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Official Committee Hansard

HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON ECONOMICS, FINANCE AND PUBLIC ADMINISTRATION

Reference: Current and future directions of Australia's service industries

FRIDAY, 2 MARCH 2007

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON ECONOMICS, FINANCE AND PUBLIC ADMINISTRATION

Friday, 2 March 2007

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

Members in attendance: Mr McArthur, Mr Baird, Ms Bird, Mr Ciobo, Ms Grierson and Mr Keenan

Terms of reference for the inquiry:

To inquire into and report on:

Where the service export sector now sits in Australia's export (and import competing) environment, focusing on, but not limited to:

- the tourism and education service sectors;
- the impact of the resources boom on the service sector;
- future global opportunities for Australian service exports; and
- policies for realising these opportunities.

WITNESSES

Committee met at 9.18 am

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Economics, Finance and Public Administration. Today's hearing is for the inquiry into the state of Australia's manufactured export and import competing base now and beyond the resources boom and for the inquiry into the current and future directions of Australia's service industries. The inquiries were referred by the Treasurer, the Hon. Peter Costello MP on 3 May 2006. To date the committee has received close to 50 submissions for each inquiry. Copies of these submissions are available on the committee's website.

Australia's resources sector is currently experiencing a well-publicised boom, driven mainly by unprecedented Chinese demand for raw materials globally. While Australia is currently enjoying the riches of this boom, history indicates that high commodity prices cannot be sustained indefinitely. The committee is, therefore, investigating the state of two of our other dominant trade sectors: services and manufacturing.

Today we will hear from representatives of a variety of peak associations and the relevant Australian government department. Science Industry Australia and the Australian Chamber of Commerce and Industry will discuss both inquiries, with services discussed in the first portion of their appearance of approximately half an hour, followed by manufacturing in the second half-hour. Engineers Australia and the Australian Vice-Chancellors' Committee will appear for the services inquiry only. The Department of Education, Science and Training will appear for the manufacturing inquiry only.

[9.20 am]

HARDWICKE, Ms Leanne, Director, National and International Policy, Engineers Australia

HARTLEY, Mr Rolfe George, National President, Engineers Australia

TAYLOR, Mr Peter, Chief Executive, Engineers Australia

CHAIR—I now welcome representatives from Engineers Australia to today's hearing to discuss the services inquiry. You are aware that, although the committee does not require you to give evidence under oath, these proceedings have the same standing as those before the parliament. We have received a written submission from you. Would you like to make an opening statement and then we will proceed to questions.

Mr Hartley—Engineers Australia very much appreciates the opportunity to provide information to the committee's inquiry into the Australian service sector. We believe that services play an essential role in determining both the quality and speed of economic progress. Australia will be unable to compete in the international economy without an efficient and technologically advanced services sector. Engineering services is one of a number of professional services now being regularly traded internationally. Engineering services are universal in application, not being tied to a location. Therefore, engineers, more so than many other professions, are highly mobile. Australian engineers have shown their world-class expertise and capability to succeed in the rapidly growing international marketplace.

There are, however, some major impediments to the international provision of professional services. In particular, engineers experience difficulty with the non-recognition or limited acknowledgment of home-country education and qualification accreditation or licences.

CHAIR—Are you talking about Australians or are you talking about those who want to come into Australia?

Mr Hartley—We are talking, in this instance, about Australians' educational standards not being recognised overseas.

CHAIR—Okay.

Mr Hartley—Other major non-tariff barriers to services trade include nationality and residency requirements; restrictions on incorporation; restricted eligibility for contracts, including government procurement contracts; restrictions on foreign direct investment and ownership; requirements pertaining to a minimum number or percentage of local staff; and restrictions on the international relationship of locally-established firms.

Our submission addressed two of the terms of reference of the inquiry—namely, the future global opportunities for Australian engineering exports, and policies for realising these opportunities. We have made a number of recommendations in our submission. The first relates

to data collection. The true value of trade and engineering services to the Australian economy is essentially unknown due to problems in the collection of services statistics. Until this is improved, it will be difficult to identify areas where trade in professional services including engineering is underperforming, or to measure or predict the impact on trade volumes for changes in policy and regulation. The collection of trade in services statistics needs to improve so as to be able to focus on those activities where trade in professional services could be increased.

The second recommendation relates to technical support for the export of engineering services. To date, most assistance programs have focused on goods. While there has been a shift to include services, we believe that further improvements can be made. We believe that the Australian government needs to be more proactive in supporting professional service providers by providing information, tailored to specific industries and countries, on the types of non-tariff barriers and regulatory hurdles operating in overseas markets and how they can be overcome.

The Australian government undertakes research into the impediments operating to restrict trade in engineering services internationally, in order to participate in the WTO GATS negotiations. Opportunities to also provide this information to Australian service providers should be considered. We believe that the Australian government should identify and promote opportunities to support Australian service exporters to participate in overseas trade fairs and to identify and promote other measures to increase market knowledge, mutual awareness and mutual understanding of trade and investment opportunities between Australian engineering companies and overseas trade partners.

Our third recommendation relates to recognition of Australian education, skills and competencies. Engineers Australia actively pursues mutual recognition agreements with other professional associations and is currently negotiating mutual recognition agreements with overseas licensing authorities. The work of engineering professional associations towards international mutual recognition of university qualifications, licensing and registration needs to be supported by the Australian government, where possible, in free trade agreements under review—such as the Singapore-Australia FTA or the Australia-United States FTA and future free trade agreements such as the Australia-Malaysia free trade agreement.

Again I would like to thank the committee for this opportunity and we would be more than pleased to answer any questions that you may have.

CHAIR—Thanks very much, Mr Hartley. I commend you on your presentation to us and your submission. You have captured what we are trying to get at—namely, the problems and what can we do about them—and you have come directly to it with your recommendations and in highlighting some of the issues. That is very helpful. I read your submission with interest. Pages 30 and 31 provide a good summary of the recommendations; I am interested in several of them. I will ask about the first one: counting the value of services trade. What happens now? Is the counting just not comprehensive? Part of the problem is also in the tourism industry in terms of data collection. It is spasmodic, and other sectors are credited when it is often directly tourism related.

Ms Hardwicke—In terms of collecting statistics from trade in professional services, they are lumped in with other services which makes it very hard to determine which professional services

are being exported. In relation to engineering services, 2000 was the last time that the ABS collected any statistics on the export of engineering services.

CHAIR—Really?

Ms Hardwicke—So we have not been able to get any up-to-date information since then. The ABS does not always collect information on all engineering services; it is usually the larger engineering projects.

CHAIR—What does the ABS, for example, have to say about why they do not? I am sorry that Mr Somlyay, who used to work years ago in that area, is not here, because he was an expert in that area.

Ms Hardwicke—They only do periodic collections when they are requested to do so by government.

CHAIR—That is something we could look at as a recommendation. I think that is an important one. I am interested in the question of supporting professional service providers. In my 8½ years as a trade commissioner—it is true—I cannot remember engineers, engineering consultants, engineering service providers ever coming in to ask for assistance. Perhaps support has not been requested in the past. Could you expand on that? Also, you talk about the various trade fairs. What types of trade fairs—which ones specifically—would you be targeting? Have you approached Austrade for assistance? What has been the result? Have you participated in any trade fairs? Could we get a bit of a handle on this?

Mr Taylor—I might try to answer the first part of the question, if I may, and leave the second part to Leanne. One of things we find is that engineers, particularly consulting engineers, are rather busy getting on with the job. We completed a survey of engineers last year which came up with all the barriers they are finding. They do get on with the job and find work wherever they can, so I guess it is more in the engineers' nature to get out there and get the job done rather than grumble too much about what they were doing. It was interesting: in our most recent *Engineers Australia Magazine* there was a 30-odd page feature on what Australian engineers are doing in the Emirates. That was fascinating.

CHAIR—There are a lot of them there. I know there are 10,000 Australians in Dubai. How many of those would be engineers? Some of us with the trade committee that went to the Middle East met with Lend Lease, which was undertaking some significant construction activities. We met quite a number of Australian engineers then. How many would there be there? Do you know?

Mr Taylor—I guess it would be in the thousands.

Mr Hartley—We are not certain of the exact figure. We can try and get a more accurate figure for you.

CHAIR—Have you got an overall number in terms of engineers working internationally?

Mr Taylor—Of our members, we know there are about 5,000, but that does not necessarily cover the others who are non-members, and by and large we tend to pick up about 50 per cent or so of the number of engineers.

CHAIR—We could judge about 10,000. And then there are those who, because they are overseas, might think it is not necessarily worthwhile belonging to an Australian association.

Mr Hartley—That is right. Also, that 5,000 figure includes foreign nationals who have got their educational qualifications in Australia and are still members overseas. If you take them out, the figure may be in the order of 8,000 or so.

CHAIR—And what about the trade fairs? What fairs in particular would you be targeting, have you approached Austrade, and what was their response?

Ms Hardwicke—We have not approached Austrade as an organisation because that is not really our role. The anecdotal evidence from our engineers is that they have not utilised that service very much. Some of them do use the Export Market Development Grants type of programs occasionally, but they are usually the engineers that export goods as well as services—for instance, in the electronics area—and they find that that works well for their companies; but for services it does not work well at all.

CHAIR—As you know, tourism was added to the EMDG scheme, and perhaps it is time that services as a whole was looked at in terms of assistance to consulting engineers and professional engineers. Consulting engineers who are working overseas would be able to apply for EMDG, wouldn't they?

Ms Hardwicke—They are eligible. They do find some of the criteria difficult to address because it is more aligned with the goods side of things rather than services.

CHAIR—Could you come back to us with what areas in particular they find exclude them, what trade fairs they would want to go into, and if they have had any negative experience with Austrade's work in that area.

Ms Hardwicke—Sure.

CHAIR—I am interested in that area.

Ms BIRD—Can I reiterate the words of the chair: I only have one specific question that I want to explore a bit further with you, but that is only because I think it is a pretty comprehensive and straightforward submission from your organisation. I probably should not be surprised about that. It gives us pretty clear guidance on what we could do. The area that I want to tease out a bit with you is that you seem to be saying that problems arise when engineers get work overseas and then find that government policies, regulations and requirements start to become a real hindrance. I am assuming that you are saying that there could be some sort of advisory service here so that once people got such a contract they could look up some sort of government reference that would give them a guide to that country and its current standing on policy requirements and so forth. Can you explain to me what exactly you think would help in that situation?

Mr Hartley—There are two issues. That is one. The second issue is negotiating and, as we have said here, arrangements, through the mechanism of the free trade agreements, with the other governments to deal with those issues. One of the problems is that companies very often will be aware of the fact that there is some sort of restriction or control from the foreign government but will not be aware of the detail or the magnitude of it until they are actually in the country and about to commence work. If a better basis can be established through the free trade agreements so that there is a full understanding of what the restrictions or the issues are and they can be dealt with first-up, that would greatly improve the ability of those companies to operate.

Ms Hardwicke—Where we are not negotiating free trade agreements, in-country information would be really helpful, and it is just not available at the moment.

CHAIR—You mentioned the free trade agreement access to government purchasing. What has been your success in terms of the US government purchasing? That was one of the areas opened up.

Ms Hardwicke—Only at a federal level, though, unfortunately. At a state level it is not open at all.

CHAIR—It is open in some of them, though.

Mr Taylor—They are rather resistant, because in each American state there is a separate licensing body, and you need to be a professional engineer.

CHAIR—Yes, I know, but it is improving all the time.

Mr Taylor—We are losing some heart in relation to the United States. In our recent work there, in trying to talk to state licensing bodies, what we have found is that about 50 per cent of them do not recognise an international benchmark for accreditation of four-year university courses, through the Washington Accord. That is a bit of a worrisome occurrence that seems to be emerging, and there are some internal rivalries within the United States, which is making it more and more difficult.

CHAIR—But at the federal level, to work for the US government, would you have problems with accreditation?

Ms Hardwicke—We do not know.

Mr Hartley—One of the issues is that the licensing of engineers in the United States is done on a state-by-state basis.

CHAIR—I see, yes. So that is a real issue. Perhaps you could again come back to us with a recommendation in the area of accreditation that we could look at. If it is state by state, it makes it very hard.

Mr Hartley—It is very difficult.

Ms BIRD—This may be something that we need to follow up. It appears to me from some of your graphs that a lot of the services offered are significantly project work, so unravelling the concept of what is the service component of that export is a challenge, but there is a table that shows 'project' at the top and lists the other services underneath. Can you tell me whether those listings underneath are part of projects or are you saying they are specifically separately offered only as—

Ms Hardwicke—Is it the one on page 11?

Ms BIRD—Yes. 'Type of work undertaken', page 11 of your submission. You have got the project management there, which is nearly 70 percent of the type of work undertaken. I want to be clear that the concept work—teaching and training, administering contracts—is where they have indicated to you that the work they are doing is only that; it is not a component of project work.

Ms Hardwicke—It could be a component of part of a project, or it could be just that.

Mr Hartley—There may be instances where a company is doing both: they are providing project management services but they are also undertaking onsite supervision or design documentation.

Ms BIRD—What interests me is whether there is a problem with people who are contracted to provide concept or design work. Do they find it difficult to get that job?

Ms Hardwicke—If there is a requirement—for instance, in the US—that they be licensed to offer that service, yes, there can be problems. The companies then have to find someone who is licensed to supervise their work, which adds costs to the whole project and makes it less viable.

Ms BIRD—I am with you.

Mr Taylor—The same thing happens throughout Asia, too. Malaysia is a case in point. They are quite tight in the way they handle it, which means that you have got to have somebody—from Malaysia a lot of the time—who is actually registered in Malaysia, who is prepared to wear the responsibility for signing-off the design.

Ms BIRD—I understand that another problem is that when we go to do projects the requirement for particular local employment can mean that our companies have some concern about guaranteeing the quality of the outcome as well. It works both ways.

Ms Hardwicke—Yes, that is right.

Ms BIRD—That has clarified it. Thank you.

Mr McARTHUR—I come from a rural electorate so I am aware of doctors coming from overseas to practise in rural Australia. I want to raise two issues. Is the remuneration of engineers in Australia adequate compared to other professions and, secondly, do engineers get paid better if they go to developing nations' projects, where there is more risk involved and maybe the

projects are a bit more exciting? I am interested to know about individual engineers' remuneration rates in Australia and overseas.

