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Closing the Motor Vehicle Industry: The Impact on Australia

Bianca Barbaro, John Spoehr and NIEIR

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Australian Workplace Innovation & Social Research Centre (WISeR)
& the National Institute of Economic & Industry Research (NIEIR)

Closing the Motor Vehicle Industry: The Impact on Australia

Australian Workplace Innovation and Social Research Centre
The University of Adelaide
230 North Terrace
Adelaide
South Australia 5005

www.adelaide.edu.au/wiser

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The Australian Workplace Innovation and Social Research Centre (WISeR) *focuses on work and socio-economic change. WISeR is particularly interested in how organisational structure and practices, technology and economic systems, policy and institutions, environment and culture interact to influence the performance of workplaces and the wellbeing of individuals, households and communities.*

WISeR also specialises in socio-economic impact assessment including the distributional impacts and human dimensions of change on different population groups and localities. Our research plays a key role in informing policy and strategy development at a national, local and international level.

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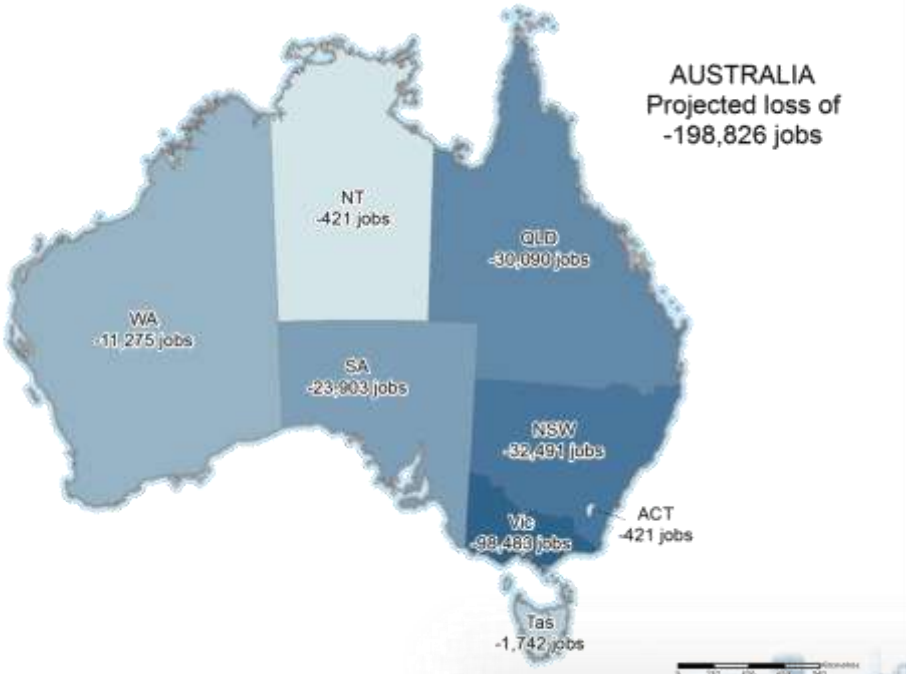
KEY FINDINGS AT A GLANCE

- An Australian Workplace Innovation & Social Research Centre (WISeR) commissioned study by the National Institute of Economic and Industry Research (NIEIR) forecasts direct impacts of the motor vehicle industry closures will be felt in capital cities and regional centres across Australia in the coming years.
- Australia is expected to suffer a fall in national employment of around 200,000 as a result of the planned closure to motor vehicle manufacturing between now and 2017.
- The greatest impact in terms of projected job loss will be in Victoria, with an estimated decline of close to 100,000 jobs, with jurisdictional variation highlighted in the map below.
- Econometric modelling forecasts a negative annual shock of $29 billion or more by 2017, in 2011 prices, a total of around 2% of national Gross Domestic Product (GDP).
- The largest regional shock to Gross Regional Product (GRP) is expected to be felt in Victoria with an annual decline of $13 billion in 2011 prices, expected by the end of 2017, followed by a $5 billion drop in NSW, negative $4.3 billion in Queensland and negative $3.7 billion in South Australia.
- Additional production losses can be expected from what has been assessed by the modelling due to the undermining of the economics of complex manufacturing in Australia. The motor vehicle industry is the main conduit for the introduction into Australia of advanced technology and the training of labour in the necessary skills. The ending of this conduit will increase the costs for other complex manufacturing industries no doubt leading to other plant closures.
- The actual impact will be highly dependent on the inter-relationship of a number of factors and decision-making as well as the capacity of companies to adapt to the changing climate, the level of assistance provided to the industry, and the opportunity and ability of employees to transition to new jobs.

NUMBER OF JOBS LOST BY STATE/TERRITORY 4 YEARS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA



1 INTRODUCTION

The Australian Workplace Innovation & Social Research Centre (WISeR) commissioned a study by the National Institute of Economic and Industry Research (NIEIR) to assess the impact of the closure of the motor vehicle industry in Australia following announcements by General Motors Holden (GMH), Ford and Toyota that they will be ceasing production in the country. The following report highlights summary findings from the commissioned research which can be obtained at www.adelaide.edu.au/wiser.

In May 2013 Ford announced the closure of its Australian-based production facilities by October 2016, followed by General Motor's announcement in December 2013 that Holden would cease production by 2017, and Toyota following suit making it known in February 2014 that it would be halting-production by 2017.

