Submission to the Productivity Commission Inquiry into the post 2005 assistance arrangements for the automotive manufacturing sector

A joint submission by

City of Marion
City of Mitcham
City of Onkaparinga

Prepared by

Centre for Labour Research
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in association with EconSearch Pty Ltd

This report has been prepared for the City of Marion, Mitcham and Onkaparinga by the University of Adelaide, Centre for Labour Research in association with EconSearch Pty. Ltd, National Economics and Professor John Quiggin, Department of Economics, Australian National University. The report was prepared by John Spoehr, Executive Director, Centre for Labour Research, Adelaide University – john.spoehr@adelaide.edu.au with the assistance of Matthew Ferris and Dr Juilan Morrison, EconSearch, Justin Nottage, GISCA and Professor John Quiggin, Australian National University.

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1. Executive Summary

The automotive industry in South Australia is a knowledge intensive industry characterised by applications of sophisticated computer based technologies that are underpinned by a highly skilled workforce. In the face of tariff reductions over the last 25 years the industry has undergone significant reform. It is now a major export industry in addition to catering for a substantial segment of the domestic market. With deep linkages into the local economy the industry has underpinned the growth of a dynamic network of component suppliers, many which have become successful exporters. When we look for evidence of the 'New Economy' we need look no further than the automotive industry as it has all the features that this term implies. The industry in South Australia is highly innovative, research and skill intensive. It provides rewarding high wage employment for thousands of Australians. For these reasons it is vital that the future of the industry be secured as an outcome of the Productivity Commission Inquiry into post 2005 assistance arrangements.

The Productivity Commission has been asked by the Federal Government to report on options for post 2005 assistance arrangements for the automotive manufacturing sector in Australia. This inquiry follows a similar inquiry undertaken in 1997. In response to this inquiry and the views of industry stakeholders, government and the wider community, the Federal Government decided to maintain automotive tariff rates at 15 per cent until 2005. The current inquiry will make recommendations on tariff rates and other assistance measures for operation post 2005.

The inquiry has particular relevance to the Cities of Marion, Mitcham and Onkaparinga as the automotive industry plays a very significant role in the Southern Adelaide region. This submission aims to bring to the attention of the Inquiry the social and economic contribution of the industry to the region in order to highlight the critical importance of ensuring that post 2005 assistance arrangements help to underpin automotive manufacturing in Southern Adelaide and South Australia for decades to come.

The need to take account of the regional and social impact of changes in assistance arrangements

Any changes to assistance arrangements for the automotive industry has the potential to significantly impact on the South Australian and Southern Adelaide economy and labour market. The Productivity Commission acknowledged this point in its report on the regional impact of microeconomic reform on output and employment. Analysing the impact of removal of the remaining 5 per cent general tariff, the Commission found that employment would decline in all regions of South Australia, with an average decline of 0.07 per cent. In the Productivity Commission's simulations, South Australia is the worst-affected state in Australia. Outer Adelaide and South-Eastern South Australia are two of the three worst affected regions.

Importance of the industry to South Australia

The automotive industry directly employs around 14,200 people in South Australia representing approximately 16 per cent of total manufacturing employment in the State. The average wage in the industry sector is around $44,000 or $7,000 above the State average. The turnover of the industry is around $5.3 billion or around one quarter of total manufacturing turnover. The value of exports in 2001 was around $5.3 billion which is around 17 per cent of total State exports. The value added attributed to the industry is around $1 billion which is around 14 per cent of total valued added in the State. The industry represents around 2.4 per cent of Gross State Product.

The Southern Adelaide regional economy is dominated by the automotive sector with Mitsubishi the major automotive industry employer. There are around 3320 people employed at Mitsubishi in the Lonsdale and Tonsley Park manufacturing plants. These employees are overwhelmingly concentrated in Southern Adelaide, particularly in the Cities of Marion, Mitcham and Onkaparinga and Holdfast Bay.

Mitsubishi is a source of considerable demand for goods and services purchased in Australia and South Australia. It purchased over $1 billion worth of goods and services in Australia and around $416 million in South Australia in 2001 (excluding wages and salaries).

The need to take account of hidden social and economic costs associated with reforms

There are significant hidden costs associated with changes is assistance regimes. Few economic models including the one utilised is this report take adequate account of these. Important hidden costs include the social, economic and health costs to the community of higher unemployment (see Junankar, P.N. and Kapscinski, C.A, 1992). We recommend that the Commission take account of the following potential impacts that may flow from any reforms that precipitate a decline in output and employment in the automotive industry.

- Reduced demand for goods and services flowing from a decline in average weekly incomes
- The impact on the States skills and revenue base of significant out-migration to other regions in search of employment
- Costs of retraining and adjustment
- Increase in consumer debt flowing from reduced incomes
- Increased family stress levels
- Increased domestic violence and child abuse
- Increased demand for Federal and State income support
- Increased demand for low cost housing and housing assistance
- Social and health impact of increased drug and alcohol abuse

It is crucial that the Commission address these matters when advising the Federal Government on options for post 2005 automotive industry assistance.

Three Scenarios Indicating the Dependence of the Region on the Automotive Industry

Through input-output modelling and close investigation of the automotive manufacturing sector this report provides further evidence of the critical contribution that the sector plays in South Australia and Southern Adelaide.

The modelling undertaken for this report indicates South Australia and Southern Adelaide is highly dependent upon the automotive industry. The implication of this is that a significant reduction in the scale of vehicle industry operations in Southern Adelaide would have a profoundly negative impact on output and employment throughout the region and the State as a whole. This in turn would place great social and economic stress on the communities most reliant upon the industry for their livelihoods.

For illustrative purposes three scenarios including a 25, 75 and 100 per cent reduction in the scale of Mitsubishi's operations were chosen to indicate the significance of the automotive industry to the State and Southern Adelaide. The results do not take account of potential offsetting positive impacts flowing from reductions in the scale of the Mitsubishi's operations. This includes income transfers from State and Federal Governments associated with re-training, unemployment and general adjustment assistance thay may flow to South Australia and the possibility automotive industry output in Northern Adelaide may expand in the face of contraction in Southern Adelaide.

Scenario 1 – 25 per cent reduction in the scale of Mitsubishi's operations

It was estimated that a 25 per cent reduction in the scale of Mitsubishi's operations in SA would result in the loss of approximately 850 full-time equivalent (fte) jobs at Mitsubishi directly and almost 4,800 jobs would be lost in other sectors of the state economy. Flow-on employment effects would be greatest in the property and business services (990 fte jobs), other manufacturing (914), trade (859) and other motor vehicles and parts manufacturing sectors (499).

This scenario would also result in the loss of approximately $84 million in direct value added from the state economy in 2001 (from turnover valued at $673 million) and a reduction in flow-on value added in other sectors of the state economy of approximately $390 million (in 2001 dollars).

A 25 per cent reduction in the scale of Mitsubishi's operations would increase unemployment in the region by around 4,100 resulting in a rise in the unemployment rate from 6.1 per cent to 8.6 per cent. For the State as whole unemployment would increase by around 5,600 resulting in a rise in the unemployment rate from 6.9 per cent to 7.6 per cent. The area most effected in Southern Adelaide by this scenario would be the City of Onkaparinga where unemployment would increase by around 2,300 resulting in a rise in the unemployment rate from 7.1 per cent to 10.8 per cent.

Scenario 2 – 75 per cent reduction in the scale of Mitsubishi's operations

It was estimated that a 75 per cent reduction in the scale of Mitsubishi's operations in SA would result in the loss of approximately 2,570 full-time equivalent (fte) jobs at Mitsubishi directly and over 14,370 jobs would be lost in other sectors of the state economy. Flow-on employment effects would be greatest in the property and business services (2,971 fte jobs), other manufacturing (2,742), trade (2,580) and other motor vehicles and parts manufacturing sectors (1,499).

This scenario would also result in the loss of approximately $250 million in direct value added from the state economy in 2001 (from turnover valued at $2,021 million) and a reduction in flow-on value added in other sectors of the state economy of approximately $1,170 million (in 2001 dollars).

A 75 per cent reduction in the scale of Mitsubishi's operations would increase unemployment in the region by around 12,200 more than doubling the unemployment rate from 6.1 per cent to 13.7 per cent. For the State as whole unemployment would increase by around 17,000 resulting in a rise in the unemployment rate from 6.9 per cent to 9.2 per cent. Unemployment rates in many areas within the region would double under this scenario. In the City of Onkaparinga unemployment would increase by around 8,200 resulting in a rise in the unemployment rate from 7.1 per cent to 18.1 per cent. In the City of Marion unemployment would increase by around 2,300 with the unemployment rate rising from 6.2 per cent to 13.2 per cent. In the City of Mitcham

unemployment would increase by around 900 with the unemployment rate rising from 3.7 to 6.7 per cent. Unemployment would rise by around 450 in the City of Holdfast Bay resulting in the unemployment rate increasing from 5.6 per cent to 8.4 per cent.

