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Mr. Brent St. Denis

Standing Committee on Industry, Natural Resources, Science and Technology

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● (1535)

[*English*]

The Chair (Mr. Brent St. Denis (Algoma—Manitoulin—Kapuskasing, Lib.)): *Bonjour tout le monde*. Good afternoon, everyone.

I'm pleased to call to order this November 23 meeting of the Standing Committee on Industry, Natural Resources, Science and Technology.

We are honoured today to have three fine witnesses—two by videoconference and one in person. We have with us in person Professor Adam J. Holbrook, who's at the Centre for Policy Research on Science andTechnology at Simon Fraser University, and by videoconference, Jack Mintz, president and chief executiveofficer,C. D. Howe Institute,and David Wolfe, professor, Political Science, University of Toronto.

I want to remind colleagues, because of the videoconference, to go a little bit slower with your questions, and also tell us to whom your question is directed, once we have done the opening presentations. Make it very clear to whom you wish your question to be addressed.

I would like to welcome all of you today—Professor Holbrook, Mr. Mintz, and Professor Wolfe. We are starting an ambitious study of Canada's industrial policy, such as some may describe it one way or another, and we hope that with your help starting today and with the help of witnesses in the weeks and months ahead we can get a clearer picture of where Canada is in terms of its industrial strategy or industrial policy and some ideas that we might put forward with your help.

With that we're going to go in the order that you are listed on the agenda of the day, so we'll invite Professor Holbrook to start.

If you would take 10 minutes, give or take, to start us off, we would appreciate that. Professor Holbrook, we're in your hands.

If at any time, Mr. Mintz or Professor Wolfe, you can't hear us, somehow wave; we have a technician here. We presume everything will go smoothly, but if not, we'll be looking out for you. Okay? Thank you.

Professor Holbrook.

Mr. Adam Holbrook (Associate Director and Adjunct Professor, Centre for Policy Research on Science and Technology (CPROST), Simon Fraser University, As Individual): Mr. Chairman, honourable members, ladies and gentlemen, thank you very much for inviting me to appear before this committee to assist in your studies of issues surrounding Canada's industrial strategy. What I'm going to talk about this afternoon is really a base to this discussion, and I hope and I suspect that this discussion will flow somewhat from what I've outlined in my statement here.

I'm associate director of the Centre for Policy Research on Science and Technology at Simon Fraser University and I'm also an adjunct professor in the School of Communication.

The mission of the Centre for Policy Research on Science and Technology, which I will abbreviate as CPROST, is to engage in research on the relationship between public policy and technology. CPROST has been studying innovation and its effect on industrial performance for over a decade. In the past seven years, these studies have been carried out as part of a national effort, as part of the Innovations Systems Research Network, which I may again abbreviate as ISRN, a national network of university-based researchers sponsored by the Social Sciences and Humanities Research Council.

This network was established to investigate the regional differences in innovation across Canada and whether or not innovation policy should reflect these regional differences. This network is organized on a regional basis. I am the head of the western sub-network and Dr. Wolfe is the national head of the ISRN. I'm speaking to you on my own behalf as a university researcher and not as a representative of my university or indeed of this network.

I should like to start by drawing a distinction between invention and innovation. Invention is a process by which a product or process is created, often through the application of research. Innovation is the process by which an invention is brought to market, by which the invention is commercialized. Thus research and development is a necessary but not sufficient component of innovation.

Firms may be very innovative without necessarily having R and D facilities or programs. Firms acquire knowledge whether through research, by market transactions, or by hiring human capital. Knowledge is a unique commodity in that while it can be created, it cannot be destroyed. Similarly, it can be transferred but the source retains all of the knowledge it transfers to the recipient even if the intellectual property rights are transferred. Knowledge can flow from one institution to another, either through people or through financial flows that permit the creation of knowledge in the recipient institution.

Studies of innovation are usually carried out at the national level, but in Canada our industrial demographics skew the national results toward what is happening in Ontario and Quebec. What happens in areas where manufacturing is not the predominant sector? For example, B.C. is moving from a resource-based economy directly to a services-based economy, but outside the lower mainland many of the key actors are small and medium-sized enterprises. They're federal labs and community colleges. This doesn't mean that we are arguing there are two Canadas. It's simply that when you look at Canada as a national whole, you are seeing the statistics that Statistics Canada provides. At the regional level, you have to go one layer down.

At the InnoWest conference held in Calgary last week, the question was raised: Can Schumpeterian rents, that is economic returns based on innovation, replace resource rents? We didn't come to a decision, I should add, on that statement, but it was a good way of framing the question.

ISRN has been set up to bring together researchers from a number of disciplines, ranging from chemistry to economic geography, to study industrial clusters and their role in regional systems of innovation. The Canadian national system of innovation is made up of a number of regional systems of innovation, and industrial innovation policy needs to be tailored to fit specific regional needs. The network has focused on the study of industrial clusters, as these are the building blocks of regional systems of innovation that in turn lead to economic and social growth.

We started with Michael Porter's definition of a cluster but have found variations from this model across the country. Issues that we have looked at include: what is the critical mass of a cluster; what is the critical density, that is, number of firms in a given geographic area; the role of champions of innovation; and the role of government, both federal and provincial in providing infrastructure.

What are the necessary and what are the sufficient conditions that support the formation of a cluster in Canada? Are these region-specific?

● (1540)

Our findings suggest that the necessary conditions for the existence of a cluster in Canada include a strong public sector institution at the centre, usually a university research lab, or in some cases a government research lab, and good access to human capital. The sufficient conditions for a cluster's continued existence are more likely if there's at least one private firm with a global reach—and of course strong support from the public sector.

We have discussed the potential test for robustness of clusters, that is, whether or not it could survive the catastrophic loss of a particular institution, node, or actor. Ottawa's information technology cluster has survived several catastrophic downsizings and yet has emerged stronger after each episode.

Our studies show that innovation differs by region. In the west, high-tech clusters often produce intellectual property rather than manufactured products. Good examples include biotech and new media. These are significant clusters, particularly in Vancouver and Calgary. It's been found that Vancouver, for example, has a higher number of biotech researcher stars than either Montreal or Toronto, and yet there is no manufacturing facility in Vancouver or no multinational pharmaceutical firm there.

Another example is the biotech cluster in Saskatoon, which is quite different from the classical definitions of clusters, as much of the knowledge required for innovation and production in that cluster is acquired through market transactions.

Location matters. Cities with sticky labour markets, those that are attractive to skilled human capital, appear to have better prospects for cluster formation. This is not a unique finding to Canada; Professor Richard Florida in the States is probably the leader in this type of study.

We have found that the role of industrial associations is important. They are more than just as champions for an industry; they provide the opportunities for the informal exchange of knowledge—networking, learning—that are a prerequisite for innovation.

We've noted that firms regard the process of innovation as intellectual property in its own right. Although this property may not be marketable in conventional transactions by itself, the industrialists often tell us that the process of innovation is more important than the innovation itself. High-tech firms tend to view in-house R and D, their customers, and their marketing departments as important sources of innovation. Resource-based firms tend to regard their suppliers, their management, and their production departments as more important in the process of innovation—possibly reflecting their interest in improving their production processes rather than improving their products. Neither group has ranked outsourced R and D, or collaborative R and D, as an important source of innovation.

In our studies in B.C. we have found—and this was quite important—that innovative firms, regardless of sector, have more similarities than innovative and non-innovative firms in the same sector. Thus you get innovative firms in the high-tech field, but there are also non-innovative firms in high technology. Similarly, innovative firms in a resources sector bear more similarity to an innovative firm in the high-technology sector than the non-innovative firms do.

The OECD has noted that the study of national systems of innovation offers new rationales for government technology and, by extension, innovation and industrial policies. In the past, government innovation policies focused on market failure. Studies of systems of innovation can identify systemic failures. In the past, Canadian industrial and innovation policy looked at providing national champions for industries such as aerospace, or wherever it was determined we did not have capability. The question we should be asking is, what are the systemic constraints on developing these capabilities?

In a federation such as Canada, the national system of innovation is the sum of several regions. I would argue that in order to understand our national system of innovation, and by extension our national industrial policy, we need to know who are the innovators and what are the innovations. We need to differentiate among the inventors, the innovators, and the implementers, and we need to map the public sector infrastructure that supports innovation.

● (1545)

It has often been suggested that Canada does not have an innovation strategy. I disagree; it's just that we don't write it down.

Over the past decade the government has put in place a number of policies that, when added together, form a coherent whole. They include the direct support of basic and early-stage applied research in the university sector; the creation of the specialized, decentralized stakeholder-operated granting agencies for university research, such as networks of centres of excellence; the shifting of direct support for industrial science and technology from direct programs, or direct Industry Canada-type programs, to indirect methods, such as the scientific research and experimental development tax credit program; and the redirection of government R and D spending in government labs to support very specific government missions. We also actively recruit skilled personnel through the repatriation of Canadian immigrants—the Canada research chairs program—and we of course encourage immigrants. Finally, we actively participate in international consortia for big S and T projects, such as the NASA Canadarm program, which is probably one of the most successful multinational technology programs that Canada has been involved in.

