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Chair

Mr. James Rajotte

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● (1530)

[*English*]

The Chair (Mr. James Rajotte (Edmonton—Leduc, CPC)): I would ask members to find their seats please. We have two sessions today, one from 3:30 to 4:15, and the second one from 4:15 to 5:30.

This is the 28th meeting of this session of the Standing Committee on Industry, Natural Resources, Science and Technology. We are continuing our study of the challenges facing the Canadian manufacturing sector and some of the solutions presented to those challenges.

We have witnesses: from Electro-Federation Canada, the president and CEO, Milos Jancik; the vice-president of the Electrical Equipment Manufacturers Association of Canada, Wayne Edwards; the president of W.C. Wood Company, Dave Wood; and Ernie Reynolds, vice-president and general manager of DSG-Canusa. Welcome.

I understand you'll be sharing the time allotted for the opening presentation of ten minutes. I believe, Mr. Jancik, you will be starting. Please start any time.

Thank you.

Mr. Milos Jancik (President and Chief Executive Officer, Electro-Federation Canada): Thank you, Mr. Chairman.

Thank you for giving us this opportunity to address the committee on this important topic.

I'd like to begin by briefly describing what the Electro-Federation is. It's an association of electrical and electronic manufacturers and electrical wholesalers. Within our group, we have seven councils, including the Canadian Appliance Manufacturers Association, the Electrical Equipment Manufacturers' Association of Canada, and consumer electronic manufacturers, which include some making telecommunications equipment. Those are some of the companies.

The products our members make can be anything from freezers and refrigerators to lamps, wall receptacles, electric motors, automation equipment, home entertainment systems, BlackBerrys, cellular phones, and so on. This gives you an idea of the breadth in the different types of products that our members make.

Our association comprises some 300 member companies, with an annual turnover in the neighbourhood of $50 billion, employing some 130,000 Canadians all across the country.

Once a year, our members come to Ottawa to meet with members of Parliament and have sessions on various issues. This year, in the middle of October, our session was dedicated to the concerns about manufacturing competitiveness in Canada. We had a number of presenters, and their presentations are included with the handouts, together with the covering note.

First, I would like to go over a few of the key points that were made in those presentations, and then make a few policy recommendations—many of which you have heard in the past—where we support a broader coalition of industries, with a specific focus on our industry and the needs of our members.

First, when you look at our membership, these are dynamic companies committing resources to innovation and productivity increases, and they have done a lot of work in the area of cost containment in a highly competitive environment. The presentation that nicely describes the whole process was prepared by Pierre-Paul Riopel, who is the vice-president of manufacturing at Thomas & Betts Canada.

Thomas & Betts employs some 1,300 people in manufacturing, mostly in Quebec and the Eastern Townships. It's a subsidiary of a U.S.-based company that develops products in Canada for domestic and export markets. It has a full engineering and manufacturing capability, and it's a very prominent member of our association.

Some of the key points they make in their presentation have to do with what it takes to implement lean manufacturing. It requires a lot of training, commitment, resources for training—that is why, as you will see later, we're making some of the policy recommendations—and investment in new technology, IT, to ensure that they have the most modern and cost-competitive processes.

When you look at the scope of the products our members manufacture, they include industrial automation products and energy-efficient—EnergyStar-rated—appliances, such as lamps, premium energy-efficient motors, and many similar products that contribute to increased productivity and to reduced energy consumption and energy costs. In other words, the activities of our members not only require support for them to be competitive, but they contribute to the competiveness of the larger manufacturing community in Canada.

When you look at what our manufacturers have been facing—and much of it has already been captured in your preliminary report, which we echo—they have been hit simultaneously with higher energy costs, volatile and rising commodity prices, and a rapid appreciation of Canadian currency, in addition to all of the usual effects of globalization: the Wal-Mart effect, increased competition, reduced prices, and the effect of products coming in from Asia.

The next two points we made in our presentations were contained in Mr. Wood's presentation, and he can speak to the details.

● (1535)

Canadian manufacturers are absorbing higher taxes than importers, and this represents a significant differential to product costs. Our members believe this is an unsustainable competitive disadvantage that is further exacerbated by the high value of our currency. Together with that, there is the issue of the method of tax collection. In our view, it is as important as the amount of taxes collected. This is of particular importance when relating the impact of taxes on domestic products to the impact on foreign competitors.

Mr. Barrett, who is the CEO of Emerson Canada—this is a company with some 3,000 employees in 12 plants—described in his presentation.... We did this in collaboration with the Canadian Manufacturers & Exporters. He is our member, but he is also chair of CME.

He talks about the process by which capital projects are approved. What he is talking about is the need to attain a return on capital that exceeds the risk-adjusted cost of capital and the method by which it's evaluated in terms of the risk associated with a longer-term payback period. In other words, projects that have a shorter payback period are obviously deemed to be more desirable and less risky.

He goes through—and you have the handout of the presentation—the steps and the investments when the manufacturer makes the investments, but also where the public sector can make investments: in infrastructure; in throughput, for example, through the ports; in support of training and skills development. In his absence, I would be pleased to answer some questions that may arise from his presentation.

That being said, in collaboration with other industry associations, there are several measures we would support.

The first one is the two-year write-off for investments—capital cost allowance—in manufacturing, processing, and associated information and communication, energy, and environmental technologies; in other words, not just for machinery, but for the whole gamut of investments that need to be made to ensure a competitive manufacturing establishment.

We certainly support the government's initiative and support its maintaining its commitment to lower the federal corporate tax from the current 21% to 19%, and eventually to 17%.

We believe there is room for improvement to the science research and experimental development tax credit. The issue there is accessibility; it's certainty of being able to include the refund, rather than a credit, in the project evaluation right from the beginning. It should be more broadly based and include international collaborative research and development, costs of patenting, prototyping, product testing and other pre-commercialization activities, and not be restricted. It's a very good program, but it's somewhat restrictive, and we believe that if it were expanded it would yield benefits.

We've talked about training. Training is essential and requires a tremendous amount of commitment by manufacturers: implementing new IT technologies, which are vital to communications in dealing with issues, such as cross-border trade—when you have to deal with the broker, submit the documentation on time, make sure the products get across quickly—skills development dealing with new technologies in automation, and so on. Companies that make that commitment should be able to receive some tax credit against their EI premiums, recognizing that a better-trained workforce is less likely to burden the employment insurance with claims.

● (1540)

Finally, the last policy recommendation we would make has to do with user fees and the whole regulatory regime. We believe user fees should be applied to the purpose for which they were collected and there should be some audit trail and accountability, and also that the whole regulatory process should be competitive in terms of costs and in terms of timeliness. We believe there is room for the introduction of smart regulation and mutual agreements with other jurisdictions where similar or identical testing—for example, qualification of products—is being done. So the whole regulatory environment becomes part of the competitive environment for manufacturers.

In conclusion, we believe in the positive future of manufacturing in the electrical and electronic sectors in Canada. We look forward to working with you in advancing competitiveness of manufacturing, and we believe the time to act is now.

The Chair: Thank you very much, Mr. Jancik.

We'll go immediately to questions. Mr. Boshcoff is first. You have six minutes, Mr. Boshcoff.

Mr. Ken Boshcoff (Thunder Bay—Rainy River, Lib.): Thank you very much.

I'd like to focus on your emphasis on energy costs in Ontario—in particular, northern Ontario and northwestern Ontario—and the forestry and mining sectors and how we are ever going to get into the global game in those two sectors in particular. Our cost per tonne for pulp, for example, is $56, and in the rest of the world it's $36. That's a huge gap to get there.

Is there a solution that is obvious to someone in the manufacturing industry, and is there a federal role that you see us being able to play in a provincial domain?

Mr. Milos Jancik: I'm not sure I'm qualified to answer that question, but certainly energy costs are a key element in manufacturing processes and the amount of energy consumed goes with it. The Government of Ontario in particular—this is not necessarily part of the scope of our presentation—is going through some soul searching in how to meet its future energy needs in terms of what kind of power should be generated, where it should be generated, how to fund it, and should the market be deregulated, as the previous provincial government had suggested, or should it be controlled.

There are a lot of issues there, but basically, from our perspective, we believe energy costs must be competitive to manufacturing. In the same way, if it leads to a higher per tonne cost, for example, in paper manufacturing, obviously that renders manufacturing non-competitive. So to that extent, the energy costs are crucial.

I'm not sure that answers your question.

● (1545)

Mr. Ken Boshcoff: It's only that the Canadian manufacturers identify three major issues, one of them being energy costs. Rather than go into currency or something else that I don't know so much about, we in Ontario are really frantic for some kind of solution. So we're looking to groups such as yours to offer their perspective as to what could be done.

There have been suggestions of things called regional energy or district energy or some kind of fair-pricing formula whereby if you produce it in an area at a low price, they should be able to do it. In the province of Ontario, of course, everything is averaged, so that for high-priced nuclear, consumers get the same price as for low-cost hydro, and those types of things.

Can you offer anything, now that I've given you that much more information?

Mr. Dave Wood (President, W.C. Wood Company, Electro-Federation Canada): Yes. I would like to thank you. Obviously we don't represent the pulp and paper industry. We represent the Electro-Federation.

We've come up with a policy or at least what we believe to be changes to policy that impact all costs, and I think you're quite appropriately phrasing this as how do we control all costs. When we look at pulp and paper or any manufacturing, we need to understand all the costs involved. Energy is obviously one of those, but what we focused in on is how government can partner with industry, with manufacturing, whether it be small industry, large industry, or medium-sized industry, which is what I represent. And in our presentation, one of the things you'll note is that the largest cost to the major appliance industry, aside from materials, is actually taxes. We can talk about energy, but within our mandate, what we have come up with from our group and association is how we can control the tax cost and the differential in taxes that Canadian manufacturers are paying as opposed to what importers are paying, primarily those in Asia as well as in Latin America. But it is a way we can control costs and it is a way we can make the industry competitive and try to improve the competitive nature of both Ontario and Canada as a whole, and that's a lead role that the federal government can play.

Mr. Ken Boshcoff: When the manufacturing sector looks at its own research and development, how important is location in terms of sectoral support? The size of the university is what we're looking for as well, I guess. For those of us in regions that are larger regions but perhaps not so close, manufacturing is just as important as it is to those elsewhere.

Have you as an association thought about the dispersal of intelligence across the country, providing for centres of excellence in the Maritimes, Quebec, central Canada, or in the west, that type of thing?

Mr. Milos Jancik: Typically we would be speaking to the research and development done by manufacturers in their facilities, generally, and certainly with the support of the academic community. From our relationship with the academic community, we know that the room for centres of excellence is certainly there. As you know, Ontario has some, and other jurisdictions have been looking at it.

The real issue for us is around the risks associated with the development of new technologies, the development of new products, at the manufacturer level, and the fact that often it's done through a collaborative effort, be it with a parent company or other companies. We'd like to see this recognized in programs geared to assist the research and development.

Certainly we would like to see, aside from our recommendations, the development of intellectual capital. Centres where expertise could be concentrated can only be helpful.

The Chair: Thank you, Mr. Boshcoff.

We'll go to Monsieur Vincent.

[*Translation*]

Mr. Robert Vincent (Shefford, BQ): Thank you, Mr. Chairman.

My question is for you, Mr. Wood, because you spoke about taxation rates earlier.

