

# Automotive surrender: The demise of industrial policy in the Australian vehicle industry

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## Abstract

Australia developed a strong and successful automotive manufacturing industry after the Second World War, based on active industrial policy. But in 2017, mass vehicle assembly in the country will cease altogether, as the last global automakers operating in the country close their final plants, with negative spillover effects along the automotive manufacturing supply chain. After 2017, Australia will be the only major industrial country with no vehicle assembly whatsoever. This article analyses the shifts in industrial policy that explain both the initial postwar expansion, and the subsequent decline and closures. Policy-makers incorrectly assumed that the critical goal of stimulating automotive exports could be achieved through trade liberalisation, but dismantling tariffs only stimulated vehicle imports without increasing overseas demand for Australian cars. Production declined in tandem with tariffs, and there was no clear industry policy strategy for facilitating the redirection of released resources to more productive manufacturing activity, when that outcome, predicted in neoliberal comparative advantage theory, failed to materialise. Financial market deregulation, resulting in financialisation of the economy, coupled with high commodity prices, resulted in an overvalued and volatile currency, attracting foreign investors to resources and asset speculation while appearing to increase manufacturing production costs. A clear contrast is drawn between Australia's policy passivity in recent decades, and the continued policy activism visible in other jurisdictions of all political orientations – including countries which, particularly after the global financial crisis, faced economic and industrial challenges at least as daunting as Australia's. In the 1970s, Australia had been among the world's top 10 auto manufacturers; after 2017, it will be one of only two G20 countries completely lacking mass automotive manufacturing capacity. The

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industry's disappearance from Australia is shown to have resulted from some unique policy choices: understanding them may help avert future similar policy errors.

**JEL Codes:** L52, L62, O14

### **Keywords**

Australia, auto industry, car manufacturing, deindustrialisation, financialisation, industrial policy, trade liberalisation

## **Introduction**

Mass motor vehicle assembly will cease in Australia in 2017. Australia was once a major automotive producer: in the early 1970s, the country manufactured almost as many vehicles as its consumers purchased each year, and Australia ranked among the 10 largest auto producers in the world.<sup>1</sup> The industry's strong presence reflected the leading influence of industrial policy. But since the beginning of neoliberal policy reform, dating back to the early 1980s, the industry has experienced steady decline, measured in both absolute terms and relative to the size of the domestic vehicle market. The industry's shutdown now marks the closing chapter of an important economic and industrial experiment. Facing a lack of policy support and powerful economic headwinds (including an overvalued currency and a deeply unbalanced structure of international trade), all three of the vehicle manufacturers remaining in Australia (Ford, GM/ Holden and Toyota) decided in close succession in 2013 and 2014 to shutter their operations entirely; production at the last of their plants will cease in 2017 (Clibborn et al., 2016). Australia remains a vibrant and lucrative market for new vehicle sales: Australians purchased 1.2 million new passenger vehicles in 2016 – the most ever, qualifying as the 15th largest new car market in the world.<sup>2</sup> But after 2017, none of those vehicles will be assembled in Australia. While automotive manufacturing has experienced challenges in many countries, Australia is the only large vehicle manufacturer to accept the complete shutdown of mass vehicle assembly altogether. And after 2017, Australia will be one of only two G20 economies (the other being Saudi Arabia) with no mass automotive manufacturing capacity whatsoever.<sup>3</sup>

Automotive manufacturing has traditionally been viewed as an industrial 'jewel' by economic policy-makers and development officials – and with good reason. The industry typified the wealth and productivity of Fordist mass production. And while Fordism has changed (and by some measures receded), auto manufacturing carries on a highly Fordist practice.<sup>4</sup> Motor vehicle assembly plants are large, tightly managed facilities, with a large minimum efficient scale to achieve benchmark productivity levels.<sup>5</sup> They anchor complex, value-added supply chains that reach far into other sectors of the economy; indeed, mass motor vehicle assembly probably possesses the longest and most complex supply chain of any major industrial sector (measured by a very high ratio of indirect to direct inputs). The industry demonstrates superior labour productivity, trade-intensity and innovation-intensity, and uses more robots in production than any other (International Federation of Robotics, 2016). Attracting investment in automotive manufacturing is

thus usually a priority for economic development officials in both developed and developing countries. To be sure, the policy levers utilised in this effort have evolved, in line with changes in the technology of production, the increasingly market-centric perspective of economic policy, and the changing terrain of globalisation. But the industry is still a prime ‘catch’ for policy-makers, and active industrial policy continues to fundamentally shape its global footprint.

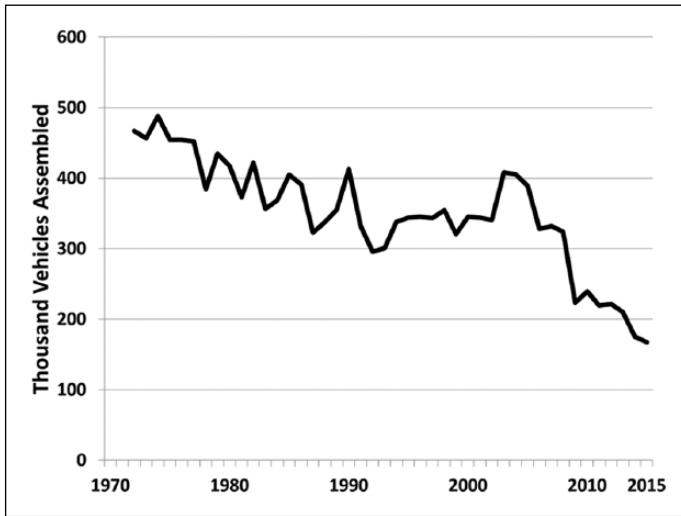
In light of the continued relevance of active industrial policy in influencing global automotive production, the Australian experience seems all the more unusual. How did a once-leading automotive manufacturer allow a strategically important, high-value industrial sector to disappear entirely, while other jurisdictions – if anything – stepped up their efforts to recruit and retain automotive investment? What explains this unique Australian trajectory? Even in other relatively small, higher-cost economies (like Canada, Sweden, or Belgium), which have also faced daunting industrial challenges, policy-makers remained determined to sustain a domestic automotive manufacturing footprint – and that determination paid off in the continuing viability of production. Other industrialised countries have succeeded in expanding automotive production (such as Germany, Korea and recently even the US).<sup>6</sup> Australia thus constitutes an outlier, and the lessons and implications of its automotive surrender should be considered carefully.

