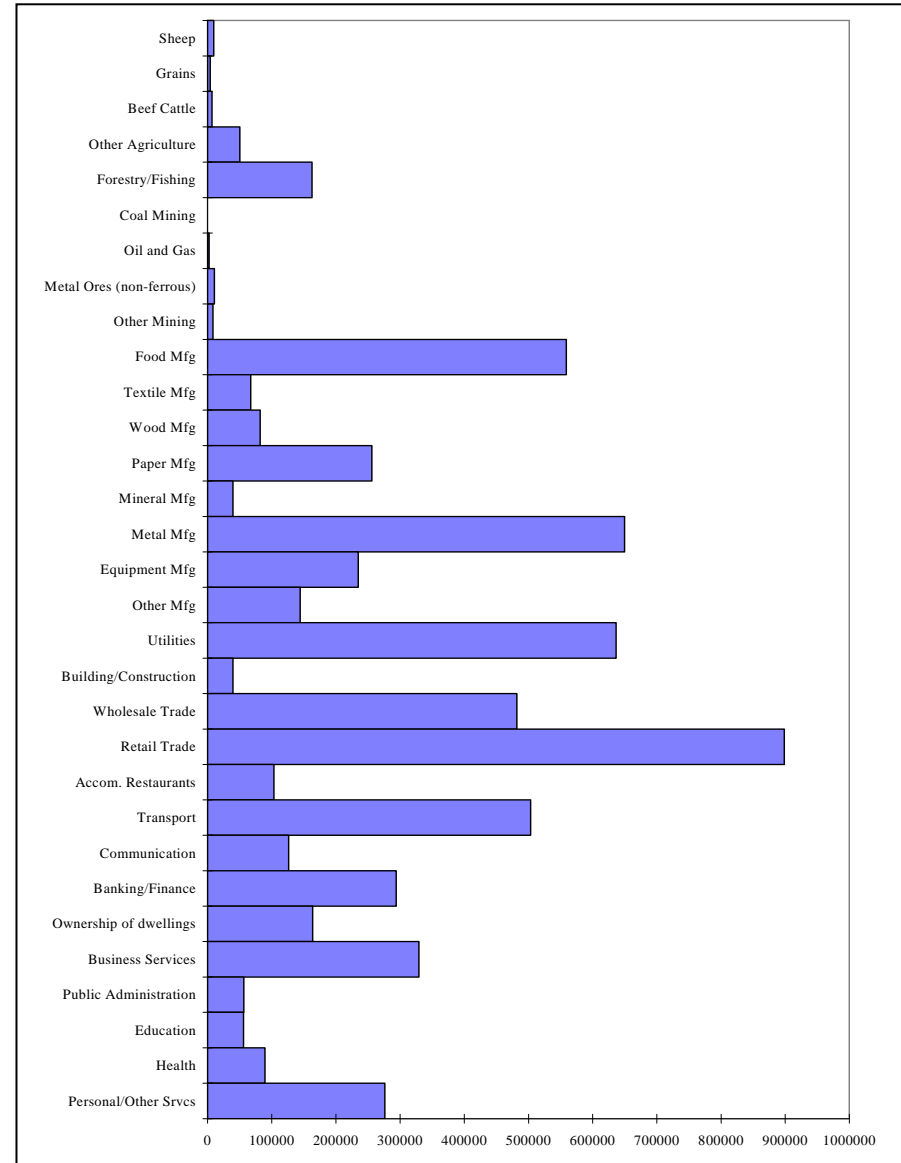


Figure A3.16.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.17 NSW Economy Description

A highly aggregated 2006 input-output table for the NSW economy is provided in Table A3.17. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.17
Aggregated Transactions Table: NSW Economy 2006(\$'000)

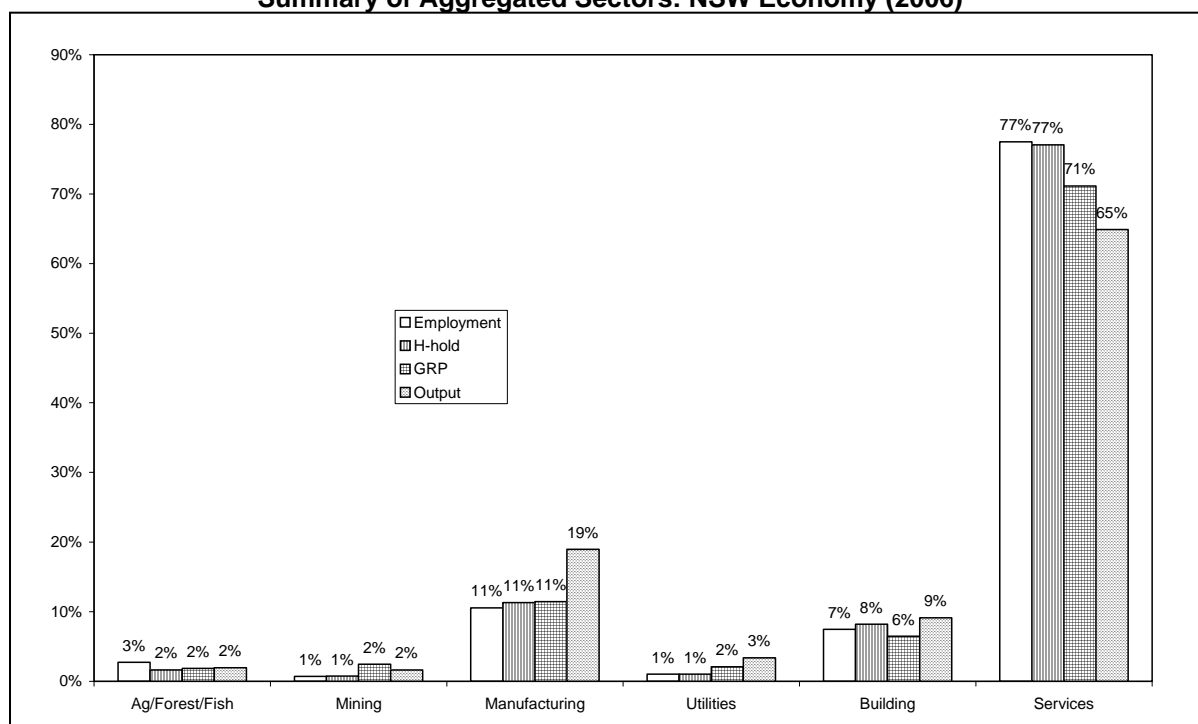
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	978,490	1,658	3,926,346	497	29,659	605,225	5,541,876	981,366	948,351	5,239,501	12,711,094
Mining	1,610	411,869	1,179,129	1,138,413	121,186	258,903	3,111,110	40,896	-129,201	7,512,313	10,535,117
Manuf.	1,143,351	383,352	20,445,740	411,503	8,116,164	24,473,596	54,973,706	18,120,001	6,224,943	42,869,542	122,188,192
Utilities	142,530	74,860	1,662,795	8,954,364	325,319	3,965,176	15,125,044	2,643,078	146,049	3,891,412	21,805,584
Building	78,424	91,078	378,687	367,549	14,512,544	4,923,118	20,351,400	0	37,174,660	1,256,598	58,782,658
Services	1,991,304	842,512	23,649,001	1,450,577	9,411,692	118,064,717	155,409,804	113,844,526	64,822,147	83,551,728	417,628,205
TOTAL	4,335,709	1,805,329	51,241,698	12,322,905	32,516,564	152,290,735	254,512,940	135,629,867	109,186,950	144,321,093	643,650,850
Household Income	3,277,526	1,520,874	22,679,989	2,052,173	16,471,515	154,555,068	200,557,144	0	0	0	200,557,144
OVA	2,609,210	6,263,792	13,591,612	4,605,620	4,049,023	70,763,541	101,882,799	10,199,756	3,860,667	259,394	116,202,616
Imports	2,488,648	945,123	34,674,893	2,824,886	5,745,556	40,018,861	86,697,967	39,028,450	20,742,568	10,231,445	156,700,430
TOTAL	12,711,094	10,535,117	122,188,192	21,805,584	58,782,658	417,628,205	643,650,850	184,858,073	133,790,185	154,811,932	1,117,111,040
Employment	79,218	20,911	307,062	30,126	217,391	2,254,661	2,909,369				

Gross regional product (GRP) for the regional economy is estimated at \$316 759 million, comprising \$200 557 million to households as wages and salaries (including payments to self employed persons and employers) and \$116 202 million in OVA.

Total employed in the region is 2 909 369 people.

Compared to the National economy (Figure A3.24.1), the NSW economy (Figure A3.17.1) has a lower relative reliance on agriculture, forest and fishing sectors (income, GRP and output), mining sectors (income, GRP and output), manufacturing sector (income), building sectors (employment and GRP) and services sectors (income) and a greater relative reliance on the building sectors (income) and services sectors (employment, GRP and output).

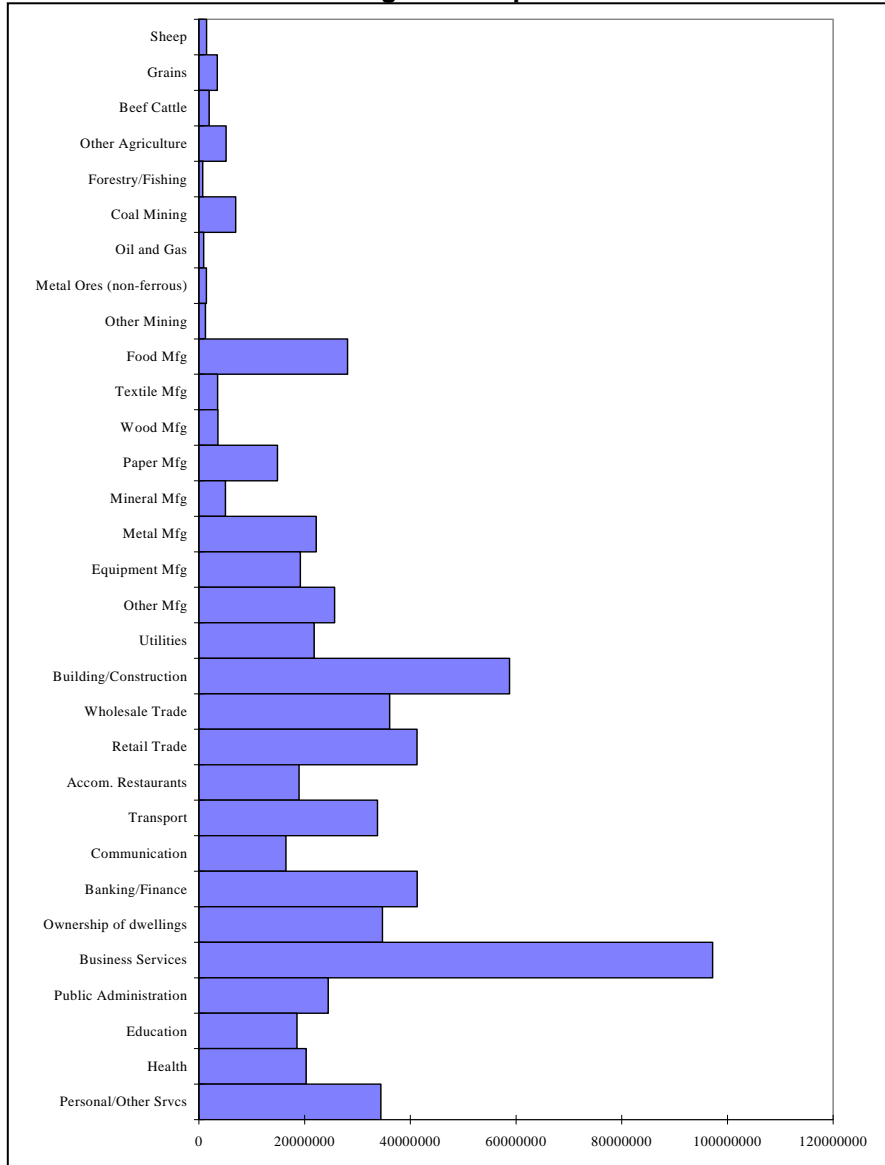
Figure A3.17.1
Summary of Aggregated Sectors: NSW Economy (2006)



A more detailed description of the regional economy is provided in Figures A3.17.2 to A3.17.4. In the agriculture, forestry and fishing sectors, the dominant sectors are the Grains Sector, Beef Sector and Other Agriculture Sector. Coal mining is the main mining sector. The main manufacturing sectors are *Food Manufacturing Sectors*, *Paper Manufacturing*, *Metal Manufacturing Sectors* and *Other Manufacturing Sectors*. Important Services Sectors include *Retail Trade*, *Business Services Sectors* and *Banking and Finance Sectors*.

Figure A3.17.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

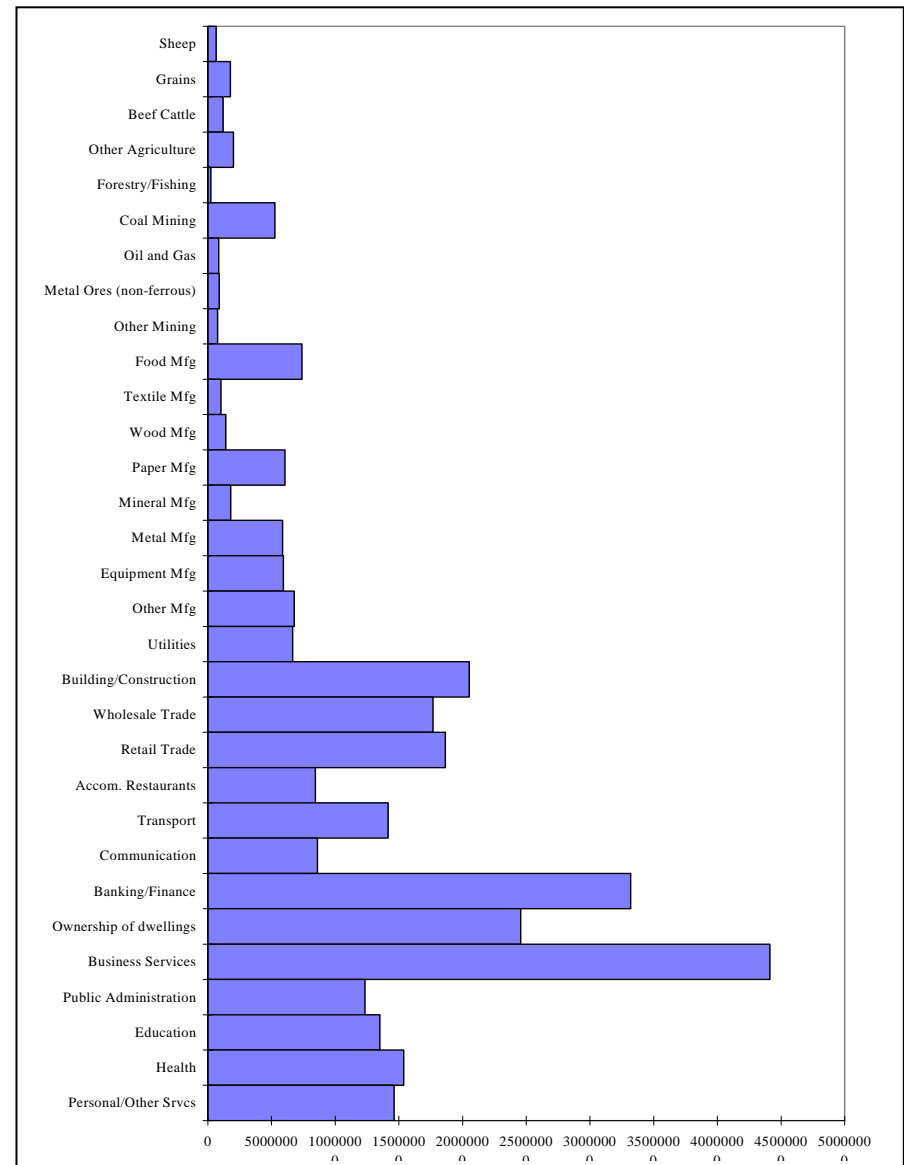


Figure A3.17.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

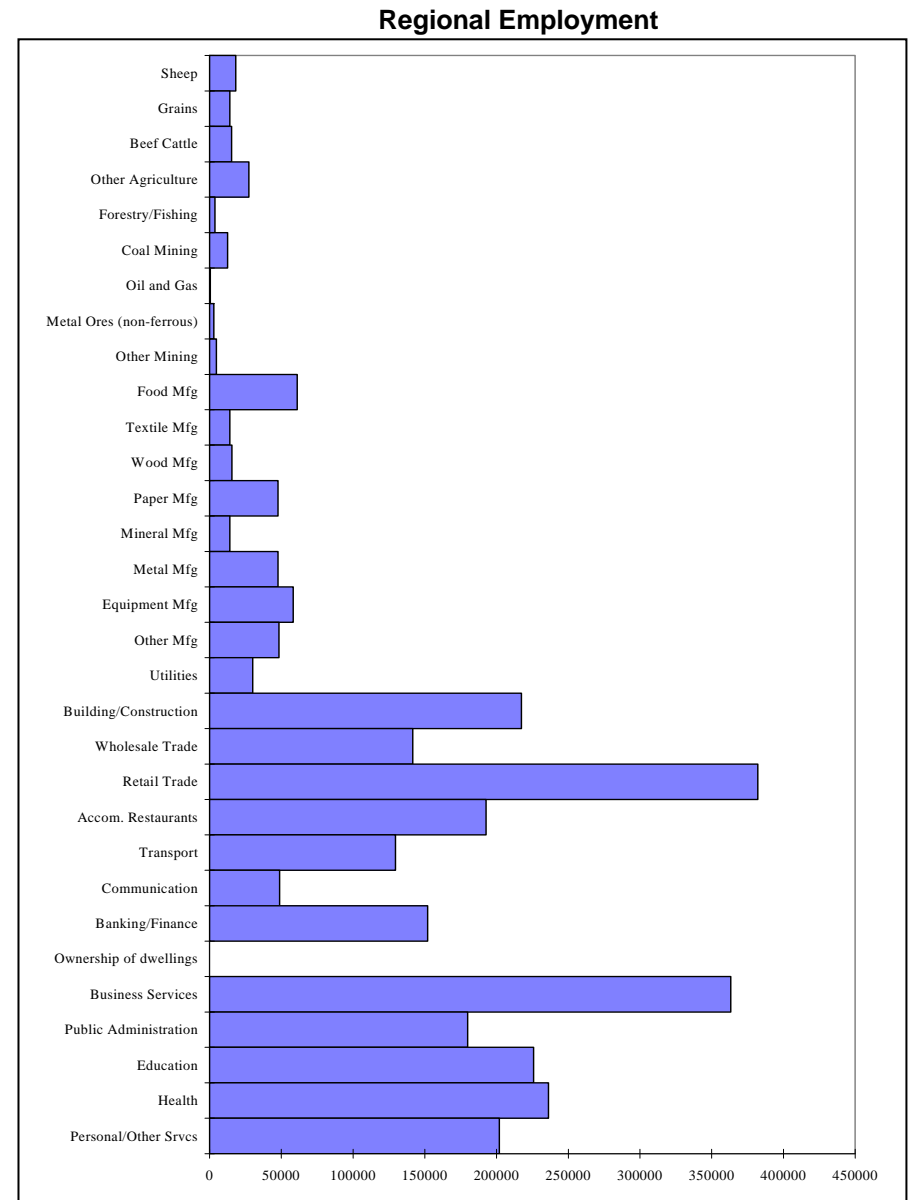
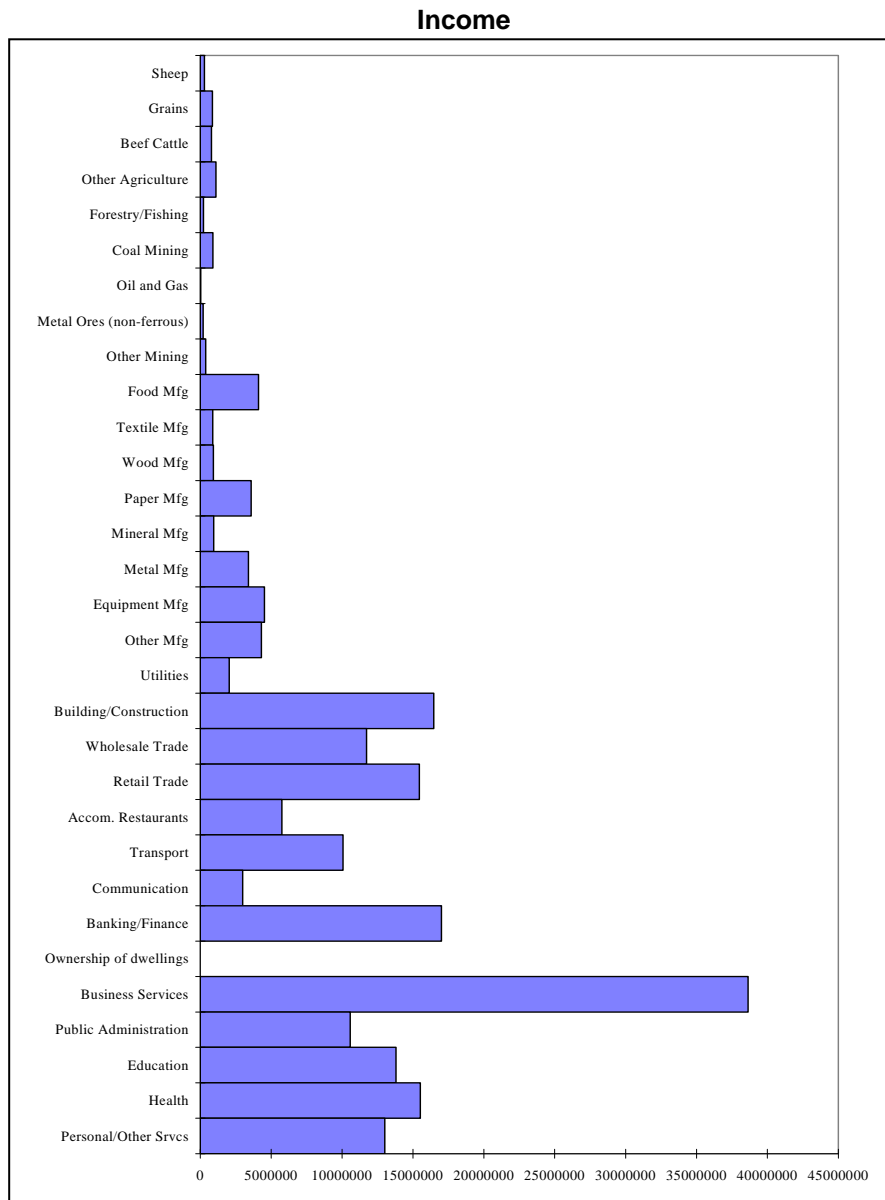
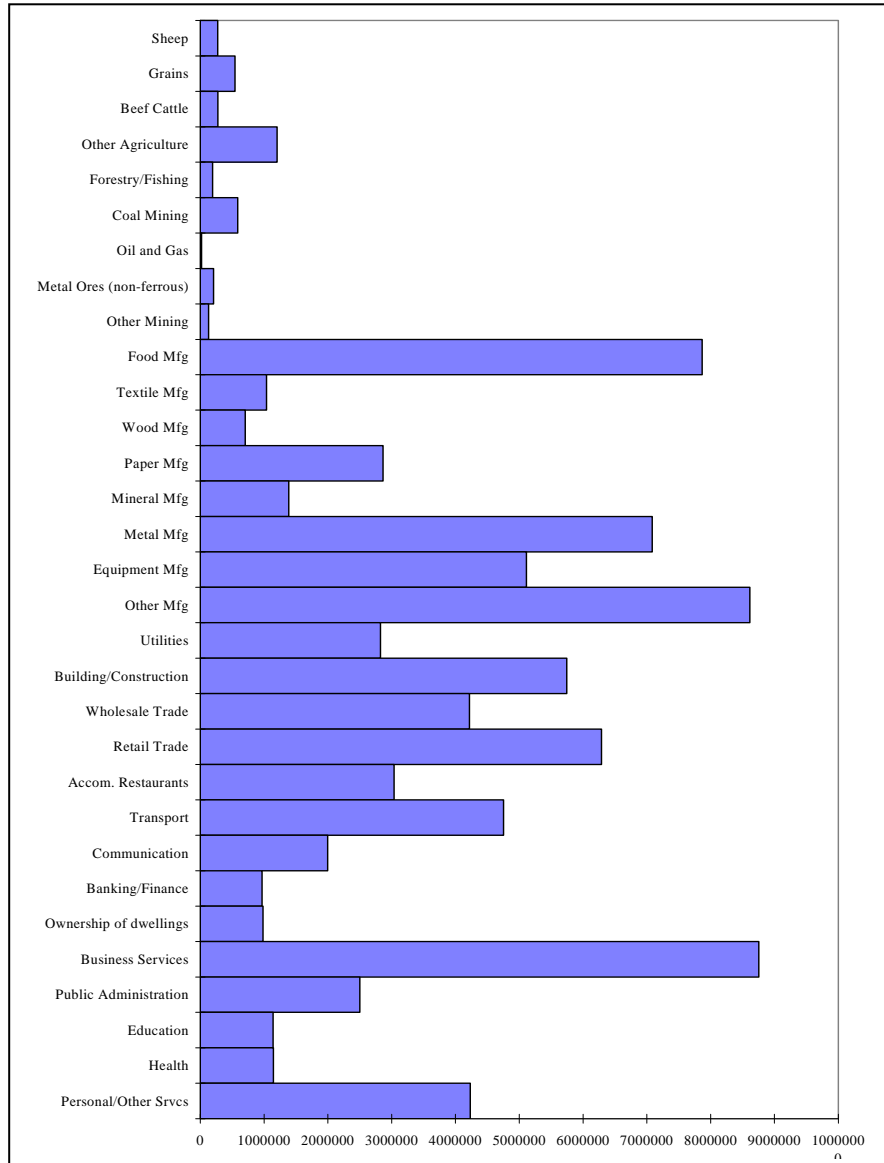
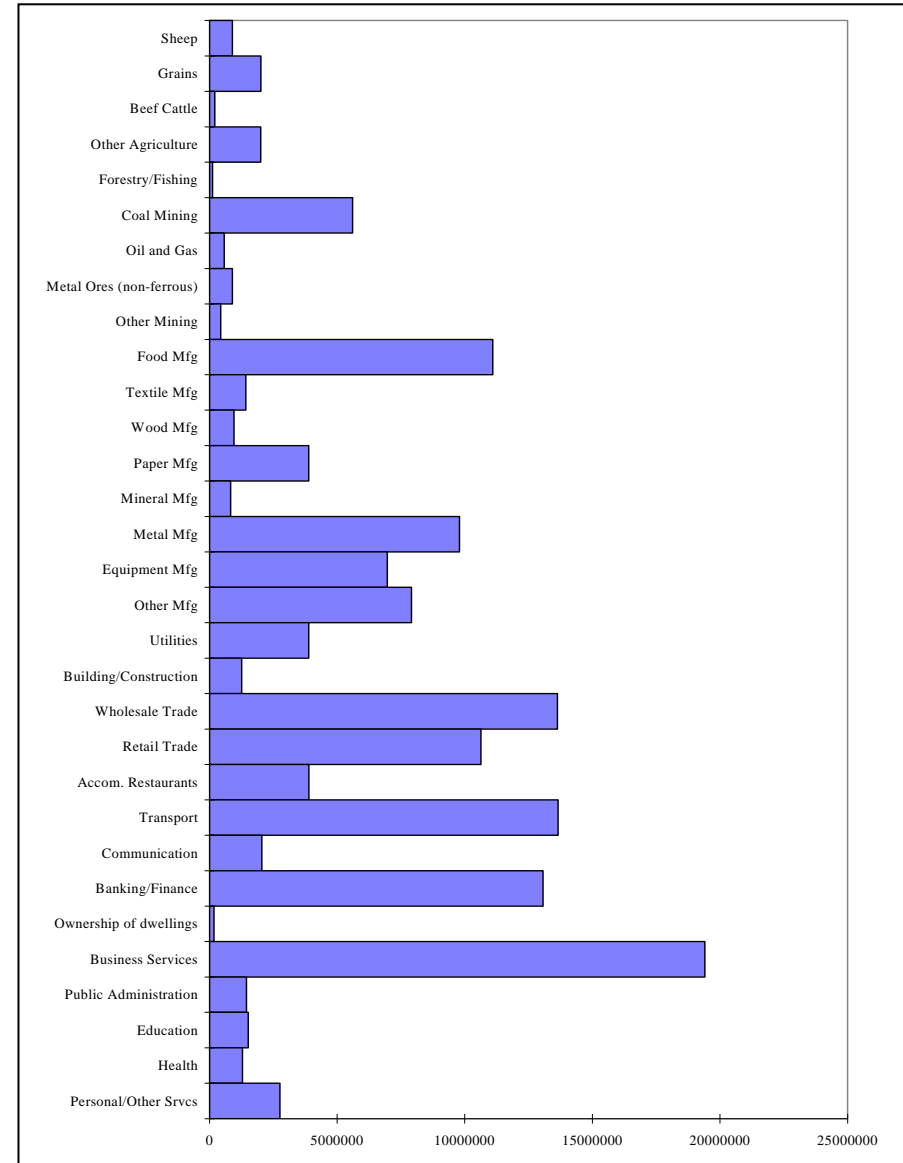


Figure A3.17.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.18 QLD Economy Description

A highly aggregated 2006 input-output table for the Queensland economy is provided in Table A3.18. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.18
Aggregated Transactions Table: Queensland Economy 2006(\$'000)

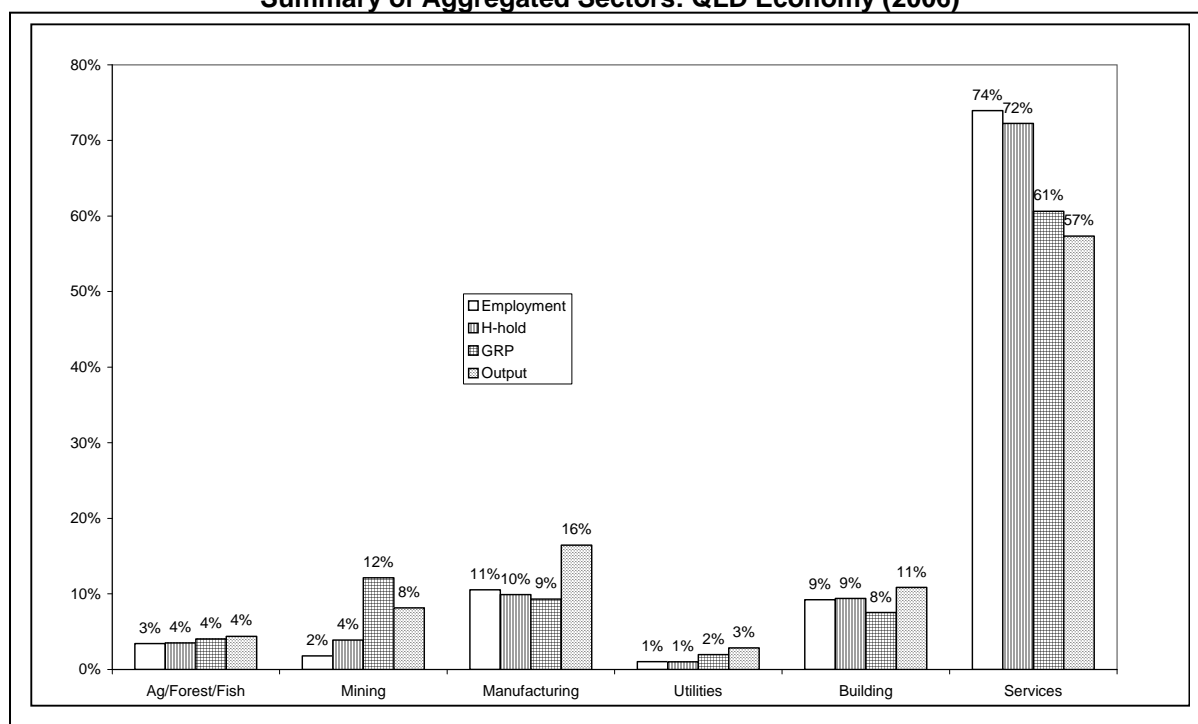
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	1,709,495	6,785	3,535,224	501	34,626	623,524	5,910,155	1,237,951	1,274,505	7,624,612	16,047,224
Mining	7,701	1,807,590	2,577,136	908,007	160,622	392,269	5,853,324	88,865	-225,335	24,084,608	29,801,462
Manuf.	1,266,494	876,098	8,870,143	174,869	4,945,575	11,063,984	27,197,163	8,875,560	3,228,484	20,915,028	60,216,234
Utilities	146,409	183,280	721,635	3,032,791	197,439	1,790,881	6,072,435	1,173,636	53,988	3,134,561	10,434,620
Building	97,573	236,331	173,735	202,535	9,477,578	2,687,079	12,874,831	0	24,675,934	2,167,412	39,718,177
Services	2,062,165	1,869,441	9,344,168	606,811	5,470,422	48,724,166	68,077,173	59,967,678	38,402,145	43,495,314	209,942,310
TOTAL	5,289,838	4,979,525	25,222,040	4,925,515	20,286,261	65,281,903	125,985,082	71,343,690	67,409,721	101,421,534	366,160,028
Household Income	3,773,543	4,213,833	10,680,557	1,107,145	10,123,479	77,829,728	107,728,285	0	0	0	107,728,285
OVA	3,659,826	18,084,996	6,417,541	2,503,615	3,752,355	33,623,978	68,042,311	5,560,867	2,508,119	40,311	76,151,608
Imports	3,324,017	2,523,109	17,896,096	1,898,345	5,556,081	33,206,702	64,404,350	26,763,579	16,649,501	6,544,294	114,361,724
TOTAL	16,047,224	29,801,462	60,216,234	10,434,620	39,718,177	209,942,310	366,160,028	103,668,136	86,567,342	108,006,139	664,401,645
Employment	62,399	32,851	192,514	19,106	168,593	1,349,188	1,824,652				

Gross regional product (GRP) for the regional economy is estimated at \$183 879 million, comprising \$107 728 million to households as wages and salaries (including payments to self employed persons and employers) and \$76 151 million in OVA.

