

very small return, something like 4 per cent. This may have been well meaning, but I am not sure it was wise or accurate.

That example is not directly related to research and development policy, but it has most certainly affected research and development in the field of pharmaceuticals. Even if that field was mostly foreign owned, we still gained many advantages. It had a great deal to offer, including keeping many of our top scientists active and satisfied and working in their own country.

Now we are into patent laws. There is a suggestion of further patent restrictions coming forward. These patent laws will only give the pharmaceutical companies an exclusive right to their own development and production for a particular number of years, for example nine years, which may not be long enough to regain their expenses. Sometimes it takes 25 years to develop a drug that will receive government approval. That is the nature of the game; it changed drastically overnight.

These are matters which we need to thoroughly rethink. They are not directly research and development. They do not come in the form of direct taxation or tax exemptions, but nonetheless result in a lot of pharmaceutical research and development being withdrawn from this country. That is a shame. It is entirely the wrong trend.

I wish to state a few of the advantages that we have from our pharmaceutical industry. It is the most research intensive of all intensive industries. It has the highest percentage of funds devoted to basic research, 25 per cent versus 4 per cent for the industry in general, toward the advancement of scientific knowledge without specific commercial objectives.

Almost 25 per cent of all research in Canada is done by pharmaceutical companies. It is the highest self-financing of research and development expenditures as a percentage of sales, 36.8 per cent versus 1.5 per cent for an average of all industries. It is by far the largest employer of research and development scientists compared to the total number of people employed. It accepts a lesser percentage of research and development money from the government, about 4 per cent, while other industries average four times that much. In other words, it gets by on its own. It asks for less help and makes a great contribution. It is one of the leading recipients of dollars from outside Canada for research and development done here.

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One in five research and development employees has a Ph.D compared with one in 20 in industry in general. It is very highly science oriented. It had nearly twice the rate of growth in terms of intramural research and development from 1963 to 1975 by comparison with industry in general. In fact, growth has doubled every five years. Finally, the pharmaceutical industry spends the third highest amount on current research and development for value added. If every industry in Canada were capable of accomplishing that much, I think we would be on top of the heap in terms of prosperity, the economy and industrial power. Yet for some reason, as I said before, the pharmaceutical industry is a peculiar example; we have singled

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it out because it is small, very visible and very susceptible to government regulation. I think it has provided a valuable example and we should be very careful of that type of practice in future.

I also mentioned the plastics industry. My hon. friend from Wellington (Mr. Maine) knows more about that than I do. It provides another example. He has probably talked about it already. The great concern of that industry is not directly related to research and development. What affects them most is the subject of trade regulations. They wonder where the GATT negotiations will end up. They do not know and they are very worried. This industry is important to us. It is new. It has grown fast. It has a great future. It has much to offer. It is already providing products to our Canadian people that we are not even aware of, products we take for granted in the food industry, in health care and so on. Yet here we are at the moment, those people feel, leaving them high and dry and not knowing where they are going to be in terms of competitive advantage.

Many of our industries are in this position. All they want to do is compete. They do not mind competing at all, but they are terribly worried that their representatives in Geneva will agree to arrangements which leave them at a great disadvantage. Many other countries would do things we are not prepared to do, particularly in the area of non-tariff barriers. It is all very hard to sort out and for some reason or other many of our most important Canadian industrialists are not yet convinced that we are going to protect them as properly as we should. That certainly applies to the plastics industry.

What has been our performance? I know this has been talked about many times today in this debate, probably in a partisan way, which is fair enough. I still am not clear myself but I think I see some trend. I certainly stand to be corrected on this, Mr. Speaker, but I am not entirely satisfied with the figures I have from Statistics Canada. I have tried to see some trends in them today, and I think this is what they are. I think it is important we should at least try to put an interpretation on them to find out what we have been doing in research and development and why.

What do the figures tell us about ourselves? I do not think there is any question that, compared to other countries, our spending has been relatively low, for whatever reason. I suppose somehow or other it has to come back to policy, but whether it is a conscious policy or not I am not sure. I referred a while back to one of our former policy setters, Mr. C. D. Howe, who helped this country develop very quickly but who also left us with an awful lot of foreign ownership. Perhaps this is what most of the trends tell us. Maybe there is more to it than that, but it certainly seems to me that this is one of the reasons. As long as we are a branch plant economy it will be difficult for us to keep up with all the leading countries, particularly in terms of private enterprise industrial sectors.

We spent more on research in the government sector than in the private sector compared to other countries. This may be interpreted as bad or good. We seem to have fed more government money into industry, at least on a relative basis,