This article reviews the shutdown of vehicle manufacturing in Australia, and the sea-change in policy thinking that contributed to the collapse. The next section provides a brief history of Australian automotive manufacturing, including both its postwar expansion and its steady contraction since the 1980s. Section ‘Understanding Australia’s automotive policy surrender’ considers the economic and political factors which contributed to the changes in automotive industry policy that facilitated, and ultimately accepted, the decline and eventual shutdown of the industry. Section ‘Industrial policy activism in other automotive-producing countries’ contrasts Australia’s automotive policy passivity to the continued use of active industrial policy in other countries. The article concludes that the shutdown of Australia’s automotive assembly industry was both globally unprecedented and preventable. This unique outcome must be interpreted as an outcome of policy choices, which in turn reflect Australia’s unique political-economic context and history.

## **The rise and fall of automotive manufacturing in Australia**

The auto industry has been an important feature of the Australian economy throughout the postwar era, with active industrial policy shaping that history.

The first global manufacturers commenced Australian production in the 1920s, reliant on the import of ‘kits’ of components which received only final assembly in Australia.<sup>7</sup> After the Second World War, a Labor government implemented an ambitious industrial strategy to develop automotive manufacturing as part of a broader plan for economic diversification (Emmery, 1999). The plan centred on an effort to develop an ‘Australian car’: designed and manufactured in Australia, embodying Australian-made components. General Motors, through its iconic Australian subsidiary Holden, was the first to produce a uniquely Australian vehicle in 1948 (Kennedy et al., 2007). Other global original equipment manufacturers (OEMs) followed suit, establishing comprehensive and



**Figure 1.** Australian vehicle assembly.

Source: Ward's Auto (2015).

vertically integrated Australian operations. The overall strategy was supported with active policy levers, including import-licensing, local content rules and tax and duty concessions (Pursell, 2001).

Import licensing was eliminated in the 1960s, replaced with quotas and tariffs on imported vehicles and parts. Tariff rebates were paid to OEMs which met strong domestic value-added targets (eventually set at 85% of the value of vehicles assembled in Australia); this provided further stimulus to domestic components production (Pursell, 2001). High tariffs (above 50% on finished vehicles) and quotas limited imports to around 20% of domestic sales. In the 1970s, the strategy was amended to encourage exports: companies received incremental relief from the domestic content threshold, reflecting the value-added in exported components and vehicles (Pursell, 2001). By the 1970s, the industry produced close to one-half million vehicles annually (Figure 1). The country assembled almost as many vehicles (for both domestic and export use) as Australians purchased, making Australia largely self-sufficient in vehicle production on a net basis.<sup>8</sup> Automotive manufacturing was the country's largest manufacturing sector, employing over 100,000 workers (Australian Bureau of Statistics (ABS), 1975, Chapter 21); it was concentrated in two major clusters (in Victoria and South Australia), but with a supply chain that reached into all states.

Downsides of this strategy included a highly fragmented industry structure: 5 different OEMs produced up to 15 different models, but with small production runs (Pursell, 2001). Combined with high tariff protection, this meant that vehicles in Australia were considerably more expensive than in Europe or North America (Automotive Review Secretariat, 2008; Pursell, 2001). On the other hand, the focus on fostering unique Australian models spurred significant automotive design, engineering and research capacities within Australia. As a result, the Australian industry demonstrated a higher

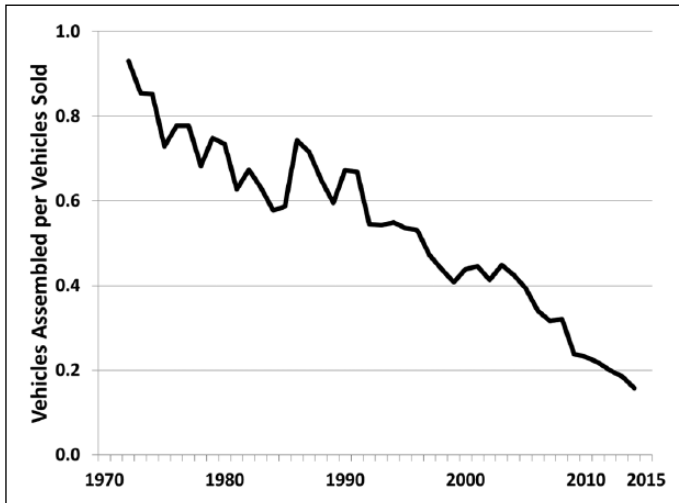
proportionate innovation effort than other countries which also lacked home-grown OEMs (Stanford, 2017).

