



An Economic Analysis of the Decline of the Australian Automobile Industry

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Abstract

The Australian automobile industry was at one point the largest industry in the country in terms of GDP, yet it practically became non-existent over forty years. This paper analyzes the drivers of the Australian automobile industry's failure by applying a theoretical economic lens and context of the Japanese automobile industry. Three key factors played a role in the downfall of the Australian automobile industry. First, the Dutch disease suggests the relative abundance of Australian resources in Australia lowered the labor pool and manufacturing resources, as well as raised the real value of the Australian currency, making it harder to sell Australian made products. Additionally, the presence of unions as institutions in the country led to higher input prices derived from higher required pay and soured relations between labor and multinational corporations. Finally, the 1980s tariff policy, initially in favor of a protectionist car industry, switched to minimal tariffs, rid domestic producers of their edge on foreign producers in domestic markets, and gave manufacturers no realistic way of turning a profit. Although federal policy changes could have reduced the effect of these factors, the final blow to the industry's future growth came after the OPEC oil crisis, creating a demand for small cars as compared to large cars, which was not the focus on Australian manufacturing.

Introduction

The first manufactured goods, textiles, were among the many bounties of the 1st Industrial Revolution. Across England and eventually other parts of Europe and the Americas, the implementation of large-scale factories introduced a metric of produced goods previously never seen before. The effects of the 2nd Industrial Revolution spearheaded the innovation of automobile mass production, forever changing how countries viewed transportation. American manufacturers dominated the automobile industry in the first half of the 20th century due to the investigation of assembly lines, which increased production speed and efficiency. During this time of mass production, American manufacturers realized that automobile production requires a significant upfront investment to graduate to a mass-production stage, where it can reach a break-even point and keep the factory running.

The mass production model of car manufacturing lasted until the Japanese companies became major players in the marketplace. After the devastation to Japan during the Second World War, the archipelago had to rebuild practically everything from the bureaucratic institutions to the physical buildings of Tokyo. The first post-war Prime minister, Shigeru Yoshida, prioritized a disarmament policy in favor of expanding industrial production. Through increased funding, Yoshida and subsequent prime ministers drove unprecedented growth in Japanese automobile production capacity. Japanese car companies could compete with larger foreign firms by innovating a new method of handling products: just-in-time production. The just-in-time production technique allocated production of individual car parts to competing or subsidiary companies and ordered them based on the current demand for cars, decreasing the storage

space required while maximizing sales. Industrialized nations viewed cars as a valuable industry for developing countries' steel, glass, and rubber production facilities. The final product of cars also provided a capital good of over ten years of transportation for their consumers.

Australia developed a different strategy for implementing cars after the Second World War. While the corporate infrastructure for automakers in Australia may have been more established than the Japanese, they were characteristically never actually "Australian"; instead, they were various multinational companies, primarily American or subsidiary companies controlled by foreign companies. Ford Motors Australia (FMA) was the first of these multinational companies to have a presence on the island, opening the first large-scale plant in the late 1920s. The Model T brand successfully established the Model T and Model A. General Motors owned the Holden brand, had similar success, and was a consistent spearheader among Australian car makers. Initially focusing on designing the bodies of cars, Holden competed with FMA. Moving into and out of the Second World War, the Australian government wanted to increase car production in the country rapidly and looked towards FMA and Holden for expansion plans. The government favored Holden's plan since it required less government intervention in the marketplace. Both companies continued expanding at increasing rates, eventually becoming the largest industry in the country and employing over 100,000 people by the 60s and 70s.

Both Japan and Australia had supplanted themselves as centers of car manufacturing. While Australia was concerned with meeting domestic demands and exporting raw materials, Japan broke into the international market. This status quo lasted until 1973, when the OPEC oligopoly, in protest of supporting Israel in the Yom Kippur War, practically stopped all oil exports to Australia and Japan. Ultimately, although the embargo would eventually end, the initial action taken by OPEC would mark the end for the Australian economy and enter it into a state of constant decline. The Australian car industry would fail and cease to exist today, with General Motors Australia finally closing its last factory in 2017. However, while Japan experienced major panic, the industry quickly recovered after the embargo ended, resulting in higher global expansion. Now, three of the largest ten car companies in the world are headquartered in Japan, while Toyota is the second largest globally in terms of yearly revenue.

