# 3 Timescale over which the impacts of plant closures could occur

This chapter uses a dynamic‑modelling framework to illustrate adjustments that may ensue after the closure of passenger motor vehicle manufacturing plants in Australia.

The closure of the manufacturing plants will result in a decline in employment in automotive manufacturing and related activities and, as the economy adjusts, an increase in employment in other industries. While jobs are continually being lost and created in the economy, the scale of job losses could lower the level of national employment and raise the rate of unemployment in the immediate post-closure period. Such effects would be concentrated in specific-regions of Victoria and South Australia and the effects may be sensitive to the rate at which these economies adjust following the manufacturing plant closures.

To illustrate the adjustment process and flow-on implications for state and national economies, two job loss scenarios are modelled — a higher and a lower job loss scenario. In each of these, it is assumed that people previously employed in passenger motor vehicle manufacturing and upstream industries add to national unemployment in the short run (box 3.1). The higher job loss scenario estimates that in the order of 33 000 jobs could be lost with the closure of passenger motor vehicle manufacturing, and the consequential rationalisation of firms in the automotive supply chain.

The higher job loss scenario includes job losses among component manufacturers, other manufacturers and suppliers of services used by motor vehicle producers. There could be a smaller number of job losses if some component manufacturers or other suppliers were able to adjust to plant closures without shedding jobs, for example by seeking new opportunities in the years before the closures.

On the other hand, there may be other job losses arising from the initial contraction in production across the economy. For example, the closure of passenger motor vehicle manufacturing plants could affect demand at local restaurants or other businesses, leading to further job losses. The extent of any such job losses will depend on the time period over which plant closures occur, on production and consumer behaviour and on adjustment in the supply chain.

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| Box 3.1 Transitional unemployment and job loss scenarios |
| The Commission’s analysis of people previously employed in the Australian manufacturing sector (appendix C, Inquiry Report) shows that about two thirds of former manufacturing employees were re-employed on a full time, part time or casual basis within 12 months of becoming unemployed. This is broadly consistent with the experience of retrenched Mitsubishi employees following the closure of the Lonsdale engine manufacturing plant in 2004. The analysis also indicates that the number of people that remain unemployed tapers off over time.  It is estimated that around 29 000 people are currently employed in passenger motor vehicle manufacturing and what the ABS classifies as automotive component manufacturing. In addition, an estimated 16 300 people are employed in other manufacturing and service activities supplying passenger motor vehicle manufacturers.  In the modelling, it is assumed that passenger motor vehicle manufacturers and input-supplier job losses occur in 2016-17, although, as noted in the inquiry report, the job losses will more likely be staggered over several years. It is also assumed that the movement of people between employment and unemployment and into and out of the workforce is such that the unemployment arising from the closures would be eliminated by 2020‑21 (appendix C).  The Commission considered two scenarios for job losses among industries that supply the passenger motor vehicle manufacturing industry.   * A ‘higher’ job loss scenario where: 80 per cent of jobs in the passenger motor vehicle manufacturing industry would be lost (20 per cent retained for ongoing design and engineering, head office, sales and marketing functions and specialist and bespoke passenger motor vehicle manufacturing); 40 per cent of employees in automotive component firms lose their job; and flow-on job losses in the supply chain in proportion to each industry’s sales to passenger motor vehicle producers. * A ‘lower’ job loss scenario where: job losses in passenger vehicle manufacturing match those announced by Ford, Holden and Toyota (6600); 40 per cent of employees in automotive component firms lose their job; proportional declines in employment in other manufacturing industries; and non-manufacturing industries responding via real wage adjustments (rather than job losses).  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  | 2016-17 | 2017-18 | 2018-19 | 2019-20 | | Higher job loss scenario | Victoria | 24 150 | 8 190 | 3 890 | 1 330 | | South Australia | 8 390 | 2 850 | 1 350 | 460 | | Other states | 70 | 20 | 10 | 0 | | **Total** | **32 610** | **11 060** | **5 250** | **1 790** | | Lower job loss scenario | Victoria | 11 980 | 4 060 | 1 930 | 660 | | South Australia | 3 930 | 1 330 | 630 | 220 | | Other states | 70 | 20 | 10 | 0 | | **Total** | **15 980** | **5 410** | **2 570** | **880** | |
| *Source*: Commission estimates. |
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Reflecting this uncertainty, the Commission has conservatively reported that up to 40 000 people may lose their jobs as a result of the closure of the motor vehicle manufacturing plants and the rationalisation of firms in the supply chain.

