



COMMONWEALTH OF AUSTRALIA

## Official Committee Hansard

# HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON ECONOMICS, FINANCE AND  
PUBLIC ADMINISTRATION

**Reference: The state of Australia's manufactured export and import competing  
base**

MONDAY, 28 AUGUST 2006

MELBOURNE

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES



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**HOUSE OF REPRESENTATIVES**  
**STANDING COMMITTEE ON ECONOMICS, FINANCE AND PUBLIC ADMINISTRATION**  
**Monday, 28 August 2006**

**Members:** Mr Baird (*Chair*), Dr Emerson (*Deputy Chair*), Mr Ciobo, Mr Fitzgibbon, Ms Grierson, Mr Keenan, Mr McArthur, Mr Secker, Mr Somlyay and Mr Tanner

**Members in attendance:** Mr Baird, Dr Emerson, Ms Grierson, Mr McArthur and Mr Tanner

**Terms of reference for the inquiry:**

To inquire into and report on:

the state and future directions of Australia's manufactured export and import competing base, focusing on, but not limited to:

- Australia's dominance in commodities exports and the impacts of this on the economy following the resources boom;
- the state of the country's manufacturing sector (and the goods and associated services) including opportunities and challenges from the expansion in global trade (in particular by China); and
- policies for realising these opportunities.

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**Committee met at 9.08 am**

**CHAIR (Mr Baird)**—I declare open this public hearing of the House of Representatives Standing Committee on Economics, Finance and Public Administration inquiry into the state of Australia's manufactured export and import competing base now and beyond the resources boom. The inquiry was referred by the Treasurer, the Hon. Peter Costello MP, on 3 May 2006. The inquiry has authorised 30 submissions to date from various parts of Australia and from a broad cross-section of interested parties. Copies of these submissions are available on the committee's website.

Australia's resources sector is currently experiencing an economic boom driven mainly by unprecedented global demand for raw materials by China. We have now been experiencing economic growth for over 15 years, which defies the historical economic cycle of peaks and troughs within this period. Australia is now operating within a different economic framework to the past, most notably a global one. However, past behaviour is the best predictor of future behaviour. History indicates that high commodity prices cannot be sustained indefinitely. The committee is therefore investigating the robustness and preparedness for the future of our other dominant trade sectors and the impacts of or synergies from the resources boom. This hearing will concentrate on the state and future directions of Australia's manufacturing sector.

Today we will be hearing from representatives of the Ford Motor Company of Australia Ltd, RMIT University, the Australasian Institute of Mining and Metallurgy, the Australian Academy of Technological Sciences and Engineering, the Geelong Manufacturing Council and the Australian Council of Wool Exporters and Processors.

I remind witnesses that, although the committee does not require you to give evidence under oath, this hearing is a legal proceeding of parliament and warrants the same respect as proceedings of the House itself. The giving of false or misleading evidence is a serious matter and may be regarded as contempt of parliament. The evidence given today will be recorded by Hansard and will attract parliamentary privilege. I ask members of the media who may be present to report this hearing fairly and accurately.

[9.11 am]

**HAUG, Ms Elly Vivienne, Government Liaison Manager, Ford Motor Company of Australia**

**SCOULAR, Mr Russell Gray, Government Affairs Manager, Ford Motor Company of Australia**

**CHAIR**—Welcome. Although the committee does not require you to give evidence under oath, proceedings before this committee have the same standing as proceedings before the parliament. We have received a written submission to this inquiry from you, which is comprehensive, and we thank you for that. Do you wish to present an additional submission or make an opening statement to the committee?

**Mr Scoular**—Thank you very much for the opportunity to be with you this morning. From our perspective, there is little doubt that the automotive industry is a cornerstone of Australia's manufacturing capability. It is a significant investor, employer, innovator, exporter and producer of complex manufactured goods. It is not only a cornerstone of manufacturing capability but, we would submit, an integral part of our increasingly knowledge based economy. As indicated in our submission, we believe Ford Australia is very much at the forefront of this industry, which is contributing significantly to the national economy.

At present, despite a sound domestic economic environment and strong overall market demand, our domestic automotive industry is being affected by a number of significant external factors. We have all before encountered rising oil prices, a strong Australian dollar, rising commodity prices and various global automotive industry challenges. However, we have rarely before encountered a convergence of all of these external factors within the same time frame. As businesspeople, we simply have to seek to manage our way through these challenges. This hopefully short-term variability emphasises why long-term stability of automotive policy is so important to us. As indicated, the industry's valued policy assistance arrangements did not insulate us from short-term challenges. They do, however, provide a framework under which we can structure our businesses and seek to be competitive in what is already one of the most open and toughest automotive markets in the world.

At Ford Australia we have been able to attract significant investment in a bid to continue to be a significant part of this country's manufacturing industry. We invested more than \$500 million in developing the Ford Territory model. We recently announced a \$1.8 billion investment strategy over 10 years which will see our product development team, for example, take on a regional centre of excellence role for the corporation throughout the Asia-Pacific and Africa region and lead the design and engineering of a new commercial vehicle which is intended to be sold in more than 80 countries around the world. That project alone will represent R&D revenues to Ford Australia of some \$700 million through its model cycle. This also represents one of the largest automotive R&D export initiatives undertaken in Australia.

Our record of involving the local component supplier industry and community in our business and in the operations of our business is a significant one. We are a substantial buyer of locally



manufactured components, purchasing more than \$2.3 billion worth annually. These purchases are made after a careful analysis of many factors, including supplier technology capability, quality, delivery, performance and economics. The Ford Falcon and the Ford Territory models have among the highest levels of local content of any locally manufactured vehicle. We have canvassed in our submission some of the challenges that we face both now and going forward, and we would be happy to take any questions that you may have.

**CHAIR**—We appreciate your coming and making a submission. Not all of your competitors did so, although we are awaiting a submission from Toyota that is currently in the process of being authorised. We have not had one from General Motors at this stage. May I say up front, as somebody who has two Fords I declare my interest.

I invite my colleagues to please join in if they feel it is appropriate. I am interested in the challenges that exist at the moment. If we read in the newspapers about what is happening with the larger automotive sector of the industry, into which we seem to be locked because of previous agreements with the Commodore and the Falcon et cetera, the trend is in the direction of smaller cars because of the pressure of the price of oil, as you have highlighted. Where does this leave us? Does it cause us concern that we have been backing mid-sized cars and the market has shifted to smaller cars? Are we likely to see a greater number smaller cars being imported and the larger cars becoming less relevant, therefore having an impact on our manufacturing base?

**Mr Scoular**—I think Australia's focus, as you correctly point out, Chair, has been on medium to large vehicles. That is where we have developed our expertise, our manufacturing and design infrastructure, and our capability. I think over many years it has served us very well. The challenge that we do face at the moment is whether what we are seeing in the marketplace in terms of some segmentation moves is a short-term spike, if you like, in response to issues that are on the table today or whether it is a long-term trend. I do not think we necessarily know the answer there. The issue for the industry—and perhaps this would have been the next question—is: should we, as an industry, be seeking to move to the production of medium to smaller vehicles?

**CHAIR**—That is a concern, obviously, and thank you for posing that question.

**Mr Scoular**—The significant challenge that we face there is one of whether we could obtain or secure critical mass in that environment. If you look at the characteristic today of the Australian marketplace, in the passenger car segment there are more than 40 different brands and more than 300 different models. That fragmentation is particularly pronounced and significant in medium to smaller cars. If I were to seek to produce a medium to smaller car in Australia in lieu of the vehicles that I am currently producing and if it were in the top three or four selling models—so, in that context, was very successful—I would be lucky to be getting one-third to half the volume that I get today with my larger vehicles.

**CHAIR**—What is the volume, for example, of the Festiva and the Focus—because it is not broken down here—versus the Falcon and the Fairmont et cetera?

**Mr Scoular**—In round numbers, last year Ford Australia sold 130,000 vehicles in Australia. In round numbers, if you incorporate the Falcon family, including Falcon ute, and Territory in that calculation, they would have been in the 90,000s.

**CHAIR**—So Festiva and—

**Mr Scoular**—Focus and the imported vehicles are a very small part of the range.

**CHAIR**—How does that compare with, say, Toyota's Corolla?

**Mr Scoular**—Corolla is the top-selling small car. It has been particularly successful in the marketplace. It has been up there on the odd occasion, on the odd month, of challenging Falcon and Commodore. But if you peel away from the Corolla and look at the models that come after that, there is a very significant volume jump down to where their sales levels are.

**Ms GRIERSON**—I find that a bit perplexing really because the bigger car—the 3.5 litre engine type car—has all the sales, and that is what you are geared towards, but as a city dweller who still likes to do highway travel I would love a 2.6 litre or 2.2 litre car, like the Holden Vectra; yet Holden no longer makes it in Australia. If public policy changed—government policy for fleet cars: you can really only buy the big or the small—would that make a difference? What proportion of your sales are fleet sales?

**Mr Scoular**—In our company probably 60 to 70 per cent of the Falcon and Territory vehicles are government and fleet or are going to business of some type; it depends how you define fleet.

**Dr EMERSON**—So is that 60 to 70 per cent of the 90,000?

**Mr Scoular**—Yes.

**CHAIR**—Have you got the government component of that?

**Mr Scoular**—I will have to take that on notice.

**Ms Haug**—We tend to term that 'non-private', if you like. So we have private users and non-private users. Russell is referring to the non-private portion of those sales.

**Ms GRIERSON**—The Ford Territory was designed locally.

**Mr Scoular**—Correct.

**Ms GRIERSON**—And it was a great success in terms of support from the industry and with the critics et cetera.

**Ms Haug**—Yes.

**Ms GRIERSON**—Has there been a downturn now that petrol prices are so high?

**Mr Scoular**—There has been a downturn, but the whole sector which this type of vehicle is competing in has had a downturn, if you like. Pre downturn, the Territory was the top-selling SUV in Australia and, if you like, post downturn of late, it is still the top-selling SUV.

**CHAIR**—I am interested in pursuing the size issue, which is one of the big challenges for us, and the LPG initiatives. I am also interested in the issue of hybrids. I understand the government has provided some funding to assist in the development of hybrids for larger cars. Where is that at? How attractive is the LPG component to you? Will that change the balance of people's interest or disinterest in larger cars?

**Mr Scoular**—We have been a long supporter of LPG. In fact, we introduced a dedicated LPG version of our Ford Falcon in 1999 and we have subsequently sold some 50,000 examples of that car.

**CHAIR**—How much has there been in additional charges for that?

**Mr Scoular**—In recent times it has been \$1,400 versus the petrol only model.

**Dr EMERSON**—Is that LPG plus petrol?

**Mr Scoular**—No, it is LPG only. The advantages it offers you, versus a traditional dual fuel approach, include a bigger boot for luggage and an engine that is specifically attuned to the fuel you are using, as opposed to a compromise approach. In fact, with the fuel prices of late, just on Friday we completed an around Australia kind of promotional lap to demonstrate how cheaply you could drive around Australia on LPG. We did the lap for \$997.55.

**CHAIR**—Is that right.

**Ms Haug**—With LPG left in the tank!

**CHAIR**—How many kilometres do you get to a fill? What is the cost vis-a-vis straight petrol?

**Mr Scoular**—It is cheaper.

**CHAIR**—By how much?

**Mr Scoular**—In terms of kilometres, on open road travel you could get, in round numbers, say, 500 to 550 on a petrol version of the Falcon; on an LPG version you could get up to 800 plus.

**CHAIR**—And the LPG is cheaper?

**Mr Scoular**—It is cheaper. The traditional issue with LPG costs, of course, has always been the conversion costs. Motorists have had to make aftermarket conversions. Therefore, if you do a lot of mileage, you can get the payback of cheaper fuel. If you do not do a lot of mileage, it has tended to be an incremental cost to you. With the dedicated LPG, we in effect halved that cost. It was still a premium price over petrol, but it was still significantly lower than it had been. The net effect was that if you then did, in round numbers, say, 15,000 to 20,000 kilometres a year, you

had a very quick payback, which meant of course that business fleet buyers were particularly affected.

**CHAIR**—What percentage are now LPG?

**Mr Scoular**—About 20 per cent.

**CHAIR**—Have you seen any change yet in orders?

**Mr Scoular**—In terms of the recent announcement?

**CHAIR**—Yes.

**Mr Scoular**—We have certainly seen an increased level of inquiry. People at this stage are just understanding exactly what it means, but we are anticipating increased sales levels for that vehicle nationally. If you have the good fortune to live in Perth, it is particularly good for you under the new arrangements because there is a state subsidy as well.

**Dr EMERSON**—That is for installation, isn't it?

**Mr Scoular**—And new.

**Dr EMERSON**—Sorry?

**Mr Scoular**—Do you mean the recent subsidy?

**Dr EMERSON**—Is that the Western Australian one?

**Mr Scoular**—Both.

**Dr EMERSON**—And the federal one? That is just all conversion, isn't it?

**Mr Scoular**—And for new. In round numbers it is \$2,000 if you take your car around for a conversion. If you buy a brand new LPG Falcon it is \$1,000.

**CHAIR**—So you get \$2,000 combined, state and federal, in Western Australia and the additional cost is only \$1,800.

**Mr Scoular**—I was looking at it from the context of: if you are buying a new Falcon in the west, it is \$1,000 from Canberra and \$1,000 from Perth for what is going to cost you \$1,400. So it is \$600 better than petrol. I like the mathematics.

**CHAIR**—What about the hybrid car? I understand this research money, which got little coverage, was announced—I cannot remember the total amount between the two Australian manufacturers but it was in the order of \$70 million.

**Mr Scoular**—I think you are talking about what is known as the ACIS R&D pool. There was \$150 million available on a competitive bids basis for a variety of automotive R&D initiatives. We were successful in getting some funding under that grant, as were some of our competitors. With regard to hybrid technology, Ford Motor Company globally is doing a lot of work in that area. It is not necessarily totally convinced that hybrid is going to be the absolute way of the future. It tends to take a more open view, that there are a number of technologies on the table, whether it be fuel cell, hybrid or whatever. It is really a question of trying to corporately get ourselves in a position where we are totally across them and nimble enough to go with where the market is going to go at some point.

**CHAIR**—Obviously no-one has a clear idea at this stage on it, but would you say it is more likely that it is going to move in the gas direction or is it likely to see a mixture, with hybrid cars too. What do you anticipate?

**Mr Scoular**—I think it may be a mixture. I think it will move in an evolutionary sense as opposed to a revolutionary sense, even allowing for the price levels of petrol at the moment. Whilst the current price levels are obviously of no satisfaction to anybody, you can look at charts and graphs where in real terms they have been at higher levels in years gone by. There was an interesting chart in the recent Reserve Bank August monetary policy statement, I think, that demonstrated this. But hopefully it was only a spike.

**Dr EMERSON**—That chart shows disturbingly that petrol prices are now in real terms higher than in the first oil shock but still below the second oil shock.

**Mr Scoular**—That was the one I was referring to. I was referring to 1978.

**Dr EMERSON**—For years we have been saying that the real price of petrol is not as high as it used to be, but now it is—except for that second oil price shock, which was a real doozy.

**Ms Haug**—Our strategy to date with alternative fuels has primarily been with the LPG dedicated Falcon. Primarily one of the benefits of that is we have a ready-made distribution network that is obviously across Australia—which we have just demonstrated with our national lap around Australia. I guess in terms of infrastructure the LPG system is already in existence whereas some of the new technologies coming through are really yet to have that infrastructure there.

**CHAIR**—Obviously this committee has the ability to make recommendations. Should we also be looking at some incentives for hybrid cars as well?

**Mr Scoular**—Hybrid cars is one technology. If one is looking at things like future fuels on an environmental or economic basis, you can come at it from slightly different approaches. Different fuels and different technologies can have different attractions. One of the issues with hybrid technology is that it is still expensive.

**CHAIR**—What is the premium for hybrid?

**Mr Scoular**—In Australia today I think the two hybrid models that are on sale—

**CHAIR**—Which are the Lexus and the Prius?

**Ms Haug**—It is the Prius and the Honda Civic.

**Mr Scoular**—Yes. They tend to be upwards of or towards \$10,000 more expensive than, if you like, a comparable—

**Dr EMERSON**—That is a lot.

**Mr Scoular**—You tend to see that, whilst the sales of those cars has been increasing of late, they tend to go towards fleets or government fleets, if you like—what I would call demonstration type buyers as opposed to you and I buying individually.

**Dr EMERSON**—How many of your sales of LPG vehicles are to the taxi industry?

**Mr Scoular**—Directly we do not sell a lot of cars to the taxi industry. You tend to find that most taxis are actually purchased at auction. They may have been government fleet vehicles or fleet vehicles and they are aftermarket conversions. We did offer what we called a taxi pack for a number of years on the Falcon. You could buy, in the case of Victoria, a yellow Falcon with all of the appropriate wiring and those characteristics in it. It was not a huge sales success—again, because most of the taxi people bought on the used market as opposed to the new. So we no longer offer it.

**Dr EMERSON**—The member for Scullin has asked me not to ask about—

**Mr Scoular**—He did give you a call, did he?

**Dr EMERSON**—the compressed air car. I have never heard of it, so I will not ask about it.

**Mr Scoular**—I ran into the member for Scullin at a football match yesterday afternoon. I alluded to the fact that I was going here.

**Dr EMERSON**—He said, ‘Don’t mention the compressed air car.’

**Mr Scoular**—It is an allusion to an appearance once before a Senate committee.

**CHAIR**—When we were in Newcastle, the CSIRO said that they were working on a battery for a hybrid model which was being tested by cars in various parts of the world. Can we have your assessment as to whether you are aware of this particular battery that has been developed by the CSIRO, where it is at and whether we should be getting excited?

**Mr Scoular**—I am aware of some of the work that CSIRO have been doing over a number of years in this area. We have had some involvement with them in this area. In this particular area and with this particular technology, we have tended to do most of it in partnership with our parent company as opposed to doing it locally. In this particular area, we really sought to concentrate on the short term and what we would see as short-term issues that we can address, produce and supply today, and to work with our parent company on longer term technology issues.

**Mr McARTHUR**—Can I just say on the record that, having been through the tariff debate in Geelong and Broadmeadows, I commend the Ford Motor Company's new attitude to being internationally competitive. We have had a number of debates over the last 15 years. The current managing director, Tom Gorman, is on the record as saying that the Ford Motor Company should remain internationally competitive and no longer depend on tariffs. I would just get that on the record and commend the company.

I want to raise three issues. You mention in your submission the market fragmentation and you talk about 50 brands offering 350 models in a relatively small market. Do you think this will be sorted out in the next 10 years, given that the Button plan reduced the number of car companies from, I think, seven down to four? It just seems a strange thing that we still have this big number of models in the Australian market. Can you give us a comment on that?

**Mr Scouler**—It depends how you would like it to be sorted out. My feeling is that, over time, we will see an increasing fragmentation of our market and we will see new brands, particularly as manufacturers from such countries as India and China embark onto the global stage. We can expect to see the variety that is currently available in the marketplace certainly either continue at current levels or grow.

**Mr McARTHUR**—Do you think that the economies of scale will be in fact working against the automobile industry in Australia because the more models and the more offers you have, that will militate against the four big manufacturers in Australia?

**Mr Scouler**—It will certainly ensure that, going forward, the competitive intensity that we face remains and life is always going to be challenging.

**Ms Haug**—I think that in our market, which is only just approaching now one million units annually, 50 brands and over 350 models is quite comparable to some of the more mature and much larger markets in the world such as the United States and some of the European markets, which have much larger per annum volumes yet have a similar or comparable number of model offerings.

**CHAIR**—Why hasn't the market sorted that out so that there has been a shake-out of some of those?

**Mr Scouler**—I think Australians like variety; they like choice. They are very proud of being able to make an individual choice as to what they would like to be able to purchase, whether it be electronic goods, mobile phones, motor vehicles or whatever. I think if you look at all those industries you see that the fragmentation of them is quite significant.

**Mr McARTHUR**—The Button car plan was designed to try and reduce the manufacturers and try and stop this fragmentation to make it more economic.

**Mr Scouler**—It did. The assumption was that if you could reduce the number of models that were being produced locally, those remaining locally produced models could pick up some of the volume that those departing had taken. That would therefore offer production economies of scale for the remaining vehicle manufacturers and also for, and probably most particularly of

benefit to, the component suppliers who had, pre Button—for want of a better description—been supplying more varieties of models than they would post Button.

