Professionals Australia

~ Submission ~

Productivity Commission's Public Inquiry

"Australia's Automotive Manufacturing Industry"

November 2013

Australia's Automotive Manufacturing Industry
Productivity Commission
LB2 Collins Street East
Melbourne Vic 8003

Australia's Automotive Manufacturing Industry

Professionals Australia is pleased to make this submission to the Productivity Commission's Inquiry into Australia's Automotive Manufacturing industry.

We believe that we must maintain automotive manufacturing in Australia because:

- It plays a pivotal role in research and development and innovation;
- It is a key employment market for high-end technical expertise;
- A broad industry base in Australia is essential, beyond the mining and services sector.

As a nation, we are one of but a few countries around the world that can take a vehicle from concept to production. Automotive manufacturing is one of the few remaining value-add industries where we are ahead of the world pack and it has the highest research and development spend of any manufacturing sector.

Maintaining an Australian automotive industry is about the kind of country we want to be. It is about whether we want to have high-skill, high-wage jobs in industry which can deliver products and services to the world. The alternative is to allow further narrowing of the breadth of industry in Australia, leaving us further vulnerable to the vagaries of international markets for our natural resources.

If we are content to be Asia's quarry, then we must be content to a future where commodity prices and currency fluctuations are the most fundamental consideration in our economy.

Much like any advice about how we manage our personal finances, when it comes to maintaining a robust economy over the long-term, diversity is the key. That's why manufacturing remains integral to our future as country.

The automotive sector – at the apex of the manufacturing sector – drives innovation, research and development and high-skill jobs. Without those jobs, highly skilled engineers and technicians will be bound for overseas.

The maintenance of automotive manufacturing represents a contribution to building a more productive, more innovative country. It should not be done at any cost, and we must be confident that the companies in which we effectively invest make sound business decisions.

If you have any queries about the content of this submission, please do not hesitate to contact me.

Yours sincerely

Chris Walton, CEO

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About this submission

This submission does not deal with all elements of the Terms of reference for the Inquiry, but rather concentrates on our areas of knowledge and expertise.

We represent technical professionals in Australia, with coverage of engineers nationally, performing design, scoping and project management roles across essential industries and services including IT, mining, construction, water, power, road and rail. We have a strong and vocal membership in the automotive industry.

These professionals are the key to Australia's future beyond the mining boom. They enable productivity growth, a diverse economy and the maintenance of a high-wage, high-skill industry in Australia. The automotive industry is a significant employment market and pull factor for these professions, and is important in maintaining a local workforce in Australia.

We do not concentrate herein on the economic contributions of the industry to the country. This has been adequately dealt with by key stakeholders and government. We deal with our key areas of knowledge and make no apology for being vocal advocates for who we represent and advance all arguments from a basis of fact and a commitment to a prosperous society.

Herein we concentrate on addressing Terms of Reference 1 and 2, and specifically "Australia's attractiveness as an investment location for all phases of automotive manufacturing activity, from research and development through to production of components and vehicles", "domestic and international demand for Australian design and engineering services, vehicles and automotive products"; and "consumer preferences, including consumer demand for new products and technologies", taking into account " "the impact of current workplace arrangements in the industry" and "the spill-over benefits of the automotive sector, such as technology diffusion".

For a smarter, more productive Australia

The automotive manufacturing industry in Australia both supplies and drives research and development and innovation. Its departure would have a profound and – over the longer term – seismic effect on the fabric of the Australian economy, driving us further to the low-end of the skills and training spectrum, reducing our ability to research, develop and innovate. It would further hamper our ability to improve productivity, bring new products to market and hold a diverse industry base which can provide high-wage, high-skill jobs beyond the resources boom.

A key to innovation and research

Australia's research and development performance is at best lacklustre and getting worse over recent years, while our innovation output is woeful. If you remove the contribution the automotive industry makes to our research and development spend in Australia, at $693 million in 2011-12, our performance appears even more parlous.

The departure of the automotive manufacturing industry would see a further erosion of our national ability to research, to create new ideas and products and to manufacture. The application and utility of the research and development spend of the automotive sector goes beyond car production – it has extensive linkages with other sectors, such as "heavy engineering, marine and aerospace"[1]. Its loss would see a reduction not only in the direct investment of the automotive industry in research and development and in innovation, but also the sectors to which it is linked, including universities, research centres and manufacturing. The crucial demand it supplies for these services would be gone and in time our research and innovation output would be markedly diminished.