Econometric modelling of potential impacts highlight the significance the industry plays in the Australian economy, with a forecast negative annual shock of $29 billion or more by 2017, in 2011 prices, a total of around 2% of national Gross Domestic Product (GDP).

The study compares the results over a four year time period of what would have been GMH's, Ford's and Toyota's production if they continued on in Australia (a 'control' projection) compared to a projected scenario of what could occur assuming a straight line decline in motor vehicle production between December 2013 until December 2017.

Regional centres and greater capital cities will suffer direct impact as well as flow-on effects. This research models the situation that is likely to occur at the regional level, examining data by Local Government Area (LGA) across Australia.

Although this modelling provides an indication of the situation that could play-out over the coming years, the actual impact of the motor vehicle industry closure will be highly dependent on the inter-relationship of a number of factors and decision-making that occurs at the local and national level. This includes the capacity of companies to adapt to the changing climate, the level of assistance provided to the industry, as well as the opportunity and ability of employees to transition to new jobs.

2 METHODS

This report is based on modelling work undertaken by the National Institute of Economic and Industry Research (NIEIR) in March 2014. The study was undertaken using NIEIR's quarterly econometric model of all Australian Local Government Areas (LGAs). The model is a fully integrated input-output inter-regional trade flow model and provides analysis at the Local Government Area level, basing the forecasts on 49 different industries per LGA.

The modelling technique involves creating a 'control' solution projection to the December quarter 2017. This projection had mining investment falling to $5.5 billion in 2012 prices by 2018, which is a significant decline from the current level of $90 billion.

The analysis compares the results of what would have been GMH, Ford and Toyota's production if they continued on in Australia (a 'control' projection) compared to a projected scenario which assumes a straight line decline in motor vehicle production between December 2013 until December 2017, four years after General Motor announced Holden would cease production in Australia.

The control projection had the exchange rate returning to 80 cents to the United States dollar. As a result, although modest, there is a recovery in the share of local motor vehicle production in total sales of motor vehicles under this scenario.

In mid-2005 the Australian motor vehicle industry was producing 400,000 units. It is currently producing at half that level. The recovery built into the control solution is a recovery returning to between 60,000 to 70,000 units at quarterly rates. This will increase employment by approximately 15 per cent from current levels.

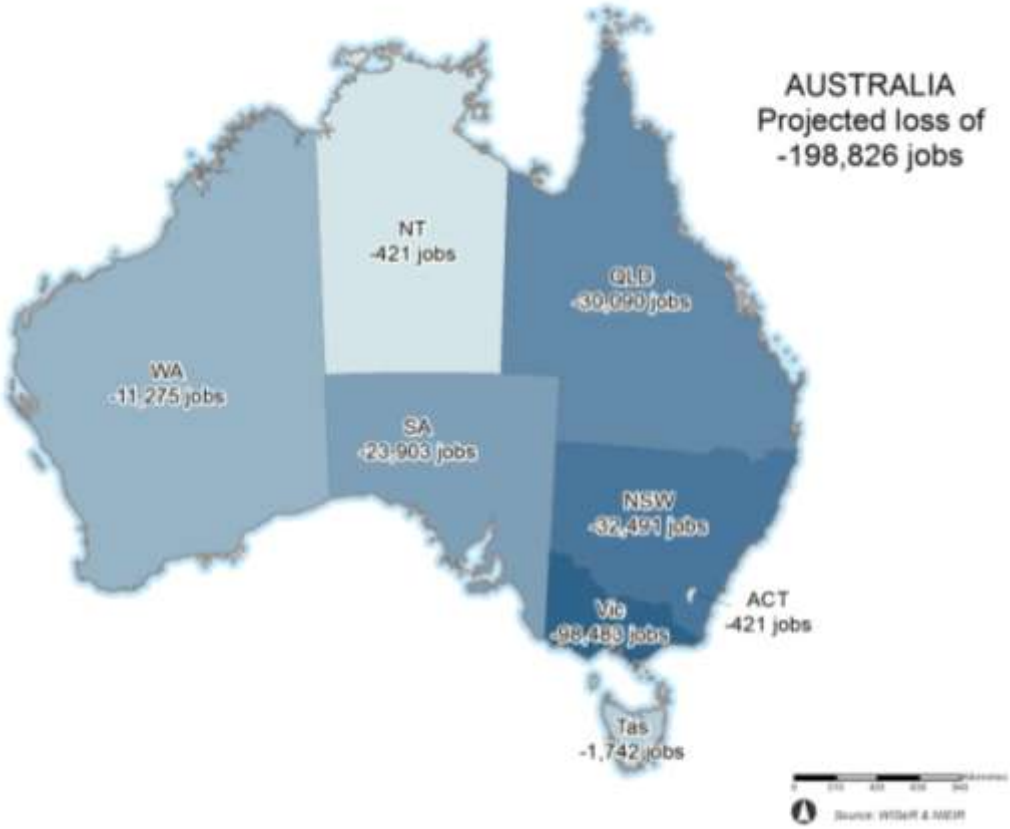
An alternative solution was then prepared assuming a straight line decline in motor vehicle production between the December quarter of 2013 and the December quarter 2017. Approximately 15 per cent of motor vehicle production remains after 2017. The results provided in this report highlight the difference between the two models between 2013 and 2017, representing the likely impact of motor vehicle production ceasing in Australia compared to if the situation had remain unchanged.