Total employed in the region is 1 824 652 people.

Compared to the National economy (Figure A3.24.1), the Queensland economy (Figure A3.18.1) has a lower relative reliance on the manufacturing sector (income, GRP and output) and the services sectors and a greater relative reliance on the agriculture, forest and fishing sectors (income, GRP and output), mining sectors and building sectors.

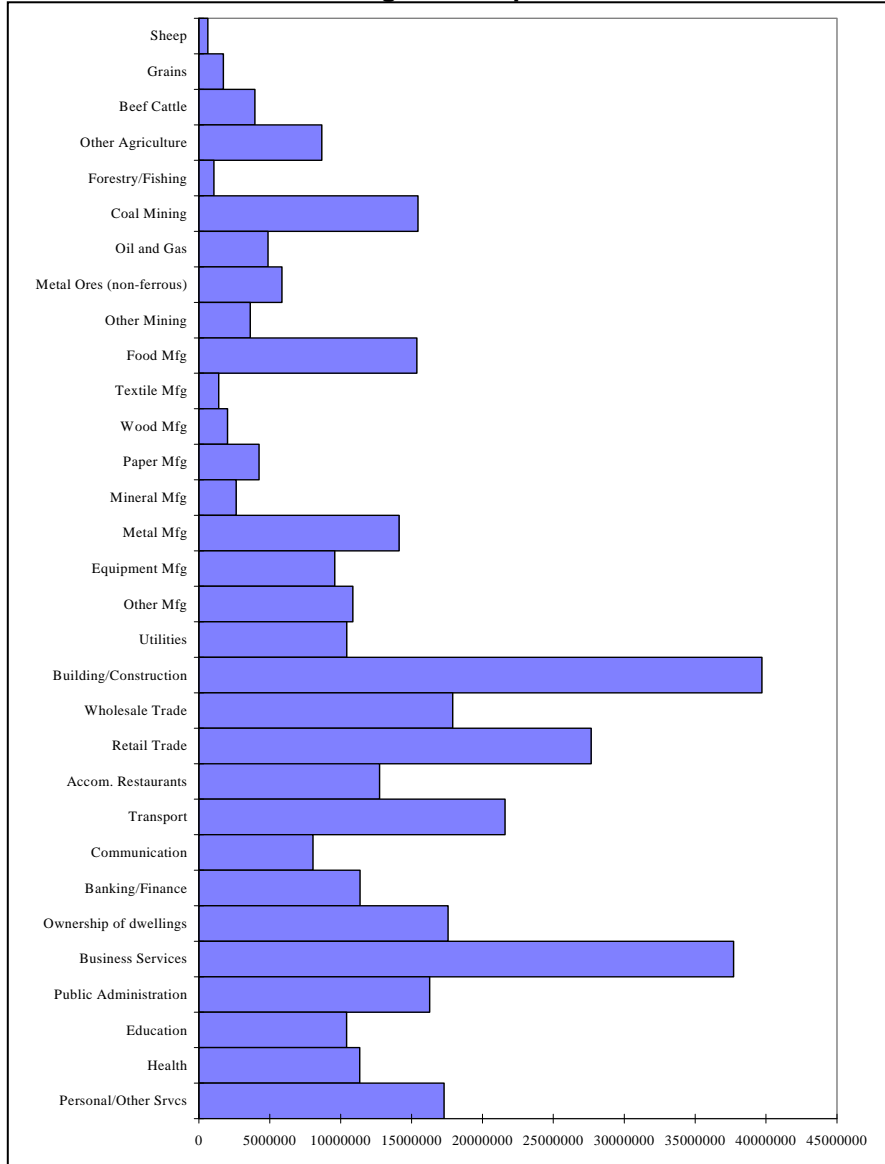
Figure A3.18.1
Summary of Aggregated Sectors: QLD Economy (2006)



A more detailed description of the regional economy is provided in Figures A3.18.2 to A3.18.4. In the agriculture, forestry and fishing sectors, the dominant sectors are the *Other Agriculture Sectors* and *Beef Cattle Sector*. Coal mining is the main mining sector. The main manufacturing sectors are *Food Manufacturing Sectors*, *Metal Manufacturing Sectors*, *Equipment Manufacturing Sectors* and *Other Manufacturing Sectors*. Important Services Sectors include *Retail Trade* and *Business Services Sectors*.

Figure A3.18.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

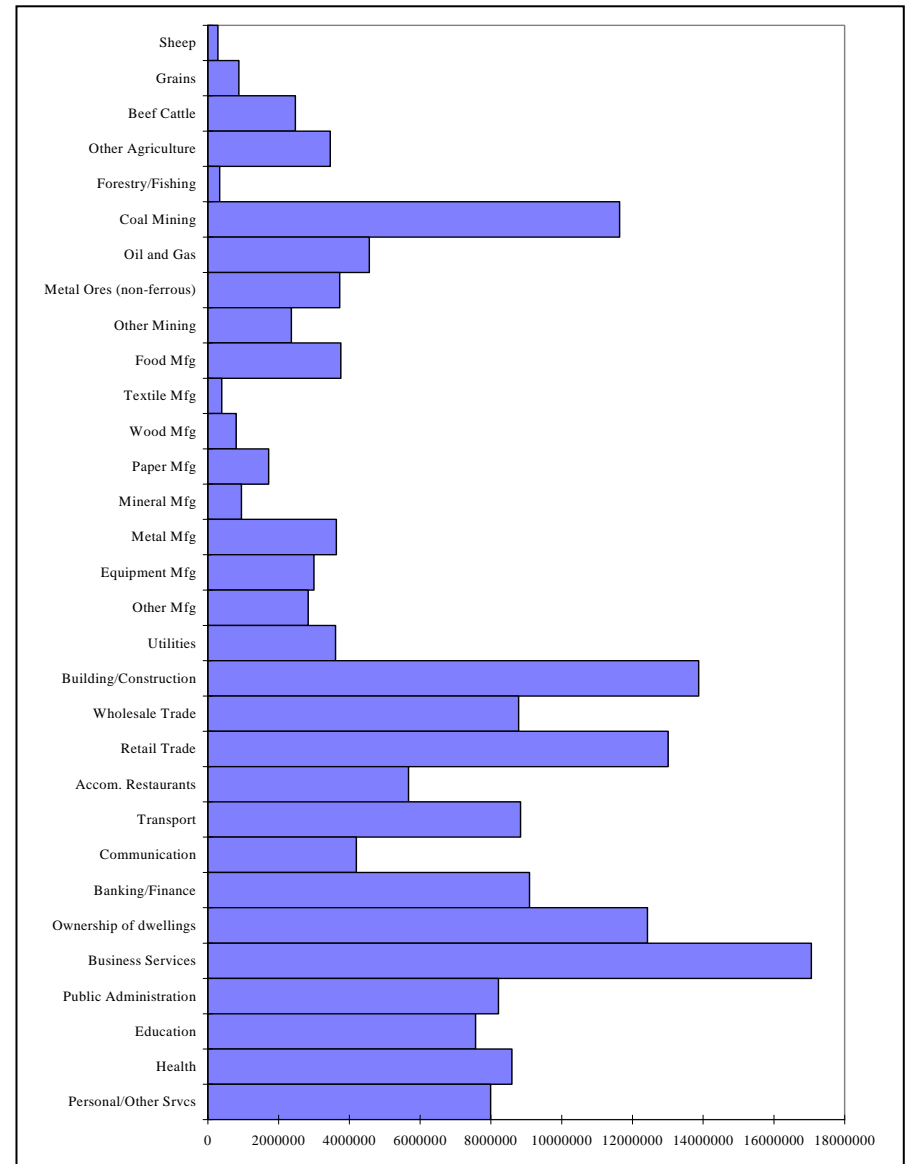


Figure A3.18.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

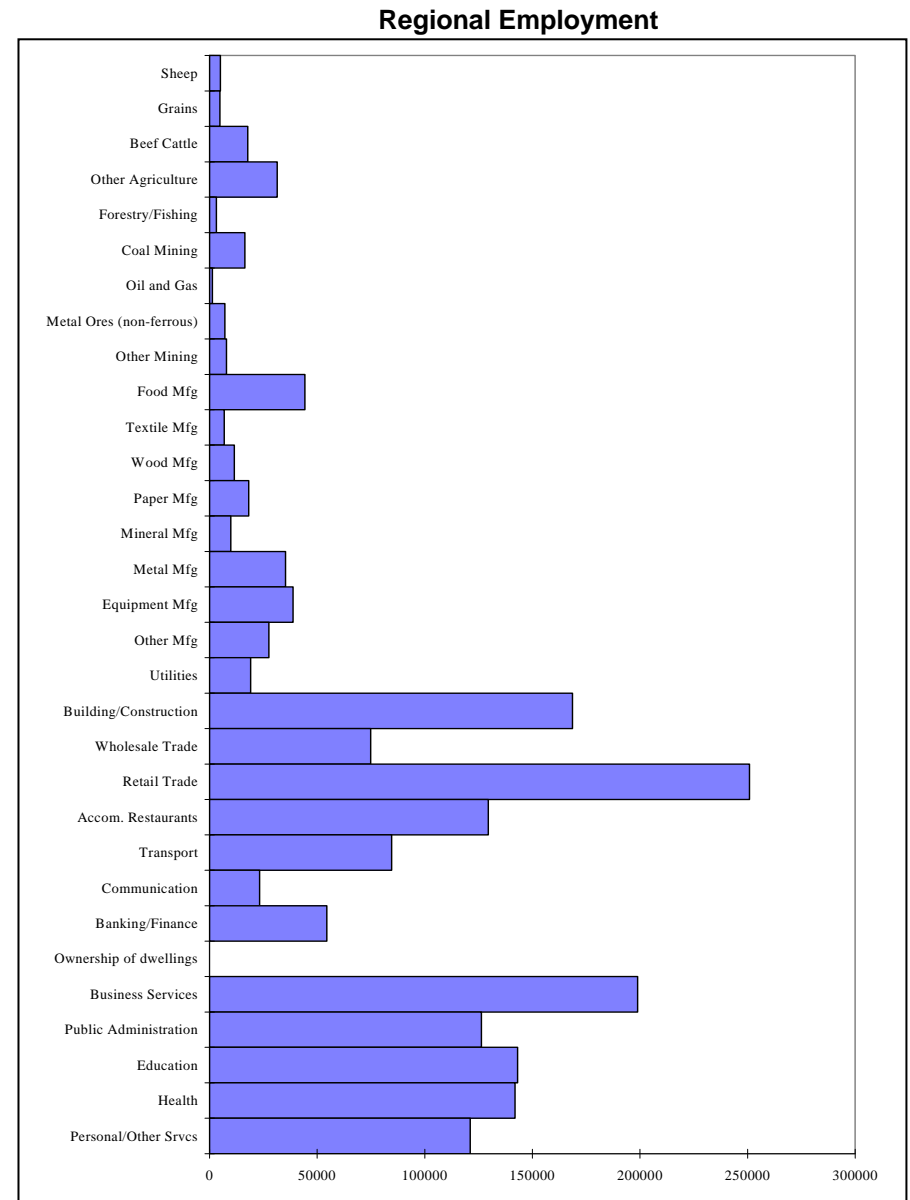
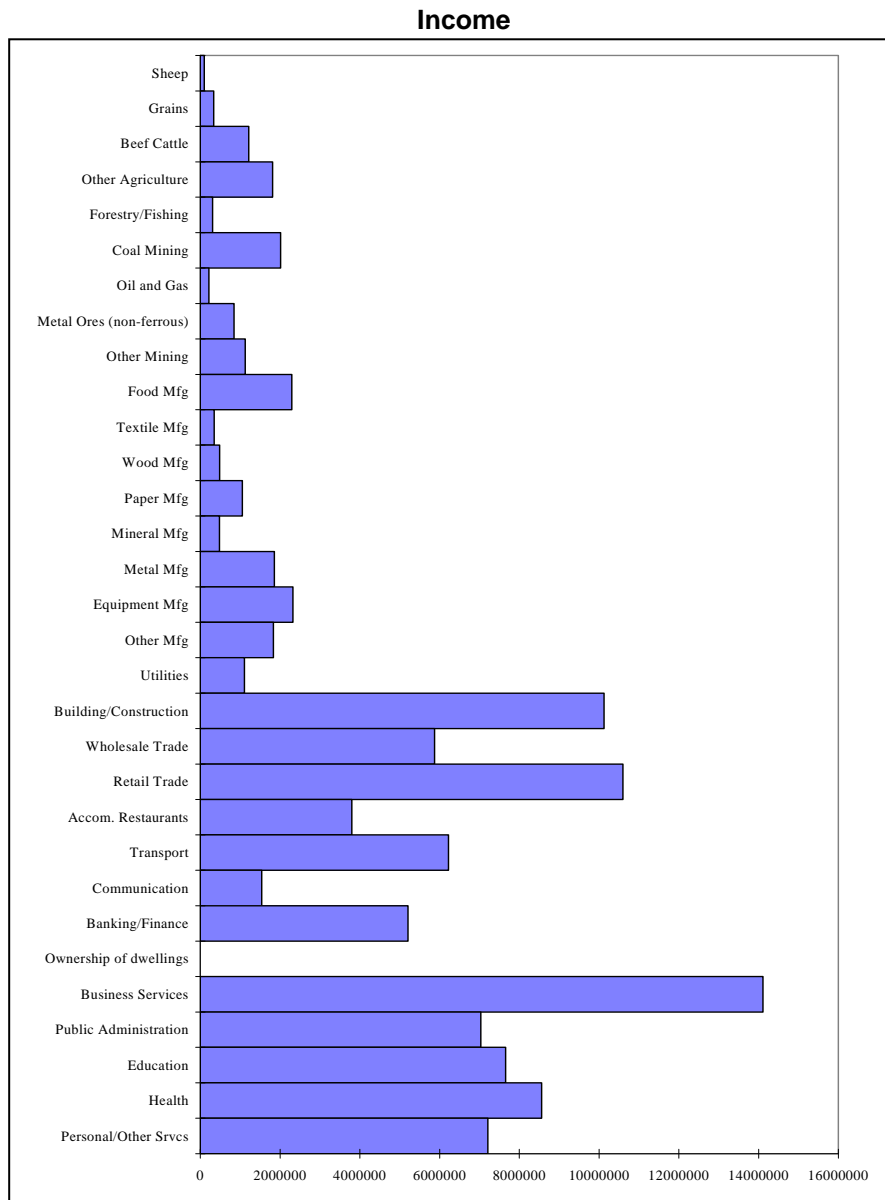
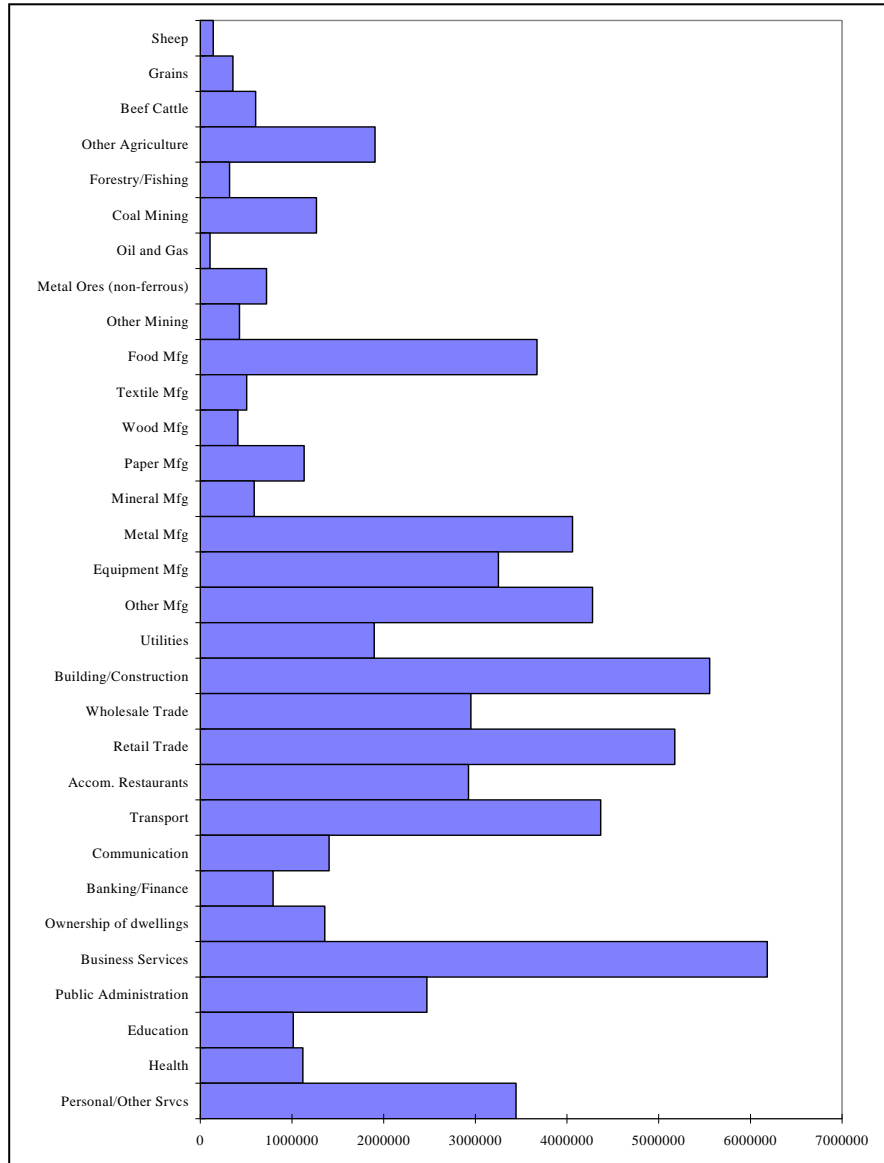
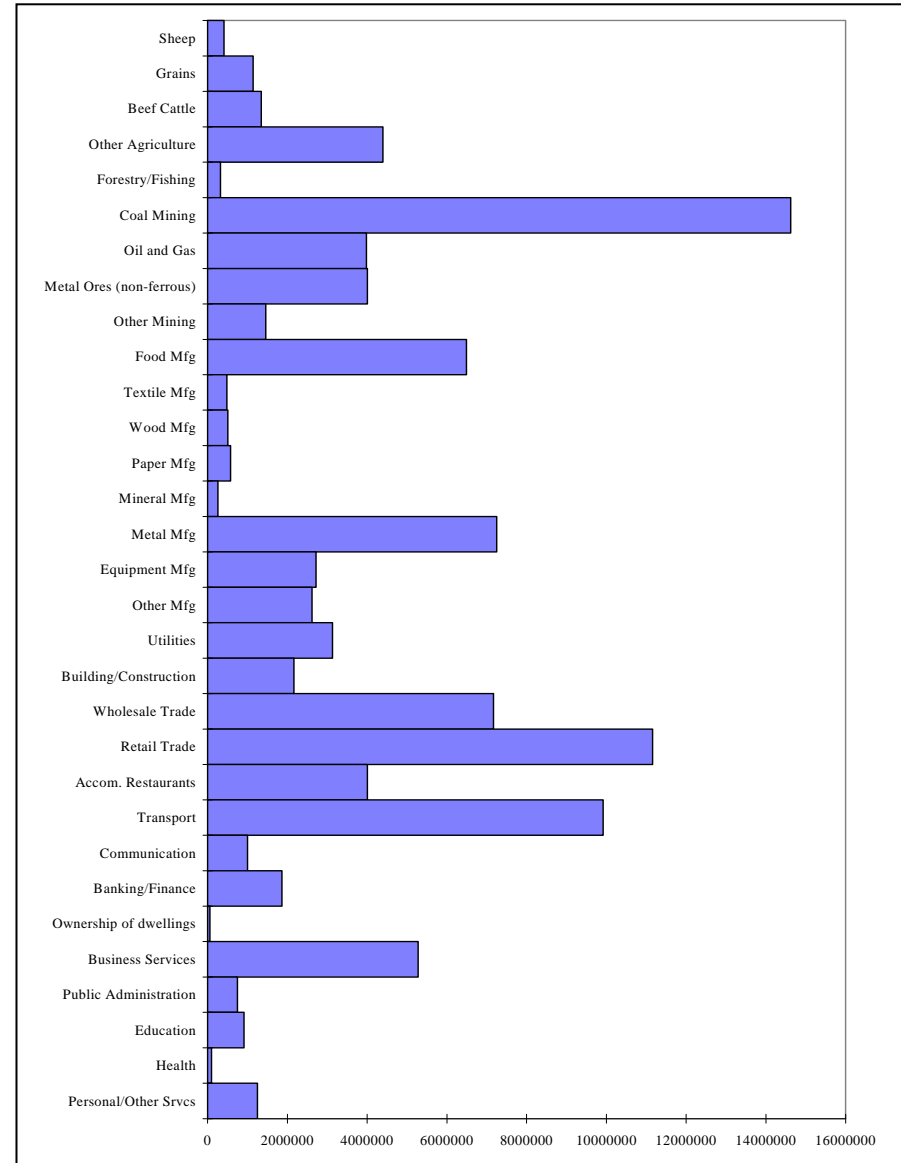


Figure A3.18.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.19 Victoria Economy Description

A highly aggregated 2006 input-output table for the Victorian economy is provided in Table A3.19. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.19
Aggregated Transactions Table: Victorian economy 2006(\$'000)

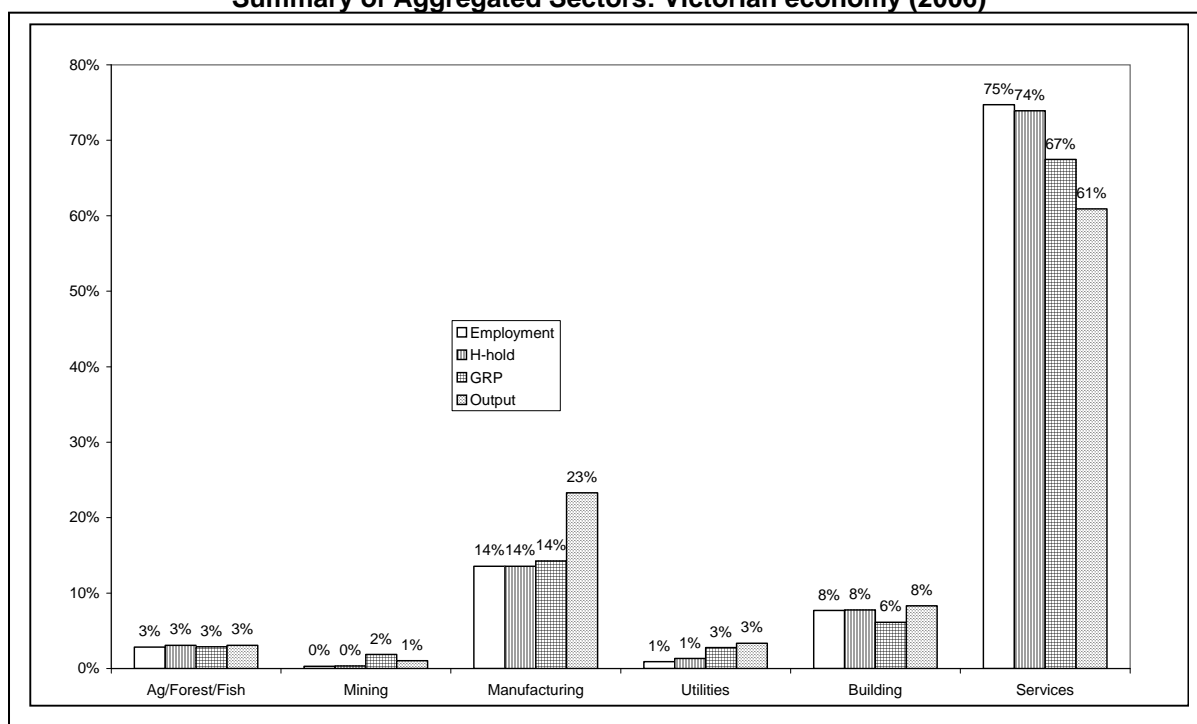
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	1,154,015	499	5,247,315	586	25,605	504,251	6,932,270	980,573	1,233,402	5,819,110	14,965,355
Mining	8,164	104,181	1,377,437	111,190	80,947	438,158	2,120,076	121,878	40,085	2,809,178	5,091,218
Manuf.	1,552,523	115,264	18,675,167	399,680	5,501,470	17,831,885	44,075,990	17,629,981	4,753,904	46,645,489	113,105,363
Utilities	217,198	16,356	1,339,354	5,014,579	216,226	2,754,964	9,558,676	2,669,521	109,386	3,908,603	16,246,185
Building	107,743	29,244	321,176	385,900	10,132,800	3,136,795	14,113,659	0	25,793,674	539,206	40,446,539
Services	2,201,028	251,624	22,053,078	1,502,535	6,278,055	79,536,747	111,823,067	81,271,800	44,741,286	58,015,431	295,851,584
TOTAL	5,240,671	517,170	49,013,526	7,414,469	22,235,103	104,202,800	188,623,738	102,673,752	76,671,736	117,737,017	485,706,243
Household Income	4,572,938	514,191	20,074,702	1,974,212	11,478,175	109,327,552	147,941,770	0	0	0	147,941,770
OVA	2,121,400	3,775,692	12,834,629	4,451,583	2,680,152	46,509,690	72,373,145	7,571,292	2,798,255	345,430	83,088,122
Imports	3,030,346	284,166	31,182,506	2,405,921	4,053,108	35,811,541	76,767,590	26,608,613	18,634,368	7,834,846	129,845,416
TOTAL	14,965,355	5,091,218	113,105,363	16,246,185	40,446,539	295,851,584	485,706,243	136,853,657	98,104,358	125,917,293	846,581,551
Employment	64,385	6,468	308,516	20,945	174,845	1,698,991	2,274,150				

Gross regional product (GRP) for the regional economy is estimated at \$231 029 million, comprising \$147 941 million to households as wages and salaries (including payments to self employed persons and employers) and \$83 088 million in OVA.

Total employed in the State is 2 274 150 people.

Compared to the National economy (Figure A3.24.1), the Victoria economy (Figure A3.19.1) has a lower relative reliance on the mining sector and building sector (GRP and output) and a greater relative reliance on the manufacturing sectors, utilities (GRP) and the services sectors (GRP and output).

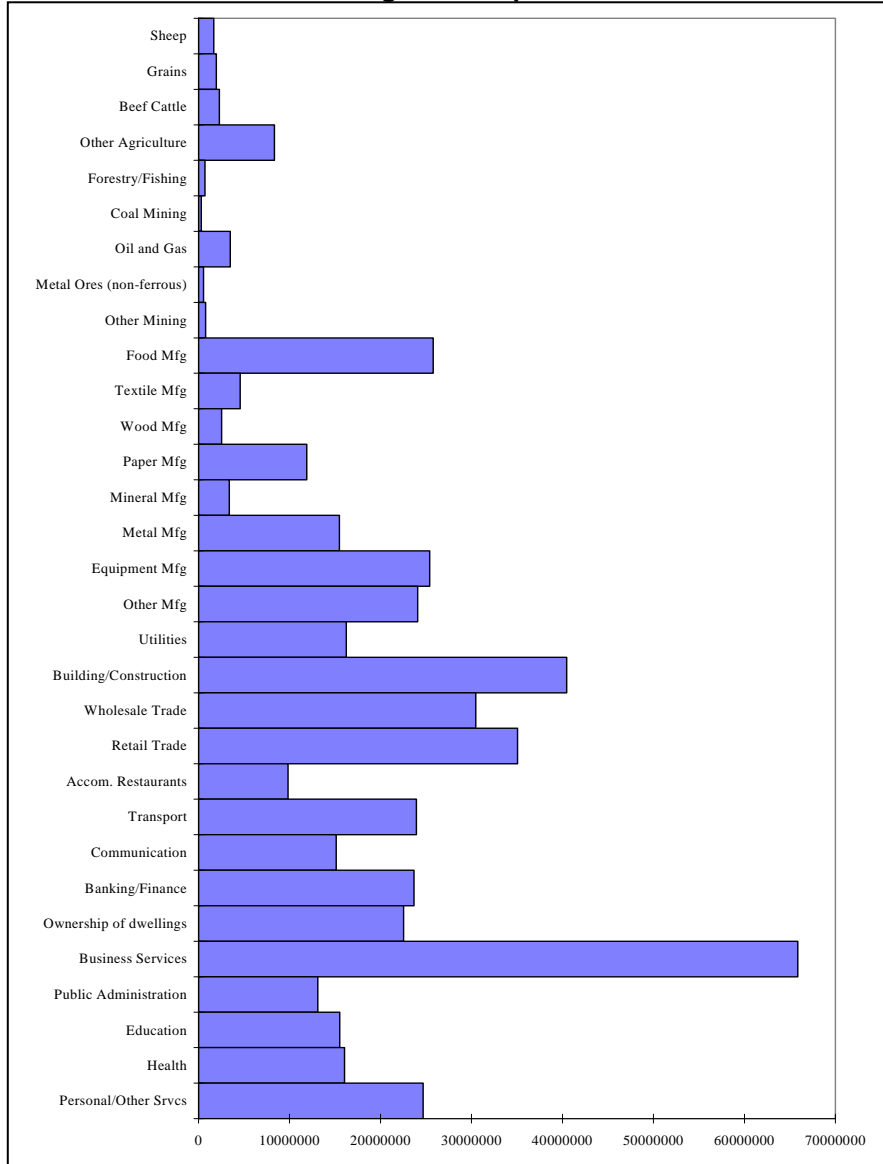
Figure A3.19.1
Summary of Aggregated Sectors: Victorian economy (2006)



A more detailed description of the regional economy is provided in Figures A3.19.2 to A3.19.4. In the agriculture, forestry and fishing sectors, the dominant sector is the Other Agriculture Sectors. Oil and gas is the main mining sector. The main manufacturing sectors are Food Manufacturing Sectors, Equipment Manufacturing Sectors and Other Manufacturing Sectors. Important Services Sectors include Retail Trade and Business Services Sectors.