While Australia spends "approximately 2.2 per cent of its GDP on research and development (R&D) - putting us just below the middle of the OECD table", our performance when compared to innovation economies of Scandinavia, the US and Israel[2] is poor. The Chief Scientist has asserted that our spend as a proportion of Gross Domestic Product[3] is declining, just at a time when the

[1] Australian Government Department of Industry. *About the Automotive Industry.* *http://www.innovation.gov.au/industry/automotive/Pages/AbouttheAutomotiveIndustry.aspx*.
[2] ABC Science (2011). *Australia's science budget 'uninspiring'.* http://www.abc.net.au/science/articles/2011/05/11/3213833.htm.
[3] The Drum, ABC. *Research needs guarantees for long-term investment.* http://www.abc.net.au/news/2013-08-13/schmidt-science-funding-election/4883800

new Federal Government is bringing increased focus to the need to improve our productivity performance.

Innovation drives productivity and growth

Innovation is a driver of both productivity and economic growth, as shown by the United States where half of the economic growth in the last 50 years can be attributed to scientific innovation[4]. It is but one of many other resource-rich countries around the world which have vastly better performances in innovation than Australia. Norway, dubbed "the world's most northerly Arab country"[5] by its neighbours due to its oil riches, ranks 14 for global innovation as opposed to Australia's 23rd on a weighted average of indices[6], while it ranks first in prosperity leading Australia in fourth. As a nation, we lag in producing new innovations – even against New Zealand – twenty per cent of whose firms produce product innovations that are new to international markets – while just 2.4 per cent of Australian firms do the same[7]. Our desire to innovate, or to make the most of our resources, is lacking. To allow the automotive industry to depart, without a holistic assessment of the wider impact of the industry on the economy would further underline a public policy – and industry – laziness which has been at its most visible since the latest resources boom.

Following the 1990s productivity boom, which many attribute to a sharp upturn in the uptake of technological change[8], Australia's productivity growth has been lacklustre. Our "performance over the last decade" has "slipped. Our commodity boom and terms of trade boost have masked that performance"[9]. With the automotive sector removed, the resource sector would be the last major innovator and source of investment in research and development in Australia – but is a sector which does not provide the widespread utility from technological advance that automotive manufacturing does. If there is one lesson we can learn from the cyclical nature of resources investment is that this investment cannot be counted on to continue indefinitely and is intrinsically linked to continued demand which delivers advances in a niche with little utility, which is dependent on considerations well beyond our control such as commodity prices and currency exchange rates.

The vehicle industry is a vital part of manufacturing industry innovation in this country, such as robotics and lean production, driving productivity gains through the supply chain.

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[4] Chief Scientist (2013). *Science and the Economy.* http://www.chiefscientist.gov.au/2012/03/science-and-the-economy/.
[5] The Economist (2013). "*Northern Lights".* Edition February 2 – 8 2013, p15.
[6] Ibid.
[7] S Eslake (2011). *Productivity: The Lost Decade*, p243. Reserve Bank, Canberra.
[8] R Gittins. *Productivity more about technology than reform.* www.rossgittins.com.
[9] R Green, P Toner, R Agarwul (2012). *Understanding Australia's Productivity Choice,* p8. McKell Institute, University of Technology, Sydney.

Recommendation

1. A key consideration for the Productivity Commission must be the impact that the automotive industry has on Australia's research and development effort and the resulting impact on innovation in this country over the longer term.

High-skill, high-wage jobs, for a more productive Australia

One of the key innovating and productivity enabling professions is engineering[10]. A reduction in demand for the engineers – particularly for those drawn to sectors in which they can truly demonstrate the skills and innovation they bring to their profession such as the automotive industry – would over the longer-term drive decreased interest in the profession in Australia, with resulting impacts on our ability to create and manufacture.

The future for our engineers

We are seeing an easing of demand for engineers in Australia, with Australian firms now looking to a wholly overseas solution. Figures released by the Department of Foreign Affairs and Trade show a near doubling in the importation of engineering services between 2009-2011 from $1.2 to $2.3 billion and a five year growth trend of 42.5 per cent[11], while declines in demand have been reported in every discipline of engineering, as expressed below:

Advertised internet vacancies[12]