**Mr McARTHUR**—This leads to my next question, which is on the matter of the components. You talk about the components in Australia being integrated with global operations of their parent companies. We have seen a lot of publicity in recent weeks about components, the ‘just in time’ supplying and the fact that the whole car industry could come to a halt because of one component manufacturer’s potential bankruptcy. Could you comment on how you see the component industry in Australia, firstly, supplying the Australian car industry and, secondly, on how they will integrate internationally. It has been suggested by some commentators that the component industry internationally will swamp the Australian market and our smaller component operators will go broke, to put it bluntly.

**Mr Scoular**—If you look at the component industry you see that you can probably put it into two or three categories. The first category is the number of significant component producers in Australia who are members of or part of global component companies. A good example of those for discussion at this point is a company like Bosch, which is a very significant player in the Australian industry. In the second category you have some Australian owned companies that in their own way have been very successful because of the technologies that they own or have licence agreements to and because they have been very positive in the way that they have not only done business in Australia but have sought to export from Australia or develop goods. An example would be Futuris Air International Group. The third category has historically been Australian owned and probably at the lower end of the scale in terms of the technologies that are embedded in the products that they are producing. Generally speaking, whilst you could look at those component companies which have encountered difficulties in recent times, have been reasonably high profile and in the media from time to time and about which you would say that the reasons for the difficulties may vary from company to company, they have tended to be in that third category.

**Ms GRIERSON**—The lower value add?

**Mr Scoular**—The lower value add without either direct access or licensed access to technologies.

**Mr McARTHUR**—I notice that there has been comment that the Ford parent company is now seeking other manufacturers around the world to integrate with them. Do you think Ford will survive as a name or do you think it will become part of Jaguar, Mercedes Benz or even GMH?

**Mr Scoular**—For the record, Jaguar is part of us. As much as my former chief executive Geoff Polites, who is now boss of Jaguar in the UK, would probably like that to be, I do not know. There is no doubt that Ford is going through some very difficult and challenging times globally. Most of the issues behind that are related to issues in the North American market, which is of course a very significant market. The corporation has undertaken what it calls a ‘way forward’ plan. It is quite a significant restructuring plan to better position itself for the future and going forward. There are a lot of hard challenges and hard decisions to be made. I am cautiously optimistic.



**Mr McARTHUR**—Do you think we will see four or five big conglomerates that will dominate the car industry worldwide?

**Mr Scoular**—If you look at the car industry today worldwide, if you look at the top half dozen vehicle producers or vehicle producer groupings, you have General Motors, Toyota and Ford, and under the Ford umbrella, for example, you have the Ford brand, Mazda, Jaguar, Volvo, Land Rover and Aston Martin—which has a pretty token volume but they are nice cars.

**Mr McARTHUR**—Do you still see a hope for the Australian operations, given these multinational groupings?

**Mr Scoular**—That is very much part of what I alluded to in my opening comments and in the submission. Our new corporate strategy that we adopted earlier this year involved significant investments going forward. I alluded to the R&D production of a new commercial vehicle platform being undertaken in Australia. To us that is a critical component of Ford Australia becoming an integrated and very important part of our parent company's global operations. If we are the lead designer, the lead engineer of an important vehicle that is sold in many markets around the world, they need us.

**Ms GRIERSON**—What markets are you targeting for that?

**Mr Scoular**—In that market you are talking about in excess of 80 countries. You are virtually talking about many countries on all continents.

**Ms GRIERSON**—So you are not just talking about the Southern Hemisphere or the Asia-Pacific?

**CHAIR**—You are talking about engines predominantly—

**Mr Scoular**—No, that is a commercial vehicle line.

**CHAIR**—So these are the ones going to the Middle East et cetera.

**Mr Scoular**—It could be Middle East, it could be South America, Europe, Asia-Pacific—

**Ms GRIERSON**—China?

**Mr Scoular**—It could well be.

**CHAIR**—It is an interesting discussion, so we are all going to dive in at some stage. I know that Dr Emerson would like to ask some questions.

**Dr EMERSON**—I am trying to project forward 20 years. We have China, in 20 years time, producing an enormous amount of vehicles for its local market. If we follow the pattern of Chinese manufacturing, very quickly it will go up the quality curve, so 'made in China' will not have the same connotation as it might have had 10 years ago. It will be a quality vehicle. Didn't Kia follow that path? I think that a Korean vehicle entered the Australian market at a really low cost but dramatically and rapidly improved its quality. That seems to be highly likely as a path of

development for China. What does that mean for the Australian car manufacturing industry, given that China will not be satisfied with simply producing for its domestic market but will want to produce for the global market as it does in other areas?

**Mr Scoular**—I think it is obviously going to mean more challenges going forward. We could particularly expect a country like China to concentrate on medium to smaller vehicles.

**Dr EMERSON**—Why is that?

**Mr Scoular**—It is the number of people in its own economy, availability of space—big cities, small space and those issues. All other things being equal, that leaves a country like Australia with its capability in medium to larger vehicles having an element of natural protection, but it will not be total protection, because what small cars can do if they come in a particular volume into a marketplace is, if you like, reposition the key pricing points.

**Dr EMERSON**—Can you elaborate on that?

**Mr Scoular**—Yes. If the prices of small cars dramatically drop, then people's expectation for pricing of larger cars and their perception of value—they drag everyone down, if you like.

**Dr EMERSON**—This inquiry is called 'beyond the resources boom', and I think members of the committee have a view that we want a strong, viable manufacturing sector for Australia and we do not really want to just give up on it. We are losing about 1,100 jobs a week in manufacturing; someone is obviously picking them up. What sort of policy instruments would you see as being the most valuable, in this industry, for taking manufacturing forward? I think the tariff debate is pretty well over, and it is not going to help our exports anyway.

I am particularly interested in the role of support for research and development, which you have already mentioned and have enjoyed some benefits from. This is a long question, I am sorry, but given that we are not going to be a source of cheap labour—we hope!—and we will not have the economies of scale of massive factories in China and other countries, it seems that it is the intellect, ideas and the application of those ideas that might give us the advantage. If that is right, what sort of R&D support does your company see as the most valuable: a 125 per cent, or higher, tax concession or direct grants, as in the ACIS arrangement, or some other proposals?

**Mr Scoular**—As a company, we have been and are beneficiaries of R&D support under both elements that you have mentioned. I think that we would see the ACIS program, which is the automotive specific program, and what it offers in the R&D area as being more particularly valuable and supportive to us than the tax concession for a number of reasons. Obviously, it is available at a higher level. Also, whilst the tax concession is a valuable and important policy arrangement, you have to be making a dollar for it to be of importance.

**Dr EMERSON**—Would they have that R&D tax offset and that R&D start, which is really for small businesses?

**Mr Scoular**—Yes. I think ongoing R&D support is very important. In terms of support, I think the present policy arrangements which offer the industry, as I alluded to earlier, long-term planning stability, are critical in our industry, which has very long lead times and product

evolutionary development phases. I think one area we are increasingly focusing on and where I think there are ongoing opportunities—and we have alluded to the component and supplier industry—is what I would call supply chain development. It is not only an issue of ensuring that a supplier to, say, the Ford Motor Company has technologies that are capable, innovative and all those important things; it is making sure that they understand their supply chains as they work their way through. I think that is an area where there is need, there is opportunity, and it is certainly an area where our Ford Motor Company is seeking to do some increasing work.

An additional item—and we touched upon it in our submission—is that we have been broadly supportive of the government's trade liberalisation strategy. We understand that WTO and, more recently, the Doha Round of that has been very slow moving and quite frustrating for all the parties involved. In that context, we believe that the FTA strategy has been a reasonable part of an overall policy—

**CHAIR**—What happened to the utes export that we all got excited about in terms of the FTA?

**Dr EMERSON**—That is right—the utes to America.

**Mr Scouler**—I suppose one could never say that utes would never go to America under the FTA. They have gone under the pre-FTA when the tariff into the US for those vehicles was 25 per cent. It has now reduced to zero. They have not gone and I do not think one could say that they are not necessarily going to go. The automotive industry tends to move over a long time frame and long time leads, looking at model development. In my own company's case, our ute, which has been a very strong seller in Australia for many years, is not currently available in left-hand drive capability.

**CHAIR**—I saw a report that said that, because of the downturn in the US plants, it was decided to not import Australian models. We were disappointed to see that.

**Mr Scouler**—I am not aware of that particular article. I can say with regard to America that, if you are a business person making a judgement call as to whether to go into that particular market, it is a very tough market. It is a very large market. In the case of the Ford Motor Company, in recent years it has had more sales annually in the US, for example, of F-series pickup trucks than the entire new vehicle market in Australia.

One of the issues there is that if you go in from Australia—and I think this would apply to any franchise; it is not something peculiar to Ford—you are going in with a niche model, with a very small volume. And when the going gets tough in a big market, or in any market, you concentrate on those models where your greater volume is, where your greater investment is and where your greater returns are. In that context, I am talking about the dealership retail level; I am not necessarily talking about the corporate level.

**CHAIR**—The reason I ask is that here is an example of where the benefits, that you have outlined, of being involved in the overall corporate relationship and model did not work out.

**Mr Scouler**—I think it is premature to say that it has not worked out. One of the characteristics of the automotive industry, as I said, is that its lead times and its long product

development phase lines are measured in terms of years as opposed to months. The US FTA, for example, is still relatively young; it is barely two or three years old—

**CHAIR**—Yes, about two.

**Dr EMERSON**—The second line of questioning is: just for the sake of hypothetical argument, if our component manufacturers got into a lot of trouble and we did not have much of a component manufacturing sector in Australia, my understanding is that that would severely affect the thinking of car manufacturers. I think Toyota still imports a fairly large proportion of its components, but the others are heavily reliant on local component manufacturing. I ask this question because we as policy makers probably need to be thinking about the right policies for component manufacturers as well, rather than thinking: ‘Oh, well, if some of those hit the wall it doesn’t matter.’ My understanding is that it does matter for the car assemblers.

**Mr Scoular**—I think you are right to the extent that if anybody hits the wall it matters. The current automotive policy arrangements as they apply to component manufacturers have been structured in quite an intelligent way. In effect, they recognise—going forward, fundamentally—that enhanced performance is a critical criterion of viability. So they specifically reward R&D and capital investment. So if you are involved in developing new products, processes or components you can access the program.

**Dr EMERSON**—Is this still ACIS?

**Mr Scoular**—Yes. If you are involved in developing, buying or investing in new capital equipment to enhance the efficiency or quality of your operation, you can access the program. If you are doing nothing more than more of the same, then you cannot access the program. Fundamentally the policy makers have recognised that change is a very important ingredient of future viability and, in a way that does not pick particular winners—in the sense of corporations or technology or machinery—have still sought to steer people’s thinking and investments in a particular way.

**Dr EMERSON**—At least for a segment of the market, if not for all of it, should we be trying to get our component manufacturers to produce for the world? We think of our assemblers as producing for the domestic market and some exports; I do not know, but it would be a few hundred thousand units. But if we had, for example, a component manufacturer who was really topnotch in electronics and was very innovative—say a steering column manufacturer, for the sake of argument—we could potentially produce that steering column for 10 million vehicles or whatever, become the best in the world and produce a hell of a lot of value and export income. A manufacturer becomes the very best in the world and therefore the dominant supplier of all vehicles, whether it is for Ford or Holden or whatever. Is there any potential in that sort of strategy?

**Mr Scoular**—I do not know. I would have to give it a lot of thought. You mentioned steering wheels or steering columns. As I understand it that is probably a pretty good example. One of Australia’s top supplier organisations involved in developing technologies is the Bishop company, which for many years has developed power steering technologies. Whilst it does not necessarily manufacture the componentry made off its patents, it certainly has very extensive licensing agreements throughout the world. I think it is a Sydney based company, from memory.

**Ms GRIERSON**—How much of a Ford Falcon would be manufactured in Australia and how much would be imported?

**Mr Scoular**—It varies according to how the currency rate varies, but in round numbers Falcon family average local content would be of the order of 75 to 80 per cent, depending upon the derivative and the particular options you may choose in it.

**Ms GRIERSON**—So do you have autonomy from your parent company in terms of what you use and what you don't use? Do you have to buy certain products?

**Mr Scoular**—No. We do not have to do anything. Where the parent company takes a strong interest in what we are doing and how we are doing it are the business judgements that are forming our decision making. So if we can put forward a very sound case that we want to go in a particular direction with a particular component or a particular service for our product, they will back it. They are insistent that we benchmark, and that is quite an appropriate form of interest, I would think.

**Ms GRIERSON**—So conversely to that, you don't actually benefit from any economies of scale if there is not mass purchasing internationally?

**Ms Haug**—We have a unique model with Falcon, and there is not a ready supply shelf for a lot of the componentry that goes into the Falcon and the Falcon family. So by the nature of having an indigenous product, we are restricted in some ways as to who we can choose.

**Ms GRIERSON**—You said in your submission that you supported trade liberalisation. How have you locally benefited from the USFTA? How has Ford Australia benefited from the USFTA?

**Mr Scoular**—We were supportive as a company of the USFTA for three reasons. First, we saw longer term—we were alluding to it in our discussion before—potential export opportunities that historically have not existed. Secondly, we saw it being a good example of broader trade liberalisation which could lead to economic growth in Australia. More economic growth, potentially more cars I can sell. Thirdly, we had some modest reductions in our input costs because we buy some componentry from the United States. So the advantage is that historically we used to have to pay duty on importing that componentry but under the FTA arrangements we could access them more competitively. They were components that we do not, and I do not, expect would be made in Australia. Probably the best example there is what we call the EC4 module. It is the electronic computer system that runs the engine.

**CHAIR**—What about the Thai free trade agreement? Have you been selling to increase volumes? I do not know whether you sell to Thailand.

**Mr Scoular**—We do. We began earlier this year exporting the Ford Territory to Thailand. It will be in very modest volumes. It will measure in the hundreds, as opposed to the thousands, but it is still an important and useful market. One of the characteristics in that market is that whilst under the free trade agreement it is zero for zero tariff arrangements, or we are phasing to particular points, beyond the tariff wall there are various taxation arrangements which tend to

favour local and smaller vehicles in that market. So the FTA in terms of accessibility to the market has been useful and valuable, but there are still issues there that make it very hard.

**Ms GRIERSON**—Not just in your submission but in other submissions we have had comment on non-tariff barriers that do not get picked up in an FTA. We had an American one where there was a requirement for local content—there was a Defence preference for local content that therefore undid some of the benefit of the FTAs. I note in your submission that you have some concerns about that in terms of China and further FTAs. Would you comment on that for us?

**Mr Scoular**—I suppose that FTAs, particularly in the automotive industry around the world, are pretty pervasive. There are quite a number of them in many different markets. What we have said and put on the table here is that if, as part of our FTA strategy, we are determined to enhance market accessibility—and I think we all are; that is the reason we are undertaking it—we have to focus on all issues. We cannot just focus on what I would call a border issue. That is easier said than done, because many of these issues are very complex. The Department of Foreign Affairs and Trade recognise that quite clearly. If you look at the number of scoping studies and prenegotiating type studies they have done as part of the trade liberalisation agenda, you will see that they are increasingly focusing on and picking up these issues as being issues of legitimacy and in need of addressing.

**Ms GRIERSON**—If you do not pick those up then it is really not going to be a viable document, a binding document, in any way. How much does industry input into that?

**Mr Scoular**—I can only speak from the Ford Motor Company's perspective, but I think we have very valued access at parliamentary level, government level and departmental level. We are not known as a company that holds back from making our points of view known and I have never encountered anybody who has not listened to what we have to say.

**Ms Haug**—Equally, we are also using the Federated Chamber of Automotive Industries to address some of those concerns on behalf of the automotive industry because the concerns are real and, as Russell said, the NTBs need to be addressed as part of the broader FTA strategy in order for it to be effective.

**CHAIR**—We will see them in, I think, Canberra.

**Ms GRIERSON**—You have a new strategy to go forward and it is innovation focused. Your first product will be a commercial vehicle—is that right?

**Mr Scoular**—The strategy has a number of elements to it. The commercial vehicle which we are designing and engineering—we are the lead global design and engineering source—is an integral element. Other elements of it include future Falcon and Territory models—development of what we call the E8 platform, which is the common platform that is shared by both of those models.

**CHAIR**—When Ford developed the current model, when it was introduced, it broke a lot of the previous moulds.

**Mr Scoular**—Sure.

**Ms GRIERSON**—Can you make it more fuel efficient?

**Mr Scoular**—It is a good car today, but I take on board the challenge.

**Ms GRIERSON**—Is there another part to that strategy? You mentioned the commercial vehicle, the Falcon and the Territory.

**Mr Scoular**—I mentioned the commercial vehicle, the future development of both the Falcon and the Territory and potentially future derivatives of that vehicle that we have not seen yet. But I am in a public forum.

**Ms GRIERSON**—You mentioned earlier that the Corolla has the fastest growing sales, and that has been—

**Mr Scoular**—I mentioned that it is the top-selling small car.

**Ms GRIERSON**—It is at the moment in Australia.

**Mr Scoular**—Unfortunately.

**Ms GRIERSON**—Do you take note of that and try to compete on that level or do you stick to your products that you know you have a niche for?

**Mr Scoular**—In a local manufacturing sense, we are focused on Falcon and Territory vehicles. We certainly do take note of it because we have imported vehicles just like the Corolla in that segment of the market.

**Ms Haug**—Which we always seek to do better with. Our sales of Focus have increased since the launch of the new model and Fiesta is doing very well as well.

**Ms GRIERSON**—Do you think it is possible that fuel prices will eventually shift you away from the Falcon and Territory type platform?

**Mr Scoular**—I do not really know. When you look at fuel prices as they are today, you take a deep breath. When you listen to some of the forecasters about where prices may go, there are those who say, ‘They’re going to keep going up,’ and there are those who say, ‘No, they’re actually going to come down.’ If we actually knew what was going to happen, we would all be on a beach in the Bahamas.

**CHAIR**—And there is LPG.

**Mr Scoular**—Yes.

**Ms GRIERSON**—What do you think is the most essential innovation that is required in the automotive industry to move cars to a new level? There have been all sorts of engine designs that

have never gone to market and there have been lots of innovative products that have never been taken up by the automotive industry.

**Mr Scoular**—I think in a sense that is not necessarily a bad thing because automotive is a very capital intensive industry. For example, in one sense, every time we introduce a new Falcon model, we bet Ford Australia. That is our main model line; we are not a multi-model company; so, if you like, we bet the company. So inherently, in that environment, you are going to be cautious.

**Mrs Haug**—You are going to pick a winner.

**Mr Scoular**—You are going to move carefully. I do not know what I could say may be the great breakthrough technology. I still think that the gasoline engine as we know it has a lot of life in it still to go. And we have seen changes over time. For example, if you look at today's Falcon it is more fuel efficient than the little Ford Escort used to be in the late seventies. A couple of weeks ago we announced that we were taking our six-speed transmission and making that available across the range—taking it from just the higher level of vehicle down to the base XT version. That in itself offers a six per cent improvement in fuel economy. So I think our improvements will come in evolutionary increments as opposed to a revolutionary leap. As to what they may be, I think it will be, really, finetuning and doing more of what we are doing.

**CHAIR**—At our hearings in Brisbane and Newcastle there was a lot of comment about the shortage of skilled labour. Have you experienced that?

**Mr Scoular**—It is an issue and it is a challenge for our industry. As a company, we have been a significant trainer of our own people and, we would probably argue from time to time, a trainer of our competitors' people; once they get trained they get taken. For many years we have had apprenticeships and a very strong graduate intake program of graduates across all disciplines. In more recent times, as we have significantly grown our own product development and R&D capability, we have brought in a lot of people from overseas to work in Australia.

**CHAIR**—Was that as part of your global Ford group?

**Mr Scoular**—We have brought them out from our company and out of other companies from offshore. That is really for two reasons. One is obviously that we have wanted people with particular skills and, as we have grown our business very rapidly in that area, we have wanted them quite quickly. So if we could get people with those skills right away, they could help us train and develop Australians.

**CHAIR**—Was that mainly out of the US or Europe?

**Mr Scoular**—Mainly out of the UK and Europe. And also, in an automotive sense, recognising that we are competing and selling our products, either locally or globally, in a globally competitive market, we see the benefit of bringing in people with the latest contemporary global skills as being very much part of the development of our capability.

**CHAIR**—You could give a very long answer to this question, but because of the time constraints I will ask you to be brief. You are part of a corporate group. We have a lot of



companies in this situation, but particularly GM and Ford are challenged. When I was in the US last year and talking to various banks there was a lot of concern about Ford and GM in terms of their long-term viability. Where does Ford sit at the moment? And what implications does that have for Australia?