Figure A3.19.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

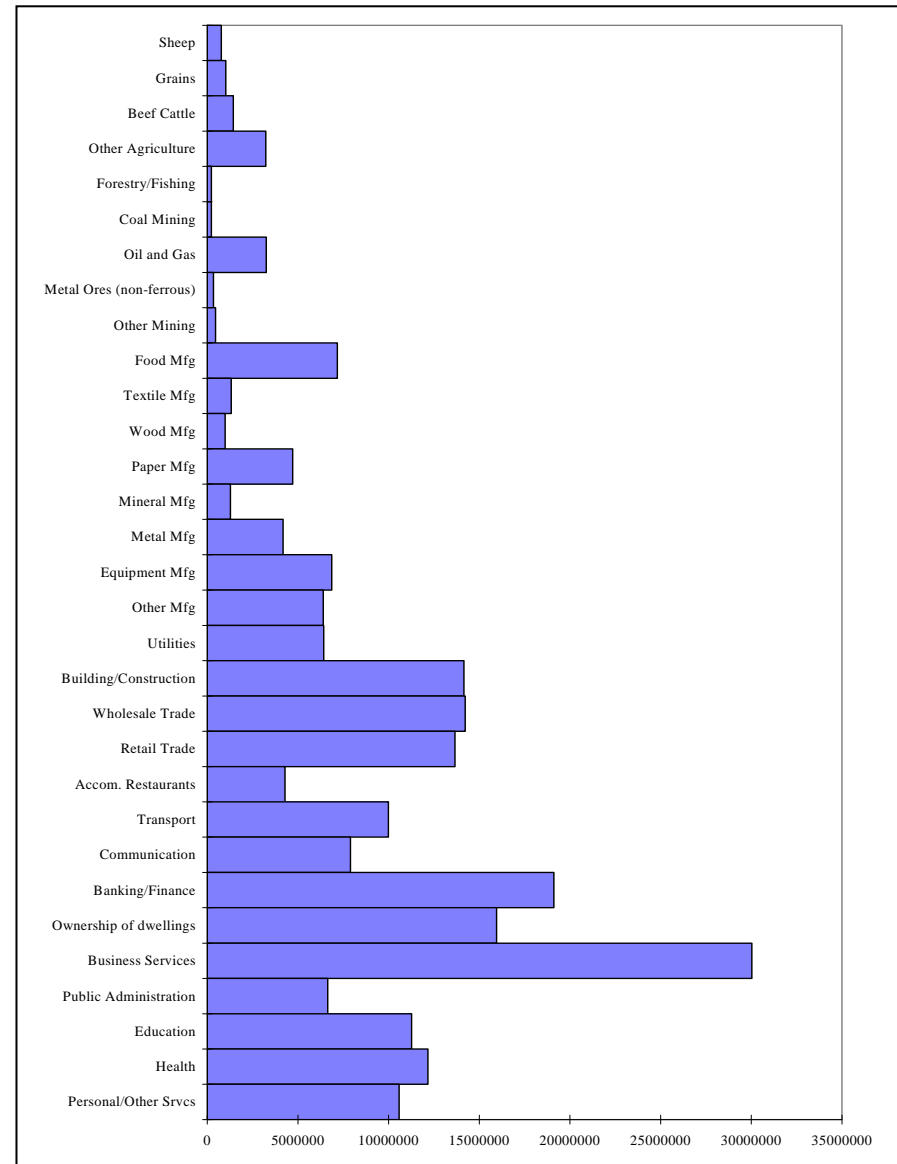


Figure A3.19.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

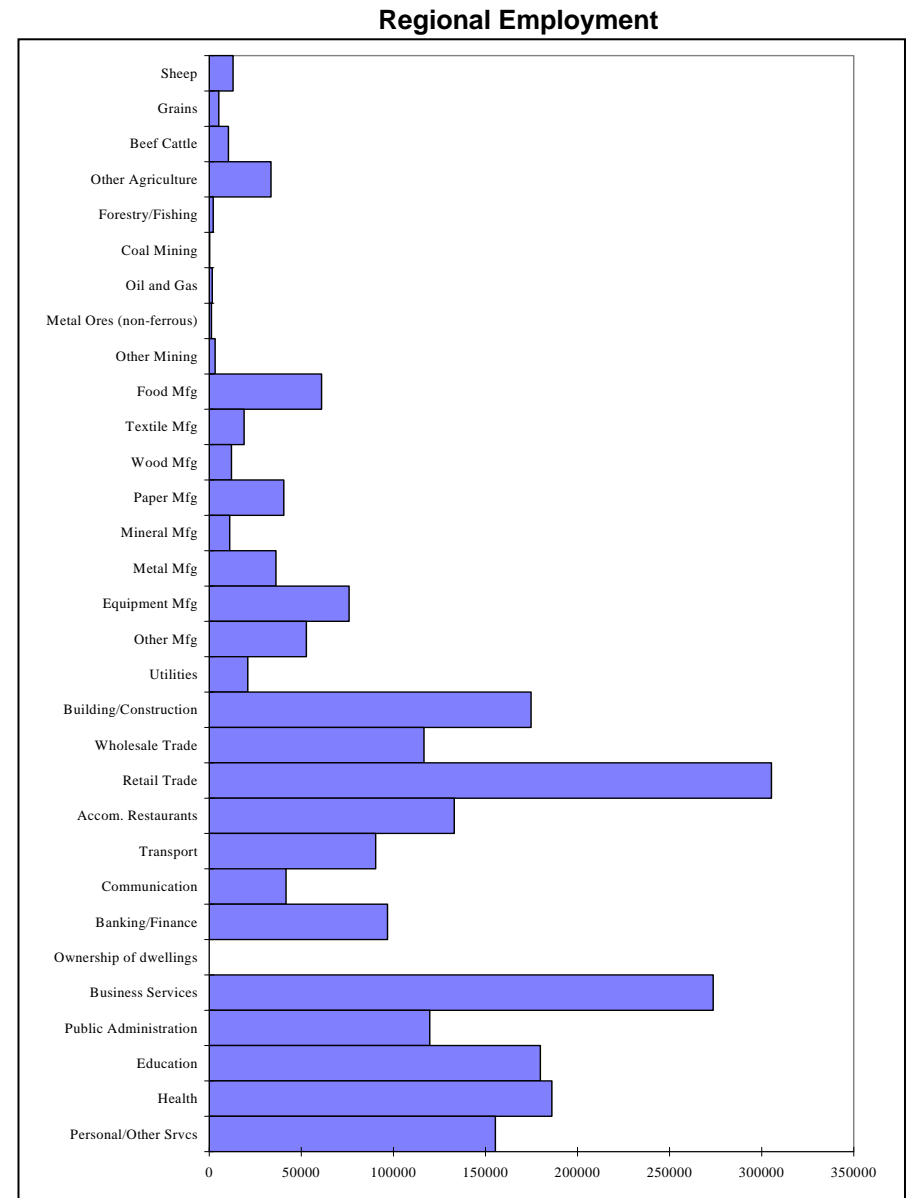
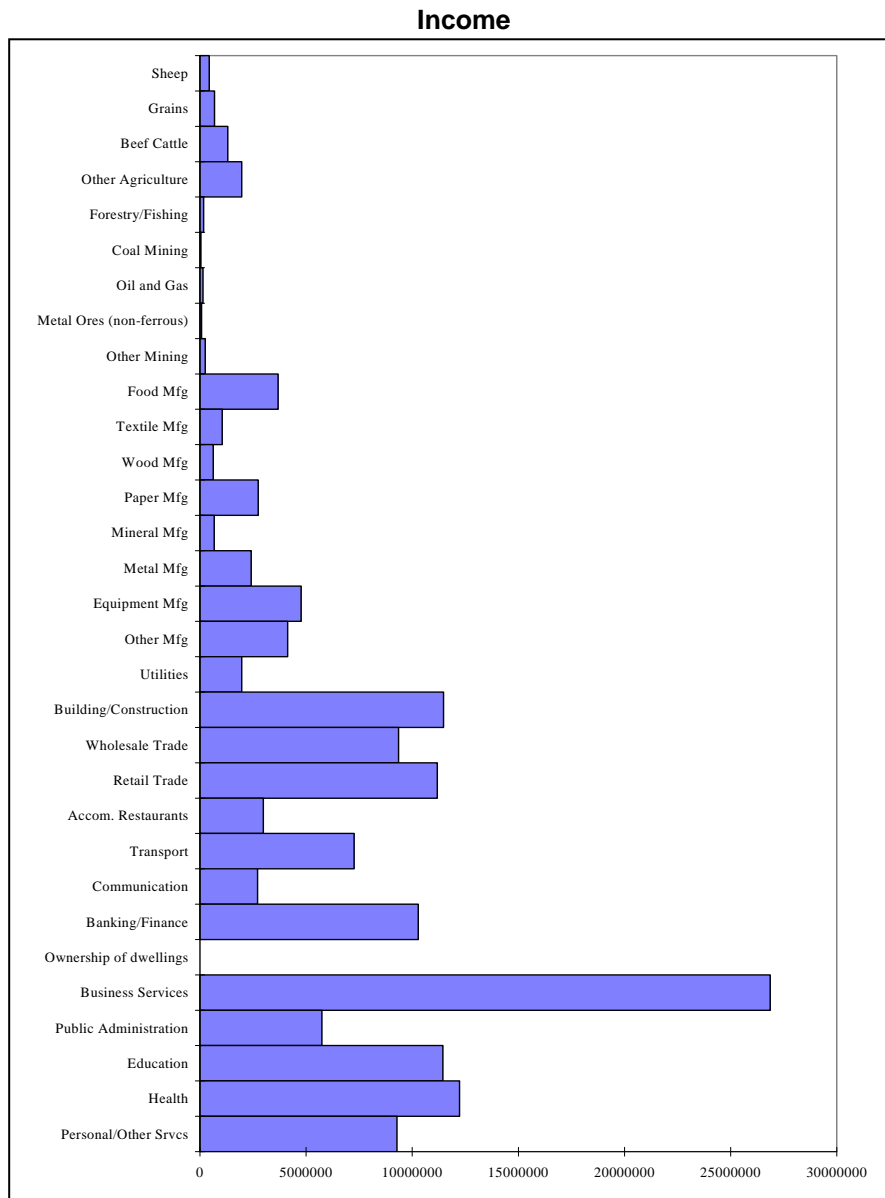
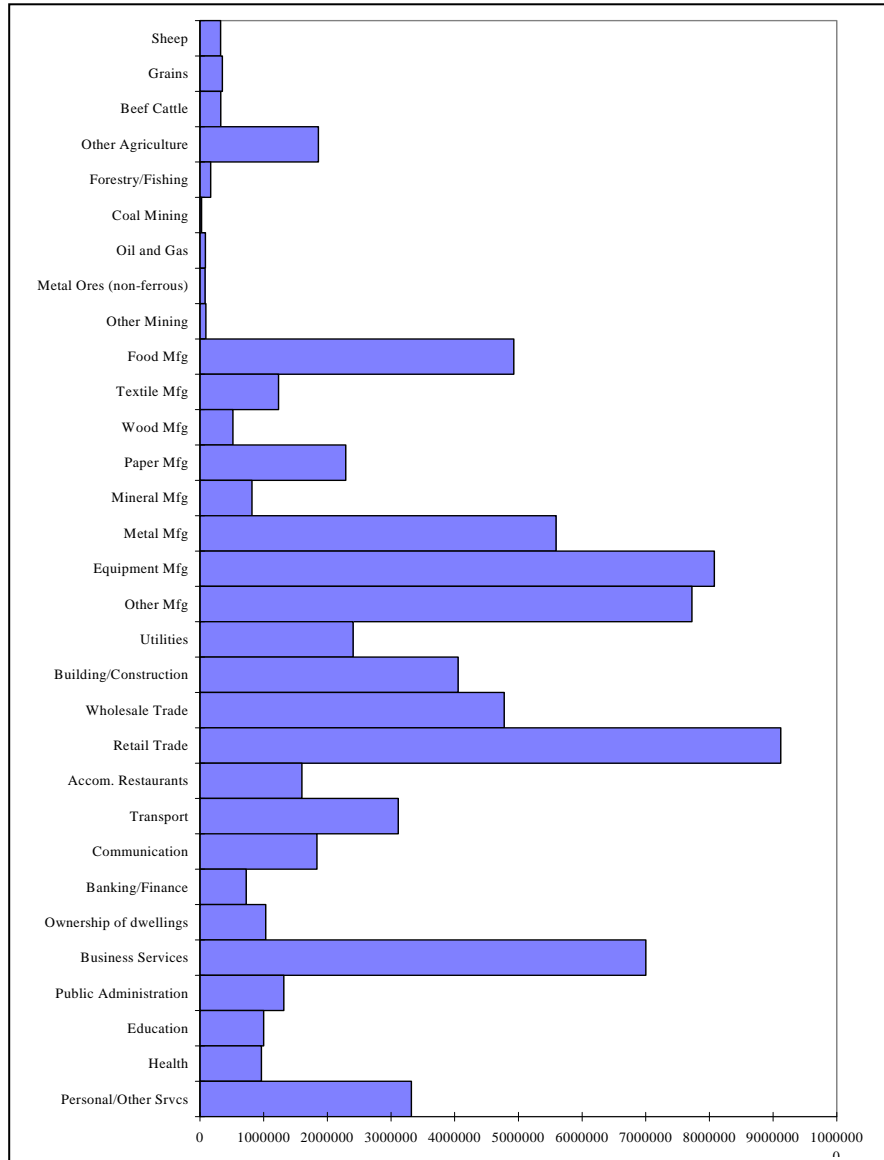
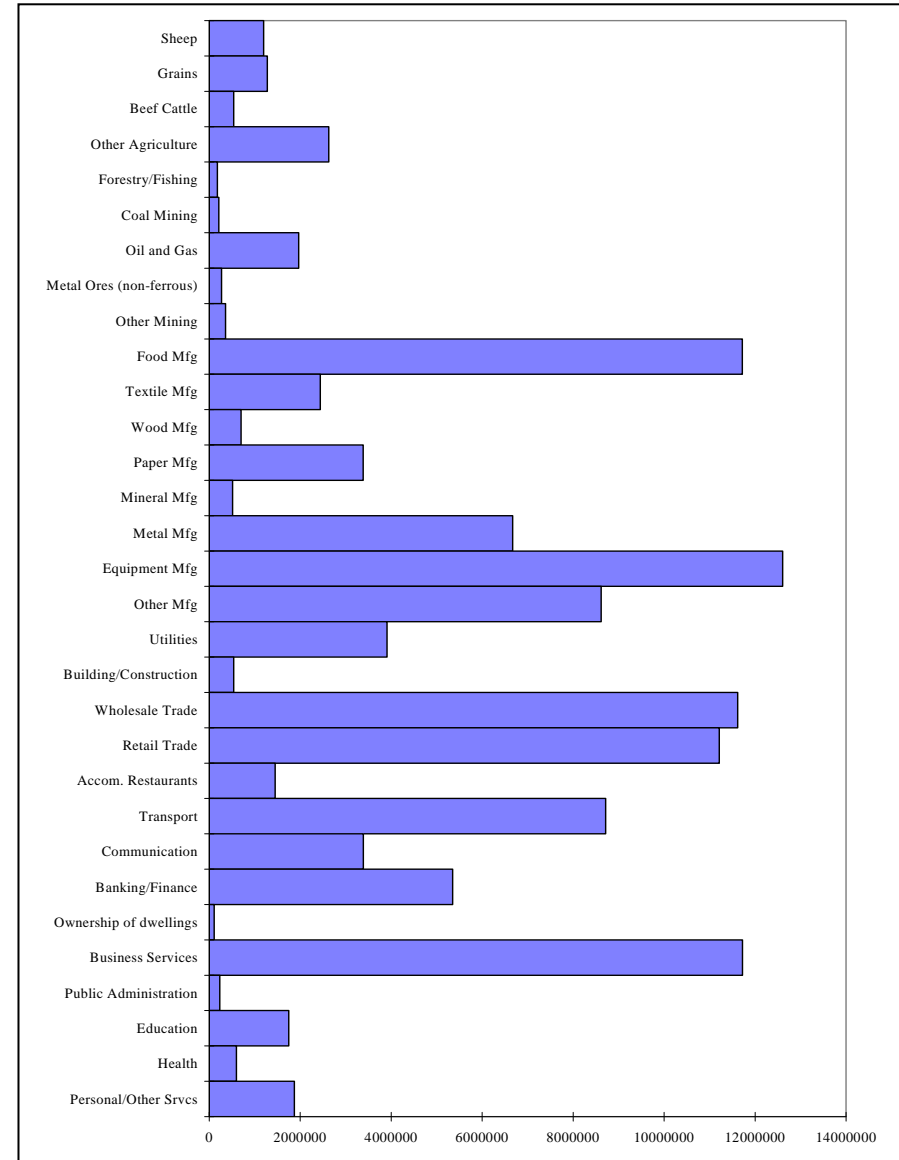


Figure A3.19.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.20 WA Economy Description

A highly aggregated 2006 input-output table for the Western Australian economy is provided in Table A3.20. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.20
Aggregated Transactions Table: Western Australian economy 2006(\$'000)

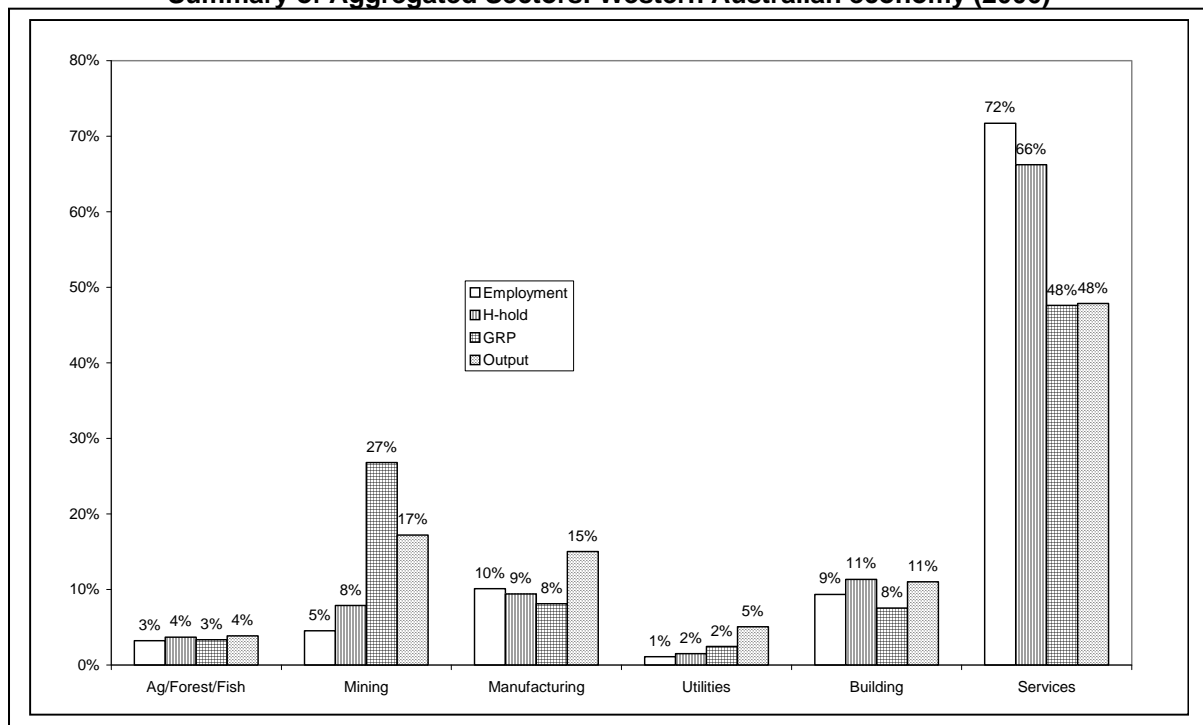
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	1,175,495	6,232	1,253,276	317	21,997	260,860	2,718,176	480,038	628,226	5,288,003	9,114,442
Mining	7,443	2,722,982	3,923,385	352,814	129,777	321,095	7,457,497	88,480	411,986	32,827,527	40,785,490
Manuf.	755,104	927,725	4,849,786	142,956	2,926,274	5,577,182	15,179,028	4,881,826	2,168,884	13,366,112	35,595,849
Utilities	108,727	209,325	571,909	4,247,789	155,537	1,204,503	6,497,790	927,444	47,035	4,523,248	11,995,517
Building	51,616	236,235	116,212	178,034	6,450,182	1,319,668	8,351,948	0	15,903,038	1,849,854	26,104,840
Services	1,331,568	2,053,899	5,459,559	573,173	3,755,384	29,038,292	42,211,875	29,909,538	20,969,422	20,320,099	113,410,934
TOTAL	3,429,954	6,156,398	16,174,127	5,495,082	13,439,152	37,721,600	82,416,312	36,287,326	40,128,592	78,174,842	237,007,072
Household Income	2,291,943	4,885,065	5,835,668	935,508	7,035,416	41,123,473	62,107,073	0	0	0	62,107,073
OVA	1,827,127	27,997,777	4,134,360	2,075,851	2,204,250	17,329,737	55,569,103	2,802,026	2,168,275	122,187	60,661,590
Imports	1,565,419	1,746,250	9,451,694	3,489,076	3,426,022	17,236,123	36,914,584	13,777,395	12,478,168	14,169,758	77,339,905
TOTAL	9,114,442	40,785,490	35,595,849	11,995,517	26,104,840	113,410,934	237,007,072	52,866,746	54,775,035	92,466,787	437,115,641
Employment	30,047	42,439	94,526	10,090	87,367	670,560	935,029				

Gross regional product (GRP) for the regional economy is estimated at \$122 768 million, comprising \$62 107 million to households as wages and salaries (including payments to self employed persons and employers) and \$60 661 million in OVA.

Total employed in the State is 935 029 people.

Compared to the National economy (Figure A3.24.1), the Western Australian economy (Figure A3.20.1) has a lower relative reliance on the manufacturing sectors and services sectors and a higher relative reliance on the mining sectors, building sectors, agriculture/forestry/fishing sectors (income and output) and utilities sectors (income and output).

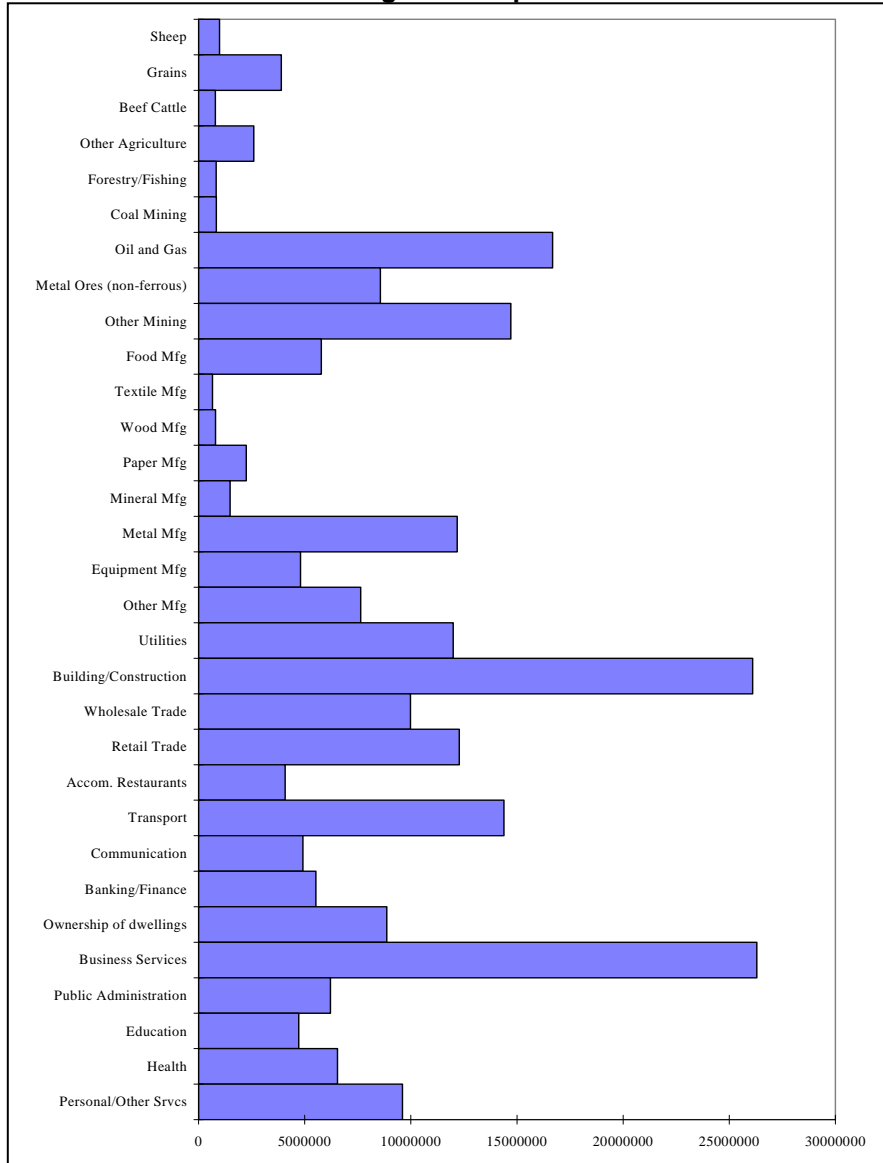
Figure A3.20.1
Summary of Aggregated Sectors: Western Australian economy (2006)



A more detailed description of the regional economy is provided in Figures A3.20.2 to A3.20.4. In the agriculture, forestry and fishing sectors, the dominant sector is the *Grains Sector*. *Oil and gas*, *Non-ferrous metal ore mining* and *Other Mining* are the main mining sector. The main manufacturing sector *Metal Manufacturing*. Important Services Sectors include *Retail Trade* and *Business Services Sectors*.