	Sep-10	Sep-11	Sep-12	Sep-13	% decline 10-13
Engineering Managers	471.7	601.7	442.0	242.0	48.7
Chemical and Materials Engineers	106.0	81.7	66.7	26.0	75.5
Civil Engineering Professionals	4236.3	4570.7	3873.0	1739.3	58.9
Electrical Engineers	947.7	1160.0	951.0	368.3	61.1
Electronics Engineers	116.3	157.7	143.7	68.3	41.3
Industrial, Mechanical and Production Engineers	1322.0	2149.0	1637.0	744.7	43.7
Mining Engineers	1430.0	2834.7	2468.7	727.0	49.2
Other Engineering Professionals	736.3	745.7	513.0	270.3	63.3
ICT Support and Test Engineers	1206.3	928.3	684.7	577.0	52.2

[10] Design Build Source. *Australia's Chief Scientist: Innovation Council Is a Priority.* http://designbuildsource.com.au/australias-chief-scientist-innovation-council-is-a-priority.
[11] Department of Foreign Affairs and Trade. *Trade in Services Australia 2011.* http://www.dfat.gov.au/publications/stats-pubs/trade-in-services-australia-2011.pdf.
[12] Department of Employment. *Vacancy report.* http://lmip.gov.au/default.aspx?LMIP/VacancyReport

Telecommunications Engineering Professionals	417.3	437.3	293.0	239.7	42.6

The maintenance of a highly skilled engineering workforce in Australia is key to the maintenance of a full range of industries that rely on the design skills which only these technical professionals hold. By bringing science to life, engineers enable the delivery of vital services in every walk of life from infrastructure to IT and telecommunications. As our importation of engineering labour over many years should have taught us, engineers are highly educated global professionals, able to move to meet demand. With the departure of high-end manufacturing and the allied industries it enables, we also will see the departure of some of the most vital human capital we have.

"Over 52 % of the Australian engineering labour force was born overseas compared to 36 % for comparable non-engineering skills and 27 % in the overall labour force"[13]. We produce just one third of our engineering needs from domestic graduates each year, with overseas "the major part of overall growth in commencements"[14]. "In an age of unprecedented globalisation and labour mobility"[15], Australia must improve its domestic supply of engineers, and to do this it must keep the critical pull factors delivered only by diverse industry, which in turn results in diverse employment outcomes and choice of specialisation from engineers. The automotive manufacturing industry is one such key crucial pull factor.

The question that has to be asked is, that in the shift to global platforms for car production, are Australian engineering capacities such that they can play a critical role in the design of cars for delivery around the world as part of a global supply chain? Are we cost competitive in this sector? The answer to any of these questions we believe is yes, as demonstrated by Ford. The key is the designation of Australia as a Centre of Excellence by a multinational and government should actively explore what it can do to facilitate this.

The end of a dream

In classrooms throughout the country children dream of what it might be like to design their own car. Such perceptions of the engineering profession are leveraged by commendable endeavours such as Re-Engineering Australia Foundation's "F1 in Schools™"… "a holistic action learning program which focuses on developing long term employability skills"[16]. One of the most

[13] Engineers Australia. *Engineering graduates still well short of meeting demand.* http://www.engineersaustralia.org.au/news/engineering-graduates-still-well-short-meeting-demand.
[14] Ibid, p35.
[15] ANET (2012), p18. *Realising an Innovation Economy.* ANET, Sydney.
[16] Re-engineering Australia Foundation. *F1 in schools.* http://rea.org.au/f1-in-schools/

appealing, creative and innovative industries, the departure of automotive manufacturing would see the end of the aspirations of many a school aged child to a career in engineering. Post school-age, the industry is an important source of on the job engineering training to Australia's graduate and younger engineers that would be lost forever.

Also bearing consideration is the re-shaping of our education system in recent years to a pure demand driven model. This may mean that we will be producing many trained professionals to work in manufacturing industries which have no future. If our economy is to be allowed to drift towards a resources and services economy, then we must make sure that our education system, such that it is required to meet the needs of a resources and services economy, is fit-for-purpose.

Wages and conditions for technical professionals

A narrow examination of wages in the sector will do little to further proper considerations of the merits of assistance for the industry. Wages for our members are comparable to those in high-wage, high-skill countries overseas. A reduction of wages for these professionals would further enhance the prospects of an international drift. As it outlined throughout, we must be careful to consider the exemplars in manufacturing in high-wage economies. We do not presume that the Federal Government wishes to see a low-wage, low-skill economy and nor do we believe that lower wages improve productivity – indeed the opposite is often the case. Engineers are the key enablers of productivity improvement and economic growth in this country and as such, this is one employment sector where we must act to ensure wages and conditions are not only comparable, but better than what can be found overseas. At present, the wages for engineers at automotive manufacturers may surprise, with non-graduate salaries averaging approximately $90,000 p.a..