Scenario 3 – 100 per cent reduction in the scale of Mitsubishi's operations

It was estimated that a 100 per cent reduction in the scale of Mitsubishi's operations in SA would result in the loss of approximately 3,424 full-time equivalent (fte) jobs at Mitsubishi directly and over 19,160 jobs would be lost in other sectors of the state economy. Flow-on employment effects would be greatest in the property and business services (3,961 fte jobs), other manufacturing (3,656), trade (3,439) and other motor vehicles and parts manufacturing sectors (1,999).

This scenario would also result in the loss of approximately $340 million in direct value added from the state economy in 2001 (from turnover valued at $2,694 million) and a reduction in flow-on value added in other sectors of the state economy of approximately $1,560 million (in 2001 dollars).

A 100 per cent reduction in the scale of Mitsubishi's operations would increase unemployment in the region by around 16,300 resulting in a dramatic increase in the unemployment rate from 6.1 per cent to 16.3 per cent. For the State as whole unemployment would increase by around 22,600 with the unemployment rate rising from 6.9 per cent to 9.9 per cent. Unemployment in particular areas of the Southern Adelaide region would rise dramatically. In the City of Onkaparinga unemployment would increase by around 11,000 resulting in a rise in the unemployment rate from 7.1 per cent to 21.8 per cent. In the City of Marion unemployment would increase by around 3,500 with the unemployment rate rising from 6.2 per cent to 15.5 per cent. In the City of Mitcham unemployment would increase by around 1,200 with the unemployment rate rising from 3.7 to 7.6 per cent. Unemployment would rise by around 600 in the City of Holdfast Bay resulting in the unemployment rate increasing from 5.6 per cent to 9.3 per cent.

Three Scenarios estimating the impact on unemployment of reductions in the scale of the automotive manufacturing industry in Southern Adelaide

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployed (No.)			Unemployment Rate (%)		
	Base*	Outcome	Change	Base	Outcome	Change
25						
Holdfast Bay	879	1,029	-150	5.6	6.5	0.9
Onkaparinga	5,335	8,072	-2,737	7.1	10.8	3.7
Marion	2,362	3,240	-878	6.2	8.5	2.3
Mitcham	1,182	1,490	-308	3.7	4.7	1
Total Region	9,758	13,832	-4,074	6.1	8.6	2.5
South Australia	50,700	56,345	-5,645	6.9	7.6	0.7
75						0
Holdfast Bay	879	1,329	-450	5.6	8.4	2.8
Onkaparinga	5,335	13,552	-8,217	7.1	18.1	11
Marion	2,362	4,999	-2,637	6.2	13.2	7

Mitcham	1,182	2,107	-925	3.7	6.7	3
Total Region	9,758	21,986	-12,228	6.1	13.7	7.6
South Australia	50,700	67,643	-16,943	6.9	9.2	2.3
100						0
Holdfast Bay	879	1,479	-600	5.6	9.3	3.7
Onkaparinga	5,335	16,289	-10,954	7.1	21.8	14.7
Marion	2,362	5,877	-3,515	6.2	15.5	9.3
Mitcham	1,182	2,415	-1,233	3.7	7.6	3.9
Total Region	9,758	26,060	-16,302	6.1	16.3	11.2
South Australia	50,700	73,287	-22,587	6.9	9.9	3

Source: EconSearch analysis and DEWR (2002).
*base rates for unemployment and numbers unemployed are December 2001

There can be little doubt from the evidence presented here that the automotive industry plays a central role in the South Australian and Southern Adelaide economies and communities. The three scenarios presented confirm this. While reductions in the scale of the automotive industry` are not likely to produce as dramatic outcomes for South Australia and the Region as the scenarios might suggest, it is not unreasonable to believe that great social and economic hardship would be experienced. The direct and indirect social and economic costs of this are likely to be very significant, requiring a very substantial package of adjustment assistance from the Federal Government and the industry. The closure of BHP in Newcastle suggests that these costs are likely to be in the order of hundreds of millions of dollars. In weighing up the net benefits to the nation of reform to assistance regimes the full financial and social costs associated with possible scaling down of the industry in South Australia must be identified and be subject to public scrutiny.

In this context the Cities of Marion, Mitcham and Onkaparinga make the following recommendations to the Productivity Commission.

Recommendation 1

That current scheduled levels of assistance to the automotive manufacturing industry be maintained for at least five years from 2005, when tariffs on passenger motor vehicles (PMVs) and components fall to 10%. No changes to tariff rates should be made until real gains are made in access to markets throughout the world and particularly in Asia.

We recommend the retention of tariffs on light commercial vehicles (LCVs) and four wheel drives (4WDs) and components for these vehicles at the current level of 5% after 2005 and at least until 2010.

Recommendation 2

We recommend that an assistance scheme like the Automotive Competitiveness and Investment Scheme (ACIS) which promotes investment, R&D and production within the industry be maintained post 2005 for at least five years.

Recommendation 3

We recommend that the Commonwealth Government develop strategies to deal with structural adjustment issues should the automotive industry suffer a significant and sudden contraction in output and employment. Further, any such strategies should be designed to provide a focus on those individual regions in which the industry is concentrated.

Structural assistance programs should aim to:

- **assist workers made redundant by structural change within the industry, including through labour, training and re-training programs; and**
- **assist regions negatively impacted by industry adjustment to find new economically sustainable industries to maintain overall levels of employment and economic wellbeing.**

Recommendation 4

We recommend that in reviewing options for post 2005 assistance the Productivity Commission report on the regional impact of its recommendations taking account of the following factors:

- **impact on average weekly incomes;**
- **impact on local demand for goods and services;**
- **impact on the States skills and revenue base;**
- **impact on population levels;**
- **likely costs of retraining and adjustment;**
- **impact on consumer debt levels**
- **impact on family dynamics and individual social and health related wellbeing;**
- **Increased domestic violence and child abuse;**
- **Impact on demand for Federal income support.**

Recommendation 5

That the Productivity Commission consult with the Cities of Marion, Mitcham and Onkaparinga regarding proposals for change to automotive assistance arrangements in order to identify the potential regional social and economic impacts of any proposed reforms.

2. Introduction

The automotive industry in South Australia is a knowledge intensive industry characterised by applications of sophisticated computer based technologies that are underpinned by a highly skilled workforce. In the face of tariff reductions over the last 25 years the industry has undergone significant reform. It is now a major export industry in addition to catering for a substantial segment of the domestic market. With deep linkages into the local economy the industry has underpinned the growth of a dynamic network of component suppliers, many which have become successful exporters. When we look for evidence of the 'New Economy' we need look no further than the automotive industry as it has all the features that this term implies. The industry in South Australia is highly innovative, research and skill intensive. It provides rewarding high wage employment for thousands of Australians. For these reasons it is vital that the future of the industry be secured as an outcome of the Productivity Commission Inquiry into post 2005 assistance arrangements.

The Productivity Commission has been asked by the Federal Government to report on options for post 2005 assistance arrangements for the automotive manufacturing sector in Australia. This inquiry follows a similar inquiry undertaken in 1997. In response to this inquiry and the views of industry stakeholders, government and the wider community the Federal Government decided to maintain automotive tariff rates at 15 per cent until 2005. The current inquiry will make recommendations on tariff rates and other assistance measures for operation post 2005.

The inquiry has particular relevance to the Cities of Marion, Mitcham and Onkaparinga as the automotive industry plays a very significant role in the Southern Adelaide region. This submission aims to bring to the attention of the Inquiry the social and economic contribution of the industry to the region in order to highlight the critical importance of ensuring that post 2005 assistance arrangements help to underpin automotive manufacturing in Southern Adelaide and South Australia for decades to come.

The Commission has been asked to:

- Evaluate the outcomes of the Automotive Competitiveness and Investment Scheme and the reform of automotive tariffs;
- Assess the interdependence between vehicle assemblers and component producers;
- Identify the strengths, weaknesses and opportunities for the sector including major impediments to its long term viability;
- Examine the impacts of changes in road safety and environmental requirements; and
- Report on progress in trade liberalisation of the automotive sector in existing and prospective export markets.

In keeping with the requirements of its enabling legislation, the Commission will assess the assistance arrangements for the automotive industry taking into account the effect on other industries and the wider community. This submission addresses these particular questions providing an overview of the significance of the automotive sector to the Southern Adelaide and South Australian communities.

Specifically the submission:

1. Identifies the contribution of the automotive sector in generating wealth and employment in Southern Adelaide;

2. Assesses the potential impact on investment and employment in Southern Adelaide flowing from any significant reduction in the size of the industry in the region;
3. Comments on the potential social and community costs resulting from employment losses;
4. Comments on the linkages between the automotive sector and activities including vocational education and training and research and development;
5. Identify potential industry "adjustment" issues in the context of future decisions regarding assistance measures.