One of your document explains that export duties paid by Canadian manufacturers are not the same as those paid by other manufacturers, especially in the case of China. Further on in the same document, you state that where a given appliance is made in Canada it would be subject to $52.28 in taxes of all kinds, while if the same appliance were made in China it would be subject to only $18. What I find the most troubling in this situation is that manufacturers would have to set up shop in China to have access to the same advantages.

What can we do to help you keep our manufacturers here in Canada while also insuring that they can compete with China?

● (1550)

[*English*]

Mr. Dave Wood: Thank you, that's an excellent question.

You're asking how we wrestle with the challenge of taxes that are paid on an imported good, of $18, versus taxes on a manufactured good, of $52.28. I think the biggest thing the committee has recognized is that manufacturing in this country is becoming very challenging, whether it be the increase in the Canadian dollar, whether it be the increase in commodity prices, or whether it be global competition.

Speaking specifically to global competition, China has a significant advantage in labour. We all understand that. But they have a significant disadvantage in skilled labour infrastructure as well as freight. The biggest advantage for the appliance industry is actually taxes, as you pointed out. There is an 11% total differential in costs, based on the tax burden.

The proposal we sent actually lists, on the second-last page of the presentation, an alternate tax method. It identifies a proposal that would reduce personal income taxes by 53%, corporate income taxes by 20%, and property taxes by 50%, eliminating entirely capital taxes as well as reducing payroll taxes by 8%. Those taxes can then be offset by increases in the provincial GST, the federal GST, and consumption taxes, which place more of a burden on the imported product. Currently the imported product contributes only 22% to the tax revenue of Canada, whereas manufacturing is contributing well over 80% of that tax burden.

This proposal would double the tax burden on the imported product to 43% of the tax revenue generated at all levels of government, and would decrease that gap, as you noted, between the $52 in taxes paid by a manufacturer and the $18 paid by an importer, by about 40%. That would bring us much closer to being able to compete. In fact it would allow us to export more tax-efficiently, and compete not just within Canada but globally.

[*Translation*]

Mr. Robert Vincent: If I understand you correctly, the solution would be to introduce a border tax on Chinese products in order that yours remain competitive. Currently, the greatest problem manufacturers face is that, in order to compete in the same market, they have to be based in China.

Do you think that this is a good solution, I understand your argument that we should introduce higher border taxes on Chinese products so that Canadian industry can remain competitive. I think that you have hit the nail on the head. I would like you to explain this solution further so that everybody understands it and we can move towards implementing it.

[*English*]

Mr. Dave Wood: The challenge is it requires a lot of political will. Changing our tax base is extremely challenging. What we have to recognize is that China's tax model, as well as many countries' tax model—including not too far south, where we have another facility in the state of Ohio—is moving away from a tax that bases their tax revenue on value added, on income, on payroll, and moves more towards a tax based on consumption. That consumption tax isn't designed to penalize importers. It's designed to level the playing field. The goal is not to penalize manufacturers domestically, which is currently the challenge.

China gives you a full tax credit on finished goods of between 13% and 17%, essentially eliminating all taxes paid on an exported product. To your point, we can't access their cost structure on materials because there is actually an export duty on things like aluminum, copper, steel, and other base commodities. The only solution, currently, is to relocate to China. We have to recognize that if we want to stop that, we have to stop penalizing domestic manufacturing. We have to stop allowing China to have free access to our market and allowing them to continue to provide export subsidies.

The goal, as I mentioned, is to look at the implications of not just what taxes we collect, but how we collect those taxes. I think there's a strong movement always to lower taxes in general, but I'd ask the committee and the government to take a look at how they collect that tax. Try to collect that tax revenue based on an economic model that recognizes that industry and the economy are global; don't collect tax based on the value added domestically, but based on the goods traded throughout the entire economy. And that moves away from the income tax model and towards a consumption tax model.

Does that answer your question?

● (1555)

The Chair: You have 30 seconds, Monsieur Vincent.

[*Translation*]

Mr. Robert Vincent: You spoke about reducing the tax burden. I would like you to give us a clearer explanation of how this could be achieved.

What sort of tax cuts will help Canada compete with China?

[*English*]

Mr. Dave Wood: As I mentioned on the second-last slide of our presentation, to reduce our income taxes we would have to raise our consumption taxes. The GST and the PST would have to increase between 25% and 200% to try to compensate for that decline in tax revenues from the income tax. It has to be a balance. And that tax burden would be shared by all levels of the economy, including importers.

The Chair: Thank you.

We'll go to Mr. Carrie now, for six minutes.

Mr. Colin Carrie (Oshawa, CPC): Thank you very much, Mr. Chair.

I'd like to thank you all for coming here and being part of this very important study we're doing on manufacturing across Canada. I think you've noticed the Minister of Finance has really been committed to starting to lower the corporate tax structure and taxes in general. I think we're on the right track. But I come from Oshawa and I think the majority of the committee comes from Ontario and Quebec, really the manufacturing heartland of Canada. For me, a lot of it is about jobs and how we can maintain the jobs here in this country. So I was wondering if you could be specific to your sector.

What do the corporate and business tax cuts do to increase Canada's ability to attract foreign investment to Canada? What does foreign investment do for Canada? And what does that do for jobs in our nation?

Mr. Milos Jancik: Clearly, and it's part of our recommendation, reduction in corporate taxes improves the competitiveness. Canadian competitiveness makes for a better investment climate, be it for domestic investors or foreign direct investment. We've seen positive effects when many companies have located facilities in Ontario, in various sectors, in the automotive sector, for instance. Also, in our sector, some of the companies in our group are companies like General Electric, Siemens, Philips. These are global companies that make investments globally and look at the best conditions in terms of proximity to market, in terms of investment climate, in terms of tax regime, in terms of available skill sets of labour, and ultimately calculate their return on capital. So the better the business environment, very much supported by a more competitive tax structure, the better the attractiveness for foreign investment. That directly creates jobs. Certainly we would support that.

Mr. Colin Carrie: Then more people pay taxes.

When you talked a bit about the international tax gap, and what we've done this year and what we've committed to, how much further do you feel we have to go?

Mr. Dave Wood: The current tax gap in the appliance industry is about 11% of total product costs. As I said, that's more than labour. It's more than the advantage of labour that many people refer to. And this committee I think appropriately characterized that in their interim report in June. We have a lot further to go. The move we've made has changed that from about 11.4% to about 11.2%. That's all. We have a long way to go to try to correct that.

This association, Electro-Federation Canada, represents about 130,000 employees throughout Canada, most of whom work for foreign national companies. There are a lot of opportunities to attract business to our country if we can provide them tax incentives to export. Our economy is not large enough necessarily to draw in the size of industry we need to sustain our economy by the domestic market. We have to represent ourselves as a good base to export. The best way to do that is to provide tax credits based on the consumption tax model that allows you to export product, and by lowering the taxes that Canadians have to pay, both at the business level and others.

Mr. Colin Carrie: Okay.

Looking at your recommendations, you talk about the CCA rate. We had officials from Revenue Canada come in, but they didn't explain it really well to us. If Canada were to accelerate the CCA rate, can you explain in detail how this would improve your industry's ability for procurement and what impact it would have on efficiency, competitiveness, productivity, and the environment?

● (1600)

Mr. Milos Jancik: What it does is reduce the risk with new investment. Normally, you would amortize equipment over its lifespan, so if a machine is supposed to last five or six years, that's how you would depreciate it.

Investment in new technologies and investment in new processes, new IT—there's always a risk in investment. And in any organization, particularly in broader multinational organizations, you will be competing for the investment dollars with other units within the company. What the accelerated capital cost allowance does is improve or reduce the payback period, essentially, because you get the full benefit of the write-off over a shorter period of time. It does not reduce the total tax take for the government, but it does change the timing of it.

Mr. Colin Carrie: Are you finding that the equipment becomes outdated that fast?

Mr. Milos Jancik: I beg your pardon?

Mr. Colin Carrie: Do you find that the equipment you would buy or the new products you would buy for your business become outdated that fast, say, within two years?

Mr. Milos Jancik: Not necessarily. It may be true of some IT equipment where you will write it off over three years, if it's a notebook or something like that, but not necessarily. It's simply the initial investment that is required and getting approval for it. Whether it's new product development, acquisition of new machinery, to get the approval on that project, you want to see a positive cashflow quicker or improved, accelerated, so that the project has a quicker return on investment. That's the critical dimension. It's not that the equipment gets necessarily replaced in two years; that need not be the case.

The Chair: Thank you, Mr. Carrie.

We'll go now to Mr. Masse.

Mr. Brian Masse (Windsor West, NDP): Thank you, Mr. Chair, and thank you to the delegation for being here today.

The Canadian dollar and the rapid increase that has taken place over the last number of years developed a lot on the explosion of the oil and gas industry and exportation, pushing the manufacturing aside—about a 30% change. What has mostly been taken out of your business operations with the loss of that 30% that you had there? If you had that same differential today, where would that be going?

Mr. Dave Wood: There are two answers to that question. First, what have we had to take out? What a lot of manufacturing has done.... You're quite correct, a 43% increase in the dollar is equivalent to a 30% reduction in our selling price, the inverse of the impact of the dollar. What industry has had to do to try to compete with that is either improve their productivity, lower their cost of materials by sourcing globally or using alternative materials and alternate designs, lower their overheads through payroll reductions—which has been the dominant impact in this industry, with an 8% reduction in total employment—or move operations south.

In the appliance industry specifically, there were 34 appliance manufacturers at one time. There are now three left, two of which are in the province of Quebec. One is in Ontario. What our industry has been doing is relocating and downsizing operations, and that's not healthy for the economy.

Embedded in the problem is the overheads, and there are limitations to what industry can do. We can correct labour. We can correct material. In many cases the declining dollar or increasing dollar has actually helped to lower our material costs. But what we're seeing is our overheads are not decreasing. To give you one example, taxes in terms of the U.S. currency have actually increased 69% in the last four years. So our challenge is how to lower those costs. The alternatives are typically to relocate, to downsize, or to outsource.

Mr. Brian Masse: In that context from 2002 to today, what would be the profit percentage in there?

Mr. Dave Wood: In this example—and it's a hypothetical example based on industry statistics—the example in 2002 is that it's a 5% net profit. That's net income before taxes. And that's not untypical of what most industry was doing prior to the increase in the dollar and the increase in commodities.

What you'll see now, though, is that unless you change your business model—and this is all based on the premise that you don't change your business model—you go from making 5% to losing 23.5%. There aren't many businesses that can stay in and survive very long losing 23.5% .

And you can see that this is really what has driven the decrease in employment and the decrease in manufacturing activity in this country.

● (1605)

Mr. Brian Masse: I like the chart here on the tax gap for a manufacturer. Maybe you can explain it a little more. Is there no cost in there in terms of from China? You just have the GST and that's it. It's hard to believe that there wouldn't be any other expense. You could be correct, but is that really the...? And do you have a comparable one, for example, to the United States?

Mr. Dave Wood: We'll start with China. The tax stamp is based on the taxes that we pay in Canada. Another way to look at it from a government's perspective is that these are the taxes you collect. So for every appliance—refrigerator, freezer, dehumidifier, microwave, whatever it is—that we import, the government is seeing a decline in taxes of about 70%.

China does pay tax. There is certainly a tax model there, but their tax model is dramatically different. Their payroll taxes are a fraction of what ours are, partly because their payroll costs are a fraction of what ours are. But they get a tax credit for everything they export, between 13% and 17%.