Recommendations

That the Productivity Commission:

2. Examine in detail the impact of the diminution of the automotive manufacturing sector on the demand for highly skilled technical professionals and the implications of those findings on the economy more broadly.
3. That the impacts on the current model for supply of graduates from our education system be examined to ascertain the impacts from a potential departure of automotive manufacturing.
4. That the wages and conditions of technical professionals be examined to ensure that they

compete with international, high-wage, high-skill economies so as to remain competitive in a global market.

5. That options for the retention of Australia's automotive engineering capacity be explored with a view to making Australia an international Centre of Excellence.

A diverse economy

If our submission to this point depicts Australian public policy as lazy and opportunistic, then our performance as an exporter does little to alter this perception. Elaborately transformed manufactures "such as cars, machinery or clothing", "part of the success story of the 1990s"[17] have been in decline, as broadly has the manufacturing sector[18]. Manufacturing imports continue to grow. The five year trend in export of manufactures is -2.5 per cent[19], and even in "Mineral manufactures & metals"[20], we are seeing a decline in export of processed goods.

A narrow base, getting narrower

Primary products comprise a full three quarters of our exports, with very little effort going in to improving their value prior to export. Processed mineral exports are in substantial decline. Our importation of manufactured products is booming, with imports at four times the levels of exports[21]. While the exchange rate has been at historic highs and only recently experiencing decline[22] we have seen our domestic manufacturing sector reduce in size and import[23] to the Australian economy. Manufactures are now 72 per cent of imports and growing year on year[24].

Recent policy initiatives, such as the Manufacturing Industry Innovation Precinct are yet to be established and face an uncertain future[25]. As our currency devalues, the domestic manufacturing industry will take some time to re-establish to respond to a potential increase in demand as it again becomes competitive against international counterparts. The diversity of our industry in Australia has narrowed and will take time to rebuild.

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[17] T Conley (2009). *The Vulnerable Country. Australia and the global economy*, p139.
[18] Ibid.
[19] Department of Foreign Affairs and Trade (2013). *Trade in Primary and Manufactured Products Australia,* p21. Department of Foreign Affairs and Trade, Canberra.
[20] Ibid.
[21] Ibid.
[22] Reserve Bank of Australia. *Exchange Rate Data.* http://www.rba.gov.au/statistics/hist-exchange-rates/index.html. Last accessed August 7, 2013.
[23] T Conley (2009). *The Vulnerable Country,* p116.
[24] Department of Foreign Affairs and Trade (2013). *Trade in Primary and Manufactured Products Australia,* p21.
[25] Manufacturer's Monthly. *Coalition would ditch Innovation Precincts Program if elected.* *http://www.manmonthly.com.au/news/coalition-would-ditch-innovation-precincts-program*. Last accessed August 7, 2013.

The five year trend for export of manufactures is -2.5 per cent[26], and even in "mineral manufactures & metals"[27], we've seen a decline in the export of processed goods. Primary products comprise a full three quarters of our exports, with very little effort going in to improving their value prior to export. The automotive sector is one of the few remaining Australian industries that adds value to our natural resources and "they still account for around 13 per cent of total exports of elaborately transformed manufactures (ETMs)"[28].

The departure of the industry would not only drive a further reduction in what is already a poor report card for Australian exports, it would dampen demand for domestic production of ETMs for use "in the manufacturing process. For example, the industry uses high-technology capital items such as robots in manufacturing vehicles and parts". Again evidenced is the catastrophic effect the departure of the industry would have on the broader future of our economy.

Signs of life?

While automotive imports might be on the up, so too are automotive exports. Since 2010-11, motor vehicle exports have increased nine per cent and motor vehicle parts by approximately ten per cent[29]. The Holden Commodore just recorded its best sales results in two years and Holden had its best sales result since 2009[30]. A prescient question is whether these figures underline that domestic consumers are drawn to Australian brand? The traditional rival to the Holden Commodore, the Ford Falcon's sales are down 30 per cent at the same time sales of the Commodore have spiked[31]. What this serves to underline however is that there is a domestic market to be tapped.

There is no doubt that some Australian car manufacturers have made poor decisions in recent years – choosing to believe against all evidence to the contrary that demand for larger cars in Australia would go against trend and defy petrol prices. These poor commercial decisions of recent times should not overshadow the 100 years of successful operation for the industry in this country. The comparative performance of Toyota, the only Australian manufacturer with a mid-size offering and "better catering to shifts in consumer preference towards fuel-efficient vehicles" is instructive[32].

