



Federal Chamber of Automotive Industries

Submission to the Productivity Commission

**Inquiry into Post 2005 Assistance
Arrangements for the Automotive
Manufacturing Sector**

May 2002

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Executive Summary

The Federal Chamber of Automotive Industries (FCAI) is pleased to present this submission to the Productivity Commission's inquiry into post 2005 assistance arrangements for the automotive manufacturing sector.

FCAI is the peak industry organisation representing the automotive industry in Australia. The Chamber's membership comprises the four passenger motor vehicle manufacturers and all major international brands importing and marketing passenger, light commercial and four-wheel drive vehicles and motor cycles in Australia.

This submission provides a range of information intended to assist the Commission in developing its findings about the automotive industry and its prospects, including the identification of options that the Government might consider regarding policy arrangements to apply after 2005.

While much of the material presented in this submission relates to issues of relevance to the manufacturing sector, consistent with the Commission's terms of reference, the views expressed should be regarded as representative of the Chamber's entire membership. It is significant that this is the first such inquiry where the views of importers and manufacturers have been consolidated into a single FCAI submission.

The four vehicle manufacturers believe that the policy positions articulated in this submission provide a framework to encourage greater investment in productive capacity and innovation, needed to enhance the future competitiveness of the industry.

The importers support this submission because they recognise that:

- Significant progress has been already been made in opening the Australian market to increased competition. By 2005, when tariffs on passenger motor vehicles fall to 10 per cent, they will be at a level which is internationally competitive and provides no significant barrier to market access.
- The increase in availability of imported vehicles in the Australian market has provided consumers with access to a wider choice of vehicles and has resulted in the raising of the competitiveness of local manufacturers in the areas of technology development and quality.
- The Australian automotive manufacturing industry, with the four vehicle manufacturers, specialist component suppliers and a wide range of other suppliers, makes a complex and vital contribution to the Australian economy.

Further progress by the industry, especially continued export growth, will help to support economic growth resulting in a stronger and more vibrant vehicle market, to the benefit of both local manufacturers and importers.

The Australian automotive industry in context

The Australian automotive market is one of the most open and dynamic in the world. It is characterised by its openness to imports, the wide diversity of brand and model availability and high levels of vehicle affordability. The total vehicle market has grown strongly in recent years, with full year vehicle sales now running at levels close to 800,000 per annum. Sustained economic growth, low interest rates and the introduction of the New Tax System have all contributed to the recent strength of the market. Local car production is about 350,000 units per annum, of which almost 110,000 were exported last year.

The Australian automotive industry has been through a major process of repositioning and restructuring in the last couple of decades. This has been driven by changes in its international and domestic operating environments. As demonstrated in this submission, the industry will continue to face challenges from multiple sources. However, the industry has worked to develop a vision to carve out a distinctive and sustainable niche in the global automotive industry based on the embedded competencies, experience and the credibility that has come from its innovative products and approaches.

“As we compete globally for investment capital so necessary to sustain a viable domestic industry, it is most important that Government provides suitable encouragement and an operating environment conducive to the future enhancement of the industry.”

P.Hanenberger, President, FCAI

The automotive industry stands at the threshold of strong growth over the next 10 to 15 years based on increases in exports and stronger performance in the domestic market. Realisation of this potential depends on getting a number of aspects right. Many of these things lie within the capacity of the industry - others depend upon the provision of an internationally competitive automotive policy environment.

International trends and influences

As might be expected with an industry as large and complex as the automobile industry, its development will be influenced by multiple factors. These include:

- Ongoing pressures for globalisation, including the consolidation of global manufacturers and restructuring of extended supply chains.
- Application of new technologies, especially those associated with information and communication technologies and mechatronics.
- Pressures for improved environmental and safety performance.
- The impact of emerging markets and manufacturing nations, such as China.
- Trends in world and regional trading rules and realities.

Many of these factors are influencing the direction of the global industry now. Others such as the search to replace petrol driven engines through hybrids and ultimately fuel cells will have their main effect over the next 10 to 15 years.

Contribution of the industry to the Australian economy

The automotive industry is an essential part of Australia's industrial infrastructure and an important driver of economic capability and growth. This reflects the industry's size, its complex linkages to the rest of the economy and the way it operates as a channel for new technology and organisational innovations.

The application of new technology to the industry and the pressures on the industry for continuous innovation have fundamentally altered its profile and nature. Once seen as the heartland of mechanical engineering capability and an essential part of the metal manufacturing economy, the application of information and communications technology and, increasingly, mechatronics to automobiles has fundamentally changed the impact of the industry. It is now an essential part of the knowledge-based economy and a major source of innovation; it is also increasingly important in the services economy. A key challenge for the industry is to attract the best and the brightest to work in what is now a high tech and progressive industry.

International automotive policy environment

Reflecting the special features the automotive industry offers to its host economies, it has received special attention by policy makers wherever it is located. Two approaches have been followed. Firstly, seeking to attract investment by the world's leading automotive companies through a battery of measures designed to provide privileged access to the local market and to directly support investment, R&D and training and education. Secondly, seeking to develop national champions by reserving the domestic market and de facto subsidizing exports. Generally speaking, the trend has been for the first approach to predominate.

In most automotive producing developed countries access for imported automotive products remains less open than for most other manufactured products. A range of other investment supporting measures are in place and have become relatively more important as tariff barriers have fallen. In many emerging markets, tariff and non-tariff barriers remain high. Tariff liberalization in automotive products tends to be at the end of the queue, as is shown by the case of the ASEAN Free Trade Area (AFTA).

A vision for a competitive and viable Australian car industry

This review comes at a time when the industry has responded successfully to a number of challenges, including the major reductions in tariffs that have occurred in Australia - with a further reduction to 10 per cent due in 2005.

An important element in the response by the Australian industry to developing a sustainable niche in the global automotive industry has been to develop export business. In the course of the last five years the industry has strongly increased its export performance to the point where it is now Australia's leading exporter of complex manufactured products and one of the top six exporters overall. This success has been based on getting the fundamentals of quality, price and delivery right - Australian produced automotive products (and increasingly services) represent value for money. Export success has also been based in many cases on the capacity for innovation.

A sustainable automotive industry cannot rest on exports alone - it is essential the industry have the opportunity to retain a significant share of the home market. Doing so rests in the first instance on the car manufacturers producing the right products for the Australian market, but it also depends on a continuation of the appropriate policy environment.

Post 2005 policy arrangements

“The automotive sector is a major Australian industry, employing about 50,000 people and generating about \$4.6 billion in exports. The Government is committed to developing an internationally competitive automotive sector in Australia.”

The Hon. Ian Macfarlane MP, Joint Media Release (with the Treasurer), 21st December 2001

The automotive industry with its large investments in people and plant and equipment, and the nature of its product model cycle, requires a planning perspective of no less than five and preferably 10 years. Under current arrangements the industry has policy certainty to 2005, a little over three years. A key requirement for the current review is to provide the basis for a longer planning perspective. This is particularly important, given the considerable potential the industry has for growth and an increased contribution to the Australian economy.

The ability to attract international automotive investment is of fundamental importance if the Australian industry is going to remain competitive and viable over the next decade. As some of the world's leading companies, the international shareholders and parent companies of Australian vehicle manufacturers are fully informed about the policy environment in other actual and potential production locations. It is essential that the Australian policy environment is benchmarked against those on offer in competing locations.

The current policy environment meets this test. However, it would be very easy to introduce changes that would place in jeopardy the advantages that have been so hard won in the past decade. What is required is a pragmatic approach based on full knowledge and understanding of the global realities. An ideologically driven approach, based on purely domestic considerations, is not likely to pass the international test of good policy design, or practice.

Tariffs

The automotive industry accepts the Government's decision embodied in legislation that the tariff on cars will fall to 10 per cent from 1 January 2005. At that stage the tariff will be broadly in line with tariffs that apply to cars in developed countries. For example, it will be the same as the EU common external tariff on cars. Reducing tariffs below 10 per cent in the absence of a clear movement in major markets to lower tariffs (and non-tariff barriers) to provide more open market access would send a negative message to investors. This could endanger future investment and risk the loss of existing productive capacity in Australia.

FCAI Position:

FCAI submits that the tariff on passenger motor vehicles should be maintained at 10 per cent beyond 2005.

ACIS replacement

The Automotive Competitiveness and Investment Scheme (ACIS) has been vital in securing support for continued investment in the development of new models and expanded manufacturing capacity in the Australian automotive industry over the period to 2005.

ACIS has helped to strengthen the industry's focus on key areas of future competitive advantage in the lead up to 2005. It is essential that this support be maintained beyond 2005 if the industry is to continue to strengthen its competitiveness and if Australia's attractiveness as an international location for automotive investment is to be enhanced.

FCAI Position:

FCAI submits that ACIS should be renewed beyond the end of 2005.

However, FCAI believes some modifications need to be made to strengthen the future effectiveness of the scheme. In particular, consideration should be given to ways of enhancing support for future investment and innovation in the industry. In addition, the Chamber supports the introduction of measures to improve the level of certainty participants have about the value of entitlements earned within the scheme, to overcome difficulties with the current process of modulation.

Market access

Increased market access for Australian automotive exports remains a key priority for the industry. While Australian automotive exports have more than doubled in the past five years, now approaching \$5 billion a year, a significant percentage of exports are concentrated into a limited number of markets (particularly in the Middle East).

Increased market access, particularly within the Asia-Pacific region, would offer prospects of strong potential growth in sales of a number of Australian produced vehicles, including utilities, newly announced 4WD variants and four cylinder passenger cars. Failure to achieve improved market access can act as a significant disincentive to renewed or increased international investment.

FCAI Position:

FCAI supports efforts by the Australian Government to identify and progress potential bilateral free trade agreements with a number of countries. The development of these agreements will raise a number of issues of relevance to the automotive industry and it important that a close dialogue is maintained between Government and industry on these issues.

FCAI also supports the Government's efforts to continue to advance the Closer Economic Partnership between ASEAN nations, Australia and New Zealand.

The Chamber also welcomes the initiation of the new WTO round of multilateral trade negotiations. There is clear scope for the new round to deliver meaningful improvements in international market access on industrial products, including automotive products.

Environmental issues

In November 1997 the Prime Minister announced details of an 'Environmental Strategy for the Motor Vehicle Industry'. Key measures announced in this strategy included:

- Negotiation with the automotive industry to secure a 15 per cent improvement in national average fuel consumption (NAFC) for new passenger motor vehicles against a 'business as usual' outlook, by 2010;
- Development of a NAFC framework for light commercial vehicles and four-wheel drive vehicles;
- Introduction of a new ADR requiring model specific fuel consumption labels to be affixed to all new cars to be sold in Australia;
- The Commonwealth Government to work with key consumer groups, motoring organisations, private fleet operators, State and local governments to encourage fuel efficiency objectives;
- Noxious emissions standards to be progressively tightened by 2003 and to be brought into line with international standards by 2006; and
- A bring forward in the phase-out of leaded petrol.

A number of these measures have since been implemented and the Australian industry has clearly acknowledged its responsibility to contribute to improved emission standards and environmental performance.

To this end FCAI has proposed two cooperative passenger motor vehicle NAFC targets, of 6.8 litres per 100 km by 2010 and 6.3 litres per 100 km by 2015. The achievement of these targets is dependent on a range of factors including more widespread uptake of higher octane (95 RON) petrol and introduction of very low sulphur petrol to facilitate the introduction of a range of advanced engine and emission control technologies.

FCAI Position:

FCAI supports agreement to NAFC targets for 6.8 litres per 100 km by 2010 and 6.3 litres per 100 km by 2015.

FCAI will work with the Government to monitor progress toward these targets and implement strategies to assist their achievement.

Taxation policy

The introduction of the New Tax System in July 2000 provided a significant boost to the Australian vehicle market. Removal of the 22 per cent Wholesale Sales Tax and introduction of the 10 per cent Goods and Service Tax (GST), resulted in a significant net reduction in the average tax burden on vehicles.

Conditions were further improved by the decision, implemented in the 2001 Federal Budget to bring forward the phase-in of input tax credits for the purchase of vehicles for business purposes.

As a result of these reforms affordability of vehicles has been significantly enhanced and this has been an important factor contributing to buoyant sales over the past couple of years.

FCAI acknowledges that the significant reforms to the tax system implemented by the Federal Government have had strong benefits for the Australian vehicle market.

One key area of remaining concern for the industry is the 25 per cent luxury car tax and vehicle depreciation limit (which currently apply to passenger motor vehicles with a GST-inclusive value greater than \$55,134).

These imposts do not apply to any other type of good or service. The luxury tax is a punitive tax, high by international standards (the US levies a 3 per cent luxury tax), that results in a distortion of the domestic vehicle market. As a result, the luxury vehicle segment only accounts for around 4-5 per cent of the Australian market, compared with an international average of 8-10 per cent.

Moreover, the threshold for the luxury tax/depreciation limit has not adjusted over time to keep pace with changes in luxury model pricing and specification. When the depreciation limit was introduced in 1979, it was nearly 11 per cent above the price of a Ford LTD or Holden Caprice. To restore the same relativity today, the threshold would need to be increased to around \$78,000.

FCAI Position:

FCAI supports the eventual abolition of the luxury car tax and removal of the vehicle depreciation limit.

As an immediate measure, FCAI believes the luxury car tax threshold/vehicle depreciation limit should be increased, to restore earlier relativities with significant pricing points in the Australian vehicle market.

Standards and safety

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 (ADRs) that set standards for vehicle safety, emissions and anti-theft performance.

The MVSA was the subject of a comprehensive review, undertaken between 1997 and 2000. The Government's response to this review was released in May 2000 and resultant changes were given effect in the *Motor Vehicle Standards Amendment Act 2001*.

Arrangements for the importation of used vehicles were examined as a key issue arising from the review of the MVSA.

With implementation of the 2001 amendments, the former Low Volume Scheme (LVS) has been replaced by the new Specialist and Enthusiast Vehicles Scheme (SEVS) and it is expected that this will overcome many of the problems associated with the previous arrangements. Imports of used vehicles will no longer be eligible for type (bulk) approval and must now undergo vehicle-by-vehicle approval in one of a new system of registered workshops to ensure compliance with relevant ADRs.

FCAI Position:

FCAI supports implementation of the new SEVS arrangements for the importation of limited numbers of used passenger motor vehicles.

However, FCAI believes the potential for the \$12,000 tariff on used imported passenger vehicles should be retained in case loopholes are identified in the operation of SEVS, or the new Registered Automotive Workshops Scheme (RAWS).

An ongoing review of ADRs, to achieve greater harmonisation with the UNECE new vehicle regulations, is proceeding towards completion in 2002.

It is hoped that the completion of the ADR review will help facilitate the more rapid harmonisation of ADRs to UNECE standards. Such an outcome will help facilitate Australian vehicle exports, eventually allowing vehicle manufacturers to acquire UNECE approvals in Australia. In addition, vehicle importers meeting UNECE regulations will have easier entry into the Australian market.

FCAI continues to work within the APEC Automotive Dialogue to promote international harmonisation of new vehicle regulations based upon UNECE regulations in a greater number of participating economies, as a means of reducing technical and regulatory barriers to increased market access throughout the region.

FCAI Position:

FCAI supports ongoing efforts to harmonise ADRs with UNECE standards.

Industrial relations

The ability to implement work practices to support flexible manufacturing systems is crucial to the strengthened competitiveness and ongoing viability of the Australian industry. While recently concluded enterprise bargaining rounds have seen gains in the crucial area of workplace flexibility, there is still some way to go in bringing Australian workplace practices up to world best levels.

Australian vehicle manufacturers will be continuing to pursue improvements in these areas. The process of workplace practices change must and will continue.

The industry must obtain the labour flexibility and productivity gains needed to compete globally while at the same time avoiding major industrial disputes that could severely threaten crucial export contracts.

Any measures introduced to reverse the movements towards greater workplace flexibility would undermine a key emerging industry strength, namely the ability to produce small product runs in a cost effective way and to rapidly alter production plans to capitalise on emerging niche market opportunities.

Vehicle manufacturers remain vulnerable to the impact of inflexible workplace arrangements and resistance to change inspired by the high level of unionisation of the workforce and militant union leadership. Moreover the industry continues to be vulnerable to industrial relations disruption at supplier companies. Disputes at one small supplier can bring the entire industry to a halt. In addition, new investment in essential production equipment can be subject to critical delays due to industrial action. The threat of such industrial relations disruption is a serious obstacle to the attraction of new investment into the Australian industry.

FCAI Position:

FCAI supports currently proposed legislative amendments to strengthen safeguards to the integrity of genuine bargaining arrangements and to introduce secret ballots to help reduce the risk of unnecessary and illegitimate industrial action.

Although FCAI acknowledges that there are provisions within the existing legislation that manufacturers may use, consideration needs to be given to further amendments to provide increased protection against disputes which cause significant disruption to third parties within the industry and to increase penalties for non-compliance with court decisions.

Chapter One

The Submission

The Federal Chamber of Automotive Industries (FCAI) is pleased to present this submission to the Productivity Commission's inquiry into post 2005 assistance arrangements for the automotive manufacturing sector.

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The four vehicle manufacturers believe that the policy positions articulated in this submission provide a framework to encourage greater investment in productive capacity and innovation, needed to enhance the future competitiveness of the industry.

The importers support this submission because they recognise that:

- Significant progress has been already been made in opening the Australian market to increased competition. By 2005, when tariffs on passenger motor vehicles fall to 10 per cent, they will be at a level which is internationally competitive and provides no significant barrier to market access.
- The increase in availability of imported vehicles in the Australian market has provided consumers with access to a wider choice of vehicles and has resulted in the raising of the competitiveness of local manufacturers in the areas of technology development and quality.
- The Australian automotive manufacturing industry, with the four vehicle manufacturers, specialist component suppliers and a wide range of other suppliers, makes a complex and vital contribution to the Australian economy.

Further progress by the industry, especially continued export growth, will help to support economic growth resulting in a stronger and more vibrant vehicle market, to the benefit of both local manufacturers and importers.

1.1 Submission structure

This submission considers the following:

- The key trends and influences defining changes in the global industry. (Chapter Two)
- Recent changes in the operating environment and the response of the Australian industry to the changing global and local operating environment. (Chapter Three)
- The contribution of the industry to the Australian economy. (Chapter Four)
- The policy environment in which the Australian industry operates is benchmarked against policy settings in a range of other automotive producing nations. Developments in both multi-lateral and bi-lateral trade negotiations are also considered. (Chapter Five)
- The opportunities and challenges now facing the Australian automotive industry and its growth aspirations for the future. (Chapter Six)
- Recommendations for post 2005 policy settings that will support the achievement of industry growth aspirations. (Chapter Seven)

Chapter Two

Global Trends and Influences

The automotive industry is one of the world's biggest industries with production plants located in many places in the world, huge investments in plant and equipment, large workforces, large and complex supply chains and a heavy involvement in world trade and investment. Perhaps less well recognized, but no less significant, the automotive industry is an important platform for the application and development of many new product, process and organisational technologies and methodologies. It is one of the largest performers of R&D and a major source of innovation.

