COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON SCIENCE AND INNOVATION

Reference: Business commitment to research and development in Australia

MONDAY, 14 OCTOBER 2002

CANBERRA

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON SCIENCE AND INNOVATION

Monday, 14 October 2002

Members: Mr Nairn *(Chair)*, Ms Corcoran, Mr Martyn Evans, Mr Forrest, Ms Grierson, Mr Hatton, Mr Lindsay, Mr Anthony Smith, Mr Ticehurst and Dr Washer

Members in attendance: Ms Corcoran, Ms Grierson, Mr Lindsay, Mr Nairn and Mr Anthony Smith

Terms of reference for the inquiry:

To inquire into and report on:

International comparisons indicate that while the public sector in Australia supports R&D at an impressive level, business investment is less impressive.

With particular consideration of:

- the R&D drivers in small and medium sized business;
- the needs of fast-growing companies; and
- the considerations by which major international corporations site R&D investment,

the committee seeks to address three questions.

- What would be the economic benefit for Australia from a greater private sector investment in R&D?;
- What are the impediments to business investment in R&D?; and
- What steps need to be taken to better demonstrate to business the benefits of higher private sector investment in R & D?

WITNESSES

Committee met at 5.53 p.m.

BERMAN, Ms Patricia Anne, General Manager, Innovation Policy Branch, Department of Industry, Tourism and Resources

JENKINS, Ms Carolyn Joy, Manager, Business R&D Policy, Innovation Policy Section Branch, Department of Industry, Tourism and Resources

LOWNDES, Mr Terrance Anthony, Head of Innovation and Industry Policy Division, Department of Industry, Tourism and Resources

SAINSBURY, Mr Bruce Leslie, Assistant Manager, Innovation Analysis Section, Department of Industry, Tourism and Resources

CHAIR—I declare open this public hearing for the Standing Committee on Science and Innovation inquiry into the commitment by business to R&D spending in Australia. I welcome the representatives from the Department of Industry, Tourism and Resources. I would like to point out that, while the committee does not swear in witnesses, the proceedings here today are legal proceedings of the parliament and warrant the same respect as proceedings in the House. The deliberate misleading of the committee may be regarded as a contempt of the parliament. The committee prefers all evidence to be given in public, but should you wish at any stage to give evidence in private you may ask to do so and the committee will give consideration to your request.

Just before I ask you to make an opening statement before we go to questions, I should comment that there are a number of people here today as observers who are on training programs and various things from different parts of the world. They are looking at how the parliament and the committee system operate and at how we do things. Would you like to start with an opening statement? Then we will go to questions.

Mr Lowndes—By way of an opening statement, I would like to draw out a few of the points that we have made in our submission. The first area I want to cover is what I might call the overall analytical framework for looking at business expenditure on R&D. Clearly, there are benefits from business undertaking R&D in terms of contributing to innovation—innovation encompassing the development of new or improved products and processes with the ultimate end of productivity improvements. Business undertaking R&D, however, is only one mechanism to enhance innovation in business. Technologies can be adapted, products modified and new production processes introduced without formal R&D.

Business R&D in this context is part of an innovation system and its application, rather than the R&D itself, is ultimately the source of economic benefit. I think it is significant that the end point or ultimate output of the innovation process—that is, productivity growth—has been very strong in Australia in recent years. Viewing business R&D in this manner encompasses R&D as part of an innovation system that also includes public institutions such as the CSIRO and universities, access to research and technology from overseas and what I would call the innovation friendliness of the overall business environment.

Business R&D is an investment and will ultimately be driven by perceived returns in the marketplace. These returns will be affected by overall market conditions, access and cost of

finance and skilled personnel, commercial pressures, opportunities in product markets and capacities of labour markets to adopt improved processes. To illustrate this point, a previous survey—admittedly a rather old one—conducted by the Bureau of Industry Economics indicated that 85 per cent of firms undertaking R&D rated creating competitive advantage as the prime motive for undertaking the activity. This type of framework leads to two key observations: that success in the marketplace will be a key determinant of both the quality and the level of business expenditure on R&D, and links between business and other aspects of the innovation system including the public sector and the international marketplace will also be very important. Governments the world over recognise their role to influence decisions beyond the market outcome and Australia has a range of policy instruments to that effect.