**Mr Scoular**—Obviously, as Ford Australia, we are ultimately owned by the parent company in the US. There is no doubt, as I alluded to earlier, that the US is facing some very significant issues at the moment. But I think the important thing is that it is taking some very positive actions to address those. Unfortunately, in the automotive industry you do not see a result tomorrow morning or next week; you just have to be patient and take your medicine.

**CHAIR**—There was a lot of talk when I was there about the several thousand dollars per car that was due to past superannuation and Medicare or Medicaid liabilities. Has that been resolved?

**Mr Scoular**—It has not been resolved as such. It is still a cost that companies like Ford in the United States incur, and in part that is an overhang from many years ago when there was not a Medicare system as we know it in Australia. Post war, in the US there were restrictions on paying salary or wage increases, so the way you attracted labour in that very competitive environment was to say, ‘I’ll pay your medical bills.’ And they were a significant issue in that marketplace. Over time, as people have tended to live longer, and there have come to be more of them and medicines have got a lot more expensive, what seemed to be a modest cost at the time, and a good idea, has become very expensive.

**CHAIR**—Finally—and I am sure the next participants in our hearing will be interested in what you have to say—we come to your free plug. Bear in mind that we are looking at recommendations for our manufacturing sector. What would you see as the types of things that government should be doing in the future to ensure the long-term viability of companies such as yours?

**Mr Scoular**—In one sense I would say more of the same. In a broader, macro sense, if the economy is well run, if it is growing, with low interest rates, that is good for selling motor vehicles. More specifically and more sectorally based, I think the current policy arrangements are pretty good. They are pretty well structured. They aim to reward and encourage development rather than just bring more of the same, if you like. I think the government is planning or has undertaken to have a partial mid-term review of automotive policy arrangements in 2008 and we would be keen participants in that.

**CHAIR**—I appreciate that. It was particularly interesting to us. The automotive sector is a big chunk of manufacturing in Australia and has been through significant restructuring. We want to understand it a little better. Thank you.

[10.12 am]

**WELLS, Dr Julie, Director, Policy and Planning, RMIT University**

**WOODLAND, Ms Katrina, Research Analyst, Policy and Planning, RMIT University**

**CHAIR**—Welcome. As you know, although the committee does not require you to give evidence under oath, this hearing still has the same standing as proceedings before the parliament. We have received your written submission. Thank you for that. It was comprehensive. We are checking with the other universities that have submitted. The University of South Australia has, but you are one of a small group and it is a bit of a pity, because the universities are quite related to the future of manufacturing, I think. We have certainly had some involved in the development of some of the higher end biotech areas, medical areas et cetera. The University of Newcastle, the University of Queensland and the CRC were also at the campus there. Would you like to make an opening statement?

**Dr Wells**—We found listening to the last witnesses very interesting too, given that Ford is one of the biggest employers of our graduates, so we will also be reading the *Hansard* with interest. Our submission obviously reflects our own relationship to the manufacturing industry as an education and research provider. In fact, industry engagement is central to the work RMIT does. I thought in introducing and expanding a little on the submission it might be helpful to give you a bit more information about our work in this respect and perhaps some examples.

RMIT enrolls about 58,000 students. Around 30 per cent of our teaching effort is in vocational education and training, so we are one of the biggest TAFE providers in Victoria. Around 70 per cent is obviously in higher education, ranging from degree programs through to higher degrees by research. We are not a comprehensive university in the way that term is often used, insofar as we do not offer generalist programs in the arts, humanities and sciences. Our students come to RMIT with a pretty clear idea of what they want to do. As a result, our programs are very much oriented towards the particular needs of industry, the labour market and, sometimes, specific professions and occupations. A fair amount of our profile is concentrated in areas that are relevant to manufacturing industries, particularly in aerospace, automotive engineering, food technology, fashion and textiles, biotechnology and even in areas like printing, where we are probably more involved in the manufacturing process skills end. We obviously have a strong interest in this inquiry.

The model for industry engagement that we are aspiring to is not just about producing job-ready graduates, although that is clearly important. We are actually trying to move to a more active partnership with industry that is about meeting needs and addressing specific problems. To do that, we are trying to move beyond the traditional barriers between vocational education and training and higher education in order to develop integrated solutions that can draw on the knowledge and understanding from both sectors and across disciplines. This concept of industry engagement is at the heart of the proposal for a design hub which we are developing and which we referred to in our submission as an example of the sort of work that we think is going to be helpful to manufacturing industries, particularly if we are moving towards positioning Australian manufacturing at the high-end, value-added point.

**CHAIR**—I think that is a key point in terms of the positioning at the high-end, value-added area.

**Dr Wells**—Yes. But from our point of view—and this is an issue that we face within our own institution but I would suggest it is common to the education sector—frequently the people who are engaged in research will see their work as being distinct from those who are involved in training apprentices. In many ways it is. I would not want to suggest it is the same. We are actually trying to create an environment in which we can build opportunities for synergies. For example, we have apprentices who are working with computer assisted design in labs built for researchers and with interaction with PhD students. That is the kind of model we are moving towards.

I think the other dimension of that model for industry engagement is that we are not just reacting to industry needs; we have to have a proactive role in assisting industry in anticipating where the workforce might be going. In that respect, we are developing relationships within the manufacturing industry that are focusing on problems and outcomes, particularly around strategic planning and workforce development. An example is some work we did last year with Plastool, which is a Victorian company manufacturing injection moulds for plastic car parts. The project we worked on with them was on long-term strategic planning, particularly in terms of their improvement of manufacturing processes and looking offshore to where they might draw processes from. That partnership actually engaged higher education academics, PhD students and TAFE teachers to work with the company. We have real challenges in working with small to medium sized enterprises. As I am sure you would have heard, there are particular issues. Small companies like Plastool do not have a lot of resources to put behind—

**CHAIR**—Which ones?

**Dr Wells**—Like Plastool. They do not necessarily have a lot of resources to put behind the product development, so there is a fair bit of work in helping them to scope what it is they want and need from an education and research provider. Our challenge is getting the resources behind that work. That is where the argument in our submission around the need to support small to medium sized enterprises in partnering with education and research institutions comes from.

In relation to skills acquisition, which is another point we have touched on in our submission and which is obviously of concern to this inquiry, in the case of education training providers, we have often had this mentality of ‘If we build it, they will come’—that is, if we build the programs and courses that we think will meet industry needs then the students will flock in. What we are finding is that we actually have to stimulate demand. We have noted in our submission a need to shift people’s perceptions away from old models of what a career in manufacturing industries might look like.

**CHAIR**—That ranges all of the way through for apprenticeships, I think. That is a common perception.

**Dr Wells**—Absolutely. We are actually doing work with VECCI to increase our Vet in Schools profile. A student can start an apprenticeship in year 11 and then move into an apprenticeship program at RMIT. We are running taster programs with year 10 students, bringing them onto campus and showing them the sort of work they can do. We are also trying

to run transition-to-study programs for the older workers because that is an area where we are finding that there is a big gap between understanding the need for retraining and upskilling and then being able to make a link with an education provider. We would be really happy to see a stronger partnership between government, some of the key industry bodies and the education and training providers in actually building the demand.

Our director of TAFE recently attended a presentation by the joint committee on human resources in the textiles industry which comes out of Canada. It comes out of the Canadian federal Department of Human Resources and Social Development. The industry joint committees are funded jointly by government and industry, but they are specifically focused on long-term productivity development in the workforce. This is an example of how government and industry are bringing together multidisciplinary and multisectoral teams. For example, in textiles, the industry council is engaging academics from Harvard in helping them to adapt Harvard business materials to use with school students or apprenticeship level students. Although the COAG agenda has been a great impetus for more of that work to happen, I think there is probably more we could do.

I think there is also a role for government in supporting the kinds of flexible industry based qualifications that will help students to draw on knowledge and skills from across VET and higher education, such as the accelerated industry pathway qualifications that we referred to in our submission and which we are developing. We have seen encouraging signs, I think, from the federal government that they are prepared to move away from a very rigid approach to funding higher education profile. We have seen it in the opposition's policy platform around higher education too, and we welcome that. We would like an approach to funding education and training which is more focused on outcomes and outputs and which does have a longer time frame than a 12-month time frame and is not so much focused on filling quotas of student load in particular disciplines. That kind of approach will help us to be more nimble, I think. The final aspect of our experience that I wanted to touch on, because it has shaped our approach to this inquiry, is RMIT's global orientation.

**CHAIR**—We are aware of that. You have done well.

**Dr Wells**—Yes, and we are continuing to do quite well despite the fluctuations in the market. About one-third of our students are international students—that is, their home address is offshore. Of these, about 10,000 are studying outside Australia, mostly through our partnerships in Singapore, Hong Kong and Malaysia. Also, we have 3,000 students enrolled at RMIT Vietnam now. We have two campuses.

**CHAIR**—Congratulations on that.

**Dr Wells**—Thank you. It has been a very exciting trajectory but not without its challenges, as I am sure you are aware. We are one of the biggest offshore providers of education. We are moving away from the old model of education export and bringing in the international students and towards a model which is more focused on transnational education and industry partnerships across borders.

In our submission, we have suggested that we need to look outside Australia in how we support and position manufacturing industries into the future. On one level, that is a self-evident

statement. But—and this is a trap that education providers fall into—it is easy to think of skill shortages as a local or a national phenomenon, whereas in fact the issue has different resonances throughout our region. Our population is ageing and we are having to focus on engaging young people who have perhaps fallen out of the education system and also on the need for workers at the other end to stay in the workforce and reskill and upskill, but we are surrounded by countries where the demographics are reversed. About 70 per cent of Vietnam's population is under 25. They have very strong training needs and recognise the importance of education and training in building their own economic and social capabilities.

We see opportunities for Australian education and training providers to work with Australian and global companies offshore in skills development. I will give you an example of a project that RMIT has commenced with Oxiana. We have embarked on a six-year program to train apprentices in Laos. These are apprentices in the mining sector, so it is primarily electrical, mechanical and automotive trades, but also some instrumentation. They are being trained to Australian Certificate III level. They would then have to undertake an examination to test their accreditation to work in Australia or to articulate into studies in Australia. That is pointing to some interesting opportunities, not just for education and training providers but also for Australian industries that need access to a globally mobile labour force.

**CHAIR**—Thank you very much for that comprehensive review.

**Dr EMERSON**—Can we explore what you think will give Australia a competitive advantage in manufacturing in the future? We know that it is not large scale, because we do not have the capacity to produce on the scale that other countries, particularly some of those in our own region, do. Similarly, we know that it is not cheap labour, and we do not really want it to be cheap labour. Can we therefore think about producing low-volume, high-value manufactured goods, including those that might be used in the production of high-volume, low-value manufactured goods in other countries—for example, machine tools? Could we become the Germany of the Far East? Is there a capacity, by going up the value chain and utilising the sorts of skills that you are trying to create, to ensure that we have at least a highly skilled engineering base that can produce those sorts of products and then perhaps have other manufacturing enterprises linked to those who see it to their advantage to locate to or stay in Australia?

**Dr Wells**—It is a very interesting question. I guess it underpins the importance of engagement with industry in the skills development process. Obviously, there has to be a viable business case around it. In general terms, I would agree with the proposition as you outlined it. In some ways, I do not think that Australia has a lot of choice if you look at our population base and the size of our industry base and the enormous capacity we have in skills and education development. As a broad strategy, that is certainly the one that we are probably the most interested in. It underpins the importance of pathways not just between education sectors but between learning and work. If we are going to proceed down that track, which is not just about high-end, value-added products but also potentially about their translation into mass production, then we have to locate the education and training effort more squarely in the workplace, so that educators are close to the means of production.

**Dr EMERSON**—Why concentrate on small and medium enterprises? I am not actually arguing against it—I am inviting you to elaborate—but you pointed out that bigger enterprises have got the cash to do some of the things that you would want to be done and small and

medium enterprises often do not. But we always say we will concentrate on small and medium enterprises. Why?

**Dr Wells**—I would not want to suggest that we would concentrate on them exclusively—certainly we have very strong partnerships with companies like Ford Australia and Bosch. But I guess it is something that is very particular to our Australian context—the dominance of small to medium enterprise in our industry base. I think it is a sector that probably is less able to access readily programs such as the Cooperative Research Centres Program. RMIT is involved in seven cooperative research centres, and a number of them have direct links to the manufacturing industry, most notably the CRC for Advanced Automotive Technology. But it is sometimes quite difficult for small to medium enterprises to engage in those large-scale very successful programs.

**Ms Woodland**—With the work we are doing around the design hub and design more generally I guess we have identified from small to medium enterprises that there is a need to be able to come to an organisation such as RMIT and use our expertise, use our students, more effectively, through work-integrated learning. The notion of this hub is really to pool our broad range of expertise. We have a Centre for Design, a Spatial Information Architecture Laboratory, a research institute and all the capacity at the TAFE level, so we are really looking at pooling that together and providing physical resources as well as intellectual and academic expertise to help small to medium enterprises. We are still in the planning phase of that initiative, but we hope it will provide opportunities for these SMEs to come up with new products, to improve their design capability, which we have identified in our submission as being a key driver of innovations. We are really looking at those sorts of models to provide the industry with resources that they currently do not have.

**Dr EMERSON**—This inquiry is titled ‘Beyond the resources boom’. The reason for that is that we do not know how long the resources boom will last and at what level, but the high exchange rate is damaging the competitiveness of Australian manufacturing. Is there a danger that, if we do not put in place good tertiary education programs with the sort of diversity you are describing, we could lose the skills base that is associated with our more traditional manufacturing, which is getting hammered, and then, when the exchange rate does fall after the resources boom, Australian manufacturing will potentially become competitive but we will not have the skills base to capitalise on it? It is a kind of transition that we are interested in. In pure economic terms conventional economists would say, ‘Then there will be an incentive to lift the skills base again.’ But is there a problem of, having lost the skills base, it becoming quite difficult over a reasonably short time to create a new one?

**Dr Wells**—Potentially there is. We have seen this with fluctuating demand, particularly in the apprenticeship and traineeship area but also in higher education. In the last 12 months we have been quite encouraged by a resurgence in demand in those areas, particularly around engineering. The problem that you outline goes to the fact that, as education and training providers we cannot be simply reactive; we actually have to be looking 10 years ahead. So there is a challenge for us, and this is partly why we would welcome a more active engagement—and I am not suggesting there is not already engagement—at all levels of government in promoting the changes in career paths and occupational streams to students. In some ways—this has been discussed quite broadly—we do still suffer a sort of cultural lag. It becomes a hard job for the

providers to be out there saying, 'This is what you may think you need, but we're telling you you need this.'

**Dr EMERSON**—There must be some difficulty in convincing school children that manufacturing is the way to go when they see many jobs being lost in manufacturing and say, 'We won't have a manufacturing sector in five to 10 years time.' They would think that there is no future in it. We might find that there is a future in it, by which time we are up against it to train the kids.

**Dr Wells**—Can I suggest that it is not just the students; it is their parents. The parents have the firsthand experience and observation of what has been happening in the manufacturing sector over the last couple of decades and their influence is very strong.

**Mr McARTHUR**—I want to raise the issue of the shortage of skilled people that we see particularly in the mining areas, where skilled tradesmen are now being paid quite big salaries. Do you think this will have some impact on the culture of young students being encouraged by their parents to take on a tertiary degree rather than a trade qualification?

**Dr Wells**—I think it probably will, but again we are dealing with the issue of lag. The fact that skills shortages mean people can command quite high salaries in the trades also poses particular problems for training providers, because the salaries that we pay our staff are often not comparable with what they can earn in the industry sector, despite the fact that we will offer industry loadings. It is a double-edged sword, I think, for skills acquisition.

**Mr McARTHUR**—Do you think there will be any change in the culture, though, that young students are encouraged to go to universities compared to trade schools?

**Dr Wells**—I think there will be change. The change is probably happening. 'Forget uni; go to TAFE,' is not necessarily the message we would be seeking to give young people, but we would certainly be encouraging them to think more broadly about their opportunities and not to see the decision they make on leaving school as the end of the road. An occupational pathway that fits with their skills and interests now should also be an option that will lead into other learning opportunities down the track, which is why a lot of the work we are doing is focusing on pathways which have different entry and exit points for young people. I think that there is shift in the culture and I think that we need to be fairly energetic in prosecuting it.

**Ms GRIERSON**—Do you think the model for funding of public education and training institutions like yours recognises the industry collaboration component, or does it shift the burden too much to industry for you to do those integrated programs, respond to their needs and develop their expertise?

**Dr Wells**—I could probably talk for a very long time about the funding models. I think the move to governments supporting programs which actively encourage education and research providers to partner with industry has been a good one, and we have seen that over the last 20 years.

**Ms GRIERSON**—Give me an example.

**Dr Wells**—The CRC program is one example. Other examples, more recently, are the Collaboration and Structural Reform Fund that the government set up, which is specifically focused around public-private sector partnerships, and also the Capital Development Pool, which has been around for a long time and has also focused on public-private sector partnerships. But the reality is that the education providers are carrying a lot of the cost of developing these pathways.

**Ms GRIERSON**—That is my impression.

**Dr Wells**—There is no way around that. We are engaging industry. For example, with the accelerated industry pathways we have set up an industry advisory group, and that includes representatives from Ford, Oxiana and Bosch as well as the Manufacturing and Engineering Skills Advisory Board. We actually have to come up with the product for the industry then to invest, and the process of product development is quite time and labour intensive, because it involves rethinking our curriculum, drawing together modules from both vocational education, training and higher education and ensuring that we have the recognition of prior learning in place and the recognition of learning in the workplace in place.

**Ms GRIERSON**—So, in a way, perhaps it is not recognised in the funding model that there is a demand for more flexible delivery and more flexible programs that cross faculties or disciplines or whatever?

**Dr Wells**—No, it is not recognised in the funding model. It is recognised in some of the individual programs that government has established to foster collaboration. So, if we are looking at a substantial investment, we will look to project based funding for that investment. We cannot rely on the funding model to support it and sustain it.

**Ms GRIERSON**—You talk about it being a design hub, and you talk about building up a critical mass of expertise and training courses with industry as real partners in that. That really interests me. I think it is self-explanatory and people would say, ‘That’s a good idea.’ But when you do know the manufacturing industry and the service sector that attaches to it, no-one generally tries to be the designer as well as the manager or the engineer, yet so many engineers are trying to deliver all the soft services as well—the marketing, the business skills, the logistics and the supply chain management. They will shift and do all those things without any training, but they will never shift and do design. What about those skills that would improve business so much? Is there a way that government can do more to assist the development of those other skills, particularly for SMEs that are often the baby of a few people and then build up to a 40 or 50 type employment structure? They grow and grow, but they have not really had that input of skill and expertise into those softer skills and management skills.

**Dr Wells**—I think it does go partly to the question of the funding model. At the moment, for example, in both VET and higher education we are running quite rigid models around the way we fund our student load that involve discipline based targets or industry based targets but do not always recognise the need to have different disciplines teaching into particular areas. Our dialogue with both state and federal governments has been around trying to get some more flexibility into those funding agreements that would allow us to more readily run programs that cut across sectors and disciplines. That is one thing. In our submission we have put in a plea for



greater recognition of the importance of supply chain management and logistics in the manufacturing industry.

**Ms GRIERSON**—Yes, you say that the Australian government should assist the manufacturing industry to secure a place in international supply chains. Is it possible for government to bring that about?

**Ms Woodland**—Our point there really comes from speaking to our experts internally at RMIT in that discipline area who are working quite closely with the industry. Their perspective is that within the management of manufacturing companies of all sizes there is very little of that strategic planning and strategic focus. Our perspective is that there is probably a greater need for more specialised—

**Ms GRIERSON**—So should Austrade have some of those specialities?

**Ms Woodland**—It just appears from the work that we are doing that there is a greater need within a manufacturing firm to bring in different project teams—say, someone with a specialisation in supply chain management to work with the designers. There is really not that level of activity going on at the moment. I guess we are really looking for ways of working with government.

**Ms GRIERSON**—I know you can do a certificate course in project management. Can you do a certificate course in logistics and supply chain management?

**Ms Woodland**—We certainly offer those kinds of programs.

**Ms GRIERSON**—As part of another program or as an add-on?

**Dr Wells**—I think it is a stand-alone. If you do not mind, I will take it on notice and send you the detail, if you are particularly interested in the structure of those programs. I know we are offering them through to masters level as well across our business portfolio and our science, engineering and technology portfolio.

**Ms GRIERSON**—What about keeping our talent here? As well as skilling up internationally through the export of education services, how do we keep our most talented players here?