That covers nearly all taxes paid, because most of their tax burden is based on a consumption model. They also don't pay property taxes. You can't own land in China. You have to lease land.

So you're quite correct in saying there are taxes paid in China. They are relatively insignificant to even the GST, because they get credited for most of that tax when the product is exported.

If you look at it in comparison to the U.S., the U.S. has a very different tax model as well. They are actually in many respects further behind Canada, in that they have no consumption tax at a federal level, which gives you an advantage on an export basis.

But many of the states have stepped up. The state of Ohio I can use as one example. The state of Ohio has moved from an income tax basis to a sales tax basis. You now pay your “income tax”...you pay your state taxes based on what you sell and you only pay based on what you sell within the state of Ohio. So for all the refrigerators and freezers that we export out of the state of Ohio, we pay no tax. That's the tax haven that draws investment into Ohio, and that's why Ohio is starting to now recover their manufacturing base.

Mr. Brian Masse: You're bringing up an interesting point, because it's really a dog's breakfast when you try to compare some of these scenarios. And I think that's where, when we look at public discussions about what's fair in terms of either a rebate related to research and development, lowering a corporate tax cut, or other types of subsidies....

You have an analysis here in terms of China that's been interesting. Do you have any information on some of the environmental differences that are allowed there versus the practices over here? In North America, and Canada in particular, they are quite profound in terms of the impact on operations. Do you have any research in that capacity?

Mr. Dave Wood: I don't. I'm not qualified to really answer that question.

What I can tell you is that we do extensive research on the products imported—not the process, but the products—and I can tell you that the products imported from China, from reputable manufacturers, which for the most part they are, are equally as capable of living up to our standards of quality and safety. And from an environmental standpoint they comply with the rules and regulations of Canada in terms of environmental CFC protocol, and others. And there is no issue in that regard.

As far as manufacturing process is concerned, I'm not sure I'm qualified to answer that.

Mr. Brian Masse: Yes, and that's what I'm interested to find out; that, and also the disposal of materials.

The Chair: Mr. Masse, we're over time here, so thank you, Mr. Masse.

We'll go to Mr. Pacetti.

Mr. Massimo Pacetti (Saint-Léonard—Saint-Michel, Lib.): Thank you, Mr. Chairman.

And thank you to the witnesses for coming here today. It's always interesting to hear from the manufacturing sector.

I have just a couple of questions. My first is mainly a comment.

In the past couple of years under the Liberal government there was a lot of reduction in corporate taxes, especially in the last few years—corporate taxes, surtaxes—and reductions all the way around. And corporations seem to have benefited from it, but the manufacturing sector didn't seem to reinvest. You have to take some type of responsibility for that. We didn't see productivity going up. We didn't see investments in capital and equipment. What happened? How come that didn't happen?

Mr. Milos Jancik: I believe there have been productivity increases in manufacturing in the last couple of years. I believe your own interim report suggests something like 5.6%. And there have been investments. They vary from manufacturing sector to manufacturing sector, but many of our members have made significant investments in manufacturing and improved productivity in implementing lead manufacturing. To say that they haven't been doing it is not accurate, but certainly a lot more needs to be done. We haven't closed the productivity gap.

It's also fair to say that when you're looking at the tax burden, you're looking at the total tax burden, not only the federal taxes. The whole discussion can't only be at the federal level; it also has to flow through to the provincial level. Yet we still have a very significant productivity gap, depending on the sector, and we speak to this; it's in the range of 20%.

● (1610)

Mr. Massimo Pacetti: I don't mean to interrupt you, but our time is limited and I'd like to go along the lines.

The corporate tax has helped in the past. Now, going in the future, we see the GST cut, which I think you're opposed to, Mr. Wood, from what you were saying. The new government has also introduced corporate taxes. Are those opposite views? Are we going in the right direction? Is the present government going in the right direction or the wrong direction?

Mr. Dave Wood: I'm not here to make comment on politics. I think any government, from any of the parties, that helps change this tax gap is moving in the right direction. Certainly the GST proportionally gives the importers a bigger tax advantage than it does domestic manufacturers, that's true. But I think any government that can look at this pragmatically and understand that we have to get our taxes down to manufacturing and allow them to compete, or at least allow them to get credit for those taxes when they export, is the key.

Mr. Massimo Pacetti: Okay. It's simply trying to see what can best help the manufacturing sector, then the committee will decide what is the best avenue. I'm not asking for you to decide, I'm not asking for you to be partisan, but the two avenues don't seem to be consistent. I want that aspect to be clear.

The other aspect when it comes to taxes, and I think Mr. Jancik spoke about it, is should we not maybe do more targeted cuts? For example, if manufacturing companies are going to invest in payroll, perhaps they should get credit for that, and if they are going to invest in new machines and equipment, perhaps they should get a credit for that. Is that the way to go as well?

Mr. Milos Jancik: Well, I mean....

Mr. Massimo Pacetti: Or do we do general...?

Mr. Milos Jancik: We have made recommendations. No, I.... We haven't had—

Mr. Massimo Pacetti: Is it going to work? I'm only afraid that we're going to do this piecemeal. We're not going to be able to do all of the things that Mr. Wood suggests, but I'm wondering, in terms of prioritizing, how do we prioritize? There is a limited amount of money in the government coffers and we do want to pick the right solutions.

Mr. Milos Jancik: First of all, I would not leave you with the impression that we came looking for donations. What we are talking about, for example, is one of the recommendations we made about the introduction of a tax training credit against EI premiums. First you have to do the training, you have to spend the money, you have to spend the resources, before you can talk about a tax credit. In the same way, you cannot get an accelerated capital cost allowance until you have made the investment.

Mr. Massimo Pacetti: But is that the priority? Are those the first issues that we should be tackling, training, CCA, or is it corporate taxes, or is it increase in GST? That's what I'm asking. I'm trying to build consensus here.

Mr. Milos Jancik: The recommendations we have made are broadly shared recommendations with other associations. I think the argument that Mr. Wood has made is not so much a railing against the initiative of the government, but is to say that the method of tax collection, when you look at the impact on domestically produced products and imported products, is significant and should be part of the design of the tax game, if you like. That is different from talking about the total amount of taxes collected. Obviously, reduction of the tax burden for manufacturers is advantageous, and we are supportive of the reduction in the federal corporate tax.

The Chair: Okay. Thank you.

Thank you, Mr. Pacetti.

We'll go to Mr. Van Kesteren. You have about four minutes.

Mr. Dave Van Kesteren (Chatham-Kent—Essex, CPC): Thank you, Mr. Chair.

Thank you all for coming.

Mr. Wood, I take it that the appliance company.... You are what generation?

Mr. Dave Wood: I'm the third generation. My grandfather started the business almost 77 years ago.

Mr. Dave Van Kesteren: Congratulations.

This is a new concept, and it's intriguing, the tax you talk about. How many factories did your company close?

Mr. Dave Wood: We close our first factory at the end of this month in Guelph. We have three facilities in Guelph; one of them is closing at the end of this month.

Mr. Dave Van Kesteren: Okay.

Have you opened up new operations in China?

Mr. Dave Wood: We have partners in China. We source from China; we don't own any facilities in China. We have trade alliances and joint ventures from a collaborative manufacturing standpoint. We have opened a new facility in Mexico and are expanding our operations in Ohio.

Mr. Dave Van Kesteren: I'm going to ask you a really pointed question. You're a third generation and you're the new breed. Do you think maybe some of our companies just got a little bit fat and lazy? I'm not saying that to be critical. I'm thinking about this: I look at a refrigerator, I look at a washer and a dryer.... Now, that's probably an exception; there's some new innovation there. But were we cranking out the same stuff year after year, and did this high dollar just sneak up on us all of a sudden, and did we just fall asleep at the wheel?

● (1615)

Mr. Dave Wood: No, and I take great offence at the comment that we're not reinvesting. In fact I'd invite any one of you to come to our facilities in Guelph, even the one we're closing, and look at the millions of dollars we've been investing in the last three years. We've been consistently investing millions of dollars in our facilities and in our products. In fact, we have a very strong initiative to reinvest in our products. The products we build today are, without a doubt, the best products built anywhere in the world. And in fact, I would argue that our facilities are the most productive of anywhere in the world.

It's more than just making a good product that makes a good business.

Mr. Dave Van Kesteren: We're finding that out. We're finding that out when we interview. The companies that are making it are the ones that are coming up with new ideas, doing things, reinventing the mouse trap by just making a better mouse trap.

So that is part of your strategy, and you see it as well and are answering the call, and as a result, your company is.... Is there a bright light there too? Is there some good news, aside from all these challenges?

Mr. Dave Wood: We certainly believe that Canadian manufacturers can compete. I think it's important that everyone on this committee understand that Canadian manufacturers can compete. We wouldn't be here if we didn't think so. But government is our partner in that enterprise, and government is there to help us. But we're there also to help government.

As Milos said, we're not here with our hand out looking for a subsidy, and our recommendations are something that benefit all manufacturers, regardless of size, regardless of where you're from; they're there to help the economy. We believe very strongly in the community we're in, we believe very strongly in this country, and we believe that manufacturing will do well in this country with your help.

Mr. Dave Van Kesteren: We agree.

I would say, too, that I wasn't trying to be critical, because right here in this government we've done the same thing. We've gotten fat, we have this incredible amount of money that we've had as a nation, and all of a sudden we're realizing that it's a new world and we're waking up.

So you feel that you can respond to those challenges and you feel pretty positive about the way?

Mr. Dave Wood: If the taxes we paid on our product were equal to the taxes paid on an imported product, there's no doubt that we would be beat the Chinese day in and day out.

Mr. Dave Van Kesteren: Okay, thank you.

The Chair: Thank you, Mr. Van Kesteren.

I apologize for the short time, but we are trying to fit in a number of witnesses today.

I want to thank you gentlemen for coming out today. I also want in particular to thank you for the presentation, the letter, and the very specific recommendations. They're very helpful. If there are any further recommendations that upon further reflection you want to present to the committee, please send them in to the clerk or to me, and we will ensure that all members get them. Thank you very much for coming out.

We're going to suspend for about a minute or two and have a quick changeover of witnesses.

If the other witnesses can come forward as soon as possible, I'd appreciate it very much.

Thank you, gentlemen, for coming.

● _____ (Pause) _____

●

● (1620)

Dr. Eliot Phillipson (President and Chief Executive Officer, Canada Foundation for Innovation): Thank you, Mr. Chair.

I will not take the full ten minutes.

My thanks to the committee for the opportunity to appear before you. I am appearing with our vice-president for external and government relations, Suzanne Corbeil.

This is the 21st appearance by the CFI before a committee of Parliament since its creation in 1997. Today I want to talk to you about CFI's role in helping to secure Canada's future prosperity and competitiveness, in the context of your study of the challenges facing the Canadian manufacturing sector.

In your interim report of June 2006, you identified five principal challenges facing the manufacturing sector in Canada. My remarks today will focus on the CFI's role in addressing two of these challenges, namely, competition from emerging economies and the development of skilled labour.

The challenges we face as a nation in the 21st century are well known, particularly an aging population and increasingly intense international competition. In the face of these challenges, Canada cannot afford to slip in this global race.

In broad terms, Canada's prosperity in the 21st century will depend on our capacity as a nation to innovate, to generate new knowledge and ideas and translate them into products, services, processes, and policies that will create wealth, enhance our social foundations and improve the quality of life. In short, Canada must become a nation of innovation.