The regional impact of microeconomic reforms

Any changes to assistance arrangements for the automotive industry has the potential to significantly impact on the South Australian and Southern Adelaide economy and labour market. The Productivity Commission acknowledged this point in its report on the regional impact of microeconomic reform on output and employment.

Over the period since 1973, and particularly since the mid-1980s, rates of tariff protection for manufacturing industry have been reduced from average levels around 30 per cent to a general rate of 5 per cent, with somewhat higher rates for the motor vehicle and textile, clothing and footwear industries. It is generally agreed that this reform has produced net benefits for Australia in the long run, although estimates of the magnitude of these benefits differ widely.

Analysing the impact of removal of the remaining 5 per cent general tariff, the Commission found that employment would decline in all regions of South Australia, with an average decline of 0.07 per cent. In the Productivity Commission's simulations, South Australia is the worst-affected state in Australia (Table 2.1). Outer Adelaide and South-Eastern South Australia are two of the three worst affected regions.

Table 2.1: Estimated long-run output and employment effects of removal of the 5 per cent general tariff

STATE/REGION	OUTPUT	EMPLOYMENT
New South Wales	0.07	0.00
Queensland	0.11	0.02
Victoria	0.02	-0.05
Tasmania	0.07	-0.03
Western Australia	0.21	0.10
ACT	0.06	0.02
NT	0.22	0.13
South Australia	0.02	-0.07
SA Regions		
Adelaide	0.03	-0.06
Outer Adelaide	-0.02	-0.11
Yorke and Lower North	-0.01	-0.08
Murray Lands	0.00	-0.05
South East	-0.11	-0.31
Eyre	0.01	-0.03
Northern	0.12	-0.04

Source: Productivity Commission

Although the Commission's analysis is undoubtedly accurate in qualitative terms, the modeling incorporates a number of assumptions that generate unrealistically favorable outcomes as a result of the tariff reduction. In particular, the Commission assumes that increases in import competition will automatically generate improvements in

productivity. This assumption lacks a firm theoretical or empirical basis, and is clearly not applicable when plants close altogether as a result of tariff changes. The Commission's estimate of an increase in state output is particularly sensitive to this assumption. A more realistic analysis implies that South Australian GSP would decline significantly as the results of the modeling presented in the report indicate.

Furthermore, the estimates published by the Productivity Commission are those which are projected in long-run equilibrium, after an adjustment period of five to ten years. Adverse employment effects in the short and medium term would be substantially greater, particularly in the absence of adjustment policies.

In efficiency terms, the benefits of any strategy of reform are diminished if significant numbers of those who lose employment respond by withdrawing from the labour force. The general theory of adjustment put forward by advocates of tariff reform is that workers will move from contracting regions and industries to those that expand as a result of lower tariff burdens. In South Australia's case, however, employment is projected to decline in all regions, so that the only mechanisms for aggregate adjustment are withdrawal from the labour force and interstate migration. Both are socially costly and can easily offset the modest benefits of tariff reform.

The analysis of the regional impact of changes in the scale of automotive manufacturing undertaken for this report indicates a cautionary approach to any further reductions in tariffs for the industry where scaling down of the industry in South Australia is a likely outcome of tariff reductions or other changes to automotive assistance arrangements. The full implications of proposed reforms must be identified before any informed decision can be made about post 2005 assistance arrangements. This report aims to assist the Productivity Commission in making such deliberations by assessing the significance of the industry to the Southern Adelaide and South Australian economies and communities. We are aware that other regions like Geelong are likely to share similar concerns given their dependence upon the automotive industry.

It is vital that any deliberations regarding future assistance to the industry take account of assistance regimes in competitor nations. In this respect the arguments prevailing during the 1997 Inquiry on comparative assistance regimes remain relevant today. It would not be wise for Australia to unilaterally reduce assistance to the industry in an international environment where competitor nations maintain significantly higher levels of industry protection. The Commission should undertake a detailed international comparative study of assistance regimes available to the industry and assess the likely impact of proposed reforms in this real world context.

There is little doubt that the Federal and South Australian governments regard the automotive industry as vital to the future prosperity of South Australia and Australia. This was confirmed in April 2002 when the Governments announced that they will provide an $85 million assistance package to help secure a $1 billion investment by Mitsubishi in new model development and production. Importantly this announcement includes a commitment by Mitsubishi to the establishment of an International Research and Development Centre to support new product development and innovation. In addition it appears that Mitsubishi will be required to meet a number of economic and employment targets in exchange for Government assistance. Clawback provisions have been incorporated into the arrangement should there be a failure to meet key targets and commitments.

The commitment by Mitsubishi to two new models from 2005 is very welcome in the State and in Southern Adelaide. It is now vital that the future of the industry be secured

for the next decade by providing a climate of investment certainty for automotive manufacturers. This inevitably will involve relative tariff stability. Any reduction below 10 per cent post 2005 is unlikely to provide this given Australia's competitive position within the global automotive industry.

The following sections provide a detailed outline of the significance of the automotive industry to South Australia and Southern Adelaide, drawing particularly from the results of input-output analysis undertaken specifically for this submission.

3. Overview of the significance of the industry to the State and the region

The automotive industry plays a critical role in the South Australian economy and has special significance to the Southern and Northern Adelaide regions given the concentration of the industry in these areas. The presence of Mitsubishi and Holden in Adelaide have given rise to the development of a significant automotive industry cluster involving around 40 local components producers and tool makers. While a number of these suppliers export components to Victorian automotive manufacturers they rely heavily on the presence of the two major local manufacturers.

The automotive industry in Australia is highly interdependent. The current mosaic of manufacturers and components suppliers creates important economies of scale. The loss of a major player in the industry is likely to have negative consequences for the industry as a whole. For this reason it is vital that the outcome of the current inquiry be the development of a strategy to help underpin the future of the industry nationally as well as in South Australia.

The following snapshot of the automotive industry in South Australia clearly illustrates the significance of the industry to the State. The automotive industry directly employs around 14,200 people in South Australia representing approximately 16 per cent of total manufacturing employment in the State. The average wage in the industry sector is around $44,000 or $7,000 above the State average. The turnover of the industry in around $5.3 billion or around one quarter of total manufacturing turnover. The value of exports in 2001 was around $5.3 billion which is around 17 per cent of total State exports. The value added attributed to the industry is around $1 billion or which is around 14 per cent of total valued added in the State. The industry represents around 2.4 per cent of Gross State Product.

Auto Industry Employment	14,200
% of Manufacturing Employment	16.0
Average wage of sector	$44,000
Industry ouput	$5.3 billion
Exports	$1.5 billion
Industry value added	$1 billion
Contribution to Gross State Product	2.4%

Source: National Economics.

Purchases of good and services

Mitsubishi is a source of considerable demand for goods and services purchased in Australia and South Australia. Table 1 indicates that it purchased over $1billion worth of goods and services in Australia and around $416 million in South Australia in 2001 (excluding wages and salaries). These purchases generate significant employment in the region.

Table 3.1 Mitsubishi Purchases, $m, 2001

Location	Carriers	Non Production	Other	Production	Raw Material	Total
O/SEAS		0.07	0.01			0.08
NSW	5.75	10.15	60.49	21.18	0.93	98.49
VIC	21.24	26.56	11.32	324.86	6.97	390.94
QLD	0.00	2.36	15.89	0.36	3.35	21.95
SA	17.99	91.42	157.63	306.14	28.61	601.79
WA		0.77	0.35			1.12
TAS		1.22		1.33		2.55
TOTAL	44.99	132.54	245.68	653.85	39.85	1,116.91