Figure A3.20.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

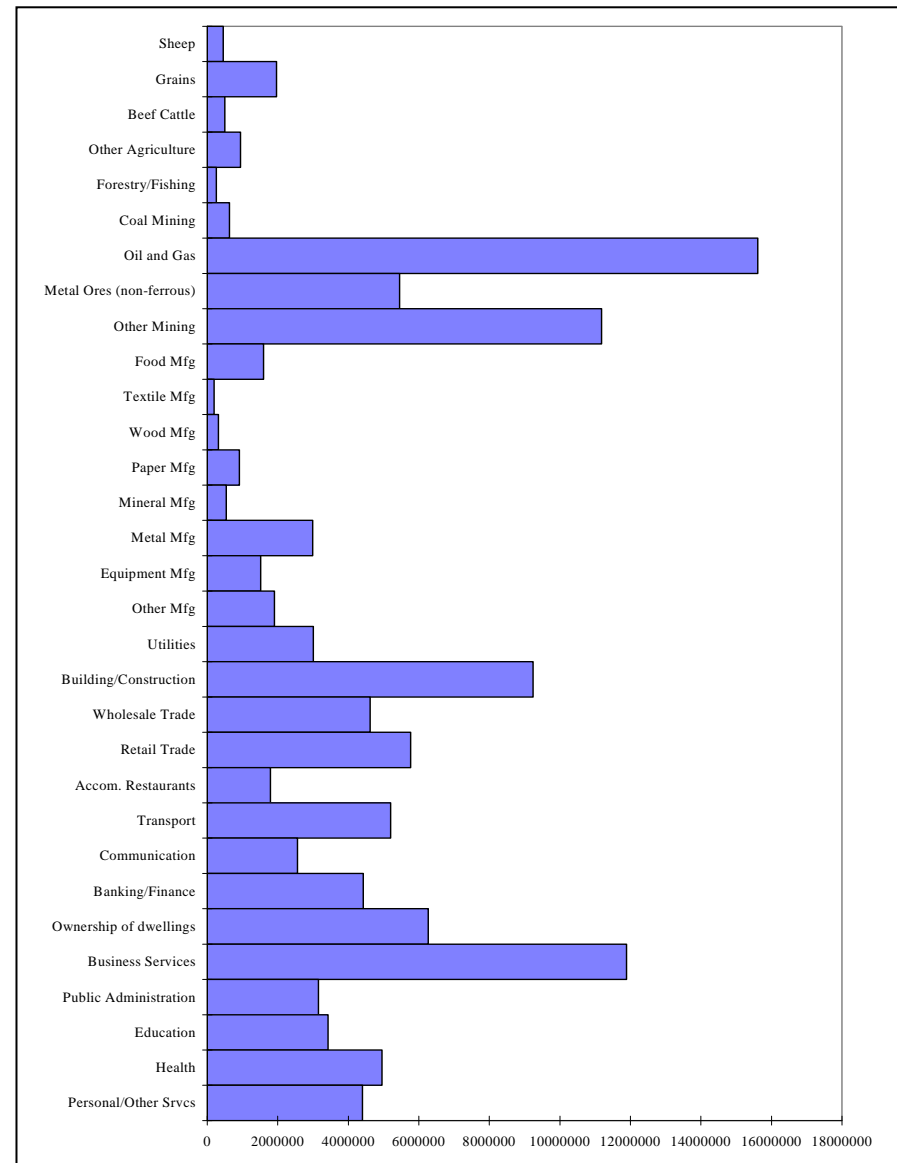


Figure A3.20.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

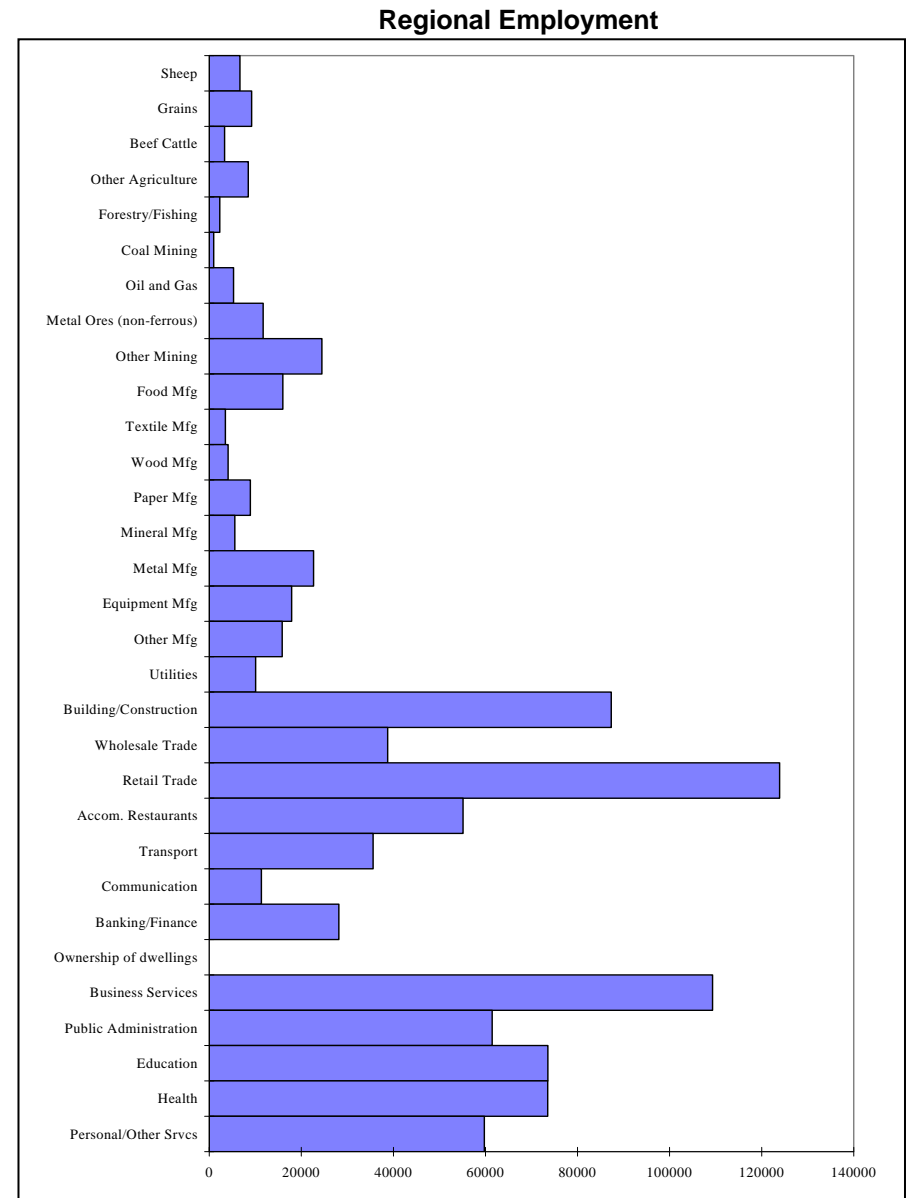
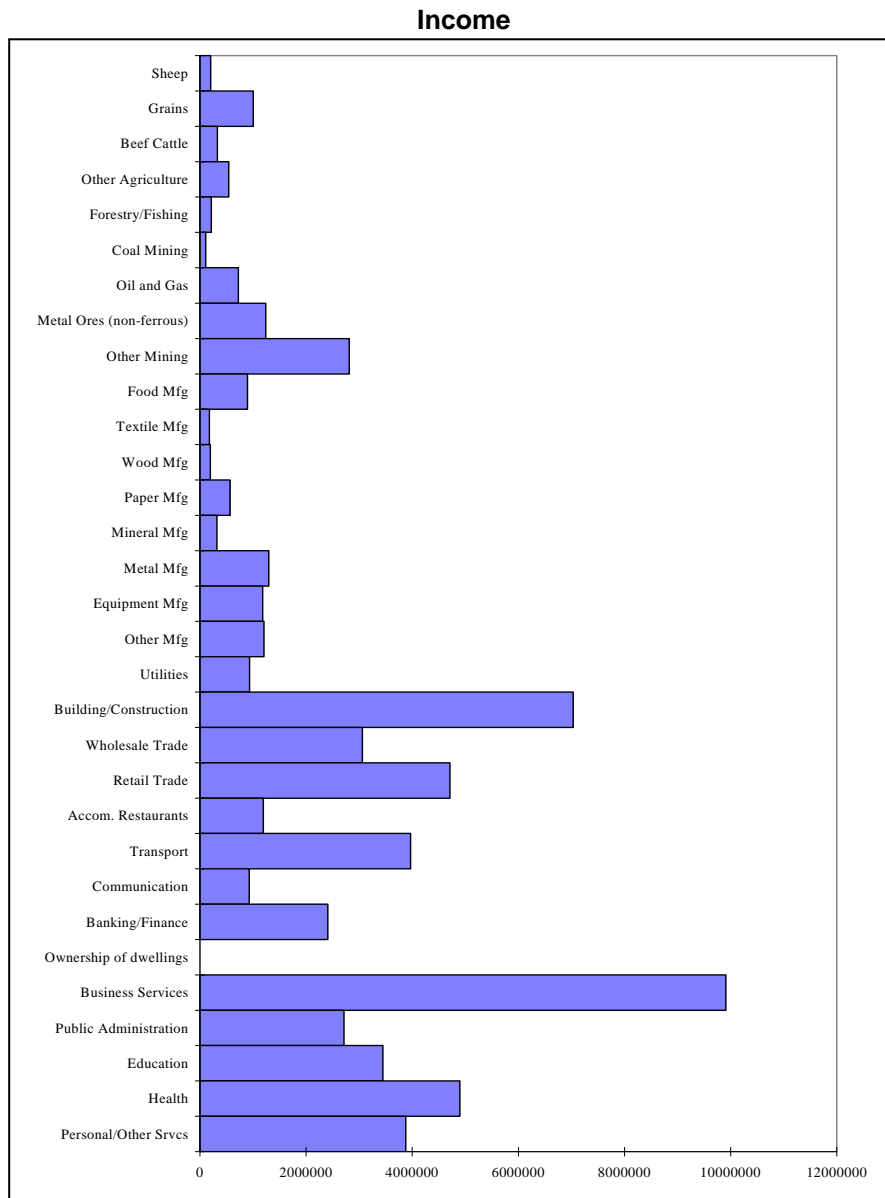
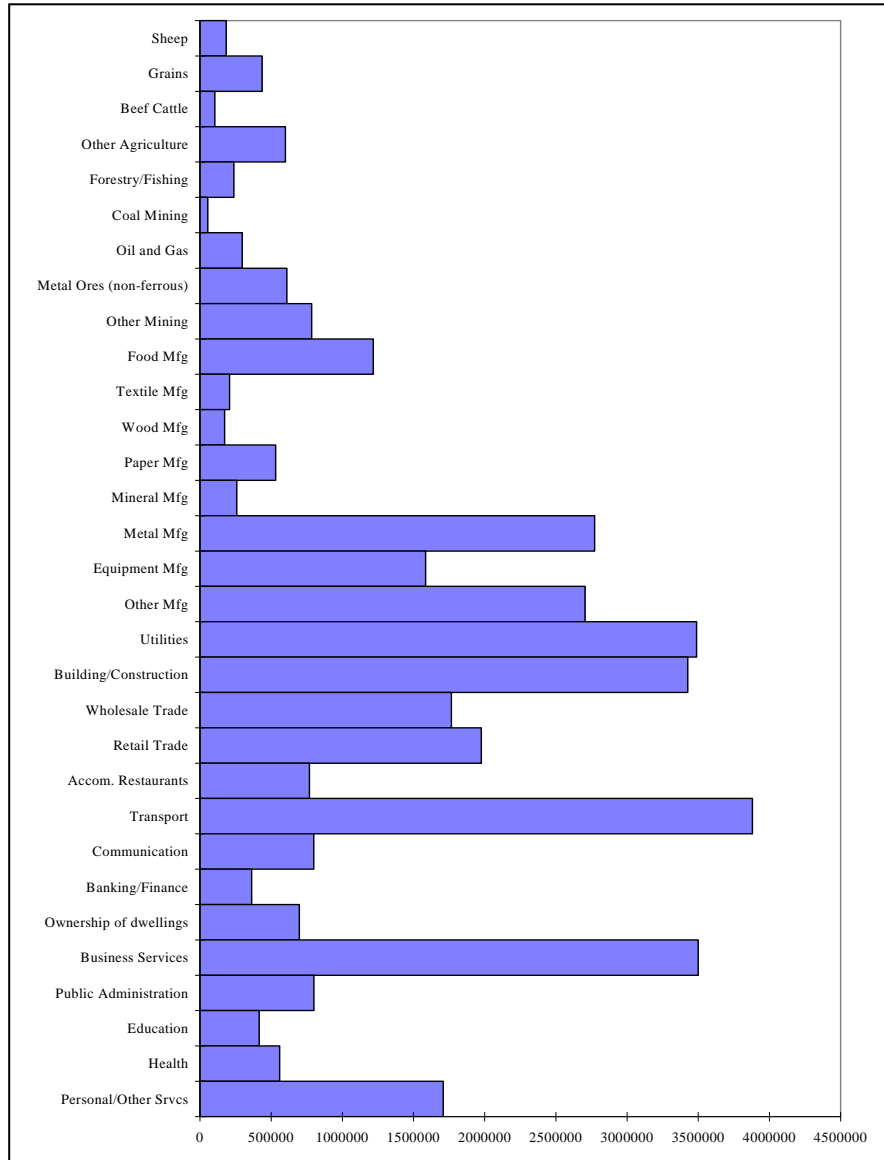
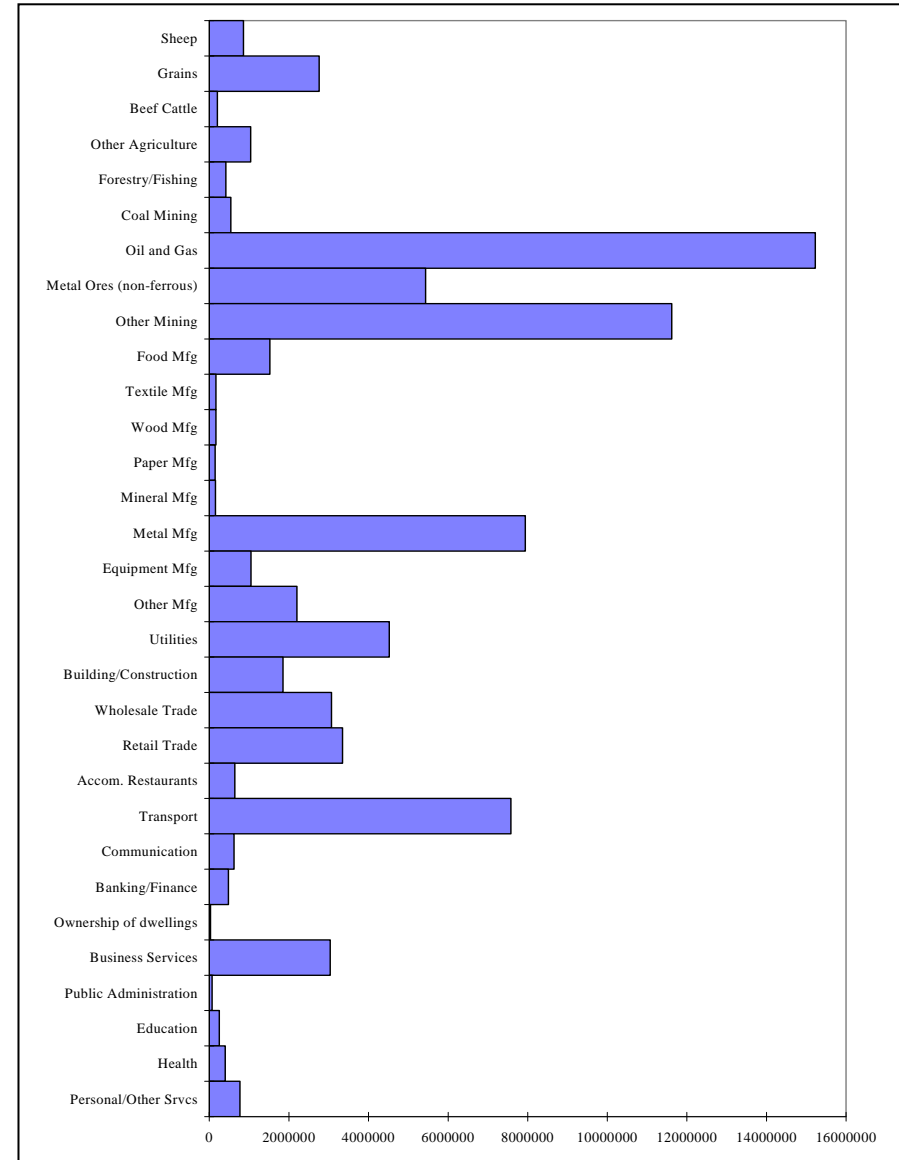


Figure A3.20.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.21 SA Economy Description

A highly aggregated 2006 input-output table for the South Australian economy is provided in Table A3.21. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.21
Aggregated Transactions Table: South Australian economy 2006(\$'000)

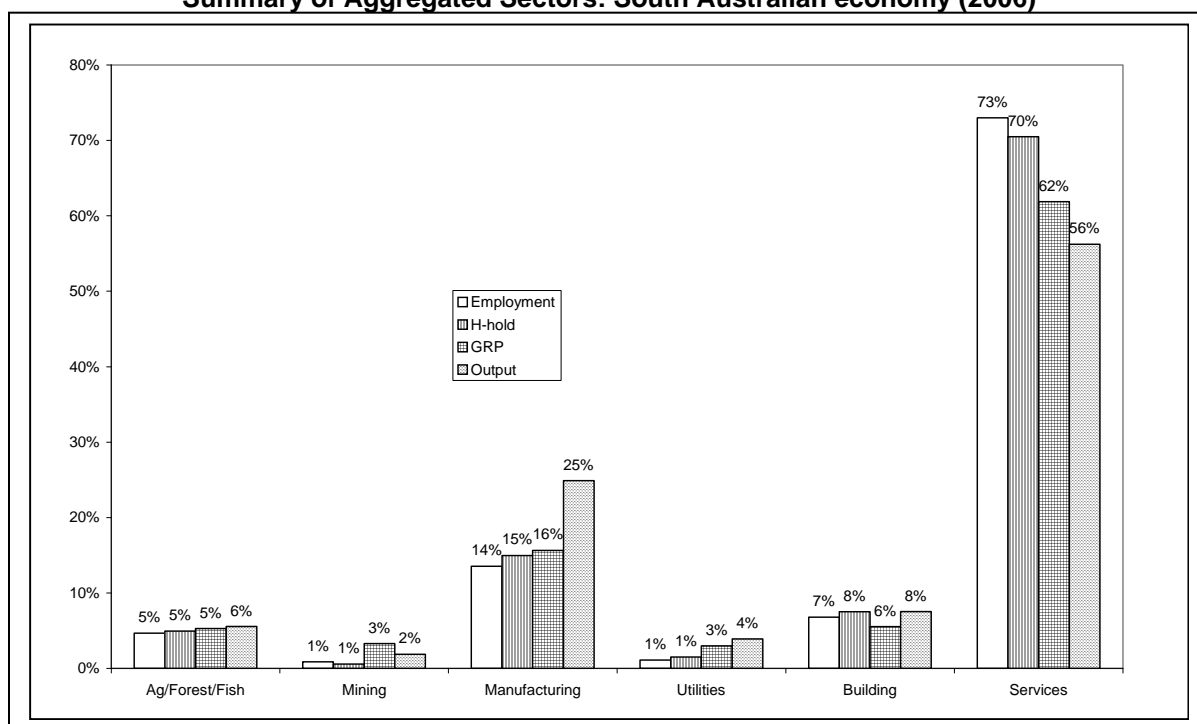
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	630,828	395	1,391,779	207	7,222	165,854	2,196,285	388,568	485,917	4,240,768	7,311,538
Mining	2,075	34,520	339,997	48,575	9,083	62,746	496,995	23,806	41,736	1,902,856	2,465,393
Manuf.	520,667	31,408	5,123,175	94,053	1,314,917	3,737,524	10,821,745	4,359,907	1,399,954	16,229,630	32,811,236
Utilities	87,939	9,993	369,636	1,690,519	50,397	675,988	2,884,472	843,930	37,742	1,389,489	5,155,633
Building	34,627	10,502	68,437	107,812	2,501,189	773,229	3,495,796	0	6,111,167	328,441	9,935,404
Services	844,544	80,004	4,730,743	308,803	1,167,858	15,108,848	22,240,800	21,668,924	13,482,941	16,663,076	74,055,741
TOTAL	2,120,680	166,821	12,023,767	2,249,970	5,050,665	20,524,190	42,136,093	27,285,134	21,559,457	40,754,260	131,734,944
Household Income	1,902,226	224,229	5,764,441	577,106	2,891,728	27,117,891	38,477,620	0	0	0	38,477,620
OVA	1,427,294	1,862,694	4,103,159	1,306,497	594,879	11,894,482	21,189,005	2,261,506	928,858	187,386	24,566,755
Imports	1,861,338	211,648	10,919,870	1,022,061	1,398,131	14,519,179	29,932,226	10,861,226	10,178,510	3,393,051	54,365,013
TOTAL	7,311,538	2,465,393	32,811,236	5,155,633	9,935,404	74,055,741	131,734,944	40,407,867	32,666,825	44,334,697	249,144,332
Employment	32,294	6,060	93,417	7,712	46,836	503,613	689,932				

Gross regional product (GRP) for the regional economy is estimated at \$63 044 million, comprising \$38 477 million to households as wages and salaries (including payments to self employed persons and employers) and \$24 566 million in OVA.

Total employed in the State is 689 932 people.

Compared to the National economy (Figure A3.24.1), the South Australian economy (Figure A3.21.1) has a lower relative reliance on the mining sectors, building sectors (employment, GRP and output) and services sectors and a higher relative reliance on agriculture, forestry and fishing sectors, manufacturing sectors, utilities (GRP and output) and building (income).

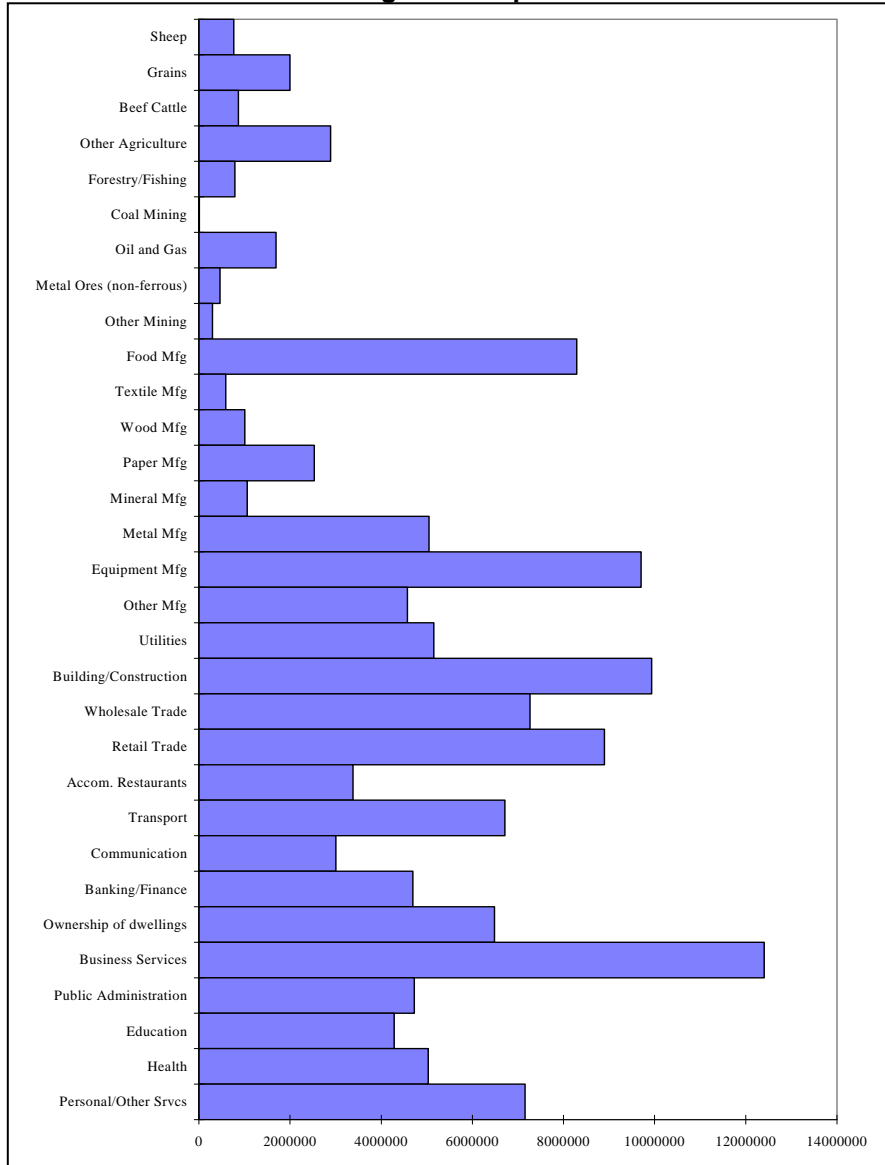
Figure A3.21.1
Summary of Aggregated Sectors: South Australian economy (2006)



A more detailed description of the regional economy is provided in Figures A3.21.2 to A3.21.4. In the agriculture, forestry and fishing sectors, the dominant sectors are the *Grains Sector* and *Other Agriculture Sectors*. The *Oil and gas sector* is the main mining sector. The main manufacturing sectors are the *Food Manufacturing Sectors* and *Equipment Manufacturing Sectors*. Important Services Sectors include *Retail Trade* and *Business Services Sectors*.

Figure A3.21.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

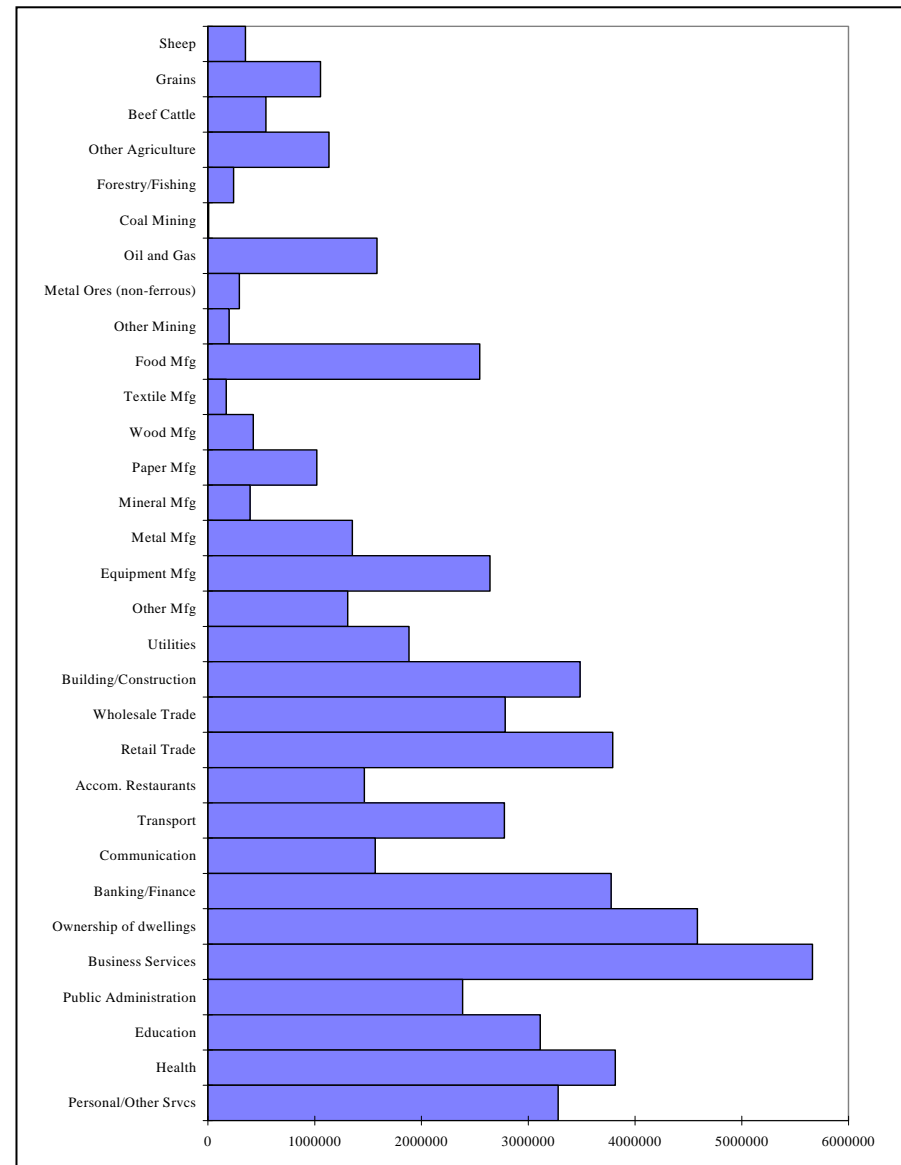


Figure A3.2.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

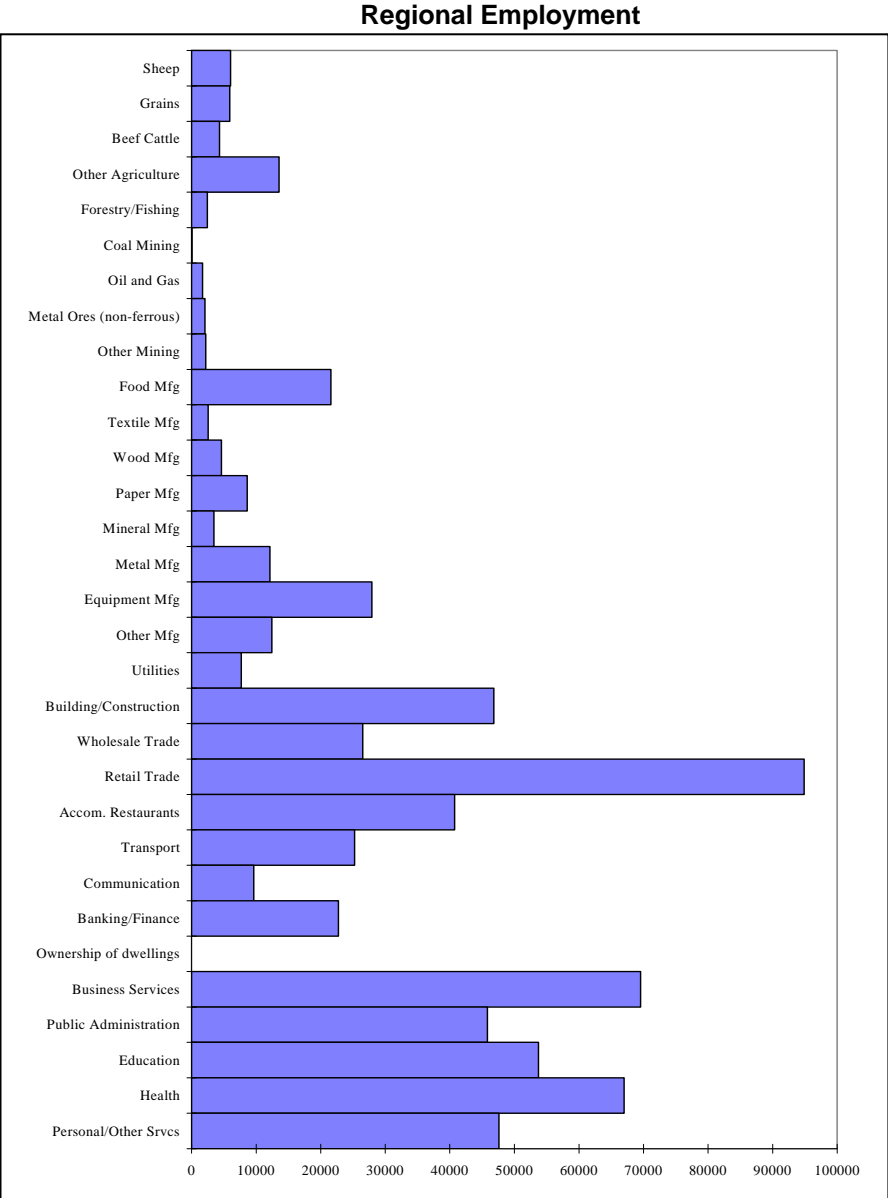
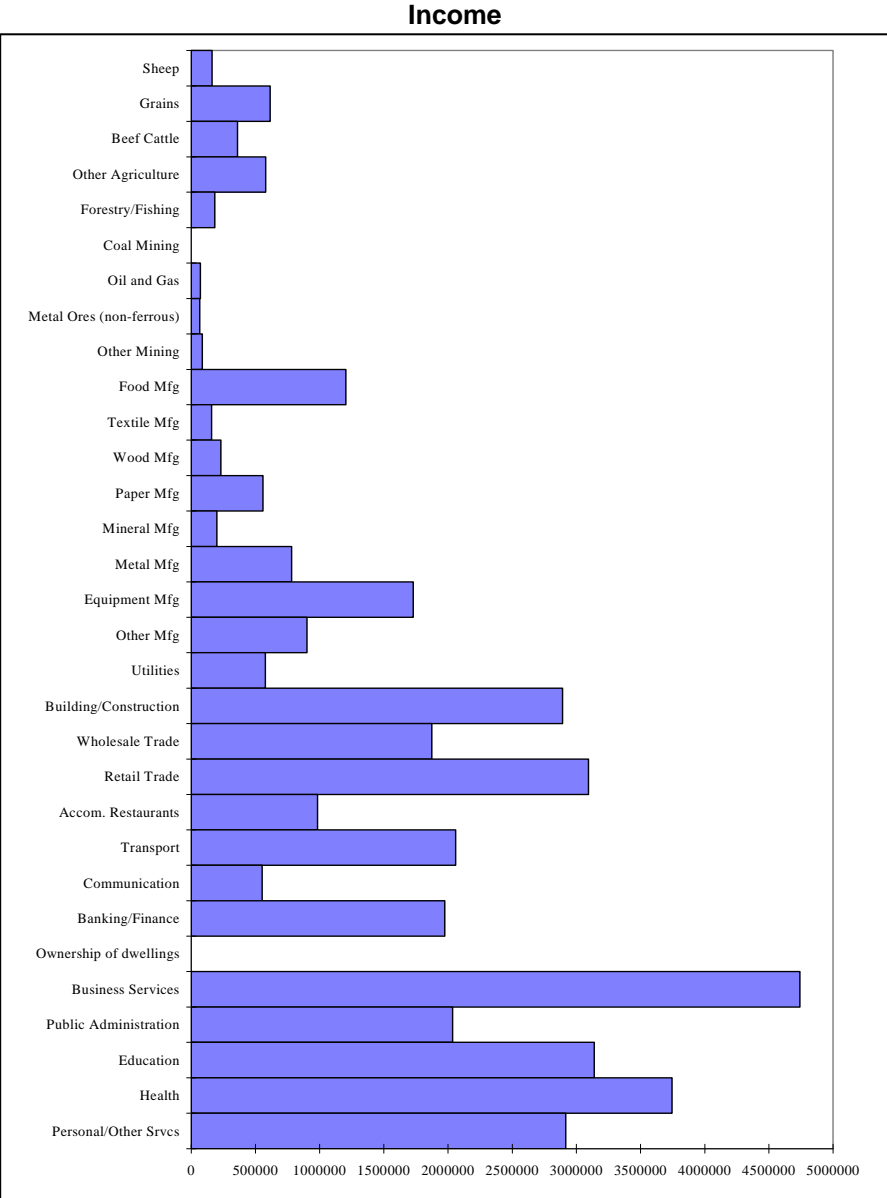
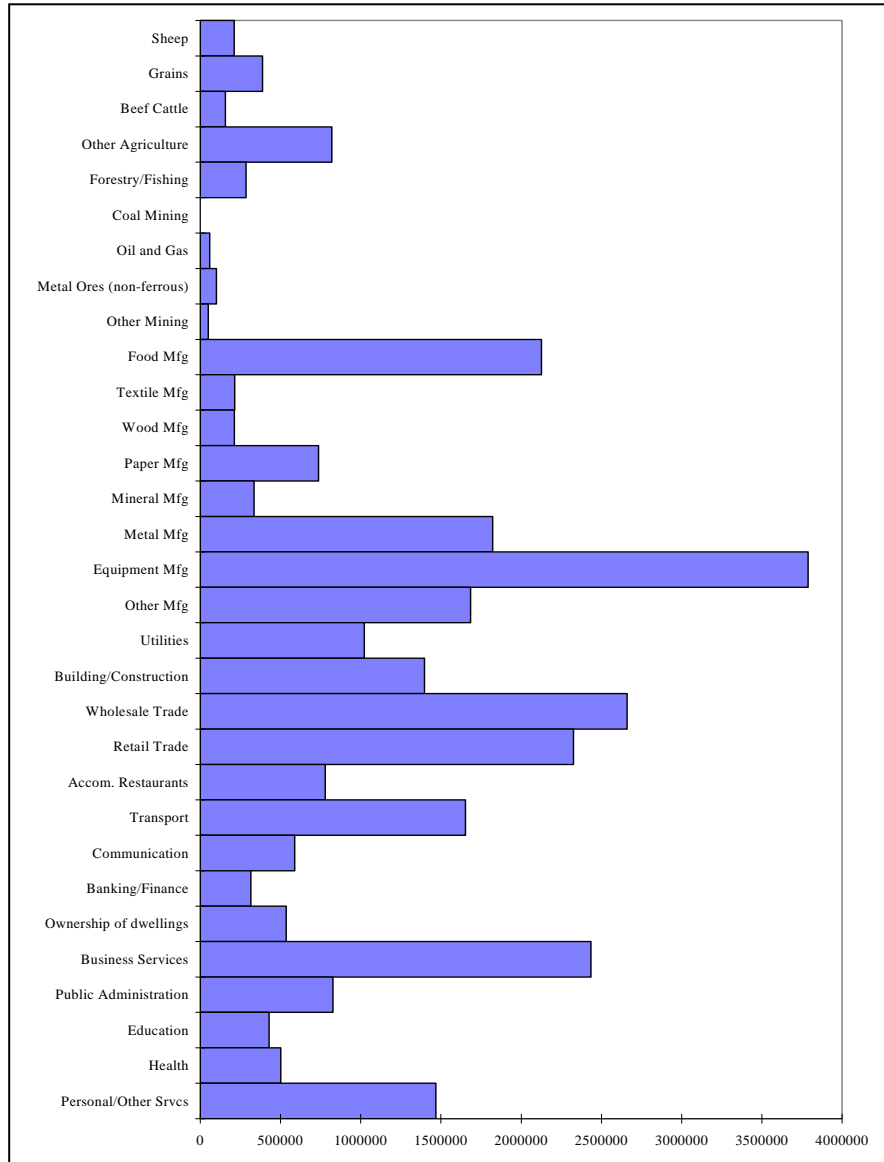
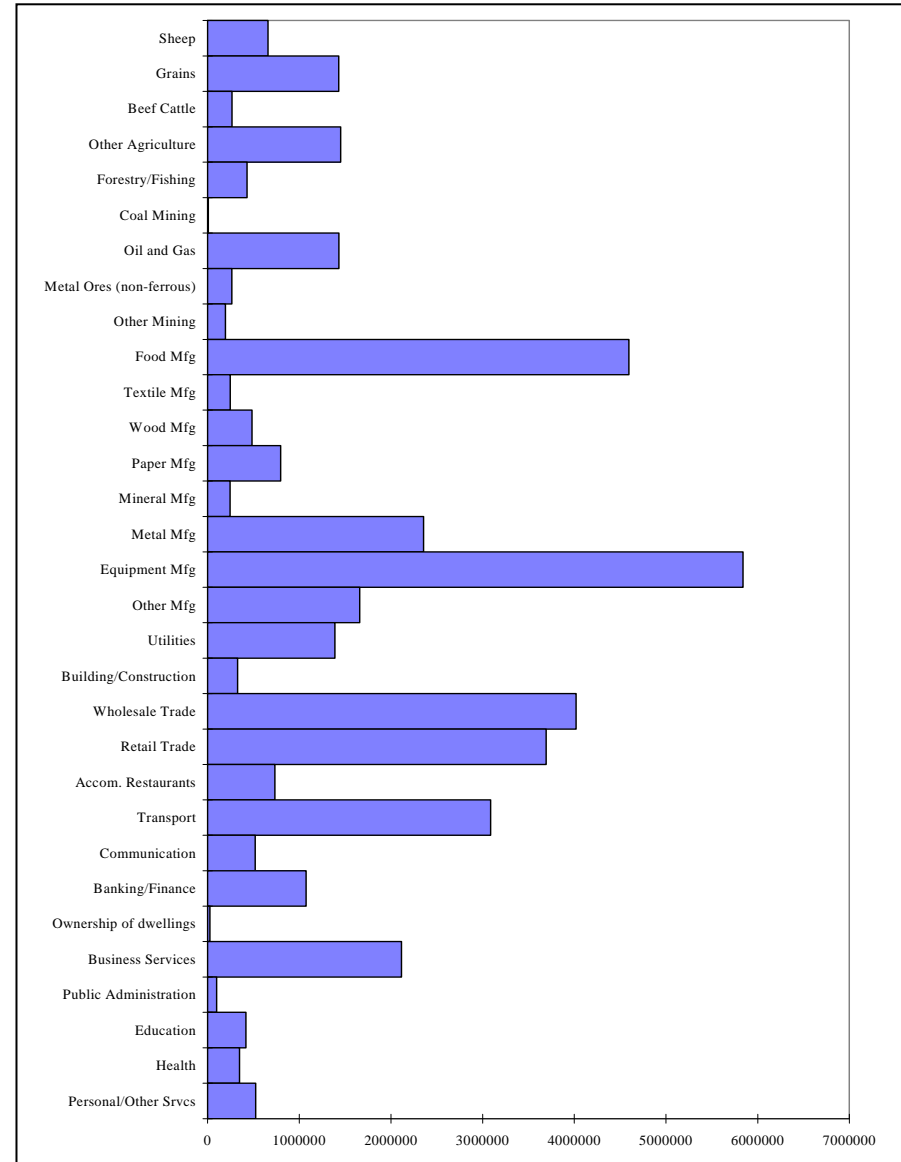