I'd like to finish with the observation that Canada has a unique feature in its industrial innovation landscape, that of a significant amount of foreign-funded industrial research and development. Statistics Canada reported that in 2002, $3.5 billion in R and D was funded by foreign sources—almost all of it in industrial labs—out of total R and D expenditure of $20.7 billion. You can interpret this as a reflection of an appreciation by foreign investors that Canada is a cost-effective place to carry out research—although the subsequent rise of the dollar since 2002 may have reduced this competitive advantage.

This activity is a service industry in its own right. The fact that the intellectual property rights may be exported does not reduce the fact that the knowledge remains in Canada and can be used as a base for further invention and innovation. Studies of the technological balance of payments suggests that at least in recent years, Canada breaks more or less even on the financial aspects of the transfer of patents, licences, and intellectual property.

An industrial strategy must start with an invention and an innovation strategy. Some of the building blocks are in place. I hope your deliberations will lead to the formulation of a complete and seamless strategy for Canada.

Thank you.

The Chair: Thank you, Professor Holbrook.

Now to Dr. Mintz, please.

Mr. Jack Mintz (President and Chief Executive Officer, C.D. Howe Institute, As Individual): Thank you very much. It's my pleasure to be here at the University of Toronto. I should add I'm also a teacher—my other position in life—and a colleague of David Wolfe, who you'll hear from momentarily. I'd like to begin with the following observation, which perhaps may not make your committee very happy to hear.

The House of Commons Standing Committee on Industry, Natural Resources, Science and Technology is, in my view, off in the wrong direction in its review of Canada's industrial strategy. While it makes sense to consider how regulatory and tax reform and innovation policies can play a useful role in improving business competitiveness and Canada's standard of living, the study is focused primarily on three selected industries: oil and gas, apparel and textile, and automotive. While not to denigrate the importance of each of these sectors to Canada, what about other industries that are critical to Canada's growth: manufacturing in general, mining, construction, utilities, transportation, trade, forestry, and farming?

Once again our politicians are falling in the usual trap that they know better than anyone else which sectors are the winners, implying that other sectors of the economy are not a priority to economic growth. This pick-and-choose approach to industrial policy, however, often fails for the following reason. Well-known U. S. economist Arnold Harberger demonstrated that it's difficult to predict which industry will be the star in a particular decade. Historically, some industries have had outstanding performance in one decade, while mediocre at best in other decades. For example, transportation was the star in the 1950s and high tech in the 1990s.

More importantly, within each high-performing industry, firm performance varies substantially. Only a few companies are truly stars, and the majority are dogs. Given that it is so difficult to know which businesses will do well in the future, government policies are often targeted at the wrong company, resulting in an industrial policy failure. Resources are directed to less productive businesses of the economy, thereby undermining economic growth and job creation for the whole economy.

Canada has many examples of companies of poor profitability that were propped up by government largesse: Algoma Steel in Ontario, Swan Hills hazardous treatment centre in Alberta, cucumber factories in Newfoundland, and Michelin in Nova Scotia. I can also add the plastic cluster in New Brunswick. Yes, there are some examples of subsidized businesses that have done well, but whether the benefits to one particular business have been greater than the economic costs created by the subsidy is another matter.

When targeting support at selected businesses, policies impose significant economic costs for three reasons. Support given to some businesses may encourage their growth, but to the detriment of their competitors. The subsidy has much less impact on aggregate growth, since some businesses are made less competitive and lay off workers.

Subsidies or tax relief given to some businesses often lead to higher prices charged for rents, salaries, and other costs, rather than encourage growth. For example, the tax holiday for the Internet towers in Montreal led to higher rents charged by landlords, rather than improving the competitiveness of the high-tech companies that moved into the sites.

Subsidies given to some businesses must also be funded by taxes paid by others or by people themselves. Alternatively, efficiently provided services may suffer that promote economic growth, such as education and infrastructure.

A smart industrial policy is less concerned about supporting so-called clusters; instead it is aimed at ensuring that barriers to successful entrepreneurship and business development are eliminated.

Several barriers should be removed to improve Canada's productivity. The first is to encourage greater adoption of research by Canadian businesses. While we have generous tax and grant support for research and development, adoption of new technologies is inadequate, in large part because of insufficient business investment that lags behind many other countries.

I'd like to add in this respect that a sister country, Australia, which is resource based like we are, has a research and development intensity very similar to Canada's. In fact, perhaps it's a little bit worse. However, during the 1990s their productivity was as good as the United States. The primary reason behind that, as the OECD report has pointed out, is that Australia has had a very good rate of adoption of new technologies, and certainly much better than what we've seen in Canada. I think that does tell you something we need to pay more attention to.

● (1550)

Second is to reduce regulatory burdens and encourage greater competition among businesses. Foreign ownership limitations in industries like air transportation and telecommunications are difficult to understand in terms of what they're trying to protect. The overwhelming federal regulatory burden imposed by different departments on offshore oil and gas development is another case in point.

Third is to undertake pro-growth tax reform, to shift burdens on investments and savings to broaden tax bases and lower rates. In a paper to be released by the Institute for Competitiveness and Prosperity—which I might add will be tomorrow—Duanjie Chen and I demonstrate that the fiscal burdens on businesses in Ontario are sharply higher than the five U.S. states of California, Georgia, Illinois, Massachusetts, and Michigan. After accounting for fiscal subsidies like research and development grants, infrastructure, health and education, and taxes, including income, sales, payroll, and capital taxes, federal and provincial governments increased the costs of goods sold in Ontario by almost 30%, compared to 15% in the United States.

Most Canadian industries are at a fiscal disadvantage compared to not only the United States, but to many other countries like Ireland, the Netherlands, Norway, Finland, and Sweden. It's not just a problem for a few sectors chosen as favourites for government policy.

The smart approach for industrial policy is to improve our regulatory and other microeconomic policies to improve the efficiency of the Canadian economy as a whole. We should not pick some sectors for relief; instead we should look at policy reforms more generally that could help many industries do better.

Thank you very much.

● (1555)

The Chair: Thank you, Dr. Mintz.

Now, Professor Wolfe, we'll invite you to share some thoughts with us as well.

Prof. David Wolfe (Political Science, University of Toronto, and National Coordinator, Innovation Systems Research Network (ISRN), As Individual): Mr. Chairman, honourable members, I too would like to thank you for the opportunity to present to you this afternoon.

I've distributed a set of slides, which I believe has been translated. I'm not going to try to go through them in any detail, but rather I'll speak to a number of very broad points.

As Adam Holbrook said, we're part of a broad national network of researchers who have been studying innovation in Canada since 1998 with support from one of the federal granting councils, the Social Sciences and Humanities Research Council, plus a number of federal and provincial agencies.

What I'd briefly like to try to do in this presentation is engage in a discussion of the differences historically in this country between what we've called industrial strategy or industrial policy and the transition, particularly in the mid-1980s and late 1980s, to a focus on innovation policy and the kinds of policy implications our research leads us to, which may be of relevance for the committee's deliberations.

I'll start with a very brief definition of industrial policy, which is any government program that directly affects the economic activity of an industry, company or plant, or, secondly, policies that are designed to change economic structures, behaviour or performance.

The literature on industrial policy tends to differentiate between three types: innovative polices, which are designed to promote growth and development by fostering the promotion of new product and process technologies; defensive policies, which attempt to protect firms, sectors or regions against undesired economic changes; and adaptive policies, which attempt to ease the adjustment process by reallocating capital and human resources away from declining economic activity.

The history of industrial policy in Canada, particularly in the 1970s and 1980s, which would include a number of the examples Dr. Mintz referred to, tended to fall into the category of defensive and adaptive policies. I think the consensus across the research community by the mid-1980s was that the record of these kinds of policies was less than successful in industries like textiles, shipbuilding, forestry, and others where the policy interventions had not had the desired effects.

The debate over industrial policy, in some respects, came to a head with the Macdonald commission in the mid-1980s. In its report, the commission very soundly came down in favour of rejecting the increased use of industrial policies, and instead argued that in a small, open economy such as Canada's, industrial policy and trade policy were synonymous.

What they didn't include, though, was consideration of the insights of one of their own researchers, who argued that in a small, open economy such as Canada's, where the economies of scale were considerably less than those of some of our larger trading partners, we also needed to look seriously at policies to support innovation. If left to their own devices, firms would often lack either the incentives or the resources to adequately invest in innovation, and if you were to foster and promote more open and freer trade, you needed policies to support research and innovation to compensate for the structural weaknesses of the Canadian economy.

At the same time, in the late 1980s and early 1990s, a number of provinces began to more seriously explore their own industrial strategies. Ontario had several rounds of premier's council reports in the late 1980s, and in the early 1990s they adopted an industrial policy framework for Ontario.

In this period, under Minister of Industry Tremblay, Quebec produced *The Quèbec Industrial Atlas*, which mapped the entire Quebec economy into 12 industrial clusters, adopting Michael Porter's research methodologies and approaches.

