

Science and Technology

speed with which an entire technology can be removed following a decision taken by the board of a foreign company, even when the development has taken place in Canada.

Foreign ownership of resource industries tends to require Canadian-produced raw materials to remain at an early stage of processing until after export to the parent company, for the Canadian subsidiary's function in the over-all company structure is often to secure the source of raw materials only. A Canadian owned company would think, or could be more easily induced to think in terms of further processing so that the product entered the manufactured category.

Furthermore, it is common practice for a subsidiary of a foreign company to have restrictions placed on the export markets that it may enter. These restrictions can only help to limit Canadian exports of higher technology. In order to develop our capacity to capture our share of the market in high technology industries, it is essential that we improve our capacity for technological innovation. We must become a country which is an important source of new technology. By doing this, our control by foreign multinational corporations will be diminished.

That we achieve this goal of becoming a significant source of new technology is important because of the natural attraction of other activities toward the centre of creative activity. Managers, designers, and engineers, like most other people, prefer to deal in familiar surroundings, and as a result they are more likely to interact with people in their geographic area than with people in other areas. For a variety of reasons, such as the greater ease of getting engineering samples if you have no borders to cross, the interactions are more likely to occur within the same country than between countries. It is this effect that explains why the purchasing of multinational corporations is biased in favour of the country in which the head office is located. The main technology centre is usually in the same country, and thus the potential suppliers have a much better opportunity to establish early contact and early competence.

It has been shown that there is no better and more effective way to create a market for one's own labour force than through the sale of technology. Every penny of patent or licence income from a foreign country creates a market for up to a dollar's worth of goods from the country in which the new technology originated.

If Canada is to improve or even maintain its economic position, and to generate the kinds of job opportunities that Canadians expect in this changing economic environment, it is essential that we develop an enhanced capacity for innovation and a comprehensive technological capability.

We must find ways of giving positive encouragement to entrepreneurs, particularly by providing venture capital in areas other than new minerals or other natural resources.

Finally, we must create an environment which is conducive to the development of industrial units that generate the full range of activities needed to support a dynamic industry, from management, to engineering, to marketing.

[Mr. Maine.]

Hon. George Hees (Prince Edward-Hastings): Mr. Speaker, I think the whole House was very interested and pleased to hear the hon. member for Wellington (Mr. Maine) make a very clear and able speech. It is an encouraging thing and a very refreshing thing to hear a member on the government side speak so truthfully, so objectively, and to make sense. The hon. member for Wellington did all of these things and I congratulate him.

Some hon. Members: Hear, hear!

Mr. Hees: In the same vein as the hon. member for Wellington, Mr. Speaker, I intend to speak about research and development from the point of view of helping to make our products, particularly high technology and manufactured products—the ones that produce the jobs—more competitive, and thus enable us to sell in greater volume in Canada and abroad.

During the past three years we have been doing very badly indeed in the business of selling our products against foreign competition. In 1972, we had an adverse balance of trade in manufactured products alone of \$4 billion; in 1973, we had an adverse balance of \$6 billion, and last year this adverse balance had increased to \$9.2 billion. The indications for the present year are that the deterioration which has been going on for the past three years is continuing at the same disastrous pace.

It is obvious that something must be done to reverse this disastrous trend which has contributed so greatly to our massive and rising unemployment today. One of the things that we can and must do is increase the amount of research and development in this country.

First of all, I suggest that we look at the amount of research and development carried on in the five major industrial countries which are our principal industrial competitors for world trade, and compare what they have done and are doing with what we are doing today. We get our information from the records of the OECD which reports each year on the percentage of each country's gross national product that it spends on industrial research and development.

The latest available figures show that the United States spends 2.8 per cent of its GNP on research and development; the United Kingdom, 2.4 per cent; France, 1.9 per cent; West Germany, 1.7 per cent; Japan, 1.5 per cent, and Canada last with 1.3 per cent. The final figures have not been produced yet, however, and the ones I have given are the latest available. The indication is that our position today is considerably worse than the figures I have just given would indicate.

It is painfully obvious, Mr. Speaker, that if we are going to compete with these countries for the sales in Canada and in the world market which are so vital to our economic health, we must do at least as much research and development as they do and, more desirable still, we should do considerably more than they. That should be our objective. We must do this in order to lower our costs and thereby our selling prices, and also to improve the quality and design of our products so that we can sell more goods than our competitors can sell.