As part of a broader vision of market-oriented reform, a subsequent Labor government in the mid-1980s dramatically changed its approach to macroeconomic, labour market, industry and trade policies (Pusey, 2003). This shift in policy direction constituted a controversial effort by Labor to implement core neoliberal policies such as anti-inflation measures, wage restraint, financial liberalisation, tariff reduction and deregulation, but conditioned by a unique political bargain that included a range of other measures intended to cushion the impact on working people. From the beginning, this policy direction embodied an uneasy coexistence of market and planning, as the government grappled with the competing objectives of enhancing business confidence and maintaining support from its core constituency.<sup>9</sup>

A complex and contested approach to industry policy was a key component of this grand compromise, in which the auto industry obviously played a central role. In 1984, the government implemented a new Motor Industry Development Plan, called the 'Button Plan', after the Industry Minister of the day (Productivity Commission, 2014: 30). Its main features were the elimination of quantitative restrictions on imports, replaced by tariff quotas (which in turn were also phased out by 1992), and steep reductions in vehicle tariffs, which fell immediately from 57.5% to 45%, and then by 2.5% per year for the next 12 years, reaching 15% by 2000 – by then in line with typical most favoured nation (MFN) tariffs levied by most other industrial countries. To support the domestic industry through this change, the government implemented direct subsidies and incentives to domestic production, supposedly on a temporary basis (Pursell, 2001).

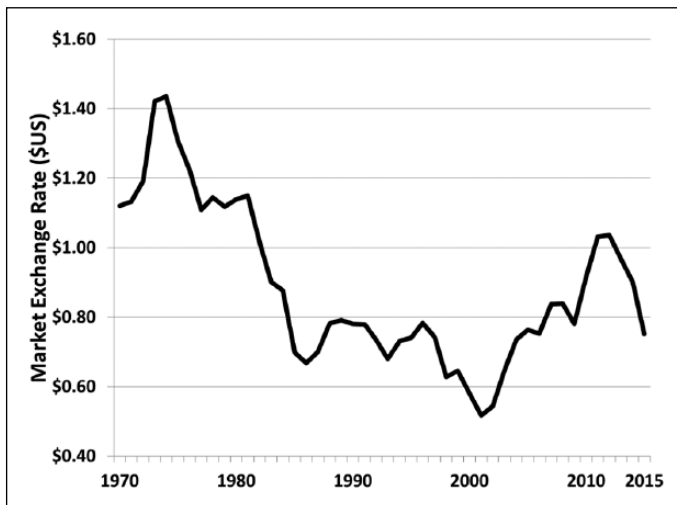
The industry consolidated down to four OEMs, producing fewer models in just four assembly plants. Imports surged in the wake of unilateral trade liberalisation, providing Australian consumers with more choice and lower prices. The domestic industry's share of domestic sales fell steadily. Exports increased, but not nearly enough to offset the decline in domestic sales, so overall production fell about 20% and a large and chronic automotive trade deficit emerged.<sup>10</sup> The decline in domestic production was all the more substantial when measured in relative terms – that is, as a proportion of the domestic vehicle marketplace (which continued to expand on the basis of a growing population and rising living standards). By the early 1990s, Australia was assembling barely half as many vehicles as its consumers purchased (Figure 2) – a sharp decline from the net self-sufficiency that was attained in the 1970s.

Later, in the 1990s and early 2000s, vehicle assembly stabilised (at around 350,000 units per year), and employment in automotive manufacturing expanded slightly. This was in part due to the lower value of the Australian dollar at the time, which enhanced the relative cost competitiveness of Australian production, encouraging OEMs to produce more in Australia (including for export sales). The Australian dollar depreciated by one-third between 1989 and 2001 (Figure 3), reaching an all-time low of just over 50 cents US in 2001.<sup>11</sup> Modest growth in exports also supported production levels: by the mid-2000s, exports accounted for 40% of all vehicle output. Some of this export growth reflected OEMs' allocation to Australian assembly plants of models with broader international sales potential, rather than traditional iconic Australia-specific models (Automotive Review Secretariat, 2008). However, the industry's share of domestic sales



**Figure 2.** Vehicle production-to-sales ratio, Australia.

Source: Author's calculations from Ward's Auto (2015).



**Figure 3.** Australian dollar exchange rate.

Source: Reserve Bank of Australia (2017).

continued to shrink, and total production lagged far behind ongoing growth in domestic sales, so the production-to-sales ratio continued to fall steadily.

After 2000, the Australian government introduced another automotive support programme, based on duty remission credits, again supposedly on a temporary basis (Automotive Review Secretariat, 2008). But Australian production began to decline

sharply after 2004, reinforced by a dramatic appreciation in the Australian currency (Figure 3). The Australian dollar doubled in value between 2001 and 2012, eventually exceeding parity with the US dollar. This badly damaged the cost competitiveness of Australian auto production. However, the government's response was to embark on further unilateral trade liberalisation: in 2005, the tariff on vehicle imports was cut by another 5 percentage points to 10% (Automotive Review Secretariat, 2008), and Australia began signing free trade agreements (FTAs) with auto-exporting jurisdictions, starting with the US and Thailand in 2005.<sup>12</sup> Imports reached close to 90% penetration of the domestic market, but automotive exports actually declined (reflecting Australia's high costs, and inconsistent export marketing of Australian-made vehicles by the OEMs).

Total domestic assembly fell by half between 2004 and 2010.<sup>13</sup> Mitsubishi shuttered its Australian engine and assembly plants in 2008 (Beer and Evans, 2010). The 2008–2009 global financial crisis (GFC) posed more challenges. A 'cash for clunkers' vehicle purchase incentive helped maintain domestic demand, and special loans were offered to GM-Holden in response to its liquidity crisis and bankruptcy restructuring. But even after the global economy exited from recession and financial conditions stabilised, Australian auto production continued to decline. Ford was the next assembler to announce its departure in May 2013, followed by GM-Holden later that year and Toyota in February 2014. At the time of the latter closures, the federal government was led by conservative Prime Minister Tony Abbott, who stated bluntly that 'the government's role is not to prop up private business' (Taylor, 2013). Traditional bipartisan support for active automotive industry policy had evaporated, hastening the decisions by GM and Toyota to leave (Senate of Australia, Economics References Committee, 2015).