**Dr Wells**—I wish I knew the answer to that; I think a lot of people would like to know the answer to that. There are a number of things we do know. One is that it is less a matter of a brain drain than a matter of a brain swirl that we are looking at with a globally mobile workforce. We should be less anxious about people moving offshore once they have completed a qualification to work and more concerned with how we draw them back and how we draw talent from offshore to work in Australia.

**CHAIR**—In relation to that is also the question of the number of engineering graduates turned out—I notice you have some comments about that in your submission—and whether we should be increasing the numbers. My experience is that engineering graduates are rapidly moving into merchant banking and management generally and leaving engineering behind fairly quickly, so we often see a base qualification to increase the numbers.

**Ms GRIERSON**—In your training courses, because of this flexibility and mobility, how do you upgrade very quickly within a working environment where you have to do it as part of the working environment? Are you able to do that or is it all online? Can you do these things online? How do you do these things? If you are a manager already and you want to upskill or you are an engineer and your business is growing and you need to upskill, do you deliver really flexible delivery models?

**Dr Wells**—I think it is fair to say that we have not done particularly well, and I am not just speaking for RMIT but for the education and training sector more generally. I guess we are taking it on board as a real challenge. It is not really an option for us to do otherwise.

**Ms GRIERSON**—Most higher education institutions do not provide night-time courses or out-of-work hours type courses these days unless it is online.

**Dr Wells**—I might invite Katrina to talk a bit more about the detail around the accelerated industry pathways. We have moved over the last two years to offer more night-time courses. The other thing we are aware of is the industry's need for on-the-job training. I noticed that the representative of Ford Australia was talking about the fact that they are big in-house trainers. We cannot expect people to come to us in the hours that do not suit them, so part of the development of the industry accelerated pathways is to reduce the time taken to complete particular qualifications without compromising the quality and to have programs that are industry specific. For example, the industry pathway in engineering that we are looking at, which would potentially take a student from an apprenticeship level possibly through to a PhD, has been developed very closely with Robert Bosch. We would be drawing on their workforce, to bring into those programs as well as others that might have a more generic interest. That is one way we are attempting to deal with it.

**Ms Woodland**—Similarly, we are developing an industry accelerated pathway with IBM. We have two streams at the moment, one in engineering and one with the ICT industry. As Julie mentioned, it really is about truncating the pathway from apprenticeship through to, say, the engineering degree. One of the key reasons for us doing that in collaboration with the industry is to meet what is a major skill gap, which is in the technician and paraprofessional area. It is often very difficult for, say, apprenticeships—(a) there is a shortage of apprenticeships and (b) there is a difficulty in getting from apprenticeship level through to the supervisory management level. So part of this pathway is to develop an integrated set of qualifications from VET through to higher education to really try to map all the different skills that lie in that pathway and to break down the distinction, which really does not make sense for students or for employers—say VET higher education. It is really the skills that are needed to do the job. So we are working with industry to develop this pathway, which is very enterprise specific, and the students will be basically employed with the company the whole time. As Julie mentioned, they will be learning on the job.

**Ms GRIERSON**—It is really the quality assurer, basically.

**Ms Woodland**—Absolutely. We will be working closely with the industries.

**Dr Wells**—It does pose significant challenges in terms of the culture of universities and TAFE providers. We are not underestimating the work involved in making that work. It does go to your

question about the attractiveness of careers as well. We think that, if we can offer to students an accelerated pathway that shows them the linkages between different qualifications and allows them to see a way in which they can move forward, it becomes more attractive. It is more of a life choice and less of: 'What am I going to do? I'll enrol in this.'

**CHAIR**—In the interests of time, we will have to wind it up there. Obviously it is a particularly interesting area, and it will form part of our whole report on technical training and upskilling. Thank you for your very valuable contribution and perspective.

**Dr Wells**—Thank you for inviting us.

[10.58 am]

**LARKIN, Mr Don, Chief Executive Officer, Australasian Institute of Mining and Metallurgy**

**SARDER, Ms Monika, Senior Policy and Research Coordinator, Australasian Institute of Mining and Metallurgy**

**CHAIR**—I welcome representatives from the Australasian Institute of Mining and Metallurgy. As you know, although the committee does not require you to give evidence under oath, it still has the same standing as proceedings before the parliament. We have received your written submission. Would you like to make an opening statement, and then we will proceed to questions.

**Mr Larkin**—Thank you. I will make an opening statement indicating whom we represent and the overall thrust of our submission—no doubt you have read it but I would like to reinforce it, particularly in light of the question from Dr Emerson earlier to the last witnesses. We are the professionals in the mining sector—the geologists, the metallurgists and the mining engineers—and we are different from other professional institutes in that we are bounded by an industry. Physiotherapists are physios across many industries, as are doctors, et cetera. We represent the only institute in Australia that is bounded by an industry. Our estimate is that there are about 18,000 tertiary qualified professionals in the minerals sector and we represent 8,000 of them. There is no legal reason why you have to be a member of the institute, nor to undertake your profession. We are Australasian because we include New Zealand, and about eight per cent of our members are from overseas.

Our initial position is that we believe Australia is very well endowed with minerals resources. There has been some debate in Canberra—for example, Ken Henry, Don Aitken and others have come out and made statements in the paper that we have a resources curse. We do not believe we have a resources curse; it depends what you do with the windfall gains from your resources. If you put it into current expenditures then you do not provide for the future skills and R&D, and build the platform for the future. We will only have a resources curse if we curse ourselves.

We have a natural endowment and we are currently taking great advantage of that natural endowment. We are confident that demand has reached a high level and will stay at that level until the next decade. The demand from China will continue, as will demand from India, Russia and other emerging states. There will be a downturn at some stage but it will be well into the future and it will not go back to previous levels.

We believe the challenge is not beyond the resources boom but how we can lift manufacturing and service industries to leverage off the resources boom going into the future. The big challenge is not on the demand side; it is on the supply side. Who will supply? Australia at this stage is very well placed but we are concerned about the sustainability of the minerals sector in Australia. If we do not invest in exploration and R&D and in the technical skills that are needed by the industry then the larger companies and global industry will move to higher risk areas in

other parts of the world and will take their profits from Australia whilst investing in exploration based in other countries.

We therefore argue in our submission that we need to leverage off the resources boom, not either/or. We need to build on our comparative advantage, and that is in our natural endowment. The mining technology services action agenda has identified an industry which is potentially bigger than the wine industry, and has put in place a lot of initiatives to promote that industry. At the moment it is about a \$5 billion industry, of which \$1.1 billion are exports. The challenge is to build that to a \$9 billion industry and increase exports significantly. Over 60 per cent of the software used in mining around the world comes from Australia. There is also heavy equipment design, services to the industry, downstream processing and software.

We are challenging some of the assumptions of the inquiry and saying it is not one or the other; we need to leverage off our advantages and smooth out the cyclical peaks and troughs. That is the challenge. We believe the boom will continue, particularly if we invest in the future of the resources industry; that commodity exports will continue at a high level; that it is not them or us in terms of manufacturing services and the resources industry; and that the challenges are for all industries to have an emphasis on the skills needs, to focus on planning for the future and to address the constraints affecting those industries.

**Ms Sarder**—I will expand on some of the challenges we identified in our submission to the assumptions of the inquiry. First of all, we were quite uncomfortable with the way that the inquiry was phrased and the idea that we are looking at the dominance of either resources or manufacturing. It is very much in the tenor of the resources curse things that we are hearing about in the media and Ken Henry's statements. It is this idea of mining and manufacturing being a dichotomy. We then had a comment about looking at the manufacturing sector, and then goods and associated services are in brackets, as if they are somehow a lesser area. We thought that instead we should be looking at how we can maximise the synergies between these various sectors. Value-added success is one, particularly the ways in which some sectors feed into other sectors to make them leaner and more efficient, that then benefits the competitiveness of the heavier sunk cost sectors. That is something we should really be looking at.

We looked in our submission at the assumption that the resources boom will not continue for a sustained period. There has been a lot of talk about the fact that potentially we are seeing a period of sustained demand similar to when Japan and Germany were undergoing significant industrialisation. This time it is China, India, perhaps Brazil and Russia to an extent. There are long lead times between exploration and production coming online. There is a shortage of minerals at the moment. The demand is going up and prices are high. But the expectation is that demand will stay up. The prices will stabilise at a certain point. We cannot predict exactly how they will stabilise. The nature of commodity long-term confidential supply contracts is that you cannot get a perfect estimate or prediction of what spot prices are going to be in the future or in the long term. But surveys have shown that CEOs of mining companies expect that this will continue for quite some time. At the moment, we are seeing exports of \$100 billion a year. This means that resources is a bigger section of our economy than it ever has been before and we really should be looking at how we can leverage off it. We really should be thinking about how we can sustain it.

The second proposition in our submission was that we want to challenge this idea that the demise of the Australian minerals commodity exports is inevitable and beyond our control. It has been difficult communicating the fact that in some ways the long-term health of our resources sector is quite vulnerable. That is because it is such a powerhouse now. We are seeing record numbers of brownfields expansions. We are seeing capacity being ramped up to its maximum. There has been \$34 billion project expenditure, which is a record. But these are all expansions of existing deposits. What we are not seeing is new investment in exploration. We are seeing it to a degree, but consistently over the last five years our share of global investment has been falling. We have gone from second to fifth most explored nation. We have gone from 18 per cent to 12 per cent. That has consistently been going down.

Because people are so fixated on returns to shareholders and the trickle-down effect now, we are seeing this decline in exploration. Given that lead times between exploration and production are 10 to 15 years, it is something that we will feel 10 to 15 years from now. The competition we are looking at is from underexplored regions such as South America, Africa and the Middle East. What global mining companies are needing to do now with this huge demand is restock their cupboards. They have two options: either they can go to high sovereign risk areas that are underexplored or they can stick with places such as Australia and Canada et cetera that are explored, have low sovereign risk, have the infrastructure and have their supporting manufacturing services and a whole range of maintenance services and technology that is close to them.

There are a lot of advantages that we have. A lot of them are located in manufacturing and supporting services. But in order for them to really want to stay here, we need to improve our rate of discovery. The main way that we do that is through R&D. In order to improve this, we need to continue to invest in minerals-led courses at the tertiary level and to improve links in R&D between industry and our universities. There are things I will go into later about supporting SMEs et cetera. There is a real need for us to think about the capacity constraints that we can address in terms of attracting the global players to new exploration here because they do not have any incentive, financial or emotional, to address those capacity constraints themselves—and why should they? It is up to our government to address those.

I had dinner with a friend recently from the Department of Industry, Tourism and Resources, who said, ‘You people from the mining sector, why don’t you ask us for some more subsidies?’ It is not a subsidy; it is something that the companies are not going to be interested in doing. Prospectivity is very much a concept, so if there is an idea that South America is exciting and that is the place to be, mining companies—it is a group think thing—will go there if we cannot offer them something better. The next proposition we want to discuss is that minerals and manufacturing are discrete sectors.

**CHAIR**—We have your submission in front of us. If we have all done our homework, we should have read it, not that we do not need reinforcing. Perhaps we could focus on the questions. I want to focus on one issue before passing over to Lindsay Tanner, seeing he has just joined us: when I went to the mining industry dinner, which Don Larkin was at, a whole group of people were talking about the Canadian model. I was not aware that the level of—what is the word—

**Ms Sarder**—Prospectivity.

**CHAIR**—exploration had fallen so significantly over such a short time. Tell us about the Canadian model and what they have done. They have reversed their situation and managed to gather a lot more exploration to Canada. What do they do?

**Mr Larkin**—At a very strategic level, the government have said that the mineral sector is important to their country, now and in the future. They have come out and said that. That then flows through the bureaucracy and all their decision making et cetera. In the area of exploration, they introduced flowthrough shares because most greenfields exploration is done by juniors and they were an incentive for the juniors.

**CHAIR**—Take us through how flowthrough shares work.

**Mr Larkin**—For the investor who is investing in the junior company, the junior company raises capital and the investor can then claim against their tax the investment that they put into that junior company, so that helps them attract dollars to do the exploration.

**CHAIR**—How is that different from ours?

**Mr Larkin**—We do not offer that incentive to the investor.

**Ms Sarder**—I will expand on why that is important—I thought it would be better if the economist explained the taxation incentive. Most of the new discoveries are made by juniors and that is why this has been important in Canada because exploration is a high-risk activity and the global players—

**CHAIR**—The key question is: after they introduced it, how much did the Canadian exploration go up by?

**Ms Sarder**—The following year, they took our place in terms of—I do not know the percentage but—

**CHAIR**—Perhaps you could come back to us with the percentage.

**Mr Larkin**—They went to 18 per cent, and we went to 12 per cent of world expenditure.

**Ms Sarder**—They took our place as the second most explored region the following year.

**CHAIR**—What is No. 1? Brazil, is it?

**Ms Sarder**—I think it is Latin America as a region.

**Mr Larkin**—As a region.

**CHAIR**—What has the level of finds been like since they introduced those?

**Mr Larkin**—I cannot answer that question.

**CHAIR**—Perhaps you could come back to us.

**Mr TANNER**—Firstly, I have a technical question: your association, presumably, is predominantly people with technical skills who are members, but do you also have administrators and managers as members?

**Mr Larkin**—Yes, if they are tertiary qualified accountants, lawyers and economists but they are predominantly technical.

**Mr TANNER**—Predominantly, it is metallurgists and geologists and so forth?

**Mr Larkin**—Yes.

**Mr TANNER**—The next question coming off the observations you have just made is about the statement that Australia has moved from being the second to the fifth most explored terrain. Can you elaborate a bit on that? What is the measure or the indicator that tells you how explored you are? Secondly, is this drop in our relative position driven by increased exploration elsewhere or reduced exploration in Australia?

**Mr Larkin**—A bit of all of those. There is an international group—

**Ms Sarder**—The Metals Economic Group. They are Canadian based and their survey is based predominantly on the larger companies. I think it is based on how they have raised finance and how they have allocated finance.

**Mr Larkin**—It has been an indicator worldwide for quite a long time. It does have the fault that it mixes countries with regions. Latin America, of course, is taken as a region. In countries I think we are about third, but by region we are fifth. But it is a bit of everything you said.

**Mr TANNER**—I am interested in your arguments with respect to the synergies between manufacturing and mining and resource activity. It seems to me that the core question ultimately revolves around the natural dynamics of transport costs and the relative economics of where something is manufactured relative to its final market. If you think about where Australian iron ore ends up, for example, most of it ends up in things that do not come back to Australia.

Let's use as an example, for argument's sake, the iron ore that is being exported to Japan in an unprocessed or very little processed form. Most of it ends up in consumer goods—cars and various other things—that are not being re-exported to Australia. Some are but most are not. Presumably the key factor governing the extent to which it is viable to have further processing occur in Australia is the relative economics of manufacturing close to your predominant consumer market versus manufacturing close to your predominant resource input. I would have thought that one of the problems with the latter, manufacturing close to your resource input, is that there are other inputs. It is not just, in this case, iron ore; there are other significant inputs. In a sense, what I am seeking your view on is: aren't we really prisoners of a few iron realities—pardon the pun—namely, our small size in population terms and our distance from the consumer markets that our raw materials ultimately end up in?



**Mr Larkin**—The answer is yes, if you look at coal and iron ore, which are shipped out predominantly without additional processing, or if you look at uranium and the debate over whether it is appropriate that we should do any further processing of that here. I think the answer is that where our manufacturing and service industries can gain is in the area of high R&D and high technical input: the mining software, the mining equipment and the technology of the road transport and infrastructure. So it is not in adding value to the coal or the iron ore; it is actually in maintaining those as exports well into the future and making the processes more efficient.

**Ms Sarder**—It is the range of supporting services, and with a lot of them it is not necessarily adding value to the iron ore, but a lot of those supporting services will also service clients from different industry sectors. The market share that they then get from the resources sector enables them to develop themselves. You have seen that sort of thing happen in Scandinavian countries that now have an Atlas Copco or an Outokumpu.

**Mr Larkin**—And Caterpillar would be an example. Elphinstone had designed underground mining equipment that was excellent. It was taken over by Caterpillar, and now nearly all Caterpillar's production has Australian manufacturing on it.

**Mr TANNER**—The way you have expressed it really envisages a pretty limited, niche kind of activity on the part of the manufacturing sector. We visited at least one company in Brisbane that is part services and part manufacturing that pretty much fits the description you have just outlined. I visited another in Tasmania that manufactures underground mining communications equipment which is world-leading equipment. They export but they employ about 15 people. One would hope they will grow, but it is still ultimately in relative terms a pretty small operation.

I accept your point that Australia already gets a significant degree of value-adding in that direct association with the processes and activities of the minerals and resources sector. Am I to take it therefore that you think that on the broader issue of processing the product, where we typically have not as a nation been very strong, the prospects for manufacturing are not good?

**Mr Larkin**—I think you are right. On the downstream processing of aluminium, coal, iron ore, uranium and those products, it is going to be very difficult to compete with the emerging countries, their technology and what they are doing. We are not saying we are the total answer to the manufacturing or service industry; we are saying that there is still a lot of leverage that can be had.

**Mr TANNER**—I have a final question. I note your comments about your discussion with your friends in the Department of Industry, Tourism and Resources, who are eager to hand out subsidies. Should I be finance minister, they will be some of the people I will be having a good look at! Isn't there a bit of a problem with the notion of government responsibility for dealing with capacity constraints and so on, which I accept up to a point, and that is that you are dealing with a non-renewable resource, so one way or another at some point it is going to be dug out of the ground. Because it is a finite resource globally that you are dealing with, whether it is a resource that has got hundreds of years worth of supply like coal or scarcer minerals, it seems to me that it is hard to make an argument for significant government subsidies for mining activity here because the most that that is likely to achieve economically is to bring forward the activity from a given year to another year when it is only going to happen once. If there is a finite pile of

iron ore in the ground, it is only going to be dug up and sold once, so it seems to me that that is a difficult basis on which to sustain an argument for significant government subsidy.

**Ms Sarder**—It is a finite resource. As we know, technology is changing, the expectations of people are changing, there is the imperative of ‘reduce, reuse and recycle’, but the reality is that, in the next few decades, we will be seeing major consumption of a lot of these commodities that cannot be reprocessed at a rate that meets world demand. We will be seeing uranium mined for the next few decades. The majority of China’s electricity will be met by fossil fuel. These are the projections of the International Energy Agency. In terms of how long this will go, I think if we can maintain it at a level where we can leverage off it for the next few decades and see where this takes the remainder of our technologies and how this is contributing to our GDP, it is certainly worth while. I think it is a little bit premature at this stage to ask what happens when these resources are dug out of the ground. Also, processing technologies are always changing, so what is not an economic deposit today might be an economic deposit further down the line.

**Mr Larkin**—And also going deeper.

**Ms Sarder**—Yes.

**Mr TANNER**—Or, alternatively, the reverse could occur and technological change, or indeed public policy, could mean that what is a viable product today will not be tomorrow. At some point surely there is going to be a question mark over our coal exports courtesy of global warming? That might be quite some time away but—

**Ms Sarder**—That is true. A lot of the science that is required to look at these issues—whether it is to do with finding new deposits or looking at new ways to engineer our materials—is knowledge that is required across manufacturing and mining and in companies like Visy Engineering. These are the capacity constraints that are relevant to mining. We are seeing problems in a whole lot of sectors because of this. We are seeing the number of engineering graduates remaining flat. Ken Henry said that we have already used up our capacity of expertise. We have Queensland and WA taking all our engineers. That clearly indicates that there is a shortage across the board. Mining should not have to poach engineers from other sectors. We should not be poaching generalist engineers who cannot innovate in mining. It is a dire problem.

**Mr TANNER**—Isn’t that unavoidable, given the inherently cyclical nature of the minerals sector? Points like we are currently experiencing will occur because you will go from high levels of activity to lower levels of activity. Therefore, the kinds of circumstances now where you are poaching staff from other sectors seem to me to be just a natural phenomenon of the inherently cyclical nature of the industry.

**Mr Larkin**—Bishop’s report said that across all science, engineering and technology, 43 per cent of their tertiary qualified come from other employers. So it is not just in the minerals sector; it is across science, engineering and technology. They recruit 43 per cent of their tertiary qualified from other employers.

**Mr TANNER**—That could be within the same sector, though. What we are talking about here is cross-sectoral poaching, so to speak. I am essentially saying that there is nothing inherently wrong with what is going on at the moment at one level, which is that you would naturally

expect that when you see a peak of activity in an inherently volatile sector—which mining obviously is—it is going to suck in human resources from other sectors. The real question for us is to what extent is the total level of skills and education in those areas adequate to deal with those ups and downs—and clearly it is not.