Mr Taylor—That is a simple answer—no. They are not adequately remunerated, but anybody will say that. But with the boom that is going on at the moment, if people are prepared to go to the resource areas, then young graduates might start on $80,000 or $90,000 a year, compared with the benchmark which is around $49,000 or $50,000. From that perspective, the remuneration levels are not bad under the current circumstances but that will not go on forever, and there is a lot of competition for people. Rolfe has worked overseas. He might be able to answer the question about overseas rates.

Mr Hartley—In terms of overseas projects, it is very variable. If you are working on an overseas project through Austrade, for example, then effectively you are working more or less under Australian terms and conditions and the situation is not much different. If you are working directly on a project overseas, it can be very variable, and there are times when the remuneration is good; there are times when it is not so good; there are times when the risk profile varies. It is an issue that each individual consulting firm, for example, has to deal with and make the decision as to whether or not they are going to pursue work in a particular market.

Mr McARTHUR—Is overseas work lucrative, given all the risk?

Mr Hartley—It can be. Basically, if the risks are too high and if the return, when you consider the risks, is really not there, then companies will not do the work. One of the issues that I think we raised in our submission is that there is a proportion of companies who see the risk profile to be a little bit too great because of all of the issues and all of the non-tariff barriers that they have to deal with. That is a factor in their decision not to pursue work in particular countries. They are saying that if the situation was clearer and if the risk profile was not as great then they would be much more interested in pursuing work in those countries.

Mr Taylor—On the other hand, people like Leightons are doing very nicely out of overseas work; probably better than they do in Australia.

Mr McARTHUR—What is the general attitude of the profession towards overseas consulting work? If you do not have good work in Australia with the mining boom, do you have a predisposition to look for overseas work or is it a bit too hard?

Mr Hartley—Yes, we see engineering as a global profession. On that basis, we would like to see equal access for our members to work anywhere in the world, basically.

CHAIR—Do you get much assistance from Austrade in relation to opportunities through the World Bank, IMF and the Asian Development Bank?

Mr Hartley—Yes. There have been, certainly from my direct experience, a lot of World Bank funded projects that have been done by Australian engineering firms. One example that I can think of is a significant amount of irrigation and water supply work being done in Vietnam by Australian firms. That is World Bank funded.

Mr McARTHUR—Are they lucrative under the World Bank jurisdiction?

Mr Hartley—Yes, they are. They certainly pay quite adequately and, because of the World Bank involvement—and they are very often done through Austrade—the risk profile is much more manageable.

Mr CIOBO—I apologise, I was a couple of minutes late, so if you have already answered this question I will be happy to read the transcript. You made comments in your submission that the government should refrain from bilateral agreements that cannot be expanded into multilateral agreements. Could you expand on the reasons you feel that is the case and why it is not advantageous to pursue bilateral or multilateral agreements as aggressively as you possibly can?

Ms Hardwicke—We believe that both should be operated. We believe that multilateral is probably the best way to go in the long term, but in the short term we do not believe that you can achieve the objectives because it is very slow, for instance, going through the WTO and GATS processes. If we are going to enter into bilateral agreements, we believe that it should be able to be then transferred into the multilateral arena.

Mr CIOBO—I guess that is ultimately the goal. But I get the impression from your submission that you are saying that unless there is opportunity for expansion a bilateral agreement should not be entered into. Is that right?

Ms Hardwicke—No.

Mr CIOBO—Am I misinterpreting your submission?

Ms Hardwicke—We believe that we ought to be able to enter into as many bilateral agreements—

Mr CIOBO—It is more of an aspirational statement?

Ms Hardwicke—That is right.

Mr Taylor—We are pretty pragmatic when it comes to that sort of thing.

Mr CIOBO—I would like to explore some of the non-tariff barriers that you speak of. I guess it ties in with your desire to have more emphasis put on mutual recognition agreements. Could you expand a little bit more on some of those non-tariff barriers? You talked about advertising; foreign direct investment, ownership requirements, and the minimum number or percentage of local staff. I take it, therefore—and let us look at what is probably the most common example—that if we were to succeed with a bilateral agreement with a trading partner, it has to be quid pro quo between the two countries. Are there any concrete examples where you say, 'Look, we are missing opportunities under this agreement right now in this country'? Obviously, you are saying that that is the case at a state level in the United States because of some of their barriers, but are there other specific examples where you can say to this committee, 'The government should do X in order to achieve a good outcome'? Obviously, there is a generality in the comment, which I think we are probably mostly familiar with. Are there some specific examples that you can cite?

Ms Hardwicke—Another specific example that we know of is Singapore. The board of engineers over there lists a range of Australian universities and they agree to register people who

have been to those universities. It is a very small list. They are now members of the Washington Accord, which we have explained in our submission, and we are hoping that now the government will recognise that the whole of Australia's university system is accredited and therefore they need to get rid of that list in terms of Australian universities. That was something that we had hoped would have been addressed through the free trade agreement, and it was not. That is one area that we would like to see addressed. In terms of other countries, we provide information to the Department of Foreign Affairs and Trade on a case-by-case basis.

Mr CIOBO—I know that on the Gold Coast, for example, there is a company called Hyder Weathered Howe, who are consulting engineers who have done very well in a niche market to do with motor racing and high-rise apartments, predominantly in the Middle East. Do you think that part of the solution is to have a broad-based approach or perhaps some of those niche approaches where we can get behind it and say, 'Look, we've got expertise in this area. That's what we should be rolling out'?

Mr Taylor—There are probably two ways of looking at it: one is, obviously, that if somebody is very good at a particular thing they will do well.

Mr CIOBO—Do you find that it is easier for them then to have access into particular markets, if they are regarded as having world best practice?

Mr Taylor—It depends on the job. Rolfe has been involved with the consultants more than I have. One of the things we have found is that Australian innovation generally is what gets the job. If you can come up with an innovative solution, and it means you can do the same work for a lower price or you can do more work or a better job for that price, the end product for the client is, by far, an advantage to an Australian company—and I think that applies whether or not it is a broad based company. The bigger companies now are very diverse in the way they handle projects. They have social scientists on their staff. It is not just a very narrow engineering base. They have to have all these other disciplines in order to address the multitude of issues that surround any major project these days.

Mr Hartley—The Australian consulting industry in world terms is relatively small when you look at some of the very large American consulting and construction firms that are operating overseas which have 70,000 to 80,000 people employed globally. We do tend to fit into a niche, and one of the areas where the Australian consulting services industry can fit is in providing specialised subcontract and subconsultant support to some of these larger companies. There are a number of firms doing that around the world, and that can be very lucrative. Specialised innovation really is our best niche.

Ms GRIERSON—I have to congratulate you on the document. The amount of information on working in other countries is incredible. Have you had to do that research yourself? Is it off a government site?

Mr Hartley—We surveyed industry to get that information.

Ms GRIERSON—Is it accessible on your website?

Ms Hardwicke—Yes, it is.

Ms GRIERSON—It is on your website, so your engineers can just go on and—

Ms Hardwicke—Yes.

Ms GRIERSON—That is marvellous.

Mr Hartley—We published that information as a publicly accessible report last year.

Ms GRIERSON—That is excellent.

Mr Taylor—I was invited last year by MATRADE to go and speak at an APEC forum in Kuala Lumpur and that research formed the basis of a lot of what I spoke about over there, too.

Mr Hartley—Similarly, using that research as the basis, I presented a paper to the conference of the ASEAN Federation of Engineering Organisations at the end of last year. We have been taking this information overseas as well as publishing it domestically.

CHAIR—Well done!

Ms GRIERSON—And should it be on a government website? Is it the sort of thing you would expect that Engineers Australia would not have to do and it would be on an AusIndustry or an Austrade type of portal?

Ms Hardwicke—We would like a lot of the country information to be available on a government website so that we can more clearly identify barriers to trade for engineering services.

Ms GRIERSON—And perhaps track changes, too, and keep it current, because it is an excellent source of information?

Mr Taylor—Some assistance might be useful, too, because we use members' funds to do this, and a lot of that information feeds into the Department of Foreign Affairs and Trade. Leanne and I and one of her staff often appear at discussions on free trade agreements over at DFAT and overseas. In fact, I attended one in Beijing last year, and Rolfe and I are about to head off to Beijing again.

Ms GRIERSON—My engineers are doing business in China, South America with mining—

CHAIR—Engineers from Newcastle, that is!

Ms GRIERSON—Newcastle and the Hunter—so it is very much a resources boom. I am tracking with great interest the different approaches to offshoring and would like your advice and comments. Some companies are just moving things offshore. These are manufacturing and engineering-dependent industries, linked to mining particularly. Some are just offshoring the whole business. Others are setting up offshore to manufacture the components they are already importing, which I think is very exciting—and that is in China. We have to be prepared for those post-boom opportunities, which I think very much will be located offshore, but in a way that does not strip us of our skills, abilities and economic success.

Are you keeping track of the way big engineering firms and manufacturers in that sort of sector are offshoring? Do you have views on how government can make sure it is not just leaving Australia but value-adding to what we do in Australia—for example, where they are now setting up in China to quality-control the components they are already importing and to make sure the supply chain is credible and available all the time, and also for those currency advantages that come when you are an exporter from China rather than an importer from Australia?

Mr Hartley—Can we talk about the consulting sector rather than the manufacturing sector, because that is the one that we have probably got the most detail on?

Ms GRIERSON—All right. That is a little bit different, yes.

Mr Hartley—That particular sector is doing it in a number of ways. A number of companies are setting up a significant presence overseas, either on their own or in conjunction with a local firm. A number are also doing design work in Australia and, basically, moving it virtually around the world. In some instances they are relying on design offices elsewhere in the world in a truly global way. There are a variety of ways in which it is being done. You touched on one of the issues in terms of manufacturing—but it applies to consulting as well—and that is quality control. When you have documentation and designs being produced from a variety of sources you have a significant quality assurance issue, especially if the quality assurance standards that apply in the host country are not what we would normally see in Australia. That is something that applies to manufacturing as well.

Mr Taylor—It all comes down to maintaining your competitive advantage, and you have to be careful, whichever way you handle it, that you do not give that away in terms of the IP and so on. Rolfe's predecessor comes from the Newcastle area and has just established a factory in China, but I do not believe that he will be operating that business in such a way that it will detract from his ability to be the world leader in the sort of equipment that he produces. He will keep that, I think, pretty tightly under wraps.

Ms GRIERSON—Many of our firms do have offshore offices, and their staff move around the world, as you say, and do very much virtually—designing things they have never seen for places they have never seen. But the way engineering consultant firms are working at the moment is that they work in teams, not just with engineers but with environmentalists, economic modellers et cetera. So there is a team model, yet I would think that the training of engineers probably has not moved to recognise the new ways of doing business in that team and associated areas approach. Am I wrong? Tell me I am wrong! Is there a need for change?

Mr Taylor—I think you are wrong, with respect. We have a couple of programs. We have a professional development program which is aimed at getting people to the stage where they are capable of independent practice. That covers a whole range of activities. We have another one aimed at producing engineering leaders and managers, which is the next level up, and that is being adopted pretty well, I think. In fact, we have about 300 different firms or organisations participating in the first program, including the whole of Defence Materiel Organisation and the whole of Defence, so it is a very significant exercise. And that is, I think, helping to build that sense of teamwork.

About this time last year we had an Engineering Australia conference in Sydney with the CEOs of most of the major consulting firms present. They all had professional development programs in-house, not only to lift the competencies within their organisations but also as recruitment and retention tools. They are all very much aware of this in a competitive world.

Mr Hartley—Having said that, one of the major initiatives that we have running within Engineers Australia at the moment is a study we call the Task Force for the Future. That is a group that is drawn from expertise within our broader membership. It is looking at the changing nature of the way engineering is practised, picking up exactly the issues that you just mentioned and asking how we keep pace with those changes.

Ms GRIERSON—They will come out with some sort of recommendations or report to you?

Mr Hartley—It will be, essentially, a set of recommendations, which will come out internally, which will guide how we continue to develop our professional development program, work with our professional development partners and decide what sort of continuing professional development we provide to our members.

Ms GRIERSON—You were recently involved in a forum in Newcastle, I gather, on the deficiency of engineers and how we attract and build up our numbers of engineers. It was not on your national website, so I do not know if it was just a local activity, but I did not see any outcomes in terms of what the recommendations were. Are you aware of it, and, if there were recommendations, can you send me a copy?

Mr Taylor—I think that was the one that was organised by a consulting firm and we participated, but it was not primarily our function.

Ms Hardwicke—But we did have a participant there, so we will get you what came out of it and send it to you.

CHAIR—That would be good, and perhaps you could send a copy to the secretariat as well.

Mr KEENAN—Have you found that when Australia has completed an investment framework agreement or an FTA with particular countries, or even groups of countries, it has improved the access of Australian engineers and companies doing business there, and has it improved the recognition of Australian engineers wanting to operate overseas?

Mr Taylor—I think the feedback said that that was the case, although, again, there obviously has not been any real benefit from the United States agreement yet, because of the issues we talked about earlier on. But I think in that survey there was some feedback that said they thought the situation had improved. There were no facts and figures to back that up, but they thought the situation was improving.

We work very hard on our own bilateral arrangements and there are a couple of things happening at the moment. We have been to Canada a few times to talk to the Canadian Council of Professional Engineers. They have a similar situation to the US, where each province and territory has its own licensing body, so you have to be licensed by that body to operate in that territory or province. We are very hopeful that we will have an agreement by about October,

when Rolfe and I go back there, which will provide Australian engineers with much easier access and a much greater facility for being licensed in those provinces, and we think that is a great move forward.

With China, which is a much tougher nut to crack, we are in the process of understanding how China's engineering profession works, how their training systems work, and we are encouraging China to join the Washington Accord on accreditation of four-year engineering courses. We are offering to mentor China in such an application. We have spoken to them. They were out here just before Christmas and we will be meeting with them again in the next week or so to encourage that, because I think it is better to have them in that benchmarking tent rather than outside it and perhaps being lured into an ASEAN tent, or somewhere else.

Mr KEENAN—Do you know if these particular issues are on multilateral agendas, such as APEC's, and have we seen any improvements through that process?

Mr Taylor—We do, but that is double-edged as well. We have an APEC Engineer Register which enables engineers who meet the criteria, which is usually seven years experience plus their degree, to be registered on the APEC register, which provides a basis for mobility between engineers of participating countries. In practice, that has not resulted in any great improvements yet. The only real one is between Australia and Japan, and again it only applies to a few disciplines of engineering.