Figure A3.21.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.22 Tasmania Economy Description

A highly aggregated 2006 input-output table for the Tasmanian economy is provided in Table A3.22. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.22
Aggregated Transactions Table: Tasmanian economy 2006(\$'000)

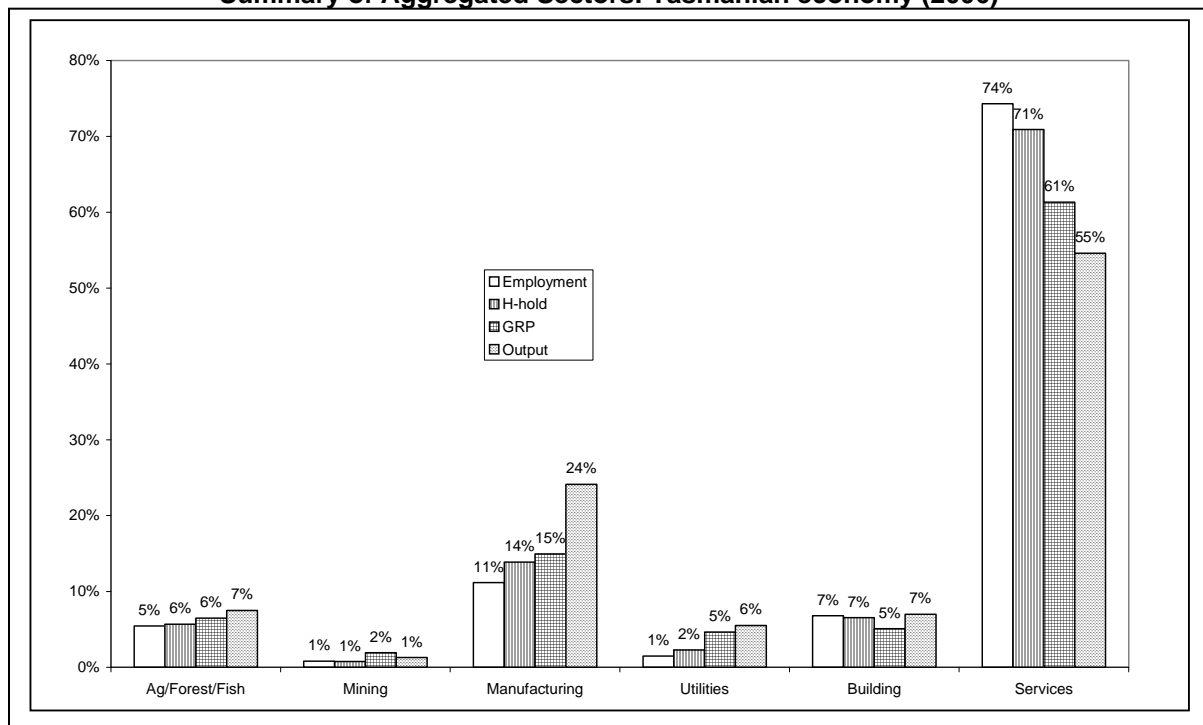
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	96,644	113	533,639	79	1,853	49,630	681,958	107,256	188,944	1,794,106	2,772,264
Mining	113	25,637	61,900	455	3,330	5,071	96,506	823	2,672	377,601	477,602
Manuf.	169,969	8,494	989,722	21,169	263,311	711,904	2,164,569	795,933	146,408	5,811,797	8,918,708
Utilities	24,262	3,313	115,538	595,093	13,225	165,497	916,928	170,153	8,757	945,909	2,041,746
Building	14,521	3,157	17,998	42,343	560,787	183,228	822,033	0	1,730,039	36,370	2,588,442
Services	230,733	19,389	859,608	82,423	208,913	2,928,361	4,329,426	5,507,800	4,212,121	6,146,161	20,195,509
TOTAL	536,241	60,102	2,578,405	741,562	1,051,419	4,043,691	9,011,420	6,581,965	6,288,942	15,111,945	36,994,272
Household Income	612,640	79,763	1,495,489	245,498	703,677	7,648,837	10,785,905	0	0	0	10,785,905
OVA	527,499	258,384	1,137,328	572,380	192,250	3,151,645	5,839,486	656,353	319,195	10,726	6,825,759
Imports	1,095,883	79,354	3,707,486	482,306	641,096	5,351,336	11,357,461	4,590,388	3,211,878	1,810,565	20,970,292
TOTAL	2,772,264	477,602	8,918,708	2,041,746	2,588,442	20,195,509	36,994,272	11,828,706	9,820,014	16,933,235	75,576,228
Employment	11,116	1,645	22,794	3,037	13,919	151,890	204,402				

Gross regional product (GRP) for the regional economy is estimated at \$17 611 million, comprising \$10 785 million to households as wages and salaries (including payments to self employed persons and employers) and \$6 825 million in OVA.

Total employed in the State is 204 402 people.

Compared to the National economy (Figure A3.24.1), the Tasmanian economy (Figure A3.22.1) has a lower relative reliance on the mining sectors, building sectors and services sectors and a higher relative reliance on agriculture, forestry and fishing sectors, manufacturing sectors (income, GRP and output), utilities (income, GRP and output).

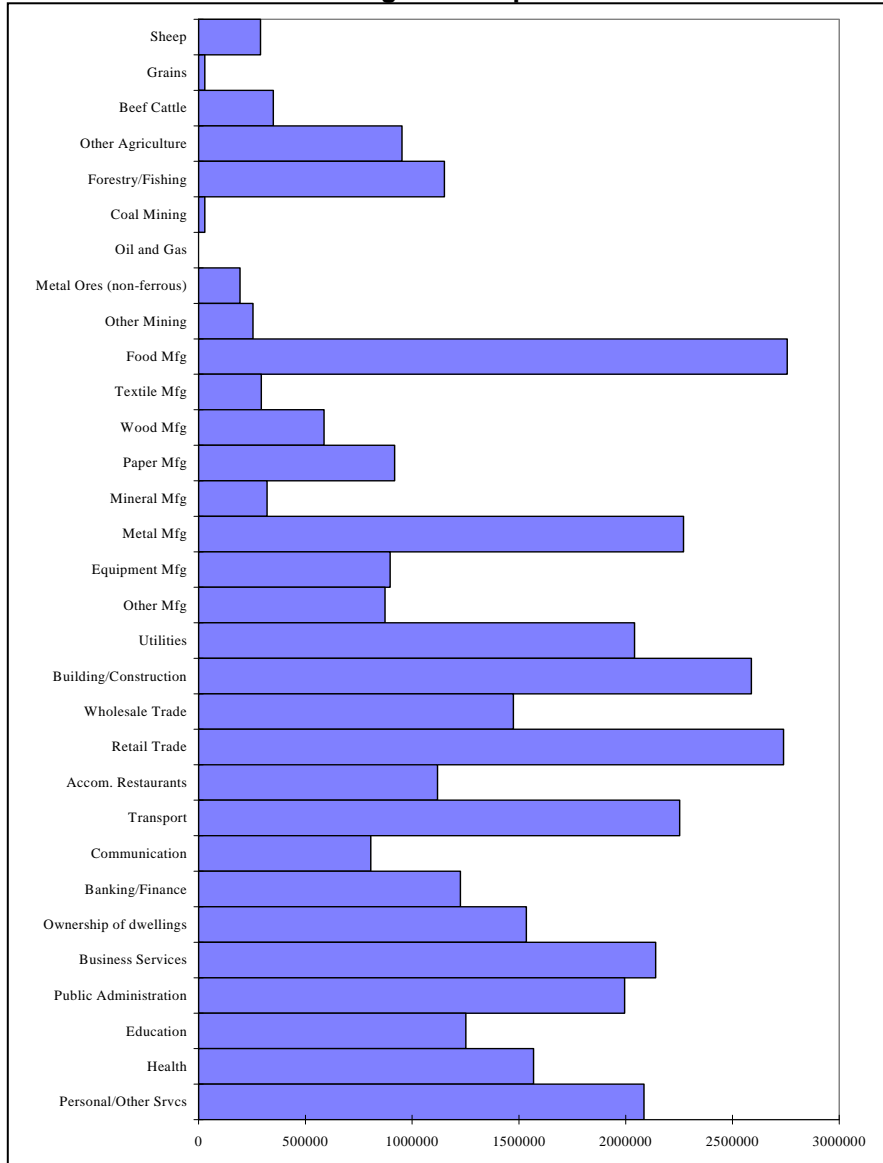
Figure A3.22.1
Summary of Aggregated Sectors: Tasmanian economy (2006)



A more detailed description of the regional economy is provided in Figures A3.22.2 to A3.22.4. In the agriculture, forestry and fishing sectors, the dominant sectors are the *Forestry and Fishing Sectors* and *Other Agriculture Sectors*. The *Other Mining Sector* is the main mining sector. The main manufacturing sectors are the *Food Manufacturing Sectors* and *Metal Manufacturing Sectors*. Important Services Sectors include *Retail Trade* and *Health Sectors*.

Figure A3.22.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

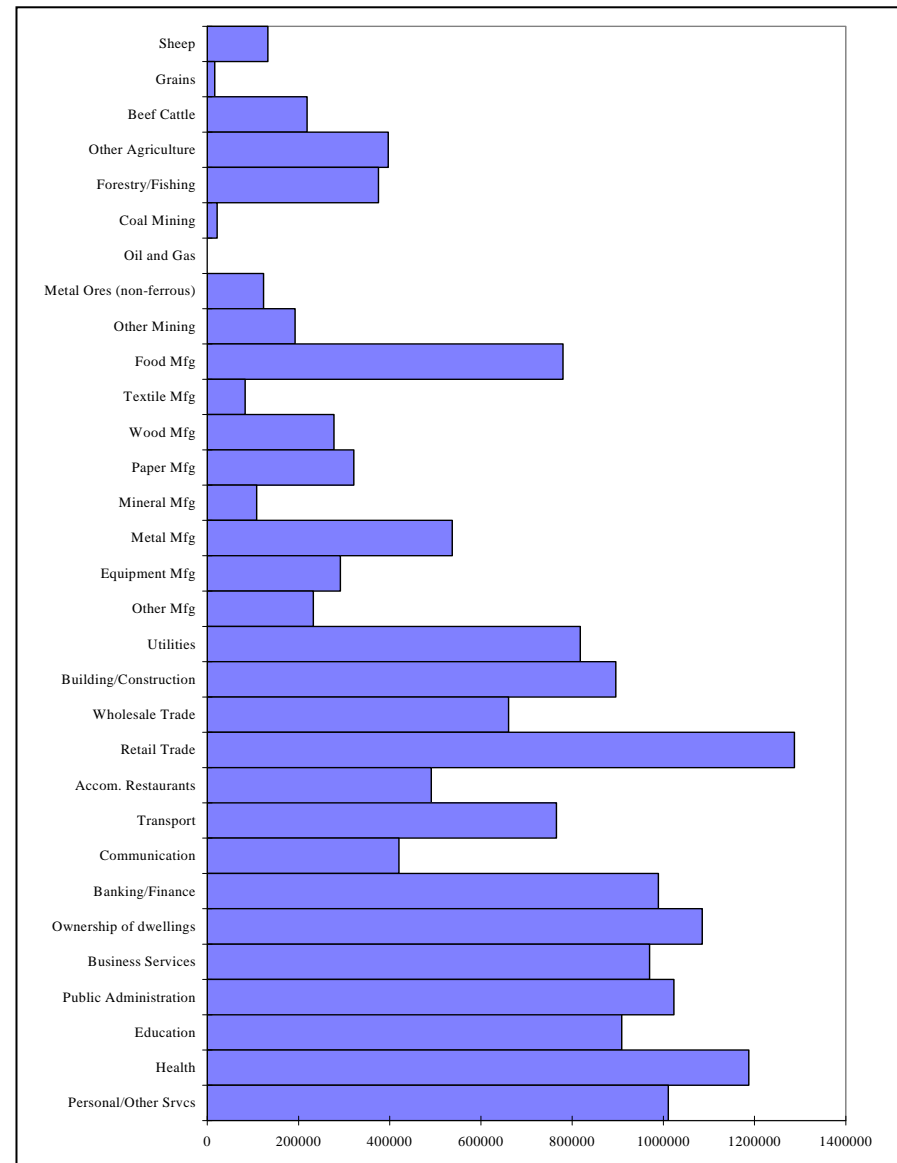
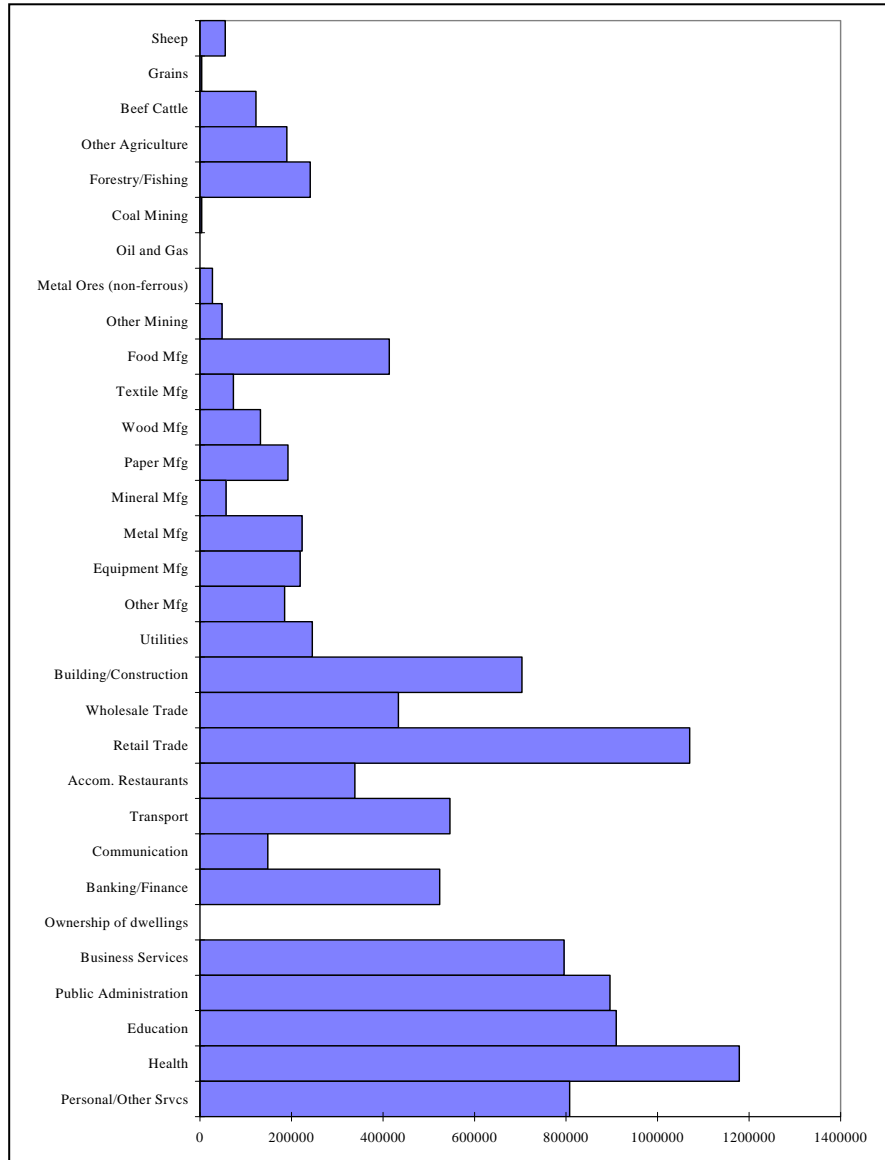


Figure A3.22.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

Income



Regional Employment

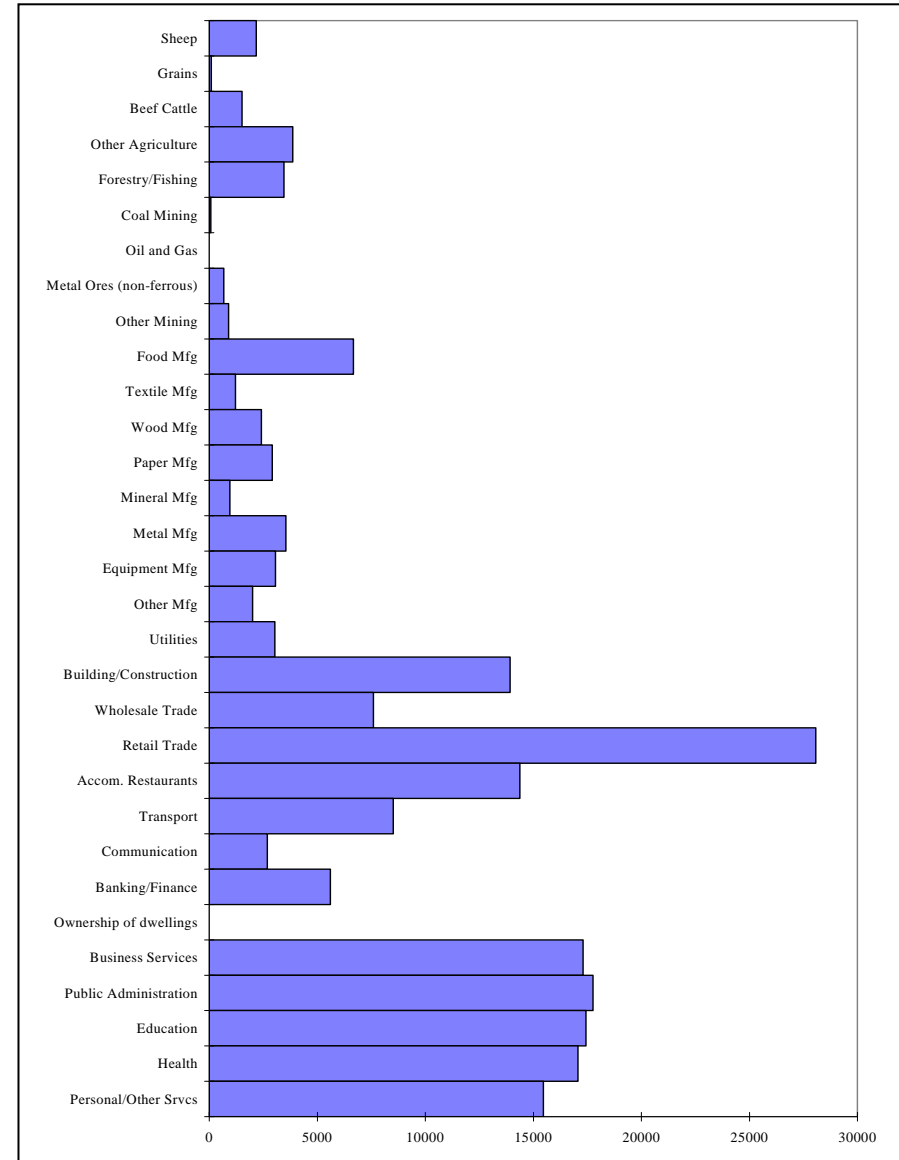
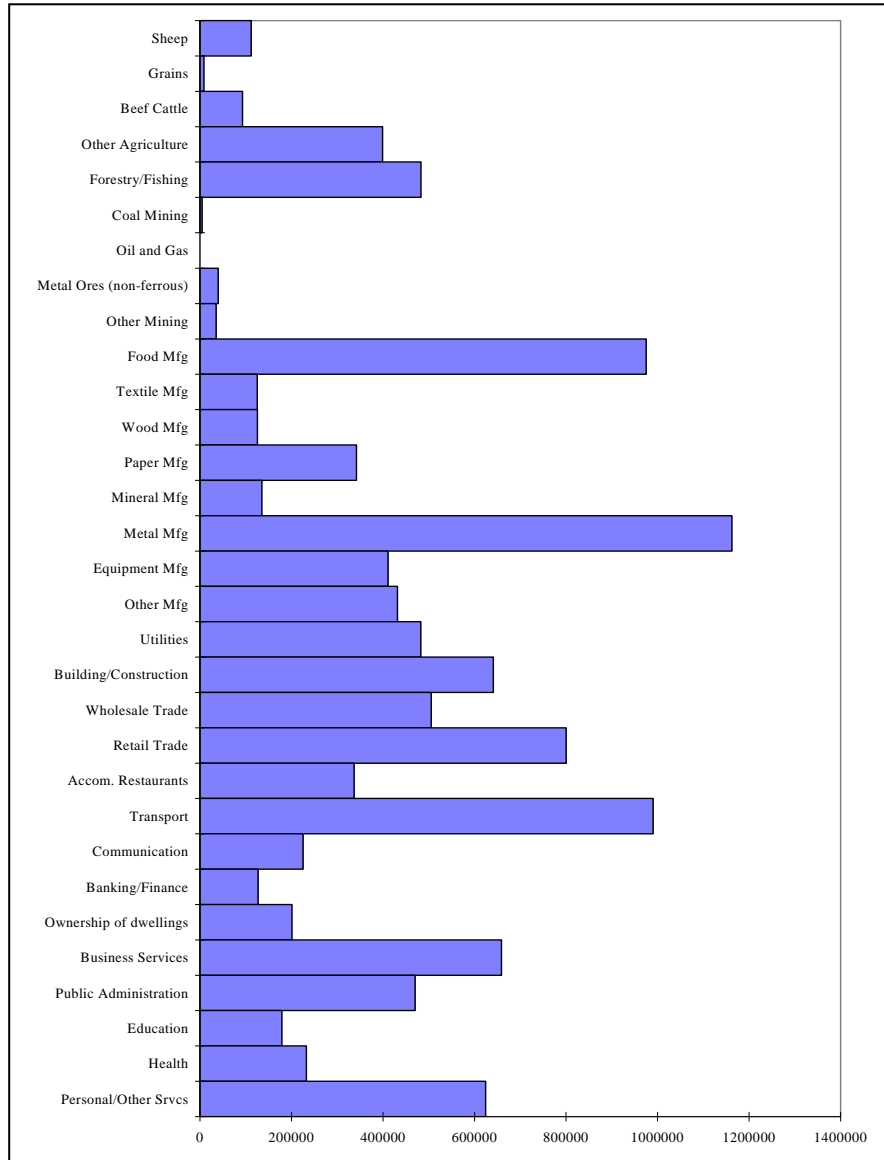
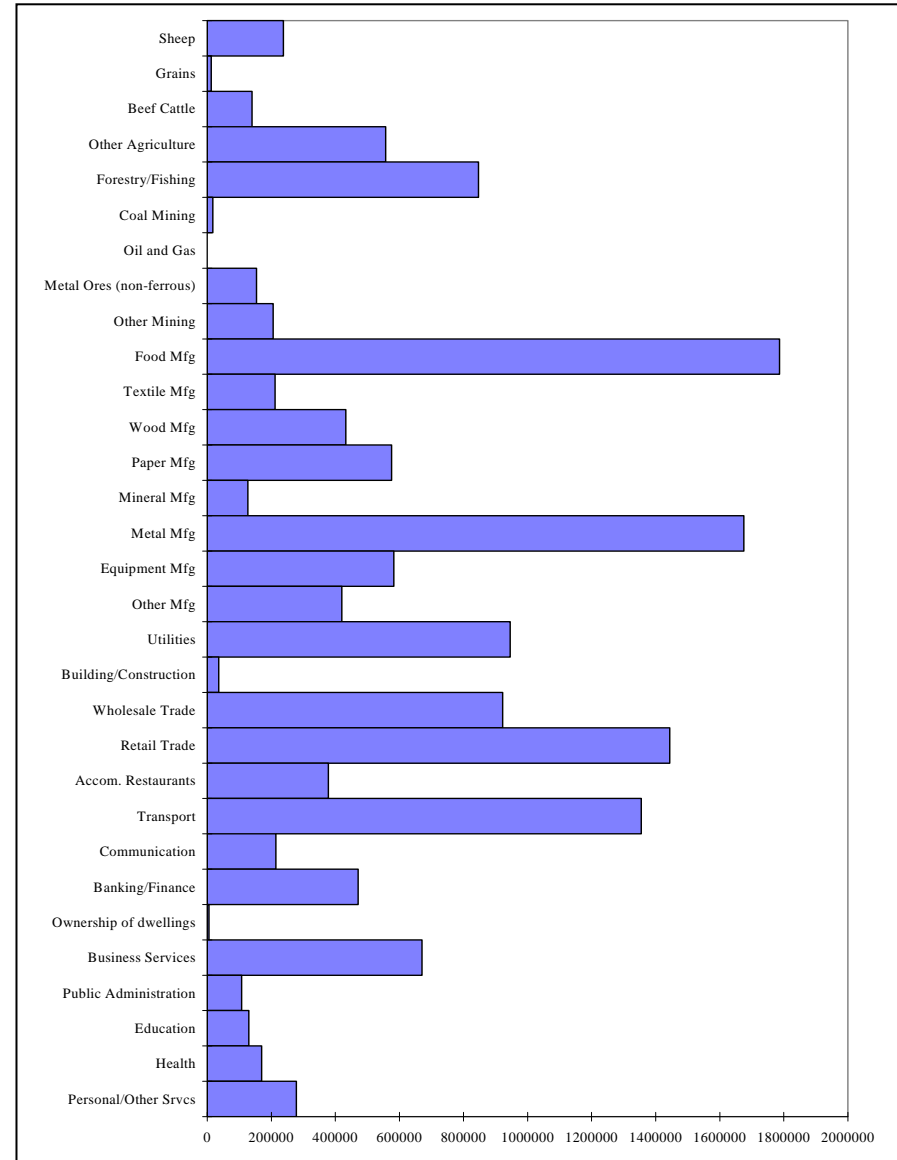


Figure A3.22.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.23 NT Economy Description

A highly aggregated 2006 input-output table for the Northern Territory economy is provided in Table A3.23. A brief guide to interpreting the table is provided in Appendix 4.