The scale of the industry, its scope and its implications for the economy and the environment, means a range of factors influence its development. While many of these factors are driving broader global economic change, they have special implications for the automotive industry. These forces include:

- Globalisation in all its different aspects, including corporate integration, company supply chains, restructuring and rationalization.
- New technologies (and organisational methodologies) and the growing importance of innovation in all its forms.
- Regulation aimed at achieving society's environmental and safety goals.
- The impact of emerging markets such as China.
- Trends in world and regional trading rules and realities.

This chapter considers these and related matters to convey a picture of what could lie ahead of the automotive industry in the next 10 to 15 years. A key development, for example, is the likely significant change in automotive powertrain technologies. Hybrid powered vehicles are already on our roads and within the next 10 to 15 years the huge investment in R&D on fuel cell technology will have paid off and it is generally believed will have moved to widespread application almost completely replacing petrol driven engines.

2.1 Globalisation

In recent years there have been a number of mergers between major motor vehicle manufacturers which has seen the emergence of a small number of manufacturing groups that dominate automotive production. Just six major groups (under the umbrella of General Motors, Ford, DaimlerChrysler-Mitsubishi, Toyota, Volkswagen, and Renault-Nissan) now account for four out of every five passenger vehicles produced globally¹.

¹ International Organisation of Motor Vehicle Manufacturers (OICA), Statistics Committee, Motor vehicle production by manufacturer, World rankings 2000, www.oica.net

The consolidation amongst vehicle manufacturers has been accompanied by a progressive rationalisation of production facilities, with global automotive groups increasingly trying to extract greater efficiency from their global assets. This is having a major impact on automotive investment decisions. As members of major global production groups, the four Australian vehicle manufacturers are subject to increasing scrutiny of their performance and are engaged in fierce competition with other subsidiaries for investment for their parent companies.

This consolidation amongst vehicle manufacturers has been driven by a combination of global production overcapacity, fierce competition and the availability of economies of scale in R&D, design and engineering, production and marketing.

Accompanying this consolidation has been a reduction in the number of vehicle platforms. Vehicle platforms are now increasingly providing the base for a number of related but distinct vehicle models. For example, the VW Passat and Audi A4 share the same platform. Increasingly cross-over light 4WD vehicles such as those produced by Volvo, Audi and BMW are being developed using the same basic platform used for 2WD sedans and wagons. The development of multiple variants from each vehicle platform allows economies of scale to be captured regarding high model platform design and engineering costs, while still allowing for the development of a range of vehicles to meet niche market segments.

The trend to multiple variants from a common platform have been seen in Australia for several years, with both Ford and General Motors producing utilities, standard upper medium passenger vehicles and more luxurious models from single platforms. The recent introduction of the Monaro by General Motors and new models proposed at Ford will further extend the number of variants being produced.

The rationalisation trend is being supported by an important change in the nature of the relationship between the vehicle manufacturers and their supplier base. Concurrent with the emergence of major globally distributed manufacturing groups has been a trend towards Tier One suppliers to these groups becoming partners in product design and engineering with the vehicle manufacturers. In addition, they are being required to deliver not just individual components, but rather larger integrated component modules that incorporate components from many smaller Tier Two and Three component suppliers.

This means that for any given model of vehicle the manufacturer now deals with far fewer direct suppliers who work closely with the manufacturer in the design and development of the modules that they supply. For example, the number of direct suppliers for the most recent model of the Ford Focus is only 195, down from over 800 on the previous model.

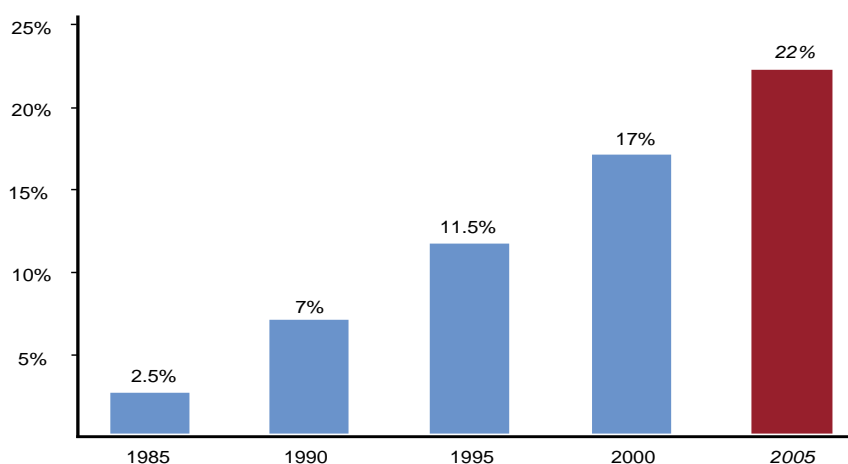
To succeed in this new environment, Tier One suppliers of assembly modules must develop supply chain management and product innovation skills on a par with those that were traditionally only required of the vehicle manufacturers themselves. In turn, these Tier One suppliers are seeking to involve their own supplier base in the product development process and to work with their suppliers to enable them to meet required product delivery and reliability standards. In this way, the innovation intensity of the industry and hence the premium on accessing knowledge and developing proprietary intellectual property is being increased throughout the supply chain.

2.2 New product engineering technologies

Vehicles, and their constituent components, are incorporating higher levels of technology than ever before. Cars are becoming extremely information technology (IT) intensive, with the value of electronics and semiconductor content as a percentage of production costs for an average vehicle increasing dramatically over the past 15 years, as Figure 2.1 illustrates.

Figure 2.1

THE INCREASING ELECTRONICS INTENSITY OF VEHICLES – ELECTRONICS AS A PERCENTAGE OF PRODUCTION VALUE



Source: Robert Bosch GmbH

The continual upgrading of the technology embedded in vehicles is being driven by the needs of the vehicle manufacturers to:

- increase the attractiveness of vehicles to customers;
- meet higher environmental standards; and
- meet higher safety and anti-theft standards.

These imperatives are leading to greater use of electronics and wireless IT systems which allow the vehicle manufacturers to offer:

- interactive services such as navigation systems and fault diagnostics;
- more fuel efficient and environmentally friendly engine systems;

- weight reductions through mechatronic systems – the combination of mechanical and electronic functions in one product – such as drive and brake by wire; and
- greater safety through using embedded sensors to improve airbag, braking and steering performance.

The higher levels of technology now involved in vehicles, and the expectation that this trend will continue, is forcing a significant upgrading in the skills and innovation capabilities of the automotive industry.

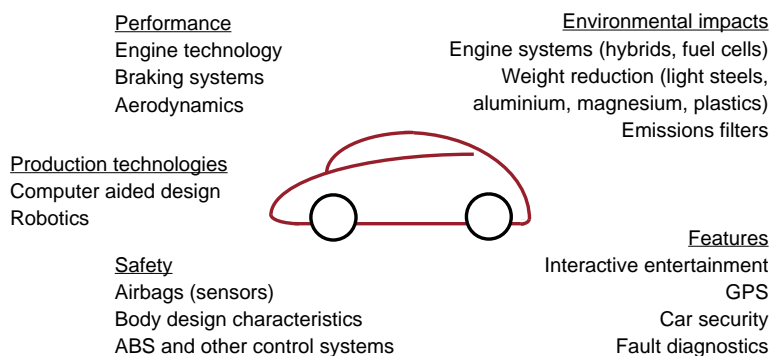
With the emergence of technologies such as mechatronics and increased reliance on computer-based design and engineering tools, employee skills have needed to broaden and deepen. In response the industry has placed increasing focus on training at all levels of its workforce to raise the skills profile of the industry.

In order to meet challenging environmental and safety standards, the industry has also been making major efforts in R&D and design (using advanced simulation visualisation technology) as it seeks to optimise drive-train performance, reduce vehicle weight and improve safety features.

The growing significance of technology to the automotive industry is highlighted in Figure 2.2, which illustrates some of the current technology hot-spots involved in modern vehicles and manufacturing processes.

Figure 2.2

TECHNOLOGY HOT-SPOTS



Enabling technologies: power technology, materials technology, nanotechnology, mechatronics, semiconductors, software, wireless technology, computer technology

Source: Allen Consulting Group synthesis of material in Strategy Analytics report, Car of 2010

The innovation intensity of the industry is reflected not only by its increasingly high technology products but also in its efforts to improve design and production processes. The automotive industry globally has led the way for other manufacturing sectors in the adoption of just-in-time inventory management, lean production methodologies, the use of robotics and now in relation to total productive management. The highly competitive nature of the industry is continuing to spur such leadership in design and production process innovation.

2.3 Rising global environmental and safety standards

Closely linked to the trend to a more innovation intensive industry, has been rising and increasingly globally harmonised environmental and safety standards.

With increasing globalisation in the automotive industry, the harmonisation of vehicle technical requirements has emerged as a high priority as common technical requirements reduce high development costs and avoid duplicative administrative procedures. The United Nations Economic Commission for Europe (UNECE) 1958 agreement of technical standards marked the first major move towards international standards harmonisation. Australia became a party to this agreement in April 2000. Under this Agreement technical standards must:

- provide for high levels of safety, environmental protection, energy efficiency or anti-theft performance;
- be expressed wherever appropriate in terms of performance instead of design characteristics; and
- include the test method by which compliance with the regulation is to be demonstrated.

An executive committee of the UNECE refers candidate standards to a working party, which reviews the proposed standard and develops a recommendation. The executive committee then determines whether the standard becomes part of the global standards registry. It is then left to contracting nations to decide if they will adopt this new standard.

Through this international forum, tighter standards for vehicle safety and environmental performance have been developed, with the European standards often leading the way for global standards. The automotive industry has also been working with the oil industry to develop and improve fuel specifications to meet the requirements of more advanced engine and emission control technologies.

Australia is now committed to meeting the stringent Euro 2 and Euro 3 fuel emission standards that were set through the UNECE standards process.

The global tightening and standardisation of environmental standards to reduce the environmental impacts of motor vehicles is driving a major investment in new engineering technologies such as fuel cells. In turn, the emergence of fuel cells as a mainstream powertrain technology will lead to other significant changes in vehicle design. Fuel cells will be able to be distributed across the vehicle platform, rather than consolidated in one location as current engines are, opening up entirely new vehicle configuration options for designers. This is an example of the way that each new engineering advance will open new possibilities and spur further innovation in other areas of vehicle design.

2.4 Impact of emerging markets and manufacturing nations

The heartland of the automotive industry in the well-established automotive producing areas in North America, Western Europe and Japan continues to attract the bulk of industry investment. However, over the last decade a good deal of new investment has been directed to the southern United States (e.g. Alabama); and some countries in Latin America; in Central and Eastern Europe; and Asia. Much of this investment has been driven by the desire of the automotive companies to tap lower cost areas of automotive manufacturing as well as to address emerging markets. Investment in R&D, design and engineering, however, has tended to remain centred in the well established areas of North America, Western Europe and Japan where there is access to highly skilled people and close connections to the science and technology base.

The maturity of automotive markets in developed countries and the potential market growth in the populous countries in Asia, notably China, will see the automotive companies vigorously pursuing major investments in these countries. The existence of a potentially large and protected market makes such emerging nations attractive investment locations. Attention is focussing on China where the potential growth in the market in the coming decades is expected to be great.

China already has a substantial automotive industry and there is little doubt that there will be major investment in production capacity by the world's leading companies.

With China's entry into the WTO, and the resulting commitments to open its markets, the opportunity exists for the Australian automotive industry to supply appropriate products into the Chinese market thereby diversifying Australia's automotive exports.

2.5 Trends in world and regional trading rules and realities

The development of the world automotive industry has been influenced by trends in world and regional trading rules and realities. As a result of a number of GATT multilateral tariff negotiating rounds, the level of tariffs on manufactured products, including automotive products, in developed countries have fallen to relatively low levels. Tariffs on motor vehicles tend to be in single digits or low double digits – the 25 per cent tariff the US imposes on light trucks is the outlier.

The situation in emerging markets is rather more complex. Tariffs and non-tariff barriers in countries seeking to develop their automotive industries tend to be very high and often complex by the standards of developed countries. Non-tariff barriers of one kind or another are common.

Looking forward, it is possible there will be further reductions in industrial tariffs, including those on automotive products, in the forthcoming WTO trade negotiation round. It is most unlikely tariffs will fall to zero.

Since the Uruguay Round, most of the reduction in tariff and non-tariff barriers has occurred within the context of regional trade blocs. Though even here progress on integrating automotive tariffs into such negotiations has been slow. A key example is provided by developments within the ASEAN Free Trade Area (AFTA). Given the concerns of the Malaysian government to support Proton, its national car company, automotive products will not be fully included in AFTA until at least 2005.

There is little to suggest the Australian automotive industry will benefit much in the next 5 to 10 years from reductions on automotive tariffs in ASEAN countries. This is a major impediment for the development of Australia's automotive industry in terms of its ability to integrate its development with that of the South East Asian region's automotive industry.

2.6 Summary

The automotive industry globally is undergoing a period of significant restructuring. Consolidation amongst vehicle manufacturers has been considerable in recent years and the next few years will see the emerging major manufacturing groups (which include the parents of all four Australian vehicle manufacturers) rationalising their global operations as they attempt to increase capacity utilisation across their global assets.

Further progress with 'mass customisation', which seeks to more closely align vehicle supply to consumer tastes, will be facilitated by the efforts of major brands to settle on a limited number of vehicle platforms which can then be used as the basis for producing product variants that can be viable at relatively low production scale levels. To exploit this potential will require high level design and engineering know-how and skills and the ability to quickly convert new concepts into production vehicles.

Supply chain relationships are also changing with the trend towards modularisation and Tier One systems integrators. This represents both an opportunity and a threat for Australian component suppliers. If they can stay at the cutting edge of technology and show the capacity for innovation their potential markets become much larger. At the same time, they have to overcome their distance from the major centres of production.

There has already been a very considerable movement to apply semiconductors and electronic systems more generally to vehicles. This trend can only continue as mechatronics has a major impact on the nature of vehicles. Drive-by-wire systems are currently on the drawing boards and can be expected to be widely applied to vehicles in the next 10 to 15 years.

The complexity of the vehicles themselves is rising, driven in part by the steady move towards higher and, certainly among the developed countries, converging environmental and safety standards. The increased vehicle complexity is leading to more and deeper linkages being formed between the automotive industry and the wider economy. Therefore the benefits to be gained from the presence of a vibrant knowledge intensive automotive industry are increasing as it is becoming an important element of the knowledge economy.

The environmental pressure to lower vehicle emissions, combined with the competitive imperative to not compromise performance, is likely to lead over the next 10 to 15 years to the replacement of the petrol driven internal combustion engine by, at first, hybrids of one kind or another and subsequently fuel cells once the problems of that technology have been successfully overcome. At some stage this will require the writing off of investments in conventional power systems and making investments in new systems.

While markets for automobiles are mature in most developed countries the room for greater take up of automobiles is very large in countries such as China and India. The increasingly environmentally friendly nature of automobiles makes this an environmentally sustainable option. But China will be both a producer and consumer of automobiles. There is already considerable production capacity in China and much greater investments in production capacity will be made. However, the Chinese market is so large it is likely that, for the foreseeable future, China will be a major importer of automobiles. This is likely to be the case if the reduction in tariff and other barriers envisaged as part of China's entry to the WTO are applied in practice. The Chinese market will at some stage become an opportunity for the Australian automotive industry.

The trend to reduce tariff barriers for automotive products, like manufactured products more generally, at least among the developed countries has been a feature of the post-war trading environment. The forthcoming WTO round may see tariffs on automotive products fall further. This remains to be seen. Regional trade blocs such as NAFTA, the EU and, in time, AFTA have and will open up increased automotive trade opportunities for their members. Nevertheless, trade barriers applying to automotive products remain something of a special case and progress at reducing trade barriers in emerging automotive producing countries has been slow, particularly in ASEAN and elsewhere in Asia.

Table 2.1

KEY DRIVERS OF CHANGE: THEIR IMPLICATIONS

Key Drivers	Implications
1. Globalisation	Major merger and acquisition activity. Globally integrated supply chains. Reduced number of vehicle platforms; many model variants. Global competition for investment.
2. Technology	Increased application of ICT to cars. Trend to mechatronics. Move to drive by wire. Increasing importance of innovation.
3. Environmental and safety regulation	Development of new environmentally friendly power sources (eg. fuel cells). Focus on new light weight materials. Ongoing emphasis on car safety.
4. Emerging markets and manufacturing nations	New, large consumer market opportunities emerging. Greater competition for automotive investment.
5. World and regional trading rules and regulations	Could be some movement to lower trade barriers in the new WTO round. Regional trading blocks more important, but Australia is currently excluded.

Chapter Three

Response to the Changing Operating Environment

The global trends and influences discussed in Chapter Two have had a significant impact upon the activities of the Australian automotive industry. However, in addition to adjusting to these global trends, the Australian industry has also faced a number of distinctly local developments that have impacted upon its operating environment.

The combined impact of these global and local influences has propelled efforts to reposition the capabilities of the Australian automotive industry for innovative and flexible manufacturing and product development.

3.1 Recent changes in the Australian operating environment

In addition to the global trends outlined Chapter Two, recent developments driving change within the Australian automotive industry and marketplace include:

- The devaluation of the Australian dollar against the Yen and the US dollar;
- The reduction of tariffs from 22.5 per cent in 1997 to 15 per cent in 2000 on passenger motor vehicles (which will fall again to 10 per cent from 1 January 2005);
- The replacement of the Export Facilitation Scheme (EFS) and the Duty Free Allowance scheme with the Automotive Competitiveness and Investment Scheme (ACIS);
- The removal of the 22 per cent wholesale sales tax (WST) and the introduction of the 10 per cent goods and services tax (GST); and
- Industry production practices, such as 'just in time' supply, placing increased pressure on the flexibility (inflexibility) of current workplace arrangements to support a more sophisticated production system.

High exposure to currency movements is becoming an unacceptable risk factor for automotive companies which source significant components from Japan and the USA. The depreciation of the Australian dollar is driving a major push to increase local content levels in Australian produced vehicles. The need to boost local content levels means that now, more than ever before, a strong domestic component and materials supply base is crucial to the success of the Australian industry.

The reduction of tariff rates has seen import competition intensify, exacerbating the long-term decline in domestic passenger vehicle market share for the four Australian vehicle manufacturers. Domestically produced vehicles sales of 237,000 in 2001 represented only a 40 per cent share of the Australian passenger vehicle market². Any further decline in domestic market share represents a serious threat to the scale and sustainability of the domestic vehicle manufacturing industry.

The industry has responded well to the replacement of the EFS by ACIS. Exports have continued to rise, as has total production, investment and R&D.

While ACIS has only been fully operational for under a year and a half there is no doubt that the program has had a significant beneficial impact on the performance and competitiveness of automotive manufacturing in Australia.

The removal of the 22 per cent WST and introduction of the 10 per cent GST has further boosted vehicle affordability in Australia. The strength of general economic conditions and the sustained low level of interest rates over recent years have also helped to maintain buoyant conditions in the Australian vehicle market.

3.2 Industry's response to changes in the operating environment

In response to the changes in both the global and local operating environment, the Australian automotive industry has been pursuing:

- becoming a smarter and more innovative industry; and
- building capabilities and competencies in flexible manufacturing.