The APEC engineer register may be picked up to some extent in the Canadian agreement. But there is a lot going on in South-East Asia which seems to suggest that they are more interested in ASEAN than APEC. There are all sorts of reasons why that might be—Cambodia, Myanmar and Laos, for instance, have real troubles meeting the required standards. It may well be that, with the help of Malaysia, the ASEAN engineers register may set some criteria which are not adequate as far as the members of the Washington Accord are concerned.

CHAIR—Thank you very much. It was very interesting and a very professional presentation. We appreciate it. You have put yourself in the mindset of what this inquiry is about. If you have further inspiration following the discussions today, please submit it, because we are interested in your recommendations. Collectively we need to be looking forward and making sure that we are globally competitive and that some of the barriers that you talked about are removed. We will do what we can to assist, because it is an important component of our export trade.

[10.06 am]

BAKER, Professor Mark Scott, Committee Member, Science Industry Australia Inc.

FRAVAL, Dr Hadrian, Science Industry Australia Inc.

GONIS, Dr Jim, Executive Council Member, Science Industry Australia Inc.

PULSFORD, Dr John Derrick, Science Industry Australia Inc.

CHAIR—I welcome representatives of Science Industry Australia to today's hearing to discuss the services inquiry. Do you have any comments to make on the capacity in which you appear?

Dr Pulsford—I am the research and development manager for Varian Australia Pty Ltd.

Dr Fraval—I am the managing director of Rofin Australia.

Dr Gonis—I am the general manager of the environmental division of Amdel, Australia.

Prof. Baker—And I am the chief executive officer of the Australian Proteome Analysis Facility, one of our major national research facilities.

CHAIR—Three doctors and a professor: that is a pretty good representation. We feel intimidated! Although, as you know, the committee does not require you to give evidence under oath, these committee hearings do have the same standing as proceedings before the parliament. Now we would invite you to make an opening statement and Mr Keenan will then lead in terms of the questioning.

Prof. Baker—Firstly, I would like to give the apologies of the executive director of Science Industry Australia, Duncan Jones. Duncan has got a personal health issue that he is dealing with that requires daily treatment.

We are here to represent Science Industry Australia. This industry represents now a growing body of Australian industries. It is an industry which has been fragmented in the past and has, through the Science Industry Action Agenda, now started to come together. It represents a significant service and manufacturing sector in Australian industry. It employs about 50 per cent of its workforce as graduates and it has about 25,000 employees across the sector.

During the Science Industry Action Agenda, it was quite difficult to define what the science industry was and to find ABS statistics that could allow us to measure the success of the science industry. So the action agenda led to a process and interactions with DITR and DEST that have allowed us to submit a definition of what the science industry is and to set an action agenda for the next 15 years, which looks at trying to do a number of things which we have included in our submission.

These include to grow exports; to increase the percentage of innovations that are in our publicly funded research agencies—like CSIRO, universities, and research institutes—getting through to production; to progress regulation and to minimise red tape so that some of our larger industries could capture that innovation cycle; and to attract and retain a skilled workforce. We were privileged to hear the engineers a minute ago saying that they were experiencing exactly the same issues that we have. Finally, we want to promote the Australian science industry as an industry in its own right, both internally and externally to the export market. I think my colleagues might be able to do a better job than that.

CHAIR—Mr McGowan, from the committee secretariat, has just reminded me that we should concentrate on the services sector first. We have got this artificial construct of trying to divide the *Hansard* into references: services and manufacturing. So we will concentrate, first of all, on services and then we will do a switch to manufacturing. Were you about to make some further comments?

Dr Pulsford—I think Mark has covered science from an introductory point of view.

Mr KEENAN—I want to pick up on the point about red tape and bureaucracy. Could you expand on where you see problems in that area?

Prof. Baker—I think that some of my colleagues have actually experienced it.

Dr Fraval—Small companies, particularly, in the administration of some of the R&D concessions or grants that they might apply for, have to expend quite a large amount of effort and time to benefit from those. The question is: is it worth the effort? That is one of the questions that some of the members have asked. 'If it's going to cost us $50,000 in order to get $70,000, is it really worth it?' That is one of the items. From a personal point of view, our own company has been involved in R&D for the last 17 years and we are very grateful, I might say, for the assistance that we have received through EMDG, the R&D concession, the Start grants etcetera. They are all very beneficial to the company. The only question is for smaller companies: do they have the wherewithal which will allow them to efficiently gain access to those?

Mr KEENAN—Is that a realistic assessment about what would happen? You would need to spend $50,000 to get a $70,000 research grant? How would that $50,000 be spent?

Dr Fraval—I hate to be specific, but I have a specific example from my own company, where for over two years we have been 'discussing'—I think that is the right word—with the ATO our claim that we were $20,000 under the $1 million-cap, compared to their claim that we were a few dollars over. Is the effort for us to keep on with it really worth while? We only have to do it because now the ATO says, 'We'd like you to.' We supplied them with 30 kilograms of papers, audits et cetera, and they are still discussing it. I put it to you: is it worth our while? That is an example.

Mr KEENAN—If you were to pinpoint the area of government that is a problem, you would say it is within the ATO and the assessment about tax concessions in relation to R&D. Is that what you are saying?

Dr Fraval—I am specifically talking about R&D, because that is the example that I gave. Maybe others have other examples. In an application for a grant—it might be a Start grant—there is quite a large amount of work to be done in order to create a presentation which will allow the grant committee to feel comfortable that you are a company that would be able to carry it out. One would accept that that would be your duty; however, the paperwork during the course of the grant is quite onerous. I can only be as specific as that. There are a number of milestones within a project and each milestone has to be audited and reported on.

Mr KEENAN—I suppose you can understand that the government needs to account for the expenditure of public money, in a sense, and it is a matter of finding that right balance.

Dr Fraval—I understand that. What I am saying is that one needs to look at whether it is too rigorous. That is my point. I know why it is there: it is in order to make sure that the public money is not abused, and there have been instances where it has. One is not complaining about the fact that it has to be policed, and adequately. It is a question of whether it has gone a bit too far. My ATO example is a situation I would question and say that the spirit of the law that government passed has been misinterpreted. If it was $2 over the $1 million, I do not think that the $1 million was a sacrosanct number, it was an indication, and I believe the ATO has taken that too far. That is my opinion.

Mr KEENAN—I want to ask about the barriers that you are finding to trade in services internationally. Again, I want to flesh out whether some of the agreements that Australia has negotiated with some of our trading partners have been helpful in that area.

Dr Pulsford—It is interesting that you are focusing on services, because I really have to say that basically we are not into providing services. We are a designer and manufacturer. In fact, our customers are frequently the sorts of people who provide those services. So I am not too sure how to answer that question.

Mr KEENAN—I suppose if you are looking at trade barriers, it is easier to identify things in relation to manufacturing than in relation to services. Has nobody here any experience?

Prof. Baker—As a major national research facility, one of the things we are providing is services to the Australian research community in the hot area of research called proteomics. For example, we characterise the proteins that make good-quality wheats for biscuits or breads et cetera, or barleys for beer—or, equally, we might be discovering proteins that give an early indication of ovarian and breast cancer, prostate cancer et cetera.

The technology was invented in Australia, and we have deployed it through the major national research facility, and find that about 50 per cent of our business—about $5 million a year—comes from international sources. That is because the innovation cycle has remained in Australia. We have managed to capture a workforce now by recruiting international experts that have industry experience and bringing them back into our major national research facility that is embedded primarily in universities. That has allowed us to provide services locally and internationally.

The barriers that we have at present are primarily, I think, trying to get the innovation cycle looking forward—so, filling in the gaps in the innovation cycle. In particular, Australian

investment into commercialisation of products has been traditionally in our industry late stage, and so there is a gap between things like the ARC Linkage grant schemes, the NHMRC development schemes, and getting product from the publicly funded research agencies into organisations like Varian, Rofin, SGE et cetera, and the local Australian companies that are commercialising Australian product.

We do not have any problems getting it to the world. The issue is trying to fill in those gaps in the innovation cycle. That is the particular issue that Hadrian was trying to address. Trying to encourage Australian companies to pick up the Australian innovation out of our publicly funded research agencies is the critical issue in getting the services out.

Ms BIRD—I would like to explore that a little bit further. I find it interesting, in that I have dealt with some people at my own local university, trying to link them up to pharmaceutical companies and so forth. It strikes me that a lot of the university operators are pretty naive about how the industry works. Is that the sort of gap that you are talking about: people are doing fabulous pure research in the area that they love, but their understanding of how to take that a step further is pretty simple and undeveloped? You are all nodding. I am assuming that that is a common experience.

Prof. Baker—There is unanimous agreement. That statement is very accurate. Getting the research through the commercialisation entities, either in CSIRO or universities, has been less than optimal. There are lots of reasons for that. The whole commercialisation sector of those agencies that take the research from the basic researcher and present it to companies is fairly new in Australia. I think that is probably less than a 10-year-old industry in its own right.

Dr Fraval—The point you make is a really important one. We do have fantastic innovation from very naive people. I think you will find that one of our proposals is to have a bridge—it is an innovation but we do not know whether it is commercial—that will allow there to be an interaction between commercial and the inventor. The innovation centre would say, 'Let's meter this, let's measure it. Is this something that is worth while?' The big problem with that is: where do you find a commercial entity that is willing to take a risk to evaluate that? I believe that is where the challenge is: let us find a forum.

Ms BIRD—In some of the partnership arrangements, you are locked into a particular person picking up your product and taking it, rather than getting it to a commercial-ready state and saying to the companies that would be interested in it, 'Okay, come and talk to us.' You also do not necessarily want too tight a relationship at that point.

Dr Fraval—You might be lucky and you might not be.

Ms BIRD—Yes, exactly.

Dr Pulsford—It really is an issue not just for services but for manufacturing as well.

CHAIR—Do you have a problem with government-funded organisations moving through commercialisation of products?

Dr Pulsford—We talk to about half a dozen groups a year; mostly they are government funded. You occasionally get a private group come in and talk, but it is generally government funded. I think there is too big a communication gap between the two groups, or too big an expectation.

Ms BIRD—That might just be early stage, do you think—that we are just starting to do this—or do you see flags going, 'No, there's a structural problem'?

Dr Fraval—I think there is a bit missing. In my view, there is a component missing. I can only relate it to this: if one had a forum like this and you were the research organisations and we were the commercial entities and we had had our green hats on—meaning that we are just discussing, 'This is what I do,' and you are saying, 'This is what I have'—we could see whether there might be three or four companies here that potentially match up or are in the same area as your research. Of course, there is a problem of confidentiality too, because we are going to release some information that may be sensitive and we do not want the whole world to know about it. If one were able to create such an environment it would be very dynamic and useful.

Yesterday I went to the CSIRO and I found out about something I did not even know they were working on. It was actually going to be very valuable to me, and it was only through a conversation—a general one—that that came up. So that is an example.

CHAIR—To zero in on that, what specifically would you recommend? Would you recommend the establishment of a forum to talk about some of these areas?

Prof. Baker—There already are a number of fora that have started to address this: KCA—Knowledge Commercialisation Australasia—and AusBiotech, for example, have fora that are trying to create these networks between the discoverers, innovators and inventors, and those who commercialise or the industry partners. There are some strong efforts around the country that are starting to pay off, but we are looking forward now and saying that there are still some gaps in that process and that the job is not done.

CHAIR—Specifically, how do we overcome that gap?

Dr Pulsford—I think it goes back to the expectations. We are a commercial company. We have to do things. We have to make a profit and we have to do things within a certain time frame. We do not want to lose our commercial integrity and the universities or the CSIRO have an invention that they think is worth millions. It may be; it may not be. They have a problem: 'How do we divvy up working with intellectual property?' There may be some that come in; there may be some that gets jointly developed. How do you commercialise that and how do you pay back a fair reward to both partners?

The other thing that we find is that generally research institutions have a quite different time frame than we have to live with. You don't only have this problem with televisions and DVDs: in our industry a platform life cycle might be seven or eight years and that might include two or three transplants—maybe some new software or something like that. It could well be that the research institution takes seven or eight years to get to step 2, whereas we are past step 10 and we are looking for step 1 on the next thing. They are the sorts of areas that we have had

problems with and we keep having the same problems. We know we have got people to talk to. We talk to them but it is much easier to pull it back and do more of it internally.

CHAIR—We are obviously considering our report. What specifically would you recommend to government that they do to try to overcome that?

Ms BIRD—It is clear that some overseas countries do not have this problem, because they are stealing our innovation and commercialising it. So what is happening somewhere else?

Prof. Baker—There are a lot of factors that are certainly playing into this. For example, the high failure rate of spin-offs and start-ups is one contributing factor that allows for that product to be taken off shore. In addition, there is the late-stage venture capital investment in Australian discoveries, whereas in the States, where I have recently returned from, in Silicon Valley, you can get early-stage investment—or could have, 10 years ago—in almost any invention that you put on the table in genomics, proteomics, metabolomics: any of those '-omics'. In Australia it has been quite difficult to get funds for those early-stage technologies that Australia has been quite good at in our basic science sector.

Ms BIRD—Who is providing those funds in Silicon Valley?

Prof. Baker—In the States?

Ms BIRD—Venture capitalists?

Prof. Baker—It is venture capital money; getting in early.

Dr Fraval—It is private money. We do not have that situation here.

Prof. Baker—So we are funded further into the innovation cycle by government.

Dr Fraval—You are specifically asking us what we recommend. In our submission we are saying that there could be something called 'a proof of concept', three-to-one encouragement to publicly funded organisations and industry to say, 'You are a publicly funded institute. You've got something, we think, maybe, but let's measure its commercial viability in terms of how much and how long it would take us to get it to a product.' There is that little bit of middle ground there in which I think government could assist. It is the biggest risk area and, maybe out of every 10, two or three of them will succeed, but if you never had any of the 10, then none of them are going to go ahead.

Ms BIRD—That would require specific funding to universities, because they are going to say, 'We don't want to do that role because we've got to provide the people in the classrooms and the PhD supervisors and so forth.' They do not want to spend all their time on that sort of thing. Perhaps a specific focus of government funding of university roles that allow that to happen might be useful.

Prof. Baker—In fact, it might be more beneficial to split the funding between company and university, so that it is actually encouraging the partnership: it is a proof of concept and it is only

late stage. There have to be impediments to stop universities from using this for basic research, for the early-stage stuff that we already have very strong funding programs for.