Australia retains a modest truck and specialty vehicle manufacturing industry; some automotive components manufacture will also continue, based on sales to the domestic aftermarket and OEM assembly operations in other countries (Federal Chamber of Automotive Industries (FCAI), 2015; Senate of Australia, Economics References Committee, 2015). Australia's strong automotive research and engineering capabilities (the legacy of the 'Australian car' strategy) may support some continued work in that sphere for the global supply chains of OEMs. For example, Ford has announced plans to maintain significant Australian engineering facilities. Policy-makers continue to explore options for preserving and nurturing remnants of the industry (Clibborn et al., 2016; FCAI, 2015; Senate of Australia, Economics References Committee, 2015). Nevertheless, with the cessation of large-scale passenger vehicle assembly, Australia's status as a major automotive producer is ending.

## Understanding Australia's automotive policy surrender

The disempowerment and ultimate failure of Australian automotive industrial policy over the past 30 years must be understood in the context of parallel developments in the national political economy during that period — together, of course, with marked changes in the contours of global automotive competition. Beginning in the early 1980s, a bipartisan consensus emerged that the previous state-supported development strategy, based on import-substituting industrialisation and a corporatist approach to income distribution and industrial relations, would be disassembled in favour of a more deregulated,

market-driven approach (Kelly, 2008; Pusey, 2003). The first major steps in that epochal shift were taken under the leadership of a Labor government which initially attempted to combine neoliberal trade, deregulation and financial policies with continued structures of tripartism and an expansion of some social protections. Supporters of the approach hoped that by trading off traditional labour movement demands as part of the compromise, support could be won for continued interventions in industrial policy and other dimensions of economic and social planning such as medical and retirement insurance. The Scandinavian model of active tripartite industrial planning was invoked (as, for example, in the 'Australia Reconstructed' exercise: see Australian Council of Trade Unions/Trade Development Council Mission to Western Europe (ACTU/TDC), 1987).

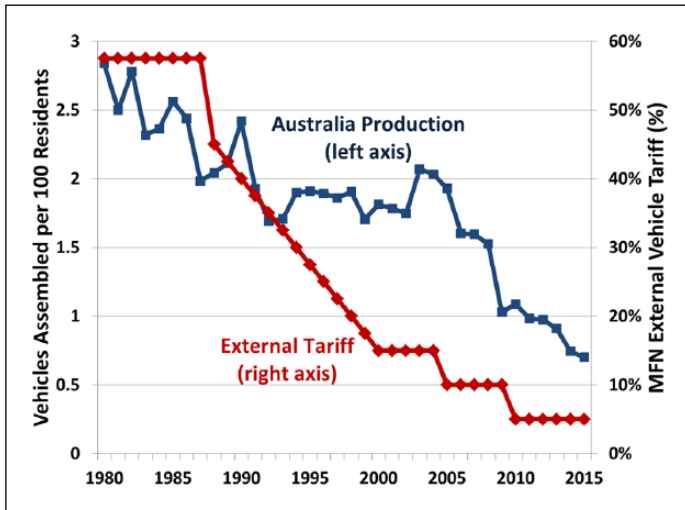
This compromise was contested, and ultimately unsustainable. Neoliberal approaches came to dominate the policy direction: visible in the pursuit of trade liberalisation, ratification of financialisation in the domestic economy, and the replacement of targeted industrial policy with a much more diffuse vision of innovation and upskilling, such as finds current representation in the National Innovation and Science Agenda (Australia Department of the Prime Minister and Cabinet, 2015). Over the years, Coalition governments extended the market-oriented aspects of the compromise such as trade liberalisation, while diluting or rolling back its more interventionist dimensions. Initial bipartisan support for the overall neoliberal framework of the plan helped to insulate its main features from subsequent revision. The gradual decline of automotive manufacturing, clearly attributable to features of that overall policy framework, was not fundamentally challenged by the Labor party and only by a dissident minority within its union base (Ewer et al., 1991).

An incremental neoliberal 'ratchet effect' is thus clearly visible in Australian automotive industry policy after the Button Plan. Liberalised trade policy continued to advance under both Labor and Coalition governments. A misplaced expectation that unilateral, bilateral and multilateral liberalisation arrangements would result in a stronger, more rational automotive industry strongly influenced automotive policy reform beginning in the 1980s. The postwar development strategy of meeting domestic demand was initially effective, and reinforced the development of domestic research and engineering capabilities. Later, however, as consumer preferences diversified, it became impossible to sustain viable domestic production on the basis of domestic demand alone. Production runs were fragmented, productivity and costs suffered and more consumers turned to imports.

Thus, automotive industry policy later tried to transition towards a greater emphasis on exports. That transition was made more difficult by the Australian industry's concentration on unique, relatively large vehicles with limited appeal in foreign markets. In retrospect, policy needed to more powerfully stimulate reorientation of domestic production toward export sales. Given the strong economies of scale inherent in this industry, that would have required winning global or at least regional production mandates from OEMs for export-oriented models for their Australian plants.<sup>14</sup>

Policy-makers correctly identified the importance of nurturing a viable export market for Australian-made vehicles. But their main strategy for accomplishing that goal – namely, unilateral and multilateral trade liberalisation – failed utterly in stimulating automotive exports. Figure 4 indicates that the decline in automotive tariffs was closely associated with the continuing decline of domestic production.<sup>15</sup> Trade negotiators





**Figure 4.** Australian vehicle tariff and production per capita.

Source: Automotive Review Secretariat (2008); Ward's Auto (2015); ABS (2017).

argued that dismantling tariff barriers would, of itself, promote a mutual reorientation of production and the growth of exports. But, while automotive imports grew, reductions in foreign tariffs did not cause the expected automatic growth in exports. The approach underestimated the fluidity of international investment location decisions. With disincentives for imports mostly eliminated, global OEMs could simply service Australia's lucrative vehicle market entirely from offshore production.

