Submission to the Inquiry into Manufacturing in Victoria

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1. Contribution to the Economy

The automotive industry is of strategic importance to the Australian economy. Major macroeconomic factors such as growth, employment, technological progress and the rate of innovation are all strongly influenced by the automotive industry.

In total, it is estimated that the industry, (including retail, service and repair) produces annual turnover in excess of $50 billion and generates employment for more than 400,000 people, with around 60,000 individual enterprises represented in the industry. Key sectors in the industry are:

- **Motor Vehicle Manufacturing:** Three Australian based vehicle manufacturers produce a range of passenger vehicles at multiple plants in Melbourne and Adelaide. The industry is a significant exporter and employs over 60,000 people.

- **Component Producers:** There are more than 200 firms producing automotive components for use as original equipment in new vehicles and for the replacement and accessories markets. There are around 500 firms providing specialised tooling to vehicle and component producers.

- **Vehicle Importers:** In 2008, almost 850,000 vehicles were imported into Australia. In addition to their production of vehicles in Australia, local manufacturer’s imported more than 350,000 vehicles. A further 500,000 vehicles were imported by around 40 companies whose operations are principally focussed on vehicle import and distribution. The import and distribution of motor vehicles generates a substantial employment base in its own right.

- **Retail, Service and Repair:** The retail, service and repair sector of the automotive industry are significant employers in their own right with around 300,000 people employed across Australia and includes vehicle maintenance, repair of damaged vehicles, supply of aftermarket equipment and vehicle recycling.

The automotive industry is a key driver of economic growth and provides large benefits to the economy through the education and training of employees; the introduction of new technologies; design and engineering capabilities; operational and managerial concepts; and its contribution to further global integration.

The automotive industry plays the role of leading edge customer for significant parts of these supplier industries. It is a major customer for many other Australian industries such as steel, glass, rubber, electronics, plastics, paint and advanced textiles.

The automotive industry makes a number of significant direct contributions to the Australian economy. Some of these contributions, such as well paid full time jobs,
have been traditionally recognised. However, the contribution the industry makes to Australia’s national innovation system and Australia’s reputation as an exporter of advanced manufactured products has only recently received attention by analysts.

**Production and Investment**

The automotive industry is the largest manufacturing sector in Australia and represents around 6 per cent of Australia’s total value added manufacturing and contributes around 1 per cent of national GDP.\(^1\)

Chart 2.1 highlights the changes in production of motor vehicles in Australia over the past decade. Vehicle production by the Australian automotive industry peaked in 2004 at around 412,000 vehicle units. However, in more recent years vehicle production has declined and in 2008 the industry produced around 320,000 vehicles.

The industry undertakes significant investment in new plant and equipment relating to production and development of new motor vehicles. Consistent with the model development cycle the amount of investment undertaken by each manufacturer varies significantly from year to year.

It is estimated that the industry has undertaken investment in plant and equipment worth around $4.5 billion over the past 5 years. GM Holden and Ford Australia have invested more than $1 billion each in new model development. In addition, Toyota has invested more than $800 million to the development of the new Camry/Aurion range.

**Chart 2.1: Australian Motor Vehicle Production**

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\(^1\) ABS, *Year Book Australia*, 2005.
Exports

As automotive tariffs have been reduced in Australia, the local market has become increasingly competitive and the automotive industry has looked to build its export business.

The Australian automotive industry operates in one of the most open and competitive markets in the world. While imports account for slightly more than 80 per cent of the domestic sales, Australian vehicle manufacturers have demonstrated their competitiveness, exporting in excess of 40 per cent of local vehicle production to more than 21 markets in Europe, Asia, the Middle East and United States.

In 2008, Australia exported more than 160,000 vehicles. This compares with annual exports of around 50,000 vehicles only ten years ago. There is potential for future export growth.

The automotive industry is Australia’s largest source of exports after mining, with annual export sales worth in excess of $5 billion - more than any agricultural commodity (see Chart 2.2).

Chart 2.2: Australian Merchandise Exports ($ Million)

![Chart 2.2](chart_url)

Source: DFAT Composition of Trade 2007

Automotive component suppliers have also built their export businesses. In some cases very high proportions of total output are exported however, many second and third tier component suppliers remain heavily dependent on sales in Australia.
R&D and Innovation

The Australian automotive industry is a key source of investment in R&D and a vital part of Australia’s national innovation system.