**Mr Larkin**—But the big problem in the sector is that there are only about 100,000 employees in total. The demand each year for mining engineers is only about 150, which is small in comparison to the total number of engineers. The demand for geologists is about 50 per annum and for metallurgists 50 per annum. So it is getting those who are already doing those courses at university to want to enter the industry.

**Mr TANNER**—What is the age profile of geologists and metallurgists? It is ageing, isn't it?

**Mr Larkin**—It is ageing.

**Mr TANNER**—So there is a potential crunch coming in, say, 10 years time?

**Mr Larkin**—Yes, because the younger people who are doing geology don't necessarily want to pursue a career in the minerals sector, for example.

**Ms Sarder**—There are a range of attractive initiatives and issues around work-life balance that we are continually looking at as well. But having the graduates there in the first place is the first step towards addressing that problem. In terms of it being a small group and cyclical, that is an issue. In the past the mining industry has looked to courses and experts in civil engineering et cetera. It gets them to come across and upskills them through a conversion course or something like that, but even this is becoming a challenge because of the limited pool across engineering generally.

**Ms GRIERSON**—As part of the terms of reference we did not specify the mining industry but we were certainly looking at the synergies that exist between the manufacturing and services sector and what they hang off. Coming from the Hunter we know of the significant mining services and new inventions and products that come out of the Hunter because of that. They range from the longwall mining we saw to the pickheads that go on every longwall mining machine. A lot of innovation has come from that. Given your comments on exploration, what is the trend? During this boom period, when operation levels are so high, just as we have seen R&D, say, expenditure by BHP Billiton go down rather than up because of working at capacity, wouldn't we expect exploration to also suffer because of that?

**Mr Larkin**—No. You have to think longer term and, because our product is finite, you have to find new resources. The trend has been into more brownfields—which is at the margin of what you are already doing—and into countries which are higher risk but where you trip over it on the ground.

**Ms GRIERSON**—In Australia we have seen re-exploration: the opening of, say, goldmines which were not as productive or as cost beneficial before but which now are during this boom period. Has that been the trend in Australia—that we see old workings being reopened rather than new exploration?

**Mr Larkin**—Yes. Because of commodity prices, some of the goldmines become economical that were not economical before. But the larger global companies are putting most of their exploration into other ‘spaces’—that is the word they use, which means other countries.

**Ms GRIERSON**—Is it a really expensive business? I assume it is because you may discover nothing. Who are the key players in it? The big resource companies?

**Ms Sarder**—I think the last Metals Economics Group report showed that 53 per cent of finance raised for greenfields exploration was by juniors.

**Ms GRIERSON**—You mentioned that, and that is surprising.

**Mr Larkin**—They raise the capital and take the risks. The larger companies are not high risk takers.

**Ms Sarder**—Sometimes, though, they will have a collaborative agreement between a big company and a junior, where they will allocate a proportion of their find to the company and vice versa: the company will finance the exploration. But we are not necessarily seeing a lot of that model here.

**Mr McARTHUR**—You say in your submission, under ‘Proposition 1’, ‘The resources boom will not continue for a sustained period,’ and you draw a comparison with the resources boom in relation to Japan’s and Germany’s reconstruction. What do you think is different about the current boom in China and India, compared to the previous one?

**Mr Larkin**—There has never been such a high and sustained demand for products such as iron ore, coal and copper, and they are willing to pay the higher prices. It is the laws of supply and demand.

**Mr McARTHUR**—Given that scenario, why would the boom fall away fairly quickly?

**Mr Larkin**—We do not think it will fall away.

**Ms Sarder**—We think it will continue.

**Mr McARTHUR**—How long do you think it will last?

**Mr Larkin**—It has reached a higher level. It will not drop back to where it was before, and I suggested earlier on that it will maintain for 10 years. We cannot say—

**Mr McARTHUR**—I know. We are just interested in a judgement.

**Ms Sarder**—Given that China is such a key factor in all this—and I am sure we could sit and speculate until the cows come home about how they are going to address various issues—

**Mr McARTHUR**—But why would this go on longer than average? We know that commodities tend to fall over for all the wrong reasons.

**Ms Sarder**—We know that China has a low per capita endowment of minerals and we know that it is industrialising at a rapidly accelerating rate. We know that the trends are that people from the rural areas are increasing their standard of living. There is growing urbanisation. These all look very good for the next 10 years.

**Mr Larkin**—It is not only, as I said earlier, the demand side—we are confident that demand will remain there—it is the supply side, and the supply side have not put as much into exploration over the last 10 years as they had previously and they are limiting supply—

**Mr McARTHUR**—Are you saying worldwide supply?

**Mr Larkin**—Yes.

**Ms Sarder**—Supply is limited. It is a question of where the companies look to fulfil this supply. At the moment, they are looking, as I said, to refill the cupboard but they are not—

**Mr Larkin**—The point I am making is that there is a lot more control over supply.

**Mr McARTHUR**—This committee is very interested in knowing, when this boom falls over, where Australia will be. We are interested in your view. You are saying it will go on a bit longer than it did in the 1950s?

**Mr Larkin**—Yes, and we are saying it should go on and we should be investing in policies that help services and manufacturing industry and in policies which will keep us competitive in the long term in the resources industry.

**Mr McARTHUR**—This is with respect to exploration from what you say?

**Mr Larkin**—We need to explore and we need to put policies in place for skills in areas of national importance and national priority.

**Ms Sarder**—Or, to put it another way, if these high commodity prices continue and 10 to 15 years from now we have not made the new discoveries, but Latin America and the Middle East have raised their infrastructure and sovereign risk to a level where they are much more attractive than we are with resources exploration, how will we feel?

**Mr McARTHUR**—Surely in the area of black coal and iron ore, Australia has a huge resource that we can handle. It is just a capacity constraint at the moment to get the stuff out of the ground.

**Mr Larkin**—At the moment, yes, but we have then got to invest in R&D to make sure that when that high-grade iron ore has left, the more uneconomic will also be attractive.

**Mr McARTHUR**—You are not quite telling me when the boom will be over. I would be interested to know!

**CHAIR**—Thank you very much for your attendance here today. We appreciate it very much.

**Mr Larkin**—Thanks for the opportunity.

[11.44 am]

**BECK, Dr Vaughan, Technical Director, Australian Academy of Technological Sciences and Engineering**

**LAYER, Mr Peter John, Vice President, Australian Academy of Technological Sciences and Engineering**

**CHAIR**—Welcome. Although the committee does not require you to give evidence under oath, I remind you that this hearing has the same status as proceedings of the parliament. We have a written submission from you. Would you like to make an opening statement before we proceed to questions?

**Mr Laver**—The Australian Academy of Technological Sciences and Engineering is one of the four learned academies in Australia. We have about 700 fellows, who in theory are the peak applied scientists and engineers in Australia. The thing that distinguishes us from the other three academies—science, humanities and social sciences—is the fact that we have a fairly large industry base. Something a little under half of our fellows are industry people, so we do get a bit more involved in things that relate to the interface between technology, science and innovation and industry. This differentiates us a bit from the other learned bodies. For this inquiry we have a basic thesis, which we would just like to summarise. We will not go through the submission, although I will ask Vaughan in a moment to emphasise a couple of the points.

The basic thesis is that the resources boom that we are seeing now will at some stage peter out—whether it will fully peter out and how soon nobody knows. I worked for 40 years in a resources company and I have been through about five booms, so I cannot believe that it will last for ever. It is a matter of concern because, even with this boom on, the Australian economy is still living on the generosity of people elsewhere. Our balance of payments is still not in terrific order. You could say that with the tapering out of the resources boom we are going to have to ask: what are we going to do now if we are going to sustain the same standard of living that we have at the present time?

The good news is that the 25-year-old jockeys on various desks in London and New York who trade in currencies see the Australian dollar as a commodity driven currency, so when the boom goes off the currency will come down, which will make the manufacturing sector more competitive than it is at the present time. At the present time its competitiveness is being unduly impaired, if you like, by a commodity driven exchange rate. We believe that there is a future for manufacturing, but it is not going to be in mass manufacturing; it is going to be in selecting things that we can do better than others—niche type manufacturing, which we do really do need to start exploring now because there is a lead time involved in this.

**CHAIR**—You have to pick the winners, do you?

**Mr Laver**—No, we have to allow the winners to flower and bloom on their own—but we have to provide an environment where the flowers can grow. I guess that is really our thesis. Our two main concerns are the need to foster more innovation at the present time—a fair bit is going

on; but we need more—and the need to take a long, hard look at our skills base and the development of the skills that we will need to implement that innovation. They are the two areas that we particularly want to address today. Both of them we see as investment. Unfortunately, government policy tends to see them as a current expense. We see them as an investment in the future; it is money that you outlay now against a future return rather than something on which you expect an immediate return. Both of them are long term. If you are going to foster innovation, it does not happen tomorrow—programs and systems have to be developed, and likewise with skills. If we find that we are short of adequate skills in some areas at the present time, it will be 10 years before we can actually see the returns on that.

That is why I think we really do need to get at these fundamentals while the resources boom is on: because it will be too late if we wait until the boom declines and then say, all of a sudden, ‘Hey, we aren’t getting the level of innovation that will underpin niche manufacturing,’ or realise that we have not got the skills to do that innovation or manufacture the goods that we are talking about. So there is an urgency about it. Niche manufacturing as we see it can be broadly ranging. It does not have to be about governments picking winners. We see it being encouraged by governments by a leverage effect. We are not here to plead for more government money just to go into R&D or something like that; we are here to say, ‘Let’s look at the total system and ask how we can effectively use the government money that is there now to leverage more private industry money to focus on innovation.’

Innovation, at the end of the day, is a balance of your risks and your rewards. If you can change the reward to risk ratio, you will get more people to spend money on the risk side of it. If government money can somehow or other be used to reduce the risk relative to the reward or to increase the reward relative to the risk, you will see more companies deciding to innovate.

**CHAIR**—It is socialising your risk and capitalising your profit, is it?

**Mr Laver**—That is the extreme. If we were here asking for grants for innovation, that would certainly be the case. We are saying that we need to structure even some of the things that we are doing now through the public funded research institutes and so on in such a way that they are seen as leverage to induce more private money to match the public money. The way you do that is that the providers of the private money have to see that their risk is being reduced somehow or other by the way in which the public money is being applied.

It is a topic that has been canvassed well. One of your fellow committees recently wrote a report on innovation and, I have to say, we were pleased that they took up a couple of the academy’s recommendations in their recommendations. I hope that that report has not just been filed, like so many of them are, because I think there is a nucleus of some good ideas in there that relate to it.

In terms of skills, we are very concerned about what is happening, because the pipeline seems to be getting clogged. The recent skills audit that DEST undertook, which you may have seen, showed that the number of people entering science and engineering at a tertiary level has been static for some time, except in some peculiar areas. I think we will have more forensic scientists than the country could use in 2,000 years, because people watch television. Unfortunately, they are not a lot of help. There is concern, and we see that it goes back to primary schools, in terms of the lack of primary schools which are able to impart even fundamental knowledge on science



matters to their kids. They turn kids off too early, so we are reducing the pool before they even get to the age that they can make a sensible choice about future careers.

As a sideline: I have come from an academy sponsored symposium that is on here at Healesville—it started yesterday and is on today and tomorrow—with the leading nano and biotechnologists from both Taiwan and Australia. The good news from that symposium that came through very soundly yesterday is that there is earnest desire on both sides to collaborate on this leverage type of thing. The Taiwanese have far better skills than we have in a lot of the ICT areas, in the electronic areas and the like. We have far better skills than they have in the bio areas.

The symposium is called ‘Nanotechnology and biotechnology combined’—the nano-bio interface, if you like. There is resolve on both sides—there are about 20 or 30 from each side—that before they go home tomorrow they will have identified some collaborative projects that will lead to products that we can use our respective strengths to move ahead and commercialise. The bad news from it, interestingly enough, was the presentation that the former minister for the National Science Council made yesterday. The minister said that the National Science Council has a program on—

**CHAIR**—It was the minister for national science, was it?

**Mr Laver**—No, he was the minister responsible for the National Science Council. He is retired now; he is the emeritus minister or something like that.

**Mr TANNER**—Does he have a name?

**Mr Laver**—Yes, he has a name. He is a professor. He is Dr Mau-Keun Wu. He is currently the director of the physics academy. He was previously in the ministerial area. He says the National Science Council actually sponsors a program on nanotechnology for kids from kindergarten to year 12, so kids in primary school are learning about nanotechnology. We cannot get teachers who can teach kids about electricity or gravity, but here are the Taiwanese teaching primary school kids about nanotechnology.

We have got a long way to go, and those are the alarm bells that we, as an academy, are hearing. They are ringing very loudly and clearly. We have enough trouble getting science teachers for secondary schools but the science literacy in primary schools is abysmal and as a consequence kids are not being excited by science. We are getting into a situation where it is becoming a self-perpetuating wheel, because the fewer the kids that are getting interested in science the fewer the good science teachers that we are going to have to teach the next generation and the like. That is where we really do need to apply some investment. We have to take a long-term view to somehow or other stimulate both the number of kids who are interested in science and technology and the quality of the kids, to wean them off—with all due respect to any lawyers here—futures in law, which are a cost to the economy, and to get them to do something like science and technology, which is actually going to create some wealth.

Vaughan will summarise a couple of the key points. We will not go through the submission but there are a couple of points that we would like to emphasise.

**Dr Beck**—The academy's key points are that certainly post the boom we see some advantages for the manufacturing industry, particularly with the exchange rate, but that if we have not positioned ourselves to capture the opportunities we are going to be in a severe situation, particularly with our balance of payments. The issues that we would say are key to Australia's future are the issues surrounding innovation and skills. As for the innovation perspective, as Peter was saying, we are not here pleading for extra money; we are recommending that there is a need for investment by or for leverage from the private sector, using public funds to help facilitate that. The issue of skills is most critical. We are finding some really major issues looming as to the number and quality of students that are coming forward in the engineering areas. We contrast that with the situation in other countries, where engineering and technology are among the most popular and sought-after courses, whereas in Australia medicine and law are. So there is a real need for a sea change in order to capture some of these opportunities that are available for Australia.

**Dr EMERSON**—There is a report out today, by Andrew Leigh and Chris Ryan of the ANU, which is perhaps relevant to the observations that both of you have made. It shows that the tertiary scores of people entering the teaching profession have declined dramatically over the last couple of decades and also, separate from that, that there has been a very alarming exodus of people from the teaching profession after they have been in it for seven or so years. Do you think that is contributing to this change that you have identified in the shortfall in the teaching of science and some of those hard disciplines in the early years?

**Mr Laver**—I have heard only the news reports on that, but it is consistent with our understanding. They are talking about teaching in general, and our concern is science literacy—not necessarily people that are scientifically trained but at least people that have a degree of literacy. That is certainly a problem that the profession has. They believe it has lost ground and consequently will not attract the best and brightest. But there are some other factors that affect primary schools, and they really are societal problems. Firstly, 80 per cent of primary school teachers are women. Traditionally, while women have been well represented in the life sciences they have been underrepresented in the physical sciences: physics, chemistry, mathematics and so on.

The second problem, and an interesting one, is the one we are having with occupational health and safety. A lot of schools would like to teach more primary science, but all they can do is to show burning candles and so on. Kids want to see things blown up; kids want to see things that they can get excited about. But quite often you hear teachers say, 'We'd love to do that but we are frightened that we're going to injure someone—either ourselves or, more particularly, the kids.' So there is the combination of an environment where men are wary about going into primary school teaching and this issue. I do not know how serious the OH&S thing is, but it is a perception that is there and you do not have to go very far before people will talk about it. That, I believe, is exacerbating the science part of the decline that the ANU report has talked about.

**Ms GRIERSON**—Do you mind if I comment, Chair? This is my area of past expertise. Having had the problem, as a principal, of introducing sciences into the lower grades, of children of that age, I would say that there are great inadequacies in the curriculum as well as in teachers' abilities to teach it. The only way I could effect change was to buy the national Academy of Science curriculum, which is far superior to the state curriculums. And to buy that the money had to come from benefactors. The school I was at the head of had lots of special education units

as well. The only way I could do it was to get the money from a benefactor, who would support the special education kids—those with special needs—or units I had, to introduce that into the whole school. That meant it had to be structured into the timetable, just like a high school; the whole school was taught that subject at that particular time of the day. There were great resourcing needs for the materials. It is a huge challenge. If you do not do it at that age, you are just never going to get it. I actually had engineers and scientists among the parents who contributed because of that personal commitment, but to find that across a whole system is impossible. So it is a huge gap.

**Mr Laver**—That is right. I am glad that some are doing it, because we really need to replicate that effort.

**Ms GRIERSON**—Absolutely.

**Mr Laver**—We have been supporting the Academy of Science and there are a number of parallel programs that we are assisting with too.

**Ms GRIERSON**—They have some great resources.

**Mr Laver**—It really does need to be done. There also needs to be some more parents' education because they are the major influence on kids. I think there has been a Macquarie University study recently published on the factors that influence kids choosing a science degree, and I think the biggest chunk of that influence is what their parents—

**Ms GRIERSON**—Thank you for indulging me, Chair.

**CHAIR**—No worries. You have a point, Sharon.

**Dr EMERSON**—You do not seem to be too enamoured of the research quality framework—just picking up a nuance here and there! Could you explain your strong reservations about that?

**Mr Laver**—We could both have a go at this, Vaughan. Our concern, really, with our academy hat on, is that we are very interested in making sure that we have engineers with practical skills coming out of the universities. The first thing that happened in the UK when they introduced the RA—

**Dr Beck**—RAE—research assessment exercise.

**Mr Laver**—was that the universities, instead of employing people who had had industry experience to lecture the undergraduates, employed people who were, if you like, paper-writing machines—because they knew that they would get their research score up—who had no understanding of what was happening in the real world. We are for applying technology and having engineers with practical skills. And we believe that is the fundamental concern of this academy.

In broader terms, we are worried about the measurement of quality. It can sort of be done through the usual means—the numbers of papers you write in reputable journals and how many times they are cited and those sorts of things—but we have been pressing the impact side of it.

We are probably the lobby group for impact in the RQF. We must measure the impact of research. Why are you doing it? It makes you feel good. But it is not a trivial exercise. Vaughan, up until last year, was pro-vice-chancellor of research at one of the universities, and has been on the impact committee of the RQF. So, Vaughan, maybe you could talk about it.

**Dr Beck**—Certainly. I think the academy has a real concern with the original way that the RQF exercise was being framed because there was considerable emphasis being given to the research quality aspect. There are two components: quality and impact. The emphasis on quality, if it were manifested as originally proposed, would be such that academics would see that their future research funding would come from going down a research quality path.

Doing that involves publications. It means that academics would spend most of their time producing publications and they would start to disengage from industry involvement where they could be supportive of innovation. So the academy has been very strongly of the view that, if there is going to be a research quality impact assessment, impact must rate at least as being equal to quality, otherwise the academics will turn themselves into production machines—producing papers of high quality but of limited impact in terms of the Australian economy. So the academy has been very strongly pushing impact and we think there is some movement going on as to a change of emphasis, but we are still not convinced that there will be an adequate change of emphasis. I think there are some issues that may reside here in terms of which department has carriage for the RQF. At the moment it is with the education and science department, and the industry department is on the side. So we are very strongly of the view that impact should rate as being at least equal to research quality if there is to be a research quality exercise.

**Ms GRIERSON**—You talk about increasing the capability to use knowledge generated elsewhere. One of the problems that I am finding in assisting a local scientist, a biomedical researcher, is that he has been invited to work on an international model, an international collaboration, but there is no specific funding. A lot of the funding is for big programs, not for individuals to participate in international research. Is that something that we could address or look at?

**Dr Beck**—I think there is funding available under the Department of Education, Science and Training portfolio to support collaborative international links. I do not know whether your constituent has explored that particular avenue.

**Ms GRIERSON**—Not that one. We are trying another one now.

**Dr Beck**—Peter mentioned earlier that the academy is currently involved with the Taiwanese group in terms of biotechnology and nanotechnology. This academy—and other academies, but particularly this academy—is responsible for international exchanges of scientists in the various disciplines, so there are exchange visits of people between Australia and Taiwan, India and so on. The academy is at the forefront of helping to facilitate that, but that is more at a strategic level, not at an individual level.

**Ms GRIERSON**—Do we need to do more in that field or risk losing a lot of our best researchers in terms of allowing them some flexibility to move in and out of institutions and take overseas appointments for a while while there would be a bring-them-back component?

**Dr Beck**—The point that you raise perhaps raises a broader issue. It is not only about research collaboration between research institutions. It is also about the issue of academics being able to move out of the academic environment into a business-industry environment as well. There is great importance on trying to facilitate movement like that. I think much more can be done in that area. The Cooperative Research Centres program is a way of trying to get people from both industry and academia working together, but that is on a relatively small scale and there is an opportunity for much greater collaboration between institutions and between institutions and industry.