Innovative societies are increasingly characterized by three elements: first, a cutting-edge research enterprise; second, a highly educated and skilled workforce; and third, a business, regulatory, and social environment that encourages entrepreneurship and creative thinking.

The Canada Foundation for Innovation, CFI, is playing a major role in Canada's evolution into a nation of innovation by enhancing the capacity of Canada' s research enterprise, by providing state-of-the-art infrastructure required for the training of highly qualified personnel—that is, the human infrastructure that is the most important resource, renewable or otherwise, in a knowledge-based economy—and by promoting the development of technology clusters through collaborations between public research institutions and the private sector.

Nine years into its mandate, CFI has committed $3 billion to 4,700 research infrastructure projects at 128 institutions in 62 municipalities across the country. Included in these investments is more than $153 million in support of 230 cutting-edge research projects in a wide range of manufacturing sectors, including forestry, automotive, aerospace, biotechnology, and nanotechnology, to name but a few. The details are provided in the appendices.

Our strategic investments are made on the basis of a rigorous assessment of merit using international standards to determine the potential of the projects to increase the capacity of Canadian universities, colleges, research hospitals, and non-profit research institutions to compete internationally and to produce knowledge that will benefit all Canadians.

The results of CFI's investments have been transformative. If I had stood before this committee in 1996 and declared that a decade from now Saskatoon would be home to a state-of-the-art synchrotron, Canada's biggest science project in a generation; that Chicoutimi would be a world leader in developing de-icing technology for commercial use on airplane wings and hydroelectric wires around the world; that St. Mary's University in Nova Scotia would be a recognized leader in astrophysics; and that Montreal's McGill University would be internationally recognized for the development of groundbreaking technologies that allow scientists to identify the genetic basis of human diseases—if I had stood here and told you all of those and many other predictions, the reaction would likely have been one of disbelief. But I am pleased to report that a decade later, in 2006, all of the advances I've described are a reality, in large part due to investments made by the CFI.

● (1625)

By 2010 the total capital investment in research infrastructure by CFI, the research institutions, and their partners will collectively exceed $11 billion. These investments are creating jobs and are leading to innovative solutions in some of today's most important and exciting areas of investigation, from advanced materials to pharmaceuticals, renewable energy, high performance computing, advanced manufacturing, and early childhood education, as examples.

Furthermore, the discoveries are moving from the laboratory to the marketplace. Spinoff companies are being created to supply highly demanded technology, particularly in the bio-tech, communications, aerospace, and other related industries, and highly qualified personnel are being trained for careers in both the public and private sectors.

Last summer, however, CFI launched its last major competition, with the decisions to be announced over the next two months. Thereafter, our capacity to invest in cutting-edge research going forward will be largely depleted. Unless it is known well in advance that additional funding will be available after this last competition, the institutions, universities, and colleges will find it increasingly difficult to undertake the planning of infrastructure projects whose design and construction might span several years. As a result, Canada will begin to lose its hard-earned competitive advantage in public sector R and D.

As mentioned, innovation is dependent on the generation of new knowledge and ideas from research that eventually lead to economic health and social benefits for society at large. At times, however, the link between knowledge creation and technology development is not immediately apparent, and yet understandably governments, which invest considerably in public sector research, often seek evidence that their investments have yielded appropriate returns.

Such evidence can be derived from several studies of the economic impact of investments in research. As one example, and there are several I could cite, in a landmark study of over 100,000 industrial technologies that were patented in the United States in 1993-94, the study found that 73% of the science citations involved in these private sector patents originated from research conducted in public institutions, largely universities. Only 27% of the citations originated in industry-conducted research.

I'm quite sure the data for Canadian industrial patents would be very similar. In fact, many of the citations in those U.S. patent applications were to research done in Canada.

However, the process of knowledge transfer, which is what we're talking about, is not simply a matter of the acquisition of intellectual property by the private sector. Rather, the transfer requires a close working relationship between the public and the private sectors, a relationship that ultimately involves the free movement of people and ideas between the two domains.

This interplay between the supply forces of science and the demand forces of the marketplace greatly facilitates knowledge transfer and its eventual commercialization. As has often been said, tech transfer is a contact sport.

CFI promotes the process of knowledge transfer by enhancing the development of local and regional technology clusters that bring together the industrial, financial, and academic enterprises and their respective talent pools. We do it because such clusters often coalesce around infrastructure facilities or specialized technologies.

In so doing, CFI is helping to ensure that universities and colleges play a critical role in the sustainable development, both social and economic, of communities across Canada, large and small, and thereby contribute to Canada's prosperity and competitiveness.

● (1630)

In conclusion, by investing in leading-edge research throughout Canada, by supporting world-class expertise in universities and other research institutions, by putting in place the right conditions to attract and retain top-quality researchers in Canada, and by training young Canadians for the knowledge-based economy—by doing all of these things—we are ensuring that Canada will become a nation of innovation, one that will compete successfully in the global knowledge economy and that will ultimately bring benefits to all Canadians. We owe it to future generations to maintain this commitment.

Thank you.

The Chair: Thank you very much, Dr. Phillipson.

We'll go right away to Mr. Taylor.

Mr. Graham Taylor (Vice-President, External Relations, Precarn Incorporated): Good afternoon.

Thank you, Mr. Chairman.

Thank you to the committee for the opportunity to share our thoughts on the challenges facing Canadian manufacturing.

My name is Graham Taylor. I am the vice-president of Precarn Incorporated. I wish to convey the regrets of the chair of our board of directors, Jean-Paul Boillot, and the president and CEO of Precarn, Paul Johnston. Unfortunately both are out of the country honouring business commitments, which they were unable to change. So you get me, and I hope this works out for all of us.

My message to you today is that boosting productivity and competitiveness in the manufacturing industry will require a broad-based approach. Policy measures to condition the business environment must be our first priority, but simply getting certain business conditions right, although necessary, will not be sufficient. Smart investments of public funds can complement the policy framework by promoting risk-sharing and stimulating the right kinds of investments and business relationships.

In particular, we have to encourage industry-driven collaboration in that crucial and difficult stage, which Dr. Phillipson referred to, between the development of an idea and its take-up by the marketplace. We need to drive more resources, both private and public, to the interface among companies, universities, colleges, and government laboratories, in a way that puts the private sector in the lead.

First, let me tell you a little about Precarn. Precarn Incorporated is an independent, private, not-for-profit company that supports collaborative research and development on what we call enabling technologies, such as robotics, intelligent systems, and advanced information and communications technologies. Since its founding in 1987 by visionary individuals in the private sector, Precarn has generated impressive results by investing modest amounts of federal funding in projects led and primarily financed by advanced technology companies.

For 16 years we have also managed a network of centres of excellence, the Institute for Robotics and Intelligent Systems. IRIS gave rise to 38 start-up companies and remains the only NCE managed outside of a university. We integrated it into our industrial network.

Precarn's distinctive collaborative model brings together technology developer companies, end-user companies, universities, colleges, and government laboratories in projects that take new technologies from ideas to working prototypes. The leverage available increases the scale and scope of the research, shares costs, and reduces technical risks. Having an end-user involved in the project right from the beginning increases the potential for immediate commercial success. This improves the return from publicly funded R and D.

My remarks to you today are based on Precarn's 18 years of experience operating that model, supporting over 200 projects—which involved hundreds of companies, about 200 professors, and 3,000 graduate students in 25 universities—and working with partners from coast to coast, including many federal and provincial government organizations.

By the way, I would like to take this opportunity to thank Industry Canada for the support and good advice that they gave us over those years.

Suppose for a moment that we think of the Canadian economy as a business. What would a business plan for Canada look like? Among other things, our business plan would recognize that an aggressive R and D plan, driven by opportunity and vision, and based on the principle of smart spending, is essential. It would recognize that to be a market leader, we need to do more, do better, or do differently than the competition.

Simply waiting for cues from the competition is not enough. It would recognize that the success of the business called “Canada” depends on the decisions of individual people working together and sharing confidence about their ability to turn risky propositions into commercial successes.

So how can we stimulate increased business investment in R and D? How can we improve the payoffs from research dollars? If we had one more dollar for science and technology, how would we invest it to get the broadest impact?

The business of Canada is in pretty good shape. As we look ahead, we have an opportunity to be a world leader in the development and application of advanced technologies. Elsewhere in the world, we are being undercut on labour costs and left behind by major investments in emerging areas. We have some fundamentals right, such as education, academic research, social services, and governance systems, and these need to remain strong, but some other things need improvement.

The business called Canada needs to improve its industrial R and D department. We are great at pioneering new discoveries and expanding knowledge, but not so great at making the follow-up investments in order to translate these into economic returns.

● (1635)

Our generous R and D tax credits contribute positively to the business environment but can still be improved. I will not dwell on this issue, since you have already heard testimony from people more expert than I. I would just say that we need to be confident that these incentives will result in increased private sector R and D investments, beyond simply reducing business costs.

These tax credits are intended in part to deal with the well-documented gap between research and the marketplace. Some call this the commercialization gap; others call it the "Valley of Death". This is the stage where public money begins to pull out because the returns are increasingly appropriated by private interests, but private money is not yet fully committed and in fact has a tendency to retreat over time because the risks turn out to be very high.

Will business framework measures, along with continued support for academic research, bridge this gap?

In fact, tax incentives alone will not help a company that is underperforming on R and D create productive relationships with academic researchers. Business environment measures by themselves will not show a company how best to get leverage on its R and D dollars. More money for university research by itself, as welcome as it may be, will not cause a company to understand how it can achieve a competitive edge by collaborating with suppliers, customers, universities, colleges, and government laboratories.

Precarn recommends that a business plan for Canada have a strong emphasis on collaboration. It should promote technologies with the broadest impacts. It should allow market demand to drive investments, with leadership coming from industry-based technology developers working with their customers. It should couple project funding with other services and relationships that are essential for commercial success. It should help companies learn how to collaborate successfully.

To illustrate how this is relevant to manufacturing, let me turn to the automotive parts sector.

I don't need to tell this committee how important the automotive industry is. Last week I believe you heard from my colleague and collaborator, Dr. Peter Frise of AUT021, who knows a lot more about this than I do.

The automotive parts manufacturing sector consists of several hundred companies, large, medium, and small. They are part of an increasingly globalized industry. They are under intense competitive pressure. Automobile assemblers have become more aggressive on price reduction, putting pressure on suppliers. Development and design functions are being pushed down the supply chain. Everyone is striving to deal with a compelling demand for new ideas and smart technologies to improve both products and productivity.

With labour-intensive production moving offshore, the future of the auto parts industry in Canada depends on its ability to innovate, to lead in the adoption of new technology, and to collaborate. This has been recognized by both the Canadian Automotive Partnership Council, or CAPC, and the Automotive Parts Manufacturers Association, or APMA, in recent policy papers.

There is a big job to be done on R and D. Only one company in the automotive sector, Magna, ranks among the top 100 corporate R and D performers in Canada. Canada contributes 4.2% of worldwide vehicle production but only performs about 0.6% of the R and D.

A big challenge is that most companies in the auto parts sector lack cash resources. They also lack technical expertise. And their relationships with their customers, surprisingly, are often more adversarial than collaborative.

Still, it's an exciting industry, and its global markets are growing —people are still buying cars. Companies need to develop new ways of doing things: new ways of collaborating along the supply chain, new ways of getting the expertise and skills they need, new ways of employing technology not just to stay in the game but to achieve market leadership.