When you look at business expenditure on R&D as part of an innovation system, it highlights that it is not an isolated activity or an end in itself. It is an input towards the end of productivity growth. The policy challenge is to provide appropriate stimulation to business expenditure on R&D consistent with facilitating an overall productive innovation system. I believe that maintaining the primacy of market drivers with cost-effective government support programs and effective settings in the overall innovation environment is the appropriate framework to meet the challenge of stimulating business expenditure on R&D.

The second point I want to make is, within this overall framework, to comment briefly on two elements that the committee's terms of reference have drawn attention to: namely, small business and the issue of location decisions of foreign investment. The recent government statement, Backing Australia's Ability, has a number of specific measures focusing on small business. The extension of the COMET program, the introduction of the tax rebate and the pre-seed fund are probably the three most significant ones. Also relevant is our service delivery arm, AusIndustry, which is trying to give a specific focus to ensure that its programs are small-business friendly.

More recently small business has been included in the Industry, Tourism and Resources portfolio. I think that probably should give a bit of impetus to the significance of innovation to small businesses. Notwithstanding the above, I think it is perhaps an area for further exploration to focus on the capacities of small business to link in with other aspects of the innovation system. These include public institutions, international markets, the finance sector and larger companies. In a sense, all these other linkage areas tend to be large business, and I think the capacity of small business to link in with them is something that is worthy of exploration. I guess the question is: are there impediments to small business linking in to these elements of the innovation system which may impact on their R&D effort?

On the international side of things, I think we appropriately recognise that we are part of an international commercial system and innovation is part of that. Investment and skills tend to be footloose and they will move according to the market, economic and political stability, the availability of research infrastructure, both in terms of the skills and physical infrastructure, and the opportunities for growth in the marketplace. Australia is quite strong in many of these areas. I think it is important that we market Australia effectively to the world as a site to undertake R&D and translate that into commercial outcomes. I think two questions arise in this area. One is whether we can get more marketing and awareness mileage from Australia's many international R&D success stories, such as ResMed and Cochlear, for example, and also the many multinational firms that do their R&D here. I think we are already performing quite well in a lot of those areas. The question is whether we can build on that strength to perhaps address

any perceptions that Australia is perhaps not as high tech and capable in these areas as we actually are. The other interesting area again relates back to the Backing Australia's Ability initiative to create some world-class centres of excellence, which involves clustering of industry and academic institutions. An area of interest is whether over time this concept can develop usefully and attract skills and funds from overseas to Australia. They are some of the main comments I want to make.

I close with an observation that the committee's focus, I think, is very much on the business R&D end of the innovation process, and to some extent this is not entirely reflected in the composition of submissions. Many of the submissions come from the public sector or industry associations. There are many successful examples—SMEs, multinational firms and Australian firms going global in the R&D business—and I think the lessons from those success stories are clearly quite important in looking at some of the very relevant questions that are raised in the terms of reference. It is also relevant that business tends to give more of the demand side of the innovation equation whereas there is probably some tendency for the public sector to look more at the supply side of it. Given that the terms of reference are very much market based, the importance of appropriate input from actual businesses is something I would like to emphasise.

CHAIR—Thank you for that. The point you finished on is very true, and I guess that is what we were hoping to get. We have probably not got as many submissions as I would have liked in that respect, but I think we have got a cross-section of views. In respect of that, one of the submissions we have—and we heard evidence two weeks ago in Melbourne—is from Dr James Fox and his company, Vision Systems, which is one of the success stories. It is a company that is investing 30 per cent of its turnover back into R&D and it can see the particular benefits that it can get by doing that. One of the things that he raised—and it is also mentioned in your submission—is that the studies by the Industry Commission and the Bureau of Industry Economics talk about incremental tax concessions. We have introduced the 175 per cent, but what Dr Fox was saying was that there probably should be a series of regimes, different levels of tax concession, depending upon the increase in investment but for it to be done revenue neutral so that there would obviously have to be other changes. Has the department had a look at that to see what might be possible? Do you feel there is some benefit in doing that?