Dr Fraval—It is also the driver. The commercial will be the driver. We worked with Curtin University of Technology and RMIT on a project which was funded by government. We were just the commercial entity at a safe distance, and we did not have the input into that project that we would have liked. That was in the GIRD days. I think that the commercial entity does put an accelerator on the thing which maybe the university does not quite understand.

Ms BIRD—There is another small thing that I want to explore. It was interesting when you talked about the 30 kilos of paper required by the ATO for applications. I have a boat-building and boat-licensing company in my area and they brought their box of applications to me and said, 'Of all of those applications; we've got two of them.' They were making the point to me that government funded programs should look at rationalising criteria, so that there is a set group of criteria if you are applying for particular government program funding. You could resubmit the same thing, fundamentally, just with updates that are allowed to be much more specific to that particular program, rather than rewriting every application. I am interested to know whether that sort of approach would be something that you would see—

Dr Fraval—It sounds very attractive to me.

Prof. Baker—It is the Australian Research Council and NHMRC grant time at present. They are going into universities this week. I can tell you that in both of those programs you have to rewrite your grant every year because the formats are changed from year to year. That is done to decrease the numbers of applications. You have to be totally dedicated to putting in a new application each year. And it gets reviewed by a different group. It is completely different in the US and in Europe, where your grant applications are seen and they grow and they develop—they become more mature over a period of time—and where the review panel is basically quite constant.

Ms BIRD—Yes, otherwise you end up funding the same people over and over again, really.

Mr CIOBO—You have touched on a number of the issues I wanted to touch on, but I want to explore a couple of things. Are you aware of the incubator program that the Australian government has funded, and centres of excellence and so on and so forth—Australian Technology Park in Sydney? It seems to me that a lot of that touches on exactly what we have just been talking about. I am interested in your observations about how successful or otherwise those programs have been.

Prof. Baker—We are aware of all of those programs. In fact, there are members from each of those programs in Science Industry Australia or on the action agenda. I think the issue there is that they have been quite successful locally; it is whether they can be distributed nationally. ATP, for example, is a stunning example of success, but it is a very localised New South Wales initiative. KCA is growing slowly and steadily; its membership is increasing. Those initiatives that are out there, and the centres of excellence that you refer to, are individual, focused initiatives. What we are trying to do is say, 'We need to broaden the scope of this so that we've got a technology pipeline that goes from early discovery all the way through to the generation of industry.'

Mr CIOBO—If the model is shown to work, why then is the market not doing that itself?

Ms BIRD—Because it is imperfect.

Dr Pulsford—I think part of it goes back to the other people in the equation. Mark Baker mentioned the role of venture capital. There has to be some funding in there somewhere, and I do not know that there is an awful lot of it around in Australia.

Mr CIOBO—Capital has never been as cheap as it is now. We know that for a fact. Capital has, in a global sense, never been as liquid and never been as cheap as it currently is, so I struggle with the concept that there is no capital. There certainly is capital, but it is just not being invested in this area.

Dr Fraval—Yes, I think that is right. There is a lot of money around—for instance, in superannuation funds. But they are looking for security, and I think we must admit that innovation is sometimes successful and sometimes unsuccessful.

Mr CIOBO—That is obviously not the case in the United States. Let us hold that up as the beacon of venture capital investment—early stage, late stage, whatever you want to call it. There are other examples. Israel, I think, is quite good in this area, and Finland.

Dr Fraval—The big difference, though, is that they have got 250 million, 260 million or 270 million people that they would be marketing to as an incubator, a starting-up company.

Mr CIOBO—So it is the market size?

Dr Fraval—Yes. We are going to a market of 20 million people. I think the view of the capital is, 'Where is the best use of my money?' and I do not think they view innovation of small new ideas as something that is important to them or secure enough.

Mr CIOBO—Is it the case, then, that perhaps with these kinds of innovative and research based projects, be they services or manufacturing—probably, predominantly manufacturing—we need to get those who are working, the scientists, and those who are involved in undertaking this research to raise their eyes and look at it as a much bigger market than just Australia? Should we be looking at opportunities to expand and broaden marketing for these kinds of new products into foreign markets right from the get-go?

Dr Pulsford—It is unlikely that any of these types of ideas in our industry could survive if we only looked at the Australian market. That is why virtually all of the big companies, and probably a lot of the small companies, in the business are already global companies.

Mr CIOBO—So these wonderful Australian projects that we come up with that ultimately go offshore are in fact a process of natural selection, whereby those that realise the true international marketability of these concepts actually exercise that right and take it offshore?

Dr Pulsford—I think 'natural selection' is a good way to express it, because the markets are much smaller and the venture capitalist structure in Australia is not as aggressive and risk-taking as it is overseas. Not every American venture capitalist makes money every time. I know of

several that have lost money on certain things that they—and we, somewhat peripherally—have become involved in, but there are also an awful lot more wealthy people in America who seem to be able to, almost as individuals, make this money available. I do not know that there are a huge number of wealthy individuals in Australia with lots of money to give. There might be money in superannuation funds, but I am not sure that that is a good way to go, from the members' point of view, all the time.

Dr Fraval—It is also about creating the environment. If one has not created in Australia the environment for the people to stay and flourish here and, therefore, to employ people here, of course they are going to go and maybe sell out to overseas or whatever.

Mr CIOBO—But is that what it is? This is what I am trying to delve into. You talk about creating the environment. They are policy decisions that the government can make. Is it the case that we have not created the environment? I am left thinking that in fact we have, and it is actually the market sorting itself out. That is why I say it is almost a process of natural selection. Is it the case, really, that we have not created the environment or is it the case that people simply see better opportunities—that is why I say it is a process of natural selection—and they go offshore? This is really the nub of the issue that we are boring down into.

Prof. Baker—I can give you an example that comes directly from APAF's experience. When I was recruited back from Silicon Valley, I deliberately decided to recruit non-academics from Australia but industry-trained Australians who had gone offshore. So I deliberately went out and targeted a list of 20 expats that I was going to bring back. How did I get them back? The only way I could get them back was to go to other companies and say, 'Let's work together,' so that I could supplement their salaries, because the standard university salary was not going to bring back Professor Mark Molloy from Pfizer and Ann Arbor. I had to supplement that salary; in fact, almost double it.

That is the sort of problem that we face in dragging people back out of a market where they have gone—post their PhDs, usually, in Australia—and getting them back into Australian industries to be creators and drivers of innovation. We do have to make an effort and I think any assistance the government can give to increase this 'brain gain', as I call it, would be to our benefit, especially in the science industry, because we are growing this industry now at a rate of about 12 per cent to 13 per cent per annum.

CHAIR—There was a grant announced by, I think, Dr David Kemp some time ago.

Mr CIOBO—Sure, but again what I am hearing from you is that the market is working.

CHAIR—Yes.

Mr CIOBO—These guys can, in a much bigger market, earn a lot more money.

Prof. Baker—I think we resonated with your natural selection idea. That is exactly right.

Mr CIOBO—Maybe our policy focus should not be to pretend that we can in some way put barriers up and retain all this in Australia. Maybe our policy goals should be to say, 'Well, look, let's try to get our biggest and best offshore but retain that IP in Australia if possible, and

generate the wealth through being world-class when it comes to IP.' I am not saying that is the answer, but is that the kind of thing we should be doing?

Dr Pulsford—It depends on where you see your outcomes. For example, it is great to own the IP, but let us say you do sell the IP overseas—and the licence fees are bundles of money, and things like that—but in the end, does that grow your infrastructure and your manufacturing capability? Does it employ people? This may be a distinction between providing services and providing manufacturing, because manufacturing certainly cannot survive in Australia by servicing the Australian market. We export 96 per cent to 97 per cent of what we build. If we look at intellectual property, it might be a completely different model. Indeed, if you look at services industries—for example, laboratory supply or analytical services companies; and Australia has a few of those which are globalised—you find that the business model is the innovation and the intellectual property, rather than saying, 'Let's patent some fundamental invention,' or something like that.

I hesitate to spend a lot of time talking about services industries because I am not really in one, and we look at things like intellectual property from a different perspective. We look at things like, 'Well, we want to employ people. We want to actually make things and make them better next time around, and sell them, and actually bring in not royalties but 100 per cent of what we build in terms of the dollar value,' and things like that. It is a distinction that might be perhaps bigger than you think—depending upon how one goes about it.

CHAIR—Do you use the Pooled Development Funds program? Do you find it adequate?

Dr Pulsford—We do not. We are largely self-funding for our research and development, partly because we have to be: we are above the thresholds or the ceilings of most funding. About the only funding that we get is the taxation concession on R&D. We have become progressively more internally focused, and we have got too many things to do anyway, to be honest. We do not do some things because we run out of money. Perhaps if we had access to some more of these schemes, we might do more of those sorts of things—not particularly that scheme, but Start grants or whatever. We are out of those and we cannot get them.

Mr CIOBO—I have a bit of a hypothetical question for you. If I could offer you an investment where you derived the full benefit—I'll pay up front 100 per cent of the cost but ultimately ask you to chip in 25 per cent of the investment and you retain the full benefit—do you think that would be an attractive proposition?

Dr Fraval—Sounds good to me!

Ms BIRD—Is it legal?

Mr CIOBO—I think most people would say yes. The reason I ask that is because I take issue with your submission on page 80—your concern about HECS fee increases for students in science and engineering. Basically that is the proposition that is put forward to any tertiary student. They invest 25 per cent over a period of time only if their income rises above a particular level. They derive 100 per cent of the benefit, yet for some reason in this country we have got this notion that HECS is a huge barrier to study.

My interest is to cut beyond the rhetoric and get to the facts. I know of no-one in my peer group, or anything like that, who has ever been dissuaded from study by HECS. I am fascinated that you have put that in. Have you done any quantitative research that indicates that students being required to pay 25 per cent once their income passes a certain threshold is the reason they will not go and study?

Dr Pulsford—My answer to that is, no. I do not know of any person that has or has not done that, to be specific.

Dr Fraval—The point that we were trying to make in that submission was that we were trying to find—that was one of the items that was a possibility—some way to encourage more students not to go for history and English but to go for the perceived more difficult subjects to get a degree. How do you do that? That was a suggestion of one way to do it.

Mr CIOBO—I guess I am just saying that I do not think it is because of the imposed level of HECS. I have never heard put forward a good argument that HECS is a barrier and I am trying to explore the strength of your proposition, to be frank.

Prof. Baker—Science Industry Australia has not undertaken any study of that fact or that contention. It is pretty clear that we are trying to do is to generically say that anything that would encourage—

Mr CIOBO—I support the aspiration. I just think that the specifics may be questionable. Thank you.

CHAIR—There have been some good questions. We have tried to have this artificial construct of separate questions on services and manufacturing. It is clearly not working. If you have got specific manufacturing responses, then we would be interested in those as well.

Dr Pulsford—I just have a general statement, using our company as the basis. We are in a range of businesses which are all associated with designing and manufacturing scientific equipment. We have about 70 or 80 engineers, so the previous people would be in tune with that. We also have about 30 scientists, so we are a heavily R&D-intensive kind of company. About 10 per cent to 12 per cent of money goes into investment in R&D. As I mentioned, we basically manufacture everything here for the whole word. We export 90 per cent of it. Our biggest issues in terms of manufacturing are getting good people to work in R&D and to work in manufacturing.

CHAIR—Do you recruit people internationally?

Dr Pulsford—Very occasionally. We have some very specific jobs that need to be done and for those appointments we do look outside Australia sometimes. We would occasionally ‘import’ somebody, if I can put it that way, but generally not. Generally we recruit locally. The people that we have tended to recruit overseas have been more than just the general engineer or the general scientist, so I would say we would import someone every year or every two years—that kind of thing.

The other issue that we have with running the business is that we have got too many ideas to fund. We always leave things on the shelf and we are struggling to find some funding for something at the moment. Some things will not ever get done because we are too busy doing other things, and we struggle to get access to extra money by way of anything other than from our parent company to do those projects that we do not typically do. That is a little bit like our world in a nutshell.

CHAIR—I am sure you would not be suggesting that government provide a pool of funding for investment in that area. Or are you?

Dr Pulsford—Not entirely. But there are some things that are high risk but also have good return to the country in terms of exports and employment and growing of the infrastructure that are worthy of consideration. To pragmatically answer your question, governments do not think that way—that is why we have not got this money. It is rather like: where does the HECS scheme fit in? Somebody who might be a genius might think that that is the straw that breaks the camel's back. We should not go down those sorts of pathways too much because it is individualising things, but it is important that, in return, the government understands that some things that could happen, and probably would be of advantage to the country, do not happen when there is not enough of that sort of thing.

As I mentioned, we are basically at the taxation concession level, and that is it. We have a couple of projects which we know would generate good returns but I do not think we will do them, because we are doing the ones which will generate better returns. We are not doing all of the projects.

Ms GRIERSON—The conversation that we are having about finance and risk is terribly important. The market does not want to finance risk and take on risk, and with science and innovation there is always risk. The government has reduced its contribution to risk. We do not have the access to risk capital, so I think that some of the points that you are making are essential. If we do not invest in other ways, then we are really always going to be diminishing the opportunities for this country. But someone has to invest eventually and government does have access to funds at a lower cost than anyone else, so it seems to me that somewhere along the line there has to be recognition that investing in the future through science and innovation carries risk. There is something that can carry that burden better than others—and that is government.

I listened to the argument on HECS and I think it has to be pointed out that there is some gross hypocrisy, in that the government's parliamentary staff have access to HECS reimbursement, ADF do not pay their HECS in their training, and yet our students have to. I notice that one of the vice-chancellors recently came out and said that they thought Australia was at the tipping point, where the HECS level was such now that it was becoming a barrier. Does your profession consider that that comment may be having an impact on recruitment and people going into science?

Dr Fraval—We are not saying that it is the only thing that is going to work in terms of getting more people into science, but it was the readily available option in front of us. I am sure that people could find other ways of encouraging students to make that decision, but, in terms of

what we looked at, that was one of the easiest options. Is it the most effective one? I do not know.

Ms GRIERSON—The better manufacturing businesses in the Hunter have gone back to cadetships. They are basically now paying for their personnel to go to university. They are paying their HECS, they are carrying them in their workforce permanently, and they have reintroduced the cadetship approach. If industry is at a point where it wants to do that, should we be opening some incentives for it to do that again?