3 RESULTS

Australia is expected to suffer a fall in national employment just under 200,000 as a result of the planned closure to motor vehicle manufacturing in the country between now and 2017.

The greatest impact in terms of number of jobs lost is forecast to be in Victoria, with close to 100,000 jobs expected to go by the end of 2017. NSW and QLD could suffer a loss of around 30,000 jobs each, while SA is projected to lose around 24,000 over the four year period since GMH's announcement in 2013, illustrated in Figure 1.

FIGURE 1: NUMBER OF JOBS LOST BY STATE/TERRITORY, 4 YEARS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA



Overall the direct impact of the facilities closure will impose a negative annual shock to the Australian economy of $29 billion in 2011 prices, or 2% of national Gross Domestic Product.

TABLE 1: GROSS REGIONAL PRODUCT BY STATE/TERRITORY, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

State/Territory	$2011m annual rate (market prices)
NSW	- 4,970
Vic	- 13,977
QLD	- 4,270
SA	-3,650
WA	-1,691
Tas	- 252
NT	- 67
ACT	-65
AUSTRALIA	-28,942

Source: NIEIR, 2014

The largest shock to Gross Regional Product (GRP) is expected to be felt in Victoria with an annual decline of $13 billion in 2011 prices, expected by the end of 2017, followed by a $5 billion drop in NSW, negative $4.3 billion in Queensland and negative $3.7 billion in South Australia.

Figure 2 and Figure 3 demonstrate the forecast decline in employment at the local government area level based on the place of work, four years post-announcement of the closure of motor vehicle manufacturing in Australia. Figure 2 shows the impact by number employed while Figure 3 illustrates the percentage change as a proportion of 2012 employment levels. The City of Melbourne is expected to have the greatest decline in actual numbers across Australia while the Playford LGA in northern Adelaide, South Australia is expected to have the greatest decline in percentage terms.

Figure 4 and Figure 5 are based on loss of jobs by the place of residence of the employee to give a different perspective. The estimates suggest that the City of Brisbane will suffer the largest decline in employed residents at around 9,000 jobs, while Playford in the north of Adelaide is expected to show the greatest percentage decline.

Figure 6, the change in Gross Regional Product, illustrates the greatest impact in clusters located in Victoria, Queensland and South Australia, with the City of Melbourne projected to have the greatest decline in annual rates at dollars per million in 2011 prices. Figure 7 estimates the City of Playford in South Australia will show the largest difference in GRP between now and 2017 as a proportion of 2012 levels.

FIGURE 2: LOSS OF JOBS BY PLACE OF WORK (NO.), 4 YRS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA

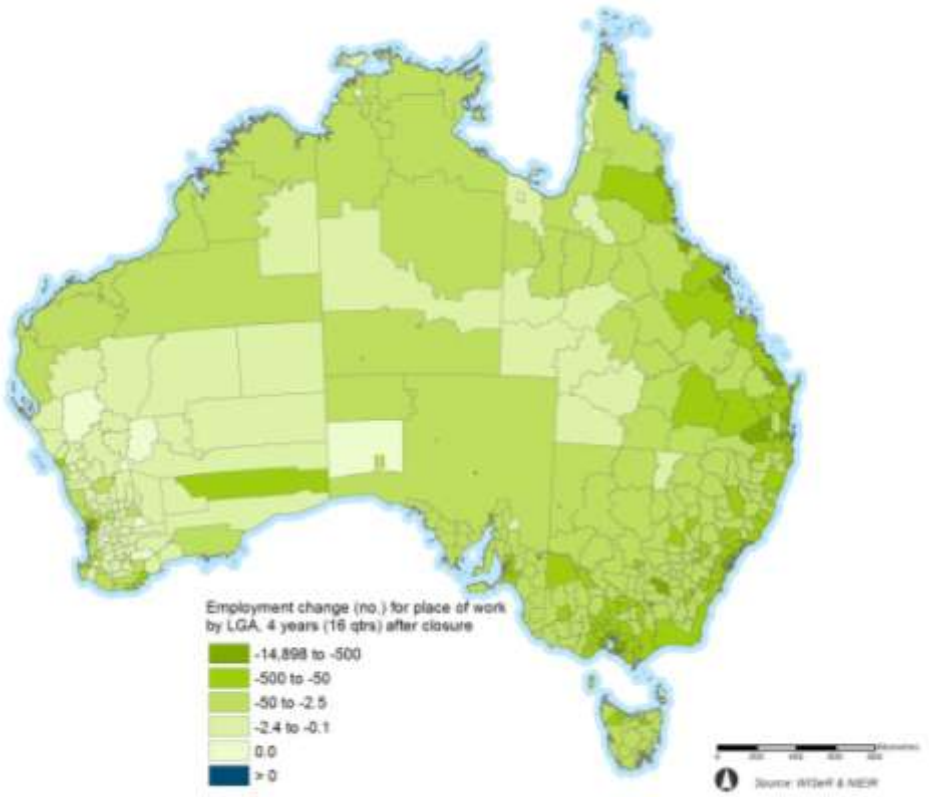


FIGURE 3: LOSS OF JOBS BY PLACE OF WORK (%), 4 YRS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA

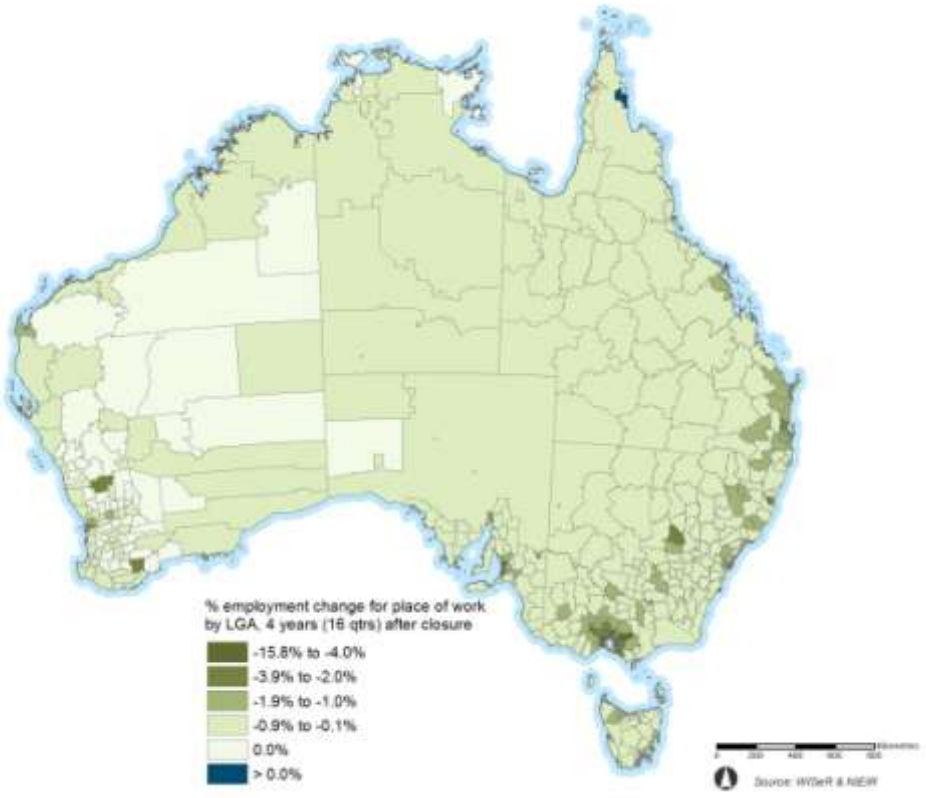


FIGURE 4: LOSS OF JOBS BY RESIDENCE OF EMPLOYEE (NO.), 4 YRS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA

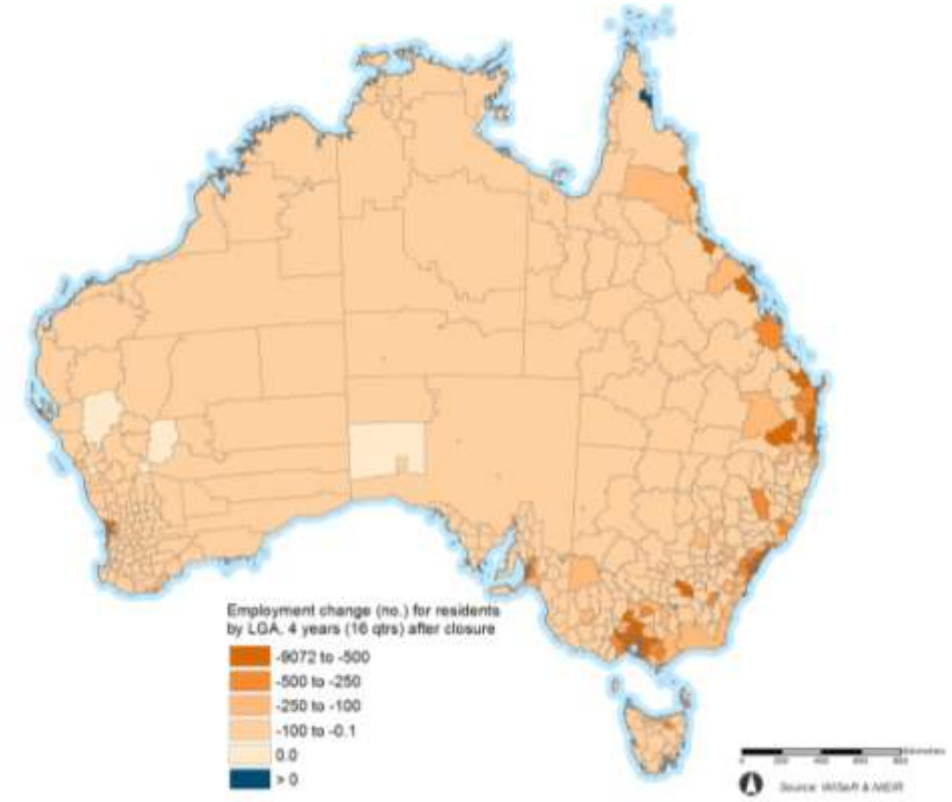