Mr Lowndes—The incremental concession as it stands was introduced or announced 18 months ago in the BAA. It became operative at the beginning of the last financial year. So, even though it has been functioning for a year, we have had relatively little experience as to just how it works. These incremental type arrangements are reasonably complex in their design to ensure that we are really targeting the arrangement at what is genuinely incremental R&D. The idea of trying to manipulate the concession to focus on that additionality as distinct from, in a sense, providing support for R&D that would have already happened is really what has motivated the incremental arrangement that we have already got. We have not looked at introducing further steps into it. I guess the sort of thing that he is saying is that you might have a lower rate than 125 per cent generally and have a number of other steps.

CHAIR—I think realistically, if you did have a number of steps, with some of the steps actually higher than 175, you would really have an element where you just got the normal business deduction at 100 per cent; there would probably have to be a sector of that 125 to be able to do it revenue neutral.

Mr Lowndes—That is certainly true, and it is an interesting area to be looking at. We would probably like to see a little more experience as to how the increment that we already have is working.

CHAIR—Do you think another full financial year, which really means effectively another 18 months or more, would be required before you would have a better idea of the benefit of how the 175 is working?

Mr Lowndes—I think that is probably right. There are two issues to assess. One is just how much extra R&D we are attracting, which is obviously the key policy thing as to how much is becoming eligible, and there is also the operation and design of the incremental system to ensure that what we are getting is genuinely extra R&D. The concession has been quite well publicised, so we are expecting a response to it reasonably quickly because it is building on an existing concession rather than something new. We do not expect there to be a long lag before people will try to take it up. The sort of time frame that you are talking about is quite realistic.

Ms Jenkins—It might be worth noting there that the IR and D Board has to provide a report to parliament for the first time in July next year. That is primarily directed towards the rebate, but we expect they would also look at the take-up of the premium and any issues about effectiveness as far as you could comment on them at that early stage.

CHAIR—When do they need to report by?

Ms Jenkins—The first report would not be before July next year.

Ms Berman—When they produce their annual report, which is the end of the financial year. The first stats become available about June next year, so information will be available early in the 2003-04 financial year.

CHAIR—On a related issue, one submission we have is from Deloitte Touche Tohmatsu and in evidence they threw in a few things that they thought should be done. One of them was that they felt the maximum threshold for the R&D tax offset should increase from $1 million to $5 million. I asked them at the time whether they had any idea what that would cost, and they said they had not looked at that. Would the department be able to give us some idea what a change such as that would cost, even if it is 'in the order of'?

Ms Berman—We probably could not give you an exact figure, but we assure you that, in developing the $1 million limit, considerable analysis was done of the current suite of companies that use the tax concession. It was found that that cap allowed the maximum number of non-profit firms to get access to it and take cash rather than waiting. So it is up to $1,300 when we talk about a 3,000 usual registration group that goes for the tax concession. So it is quite a large percentage; it is not a figure that we picked out of the sky. As you go further up, it tends not to be so much the non-profit group; it is the people who would get the tax concession in their financial statement anyway because they have profit. So they can access it that way.

Ms GRIERSON—I want to use the Ericsson example and I want to be fairly direct and ask whether the department knew that Ericsson were having difficulty in retaining their facility here. Was there any state and federal cooperation in looking at that situation? Does it also reflect

any changes that we need to our policies that are aimed at sustaining and maintaining, not just boosting and starting off, such industries?

Mr Lowndes—The Ericsson decision to axe its R&D activity here was part of a global restructuring. They shut down facilities, I think, in Germany and in another country. It was not something that we as a government were involved in; it was a commercial decision undertaken by the company based on what has been a global downturn in ICT activity.

Ms GRIERSON—Given that we probably all did know that there was a downturn in that industry, perhaps that was a situation we could have predicted. Having just heard from CSIRO of the value of e-partnerships to aggregate our research activities and to overcome some of the isolation factors, one would have thought that might have been a target that we would have wanted to continue.

Mr Lowndes—It is certainly not a good development that it has occurred. As I say, it was a commercial decision taken by the company. It was not something that they negotiated in any way with government.

Ms GRIERSON—From the point of view of the public, who perhaps assisted and facilitated their coming to this country—and I know there are commercial realities—could we have been more proactive and should we perhaps look at policies in the future in that way?