In this period as well, policy analysts in the United States, particularly focusing on economic development at the state level, identified a number of key transitions through different stages of policy: moving from smokestack chasing, the policies focused on attracting industry to particular states; to a second stage that focused on upgrading the research infrastructure within particular states; to a third stage, identified in the 1990s and beyond, which began to focus on questions of the integration of these policies. Focusing on a particular policy issue or policy problem was deemed to be inadequate. The key question of how they interacted with each other and how they were integrated was more important.

It's this kind of thinking that led a number of us in the research community to begin to adopt and use what's called the innovation systems approach. It emphasizes the interaction between different key components or institutions in a national or regional economy, which collectively contribute to the process of innovation. The focus here is on how effectively the different components of the innovation system interact with each other. I've provided you with a diagram of a national innovation system adopted from the OECD, which I won't even begin to go into but would be happy to answer questions about.

● (1600)

Moving on, a number of researchers at the regional level, working from the kind of perspective Dr. Holbrook was talking about, began to emphasize the importance of the regional level for innovation. This came out of the observation that increasingly innovation is place-based; that although the research community itself is increasingly global, the kind of knowledge flows that contribute to innovation occur within an institutional, political, and social context that's defined by a particular region. Furthermore, spatial proximity facilitates the sharing of knowledge and capacity for localized learning that is critical for innovation. Finally, this kind of localized learning is often facilitated by the presence of a common set of regional institutions, such as regional or local trade associations, industry associations, or labour market and training institutions.

As Adam has said, we in our research network have been studying the role and nature of industrial clusters in Canada. We've studied a total of 26 clusters across the country and have developed a number of important insights into the way in which they operate, the advantages, the disadvantages.

I want to briefly mention some of our studies in mature industries: steel, auto, aerospace, and in particular mining supply and services. Among a number of things our researchers have found are occurring in these industries is that there is a certain unbundling of the corporation taking place. A lot of the coordination and design functions that were traditionally carried out more centrally within an individual firm in these mature industries are being decentralized, and key research design and development challenges for new products are being allocated to key supply firms—in the auto industry they're often referred to as tier one firms—with greater responsibility. The same kind of process is occurring in the aerospace industry as well.

What's critical in these industries, and what holds the firms often in a specific geographic location, is the presence of the talent and skills that are needed by the firms to carry out the design and production tasks they take on. What differentiates Canadian firms and keeps them competitive in increasingly global markets for the products of these firms—particularly automotive and aerospace—is the quality of the labour market in Canada. Traditionally our advantage of a thick labour market has given us a competitive advantage in these industries, but that's beginning to change. Key firm leaders have identified the increasing importance of research and development for firms in their industries to hold them or justify further investment in these industries in Canada. I'd be happy to elaborate on that.

Finally, if you were to ask what the implications of all of this are for policy, I'd single out three in particular. What an innovation system and cluster-based approach leads to is an emphasis on the linkages within the system—not on a particular policy targeted at an individual firm or particular industry, but on the way in which policies foster and promote improved linkages between the firms.

From this perspective, if we're looking at industrial subsidies—if we look at a program such as Technology Partnerships Canada—and ask what an innovation systems perspective would lead us to inquire about a program like that, I would suggest the key emphasis should be not on the benefit conferred to an individual firm receiving a grant under that program, but rather on the way in which that grant could be used to leverage increased activity along the supply chain within a particular industry or to promote increased economic activity among a network of firms within a specific cluster or in a given geographic locale.

The last point I'd emphasize is the importance of alignment of policies and programs. If we look in detail, as some of our researches have done, at the vast array of federal programs and policies at work, on the ground, in specific communities and specific regions of this country, we have in fact, as Adam says, a very comprehensive economic development and innovation strategy at work.

● (1605)

What we often lack is a high degree of alignment between individual government programs and agencies and among federal, provincial, and local governments. If you were to ask me where increased value could be gained with respect to innovation policy and innovation strategy in this country, it would be in promoting greater alignment among and between the existing mix of policies and programs currently at work in the country.

Thank you.

The Chair: Thank you, Professor Wolfe, and thank you all.

Now we're going to turn to the question and answer part of the meeting. We'll start with John Duncan.

John, unless your question is for everybody, please indicate to whom you are asking the question.

Mr. John Duncan (Vancouver Island North, CPC): What I'll do, then, is address my question to Jack Mintz. I'll do that because you've been the most critical and blunt about where you think the committee is heading. This is early in the process. I'm not sure what kind of terms of reference you were given for today, because they didn't come from me, but there are four or five parties involved at the table here, so there always is some give and take and some compromise.

The focus of the study, from my perspective and I think from our perspective, is to bring smart regulation—the September 23 announcement of the 15-month report from Privy Council that basically wants to address the over-abundance of regulatory hurdles in Canada—from the bureaucracy to the political level, to do Canada a big favour. I've met with over 50 industry associations, and every one of them said if this committee studied smart regulation it would be doing a favour for everybody. For example, if we say we want to look at the energy sector, everyone's either producing, transporting, or consuming energy.

The second thing we want to focus on here is to look at what Canada's long-term plan is when it comes to our energy sector—for our renewables, non-renewables, our conventional, and our un-conventional. All of our industry, our whole apparatus, is dependent on it; we have commitments under NAFTA; we have major regulatory burdens, as you mentioned yourself, on the offshore. The Mackenzie valley project, a very important project for Canada, is totally bogged down.

Those are our two focuses for the Conservative Party.

I think there's a communications exercise here that has gone a little askew. I'll take this as a lesson that I should be contacting the industry associations.

You mentioned we shouldn't avoid talking to transportation, forestry, and other sectors. Indeed, they are on our list of witnesses to ask to appear before the committee. Because there was a recognition that we would have to compromise somewhat on the agenda, they recognize they'll have to shoehorn their agenda into our larger terms of reference.

That's where we're headed. I don't think this committee is headed to a big subsidy regime or anything like that. We're really trying to focus on improving the climate so that industry can be unburdened, as opposed to taking strong government direction.

Do I have a question out of all that?That's the message I wanted to deliver. It's obviously addressed to a larger audience than yourselves.

I really appreciate the fact that you talked about regulatory burdens in your document and you talked about taxation burdens. The one major area we really need some input on is smart regulations.

● (1610)

When you look at the smart regulation initiative, you will see that the panel that put it together—I think it's about a 150-page document—had to use case examples as well in order to be able to do their job. In a sense, that's what we were trying to do here; we weren't trying to pick winners and losers but just to narrow the terms of reference for the study.

The Chair: Following your opening comments, I think part of this is a learning exercise for us.

Mr. John Duncan: Exactly. We're early on in this.

The Chair: We created a camel by committee, and that's what we got, the four humps and six legs, or what have you.

Mr. John Duncan: Yes.

I would invite comment, if that's where you're headed.

The Chair: Exactly. Maybe a further comment, and any others at an appropriate time, on our mandate; we want to have a mandate that makes sense. It was our first effort, and I would say a good effort, given that we were all coming from many different directions.

If you, Dr. Mintz, would want to comment further on your positive criticism of our mandate, we'd appreciate that.

Mr. Jack Mintz: Thank you very much.

The document I had was something called the industrial strategy study, and I'll just quote one line. This is the one that concerned me, which I wanted to direct my comments at:

> The study will focus on the energy, manufacturing and services sectors, in particular the oil and gas industry, apparel and textile industries, and the automotive sub-sector....

It was that line particularly that got me worried about starting to pick certain sectors as being more important than others. I am very pleased to hear that you are taking a general approach to industrial strategy; I would agree that is something to do.

Let me just use the area of taxation, which is my expertise, as a way of really discussing that particular issue. We've had a tax system over the years, a business tax structure, that particularly discriminated against service sectors relative to manufacturing and resource sectors. In 1998, when the *Report of the Technical Committee on Business Taxation*, a committee I chaired, came out and argued basically for levelling the playing field between the service sector and other sectors of the economy, it led to a structural change in the corporate income tax. I want to compliment the government for doing it, eliminating some of the differentials in corporate taxes, particularly with respect to services, manufacturing, and resource income.

There is still more work to be done. In fact, the report recognized a number of areas. Whether one is talking about environmental levies or is discussing research and development or the treatment of small businesses, etc., there are a number of things that could still be done in the taxation area that would lead to a much better tax system if we undertook some reforms. A favourite of mine is the unemployment insurance system, or what we in Canada put a positive spin on and call employment insurance.

The view I have expressed in the past—and it's also in the report, which all of the committee did accept—was the need for some partial experience rating in employment insurance in order to encourage businesses to keep their workers. In fact, the employment insurance system at this time penalizes the businesses that tend to keep workers on, because those businesses end up paying the same contribution rate as the businesses that lay off a lot of workers. So we had argued for some partial experience rating, which you find in other countries, as a way of making the employment insurance system operate better. There is good evidence to show that we could reduce our unemployment rate and have better labour utilization of capital as a result.