3.2.1 A smarter and more innovative industry

The trends towards increasing innovation intensity and changing supply chain relationships in the automotive industry globally are also clearly evident within the Australian automotive industry. They are leading to value creation in the Australian industry increasingly resting on skills in brand management, supply chain management and intellectual property creation and its successful application to product and process innovation – activities that are emblematic of the knowledge economy.

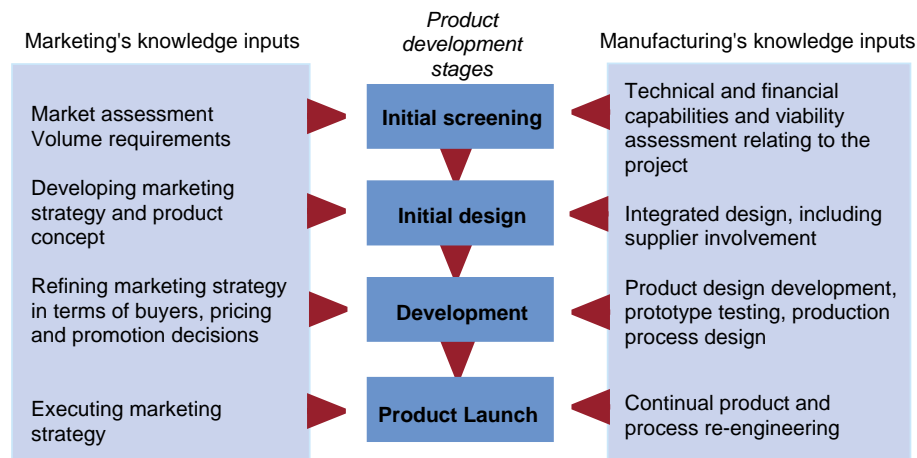
The pressure to increase innovation capabilities is particularly strong for a relatively small-scale producer of vehicles and components such as Australia. To succeed without the benefits of large scale requires the development of other areas of competitive advantage resting upon high level production competence and flexibility (allowing rapid responsive to opportunities) and product innovation (leading to world class products tailored to specific market requirements).

² VFACTS

The process of developing and bringing to market a new vehicle or component involves a range of both marketing and manufacturing related knowledge inputs at each development stage (see Figure 3.1).

Figure 3.1

KNOWLEDGE INPUTS INTO PRODUCT DEVELOPMENT



Source: Steve Brown, *Manufacturing the Future*, 2000

It is the application of these knowledge inputs in combination with the use of advanced design software tools that is driving shorter product development cycles which allows more rapid response to consumer demand and tastes. The ability to innovate at speed has the potential to become a powerful source of competitive advantage for the Australian automotive industry.

Given the changing nature of supply chain relationships, and the development of partnerships between the car manufacturers and the components suppliers, an enhanced ability to innovate has been needed not just from the vehicle manufacturers but also throughout the component manufacturing sector of the automotive industry.

It has been the entire industry's commitment to innovation that has driven the industry's growing export performance in spite of Australia's isolation from major markets and exclusion from major trade blocs.

One consequence of this increased focus on innovation has been a broadening of the automotive industry's linkages with the wider Australian economy, including the science, technology and engineering system. A notable feature of the emerging knowledge economy is the willingness of major companies, which were essentially self contained in terms of developing and applying technology, to outsource significant parts of previously totally in-house research budgets and to engage in strategic partnerships with competitors to develop new generation technologies.

Relationships and responsibilities within the car manufacturers supply chains for R&D, design and engineering have also moved very significantly to a partnership model in which the car manufacturers and their first tier suppliers become partners in product development. This relationship tends to flow on to second and third tier suppliers. The consequence is a spreading of R&D and engineering capabilities across the supply chain rather than its concentration in a limited set of companies.

New and powerful ICT technologies are also enabling design and engineering partnerships to operate between parties which are separated by great distances. Australian based companies can now position themselves to become substantial exporters of design and engineering services both to companies within their parent's group and to external companies. For example, in recent years Holden has taken a leading role as a supplier of engineering and R&D services for General Motors operations in the Asia Pacific (see Box 3.1).

Box 3.1

EXPORTING KNOWLEDGE-BASED SERVICES

In 1996 the Holden Asia Pacific Engineering Group was established to support General Motors manufacturing operations in developing Asian markets.

The Group now supports regional General Motors programs in Thailand and Indonesia and has also provided engineers in support of operations in Taiwan, India, China and Japan.

In 2000, the Group exported over \$80 million in specialist engineering services, which included support for the introduction of the Corsa at the general Motors plant in India.

The Group now employs 170 design, engineering and support staff, which represents a quarter of Holden's total engineering and design resources.

Source: Holden Australia

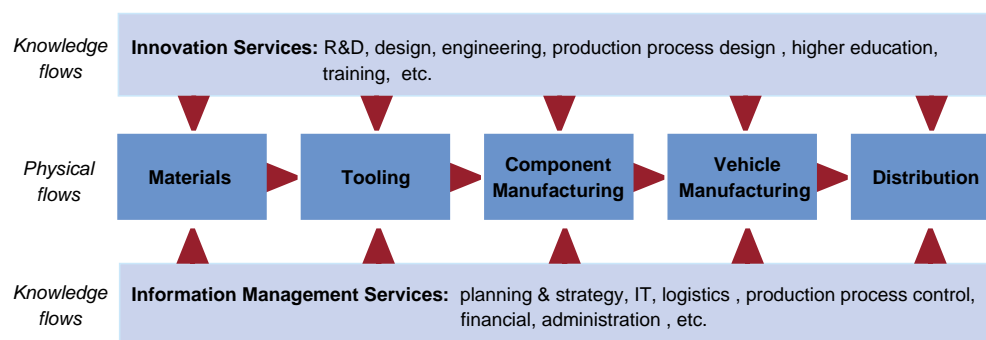
Stronger relationships are also developing between the automotive companies and the Universities, CRCs and the CSIRO. The potential for growth in these relationships is shown by the experience of the North American automotive producers with researchers in the University of Michigan, the German automotive producers with Aachen University and various Fraunhofer Institutes and the Swedish automotive producers with Chalmers University.

The industry has always had strong links to the tooling and materials sectors of the economy, and indeed these links remain strong with the automotive industry remaining a leading edge customer for these sectors. The automotive industry accounts for over one third of industrial robot purchases in Australia.

However, the industry is now also developing a new set of powerful linkages into the services sector of the Australian economy. It is now drawing upon a wide range of information management and problem solving services that support its drive to continuously improve its performance and competitive position.

Figure 3.2 illustrates how the traditional automotive industry physical supply chain is now being augmented by a parallel intangible flow of knowledge (and information) services supporting the activities of each element of the traditional physical supply chain.

Figure 3.2

PHYSICAL AND KNOWLEDGE/INFORMATION SUPPLY CHAINS

Source: Allen Consulting Group

It is the combination of each of these physical and knowledge based activity that constitutes the value stream of developing, producing and distributing a vehicle.

In addition to the new linkages that are arising due to the trends towards innovation and new supply chain relationships, the export success of the industry is also forging new linkages into the global economy for both participants in the automotive industry and those within industries that supply materials, tooling and services to the Australian automotive industry. For example, following from its work with several Australian vehicle manufacturers, RMIT secured and delivered on a training services contract with Ford's operations in Vietnam.

3.2.2 *Developing capabilities and competencies for flexible manufacturing*

Human resources have become a vital ingredient in the new world of rapid innovation, simultaneous engineering, flexibility and quick response times. This is as true at the level of the individual firm as it is as the level of the economy. *The Economist* expressed this point in the following way:

"The rich economies are coming to depend increasingly on the creation, distribution and use of information and knowledge involving both technology and human capital. The most distinctive feature of the knowledge-based economy is not that it churns out lots of information for consumers though it does that too but that it uses knowledge pervasively as both an input and an output throughout the economy."

The Economist, September 28, 1996

Although firms have access to codified knowledge across the world, it is often the tacit knowledge of firms that centres around human resources which is decisive for achieving world class levels of performance. This is true of the ability to operate production facilities to the full capability of the installed systems and equipment. It is especially true of the ability to go beyond this to develop and introduce continuous improvements. The implication of this is that a motivated, highly trained workforce is an indispensable ingredient to achieving world class performance levels.

The old mass production methodology made very different demands in terms of the human resources capabilities and competencies. The work was broken down into highly specialised pieces which could be performed by relatively unskilled assembly workers. Innovation was essentially a top down affair with the workforce not expected to contribute significantly to the process. There was little or no incentive for investment in training and skills development. The consequence was relatively high labour turnover rates, endemic absenteeism and low levels of quality. To achieve acceptable quality levels a major effort had to be made at the end of the assembly process to correct mistakes prior to the product being delivered to customers.

The lean or agile manufacturing model brings with it a much higher need for skills, flexibility, adaptability, teamwork, problem solving and continuous innovation. This in turn places a major weight on education and training. The car manufacturers are both investing in in-house education and training for their employees and working with the education and training providers to structure courses which are relevant to their changing needs.

The rapid rise in skill levels within the automotive industry has been accompanied by rising productivity levels. According to the Department of Industry, Tourism and Resources industry productivity levels, as measured by vehicles produced per employee, have risen dramatically during the 1990s. On this measure, productivity has risen from 10.8 vehicles per employee in 1991 to almost 18 vehicles per employee in 2000³.

Productivity gains have been substantially passed on to vehicle consumers, resulting in major improvements in vehicle affordability. The past five years have seen a real increase in the affordability of vehicles (measured by the ratio of average weekly earnings to the motor vehicle consumer price index). In the period since 1996, the CPI for motor vehicles has declined by 20 per cent, while average weekly earnings have increased by 15 per cent.

Apart from serving their own product development, engineering and production needs, the workforce capabilities and competencies developed by Australian vehicle manufacturers are potentially available to address services markets worldwide in the automotive industry.

3.3 Industrial relations and security of supply

The automotive industry, in order to raise its international competitiveness, has moved to implement highly efficient lean manufacturing processes such as 'just in time' component delivery. The successful operation of such a world class lean manufacturing system depends upon reliability of supply at each stage of the supply chain.

Unfortunately, as several recent industrial disputes have demonstrated, the Australian industrial relations climate does not always support this essential supply stability.

³ Department of Industry, Tourism and Resources (2001), Key Automotive Statistics 2001; Department of Industry, Tourism and Resources (2002), Industry Outlook 2002

While reforms to the industrial relations system in recent years have strengthened the level of flexibility to implement workplace arrangements better suited to the needs and circumstances of the individual workplace, the impact of these reforms has not always been immediately reflected at the enterprise level.

Many suppliers face a number of challenges that increase their vulnerability to industrial disputation. In particular, there is a proliferation of agreements of short duration, resulting in regular negotiations, vulnerability to periods of ‘protected action’ and the adoption of a ‘pattern bargaining’ approach by unions.

For vehicle manufacturers, they are often reliant on single sources of supply for a significant proportion of components, meaning that local alternative sources of supply are often not available, or are too difficult, or costly, to arrange without considerable delay.

These issues pose a range of risks and challenges for the industry in Australia, including:

- The risk that prolonged or repeated disruption as a result of industrial disputation poses a significant risk to the favourable perceptions of shareholders and international customers. In turn, this may impact adversely on future investment or export opportunities for the industry.
- Any requirement to revert to strategies of holding increased quantities of stock to provide a buffer against unexpected disruptions to supply will raise costs within the supply chain. The move to ‘just in time’ manufacture was designed to reduce costs by reducing inventories of productive material. The gains achieved by successful inventory management strategies will rapidly be lost if counter strategies are required.
- The lack of professional industrial relations expertise at some levels within the industry heightens the risk of increased industrial confrontation. This has typically resulted in vehicle manufacturers being drawn into the resolution of disputes triggered at the supplier level. However, under current legislation, such ‘third parties’ often do not have standing to intervene in industrial disputes, although as key customers they may be exposed to the costs of significant industrial disruption.

3.4 Summary and policy implications

In response to changing nature of the automotive industry’s operating environment, both local and international, the Australian automotive industry has become much more focused on the need for it to build areas of sustainable competitive advantage. In order to carve out a viable position in the global industry, the Australian automotive manufacturers have been repositioning their operations to build and leverage skills in innovation and flexible manufacturing.

The move towards becoming a 'smarter' industry is also broadening the industry's connections and contributions to the wider Australian economy. The policy environment should be supportive of this transition to greater flexibility and knowledge intensity.

Chapter Four

Industry Contribution to the Australian Economy

The economic significance and contribution of the automotive industry is unique in many ways. This is true whether the focus is size, complexity, or the participation in the knowledge-based economy. Its economic importance has been well recognised, and responded to, by policy makers in the world's leading automotive producing nations.

At the global level, the automotive industry is one of the world's biggest industries. It produces goods worth about US \$1 trillion, it employs 10 million people and it contributes about 10 per cent of world trade in merchandise products. In 2000 the global industry produced about 55 million motor vehicles⁴.

The industry is not only important in its own right, but also as a major customer for many other industries such as steel, glass, rubber, electronics, paint and textiles. The automotive industry plays the role of leading edge customer for significant parts of these supplier industries.

Perhaps less widely recognised but nonetheless important, the automotive industry has been a leader in organisational innovation, production methodologies, the use of advanced manufacturing technologies and the organisation of extended supply chains. It is the bedrock of many countries engineering know-how.

The traditional view of the automotive industry as a major part of the industrial economy and direct provider of jobs and investment now needs to be extended. With its new emphasis of innovation and flexibility, the automotive industry is rapidly becoming an integral part of the emerging knowledge-based economy and has built intense linkages to the services sector. This enhances its already considerable potential for future growth.

4.1 Sources of contribution to the economy

The Australian automotive industry makes a number of significant direct contributions to the economy. Some of these contributions, such as well-paid full time jobs, have been traditionally recognised. However, the contribution the automotive industry is making to the development of Australia's knowledge-based economy and Australia's reputation as an exporter of complex manufactured products has only recently received attention by analysts.

"Innovation and flexibility in both product specification and marketing campaigns are vital if Australian manufacturers are to increase shares in accordance with overall growth"

*P. Hanenberger
FCAI President's Report 2001*

⁴ Brown, S. (2000), *Manufacturing the Future*, Financial Times: Prentice Hill, p.31-32; www.oica.net

4.2 Traditionally recognised economic contributions

4.2.1 The provision of well paid, full time jobs

The automotive vehicle and component manufacturing sector is a major direct source of full time jobs. ABS data indicates that this sector employs over 54,000 people, with 26,000 jobs directly in vehicle manufacturing⁵. The jobs that it is providing are attractive, being relatively high wage in nature. Average wages of automotive employees are approximately \$39,500, which is one thousand dollars above the average national full-time wage rate.

The industry is also an indirect generator of jobs, being crucial to employment in sectors such as tooling (where it accounts for 80 per cent of sales) which employs over 10,000 people, and is an anchor customer for the iron and steel, paint, rubber and glass product manufacturing sectors, which together employ a further 44,000 people⁶.

4.2.2 Large investments in plant, equipment and new models

Input from the four vehicle manufacturers indicates that new investment from these four companies alone was over \$2 billion over the period from 1996 to 1999 and is expected to increase to approximately \$2.7 billion for the period 2000 to 2003.

4.2.3 High levels of output and value added

The industry produces 360,000 vehicles annually plus a range of automotive components and contributes about one per cent of GDP. According to the ABS the automotive vehicle and component manufacturing sector had a turnover of \$17.4 billion and a value added component of \$3.9 billion in 1999-00, representing 5.7 per cent of total manufacturing industry value added for that year⁷.

4.2.4 Linkages to supplier industries

The automotive industry has close linkages to a number of other industries, both in manufacturing and the services sector. The output of just a small number of the traditional supply sectors (tooling, steel, paints, rubber and glass) that are heavily reliant on the automotive industry represents a \$16 billion in turnover. Many jobs in manufacturing industries such as steel, glass and textiles are directly dependent upon the automotive industry. The same is increasingly true for jobs in a range of service industries which provide services to the automotive industry.

Efforts made by BHP's coated steel division to improve quality illustrate (see Box 4.1) the impact that having to meet the stringent automotive industry quality standards have upon the capabilities of its traditional industrial suppliers.

⁵ ABS (2001), Manufacturing Industry Australia 1999 – 2000, 8221.0

⁶ Ibid

⁷ Ibid

Box 4.1

DRIVING IMPROVEMENTS IN TRADITIONAL SUPPLIER INDUSTRIES

In 1992 BHP's Coated Steel Australia (CSA) commissioned a new \$150 million metallic coating line at its Western Port Works in Victoria. The state-of-the-art production line allows CSA to produce premium quality Galvanneal steel – under its own trade name ZINCANNEAL - that meets the stringent quality requirements of the automotive component and vehicle manufacturers. ZINCANNEAL is now also sold to a range of non-automotive manufacturing sectors.

CSA is also now working through BHP Research's multi-million dollar research facility network to further develop its high strength automotive steel products. This research is now also being applied to international automotive projects such as the UltraLight Steel Auto Body Project. This development work is closely related to the desire by the automotive industry to reduce vehicle weight to improve fuel economy and meet environmental targets.

Source: FAPM, Australian Automotive Products Directory 2002

4.2.5 Providing significant benefits to regional economies

While the activities of the Australian automotive industry are predominantly located in Victoria and South Australia (the industry accounts for almost 2.5 per cent of gross state product in these states)⁸, significant automotive operations are also located in New South Wales, Tasmania and Queensland.

The location of industry activities in many smaller regional centres throughout Victoria, Tasmania, NSW and Queensland also give rise to significant impacts on these micro-economic regions. The presence of companies such as: Ford in Geelong Vic (2,190 employees, making it Geelong's largest employer); Automotive Components Limited in Launceston Tasmania (480 employees); Schefenacker Lighting Systems Australia in Taree NSW (350 employees); BTR Automotive in Albury NSW (840 employees); Empire Rubber in Bendigo Vic (450 employees); and, Toowoomba Foundry in Toowoomba Qld (230 employees) are of considerable importance to the viability of these regional centres.

4.3 Newly recognised economic contributions

These traditional sources of contribution to the economy have been well documented in the past, both in Australia and in other automotive industry producing countries. However, the contribution of the automotive industry to the development of the knowledge-based economy is only now beginning to be fully recognised. The OECD has highlighted the importance of areas such as human capital development, R&D and links to local and global innovation systems to economic performance⁹.

The major channels by which the Australian automotive industry is contributing to Australia's innovation performance and global integration are explored below.

⁸ ABS, Manufacturing Industry Victoria; MICC, Victoria's New Manufacturing Future; ABS, Manufacturing Industry South Australia; SADIT, Manufacturing Industry Directions Statement

⁹ OECD (2000); Innovation and Economic Performance, Directorate for Science, Technology and Innovation, pg.10

4.3.1 Human capital and skills formation

The automotive industry has invested heavily in training and skills development for its workforce reflecting the need to achieve world class levels of performance in quality and price and to provide for continuous improvement.

In the 1990s a key element of the automotive industry’s strategy to meet world’s best practice standards was to make a step change in its investment in training and skills development. This involved the automotive companies becoming learning organisations, lifting spending on education and training to a average in excess of 4 per cent total wages, well above the rate in industry generally. Ford Motor Company, for example, was recognised with the Australian National Training Authority employer of the year award in 1995 for its efforts in the area of education and training (see Box 4.2).