Ms Berman—I believe that the recent Backing Australia's Ability innovation statement is totally focused on what you are suggesting. There was a very strong desire on the part of government ministers at the time to do what they could to enhance the attraction of Australia as a sustainable place to do R&D and, indeed, to commercialise. I believe the two world-class centres are directed at exactly that. They are very early in their implementation. But something like the ITC Centre of Excellence is exactly the sort of thing that future Ericssons, or similar groups, would hopefully cluster with, build on and—

Ms GRIERSON—That is right, but without those partnerships they are really of very little benefit, and it is those partnerships in business that we will need for those centres of excellence to be used.

Ms Berman—Overseas partnerships are just as important as domestic partnerships. I think there is a policy direction to cement that in.

CHAIR—Can I clarify something in that question? The federal government did not provide any grants and I do not think Ericsson were involved in any program in setting up their R&D. Is that right?

Ms Berman—I believe that they were involved in some early grants, particularly in relation to the R&D area. I would have to take on notice the exact quantums, but they are also involved in the CRC, so there are a number of areas where they are being supported.

Ms GRIERSON—In many of our hearings we have talked about portability of employees and people who are involved in research and development, and joint employment that benefits the public sector and private sector. Do you have any advice for us about that or directions that should be pursued to facilitate that?

Ms Berman—We are very aware of, and discussed in the lead-up to the last statement on innovation, the absolute importance of having people moving between the public and private sectors to facilitate innovation. There is a cultural difference between the two that still needs a lot of attention. We have programs in place. There is the linkage program in the Australian Research Council that encourages industry and research groups to work together and that involves picking up graduates and taking them into industry. We also have a similar program in the R&D Start area, which again is about getting graduates and putting them in industry.

I think the area we need to give more attention to is how to facilitate that in small and medium sized enterprises. Australia has enterprises of 10 people. They do not have strong R&D programs. They certainly do not have a team. If you bring a graduate into that, they often need a lot more assistance than just being there in order to make a real difference to the SME. I think that is the end we have to start focusing on more. There are things in place; it is a matter of improving the marginal outcome.

Ms GRIERSON—Yes, and I think the special needs of small and medium enterprises have come out in our submissions too. I think there has been a freeze on the R&D Start program for the moment. Is that correct?

Ms Berman—The R&D Start program has not stopped its funding. The amount of funding that was agreed is continuing. The rate at which the businesses were using that funding increased from previous years. So they were calling on the funds more rapidly, which has resulted in a need to hold the program at this point and not offer more grants to people until there is adequate funding available for these new firms to take on.

Ms GRIERSON—What do you think is the cost benefit analysis of that?

Ms Berman—The government set up a certain quantum. It is about $180 million a year; so it is capped. It is for competitive R&D. It is for the best, not just for anybody, unlike the R&D tax concession. The tax concession is driven by the market and is an entitlement program, so there is no cap on the funds—if you understand what I am saying. With R&D Start, it has always been a competitive program, so the projects which are selected by the IR and D Board are based on the best opportunity for commercial outcomes, profit building and national benefit. And that continues: there are over 300 projects currently being funded. The rate at which businesses were drawing down that funding had increased compared to previous years.

Ms GRIERSON—Are those the same companies or are new players entering all the time and drawing down those funds?

Ms Berman—At the moment we have people who are funded up until the beginning of this calendar year and they could have been from 12 months before that. The projects frequently take three to five years, so you are looking at a suite of projects over three years at least. Some of those are nearing the end; others have just started and so on. Then when the program reopens there will be people added on gradually over three to five years, so it keeps it at a constant of about $180 million being spent per year on competitive R&D.

Ms GRIERSON—If the take-up has increased so much, it would suggest there is a real need, but that would have to be measured against the benefit that comes out of that need.

Ms Berman—Yes.

Ms GRIERSON—Would your analysis of that at this stage suggest that there needs to be more funding for the R&D Start program? Are we getting the benefits from it?