Source: Mitsubishi Pty Ltd

Employment

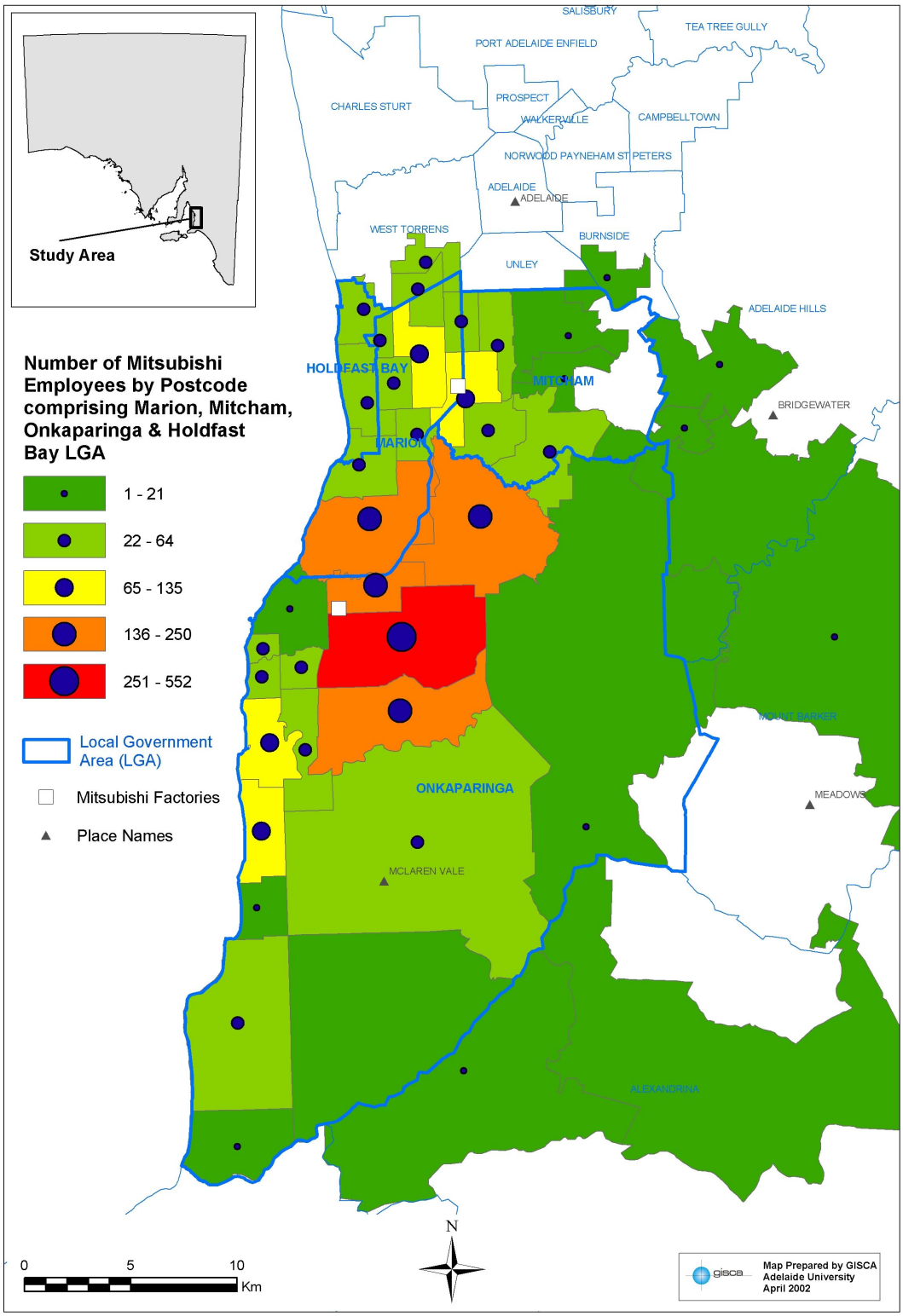
The Southern Adelaide regional economy is dominated by the automotive sector with Mitsubishi the major automotive industry employer. There are around 3320 people employed at Mitsubishi in the Lonsdale and Tonsley Park manufacturing plants. These employees are overwhelmingly concentrated in Southern Adelaide, particularly in the Cities of Marion, Mitcham and Onkaparinga and Holdfast Bay. (See Table 3.2 and Figures 3.1-3.2) Around 72 per cent of all employees live in these areas with half living in the City of Onkaparinga. Around 16% live in the City of Marion and 5.6 per cent in the City of Mitcham. In addition a significant proportion of Mitsubishi employees are concentrated in central and northern Adelaide and a smaller proportion in the Adelaide Hills.

Table 3.2 Mitsubishi Employment by Local Government Area and State, April, 2002

Council Area	No. of Employees	% of Total
Onkaparinga	**1661**	**50**
SA Other	772	23.3
Marion	**533**	**16**
Mitcham	**187**	**5.6**
Holdfast Bay	91	2.7
NSW	51	1.5
VIC	12	0.4
QLD	8	0.2
WA	6	0.2

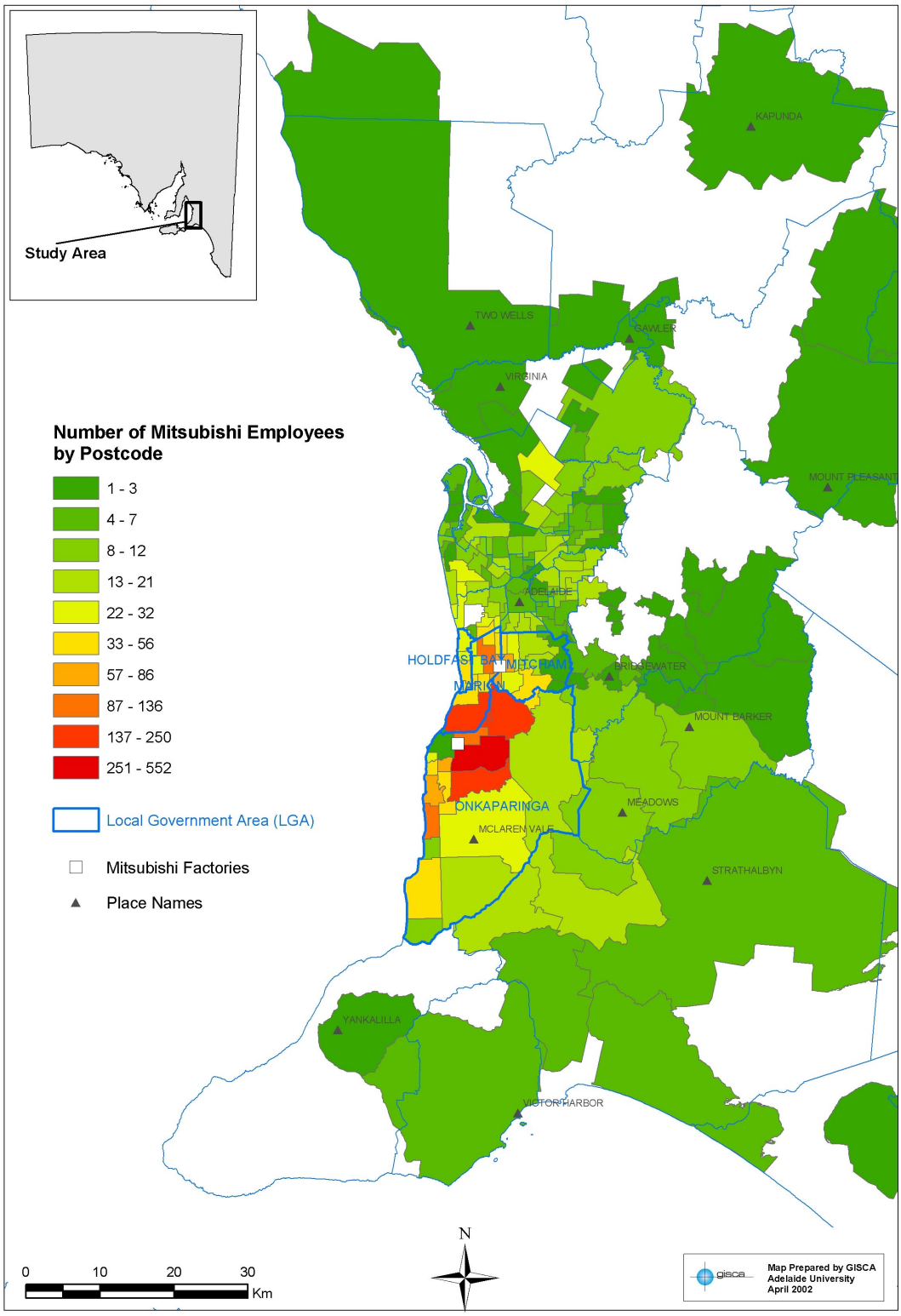
Source: Mitsubishi Pty Ltd

Figure 3.1 Mitsubishi Employment by Local Government Area, Southern Adelaide, April, 2002



Source: Mitsubishi Pty Ltd.

Figure 3.2 Mitsubishi Employment by Local Government Area, Metro Adelaide, April, 2002



Source: Mitsubishi Pty Ltd.

Training

The automotive industry is characterised by the widespread use of computer and information technologies. This underpins the need for a substantial commitment to training in the industry. This commitment is evident at Mitsubishi where around 700 or 20% of all employees undertook training programs in 2001 (see table 3.3). Investment in knowledge and skills development is essential for the future of the industry. A significant level of investment is currently being made by Mitsubishi. Table 3.4 indicates that Mitsubishi spent around $3.5 million on training in 2001.

Table 3.3 Type of Training and Persons Trained at Mitsubishi, 2001

Production (Vehicle Industry Certificate)	500
Leadership Certificate	140
Graduate Diploma or Certificate	55
Total	695

Source: Mitsubishi Pty Ltd

Table 3.4 Value of Training provided by Mitsubishi, $m per annum, 2001

Internal	3.21
External	0.30
Total	3.51

Source: Mitsubishi Pty Ltd

In addition to providing training for current employees Mitsubishi has invested in a program designed to support manufacturing skills development through Manufacturing Learning Centres which provided training for around 200 students.