So there are a host of reforms. I didn't go into detail about all of them, but I would encourage you to look at those things. Let me go back to my example of Australia. Australia achieved a great deal of efficiency in the 1980s and 1990s in the way it was undertaking its policies. In particular, it undertook a number of labour market reforms to make labour markets much more flexible. It also undertook tax reforms, such as introducing a value-added tax to replace the previous wholesale tax, but it also reduced income tax rates. It also undertook major changes in its trade policies. There were actually quite a few things that were done in Australia, and as a result, it was actually a relatively good performer in the 1990s. One could say that many of the policies were an industrial strategy that allowed businesses to grow much better in that country.

● (1615)

The Chair: Dr. Holbrook or Dr. Wolfe, have you any comments on at least the initial phrasing of our mandate, before we move to Marc?

Prof. David Wolfe: Again, I can't see if Adam is trying to intervene, so I'll jump in.

The Chair: Oh, I'm sorry.

We'll go with Dr. Wolfe, and then Dr. Holbrook.

Prof. David Wolfe: Labels have very particular meanings, and I think the committee has to be careful. Obviously, when some of us look at the phrase "industrial strategy", we draw certain broad implications from it, and it means considerably more than smart regulation. So you need to be clear about what you want to study and what you see as the critical policy variables that are at work here.

With respect to a mandate, the one point I would try to emphasize is that the Government of Canada currently has a broad array of policies and programs in place that affect innovation and economic development generally. They include regulation and the kinds of tax policies Dr. Mintz was talking about, but they also include the research and development policies Dr. Holbrook referred to, and much more. They include the kind of spending that goes on in the regional development agencies, and firm-specific programs, such as TPC, and a variety of others.

What troubles me is that each of these programs has been put in place to achieve a specific policy goal by itself—often a desirable or a laudable goal. But there's no sense of whether the programs are operating in a cohesive fashion to deliver the maximum economic benefit. The question is rarely posed of whether we as a country—including both senior levels of government, federal and provincial—could achieve greater economic benefits by improving the degree of coordination or alignment among the existing array of policies and programs—regulatory, taxation, research, and subsidies. That's the central point I would urge you to consider.

● (1620)

The Chair: All right.

I think Dr. Holbrook wants to jump in on the mandate question.

Mr. Adam Holbrook: Yes. I'd like to just follow up on what David said about the need for some sort of coherent policy or seamless policy. I outlined in my notes where I think our R and D policy has been coherent, but I think that's been almost by accident rather than design.

Certainly it's true that we need to have some sort of overall bird's-eye view of the different elements of industrial policy in Canada. I'll give you an example. You are using the term "smart regulation" here. I would add as a subset of that, at the very least, the issue of standard setting.

In the world of science and technology, those countries that are actively involved in setting standards for new technologies often gain competitive advantage by doing so. For example, we should probably ensure that we could punch above our weight by taking a more active role—in some cases we do take quite an active role already—in the process of international standard setting, whether it's for wireless cell phones, or other types of mechanical and electrical equipment. I think that's one of the things that needs to addressed.

The other one, without harping on the regionality issue, is certainly the need for some sort of integrated approach to government infrastructure. In British Columbia there are often western economic development offices, there are Industry Canada offices, there are NRC IRAP offices. At the individual level, the officers work very well together. In fact, I have to compliment them. Once you get out into the regions of British Columbia they work together and they work well, given the limited resources they have. But there's not much coordination at the higher level so the services they deliver can be delivered in a seamless way. So I would argue that this committee should at least try to address the global aspect of industrial policy, perhaps to the exclusion of looking at specific sectors.

Thank you.

The Chair: Thank you.

Welcome, Marc Boulianne, to the committee. Are you going to take a turn?

[*Translation*]

Mr. Marc Boulianne (Mégantic—L'Érable, BQ): Thank you, Mr. Chair.

Welcome to our three witnesses. My question is for Mr. Holbrook.

Of course, we know- it is very clear from your document- that innovation happens around industrial clusters. I think this is essential.

When you talked about regions, we understood that you were talking about the west. What about small regions within regions?

We understand at last what we need to build industrial clusters : a university center, a good-size firm, and human capital. These are the keys to success.

However, in a town like mine, Thetford Mines, there is a major research center in oleochemistry but we find it difficult to deal with innovation. We lack subsidies and other conditions are missing too. Do you think we can succeed in small municipalities who lack the necessary conditions?

People tell us we should move the research center to a bigger town where those conditions would be met. What could we do to be successful in a isolated region, like ours, where innovation could be fostered?

[*English*]

Mr. Adam Holbrook: Thank you.

I think it is possible under certain very specific conditions for small regions—however you choose to define a region—to be successful. Again I will use an example that I am familiar with, which is the central Okanagan Valley, where the city of Kelowna and the region around that have been very successful in establishing one and a half clusters. The one obvious cluster, of course, is the wine industry. That is a good example of where a federal government initiative, through an Agricultural and Agri-food Canada station at Summerland, got the ball rolling in the creation of the wine industry.

Now you might say that's not high technology. Well, in fact it is, for starters. Second, it's a very integrated cluster because these days it includes not just the production of wine but the tourism that goes with it. So it has certainly been a successful development of a cluster in that particular context.

A more interesting variation of a cluster development within that area has also been the initiation—I would hardly say it is a fully formed cluster yet—of a small software services industry. This is occasioned merely because the Okanagan Valley is a place where people want to live. It's the human capital aspect that becomes important.

So the big issue for small regions is, are they places were people want to live? Not everybody wants to live in a big city. Not everybody wants to live in the Okanagan Valley, but some people do.

In the case of Kelowna, one of the things that really helped the development of their software industry was active participation at the municipal level by the Central Okanagan Economic Development Commission, which pushed very hard for development and upgrading of the airport facilities there. We've been told by officials at the airport that it is faster to get to the international departures side of Vancouver airport from Kelowna than it is from North Vancouver, because of traffic, security, and so on. So a company with global reach might just as well locate in a place like Kelowna as in North Vancouver.

I am certain this would be true in other places in Canada as well. This is not unique to that region, so I think that under very special circumstances it is possible to do this, but the conditions have to be right. The industries have to meet the abilities of the particular region to respond to them. I don't want to argue a counter example, but obviously the wine industry fits the economic, agricultural, and geographic profile of the Okanagan. You wouldn't try to grow grapes in Yellowknife, for example.

● (1625)

[*Translation*]

Mr. Marc Boulianne:

[*English*]

The Chair: Are there any comments from Dr. Mintz or Dr. Wolfe on Mr. Boulianne's question? No. Okay.

Mr. Marc Boulianne: Thank you.

The Chair: *C'est bon*. Thank you.

Denis Coderre, please.

Hon. Denis Coderre (Bourassa, Lib.): Good day.

First of all, Mr. Mintz, I think we can chew gum and walk at the same time. Politician bashing is a good sport, especially on the Hill. Frankly, the role of our industry committee is clearly, one, to look at the environment, and two, to see some of the industries that we can focus on while at the same time finding a way of adapting ourselves to a new reality. So I forgive you, for now. I know that at the end you were improving, so we'll leave it at that.

My question is for the three of our friends here. We talk a lot about innovation as a label, we talk a lot about productivity, and we talk a lot about environment. What we're struggling with is first.... Of course, when we spoke about the smart regulation plus the standard settings, or the integration of all the stakeholders.... Frankly, the question is, is it possible to adapt ourselves to the new realities and remain Canadian?

One of the issues, of course, is that we don't have any choice in adapting ourselves to some of the international standards if we want to be productive. At the same time, we are witnessing—and I was especially pleased to hear Dr. Wolfe when we spoke about the social component.... We cannot just talk about globalization and innovation without talking about the environment of the workers and the conditions by themselves. Do you feel, now that we have passed from a savage capitalism in certain ways, that people have more social conscience now? When we're talking about investment or adapting ourselves to new realities, we cannot put aside having that social component now. We cannot talk just about clusters, but we should also talk about the people who are working there. How can we have that kind of balanced approach between remaining Canadian and having our own leads and at the same time trying to protect what we've got?

We spoke a lot about mature industries; this is an issue by itself. We know that with globalization, especially in the textile industry, a lot of people were struggling because the adaptation is not quite obvious, especially in certain areas. Our friend, Marc Boulianne, spoke about small communities too.

These are the several issues I'd like to talk about. Maybe as a general question, how can we strike that kind of balanced approach between adapting ourselves to new realities, trying to take the lead, and having the proper environment? At the same time, how can we be protective without being protectionist in some of the areas we should protect—because there are thousands of jobs attached to them?

● (1630)

The Chair: Who wants to start?

Dr. Wolfe.

Prof. David Wolfe: I'll start.

I think the honourable member has raised a number of very critical issues. To start with, how do we deal with industries under pressure? The challenge for those industries is to differentiate themselves in global markets. This is the lesson of the last twenty years for Canada in a variety of industries that were relatively protected. Some of them have met that challenge and done very well; some of them have not. The textiles industry has been under challenge since the late 1970s, and it continues to struggle.