Box 4.2

FORD’S COMMITMENT TO EDUCATION AND TRAINING

Ford Australia’s commitment to up-skilling its workforce is reflected in its expenditure on education and training reaching 8 per cent of all wage and salary costs.

The company has put in place a comprehensive learning and development framework that makes it possible for an untrained worker to enter the company and progress through fully accredited education and training programs up to a Master degree level and beyond.

Ford itself is a registered training provider for all or part of the following qualifications:

- Certificate of Vocational Studies
- Vehicle Industry Certificate
- Advanced Certificate in Technology Management
- Advanced Certificate in Engineering
- Advanced Diploma in Engineering
- Advanced Certificate in Automotive Manufacturing

Source: Ford input

The result of the efforts by each of the vehicle manufacturers in up-skilling their workforces is that the qualifications profile of the automotive industry is now very different to what it was only five years ago.

Figure 4.1

QUALIFICATION LEVELS OF THE WORKFORCE OF THE FOUR AUSTRALIAN VEHICLE MANUFACTURERS

	1995 (% of workforce)	2000	
Post graduate degree	2.1%	2.7%	↖ This represents a 45% increase to 561 in the number of post graduate degree holders employed by the four vehicle manufacturers alone.
Graduate degree	11.1%	11.6%	↖ This reflects a 339 person increase to in the number of graduate degree holders employed by the four vehicle manufacturers.
TAFE qualification	20.2%	41.5%	↖ The percentage of workers with TAFE qualifications has more than doubled (to 8,627 workers) while the percentage number of workers without any post school qualifications has fallen by 33%.
No post secondary school qualifications	66.6%	44.2%	

Source: Allen Consulting Group consolidation of data provided by the four vehicle manufacturers

The commitment to skills formation has seen the percentage of employees of the four vehicle manufacturers with TAFE, graduate or post-graduate qualifications rise from 33.4 per cent in 1995 to 55.8 per cent in 2000.

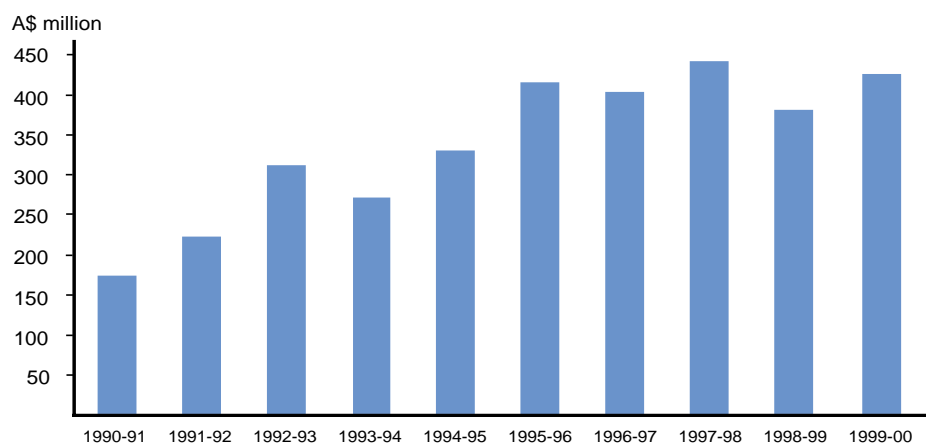
4.3.2 Expenditure on and performance of R&D

The increasing importance of innovation has seen the automotive industry become one of the major performers of business R&D in Australia. Based on information regarding R&D tax concession claimants, the automotive manufacturing industry in Australia, which spends approximately \$400 million per annum on R&D, accounts for over 8 per cent of total business R&D expenditure and is second only to the mining industry in total R&D expenditure.

As Figure 4.2 indicates, ABS data shows that spending on R&D by the motor vehicle and parts industry, while subject to significant year to year changes based on new model development cycles, has shown a solid growth trend over the past ten years.

Figure 4.2

RISING AUTOMOTIVE INDUSTRY EXPENDITURE ON R&D



Source: ABS unpublished data

Increasingly companies within the automotive industry are developing relationships with the universities and the CSIRO to undertake collaborative R&D. Automotive companies are members of a number of Cooperative Research Centres (CRCs). Recent examples of the industry's involvement in collaborative R&D ventures with public sector researchers include:

- Holden's longstanding involvement with the Monash University Accident Research Centre;
- The use of the Monash University wind tunnel facilities by both Ford and Holden;
- Ford's strong links with Deakin University in its ferrous and aluminium solidification technology (FAST) and stamping technology for automotive manufacturing processes (STAMP) research centres;
- Mitsubishi's involvement in the CRC for intelligent manufacturing systems & technologies; and

- Ford's involvement in the CRC for alloy and solidification technology (CAST).

4.3.3 *Dissemination of world's best practice manufacturing methods and technologies*

Product development partnerships have also been developed between the car manufacturers and their automotive component suppliers as the need to invest in innovation throughout the supply chain has become evident. The automotive industry is an important source of leading edge design, engineering and production technologies and organisational methodologies which it disseminates to its suppliers and industry more generally. Its relatively high use of advanced manufacturing technology is reflected in its significant purchases of robotics.

The automotive industry has also played a leading role in the adoption of IS-9000 quality standards, with the vehicle and components manufacturing industry now being fully IS-9000 rated. Ford, General Motors, Mitsubishi and Toyota have formed a landmark agreement to adopt IS-9000 accreditation as a supply requirement, which is driving compliance with these standards in other manufacturing sectors. The industry is now acting as a leader in relation to the adoption of ISO14001 environmental management accreditation standards.

Toyota, for example, since 1989 has had a dedicated supplier development team in place that has worked with a wide range of Toyota suppliers to help them implement lean manufacturing principles. Toyota has worked with 60 of its first tier suppliers on the introduction of lean manufacturing into their operations.

4.3.4 *Close linkages to the services sector*

While the automotive industry has traditionally been closely linked to a number of other manufacturing industries, in recent times there has been a trend for the industry to connect strongly with a range of specialist services providers.

In recent times the term 'new manufacturing' has been used to describe the changing nature of advanced services intensive manufacturing activities. Sheehan and Pappas have recently explored the emergence and implication of new manufacturing¹⁰. Key findings of their detailed study were that:

- Manufacturing industries are drawing increasingly heavily on service sector inputs. Well over 60 per cent of inputs from other industries into those sectors manufacturing elaborately transformed manufactures (ETMs), of which automotive is a leading sector in Australia, come from the service sector;
- Service rather than production activities are becoming increasingly important within manufacturing itself, with over 35 per cent of employment in manufacturing being in service occupations;

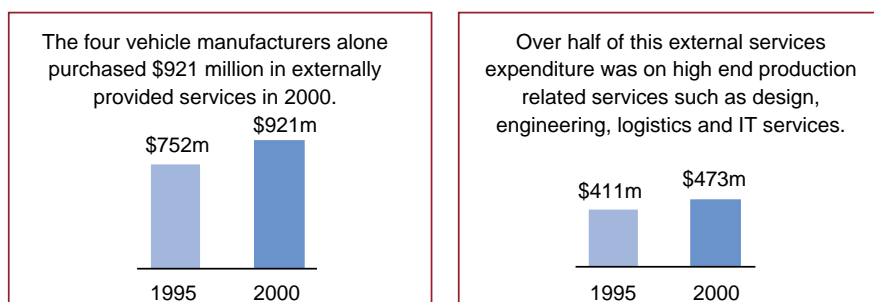
¹⁰ Sheehan and Pappas (1998), *The New Manufacturing: Linkages between production and services activities*, Victoria University Centre for Strategic Economic Studies

- There are strong linkages between exports of commodities and of services, especially in relation to ETM exports; and
- As of 1995-96, about 65 per cent of Australian employment was in industries involved in the creation, production or distribution of goods.

Input provided by the four vehicle manufacturers and some leading component suppliers (see Figure 4.3), add support to the above findings and indicate that services enhanced new manufacturing is very much a reality within the Australian automotive industry.

Figure 4.3

SERVICES ENHANCED MANUFACTURING IS AN AUSTRALIAN AUTOMOTIVE INDUSTRY REALITY



Expenditure by leading components producers is also growing, with one producer, for example, doubling its external services expenditure between 1995 and 2000 to \$72 million per annum.

Source: Unpublished input from the four vehicle manufacturers and several leading component suppliers

This interaction between the manufacturing sectors producing ETMs and the services sector, indicates that while services may be a powerful economic growth engine in Australia, much of these services are related to the domestic presence of manufacturing of ETMs into which they can provide service inputs.

The automotive industry is very much a part of this trend to services enhanced manufacturing with input from the four vehicle manufacturers indicating that they spent \$920 million on externally provided services in 2000, including \$473 million on high end production related services such as design, engineering, logistics and IT services.

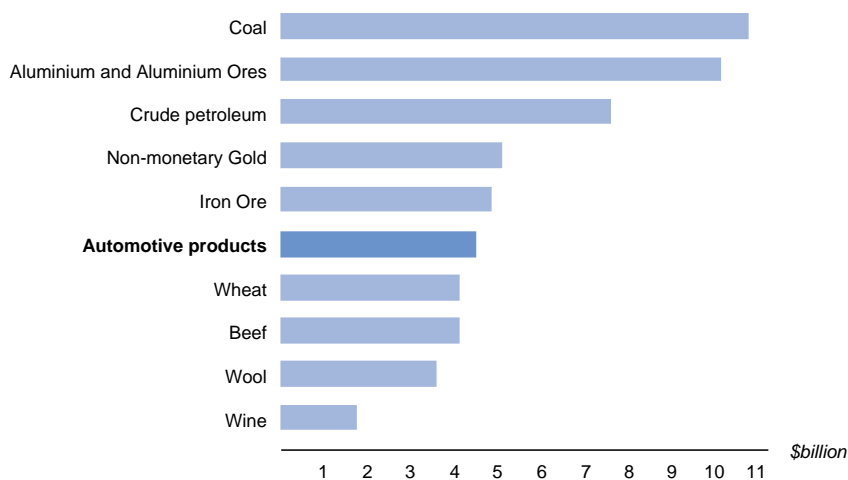
4.3.5 *Building Australia's reputation as an exporter of complex manufactured products*

Over the last decade, exports of automotive products have expanded rapidly and in 2001 exports contributed \$4.94 billion to Australia's total exports¹¹. This represents a four-fold increase in exports over the past ten years.

¹¹ Department of Foreign Affairs and Trade (2001), Composition of Trade Australia 2000 – 2001, October

The Department of Foreign Affairs and Trade *Composition of Trade* publication indicates that automotive exports represent almost 4 per cent of all Australian merchandise exports and over 12 per cent of all manufactured exports. Figure 4.4 shows automotive exports now rank sixth in value. Automotive products are almost as important as exports of iron ore, exceed exports from traditional exports sectors such as wheat, beef and wool and are more than twice as large as exports of wine.

Figure 4.4

MAJOR AUSTRALIAN MERCHANDISE EXPORT CATEGORIES FOR YEAR 2001

Source: Department of Foreign Affairs and Trade, *Composition of Trade 2000-01*

The industry's growing export success, is generating significant spillover benefits for Australia beyond those that are fully captured by the industry itself. These benefits include:

- The expansion of exports improves Australia's balance of payments and hence the capacity of the economy to grow faster;
- The expansion of exports of ETMs and high end services improves Australia's average terms of trade and supports the Australian dollar;
- The challenge of meeting the quality demands of export markets have driven quality improvements in Australian produced vehicles for the domestic market;
- The export of ETMs from Australia acts to raise Australia's profile overseas as a source of high quality technologically advanced products; and
- The automotive industry acts as a demonstration model for other potential exporters of ETMs.

Consideration of the industry's experiences in exporting to the United States and the Middle East demonstrates some of these benefits (see Box 4.3).

Box 4.3

LESSONS FROM EXPORT EXPERIENCE**Exporting to the United States**

Mitsubishi Motors Australia commenced exports to the US in 1992, shipping a total of 9,100 units of the Diamante wagon between 1992 and 1995. Once Mitsubishi Australia had demonstrated its capability to Mitsubishi head office with the fulfilment of this small export contract, from 1996 Mitsubishi Australia was able to win a larger export contract supplying the new generation Diamante sedan into the US near luxury market.

Since 1996, Mitsubishi Australia has shipped over 62,000 units of this vehicle to the US and has subsequently captured several other niche export contracts for this vehicle and now globally exports 19,000 units per annum.

Qualitative benefits to Mitsubishi and the wider manufacturing sector, beyond the quantitative benefits such as the increase in scale and revenue that has been generated, have included:

- the introduction of leading edge specific features into Australia;
- the transfer of skills and technology needed for high end vehicle manufacture; and
- improvements in quality standards across the entire Australian production range.

Exporting to the Middle East

Toyota started exporting vehicles to Saudi Arabia in the mid 1990s. Exports have built up rapidly to the point where Toyota is now exporting over 50,000 vehicle to the Middle East each year. In order to meet the demanding climatic and consumer quality expectations in the Middle East, Toyota needed to raise its quality levels for all of its Australian built vehicles.

Holden also now export to the region and together vehicle exports to Saudi Arabia alone reached \$1.2 billion in 2000-01, representing 55 per cent of Australia's exports to Saudi Arabia.

Vehicles are the first high value added, complex product that Australia has exported to the Middle East in significant quantities and these exports are helping to deepen the Australia-Middle East trade relationship and helping to position Australia as a serious exporter of world class high value added products.

Sources: Holden, Mitsubishi , Toyota, ABS Trade data

4.3.6 Linkages to the global networks of the world's leading automotive companies

The presence in Australia of subsidiaries of the world's leading automotive producers provides valuable linkages for Australian companies to international networks which can be important both as suppliers of knowledge and know-how and significant potential market opportunities. Knowledge and know-how accessed from the resources of their parent companies is rapidly disseminated into the Australian economy. The internationalisation of the R&D function in the global automotive companies also creates opportunities for participation by Australian researchers.

4.4 Contribution to future growth

There has been a perception in Australia that the automotive industry is a mature industry with limited prospects for growth. Over the last five years or so, the industry's output has increased, driven primarily by export growth. This has been underpinned by the industry's ability to improve its international competitiveness, increase innovation and respond flexibly to emerging opportunities.

Looking to the future, there is potential for the automotive industry to grow at a significantly faster rate in the next five to 10 years. The main sources of enhanced growth would be:

- Improved productivity performance associated with the increased innovation potential of the workforce, the effective exploitation of powerful new IT and production technologies and the ongoing drive towards organisational improvement and agile manufacturing.
- The ability of the car manufacturers to meet niche demands in the Australian market by producing specialist vehicles based on existing vehicle platforms supported by technologies enabling the design to production cycle to be significantly shortened.
- Increased exports of vehicles and automotive components based on product innovation and the development of new export markets.

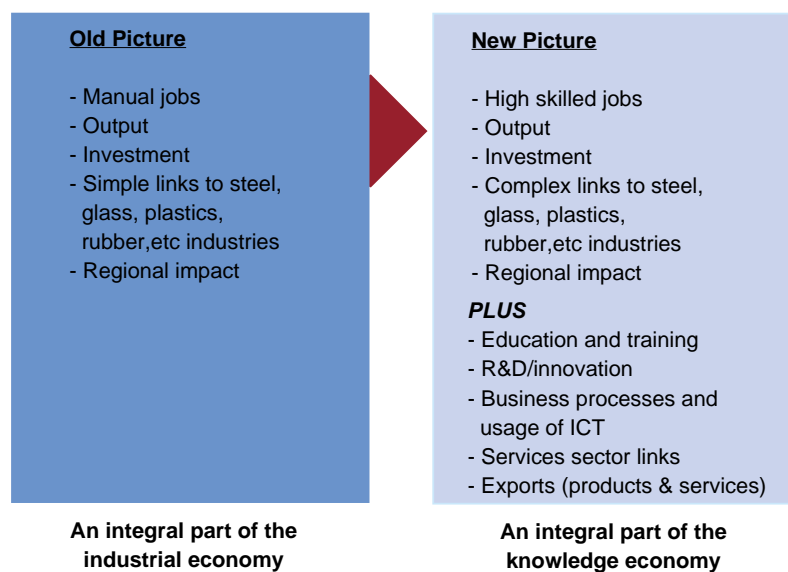
If the industry can capitalise on its potential in each of these areas it will be able to make an increased economic contribution to Australia over the coming decades.

The vehicle manufacturers, by demanding high standards of cost and quality competitiveness from their suppliers of both components and materials, will also spur greater productivity and competitiveness across the wider economy. The industry is working with its suppliers to upgrade their capabilities to assist them in meeting these standards. In this way they are acting to disseminate world's best manufacturing methods and technologies throughout their supplier base, thus strengthening the competitive position of a number of supplier industries.

4.5 Summary and policy implications

Figure 4.5 illustrates how the old picture of the industry's economic contribution should now be superseded by a much richer modern view of the industry and its place within the Australian knowledge economy.

Figure 4.5

TRANSITION FROM AN INDUSTRIAL TO KNOWLEDGE ECONOMY INDUSTRY

Source: Allen Consulting Group

Too often public discussion tends to equate the knowledge economy with the major breakthroughs that have occurred in information and communications technology, or biotechnology. A broader, more appropriate, measure of an industry's contribution to the knowledge economy would have regard to the extent of use of knowledge, both as an input and an output.

"The automotive industry is a 'university' of advanced manufacturing methods and technologies"

Creating Our Future, Victorian Government Statement 1997

On this basis the automotive industry is clearly an integral part of the knowledge economy.

Rosabeth Moss Kanter has identified concepts, competence and connections as the three key characteristics possessed by world class performers in the global knowledge-based economy¹². The automotive industry now possesses these features:

- Automotive companies are developing successful concepts through spending on and performance of R&D resulting in innovation in products and processes as well as new organisational methods.
- The industry is building its competence by becoming a leader in education and training and spending in excess of four per cent of salaries on skills development.
- Automotive companies are creating and using connections by entering into partnerships with Australian-based suppliers for joint design and engineering, accessing the global networks operated by the world's biggest automotive companies and working closely with Australian education, training and research agencies.

¹² Kanter (1997), World Class: Thriving Locally in the Global Economy, Touchstone

This modern view of the industry provides a more accurate and positive perspective on the potential of the automotive industry to contribute to the growth of the Australian economy. The challenge for policy is to create a globally competitive policy environment for the automotive industry which will enable it to achieve its inherent potential for growth in the interest of the economy and the community as a whole.

Chapter Five

Benchmarking the Global Policy Environment

The significant and widespread economic contributions made by the automotive industry has led to it being seen by both developed economy and emerging economy countries as strategically important to the development and growth of their economies. Reflecting the industry's perceived strategic importance for employment, wealth creation and broader industrial development reasons, it has been treated as a 'special case' by policy makers for a long time.

The industry is still the focus of specific policy attention in many countries (and states in the USA). Governments continue to seek in a range of ways to provide policy environments for the automotive industry which will attract and retain automotive investment in their jurisdictions.

The 'special case' nature of public policy towards the automotive industry in many automotive producing countries has not changed over the past decade. What has changed is the mix of policies used to support and facilitate the development of the industry.