After several bilateral FTAs were signed, beginning in the mid-2000s, Australia's automotive exports went into outright decline: the generalised contraction of the industry was not prevented or even slowed by 'better access' to foreign markets. As summarised in Table 1, none of Australia's FTAs produced any measureable increase in offshore demand for Australian-made vehicles – and that demand was small (for the US) to non-existent (for the Asian FTA partners) to begin with. Trade liberalisation thus contributed to an erosion of Australian exports, not an expansion. While the auto workers' union continued to campaign against these deals, Labor governments accepted them in practice, cementing the liberalised trade policy context that contributed to the decline of automotive investment and production in Australia.

A core assumption of neoliberal comparative advantage trade theory is the notion that every participant in international exchange will automatically attain a position of beneficial specialisation by following its 'comparative advantage'. This approach assumes away the general challenge of competitiveness: industries might decline in the wake of liberalisation, but idled resources should automatically be absorbed in other, relatively more productive industries. The emphasis on transitions and adjustment, and the corresponding faith that there is a sustainable and beneficial industrial structure to adjust toward, is a hallmark of neoliberal trade policy (see, for example, Staff of the World Bank, International Monetary Fund, and World Trade Organization, 2017), and

**Table 1.** Australia's automotive trade under Free Trade Agreements (2015, \$million).

Country	Australian imports	Australian exports	Trade balance	Ratio of imports to exports
Japan	8229	29	-8199	279
Thailand	6192	26	-6166	237
US	3574	413	-3161	9
Korea	2495	39	-2457	65
China	626	25	-601	25
Total 5 FTA	21,117	533	-20,585	40

Source: Author's calculations from Australia Department of Foreign Affairs and Trade (2015). Includes sectors 781–784.

FTA: free trade agreement.

this theme was important in the evolution of industry policy in the Australian automotive sector.

Indeed, every episode of trade liberalisation, from the Button Plan through to the bilateral FTAs signed after 2005, was accompanied by the offering of automotive investment and production subsidies to support the industry's 'adjustment'. The programmes were all initially described as temporary measures to assist the industry in adapting to international pressures (Australia Department of Industry, Innovation, and Science, 2016; Automotive Review Secretariat, 2008; Pursell, 2001). Yet subsidies, whether for investment, research, or outright production, could not alter the fundamental asymmetry of Australia's automotive trade and the reduced appeal of Australia as a location for incoming automotive foreign direct investment (FDI). There was no explicit idea of what the industry would be 'transitioning' to; hence, subsidies were repeatedly rolled over. Eventually, the payment of subsidies was not even tied to concrete production or export commitments, as had been the case under the original Button Plan (Stewart, 1994). In practice, the subsidies simply deferred and prolonged the decline of the industry, rather than helping it find a truly viable equilibrium.

The liberalisation of foreign currency trading (first implemented by the Labor government in 1983) and the general financialisation of Australia's economy also contributed to the collapse of industrial policy in the automotive sector (as in other segments of manufacturing). Currency misalignments, permitted and encouraged by financial liberalisation, greatly exacerbated the industry's downturn beginning in the early 2000s. At the peak of the Australian resource boom in 2012, the Australian currency was trading 60% above its purchasing power parity benchmark.<sup>16</sup> This made Australian relative production costs 'seem' 60% higher than nominal values (measured relative to domestic price indices) would suggest. The overvaluation did not reflect strong trade performance. In fact, Australia incurred large trade deficits and growing international debt throughout the resource expansion – driven in part by large inflows of real foreign direct investment, but even more by more volatile financial inflows seeking to profit from Australia's uniquely high interest rates and the expected further appreciation of the currency. The Reserve Bank's single-minded focus on inflation targeting (another core neoliberal macroeconomic precept), and corresponding refusal to intervene to moderate the dramatic swings

in currency markets, ratified the currency's extreme overvaluation. Far from acting to limit the dollar's rise (and its negative impact on non-resource exports), the Reserve Bank actually celebrated the appreciation as a useful adjustment mechanism in supposedly preventing inflation (Stevens, 2013).

As illustrated above, an undervalued exchange rate had temporarily supported Australian automotive output during the 1990s and early 2000s. The reverse occurred, however, once the resource boom gathered momentum and the exchange rate shot up. The problem of currency overvaluation, and failure of Australian policy-makers to address it, contributed to OEM judgments that Australia was an unsustainably expensive location for future production. The subsequent retreat of the currency after the commodity price downturn in 2014 significantly restored Australian cost competitiveness. But by then it was too late: the decisions to shut down Australia's industry had already been made.

The strength of the resource boom also likely contributed to policy-makers' complacency regarding the potential consequences of automotive downsizing. Unemployment fell to very low levels in the mid-2000s, thanks largely to strong employment growth in resource extraction and its supply chain, and broader macroeconomic conditions were strong. In that context, concerns over the impact of automotive closures were subdued. Policy-makers from the major political parties, and influential bodies like the Productivity Commission of the Australian Government (2014), tended to express strong faith in the automatic, beneficial nature of inter-sectoral economic adjustments. And with a resource boom in full swing, it was easier to believe that job losses in one sector negatively impacted by soaring net imports would be naturally offset by gains in more successful export-oriented sectors. Analysts forgot that extractive resource industries demonstrate strong cyclical patterns; the quick ending of the so-called commodities 'super cycle' after 2014 should not have been a surprise.