The industry accounts for around 10 per cent of total business R&D and more than 20 per cent of R&D undertaken by the manufacturing sector.

The Australian automotive industry is recognised worldwide for its capacity to deliver high quality engineering, technical and design skills. Australia is one of relatively few nations which possess the capability to fully design, engineer and manufacture vehicles.

GM Holden has global responsibility for the design and development of full size rear-wheel drive sedans across the General Motors range.

Ford Australia is also a world leader in the design and engineering of vehicles for global markets, particularly for the Asia Pacific region. The local company took the design and engineering leadership for a new light commercial vehicle that is sold in more than 80 countries in both left and right-hand drive, generating R&D revenues worth $700 million. Ford also employs more than 1,000 designers and engineers at its plant locations in Broadmeadows and Geelong.

Toyota has established one of its few technical centres outside of Japan, within Australia.

These global projects could not have been undertaken in Australia without the skill and expertise harnessed through the development and production of locally manufactured vehicles.

Employment, Skills and Training

The industry employs over 61,000 people with around 25,000 employed directly in vehicle manufacturing. The jobs that the industry provides are attractive, being relatively high wage in nature. The industry accounts for $3.7 billion in wages and salaries each year, 7 per cent of the total for all manufacturing.\(^2\)

The automotive industry has invested heavily in training and skills development for its workforce. This is recognition of the need for Australian vehicle manufacturers to achieve world class levels of performance in quality and price. This world class education and skills base is recognised throughout the world. This is evident through the trust and responsibility placed in Australian operations to carry out a number of international automotive projects for global markets and increasing export sales.

\(^2\) ABS, Catalogue 8221.0 Manufacturing Industry 2005 – 06.
The automotive industry indirectly also helps keep thousands more people employed through various support industries such as retail, service and repair. These statistics do not take into consideration the employment generated by the automotive industry in related industries, for which the industry is a major customer, such as iron, steel, plastics, glass and rubber.

**Key Points:**

The automotive industry is of strategic importance to the Australian economy.

It is Australia’s largest manufacturing sector, representing around 6 per cent of total industry value added.

The industry is a key source for the uptake and development of new technologies and engineering and design skills. As such the industry plays a vital role in Australia’s national system of innovation.

The industry also contributes substantially to Australia’s export base. The industry is Australia’s largest source of exports after mining, with annual exports worth in excess of $5 billion.
2. Competitive Environment

Several factors stand out as having contributed to a significant shift in the competitive balance between imported and locally manufactured vehicles and the competitiveness of Australian automotive exports:

- **Exchange rate appreciation:** The sustained appreciation of the Australian dollar against other key currencies, in particular the United States dollar and the Japanese yen, in response to strong international demand for Australian resources, has increased the competitive pressure on other sectors, including automotive manufacturing.

- **Changing market segmentation:** Consumer buying patterns have undergone significant changes, reflecting the impact of rising fuel prices, the introduction of new brands and products across a range of market segments and changing patterns of vehicle specification and affordability.

- **Global industry restructuring:** Australian vehicle manufacturers have faced significant challenges in adapting to the competitive pressures facing many international automotive producers and evolving global approaches to supply chain management.

Indicators of the competitiveness of the Australian automotive industry include production volumes, sales to the domestic and export markets, productivity and profitability.

**Production and Sales**

The scale of production is an important indicator of the competitiveness of the local vehicle manufacturers. An increasing level of production, other things being equal, would suggest increasing competitiveness.

Australian vehicle manufacturers produce vehicles for both the Australian domestic market and export markets. The domestic market has historically underpinned the manufacturing operations, a function of the inward looking nature of the industry up until the 1980s. However, as tariffs have fallen, and the share of the Australian car manufacturers in the local market has decreased, exports have become critical to the future sustainability of the Australian automotive industry.

Chart 3.1 illustrates that the production of vehicles directed to export markets has experienced a strong upwards trend since 1996, averaging growth of around 12 per cent per annum. On the other hand, production of vehicles for the domestic market has experienced a downwards trend, especially since 2003-04, with an average contraction of 3.7 per cent per annum.