FIGURE 5: LOSS OF JOBS BY RESIDENCE OF EMPLOYEE (%), 4 YRS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA

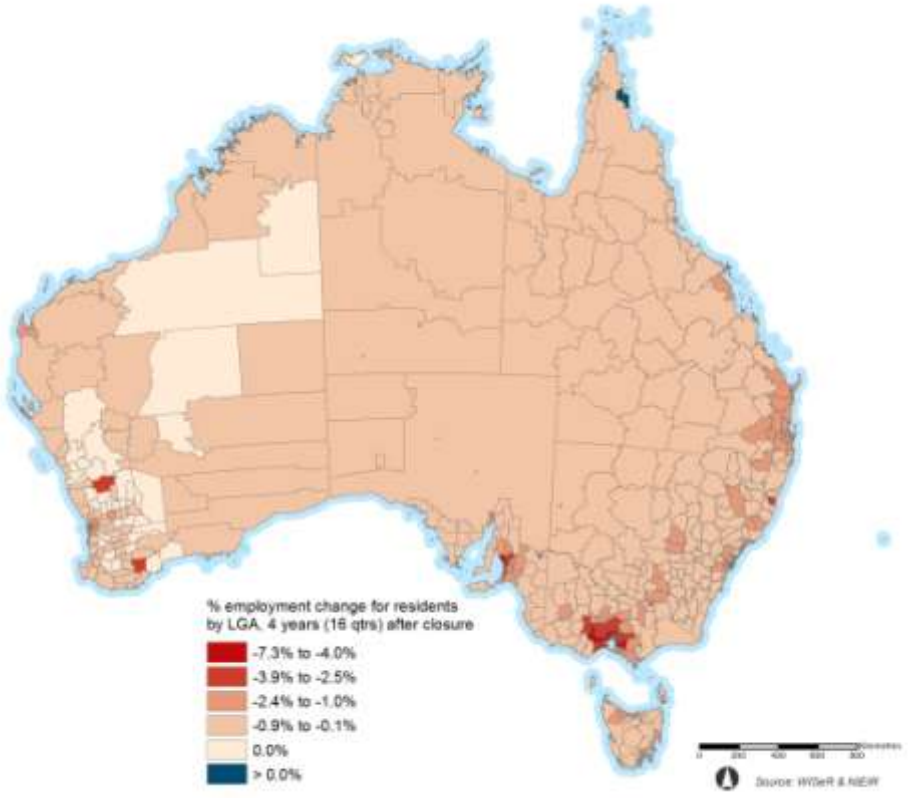
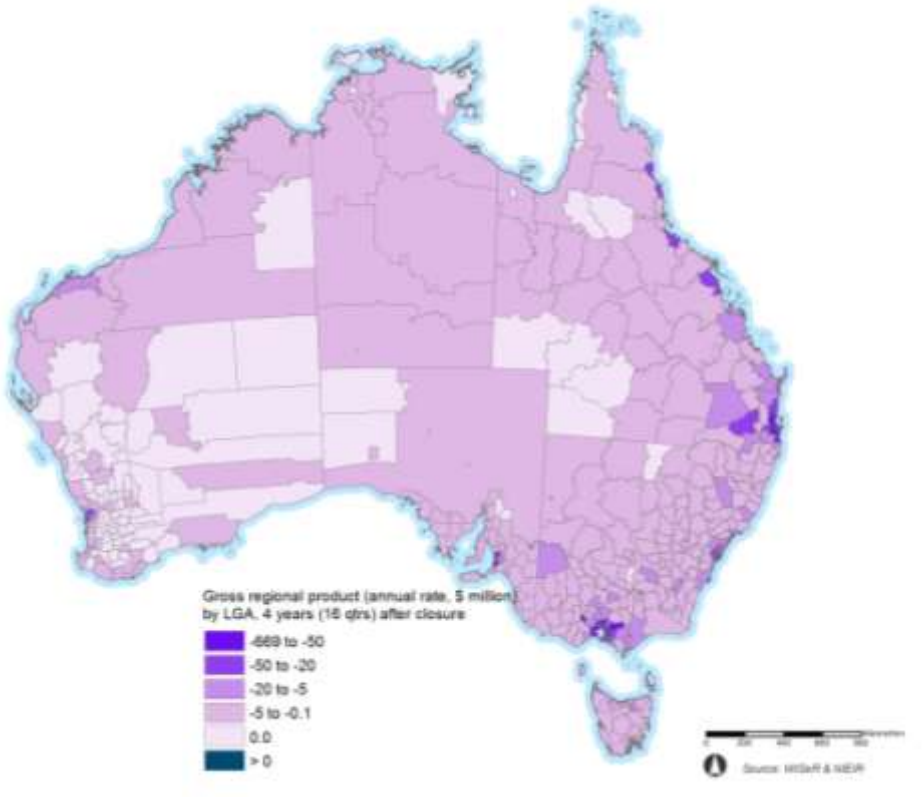
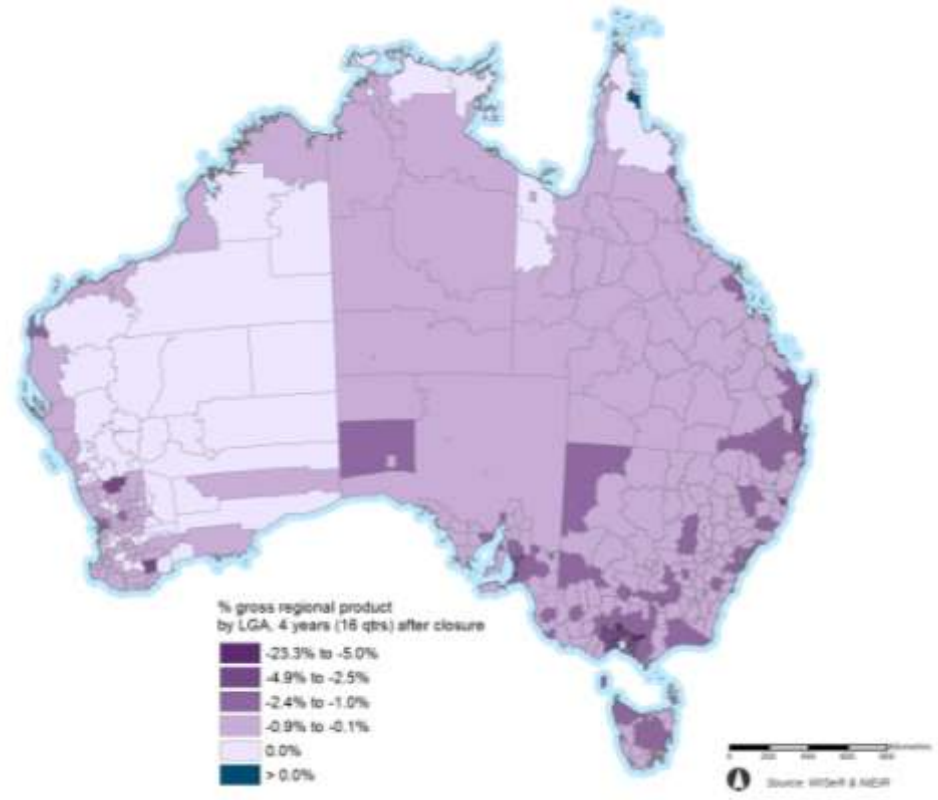