Dr Fraval—The answer is yes, of course. Relating a specific example, our company employed a student from Swinburne University of Technology for six months as part of their course. I think it was a four-year course. Within that four-year course, for six months they worked in our company. They basically got some experience of the real world, which is quite an important aspect that they do not get at university, and we get a look and say, 'Gee, this might be somebody who has potential as an employee for the future.' It worked quite well in the situation where we had a student, and I wonder whether it is something that needs to be looked at a bit more carefully—whether that is an option to bridge the university-to-real-world situation. I know that Swinburne does it, but I do not know whether very many other places do.

Ms BIRD—There is another thing that we sometimes miss, and someone made a comment that alerted me to this before. We have provided internationally world-class trade training for decades in this country. The engineers reminded me of it. Somebody said they are not recruiting university graduates but technical-type people. It is quite a big prohibition, as a mature person with a trade background who is earning good money, to consider upgrading to degree qualifications and so forth. I wonder whether there is a similar phenomenon in the science field and whether we should be looking at upgrading the mature skilled worker, not just at the entry level—how many kids we can get into engineering.

Dr Gonis—It is fairly rare that you see a mature student coming through the science faculties. Our issue is generally not one of knowledge, because when people come out of a science degree they have the knowledge; they just do not have the skill. Again, we are going back to the gaps that we see. There is certainly a gap between the knowledge that people have when they come out and the skill that they need to do the work once they are in.

Ms BIRD—So there is no problem with the model of having the skills and then saying, 'I've done 10 years as a technician. I want to upgrade,' but if you then have a couple of kids and a mortgage and you are going to drop your income a bit while you study, and then pick up a HECS debt, I would imagine that would be quite prohibitive.

Prof. Baker—It is particularly difficult in this industry because 50 per cent of our workforce has a tertiary degree, and in some sectors of the industry, including the major national research facilities, it is higher. Ninety-five per cent of the people that work in my organisation have degrees, and that is because it is right at the cutting edge of innovation. So I think the further you are towards that real cutting edge of innovation the stronger a support network you need from the university, or the better recruitment of expatriates.

Dr Fraval—Equally, the people in production might not have a degree but there are skills that they still have to learn tertiary-educationwise, and there are the salespeople—those who are not in the innovative part of the company but are really important and really hard to find.

Dr Pulsford—We see some natural progression, but not because we make someone get another degree or something like that. For instance, if we see a cadetship going through to a tradesperson or to an engineering assistant, if that person develops and demonstrates a good level of skill we will give him higher level jobs.

Ms BIRD—Without worrying about the qualifications?

Dr Pulsford—We will not tell them, 'But we're not going to do it unless you get an extra diploma,' or something like that. It can happen, but I think it would not be typical.

Ms BIRD—It is good for you, John, but it is hard for them to move.

Dr Pulsford—Yes, but we do not do it if they do not want to, either.

Ms GRIERSON—According to the OECD tables, the innovation gap is real, and you have put in your submission suggestions on tax incentives, the R&D start-up, and modification of what is there already. Is it time to be investing in the workforce and having bonuses and incentives to employ scientists, basically? Is it that critical, in terms of losing them overseas or not keeping them?

Prof. Baker—I think it is. I think we lose most of our scientists to overseas. In fact, I used to be at the John Curtin School of Medical Research here years ago and every PhD student over a three-year period that trained there left to go overseas immediately after. I elected not to go overseas at the end of my PhD because I wanted to play Rugby Union and I could not find a place to go to do that. The States did not look real good to me then, playing for the American Eagles—the 'Bald Eagles' as they call them now!

Ms BIRD—That is a whole policy area we have not explored!

Prof. Baker—What you are saying resonates highly. We need some scheme to bring back our best scientists. We have not thought of this as part of a repertoire of incentives that we give our graduates and our expats to bring them back. Those sorts of 'come back home' types of approach have some merit or are at least worth considering.

Ms GRIERSON—I think bringing them back is really important, and one of the reasons they do not come back is that they would then have to pay their HECS debt. It is a puzzle for everybody in terms of science and innovation. We now have the CSIRO national flagships program. Have the priorities of that program assisted in putting scientific innovation into commercialised industry? We also have a Productivity Commission report that was fairly condemning of the link between formal institutions and commercialisation of innovation, and yet we have some stand-out companies doing wonderful things in Australia. It just seems to me that there is a need for change that we have not put our finger on yet. We just do not seem to be getting there. Can you comment on the priorities and the flagships? Can you comment on the

Productivity Commission report and the stand-out companies? I know you have done it in your paper, but for politicians and for public policy it is a puzzle that has to be solved.

Dr Pulsford—I am happy to talk a little bit about the CSIRO-university situation. We have two discussions going with CSIRO at the moment. One of them also involves a third party, so it is starting to get a little bit complicated, but they are very eager to do things which have a good outcome for both parties. I think there are a lot of issues about how we go about making it work, and again, as I mentioned before, we see differences in timescale, which sometimes commercially we would struggle with. With universities and other institutions we have dealt with, we see a willingness to solve the problem but nobody wants anything to change while we solve it. We struggle sometimes to find out from universities what they do, for example. With a US university, you just look on their website and you see hundreds of pages of what everybody is doing and who you talk to if you want to commercialise it, and all that sort of thing.

We do not really see that here. We have to go through the formal process of a set of meetings, and then people go off and find out what they really do, and say, 'Have we got anything that matches what you're interested in?' That has been our experience in working with universities in recent years. But we keep trying. We are trying again at the moment. But we are very impatient, relative to universities, because we have our commercial timescales. So it is not always their fault.

Prof. Baker—You have hit the nail right on the head. The Science Industry Action Agenda is reinvigorating the process. The flagships, as part of the restructuring of CSIRO, and having CSIRO in the Science Industry Action Agenda, has meant that there have been discussions—and John's company talking to CSIRO is one of those examples. There are multiple examples of those interactions now happening. I think one of the things that came out of *Measure by measure*, the action agenda report, was that most of these interactions occur face to face. It is people with other people; it is getting to know them. It is actually calling the universities, the companies and industry together, putting CSIRO in the mix and saying, 'You've got to talk.'

Ms GRIERSON—Yes, it is being left to them, isn't it? It is not being facilitated very formally.

Prof. Baker—That is true. There has been no government intervention, except for DITR's support of the action agenda.

Ms GRIERSON—We cannot understate how clever some of our companies are being. I use the example of CCI Pope in my area, which is a problem-solving company for engineering and manufacturing. It has successfully solved a problem for the Rolls Royce jet engine manufacture and it has now embedded itself in a huge global chain. Those sorts of success stories are out there all the time but you will not see it on the front page of the newspaper. I do not think anyone is doing enough to make it look interesting and to tell those really good stories, so I hope that your organisation can assist in telling some of those good stories.

CHAIR—We have carried out a quite interesting discussion in terms of probing some of these issues. The challenge for us is how to approach the whole area of providing sufficient incentives for you so it is not direct government investment but the incentives are there. Thank you for the input today. If you have got further inspirations, you know what our agenda is about and you

know that we need to work on this together so that in 20 years time people will not look at this committee and say, 'They certainly blew it there. They had the opportunity to make some recommendations.' It behoves us to try to come forward with appropriate recommendations so that we do capture the scientific endeavour in terms of corporations and government-funded institutions that can result in manufacturing and a successful services sector as well.

Proceedings suspended from 11.00 am to 11.12 am

EVANS, Mr Gregory James, Director, Industry Policy and Innovation, Australian Chamber of Commerce and Industry

JOHNSON, Mr Peter Andrew, Policy Advisor, Australian Chamber of Commerce and Industry

CHAIR—I welcome representatives from the Australian Chamber of Commerce and Industry—ACCI—to today's hearing on the services inquiry. As you know, we do not require you to give evidence under oath, but this hearing has the same standing as proceedings before the parliament. We now invite you to make an opening statement and then we will proceed to questions.

Mr Evans—The comments that we will make are probably relevant to both the services and manufacturing inquiries so we will not necessarily seek to differentiate some of those general comments. By way of opening, ACCI is the oldest business organisation, representing manufacturing at the national level for some 103 years, and it has the widest reach across the manufacturing sector in Australia.

The Australian manufacturing sector has been facing challenging circumstances for many decades but now, contrary to the views of some, it is neither dying nor chronically sick. While manufacturing's share of the economy has been steadily declining as the economy has grown, the sector still accounts for some 12½ per cent of the national economy or $96 billion, and averages around 1.5 per cent growth per annum. However, simply looking at the relative share of the economy and the shift between the manufacturing sector, services, mining or agriculture is not particularly instructive.

We recognise, as with most advanced OECD countries, that the manufacturing contribution has declined while services have increased. This is not necessarily a problem, but what is important is that, whatever the sector, it is provided with an economic framework to operate efficiently and competitively. We certainly do not see that government has any role in somehow adopting a grand plan to assist one sector over another. Rather, in the case of manufacturing, Australian governments—both Commonwealth and state—must continue with overall economic reform to allow the sector to take up the opportunities offered by globalisation.

CHAIR—Yes, we agree with all of that.

Mr Evans—That is good. In recent decades, Australia has followed the path of engagement with international markets through lower tariffs and reducing barriers to inflows of international capital. The rise of low-cost production centres for simply-transformed manufacturers—especially in China and India—combined with lower tariffs meant that some Australian firms have moved offshore or, where the readjustment task was too difficult, have gone out of business.

The story of the evolving manufacturing sector is a positive one, we think. Australian manufacturers have become more outwardly focused, manufacture high-value goods, develop niche products for global markets or mass produce goods for global supply chains. The diversity

and relative size of the manufacturing landscape as it was in the fifties or sixties will never be repeated in Australia but this is not an example of policy failure. Rather, it is a sign of our increasing economic sophistication and a competitive, open economy.

The manufacturing sector continues to contain success stories that defy a more negative view sometimes portrayed by those seeking a more interventionist or prescriptive approach. Australia has industries within the manufacturing sector which maintain comparative and competitive advantages over even the lowest-cost countries. Regardless of the relative decline of manufacturing to GDP, it is a vital part of the Australian economy and will remain so for a long time into the future.

However, ACCI believes that recent difficulties faced by manufacturing should not be used as an excuse to lead governments back to old, failed policies of protectionism and intervention. The future of manufacturing does not lie in increasing government intervention, building higher tariff walls, providing greater subsidies or picking winners.

CHAIR—Hear, hear!

Mr Evans—The future of Australian manufacturing lies with policies that strengthen the overall economy and support competition—such as sound taxation and industrial relations policies; initiatives to address skill shortages; policies to increase investment in infrastructure, innovation, and research and development—

CHAIR—Sorry. Could you run that past us again? I am sure that most of the committee will agree with the first part but we want to focus on those issues that you see as problems. Could you start that list again?

Mr Evans—Sure. The future of Australian manufacturing lies with policies such as sound taxation and industrial relations policies; initiatives to address skill shortages; policies to increase investment in infrastructure, innovation and research and development; continued support for trade negotiations that reduce tariff and other barriers in other countries; the implementation of recent undertakings to reduce the regulatory burden on business; and, finally, ensuring that Australia maintains access to cheap energy, which is a vital component in securing a competitive advantage for the manufacturing sector.

A survey recently provided by ACCI in January, the Westpac survey of industrial trends, shows that while the level of demand for product and the competitive environment weighs heavily on future investment decisions of Australian manufacturers, key generic issues, as I have just mentioned, are to the fore amongst concerns of business. In particular, major constraints on manufacturing investment continue to include the level of business taxes and charges, the availability of suitably qualified employees, wage costs and non-wage labour costs, interest rates and current levels of debt, federal government regulations and state government regulations.

The priority for the manufacturing sector, as for all industry sectors—including the services—in the Australian economy is to ensure that we have appropriate policy settings for each component part of the wider reform agenda. This allows producers to better deal with a potentially adverse trading environment. ACCI, as a major stakeholder on behalf of the

Australian manufacturing industry and representing service companies, therefore will continue to argue for reform in all of those areas that I have mentioned. Thank you.

CHAIR—Mr Johnson, do you want to add something to that?

Mr Johnson—Many of the issues that I was going to raise have already been covered by Greg so I will make this as quick as possible. Australia's manufacturing sector, while currently experiencing a number of competitive pressures, has nevertheless continued to grow in value terms over the last two decades. However, as with many OECD economies, manufacturing has grown at a rate relatively lower than the economy as a whole. Furthermore, while manufacturing employment has remained constant in absolute terms, it has declined as a proportion of the total labour market.

ACCI remains supportive of the manufacturing sector, and notes that broader macro-economic reforms such as industrial relations, taxation, skills and investment are the challenges for improving our competitiveness. Previous macro-economic reforms have provided benefits to all Australians and ACCI supports continuing down this path. ACCI is a long supporter of Australia's engagement with the international economy. This process has provided many difficulties for businesses, but for others has provided great opportunities.

The manufacturing sector is not a homogenous sector and, as pointed out previously, a number of sectors remain internationally competitive. Programs that assist the manufacturing sector must be transparent and rigorously costed. While Australia's high exchange rate is presently reducing manufacturing's competitiveness, the benefits from floating the Australian dollar cannot be understated. You cannot and should not intervene in the market which is driven by international conditions.

The rise of low-cost competitors, such as China, compounds the manufacturing sector's problems, but the opening up of borders has provided further opportunities to sell into markets which are expanding at a rate higher than our own. The future of Australia's manufacturing sector, like the economy in general, lies in being innovative, integrated into the global supply chain, investing in high-value products while having access to a skilled and flexible workforce, and securing a regulatory environment conducive to business.

CHAIR—It is all good stuff that you have come up with. I am sure that the majority of this committee would agree with most of that. There are, nevertheless, some issues that I want to take up, not the least of which is today's *Australian* on page 8, where it says:

The resources boom is gathering a fresh head of steam as miners gear up for the export boom, but new production capacity is shrinking in the rest of the economy.

Investment by the mining industry is expected to jump 22 per cent this year and firms expect to cap this with another extraordinary 37 per cent rise in 2007-08.

That is the good news. It goes on:

But reflecting Australia's two-speed economy, the loss of confidence in manufacturing industry in the eastern states is leading firms to scrap investment plans.

Business investment by manufacturing will slump by 15 per cent this year and a fall of similar size is forecast next year.

Investment is weakening in other industries such as retail, transport, finance and telecommunications.

Given that most of your members are in that sector, and I cannot remember your exact comment but it was along the lines of, 'The demise of the manufacturing industry is much exaggerated,' how do we relate the two? That is today's paper, highlighting the problems that we face. It is terrific news that the resources sector continues to expand, but where to in the manufacturing sector? I am interested in talking about some of the issues that you see as being impediments.