That's why Precarn has joined forces with AUT021, the Ontario Centres of Excellence, and the APMA to propose a fund that will create R and D relationships among auto parts companies, their customers and suppliers, academic institutions, and government labs. The fund will integrate Precarn's proven collaborative model with the successful approaches of AUT021, OCE, and APMA, enabling companies to draw on the deep knowledge, experience, research capacity, and highly qualified and skilled people of these partners.

Most of the project funds will come from companies. But given the risks associated with early stage pre-commercial R and D and the need for new ways of doing business, investments from federal and provincial governments will be necessary.

In conclusion, Mr. Chairman, boosting productivity and competitiveness in the manufacturing industry will require a broad-based approach. Getting the policy framework right is the first thing to do. But we need also to open the collaborative interface between knowledge developers, technology developers, and technology users. Strengthening these relationships mitigates the risks of R and D and technology investments, while accelerating commercialization. And exerting a market pull from end users that reaches back into research labs will help capture the value of Canada's investments in scientific research.

● (1640)

Mr. Chairman and members of the committee, Precarn would welcome the opportunity to provide to committee members, either as a group or individually, a more complete briefing on our collaborative R and D model. For now, I welcome your questions.

This concludes my remarks. Thank you.

The Chair: Thank you very much, Mr. Taylor.

We'll go right away to Mr. Stewart, for your presentation.

Mr. Iain Stewart (Director General, Policy Branch, Science and Innovation Sector, Department of Industry): Thank you very much for having me.

My colleagues Eliot and Graham have both touched on a number of things that I would have touched on. I guess that, coming late in your proceedings, some of the things I would say have perhaps already been said by others, but I'll have a go. I'll try to summarize my presentation, accordingly, to move it along.

I would like to begin by highlighting the critical importance of R and D to manufacturing and to industrial competitiveness. We see R and D all around us. We see it in our lives; we see it in social and environmental applications. But we also see it most directly in how it supports prosperity. In our 21st century global economy, our competitiveness going forward is going to increasingly rely on R and D and the application of R and D to create competitive advantage.

R and D creates competitive advantage in a number of ways, as you probably know. It helps firms develop new products and services that they can use to create market niches for themselves; it supports process innovations that increase the productivity of their industrial production; and it also is embodied in the latest machinery and equipment they buy.

Canada produces a small amount of innovation in the world. We're big consumers of innovation. One of the main ways we consume it is through purchasing goods and services to be used in the production process—investment in M and E.

Investment in R and D brings a lot of rewards as a result: companies have new product offerings, they're move adaptable companies, they're more efficient in their production processes. It makes the companies more robust and able to withstand the processes of change in the marketplace that we're experiencing.

Looking at the importance of R and D for industrial production, for manufacturing, and for competitiveness, we have to ask ourselves how we are doing as a country in supporting R and D.

Canada has made tremendous gains over the past ten years with respect to building up the R and D capacity of the country. We've seen this through the substantial investments that have been made in our higher education R and D capacity. Eliot, of course, is here representing one of the initiatives that is from that investment in building capacity to do R and D.

In fact, we've gotten to the point where Canada is now first in the G-7 and second in the OECD with respect to the amount of R and D that's done as a proportion of GDP in the higher education sector. So we have a strength there; we've achieved a position of leadership.

We also are doing very well in the outputs from those investments. It's not just that we're spending highly; we're also generating good output. Canada ranks very well with respect to the volume of publications. We are a major source of advancement of knowledge in the world. We also are doing good-quality research. Canadian researchers are frequently cited. So we do well with respect to our higher education R and D.

Higher education R and D is important not just for producing raw ideas or basic research; it's also where we train our talent, our young innovators of tomorrow, our highly skilled people, who are going to move out of the university or the college system into the marketplace, into government labs, into the university labs doing research. And there Canada does relatively well also.

We do extremely well in producing post-secondary education, but when you start to deconstruct that post-secondary education performance, we see that we do less well in the production of advanced degrees—science and engineering degrees, the kinds of things that are important for having a more innovative economy going forward. In fact, if you looked at our ranking for the production of all levels of post-secondary education, we're first in the OECD—but that includes colleges, just some post-secondary education. If you move to the production of advanced degrees, such as PhDs, we're actually eighteenth. So we're not supplying necessarily the level of talent that's required for an innovative, R and D-intensive economy.

Another interesting aspect is our use of highly qualified people. If you look at Canada and at the United States across almost all industrial sectors, you'll see that Canada uses fewer advanced research degrees than the United States for the same industrial sector; and then secondly the remuneration for those advanced degrees is lower. The more advanced a degree becomes, the more that gap, the difference in the premium for having that advanced degree in the labour market, diminishes.

So we may produce fewer degrees, we may produce not as many of the right kind of research degrees, and we may as a society have a softer labour market. Now, that labour market is strongly influenced by private-sector demand for advanced research degrees, because R and D in Canada is 54% located in the private sector. That's an indication to us that we have soft demand in the private sector for investment in the kind of input they need to perform R and D. In fact, when you look at the performance of our R and D in the business sector, you begin to see that finding reinforced.

● (1645)

As a proportion of the R and D done, Canada ranks below the OECD average for the proportion that's done in the business sector. The R and D intensity of the Canadian economy in the private sector is lower in Canada than it is the U.S. and lower than the OECD average. We're sixth in the G-7. Canadian companies tend to spend less on R and D.

Also, when we do spend on R and D, we tend to generate fewer innovations from each dollar we expend. There is some evidence done by Pierre Therrien and some others around the return on investment from the innovations that the private sector generates, and again, Canada's a bit weak in that regard. Overall, some surveys suggest Canadian companies tend to use innovation less often than cost reduction as a competitive strategy, although the findings are a bit mixed there.

If we look at what kinds of factors explain why Canada spends less on business R and D, why we underinvest in business R and D, there are a number of explanations, but we have to say that we don't have the definitive answer. Some analysts have pointed to our industry structures in Canada—the profile of our economy, as it were. If you look at some industry sectors like pharmaceuticals or ICTs, Canada's very competitive vis-à-vis the United States with the level of investment in industrial R and D, but they are smaller parts of the economy than they are in the United States.

In contrast, as Graham was just mentioning, the auto sector's a big part of the Canadian economy, and it invests surprisingly little in R and D. If you look at other countries with automotive sectors, there's a much richer investment in innovation going on.

As for other factors, we have a large natural resource endowment. Because innovation or competitiveness there works on a longer cycle time than perhaps ICT, you see that they might underinvest, and that might be a contributing factor to our overall R and D performance. Others note that we have a large preponderance of SMEs. Others point to foreign ownership, the idea being that headquarters tend to be the places that attract the R and D mandates; since Canada does have some foreign ownership, that's influencing our outcomes. Lastly, others point to framework policies, asking if we have the right competitive intensity in Canada, and so on.

Understanding why we have an underinvestment in business R and D is an area of inquiry that's getting a lot of attention. Industry Canada and many others have been researching it for some time, but it continues to be an area in which further research is required and further advice is required on what could be done to improve. What underlies the underperformance of business R and D, and what specifically could be done in this area?

To sum up, R and D plays a key role for long-term competitiveness. R and D in the higher education sector, in fact, is very strong in Canada, and our challenge is to sustain and maintain that level of excellence. However, that translation of those ideas, the translation of those young people into private-sector applications that would see an influence on productivity, is weaker.

Governments around the world play a role in these areas. One of the foremost things the government seeks to do is create a competitive environment in which companies are incented to compete on the basis of innovation, as opposed to cost reduction.

Also, governments work to ensure that we have effective marketplaces, good regulatory environments in which consumers understand biotechnology products and understand health and safety around new products. Government is providing a regulatory framework that allows an effective market operation around innovative products.

Government also plays a key role in supporting basic research. As I was mentioning earlier, the Government of Canada makes a sustained investment in support of higher-education R and D. We spent about $2.2 billion annually, 2004-05, on supporting research, supporting students to participate in research, supporting professors, attracting professors to come to do research here, supporting the indirect costs of research at universities, and supporting networks of the nature that Graham touched on when he mentioned ISIS, which was in the networks of centres of excellence and a government-supported initiative, among other players as well.

Lastly, the government can play an important role encouraging linkages, trying to connect up universities with that talent flow and that idea flow coming out of the university system. There are many ways that can be done, and there is a range of programs in place at this time. Whether it's the National Research Council's cluster initiative, whether it's the networks of centres of excellence, whether it's Precarn or others, the idea is to bring together researchers and users of R and D to get those practical applications of innovation.

● (1650)

As a concluding word, my minister was here two days ago. He mentioned that he is bringing forward a science and technology strategy, and it will speak to these issues over the coming period.

Thank you very much.

The Chair: Thank you very much, Mr. Stewart.

We'll go right to questions from members. We'll go to Mr. Boshcoff first, for six minutes.

● (1655)

Mr. Ken Boshcoff: Thank you, Mr. Chair.

If a regime in Canada had a buy-Canada preference, similar to most of the rest of the nations of the world, and our manufacturers knew that they had some competitive advantage too—say what the Americans do with public transportation or some of these other things—would that actually provide incentives to companies, seeing that they could actually launch some product without another country taking advantage of it? Could we actually compete better?

Mr. Graham Taylor: I'm not sure I can comment on the policy, but I can tell you one way we approach that, which is that the projects we support involve an end user, as I say, and this is almost always a Canadian company. We try to create a situation in which a technology developed in Canada is first proven in the commercial operations of the Canadian company. You develop the Canadian supply base for that company and a Canadian customer base for the developer.

Mr. Ken Boshcoff: That's not quite what I was looking for, but I appreciate it. The answer is actually very good, so thank you.

When we talk about the federal role, it seems that lots of people want to be assisting—that is, provinces and territories—but as an order of government, the federal role seems often to be siloed from other provincial domains. Is there a suggestion, perhaps from Industry Canada or someone who's experienced it, of a way of coordinating the national approach?

Mr. Iain Stewart: Do you want to take a shot?

Dr. Eliot Phillipson: I can provide a partial answer.

The Canada Foundation for Innovation, as I mentioned, funds research infrastructure. It is a co-funding model. We fund 40% of the capital of approved projects. The institutions who are our applicants have to find the other 60%, but in practice, in virtually all cases the province in which the institution is located provides another 40%. That leaves 20% for the institution or, very often, a private sector partner.

Over the years we have worked and coordinated our efforts better with the provinces. It is certainly one example of federal and provincial investing in the R and D side of the equation.

Mr. Ken Boshcoff: Okay.

When Mr. Taylor mentioned the automobile industry in all its facets, we understand the competition for a national auto plant is as fierce as it gets on a global basis, but for people who can find a niche in some form of parts manufacturing, is geography a limitation anymore, in terms of being able to do those kinds of things? Could it be done in just about any part of the country?

Mr. Graham Taylor: I'm not expert on the industry itself, but I would observe that a number of factors come into play choosing a location for an auto parts company. Proximity to your customer is important, but I think it depends on what you're making. If it's a complex high-end product, typically a closer proximity to your customer is more important, but if it's a commodity that can be shipped very cheaply, then it would be less important. The other things that come into play are the business environment and access to a good labour force with high levels of skills and that sort of thing.

I think geography is significant, but increasingly these companies are footloose, and they're moving here and there.