4. Modelling the regional impact of changes in the scale of the industry

The modelling undertaken for this report indicates that any significant reduction in the scale of vehicle industry operations in Southern Adelaide would have a profoundly negative impact on output and employment throughout the region and the State as a whole. Three scenarios including a 25, 75 and 100 per cent reduction in the scale of Mitsubishi's operations were modelled. It should be noted that these scenarios have been chosen to indicate the significance of the industry to the Region and the State. The results do not take account of potential offsetting positive impacts flowing from reductions in the scale of the Mitsubishi's operations. This includes income transfers from State and Federal Governments associated with re-training, unemployment and general adjustment assistance that may flow to South Australia if there were a significant reduction in the scale of the automotive industry in the State. These financial transfers could also be regarded as costs to the community.

There is a range of significant hidden costs associated with reductions in the size of the automotive industry. Few economic models including the one utilised is this report take adequate account of these. These include the social, economic and health costs to the community of higher unemployment (see Junankar, P.N. and Kapscinski, C.A, 1992). While it is not possible for us to detail all the likely costs flowing from such an outcome we recommend that the Commission take account of the following potential impacts flowing from an increase in unemployment associated with jobs losses in the automotive industry.

- Reduced demand for goods and services flowing from a decline in average weekly incomes
- The impact on the States skills and revenue base of significant out-migration to other regions in search of employment
- Costs of retraining and adjustment
- Increase in consumer debt flowing from reduced incomes
- Increased family stress levels
- Increased domestic violence and child abuse
- Increased demand for Federal and State income support
- Increased demand for low cost housing and housing assistance
- Social and health impact of increased drug and alcohol abuse

It is crucial that the Commission address these matters when advising the Federal Government on options for post 2005 automotive industry assistance.

This section provides estimates of the likely economic impact on the South Australian economy of a reduction in the scale of the automotive manufacturing sector in Southern Adelaide. Three scenarios were analysed:

- a 25 per cent reduction in the scale of Mitsubishi's operations in SA;
- a 75 per cent reduction in the scale of Mitsubishi's operations in SA; and
- a complete cessation of Mitsubishi's operations in SA.

Estimates were also provided of the likely impact of these scenarios on the unemployment rate in the local government areas in which the majority of Mitsubishi's South Australian workforce resides, namely, the cities of Onkaparinga, Marion, Mitcham and Holdfast Bay.

Economic impacts were measured in terms of turnover, value added and employment[1] and were provided in 2001 dollars.

The analytical method employed in this study for measurement of economic impacts was input-output analysis. Input-output analysis provides a standard approach for the estimation of the economic impact of a particular activity. The input-output model is used to calculate industry multipliers that can then be applied to various scenarios. EconSearch has developed an input-output model for the South Australian economy (EconSearch 2001).

While input-output analysis has a number of limitations, it is widely used in economic impact analysis and is the only practical method for measuring economic impacts at the regional or state level[2].

4.1 The Turnover, Value Added and Employment Impacts on the South Australian Economy - modelling changes in the scale of the Southern Adelaide Automobile Industry

Scenario 1 – 25 Per cent Reduction in the Scale of Operations

The total turnover, value added and employment impacts on the South Australian economy of a 25 per cent reduction in the scale of Mitsubishi's South Australian operations are outlined in Table 4.1.

Table 4.1 The total turnover, value-added and employment impacts on the SA economy of a 25 per cent reduction in the scale of Mitsubishi's SA operations, 2001

	Turnover [a]	Value Added [b]	Employment [c]
	$m	$m	No. of jobs
Mitsubishi - direct	-673	-84	-856
Flow-on effects:			
Other motor vehicles and parts manufacturing	-141	-32	-499
Other manufacturing	-231	-68	-914
Property and business services	-177	-80	-990
Trade	-87	-41	-859
Other flow-ons	-277	-168	-1,527
Total	**-1,587**	**-474**	**-5,645**

Note: Totals may not sum due to rounding errors.

[a] In 2001 dollars. Note that turnover (output) impacts may include double counting.

[b] In 2001 dollars. Value added is calculated as the value of output less the cost of goods and services (including imports) used in producing the output. Value added is consistent with standard measures of economic activity, such as gross domestic, state or regional product and it provides an assessment of the net contribution to regional economic growth of a particular enterprise or activity.

[1] For an outline of input-output terminology refer to Appendix 1.

[2] For an outline of input-output methodology refer to Appendix 2.

[c] Number of full-time equivalent jobs.

Source: EconSearch analysis.

It was estimated that a 25 per cent reduction in the scale of Mitsubishi's operations in SA would result in the loss of approximately 850 full-time equivalent (fte) jobs at Mitsubishi directly and almost 4,800 jobs would be lost in other sectors of the state economy. Flow-on employment effects would be greatest in the property and business services (990 fte jobs), other manufacturing (914), trade (859) and other motor vehicles and parts manufacturing sectors (499).

This scenario would also result in the loss of approximately $84 million in direct value added from the state economy in 2001 (from turnover valued at $673 million) and a reduction in flow-on value added in other sectors of the state economy of approximately $390 million (in 2001 dollars).

The total turnover, value added and employment impacts on the South Australian economy of a 75 per cent reduction in the scale of Mitsubishi's South Australian operations are outlined in Table 4.2.

Table 4.2 The total turnover, value-added and employment impacts on the SA economy of a 75 per cent reduction in the scale of Mitsubishi's SA operations, 2001

	Turnover [a]	Value Added [b]	Employment [c]
	$m	$m	No. of jobs
Mitsubishi - direct	-2,021	-253	-2,568
Flow-on effects:			
Other motor vehicles and parts manufacturing	-422	-97	-1,499
Other manufacturing	-694	-205	-2,742
Property and business services	-532	-240	-2,971
Trade	-262	-124	-2,580
Other flow-ons	-832	-504	-4,582
Total	**-4,763**	**-1,424**	**-16,943**

Note: Totals may not sum due to rounding errors.

[a] In 2001 dollars. Note that turnover (output) impacts may include double counting.

[b] In 2001 dollars. Value added is calculated as the value of output less the cost of goods and services (including imports) used in producing the output. Value added is consistent with standard measures of economic activity, such as gross domestic, state or regional product and it provides an assessment of the net contribution to regional economic growth of a particular enterprise or activity.

[c] Number of full-time equivalent jobs.

Source: EconSearch analysis.

Scenario 2 – 75 Per cent Reduction in the Scale of Operations

It was estimated that a 75 per cent reduction in the scale of Mitsubishi's operations in SA would result in the loss of approximately 2,570 full-time equivalent (fte) jobs at Mitsubishi directly and over 14,370 jobs would be lost in other sectors of the state economy. Flow-on employment effects would be greatest in the property and business services (2,971 fte jobs), other manufacturing (2,742), trade (2,580) and other motor vehicles and parts manufacturing sectors (1,499).

This scenario would also result in the loss of approximately $250 million in direct value added from the state economy in 2001 (from turnover valued at $2,021 million) and a reduction in flow-on value added in other sectors of the state economy of approximately $1,170 million (in 2001 dollars).

Scenario 3 – 100 Per cent Reduction in the Scale of Operations

The total turnover, value added and employment impacts on the South Australian economy of a 100 per cent reduction in the scale of Mitsubishi's South Australian operations are outlined in Table 4.3.

Table 4.3 The total turnover, value-added and employment impacts on the SA economy of a 100 per cent reduction in the scale of Mitsubishi's SA operations, 2001

	Turnover [a]	Value Added [b]	Employment [c]
	$m	$m	No. of jobs
Mitsubishi - direct	-2,694	-337	-3,424
Flow-on effects:			
Other motor vehicles and parts manufacturing	-563	-130	-1,999
Other manufacturing	-925	-274	-3,656
Property and business services	-709	-320	-3,961
Trade	-349	-165	-3,439
Other flow-ons	-1,109	-672	-6,109
Total	**-6,350**	**-1,898**	**-22,587**

Note: Totals may not sum due to rounding errors.

[a] In 2001 dollars. Note that turnover (output) impacts may include double counting.

[b] In 2001 dollars. Value added is calculated as the value of output less the cost of goods and services (including imports) used in producing the output. Value added is consistent with standard measures of economic activity, such as gross domestic, state or regional product and it provides an assessment of the net contribution to regional economic growth of a particular enterprise or activity.

[c] Number of full-time equivalent jobs.

Source: EconSearch analysis.

It was estimated that a 100 per cent reduction in the scale of Mitsubishi's operations in SA would result in the loss of approximately 3,424 full-time equivalent (fte) jobs at Mitsubishi directly and over 19,160 jobs would be lost in other sectors of the state economy. Flow-on employment effects would be greatest in the property and business services (3,961 fte jobs), other manufacturing (3,656), trade (3,439) and other motor vehicles and parts manufacturing sectors (1,999).

This scenario would also result in the loss of approximately $340 million in direct value added from the state economy in 2001 (from turnover valued at $2,694 million) and a reduction in flow-on value added in other sectors of the state economy of approximately $1,560 million (in 2001 dollars).