Table A3.23
Aggregated Transactions Table: Northern Territory Economy 2006(\$'000)

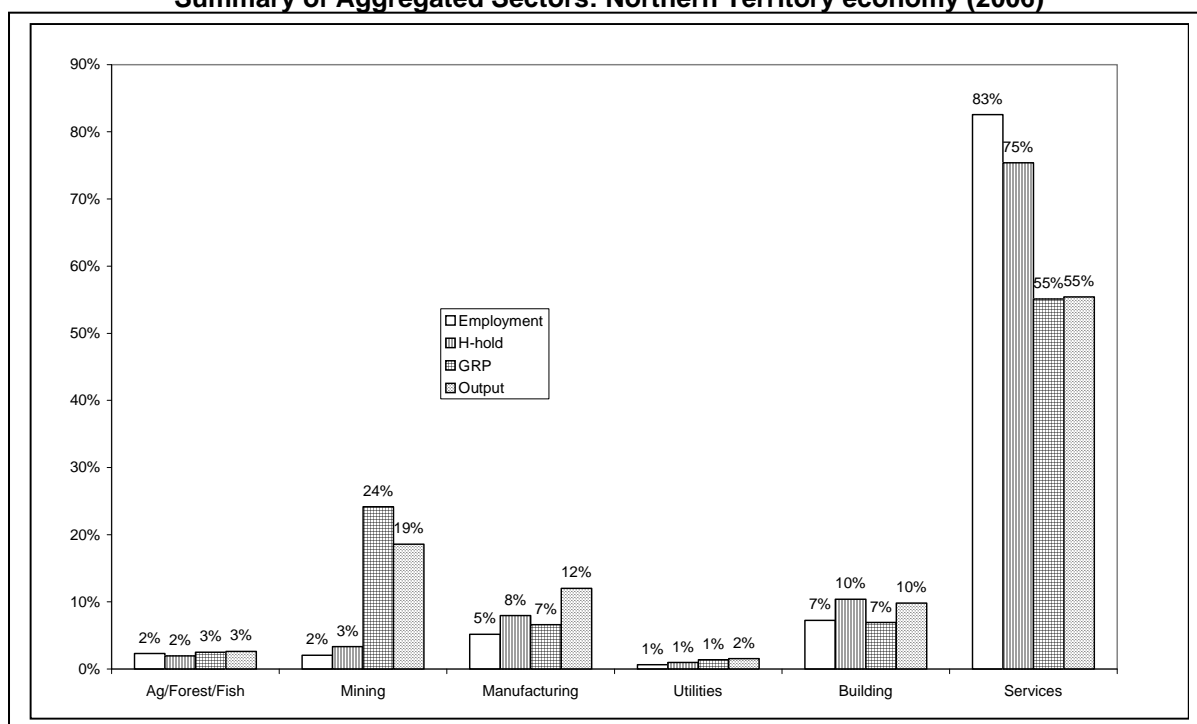
	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditur e	OFD	Exports	Total
Ag, forest., fishing	29,704	1,511	15,079	17	1,290	21,623	69,225	49,436	61,562	461,117	641,339
Mining	39	429,597	441,265	392	8,777	7,040	887,111	1,502	51,486	3,622,362	4,562,460
Manuf.	20,593	52,327	224,371	4,691	167,773	322,943	792,698	187,259	22,948	1,949,327	2,952,233
Utilities	3,602	18,636	14,167	23,480	6,225	59,908	126,018	41,528	2,127	211,883	381,555
Building	3,546	42,378	4,997	8,584	524,830	217,587	801,922	0	1,192,266	412,355	2,406,543
Services	57,854	209,755	261,518	19,065	246,058	2,244,863	3,039,111	3,241,361	2,654,993	4,663,942	13,599,407
TOTAL	115,338	754,204	961,397	56,229	954,952	2,873,965	5,716,085	3,521,085	3,985,382	11,320,986	24,543,538
Household Income	112,853	191,087	457,724	56,960	596,188	4,332,056	5,746,869	0	0	0	5,746,869
OVA	194,563	2,782,013	352,447	115,340	253,847	2,442,831	6,141,040	283,526	119,464	4,320	6,548,349
Imports	218,584	835,156	1,180,665	153,027	601,557	3,950,556	6,939,545	2,055,196	1,417,761	2,854,881	13,267,383
TOTAL	641,339	4,562,460	2,952,234	381,555	2,406,543	13,599,407	24,543,538	5,859,807	5,522,606	14,180,187	50,106,139
Employment	2,022	1,789	4,510	563	6,320	71,917	87,121				

Gross regional product (GRP) for the regional economy is estimated at \$12 295 million, comprising \$5 746 million to households as wages and salaries (including payments to self employed persons and employers) and \$6 548 million in OVA.

Total employed in the State is 87 121 people.

Compared to the National economy (Figure A3.24.1), the Northern Territory economy (Figure A3.23.1) has a lower relative reliance on the agriculture, forestry and fishing sectors (employment and income), manufacturing, utilities (GRP and output) building (employment) and services sectors (GRP and output) and a higher relative reliance on mining, building (income and output) and services sectors (employment and income).

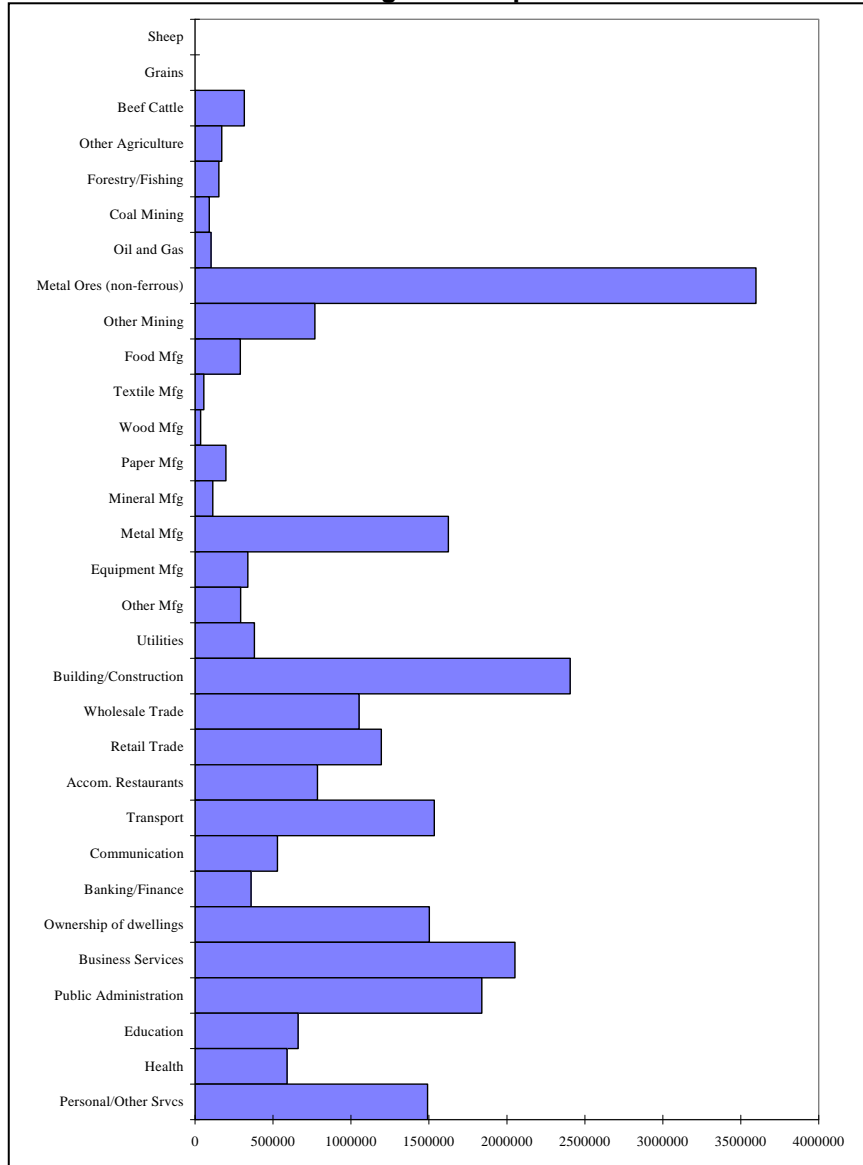
Figure A3.23.1
Summary of Aggregated Sectors: Northern Territory economy (2006)



A more detailed description of the regional economy is provided in Figures A3.23.2 to A3.23.4. In the agriculture, forestry and fishing sectors, the dominant sector is the *Beef Cattle Sector*. The *Non-ferrous Metal Ore Mining Sector* is the main mining sector. The main manufacturing sector is the *Metal Manufacturing Sectors*. Important Services Sectors include *Ownership of Dwellings*, *Business Services* and *Public Administration*.

Figure A3.23.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

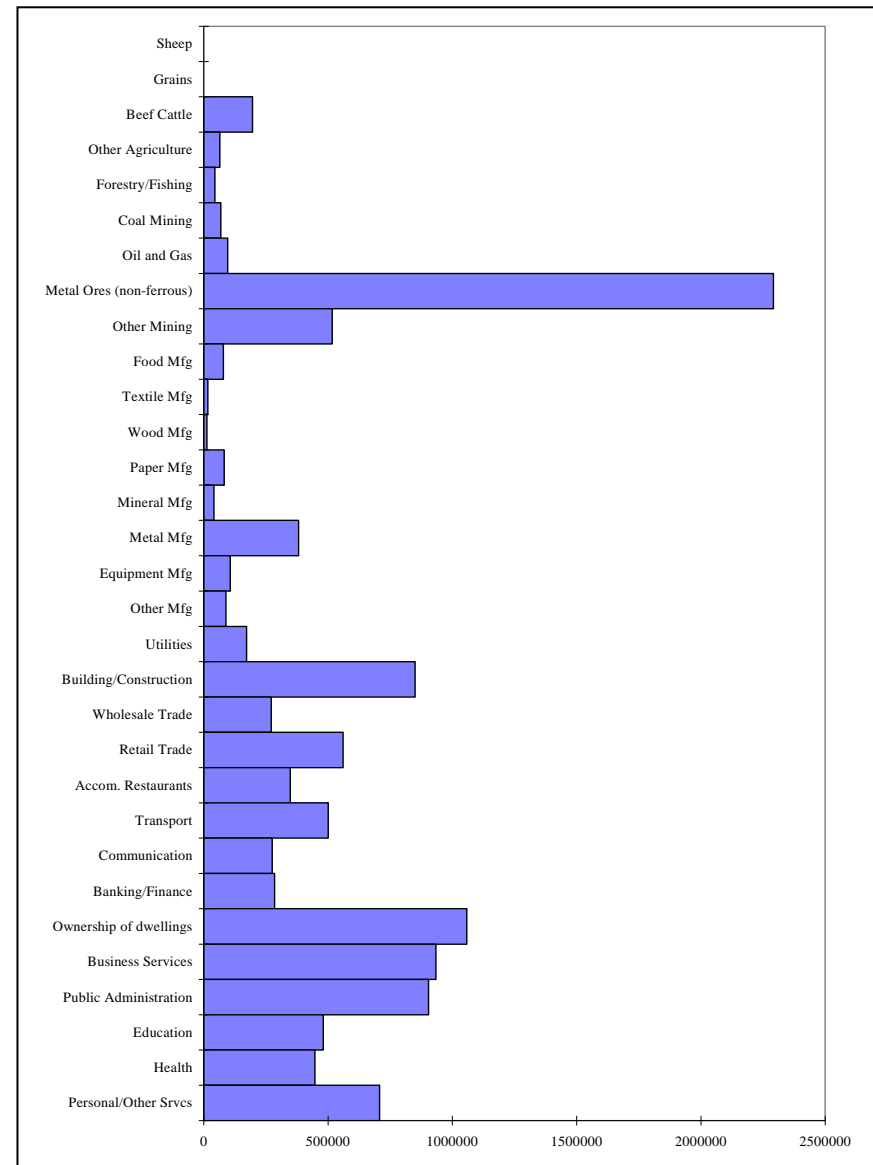


Figure A3.23.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

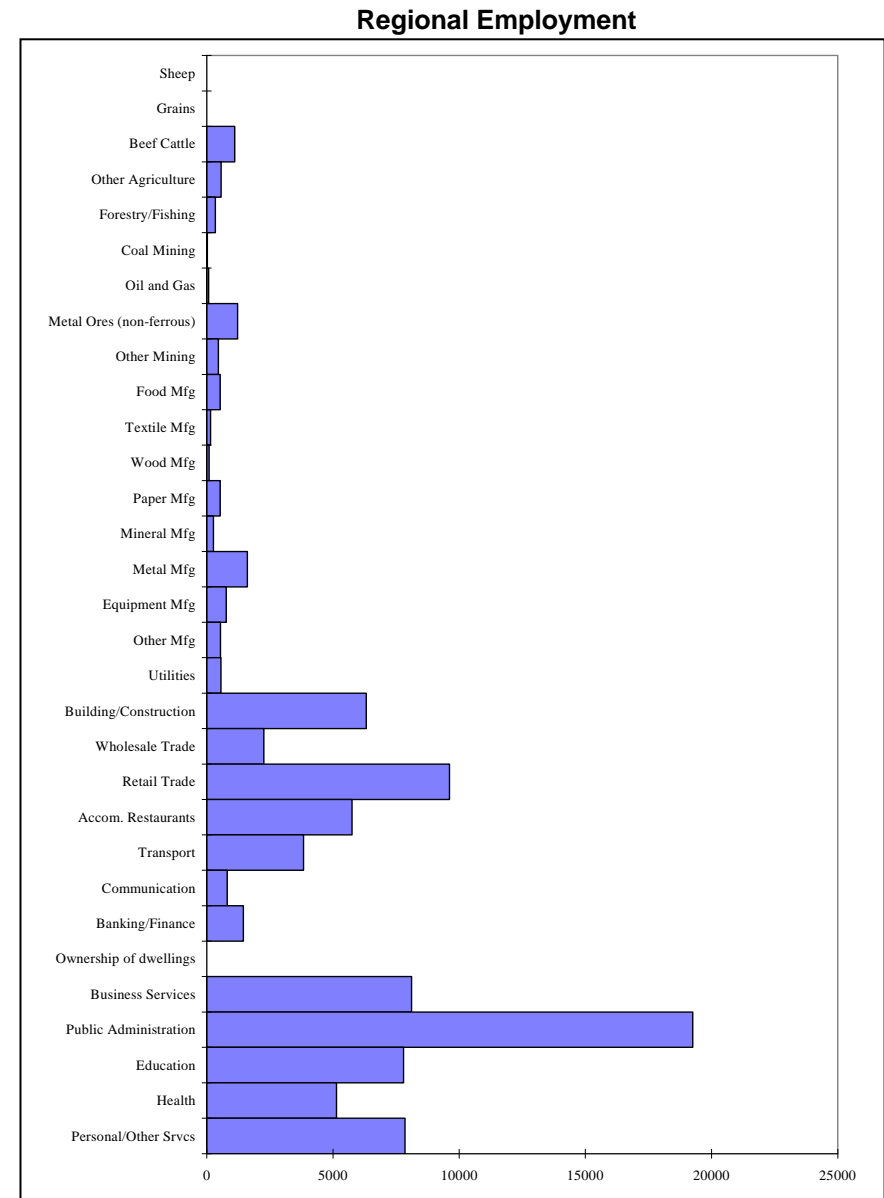
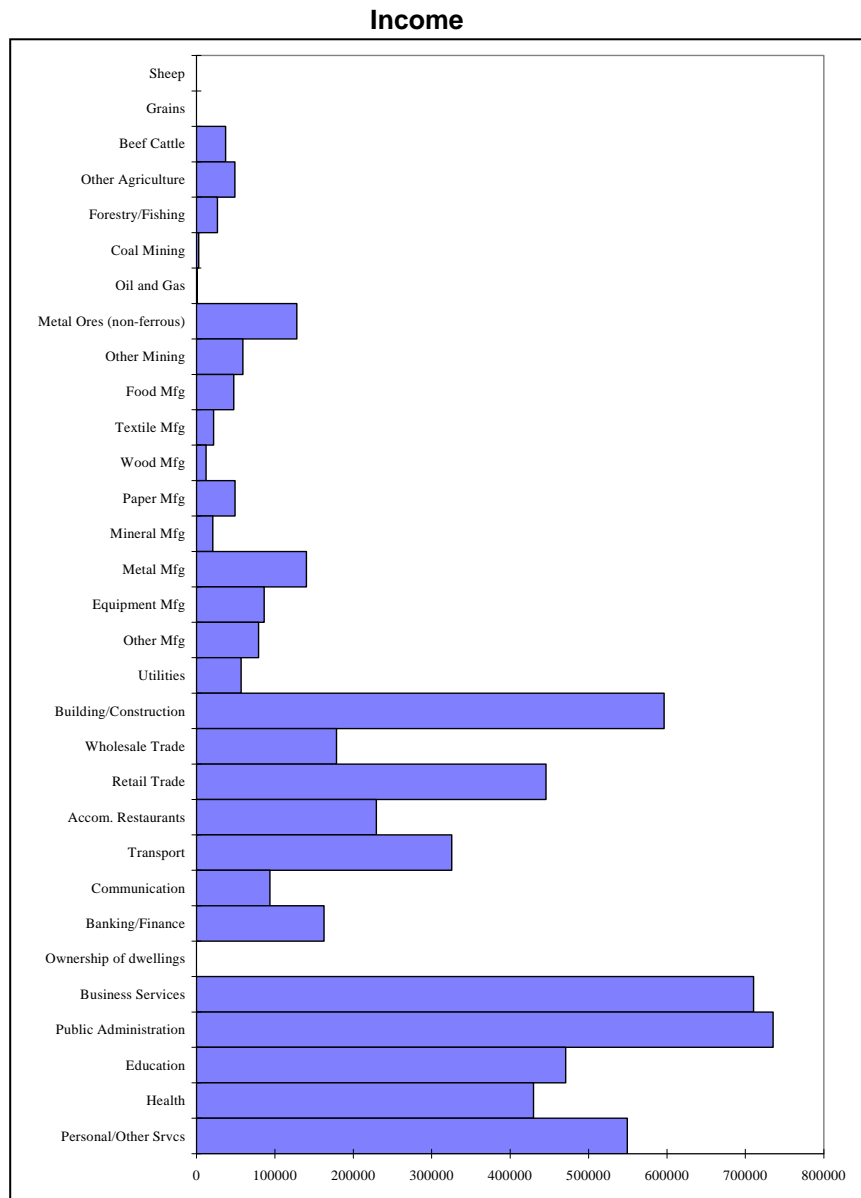
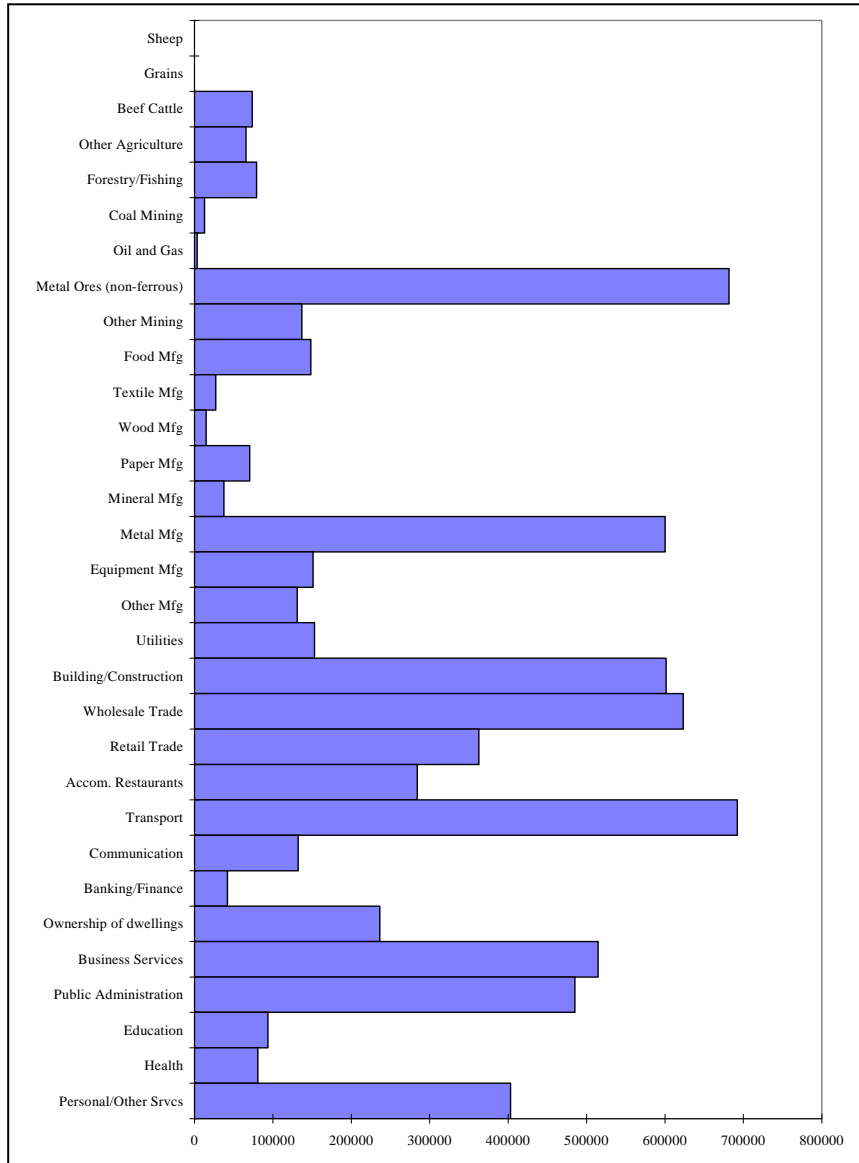
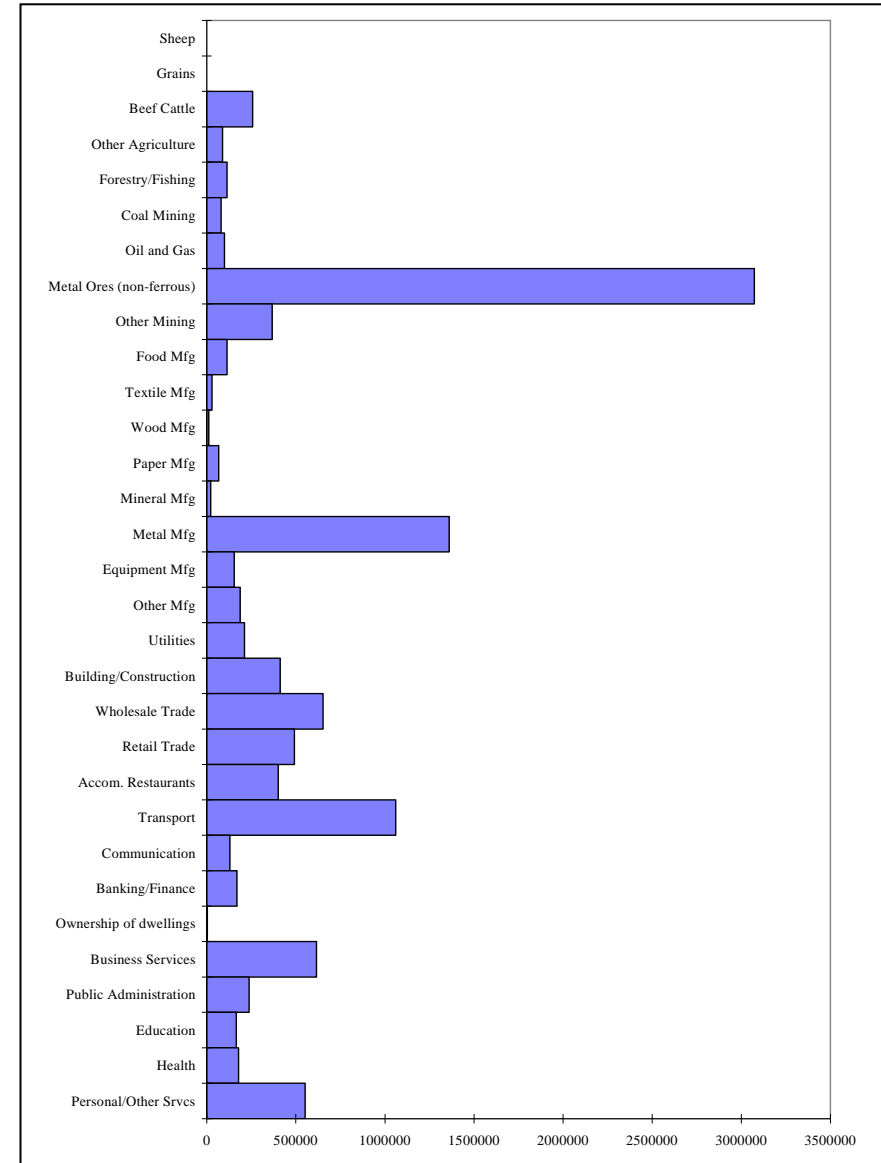


Figure A3.23.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



A3.24 Australian Economy Description

A highly aggregated 2006 input-output table for the national economy is provided in Table A3.24. A brief guide to interpreting the table is provided in Appendix 4.

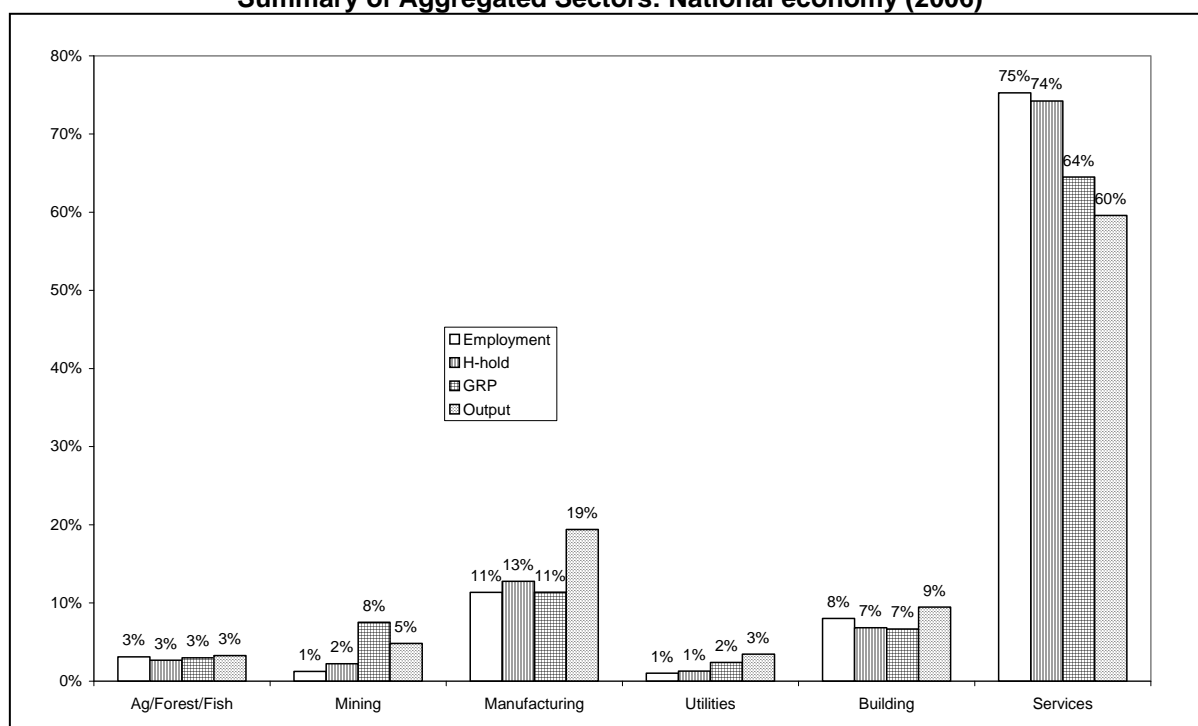
Table A3.24
Aggregated Transactions Table: National economy 2006(\$'000)

	Ag, forestry, fishing	Mining	Manuf.	Utilities	Building	Services	TOTAL	Household Expenditure	OFD	Exports	Total
Ag, forest., fishing	10,406	20	25,621	5	216	4,202	40,469	5,227	5,995	11,903	63,594
Mining	63	7,265	24,207	3,226	897	3,910	39,567	658	435	53,062	93,722
Manuf.	7,847	3,642	79,055	1,679	29,907	92,639	214,768	64,261	23,587	74,568	377,184
Utilities	882	731	7,660	30,579	1,287	14,588	55,727	10,888	513	80	67,208
Building	415	667	1,112	1,355	46,207	14,418	64,174	0	119,978	114	184,266
Services	10,507	6,718	78,329	5,735	32,392	353,435	487,117	389,811	228,107	53,045	1,158,079
TOTAL	30,120	19,042	215,985	42,578	110,906	483,192	901,823	470,845	378,613	192,771	1,944,053
Household Income	13,744	11,437	65,596	6,664	35,028	381,193	513,661	0	0	0	513,661
OVA	15,177	61,220	44,385	16,399	29,473	241,509	408,163	29,940	12,908	970	451,980
Imports	4,553	2,023	51,219	1,358	8,859	52,066	120,078	46,353	40,218	0	206,649
TOTAL	63,594	93,722	377,184	66,999	184,266	1,157,961	1,943,725	547,138	431,739	193,741	3,116,344
Employment	281,695	112,203	1,033,479	92,984	728,604	6,846,032	9,094,997				

Gross regional product (GRP) for the Australian economy is estimated at \$965 641 million, comprising \$513 661 million to households as wages and salaries (including payments to self employed persons and employers) and \$451 980 million in OVA.

Total employed in the country is 9 094 997 people.

Figure A3.24.1
Summary of Aggregated Sectors: National economy (2006)

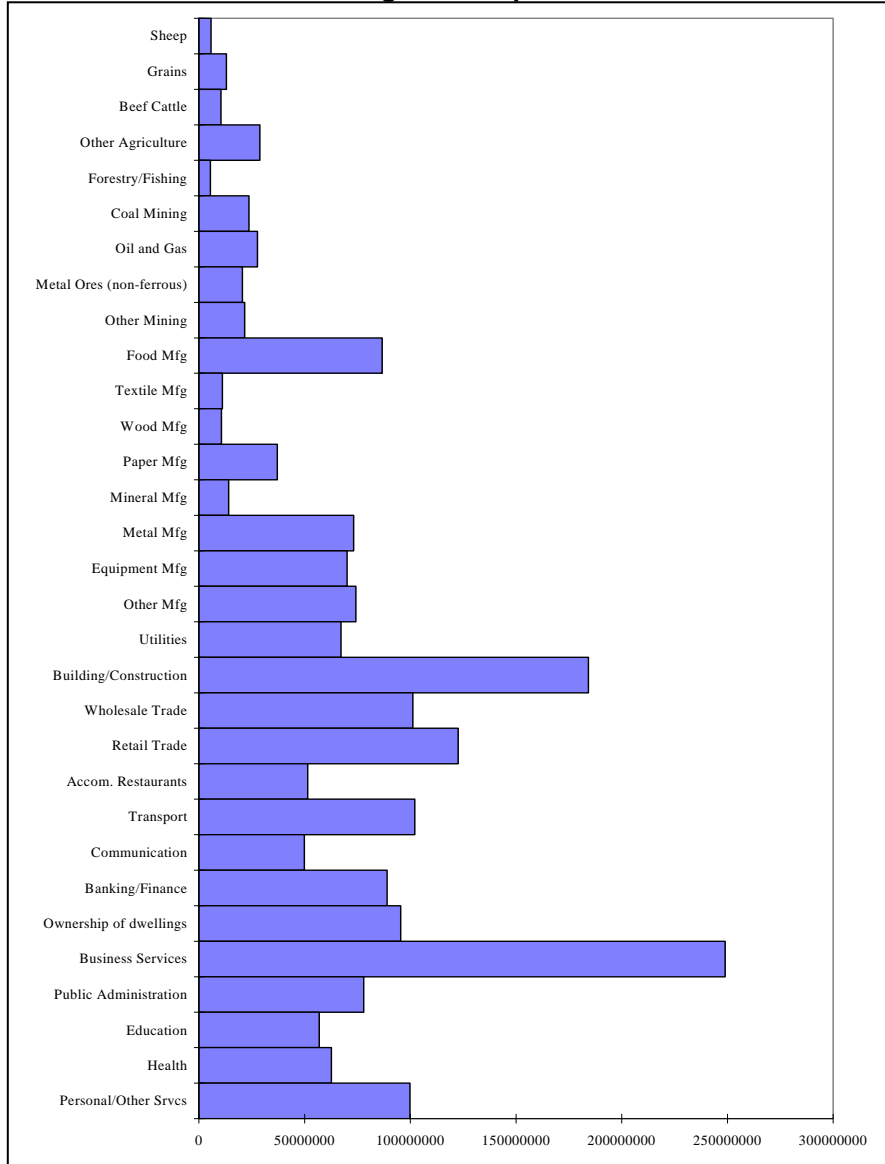


A more detailed description of the regional economy is provided in Figures A3.24.2 to A3.24.4. In the agriculture, forestry and fishing sectors, the dominant sector is the *Other Agriculture Sector*. The *Oil and Gas Sector* and *Coal*

Sector are the main mining sectors. The main manufacturing sector is the *Food Manufacturing Sectors*. Important Services Sectors include *Business Services* and *Retail Trade*.