Mr. Ken Boshcoff: Dr. Phillipson, when you talked about the critical dates for funding, how soon do we as a nation have to provide that stability, so that people who are working in these professions say that if the door closes I might as well go to another country and set up shop there, or take my kids and start them in school next year somewhere else?

Dr. Eliot Phillipson: It varies somewhat by program and by which funding organization we're referring to, but in our case, for the Canada Foundation for Innovation, I think that the institutions that are our applicants will be looking to the spring budget for an indication that our organization will be continued. As I've indicated, by the end of this year we will have essentially committed all our funds, and therefore they'll be looking to see whether there will be another competition in 2007 or perhaps early in 2008, because these sorts of infrastructure projects require a considerable amount of thought and planning and sometimes can be a considerable expense. Therefore the institutions will not begin to undertake conceptualizing and planning these sorts of projects if there's no indication that there's to be another competition.

● (1700)

Mr. Ken Boshcoff: It was mentioned that more or better are the two combinations. Is it always more government dollars and better tax regimes? Is that really the one-two combination, that we have to bite the bullet and do it? Is that what you're saying?

Dr. Eliot Phillipson: In the case of the higher education R and D, it's a question of maintaining the government support for the enterprise. As Iain Stewart indicated, Canada does extremely well in government public investment in university and college-type research, and we should be very proud of that, but it's not a one-time-only event.

It's like education and health care. You can't educate one group of children and then say there, we did it, and now we'll move on to something else. You can't say we delivered health care to this population, so we took care of health care, and now we'll move on. It has to be an ongoing commitment. I think the levels at which Canada has been committed have served us extremely well. We're not necessarily saying it has to be more and more and more. It's a case of maintaining a reasonable level of investment.

The Chair: Thank you.

We'll go now to Monsieur Crête.

[*Translation*]

Mr. Paul Crête (Montmagny—L'Islet—Kamouraska—Rivière-du-Loup, BQ): Thank you, Mr. Chairman. I would also like to thank our witnesses for their presentations.

My question, which follows on from my colleagues, is primarily for Mr. Stewart, but I would also like to hear the views of the other witnesses.

The Canada Foundation for Innovation clearly stated in its brief that if its funding is not renewed, it will run out of money within a few months and will not be able to undertake any projects. The foundation is therefore asking for a long-term funding guarantee.

Mr. Stewart, I would like you to talk to us both about the important role that basic and cutting edge research will play over the next 10, 15 or 20 years and the government's contribution to research transfers. What is your view on this matter?

[*English*]

Mr. Iain Stewart: I think the government has recognized the importance of basic research. In the case of Eliot's organization, the last budget provided resources to the Canada Foundation for Innovation, which was a clear indication that this is something that they thought was important.

[*Translation*]

Mr. Paul Crête: Mr. Stewart, your brief states that:

> Unless it is known well in advance that additional funding will be available after this last competition, universities and colleges will find it difficult to undertake the planning of infrastructure projects whose design in construction may span several years.

Mr. Phillipson said that although the foundation received adequate funding in the past, the challenge now lies in insuring that this continues. I would like to hear your view on the matter. Henceforth, how important will this aspect be? Your brief speaks extensively of supporting the private sector. I would like you to tell me in what way cutting edge research projects, such as those carried out by the Canada Foundation for Innovation, Genome Canada or Precarn Incorporated, should be supported.

[*English*]

Mr. Iain Stewart: Just to reiterate, I think that the government is well aware of the importance of basic research. It is essential not only for the production of ideas, but also for the training environment it provides for young talent and creating the next generation of researchers and innovators.

The Canada Foundation for Innovation plays a key role in that regard, as do the granting councils. In the last budget both of those were recognized, along with the importance of indirect costs of research, which is really about providing a research environment for the universities as well and covering some of their overhead costs. The government recognized that this is an important role and put investments into all those areas.

As Eliot was saying, what's the appropriate level of investment? In fact, we have discussions in that regard about where you see this level of investment and how you sustain it going forward. Those discussions are not complete, and the government has not taken a decision. I don't want to contradict Eliot, because we're good colleagues and work together all the time. There was funding provided in the last budget. It's not that his bank account is completely empty. What he is really saying is there is an issue here about what the right level of funding is for us going forward and how we sustain that. The current competition that you have under way is of an order of magnitude that's quite large, so the question is how do you approach that going forward?

● (1705)

[*Translation*]

Mr. Paul Crête: Do you think that funding should be maintained at the same level as in recent years?

Is the government prepared to commit to maintaining investment levels for a period of five to 10 years?

Is this the approach that is being favoured in terms of cutting edge research in universities and other centres?

[*English*]

Mr. Iain Stewart: We're talking within the context of supporting basic research happening in the university context. I think the question you're asking is how will that continue, going forward.

We have a system that's almost an ecology of support. There are different kinds of programs that play different roles in supporting that research. We have infrastructure support for equipment and lab facilities and so on, such as Eliot provides. We have the granting councils that provide the direct costs and we have indirect cost programs.

The appropriate balance and delivery of those programs going forward is something that is being considered. How do you get the right efficiencies? How do the right synergies among these programs get organized? That discussion is not yet over, but to the extent that there is to be basic research, then these matters have to be tended to.

[*Translation*]

Mr. Paul Crête: My question is primarily for Mr. Phillipson, but the other witnesses should also feel free to answer.

If long-term funding were not guaranteed after this competition, what would be the impact on cutting edge research?

Ms. Suzanne Corbeil (Vice-President, External Relations, Canada Foundation for Innovation): Allow me to answer the question. The CFI will fold in 2010 if our funding is cut. As Mr. Phillipson said in his presentation, our projects are sizable, require a great deal of time and energy, and are costly to plan.

University research would regress as a direct result. As we have said, it is important to know, with a degree—

Mr. Paul Crête: What length of commitment do you want from the government? Five years? Ten years?

Ms. Suzanne Corbeil: It is always a good idea to review projects after a few years.

That being said, we need an extension of at least five to 10 years so that we can see the full results of the projects that are already underway and already bearing fruit.

[*English*]

The Chair: Merci.

Mr. Taylor, we're over time, but if you briefly want to respond, you may.

Mr. Graham Taylor: Just briefly, the position of Precarn is continued support, and really the longer the commitment, the better. For basic research that is absolutely essential. That's really what our activity is based on. You have to continue to make that investment, but you also have to know whether you're getting a return on that investment, so you have to do other things as well, including helping the private sector take that stuff up.

The Chair: Thank you.

We'll go to Mr. Shipley, for six minutes.

Mr. Bev Shipley (Lambton—Kent—Middlesex, CPC): Thank you, Mr. Chairman.

Thank you for coming out today. I find it really interesting. Actually there's quite a theme that's developed by all three of you. When I look at the array of projects and universities that are involved, it's quite amazing.

I'm impressed with the amount we are putting into research and development that takes us to the top of the G-7. I'm also then disturbed by what we do with that research and development. I find it to be something I wasn't aware of, but it certainly has become the role. When we're putting the billions of dollars into this research and development, actually then we're questioning the return on the investment we're getting on it. I want to know where your role is to improve that.

● (1710)

Dr. Eliot Phillipson: Thank you for that question.

Our mandate, given by Parliament, is to invest in university research, but we recognize that although knowledge in its own right is extremely valuable and leads to many unexpected economic, social, and environmental benefits, we think we can play a more active role in moving that knowledge into the commercialization arena, particularly in the area of knowledge transfer, knowledge translation. That's why in my remarks I indicated investing in programs facilitating that knowledge translation; in our case, that would be infrastructure. It occurs best, we think, in an environment in which the researchers, the private sector, and the financial sector are all interacting very closely.

It's been said that ultimately innovation commercialization is a social process. In other words, people have to be in reasonably close proximity and interact. With additional funding, that is one area in which CFI sees itself as potentially playing an important role. It is a narrow window, but as my colleagues have indicated, it's a window that is too early for the private sector, by and large, because it is still somewhat risky. Nevertheless, with the three sectors working together, we think there could be more of the knowledge translation, which will then ultimately lead to the commercialization.

Mr. Bev Shipley: Has there been a start to developing that relationship? You talk about extra funding. Maybe part of what you do.... From my perspective, doing the research and development and not following through by having that plan in place to turn it into a return on investment for our industry and our country seems like putting money into one part of it and losing it on the other end. Likely what that will do is transfer to some other country, where they'll take advantage of it.

Without talking about more money—I mean, that seems to be the answer for everything—what can you do, or what have you done, to help facilitate that already, recognizing you already know there is a problem?

Mr. Iain Stewart: The practical application of ideas and talent to market opportunities ultimately has to be driven by the private sector. We spend a lot on higher-education R and D, and we get good returns on that investment. We do well; we have good statistics; Canada is a good provider of research ideas.

In a way, sustaining that research excellence is the challenge, but that's not the challenge for the whole system. In my presentation I mentioned 54% of R and D in Canada happens in the private sector. That's actually a much lower level than in most OECD countries; there, the average is 68%. The challenge is to get the private sector to compete on the basis of innovation and pull some of those ideas and people out of the system.

The university system is training young people, creating those ideas, and we use those ideas for all kinds of things—social, economic, and environmental applications. Sustaining that has a lot of societal advantages, but if we want to see it really have an impact on competitiveness, we have to see that market demand, that market orientation, and that business investment in R and D.

Mr. Bev Shipley: We've had other witnesses in. One was from the Energy Innovation Network. When I mentioned earlier the array of research that you're involved in with those dollars, sometimes I feel we may be moving ahead with too much on the plate in terms of the spectrum. When you look at the number of things involved here, it's actually quite amazing.

He felt that the numbers should be condensed down, with not as many programs and with a focus more on those programs that were able to take that research and develop it better with the private sector and actually turn it into a return on the investment. I don't know if you have any comments on that, either one of you.

Mr. Iain Stewart: It's a complex research environment, in which many people are pursuing what they think is their opportunity for excellence.

If you haven't spoken with the Council of Canadian Academies, you might want to. They've just completed a study in which they looked at where research excellence is in Canada—not only in science, but also in technology, and therefore getting closer to market.

From that study it's clear that Canada has a very rich and varied research community, and that we're world leaders in a number of areas. A lot of the program activity is supporting people in an enabling way to pursue those opportunities. Consolidating the number of programs isn't necessarily good in its own right. The key question is whether those programs are meeting the needs of the client base effectively. I think that would be the way I'd look at that question.

● (1715)

Mr. Bev Shipley: How am I doing?

The Chair: You're out of time, Mr. Shipley. Thank you.

Mr. Bev Shipley: It's been great. Thank you.

The Chair: We'll go to Mr. Masse for six minutes.

Mr. Brian Masse: Thanks, Mr. Chair, and thanks to the delegations here.

I will start with Mr. Philipson. One of the most interesting things you noted was a study—I'd like to know what study it is so we could be directed towards it—with regard to industrial technologies in the United States, and 73% involved the public sector. It really debunks just having tax reductions as a single-source bullet to start R and D.

You noted in your discussion that some of those projects were actually Canadian innovations that ended up getting patented and developed in the United States. Did they come from the public sector or the private sector?

Dr. Eliot Phillipson: It was a study of, as I indicated, 100,000 U. S. patents filed by the private sector in the United States to determine where the necessary knowledge comes from that sustains those patents. Some 73% of it came from university-related research, the public sector, of which a lot of that research—I am saying a significant portion—was done in Canadian universities. It is knowledge that is published in the scientific literature and that ultimately was made use of in those patent applications.