**Ms GRIERSON**—How do you see innovation hubs and centres of excellence? Are they different? What sort of proposal are you putting up in terms of innovation hubs?

**Dr Beck**—As for what we mean by innovation hubs, the base starting point is that Australia is producing about two per cent of the world's knowledge base and that, in order for industry to be competitive in an international sense—there is also the issue of how they access the other 98 per cent of the world's knowledge—there is an urgent need, particularly in various industry sectors, for these innovation clusters to be established. They are a vehicle by which individuals or a group can provide a link between industry sectors and various research support activities, to help bring the two together and to help access overseas information and to make it into a form which is digestible and which can then be transferred to industry. But it has to be industry driven.

**Ms GRIERSON**—So you are talking about an innovation cluster that links industry by innovation rather than just by their operations.

**Dr Beck**—Yes. There is a strong focus on innovation, because only a small percentage of firms are currently involved in innovation—something like 35 per cent. If you look at the expenditure of firms that are involved in innovation, there is a long tail of very low expenditure. There is a relatively small percentage of firms that are significantly involved in innovation.

**Ms GRIERSON**—That is a very different model of clustering than the ones we have seen. We have seen that sort of clustering across research institutions and researchers and we have seen industry clusters that are very much about banding together to do all sorts of things, but I do not know of an innovation cluster.

**Dr Beck**—I was recently in Sweden, where they operate a number of these clusters across the country. They have identified certain areas and what they do is they establish what I think they call a 'knowledge cluster', and it is basically staffed by people who are well versed in industry but also can relate to the academics. For example, I think there was one on electronic componentry. There may have been another one, if I recall, on castings for gearboxes or something similar. So they are fairly specialised areas, but nevertheless it is a way of trying to help facilitate knowledge transfer into strategic industry areas, and it is a cluster of industry organisations that are willing—

**Ms GRIERSON**—How do you overcome the competition barriers? Obviously, it is a field where IP is highly prized.

**Dr Beck**—Yes. In a lot of these cases there are two levels. There is precompetitive type information, which can be transferred, but then each particular industry organisation may have a

particular requirement, so it is then a matter of being able to service the needs of a particular inquiry, as distinct from a broad, generic innovation. I think that can be done with appropriate controls and mechanisms.

**Ms GRIERSON**—Very interesting. Thank you.

**Mr McARTHUR**—An earlier witness raised the issue of the shortage of tradesmen in the minerals boom, the culture that students should go to university and whether there would be a change in that because of the higher remuneration that tradesmen are now receiving in some parts of the minerals boom. My question is: what is the remuneration that your engineers and scientists are receiving in the marketplace? Is it high or low, relatively speaking?

**Mr Laver**—On the question of tradespeople, there has been a small shift in the last year or two years for people to actually see that there is some merit in undertaking TAFE training, if you look at the statistics. Up until a year or so ago I chaired the Victorian equivalent of the state training board and we were very much concerned about attracting schoolkids into TAFE in general but particularly into the trades. I was horrified to find that we—I can only quote Victoria—were training 30 per cent fewer trades apprentices than we had been 10 years ago. That is not allowing for growth or anything else. It was just a decline in the numbers. So the problem was becoming very serious, particularly as I think the average age of a plumber in Victoria is 54 or something. Plumbers might be able to work until they are 70, but not too many of them are going to. So certainly something needs to be done there.

It gets back a little bit to the image that these professions enjoy in schools and the sorts of things that teachers and careers advisers tell people about these things. I think they have to start telling them that you put up with hell while you do your four years as an apprentice, but within a couple of years of that, if you wanted to live outside a capital city, you could probably be up in the \$80,000 to \$100,000 range quite easily. Those are the sorts of figures that they are having to pay to attract on construction sites in the mining areas and the like. So there is a cultural thing that certainly needs to be addressed. The small inkling that I have is that perhaps we have reached the bottom and it has started to turn, but I do not have the current Australia-wide figures on that at the present time.

The remuneration of scientists and engineers continues to be a problem, although it is probably not quite as bad as it was. Again, particularly if people are prepared to uproot and go and work on construction projects or in remote areas, remuneration is very good. In fact, I think you could probably say a first-year mining engineer can command a higher rate of pay than a first-year doctor, dentist or lawyer and probably will sustain that difference for quite a few years, while the boom lasts. But the general rates, particularly for scientists rather than engineers, are probably still not sufficient to be able to use as an attraction to get people into the industry.

I would have to say that the biggest impediment we have seen as far as inducing kids to do science is the lack of a clearly defined career path. Everyone has a rough idea what an engineer might do, but if you say you are a scientist the first thing people think of is someone wandering around a laboratory in a white coat waving test tubes around. Scientists do a lot more interesting things than that. There are a couple of programs—I think there is one at the University of Newcastle—

**Ms GRIERSON**—It has been taken up all over the place.

**Mr Laver**—Yes, and there is one very encouraging one that the University of Tasmania pioneered. I think they have started it in Western Australia and South Australia, in conjunction with the Grains Research and Development Corporation. They take kids on a summer camp type thing and show them that you can enjoy life as a scientist and there is a really diverse range of careers. I think we need to do a lot more of those types of things. Perhaps a little bit of government investment in those types of things would not cost very much, but if it starts to wake kids up to the excitement and the diversity of careers in some of these areas it has a knock-on effect. They go back and tell their mates. They tell their parents, ‘Stop telling me to be a lawyer or a television star,’ or something. They get to a situation where all of a sudden they see it as a viable and interesting future career for them. So money is not everything. Particularly for the scientists, I am more worried about the information on career paths that kids in schools are receiving.

**CHAIR**—In the interests of time, we had better stop there, but I appreciate your coming today. Thanks very much.

**Proceedings suspended from 12.18 pm to 1.20 pm**

**PEART, Mr David Maxwell, Executive Officer, Geelong Manufacturing Council**

**CHAIR**—Welcome. Although the committee does not require you to give evidence under oath, we remind you that this is a proceeding of the parliament and has the same standing. We received a written submission from you and now invite you to make an opening statement. We will then proceed to questions.

**Mr Peart**—Thanks. Manufacturing is an important and critical part of the economic fabric in the Geelong region. We welcome this inquiry and are particularly keen to participate with a view to putting forward positive suggestions on how the manufacturing sector in the Geelong region can grow in the future. If it is to be effective, this inquiry must be reflected in a range of positive and broadly accepted outcomes, capable of having a substantive future impact on the sector's future sustainability. We believe a national manufacturing strategy and plan to grow and encourage manufacturing would assist the sector and develop and strengthen its competitive position. Such a strategy should incorporate existing sector strategies, which have proved to be effective, and ensure a long-term vision is pursued.

Within the Geelong region we have developed a plan to build on our existing industry base. This also requires changes in national policies to reduce the effects of a range of factors such as the appreciation of the Australian dollar, increases in import penetration across many segments, higher commodity import prices and recent increases in oil prices, which are currently placing stress on the existing manufacturing base. We have industry support in the Geelong region to move forward with our stated direction. However, to be most effective, our plan needs to be supported by state and federal governments with appropriate and significant support.

In summary, these are our key points. Manufacturing is of vital importance to the Geelong community. A strong plan and national vision is required for manufacturing. Australian industry is subject to world-lowest protection levels, and for industry to survive in this environment in the future it requires strong support, encouragement and improved access to overseas markets. Targeted sector programs such as those existing in automotive and TCF should be continued. Skills development and repositioning manufacturing to the general community and to young people in particular is vital to the future of manufacturing. Increased innovation, research and development are key requirements within manufacturing to be competitive in the future.

**CHAIR**—Can I say, as an outside observer, you are already doing well in terms of having the Ford and Alcoa plants and other major investors in the area. The region has attracted international business successfully. I want to ask you about the views of your members in the region that the manufacturing sector needs to redefine itself and seriously move upstream to be much higher value added and driven by high-skill content manufacturing, and that it should adopt the best of new innovation and technology. That all sounds very good. How would you suggest that we go about that?

**Mr Peart**—A number of companies are moving in the right direction and I think the recent announcement by the Ford Motor Company of Australia of their substantial \$1.8 million program—



**CHAIR**—They spoke to the committee this morning.

**Mr Peart**—Yes, I am aware of that. That program is a great step forward in that respect. There is a lot of room for other companies that may not have embarked upon such a process of using innovation and technology to understand the benefits, consider them and move forward.

There are 500 companies in the Geelong region; there is a lot of room for companies to embrace technology, research and development principles. We believe that they need to have a process and a strategy in place to make those services available to them. We could do with more companies, along the lines of the Ford Motor Company, that have recognised the benefits of such a strategy.

**CHAIR**—In your submission you have a seven-point plan about what needs to be done for people in your area. If you were in our position and had to recommend strategies for the government in terms of support of the manufacturing sector, what would you be recommending?

**Mr Peart**—I think that some of the sector strategies that have been employed over the last few years have been very successful and have certainly moved in the right direction—

**CHAIR**—Which ones?

**Mr Peart**—Particularly the ACIS program in the automotive sector and the SIP program for textiles, clothing and footwear. Those programs have—

**CHAIR**—Have you got textiles and footwear in your area?

**Mr Peart**—Yes, we certainly have.

**CHAIR**—Which ones have you got?

**Mr Peart**—We have more than 2,000 people employed in textiles, clothing and footwear. The major companies are Godfrey Hirst Australia, which employs around 800 people and is probably Australia's foremost carpet manufacturer; Brintons Carpets, which employs around 150 people; CSIRO Textile and Fibre Technology, which is Australia's leading textile research centre; Melba Textiles, which is a leading advanced textiles company that is reinvesting in the future; and Huyck Australia, which is a felt clothing manufacturer. Those are four or five of the key organisations.

**CHAIR**—You were talking about the programs that we have got which have been of assistance to them. What other programs would you be looking for?

**Mr Peart**—Going back a step, some sort of a vision across all manufacturing would be helpful. Those programs are really sector programs that specifically help investment in those industries. Stepping back a bit and looking at the overall nature of manufacturing and putting forward a vision as to where we are going to be in the future in manufacturing is something that has probably been lacking in Australia for quite a few years.

**CHAIR**—It is easy to say that, but what would you suggest it should be?

**Mr Peart**—It is a difficult question, but I think that without some sort of national vision it is a case of possibly any road leading to the final destination. We need to move up that value chain. Other countries around the world, particularly some of the Scandinavian countries and European countries, like Germany, have put together visions and programs across a wide range of sectors, but particularly sectors that have shown some competitive advantage.

**Mr McARTHUR**—Visions mean more money from government. I was in Scandinavia 12 months ago, and it was very clear that government was part of the program. So vision means what?

**Mr Peart**—I think that vision means a strategy where people know that they are moving in that direction. I will give you an example. Out on the street, there are misconceptions about the extent to which manufacturing is moving offshore. I think that is fairly universally agreed. It is a question of turning that around and talking about the fact that we have got a sustainable manufacturing sector, it is a wealth creating sector and it is something that we are going to develop over years.

**CHAIR**—You could say that, but do you have credibility when in fact it is happening and it is going to continue to happen because of lower labour costs offshore? In the last five years in the US, three million manufacturing jobs were lost. What would they say in the US? ‘We are not going to allow this to happen anymore because the free market is going to determine it’? If people can get it manufactured cheaper offshore, then why wouldn’t they do that? I am playing devil’s advocate here.

**Mr Peart**—I acknowledge that that scenario may happen, but, for the companies in the industry at the moment, having some sort of vision gives them confidence going forward that—

**CHAIR**—This committee is sympathetic to what you are saying, but we are trying to grasp hold of what you want to see the government do. You can have nice words, that can make everyone feel good, that we want a strong manufacturing sector, but what does that mean? Do you expect that the government should pick winners? Is that a reflection of the free market? What do you want? I heard you saying that you believe it should progress up the manufacturing chain so that we are in the high-value content area. I think that has a lot of sense, and it has been suggested by others, and we take that on board.

**Mr Peart**—The concept of picking winners I would not advocate. But I guess we would say: allow companies the opportunity to compete on some sort of a reasonable footing, on an equal footing, with their counterparts around the world. Other countries around the world have fairly aggressive plans and strategies and it probably put us at a disadvantage if we do not have those.

**CHAIR**—I suspect that you are actually talking about somewhere like Sweden. Are you?

**Mr Peart**—Yes; I would include Sweden.

**CHAIR**—But what do they do? They certainly have some very successful manufacturing businesses there in which they have an international reputation. But what do they do that we are not doing? It is not a ‘them and us’ situation here in the committee. We are really trying to look forward together. This is a real chance for us to say, ‘Okay, what should we be doing?’

**Mr Peart**—I think we have got to at least outline a process by which those companies are supported to move forward into the future by reinvesting.

**CHAIR**—When you say ‘supported’, in terms of what?

**Mr Peart**—It flows right through the whole economic system. If there is a willingness to embrace and support manufacturing through, I suppose, aggressive export development programs—

**CHAIR**—Which you already have.

**Mr Peart**—It is skill development, in which we have seen some positive moves in the last year or so.

**CHAIR**—Undoubtedly that will form part of our recommendations, somewhere.

**Mr Peart**—Yes. All of those factors together with, I suppose, supporting those companies to restructure so they are able to compete internationally are important.

**CHAIR**—Isn’t it their own responsibility to restructure to compete internationally?

**Mr Peart**—I think that, as a country, we need to at least try and free the companies of their burdens and make it easier for them to do so.

**CHAIR**—By what means could we make it easier to restructure?

**Mr Peart**—Red tape is a classic example of such a burden, I suppose. But it is not only that. In five to 10 years time, a lot of industry is going to be markedly different from how it is today, so they will need to restructure continually. When I say ‘restructure’, I probably should clarify that a bit and say, ‘Move forward with the times, as is involved in technology.’ We all know that there is not enough research and development, probably from the private sector, in this country—so accessing that.

I do not have all the answers, but we need to develop more of a comprehensive national vision that allows companies to become smarter so that, in five and 10 years time, the businesses that they have evolved into are much more world competitive than they are today. And that is a continually evolving thing.

**Mr TANNER**—What is your view on the future of Ford Geelong? To what extent do you fear that that may be under medium-term pressure as a manufacturing installation?

**Mr Peart**—I know that you spoke to Ford Australia this morning. We do not have a view apart from what Ford Australia has publicly commented on. Their \$1.8 billion investment I think certainly builds confidence in their future in Geelong. And we are very happy that they have made that announcement and made that investment.

It is not easy, as everyone knows. Import penetration in the automotive industry has grown quite a lot over the last decade. So it is not easy. But we are very happy that they are making

those investments. They are certainly doing their best to remain competitive into the future. I hope I have answered your question.

**Mr TANNER**—I have an associated question. The National Institute of Economic and Industry Research recently published a report on the state of manufacturing in which they argued that the strategy of pursuing niche manufacturing opportunities was flawed. Their argument was essentially that you can only realistically do that off the base of a critical mass in the sector, so there needs to be both a supply chain and a kind of activity chain. The conclusion they drew was that it is unrealistic for Australia to, in a sense, cherry-pick small bits of a particular broader product and focus solely on producing those small bits. I suspect the sector they had most in mind was automotive, where you have got, obviously, car manufacturers in Australia and a wide range still of vehicle component manufacturers but, increasingly, component manufacturers who are predominantly servicing a global production chain, in the global market, rather than the car manufacturers here. In other words, the question here is: in that instance, is it realistic to expect that Australia can be a significant manufacturer of world-class vehicle components if we are not actually making cars? I am interested in your view about that question of niche manufacturing and to what extent that is a viable future option for Australia.

**Mr Peart**—I think one of the things about ‘niche’ is that it probably means different things to everyone. The automotive industry is one of those industries that I would refer to as a strategic industry, whereby the multipliers are probably higher than in most other industries. They use R&D and engineering services probably more than any other industry. I think your point—certainly the point made by Peter Brain—is probably a good one: niche may not be achievable in all circumstances. Certainly the supply chain comments and the critical mass are something that industry is very concerned about. It is another reason why those companies that may be in the supply chain of certain critical industries are given an opportunity to compete with the rest of the world, as other companies around the world are given opportunities to compete in the Australian market.

**Mr TANNER**—You pointed out earlier on that Geelong is pretty strong in carpet manufacturing. How exposed to the threat of import competition do you think Geelong carpet manufacturing is? I presume there is a natural degree of protection because carpet is essentially a low value per volume product so there is a pretty high relative cost to the import it, but nonetheless we do import some carpet. I am interested in your view as to how much under threat from imports the carpet manufacturers see themselves as being.

**Mr Peart**—Traditionally the sector is seen as highly exposed to competition, particularly from China. However, people are doing reasonably well because they are investing in their businesses, they are reinvesting in technology and they are reinvesting in sustainable techniques of reducing water consumption and materials waste. It might be a fair comment to say that that sector is exposed, but the performance of the last two or three years has been very strong and we see that continuing into the future. Certainly people are having a red-hot go and doing quite well. With the reduction in tariffs, I suppose the fact that the strategic investment program has got a 2010 horizon is something that should be looked at going forward, and we would certainly support a review of the continuation of such a program.

**Mr TANNER**—So would you suggest to us that, if we are looking for examples of potentially threatened sectors that have managed to lift their game and to some degree ward off the threat, carpet manufacturing in Geelong would be worth looking at in that regard?

**Mr Peart**—You can certainly make your own judgements on that. I would be suggesting—and I am not talking for those people—that you have the discussion with them.

**CHAIR**—We are seeing the textile people today, so we can ask them. It is an interesting point. Have carpet manufacturers been expanding or reducing, and if it has been expanding, what are the reasons for success? It is something that perhaps our secretariat might like to look at—whether that is a success sector and some of the reasons why, and why some manufacturing industry has been successful.

**Mr McARTHUR**—I commend Mr Peart for his submission; it is a good representation of the manufacturing group, disregarding the chair's Sydney bias. It does reflect some of the issues and I commend the council and Mr Peart. I would like to raise three issues. The first one is that I have personally been in dialogue with your council, as you know, Mr Peart, over 15 years about tariffs and competitive forces. I detect a change in attitude in that Geelong manufacturing are more prepared to be more competitive in terms of quality, export orientation and import replacement. Do you think that is a fair assessment of the change of attitude compared to being a protected industry in manufacturing in both cars and TCF?

**Mr Peart**—Certainly, I agree completely with that.

**Mr McARTHUR**—What brought about that change?

**Mr Peart**—I suppose the fact that we have come down from tariffs approaching 60 per cent to about 10 per cent. There has been a huge reduction so we have just got on with it and accepted it and moved forward. So your comments are reasonable. Going forward past 10 per cent is another question. The tariffs are probably fairly negligible now but whether you go down to zero is an entirely different question.

**Mr McARTHUR**—We will continue that dialogue at another time. The second question is: how much does the Geelong Manufacturing Council regard the resources boom as important to Geelong, and if that boom collapses what will happen to some of the manufacturing in Geelong?

**Mr Peart**—Some of the effects of the resources boom have not been entirely positive in Geelong and Victoria. Higher input costs have been generated.

**CHAIR**—Is that in terms of the alumina costs to the aluminium smelter?

**Mr Peart**—It is just general prices on services.

**CHAIR**—Can we drill into that? Alcoa is transferring prices internally. How could that be a problem for Geelong?

**Mr Peart**—My comments are probably not specific to Alcoa.

**CHAIR**—Who else are you talking about? Isn't that the major one in your area?

**Mr Peart**—They are the major one that has operations involved in the commodities sector but those companies that are not involved in the commodities sector are paying higher prices for engineers because they are being attracted elsewhere around the country for their skills. There are other well-documented prices and costs that have increased around the country as a result of the activity going on in our resources industry. The direct effect on Geelong has not been positive in that sense. It has been a neutral if not negative effect.

**CHAIR**—The largest aluminium smelter in the country is in Geelong. The world price for aluminium has gone up substantially; aren't you big winners at the bottom line?

**Mr Peart**—I am not going to get involved in discussing the Alcoa example.

**CHAIR**—You were successful in winning that company to locate in Geelong. Obviously, each case has upsides and downsides, but I would have thought that you were a winner.

**Mr Peart**—Our sphere of influence remains in Geelong, so while companies have other activities outside Geelong, which you are alluding to—

**CHAIR**—They are exporting to the world market, and the price of aluminium has gone up very significantly. That means more revenue coming back to Geelong.