Explanation of Dutch disease

The idea of the "Dutch disease" was developed in the 1960s with the discovery of a natural gas field in the Netherlands. Although the discovery led many people to expect an expansion in the country's economy, the more significant effect was a subsequent fall in the manufacturing export industry. Economist W. M. Corden wrote a record of all significant models of Dutch Disease, the first of which is the cord model.

The core model explores factors relative to the Australian economy and includes three industries: a booming industry (B), a lagging industry (L), and a non-tradeable industry (N). The critical assumption in this model is that the only mobile factor of production is labor, while all other factors are fixed to their respective industry. Corden identified three ways for an industry to "boom," namely, a technical innovation that stays only inside the country, a discovery of new natural resources, or the price of goods from the market rising internationally, making the supply worth inherently more (Corden 361). Corden outlines two effects of the booming industry: the Spending Effect and the Resource Movement Effect. The spending effect is initiated by the raised aggregate income from B, resulting in a rise in prices in N, assuming that the income elasticity of demand is positive. This triggers a movement of resources from B and L into N. The Resource Movement Effect, initiated by the increased demand for labor in B, pulls labor out of L, lowering the output.

Additionally, regarding the exchange rate, genuine appreciation is raised by the effects of spending and resource movement, making it harder for L to sell goods in a foreign market if it had previous sales abroad (Corden 362). Something to keep in mind, however, is that the lagging industry can be something other than a manufacturing industry. A great example of Dutch disease occurring in the agricultural sector was American Gilded Age farmers, who saw the creation of massive corporations that exported various booming manufactured products abroad, leading to an overall decline in the farmer population and a relatively appreciated currency. Typical examples in the 20th and 21st century of Dutch Disease are more typically associated with L being a manufacturing industry and B being a resource extraction industry, usually started by discovering new natural resources, such as the namesake natural gas field in the Netherlands or Middle Eastern oil discoveries.

Notably, the paper shows dramatically different results when moving away from the core model, for example, when capital is mobile between the lagging and booming industries. Mobile capital offers a more realistic perspective on a modern economy, as financial firms determine the industries or companies for investment. In other models, depending on which variables are considered mobile or fixed, a possible expansion of the lagging industry or an outright depression may occur depending on whether the service industry is labor intensive, which it statistically is.

Spending Effect:			
Industry:	<u>Booming</u>	<u>Lagging</u>	<u>Non-Tradeable</u>
Resources	Increases	Decreases	Increases

Resource Movement Effect:			
Industry:	<u>Booming</u>	<u>Lagging</u>	<u>Non-Tradeable</u>
Demand For Labor	Increases	Decreases	x
Output	Increases	Decreases	x

Application to the Australian situation

Australia has one of the most significant natural resources compared to its relatively small population. As previously discussed, this influx of raw materials is not a benefit when attempting to diversify an economy, namely the manufacturing sector. However, the idea of a direct use of the core model would be misleading, for despite the period of car manufacturing at its peak being the top industry (in terms of GDP), mining has always dominated, with the most prominent company today being Broken Hill Proprietary, a mining company headquartered in Melbourne.

The abundance of natural resources could deter newly up-and-coming manufacturing sectors from expanding in the country, as an almost constant challenge unique to Australian companies, which is a possible explanation for a lack of Australian-owned car companies, for it was impossible to challenge a competitor with excess capital in the manufacturing space. Additionally, instead of just deterring potential auto start-ups, it further makes all efforts by international companies to establish plants relatively more challenging compared to other developed countries. The inflated appreciation rate of the dollar made the export industry next to impossible for manufacturing, instead having to rely on the small domestic population of roughly ten million people to make sales. Even with this pullaway, there were still potential ventures to get into the market to avoid the high tariffs that kept foreign cars out. As mentioned, these companies initially were American, who had a general oversight in management with the prioritization of big cars over more compact cars meant for urban and suburban living, which makes up the vast majority of the Australian population. The oversight led to Japanese companies staking their claim, filling the small car market while bloating it.