FIGURE 6: CHANGE IN GROSS REGIONAL PRODUCT, 4 YRS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA



Data expressed as change in $ per million in 2011 prices

FIGURE 7: CHANGE IN GROSS REGIONAL PRODUCT (%), 4 YRS AFTER CLOSURE ANNOUNCEMENT, AUSTRALIA



Data expressed as change in $ per million in 2011 prices, calculated as per cent of 2012 level

3.1 Regional impact in NSW

It is expected that the greatest impact on jobs based on place of work in NSW will be in the capital city, with the City of Sydney forecast to decline by around 5,000 jobs, a drop of around 0.9% from 2012 levels, shown in Table 2.

Table 2: Top 10 LGAs in NSW with highest loss of jobs by place of work, 4 years after closure announcement

Rank	LGA	No. of jobs lost
1	Sydney (C)	4,933
2	Bankstown (C)	1,285
3	Newcastle (C)	1,248
4	Blacktown (C)	1,235
5	Fairfield (C)	1,096
6	Sutherland Shire (A)	1,066
7	Parramatta (C)	1,002
8	Penrith (C)	953
9	Liverpool (C)	784
10	North Sydney (A)	783

Source: NIEIR, 2014

When examining the forecast loss of jobs by residence of the employees, those living in Blacktown in western Sydney are expected to have the greatest loss in numbers with a projected decline of around 1,672, followed closely by Sutherland Shire in the southern region of Sydney declining by around 1,400 (Table 3), both a decrease of around 1.1% for both LGAs.

Table 3: Top 10 LGAs in NSW with highest loss of jobs by residence of employee, 4 years after closure announcement

Rank	LGA	No. of jobs lost
1	Blacktown (C)	1,672
2	Sutherland Shire (A)	1,420
3	Penrith (C)	1,199
4	Sydney (C)	1,122
5	Liverpool (C)	1,006
6	Campbelltown (C)	950
7	Lake Macquarie (C)	933
8	Fairfield (C)	914
9	Newcastle (C)	853
10	The Hills Shire (A)	830

Source: NIEIR, 2014

The GRP in the City of Sydney is projected to illustrate a negative annual growth of $1.1 billion by 2017, by far the greatest impact in monetary terms expected in NSW at the local area level.

TABLE 4: TOP 10 LGAS IN NSW WITH HIGHEST LOSS OF GROSS REGIONAL PRODUCT, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	$2011m - annual rate (market prices)
1	Sydney (C)	-1093.8
2	Blacktown (C)	-180.04
3	Parramatta (C)	-179.8
4	Bankstown (C)	-175.48
5	Newcastle (C)	-165.28
6	North Sydney (A)	-155.92
7	Sutherland Shire (A)	-150.6
8	Fairfield (C)	-142.16
9	Auburn (A)	-131.24
10	Ryde (C)	-127.56

Source: NIEIR, 2014

3.2 REGIONAL IMPACT IN VICTORIA

It is estimated that the greatest job loss by place of work in terms of numbers will occur in the Local Government Area of Melbourne, with close to 15,000 expected to go, the biggest decline in actual numbers not only in Victoria, but for all LGAs across Australia by the end of 2017. This is a drop of around 3.1% from 2012 levels of employment.

Hume in the outer north-western suburbs of Melbourne is forecast to have a large impact both on the number of jobs lost as well as the percentage change, at 8,815 jobs, representing a decrease of 9%.

Other LGAs in Victoria projected to suffer high employment impacts are also in the Greater Melbourne region, with Greater Dandenong and Monash in the south-east and Hobsons Bay in the south-west.