Mr Evans—For a start, there are different levels at which different parts of the economy grow, and the resources sector is obviously growing very strongly at the moment, manufacturing less so. However, I do not think that it is the role of government to somehow introduce prescriptive policies, as I said, that will favour one sector over the other.

CHAIR—I think we would agree with that.

Mr Evans—We believe it is important for the manufacturing sector to address issues of the economic fundamentals so that we can have a competitive and efficient manufacturing sector. We believe that that is really what underlies our position.

Mr Johnson—The resources boom is certainly taking economic resources away from mining and other areas. Generally, it is part of the history of the Australian economy for there to be these long-term structural changes. I would imagine back 60 years ago that people were saying the same thing about agriculture. This is a long-term trend that has happened over 20 years and, as mentioned before, there are a number of issues that are beginning to come together to make the trading environment more difficult. But, again, this is just the market working through where the resources are best allocated in the economy so that we do have higher incomes and higher wages for all people in the Australian economy.

CHAIR—Could we focus on some of the things that you highlighted as being issues for the development of the manufacturing sector and impedients to overcome in terms of micro-economic reform? You have rightly identified a number of them. I am sure my colleagues will want to take up some of them.

Perhaps I should say, because of your introduction, that any artificial construct in terms of dividing this hearing into questions on manufacturing and services has been demolished, so we might just proceed on both sectors. We are interested in both sectors. In terms of the skills shortage, do you think it is real? What should we be doing to overcome these shortages? Is it a training exercise? Should we be putting more funding into training? Should we be bringing people in on short-term visas? Should we be recruiting people offshore, doing deals with our South Pacific neighbours? What do you think?

Mr Evans—For a start, I suppose I should say that, yes, it is a real issue and it continues to be a major issue. In response to our surveys, members say that it is of concern to them. Different parts of ACCI have done extensive work on skills shortages, and I can later refer you to some of that work. Today we just wanted to highlight the generalities in that issue and we do identify that our members are concerned about skill shortages. Particularly in manufacturing, skill shortages

are in technical areas. One of the things that we refer to in our document is the level of education. We refer to some deficiencies in the uptake of science and maths in schools and the uptake of those related courses at university. These are some of the issues that we are seeking to address and want to highlight to you.

CHAIR—You said we have a problem. The problem for this committee is that we have been given issues that we should address; we would also like some suggested solutions.

Mr Evans—We have done extensive work on skills et cetera. It is not our area of ACCI responsibility but the responsibility of other personnel in ACCI. We can certainly provide that to you.

CHAIR—That would be great. In terms of infrastructure, what would you like to see happen? Do you think that we have not been developing enough in terms of infrastructure? Which infrastructure is it: ports or railways, roads?

Mr CIOBO—All of the above?

Ms GRIERSON—And knowledge?

Mr Evans—As part of this process, when looking at this issue throughout the last 12 months, we did not identify that there was an infrastructure crisis but we did say that there are certain principles that should be adopted with respect to infrastructure investment—that is, it is usually best undertaken by the private sector and where there is an actual need. We are very much promoting the role of the private sector in that, rather than perhaps grand government plans to build infrastructure that can turn into a white elephant. There are some impediments, and we will talk about those later. I suppose, specifically in relation to infrastructure, it is the overall economic environment. There are some specific tax issues and there are other—

CHAIR—Which tax issues in particular are you concerned about?

Mr Evans—There are constraints in terms of specific tax issues that are impeding the level of investment in infrastructure. I think it is section 16D, for example. That is the one that comes to mind.

CHAIR—So is that it?

Mr Johnson—On skills issues, we do know that with maths and science a number of our members have had issues with the number of graduates and future projections for people leaving the industry and those graduates filling the gap. So we do see a shortage. Another important issue is the quality of the teaching for maths and science. Rather than changes to the HECS structure, we feel flexible wages is the solution and will increase the number of maths and science teachers because they now pay a higher level of HECS but receive the same wages as someone who has done another course, such as humanities.

Ms BIRD—Now let's move into the realm of reality, because that ain't gonna happen!

Mr Johnson—It is what we would like to see happen.

Mr CIOBO—What she means is that it will never happen under Labor.

Ms BIRD—As an ex-English-history teacher, I used to think that what I did was pretty important too.

Mr Johnson—We are not making judgements on the relative importance of teachers.

Ms BIRD—No; I understand.

Mr Johnson—We just prefer the flexible wage structure to account for that, that is all.

Mr CIOBO—Yes.

CHAIR—You have listed a number of impediments, and I know ACCI has a pretty free-market environment—and we support that—but there are no firm recommendations that I can see. You have mentioned one item: taxation. What specifically would you like the government or this committee to focus on? Apart from providing the overall environment in terms of regulatory reform and industrial relations reform, taxation et cetera, where do you feel we can assist both sectors?

Mr Evans—In essence you have summarised it. A lot of this is about deregulation. One of our responses is that there needs to be less regulatory burden placed on firms. That is having an effect on the level of investment and job creation et cetera, and the government responded to a report by Gary Banks last year on that issue. A lot of it is about government, as I said, providing the framework and not necessarily coming up with prescriptive solutions to perceived crises in different sectors.

Mr McARTHUR—You mentioned in your submission the 'Dutch disease'. We do enjoy the minerals boom, which this inquiry is about. What would you specifically recommend—that we reallocate that boom money back to manufacturing? How would we overcome this so-called Dutch disease problem that the Netherlands faced?

Mr Evans—We provide commentary on that, but we do not necessarily see that it is a problem. Obviously, a strong resources sector influences the exchange rate, but that also has major benefits for the manufacturing sector in that a lot of their inputs are cheaper than they otherwise would be. We do not believe there needs to be any RBA intervention on the exchange rate. We had that debate a long time ago. We are highlighting it and provide commentary on it as an issue, but we do not necessarily perceive it as a major problem. In fact, it has had some benefits for the manufacturing sector.

Mr McARTHUR—What about the movement of the labour force to the higher paid minerals export area? What do you say about that?

Mr Evans—I think that is a consequence of shifts in the Australian economy and there is nothing you can really do about that. It is influencing the way the manufacturing sector is evolving. We are moving away from labour-intensive type exports to higher value-add exports that require fewer labour inputs.

Mr KEENAN—Thanks very much for your submission, because I think it really gets to the heart of where this committee needs to go in its recommendations. We have had submissions that have said to us, in one sense, 'The government needs to do more. We need to spend money doing this or that.' And we have had other submissions, including yours, that have said, 'Well, really what we'd like government to do is to get out of the way and let us get on with the job of doing what we do best.' We will need to decide, when we make our recommendations, which way we will go as a committee. What sorts of dangers are there if we were to look at the reforms that have happened over the past 20 years and say, 'We need to turn the clock back on some of these reforms,' or, 'These reforms have gone too far and we need to reregulate certain areas'? What would happen if we were to say, 'We're going to put some rigidities back into the labour market'? What would that mean for the ability of your members to employ people?

Mr Evans—For a start, we would be immediately signalling to the world that we are out of step with them. The rest of the world—the OECD, and our immediate neighbours in Asia—are doing the opposite and deregulating their economies, making them more accessible, more globally competitive, so the danger is that we would be putting ourselves out of the competitive race.

Mr KEENAN—Yes, and more regulation would essentially cost jobs.

Mr Evans—Certainly.

Mr KEENAN—What is the chamber's view of the idea of having a new industry policy in Australia?

Mr Evans—I think what we are outlining today is industry policy and dealing with the fundamental design features: taxation, workplace relations, skills, less regulation and whatever. They are the sorts of things that we would like to see in an industry policy.

Mr KEENAN—But do you think the government should be sitting around and saying, 'Look, we think there's potential in this sector here, and we think this sector here has got potential, and we need to spend taxpayers' money in support of that'?

Mr Evans—No, that would not accord with our general approach. However, there are good programs administered by the industry department that fill market gaps in the areas of commercialising technology, greater support for R&D et cetera, and we accept those. They are good programs. They can always be improved, but as a general rule we do not go down the approach of prescriptive policy responses to problems that may only be short term.

Ms GRIERSON—You said in your submission that the Australian export services sector is facing a difficult trading environment. I would like you to comment on that and also on who you think is faring worst or who is doing best. Generally, what is the picture out there?

Mr Johnson—I think many of the problems facing manufacturing also spill over into the traded services sector. They are quite analogous. Tourism has had a number of issues come together—SARS, high oil prices, high exchange rates—so that would probably be more affected than other industries, given the market fundamentals. We produce a lot of financial services and high value-added products and they tend to be less influenced by the problems I have just

mentioned. A lot of them tend to be the same solutions. Whilst they are quite different areas, we advance a high-level approach. We do see a role for government in promoting tourism and Australia as a destination.

Ms GRIERSON—But you do point out in your submission the problems of three tiers of government having that responsibility.

Mr Johnson—Yes. There needs to be a high degree of coordination. There are advantages to having local governments making decisions: they are the people on the ground and perhaps they understand the situation but you need better coordination between the three groups so that they are in step. That is part of the regulation and the harmonisation of decision making.

Ms GRIERSON—When I scan what support there is out there for the services sector exporting, I do not find much. In my own region—the Hunger region—I note that the Hunter Export Centre runs some wonderful courses, seminars and forums for its members on accessing overseas markets for goods, doing work in China and India, and all those sorts of things. They relate to the services sector very much, but they just have an export-of-goods focus. What has ACCI done, in terms of engagement with its membership, to improve that emphasis on the benefit of training for the services sector and assisting them to get into export markets?

Mr Evans—That has not been a specific issue of member feedback. But, as we understand it, if you seek to use the services of Austrade, it is as relevant as if you are exporting goods, as if you are exporting services.

Ms GRIERSON—I do not hear that. I get feedback that says it is not as relevant, particularly in the services sector—for example, education. Often they are very small companies, small entities, and they think that there is not enough service for very small companies and businesses and they look at AusIndustry and Austrade people as being perhaps not as helpful, because small companies do not have a lot of time or resources and they have to use online facilities et cetera. That is the feedback I get; do you get that sort of feedback? Do you have a view on that?

Mr Evans—In your elaboration, was that more about the size of the firm rather than necessarily the activity that it is involved in?

Ms GRIERSON—That would probably be the case in my region, yes. They are small companies—they are, for example, going into Pakistan with education services. This is a tough game, very tough for small companies, and they are doing quite well, but they are finding that they do not have much support there.

Mr Evans—SMEs have a more acute difficulty than larger and more sophisticated firms in dealing with government and understanding what programs are available. We recognise that and we do see that.

Ms BIRD—I think it is more than size. I think there is a lack of expertise in the service industry and in how we can export that to the world which, with all due respect, is reflected in your submission. You have 13 pages on the service industry and 43 pages on the manufacturing industry. You reflect, I think, what government reflects—that we have not yet really tackled and mastered the issue of the service export industry.

Ms GRIERSON—And its economic contribution is huge.

Ms BIRD—Yes. We talk about tourism and education—two big ones—but one of our biggest export earners is the Wiggles. We have not even touched on the entertainment industry and the capacities for that. It just seems to me that these fellows are out there doing it themselves and maybe all of us—government and non-government—need to start to take it on board.

Mr Evans—I hear what you say. But we believe that it is pretty hard to treat the services sector as a homogenous sector and have one policy response from government which deals with all their issues, because they are diverse, varying industries.

Ms BIRD—True.

Mr Evans—Your example was of the Wiggles: they seem to do fine without government help.

Ms BIRD—Yes. This may just come down to our very different approaches, because I understand that you are saying that you should get the levers right in the economy and then let people run. I suggest to you that that would mean that we should just close our inquiry today. I think there are particular points at which government can intervene, and it is not about picking winners; it is about identifying what good winners do and spreading that skill and information around the sector.

I understand the broad issue of what you are saying but I am saying back to you that I suspect there are still points at which a good program intervention could work. Some of the ones that you have already identified do work. My fear is that we will get captured into looking mainly at manufacturing again, because that is where the conversation has been for so many decades in this country, and we are going to miss the conversation we need to have on the service sector.

Mr Johnson—That is broadly correct. Where intervention is required, we would simply ask that it be transparent and robust.

Ms BIRD—Yes.

Mr Johnson—We would say, 'Okay; make sure you have the levers set correctly.' Then you would get an indication of the actual problem, rather than working off some distorted view. When you say we have done 48 pages on manufacturing, that is a fair point, but by the same token you have one manufacturing inquiry but you would need a number for the services sector.

Ms BIRD—I would argue that manufacturing is as diverse as the service sector. I just think that we are more familiar with manufacturing.

Ms GRIERSON—I will move on to infrastructure, because this inquiry is trying to look at the potential, post boom. I have mentioned earlier in this inquiry today that doing business overseas and becoming part of the global markets will be one direction that the country will take post boom. I would have thought that the boom necessitates an investment in infrastructure, but in a way it is allowing us to neglect the needs of our current infrastructure. So around the country local government is in big trouble because its infrastructure is deteriorating so rapidly; it

was mostly put in post war and the cycle has come where it needs to be replaced, replenished or maintained in a major way. So the deficits are huge.

In my own area of Newcastle City Council, $630 million over 20 years is needed just to get all infrastructure up to standard. That is a story that we are hearing all over the country in terms of the neglect of infrastructure. With a priority on servicing the boom—whether it is manufacturing, services or whatever—infrastructure has been neglected, so I would think that post boom there will be a huge requirement to invest in infrastructure. Do you think we have a picture of that yet and do you think we have the capacity and the skills to respond if it all comes in a rush like that?

Mr Evans—You have highlighted some infrastructure deficiencies in an urban context. It goes back to some of my previous comments. In the past, the potential role of the private sector has been neglected and some of that urban infrastructure has been under the control of state instrumentalities that have had a requirement to return dividends to their respective governments and have, by the nature of their ownership and their operation, not reinvested in vital infrastructure and instead returned any dividends to government. That is what we mean when we say that there is greater need for the role of the private sector.

As an example, urban water is an issue that everyone is talking about. Potentially, there is a role there for the private sector to be involved and incentives for them to begin to recycle water and put it back into an urban water system. In the past that has not happened because of the dominance of government-owned instrumentalities. I think you are seeing that in all areas of infrastructure, including electricity generation and distribution.

Ms GRIERSON—Water and energy infrastructure alone would stand out as being a great opportunity.

Mr Evans—Yes. One of the issues that we highlighted in the paper was the importance of energy in the Australian context. Australia has a major competitive advantage over a lot of countries, and we would not want to see that eroded through reactive policies on issues in relation to the environment.