Application to Japanese situation

The difference between Australia's and Japan's post-war economic models can be partially attributed to the difference in raw materials. The Japanese had fewer natural commodities per capita to offer in the market. Fitting this into the previous economic model, since there are no available resources, the booming tradeable industry is instead the manufacturing industry, with the lagging industry being agriculture. The process of urbanization followed during much of early 20th-century Japan as many more Japanese worked in factories instead of farms, as it was cheaper to import food from agricultural economies than waste the space of cultivating in the archipelago, such as pre-Great-Leap-Forward China or modern-day

India. The modern agricultural economy of Japan now primarily sells luxury products, like wagyu beef, which is profitable after the remainder of the farmers have specialized. As previously discussed, the more significant effect on the economy was the booming car industry, not the reshaped agricultural economy. As Japan had the means to ship the food, there, in turn, was less of a need for farms, creating more urban environments in all non-mountain parts of the country. The exact ports that forever changed the Japanese industry can also transport Japanese goods back to foreign markets, giving Japan a comparative advantage in its selling of cars compared with Australia. As mentioned in the previous model, the resulting switch of the booming car manufacturing industry also led to a growing service sector in Japan, which currently makes up almost three-quarters of their current industry.

Cost of Labor Unions

How does the higher cost of labor increase the price of goods?

The primary objective of labor unions is to raise wages, either by increasing the demand or decreasing the supply of their work. Both of these methods could be better for a company, as they benefit from having access to a large labor pool, which, in turn, keeps wages low. The disagreement between wages was only one of the many fights that unions had to endure; however, with others, it included fewer hours, safer working conditions, and work on time. Unions share some domestic corporations' objectives, though, such as heavy tariffs on goods to keep cheaper foreign goods out of the national market, which could jeopardize their jobs and the union's leverage.

For unions to achieve their goals, federal cooperation with workers instead of corporations has historically worked the best. Unions, in turn, do best in industries with the heaviest regulation of working laws and most benefits already guaranteed by the government (Banerjee et al.). If unions were to get their foothold in a given industry, and if they wanted to negotiate directly with the given corporation, they need to achieve some level of monopoly in labor. The percentage needed to achieve such a monopoly can vary. However, the amount needs to be enough so that the company would lose more money if all union members were to strike than they would have conceded to union demands. On a relative scale, the higher the percentage of the union, the more they can demand.

Why are Australian wages so high?

The first labor unions date back to the late 18th century in the United States. However, traction would slow until the Gilded Age and Progressive Era, when politicians sided with the unions instead of the company. Industries more likely to have Unionist ties are with "blue collar" jobs, especially with a higher risk of injury, developing a Union culture in many manufacturing

sectors. With most reforms winning out, corporations were forced to adapt to the new laws, with unions today existing as a power balance to the companies. With the union development in America, Australia began to have its own union culture, which had a statistically more significant impact than the American culture. A 2-hour less work week, one of the highest minimum wages in the world, and almost double labor union employment in the modern day are some of the successes of Australian labor unions compared to their American counterparts. Union membership persisted throughout both world wars and the post-war world, and in 1986. While American union membership across manufacturing industries was less than twenty percent, most Australian workers were still unionized. The Australian government traditionally supports almost every demand of the unions. A previous president of the Australian Council of Trade Unions, Bob Hawke, became prime minister from 1983 to 1991, overseeing a crucial time for the car manufacturing industry.

History of friction between unions and multinationals

Nissan's attempt at auto manufacturing best exemplifies the Labor-Management struggle in Australia. Although Nissan successfully imported more compact cars in Australia, the upper management decided to produce within the country to avoid high car tariffs. Nissan was, and still is, historically anti-union and consistently had problems with its Australian factories due to its high unionizing rate. Nissan overseas traditionally are in areas with little economic opportunities, such as the towns of Sunderland in England and Smyrna in Tennessee. The strategically placed operations make Nissan monopsony when buying labor pools in the immediate surrounding area since there previously were no jobs in the manufacturing center. Workers, in turn, would feel at risk of joining a union as either there previously was no basis for industrial unions, or they could not gamble the chance of losing their jobs, even if it meant better working conditions. Nissan's model of working prioritizes a flexible assembly line, producing according to concurrent demand, which has the effect of possibly overworking the workforce if demand exceeds expectations (Minchin 328). In these high-demand times, Nissan makes the most profits, guaranteeing that whatever local factory can keep producing.