*Chart 3.1: Domestic and Export Sales of Australian Manufactured Vehicles*
At the same time that the demand within the domestic market for locally made vehicles has been declining, the total market size has grown from around 955,000 vehicles in 2004 to over 1 million in 2008.

There has been a noticeable shift away from locally produced vehicles to all other vehicle categories since 2004.

Chart 3.2 illustrates that much of the loss in market share within the large vehicle segment, in which locally produced vehicles continue to dominate, has predominately been captured by smaller vehicles, and to a lesser extent medium-sized vehicles and SUVs.

These shifts in consumer preferences mean that exports are becoming increasingly important in maintaining and improving the competitiveness of the Australian automotive industry. The shift in consumer preferences within the domestic market have been a function of two key external factors, the exchange rate and fuel prices, as will be discussed further below.
Productivity

Productivity was a major area of concern for Australia’s automotive industry prior to the microeconomic reforms which commenced in 1984 under the Button Car Plan, and is a key element of competitiveness.

The productivity of the Australian motor vehicle manufacturers has been improving, as illustrated in Figure 3.3. Vehicle production per employee per annum has increased by an average annual rate of 4.0 per cent since 2002, whilst the value of production per employee has increase by 11.5 per cent over the same period.

Also evident from the figure is that there is a distinct cycle in the measures, particularly the vehicle production per employee. This is likely to be linked to the model cycle of firms – when a new model is introduced productivity may decline initially because of the learning curve associated with new manufacturing processes.

It is difficult to compare these productivity measures to those in other countries because Australia is one of a small number of countries which has the capability to design, engineer and manufacture a vehicle from scratch. Operations in many other countries only undertake manufacturing functions, and, all else being equal, would produce more vehicles per employee as they do not have the labour force undertaking design and engineering activities.
Figure 3.3: Australian Vehicle Manufacturer’s Labour Productivity

Source: DIISR (2008)

Exchange Rates and Fuel Prices

Two significant factors which have influenced production volumes and profitability of the local vehicle manufacturers have been the exchange rate and the rise in fuel prices.

The exchange rate has been a significant factor influencing the profitability of the local vehicle manufacturers. Although the rise in the value of the Australian dollar has, to some extent, shielded the industry and its domestic market production volumes from the full increase in fuel prices, it has significantly affected the profitability of the manufacturing operations.

Chart 3.5 illustrates the appreciation of the Australian dollar against these currencies since 2002.
With over 40 per cent of total local production for export markets in 2007, the local vehicle manufacturers are highly exposed to the exchange rate, which adversely affects the profitability of the firms. The Australian industry’s largest export contracts are to the Middle East, with most key markets in this region pegging their exchange rate to the US dollar. Therefore, with the Australian dollar almost on parity with the US dollar, in order to continue to remain competitive in these markets, Australian vehicle manufacturers must accept low or negative margins on vehicles in these markets.

Oil prices and the associated rise in fuel prices are a key factor underlying the significant shift in consumer preferences towards smaller, more fuel efficient vehicles.

**Conclusion**

Meeting these challenges will require significant investment and innovation on the part of car manufacturers and their suppliers, as well as a globally competitive automotive policy framework.

The global strategy that underpins the structure of Australian vehicle manufacturing remains effective:

- the efficient scale of production for larger sized family cars is not as high as it is for small cars and is within the reach of the Australian car manufacturers;
other countries have shown that a strategy that involves a high share of imports in the home market and a high share of exports can work for extended times;

given the relatively low volume of production of Australian car manufacturers they only need to achieve relatively small shares of overseas markets in order to sustain substantial export sales; and

Australian car manufacturers have achieved considerable recognition as specialists with deep knowledge in their global product niche which can be used in other areas to support projects in related companies.

**Key Points:**

The competitive environment facing local vehicle manufacturers has deteriorated markedly over the past five years. The extent of the competitive challenge facing local manufacturers has been exacerbated by a range of factors including:

- The appreciation of the Australian dollar against other key currencies, fuelled by strong international demand for Australian resources and rising terms of trade;
- Changing market segmentation, reflecting the impact of rising fuel prices and other influences on consumer preferences, and
- The impact of restructuring and commercial pressures affecting international automotive producers and evolving global approaches to supply chain management.

Combined these factors have undermined the cost and price competitive position of Australian vehicle makers in the domestic market and in key export markets.

