

that nowadays research and development are not the simple things they used to be. Consequently, many of the large corporations are forced to undertake their research programs in the United States. We no longer conduct a specific research program on a product. We have to research the product and the market, and it is no longer a national market but an international market. We have to research the price structure, the financing, and all such things. There are very few small corporations that can do this.

In fact, most Canadian corporations cannot do this, and so they continue with a fly-by-night operation which absorbs a lot of their money and a lot of the government's money. About seven years ago I suggested that the government establish a Crown research corporation that could put all of this together. It has been said many times that this is a wonderful idea and that we will have to think about it sooner or later, but the "later" always seems to come much sooner than the "sooner."

It is no longer possible for an industry to make an effective contribution to research and development of its product without taking into consideration many other factors, of which pollution is one. Pollution is something that has to be researched, but you cannot expect one small industry producing soap flakes to undertake such a great project. Therefore, we must have a Crown Corporation very much like the original Rand Corporation in the United States, through which we can use our talent, where research programs are undertaken in sequence, where as the need arises other departments and other advisers can help. Such a program would be twice as effective as this program and would cost half as much.

I have looked over the other clauses of the bill, and I think they solve a lot of the problems that arose in connection with the original act. I repeat that the minister and his department should look carefully into the establishment of a Crown research corporation which could effectively make a contribution to our industry, to our economic affairs and to our government. I think the bill is worthy of support, and I hope the hon. member for Oshawa-Whitby was not serious in saying he was going to move some sort of amendment to do away with the original act.

**Mr. Pepin:** Very rapidly, Mr. Chairman, the hon. member for Oshawa-Whitby makes a frontal attack on this program, which is one of general research; he would like us to

*Industrial Research and Development Act* emphasize more specific types of research, which is what we have under the PAIT program. My answer is that in the department we try to have all types of research and development programs. That is really what we try to achieve. Why do we do that? Frankly, it is because we feel industries have different needs, have different situations, and we try to meet as many of these particular situations as we can. This is why we have specific research and development programs, and this is why we have a general research and development program which is known as IRDIA. Our motivation is really to meet the client on his own terms, if you want to put it this way.

I could give two examples to indicate the success of this approach. I could say, that under the stimulus of government assistance programs in general Canadian industry increased its expenditures on scientific research and development between 1961 and 1967 from \$127.5 million to \$337.8 million, which is an increase of 165 per cent, from 1.17 per cent of its net output in terms of total value added to 1.87 per cent of total value added.

I could say that the growth rate in funds provided by industry for current intra-mural research and development has increased over the same period of time from 12.8 per cent per annum to more than 19 per cent per annum. But I am afraid that this kind of statistics would not impress the hon. member for Oshawa-Whitby.

This being a general program I cannot indeed relate the effect of the program to any particular case except to indicate that total research and development in Canada has increased in recent years, and I may venture to say that IRDIA is one of the reasons. I cannot be more specific than that, IRDIA being a general program.

In answer to the statistics offered by the hon. member for Oshawa-Whitby to the effect that the rate of increase in research and development has been going down, I can only say that it might have been worse had it not been for IRDIA. I do not think he can challenge that on logical grounds. I would also have to indicate that there would be other factors to bear in mind if the rate of increase is going down. One of these is the fact that the Canadian government contribution to defence research is not as high now as it was three, four, five or ten years ago. The hon. member tells me that I cannot prove in mathematical terms the effect of IRDIA, and I