When Nissan eventually landed in Australia, their previous overseas work model fell apart (Minchin 329). The first main issue lay in that Volkswagen previously built and owned the plant and needed to be more suited for the flexible assembly line Nissan championed. Additionally, with its historic labor union sentiment, Australian workers wanted to keep the current production methods. The government provides healthcare benefits and does not leverage Nissan, which it could have used in the American markets. Finally, the plant was located in Melbourne, with orders of magnitude more job opportunities for manufacturing compared to the rural towns that had previously characterized Nissan's overseas operations. Although Nissan overcame some of these challenges, becoming Australia's fourth-largest car producer and roughly one-eighth of the domestic market share, it ultimately had to close the plant entirely in 1992. Opening or continuing production in Australia was ultimately not worth the time for many foreign companies.

Australian Tariff Policy

Due to the Dutch disease and higher labor costs derived from the unions, Australian cars were inherently more expensive than the world price. Throughout the early to middle part of the automotive industry's history, lawmakers wanted to preserve domestic production due to the risk of losing the support of the manufacturing basis, which comprised a large labor force sector. Politicians subsequently enacted significant tariffs to protect this domestic production at the cost of the consumer. The industry relied on these tariffs for producers to sell within Australia, with almost zero exports of any cars outside the country due to the much cheaper cars produced by their neighbors. The high tariff rate did, however, encourage many multinationals, such as Nissan, to bypass the tariffs by producing cars within Australian borders. The strategy led to an oversaturated car market, as companies attempted to break even in their production with only a tiny population of roughly twelve million (in 1970) buying products.

Soon after the OPEC embargo on Australia, the demand for small cars shot up, something that all primary producers had not considered before. The demand became higher than the tariff could protect, leading to importing mainly Japanese vehicles for compatibility and low fuel usage. The small timespan in the changes made it harder for corporations to break even. When governing the Hawke Administration during the nineties, Bob Hawke removed the tariffs which had previously been the force keeping the industry alive, which subsequently led to the pullout of the majority of corporations, crippling domestic production.

The level of competitiveness in Australia, combined with the break-even goal for all, made it impossible for anyone to make a profit. Other countries did have similar issues, especially after the OPEC embargo rapidly shot up demand for low-fuel usage cars. Concurrently, Japanese companies also had intense domestic protection at an unsustainable rate, and even with the presence of the exporting market, many needed help breaking even due to the previous competition principle. To avoid an industry-wide collapse, the Japanese government combined all its significant manufacturers to create a duopoly of Toyota and Nissan. Australia, however, did not have this luxury since all producers were not headquartered in Australia. If the ten companies were to merge into only two or three companies as before, production could still theoretically continue with the tariffs in place, for it would have been possible to reach the break-even point and make profits. However, since these companies were multinational, a forced merger was beyond the control of any Australian bureaucracy.

Conclusion

Moving away from the seventies and eighties and into the 2000s, although the Australian car industry did exist, it was only a shell of its former self. As Orsato and Wells estimate, an



efficient modern automobile plant needs roughly a quarter of a million cars a year to break even on the investment for that year. However, the total units made by the sum of all Australian factories during this time was below this margin for one sole factory with only 200,000 cars. At its peak, there were a total of ten corporations producing automobiles within Australia. However, by 2000, this number had become only three, with imports making up 80% of Australian driven cars.

It would be beneficial to have the claims made in this paper backed up by numbers, such as the actual prices of small or large domestically produced vehicles, showing a significant increase in value compared to Japanese or American-made cars. However, there is no accessible listing of any average car prices domestically produced, nor is there any data on what the break-even point would look like for Australian factories in particular, as presumably, a higher labor cost would mean more factories require more cars to make up for that loss. In turn, this paper's current state mostly tells the industry's story with applied theories to describe later parts. Ultimately, if only one of the three factors were to be in place, or possibly only the oil crisis, there would still be a strong presence of Australian-made cars. The auto industry could exist in some form, even with all three signature characteristics and the oil crisis, if it instead specialized in a specific market, such as luxury cars or train car manufacturing. However, the collapse of the largest industry on the smallest continent resulted from the extensive natural resources, labor union culture, removal of a protectionist system, the shortage of affordable oil, and the decision-making of foreign managers.

The chances that there will ever be a recovery from this industry are unlikely, for all the problems discussed are still pressing in the country today. Mining is still the most prominent industry, the unionization rate is still comparatively higher, and there are few tariffs for the gateway to buy cheap cars. Although building an industry from a non-tradeable product such as train cars could be possible, this project would first include convincing the population to switch to public transit. This process would take years and have to survive numerous administrations.

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