Australia's impressive postwar achievement in building a viable and successful automotive sector was ultimately undone, as policy-makers (beginning in the 1980s) lost sight of both the rationale for, and the necessity of, active industrial policy in attracting and nurturing investment in strategic, globally mobile sectors. Evidence that the industry was locked in a downward trajectory was overlooked on the strength of undue faith that comparative advantage reallocation of resources would ultimately offset any sectoral losses and lead the national economy toward a more efficient equilibrium position. Policy-makers abandoned their previous conviction that industries like automotive manufacturing – once seen as an obvious and logical target for industrial policy – even 'matter' in a world of liberalised trade and global value chains. Hence, there was no particular reason to pay the sector any special attention.

## **Industrial policy activism in other automotive-producing countries**

Meanwhile, governments elsewhere maintained a more active stance. The continuing effectiveness of industrial policy helps to explain the continuing viability of automotive manufacturing in other jurisdictions, even those facing challenges equally or more daunting than Australia's. Of course, there has been considerable and painful automotive

adjustment and restructuring in many countries, arising from the impacts of trade liberalisation (Klier and Rubinstein, 2010; Stanford, 2010), the evolution of global value chains and their impact on supply relationships in the industry (Gereffi, 2014; Newsome et al., 2015), and the generalised course of deindustrialisation in the advanced economies (Doussard et al., 2009; Rowthorn and Ramaswamy, 1999). But in other countries, despite tumultuous global industrial and financial conditions, governments (even conservative ones) retained a willingness to mobilise substantial resources and regulatory influence to support automotive production. In no other country did policy-makers effectively leave the fate of the industry solely to international market forces and the private decisions of global OEMs.

### *The continuing rationale for industry policy in automotive manufacturing*

Continued interest in fostering automotive manufacturing in other jurisdictions is motivated by the industry's strategic economic importance and strong external benefits which spillover from automotive production into other sectors of the economy. For example, the trade-intensity of automotive products is an important motive for policy interest. International trade in automotive products accounts for close to 10% of global merchandise trade (World Trade Organization (WTO), 2014), making it the third most traded physical commodity grouping (after fuels and food). For countries which possess significant auto assembly capacity, auto exports automatically boost trade and balance of payments performance.

The innovation-intensity of automotive manufacturing is another key motive for policy interest. Research, design and engineering inputs can account for close to 10% of the total costs of vehicle production (Vyas et al., 2000). The ability to attract and retain desirable jobs in those functions is important in its own right; the prospect of positive technological spillovers into other sectors heightens the appeal. Innovation-intensity was strongly present in Australia's automotive manufacturing sector, even in its final years. The sector reinvested well over 10% of annual value-added back into research and development spending, and accounted for close to 5% of all business R&D activity in Australia (25 times more than its share of direct gross domestic product (GDP)).<sup>17</sup>

Perhaps the most important rationale for automotive industrial policy is the long and diverse supply chain which the sector supports. Assembly plants depend on purchases from many external suppliers, covering most broad sectors in the economy. In Australia's case, for example, input–output data for 2013–2014 indicated that auto manufacturers purchased AUD8 billion in total inputs from Australian suppliers (not counting imported parts and inputs).<sup>18</sup> Those purchases came from 100 different industries (out of 116 sectors defined in the ABS input-output database). Domestic supply chain purchases accounted for well over half of the total value of gross output, and more than twice the value of GDP produced within automotive manufacturing proper. A similarly complex and lengthy supply chain feeds into vehicle assembly in other countries, too (Hill et al., 2015). Vehicle assembly thus serves as an economic 'anchor', securing the presence and activity of many and varied supply sectors.

The long automotive supply chain explains the industry's strong multiplier effects on employment and incomes. Considering both 'upstream' effects (experienced through

the supply chain) and ‘downstream’ effects (resulting from consumer spending generated by automotive employment), total supported employment has been estimated at between 7 and 10 jobs in total for each job in a final vehicle assembly plant.<sup>19</sup> Thus, while direct auto industry employment and output are never large as a share of national total employment and GDP, the sector carries a disproportionate strategic (and ultimately political) importance because of those extensive external benefits. Barnes et al. (2016) identify an additional category of positive externalities from automotive production, which they term ‘social spillovers’, in the form of the social inclusion and cohesion which results from the presence of higher-quality employment opportunities in manufacturing regions.

### *The major policy levers of automotive industrial policy*

Despite the dominance of neoliberal ideas in most of the world, activist industrial policy has not generally receded in importance and effect (Rodrik, 2008; Stiglitz and Yifu, 2013). The continued relevance and effect of industrial policy remains especially visible in the automotive industry. Most governments continue to play an active role in attracting automotive investment to their respective jurisdictions. Interventions in the sector have been especially strong since the GFC (Organisation for Economic Cooperation and Development (OECD), 2009). As the financial crisis took hold, governments provided subsidies and incentives to boost vehicle demand (shocked by the impact of the crisis on consumer confidence), emergency financial aid was provided to distressed OEMs and suppliers, tariffs and other trade restrictions were imposed in several countries, and support was expanded for industry investments and research (Stanford, 2010). Even after the crisis abated, governments in most regions remained active in their efforts to attract and support domestic automotive manufacturing.

Surveying continuing automotive policy efforts, several broad themes are visible. Direct government incentives to defray capital costs are a common tool for influencing investment at critical decision points (Center for Automotive Research, 2015; Molot, 2005).<sup>20</sup> Yates and Lewchuk (2016) argue that investment subsidies are now seen by OEM executives as a normal, necessary feature of the policy environment in any automotive jurisdiction.

Automotive investment is responsive to international and especially intra-regional (Klier and Rubinstein, 2010) differences in production costs, as evidenced by the migration of investment toward lower-cost regions of Europe and North America. Governments join this race by invoking measures to reduce relative production costs in their respective jurisdictions. Such measures include policies to suppress wages and other labour costs, measures to enhance productivity (like publicly funded training, or subsidies for automation), public provision of tailored infrastructure and transportation facilities (to reduce logistics expenses), lower corporate and payroll taxes and in some locations, direct subsidies to production.