5. The impact on employment and unemployment of changes in the scale of the automotive industry

This section provides an overview of the impact on employment and unemployment of changes in the scale of the automotive industry in Southern Adelaide. The likely impact on employment and unemployment of a 25, 75 and 100 per cent reduction in the scale of Mitsubishi's operations is detailed. Before presenting the results of this modeling a short overview of the state of the South Australian and Southern Adelaide labour market is provided as a context to the three scenarios presented.

While official unemployment rates have declined over the last few years in South Australia, a falling labour force participation rate masks high levels of hidden unemployment. Official estimates of unemployment in the study area of Southern Adelaide range from 3.7 per cent in the City of Mitcham to 7.1 per cent in the City of Onkaparinga. Unemployment rates very considerably within each area with the highest rates recorded in Noarlunga (8.4%) and Willunga (9.7%). The real rates of unemployment in the region are likely to be significantly higher given the low labour force participation rates prevailing in Adelaide. The labour force participation rate for the Adelaide region was around 60.2 per cent in December 2001 compared to 63.8% for Australia (DEWR Small Area Labour Markets). An analysis of the divergence between State and National labour force participation rates indicates that if hidden unemployment is taken into account the South Australian unemployment rate was as high as 9.3 per cent compared to 6.9 per cent for December 2001 (Spoehr, J. , 2002, p 1).

Table 5.1 Labour force and unemployment estimates in the Cities of Onkaparinga, Marion, Mitcham and Holdfast Bay and SA

	Labour Force	Unemployment	Unemployment rate
Holdfast Bay	15,823	879	5.6%
Onkaparinga	74,739	5,335	7.1%
Marion	37,917	2,362	6.2%
Mitcham	31,675	1,182	3.7%
Total in Region	160,154	9,758	6.1%
Total SA	737,000	50,700	6.9%

Over 70 per cent of Mitsubishi's South Australian workforce currently resides in the southern suburbs of Adelaide, namely the cities of Onkaparinga (48 per cent), Marion (15 per cent), Mitcham (5 per cent) and Holdfast Bay (3 per cent). The total labour force in this aggregated region was approximately 160,150 in December 2001. Approximately 9,760 people were unemployed at this time, an unemployment rate of 6.1 per cent (DEWR 2002).

The modeled impact of a reduction in the scale of Mitsubishi's operations on unemployment and unemployment rate for the region, the component local government areas and the state is summarized in Table 5.2. Additional detail is provided in Tables 5.3 to 5.8. It was assumed, for the purposes of this analysis, that the flow-on employment impacts would be distributed between the local government

areas of Onkaparinga, Marion, Mitcham and Holdfast Bay in proportion to their share of Mitsubishi's total workforce.

The modelling undertaken for this report indicates that any significant reduction in the scale of vehicle industry operations in Southern Adelaide would have profoundly negative impact on the labour market throughout the region and the State as a whole.

Scenario 1 – 25 Per cent Reduction in the Scale of Operations

A 25 per cent reduction in the scale of Mitsubishi's operations would increase unemployment in the region by around 4,100 resulting in a rise in the unemployment rate from 6.1 per cent to 8.6 per cent. For the State as whole unemployment would increase by around 5,600 resulting in a rise in the unemployment rate from 6.9 per cent to 7.6 per cent. The area most effected in Southern Adelaide by this scenario would be the City of Onkaparinga where unemployment would increase by around 2,300 resulting in a rise in the unemployment rate from 7.1 per cent to 10.8 per cent.

Scenario 2 – 75 Per cent Reduction in the Scale of Operations

A 75 per cent reduction in the scale of Mitsubishi's operations would increase unemployment in the region by around 12,200 more than doubling the unemployment rate from 6.1 per cent to 13.7 per cent. For the State as whole unemployment would increase by around 17,000 resulting in a rise in the unemployment rate from 6.9 per cent to 9.2 per cent. Unemployment rates in many areas within the region would double under this scenario. In the City of Onkaparinga unemployment would increase by around 8,200 resulting in a rise in the unemployment rate from 7.1 per cent to 18.1 per cent. In the City of Marion unemployment would increase by around 2,300 with the unemployment rate rising from 6.2 per cent to 13.2 per cent. In the City of Mitcham unemployment would increase by around 900 with the unemployment rate rising from 3.7 to 6.7 per cent. Unemployment would rise by around 450 in the City of Holdfast Bay resulting in the unemployment rate increasing from 5.6 per cent to 8.4 per cent.

Scenario 3 – 100 Per cent Reduction in the Scale of Operations

A 100 per cent reduction in the scale of Mitsubishi's operations would increase unemployment in the region by around 16,300 resulting in a dramatic increase in the unemployment rate from 6.1 per cent to 16.3 per cent. For the State as whole unemployment would increase by around 22,600 with the unemployment rate rising from 6.9 per cent to 9.9 per cent. Unemployment in particular areas of the Southern Adelaide region would rise dramatically. In the City of Onkaparinga unemployment would increase by around 11,000 resulting in a rise in the unemployment rate from 7.1 per cent to 21.8 per cent. In the City of Marion unemployment would increase by around 3,500 with the unemployment rate rising from 6.2 per cent to 15.5 per cent. In the City of Mitcham unemployment would increase by around 1,200 with the unemployment rate rising from 3.7 to 7.6 per cent. Unemployment would rise by around 600 in the City of Holdfast Bay resulting in the unemployment rate increasing from 5.6 per cent to 9.3 per cent.

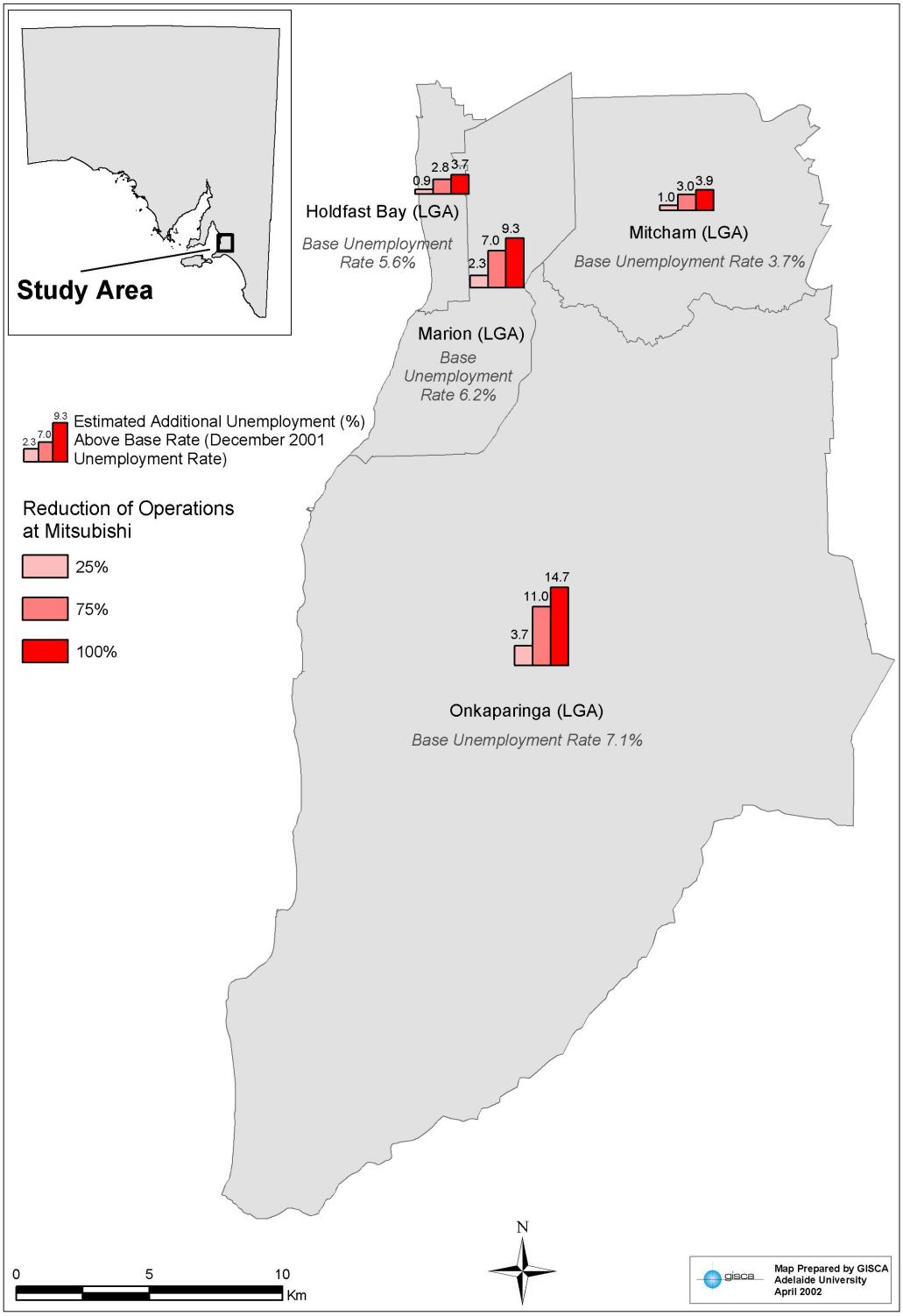
Table 5.2 Estimates of the impact on unemployment of reductions in the scale of the automotive manufacturing industry in Southern Adelaide