Figure A3.24.2 Sectoral Distribution of Gross Regional Output and Value-Added (\$'000)

Gross Regional Output



Gross Value-Added

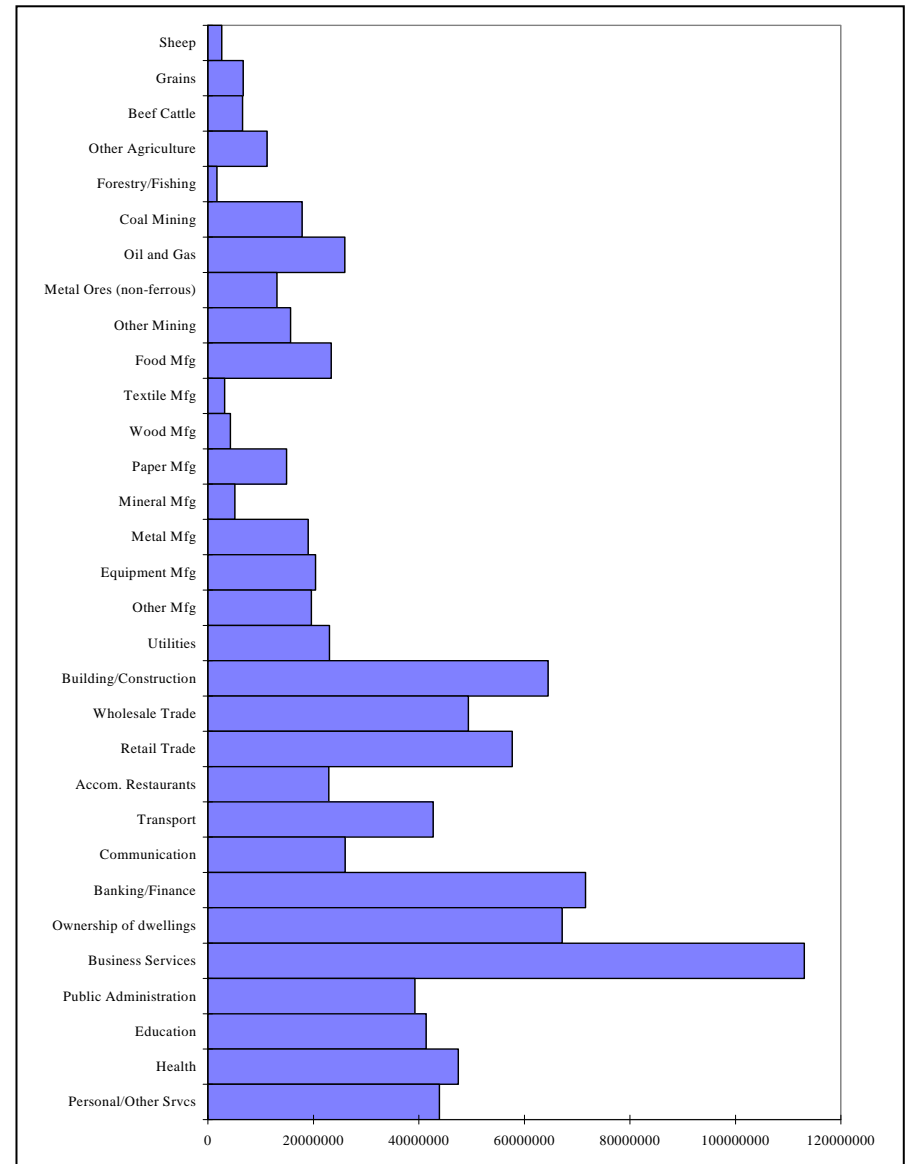


Figure A3.24.3 Sectoral Distribution of Gross Regional Income (\$'000) and Employment (No.)

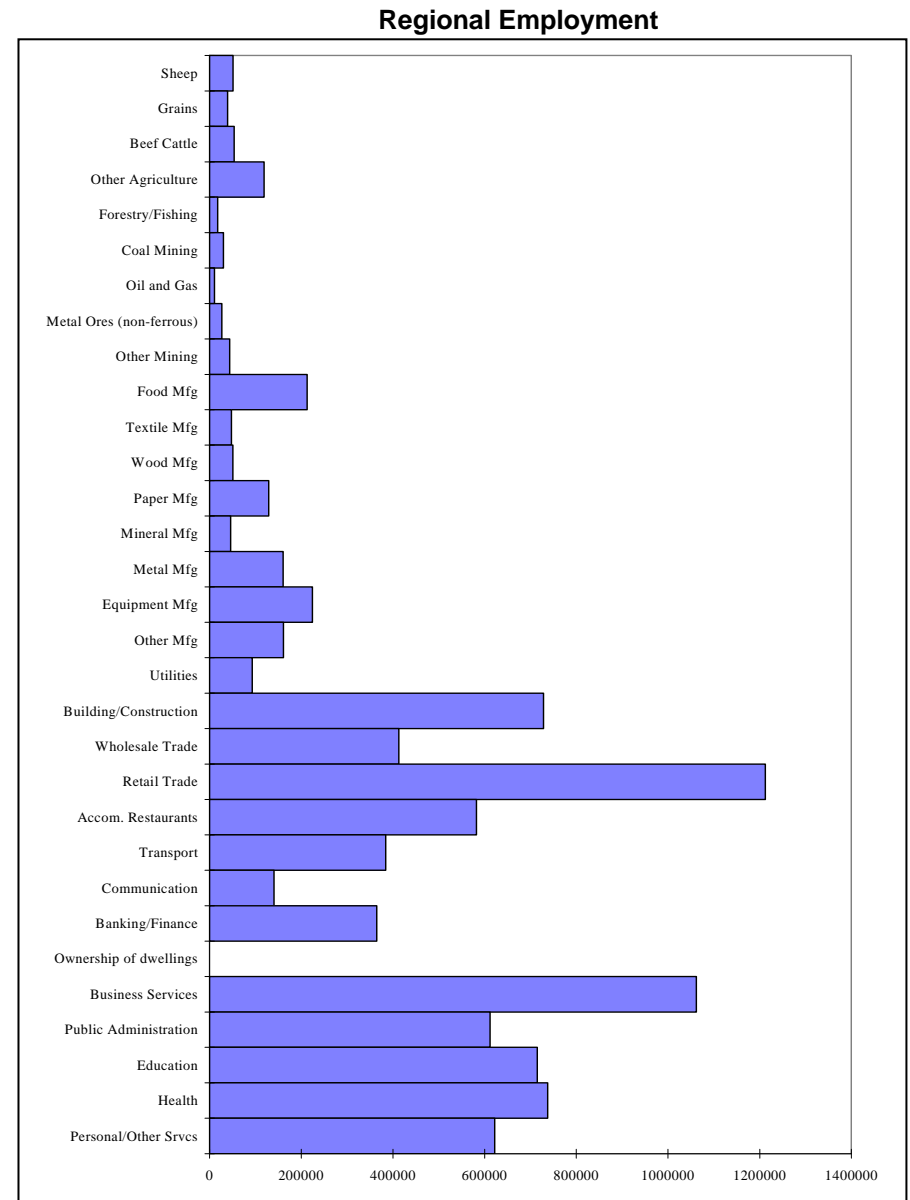
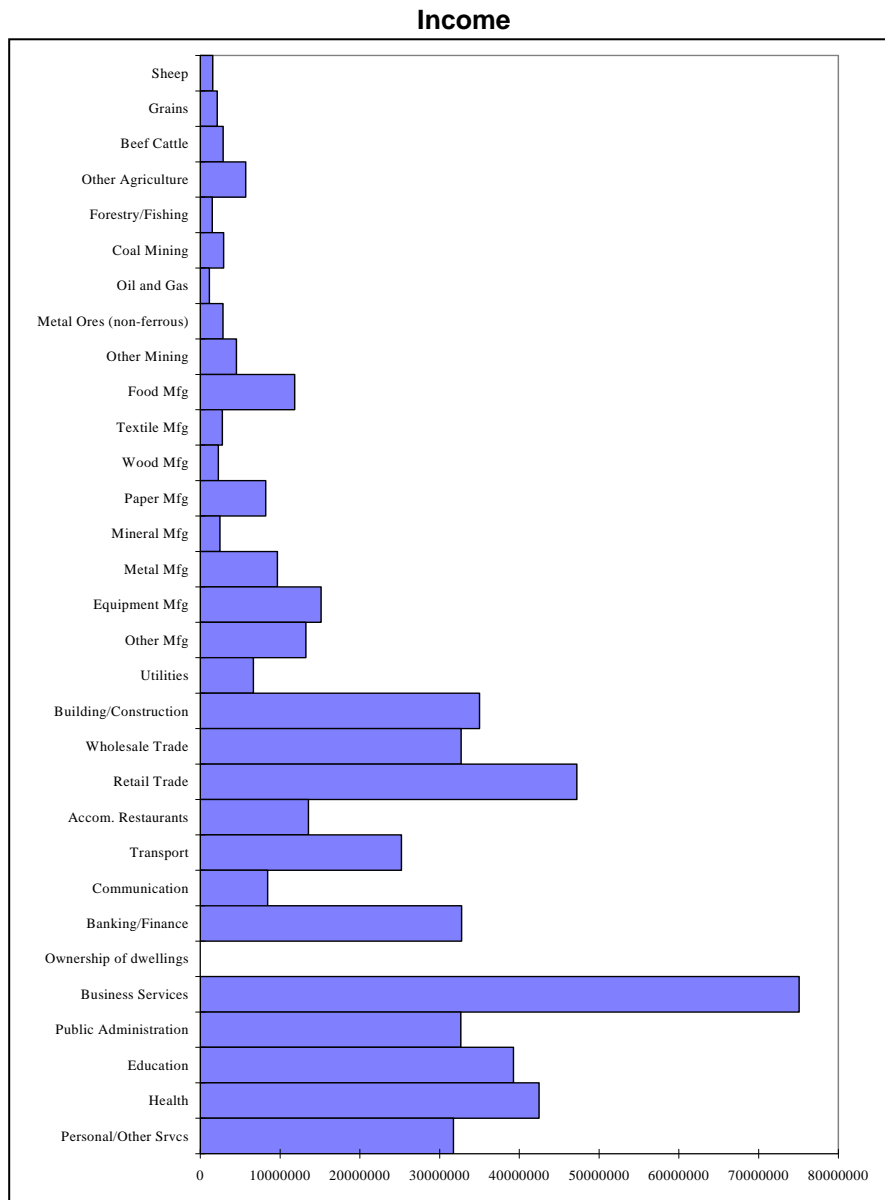
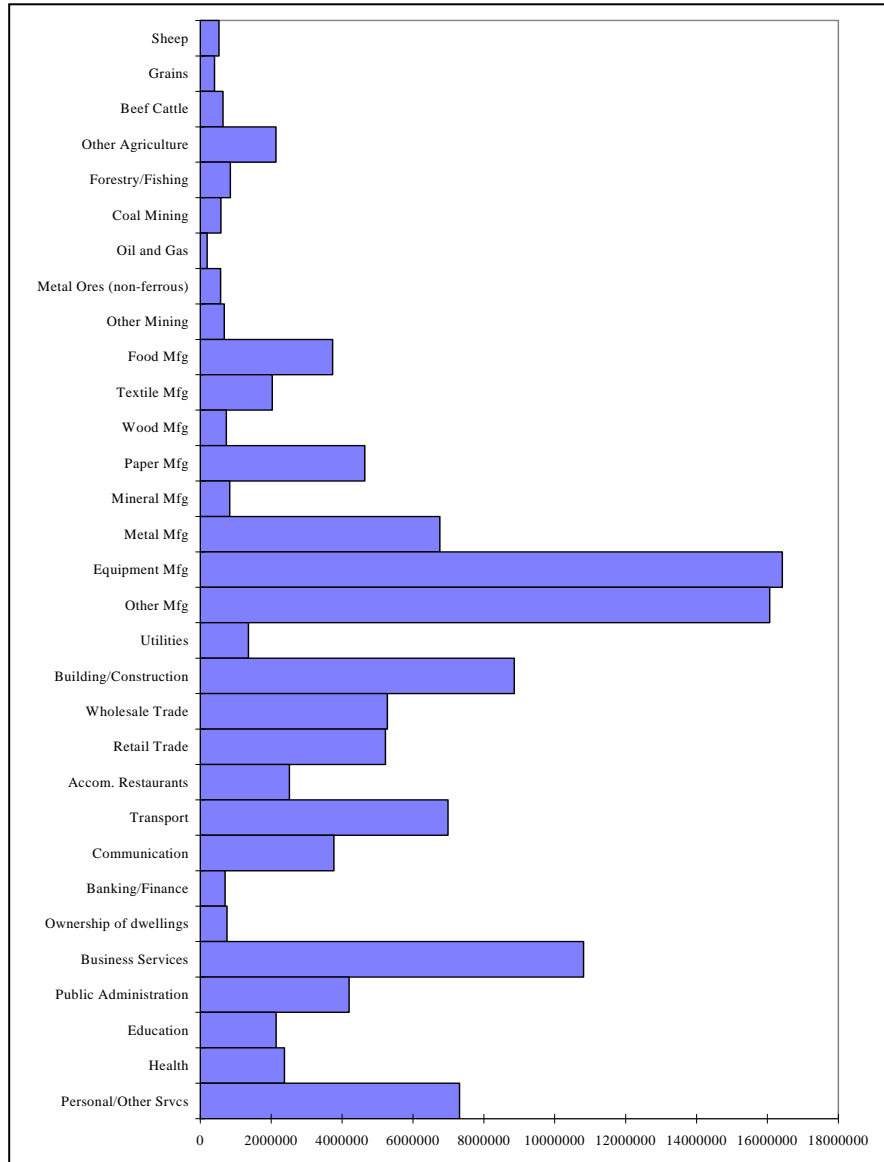
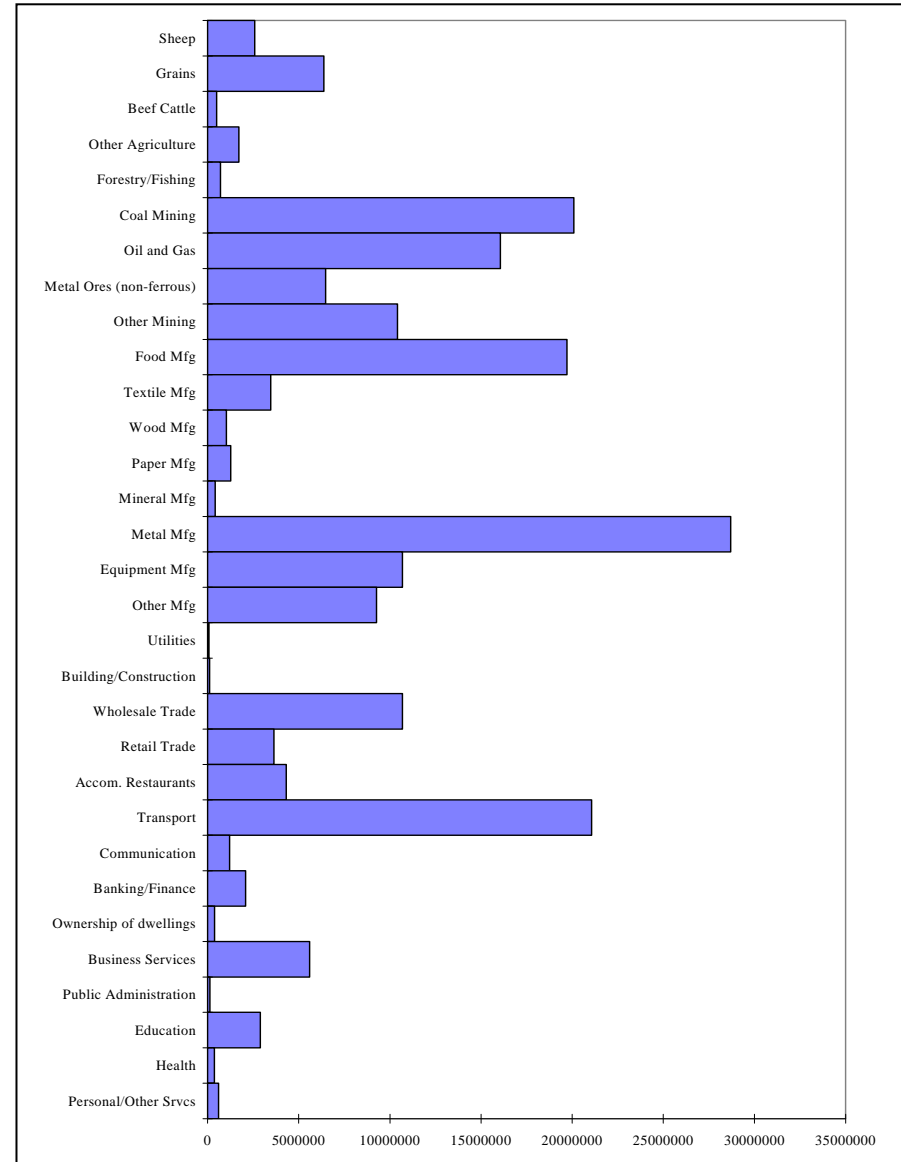


Figure A3.24.4 Sectoral Distribution of Imports and Exports (\$'000)

Regional Imports



Regional Exports



Appendix 4: Multipliers

The multipliers for each sector of the economy can also be derived from the input-output tables for the regional, state, territory and national economy.

The calculation of multipliers from the input-output tables is based on the following underlying assumptions:

- “there is a fixed input structure in each industry, described by fixed technological coefficients;
- all products of an industry are identical or are made in fixed proportions to each other;
- each industry exhibits constant returns to scale in production;
- unlimited labour and capital are available at fixed prices; and
- there are no other constraints, such as the balance of payments or the actions of government, on the response of each industry to a stimulus.” (ABS 1995, p 24).

Multipliers therefore do not take account of economies of scale, unused capacity or technological change since they describe average effects rather than marginal effects (ABS 1995).

Multipliers indicate the total impact of changes in demand for the output of any one industry on all industries in an economy (ABS 1995). Conventional gross regional output, employment, gross regional product and income multipliers show the gross regional output, employment, gross regional product and income responses to an initial gross regional output stimulus (Jensen and West, 1986).

Components of the conventional gross regional output multiplier are as follows:

Initial Effect - which is the initial output stimulus, usually a \$1 change in output from a particular industry (Powell and Chalmers, 1995; ABS, 1995).

First round effects - the amount of output from all intermediate sectors of the economy required to produce the initial \$1 change in output from the particular industry (Powell and Chalmers, 1995; ABS, 1995).

Industrial support effects - the subsequent or induced extra output from intermediate sectors arising from the first round effects (Powell and Chalmers, 1995; ABS, 1995).

Production induced effects - the sum of the first round effects and industrial support effects ie. the total amount of output from all industries in the economy required to produce the initial \$1 change in output (Powell and Chalmers, 1995; ABS, 1995).

Consumption induced effects - the spending by households of the extra income they derive from the production of the extra \$1 of output and production induced effects. This spending in turn generates further production by industries (Powell and Chalmers, 1995; ABS, 1995).

The *simple multiplier* is the initial effect plus the production-induced effects.

The *total multiplier* is the sum of the initial effect plus the production-induced effect and consumption-induced effect.

Conventional employment, gross regional product and income multipliers have similar components to the gross regional output multiplier, however, through conversion using the respective coefficients show the employment, gross regional product and income responses to an initial gross regional output stimulus (Jensen and West 1986).

For employment, gross regional product and income it is also possible to derive relationships between the initial or own sector effect and flow-on effects. For example, the flow-on income effects from an initial income effect or the flow-on employment effects from an initial employment effect etc. These own sector relationships are referred to as ratio multipliers, although they are not technically multipliers because there is no direct line of causation between the elements of the multiplier. For instance, it is not the initial change in income that leads to income flow-on effects, both are the result of an output stimulus (Jensen and West, 1986).

A description of the different ratio multipliers is given below.

$$\text{Type 1A Ratio Multiplier} = \frac{\text{Initial} + \text{First Round Effects}}{\text{Initial Effects}}$$

$$\text{Type 1B Ratio Multiplier} = \frac{\text{Initial} + \text{Production Induced Effects}}{\text{Initial Effects}}$$

$$\text{Type 11A Ratio Multiplier} = \frac{\text{Initial} + \text{Production Induced} + \text{Consumption Induced Effects}}{\text{Initial Effects}}$$

$$\text{Type 11B Ratio Multiplier} = \frac{\text{Flow-on Effects}}{\text{Initial Effects}}$$

(Centre for Farm Planning and Land Management 1989, p.207)

Appendix 5: Interpreting Input-Output Tables

The rows of the table indicate how the gross regional output of an industry is allocated as sales to other industries, to households, to exports and other final demands (OFD - which includes stock changes, capital expenditure and government expenditure). The corresponding column shows the sources of inputs to produce that gross regional output. These include purchases of intermediate inputs from other industries, the use of labour (household income), the returns to capital or other value-added (OVA - which includes gross operating surplus and depreciation and net indirect taxes and subsidies) and goods and services imported from outside the region. The number of people employed in each industry is also indicated in the final row.

Appendix 6: New South Wales WHA impacts on the NSW economy

Table A6.1: Impacts of management of Willandra Lakes Region WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,170	1,426	2,822	4,248	6,418
<i>Ratio Multiplier</i>	1.00	0.66	1.30	1.96	2.96
INCOME (\$'000)	1,145	466	823	1,289	2,434
<i>Ratio Multiplier</i>	1.00	0.41	0.72	1.13	2.13
VALUE-ADDED (\$'000)	1,324	621	1,438	2,059	3,383
<i>Ratio Multiplier</i>	1.00	0.47	1.09	1.56	2.56
EMPL. (No.)	23	6	13	19	42
<i>Ratio Multiplier</i>	1.00	0.25	0.56	0.81	1.81

Table A6.2: Impacts of visitors to Willandra Lakes Region WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	3,735	2,606	3,216	5,822	9,557
<i>Ratio Multiplier</i>	1.00	0.70	0.86	1.56	2.56
INCOME (\$'000)	1,059	777	937	1,714	2,773
<i>Ratio Multiplier</i>	1.00	0.73	0.89	1.62	2.62
VALUE-ADDED (\$'000)	1,483	1,121	1,638	2,759	4,242
<i>Ratio Multiplier</i>	1.00	0.76	1.10	1.86	2.86
EMPL. (No.)	23	11	15	25	48
<i>Ratio Multiplier</i>	1.00	0.46	0.63	1.09	2.09

Table A6.3: Impacts of management of Lord Howe Island WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	8,277	6,880	7,459	14,339	22,616
<i>Ratio Multiplier</i>	1.00	0.83	0.90	1.73	2.73
INCOME (\$'000)	2,534	1,723	2,174	3,897	6,431
<i>Ratio Multiplier</i>	1.00	0.68	0.86	1.54	2.54
VALUE-ADDED (\$'000)	4,524	2,561	3,799	6,360	10,884
<i>Ratio Multiplier</i>	1.00	0.57	0.84	1.41	2.41
EMPL. (No.)	59	21	34	55	114
<i>Ratio Multiplier</i>	1.00	0.36	0.57	0.94	1.94

Table A6.4: Impacts of visitors to Lord Howe Island WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	5,610	3,920	4,816	8,736	14,346
<i>Ratio Multiplier</i>	1.00	0.70	0.86	1.56	2.56
INCOME (\$'000)	1,588	1,161	1,404	2,565	4,152
<i>Ratio Multiplier</i>	1.00	0.73	0.88	1.62	2.62
VALUE-ADDED (\$'000)	2,257	1,680	2,453	4,133	6,390
<i>Ratio Multiplier</i>	1.00	0.74	1.09	1.83	2.83
EMPL. (No.)	36	16	22	38	74
<i>Ratio Multiplier</i>	1.00	0.44	0.60	1.04	2.04

Table A6.5: Impacts of management of Greater Blue Mountains WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	11,100	10,756	12,622	23,378	34,478
<i>Ratio Multiplier</i>	1.00	0.97	1.14	2.11	3.11
INCOME (\$'000)	4,180	3,023	3,679	6,702	10,883
<i>Ratio Multiplier</i>	1.00	0.72	0.88	1.60	2.60
VALUE-ADDED (\$'000)	4,396	4,248	6,429	10,677	15,074
<i>Ratio Multiplier</i>	1.00	0.97	1.46	2.43	3.43
EMPL. (No.)	99	41	57	98	197
<i>Ratio Multiplier</i>	1.00	0.42	0.58	0.99	1.99

Table A6.6: Impacts of visitors to Greater Blue Mountains WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	119,286	83,322	102,788	186,110	305,396
<i>Ratio Multiplier</i>	1.00	0.70	0.86	1.56	2.56
INCOME (\$'000)	33,857	24,807	29,961	54,769	88,625
<i>Ratio Multiplier</i>	1.00	0.73	0.88	1.62	2.62
VALUE-ADDED (\$'000)	47,629	35,822	52,355	88,177	135,806
<i>Ratio Multiplier</i>	1.00	0.75	1.10	1.85	2.85
EMPL. (No.)	748	340	465	805	1,553
<i>Ratio Multiplier</i>	1.00	0.45	0.62	1.08	2.08

Table A6.7: Impacts of management of the Sydney Opera House WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	68,913	53,436	99,846	153,282	222,195
<i>Ratio Multiplier</i>	1.00	0.78	1.45	2.22	3.22
INCOME (\$'000)	36,508	20,477	29,104	49,580	86,089
<i>Ratio Multiplier</i>	1.00	0.56	0.80	1.36	2.36
VALUE-ADDED (\$'000)	37,230	24,255	50,857	75,112	112,342
<i>Ratio Multiplier</i>	1.00	0.65	1.37	2.02	3.02
EMPL. (No.)	654	242	452	694	1,348
<i>Ratio Multiplier</i>	1.00	0.37	0.69	1.06	2.06

Table A6.8: Impacts of visitors to the Sydney Opera House WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,247,832	879,107	1,094,375	1,973,482	3,221,314
<i>Ratio Multiplier</i>	1.00	0.70	0.88	1.58	2.58
INCOME (\$'000)	360,913	263,679	318,997	582,676	943,588
<i>Ratio Multiplier</i>	1.00	0.73	0.88	1.61	2.61
VALUE-ADDED (\$'000)	510,286	379,810	557,424	937,234	1,447,520
<i>Ratio Multiplier</i>	1.00	0.74	1.09	1.84	2.84
EMPL. (No.)	7,906	3,588	4,954	8,542	16,448
<i>Ratio Multiplier</i>	1.00	0.45	0.63	1.08	2.08

Table A6.9: Impacts of management of Gondwana Rainforests of Australia WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	12,550	13,073	13,956	27,029	39,579
<i>Ratio Multiplier</i>	1.00	1.04	1.11	2.15	3.15
INCOME (\$'000)	4,285	3,680	4,068	7,749	12,034
<i>Ratio Multiplier</i>	1.00	0.86	0.95	1.81	2.81
VALUE-ADDED (\$'000)	4,519	5,179	7,109	12,287	16,806
<i>Ratio Multiplier</i>	1.00	1.15	1.57	2.72	3.72
EMPL. (No.)	102	50	63	113	215
<i>Ratio Multiplier</i>	1.00	0.49	0.62	1.11	2.11

Table A6.10: Impacts of visitors to Gondwana Rainforests of Australia WHA on the NSW economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	127,746	89,319	110,309	199,629	327,375
<i>Ratio Multiplier</i>	1.00	0.70	0.86	1.56	2.56
INCOME (\$'000)	36,336	26,621	32,154	58,774	95,111
<i>Ratio Multiplier</i>	1.00	0.73	0.88	1.62	2.62
VALUE-ADDED (\$'000)	51,129	38,426	56,187	94,613	145,742
<i>Ratio Multiplier</i>	1.00	0.75	1.10	1.85	2.85
EMPL. (No.)	801	364	499	864	1,665
<i>Ratio Multiplier</i>	1.00	0.45	0.62	1.08	2.08

Appendix 7 – Queensland WHA impacts on the QLD economy

Table A7.1: Impacts of management of Wet Tropics of Queensland WHA on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	11,380	5,999	12,573	18,573	29,953
<i>Ratio Multiplier</i>	1.00	0.53	1.10	1.63	2.63
INCOME (\$'000)	7,220	1,650	3,692	5,342	12,562
<i>Ratio Multiplier</i>	1.00	0.23	0.51	0.74	1.74
VALUE-ADDED (\$'000)	7,447	2,661	6,436	9,097	16,543
<i>Ratio Multiplier</i>	1.00	0.36	0.86	1.22	2.22
EMPL. (No.)	180	25	66	91	271
<i>Ratio Multiplier</i>	1.00	0.14	0.37	0.50	1.50

Table A7.2: Impacts of visitors to Wet Tropics of Queensland WHA on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,382,904	770,203	882,964	1,653,167	3,036,071
<i>Ratio Multiplier</i>	1.00	0.56	0.64	1.20	2.20
INCOME (\$'000)	397,066	225,796	259,283	485,080	882,146
<i>Ratio Multiplier</i>	1.00	0.57	0.65	1.22	2.22
VALUE-ADDED (\$'000)	566,618	335,508	451,969	787,476	1,354,094
<i>Ratio Multiplier</i>	1.00	0.59	0.80	1.39	2.39
EMPL. (No.)	9,330	3,701	4,623	8,324	17,654
<i>Ratio Multiplier</i>	1.00	0.40	0.50	0.89	1.89

Table A7.3: Impacts of management of Fraser Island WHA on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	8,036	4,534	8,463	12,997	21,033
<i>Ratio Multiplier</i>	1.00	0.56	1.05	1.62	2.62
INCOME (\$'000)	4,680	1,291	2,485	3,776	8,455
<i>Ratio Multiplier</i>	1.00	0.28	0.53	0.81	1.81
VALUE-ADDED (\$'000)	4,980	2,022	4,332	6,354	11,334
<i>Ratio Multiplier</i>	1.00	0.41	0.87	1.28	2.28
EMPL. (No.)	117	20	44	64	181
<i>Ratio Multiplier</i>	1.00	0.17	0.38	0.55	1.55

Table A7.4: Impacts of visitors to Fraser Island WHA on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	322,917	179,511	202,911	382,422	705,339
<i>Ratio Multiplier</i>	1.00	0.56	0.63	1.18	2.18
INCOME (\$'000)	90,973	52,165	59,585	111,750	202,723
<i>Ratio Multiplier</i>	1.00	0.57	0.65	1.23	2.23
VALUE-ADDED (\$'000)	130,067	77,910	103,865	181,775	311,842
<i>Ratio Multiplier</i>	1.00	0.60	0.80	1.40	2.40
EMPL. (No.)	2,171	856	1,062	1,918	4,089
<i>Ratio Multiplier</i>	1.00	0.39	0.49	0.88	1.88

Table A7.5: Impacts of management of AFMS, Riversleigh WHA on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	126	52	146	198	324
<i>Ratio Multiplier</i>	1.00	0.42	1.16	1.58	2.58
INCOME (\$'000)	88	15	43	58	146
<i>Ratio Multiplier</i>	1.00	0.17	0.49	0.66	1.66
VALUE-ADDED (\$'000)	90	24	75	98	189
<i>Ratio Multiplier</i>	1.00	0.26	0.83	1.09	2.09
EMPL. (No.)	2	0	1	1	3
<i>Ratio Multiplier</i>	1.00	0.11	0.37	0.48	1.48