5.1 Key trends in the global policy environment

The influence of the GATT (now the WTO) in setting limits on, and altering the form of, industry support are forcing change in the policy environment. That influence shows itself through three main channels:

- general tariff negotiation rounds that have seen significant reductions in tariffs on manufactured products in the leading industrial countries since the Kennedy Round which finished in 1967 and under which most industrialised economies agreed to cut their tariffs by 50 per cent;¹³
- GATT (now WTO) rules governing the application of production subsidies ; and
- the Trade Related Investment Measures (TRIMS) agreement which places disciplines on connecting investment incentives to production and exports.

There has been a tendency in the 1990s for major countries to bring cases bearing on automotive to the WTO for resolution. A very significant case was the dispute brought by the European Union and Japan against the Canada-US Auto Pact in 1999.

¹³ Oxley, A. (2000), *Seize the Future: How Australia can Prosper in the New Century*. Allen & Unwin, p 19-20.

Trade blocs – such as the EU, NAFTA, MERCOSUR and AFTA – have also become important as both promoters of intra-bloc trade and in some cases, most noticeably the EU, as rule setters for the conduct of member countries in relation to industry assistance policy.

The EU has a policy on State Aids for industry which is specific to the automotive industry¹⁴. The purpose of the policy is to ensure fair competition applies between automotive producers throughout the EU. Over time, the policy on State Aids for the automotive industry have come to recognise three justifications for member states providing financial assistance to attract and retain automotive industry investment:

- support for R&D;
- support for education and training; and
- support to overcome real regional operating disadvantages.

The European Commission has been active in challenging member states who seek to provide financial assistance over and above the amounts justified by recourse to these three elements.

Despite these WTO constraints and the constraints imposed both various trade blocs on member country conduct, governments globally, in both developed and developing countries, continue to offer significant incentives to attract and retain automotive industry investment.

Both tariff and non-tariff barriers, higher than those for most other manufactured products, are widely used to protect the domestic automotive market for local producers in automotive producing countries.

A range of other policy tools have also been used to attract automotive industry investment and to make countries and regions an attractive base for the export of automotive products. Tax concessions, grants, regional aid, R&D support, education and training support and production assistance have all been widely used, in conjunction with tariff and non-tariff barriers, to increase the attractiveness of countries and regions as a location for major automotive industry investments. Different nations and regions are becoming increasingly specific about what types of investment they are seeking to attract – ranging from major production facilities to high end activities such as research and engineering centres¹⁵.

Beginning with the reduction in industrial tariffs negotiated through the GATT Kennedy Round in the 1960s, developed countries' automotive product tariff barriers have gradually fallen to more modest levels (although they are still higher than for industry generally).

The policy emphasis has shifted to more direct support of investment, R&D, education and training and regional assistance.

¹⁴ See European Commission's Competition Reports – State Aids for 1998 and 1999.

¹⁵ It should be noted here that the attraction of high end activities such as major R&D centres depends on already having substantial manufacturing operation in place. R&D centres are not established in isolation from production centres.

In emerging economy countries tariff and non-tariff barriers remain high (eg. Thailand) to extremely high (eg. Malaysia). There is the widespread use of tax holidays as a tool to attract new investment in these countries.

Nation states and regions in both developed and developing countries are employing an increasingly broad and sophisticated range of investment attraction and retention policy tools.

The utilisation of designated regional development zones offering special investment incentives is becoming common, and an increasing focus on R&D and education and training linked assistance is emerging.

In Australia's case public policy towards the automotive industry (and the mix of policy instruments used) has changed significantly over the past two decades.

Prior to 1984 policy was mainly directed at reserving the domestic market for the Australian industry through high tariff and non-tariff barriers to imports. Local content plans aimed to ensure support for the component manufacturing industry were also in place.

Since 1984 policy has been directed at reducing tariffs to levels consistent with those in other developed countries and, until quite recently, directly supporting the growth of exports of automotive products.

The past five years have seen two major policy changes in Australia that reflect both the trend to bring tariffs into line with those of other developed countries and the impact of WTO rules on the design of industry assistance measures.

- The reduction of tariffs from 22.5 per cent in 1997 to 15 per cent in 2000 on passenger motor vehicles (which will fall again to 10 per cent from 1 January 2005);
- The termination of the Export Facilitation Scheme (EFS) and the Duty Free Allowance scheme at the end of 2000 and the introduction from 1 January 2001 of the Automotive Competitiveness and Investment Scheme (ACIS) that provides a mix of support for production, investment and innovation.

5.2 Future trends in global trade rules affecting automotive trade

Developments in major multi-lateral trade forums such as the WTO and APEC or Australia entering into new bi-lateral free trade agreements will potentially impact upon the policy setting options relating to the automotive industry that are available to the Australian Government.

5.2.1 Multilateral trade forum developments

New WTO round

The WTO Ministerial Conference at Doha agreed on the parameters of a new round of negotiations as part of the future work programme of the WTO. The round is due to end by 1 January 2005 at the earliest. Even if such a deadline were to be met, new rules would be unlikely to come into force before 2006.

The Anti-Dumping Agreement and the Subsidies and Countervailing Measures Agreement will be subject to negotiations in the new round.

While the focus in discussions on these agreements leading up to Doha was on special treatment demanded by developing countries, developed countries such as Canada and the EU may continue to push for the re-activation of the provisions on the deeming of serious prejudice and for specific non-actionable subsidies, in particular those meeting the criteria for disadvantaged regions. New provisions on non-actionable subsidies may have to go some way to accommodate the demands of developing countries for some provisions on developmental subsidies.

If the Subsidies Agreement were to be opened up, then there could be an attempt to revisit interpretation issues as well as remedy issues in respect of prohibited subsidies, in particular export subsidies. While such work would seek to clarify certain rules, it would not open up the rules to allow circumvention of the current prohibition on export subsidization for developed countries. Australia will continue to face the problem of being subject to the same rules as other developed countries, but with the 'small country' problem of how to provide assistance to industries that must rely on export performance for scale.

The issue of the modalities of future negotiations on trade and investment will not be decided until the next Ministerial Conference of the WTO in 2003. Any outcome could include some reinforcement of existing disciplines on performance requirements, which would need to be taken into account for future industry assistance measures. However they would not come into force before 2006 at the earliest.

APEC developments

In the context of APEC, Australia also has a commitment to the Bogor goal of free trade and investment by 2010, which potentially sets a long-term time limit to reliance on tariff protection as an integral part of industry assistance. However, it is clear that the definition of free trade and investment are somewhat flexible and Australia does appear to have some flexibility in terms of commitments under APEC. This is particularly true for automotive tariffs, given that Australia already has much lower tariffs in place, and a more open market for imports, than many other APEC members.

Developments within APEC also appear to have been somewhat overshadowed by the further development of the ASEAN free trade agreement (AFTA) to which Australia is not a party.

5.2.2 The development of bi-lateral Free Trade Agreements (FTAs)

The growing network of bi-lateral FTAs across the world, must necessarily impact on the market access conditions for third countries. They will also continue to affect investment decisions to take advantage of improved access to larger markets. It is important that Australia does not fully rely upon progress in trade liberalisation in multi-lateral trade forums, such as APEC and the WTO, to achieve greater access to international markets. Progress to date has been slow in multi-lateral forums so it is important that Australia explores the opportunities to develop FTAs with major trading partners.

To this end, the automotive industry welcomes recent initiatives towards the development of FTAs with countries such as Thailand.

Clearly any FTA that Australia entered into with a country with a significant automotive industry, such as the USA, may impose some constraints on the types of support able to be provided to the Australian automotive industry.

5.2.3 Implications for automotive industry assistance in Australia

In the short term, the only likely change in the upcoming WTO negotiation round is the reinstatement of more effective provisions for proving serious prejudice being caused by subsidization, in particular the 5 per cent or some other threshold. In addition, agreement might be reached on the Informal Experts Group's proposals regarding the calculation issues for applying the threshold. This should have limited implications for ACIS given the 5 per cent figure in legislation. However, it may impact on a future Plan and its relationship with State assistance.

Moreover, it may be that the serious prejudice issue will only be dealt with as part of any negotiations on the Subsidies Agreement in the new round. If that is the case, then any changes for subsidies may not be implemented for some years. Similarly, any changes in other areas, including investment rules, would not be for some years, indeed would not enter into force before 2006 at the earliest. If there were to be an agreement on trade and investment in the WTO, it is likely that Australia would join it, even if it did not involve all WTO Member countries. However, as a general point, the rules as they affect the automotive industry have been basically evolutionary from GATT 1947 through to the WTO with clarifications and interpretations. Even if such a new agreement were to contain rules on performance requirements, radical changes would be unlikely to be negotiated.

In the shorter term, the temporary derogations being sought by developing countries may affect market access for Australian exports and even the competitive situation of imports in the Australian domestic market. However, most of these are time bound and there will be little that can be done about it. Nonetheless, the outlook is for continued differential treatment being afforded to developing countries.

More promising avenues for improving market access for automotive exports would appear to be through the development of FTAs with countries such as Thailand and other ASEAN nations.

5.3 Benchmarking the global policy environment

In the past there has been a tendency to focus almost entirely on benchmarking tariff barriers. This is perhaps understandable given the simple data requirements involved with such an approach. The difficulty is that the policy set typically used by countries to provide an attractive environment for the automotive industry generally comprises a number of significant instruments going well beyond the tariff. This means that focussing on the tariff alone can convey a totally misleading impression of support being provided to the automotive industry in different jurisdictions.

Therefore to gain a more comprehensive understanding of the actual overall policy environment relating to the automotive industry it is necessary to consider a broad range of policy settings, including:

- policies impacting on market access;
 - tariffs
 - non-tariff barriers
 - trade bloc membership
- policies impacting on the attractiveness of the investment environment;
 - investment incentives
 - production supports
 - regional aid support
 - corporate taxes
- policies supporting innovation capability and competence development;
 - R&D support
 - education and training support

5.3.1 Benchmarking Australia against leading automotive producers

Below, policy settings in Germany, Japan and the USA are briefly considered. These countries represent the world's most developed automotive producers and the dominant sources of automotive investment flows and decision making.

5.3.2 Developed countries summary

Following is a discussion of the overall impact of government policy on market access, investment attractiveness and innovation capability and competence building in the three highly developed countries analysed. It provides an overview of the policy environment in these countries relative to Australian policy settings.

Policy areas impacting upon market access

Tariffs in these countries range from a rate of zero in Japan, to 10 per cent in Germany, to 2.5 per cent on passenger motor vehicles but 25 per cent on light trucks in the USA. The current Australian rate of 15 per cent on vehicles and parts and five per cent on light trucks and 4WD vehicles (which make up about 20 per cent of the vehicle market) are slightly higher than the rate found in most other developed countries. Table 5.1 sets out tariffs in each of the developed countries analysed.

Table 5.1

TARIFF RATES IN SELECTED KEY DEVELOPED COUNTRIES

Australia	Currently 15% on passenger vehicles and most components (both rates to fall to 10% in 2005) and 5% on 4WD and light and heavy trucks.
Germany	Common EU tariff rates apply. 10% on vehicles, 3.5 – 4.5% on components.
Japan	Zero on both vehicles and components.
USA	2.5% on passenger vehicles and components, 25% on light and heavy trucks.

By 1st January 2005 when the passenger vehicle tariff falls to 10 per cent, Australia's tariff will be broadly in line with those in both Germany and the USA.

The tariff is only one element determining market access conditions. In some developed countries, non-tariff barriers are important. This is demonstrated by a comparison of the situation in Australia and Japan. The relative openness of the Australian vehicle market is reflected in the fact that vehicle imports hold about 60 per cent of the vehicle market in terms of numbers of vehicles. This compares to an import share of 6.3 per cent in the Japanese passenger vehicle market where tariffs are zero¹⁶.

Despite having zero tariff rates, the Japanese domestic market has a very low import penetration rate – the lowest amongst these developed countries – caused it is alleged by the presence of non-tariff barriers, particularly in the vehicle distribution system. In this case the tariff rate is a poor indicator of market openness.

Germany and the US are similar to Australia in that no major non-tariff barriers to imported goods are in place.

In relation to trade bloc membership, only Japan and Australia of the countries considered are not members of a major trade bloc. Given the small and open domestic market in Australia, this presents a challenge regarding access to production economies of scale relative to these countries.

¹⁶ Just-auto.com, (2000) Global car forecasts to 2005

The US is a member of NAFTA, which allows for free trade between members. The effective size of the barrier free market available to NAFTA members is over 19 million passenger and light truck vehicles. Similarly, Germany has access to the barrier free EU passenger car market of over 15 million vehicles. The barrier free market available to Japanese producers is approximately 4.5 million passenger vehicles. These barrier free markets dwarf the 0.8 million barrier free vehicle market available to Australian automotive producers in the absence of Australia being a member of a major trade bloc.

The overall impact of these three policy areas on market access is that, despite currently having a somewhat higher tariff rate than these three developed countries, the Australian market is very open to imported vehicles. The market will open even further when the 10 per cent tariff comes into operation from 1st January 2005.

The actual degree of import penetration of a country's domestic automotive market is a useful indicator of the degree of market openness. It should be noted that import penetration rates for countries that are members of major trade blocs (that have barriers to imports from non-member countries) need to be considered in terms of imports from fellow trade bloc members and imports from non-trade bloc member countries. Table 5.2 below sets out import penetration rates for Australia and these three leading developed countries.

Table 5.2

IMPORT PENETRATION IN AUSTRALIAN AND SELECTED DEVELOPED COUNTRY MARKETS

	Domestic Passenger Car Market (2000)	Imports market share	Imports (from within trade bloc) market share	Imports (from outside trade bloc) market share
Australia	554,000	58.9%	0%	58.9%
Germany	3,380,000	47%	30%	17%
Japan	4,225,000	6.3%	0%	6.3%
United States	17,300,000	34%	17.5%	16.5%

Sources: Department of Industry Tourism and Resources (2001), Key Automotive Statistics 2001; Just-auto.com (2000), Global Car Forecasts to 2005; German Association of the Automotive Industry, Annual Figures (www.vda.de); www.ita.doc.gov/td/auto/qfact.html

These import penetration rates demonstrate the relatively high degree of openness of the Australian marketplace to imported passenger vehicle as well as highlighting that the majority of imports into trade bloc member countries, the USA and Germany, come from fellow members of their respective trade blocs, NAFTA and the EU.

A further indicator of the degree of contestability of different countries automotive markets is the relative affordability of comparable vehicles in those markets, where affordability is defined as the ratio between vehicle cost and average full time weekly earnings. High vehicle affordability suggests a high level of market contestability. Table 5.3 below sets out the affordability of comparable vehicles (in this case variants of the four cylinder automatic Toyota Camry) in Australia and a broad selection of developed countries.

Table 5.3

VEHICLE AFFORDABILITY IN AUSTRALIA AND SELECTED DEVELOPED COUNTRIES

	Average full time weekly earnings	Cost of base model automatic 4 cylinder Camry variant	Vehicle cost: average weekly earnings
United Kingdom	Stg 444	Stg12,980	1:29.2
United States	US\$ 640	US\$20,285	1:31.7
Australia	A\$ 859	A\$27,900	1:32.4
Germany	Euro 600	Euro19,803	1:33.0
Canada	C\$ 773	C\$25,600	1:33.1
Sweden	SEK 4,650	SEK 248,000	1:53.3

Sources: Industry price data from Toyota Australia; Earnings data from ABS, 6302.0; www.statcan.ca; www.destatis.de; www.statistics.gov.uk; www.bls.gov; www.si.se

These affordability comparisons indicate that Australia ranks squarely in the middle of the developed countries analysed in terms of vehicle affordability for a mid-size passenger vehicle. It is recognised that consumption taxes vary from country to country and it is significant that the only outlier is Sweden which has a much higher rate of Value Added Tax than that of the other EU member countries included in Table 5.3¹⁷.

The past five years have seen a real increase in the affordability of vehicles (average weekly earnings/motor vehicle consumer price index), with locally produced vehicles providing a highly competitive pricing reference point for the wider market. Small cars in particular are forced to keep their prices significantly below those of the larger domestically produced vehicles in order to generate sales.

Policy areas impacting on the attractiveness of the investment environment

The terms of market access can have a strong bearing on the investment attractiveness of a particular country. For example, high market access barriers to a significant domestic market can make investment designed to gain access to that market relatively more attractive¹⁸. In Australia's case high protection in the 1950s to 1970s led the major automotive producers to build up significant automotive production capacity in Australia to address the local market.

However, market access conditions tend to impact very generally upon the attractiveness of the investment climate whereas many of the specific investment attraction policies considered in this section (with the exception of the corporate tax climate) tend to impact upon the attractiveness of the investment environment on a case by case basis.

Investment incentives available in the Germany and the US are negotiated on a project-by-project basis, with incentives being made under either a general or a regional aid banner.

¹⁷ Vehicle prices in each of the countries is impacted by the rate of the consumption tax applied to automotive products. For instance, in Australia the rate is 10%, in Sweden 25%, the UK 17.5%, Germany 16% and in the USA varies between states but is generally less than 8%.

¹⁸ The risk however in such an approach is that the investment will be scaled to service only the domestic market and its viability will be at risk if market access barriers are lowered in the future.

Investment incentives in developed countries reflect to a degree whether the countries concerned have federal or unitary political systems. In the US, where there is a federal system, the state governments take the lead in providing investment incentive packages - these reflect their financial capacity and tax base. State government incentive packages include access to land, provision of transport infrastructure, finance for education and training and tax concessions.

Box 5.1 sets out some significant examples of investment incentive packages provided to the automotive industry by US states in the 1990s¹⁹. These were associated with the entry of Honda, BMW and Mercedes-Benz into manufacturing in the US.

Box 5.1

1990s INVESTMENT INCENTIVE EXAMPLES IN THE USA

In 1999, Honda chose Lincoln Alabama as the site for a new US\$450 million, 1,500 employee minivan and sports utility vehicle plant. The investment was supported by the State of Alabama and local counties with a US\$158.7 million incentive package.

In 1992, BMW chose Spartanburg, South Carolina as a location for its first manufacturing facility outside of Germany. They invested US\$450 million in a plant designed to ultimately employ 2,000 people. The company negotiated an incentive package with the State and Local Governments worth about US\$130 million.

In 1993, Mercedes Benz (DaimlerChrysler) chose Vance in Tuscaloosa County, Alabama as the site of their first US plant. They invested US\$380 million in a 1.2 million square foot plant employing 1,900 people. The company negotiated an incentive package worth US\$253 million from the State and Local governments.

Source: www.siteselction.com; UNCTAD (1995), World Investment Report 1995

Box 5.2 sets out some significant investment incentives provided by US states since 2000. Some of these examples relate to further round incentive support beyond that provided earlier in the 1990s.

Box 5.2

RECENT EXAMPLES OF INVESTMENT INCENTIVES IN THE US

In April 2002, Hyundai announced its US\$1 billion automotive assembly plant will be located in Alabama. The plant will employ at least 2,000 workers with average salaries of US\$40,000 per annum. The Alabama Government provided incentives totalling US\$123 million.