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployed (No.)			Unemployment Rate (%)		
	Base*	Outcome*	Change	Base	Outcome	Change
25						
Holdfast Bay	879	1,029	-150	5.6	6.5	0.9
Onkaparinga	5,335	8,072	-2,737	7.1	10.8	3.7
Marion	2,362	3,240	-878	6.2	8.5	2.3
Mitcham	1,182	1,490	-308	3.7	4.7	1
Total Region	9,758	13,832	-4,074	6.1	8.6	2.5
South Australia	50,700	56,345	-5,645	6.9	7.6	0.7
75						0
Holdfast Bay	879	1,329	-450	5.6	8.4	2.8
Onkaparinga	5,335	13,552	-8,217	7.1	18.1	11
Marion	2,362	4,999	-2,637	6.2	13.2	7
Mitcham	1,182	2,107	-925	3.7	6.7	3
Total Region	9,758	21,986	-12,228	6.1	13.7	7.6
South Australia	50,700	67,643	-16,943	6.9	9.2	2.3
100						0
Holdfast Bay	879	1,479	-600	5.6	9.3	3.7
Onkaparinga	5,335	16,289	-10,954	7.1	21.8	14.7
Marion	2,362	5,877	-3,515	6.2	15.5	9.3
Mitcham	1,182	2,415	-1,233	3.7	7.6	3.9
Total Region	9,758	26,060	-16,302	6.1	16.3	11.2
South Australia	50,700	73,287	-22,587	6.9	9.9	3

Source: EconSearch analysis and DEWR (2002).
*base rates for unemployment are December 2001. Outcomes include both direct and indirect employment effects.

Figure 5.1 illustrates the impact on the unemployment rate of reductions in the scale of automotive manufacturing in the Cities of Marion, Mitcham, Onkaparinga and Holdfast Bay.

Figure 5.1 Estimates of the impact on unemployment rate of reductions in the scale of the automotive manufacturing industry in Southern Adelaide



Source: EconSearch

Table 5.3 Estimates of the impact on the unemployment rate in the Cities of Onkaparinga, Marion, Mitcham and Holdfast Bay of a reduction in employment at Mitsubishi, SA [a]

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployment Rate in the Cities of Onkaparinga, Marion, Mitcham and Holdfast Bay		
	Including direct loss of employment at Mitsubishi only	Including flow-on employment impacts only	Including total employment impacts (direct + flow ons)
25	6.5%	8.3%	8.6%
75	7.3%	12.6%	13.7%
100	7.6%	14.7%	16.3%

[a] Using the unemployment rate as at December 2001 (6.1%) as a base. Estimates of job losses were derived from Tables 2.1 to 2.3.

Source: EconSearch analysis and DEWR (2002).

Table 5.4 Estimates of the impact on the unemployment rate in the City of Onkaparinga of a reduction in employment at Mitsubishi, SA [a]

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployment Rate in the City of Onkaparinga		
	Including direct loss of employment at Mitsubishi only	Including flow-on employment impacts only	Including total employment impacts (direct + flow ons)
25	7.7%	10.2%	10.8%
75	8.8%	16.5%	18.1%
100	9.4%	19.6%	21.8%

[a] Using the unemployment rate as at December 2001 (7.1%) as a base. Estimates of job losses were derived from Tables 2.1 to 2.3.

Source: EconSearch analysis and DEWR (2002).

Table 5.5 Estimates of the impact on the unemployment rate in the City of Marion of a reduction in employment at Mitsubishi, SA [a]

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployment Rate in the City of Marion		
	Including direct loss of employment at Mitsubishi only	Including flow-on employment impacts only	Including total employment impacts (direct + flow ons)
25	6.6%	8.2%	8.5%
75	7.3%	12.1%	13.2%
100	7.6%	14.1%	15.5%

[a] Using the unemployment rate as at December 2001 (6.2%) as a base. Estimates of job losses were derived from Tables 2.1 to 2.3.

Source: EconSearch analysis and DEWR (2002).

Table 5.6 Estimates of the impact on the unemployment rate in the City of Mitcham of a reduction in employment at Mitsubishi, SA [a]

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployment Rate in the City of Mitcham		
	Including direct loss of employment at Mitsubishi only	Including flow-on employment impacts only	Including total employment impacts (direct + flow ons)
25	3.9%	4.6%	4.7%
75	4.2%	6.2%	6.7%
100	4.3%	7.0%	7.6%

[a] Using the unemployment rate as at December 2001 (3.7%) as a base. Estimates of job losses were derived from Tables 2.1 to 2.3.

Source: EconSearch analysis and DEWR (2002).

Table 5.7 Estimates of the impact on the unemployment rate in the City of Holdfast Bay of a reduction in employment at Mitsubishi, SA [a]

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployment Rate in the City of Holdfast Bay		
	Including direct loss of employment at Mitsubishi only	Including flow-on employment impacts only	Including total employment impacts (direct + flow ons)
25	5.7%	6.4%	6.5%
75	6.0%	8.0%	8.4%
100	6.1%	8.8%	9.3%

[a] Using the unemployment rate as at December 2001 (5.6%) as a base. Estimates of job losses were derived from Tables 2.1 to 2.3.

Source: EconSearch analysis and DEWR (2002).

Table 5.8 Estimates of the impact on the unemployment rate in South Australia of a reduction in employment at Mitsubishi, SA [a]

Reduction in Scale of Operations at Mitsubishi, SA (%)	Unemployment Rate in South Australia		
	Including direct loss of employment at Mitsubishi only	Including flow-on employment impacts only	Including total employment impacts (direct + flow ons)
25	7.0%	7.5%	7.6%
75	7.2%	8.8%	9.2%
100	7.3%	9.5%	9.9%

[a] Using the unemployment rate as at December 2001 (6.9%) as a base. Estimates of job losses were derived from Tables 2.1 to 2.3.

Source: EconSearch analysis and DEWR (2002).

A significant proportion of the direct employment impacts reported in this analysis could be net losses to the state and regional workforce. However, some of the flow-on jobs may not be net losses, rather they represent 'industrial support', that is, the

employment necessary to support industrial activity of this magnitude. Thus the problem may be one of underemployment, rather than unemployment.

Estimates of total and flow-on employment losses and the associated impact on regional unemployment, as presented in this analysis, are likely to be overestimates of the actual impact.

Further, it is important to note that the estimates of economic impact presented in this report do not take account of some of the offsetting, positive economic impacts on the state economy that may arise from the three Mitsubishi scenarios. For example:

- alternative employment will be obtained by some employees of Mitsubishi and those in other sectors impacted by flow-ons from a reduction in the scale of Mitsubishi's operations; and
- for those people that remain unemployed there would be some offsetting, positive economic impacts from the expenditure of unemployment benefits.

6. Conclusion and recommendations

There can be little doubt from the evidence presented here that the automotive industry plays a central role in the South Australian and Southern Adelaide economies and communities. The three scenarios presented confirm this. While reductions in the scale of the automotive industry are not likely to produce as dramatically negative outcomes for South Australia and the Region as the scenarios might suggest, it is not unreasonable to believe that great social and economic hardship would be experienced. The direct and indirect social and economic costs of this are likely to be very significant, requiring a very substantial package of adjustment assistance from the Federal Government and the industry. The closure of BHP in Newcastle suggests that these costs are likely to be in the order of hundreds of millions of dollars. In weighing up the net benefits to the nation of reform to assistance regimes the full financial and social costs associated with possible scaling down of the industry in South Australia must be identified and be subject to public scrutiny.

It is vital that Australia maintain a stable and attractive investment regime for the automotive industry. A critical component of this are sensible tariff settings which take account of the tariff and non-tariff barriers current in place in competitor nations. Any unilateral reductions in tariffs or other forms of automotive industry assistance is likely to impact negatively on the industry in Australia and have particularly damaging effects on regions with a high level of dependence on automotive manufacturing like Southern and Northern Adelaide.

In this context the Cities of Marion, Mitcham and Onkaparinga make the following recommendations to the Productivity Commission.

Recommendation 1

That current scheduled levels of assistance to the automotive manufacturing industry be maintained for at least five years from 2005, when tariffs on passenger motor vehicles (PMVs) and components fall to 10%. No changes to tariff rates should be made until real gains are made in access to markets throughout the world and particularly in Asia.