TABLE 5: TOP 10 LGAS IN VIC WITH HIGHEST LOSS OF JOBS BY PLACE OF WORK, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	No. of jobs lost
1	Melbourne (C)	14,898
2	Hume (C)	8,815
3	Greater Dandenong (C)	7,456
4	Hobsons Bay (C)	6,011
5	Monash (C)	4,885
6	Greater Geelong (C)	4,878
7	Kingston (C)	4,094
8	Port Phillip (C)	3,148
9	Maroondah (C)	3,046
10	Casey (C)	2,867

Source: NIEIR, 2014

The impact on loss of jobs is expected to be highest for employees residing in the local government area of Casey in the outer south-eastern suburbs of Melbourne, at around 6,700 jobs. Around 5,000 residents of the Greater Geelong area are projected to lose their job, with a similar but slightly lower figure for Hume in the outer north-western suburbs of Melbourne.

TABLE 6: TOP 10 LGAS IN VIC WITH HIGHEST LOSS OF JOBS BY RESIDENCE OF EMPLOYEE, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	No. of jobs lost
1	Casey (C)	6,734
2	Greater Geelong (C)	4,984
3	Hume (C)	4,736
4	Brimbank (C)	4,432
5	Wyndham (C)	4,360
6	Whittlesea (C)	3,453
7	Greater Dandenong (C)	3,321
8	Knox (C)	3,256
9	Kingston (C)	3,176
10	Yarra Ranges (S)	3,087

Source: NIEIR, 2014

The City of Melbourne is expected to suffer a decline in GRP of $2.7 billion annually in 2011 prices, followed by $1.2 billion in Hume, and a negative annual decline just under $1 billion in Greater Dandenong.

TABLE 7: TOP 10 LGAS IN VIC WITH HIGHEST LOSS OF GROSS REGIONAL PRODUCT, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	$2011m - annual rate (market prices)
1	Melbourne (C)	-2673.52
2	Hume (C)	-1168.84
3	Greater Dandenong (C)	-927.56
4	Hobsons Bay (C)	-840.76
5	Monash (C)	-679.4
6	Greater Geelong (C)	-594.08
7	Kingston (C)	-533.52
8	Port Phillip (C)	-486.28
9	Maroondah (C)	-415.12
10	Brimbank (C)	-391.28

Source: NIEIR, 2014

3.3 REGIONAL IMPACT IN QLD

The greatest impact in terms of number of jobs lost four years post-closure announcement in Queensland is projected to be in the Brisbane LGA, both for jobs by the place of work as well as by residence of employees. Around 12,400 less jobs are expected to be located in the City of Brisbane by 2017, with around 9,000 residents of that LGA expected to be effected, shown in Table 8 and Table 9. In both instances this would result in a decline of around 1.5% from 2012 levels.

TABLE 8: TOP 10 LGAS IN QLD WITH HIGHEST LOSS OF JOBS BY PLACE OF WORK, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	No. of jobs lost
1	Brisbane (C)	12,404
2	Gold Coast (C)	4,063
3	Moreton Bay (R)	2,779
4	Logan (C)	1,513
5	Sunshine Coast (R)	1,434
6	Toowoomba (R)	1,245
7	Ipswich (C)	1,035
8	Cairns (R)	680
9	Townsville (C)	617
10	Mackay (R)	614

Source: NIEIR, 2014

Around 5,000 jobs are expected to be lost for employees residing in the Gold Coast (decline of around 1.7%), with a drop of around 4,000 jobs in Moreton Bay on the south-east coast (drop of 2.1% from 2012 levels) (Table 9).

TABLE 9: TOP 10 LGAS IN QLD WITH HIGHEST LOSS OF JOBS BY RESIDENCE OF EMPLOYEE, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	No. of jobs lost
1	Brisbane (C)	9,071
2	Gold Coast (C)	4,497
3	Moreton Bay (R)	4,075
4	Logan (C)	2,523
5	Sunshine Coast (R)	1,698
6	Ipswich (C)	1,674
7	Toowoomba (R)	1,264
8	Redland (C)	1,172
9	Cairns (R)	726
10	Townsville (C)	667

Source: NIEIR, 2014

By 2017 the impact of motor vehicle closures could result in a negative annual GRP of more than $1.8 billion in the Brisbane LGA, while in the Gold Coast this could reach around half a billion in 2011 prices (Table 10).

TABLE 10: TOP 10 LGAS IN QLD WITH HIGHEST LOSS OF GROSS REGIONAL PRODUCT, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	$2011m annual rate (market prices)
1	Brisbane (C)	-1849.4
2	Gold Coast (C)	-518.44
3	Moreton Bay (R)	-366.16
4	Logan (C)	-210.92
5	Sunshine Coast (R)	-191.68
6	Ipswich (C)	-184.64
7	Toowoomba (R)	-141.2
8	Redland (C)	-100.24
9	Cairns (R)	-97.92
10	Townsville (C)	-86.36

Source: NIEIR, 2014

3.4 REGIONAL IMPACT IN SOUTH AUSTRALIA

Playford in Northern Adelaide is projected to have the greatest impact in terms of job loss in South Australia based on place of work with a decline of 4,385 jobs, a drop of 15.8%, by the end of 2017. Salisbury and Port Adelaide Enfield are other LGAs in the north of Adelaide also expected to suffer a sizeable impact, in addition to the City of Adelaide, and Onkaparinga in the outer southern suburbs.