**Mr Peart**—I agree.

**CHAIR**—They would be able to pay higher salaries, anyway.

**Mr Peart**—They are a particular example of a company that has operations in Geelong but is also exposed—

**CHAIR**—How many do they employ in Geelong?

**Mr Peart**—It is about 1,200 people across two operations.

**CHAIR**—It is not insignificant.

**Mr Peart**—No; it is very significant, and we value them highly.

**Mr McARTHUR**—It is worth noting that Alcoa is enjoying a world commodity boom in aluminium. The price has doubled in the last 12 months. You put in your submission that in the 1960s employment in manufacturing was 35 per cent, but the raw figures have gone from 19,000 persons employed to 14,000 and you say it is only 17 per cent. If you look at those figures it seems as though the employment rates in manufacturing have kept up pretty well, contrary to public perceptions that those bigger industries have become more efficient and employ less people.

**Mr Peart**—You are right. At 35 per cent those companies would find it difficult to be sustainable. They have moved with the times. The common perception out there is that there has been a huge reduction in manufacturing employment. There has been, on a percentage basis.

**Mr McARTHUR**—But on the raw figures you have done pretty well.

**Mr Peart**—Yes.

**Mr McARTHUR**—Why are you not promoting that? You still have 14,000 employed in pretty well-paid jobs. Some of those manufacturing industries pay very well.

**Mr Peart**—We do promote that within our community, and it is to the surprise of a lot of people that there are 14,000 people employed across 500 companies. But I suppose it gets into the image issue.

**Mr McARTHUR**—That is the upside of the tariff protection and vision story you are talking about. There are some positive things. Would you say that those industries would have an ongoing viability even when the resources boom moves on?

**Mr Peart**—We would hope so. The companies that have survived and are here today have in the main made large steps towards becoming more efficient and doing more with less people, as they needed to do to remain competitive. If they had not done that they would not be competitive, and they would be suspect. We are hoping that with that continual uptake of technology and research and development that they are more sustainable going into the future.

**Dr EMERSON**—There was a discussion with the chair about what sort of policy options or instruments might be available. I think you were talking about Sweden and export facilitation. Under the WTO rules, export facilitation in manufacturing is noncompliant with WTO—in other words, you cannot do it. Some countries do it at a very low scale and no-one bothers to complain about it, but as a general strategy I think that is out. If that is the case, what else is available? We seem to be in an era of low tariff barriers, and export facilitation is out. What other policy instruments are around?

**Ms GRIERSON**—Procurement and local content are around.

**Mr Peart**—The non-tariff barriers around the world are employed variously by various countries. I do not think we have explored eliminating those in our discussions.

**Dr EMERSON**—The Doha Round has collapsed, and there was a fair bit of exploration that resulted in the debacle. I do not know how much more—other than through bilateral arrangements—we can achieve there, either. A lot of people say that we have to have a level playing field and it is unfair that other countries pay their workers lower wages. It does not strike me as being an unlevel playing field; it is just a reality that there are not uniform wages around the world. I could not be confident about non-tariff barriers being eliminated either. It seems to me that we are starting to get down to a pretty narrow range of options.

**Mr Peart**—It is a difficult area. The fact is that we are probably the least protected market in the world—or probably one of the top couple of least protected markets in the world. I do not

have the answers but, in terms of this process in government, an option may be finding ways to eliminate those non-tariff barriers in other countries so as to allow our companies to export. I do not have the magic solution to that, but I am sure it does exist within government.

**Dr EMERSON**—Research and development support is WTO compliant. We have had other witnesses arguing—as I think you did—for more R&D support. Do you have any specific proposals or ideas as to the form that should take?

**Mr Peart**—Regionally in Geelong we are working on a program that has been used around the country in a couple of instances to help companies move up that value chain—that continuum. It does not happen without any mechanism for supporting them. We are working with our local university, our technology precinct, the Victorian Centre for Advanced Materials Manufacturing and industry to try to put together a program that creates a high awareness of the need to move up that value chain, provides some of the tools available for them—whether it be in lean manufacturing or world-class manufacturing—and allows them to do, if appropriate, targeted research and development and innovation so that they can become more competitive into the future. We are working with our local community on a program to do that, and we have been looking around the country at some of the models for doing this. It is contained in our strategy that we are working quite hard to advocate, promote and spread the word on the opportunity for companies to innovate and move up that value chain.

**Ms GRIERSON**—The Geelong Manufacturing Council has been there since 1998, so you must have seen some change there. To give us some clues and pointers towards government policy, what do you see as being the greatest indicators of success or the most important things that need to be done for success? Is it public research that has helped Geelong—or is that at a deficit? Has infrastructure helped—for example, broadband, transport or regional infrastructure? Is it ensuring supply chains? Is it marketing? Is it building some critical mass? Has it been networking or clustering? Has it been state government incentives with land or capital improvements? There are a lot of tools out there that need to be employed. Is it diversification of the economy in Geelong? What sorts of things have been the success factors or the needed factors for success?

**Mr Peart**—I think with our low levels of tariffs in this country and our exposure to international trade, if we have not got all of those things in place, whether it be hard or soft infrastructure or supply chain, we are at a disadvantage. So probably most of those things are taken as a given.

**Ms GRIERSON**—If your council members were calling out for one thing, what would it be?

**Mr Peart**—There is such a diverse number of industries that I probably could not give an accurate assessment of that. Some are more important to particular industries than others. I think that list of seven or eight factors are almost taken as a given. If you have gaps with your infrastructure, your rail or road system—and we have been doing a lot of work in Geelong on improving those systems in recent years—you will be at a disadvantage to the rest of the world and your competitors.

**Ms GRIERSON**—Do you think that in those eight years you have evidence that exports have increased from the Geelong region?



**Mr Peart**—I could not give you an accurate figure on that. Exports are not collected on a regional—

**Ms GRIERSON**—No, there is never regional data. It is very difficult. I understand that.

**CHAIR**—The chances are, though, because of the increase in the price of aluminium that it would have gone up significantly over the past 12 months at least. It would be interesting to look at that. Perhaps you could come back to us on that. Thank you. We appreciate you coming.

[2.02 pm]

**CAREY, Mr Peter, Member, Australian Council of Wool Exporters and Processors**

**LILLIE, Mr Jamie, Executive Committee Member, Australian Council of Wool Exporters and Processors**

**MORGAN, Dr Peter David, Executive Director, Australian Council of Wool Exporters and Processors**

**VASILE, Mr Sal, Member, Australian Council of Wool Exporters and Processors**

**CHAIR**—I welcome representatives of the Australian Council of Wool Exporters and Processors to today's hearing. As you are aware, the committee does not require you to give evidence on oath, but it still has the same standing as proceedings before the parliament. We have received a written submission from you. Do you want to make an opening statement? We will then proceed to questions.

**Dr Morgan**—I would like to make a few comments and then I would like to invite my colleagues to make some comments. Mr Lillie is from the scouring and carbonising industry. Mr Carey is from the top making industry. He is the commercial director of Chargeurs, a major top maker in the world.

**Mr Carey**—Chargeurs is a French owned top making company.

**Dr Morgan**—Jamie Lillie is the Managing Director of Fox and Lillie, who are a scourer and carboniser, a buyer of grease wool and an exporter. Sal Vasile is the Managing Director of the Macquarie Textile Group, whom we call a downstream processor in weaving—fabric and garment making. I have a few overview comments to make. As we said in our submission, it is no secret that the Australian wool industry, from the grower through to the processor, is under serious pressure for a number of reasons. Production is now at less than half the level it was 15 years ago when we had the boom in the late eighties, which was followed by the collapse of communism and the Tiananmen Square issues. We lost two of our biggest customers overnight. It has been pretty tough ever since then. It has been extremely tough in the last three to five years, and I guess other manufacturing industries are not much different to us in that. The competitive pressures of China, in particular, have had a great effect.

**CHAIR**—In relation to scouring?

**Dr Morgan**—Yes, in relation to scouring and even more so in top making.

**CHAIR**—Is it not surprising that they would move into an area like that with low wages and adapt the technology? Why would you not expect the competition?

**Dr Morgan**—No, it is not surprising. What has been surprising has been the speed of change. Only nine years ago something like 25 per cent of our exports went to China. They were

predominantly greasy but there was still a very healthy industry in Western Europe which took a lot of scoured product and tops.

**CHAIR**—Eastern Europe or Western Europe?

**Dr Morgan**—Western Europe. There has been pressure from China on industries in that part of the world. Here we have seen a change where China moved to 46 per cent of our wool exports only two years ago and last year it was just over 61 per cent.

**CHAIR**—Obviously the quantum to China has gone up significantly, but has it reduced in other parts of the world?

**Dr Morgan**—It has reduced in other parts of the world because domestic production in Australia has been coming down at the same time because of unfavourable drought and unfavourable prices compared with alternative enterprises. Mr McArthur would well know that the sheepmeat industry is thriving whereas the sheep wool industry is not thriving. But there are a number of added effects from this. While total volume to China has increased, they take a far greater proportion of it in the greasy form. Over 90 per cent of the wool that goes to China is in the greasy form whereas the rest of the world used to take something like only 66 per cent in greasy form. That has had quite an added negative impact on the industry in Australia.

**CHAIR**—Is that why they have moved in that area? Is cost a factor in why they have moved into scouring themselves in China?

**Dr Morgan**—I think there are two reasons—one is employment in China. The textile industry in China, like some other Chinese industries, is by far the biggest in the world. Wool is only a small but a very significant part of that industry when they take that much. It has also led to some companies establishing joint ventures with Chinese interests in China also.

**CHAIR**—Are those Australian companies?

**Dr Morgan**—Australian and European companies. In fact, the three companies that the three gentlemen with me work for were all involved in joint ventures in China as well as having their manufacturing plants here in Australia.

**CHAIR**—That would be a smart move, wouldn't it?

**Dr Morgan**—They have done it and they are still in business. I guess it is typical of the scene that is happening in the wool processing industry.

**CHAIR**—The committee is regarded as a collective discussion group. It is not 'them' and 'us'. We are really trying to—

**Mr TANNER**—Except for the—

**CHAIR**—Except for the Labor Party and us. But we are really looking for a way forward from here. Where do we go with the industry? Is it worth fighting to try to keep it? What should we be doing? Should we be doing other things? Should we be going up into a more high-value

content area? There is a real opportunity for us to take time out and look at the industry and what we can do. Obviously, the simple one is to be given some assistance from the government. Is it realistic and what type of assistance?

**Dr Morgan**—I will invite my three colleagues to give a brief overview of what happens in their areas, because we do think there are a number of ways forward within the industry and with industry and government. We can address those as we move forward.

**CHAIR**—My colleagues will undoubtedly join in as well. It has come to the point where one asks if we have something that relates to our past or to our future.

**Dr Morgan**—We would like to talk about our future, but you cannot do that without recognising where the industry is coming from.

**CHAIR**—I understand.

**Mr Lillie**—I am representing the scourers and carbonisers, who perform one of the early stage processes of wool. Wool basically goes from its greasy form and then is scoured. After scouring you can do a variety of things, but all wool has to be scoured. Scouring uses a fair bit of water. It has in the past been a reasonably large industry in the country, and still remains fairly strong compared to other parts of the wool-processing industry at the moment. You have probably all read Pete's summary.

**CHAIR**—We have, yes.

**Mr Lillie**—We have floated a couple of ideas in there—a couple of strategic issues that we think should be addressed for the wool industry going forward and a couple of reasons why we should not watch as our scouring and carbonising industry disappears. For instance, we came up with the concept of animal health, should an outbreak of disease occur in this country, as it did in Argentina and Uruguay not so long ago. In fact, it still applies in the northern part of Argentina, from where no wool can enter China without being scoured. To us that is a realistic threat to the industry. Of course, if that happened and there were no wool scours in this country, which is, as you probably read, a little bit the way things are heading—we are fairly sharply reducing the kilos of wool that are being scoured here—we could ultimately end up with only one or two scours left in the country.

There are other things that you would understand. Most of the wool scours and carbonisers are regionally based, so there are regional employment issues. We are also seeing that a reason to keep a scouring early stage processing industry in this country is that environmental standards in China and other countries are quite quickly increasing. You may see the day when it is actually impossible or very difficult to scour wool in a country like China and we may even get back to where it is maybe more competitive in this country—who knows? There are a lot of ifs, ands and buts about that, but things are changing dramatically in China, and we know as we all have factories there—

**CHAIR**—Are you trying to tell us that they will change their environmental standards in China so that you have to have it processed in Australia?

**Mr Lillie**—They already have. If as a foreigner you wanted to set up a wool scour right now in China, it is probably nearly impossible compared to 10 years ago, when you could have walked in and just done it.

**CHAIR**—As a local you can without too much trouble, though, can't you?

**Mr Lillie**—I have not tried. These guys did it about 15 years ago, but I believe today it would be extremely difficult. We do not know that for sure—it is slightly speculative—but things are changing dramatically. For instance, Japan used to process a lot of greasy wool. They have gone a full turn and now only process scoured wool; they do not touch greasy wool because of pollution and environmental standards. That is an example of what might happen. Job loss is an obvious issue if our industry—

**CHAIR**—How many are employed in the industry?

**Mr Lillie**—We counted all the processors collectively, but I have not done the numbers.

**Dr Morgan**—It would be about 600 now.

**Mr HAASE**—Including you?

**Mr Vasile**—In the textile industry there are about 6,000 or 7,000 employees.

**Mr Lillie**—There are another couple of notes that we came up with. The balance of trade is an obvious one. If we cannot add value here, we are shipping out greasy, and we are losing our balance of trade—the added value that we put on when we process wool in this country.

**CHAIR**—But we are selling more wool.

**Mr Lillie**—Not really, no. You are still selling the wool—you are selling it as greasy or processed. Again, it is Australia's loss of critical expertise. I do not know how long this committee has been running for, but I imagine people have said, 'If it keeps going like this, we won't be able to manufacture anything.' Top making has got quieter. Scouring and carbonising are not to that stage, but they are reducing. We do not really want to go there. Australia is the biggest exporter of apparel wool in the world. Given a few of the threats that I have outlined, it needs to be able to process that wool to a certain extent in the country rather than just ship it out, should one of these threats arise.

**Mr McARTHUR**—The key question is: how come the wool industry did not do this 30 years ago? I come from the wool industry—I have been there myself for a long while. This is an argument that has been around about processing wool—that dealers these days are not selling as greasy. You are advocating to this committee that this all ought to be done. Can you tell us why that has not happened? It is a relatively low-wage, high-manufacturing input, but it is not a high-wage—

**Mr Lillie**—I have a splendid example in scouring. For our scour to run, we need about 20c a kilo to pay for the labour. If China is 20 per cent of the cost of our labour, then it is 4c a kilo versus our 20c. Sea freight is nothing to China. It has an instant 15c a kilo advantage.

**Mr McARTHUR**—You are saying to the committee that it is a straight out labour advantage that they have in China—

**Mr Lillie**—Yes.

**Mr McARTHUR**—in the early stage process. I am not talking about the finer processing.

**Mr Lillie**—Very much.

**Mr TANNER**—Are there offsetting cost changes?

**Mr Lillie**—We reckon that among water, power and most of the other things in China there are a few ups and a few downs. I am sure Sal would know a lot more about it than I would.

**Mr TANNER**—Is there any significant difference between the freight for the processed and the unprocessed product?

**Mr Lillie**—Freight is nothing. You can get a container up to China for \$400.

**Mr TANNER**—So there is no implicit difference in the cost of shipping one versus the other?

**Mr Lillie**—No.

**Mr McARTHUR**—Why would you overcome this intrinsic problem all of a sudden? You are advocating that this early-state processing ought to be done—

**Mr Lillie**—We are just viewing all of our members going out of business. Our fundamental issue is that of tariffs—and I have not even got onto that. There is a tariff disadvantage for processed wool into places like China, India, Europe and the USA. All our friends and our major trading partners basically have to handicap us from exporting our processed goods into their countries. Fundamentally, we believe that we could hopefully try to level the playing field with the tariffs, but we also believe Australia needs to have a reasonably sized wool processing industry left in the country, because wool is a major rural export—

**Mr McARTHUR**—You believe it, but who is going to do it?

**Mr Lillie**—It will be the last man standing, but if it goes the way—

**Mr McARTHUR**—The government is not going to—

**Mr Lillie**—Perhaps I should pass to Pete, because he can give you an example of when nobody did anything, except the government gave a lot of money. Maybe, Pete, you can explain about top making, which is—

**Mr TANNER**—Just before you do, I want to clarify the point I asked about before. Is the scoured roughly the same in weight and volume as the greasy product?

**Mr Lillie**—No. It is lower, because you are removing the dirt and the grease.

**Mr TANNER**—That is what I would have thought. Surely that means your transport costs are less.

**Mr Lillie**—Yes, but for \$400 a container it is nothing.

**Mr TANNER**—The net reduction in the overall cost is marginal, so it does not make much difference.

**Mr Lillie**—It is very marginal. It is complicated. The cost of squashing the bales to get more of them into a container is more expensive than shipping them, because the sea freight is so cheap. You can juggle it around, but anyway it goes it is not a great advantage. If it were \$3,000 a box to get it up to China, that would be way different.

**CHAIR**—We have talked about how important it is, but what do you think the government should be doing in relation to redressing this issue and perhaps reversing it? Do you want to take that on, Peter, and talk about your place?

**Mr Carey**—I will start with the top making industry. Top making is the last of the early stage processes. Scouring is the first stage of the process, which is followed by carding and combing. In Australia in the early 1990s we saw a boom in the top making industry and we had a production of almost 80 million kilos of wool top. Today we have just under eight million kilos, and this decimation has basically occurred in the last three years.

**CHAIR**—Who is responsible? Is it China again?

**Mr Carey**—Yes. It is a direct result of being unable to compete with the low labour cost of the Chinese manufacturing industry. However, now that we are down to only eight million kilos, there are two companies left for wool top making, one of which is Chargeurs and the other is Fletcher International, which is a company in Dubbo in New South Wales.

**CHAIR**—Is Fletcher a New Zealand company?

**Mr Carey**—No, it is an Australian company.

**Dr Morgan**—That is the other Fletcher. This is Roger Fletcher of meat industry fame, as Stewart would know.

**Mr Carey**—I think the important comparison to make between the top making industry and the scouring industry is that the scouring industry is today still quite a large industry, whereas the top making industry is already reduced by 90 per cent. But scouring is also a critical part of the top making process. As for what the government can do to help, we certainly have some import duty issues—

**CHAIR**—In other countries?

**Mr Carey**—Yes. For instance, that is the case when exporting into the European market, where there is no import duty on greasy wool and there is import duty on tops and scoured.

**CHAIR**—What is the duty? How much is it?

**Mr Carey**—In the European market on tops it is two per cent.

**Dr EMERSON**—That is not going to make a difference, though. Getting the two per cent down to zero is not going to save the industry, is it?

**Mr Lillie**—In Europe it probably does make a difference, because we are about the same cost as Europe. In China it would not make a hell of a lot of difference.

**Dr Morgan**—In China it is three versus one per cent, but in India it is something like 35 or 36 per cent versus five per cent. The United States still has some differentials, but we do not send much wool there anymore.

**Mr Lillie**—Scoured and carbonised wool are also tariffed differently to greasy wool, so basically they are saying, ‘We’ll take greasy wool in preference to your processed wool, in varying degrees.’

**CHAIR**—These guys have heard this story before, but I was in Washington in the United States last year and every congressman and senator I spoke to said that the big issue at that particular point in time was China and how they were cutting a lot of their industry base. Everyone was saying: ‘You’ve got to fix it. You’ve got to do something about it.’ You are in the same position and we want you to focus on what it is you would like to see done, because we are not alone in this. Are you the only industry with lower costs and so on?

**Mr Carey**—Certainly, in the top making sector there are only two survivors. Speaking on behalf of Chargeurs, we have been able to survive by choosing the area that we were best at and restructuring our factory from 480 staff to 53.

**Dr EMERSON**—Was that with a lot of mechanisation or just with a change in what you produced?

**Mr Carey**—We changed and we really streamlined our factory. We had four different production lines and we streamlined to one. We are now targeting the products with a very liquid type and we are increasing our production of this type to improve our—

**Mr TANNER**—Are you mostly exporting or servicing domestic—

**Mr Carey**—We are 100 per cent exporting. But, prior to our restructuring, we would have supplied 70 per cent of the local market in Australia.

**Mr TANNER**—Who is supplying that now—China?

**Mr Carey**—Maybe at this point it is best to pass to—



**Mr Vasile**—I am a representative of the downstream, Macquarie Textiles—

**CHAIR**—Before you start, could I just ask: have you gone for a top-quality market then for your tops?

**Mr Carey**—We are targeting the knitting sector of the market. Our main market is Italy.

**CHAIR**—Why have you been successful in that market?

**Mr Carey**—Because of the expertise required in the processing. In our group we have a very strong industrial base and we are processing a type of wool that, to date, the Chinese do not have the expertise to do.