Ms Berman—One of the performance indicators is to see, at the completion of the R&D, whether it has been a technical success. It is showing that in the order of 80 per cent are of that ilk. So it is a pretty good record. The other thing we need to do is look out three, four or five years later and see what the impact is. It could be that it is a technical success, but there may be a drop off or it could be that they are exporters and world-class global companies within two to three years. It is a relatively recent program. It was only introduced in the late 1990s and, with a three- to five-year time frame, unfortunately it takes a while to pick up trends.

Mr ANTHONY SMITH—I just wanted to draw on some of the things in your submission that I think put an important context and analysis on R&D. Often the debate takes place as if R&D is something separate to the economy and separate to the decision-making process, as if you could design an R&D program that would work irrespective of economic growth, interest rates or world events. I think you touched on that with regard to Ericsson where there is obviously a multiplicity of factors. One of the things that I wanted you to draw out a bit more—and it is a point that you make in your submission—is the issue of international comparisons. Many of these that you see in the press about levels of R&D spending across different nations simplistically presuppose that the structure of the economies are identical in every case. You make that point on page 37 of your submission. In a sectoral sense, could you draw that out any further, particularly in relation to the small and medium enterprises?

Mr Lowndes—In terms of SMEs, part of the issue is that Australia does not have a large number of multinational companies in the top 100. Certainly, some of the sectors of pharmaceuticals and defence that support these types of industries are very R&D intensive. They tend to have a higher proportion of smaller firms. Smaller firms are generally less R&D intensive than larger ones—and that helps. It is part of the economic structural type of issues that does contribute to its being down that list somewhat.

I am not sure that we have any real figures on the R&D intensity of our small businesses as distinct from other ones in other countries. But it is the case that most R&D is done by large firms. I think that is probably likely to be the case across all countries. It is also relevant to the extent that we do have some large firms. A lot of those are foreign owned and the multinationals tend to do more of their R&D in their country of origin than they do in other places—although, having said that, Australia does do reasonably well R&D-wise from the multinationals we do have here.

Major determinants of industry structure are issues like defence support and that type of initiative. We have very small defence industries. In places like the USA, for example, they are very substantial. In Finland, it is not defence but they have a very large telecommunications company, Nokia, that contributes very significantly to those types of figures. The economic structure of not having any companies in the top 100 in terms of size and also being not a big defence producer, these types of things, do contribute. It is also true that the comparative size of the manufacturing industry in the economy is lower in Australia than most of these other countries, and manufacturing tends to be more R&D intensive than other sectors.

Mr LINDSAY—How many people are in the innovation policy branch?

Ms Berman—There are 26.

Mr LINDSAY—And what is your budget each year?

Ms Berman—I will have to refer that to my division head.

CHAIR—It is very innovative, I am sure.

Ms Berman—I will have to take it on notice. I could not give you the exact figure, I am sorry.

Mr LINDSAY—In relation to the current concessions available, how were they determined? Were they determined on the basis of the amount of money available or some other basis?

Mr Lowndes—The tax concession is essentially an eligibility program.

Mr LINDSAY—I understand that. How did you determine where you were going to set the rates?

Mr Lowndes—I see what you mean—the choice of 125 or 175. These issues are about balancing the impact we are likely to have on firm decisions, the costs to the budget, looking at what happens in other countries. It is essentially about balancing those particular factors. Important in the decision to have a flat rate of 125 and an increment rate of 175 was really to try and get that differential at what we believe is an attractive level to encourage firms to go that little bit harder to do extra R&D.

Mr LINDSAY—That is all wonderful, but was there some modelling done as to how it would work?

Mr Lowndes—Yes, there was modelling. But, like all modelling, there are assumptions put into it to drive the outcomes.

Mr LINDSAY—You said that there was a balancing act and that one of the sides of the balancing act was the cost to the budget. What if I put to you that if a successful R&D concession program works there is never a cost to the budget, obviously because of the wealth that it creates and how that feeds back into the tax system? How do you respond to that?

Mr Lowndes—In a static sense of the way that budget processes work, there is a cost. In terms of the processes that we work under, that is relevant. The point you make that it would generate extra activity and wealth can well be true in certain cases.

Mr LINDSAY—Have you modelled that? Have you looked at that?

Mr Lowndes—No. Budget costing is not done on that basis.

Mr LINDSAY—Wouldn't it be terrific to be able to say to the government or to your minister, 'Look, if we do this, it will pay for itself and more, so it should not be capped or whatever'?