It is essential that future policy arrangements seek to underpin the Australian industry’s competitive position as a location for ongoing investment in the design development and production of vehicles and automotive components.
4.1.1  Vehicle Design

National uniform regulation of standards for road vehicles is achieved under the provisions of the Motor Vehicles Standards Act 1989 (MVSA). The Act provides a legislative base for the Australian Design Rules (ADR) that set standards for vehicle safety, emissions and anti-theft performance. The ADRs are largely harmonised with leading international standards.

The Australian Government is a signatory to the 1958 and 1998 Agreements. These Agreements establish international vehicle standards, commonly referred to as the UN-ECE Regulations.

The drive to harmonise the ADRs with international standards, predominately the UN-ECE Regulations, has been a focus of the Australian Government. The industry looks forward to continuing to work with the Australian Government on this ongoing task.

The competitive nature of the automotive industry requires a world’s best practice regulatory environment to ensure that the Australian industry is able to compete in both the domestic and export markets, particularly against countries which have little or no regulatory cost.

Vehicle manufacturers produce vehicles for a global market. Australian manufacturers export between 40 per cent and 50 per cent (by value or volume) of their annual production. Around 80 per cent of vehicles sold in the Australian market are manufactured overseas to international standards.

Regulation must be kept to a minimum, be the most effective method of achieving the objective and be internationally consistent to ensure that consumer choice is not limited and that Australian manufacturers are able to service both the domestic and international markets.

The industry is concerned with the potential for a “break out” of individual state based-vehicle standards.

Prior to introduction of new regulations, which are inconsistent with international standards, a rigorous process needs to be conducted to ensure the most cost effective options to achieve the desired outcomes are implemented.

**FCAI Position:**

The FCAI urges the Victorian Government to reaffirm its commitment to internationally consistent, national vehicle design requirements.
4.1.2 Government Procurement

Changes in government fleet purchasing policies appear to have contributed to recent decline in the sale of local manufactured vehicles.

Locally made passenger cars have accounted for just 40 per cent of government purchases in 2008 to date, compared with 65 per cent in 2002 (see Chart 4.3.6.1). For passenger car sales, locally made vehicles have accounted for 61 per cent of total government fleet purchased in 2008, down from 84 per cent in 2002. This decline amounts to a loss of around 16,000 locally made vehicle sales in 2007 alone.

Chart 4.3.6.1: Government Purchases of Passenger Vehicles (as % of Total Government Vehicle Purchases)

The decision by some state governments to implement policies which effectively exclude many Australian made vehicles from their government fleets has been a key driver of this change. Unfortunately the decision to exclude Australian made vehicles appears to have been made without consideration for safety, local employment or value for money.

FCAI Position:

Government purchasing decisions should take full account of their impact on local employment, the environment, safety and value for money.
3. Environment

Road transport and passenger road transport, is integral to economic development and has “dramatically enhanced mobility, economic prosperity and quality of life for billions of people”.3

The growth in demand for passenger vehicles in Australia and globally, and increased use will deliver greater benefits. The challenge for the industry and governments is to enable future road transport demands to be met in a sustainable and environmentally responsible way.

The FCAI acknowledges that the growth in road transport contributes to global greenhouse gas emissions and that the automotive industry, internationally and in Australia, has a responsibility to contribute to efforts to mitigate the impact of climate change.

Australian passenger motor vehicles accounted for 7.8 per cent of Australia’s total greenhouse gas (GHG) emissions in 2005.4 Australia has one of the oldest average fleets among developed economies with an average vehicle age of 9.7 years5. Consequently, as new vehicle technologies are developed and become available to the market benefits take a long time to diffuse through the vehicle stock.

Globally, automotive manufacturers are investing heavily in a range of technologies and advance in vehicle design that have the potential to make further significant contributions to reducing motor vehicle C02 emissions. Some of the key approaches being pursued include:

- Development of advances in electric vehicle capability and design, including advanced battery technologies;
- Improvements in vehicle design, including increased thermal efficiency in engines; reduced friction loss; enhanced aerodynamics; reduced rolling resistance; and reductions in vehicle weight;
- Advances in hybrid vehicle technology;
- Development of enhanced alternative fuels capability, including new generation renewable biofuels.
- Hydrogen fuel cell vehicles.