We recommend the retention of tariffs on light commercial vehicles (LCVs) and four wheel drives (4WDs) and components for these vehicles at the current level of 5% after 2005 and at least until 2010.

Recommendation 2

We recommend that an assistance scheme like the Automotive Competitiveness and Investment Scheme (ACIS) which promotes investment, R&D and production within the industry be maintained post 2005 for at least five years.

Recommendation 3

We recommend that the Commonwealth Government develop strategies to deal with structural adjustment issues should the automotive industry suffer a significant and sudden contraction in output and employment.

Further, any such strategies should be designed to provide a focus on those individual regions in which the industry is concentrated.

Structural assistance programs should aim to:

- **assist workers made redundant by structural change within the industry, including through labour, training and re-training programs; and**
- **assist regions negatively impacted by industry adjustment to find new economically sustainable industries to maintain overall levels of employment and economic wellbeing.**

Recommendation 4

We recommend that in reviewing options for post 2005 assistance the Productivity Commission report on the regional impact of its recommendations taking account of the following factors:

- **impact on average weekly incomes;**
- **impact on local demand for goods and services;**
- **impact on the States skills and revenue base;**
- **impact on population levels;**
- **likely costs of retraining and adjustment;**
- **impact on consumer debt levels'**
- **impact on family dynamics and individual social and health related wellbeing;**
- **Increased domestic violence and child abuse;**
- **Impact on demand for Federal income support.**

Recommendation 5

That the Productivity Commission consult with the Cities of Marion, Mitcham and Onkaparinga regarding proposals for change to automotive assistance arrangements in order to identify the potential regional social and economic impacts of any proposed reforms.

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Appendix 1 Glossary of Input-Output Terminology

Consumption-induced effects are additional output, employment and income resulting from re-spending by households that receive income from employment in direct and indirect activities. Consumption-induced effects are sometimes referred to as “induced effects”.

Direct effects are the initial round of output, employment and income generated by an economic activity.

Employment is the number of working proprietors, managers, directors and other employees, in terms of the number of full-time equivalent jobs.

Flow-on effects are the sum of the production-induced effects and the consumption-induced effects.

Gross regional (or State) product is a measure of value added on a regional basis. It can be calculated using two methods. The income method calculates GRP as household income plus other value added. The expenditure method calculates GRP as household expenditure plus other final demand, that is, in total, gross regional expenditure, plus exports less imports.

Household income is wages and salaries and other payments to labour including overtime payments and income tax, but excluding payroll tax.

Input-output analysis is an accounting system of inter-industry transactions based on the notion that no industry exists in isolation.

Input-output table is a transactions table that illustrates and quantifies the purchases and sales of goods and services taking place in an economy at a given point in time. It provides a numerical picture of the size and shape of the economy and its essential features. Each item is shown as a purchase by one sector and a sale by another, thus constructing two sides of a double accounting schedule.

Multiplier is an index (ratio) indicating the overall change in the level of activity that results from an initial change in economic activity. They are an indication of the strength of the linkages between a particular sector and the rest of the regional economy. They can be used to estimate the impact of a change in that particular sector on the rest of the economy.

Other Final Demand includes government expenditure, private and public sector investment (gross fixed capital formation) and change in stocks (inventories).

Other Value Added includes gross operating surplus and all taxes, less subsidies.

Output is gross revenue of goods and services produced by commercial organisations plus gross expenditure by government agencies.

Production-induced effects are additional output, employment and income resulting from re-spending by firms that receive income from the sale of goods and services to firms undertaking, for example, agricultural activities. Production-induced effects are sometimes referred to as “indirect effects”.

Total impact is the sum of the direct effects and the flow-on effects.

Type I multiplier is calculated as (direct effects + production induced effects)/direct effects.

Type II multiplier is calculated as (direct effects + production induced effects + consumption induced effects)/direct effects.

Value added is calculated as the value of output less the cost of goods and services (including imports) used in producing the output. It represents payments to the primary inputs of production (labour, capital and land). Value added is consistent with standard measures of economic activity, such as gross domestic, State or regional product, and it provides an assessment of the net contribution to regional economic growth of a particular enterprise or activity.

Appendix 2 Input-Output Methodology

Overview of Input-Output Analysis

Input-output analysis provides a comprehensive economic framework that is extremely useful in the resource planning process. Broadly, there are two ways in which the input-output method can be used.

First, the input-output table provides a numerical picture of the size and shape of the economy and its essential features. The input-output transactions table can be used to describe some of the important features of an economy, the interrelationships between sectors, and the relative importance of the individual sectors.

Second, input-output analysis provides a standard approach for the estimation of the economic impact of a particular activity. The input-output model is used to calculate industry multipliers that can then be applied to various development scenarios.

Linkages between sectors

The standard approach for the estimation of the regional economic impact of a particular activity, such as wine production, is to employ *input-output analysis*. The input-output model conceives the economy of the region as being divided up into a number of sectors, and this allows the analyst to trace expenditure flows.

To illustrate this, consider the example of a winery that, in the course of its operation, purchases goods and services from other sectors. These goods and services would include grapes, bottles, and corks and, of course, labour. The direct employment created is regarded in the model as an expenditure flow into the household sector, which is one of several non-industrial sectors recognised in the input-output model.

Upon receiving expenditure by the winery, the other sectors in the state economy engage in their own expenditures. For example, as a consequence of winning a contract for work with a winery, a bottle manufacturer buys materials from its suppliers and labour from its own employees. Suppliers and employees in turn engage in further expenditure, and so on. These *indirect effects*, as they are called, are part of the impact of the winery on the regional or state economy. They must be added to the *direct effects* (which are expenditures made in immediate support of the winery itself) in order to arrive at a measure of the total impact of the winery.

It may be thought that these indirect effects go on indefinitely, and that their amount adds up without limit, the presence of *leakages*, however, prevents this from occurring. In the context of the impact on a *regional or state* economy, an important leakage is expenditure on imports, that is, products or services that originate from *outside the region, state or country* (e.g. French oak barrels).

Thus some of the expenditure for imports to the region is lost to the local economy. Consequently, the indirect effects get smaller and smaller in successive expenditure rounds, due to this and other leakages. Hence the total expenditure created in the local economy is limited in amount, and so (in principle) it can be measured.

The performance of the input-output analysis calculations require a great deal of information. The analyst needs to know the magnitude of various expenditures and where they occur. Also needed is information on how the sectors that receiving this expenditure share *their* expenditures among the various sectors from whom they buy, and so on for the further expenditure rounds.

In applying the input-output model, the standard procedure is to determine the direct or first-round expenditures only. No attempt is made to pursue such inquiries on expenditure in subsequent rounds, not even (for example) to trace the effects in the local economy on household expenditures by winery employees on food, clothing, entertainment, and so on, as it is impracticable to measure these effects for an individual case, here the winery.

The input-output model is instead based on a set of assumptions about constant and uniform proportions of expenditure. If households in general in the local economy spend (say) 13.3 per cent of their income on food and non-alcoholic beverages, it is assumed that those working in wineries do likewise. Indeed, the effects of all expenditure rounds after the first are calculated by using such standard proportions (*multiplier* calculations).

Multipliers

Multipliers are an indication of the strength of the linkages between a particular sector and the rest of the regional economy. As well, they can be used to estimate the impact of a change in that particular sector on the rest of the economy. As noted above, detailed explanations on calculating input-output multipliers (and the underlying assumptions) are provided in any regional economics or input-output analysis textbook (see for example Hewings (1985), Jensen and West (1986), Midmore and Harrison-Mayfield (1996), Powell et al. (1985), and West (1993)). Suffice to note that they are calculated through a routine set of mathematical operations based on coefficients derived from the input-output transactions table.

Input-output transactions table

The structure and linkages of a local economy can be described with the aid of input-output analysis. Input-output analysis, as an accounting system of inter-industry transactions, is based on the notion that no industry exists in isolation.

This assumes, within any economy, each firm depends on the existence of other firms to purchase inputs from, or sell products to, for further processing. The firms also depend on final consumers of the product and labour inputs to production. An input-output transactions table is a convenient way to illustrate the purchases and sales of goods and services taking place in an economy at a given time.

Input-output tables provide a numerical picture of the size and shape of the economy and its essential features. Products produced in the economy are aggregated into a number of groups of industries and the transactions between them recorded in the transactions table. The rows and columns of the input-output table can be interpreted in the following way:

- The rows of the input-output table illustrate sales for intermediate usage (to other firms) and for final demand (consumers, exports, capital formation).

- The columns show the origin of the inputs and hence the purchases made at that time (labour, capital and intermediate inputs).

- Each item is shown as a purchase by one sector and a sale by another, thus constructing two sides of a double accounting schedule.

In summary, the input-output transactions table can be used to describe some of the important features of a regional economy, the interrelationships between sectors, and the relative importance of the individual sectors. The table is also used for the calculation of sector multipliers and the estimation of economic impacts arising from some change in the local economy.