Mr Lowndes—I think this area of looking at these dynamics, which is what you are talking about, is quite a difficult one—

Mr LINDSAY—Are you saying that it is unsafe for the bureaucracy?

Mr Lowndes—I am not saying it is unsafe; I am saying it is very hard to measure. You have an opportunity cost of everything. It is not just a matter of looking at what extra R&D does; it is their resources that would otherwise be somewhere else. It is a matter of measuring what return they generate as distinct from what is generated if those resources were then tied up, weighing up the relative size of the concession that you would have to give to encourage that.

Mr LINDSAY—Should the committee recommend that your department has a look at that and advises the government on the benefits of having an open-ended system because there may be a positive to Australia rather than a negative to the budget?

Mr Lowndes—When you say 'open-ended', it is open-ended in a sense now.

Mr LINDSAY—Yes, you are right.

Mr Lowndes—It is an important point. If enough firms respond to this concession, then the cost will be much higher than we have predicted. But the point you make is—we would also argue it this way—that there is a lot more R&D happening, and that is the point of it. The balancing act is, in some sense, saying that that extra 50 per cent concession is what we believe is the right balance.

Mr LINDSAY—I have got five questions and I have got 60 seconds.

CHAIR—No, you have got a little extra time, but I want to follow up that point. Effectively what you are saying is that if, for instance, we went to 200 per cent rather than 175 per cent, you would be making an assessment that the 200 per cent was needed to encourage that additional research but in actual fact it might be done anyway. The taxpayer is effectively helping the company out for the sake of it, as the company would be doing it anyway. The 175 per cent was deemed to be the point at which that extra stimulus would occur.

Mr Lowndes—That is basically the situation.

CHAIR—I just wanted to clarify that.

Mr LINDSAY—Moving the focus to state governments and whatever schemes they have, have you looked at state government schemes and have you any recommendations for the committee about how state governments might better deploy the funds that they have available?

Ms Berman—We do have a list on the web site of all innovation programs across Australia which we update each year.

Mr LINDSAY—So we know what they are. Have you looked at their effectiveness and how the state governments might more effectively spend their money?

Ms Berman—The way in which we tend to do that is we have very regular meetings with the state governments—twice a year. There is an industry ministers subcommittee called the Commonwealth, State and Territories Advisory Council on Innovation. Part of its responsibility is to do exactly what you are saying: ensuring that there is not duplication, that we complement each other and, where possible, leverage off each other. We have one of those meetings at the end of this month. That started just before the summit in 2000. That was the first of those meetings. Mechanisms are in place; there is a vehicle there to do that. When we are designing a new program or going out for policy advice we always go to the states—the states are closer to many of the clients than we are in Canberra. It is part of our responsibility to use them as consultants to advise us on the way in which we should be directing the programs.

Mr LINDSAY—Without naming any states, are any of them intransigent in their approach to partnerships with the federal government?

Ms Berman—Everybody is positive about a partnership where they both win, and we try to encourage that. For example, the success of the Major National Research Facilities Program, which you would be aware of, is the states and Commonwealth together bringing forward funding as well as industry, where appropriate, to get an outcome that suits both parties. It is all about leveraging off each other. There are opportunities for further work in that area.

Mr LINDSAY—You are saying that you are perfectly happy with what the states are doing?

Ms Berman—There is always an opportunity for us to build it a bit stronger.

Mr LINDSAY—Where are they so that we can know and we can recommend that something should happen?

Ms Berman—The area that both the states and we feel that there is more attention needed is in improving the business skills and acumen of very small firms. We have programs in place; they have programs in place. I do not think any of us have completely solved the problem yet, so working together effectively there can only bring more benefits.

Mr LINDSAY—Out of left field, as far as your department is concerned, in all of this how important is a business's ability to sell a product? I told you it was out of left field.

Mr Lowndes—It is critical.

Ms Berman—Marketing is critical. Sometimes the problem is that you do not have the right people to do that. They want to do it, but they need extra skills. Some of the programs we have help them to get, find and locate those skills.