TABLE 11: TOP 10 LGAS IN SA WITH HIGHEST LOSS OF JOBS BY PLACE OF WORK, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	No. of jobs lost
1	Playford (C)	4,385
2	Adelaide (C)	2,772
3	Salisbury (C)	2,447
4	Port Adelaide Enfield (C)	2,352
5	Onkaparinga (C)	2,042
6	Charles Sturt (C)	1,881
7	West Torrens (C)	1,554
8	Marion (C)	1,449
9	Norwood Payneham St Peters (C)	629
10	Tea Tree Gully (C)	563

Source: NIEIR, 2014

Residents of Onkaparinga in the south of Adelaide are expected to have the greatest loss in numbers employed based on their home address, with a decline of around 3,000 jobs by Onkaparinga residents, a drop of 3.6%. The LGAs of Salisbury and Playford in the north have similarly large decreases in employment for residents of those areas, at 2,981 and 2,514 respectively.

In terms of percentage change, the biggest impact in employment across Australia from the closure announcement to the end of 2017, is expected in Playford, both in terms of the proportion of jobs lost based in the LGA, as well as for jobs lost from those living in the area. A drop of 15.8% is forecast in the number of jobs located in Playford, with a decline of 7.3% in employment for residents, based on 2012 levels.

TABLE 12: TOP 10 LGAS IN SA WITH HIGHEST LOSS OF JOBS BY RESIDENCE OF EMPLOYEE, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	No. of jobs lost
1	Onkaparinga (C)	3,007
2	Salisbury (C)	2,981
3	Playford (C)	2,514
4	Port Adelaide Enfield (C)	1,850
5	Tea Tree Gully (C)	1,796
6	Charles Sturt (C)	1,759
7	Marion (C)	1,360
8	West Torrens (C)	839
9	Mitcham (C)	811
10	Campbelltown (C)	640

Source: NIEIR, 2014

Playford also registered the largest drop in gross regional product (GRP) for South Australia, with a forecast decline of $653 million annually at 2011 market prices by 2017. The City of Adelaide is also expected to suffer a loss of around $435 million while Salisbury and Port Adelaide Enfield, also located in the north of Adelaide, are among those with the highest impact on the GRP.

TABLE 13: TOP 10 LGAS IN SA WITH HIGHEST LOSS OF GROSS REGIONAL PRODUCT, 4 YEARS AFTER CLOSURE ANNOUNCEMENT

Rank	LGA	$2011m annual rate (market prices)
1	Playford (C)	-652.84
2	Adelaide (C)	-435.16
3	Salisbury (C)	-383.00
4	Port Adelaide Enfield (C)	-368.64
5	Onkaparinga (C)	-318.48
6	Charles Sturt (C)	-271.16
7	Marion (C)	-240.64
8	West Torrens (C)	-237.20
9	Tea Tree Gully (C)	-86.28

Source: NIEIR, 2014

4 SUMMARY

The effects of the announced motor vehicle industry closures in Australia have already begun to be felt throughout the sector. Projections of the likely impact up until 2017, around the time production will cease in Australia, as modelled by the National Institute of Economic and Industry Research, demonstrate the significance the closures will have on both employment levels as well as on Gross Domestic Product. Close to 200,000 jobs are forecast to be lost as a direct impact of the facilities closure, with a fall in GDP of $29 billion or more, with Victoria, New South Wales, Queensland and South Australia estimated to bear the greatest brunt.

The data presented in this report highlight the difference between two models, namely what would have been GMH's, Ford's and Toyota's production if they continued on in Australia, compared to a decline in motor vehicle production between December 2013 and December 2017.

For these comparisons a recovery in motor vehicle is allowed for where thirty per cent of the lost production from the 2005 levels is regained. However because of the current inefficiencies in the industry the gain in units produced translates into less than a 20 per cent gain in real output. However, by 2018 the exchange rate could have fallen significantly and the market share of domestic motor vehicle manufacturing could well have recovered to approach mid-2000 decade levels of 100,000 units at quarterly rates. NIEIR highlight that if this was to have occurred then the assessed cost of the motor vehicle industry closure would by 50 per cent greater for the indicators showing dollars per million and 35 per cent greater for employment indicators.

According to NIEIR findings, in this case the negative shock to the economy would be considerably greater than the forecast $29 billion national GDP loss. The loss in national gross product would be in the vicinity of $44 billion while the decline in national employment would be 270,000. These costs would be incurred if the exchange rate returns to 65 cents or below and stays at around this level over the 2017 to 2024 period.

Additional production losses can be expected from what has been assessed here due to the undermining of the economics of complex manufacturing in Australia. The motor vehicle industry is the main conduit for the introduction into Australia of advanced technology and the training of labour in the necessary skills. The ending of this conduit will increase the costs for other complex manufacturing industries no doubt leading to other plant closures.

Further detail on the impact by Local Government Areas across Australia can be found in the full NIEIR report, *Full Motor Vehicle Closure: The impact on Australia and its regions* which is available at www.adelaide.edu.au/wiser.

REFERENCES

National Institute of Economic & Industry Research (NIEIR). 2014. *Full Motor Vehicle Closure: The impact on Australia and its regions.* Report for the Australian Workplace Innovation and Social Research Centre at The University of Adelaide, Melbourne.