Despite the constraints of FTAs, which discipline some (but not all) of the traditional tools of industrial policy,<sup>21</sup> governments also continue to use active trade policy interventions to support their domestic industries. The use of non-tariff barriers to limit imports, and various institutional and fiscal measures to manage trade, are common; both Japan and Korea, for example, effectively utilise such measures to minimise import penetration.

Indirect supports for exports (including preferential financing, publicly financed export infrastructure and more) are also common. Several countries, including Russia, China and Brazil, have imposed targeted tariff protections against automotive products (both vehicles and components), notwithstanding trade disciplines – often invoking safeguard or anti-dumping loopholes. Indeed, the safeguard clauses which exist in most trade agreements (permitting governments to limit imports when demonstrated harm is occurring to domestic production) is another avenue through which the Australian government could have moderated the impact of unbalanced import flows on domestic production.

Active management of exchange rates has been invoked in many locations to protect the competitiveness of domestic production and discourage imports. Once again, this widespread practice stands in sharp contrast to Australia's 'hands off' approach. Governments and central banks in several key auto jurisdictions, including Japan, Korea, China and Brazil, regularly use market interventions or direct regulations to suppress exchange rates. In other countries, the same goal has been achieved through the use of unconventional monetary policy such as quantitative easing in the US, the UK, Japan and the Eurozone.

The increasing technology-intensity of automotive manufacturing, and the accelerating pace of both product and process innovation, have made government innovation policy a potent and commonly-used lever in attracting and nurturing investments. Government investment subsidies in most jurisdictions are now tailored to emphasise innovation inputs to domestic production, subsidising R&D activity at a higher rate than other forms of automotive investment or providing direct government funding for key innovation missions (such as the generous support for fuel efficiency and battery technology offered by the US Department of Energy). Broader innovation policies – such as the tax treatment of R&D investments, partnerships between industry and public research institutions, and the supply of well-trained innovation professionals – have special relevance in the auto industry, given its reliance on research and engineering inputs. The idea is that these innovation supports will entice OEMs and top-tier suppliers to locate innovation activity (and the high-quality jobs that come with it) in the domestic region. Moreover, it is hoped that anchoring innovation activity may spillover into localised assembly and production opportunities, as well.<sup>22</sup>

Direct public ownership of productive firms fell out of favour in most countries during the neoliberal era, but there remains a surprising degree of public intervention in ownership structures in the auto industry. In emerging economies, total or partial public ownership is still common in automotive manufacturing. China's rapid automotive development has been spurred in part by government rules requiring foreign OEMs, anxious to establish production in China, to make joint-venture investments with Chinese partners. This strategy facilitates the transfer of technology and management expertise, hence fostering all-round domestic capabilities. Direct public ownership is also present in Europe (such as France's partial ownership of Renault, and the German state of Saxony's continued equity share in Volkswagen); governments wield equity shares to push OEMs to retain core operations in their home jurisdictions. Public ownership was even used temporarily in the US during the GFC to support the restructuring of General Motors and Chrysler. Other forms of public ownership – including sovereign wealth fund and state development bank holdings in OEMs – also influence location decisions.

In sum, the global automotive policy toolbox remains filled with a variety of important and powerful instruments. While the evolution of technology and globalisation has certainly altered, and in some ways constrained, the application of these tools, it is obvious that investment and industrial development in this strategic sector are hardly being left to the unconstrained discretion of private firms and market signals. To the contrary, the engagement of governments in actively shaping the growth and location of the industry is, if anything, stronger than ever. Australia's decision to abandon active industrial policy in this sector, and tolerate the disappearance of mass vehicle assembly altogether, cannot therefore be ascribed to some universal trend in policy approach, nor to some set of irresistible economic constraints. To the contrary, Australia's trajectory has been unique and extreme.

### **Conclusion: Australian exceptionalism and the end of automotive manufacturing**

The development of a strong and successful automotive industry in Australia, despite the challenges faced by a relatively small and remote regional economy, contributed significantly to national prosperity in the postwar decades. That sectoral achievement reflected a broader vision of industrial and social planning that helped to make Australia by the 1970s one of the most prosperous and egalitarian societies in the world. Australia's auto industry thus both symbolised, and contributed to, the construction of that uniquely Australian social contract.

However, the pillars of the multipartite consensus underlying successful postwar development also contributed to Australia's automotive policy passivity, and corresponding deindustrialisation, in subsequent decades. Facing the same macroeconomic and political pressures confronted by other countries as the postwar Golden Age drew to a close, social-democratic leaders in Australia believed they could embrace the major features of neoliberal policy without sacrificing the industrial and social planning that contributed so much to postwar inclusive prosperity. In retrospect, they underestimated the powerful and negative effect that core neoliberal policies would have in undoing the legacy of postwar industrialisation.

The impact of trade liberalisation, in particular, on the industrial location decisions of global automotive OEMs was not well anticipated. As successive governments increasingly opened the Australian market unconditionally to automotive imports, there was little incentive for OEMs to continue to produce within Australia – the naïve faith of comparative advantage theory that new opportunities in other, better export industries would automatically offset any resulting dislocation was unfounded. The growing dominance of resource and financial capital over national economic policy further undermined the political-economic base for continued industrial policy activism. For example, the devastating impact of the post-2001 appreciation of the Australian currency on automotive production (and other non-resource tradeable industries) was ignored, and policy acted to reinforce the profitability of now-predominant (and highly financialised) extraction-oriented businesses. Uncritical acceptance of the general goal of 'microeconomic reform' by both major parties and the parallel influence of neoliberal technocratic institutions (like the Productivity Commission) reinforced the general reluctance to invoke

industrial interventions – widely derided on both sides of politics as relics of a bygone era. Finally, the (temporarily) ebullient macroeconomic conditions which accompanied the resource boom reinforced the unique nonchalance with which Australian policy-makers responded to the potential spillover job losses associated with automotive downsizing.