Mr LINDSAY—You mentioned earlier links to the international marketplace. Do you accept that the majority of R&D innovation or whatever will be sold overseas? If you accept that, do you then recommend that Australia put as much effort as it can in helping Australian companies do just that—go to the world marketplace?

Mr Lowndes—It is hard to say if it is a majority, but obviously a significant area for the sale of any product is really now going to be overseas. Exports are quite important to a lot of our businesses and, certainly with what you might call technological innovations, in order to get sufficient market you have to sell them in a number of countries. You get systems controls in airports and things like that. Clearly, they are things that, if you are going to have enough scale to produce them, you have to be able to sell them in other countries because there is just not enough demand here. Some of our R&D success stories have been so because they have been able to crack international markets.

It is not the only aspect of R&D and innovation. Some R&D will be directed at improving production processes for other facilities. We do not want to look at R&D as solely generating particular high-tech products that have to be sold; there are other dimensions to R&D and to innovation. But, as with any new product, there will be some businesses which need to be able to sell their products overseas, to the extent that probably from our economy's point of view it is better that they produce them here and sell overseas than move overseas and produce them there. That is an issue that is an important part of this equation.

CHAIR—You mentioned earlier that there are not huge numbers of international companies here in Australia but the ones that are here are big investors in R&D. The aspect of encouraging more of those companies that might be here and that are doing their research overseas to do research here has been raised in hearings. In some evidence that we got, it was indicated that often decisions which are made about what part of the world R&D is done in are not based on all the facts. They are often based on—

Ms Berman—Perceptions.

CHAIR—Yes. In a marketing sense, this usually indicates that something—in this case Australia—is not being sold as well it could be. In regard to Invest Australia's role, do you think there is anything else that should be done differently?

Mr Lowndes—I think the issue is not in a sense just a matter of Invest Australia, although it is timely to look at this. Since the Blackburn report, that is an issue the department has been looking at. I think the comment is more one of trying to build on the success that we have in terms of this general perception that Australia is pretty good at this sort of thing—

CHAIR—We should be beating our chest a bit more often and a bit louder.

Mr Lowndes—and using as much as we can the success stories that we have. It is one thing to have a publication, a book or a table that says we are good at things; it is probably another thing to have a representative of a multinational subsidiary or a small Australian business that has been successful overseas saying the same sort of thing. It is likely to carry a bit more weight. There may be scope to use the success we have had—and I think we have had some—a little bit more to try to attract others. At the end of the day, it is not ultimately about marketing, although people make investment decisions on rates of return, and they are not necessarily going to pick up a publication and decide to put a lot of money here just based on that.

But I think we probably do have a bit of a problem in that we market Australia in different ways to different people. We have the Tourist Commission that markets us in a certain way that is probably not necessarily the most constructive way from an R&D point of view. There are a

lot of areas where we stack up pretty well internationally and we do have some reasonable companies here doing some research, so I think it is more a matter of trying to make others more aware of these particular strengths.

The other aspect of it, I suppose, is the institutional arrangements. We have a pretty strong public research infrastructure. My understanding is that this is one of the issues as to why multinationals do their research mainly in their home country. They are much more familiar with the public research infrastructure at universities and this type of thing. They understand the system as it applies in America. They have no idea how it works here. I think that is also part of the marketing arm. It is not just a matter of having people to work in the R&D facility; it is also knowing what other parts of the innovation system we have that people can usefully tap into.

Ms Berman—I would add to that the not insignificant cultural issue here that as a country we are known for certain pleasures—sport and so on—and we are very proud at a very early age to be talking about those. We do not have that same pride for other things. We do not even bother to talk about the other successes we have. We are one of the few countries that get Nobel prizes for science. Japan has never had one. They are very envious of us. Yet we do not go away and regard that as a badge of honour. So it is important to get young people—not the people who are about to retire but rather the young people coming up through the system—feeling proud of the success stories, as we say. At the moment, they tend to be clouded a bit because, being of English origin, we tend to also draw attention to the negatives. Unfortunately, sometimes that is what is remembered rather than the positives. We need that cultural change.

CHAIR—A very good point. Thanks very much for your time this afternoon.

Resolved (on motion by **Ms Corcoran**, seconded by **Mr Anthony Smith**):

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

Committee adjourned at 6.42 p.m.