While the modelling does assume that plant closures do not affect the longer-term rate of unemployment, it does not imply that each person losing their job is ultimately re-employed or re-employed on a full-time basis or at a similar wage. Rather, it postulates that the broader labour market structure and general economic conditions determine the aggregate level of employment and rate of unemployment, and the distribution of jobs across activities and regions.

The sensitivity of results to alternative assumptions is detailed in chapter 4.

## 3.1 Regional perspective

As indicated by the longer-run comparative‑static simulations (chapter 2), the economic impact of the closure of passenger motor vehicle manufacturing plants in Australia is projected to lead to a shift in employment between activities and regions and investment in new activities. With the closure of passenger motor vehicle manufacturing plants, output and employment in Victoria and South Australia are projected to decline at the time of shutdown relative to levels that would otherwise have prevailed without the shutdown. The declines would reflect both the direct effects of plant closure and the induced (or flow‑on) effects of lower levels of activity and employment on aggregate state expenditure and activities providing goods and services to consumers and investors (including retail and service industries, as well as manufacturing).

The changes in output and employment induced by the plant closures will be significant in the short term in several regions of metropolitan Melbourne and Adelaide, and in Geelong.

Against the backdrop of ongoing growth, it is projected that the output reductions in 2016‑17 associated with plant closures could offset around half of the annual increase in GSP that may otherwise occur in Victoria and South Australia. The estimated changes in employment also broadly align with the annual increase in employment that could otherwise occur (figure 3.1) — although as noted in the main report, the employment reductions associated with the closure of passenger motor vehicle manufacturing are likely to be staggered over several years.[[1]](#footnote-1)

Figure 3.1 State employment: illustrative timescale of the effects of closing passenger motor vehicle manufacturing plants, assuming a fully mobile labour forcea

*Higher job loss scenario (‘000 persons)*

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| --- | --- |
| **Victoria** | |
|  |  |
| **South Australia** | |
|  |  |
| **Other jurisdictions** | |
|  |  |

a Note that the right hand figures are drawn for the sub-period 2014-15 to 2019-20 to different scales to illustrate the impacts in the context of scales relevant to the respective jurisdictions over the sub period.

*Source*: Commission estimates based on the MMRF-Auto14 model.

As indicated by the longer run comparative‑static simulations (chapter 2), some of the resources from Victoria and South Australia will shift to other jurisdictions, as expanding activities progressively absorb labour from contracting industries. This will lead to a small increase in gross product and employment in these other parts of Australia. The full national effects are likely to be realised over an extended period as regional industries take time to adapt and the workforce to adjust fully, including between occupations and location of work.

The timing and magnitude of the adjustment is sensitive to assumptions about the flexibility of real wages (discussed below) and the interstate mobility of labour (examined in chapter 4).

## 3.2 National perspective

Given the limits on the capacity of expanding industries to absorb labour leaving vehicle manufacturing and suppliers in the short run, the effects of plant closures in Victoria and South Australia are initially projected to outweigh the expansionary effects across the economy as a whole. In net terms, national economic growth is projected to slow in 2016‑17 with the exit of passenger motor vehicle manufacturing. The slowdown in the rate of growth of GDP is estimated to range from 0.2 to 0.3 per cent for the low and high job loss scenarios respectively, all else equal.

The low job loss scenario assumes greater real wage flexibility in the workforce in the short term. The real wage adjustments would make an increase in employment in non-auto related activities more attractive for employers, reducing the transitional lag between plant closure and redeployment of retrenched employees. The greater the flexibility of real wages and the movement of people between regional activities, the lower would be the short-run declines in employment and decline in output.

Plant closures also release funds previously paid as automotive subsidies. The modelling assumes for illustrative purposes that Australian households receive these budgetary assistance outlays in the form of lump‑sum payments. This leads to an increase in consumer demand.

Over time, the national labour market continues to adjust. In line with the empirical results from the Commission’s analysis using the Household, Income and Labour Dynamics in Australia (HILDA) survey, and survey information about the experience of retrenched Mitsubishi employees, it is assumed that additional unemployment arising from plant closures would taper off over a four to five year period. Over this period, real wages would adjust, so that the labour is progressively absorbed by existing and new activities across the economy. Firms would adjust their capital depending on the profitability of doing so. As noted in chapter 2, the real exchange rate depreciation associated with this adjustment process would favour trade-exposed exporting and import competing activities.

1. As noted in the inquiry report, Ford, Holden and Toyota have given advance notice of their intention to close their manufacturing plants and some employees might leave before the closures. The timing of retrenchments at firms supplying the motor vehicle manufacturers will also vary, depending on the circumstances facing individual firms. [↑](#footnote-ref-1)