In other countries, in contrast, the balance of political and economic forces played out differently, in a manner that facilitated continued policy intervention to support automotive production. This was true even in jurisdictions that faced arguably more daunting automotive challenges than Australia did.<sup>23</sup> Progressive forces (including trade unions) were not as deeply implicated in the initial implementation of the neoliberal framework, and thus were perhaps freer to continue to oppose incremental neoliberal policies (such as more aggressively opposing FTAs), and to fight more explicitly for direct interventions to support domestic production (no matter how uncomfortably those fit with neoliberal ideology). Business interests also tolerated far-reaching interventions in support of automotive production; they did not see these as heralding a return to state-led development strategies. Ironically, the most powerful and expensive automotive policy interventions, involving over USD100 billion in financial assistance and the outright nationalisation of two OEMs, occurred in the United States – the most ‘market-oriented’ economy in the OECD. There, the absence of significant countervailing challenges to the authority of business-friendly policy meant that government could undertake extraordinary and far-reaching actions, untroubled by apparent inconsistency with the overall neoliberal policy frame. Less spectacularly, other national governments – even conservative ones – have been more willing than Australia’s to countenance continued activism to preserve automotive manufacturing.

Australia is likely to pay a heavy and lasting price for allowing its automotive manufacturing sector to disappear completely. Automobiles are changing rapidly: their features; their method of propulsion; how they are controlled (with self-driving technologies); and even how they are owned (with the growth of car-sharing and other ownership models). However, global demand for new vehicles continues to rise. Automotive manufacturing will remain an important part of the global industrial landscape, and carry a disproportionate influence in international trade, for the foreseeable future. Australia is now abandoning its capacity to participate in that industry, lulled into complacency by a misplaced confidence that other industries can somehow better harness the national ‘comparative advantage’ and mobilise idled resources. Unfortunately, the resource extraction boom that contributed to this policy passivity has now reversed course, so that job losses in mining and related activities are now amplifying those in automotive manufacturing as the final assembly plants are shuttered. Understanding the unique economic and political factors that contributed to Australia’s exceptional decision to allow the disappearance of mass automotive manufacturing may be helpful in preventing similar policy errors in the future.

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## Notes

1. Organisation Internationale des Constructeurs d'Automobiles (2017).
2. Author's calculations from ABS (2016b) and Ward's Auto (2015).
3. Author's calculations from Ward's Auto (2015).
4. The resurrection of Ford Motor Co, near collapse during the global financial crisis (GFC) aptly symbolises the persistence of the mass production model.
5. Typically mass-market vehicle assembly requires annual output of at least 200,000 units from each assembly plant to achieve competitive unit cost and productivity results.
6. Author's calculations from Ward's Auto (2015).
7. The discussion of the history of Australian auto manufacturing in this section draws on Allen Consulting Group (2013), Pursell (2001) and Kennedy et al. (2007).
8. Author's calculations from Ward's Auto (2015).
9. See Kelly (2008), ACTU/TDC (1987), Ewer et al. (1987) and Stewart (1994) for discussion of the trade-offs embedded within the compromise, including those in the realm of industrial policy.
10. Author's calculations from ABS (2003).
11. Figure 1 plots domestic production against the Australian dollar exchange rate lagged 2 years – reflecting the time lag before changes in relative costs affect original equipment manufacturer (OEM) investment and production outcomes. The correlation between the exchange rate and production becomes even closer after 2000.
12. Once the most recent spate of Australian free trade agreements (FTAs) with auto-exporting countries is fully implemented, including with Korea (2014), Japan (2015) and China (2015), three-quarters of Australian automotive imports will be sourced tariff-free (author's calculations from Australian Department of Industry (2013: 36).
13. Author's calculations from Ward's Auto (2015).
14. Boothe (2016) highlights the crucial importance of global product mandates in sustaining viable investment plans in small, foreign direct investment (FDI)-dependent economies.
15. Figure 2 underestimates the extent of tariff liberalisation: it pictures the MFN external vehicle tariff, but after 2005, a growing share of Australian vehicle imports faced no tariff at all (due to the impact of bilateral FTAs).
16. According to the OECD (2016), the purchasing power parity (PPP) value of Australia's currency in 2015 was 68 cents US.
17. Author's calculations from ABS (2015).
18. Author's calculations from ABS (2016a: Table 5).
19. Research quantifying total employment multipliers of this magnitude includes Hill et al. (2015), New Automotive Innovation and Growth Team (2009), Centre for Spatial Economics (2008) and Somerville (2015), and in the Australian case, Barbaro and Spoehr (2014) and National Institute of Economic and Industry Research (2014).
20. Inter-jurisdictional competition within Europe is partially constrained by European Union (EU) rules capping some forms of subsidy to private investments, but there are still plenty of policy levers through which governments attempt to influence the location of investment flows in their favour.
21. Stanford (2005) argues that a combination of consumption taxes and production subsidies can have equivalent protective effects for domestic production as a tariff, but in a manner consistent with trade agreements.

22. The link between innovation activity and mass production within a given jurisdiction is weak; OEMs can geographically separate these activities according to the most cost-advantageous locations for each.
23. The experience of the automotive industry in Sweden is an interesting comparator. The Swedish industry faced potential extinction after the GFC given the bankruptcy restructuring of both Volvo and Saab which formed the core of the industry there. From 2000 through 2010, the Swedish industry was, on average, about 15% smaller than Australia's, but Sweden surpassed Australia's output in 2011, and in 2015, its assembly output grew over 20% (author's calculations from Ward's Auto, 2015).

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