In 2000 the US State of Alabama provided DaimlerChrysler with a US\$64.9 million improvement package and US\$54.4 million in tax concessions to secure a US\$600 million plant expansion in Tuscaloosa in 2000.

In 2000 Chrysler opened its new US\$1 billion Jeep plant in Toledo Ohio. The investment was supported by financial incentives package valued at US\$200 million.

Through the Virginia Investment Partnership (VIP) program, Volvo in 2000 received an assistance package of US\$60 million over ten years in support of the US\$148 million expansion of its Virginia operations.

Source: www.siteselection.com

¹⁹ Some large incentive packages were provided to attract automotive investment in the 1980s. for example, Kentucky offered incentives of US\$125 million in 1985 in attracting Toyota's plant in Georgetown Kentucky (www.siteselection.com).

Investment incentives in Germany make considerable use of the allowance for regional aid under EU State Aid rules. Incentives vary in scale depending upon region and take the form of cash grants, accelerated depreciation allowances, labour cost and R&D supports and loan guarantees. Incentives in the six New Lander States are particularly significant, amounting to up to 35 per cent of total investment costs for new automotive investments. Box 5.3 highlights some recent investment incentive packages offered in both the New Lander States and in Western Germany.

Box 5.3

REGIONAL INVESTMENT INCENTIVES IN EASTERN AND WESTERN GERMANY

Two recent examples of 'regional aid' in Eastern Germany include:

- In December 2001 DaimlerChrysler and Mitsubishi Motors announced that they would be building a new EU240 million engine plant in the German State of Thuringia which will create 500 new jobs. The German federal government and the state of Thuringia will provide a total of EU57 million in regional aid subsidies.
- In September 2001, BMW announced that Leipzig would be the site of its new US\$860 million plant that would produce 3 series vehicles from 2005. This 2,500 employee plant had been the subject of interest from 125 cities in Germany with Leipzig gaining the investment after offering a US\$244 million regional aid investment incentive package.

A recent example of 'regional aid' in Western Germany

- In December 1998 the EU Commission on State Aids approved the granting of regional investment aid of ECU44.4 million (18 per cent of total investment costs) to Opel for the production of direct injection engines at its Kaiserslautern plant. The commission noted that this assistance could be authorised as 'transformation aid' under the state aid rules framework for the motor vehicle industry.

Sources: Mitsubishi Motor Corporation; European Commission, Competition Report - State Aid 1998; www.siteselection.com

In contrast to the almost exclusively project based approach to investment attraction taken in the USA and Germany, Australia relies more on a general investment and production subsidy scheme (ACIS) as its primary automotive investment attraction tool. The Commonwealth and State Governments have also provided investment incentives in particular cases where they have been essential to attract large strategic investment projects to Australia.

The Victorian and South Australian state governments have provided investment packages in the past but generally of a relatively modest nature. It is the support available through the ACIS scheme, which provides duty credits tied to levels of investment, production and R&D, that is to date the primary source of investment support. It should be noted that due to access to the ACIS scheme being limited to companies with an operating history and subject to a modulation process, this scheme has significant limitations as a general new-investment attraction tool.

When the production level linked accrual of duty credits that is a major part of ACIS is considered, it needs to be kept in mind that Australia is atypical when compared to other developed countries in that the tariff on components is the same as that for vehicles. This means, for example, that vehicle producers in Australia face higher duty payments on components than do their European counterparts, and can use ACIS duty credits to offset these higher component duty rates.

In Japan, little is provided in terms of explicit investment attraction incentives compared to the packages of support offered in the other developed countries and Australia. Until recently the Japanese government did not actively seek foreign investment in its automotive industry. The situation has recently changed with Renault's investment in Nissan and Ford's taking control of Mazda. Japan tends to rely upon the fact that its large domestic vehicle market is accessible almost exclusively to domestically based producers to ensure re-investment occurs in Japanese production facilities.

In comparing the relative value of explicit investment support policies amongst developed countries, it is clear that Japan offers less in terms of direct investment support than the other countries studied.

The US, Germany and Australia, all appear to offer a reasonably similar level of investment support, albeit through the use of different policy instruments. Germany relies on offering regional aid packages of up to 35 per cent of total investment costs, while the US relies upon the substantial aid packages offered on a project-basis by many individual states. The project based incentive packages on offer in these countries tend to be relatively higher than those offered in Australia, but this is counter-balanced by the duty drawback elements of ACIS.

Policy areas supporting innovation capability and competence building

In developed high wage countries such as Australia and the other developed countries analysed here, the ability to create innovative high value added products and apply new knowledge to production processes to increase productivity are essential to industry competitiveness. Therefore, policies supporting R&D and education and training, two areas crucial to the building of innovation capabilities and competence, are emerging as an important focus for policy makers in many developed nations.

There has been a trend, particularly in developed countries, to provide generous ongoing support for R&D activities and provide significant investment incentives to attract major automotive R&D facilities.

Support for R&D is provided through direct government funding for major automotive R&D programs aimed at providing the technology basis for vehicles for the next ten to twenty years and through general support mechanisms such as R&D tax credits and concessions. Box 5.4 shows examples of major automotive R&D programs in place in the US, UK and Canada.

Box 5.4

MAJOR AUTOMOTIVE R&D PROGRAMS*USA – Partnership for a New Generation of Vehicles (PNGV)*

The US government provides specific support for the automotive industry through the PNGV established in 1993. PNGV is a federal government led research program that involves 7 federal agencies, 19 federal research laboratories, DaimlerChrysler, Ford and General Motors plus other automotive suppliers, universities and small businesses.

The program's stated goals are to:

1. develop an environmentally friendly car with up to triple the fuel efficiency of today's mid-sized cars without sacrificing affordability, performance or safety.
2. to significantly improve national competitiveness in automotive manufacturing.
3. to apply commercially viable innovation to conventional vehicles.

The program has been federally funded at a rate of US\$240 million per annum since its establishment.

UK – Foresight Vehicle

The UK government's Foresight Vehicle program was launched in late 1997. It is the UK's national automotive R&D program aiming to promote technology and stimulate suppliers to develop and demonstrate market driven enabling technologies for use in mass market vehicles of 2020.

The program is focused on the development of vehicles which are: clean, efficient, lightweight, telematic and intelligent.

Since its inception it has received approximately US\$140 million in government funding.

Canada – AUTO21

The Canadian government has established the AUTO21 National Centre of Excellence that involves 26 universities and 17 government departments and agencies. The Centre is run through the Department of Mechanical, Automotive and Material Engineering at the University of Windsor in Ontario, which is the centre of the Canadian vehicle production industry.

the AUTO21 network performs an extensive and integrated research program examining issues such as:

- vehicle safety;
- new manufacturing processes and materials for future automobiles;
- new fuels and powertrains; and
- integration of advanced electronic systems to improve safety, comfort and convenience.

Sources: www.foresightvehicle.org.uk; www.ta.doc.gov/pngv; www.uscar.org; The Economist, Jan 27th 2000; Deloitte Touche Tohmatsu international research

As indicated by the OECD, most member countries have special tax support for business R&D expenditure. Tax credits are on the rise among OECD countries.²⁰

As shown in Box 5.4, the United State has a major central government funded research program in place dedicated to supporting the automotive industry's innovation capabilities.

²⁰ OECD (1999), *The Knowledge-Based Economy: A Set of Facts and Figures*, Paris, p 35.

Germany, with the Max Planck and Fraunhofer Institutes and Aachen University, has several major research institutions heavily focused on supporting automotive industry R&D. German automotive companies are also significant beneficiaries of the EU Research and Technological Development Framework Programme.²¹ In Japan the Government has also recently announced that it will be significantly increasing tax incentives and subsidies to support R&D focused on enabling the achievement of the ambitious Government environmental goal that one in eight cars in Japan be 'eco-friendly' vehicles by 2010.

Australia does not have any equivalent programs or institutes with the same degree of focus on the automotive industry. Rather, in Australia there are a small number of Co-operative Research Centres, some specific University research programs and one centre within the CSIRO that have a significant automotive industry focus. Overall, the scale of these publicly funded industry specific research efforts in Australia is small when compared to those of most other Tier One automotive producing countries.

The OECD has pointed to the fact that most OECD countries have special tax schemes for R&D expenditures²². In the USA for example a research and development tax credit is available in for certain research expenses. In order to qualify for the tax credit, expenditure must relate to research that was conducted to discover technical information that is intended for use in the development of a new or improved business component.

The credit is equal to the sum of:

- 20 per cent of the excess of the qualified research expenses for the year over the base period amount; and
- 20 per cent of the basic research payments made to a qualified organisation.

For the purposes of this calculation, the base period amount is a function of the fixed-base percentage and the average annual research and development expenditure for the four years preceding the current tax period.

In Japan R&D support is available via a tax credit system whereby R&D expenses greater than the higher of the previous two years level attract a credit against corporate tax payable equal to 15 per cent of the increased R&D expenditure.

Australia's position in terms of the tax treatment of business R&D has tended to decline since 1996.

The R&D linked element of the ACIS scheme provides generous R&D support for component producers but only very limited support for the vehicle manufacturers.

²¹ The EU is currently operating its Fifth Framework Programme which covers the period from 1998 to 2002 and has a budget of Euro 15 billion. The proposed Sixth Framework Programme which will run from 2002 to 2006 envisages a budget of Euro 17.5 billion.

²² Organisation for Economic Co-operation and Development (1999), *The Knowledge Based Economy: A Set of Facts and Figures*, Paris.

In Australia, while the general standard of education and training is quite high (but by no means exceptional amongst developed nations) there is little in place in regards to automotive industry specific government policy support. Training grants and state funded automotive specific training institutes are not a feature of the Australian environment as they are in US states such as Michigan, the Carolinas, Tennessee and Kentucky. While the general standard of education and training available to the automotive industry is probably somewhat higher in both Germany and Japan than it is in Australia. However, given that no major specific automotive training subsidies are offered in either of these countries, the policy climate regarding education and training can be thought of as broadly similar to that in Australia.

When considering both government support for R&D and education and training, it appears that Australia trails both Germany and the US, and is on a par with Japan, in terms of specific policy actions supporting the vehicle manufacturers' innovation capability building efforts. Australia's lacks a major automotive research program and has no institutions dedicated to meeting industry research or training needs. General tax concessions available for business R&D spending appear comparable in Australia to other developed countries. However, when account is taken of compliance costs and the relatively small subsidy provided by the 125 per cent R&D tax concession and the limited benefits to car manufacturers for R&D through the ACIS scheme, support from these mutually exclusive instruments is insufficient to offset the lack of a major automotive R&D program.

5.3.3 Benchmarking against regional automotive producers

The Asian countries analysed below represent a selection of the regional production centres which are often in direct competition with Australia to attract automotive investment.

The regional countries analysed are:

- Korea;
- Malaysia; and
- Thailand.

5.3.4 Regional countries summary

The following discussion of the overall impact of government policy on market access, investment attractiveness and innovation capability building in these three regional countries provides an overview of the policy environment in these countries relative to Australian policy settings.

Policy areas impacting upon market access

Tariff rates in Malaysia (where tariffs virtually preclude imports) and Thailand are significantly higher than in Australia. Korea, with an 8 per cent tariff maintains tariffs slightly below those in place in Australia. Table 5.4 sets out tariffs on automotive products in the regional countries analysed.

Table 5.4

TARIFF RATES IN SELECTED REGIONAL COUNTRIES

Korea	8% on vehicles and 10 – 13% on components.
Malaysia	140 – 300% on passenger cars dependent on engine size and 60 – 200% on 4WD and commercial vehicles.
Thailand	60 – 80% on vehicles dependent on engine size. 10 – 46% on components.

Significant non-tariff barriers are evident in each of the regional countries and range from lack of transparency in customs procedures, to local content schemes, high import duties and semi-official harassment of those purchasing foreign vehicles. In the case of Korea, almost impenetrable non-tariff barriers make the tariff rate virtually irrelevant. Representations have been made by both the European and American car manufacturers seeking opening of the Korean car market to imports, whose market penetration rate remains well below 1 per cent.

In relation to trade bloc membership, Thailand and Malaysia are members of AFTA. Korea, like Australia, has no strong ties to a major trade block.

The overall impact of these three policy areas on market access is that the Australian market is considerably more open to foreign vehicles when compared to each of Korea, Thailand and Malaysia.

Policy areas impacting on the attractiveness of the investment environment

In contrast to the developed countries considered earlier, investment incentives offered by most regional countries tend to focus on granting extensive tax holidays for new investment projects. Often there is a standard tax holiday package offered which is then further expanded if the investment is made in particular designated regions.

Malaysia and Thailand appear to be very aggressive in terms of the extent of tax concessions granted, for instance:

- In Thailand corporate tax exemptions of between 8 and 20 years may be granted depending upon where in Thailand the investment is made.
- In Malaysia tax may be payable on only 15 to 30 per cent (depending on investment location) of corporate income for five years, while significant capital expenditure tax offsets and accelerated depreciation allowances are also available.

Korea appears to offer more modest tax concession packages than either Malaysia or Thailand.

The main instruments of industry support tend to be tax concessions and tariff or non-tariff barriers in the case of Korea. All things considered, Malaysia and Thailand have a more active overall investment attraction policy environment in place than Australia. Korea is probably overall on a par with Australia, with tax concessions being offered rather than production subsidies.

It should be noted here, however, that each of the regional countries considered also use the high tariff and/or non-tariff barriers to their domestic markets as an investment attraction aid. Such barriers do in fact act in some ways as a domestic production subsidy through reducing competition and improving profit margins in their domestic markets²³.

Policy areas supporting innovation capability and competence building

In these regional countries policies supporting R&D and education and training, are now also receiving increasing attention. These countries are seeking to move up the automotive industry value chain and improve the skills of their labour base to increase the attractiveness of establishing more complex automotive facilities within their jurisdictions.

Support for R&D in emerging countries is still generally offered through tax concessions or grants rather than through the existence of government funded automotive focused R&D programs involving public research institutions. Malaysia in particular offers significant tax incentives to encourage automotive R&D activity. In Malaysia a 200 per cent tax deduction on R&D expenditure is available to all companies, while majority Malaysia owned companies are able to access direct R&D support which provides funding of between 50 and 70 per cent of eligible R&D expenditure. Access to this support is subject to the discretion of the Minister for Finance.

However, due to the relatively less advanced nature of the public research sector in Malaysia, it would not appear that the policy environment supporting R&D is more favourable overall than that found in Australia. In Thailand and Korea the overall level of policy support for R&D is also probably on balance lower than that in Australia.

With regard to education and training support, the overall standard of the public education system in Thailand and (to a lesser extent) Malaysia is lower than that in Australia. However, Malaysia has put policies in place to help offset their lower general standard through offering significant grants and/or tax concessions for automotive industry training activities that sees between 50 and 95 per cent of training costs being met by government. In Korea where the general standard of public education and training system is equal to that in Australia, no specific training incentives are provided.

Taking into account both government support for R&D and education and training, Australia appears to match the level of innovation support provided in Korea and Malaysia, which is aggressively attempting to attract high value added automotive industry activities to the country as part of its overarching commitment to become a fully developed nation by 2020. However, it appears that Australia exceeds the overall level of support for innovation provided in Thailand.

²³ A tariff is similar in its effect to a consumption tax, the proceeds of which are used partly to finance a production subsidy and partly to increase government revenue.

5.5 Summary and policy implications

This brief examination of trends in the international policy environment, progress being made in major multilateral trade forums, and of policy settings in three highly developed and three emerging regional automotive producing nations indicates that competition among nation states, and regions within them, to attract and retain automotive industry investment is intense. In the Asian region little movement has occurred in terms of improving market access. In North America and Europe policy is providing significant support for investment and innovation.

Unlike industries such as agriculture that depend on immobile assets, land and climate, the automotive industry depends on attracting a highly mobile asset - investment capital. If Australian vehicle manufacturers are to successfully compete for the investment that is required for their growth, it is essential Australia's policy settings for the automotive industry are comparable with those in place in countries competing with Australia for automotive investment.

Table 5.5 summarises the policy environment in Australia and the World's three leading automotive producing countries, Germany, Japan and the USA.

Table 5.5

BENCHMARKING THE POLICY ENVIRONMENT: SUMMARY TABLE 1

	Australia	Germany	Japan	USA
Tariffs	15% on PMVs and components (to fall to 10% in 2005), and 5% on commercial vehicles	10% on vehicles, 3.5 to 4.5% on components	No tariffs on vehicles or components	2.5% on passenger vehicles and components, 25% on light and heavy trucks
Non-tariff barriers	Not significant	Not significant	Very significant. Vehicle distribution system and vehicle standards system both heavily weighted against imported vehicles	Not significant
Trade bloc membership	No	Yes - EU	No	Yes - NAFTA
Investment incentives	Some State and federal Government project by project assistance has been given. Through ACIS duty credits accrued up to 10% of value of investment (however this is subject to modulation)	Investment incentive packages of up to 35% of eligible investment costs are offered. EU Regional Aid allowance used to deliver aid. Aid delivered through cash grants, accelerated depreciation allowances, labour cost supports and loan guarantees.	Some preferential tax conditioned may be made available such as the ability to carry forward losses over an extended period. Low interest loans and debt guarantees from the Development Bank of Japan may also be offered.	Significant incentive packages offered at the State level and include cash grants, land improvements, tax concessions, training assistance, R&D support. Packages valued at between 15 and 40% of eligible investment costs are typical in many states and in Alabama an incentive package valued at 66% of investment costs was given in 1993.
Explicit production support	ACIS delivers a 3.75% gross production support but after modulation this will actually be less than 3%	No	No	Some state assistance packages tied to scale of operations. For example the Virginia Investment Partnership ties assistance value to actual levels of employment and production.
Regional aid support	No	Investment incentives of up to 35% of eligible costs available in the New Lander States while packages of up to 20% available in Western Germany	No	State assistance often tied to investment occurring in designated economically disadvantaged zones.
Corporate taxes	30% corporate tax rate, State payroll taxes of 5-6%	Effective overall corporate tax rate of 36 to 41% depending on region.	30% corporate tax rates	35% federal corporate tax rate, state corporate tax rates of 0 to 12%
R&D support	45% for components producers through ACIS, 45% on not for self R&D for PMV manufacturers through ACIS. 125% R&D tax concession (mutually exclusive access to this and ACIS programs)	Generous terms offered for companies for collaborative research with Fraunhofer and Max Planck institutes (which receive significant Government and EU funding and do extensive automotive research). R&D grants to SMEs and for R&D in New Lander States is available.	R&D tax credit of 15% for R&D greater than the higher of previous two years level. Major direct Government funding for research into eco-friendly vehicles.	R&D tax credit of 20% for R&D over historic levels plus 20% of any payments to basic research organisations. Funding of US\$240 million per annum has been given to the PNGV program since 1993. Individual states offer incentives to attract R&D centres.
Education & training support	No auto specific assistance	Direct grants offered for new investments in the New Lander States	No auto specific assistance	Varies State by State. In many states (Kentucky, North Carolina, Alabama, Tennessee, West Virginia, etc) grants, tax credits and course tailoring offered as part of investment attraction and retention packages

Table 5.6 summarises the policy environment in Australia and three significant regional automotive producing countries with whom Australia competes for automotive investment, Korea, Malaysia and Thailand.