Furniture is a very different story. In the early 1990s, there were a substantial number of people in Ontario, including the industry, government, and other representatives, who were ready to write off the furniture industry in Ontario. It faced severe competitive pressures after the introduction of the free trade agreement: higher costs of resources compared to southern U.S. states, higher labour costs. Yet, if you look at the state of the furniture industry today, it's actually doing quite well, and certainly far better today than many experts predicted in 1991-92. They did it with improved product design. They did it by selecting market niches where they could excel. They did it by improving production processes.

It's the competitive dynamic of capitalism. It's not a particularly nice system, but the one thing it tends to deliver and that we all continue to want is improved standards of living. The way you get there is by doing something better. That's fundamentally what innovation is about. The furniture industry in Ontario innovated, it improved, and it survived. I think that's why the emphasis on innovation is important.

With respect to the social dimension, when we talk about clusters and innovation, it does tend to raise in a lot of people's minds that this is all fine for firms, economists, and industrialists, but what does it do for people? It's a question that we confront a lot.

To me the answer is very simple. What innovation is all about—and we can always develop in clusters as well—what is key, is human capital. The better trained people are, the more highly skilled, the more desirable we are as a place to do business. In the world we live in, where factors of production and capital are increasingly mobile, what it is that differentiates us is the quality of people, the quality of our labour markets.

When we study the aerospace cluster in Montreal, what do we find? We find that it's not really a cluster. It doesn't have a lot of the inter-firm connections that traditional theories would lead us to expect. It certainly doesn't have local customers, which is what cluster theory says you need to have in order to be a successful cluster. So what is it that anchors all that grouping of firms in the Montreal region? It's a very thick, very skilled, very talented labour market with a lot of experience.

I think I'm reinforcing one of the points that Adam made a few minutes ago. If you were to ask me how to help more marginal communities improve their economic position and how to integrate the economic dimension and the social dimension, it's by focusing on the quality of the labour markets by looking at the role of training in educational institutions.

We have a very effective system of post-secondary educational institutions across this country, both universities and colleges, and some more specialized institutions. They're the key. They are the key to our economic future, but what we need to look at is how well integrated they are with the economic bases of their regions. How strong are the linkages between those institutions and the communities in which they're situated, the firms and the industries they're there to help prosper?

● (1635)

The Chair: Did you want to have at Denis?

Mr. Jack Mintz: Could I add some material to that, Mr. Chairman?

I do think the questions you're raising are important, but let me give a somewhat different take compared to my colleague David Wolfe.

First, I have a lot of confidence in Canadians. Canadians have been world traders for centuries, and we've shown that we can work well in the world. In fact, another country that I always think of as wonderful world traders has been the Netherlands. When you look at the record of NAFTA and free trade with the United States, we did very well under those agreements. Canada's exports have grown tremendously; if you look at many industries, they've done quite well. In fact, some industries that we expected would get hammered by free trade did very well in the end, such as the wine industry, as was pointed out. It was expected that the wine industry would die a death, but Canadian wine has actually done very well indeed.

It does show me that in particular there are some important elements. First, competition is very important. One of the things we have to be careful about when talking about trying to have more integrated systems...I think governments themselves have to have more integrated systems. I don't want to lose the competitiveness aspect of markets, because that helps put pressure on people to perform better and to undertake innovations, and we shouldn't lose that as a result.

The other point you raise that is critical is about things like environmental standards, labour standards. Are these things that undermine competitiveness and therefore hurt an industry? First, there has been some work shown that countries can pretty well undertake the standards they wish without necessarily undermining their competitiveness. It may be that there'll be some additional costs imposed on industries as a result of those standards being adopted, but as long as we undertake policies that make sure businesses can undertake the kind of capital investment they need, that can allow themselves to grow and adopt new technologies, which is very important, then you can actually get some real success. In the end, the standards don't necessarily need to be our barrier, so long as we undertake the other policies that are needed to make sure that businesses can undertake their investments and adopt the technologies they require.

That's the reason why I often emphasize the need for looking at how our regulations and our tax policies impact on capital investment. I think adoption of technology is a much more important issue for us to think about in Canada, compared to just the creation of ideas where we have put a lot of good policies in place in the past number of years.

Finally, I always like to remind people that economic growth is critical to affording social policies down the road. If we don't have good economic growth, then our social programs do suffer. We've seen that happen in the past. I always like to remind my colleagues that I've done a lot of work with the World Bank and IMF, but I have never seen a poor country have a first class health system or an education system. It's only the rich countries that can afford them.

One other quick point is on regional development. A World Bank study came out last year basically saying that the record of regional development programs has been rather depressing. They just haven't worked very well across most countries. There is some success to talk about, and recently some of the concentration has not been so much on innovation and clusters per se, but just on trying to get a better focus on what can connect a small region with larger regions. For example, in Europe there has been emphasis on trying to improve transportation and communication systems. In Canada, I think moving to having a good broadband technology across the whole country was important for connecting small regions to large regions, as an example.

Also, recently there's been some concentration of trying to overcome jurisdictional rigidities, where you have certain small municipalities that are operating next door to each other in a small populated region.

● (1640)

What governments, provincial governments—for example, Alberta—have recently been trying to do is to overcome those barriers, those jurisdictional barriers, by getting the small municipalities to band together on some resources and, in terms of developing a strategy, to try to attract businesses and to maintain people in their region. A very good example of that has been Sherwood Park near Edmonton, which has been a very successful small town that has done exceedingly well in attracting a number of businesses, which are not necessarily related to high technology or innovation, but they're just making it very attractive to bring businesses. And they're also working with other municipalities in order to work together on creating a single industrial parkland and other types of policies that might be useful for very small municipalities to try to coordinate with each other.

The Chair: Mr. Holbrook.

Mr. Adam Holbrook: I'll just make two observations, one of which is to follow up on what David Wolfe said.

I think one of the things that's very important in Canada is the fact that our successful industries and industrial clusters are often based on very specific niches in the market, that we don't build all kinds of aircraft but we build very specific types of aircraft. That's one good example. We're not engaged in a broad spectrum of biotech activities; we are engaged in a number of very specific biotech technologies, and these technologies vary from centre to centre, so they're not necessarily in competition with each other.

One of Canada's key competitive advantages is its human capital and the resilience of its human capital. Again, there's the example of Ottawa. There have been the ups and downs of Kanata, as Nortel has gone up and down and companies have come and gone; yet each time there has been a disaster, a phoenix has come from the ashes and new companies have arisen from the wreckage, simply because the human capital there saw there were specific niches that could be occupied.

I would also like to comment a little bit on Dr. Mintz's point about the need for municipalities to at least be part of this process. One of the major issues that's going to come up in the next few years is the issue of drinking water and drinking water technologies, and these are usually delivered at the municipal level. Canada has some technologies there, and we certainly have the opportunity to occupy some niches, again, in this particular sector. So across the world this is more or less a fairly open market right now. We do have the opportunity, I think, with appropriate industrial policies focusing on specific niches, to make our mark in that area.

The Chair: We're going to go to Peter—

Prof. David Wolfe: Could I add a brief comment, Mr. Chair?

The Chair: Yes.

Prof. David Wolfe: I want to add a brief comment on regulation and standards.

There is a lot of evidence from different industries around the world that high-quality standards in certain industries, particularly food or wine, or water quality, which Dr. Holbrook was talking about, can be used to stimulate innovation in an industry. Setting a higher environmental or regulatory standard, streamlining the process of meeting approval but setting a higher quality standard, can serve as a spur to innovation. It can serve to differentiate the industry in global markets and give the product of that industry a unique quality that helps build international demand. It's a characteristic that's often attributed to the Danish food industry. It certainly worked very effectively with the Ontario and B.C. wine industries with establishing the VQA standard, which allowed the wineries to differentiate themselves on world markets. Dr. Holbrook was suggesting perhaps there's a market opportunity for us, with respect to water quality, with Canadian technology.

So we need to think carefully about it, and when we think about the regulatory process and about standards, we need to differentiate whether the process is efficient, whether it saves firms time to comply with them, and differentiate that from whether the standards can serve as a spur to innovation and help improve their competitiveness in world markets.

The Chair: Thank you. Those were excellent answers to a really good question there, Denis.

We're going to go to Peter Julian, then Werner, and then Andy.

Mr. Peter Julian (Burnaby—New Westminster, NDP): Thanks to all three of you for appearing here today.

I have two questions I'd like you to answer briefly and specifically, to start with, and then I'll have some comments coming out of that.

The first is to Mr. Holbrook. You mention the issue around research and development funding, and you cite the year 2002. I'd like to know over the last 5, 10, 15 years what the evolution, in real terms, has been of R and D funding in Canada.

Now for my second question. There have been a number of examples cited about Norway, Denmark, Sweden, Finland, also known often as the social democratic or Scandinavian tigers. I'd like to know what they do, what specific policies they have in place—if you have examples above and beyond the Danish food industry—that allow those economies, which are small but effective, to prosper and promote innovation.

● (1645)

Mr. Adam Holbrook: First, I don't have statistics at my fingers here. They are readily available and I could certainly arrange to get the statistics. They're based on material supplied by Statistics Canada.