Ms GRIERSON—Thank you.

Ms BIRD—I want to come back to the services sector. Have you surveyed your service sector members on what barriers to exporting they experience?

Mr Johnson—No, not directly.

Ms BIRD—If you do that in the future, we would be interested to hear what they have to say. While I appreciate your approach to the solution, I suspect that most of your members would sit here and tell us where they want government to put money. One of the things that I hear from service sectors in my region concerns broadband. In the service sector you are often moving your product by those sorts of means rather than trains, planes and automobiles, and when dealing with some of the South-East Asian countries, where they have much higher speeds than we do, that is a bit of a barrier. I am reflecting to you the things that some companies in my area

have raised anecdotally. It would be useful, if you get any information on that, to forward it through to us.

Mr Johnson—We have done a pre-election survey for the last election. That highlighted more the cost of infrastructure rather than access to infrastructure. I do not believe that we split the data by sectors, and you are requesting the services sector. We still do have the information on our system.

Ms BIRD—Does it have the capacity to be split?

Mr Johnson—I believe so.

Ms BIRD—If it is possible, that would be great. Or perhaps if you are doing that survey again you could build that capacity in.

Mr Johnson—Yes. If you would like to put something in writing for us, we can address that issue.

Ms BIRD—If you could follow up on that it would be really interesting. Thank you.

Mr CIOBO—In your submission you talk about addressing skills shortages through possible expansion of the Australian technical colleges. Have you got any particular reflections on the ATCs versus the state-run TAFE systems and what some of the problems might have been there? Beyond that, do you have any comments about the way in which the Australian Apprenticeships scheme is operating?

Mr Evans—We are not trying to avoid answering the question, but it is not our area of particular expertise and there are other people more skilled in that area in ACCI. We can provide information on that. With respect to the ATCs and the state-run systems, we identified that there was a gap there and a potential for the technical colleges to address a particular problem. That is why they were strongly supported by ACCI. We can come back to you with more detail on that.

Mr CIOBO—Thank you.

Mr Evans—Can I just make a wider observation on some of the responses?

CHAIR—Yes.

Mr Evans—I would not want you to think—we may be presenting our position blandly—that we do not think there is any role for government in any of these issues and that the work of the committee is basically done. We have identified specific issues in the submission that we think the government needs to address. We also recognise, as I said, that there are legitimate programs that we wholly support in the industry and education portfolios which are addressing market gaps and are quite valuable. I wanted to assure you that our position is not as bland as you might have thought.

CHAIR—No, not all of the committee members would be critical of what you have said. I want to take you to some of the recommendations you have made in terms of R&D concessions.

You suggest raising those from 125 per cent to 150 per cent, indexing the EMDG budget to inflation, and a stepped rate of capital gains tax. On what premise do you make those recommendations? Do you have evidence to show, for example, that moving the R&D grant to 150 per cent is going to substantially alter the incentive to invest or that the export market development grant will stimulate more people to explore international markets? Is this rent seeking by ACCI or is it based on genuine research?

Mr Evans—One of the issues that we look at is the position of our competitors. For example, in the area of capital gains tax, those countries that have lower rates of capital gains tax have a greater formation of entrepreneurial companies and have companies that are prepared to take risks. When companies invest in a new venture, they are very exposed to risk and they want an adequate return for that risk. One of the things that may militate against making that investment is that much of any gain that they accrue will be lost in the payment of capital gains tax.

CHAIR—Are you basing this on page 23, figure 22, of your submission, about R&D by various OECD countries?

Mr Evans—Yes. It is really about maintaining our competitive position with countries that have more advantageous taxation systems which promote investment in R&D.

CHAIR—Ireland has less than we do—

Ms BIRD—And Finland.

CHAIR—but it has been held up as a model of all things good. I know that there are many other features—low taxation rates and so on—that have got something to do with it.

Mr Johnson—I believe the company tax in Ireland is quite low.

CHAIR—It is.

Mr Johnson—And they are quite close to the EU market as well.

Ms BIRD—But they have also had a fairly interventionist government program. It is a package.

Mr Johnson—Overall, I think our incomes are perhaps as high as Ireland, which, if you are looking at welfare for the nation as a whole, shows Australia is probably on the right track.

CHAIR—Yes. I am just looking at the list and trying to work out which ones with a high-level rate of tax subsidies stand out—which are the ones where it has really paid off for them—and it is debatable. Korea, perhaps, and Canada. Hungary is still in the formation stage. Is there an agreed position on this? I am certainly interested in what you have to say.

Mr Evans—I am not sure that figure 22 relates to overall taxation.

CHAIR—No; I understand that. I am sure that if you combined them all, it would be quite different.

Mr Evans—Yes. Maybe it is limited in terms of what you can interpret from it.

Ms BIRD—It may also reflect cyclical stuff, because some countries, trying to develop, will massively target research and development initiatives to get that part of their economy working and then, as it is working, will pull back to some extent. So when you capture one year, you do not always capture the policy cycle.

CHAIR—In terms of the EMDG, are you able to provide some indicators as to who gives more export assistance, and how it is provided?

Mr Johnson—There have been a number of studies conducted that have shown that it is beneficial. Are we talking about the EMDG?

CHAIR—That is right, yes.

Mr Johnson—That is the principle of the point we are trying to drive home. We are happy for these programs to be in place, as long as they are rigorously tested as being beneficial.

CHAIR—Yes. That is what I am trying to do with your recommendations. Perhaps you could come back to us.

Mr Evans—If we find any more work that has been done, we will let you know.

CHAIR—All right. In terms of capital gains tax and where we see Australia, you have indicated overall tax comparisons and a possible capital gains tax stepped rate schedule, but you have not actually separated out a capital gains comparison with other sectors. Is that available?

Mr Evans—With other countries?

CHAIR—Yes.

Mr Evans—We can certainly provide those for you.

CHAIR—That would be great.

Mr Evans—You may recall that that was part of the Hendy-Warburton exercise as well.

CHAIR—Right.

Ms BIRD—On the ATCs, my local information is that the biggest problem is getting local businesses to take a role in the ATCs, not the model of training to be offered by them, and I would have an argument about the per head cost of them compared to other sectors. Are your members giving you that feedback? My local businesses are saying they like the idea and they want to be involved, but sitting on boards and taking on that level of a role in an ATC is an unrealistic expectation of local business operators. Do you have any suggestions about the restructuring of that model, if it is not sustainable for local businesses to be doing that sort of thing?

Mr Evans—Thank you for that feedback. We can check that with our network of people.

Ms BIRD—I think sustainability—if that is where we are going to go with them—is an important issue. With the best will in the world, for a businessperson trying to keep their business afloat, being that involved in these organisations is hard.

CHAIR—Thanks very much. It was a very good submission that you made and I think a number of us would support the general thrust of the issues that you have raised and see the need to address some of the issues that you outlined. It will provide an important reference point in terms of developing recommendations and looking at the situation. If you can come back to us on some of those issues that we have raised, that would be useful. Sorry to give you that extra work. In terms of transparency and testing, that would be useful. We appreciate very much you coming before the committee.

[12.01 pm]

YOUNG, Professor Ian, Australian Vice-Chancellors' Committee

CHAIR—I now welcome the representative from the Australian Vice-Chancellors' Committee to today's hearing of the services inquiry. Do you have any comments to make on the capacity in which you appear?

Prof. Young—I am Vice-Chancellor, Swinburne University of Technology, and I am here today representing the Australian Vice-Chancellors' Committee.

CHAIR—Thank you. Although the committee does not require you to give evidence on oath, I wish to advise you that these hearings are legal proceedings of the parliament and therefore have the same standing as proceedings of the respective houses. We have had a written submission from you. Would you like to make an opening statement, and then we will proceed to questions?

Prof. Young—Thank you. I know that you have received other evidence on the importance of Australia's international education activities, but I would like to restate that. There is no doubt that international education has been one of the remarkable success stories of Australian exports in recent times. It is now a $10 billion industry and the fourth largest export industry in Australia. I expect that this year it will probably pass tourism in terms of those economic gains.

CHAIR—What is the total number now?

Prof. Young—Ten billion dollars is the number.

CHAIR—It has got a fair way to go. Tourism is $17 billion.

Prof. Young—I thought it was $10.5 billion. Okay, sorry. We may have a couple of years to go in that case. I was getting excited.

CHAIR—No; we would encourage you in your endeavours.

Prof. Young—I thought I had read the figure $10.6 billion somewhere. I will have to take that back in that case. The other comment that I would like to make is that, in addition to those economic benefits, it really adds greatly to things like the cultural diversity of our universities and to the cultural diversity of Australia. Potentially, importantly, it has enormous foreign affairs benefits to Australia. Put simply, we are educating the political and business leaders of Asia. One would hope in the future that people who understand our culture, speak our language and are sympathetic to our goals will be critically important for the future of Australia. So I make those opening comments.

CHAIR—And we would all agree with them. Well said.

Ms BIRD—As long as we are not like the British universities, educating the dictators of the next generation!

CHAIR—In terms of the figures, do they continue to go up? Is that right? I thought there had been a bit of a slow-down, particularly from China, as they were investing in their own education infrastructure.

Prof. Young—The industry is in a very interesting time at the present. We have gone through almost a decade of double-digit growth each year. That is moderating now, although we are still seeing growth of somewhere between eight per cent and 10 per cent. The reason it is moderating is because the countries where we mainly work are starting to develop their own in-country capability in education across all of the sectors. But it is not universal, and we are seeing countries which are more mature—for example, Singapore and Malaysia—which have been, in the past, high-source countries for Australia, now developing their in-country capability. We are seeing static or even declining growth in those areas, whereas countries like China—which is still a large market—are slowing as well.

There is enormous investment occurring in education in China; the most remarkable investment, I think, probably in the history of the world. But places like India, Vietnam, Latin America, Middle East, and even eastern Europe now, are all growing rapidly. So as an industry in many cases we are leading the development of those new markets but we are also diversifying our activities, so there is a change in the mix of countries. There is, overall, a slowing from growth which was unsustainable, I believe, but there is still good growth occurring.

The other change that we are seeing is in the types of education. We are seeing, essentially, a move up the food chain. We are seeing slowing growth in school activity—again, as countries develop that in-country. We are still seeing good but slowing growth at the undergraduate level, and good and increasing growth at the postgraduate level. So we are actually seeing a move up in terms of the level of education that we are providing. But we are also seeing the emergence of new areas, and probably the most spectacular one over the last couple of years has been in the VET sector, as Asia discovers that not only is it important for them to have higher education qualifications but also to have technical qualifications.

These are the changing dynamics. There is also added competition, particularly from Europe, and Asia itself is looking to Australia as a remarkable success story in terms of exports and developing their own activities in international education. We are seeing countries like the United States, which almost went out of the market completely after 9-11, now coming back in and developing their international activities as well. It is a competitive market. I think Australia is seen as a leader in this area, and we need to innovate and continue to be competitive. But I am still optimistic, at least in relation to the foreseeable future.

CHAIR—Given the nature of this committee, which is looking at the impediments to future development and growth, would you like to outline the issues that you see as the major impediments, particularly ones that the government might have some impact on.

Prof. Young—I will mention a few, but one in particular that I think is important is that we often look to the UK with some envy, in the sense that they have the British Council, which is essentially a one-stop shop for all things international in terms of education. In contrast, Australia has a number of different bodies to do this. We have Australian Education International—the government agency—which I point out does an excellent job. I am very supportive of the work that AEI does. We have IDP Education Australia—the company of which

I am a director—which is the main recruiter for universities, and we have all of our state governments now becoming active in this as well.

From the point of view of promoting Brand Australia, it is important that we do not confuse the market. Promoting Australia on the one hand but promoting individual states on the other becomes confusing for a student. I do not want to denigrate any of the things that those groups are doing—they all mean well—but trying to get better coordination across those individual groups would be a very positive thing for the future of education in Australia. The other thing that is critically important is that this industry really trades on its quality. Lose quality and we essentially lose the whole industry. Australia is well placed here. We have a regulatory environment which is very good, we have the ESOS Act, the CRICOS register, a national code for providers, and now we have a transnational quality framework which dictates how we will do things offshore. I would support government activities to bolster that but not to further increase the level of regulation. I think it is about right.

The other thing that is important—and it is perhaps a little bit pointed to say this to a parliamentary group—is that politicians need to realise that the things that they say are reported internationally and, although you and I might understand that in the cut and thrust of politics political points can be scored by making negative comments about our higher education system or our education system generally, those things are reported as fact and so, although we might understand it as parliamentary debate or media comment, those things are difficult to counter when they are reported in the *Straits Times* or the *Singapore Weekly*.

The one comment I will make here is that, although I do not always support the government's higher education policy, I have to compliment Julie Bishop on the supportive comments she has made about the industry in recent times. I think it is very important for ministers and politicians to support what is an important industry for Australia. I just make that comment generally. There are a couple of things that I think would be positive. We mentioned tourism before. I do not know what the government spend is on marketing of tourism for Australia.

CHAIR—The federal spend is now about $100 million on an annual basis, and then you have each of the states—so the combined total would be $200 million.

Ms BIRD—You want a girl in a bikini. Is that what you are telling us?

Prof. Young—I am not sure that 'Where the bloody hell are you?' is necessarily the right tag line, but a marketing campaign like that, done correctly, I think would be a significant positive for the industry in terms of brand awareness for Australia internationally.

Visas are always an important element. It is important for us to realise that what we want is a thorough but rapid system of visa vetting. New Zealand is a classic example of what happens if you simply open the doors. They devalued their education system and there are all sorts of rorts occurring. We cannot afford to have that happen, but I think one of the things that Immigration needs to always be aware of is that we need to be able to turn around visa applications in a timely manner. And, of course, we do not want the cost of visas to skyrocket too much, because that is clearly an up-front deterrent to students. We need a thorough system to make sure these are bona fide students who are applying to come to Australia.

CHAIR—Do you have problems with categories? I have heard from people that some of the countries that have been put in category 2 should be in category 1—places like the Czech Republic, Hungary et cetera.

Prof. Young—These are really points of detail, and I think everyone in the industry could go through the list of various countries and say that they should be in this category or that category. By and large, I think the system works, and it has been enormously improved in recent times. Looking at the quality and speed of our visa processing compared to five or six years ago, it is infinitely better.

Ms BIRD—What about the cost? We heard evidence in Western Australia that we are not competitive at all on cost.