3 Julia King, The King Review of Low Carbon Cars (UK), March 2008, Page 3
5 Australian Bureau of Statistics, 2007, Motor Vehicle Census, catalogue no. 9309.0
Significant opportunities exist for the uptake and the further development of a range of these technologies by the Australian automotive industry.

**Australian Industry Performance**

The three Australian vehicle manufacturers are members of the Australian Government’s Greenhouse Challenge Plus program which enables companies to form working partnerships with the Government to improve energy efficiency and reduce greenhouse gas emissions.

The Australian industry also has a long history of pursuing voluntary targets to reduce fuel consumption, dating back to the 1970s.

Most recently, in 2005, the FCAI established a voluntary target to reduce National Average Carbon Emissions (NACE) for all new vehicles (under 3.5 tonnes) to 222 grams of CO₂/km by 2010. The NACE has improved continuously since data was first collected in 2002 from 252 grams CO₂/km to 222.4 grams CO₂/km in 2007, a reduction of more than 12 per cent (see Chart 6.1).

**Chart 6.1: Fuel Economy and Emissions in Australia**

![Chart 6.1: Fuel Economy and Emissions in Australia](image)

*Note: There is a break in the fuel consumption data in 2003 due to the introduction of a new measurement standard and test cycle)*

**International Comparisons of Carbon Emissions**

International comparison of average vehicle CO₂ emissions is fraught with difficulty.
While Australia has adopted the new European drive cycle for measurement of fuel economy and emissions other countries, notably the United States, Canada, Japan and China, use a variety of different standards.

To compare emissions or fuel economy data between countries the following factors need to be taken into consideration:

- Differences in test cycles: The proportion of city or highway travel and idling undertaken in the test procedures (e.g. acceleration, top speed, braking and time idling or at speed) has a significant impact on the results;

- Differences in fuel quality: There is a direct relationship between the quality of fuel used with the engine technology that can be employed and subsequently the pollutant emissions and fuel consumption. The same vehicle will have greater fuel consumption and higher emissions if tested with a lower quality of fuel. Fuel quality standards vary between countries.

- Different sample group: The FCAI NACE target includes light commercial vehicles up to 3.5 tonnes. The EU, which uses the same test cycle as Australia, reports a emissions value for passenger cars only, which excludes many SUVs and light commercial vehicles (utes, vans etc). The US has a separate standard for ‘pick-ups’.

- Differences in consumer preferences: Consumers preference varies between countries and is dependent on factors such as the level of urbanisation, geography and standard of living. Differences in average emission values between countries reflect differences in customer purchasing behaviour as well as vehicle technology.

- Mandatory safety requirements: as additional safety features are added to a vehicle its weight increases and therefore increases fuel consumption.

As raised above, mandatory emissions targets have been adopted in overseas

Finally, the automotive industry is a global industry which produces vehicles for the global market. Around 80 per cent of vehicles sold in Australia are imported and Australia has one of the greatest varieties of vehicle brands, including most European and Asian brands and recently a number of US marques. Around 50 per cent of Australian manufactured vehicles are exported to the world. Therefore the technology available in Australia is ostensibly similar to the rest of the world.

The NACE should be used as a tool to monitor and compare emissions from new vehicles overtime.

**Emissions Trading**

The FCAI and its members recognise that the automotive industry has a role to play in addressing climate change.
Passenger motor vehicles accounted for 7.8 per cent of Australia’s total greenhouse gas emissions in 2005.

To focus regulatory attention only on the new vehicle industry fails to address the most significant contribution to motor vehicle emissions which is that of the existing vehicle fleet.

Australia will be among the first countries in the world to introduce an emissions trading scheme which includes the transport sector. Other nations have been required to introduce second best regulatory options, such as mandatory emissions targets, in the absence of an economy-wide emissions trading scheme.

The major attribute of the CPRS is that it can efficiently determine the least cost method of emissions abatement. Introducing any secondary emissions strategies on the automotive industry assumes that a reduction of one tonne of CO$_2$ from a passenger motor vehicle is more important than a reduction of one tonne of CO$_2$ from any other sector of the economy. There is no benefit to the environment if Australian vehicle production were to be relocated to countries with lower environmental standards.