Mr. Brian Masse: Which study was that, do you know? Can you forward that to—

Dr. Eliot Phillipson: We will be happy to send you the details. It was published in 1997. It looked at 1993-94. It was in one of the scholarly journals, and we will be happy to forward the details. I don't have them—

Mr. Brian Masse: That's fine. What's interesting about this equation and the frustration to me is when I see Canadian technology going over to the United States and to manufacturing facilities and also to China and other places that then compete against some of our own products, eliminating our jobs. I think we have to ask ourselves how we ensure that our public sector involvement in the information that we generate actually leads to manufacturing in our own country, because this could really backfire.

I really appreciate your organization and Precarn as well. I'm familiar with some of the work that's going on. However, that's of great concern to me.

Do you have any suggestions on how we actually protect that information for domestic manufacturing versus it going to other countries and eliminating Canadian jobs?

I'll put that out to the table, actually.

Dr. Eliot Phillipson: That study looked at patents filed 1993-94. I think since that time there's been a much increased awareness on the part of the Canadian research community of the importance of the potential commercial value of the knowledge that is being generated in universities. Not given to you today, but in our data, and we would be happy to send it to you, is evidence of the number of patents and spinoffs that are being created as a result of the research being done in the universities. I think there's an increased awareness of the importance of it.

I would also point out that Canadian industry needs access, of course, not only to the research done in Canada—Canada produces about 4% of the world's knowledge, and considering we're half of one per cent of the world's population, that's not bad—but also to the other 96% of knowledge being produced around the world. If there is one thing that's global, it is research and knowledge. It's extremely important that we have the highly qualified personnel in the private sector, because they are the surveillance and intelligence systems for the private sector, who are scanning not just the 4% of knowledge produced in Canada, but the entire 100%.

If we had done a similar study in Canada, the percentages would have been the same, but I expect a lot of the scientific knowledge that went into the patents filed by the Canadian industrial sector would have been to the research done in other countries, so there is a free exchange that benefits everyone.

● (1720)

Mr. Iain Stewart: You want to see research happening in Canada, find applications in Canada, and contribute to jobs and growth in Canada, but part of being part of an international dialogue on research and innovation involves those ideas and those people moving back and forth. We need to be, I would perhaps suggest, in that community and aware of those developments and bringing them back to Canada as much as they come out, in the way Eliot was referring to.

If you look at the suite of programs we use to support research in Canada, like for instance the granting councils, they make investments not only in research, but also in that translation of research out into the community, and Graham's organization is also a good example of that. They try to line up a user with a researcher to try to get that connectivity to happen.

In the case of NSERC, which has a budget of about $860 million a year, it spends about $160 million of that on trying to make those networks or collaborations happen, to have that stickiness occur that you're looking at. But you don't necessarily want to go too far down that road, because we only produce, as Eliot put so well, 4% of the world's ideas. We need to be part of that dialogue and be part of that international community so that we are excelling in that. It's attractive to put the question as you have, but there are some advantages to being open as well.

Mr. Brian Masse: The thing I worry about, and I don't know how to solve it, is if we produce 4% of the world's knowledge, which per population is higher, we also have to explain to workers in automotive factories, for example, or in a Canadian technology or innovation that they've subsidized, that the development goes abroad internationally to a factory that gets subsidization—for example, in China, Mexico, or Alabama—and then ships in another innovative product that takes them out of their jobs. That's what I worry about.

Mr. Graham Taylor: If you think for a minute that we're operating on a level playing field—and I think that in the field of scientific research, Canada is as good as anybody, there's no question about that—and if the playing field is level, and I hope it is, then if you're going to win, you've got to run faster than the other guy.

I think what we need are more mechanisms to encourage and facilitate companies to go to the institutions and pull the technology out. It's one thing to say that.

The second thing is when you say to a company, especially a small one, that they need to go to the door of a university, they may not even know which door to go to. That's what we do.

Mr. Brian Masse: Very good. Thank you.

The Chair: Okay, thank you.

We'll go to Mr. Pacetti for five minutes.

Mr. Massimo Pacetti: Thank you, Mr. Chair.

Thank you, witnesses, for appearing. It is a very interesting topic.

I'm going to try to get more focus and tie it into the study that we're conducting, but before we get into it, Mr. Taylor, just to clear it up, is Precarn a for-profit company or a non-profit?

Mr. Graham Taylor: Precarn is a not-for-profit federally incorporated company. It was formed by private individuals.

Mr. Massimo Pacetti: The money all comes federally, or it's matched?

Mr. Graham Taylor: We have a certain amount of operating financing from member companies. Most of the money that goes into our projects is provided by companies, but the public funding that we put into projects comes primarily from the federal government—in the current instance, from Industry Canada.

Mr. Massimo Pacetti: Who are the member companies?

Mr. Graham Taylor: We have a wide range of member companies. We have some very advanced technology companies, software and hardware companies. We also have some large resource companies like Syncrude and Inco.

Mr. Massimo Pacetti: And your mandate is what aspect of the research component? Is it the valley of death component?

Mr. Graham Taylor: It's the valley of death, yes. We support what we call pre-commercial research, which is taking an idea out of the laboratory and creating a prototype and proving that prototype in a commercial setting. The commercialization process usually follows after that.

Mr. Massimo Pacetti: So you're not really into the commercialization end of it?

Mr. Graham Taylor: We're not, really. We don't do commercialization, but we do set up the conditions for commercialization and then we help our clients find the other kinds of support they need, such as financing, to take it to the commercial level.

Mr. Massimo Pacetti: Who is the end-user? Who is usually the financier of the commercialization—the venture capitalist?

Mr. Graham Taylor: It's a mix. Sometimes they are venture capitalists. Occasionally the Business Development Bank of Canada works with a lot of our clients.

Mr. Massimo Pacetti: There are none of the Canadian agencies, I believe.

Mr. Graham Taylor: Sorry?

Mr. Massimo Pacetti: Are there none of the Canadian agencies that you know of?

Mr. Stewart, isn't it correct that nobody you're aware of finances commercialization from the government agencies?

Mr. Iain Stewart: Generally, grants and contributions programs don't fund actual commercialization of research. They tend to focus more on getting it to the pilot stage, with exceptions like BDC.

Mr. Massimo Pacetti: I'm trying to bring this back into the challenges facing the Canadian manufacturing sector. I think some of my other colleagues asked a question, but I'm going to be a little bit more direct. If I'm a company, why should I invest in R and D? What's my dollar return?

I know, Mr. Stewart, you were quite eloquent in your presentation. I think you said that we have value from R and D because we've been quoted, we've been cited, and Canadians have been in articles and newspapers, but that doesn't give any return to any of the companies. It's much easier to have somebody else develop the technology, and then we just copy it. I think Mr. Masse alluded to it.

Is that one of the problems? How do we tie this into the manufacturing sector? Has any type of research that the manufacturing sector has been conducting in the last few years been worth it for them? Does the government need to be involved? That's basically what I want to hear. How is this going to help the manufacturing sector? I think you alluded to it yourself, and I want to allow you to answer.

You compete on an innovation basis, but sometimes companies look at costs, so it's not innovation. Innovation may take five or six years or it may take one or two years, so how do we put a dollar amount? How do we put a return on it?That's what we're here for. We're here for industry purposes.

● (1725)

Mr. Iain Stewart: In the first instance, I'd say it really varies by industry structure. If some industries don't invest in R and D, they'll stop being in business. We have high-tech industrial sectors. By their very nature, if biotechnology firms, aerospace and defence firms, or ICT firms are not investing in R and D, they're going to have a problem. They're not going to be in business in the long term, because those are fast-moving markets.

In a way, from your question I was wondering if you're asking more about why some of the people who were here earlier, the more traditional and established industries, should invest in R and D.

Mr. Massimo Pacetti: I think that's what we're looking at, yes.

With the automobile sector, what's in their interest to invest money in R and D? I know what it is academically, basically, but what is it in terms of dollars? How can they value it? What are their numbers? Should they be putting in 2% or 4% or 10%? Let's say they decided on 10% but they have to reduce their costs. Would R and D be one of them because it's not profitable? How are they supposed to value that?

Mr. Iain Stewart: If cost reduction is the better strategy, companies will of course choose it. What happens is that eventually there's a limit on how far you can continue to reduce costs. You can try new ways of producing goods and services. You can try to create the next generation of goods and services and create a competitive advantage. You can try to adopt the latest production processes to get your cost base down through innovating. But straight cost reduction will eventually hit some limits. We're in the job market we are and so on, and some of the international competitors have different job markets from what we do. There's a limit as to where you're going to get to. That's why industrial societies have been encouraging their economies to move towards higher and higher value added. On that higher value added, you can maintain a good wage structure and a competitive company going forward.

Individual business owners know their businesses far better than we do. They make those decisions and they choose their competitive strategy. I guess we would try to encourage those companies that have the flexibility and aren't at the moment looking at innovation as a competitive strategy, to look at it and see what benefit that can produce.

Mr. Massimo Pacetti: How is—

The Chair: Sorry, Mr. Pacetti, your time is over. That was a good line of questioning, though.

We have two other members who want to ask questions. I'm going to indulge them if we can keep you a few minutes past 5:30.

We have Monsieur Vincent and Monsieur Arthur. We will try to squeeze the two members in, and then we'll wrap up.

Monsieur Vincent.

[*Translation*]

Mr. Robert Vincent: I am going to give my colleague my turn.

Mr. Paul Crête: Do we have five minutes or only two?

[*English*]

The Chair: As short as possible.

[*Translation*]

Mr. Paul Crête: Very well.

Do you think that researchers, as individuals, are currently offered enough tax incentives to remain in Canada?

Should the government make a concerted effort to attract and retain researchers? Currently, we face losing researchers as they are not as well protected and paid than in other countries.

Mr. Robert Vincent: There is a brain drain.

Mr. Paul Crête: Exactly, there is a brain drain.

[*English*]

Dr. Eliot Phillipson: Thank you. I'll respond to that.

You've asked a critically important question. The individual researchers are the canary in the mine. In other words, if there's a sense that Canada's commitment to R and D is diminishing, these highly qualified personnel will be the first indication, because they're extremely mobile and in great demand. We are clearly in a global competition for the highly qualified personnel. At one time Canada could depend on immigration, for example, of PhD scientists from the Pacific Rim countries. We can't depend on that any more.

Nevertheless, the investment in the public sector R and D over the last decade has had an enormously beneficial effect. You simply don't read about the brain drain any more. We have statistics and figures from our annual reports showing the recruitment numbers, and we'd be happy to forward that to you. For example, in the past five years there have been over 8,000 new researchers appointed to Canadian universities at the faculty level; 40% of them came from outside of Canada. Many are returning Canadians, but they weren't rushing to return before.

I think we're doing extremely well in terms of attracting and retaining the highly qualified personnel. Should there be a sense that the commitment is diminishing, as I say, they are the canary in the mine. They're highly mobile. The institutions from which they were recruited—the leading research institutions in the United States, Britain, Australia—haven't forgotten who these people are. The most high profile one, who I'm sure you all read about a couple of months ago, is a Nobel laureate who was attracted to the University of British Columbia. I can assure you that the University of Colorado will not forget who that individual is. At the first opportunity, they would attempt to recruit him back, if there's any indication that the possibility is there.

● (1730)

The Chair: Mr. Arthur.

Mr. André Arthur (Portneuf—Jacques-Cartier, Ind.): Thank you, Mr. Chair.