Over the past decade, Canadian R and D spending has gone up in general, and the rather much abused measure of R and D spending as a percentage of gross domestic product has gone up in that period as well. There is always pressure to increase research and development spending because the Americans spend more as a percentage of their GDP. So, too, do the Swedes and the Finns, but we'll come back to that in a minute.

But I would argue that there are all sorts of constraints in our economy that would mitigate against us meeting the same levels of expenditure expressed as a percentage of GDP compared to the United States, for example.

We do note with some dismay that industrial R and D spending has dropped over the past couple of years, but again this has to be recognized as a bit of a statistical artifact since Nortel—I don't think we're revealing anything unknown—probably accounts for about 30% of all Canadian industrial R and D spending, and when Nortel cuts back on its R and D spending it affects the overall levels in this country.

To go to the Scandinavian example, Scandinavia is a very interesting grouping of countries. And you have to look at the group as a whole, because they're almost like the provinces of Canada, with a common yet different approach to way of life, social organization, and so on. To a certain extent it can be argued that they have achieved the levels of R and D spending both by direct intervention on the part of governments and by specific decisions to support specific industries. They, too, of course, have benefited in the past by being next to a very large block of industrial consumers for their research—in their case, Europe—just as we are now benefiting from our R and D work with our proximity to the United States.

If you ask the question, could Canada hope to achieve these R-and-D-to-GDP levels of Scandinavians, I'm not certain about that. I'm not even sure we should try to achieve it, given the differences in our economic structure. On the other hand, certainly the Swedes, and more particularly the Finns, are examples we should be looking at in some detail to see what they did and why they did it.

Certainly Nokia, the Finnish cellphone maker, changed itself from a paper machinery company into a cellphone manufacturer. Whether or not that transition is one that will last, certainly only time will tell, but certainly there was assistance through both policy and regulation on the part of the Finnish government that enabled this to happen.

The Chair: Are there any comments by Dr. Mintz and Dr. Wolfe on Peter's question?

Mr. Jack Mintz: Yes, actually I have one important comment to make. I actually have done a fair amount of work with some Europeans in the past and know a fair amount about what's happened in Scandinavian countries.

One of the most powerful changes that was made in public policy in Scandinavia was back in the early 1990s with the adoption of the dual income tax in those countries. What they did was substantially lower the tax on investments and savings. For example, they dropped the corporate income tax rates, which were virtually close to 50%, to less than 30% in most of the countries, except Denmark, which took 31% or 32% at that time. They also taxed interest, dividends, and other forms of income that investors receive at similar rates.

This had a tremendous impact on investments by businesses in these countries. For example, if you look at the period 1998-2002, Sweden was the fourth largest recipient of foreign direct investment as a proportion of GDP compared to all other countries around the world. In fact, Swedish companies also are major capital exporters.

That goes back to my point about adoption of innovation. You can't just talk about trying to develop new ideas. That's important, but it's also very important to make sure that ideas are being adopted by the business community, and it enters into the production processes of those countries. The Scandinavians have figured out that it's very important to keep taxes low on capital investments, and in this way they can enjoy the kind of lifestyle they've had, and it has worked over the past 12 years because of these major changes in tax policy.

● (1650)

The Chair: Dr. Wolfe, on Peter's question.

Prof. David Wolfe: Briefly on the two points, on R and D, my recollection of the R and D statistics is slightly less optimistic than Adam's. I think R and D spending in Canada, as a percent of GDP, has risen very marginally. It has hovered in the 1.78% to 1.8% of GDP for the last four or five years. It certainly has not gone up at all in any significant way in the last two or three years.

A more troubling statistic that's come to light recently based on some Statistics Canada data and the CCRA data is that the number of firms performing R and D has actually fallen in the last three or four years, and these tend to be smaller firms performing a very low level of R and D, not the large distinctive ones. It does raise a troubling issue in the minds of some observers that perhaps rather than moving in the direction of being a more research-intensive economy we are falling away from the standard, and certainly there is no explanation that I've seen for this phenomena or why it's occurring. It is one that does raise some concern.

With respect to the Scandinavian issue, particularly Sweden, what Dr. Mintz said is not just true of Sweden since 1990, although there was a fairly major tax reform undertaken in Sweden in 1990. But if you look historically at what the Swedish approach was going back from the 1950s through the 1970s, in actual fact what Sweden historically did was combine relatively low tax rates on corporations and on capital and very high incentives for capital investment with much higher tax rates on individuals and on income. It was the high tax rates on individuals and income that were used to fund the very extensive welfare system in Sweden, but it was the low tax rates on capital and corporations and the very high incentives for investment that were used to stimulate economic growth.

Mr. Jack Mintz: I don't agree with you on that, David.

● (1655)

Prof. David Wolfe: Historically, though, there was evidence—

Mr. Jack Mintz: There was a major change in 1990 that led to much lower taxes on savings and on investments in the Scandinavian countries through their dual income approach, and I can give you citations of papers on this.

Prof. David Wolfe: All right. We will disagree among ourselves.

Mr. Jack Mintz: Can I just raise one point about the R and D performance in Canada? It is correct that R and D has been declining. It's not just an issue with Nortel. In fact, this has been a bit of a problem any time when we have recessions take place, as we've experienced over the period of 2001-2003. In fact, if you look at the statistics across the world, you'll see that there has been a decline in private sector investment in general, and the reason for that has just been much tougher times. When cashflows are reduced, that often leads to less expenditure on investments and R and D as a result. In fact, this is one issue even in the United States where there is some concern that they won't be able to keep up their productivity in the future because of the decline they have faced in both private sector investment and R and D over the past few years in that country.

The Chair: Thank you.

Peter, you can have just a short supplementary if you'd like.

Mr. Peter Julian: This isn't a question; it's a comment, particularly on those from Professor Wolfe and Professor Holbrook. Your comments are very interesting in that we can actually look at having higher standards—looking at the public investment, looking at more investment in human capital in our communities to create a better quality of life—and that actually is a central part of an effective industrial strategy. Indeed, when we look at the business press we often talk about lower standards—lowering our expectations, lowering that quality of life. In a very real sense, it's enlightening to have examples where higher standards and a higher quality of life and a better approach to human capital actually increase that innovation edge.

So I appreciate both of your comments today.

The Chair: Thank you, Peter.

We're going to the next round. I'm going to be a little tighter with the times. I want to make sure everybody gets in who wants to get in.

Werner.

Mr. Werner Schmidt (Kelowna—Lake Country, CPC): Thank you very much, Mr. Chair, and thank you, gentlemen, for making your time available to us.

I'm particularly impressed by the use of technology. There's a real advancement here, Mr. Chair, and I think you deserve some credit for this. I remember, I think it was about 10 years ago—

The Chair: I didn't set this up. Werner.

Mr. Werner Schmidt: No, I know you couldn't set it up, but you made it possible for somebody who did know how and actually did it. I remember 10 years ago we wanted to do something like this and they said it was absolutely impossible; it couldn't be done. We discovered, and we insisted, that it could be done, and it was done within about three months' time, but there had to be a complete change in attitude to adopt a technology that was available. It was available 10 years ago, and now we have it perfected to a large degree, and it's really nice to see this.

I'm also very happy that Dr. Holbrook knows about the partnership program in the Okanagan Valley and the cluster that's developed there. I was involved in the initiation of that partnership, and it's really nice to see it working and being recognized.

I want to recognize the particular point that Dr. Mintz is making, that to isolate the taxation problems and monetary problems and fiscal problems is simply to avoid some of the issues. I also agree that we talk about Canada not having an industrial strategy, but if we could only take what we have in the program and put them together, we'd have a policy. That may be so, but I think in Canada we do have a tremendous problem, because it didn't matter what industry sector we talked to, whether it was gas and oil or furniture or textiles or agriculture, the common area that came through was, yes, we need to innovate, and yes, we need to adopt, but you have so blinking many regulations that actually prevent us from doing it; if we're going to adopt this new idea, we're going to have so many new constraints we have to meet that it's not worth the hassle to go that route.

I'm wondering if one of the issues bothering us is the intrusion—the interference—of both provincial and federal, but particularly federal, requirements to literally go through such almost boundless regulatory burdens that it's not worth doing the new innovation and new adaptation. I know I'm stating the case rather strongly, but we heard it too often to ignore it. That's why the committee chose this topic—to ask, is this one of the ways in which we can get at some of these other things so the people will do something?

There's no doubt in my mind that we have to change the tax policy too. But unless this culture or this attitude that we need to adapt new innovations and new ideas happens, there won't even be money for research and development either because the ideas won't come forward. New ideas, in and of themselves, good as they might be academically, and as encouraging and exciting as they might be, really don't help raise our standard of living. We are all here benefiting from a raised standard of living because of technological development and adopting new ideas, and we can go way beyond that. What's the key that will allow us to go ahead and do that?

The Chair: Did you get the question in there, Dr. Mintz? I think it was regulation, or over-regulation, as Werner would put it.

● (1700)

Mr. Jack Mintz: I agree with you that regulations can impose a significant barrier. I'm of the view that if you get the right environment, you can unleash a lot of entrepreneurial spirit and a lot of innovation that way, and regulations are one particular example that can get in the way of people being able to undertake their activities.