Prof. Young—The cost of our visas is higher than, for instance, the UK.

CHAIR—Have you got a comparison table?

Prof. Young—I do not have that with me. We could certainly get a comparison table like that.

CHAIR—All right.

Prof. Young—Markets like this are always sensitive to up-front costs.

CHAIR—Our main competitor countries—

Prof. Young—The UK and the US are the ones to immediately look at.

CHAIR—New Zealand as well.

Prof. Young—Yes. Whilst I am talking about visas, often talked about here is the link between education and immigration. I do not think there is any doubt that graduates make tremendous immigrants. They understand our culture; they speak the language; they understand our system; they are smart, intelligent and, in many cases, affluent. They make excellent immigrants, and Australia should make the best of that. I do not think it serves the industry well, however, to have education and permanent residency linked too closely. For instance, universities never—in fact we are not allowed to under the code—market education as a pathway to immigration or to permanent residency, nor should we. Students should come here for education. If they then decide to seek permanent residency in Australia, that is another positive. But I see in at least one of the submissions from Victoria that they are arguing for a closer relationship between the two. I think you should do that with significant caution. I think it potentially devalues it.

CHAIR—Is there a problem nevertheless in the ability to stay on for a year to get experience?

Prof. Young—There have been recent changes to allow students to do that and I think that is a very positive move; I welcome those changes. Obviously we need to be continually vigilant to ensure that we are competitive with other countries. Indeed, we are in an international market for immigrants today in terms of their quality, so I think we are moving in the right direction. I do not see huge impediments for students at the present time seeking permanent residency. Large

numbers do. I would not be proposing any wholesale changes to the current system and I actually applaud the sorts of things that are in ESOS and the national code which keep a clear separation between education and permanent residency.

Ms BIRD—Otherwise we will have them in our offices complaining about not getting their permanent residency.

Prof. Young—Absolutely.

CHAIR—Was that your list?

Prof. Young—That was my list.

CHAIR—That is helpful.

Mr McARTHUR—Can I raise two issues? One is about this export earning of $10.5 billion from those students who receive an education in Australia. It has been put to me by one of your senior colleagues that the emerging countries are developing tertiary education systems and will be providing these streams of programs, and that those students who historically came to Australia will receive that education in their home countries, so that means this $10.5 billion is at risk. Could you respond to that suggestion?

Prof. Young—It is a fact that a whole range of countries around the world are increasing their capacity to educate in-country. That will undoubtedly impact on our ability to continue to grow at the sorts of rates we have seen. My expectation and the predictions we have from agencies like IDP are that we probably can expect a continued growth for the foreseeable future—and by that I mean five to six years—of probably seven or eight per cent. So there will be slower growth than we have seen in the past, but my expectation is that we will continue to see growth. The reason for that is that we will diversify the countries that the students are coming from. Undoubtedly the competition to do this is increasing, but Australia will continue to be competitive while we can continue to convince people that they get a quality education by coming here.

Mr McARTHUR—If you withdrew the stream of overseas students to Australian universities and other institutions—say there was a dramatic fall-off—what would happen to the financial viability of the universities?

Prof. Young—I cannot remember the exact number, but probably more than 20 per cent of the budgets of most Australian universities are based on international fee revenue. I know at my own university something like 28 per cent of the budget comes from international students. If you turned that off tomorrow, the viability of many Australian universities would be questionable.

Mr McARTHUR—The flow-on question is: how come you can charge the international students such a high fee level relative to the Australian students? Could you give us the rationale for that?

Prof. Young—You have to remember that when an Australian student comes to university, there is a component they pay in HECS and a component which is paid by the Commonwealth

government. In the case of an international student or a full-fee-paying Australian student, they are paying that whole component themselves. There is a premium which is charged to international students. It is not significant, but we need to ensure that we cover all the costs of the delivery of the education so that we are not subsidising the education of those students with Australian taxpayers' money.

Mr McARTHUR—Could you go into the competitive pressures from other countries in terms of the fees charged? Is that very serious? Are other countries subsidising the fees to get the students in?

Prof. Young—I honestly do not know about subsidies which occur in other countries. We have to price ourselves so that we are competitive, but we also need to price ourselves such that we cover the full cost of the delivery of education to students. That is what we currently do, and we are competitive in the market at those cost levels.

Mr McARTHUR—How do you cost it out? That has always been a dilemma, I think, for universities.

Prof. Young—Most universities have reasonably sophisticated activity-based costing systems now. In addition to that, the rule of thumb is to look at exactly what you get for a domestic student. In fact, we are not allowed under the code to charge less than that, nor should we be.

Mr McARTHUR—What do you think would happen if the competitive pressures by other countries and other institutions were such that it really became fairly cut-throat in terms of the fees levels? What do you think the Australian universities would do?

Prof. Young—They would be foolish to offer it at a cost less than the delivery cost. That is a recipe for oblivion and I doubt that that would happen. Ultimately, if other countries decided to subsidise this for one reason or another, you could be potentially priced out of the market. There is no evidence that that is going to occur, though.

Ms BIRD—I want to explore something which is not touched on in the submission. It is the reverse stuff: our sale of educational product to these other countries. They are developing their own systems and so forth. I know—but I will leave it open to you—that we are involved in selling educational product to those places. I know that Chile, for example, is becoming bilingual and is looking for language products. I know China is interested in preschool education products. Could you comment on that?

Prof. Young—One of the new and emerging elements of international education—and, indeed, I think this will be how it evolves in the future—is that Australia will do more things offshore than it currently does here. The current model, which is to bring students to Australia and educate them here and send them home, has a finite lifetime to it. We are seeing Australian institutions now move more and more into transnational activities: partnership arrangements in various countries; offshore campuses in various countries; distance education-type elements; and providing courseware and software to countries. We are moving into those rapidly growing countries and providing product and educational expertise in-country.

I have had people say to me before, 'Why would you be so foolish as to take your intellectual property and essentially give it to countries which will develop it themselves?' The reality of this is that they will do it anyhow. There are any number of international competitors out there and it is critically important for us not to put the shutters up around the borders of Australia and expect everyone to come to us. We have to be part of it.

Ms BIRD—But that would be establishing very important links, wouldn't it?

Prof. Young—Very important.

Ms BIRD—If people are doing a curriculum developed in Australia in their undergraduate course, the logical thing, when they do their PhD, would be to follow with that.

Prof. Young—Absolutely. We are very much talking here about the export industry, but it is also a critical part of any university today to provide their Australian students with an international experience. Indeed, one of the reasons more Australian students are now choosing to go to Australian universities is that they get the opportunity of an international experience as part of it. You can only do that by developing partnerships with offshore institutions. You cannot be mercenary in the sense of simply taking; we also have to give. Australian universities are developing a rich tapestry of partnerships and joint arrangements for delivery of education in various countries.

To give you an example of the reverse of that, my own institution Swinburne has signed a partnership with a US university—Northeastern University—where we will be offering joint degrees here in Australia to Australian and international students, and joint degrees in the United States to US and international students. It is a two-way process in terms of how these partnerships develop.

Ms BIRD—Having laid that out, are you aware of any particular barriers that the committee should look at in terms of that development?

Prof. Young—There are issues around free trade and the ability for Australian institutions to operate in some of these countries—a good example is China—including the ability, for instance, to be able to repatriate funds from those countries. The barriers are decreasing as a result of free trade agreements and those sorts of things and, indeed, bilateral agreements between Australia and a range of those countries. They are the same issues that any service industry has when it operates in those countries. You need to work with the regulatory system in that country.

Mr CIOBO—There has been very good growth in the industry, that is for sure. We see evidence of that all the time. You mentioned earlier about perhaps needing a marketing campaign for the educational sector. Can you advise the committee whether you have approached or have had discussions with, for example, Tourism Australia, on developing branding for the sector? Do you think it is appropriate to develop that—as part of the international pitch for Australia—in a student's mind when they might see a tourism commercial, and to equate that back to other opportunities? Are there any dual approaches to try and harness the tourism portal and then turn that into educational opportunities?

CHAIR—Good point.

Mr CIOBO—Or do you think that it needs to be done separately? I am interested in your comments in regard to all of those?

Prof. Young—I am not aware of any joint approaches made to Tourism Australia, which does not mean it has not happened. I am just not aware of any. That is an interesting possibility to look at, so I would welcome those opportunities.

CHAIR—It may be a way of getting into it, I suspect. So I think it is a good tip-off.

Prof. Young—Possibly. The other comment to make is that AEI have done work around this and Brand Australia, so it is not a total wasteland. There has certainly been work done around this. My view is that it is an area where we as a nation need to invest more effort.

CHAIR—It is quite useful, though, to think about Tourism Australia helping to develop your promotional videos because, as I understand it, a lot of the work is done through seminars and programs internationally where you get people in and you show them something of the country. I think it has potential.

Mr CIOBO—Tourism Australia is charged, as a federal government agency, with helping to align—I am not sure whether the word is 'align' or 'create' or whatever—the perception of Australia internationally, and I would have thought that in many respects your potential market internationally would get, if not their first taste, certainly their overall view of Australia off the back of the advertising campaigns that TA and other agencies run.

Prof. Young—I am sure that is very true.

Mr CIOBO—I would be interested in your comments going forward.

Prof. Young—It is a good suggestion. Thank you.

Mr CIOBO—I also want to touch on what I think is a serious issue with respect to sustainability. I know that you said that about 25 per cent of your income is from full-fee-paying, foreign-based students. What percentage of your income is from full-fee-paying Australian students?

Prof. Young—I think across Australia it is about three per cent. In the case of my university, it is a very tiny fraction—less than one per cent.

Mr CIOBO—Is there a market to expand that further?

Prof. Young—Full-fee-paying Australian students?

Mr CIOBO—Yes.

Prof. Young—The fact that it is only three per cent across the nation indicates that there is not a market there at the present time. You have to appreciate that a student will choose a HECS

place as their first option. The government has significantly increased the number of HECS places over the last few years, and there is debate about whether there is unmet demand or not. It depends whether I am a federal politician or a state politician at the moment as to whether I think there is or not: there is debate about that.

My personal view is that there is not a huge unmet demand and I think that whilst that is the case and whilst there is a reasonable number of HECS funded places, you are not going to see domestic fee-paying places grow dramatically. Also, if you look at the cost of Australian education for the average student and if you look at HECS charges today compared to, for instance, the cost of going to a state university in the United States, they are comparable—and most people would regard education in the United States as being reasonably expensive. Even HECS, by international standards, is a reasonably expensive cost for the student to pay, so I would be surprised if there was going to be a huge demand for Australian students to embrace fee-paying places.

Mr CIOBO—Are you saying that the Australian university sector has high costs?

Prof. Young—It is a combination of what the government is prepared to pay and what the user is required to pay.

Mr CIOBO—The government pays 75 per cent and the user pays approximately 25 per cent, in broad terms. So if you are trying to say to this committee that the 25 per cent contribution that a student pays is comparable to a fully-funded private—

Prof. Young—No; I was talking about a state university in the United States.

Mr CIOBO—What is the ratio there of the taxpayer-subsidised places versus—

Prof. Young—I do not know. I would have to look at it. It varies by state.

Mr CIOBO—That is quite an important distinction, then.

Prof. Young—But a state-based university in the United States is very comparable to ours in the sense that the state is paying a component and the student is required to pay a component.

Mr CIOBO—Right. I was left with the impression that perhaps you were implying that the 25 per cent cost that students incur through HECS for their tertiary education is in some way comparable to the cost of delivering a full-fee-paying student service in the United States.

Prof. Young—No, that is certainly not the case.

Mr CIOBO—Okay. Let us be very clear about that. Further to that, I am not sure that I agree with your assessment with respect to full-fee-paying domestic students and so I would like to explore that issue further. There are obviously universities in Australia that take a view contrary to your assertion. I can think of Bond University, Murdoch University and the Australian Catholic University, who pursue very aggressively full-fee-paying domestic students. Do you think that there are opportunities going forward for there to be greater investment?

Ms BIRD—How does that tie in with export?

Mr CIOBO—This is not to do with export. This is to do with the opportunities for that service industry within Australia. This inquiry is not purely focused on export opportunities. It is domestic and export, so I am talking about the domestic side of it now.

Ms BIRD—Okay.

Mr CIOBO—In terms of assessment, I am interested in the extent to which we might have a wasted investment of resources. What if a student were to finish year 12, be happy to and have the capacity to pay or even perhaps to borrow to undertake a full-fee-paying course directly in the area they wish to study, rather than following the course that I think a lot of students currently undertake, which is to go and do something else first that they might be able to get some credits for, and to then go into the course that they want to study, which to me would seem to be a fairly inefficient use of resources? Have you got any comments on that?

Prof. Young—That is an option which is open to students now. If a student cannot find a HECS-based place in the university and the discipline that they want, they have open to them the option of taking a full-fee-paying place.

Mr CIOBO—Do you think it is marketed that way? Do you think most Australian students would know that?

Prof. Young—Yes, I do. I am quite confident they do. As universities, we are certainly not turning our back on that market, and there are some universities which, because of their premium brand name or because of the niche area in which they work, are particularly attractive in that area. That is my professional view. I am not optimistic that we are going to see a large number of Australian students take that as an option.

Mr CIOBO—What percentage of first-year students change or drop out into another course of study?

Prof. Young—I do not know that number offhand.

Mr CIOBO—Can you give me a ballpark figure? Is it about 30 per cent?

Prof. Young—No, it would not be as high as that. What we call attrition rates are typically about 18 per cent. These are students who will fail, students who decide to move from one institution to another, or students who decide to enrol in one degree and move to a second degree. The total number is about 18 per cent across the sector.

Mr CIOBO—I would be interested in getting a figure on those that then choose to undertake another form of study—not those that drop out to start a job, or fail or whatever, but those who, as far as the industry is aware, have undertaken one course of study and then used that as a springboard because they did not get a high enough entrance mark or whatever it might be, and then go into what would appear to be their preferred course of study. I would be interested in knowing that figure if the AVCC have that.

Prof. Young—We could certainly get that.

Mr CIOBO—Thank you.

CHAIR—We appreciate your time today, and could you come back to us with those items that have been requested. You will see it in the transcript. Thank you for coming.

Evidence for the Inquiry into the state of Australia's manufactured export and import competing base now and beyond the resources boom *was then heard—*

Proceedings suspended from 12.35 pm to 12.49 pm

Resolved (on motion by **Ms Bird**):

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 12.50 pm