**Mr TANNER**—So quality is basically the key.

**Dr EMERSON**—Is that technology or skills?

**Mr Carey**—Skills.

**CHAIR**—That is interesting. Sorry to interrupt all the time. We just want to get our heads around it.

**Mr Vasile**—That is all right. We are the downstream, of course, and we are predominantly a wool and wool blend textile company. We need greasy wool, scoured wool and carbonised wool. As Peter just mentioned, Macquarie Textiles was probably the biggest customer for Chargeurs almost 12 months ago. Unfortunately, when that business closed up we were more reliant on wool going out of our country, going to China, being scoured and so on and coming back to Australia. That put us in a certain dilemma from a lead time point of view. As you know, our markets are ‘just in time’ these days, and certainly, in terms of our forward planning and the implications from a cash flow point of view, it took some time for us to overcome that situation.

I think the SIP has given Macquarie the opportunity to basically restructure, and we are going through that process now. At the start of 2006 we had 224 employees. Our future is to modernise the plant, make it a bit more efficient and more of a lean manufacturer. We are certainly looking at the mix of our business. The SIP has allowed us to confidently make decisions going forward. We see a domestic market for niche opportunity product segments, which in particular include school wear, corporate wear, which I will touch on later, and defence. Defence is a big part of Macquarie’s business. I think Jamie mentioned previously that our defence forces need to have product that conforms to quality specifications. It is critical for the domestic scene that that is controlled out of the Chinese operations. It is something that is a long way away.

There is another point that I support Jamie on. Our JV in China is in Beijing and we have had to relocate because of the Olympic Games in 2008. We have had to move from the third ring-road to just out of the sixth ring-road. Out of the sixth ring-road there is only this one particular site, which I think is about 10 or 20 acres and five plants are being established there and we are one of them. That is the only area that we can actually relocate to. The environmental issues that Jamie mentioned are quite real. It is the only place you can set up a dye house. In other areas in Beijing they will not allow you to even propose a joint venture.

But, as I said, the SIP has allowed us to plan ahead. We feel, from Macquarie's point of view, that we have a very strong domestic customer base, but we need to grow the volume of our business. It is all domestic here. Our volume will be generated from our joint ventures in China. But it is the expertise that drives the business, the innovation that we have, the product development that goes on on a day-to-day basis, the new treatments or finishing applications. They are all the value-adding that will keep our business in Australia.

We are confident, although we are still in the process of consolidating a bit further, that we will become leaner and more cost-effective. I think that we can compete. Wool is at a premium on the domestic scene. Our customers will still buy for us because out of all the companies around here we have a certain reputation in the domestic market. That is mainly due to reliability and quality assurance, along with us at the same time being price competitive. As far as Macquarie is concerned, going forward we need to make sure that the SIP in particular continues post 2015. We might be looking at some export development grants to give us a bit more flexibility in finding new export market opportunities. We would certainly love to have a look at a few areas to do with tax, such as incentives. A reduction in tax is being recommended through the TFIA industry body.

We believe that there is a mix. We all have joint ventures in China, but China is volume based. The reason we deal with China is because that they can supply the competitive prices, but it is not just price. Our business is about relationships with customers, not only domestically but in the international markets that we deal with. IP or design innovation perspectives are our strength. As much as China thinks that they can develop products, they are good copiers but they have no vision or foresight into fashion trends or new products coming forward. They are the areas that we need to focus on, and we need to protect them. The IP is a very critical part of keeping the balance between the two manufacturing sites that we have in place.

**CHAIR**—So the reasons for your survival are to do with product innovation, cost reduction, joint venture arrangements, intellectual property and understanding the market. Are there any other key factors that you would see in terms of the survival of your industry, which is under pressure because you are right at the edge there in terms of competition?

**Mr Lillie**—Talking specifically about scouring and carbonising, we cannot sell scoured or carbonised wool to China anymore because they have built their own factories and they basically kill us on price. They produce it domestically now and sell the goods to the people who we used to sell to. But we still have a price edge in Europe, America and, to a certain extent, Japan. It gets a bit technical, but not so much in scouring, because that is relatively low value added. But when you get to carbonising or top-making, the Chinese are off selling into Europe. That is why the top-makers are the first to go, because that process, relative to scouring, is very labour intensive.

**Dr EMERSON**—Does it have to be?

**Mr Lillie**—Yes, unless you spend a lot. The government gave the industry a vast amount of money under the TCFDA scheme back in the early to mid 1990s. Five or six top-making plants got a monstrous amount of money. Two of the ones that got money are still there, but there are about another five that have gone. That did not help much. And they were brand-new plants at

the time. Now you need robots and things like that, and nobody can afford that, because China would beat the robots just on depreciation or whatever.

**Dr EMERSON**—What happened to Geelong Wool Combing?

**Mr Lillie**—That is gone.

**Dr EMERSON**—It had an affiliate in New South Wales.

**Mr Lillie**—Oztop.

**Dr EMERSON**—Are they still there?

**Mr Lillie**—No. Both of them got big money from the government and from Geelong.

**Dr EMERSON**—I remember at the time that the company was arguing that the failure to reach a new enterprise bargaining agreement was the reason that it was going, and the contrary argument was that it might be going anyway. They referred to this operation in New South Wales and said, ‘If we had that industrial relations arrangement, we would be fine.’ That is why I asked what happened to the one in New South Wales.

**Mr Lillie**—I think that is a good question. I think the New South Wales one lasted about another year.

**Dr Morgan**—I think timing is important, Dr Emerson. A tremendous amount of the changes occurred in the last three to four years, but the changes were occurring before that, and Oztop was able to renegotiate their enterprise bargaining agreement probably in about 2000 or 2001. They had an agreement where they were paid a wage which assumed X number of normal hours, overtime et cetera. When Geelong Wool Combing attempted to introduce a similar agreement in Geelong—when production was going down because wool production and also demand were going down—there was a considerable reaction to that agreement. I think that the dispute probably went on for about six to eight months; but at the same time it was moving forward, and the industry was getting tougher. I cannot speak for Geelong Wool Combing; it was probably a combination of events, but there is no doubt that the industrial matter was important at the time.

**Dr EMERSON**—I was interested, Sal, when you were talking about your joint venture in China. Is there a model here for the industry that involves Australian production in some area of value-adding in a way that collaborates with China and, in a sense, both diversifies and secures the industry’s future? Or is this unique to your company?

**Mr Vasile**—I think it is unique. As I said, the SIP program has allowed companies which were going to be still in business in the future to basically get their act together and move on. I am not talking about just textile manufacturers; I am talking about garment manufacturers. Over the last two or three years, a lot of garment manufacturers have closed up shop; and that has set the scene. The question was asked, ‘Are there any areas that we need to improve?’ Our business is now ‘just in time’. It is very difficult for the business to expand from a trading or a sales point of view when we have to allow almost 20 weeks to receive top. That is a real issue for us, that we have to plan so much in advance.

We used to have flexibility at our site, and you could swap and change production. That was okay, but now when we look to restructure and to make it more efficient we actually cut back on certain areas of manufacturing. We are now more reliant on top coming into Australia. That is certainly an area where we have an issue. But from our JV point of view, I think what you are saying is right. We try to control our quality. As I said, Macquarie is built on reputation and quality. We specify our wool top. We even do that when it gets delivered into our JV venture in Beijing. That is where the value-adding starts to come into play. I think that, as a model, it would probably be worth while for the remaining players in the industry to have a realistic look at that. I see that going forward for our business.

**Dr EMERSON**—I readily concede that I am just groping around for an idea here, but the thought is: if the industry as a whole were reliant on China not outcompeting it, then industry has got a really big problem, I would think. But if you could create, as an industry, a set of incentives such that it is in China's interest to have at least part of the industry in Australia, then that could perhaps really work. I do not know quite how to do it, but rather than just wishing, hoping and praying that China does not get better and better at the industries that you are involved in, you could look at how you could provide the incentive structure or generate mutual incentives that would have them say, 'We want an industry in Australia.'

**Mr Vasile**—We are focusing on the value-added chain, not even from a fabric point of view. I never call a garment manufacturer, because garment manufacturers are not our customer base. So we do not want to compete with them. We always facilitate, and facilitation means fabric as well as garments. Our business is fabric, and we will stick to fabric, but facilitation and that value-added chain is realistic. You are right, and that is what our business is now driving.

**Mr Lillie**—But I think we have got to contrast the early-stage processes with what Sal does. Sal is supplying a domestic market. It is high value, internationally. Our process is much more basic. The important thing is: we as domestic, early-stage wool processors get no SIP grant. There are no SIP grants for us. That was argued by Peter about five years ago, when they went to Canberra and said, 'We should get some SIP grants.' I do not even know how to structure that, but, if we had had some, hopefully we would have progressed and used those grants to improve our businesses. The bottom line is that since then five or six top-makers have disappeared. If we want the things that we came up with to focus on—just quickly, because I think we are getting towards the end of our time—

**CHAIR**—We are almost out of time, yes. This is interesting; if our group just fires off questions so we can focus on where we go to from here—

**Mr Lillie**—I was just going to finish. I think it is tariffs and duties—

**Dr Morgan**—In foreign markets.

**Mr Lillie**—and a SIP-like scheme of some description, and we did not come up with a format or anything. The other thing we said was that we are very big in regional centres. We pay a lot of money to get domestic freight to regional centres. Remember the Tassie freight equalisation scheme, where you actually get an incentive from the Tassie government—

**CHAIR**—There are quite a few economic dries in this group.

**Mr Lillie**—I can imagine. I am just throwing a few things. We know that they might get burnt at the stake or whatever, but they are just ideas. The SIP scheme is something you could argue, and fundamentally we believe that Australia should have an early-stage wool processing industry. It is the biggest apparel wool grower in the world, and without an early-stage processing industry we think it could be threatened because of disease and the environment.

**Mr McARTHUR**—You are thinking of the future for the wool industry, and you are close to the wool growers. There are a lot of wool growers out there using fat lamb sires; some commentators are telling me that the wool industry does not face a good future. What do you guys say?

**Mr Lillie**—We have not got our heads in the sand, and we understand that obviously. But we are thinking past that hopefully. We reckon that there is a fair bit of Australia that can only grow wool, and there are a fair few committed wool growers. Not all of the wool industry is bad. When it comes to bit of a dry period like this, wool actually kind of outperforms grains and things like that. So we do not think wool is going to disappear, but it has reduced dramatically. It is about half what it was in 1991. We understand those things; they are the things we have to deal with with our business.

**Mr McARTHUR**—You are confident there is going to be an industry in 10 years time?

**Mr Lillie**—Yes, absolutely. I do not know how big it will be, but there will be an ability to scour or process wool.

**Mr TANNER**—Presumably that is international demand.

**Mr Lillie**—That is the important difference between us and Sal; all our wool goes overseas. Sorry; 99.9 per cent of my wool—we sell 18 million kilos—goes overseas.

**Mr TANNER**—Was the stockpile fiasco the underlying factor causing the drop in production in more recent years, or has that been washed through the system well and truly now?

**Mr Lillie**—Yes, by and large. Peter might have a comment, but I think it has washed through by now.

**Dr Morgan**—I think you were calling the fiasco at the sharp end of it. At the blunt end, when the stockpile was finally disposed of, we suddenly saw a sharp peak and an increase in prices as people were concerned about supply. Mr McArthur was asking about the future of the industry. Some people say the industry is the second oldest in the world. It has had many ups and downs, just in my lifetime—extreme ups and downs. It is only 40 years ago that the price got down to something like 70c a kilo. That was when the reserve price scheme was first established. Three years later, there was a boom. We also had a boom in the eighties. We cannot forecast those, unfortunately.

**Mr TANNER**—Surely the real question goes to changing technologies and other garment products and so on?

**Dr Morgan**—And other choices of discretionary spending has been identified as a factor in all textiles, irrespective of fibre.

**Mr Lillie**—This is probably getting off the track, but an interesting thing is that, when oil doubled in price, manmade fibre prices went up five per cent or something ridiculous like that. The efficiencies that they have brought into the manmade fibre production are incredible.

**Dr EMERSON**—But that will have a—

**Mr Lillie**—It seems to me that, over the last 20 years, it has been: ‘It’s all going to be synthetic,’ and then there is this big fashion lunge back to wool at some stage. They then experiment and get really besotted by some other synthetic product and then they come back to wool, particularly in countries like Italy.

**Mr Vasile**—I think if you talk about the tailored area, which is where wool will go to, it has gone down but it has been stagnant now for quite a while. The biggest area where there is the fluctuation you talk about is in ladies wear, casual. They can come in today and love wool but tomorrow it could be synthetics or microfibre. It will change constantly. What I am saying is that, for wool, the tailored area has basically now become stagnant but the other areas are areas that we certainly see as opportunities and we need to be in there servicing those customers when that trend changes. It is in and out as quickly as—

**CHAIR**—Do you get involved in carpet manufacture as well?

**Mr Vasile**—I think they get New Zealand wool for that. There is some but it is not significant.

**Mr Lillie**—Godfrey Hirst is the main producer here in Australia.

**CHAIR**—I find this interesting because your typical industry is under the hammer from changing technologies and competition and China. So it is a classic model of where we need to address getting on top of things, how we can come through this and what we might be able to do. I think it is interesting. The question is: what would happen if all of the wool scouring and carbonising all went offshore, what would be the implications?

**Mr Lillie**—It would be very interesting. It would probably play into the hands of China quite nicely and significantly disadvantage every other country. Lots of these countries have closed all their manufacturing. There is hardly any scouring, except at the big factories in Europe. It would change a lot. At this moment, if it happened suddenly, it would disadvantage the woolgrowers. The Chinese would be handed more power. They are at 61 per cent now. Longer term, I think the fundamental concern would be if one of these threats came along, and we got foot and mouth or some disease, and suddenly Australian wool was not allowed to enter Japan or China in the greasy form. China barred Uruguayan and Argentine wool in greasy form. They did it and there still was a large industry in those countries that could process the wool as required.

**Mr Carey**—And South African wool, for more than two years.

**Dr EMERSON**—How can policy makers ensure that there is a wool-scouring industry just in case there was an outbreak of foot-and-mouth disease in Australia?

**Mr Lillie**—Maybe something like SIP. We do not have an answer. Maybe it should be explored.

**Dr Morgan**—I think that is a good question. It is a very difficult one. By and large, the early-stage processing industry is operated without any assistance at all; it is from the initiative and success of the companies that are involved. It is easy to get emotional about this. The wool industry and the wool-processing industry are icon industries in Australia. But, as Jamie said, if we had no scouring capacity and we did have a disease outbreak it would be catastrophic. They referred to South Africa and South America. In the UK when they had the foot-and-mouth outbreak in 2001—and they are not a large producer—even after they were declared free of foot and mouth, China would not take imports of wool from them for another 18 months. Prices for the domestic producers in the UK just plummeted during that period. It would be disastrous. It is a strategic issue. We do not have an answer but we perhaps could work on an answer together, with the knowledge and skills that you people and your departments have. We think it is something that cannot be ignored. It is not a scare campaign.

**CHAIR**—We will raise the problem and suggest solutions.

**Mr Lillie**—You do not want it to sound too fatalistic but, in a year to 18 months, I believe that two or three scours or carbonises will possibly close. My reason? I just know the threat to our business. I am not crying poor or anything. It is absolutely real.

**Dr EMERSON**—So why does Europe have such a substantial scouring industry? They are a long way away—

**Mr Lillie**—It does not really. It is tiny.

**Dr EMERSON**—I thought you said that apart from China they had some big scouring operations—

**Mr Lillie**—No, we supply them scoured and carbonised wool.

**Dr EMERSON**—So where is scouring done other than China?

**Mr Lillie**—There is some in Europe.

**Mr Carey**—In eastern Europe.

**Mr Lillie**—There is a lot at origin in South Africa and South America—and the USA and New Zealand.

**Dr EMERSON**—Presumably they are under the same competitive pressure, high wages—

**Mr Lillie**—The same thing is happening in New Zealand more or less. South America has a much bigger advantage with wages. I think in South Africa there are only one or two plants left.

**Dr EMERSON**—If we stop thinking of Australia and China as two different countries for a moment and instead think of them as two places that are separated by a \$400 per container cost,

then could it makes sense to have Australia wool production, Chinese wool scouring—I know it is a hard and direct question—and then back to Australia for further value-adding.

**Mr Lillie**—That is for Sal. That is not for us because we only take it to the scoured and carbo form.

**Dr EMERSON**—That is why I said it is a hard question.

**Mr Lillie**—I suppose you have to get things into perspective. Australia exports 470 million kilos. Sal would know exactly how many kilos of wool Australia actually consumes as a country. It might be 20 million kilos.

**Dr EMERSON**—I am not saying bring it back for the domestic market; I am saying bring it back, add value and then sell it. International transport costs are getting low. We think that you could not have something go and come back and then go and come back between countries, but maybe in the future you can—because you have some value-add in the final product.

**Mr Vasile**—But we also then send finished goods from our other joint venture. That does not give Jamie the opportunity. We do it because it adds further value into China and then those markets. So we need to be price competitive. We utilise that facility to export that product.

**Mr Lillie**—From China direct to some—

**Mr Vasile**—From China direct to garment manufacturers or to wherever.

**CHAIR**—Do you want to make a last-minute pitch in terms of what you would like to see in our recommendations? That does not mean that we will guarantee it is there.

**Dr Morgan**—Although we have moved a bit away from it, we talked about tariffs. Tariffs are very important. Dr Emerson said that perhaps the differences are not great in some cases.

**Dr EMERSON**—It is about two per cent.

**Dr Morgan**—Yes, but it is actually more than two per cent because it is two per cent on value-add. You have the cost of getting there, so it becomes greater than two per cent.

**Mr Lillie**—Two per cent is really not far off the kinds of margins our business runs at, because we are traders—merchants. We do big volume, small margin. That is our business.

**Dr EMERSON**—But, in the case of China, a two per cent revaluation of its currency is very likely.

**Dr Morgan**—We had a two per cent—

**Dr EMERSON**—I know. I am just making the observation that exchange rate fluctuations of around two per cent are really common.



**Mr Lillie**—We need about 50 per cent.

**Dr Morgan**—We know that the government is committed to the abolition of barriers to trade internationally through the free trade agreements and Doha—may it have a comeback—so we would support that and encourage the government to continue with that line. If there were a change of government, we would have exactly the same view.

**CHAIR**—I am also the chair of the trade committee, and we operate in a very bipartisan way there, so it is pretty supportive.

**Dr Morgan**—Those barriers are an impediment to the processing industry in Australia. We have indicated some strategic reasons. We believe that China, with perhaps 1½ billion people, may not always have the same power and influence that it has now. I am talking about the wool industry. History has shown that our principal customers have changed over the years, as cost and structural changes have taken place throughout the world. It was only 50 years ago that the UK was in an unassailable position and had been for years, and Japan overtook them with technology and smarts. Then came the USSR, but we had those events at the end of the eighties which collapsed that. Now we are seeing China go. There will be countries after China, and some of those countries may not have a scouring or a top-making industry, such as Bangladesh or Vietnam. For example, we export wool to Malaysia and Thailand, and they have no scouring industry, so the wool has to be scoured here or somewhere. There will be change.

We do think that there are strategic reasons. The animal health ones need to be kept in mind, and Jamie has referred in detail to the changing environmental world. Australia does have some advantages in that, with its broad acres and small population. We made reference to employment. The wool industry, at all levels, is a major employer in regional areas. One of our members—Roger Fletcher operating in Dubbo—today said that, even though we have this resource boom and there are plenty of jobs for people, if you have unemployment in secondary industry in country towns it is very hard for people to find jobs. The cost of retraining and the social impact of perhaps increasing antisocial behaviour are all factors that need to be considered. They are all strategic type things, which we do not have any special answers for. However, we think they are things that need to be taken on board—although you tripped me slightly, Chair, for reverting problems to the committee. They are issues that collectively can be worked through.

**CHAIR**—I appreciate that. Thanks for your contribution today. It was obviously very useful, constructive and challenging for us to hear the real cases. These are not academic cases; they are real life. We appreciate that. We do not suggest that we will come up with any magic solutions, but we are certainly listening, and we will debate it amongst ourselves.

Resolved (on motion by **Dr Emerson**):

That this committee authorises publication, including publication on the parliamentary database, of the transcript of the evidence given before it at public hearing this day.

**Committee adjourned at 3.01 pm**