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[26] Department of Foreign Affairs and Trade (2013). *Trade in Primary and Manufactured Products Australia,* p21. Department of Foreign Affairs and Trade, Canberra.
[27] Ibid.
[28] Department of Industry (2013). *September 2013 Automotive Update.*
[29] Ibid.
[30] http://www.caradvice.com.au/258655/holden-commodore-repasses-cruze-companys-best-seller/
[31] Ibid.
[32] IBIS World (2013). *Automotive Industry in Australia. IBISWorld.*

The very existence of an assistance scheme – the Automotive Transformation Scheme (ATS) to "assist car and car-parts manufacturers" "investing in the development of technology to benefit the environment"… "to develop and produce greener cars"[33] underscores a situation where the Federal Government is effectively guiding business decisions by automotive manufacturers towards those which seem common-sense.

If there is continued taxpayer support for the automotive industry in Australia, as we believe there should be, we must ensure that the investment that is made is not squandered. That will mean appropriate assessment of the market, concentrating on appropriate niches and support for the production of vehicles which the market demands.

When faced with the tyranny of distance, high-wages and in many cases exchange rate disadvantage, Northern European countries' manufacturing continues to prosper. This is where we must learn from their model of investment allied with long-term planning and sound business decisions.

Gone in a minute, years to rebuild

Australia's economy has "consistently outperformed the OECD average"[34] since 1991. In these circumstances, with historically low unemployment[35], sustained favourable terms of trade[36] and "an amazing expansion of foreign investment"[37], one could expect that Australia should have a invested substantially in highly specialised industries to diversify our manufacturing base. The opposite is the case. This failing of public policy would be massively compounded by allowing our automotive manufacturing industry to close. Motor vehicle and parts manufacturing is close to five per cents of total manufacturing in Australia and they provide vital training for high-skill manufacturing jobs which are in short supply[38].

The establishment of manufacturing is resource intensive and time consuming. Industries which have been built since Federation can be closed quickly, but rebuilding them will take a great deal of effort and time. Returning to the predicted tapering of demand for our natural resources, there could not be a worse time for the departure of a significant value-add manufacturing industry in Australia. High-skill manufacturing and the enabling design capabilities have significant

[33] IBISWorld (2013), p8. *Automotive Industry in Australia.*
[34] T Conley (2009). *The Vulnerable Country. Australia and the global economy,* p113.
[35] Minister for Employment Participation. *Australia's unemployment rate remains among lowest in industrialised world.* http://ministers.deewr.gov.au/ellis/australias-unemployment-rate-remains-among-lowest-industrialised-world. Last accessed August 7, 2013.
[36] T Conley (2009). *The Vulnerable Country. Australia and the global economy*, p121.
[37] Ibid., p179.
[38] Department of Industry (2013). *September 2013 Automotive Update.*

educational lead times which are in-built barriers to rapid response to changed demand for industry output. Simply put, if we need to re-calibrate industry in Australia due to changed economic conditions, it will take time and while we wait for it to occur, many unemployed Australians will face re-training, relocation and displacement.

Recommendations

6. That an assessment be undertaken of the success of other high-wage, high-skill countries in the export of ETMs and the critical factors in that success.
7. That in any assessment of support for the automotive manufacturing industry, the Commission assess and account for in its recommendations the likelihood or otherwise of a need for future diversification of Australian industry and the costs and timeframes involved in this.
8. That the Commission assess the comparative business decisions made by Australian automotive manufacturers as contributors to their relative financial performances.

Summary of recommendations

1. A key consideration for the Productivity Commission must be the impact that the automotive industry has on Australia's research and development effort and the resulting impact on innovation in this country over the longer term.
2. Examine in detail the impact of the diminution of the automotive manufacturing sector on the demand for highly skilled technical professionals and the implications of those findings on the economy more broadly.
3. That the impacts on the current model for supply of graduates from our education system be examined to ascertain the impacts from a potential departure of automotive manufacturing.
4. That the wages and conditions of technical professionals be examined to ensure that they compete with international, high-wage, high-skill economies so as to remain competitive in a global market.
5. That options for the retention of Australia's automotive engineering capacity be explored with a view to making Australia an international Centre of Excellence.
6. That an assessment be undertaken of the success of other high-wage, high-skill countries in the export of ETMs and the critical factors in that success.
7. That in any assessment of support for the automotive manufacturing industry, the Commission assess and account for in its recommendations the likelihood or otherwise of a need for future diversification of Australian industry and the costs and timeframes involved in this.
8. That the Commission assess the comparative business decisions made by Australian automotive manufacturers as contributors to their relative financial performances.

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