That's not to say that you want to get rid of all regulations. I don't believe in that. I think there are some regulations that are absolutely required to have a good, functioning market and there are important benefits associated with them, but there are some things we are doing that are really, in my view...I was going to use the word “crazy,” but that's a little bit too strong.

Let me go back to the oil and gas offshore development. In order to undertake offshore development, either on the British Columbia west coast or off Sable Island and Hibernia, you have to deal with four different government departments at the federal level, never mind dealing with the provincial level. This is just coordination in the federal government. You have to deal with the Department of the Environment, you have to deal with Fisheries and Oceans, you have to deal with Natural Resources Canada—that's three. I think there's one more, maybe Privy Council or somebody else. I forget now.

The main point is that the businesses have found that they have had huge delays in being able to undertake investments, because of the lack of coordination that goes on amongst these three or four departments in order to make sure the projects can be undertaken. We end up undermining the ability of businesses to invest and to create wealth for Canadians because we hamper the development of very large projects in that way.

That's not to say we don't need certain types of policies and regulatory policies to protect certain objectives that governments want to achieve, but certainly there should be a single, easy way of dealing with the regulatory process so that a project doesn't take years to get accepted in order to move ahead. Instead, we're just hurting ourselves or shooting ourselves in the foot when we put in such a burdensome regulatory process in order to achieve certain objectives that clearly Canadians would like to have, such as a stable source of energy supply and being able to really deal with the huge demands that Canadian businesses have for energy itself.

Mr. Adam Holbrook: I would like to draw the distinction perhaps between the sorts of examples Dr. Mintz cited in the resources sector and the role of regulation, and more particularly standards in the industrial sector. I'm thinking of a couple of examples. Things like air traffic control regulations have led to the development of all kinds of electronics where, in some very narrow cases, Canada has expertise—for example, aircraft simulators.

The other thing, too, is that with the development of regulations and standards, going back to our example of water again, we are in the process of setting very high standards, standards that at this point seem almost impossibly high but will probably push industry into innovating so that municipalities can meet the new standards.

Is this a good thing? Well, maybe the argument is going to be that the consumer will be paying more for water because we are going to have to meet much higher standards. This could be a matter of policy. It's probably going to result, one hopes, in a more competitive industry, because in the world Canada would be seen as having an industry that is capable of delivering a product that is superior to others.

The Chair: Dr. Wolfe, did you have a comment on Werner's regulatory question?

Prof. David Wolfe: I want to reinforce what Dr. Mintz said. On the issue he was speaking to, of divided regulatory jurisdictions, we find the same phenomenon in other areas that are relevant for consideration of industrial policy or innovation strategy, where responsibility is divided up among a host of federal and provincial departments and agencies, and they are all answerable to Parliament through their respective ministries, but it creates huge administrative barriers to working in a coordinated fashion on the ground in a particular region of the country with respect to a particular industry.

When I spoke earlier of alignment, the need for greater alignment between policy instruments as they affect an industry or a firm in a local region, the same is true for regulatory instruments. There are two conflicting sets of principles at work here. One is the principle of answerability to Parliament through the minister responsible, which causes authority within administrative and regulatory structures to be funnelled straight up through the departmental hierarchy to the minister and to Parliament. The other is the need for improved horizontal coordination on the ground in particular regions or industries. I think this is a challenge. It's a serious challenge for economic development policy generally, and it extends just beyond the regulatory field.

● (1705)

Mr. Jack Mintz: I'd just make one quick follow-up point to Professor Holbrook's.

There's an assumption that every regulation is a good regulation. I think one of the things that many businesses have found operating in Canada—I'm particularly talking about multinational ones—is that some regulations really aren't raising standards. In fact, you can argue that they're diminishing, really, the competitiveness of the Canadian economy without achieving much.

A very good example of that I heard last year from Michael Grimaldi of General Motors. A particular regulation on the size of the fender results in certain types of cars not being produced in Canada, because the Canadian market is too small to really produce those cars for the Canadian market at all, so we end up just hurting ourselves.

When you look at the question of what the regulation is trying to achieve, you see that really the variation isn't doing very much outside of just raising business costs and in some ways shutting ourselves out in the international market.

The Chair: Thank you, Werner.

Andy and then Serge.

Mr. Andy Savoy (Tobique—Mactaquac, Lib.): Thank you very much, gentlemen.

I must admit that in your presentation documents I had to reread the first sentence of your second paragraph. I have a great deal of respect for you and your teachings and your institution, but I have very little respect for your delivery. So moving forward, let's be productive. We'd like to be a partner in this, and we expect you to be a partner in this, but bashing us is certainly not productive.

On R and D and technology adoption, you mentioned the Australia situation. We do a number of things in Canada surrounding R and D, and one of them, of course, is a very aggressive R and D tax credit system, which you're all familiar with. Certainly NRC-IRAP has been fairly effective in terms of adoption of new technology by small businesses specifically. Technology transfer as well is certainly something that I feel is critical in terms of technology adoption.

In that entire process of technology adoption, you mentioned, Dr. Mintz, that there was insufficient business investment in Canada and that we lag behind many other countries.

For each of you, what role can government play, or does government play a role in this, in terms of technology transfer, R and D tax credits, IRAP, and other programs? What role do you see us playing as a government, and do you have any suggestions on how in fact we can get over this technology adoption barrier that we obviously face?

Mr. Jack Mintz: Thank you very much for your question.

Perhaps I was somewhat strong in my criticism in my second paragraph, but I want you to take it as a great deal of concern that I didn't want to see an important study go off on the wrong track. So sometimes you say things strongly, but really just to emphasize a certain point.

With respect to your question—and it is a tough question—let me first of all say that while I think the R and D tax credit is great for trying to create ideas, it does not lead to more adoption of technologies in Canada.

I have seen a number of R and D projects structured where you have a lab sitting, let's say, in British Columbia, and the only business you get in Canada is the lab—the lab's income is some royalty payment that it receives from some foreign country, whether it's the United States, Bermuda, or the United Kingdom, and all these spinoff activities are taking place elsewhere. So the R and D tax credit does not really lead to more adoption of R and D in our business sector. What it does is help with the creation of ideas. I think it's important to keep that straight.

The way businesses adopt technologies is through their capital investments. That's the most important way—the kinds of machines they buy, the kinds of leasehold improvements they put into buildings, such as cabling and things like that. That's how they adopt technology. If they don't make a capital investment, then they are not going to adopt the latest technologies that are available.

Canadian businesses not only have Canadian technologies that are developed, but because of the strength of our labour force in terms of its human capital and the kind of innovation that does go on in creating ideas, they are able to use other ideas and innovations adopted elsewhere if they make those capital investments.

Those spillovers from other countries, particularly the United States, are very important, I think, to Canadian business innovation. That again is associated with the kinds of machines that are purchased.

The question is, why is private sector investment so low in Canada? In fact, when you look at the numbers for Ontario, Quebec, and other parts of Canada, except for Alberta, you'll see that capital investment rates as a share of GDP in those provinces are lower than for the United States and many other OECD countries. That is, I would suggest, a real concern.

Of course, someone like me who does calculations all the time in terms of the effect of taxation on business sector investment.... Despite the important progress we've made over the past five years in lowering our tax on capital investments, we still have relatively high effective tax rates on capital compared to most other countries. That's despite having a lower statutory corporate income tax rate, 35%, which is still the fifth highest among all OECD countries.

We don't have as generous a treatment for depreciation expenses, inventory costs. We have provincial capital taxes. We still have the federal capital tax, although the federal government is going to be eliminating that by 2008. We also have retail sales taxes at the provincial level. When you put everything together, you actually find that Canada still has a relatively high effective tax rate on capital relative to other OECD countries, including the Scandinavian countries I was mentioning earlier.

That's one area I think we still need to do some more work in. Some of that has to be done at the provincial level, not just the federal level—in fact, I would suggest, a significant part of that.

Again, regulations and just the general environment for business investments can be very important as well. Whether one's talking about certain standards that are put in place.... Yes, some standards can encourage new innovation, things like that, but some standards that are put in are not necessarily smart standards.

I think we need to look very carefully at the kinds of standards we impose on businesses and ask the question, which are the ones we really need as a country and which can we try to, let's say, make consistent with our major trading partners so that we can generate more capital investment in the country?

● (1710)

We need to look at our regulatory process—I used oil and gas as an example—to make sure it doesn't slow down capital investment in the country. We need to make sure we have a regulatory process that is smooth, that operates well in such a way that businesses are not going to find that it's going to take years to get a major project adopted, such as the ones we see for oil and gas pipelines in the Mackenzie Valley and for the development of other important offshore opportunities in oil and gas.

The Chair: I'll take comments by Dr. Holbrook on Mr. Savoy's question. Then I'm going to try to get Michael and Serge in before we break.

Mr. Adam Holbrook: I have a very brief comment on Dr. Mintz's point about levels of investment.