Table A7.6: Impacts of visitors to AFMS, Riversleigh WHA on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	10,020	5,566	6,306	11,873	21,893
<i>Ratio Multiplier</i>	1.00	0.56	0.63	1.18	2.18
INCOME (\$'000)	2,828	1,620	1,852	3,472	6,301
<i>Ratio Multiplier</i>	1.00	0.57	0.65	1.23	2.23
VALUE-ADDED (\$'000)	4,018	2,421	3,228	5,649	9,666
<i>Ratio Multiplier</i>	1.00	0.60	0.80	1.41	2.41
EMPL. (No.)	67	27	33	60	126
<i>Ratio Multiplier</i>	1.00	0.40	0.50	0.90	1.90

Table A7.7: Impacts of management of Gondwana Rainforests of Australia on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	4,678	3,846	4,408	8,254	12,932
<i>Ratio Multiplier</i>	1.00	0.82	0.94	1.76	2.76
INCOME (\$'000)	2,088	1,021	1,294	2,316	4,404
<i>Ratio Multiplier</i>	1.00	0.49	0.62	1.11	2.11
VALUE-ADDED (\$'000)	2,223	1,712	2,256	3,968	6,191
<i>Ratio Multiplier</i>	1.00	0.77	1.01	1.78	2.78
EMPL. (No.)	52	15	23	38	90
<i>Ratio Multiplier</i>	1.00	0.29	0.44	0.73	1.73

Table A7.8: Impacts of visitors to Gondwana Rainforests of Australia on the QLD economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	153,928	85,518	97,167	182,685	336,613
<i>Ratio Multiplier</i>	1.00	0.56	0.63	1.19	2.19
INCOME (\$'000)	43,600	24,944	28,533	53,477	97,077
<i>Ratio Multiplier</i>	1.00	0.57	0.65	1.23	2.23
VALUE-ADDED (\$'000)	61,800	37,240	49,737	86,977	148,777
<i>Ratio Multiplier</i>	1.00	0.60	0.80	1.41	2.41
EMPL. (No.)	1,020	410	509	918	1,938
<i>Ratio Multiplier</i>	1.00	0.40	0.50	0.90	1.90

Appendix 8 – Western Australia WHA impacts on the WA economy

Table A8.1: Impacts of management of Shark Bay WHA on the WA economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,586	958	2,871	3,830	6,416
<i>Ratio Multiplier</i>	1.00	0.37	1.11	1.48	2.48
INCOME (\$'000)	1,690	255	830	1,084	2,774
<i>Ratio Multiplier</i>	1.00	0.15	0.49	0.64	1.64
VALUE-ADDED (\$'000)	1,952	401	1,444	1,845	3,798
<i>Ratio Multiplier</i>	1.00	0.21	0.74	0.95	1.95
EMPL. (No.)	28	4	14	18	46
<i>Ratio Multiplier</i>	1.00	0.13	0.51	0.63	1.63

Table A8.2: Impacts of visitors to Shark Bay WHA on the WA economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	26,097	16,697	17,969	34,666	60,763
<i>Ratio Multiplier</i>	1.00	0.64	0.69	1.33	2.33
INCOME (\$'000)	7,368	4,799	5,193	9,992	17,360
<i>Ratio Multiplier</i>	1.00	0.65	0.70	1.36	2.36
VALUE-ADDED (\$'000)	10,469	7,246	9,037	16,283	26,751
<i>Ratio Multiplier</i>	1.00	0.69	0.86	1.56	2.56
EMPL. (No.)	206	71	89	160	366
<i>Ratio Multiplier</i>	1.00	0.35	0.43	0.78	1.78

Table A8.3: Impacts of management of Purnululu WHA on the WA economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,579	1,929	1,228	3,157	4,736
<i>Ratio Multiplier</i>	1.00	1.22	0.78	2.00	3.00
INCOME (\$'000)	233	598	355	953	1,186
<i>Ratio Multiplier</i>	1.00	2.56	1.52	4.08	5.08
VALUE-ADDED (\$'000)	415	804	618	1,422	1,837
<i>Ratio Multiplier</i>	1.00	1.94	1.49	3.43	4.43
EMPL. (No.)	6	8	6	14	20
<i>Ratio Multiplier</i>	1.00	1.28	1.01	2.29	3.29

Table A8.4: Impacts of visitors to Purnululu WHA on the WA economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	5,053	3,232	3,484	6,716	11,769
<i>Ratio Multiplier</i>	1.00	0.64	0.69	1.33	2.33
INCOME (\$'000)	1,430	930	1,007	1,937	3,366
<i>Ratio Multiplier</i>	1.00	0.65	0.70	1.35	2.35
VALUE-ADDED (\$'000)	2,028	1,403	1,752	3,156	5,184
<i>Ratio Multiplier</i>	1.00	0.69	0.86	1.56	2.56
EMPL. (No.)	40	14	17	31	71
<i>Ratio Multiplier</i>	1.00	0.35	0.44	0.78	1.78

Appendix 9 - Tasmanian WHA impacts on the Tasmanian economy

Table A9.1: Impacts of management of Tasmanian Wilderness WHA on the Tasmanian economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	9,324	5,587	4,742	10,328	19,652
<i>Ratio Multiplier</i>	1.00	0.60	0.51	1.11	2.11
INCOME (\$'000)	3,292	2,004	1,421	3,424	6,716
<i>Ratio Multiplier</i>	1.00	0.61	0.43	1.04	2.04
VALUE-ADDED (\$'000)	4,045	2,502	2,490	4,992	9,037
<i>Ratio Multiplier</i>	1.00	0.62	0.62	1.23	2.23
EMPL. (No.)	160	41	27	68	228
<i>Ratio Multiplier</i>	1.00	0.25	0.17	0.43	1.43

Table A9.2: Impacts of visitors to Tasmanian Wilderness WHA on the Tasmanian economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	420,627	138,078	141,740	279,818	700,445
<i>Ratio Multiplier</i>	1.00	0.33	0.34	0.67	1.67
INCOME (\$'000)	119,580	38,715	42,465	81,180	200,761
<i>Ratio Multiplier</i>	1.00	0.32	0.36	0.68	1.68
VALUE-ADDED (\$'000)	169,950	59,178	74,448	133,626	303,576
<i>Ratio Multiplier</i>	1.00	0.35	0.44	0.79	1.79
EMPL. (No.)	3,543	769	819	1,588	5,131
<i>Ratio Multiplier</i>	1.00	0.22	0.23	0.45	1.45

Table A9.3: Impacts of management of Macquarie Island WHA on the Tasmanian economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	482	136	340	476	958
<i>Ratio Multiplier</i>	1.00	0.28	0.71	0.99	1.99
INCOME (\$'000)	340	40	102	142	482
<i>Ratio Multiplier</i>	1.00	0.12	0.30	0.42	1.42
VALUE-ADDED (\$'000)	344	57	179	235	579
<i>Ratio Multiplier</i>	1.00	0.16	0.52	0.68	1.68
EMPL. (No.)	5	1	2	3	8
<i>Ratio Multiplier</i>	1.00	0.13	0.39	0.53	1.53

Table A9.4: Impacts of visitors to Macquarie Island WHA on the Tasmanian economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	450	148	151	299	749
<i>Ratio Multiplier</i>	1.00	0.33	0.34	0.67	1.67
INCOME (\$'000)	128	41	45	87	214
<i>Ratio Multiplier</i>	1.00	0.32	0.36	0.68	1.68
VALUE-ADDED (\$'000)	182	63	80	143	325
<i>Ratio Multiplier</i>	1.00	0.35	0.44	0.79	1.79
EMPL. (No.)	4	1	1	2	5
<i>Ratio Multiplier</i>	1.00	0.22	0.23	0.45	1.45

Appendix 10 – Northern Territory WHA impacts on the NT economy

Table A10.1: Impacts of management of Uluru-Kata Tjuta National Park WHA on the NT economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	12,300	6,162	4,792	10,954	23,254
<i>Ratio Multiplier</i>	1.00	0.50	0.39	0.89	1.89
INCOME (\$'000)	3,020	2,324	1,099	3,422	6,442
<i>Ratio Multiplier</i>	1.00	0.77	0.36	1.13	2.13
VALUE-ADDED (\$'000)	6,298	2,879	2,634	5,513	11,811
<i>Ratio Multiplier</i>	1.00	0.46	0.42	0.88	1.88
EMPL. (No.)	44	47	16	63	107
<i>Ratio Multiplier</i>	1.00	1.06	0.37	1.43	2.43

Table A10.2: Impacts of visitors to Uluru-Kata Tjuta National Park WHA on the NT economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	92,010	27,171	30,402	57,572	149,582
<i>Ratio Multiplier</i>	1.00	0.30	0.33	0.63	1.63
INCOME (\$'000)	25,912	7,987	6,970	14,957	40,869
<i>Ratio Multiplier</i>	1.00	0.31	0.27	0.58	1.58
VALUE-ADDED (\$'000)	37,813	11,709	16,712	28,421	66,235
<i>Ratio Multiplier</i>	1.00	0.31	0.44	0.75	1.75
EMPL. (No.)	506	108	103	211	717
<i>Ratio Multiplier</i>	1.00	0.21	0.20	0.42	1.42

Table A10.3: Impacts of management of Kakadu National Park WHA on the NT economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	18,797	9,894	7,441	17,334	36,131
<i>Ratio Multiplier</i>	1.00	0.53	0.40	0.92	1.92
INCOME (\$'000)	4,709	3,587	1,706	5,293	10,002
<i>Ratio Multiplier</i>	1.00	0.76	0.36	1.12	2.12
VALUE-ADDED (\$'000)	9,204	4,452	4,090	8,542	17,746
<i>Ratio Multiplier</i>	1.00	0.48	0.44	0.93	1.93
EMPL. (No.)	69	60	25	86	155
<i>Ratio Multiplier</i>	1.00	0.88	0.37	1.24	2.24

Table A10.4: Impacts of visitors to Kakadu National Park WHA on the NT economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	29,725	8,669	9,762	18,431	48,156
<i>Ratio Multiplier</i>	1.00	0.29	0.33	0.62	1.62
INCOME (\$'000)	8,346	2,539	2,238	4,778	13,124
<i>Ratio Multiplier</i>	1.00	0.30	0.27	0.57	1.57
VALUE-ADDED (\$'000)	12,048	3,719	5,366	9,086	21,134
<i>Ratio Multiplier</i>	1.00	0.31	0.45	0.75	1.75
EMPL. (No.)	164	35	33	68	232
<i>Ratio Multiplier</i>	1.00	0.21	0.20	0.41	1.41

Appendix 11 – World Heritage Area impacts on the national economy

Table A11.1: Impacts of management of Willandra Lakes Region WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,170	1,661	4,161	5,822	7,992
<i>Ratio Multiplier</i>	1.00	0.77	1.92	2.68	3.68
INCOME (\$'000)	1,146	435	1,078	1,514	2,660
<i>Ratio Multiplier</i>	1.00	0.38	0.94	1.32	2.32
VALUE-ADDED (\$'000)	1,325	727	2,041	2,769	4,094
<i>Ratio Multiplier</i>	1.00	0.55	1.54	2.09	3.09
EMPL. (No.)	23	7	20	27	50
<i>Ratio Multiplier</i>	1.00	0.31	0.87	1.18	2.18

Table A11.2: Impacts of visitors to Willandra Lakes Region WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	3,901	3,979	5,134	9,113	13,014
<i>Ratio Multiplier</i>	1.00	1.02	1.32	2.34	3.34
INCOME (\$'000)	995	956	1,330	2,286	3,281
<i>Ratio Multiplier</i>	1.00	0.96	1.34	2.30	3.30
VALUE-ADDED (\$'000)	1,544	1,741	2,518	4,259	5,802
<i>Ratio Multiplier</i>	1.00	1.13	1.63	2.76	3.76
EMPL. (No.)	26	16	25	40	66
<i>Ratio Multiplier</i>	1.00	0.61	0.96	1.57	2.57

Table A11.3: Impacts of management of Tasmanian Wilderness WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	9,324	10,199	16,318	26,517	35,841
<i>Ratio Multiplier</i>	1.00	1.09	1.75	2.84	3.84
INCOME (\$'000)	3,291	2,911	4,229	7,139	10,431
<i>Ratio Multiplier</i>	1.00	0.88	1.28	2.17	3.17
VALUE-ADDED (\$'000)	4,044	4,527	8,005	12,533	16,577
<i>Ratio Multiplier</i>	1.00	1.12	1.98	3.10	4.10
EMPL. (No.)	160	49	79	127	287
<i>Ratio Multiplier</i>	1.00	0.30	0.49	0.79	1.79

Table A11.4: Impacts of visitors to Tasmanian Wilderness WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	476,603	488,250	625,272	1,113,521	1,590,124
<i>Ratio Multiplier</i>	1.00	1.02	1.31	2.34	3.34
INCOME (\$'000)	120,538	117,107	162,042	279,149	399,687
<i>Ratio Multiplier</i>	1.00	0.97	1.34	2.32	3.32
VALUE-ADDED (\$'000)	192,078	212,540	306,739	519,279	711,357
<i>Ratio Multiplier</i>	1.00	1.11	1.60	2.70	3.70
EMPL. (No.)	3,275	1,919	3,011	4,930	8,205
<i>Ratio Multiplier</i>	1.00	0.59	0.92	1.51	2.51

Table A11.5: Impacts of management of Lord Howe Island WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	8,277	8,449	11,262	19,711	27,988
<i>Ratio Multiplier</i>	1.00	1.02	1.36	2.38	3.38
INCOME (\$'000)	2,539	1,741	2,919	4,660	7,199
<i>Ratio Multiplier</i>	1.00	0.69	1.15	1.84	2.84
VALUE-ADDED (\$'000)	4,533	3,254	5,525	8,779	13,312
<i>Ratio Multiplier</i>	1.00	0.72	1.22	1.94	2.94
EMPL. (No.)	59	27	54	81	140
<i>Ratio Multiplier</i>	1.00	0.46	0.92	1.38	2.38

Table A11.6: Impacts of visitors to Lord Howe Island WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	5,823	5,974	7,612	13,586	19,409
<i>Ratio Multiplier</i>	1.00	1.03	1.31	2.33	3.33
INCOME (\$'000)	1,463	1,430	1,973	3,402	4,866
<i>Ratio Multiplier</i>	1.00	0.98	1.35	2.33	3.33
VALUE-ADDED (\$'000)	2,331	2,600	3,734	6,334	8,665
<i>Ratio Multiplier</i>	1.00	1.12	1.60	2.72	3.72
EMPL. (No.)	40	23	37	60	100
<i>Ratio Multiplier</i>	1.00	0.59	0.92	1.50	2.50

Table A11.7: Impacts of management of Wet Tropics of Queensland WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	11,380	7,837	23,747	31,583	42,963
<i>Ratio Multiplier</i>	1.00	0.69	2.09	2.78	3.78
INCOME (\$'000)	7,220	1,806	6,154	7,960	15,179
<i>Ratio Multiplier</i>	1.00	0.25	0.85	1.10	2.10
VALUE-ADDED (\$'000)	7,447	3,494	11,649	15,143	22,590
<i>Ratio Multiplier</i>	1.00	0.47	1.56	2.03	3.03
EMPL. (No.)	180	28	114	143	323
<i>Ratio Multiplier</i>	1.00	0.16	0.64	0.79	1.79

Table A11.8: Impacts of visitors to Wet Tropics of Queensland WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,474,332	1,503,683	1,951,456	3,455,139	4,929,471
<i>Ratio Multiplier</i>	1.00	1.02	1.32	2.34	3.34
INCOME (\$'000)	379,070	362,612	505,729	868,341	1,247,411
<i>Ratio Multiplier</i>	1.00	0.96	1.33	2.29	3.29
VALUE-ADDED (\$'000)	600,158	655,928	957,325	1,613,252	2,213,410
<i>Ratio Multiplier</i>	1.00	1.09	1.60	2.69	3.69
EMPL. (No.)	10,049	5,940	9,396	15,336	25,385
<i>Ratio Multiplier</i>	1.00	0.59	0.93	1.53	2.53

Table A11.9: Impacts of management of Shark Bay WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,586	1,250	5,217	6,467	9,053
<i>Ratio Multiplier</i>	1.00	0.48	2.02	2.50	3.50
INCOME (\$'000)	1,692	290	1,352	1,642	3,335
<i>Ratio Multiplier</i>	1.00	0.17	0.80	0.97	1.97
VALUE-ADDED (\$'000)	1,956	531	2,559	3,090	5,046
<i>Ratio Multiplier</i>	1.00	0.27	1.31	1.58	2.58
EMPL. (No.)	28	5	25	30	58
<i>Ratio Multiplier</i>	1.00	0.16	0.90	1.06	2.06

Table A11.10: Impacts of visitors to Shark Bay WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	30,077	30,805	39,457	70,262	100,339
<i>Ratio Multiplier</i>	1.00	1.02	1.31	2.34	3.34
INCOME (\$'000)	7,608	7,388	10,226	17,613	25,222
<i>Ratio Multiplier</i>	1.00	0.97	1.34	2.31	3.31
VALUE-ADDED (\$'000)	12,097	13,414	19,356	32,771	44,868
<i>Ratio Multiplier</i>	1.00	1.11	1.60	2.71	3.71
EMPL. (No.)	206	121	190	311	517
<i>Ratio Multiplier</i>	1.00	0.59	0.92	1.51	2.51

Table A11.11: Impacts of management of Fraser Island WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	8,036	5,996	16,115	22,111	30,147
<i>Ratio Multiplier</i>	1.00	0.75	2.01	2.75	3.75
INCOME (\$'000)	4,680	1,444	4,176	5,621	10,301
<i>Ratio Multiplier</i>	1.00	0.31	0.89	1.20	2.20
VALUE-ADDED (\$'000)	4,980	2,689	7,905	10,594	15,574
<i>Ratio Multiplier</i>	1.00	0.54	1.59	2.13	3.13
EMPL. (No.)	117	23	78	100	217
<i>Ratio Multiplier</i>	1.00	0.19	0.66	0.86	1.86

Table A11.12: Impacts of visitors to Fraser Island WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	343,158	351,591	449,604	801,195	1,144,353
<i>Ratio Multiplier</i>	1.00	1.02	1.31	2.33	3.33
INCOME (\$'000)	86,627	84,252	116,517	200,769	287,396
<i>Ratio Multiplier</i>	1.00	0.97	1.35	2.32	3.32
VALUE-ADDED (\$'000)	137,516	153,124	220,562	373,686	511,202
<i>Ratio Multiplier</i>	1.00	1.11	1.60	2.72	3.72
EMPL. (No.)	2,344	1,381	2,165	3,546	5,889
<i>Ratio Multiplier</i>	1.00	0.59	0.92	1.51	2.51

Table A11.13: Impacts of management of AFMS, Riversleigh WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	126	72	275	348	474
<i>Ratio Multiplier</i>	1.00	0.57	2.19	2.76	3.76
INCOME (\$'000)	87	17	71	89	176
<i>Ratio Multiplier</i>	1.00	0.20	0.82	1.01	2.01
VALUE-ADDED (\$'000)	89	32	135	168	257
<i>Ratio Multiplier</i>	1.00	0.36	1.51	1.87	2.87
EMPL. (No.)	2	0	1	2	4
<i>Ratio Multiplier</i>	1.00	0.13	0.66	0.79	1.79

Table A11.14: Impacts of visitors to AFMS, Riversleigh WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	10,702	10,940	14,056	24,996	35,698
<i>Ratio Multiplier</i>	1.00	1.02	1.31	2.34	3.34
INCOME (\$'000)	2,717	2,625	3,643	6,268	8,985
<i>Ratio Multiplier</i>	1.00	0.97	1.34	2.31	3.31
VALUE-ADDED (\$'000)	4,267	4,774	6,895	11,670	15,937
<i>Ratio Multiplier</i>	1.00	1.12	1.62	2.74	3.74
EMPL. (No.)	72	43	68	111	183
<i>Ratio Multiplier</i>	1.00	0.60	0.94	1.54	2.54

Table A11.15: Impacts of management of AFMS, Naracoorte WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	616	356	1,146	1,502	2,118
<i>Ratio Multiplier</i>	1.00	0.58	1.86	2.44	3.44
INCOME (\$'000)	351	84	297	381	733
<i>Ratio Multiplier</i>	1.00	0.24	0.85	1.09	2.09
VALUE-ADDED (\$'000)	441	149	562	711	1,153
<i>Ratio Multiplier</i>	1.00	0.34	1.27	1.61	2.61
EMPL. (No.)	14	1	6	7	21
<i>Ratio Multiplier</i>	1.00	0.11	0.39	0.50	1.50

Table A11.16: Impacts of visitors to AFMS, Naracoorte WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	2,641	2,695	3,480	6,174	8,815
<i>Ratio Multiplier</i>	1.00	1.02	1.32	2.34	3.34
INCOME (\$'000)	675	648	902	1,549	2,224
<i>Ratio Multiplier</i>	1.00	0.96	1.34	2.30	3.30
VALUE-ADDED (\$'000)	1,051	1,178	1,707	2,885	3,936
<i>Ratio Multiplier</i>	1.00	1.12	1.62	2.74	3.74
EMPL. (No.)	18	11	17	27	45
<i>Ratio Multiplier</i>	1.00	0.61	0.96	1.56	2.56

Table A11.17: Impacts of management of Greater Blue Mountains WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	11,100	13,780	19,436	33,216	44,316
<i>Ratio Multiplier</i>	1.00	1.24	1.75	2.99	3.99
INCOME (\$'000)	4,180	3,207	5,037	8,244	12,424
<i>Ratio Multiplier</i>	1.00	0.77	1.21	1.97	2.97
VALUE-ADDED (\$'000)	4,396	5,483	9,535	15,017	19,413
<i>Ratio Multiplier</i>	1.00	1.25	2.17	3.42	4.42
EMPL. (No.)	99	53	94	146	245
<i>Ratio Multiplier</i>	1.00	0.53	0.95	1.48	2.48

Table A11.18: Impacts of visitors to Greater Blue Mountains WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	124,361	127,000	163,531	290,530	414,891
<i>Ratio Multiplier</i>	1.00	1.02	1.31	2.34	3.34
INCOME (\$'000)	31,662	30,490	42,380	72,870	104,532
<i>Ratio Multiplier</i>	1.00	0.96	1.34	2.30	3.30
VALUE-ADDED (\$'000)	49,458	55,479	80,223	135,702	185,160
<i>Ratio Multiplier</i>	1.00	1.12	1.62	2.74	3.74
EMPL. (No.)	829	500	787	1,287	2,116
<i>Ratio Multiplier</i>	1.00	0.60	0.95	1.55	2.55

Table A11.19: Impacts of management of Purnululu WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,579	2,347	2,167	4,513	6,092
<i>Ratio Multiplier</i>	1.00	1.49	1.37	2.86	3.86
INCOME (\$'000)	233	590	562	1,152	1,385
<i>Ratio Multiplier</i>	1.00	2.53	2.41	4.93	5.93
VALUE-ADDED (\$'000)	415	1,000	1,063	2,063	2,478
<i>Ratio Multiplier</i>	1.00	2.41	2.56	4.97	5.97
EMPL. (No.)	6	10	10	20	26
<i>Ratio Multiplier</i>	1.00	1.59	1.74	3.32	4.32

Table A11.20: Impacts of visitors to Purnululu WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	5,823	5,961	7,647	13,608	19,431
<i>Ratio Multiplier</i>	1.00	1.02	1.31	2.34	3.34
INCOME (\$'000)	1,476	1,430	1,982	3,412	4,888
<i>Ratio Multiplier</i>	1.00	0.97	1.34	2.31	3.31
VALUE-ADDED (\$'000)	2,342	2,597	3,751	6,348	8,690
<i>Ratio Multiplier</i>	1.00	1.11	1.60	2.71	3.71
EMPL. (No.)	40	23	37	60	100
<i>Ratio Multiplier</i>	1.00	0.59	0.93	1.52	2.52

Table A11.21: Impacts of management of Uluru-Kata Tjuta National Park WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	12,300	11,315	16,969	28,284	40,584
<i>Ratio Multiplier</i>	1.00	0.92	1.38	2.30	3.30
INCOME (\$'000)	3,020	3,430	4,398	7,827	10,847
<i>Ratio Multiplier</i>	1.00	1.14	1.46	2.59	3.59
VALUE-ADDED (\$'000)	6,298	5,172	8,325	13,497	19,795
<i>Ratio Multiplier</i>	1.00	0.82	1.32	2.14	3.14
EMPL. (No.)	44	57	82	139	183
<i>Ratio Multiplier</i>	1.00	1.31	1.86	3.16	4.16

Table A11.22: Impacts of visitors to Uluru-Kata Tjuta National Park WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	116,719	119,091	154,535	273,626	390,345
<i>Ratio Multiplier</i>	1.00	1.02	1.32	2.34	3.34
INCOME (\$'000)	30,006	28,727	40,048	68,775	98,782
<i>Ratio Multiplier</i>	1.00	0.96	1.33	2.29	3.29
VALUE-ADDED (\$'000)	47,730	51,911	75,810	127,721	175,451
<i>Ratio Multiplier</i>	1.00	1.09	1.59	2.68	3.68
EMPL. (No.)	801	471	744	1,215	2,016
<i>Ratio Multiplier</i>	1.00	0.59	0.93	1.52	2.52

Table A11.23: Impacts of management of Kakadu National Park WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	18,797	18,600	26,565	45,165	63,962
<i>Ratio Multiplier</i>	1.00	0.99	1.41	2.40	3.40
INCOME (\$'000)	4,708	5,389	6,884	12,273	16,981
<i>Ratio Multiplier</i>	1.00	1.14	1.46	2.61	3.61
VALUE-ADDED (\$'000)	9,201	8,310	13,032	21,342	30,543
<i>Ratio Multiplier</i>	1.00	0.90	1.42	2.32	3.32
EMPL. (No.)	69	89	128	216	285
<i>Ratio Multiplier</i>	1.00	1.28	1.85	3.14	4.14

Table A11.24: Impacts of visitors to Kakadu National Park WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	39,246	40,079	51,684	91,763	131,009
<i>Ratio Multiplier</i>	1.00	1.02	1.32	2.34	3.34
INCOME (\$'000)	10,011	9,632	13,394	23,026	33,037
<i>Ratio Multiplier</i>	1.00	0.96	1.34	2.30	3.30
VALUE-ADDED (\$'000)	15,725	17,495	25,354	42,850	58,575
<i>Ratio Multiplier</i>	1.00	1.11	1.61	2.72	3.72
EMPL. (No.)	264	158	249	407	671
<i>Ratio Multiplier</i>	1.00	0.60	0.94	1.54	2.54

Table A11.25: Impacts of management of the Royal Exhibition Building and Carlton Gardens on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,919	2,553	3,303	5,856	7,775
<i>Ratio Multiplier</i>	1.00	1.33	1.72	3.05	4.05
INCOME (\$'000)	633	622	856	1,478	2,112
<i>Ratio Multiplier</i>	1.00	0.98	1.35	2.33	3.33
VALUE-ADDED (\$'000)	638	1,095	1,621	2,715	3,354
<i>Ratio Multiplier</i>	1.00	1.71	2.54	4.25	5.25
EMPL. (No.)	18	11	16	27	45
<i>Ratio Multiplier</i>	1.00	0.62	0.88	1.51	2.51

Table A11.26: Impacts of visitors to Royal Exhibition Building and Carlton Gardens on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	389,370	402,356	524,119	926,475	1,315,845
<i>Ratio Multiplier</i>	1.00	1.03	1.35	2.38	3.38
INCOME (\$'000)	101,563	97,637	135,828	233,465	335,028
<i>Ratio Multiplier</i>	1.00	0.96	1.34	2.30	3.30
VALUE-ADDED (\$'000)	160,209	173,204	256,389	429,593	589,803
<i>Ratio Multiplier</i>	1.00	1.08	1.60	2.68	3.68
EMPL. (No.)	2,691	1,600	2,524	4,124	6,814
<i>Ratio Multiplier</i>	1.00	0.59	0.94	1.53	2.53

Table A11.27: Impacts of management of the Sydney Opera House on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	68,913	61,409	143,346	204,755	273,668
<i>Ratio Multiplier</i>	1.00	0.89	2.08	2.97	3.97
INCOME (\$'000)	36,509	17,972	37,149	55,121	91,630
<i>Ratio Multiplier</i>	1.00	0.49	1.02	1.51	2.51
VALUE-ADDED (\$'000)	37,231	27,874	70,321	98,195	135,426
<i>Ratio Multiplier</i>	1.00	0.75	1.89	2.64	3.64
EMPL. (No.)	654	294	690	984	1,638
<i>Ratio Multiplier</i>	1.00	0.45	1.06	1.50	2.50

Table A11.28: Impacts of visitors to Sydney Opera House WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	1,294,495	1,317,021	1,720,650	3,037,671	4,332,166
<i>Ratio Multiplier</i>	1.00	1.02	1.33	2.35	3.35
INCOME (\$'000)	335,561	318,399	445,914	764,314	1,099,875
<i>Ratio Multiplier</i>	1.00	0.95	1.33	2.28	3.28
VALUE-ADDED (\$'000)	528,086	575,365	844,098	1,419,463	1,947,549
<i>Ratio Multiplier</i>	1.00	1.09	1.60	2.69	3.69
EMPL. (No.)	8,748	5,214	8,285	13,499	22,246
<i>Ratio Multiplier</i>	1.00	0.60	0.95	1.54	2.54

Table A11.29: Impacts of management of the Macquarie Island WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	482	271	1,072	1,343	1,825
<i>Ratio Multiplier</i>	1.00	0.56	2.22	2.79	3.79
INCOME (\$'000)	339	68	278	346	685
<i>Ratio Multiplier</i>	1.00	0.20	0.82	1.02	2.02
VALUE-ADDED (\$'000)	343	115	526	641	984
<i>Ratio Multiplier</i>	1.00	0.33	1.53	1.87	2.87
EMPL. (No.)	5	1	5	6	11
<i>Ratio Multiplier</i>	1.00	0.22	1.03	1.25	2.25

Table A11.30: Impacts of visitors to Macquarie Island WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	510	523	669	1,192	1,702
<i>Ratio Multiplier</i>	1.00	1.03	1.31	2.34	3.34
INCOME (\$'000)	129	125	173	299	428
<i>Ratio Multiplier</i>	1.00	0.97	1.35	2.32	3.32
VALUE-ADDED (\$'000)	205	228	328	556	761
<i>Ratio Multiplier</i>	1.00	1.11	1.60	2.71	3.71
EMPL. (No.)	4	2	3	5	9
<i>Ratio Multiplier</i>	1.00	0.59	0.92	1.51	2.51

Table A11.31: Impacts of management of the Gondwana Rainforests of Australia WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	17,227	21,482	29,778	51,259	68,486
<i>Ratio Multiplier</i>	1.00	1.25	1.73	2.98	3.98
INCOME (\$'000)	6,373	4,944	7,717	12,661	19,034
<i>Ratio Multiplier</i>	1.00	0.78	1.21	1.99	2.99
VALUE-ADDED (\$'000)	6,742	8,831	14,608	23,439	30,181
<i>Ratio Multiplier</i>	1.00	1.31	2.17	3.48	4.48
EMPL. (No.)	154	80	143	223	377
<i>Ratio Multiplier</i>	1.00	0.52	0.93	1.45	2.45

Table A11.32: Impacts of visitors to Gondwana Rainforests of Australia WHA on the national economy

	Direct Effect	Production Induced	Consumption Induced	Total Flow-on	TOTAL EFFECT
OUTPUT (\$'000)	297,943	304,140	392,269	696,409	994,352
<i>Ratio Multiplier</i>	1.00	1.02	1.32	2.34	3.34
INCOME (\$'000)	76,012	73,077	101,658	174,735	250,747
<i>Ratio Multiplier</i>	1.00	0.96	1.34	2.30	3.30
VALUE-ADDED (\$'000)	118,855	132,860	192,435	325,295	444,150
<i>Ratio Multiplier</i>	1.00	1.12	1.62	2.74	3.74
EMPL. (No.)	1,989	1,198	1,889	3,086	5,076
<i>Ratio Multiplier</i>	1.00	0.60	0.95	1.55	2.55