Table 5.6

BENCHMARKING THE POLICY ENVIRONMENT: SUMMARY TABLE 2

	Australia	Korea	Malaysia	Thailand
Tariffs	15% on PMVs and components (to fall to 10% in 2005), and 5% on commercial vehicles	8% on vehicles and 10 to 13% on components	140 to 300% on passenger vehicles and 60 to 200% on 4WD and commercial vehicles	60 to 80% on vehicles and 10 to 46% on components
Non-tariff barriers	Not significant	Very significant. Semi-official harassment of foreign vehicle purchasers	Significant. Include local content schemes requiring 45 to 60% local content sourcing.	Significant. Include excise duties of 35 to 45% that disproportionately apply to imported vehicles.
Trade bloc membership	No	No	Yes - AFTA	Yes - AFTA
Investment incentives	Some State and federal Government project by project assistance has been given. Through ACIS duty credits accrued up to 10% of value of investment (however this is subject to modulation)	A seven year tax exemption from first year profits made, followed by a further three year 50% exemption is offered. In Foreign Investment Zones, further assistance such as rental reductions, housing support and planning waivers is available.	A standard investment incentive package offered includes, payment of tax on only 30% of income for five years, Investment tax allowance of 60% of capital expenditure for five years, an accelerated capital allowance of 40% in year 1 and 20% in years 2 and 3.	A standard tax incentive package for automotive investment is an 8 year corporate tax exemption and exemptions from import duties on machinery.
Explicit production support	ACIS delivers a 3.75% gross production support but after modulation this will actually be less than 3%	No	No	No
Regional aid support	No	In South West Korea ten year exemptions from local taxes are offered in addition to general tax exemptions available.	Regional aid used to extend the standards investment incentive package. In designated regions tax on only 15% on income is payable for five years and the investment tax allowance is increased to 80%.	Investment in designated investment promotion zones receives an additional 3-8 year tax exemption over the standard 8 years while investment in certain regions sees a further 5 year exemption granted.
Corporate taxes	30% corporate tax rate, State payroll taxes of 5-6%	28% corporate tax rate	28% corporate tax rate	30% corporate tax rate
R&D support	45% for components producers through ACIS, 45% on not for self R&D for PMV manufacturers through ACIS. 125% R&D tax concession (mutually exclusive access to this and ACIS programs)	SMEs eligible for Industrial Technology Support Grants	For a Malaysian majority owned company funding of between 50 and 70% of eligible R&D expenditure is provided. A 200% tax deduction on eligible R&D is available to all companies.	A 200% tax concession for R&D expenditure is available at the discretion of the Minister for Finance.
Education & training support	No auto specific assistance	No auto specific assistance	Human Resource Development Fund provides grants of up to 95% of training expenditure. Double tax deduction available for some types of training expenditure	No auto specific assistance

Chapter Six

Opportunities and Challenges: Industry Growth Aspirations

The Productivity Commission's inquiry comes at a time when the industry is responding to a number of challenges presented by the changing global and local operating environment. This has required the industry to alter many of its practices in order to increase its capacity for product and process development and to achieve higher levels of operating flexibility. In the space of just two model cycles, since the late 1980s the industry has achieved major improvements in these areas.

The industry has had some noticeable recent successes in building exports and, recently, in introducing new model variants. Integral to the repositioning of the industry has been the success in making improvements to its cost and quality competitiveness and its ability to engineer desirable products.

However, despite improved costs and quality competitiveness the industry has also been struggling to maintain a viable level of domestic market sales of locally manufactured products. The industry has not been able to capture greater locally manufactured sales as the overall domestic market has grown.

Intense import competition, a proliferation of available models in each market segment and low margins in the fleet sale market have all combined to undercut the domestic market sales base available to local vehicle manufacturers.

The industry now stands at the threshold of a period of strong sustainable growth. However, realising its ambitious growth aspirations will not be easy. This chapter considers the key opportunities for the Australian automotive industry and the challenges that will need to be overcome if these opportunities are to be realised.

6.1 Key opportunities for the Australian automotive industry

As the Minister for Industry, Tourism and Resources, The Hon Ian Macfarlane MP, has recently highlighted²⁴, innovation, international competitiveness and investment will be key future drivers of Australian industry performance and economic growth.

Innovation and international competitiveness: necessary to secure investment

Innovation and international competitiveness are necessary if the Australian automotive manufacturers are to secure new investment from global parent companies. However, it should be noted that access to a viable domestic sales base is, and will remain, an essential prior condition for securing new investment.

²⁴ The Hon Ian MacFarlane MP, Speech to the Centre for Corporate Public Affairs, 21 March 2002.

Such new investment will in turn allow the Australian industry to translate its innovation capabilities and international competitiveness into sustainable growth.

The Australian automotive industry has been actively building the innovation capabilities that are essential if it is to develop new and desirable products tailored to meet customer demands both in Australia and overseas. Similarly, for a small open developed country such as Australia, international competitiveness revolves around high level skills in flexible manufacturing. Flexible manufacturing skills, which leverage capabilities in innovative product and process design, are essential to the industry's ability to produce a range of different vehicle variants (from a small number of base platforms) in relatively low volumes and to world class quality and cost standards.

The Australian industry has embraced the challenge to build these capabilities and its strong recent export performance, and the success of niche 'variant' vehicles such as utilities and the Monaro, highlights the benefits of a strong focus on product innovation and manufacturing flexibility.

However, it should be noted that international competitiveness refers to more than just the competitiveness of the industry itself. It also entails the competitiveness and attractiveness of the Australian investment climate and the degree of international market access available to Australian automotive producers. The current policy settings in Australia mean that the investment climate is competitive with that in many other locations. However, lack of progress in terms of improving international market access could detract from Australia's future desirability as an investment location. Policies that restrict the size of the Australian vehicle market may also reduce the attractiveness of investment in the Australian industry.

It is only through the combination of the industry building competitive strengths in innovation and flexibility and the existence of a globally competitive policy environment that future industry growth can be secured.

The industry now has the opportunity to build on recent improvements to establish Australia as a recognised centre for automotive product development and production. Strong industry growth will follow the establishment of Australia as:

- a recognised centre of innovation;
- possessing high levels of skill in flexible manufacturing; and
- a country with an internationally competitive investment climate.

Becoming a centre for automotive manufacturing and exports

Leveraging product development capabilities and skills in flexible manufacturing are necessary conditions for Australia to become a centre for automotive manufacturing and exports.

A significant increase in domestic market sales is possible as the industry expands its product offerings to better meet local market demand. This expansion in model variants relies upon taking advantage of flexible manufacturing and product development skills to make more niche vehicle variants from common platforms. The Holden Monaro; Ford and Holden's utility variants; Toyota's production of the Camry and Avalon on one assembly line; and Mitsubishi's production of the Diamante for the US market demonstrate the growing ability of the Australian industry to efficiently produce relatively small volumes of a variety of models and model variants. The planned introduction of new sports utility models by several manufacturers will further build the industry's product range and open up new opportunities for increased domestic sales volumes.

Increased export sales are also a major potential avenue for industry growth. However, the continuation of the strong recent export performance achieved by the industry will almost certainly require the development of new export markets. The Chinese and ASEAN markets present a significant export opportunity for the Australian industry if improved access to these markets is secured through either multi-lateral or bi-lateral trade agreements. The expansion of exports to the US, South Africa and entry to South American markets are further avenues for export growth.

Becoming a design and engineering hub for the Asia Pacific region

A pay-off from building innovation capabilities, and having those capabilities recognised by the world's leading automotive companies, is that Australia can become a centre for design and engineering of automotive products in the Asia Pacific region. Already Holden is a major exporter of design and engineering services into Asia. There is the potential for other Australian vehicle manufacturers to build a similar position for themselves within their parents' global networks.

6.2 Challenges to realising opportunities

The Australian automotive industry faces a number of significant areas of challenge in the years ahead. These include:

- the need to steadily increase the industry's innovation capabilities;
- continued pursuit of greater manufacturing flexibility;
- achieving improvements in the industrial relations climate;
- promoting continued growth in the size of the Australian vehicle market;
- enhanced access to key international vehicle markets; and
- upgrading Australian investment attractiveness, relative to that of other competing investment locations.

Challenges in increasing innovation

Continued expansion of innovation capabilities through the industry relies upon access to a sizeable engineering skills pool. A shortage of new engineers, who have been appropriately trained in the use of the latest computing tools, would severely restrict the future growth of the industry. In the future, not only will the four vehicle manufacturers be generating greater demand for such skilled workers, but components and tooling producers will also increasingly be requiring greater innovation capabilities to allow them to work in partnership with the vehicle manufacturers in the development of new products and processes. A run down in Australia's engineering skills base must be avoided.

While Australia will not be a major global centre for basic research into new technologies such as fuel cells and telematics, there is the opportunity for the Australian industry to become a significant adopter and adapter of research being done in these areas. Globally competitive levels of support for research, but perhaps more importantly for product development, should be in place to encourage the industry to continue to invest in product innovation in Australia.

Challenges in achieving greater manufacturing flexibility

The innovation capabilities of the industry, including those of local tooling and component producers, is crucial to the pursuit of greater product differentiation and manufacturing process flexibility. The level of innovation capabilities of suppliers will significantly impact upon the degree to which tooling and component sourcing can be localised. Higher levels of local sourcing reduce the vehicle manufacturers exposure to foreign currency movements, thus reducing a major input costs risk factor.

The ability to implement work practices to support flexible manufacturing systems will also be crucial to the viability of the industry. The industrial relations climate has improved in recent years, but any measures introduced to reverse the movements towards greater workplace flexibility would undermine a key emerging industry strength, namely the ability to produce small product runs in a cost effective way and to rapidly alter production plans to capitalise on emerging niche market opportunities.

Due to the relative small production volumes of the four Australian passenger vehicle manufacturers, in order to benefit from economies of scale, many specific parts are sourced by each of the four vehicle manufacturers from one common component supplier. While this allows economies of scale to be captured, the presence of only one (or at most two) suppliers of a given component type in Australia also possess a threat to the stability of supply that is essential to the lean manufacturing processes of the automotive industry. Industrial relations problems at one small supplier can bring the entire industry to a halt. This ever present threat of such industrial relations disruption is a serious obstacle to the attraction of new investment into the Australian industry.

Challenges in improving industrial relations

As discussed in Chapter Three, the successful operation of world class lean manufacturing systems, including 'just in time' inventory management, depends upon reliability of supply at each stage of the supply chain.

Unfortunately, as recent industrial disputes at Walker Australia and Tristar have demonstrated, the Australian industrial relations climate does not support this essential supply stability. It appears that the pace of production process change has exceeded improvements in the Australian industrial relations climate. Until the industrial relations climate improves, this exposed the automotive industry to considerable risks.

The industry can not back away from the introduction of systems such as 'just in time' supply if it is to be an internationally competitive manufacturer. Equally, the industry can not afford continuous disruptions that threaten continuity of production and non-negotiable export shipment deadlines.

Disputes such as those at Walker Australia and Tristar can have a significant negative impact on the reputation of the industry and pose a considerable risk to the attraction new investment and export customers. Future prevention of such destabilising industrial disputes, through the implementation of practical reform of industrial relations, remains a very high priority for the industry.

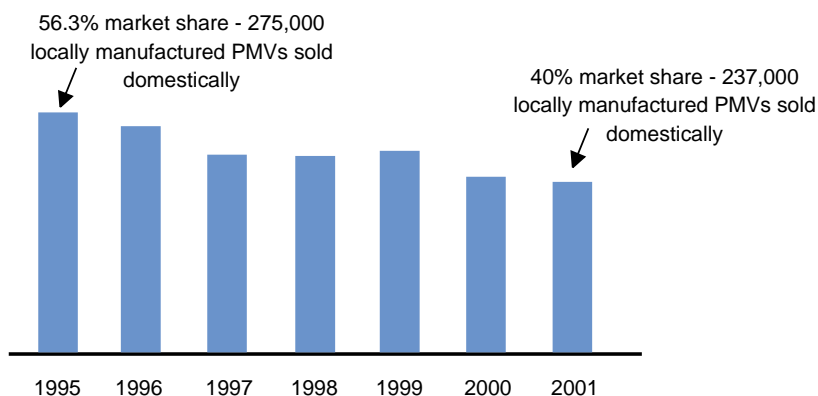
This issue is discussed in further detail in Chapter Seven.

Challenges to a viable domestic vehicle market sales base

Recent years have seen the continuation of a long-term trend towards the erosion of the passenger motor vehicle market share of locally manufactured cars (see Figure 6.1). Locally produced passenger motor vehicle market share now stands at only 40 per cent.

Figure 6.1

DECLINING PMV MARKET SHARE OF LOCALLY MANUFACTURED CARS



Source: VFACTS

Unless this continued erosion of the domestic vehicle market is reversed the future prospects of the Australian automotive industry will be severely restricted. Given the currency risks associated with export markets, a stable domestic market of sufficient size is necessary to underpin the business case for new production investments.

A number of areas of Government policy have the potential to significantly impact of the size of the domestic vehicle market, both in absolute terms and in relation to the size of the market for domestically produced vehicles.

Relevant policy areas include:

- tariff policy;
- government fleet purchasing arrangements;
- the luxury car tax; and
- environmental and safety standards for both new and existing vehicles sold and used in Australia.

More detailed consideration is given to future options for a number of these policy areas in Chapter Seven.

Challenges to further export market growth

Australia has shown in the Middle East that it is able to effectively enter and retain international markets where there is a level playing field regarding market access. However, as was discussed in Chapter Five, the number of such open vehicle markets around the world is small. Therefore, if the exciting export growth witnessed over the past five years is to continue, progress will need to be made in relation to improving access to key international markets such as China and ASEAN.

Failure to secure, through either multi-lateral or bi-lateral trade negotiations, better access to highly protected regional markets will rob the Australian industry of the chance to capitalise upon its cost and quality competitiveness and its ability to tailor products to meet local market conditions. If greater market access is obtained, the growth prospects of the Australian industry would be significantly enhanced. Without it, Australia will become a less attractive investment location as the parent companies of the Australian manufacturers locate new investments in countries that can offer access to larger addressable vehicle markets.

Export volumes also remain highly sensitive to currency movements, with the industry having benefited in recent years, in terms of export sales volumes, due to the depreciated level of the Australian dollar. The sensitivity of exports to currency movements is one reason why large new investments in production will not be made of the strength of export sales alone. Access to a stable or growing domestic market base is needed to underpin the business case for any major new investment.

Challenges to creating an attractive investment environment

Realisation of any of the above threats will serve to decrease the attractiveness of investing in the Australian automotive industry. However, even if each of these threats are avoided, if the degree of explicit support for new investment offered by Government declines significantly relative to that available in competing investment locations, the viability of the Australian industry will be threatened. The sensitivity of investment to direct incentives will remain particularly strong until the combined size of the Australian vehicle market and the international markets freely accessible from Australia increase. Pending access to a larger addressable market, programs such as ACIS are vital if Australia is to compete against other regional countries that are aggressively targeting automotive investment.

6.3 The industry's growth aspirations

The two key growth aspirations of the Australian vehicle manufacturers are for Australia to:

- become a centre for automotive manufacturing and exports; and
- become a design and engineering hub for the Asia Pacific region.

The industry is targeting a significant increase in domestic market sales of locally manufactured vehicles. This is vital to provide a stable base for investment in greater productive capacity. Given the highly competitive vehicle market in Australia this growth will need to be achieved through leveraging skills in flexible manufacturing and design to expand the range of product offerings to better meet local market demand.

Increased export sales are also a priority as the industry seeks to increase its production volumes. The industry hopes to enter new markets in Asia and South America in addition to increasing volumes into existing markets in the Middle East, the USA and South Africa.

By building its innovation capabilities, Australia can also become a centre for design and engineering of automotive products in the Asia Pacific region. There is scope for Australia to become a significant exporter of design and product development services into the Asia Pacific region. There is the potential for each of the Australian vehicle manufacturers to build a strategically important position for themselves within their parents' global innovation networks.

Achieving these growth aspirations will see the Australian automotive industry placed as a cornerstone for economic growth as Australia moves to become a globally integrated knowledge intensive economy.

6.4 Summary and policy implications

The Australian automotive industry has reached an important junction. The industry has been actively improving its own performance to make it globally competitive. The success of these efforts is borne out by the significant improvements over the past five years in quality levels and production efficiency that have led to major export performance growth. The industry is working to position itself so that once global free trade (or near free trade) becomes a reality, Australia will be able to thrive as a major automotive production and innovation centre.

Given a globally competitive policy environment, the industry has the potential to become a major driver of future economic growth in Australia.

Chapter Seven

Post 2005 Policy Environment

The Australian vehicle manufacturers are now positioned to expand future investment and assume greater strategic importance within the operations of the world's four leading automotive manufacturing groups. Such growth, built upon strengths in innovation and flexible manufacturing, will bring considerable economic benefits to Australia.

Investment in new models, major car components (such as engines) and R&D are the life-blood of the industry. Without continued re-investment the industry will quickly decline. When making investment decisions, parent companies take a global view, with investment being allocated to the overseas subsidiaries that will provide it with the greatest returns and best meet their global objectives and strategies. Therefore the four Australian vehicle manufacturers are in constant competition for investment with other subsidiaries of their parent companies.

The Australian policy environment should not be established in isolation from the realities of this global policy environment. If Australian policy is significantly less supportive of automotive investment than that in place in competing investment locations, despite the inherent competitiveness of the Australian industry, investment may be lost to overseas production centres where the policy environment is more favourable.

The Australian automotive industry has been making major efforts to improve its own performance to become globally competitive. The success of these efforts is born out by the significant improvements over the past five years in quality levels and production efficiency that have led to major export performance growth. The industry is working to position itself so that once global free trade (or near free trade) becomes a reality, Australia will be able to thrive as a major automotive production and innovation centre.

The industry does not need the Government to reduce support in order for it to be motivated to keep striving for improved performance. There is constant pressure to compete with the other global operations of their parent companies, to grow exports and attract investment (without having the market access benefits available to other subsidiaries, in terms of either a heavily protected domestic market or access to significant trade bloc markets). Furthermore, a policy environment that is not globally competitive could see investment and capacity lost even if internal industry performance is world class. Once lost, this investment and capacity would be very hard to get back when the international policy environment does move to a more level playing field.

The automotive industry globally is undergoing a period of significant restructuring. Consolidation amongst vehicle manufacturers has been considerable and in the next few years will see the emerging major manufacturing groups (which include the parents of all four Australian vehicle manufacturers) rationalising their global operations as they attempt to increase capacity utilisation across their global assets. Supply chain relationships are also changing with the trend towards modularisation and Tier One systems integrators.

In this environment, sending a signal that the Australian government is not committed to the future of the Australian industry, by either further cutting tariffs beyond 10 per cent, or not committing to replacing ACIS when it expires, could sway investment decisions against Australia.

7.1 Recommendations for future policy

7.1.1 Tariffs

The Australian automotive industry has faced an environment of declining tariff protection since the mid-1980's. Over this period, tariffs on passenger motor vehicles and original equipment components have fallen from levels of in excess of 50 per cent to 15 per cent in 2000, with a further reduction to 10 per cent scheduled to take place from 1st January 2005.