I think a lot of the time we tend to think of levels of investment by industry as investment in new products. I would argue—and correct me if I'm wrong, Dr. Mintz—most of the investment is actually in process machinery. In other words, what we're not seeing is the investment in more productive machinery. Innovation in product and innovation in process are often two different things, and we need to be asking whether or not the policies are supporting innovation on the process side rather than the product side.

● (1715)

Mr. Jack Mintz: Could I just briefly respond?

The Chair: Very briefly, Dr. Mintz. We're going to try to get a couple more questions.

Mr. Jack Mintz: It's just that a question was raised.

Professor Holbrook, what you're referring to is research and development. Canadian companies tend to invest in R and D that's process driven rather than developing new products. When I was talking about private capital investment, I was talking about the adoption of new technologies through investment, which is a sort of different issue that I'm raising.

The Chair: Okay, thank you.

We're going to go to Serge and then Michael Chong. We'll try to squeeze these two in. I'm not sure if our machine goes off at 5:30, and I want to be sure to say thanks.

Serge.

[*Translation*]

Mr. Serge Cardin (Sherbrooke, BQ): Thank you, Mr. Chair.

First, let me thank you for being here. This is very interesting. I have been sitting on committees for a while and I have rarely seen a group of departmental officials who agreed on something. There is a movement in this discussion that leads to a lot of questions being asked.

I realize listening to you that developing a comprehensive industrial strategy is a highly complex task. We tend to go in one direction or another. I don't critize Mr. Mintz for his second paragraph. On the contrary, it could be dangerous to focus too much on certain elements of an issue so broad and interconnected.

You were saying that in the end, invention and innovation are what makes a difference. This is very clear nowadays. If we look at industrial processes, there is of course raw materials,and the processing, etc. Today, invention and innovation make a difference.

You mentioned Nokia a while ago. Someone from the Engineering Department of Sherbrooke University invented a gizmo which you find now in every phone. It was invented here, but ideally, we would have liked to get the innovation, the manufacturing and the marketing of this product.

So, to have a good industrial strategy, you need a global vision but it is also important to think locally. Somebody mentioned another thing. What we aim for, in the end, is economic growth because we can then get goods and services, for our collectivity.

We know economic growth depends on consumers. Like we used to say, when the construction industry is doing well, all is well. But people won't buy one, two or three houses just to help the economy. On the other hand, if we look at the construction industry, for example, there are businesses in Quebec, and probably in the rest of Canada, which went in that area and started to export factory-built houses. They had to invent new processes and deal with innovation.

In our domestic market. standards and regulations are the same for everybody, but when a business wants to increase its production and marketing to export its goods to foreign markets, standards and regulations are different, whether in the social or environmental field.

How then can we develop a comprehensive industrial strategy that will apply to foreign markets and to our domestic market too?

[*English*]

The Chair: Are there any volunteers to start?

Did I see people pointing at you, Dr. Wolfe?

Prof. David Wolfe: We're not sure who the question was directed towards, but I'll take a very quick try at it.

I think the challenge of going global for Canadian firms is developing both a production sales marketing and a management capacity to deliver their products or their goods in many different markets and to meet the conditions that are needed. A lot of firms we have talked to say it represents a significant management challenge for them to move from a certain level of production, a certain level of sales geared to a regional or a domestic market initially into a continental or an international market.

Some people emphasize the management challenge. One of Dr. Mintz's colleagues likes to remind us all the time that we need better management and education in Canada if we are going to be able to grow some of these firms to that level. So it is a complex challenge.

The point I was trying to make earlier simply is that we don't always have to be standard takers. Our Canadian firms don't always have to be producing to a standard that is set on a global market. Sometimes setting a high-quality standard domestically will then give them an entree to a global market by differentiating their products in that market.

● (1720)

Mr. Jack Mintz: Again, I think there are some low-hanging fruits sitting out there, where changes in regulations or standards could be very easy to achieve without really undermining what governments' objectives are trying to do in terms of protecting certain interests we have with respect to the environment or safety or whatever.

Let me give another example. This is a different one but it's an important one. If you look at the tariff structure between Canada and the United States, in many products the tariffs are very close to each other. There's hardly any difference at all. In fact, we've taken the view in NAFTA that Mexico, the United States, and Canada will have the same tariff when it comes to computer parts. This way you don't have to apply origin rules to determine whether the product has been made in North America or somewhere outside North America. It makes it a much simpler system to deal with.

We can do that with a number of other products without undermining our political independence in any way, because the difference in tariffs is so small anyway. We're not really accomplishing anything when it's a very small difference. So I think there are a number of things we can look at in terms of our regulations and in terms of the way we try to conduct our trade where we wouldn't be undermining our political objectives, our independence in any way. In fact, all we would do is make Canadian businesses that much more competitive internationally, and of course that would be good for the economy and good for Canada as a whole, as it makes Canadians more confident when they have a growing economy.

The Chair: A quick comment, Dr. Holbrook, before I turn to our last questioner.

Mr. Adam Holbrook: Yes. I would agree with David's points about standards, and I think the issue here is that we can use standards to create markets. We should regard the standard-setting process as part of our ability to create policies that make Canada competitive.

The Chair: Thank you.

Before I turn to Michael, I'm not sure if our system shuts down automatically at 5:30 p.m. In case we're in the middle of answers to Michael's questions, I want to thank you right now, just in case we get cut off.

Mr. Michael Chong (Wellington—Halton Hills, CPC): Thanks very much for coming to this meeting.

My question is for all of you. I think what a lot of people have identified as a problem in Canada is the fact that our GDP per capita is less than that of neighbouring jurisdictions, especially in some of the neighbouring U.S. states. The GDP gap seems to be a result of what, in reading Roger Martin's report, he calls a lack of effectiveness vis-à-vis these other jurisdictions. In other words, our average output per worker is less than what it should be.

I know, Mr. Mintz, you mentioned in your remarks here—and I particularly want to focus on this as well—and Roger Martin has also mentioned in his reports that there seems to be a shortfall of investment by Canadian businesses in their own businesses, whether that be research and development or physical capital, compared to the competitive jurisdictions near us.

I know he has mentioned as well as you have in your remarks that this has to do with the fact that capital cost allowances are more aggressive in other jurisdictions, that capital taxes are lower or non-existent, that sales taxes on capital goods are lower or non-existent in other jurisdictions. Bonus depreciation is available for those companies investing in physical capital or in R and D.

If you were to prioritize all of these different things I've just mentioned, which one would you give the highest priority to that would encourage, as a matter of public policy implementation, a greater investment by businesses in R and D and in physical plants?

● (1725)

Mr. Jack Mintz: First of all, there is some evidence to show, for example, in a recent Statistics Canada study that was done two years ago, that our capital cost allowance regime for many capital goods is insufficient relative to the true cost of depreciation of capital good. That particularly applies in a number of areas. For example, manufacturing plants is one, and I would also suggest it in the area of pipelines. Depreciation allowances that we give for tax purposes are inadequate relative to actually how quickly businesses must replace their capital goods, and also taking into account the impact of inflation and risk on their capital investments.

I don't like having just accelerated depreciation. I'm not in favour of that. I don't like creating tax shelters and I don't like moving away from a neutral corporate income tax base, one that's based on the true costs of investment, because my belief is that if you get the base right, we should try to get the lowest corporate income tax rate possible. And that's good for two reasons. One is it's a more neutral approach across businesses and it generates investment. And it's also good for governments, because when you have a very high corporate income tax rate, and today we still do at 35%—that's the average across Canada—you get a lot of businesses that will shift income out of Canada and will put it in other countries where the tax rates are lower. So when you actually lower corporate income tax rates, another way of saying it is that you don't lose that much revenue.

In fact, in very dramatic reductions, as we've seen in Ireland and Sweden, the corporate tax receipts actually picked up because the base expanded so much and businesses shifted income into those jurisdictions.

Mr. Michael Chong: Can I ask for a clarification of that? So you would prioritize CCA reform as a higher priority than the elimination of the capital tax. For example, if you have more than $10 million in capital, we have a capital tax.

We have to prioritize things here in this committee, and you would focus more on CCA reform than you would on the elimination of the capital tax.

Mr. Jack Mintz: Well, at the federal level we're eliminating the capital tax anyway—

Mr. Michael Chong: Over five years.

Mr. Jack Mintz: Yes. That's a priority for the provinces.

I do think we need to address now the capital cost allowance issue. We brought our corporate income tax rates down. I would like to go even further than what we've done. We do have a non-neutrality with respect to our capital cost allowance system and we do need to address that, in that for many capital goods we don't provide an adequate enough deduction for depreciation expenses.

The Chair: Are there any comments by Dr. Wolfe or Dr. Holbrook?

Have you anything else to add, Michael?

Well, it is just about 5:30 p.m., and as I say, I'm not sure if our system goes off automatically.

On behalf of all members, I would like to thank our three witnesses for an excellent afternoon. Your answers were extremely helpful to us as we move forward. As we think more about the mandate we've given ourselves, we will certainly take the advice from you that we've received today—and with great gratitude.

With that, colleagues, we're adjourned. Have a good day.

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