Mr. Taylor, your answers to Mr. Pacetti were fascinating, but you were cut short. How much do you spend, and how much of that money comes from the federal government?

Mr. Graham Taylor: Our allocation from the federal government right now is about $4 million a year. In the past we've been up to as high as $10 million a year. On average we contribute about 32% of the total cost of all the projects that we support. So the remaining 68% comes from companies.

Mr. André Arthur: It comes from companies?

Mr. Graham Taylor: Yes. I might add also that we have a number of collaborations for projects across the country in which provincial money is involved as well.

Mr. André Arthur: Mr. Phillipson, you don't decide what research will be done. You don't even directly finance the research; you finance the equipment and the tools, and the play things that those people need to be efficient. Am I right?

Dr. Eliot Phillipson: I wouldn't agree with your characterization, but yes. As play things, they are the tools that are required to do the research.

Mr. André Arthur: You talked about $3 billion. Is that the endowment you received or is it the money you got and you spent? Could you qualify this amount for me?

Dr. Eliot Phillipson: Thank you, yes. I'm happy to.

Initially when CFI was created, $800 million was to be transferred for five years, and subsequently the mandate has been extended, and further blocks of funds have been allocated. It's not an endowment in the true sense. It's to be spent down. That's why I said that with the current competition, when we award those funds, the money will largely have been committed. It won't all have been dispersed yet—we manage the funds—but it will all have been committed. The total—it's not per year—allocation from government has been $3.65 billion since 1997.

Mr. André Arthur: Out of that you've been able to commit how much money with the revenues you might have from the money that was not yet spent on everything?

Dr. Eliot Phillipson: Projected to 2010, the year to which our mandate currently goes, we estimate that we will have generated about another billion dollars in interest over the years, which is also used for our mandate. It will be close to a total of $4.5 billion. After the current competitions, what we will have left to be committed is about $500 million for one specific fund called the research hospital fund. That's a very specific allocation. That was the last allocation we received from the government, and it was designated specifically just for a research hospital. It will not include universities, colleges, or other research institutions.

Mr. André Arthur: Thank you.

Mr. Stewart, you told us that we're not producing enough research degrees. Did you say that?

Mr. Iain Stewart: No, but I could understand why it would sound that way. What I said was we produce fewer compared to other countries in the OECD. So in the case of PhDs we rank eighteenth for their production as a proportion of that age group in society. The statistic is a bit complicated. But to say we're not producing enough would imply that there's demand for them. That's why I talked earlier about how the labour market is soft if you look at Canada versus the U.S. So you have to be careful.

● (1735)

Mr. André Arthur: So if we were producing more degrees, the people getting them would be unemployed?

Mr. Iain Stewart: What we would like to do is have them be valued as inputs to a more competitive private sector. We would like to see the demand for those PhDs go up, and then universities would have to step up and provide more.

Mr. André Arthur: Is there a link between this virtual shortage and the fact that in Quebec and many provinces tuition fees have been frozen for many years? Many universities, such as Laval University in Quebec City, concentrate on undergraduate students. They don't give a hoot about graduate research because it's too expensive. Their funding has been cut, their tuition fees have been frozen, and they have no real motivation to spend all the money that they still didn't get from Mr. Phillipson on things that would be very costly. Is there a link there?

Mr. Iain Stewart: I don't think I can explain the particular educational focus of specific universities.

Mr. André Arthur: It's the whole of Quebec.

Mr. Iain Stewart: Universities differentiate themselves. Some universities focus on being an excellent undergraduate educator. The University of Toronto and the University of Montreal focus on being research-intensive. I'm not quite sure what the explanation for that would be.

Mr. André Arthur: Thank you.

The Chair: Thank you.

Thank you, Mr. Arthur.

Thank you very much for coming in, ladies and gentlemen. We appreciate the session. We want to thank you all. Again, if you have any further recommendations you want to make to the committee, please forward them to me or the clerk. We have some small items to discuss here. We would like to thank you, and you can certainly move on. We look forward to seeing you here again.

Monsieur Crête.

[*Translation*]

Mr. Paul Crête: Mr. Chairman, I would like to ask for unanimous consent to adopt the following motion to simplify the committee's work. I move that during the committee's trip the week of November 20, 2006, the meetings be for the sole purpose of hearing witnesses.

This would mean that, during our trip, nobody would be able to table a motion, dilatory or otherwise. It would give us a certain peace of mind during our trip. It would mean that when we visit plants or meet with witnesses, we would not constantly have to be checking that everybody was present. I would like to have the consent of the committee to adopt this motion.

Would you like me to read it again?

I move that during the committee's trip the week of November 20, 2006, the meetings be for the sole purpose of hearing witnesses.

[*English*]

The Chair: First of all, I think the clerk advises me we need unanimous consent to let Monsieur Crête move the motion, so I'm asking for unanimous consent to move the motion, right?

Mr. Massimo Pacetti: It's just a formality. We do it before we travel all the time. When a committee travels, you don't want political interference.

The Chair: Okay, then let's go to Mr. Carrie, because Mr. Carrie had his hand up, and then Mr. Pacetti.

Mr. Colin Carrie: I don't know why we don't just go through the regular process. Having this come up at the last minute...it's something I've not seen before.

Do you intend not to travel for the whole length of time of the committee, or is it...?

[*Translation*]

Mr. Paul Crête: No, it is simply because the clerk told us that we will know today if we were authorized to travel, and our budget was approved today. I believe the House authorized the trip this afternoon, but if not, it will be done tomorrow morning.

As Mr. Pacetti said, most committees adopt such a motion when traveling to ensure that people do not get caught out by a motion at 4:15 p.m. or 4:45 p.m. It is basically a motion that protects the government.

● (1740)

[*English*]

The Chair: I had Mr. Pacetti on the speakers list. Do you want to speak, Mr. Pacetti?

Mr. Massimo Pacetti: I think it's just a formality. Sometimes it's even in the rules of the committees that when they travel, there are no motions passed.

We don't have a problem with it. I'm not sure what the problem is.

If it's not in the rules of the committee, then I understand why Mr. Crête is moving it, but it's just a formality. If somebody decides to put forward a dilatory motion in the middle of travelling, and you're going to have this kind of a debate while you're travelling, it makes no sense. But that can possibly happen, because you're still in committee format.

The Chair: If I could respond from the chair's perspective, first of all, I've been on the industry committee and we've never travelled, which is, I think, one of the reasons the travel was granted. So the whips granted our travel for November 20 to 24. Now, I've never seen this motion, obviously, because I've never had the experience of travelling. So I've asked the clerk....

The Clerk of the Committee (Mr. James M. Latimer): Well, on the committees I've been at, it never has come up, but it has been done in other committees.

The Chair: Is it done in the finance committee every time?

Mr. Massimo Pacetti: We do it all the time, just to make sure there's no monkey business conducted while we're hearing from witnesses.

Perhaps Mr. Crête could repeat it again, and if there's anything that's....

Mr. Bev Shipley: We've heard the motion. It's just the normal principle of it....

The Chair: If we adopt this motion, Mr. Crête, can we adopt it for all future meetings—for instance, when we hear from the telecommunications sector?

[*Translation*]

Mr. Paul Crête: No.

[*English*]

The Chair: I love it. You've given me a wonderful idea.

[*Translation*]

Mr. Paul Crête: But it has to be adopted.

[*English*]

The Chair: You're an excellent vice-chair.

Mr. Carrie.

Mr. Colin Carrie: To move it forward quickly, basically, I've never heard of this before, and it has been given to us at the last minute. I'm sure the intent is good, and I don't think anybody's planning any shenanigans or monkey business, as you say. But because we're unsure of it, we can't give you unanimous consent today.

But I'm sure on the first day, whatever, we can talk about it.

[*Translation*]

Mr. Paul Crête: I have been told that—

[*English*]

Mr. Colin Carrie: Could you supply me a written copy, and we'll get back to you?

Mr. Massimo Pacetti: Let me read it to you in English:

> That during the Committee's trip the week of November 20, 2006, the meetings be for the sole purpose of hearing witnesses.

Mr. Colin Carrie: Yes. I understand.

The Chair: Hearing witnesses and site visits.

A voice: Site visits aren't included in this.

The Chair: Okay.

Mr. Massimo Pacetti: I think you guys can think on your own, but let me know what the table says.

A voice: So no unanimous consent, and allow him to move the motion.

[*Translation*]

Mr. Paul Crête: Excuse me, I have a point of order.

This sort of motion does not require unanimous consent. Our next meeting will be during our trip. I do not see the problem in dealing with it now. Unanimous consent is not required to study this motion. We are asking that the committee consider the motion.

[*English*]

The Chair: My understanding is you need unanimous consent, if you do not follow the 48-hour rule. The clerk can advise me if that's incorrect.

The Clerk: That's my understanding.

The Chair: It's the clerk's understanding as well.

[*Translation*]

Mr. Paul Crête: It is a procedural motion, not a substantive one. It does not, therefore, require 48 hours notice.

[*English*]

The Chair: My understanding is every single motion needs to be presented in both official languages and given a 48-hour notice. If you have a procedure rule that says that's not the case, I'd love to see it. I will look at it.

[*Translation*]

Mr. Paul Crête: Ask the clerk, he interprets the rules. I was told that I was entitled to introduce it without 48 hours notice as it is not a substantive motion.

We are not trying to set a trap for you. We just want to avoid problems during the trip.

Mr. Robert Vincent; We could talk about this until the cows come home.

● (1745)

[*English*]

Mr. Massimo Pacetti: It's not a big deal; it's done all the time. I don't know why you guys are making a big deal out of it.

[*Translation*]

Mr. Paul Crête: He does not understand the problem.

[*English*]

Mr. Massimo Pacetti: It's just a formality. We do it all the time. I understand you guys are all new, but you guys should contact.... [*Inaudible—Editor*]

Mr. Colin Carrie: Can I confirm then, Paul, you're saying just for information gathering with the committee, you just wanted information gathering?

[*Translation*]

Mr. Paul Crête: Yes.

[*English*]

Mr. Colin Carrie: No motions and stuff brought up?

[*Translation*]

Mr. Paul Crête: Yes, exactly.

[*English*]

Mr. Colin Carrie: Then yes. In the spirit, yes, we'll go with it too. Yes.

Mr. Paul Crête: Okay.

Mr. Colin Carrie: All right.

The Chair: Thank you, Mr. Carrie.

Can I suggest again, we all knew this was coming, we knew I was presenting to the liaison committee. It makes the chair's job much easier if I have the motions in advance in both official languages. We can do the negotiating behind the scenes, and it's all taken care of. I appreciate the effort, but let's....

Mr. Masse.

Mr. Brian Masse: Just one thing, Mr. Chair. I know where you're going with it, and I appreciate that suggestion, but in all reality, until this House of Commons gets its act together on rules in committee, and it's not the wild west with every single damn committee having different rules, we'll never have that problem fixed. We're trying to live up to the basic rules we've done over the last four and a half years, and the reason we have problems is that everywhere it's different. It's amazing to think we don't even know what's unanimous and not unanimous consent in a committee. That's a larger issue, but if we want to have a committee with structure and rules, we can then pass it on to other committees.

The Chair: If you have any suggestions, I'd be very pleased to receive them. I'm not disputing your point.

Mr. Brian Masse: No, I know where you're going at too. That's part of the problem, it's always different.

The Chair: Valid point. Yes.

The meeting is adjourned.

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