The FCAI accepts this scheduled reduction in 2005. At 10 per cent in 2005, the tariff on passenger motor vehicles will be broadly in line with nominal tariffs applied in other developed countries such as the USA and EU countries. Moreover Australian tariffs are now well below tariffs applied in a number regional countries such as Malaysia, Thailand, China and Indonesia, which are seeking to develop their automotive industries (see Table 7.1).

Table 7.1

TARIFF RATES IN SELECTED KEY SOUTH EAST ASIAN MARKETS

Indonesia	Currently 125% with a 75% surcharge on CBU vehicles. Scheduled to fall to 40% with 50% surcharge in 2003.
Malaysia	140 – 300% on passenger cars dependent on engine size and 60 – 200% on 4WD and commercial vehicles.
Thailand	60 – 80% on vehicles dependent on engine size. 10 – 46% on components.
China	Currently vehicle tariffs are 50 – 60%. This rate is to fall to 25% by 2006.

Source: APEC tariff database, www.apecsec.org.sg

FCAI submits that the tariff on passenger motor vehicles should be maintained at 10 per cent beyond 2005. Any move to reduce the tariff below this level prematurely would put Australian manufacturers at a competitive disadvantage relative to other potential sources of supply. Such a move could threaten the viability of existing levels of Australian production and would be unlikely to result in significant benefits to either consumers (as was shown in Table 5.3, Australian vehicle affordability is already high by international standards) or from the viewpoint of alternative resource allocation.

As the Government's response to the Productivity Commission inquiry into Australia's general tariff arrangements acknowledged, at lower levels the net economic gains from further unilateral reductions in tariffs are likely to be quite limited. Senator Minchin noted that:

"Australia's current tariff regime puts it at the forefront of trade liberalisation in the Asia Pacific region. Australia has reduced its tariffs significantly over the past decade and they are now among the lowest in the world. These changes have delivered greater efficiency to our manufacturing industries. It's now time to consolidate and call on the rest of the world to catch up with Australia's lead."

Joint Media Release (with the Treasurer): 'Government's Response to the Productivity Commission Report on Australia's General Tariff Arrangements' (December 2000).

FCAI contends that maintenance of the tariff on passenger motor vehicles at 10 per cent, beyond 2005, would not be inconsistent with Australia's APEC commitment to achieve 'free and open' trade and investment by 2010. Even under current policy settings the Australian vehicle market is characterised by:

- an internationally high level of import activity;
- a wide diversity of brands and models; and
- very competitive levels of vehicle affordability.

Moreover, the FCAI believes that such an outcome also still yields considerable scope for Australia to negotiate further liberalisation of bound industrial tariffs in the context of the forthcoming WTO round of multilateral trade negotiations. Australia's WTO tariff bindings for passenger motor vehicles are currently set at 40 per cent.

FCAI Position:

The FCAI submits that the tariff on passenger motor vehicles be maintained at 10 per cent beyond 2005.

7.1.2 ACIS replacement

Effectiveness of ACIS

While ACIS has only been fully operational for just under a year and a half there is no doubt that the program has had a significant beneficial impact on the performance and competitiveness of automotive manufacturing in Australia.

ACIS was established with the intention of providing encouragement to the Australian automotive industry to undertake additional investment to upgrade and expand existing productive capabilities and enhance innovation in technology and design. The scheme was designed to provide effective support tailored to the differing business models of key participants in the industry as well as providing an offset to the industry's exclusion from the generally available tariff concession scheme.

The introduction of ACIS has had a range of positive impacts upon the automotive industry as a whole. These include:

- underpinning production volumes in the industry pending greater overseas market access being achieved;
- helping vehicle manufacturers bear the costs associated with working with the supplier base to improve their quality and efficiency performance to world standards;
- assisting Australian subsidiaries of international companies to secure new investment when competing with other overseas subsidiaries;
- aiding productivity and cost competitiveness improvement through the inclusion of process improvement efforts within the R&D definition and through investment incentives;
- justifying riskier investment projects that may result in the development of new sources of industry competitive advantage;
- providing the 'patient capital' required to underpin the business case for the costly development phase of new products;
- supporting the diversification of product offerings (such as sports utility vehicles and sports cars) that will boost future domestic market sales growth;
- helping Australia to build a competitive advantage as a low cost place to perform R&D – this R&D edge may then lead to the mandate to manufacture new products in Australia; and
- supporting efforts by component producers to dramatically increase their innovation capabilities.

If ACIS had not been introduced, the four Australia vehicle manufacturers have calculated that investment in 2005, including investment in R&D, would be 56 per cent lower than that which is now anticipated to occur²⁵.

Over the five-year life of ACIS, investment in plant and equipment and R&D by the four Australian vehicle manufacturers is anticipated to be over \$2.5 billion higher than would have been the case in the absence of ACIS. Such a reduction in investment would flow through to lower employment, lower production volumes and lower export earnings being generated by the industry.

Anomalies and unintended impacts

While ACIS as a whole, has undoubtedly had a strong beneficial impact on all four categories of participants, it is apparent that a number of features of the current program design may have resulted in anomalies or unintended impacts. These include:

- *Pooled funding for different categories of participants:* The original proposals for ACIS envisaged separate and quarantined funding for each class of participants. This idea was partially discarded during consideration and design of ACIS legislation and participants in all four categories now draw upon the same overall pool of funding. While eligible activity levels in the MVP category have been largely as projected, the level of participation and eligible activity has been much stronger than expected in the ACP category. As a result, the pressure for a lower rate of modulation has been greater and the level of entitlements available to participants in the MVP category in particular have been significantly reduced from what they otherwise would have been.
- *Reduction in the rate of modulation:* With current and projected levels of eligible activities in excess of the aggregate \$2 billion funding cap, it has proved necessary to modulate the scheme at a rate significantly less than 1. The impact of reductions and variability in the rate of modulation increases uncertainty about the value of future entitlements, potentially undermining the effectiveness of the scheme.
- *Differential rates of support for investment for different categories of participants:* Under current arrangements differential rates of support are provided to different categories of participants for similar activities. In particular, while MPVs can earn ACIS credits worth up to 10 per cent of the value of eligible investment in plant and equipment, ACIS provides support at a rate of up to 25 per cent for equivalent expenditure undertaken by ACPs, AMTPs and ASPs.
- *Exclusion of eligibility of MVP R&D for own use:* Under current arrangements ACIS provides assistance up to 45 per cent of the cost of investment in eligible “own use” research and development for ACPs, AMTPs and ASPs. Such support is not provided to MPVs.

²⁵ Preliminary result from a study being undertaken by Deloitte Touche Tohmatsu, on behalf of both the Federal Chamber of Automotive Industries and the Federation of Automotive Products Manufacturers into the impacts of ACIS on the automotive industry.

Extending a similar scheme beyond 2005

The FCAI believes there is a strong case for developing a similar scheme (to ACIS) beyond 2005.

ACIS has been vital in securing support for the continued investment in the development of new models and development of expanded manufacturing capacity in the Australian automotive industry over the period to 2005.

Increased investment in technology and greater innovation and flexibility in design and production techniques are essential to the ongoing development of a competitive, viable and globally integrated Australian car industry.

Our vision is for an Australian industry with the strength, scale and capability to flexibly respond to the demands of increasingly sophisticated domestic and export markets. To achieve this the Australian industry must be able to continue to attract investment in advanced technologies and pursue a commitment to increased innovation and investment in research and development.

ACIS has helped strengthen the industry's focus of key areas of future competitive advantage in the lead up to 2005. It is essential that this support be maintained beyond 2005 if the industry is to continue to strengthen its competitiveness and if Australia's attractiveness as an international location for highly mobile automotive investment is to be enhanced.

FCAI Position:

FCAI submits that ACIS should be renewed beyond the end of 2005.

FCAI supports modifications to strengthen the future effectiveness of the program and to overcome anomalies or unintended impacts associated with the existing scheme, as follows:

- **Introduction of measures to improve certainty for participants about the relationship between eligible activities and the level of assistance. Options to be considered could include a clear separation of funding for each category of participant and introduction of clear definitions of eligible activities.**
- **Enhanced support for investment in plant and equipment. Consideration should be given to introduction of higher rates of support for investment linked to the introduction of new capacity or advanced technologies; and removal of distortions arising from different rates of support for similar activities undertaken by different categories of participants.**
- **Enhanced support for investment in design and research and development, including extension of support to eligible expenditure undertaken by motor vehicle producers for their 'own use'.**

7.1.3 Market access

With the growing emergence of a number of significant international trade blocs, allowing free or near free trade between members, it is becoming increasingly likely that the number of production facilities will become concentrated in a smaller number of locations within each trade bloc area. Membership of a major trade bloc (such as NAFTA, the EU or AFTA) and the vastly increased 'virtual' domestic market that this provides will be a major determinant of the location of new automotive investment in the future.

If Australia, with its highly open domestic vehicle market, continues to lack free access to the markets of any major trade bloc members it is at risk of becoming increasingly less viable as an investment location for major export focused production facilities.

Increased market access for Australian automotive exports remains a key priority for the industry. While Australian automotive exports have more than doubled in the past five years, now approaching \$5 billion a year, a significant percentage of exports are concentrated into a limited number of markets (particularly in the Middle East).

Increased market access, particularly within the Asia-Pacific region, would offer prospects of strong potential growth in sales of a number of Australian produced vehicles, including utilities, newly announced 4WD variants and four cylinder passenger cars. Failure to achieve improved market access can act as a significant disincentive to renewed or increased international investment.

FCAI Position:

FCAI supports efforts by the Australian Government to identify and progress potential bilateral free trade agreements with a number of countries. The development of these agreements will raise a number of issues of relevance to the automotive industry and it important that a close dialogue is maintained between Government and industry on these issues.

FCAI also supports the Government's efforts to continue to advance the Closer Economic Partnership between ASEAN nations, Australia and New Zealand.

The Chamber also welcomes the initiation of the new WTO round of multilateral trade negotiations. There is clear scope for the new round to deliver meaningful improvements in international market access on industrial products, including automotive products.

7.1.4 Environmental issues

In November 1997 the Prime Minister announced details of an 'Environmental Strategy for the Motor Vehicle Industry'. Key measures announced in this strategy included:

- Negotiation with the automotive industry to secure a 15 per cent improvement in national average fuel consumption (NAFC) for new passenger motor vehicles against a 'business as usual' outlook, by 2010;
- Development of a NAFC framework for light commercial vehicles and four-wheel drive vehicles;
- Introduction of a new ADR requiring model specific fuel consumption labels to be affixed to all new cars to be sold in Australia;
- The Commonwealth Government to work with key consumer groups, motoring organisations, private fleet operators, State and local governments to encourage fuel efficiency objectives;
- Noxious emissions standards to be progressively tightened by 2003 and to be brought into line with international standards by 2006; and
- A bring forward in the phase-out of leaded petrol.

A number of these measures have since been implemented and the Australian industry has clearly acknowledged its responsibility to contribute to improved emission standards and environmental performance.

To this end FCAI has proposed two cooperative passenger motor vehicle NAFC targets, as follows:

- 6.8 litres per 100 km by 2010; and
- 6.3 litres per 100 km by 2015.

The achievement of these targets is dependent on a range of factors including more widespread uptake of higher octane (95 RON) petrol and introduction of very low sulphur petrol to facilitate the introduction of a range of advanced engine and emission control technologies.

FCAI Position:

FCAI supports agreement to NAFC targets for 6.8 litres per 100 km by 2010 and 6.3 litres per 100 km by 2015.

FCAI will work with the Government to monitor progress toward these targets and implement strategies to assist their achievement.

7.1.5 Taxation policy

The introduction of the New Tax System in July 2000 provided a significant boost to the Australian vehicle market. Removal of the 22 per cent WST and introduction of the 10 per cent GST, resulted in a significant net reduction in the average tax burden on vehicles.

Conditions were further improved by the decision, implemented in the 2001 Federal Budget to bring forward the phase-in of input tax credits for the purchase of vehicles for business purposes.

As a result of these reforms affordability of vehicles has been significantly enhanced and this has been an important factor contributing to buoyant sales over the past couple of years.

FCAI acknowledges that the significant reforms to the tax system implemented by the Federal Government have had strong benefits for the Australian vehicle market.

One key area of remaining concern for the industry is the 25 per cent luxury car tax and vehicle depreciation limit (which currently apply to passenger motor vehicles with a GST-inclusive value greater than \$55,134).

These imposts do not apply to any other type of good or service. The luxury tax is a punitive tax, high by international standards (the US levies a 3 per cent luxury tax), that results in a distortion of the domestic vehicle market. As a result the luxury vehicle segment only accounts for around 4-5 per cent of the Australian market, compared with an international average of 8-10 per cent.

Moreover, the threshold for the luxury tax/depreciation limit has not adjusted over time to keep pace with changes in luxury model pricing and specification. When the depreciation limit was introduced in 1979, it was nearly 11 per cent above the price of a Ford LTD or Holden Caprice. To restore the same relativity today, the threshold would need to be increased to around \$78,000.

FCAI Position:

FCAI supports the eventual abolition of the luxury car tax and removal of the vehicle depreciation limit.

As an immediate measure, FCAI believes the luxury car tax threshold/vehicle depreciation limit should be increased, to restore earlier relativities with significant pricing points in the Australian vehicle market.

7.1.6 Standards and safety

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 (ADRs) that set standards for vehicle safety, emissions and anti-theft performance.

The MVSA was the subject of a comprehensive review, undertaken between 1997 and 2000. The Government's response to this review was released in May 2000 and resultant changes were given effect in the *Motor Vehicle Standards Amendment Act 2001*.

Imports of used vehicles

Arrangements for the importation of used vehicles were examined in detail as a key issue arising from the review of the MVSA.

Under previous arrangements importers of used vehicles could obtain approval for the importation of a limited number of vehicles under the so-called Low Volume Scheme (LVS). The scheme provided three important concessions, relative to those applying to normal 'Full Volume' requirements:

- A lower standard of proof of compliance with relevant ADRs;
- Compliance only with ADRs in force at the time of manufacture, rather than currently applicable ADRs; and
- Exemption from the \$12,000 special tariff on used passenger motor vehicles.

The LVS was originally intended to assist manufacturers of specialist vehicles produced in very low volumes. Unfortunately, over time imports of used vehicles under the LVS arrangements had grown sharply, from 1,000 in 1993 to more than 16,000 in 2000. This growth reflected changes in the administration and operation of the scheme that went well beyond the original policy intentions of the concessional arrangements.

With implementation of the 2001 amendments, the LVS has been replaced by the new Specialist and Enthusiast Vehicles Scheme (SEVS) and it is expected that this will overcome many of the problems associated with the previous arrangements. Imports of used vehicles will no longer be eligible for type (bulk) approval and must now undergo vehicle-by-vehicle approval in one of a new system of registered workshops to ensure compliance with relevant ADRs.

FCAI Position:

FCAI supports implementation of the new SEVS arrangements for the importation of limited numbers of used passenger motor vehicles.

However, FCAI believes the potential for the \$12,000 tariff on used imported passenger vehicles should be retained in case loopholes are identified in the operation of SEVS and the new Registered Automotive Workshops Scheme (RAWS).

International harmonisation of standards

An ongoing review of ADRs, to achieve greater harmonisation with the UNECE new vehicle regulations, is proceeding towards completion in 2002.

The Federal Government's decision in 2002 to accede to the so called '1958 Agreement' (the UN process for the development of ECE new vehicle regulations) is a key factor driving the ADR review.

Over recent years, FCAI has increased its participation in the Organisation of International Constructors of Automobiles (OICA), as the OICA Technical Committee has direct input to the UNECE process.

It is hoped that the completion of the ADR review, and FCAI's participation in the OICA Technical Committee, will help facilitate the more rapid harmonisation of ADR to UNECE standards. Such an outcome will help facilitate Australian vehicle exports, eventually allowing vehicle manufacturers to acquire UNECE approvals in Australia. In addition, vehicle importers meeting UNECE regulations will have easier entry into the Australian market.

FCAI continues to work within the APEC Automotive Dialogue with the objective of promoting international harmonisation of new vehicle regulations based upon UNECE regulations in a greater number of participating economies, as a means of reducing technical and regulatory barriers to increased market access throughout the region. The Federal Government's continuing active involvement in the APEC Road Transport Harmonisation Project (RTHP) is also important in the achievement of this objective.

FCAI Position:

FCAI supports ongoing efforts to harmonise ADRs with UNECE standards.

7.1.7 Industrial relations

The ability to implement work practices to support flexible manufacturing systems is crucial to the strengthened competitiveness and ongoing viability of the Australian industry. While recently concluded enterprise bargaining rounds have seen gains in the crucial area of workplace flexibility, there is still some way to go in bringing Australian workplace practices up to world best levels.

Australian vehicle manufacturers will be continuing to pursue improvements in these areas. The process of workplace practices change must and will continue.

The industry must obtain the labour flexibility and productivity gains needed to compete globally while at the same time avoiding major industrial disputes that could severely threaten crucial export contracts.

Any measures introduced to reverse the movements towards greater workplace flexibility would undermine a key emerging industry strength, namely the ability to produce small product runs in a cost effective way and to rapidly alter production plans to capitalise on emerging niche market opportunities.

Vehicle manufacturers remain vulnerable to the impact of inflexible workplace arrangements and resistance to change inspired by the high level of unionisation of the workforce and militant union leadership. Moreover the industry continues to be vulnerable to industrial relations disruption at supplier companies. Disputes at one small supplier can bring the entire industry to a halt. In addition, new investment in essential production equipment can be subject to critical delays due to industrial action. The threat of such industrial relations disruption is a serious obstacle to the attraction of new investment into the Australian industry.

The potential disruption that such disputes can cause has been amply illustrated by a number of disputes within the past year. In particular, a dispute at steering and suspension component producer, Tristar, in August 2001 and at exhaust system supplier, Walker Australia, in April this year have lead to major industry shutdowns and significant loss of production for vehicle manufacturers.

FCAI is concerned about the prospects for further disruption to the industry in the future. Around 50 suppliers have enterprise agreements which are due to expire prior to the end of 2003. Of these the vast majority are highly unionised and arguably lack specialised in-house industrial relations expertise. Given the increasingly concentrated nature of supply arrangements, downstream producers (including the four vehicle manufacturers) would face considerable further risk to security of supply.

A number of further reforms need to be contemplated if the threat of future disruption is to be minimised, including the following:

- Implementation of amendments to existing legislation to safeguard genuine bargaining processes at the enterprise level and to provide more effective safeguards against unnecessary and illegitimate industrial action.

- Improved industrial relations performance in tender specifications for supplier contracts and the provision of increased focus and resources from industry for improved training and strengthened industrial relations capability at the supplier level.
- Achievement of greater flexibility in negotiating structures at the workplace level, including greater freedom in the representation of employee interests.

FCAI Position:

FCAI supports currently proposed legislative amendments to strengthen safeguards to the integrity of genuine bargaining arrangements and to introduce secret ballots to help reduce the risk of unnecessary and illegitimate industrial action.

Although FCAI acknowledges that there are provisions within the existing legislation that manufacturers may use, consideration needs to be given to further amendments to provide increased protection against disputes which cause significant disruption to third parties within the industry and to increase penalties for non-compliance with court decisions.