The interesting point about this phase of Canadian industrial development is that some of it takes place even though the necessary raw material are not found in this country. In fact, Canada is a growing importer of raw materials, not just bananas from the West Indies and oranges from California, but bauxite from British Guiana, natural rubber and tin from Malaya, manganese oxide from the Gold Coast of Africa, and coal from Pennsylvania. You may be interested to hear that out of every dollar spent on imports, 25¢ goes for the purchase of raw materials. This is not very different from the proportion in the case of exports. Foodstuffs and basic materials in unprocessed form account for only 30¢ out of every dollar's worth of goods we sell abroad.

The implication of this is that the mementum in Canada's industrial development program is so strong that its progress is rarely inhibited by the lack of this or that raw material. In fact, because we have some raw materials in great abundance we find it comparatively easy to trade our surpluses against the surpluses of other countries. In saying this I am not unmindful of the unsettled trade situation in the world - but the fact remains that industrial nations must have raw materials in order to survive.

Why Is Industrial Research Important for Industrial Development?

The second point I have in mind relates to the effect of industrial research on industrial development. Industrial research narrowly defined covers scientific activity in the physical and natural fields. But I gather from some of you that you interpret this term more broadly and that you would consider economic research and market analysis as part of the process of placing scientific techniques at the service of industry.

Why is industrial research so important to a country's economic development? There are many reasons, and I might mention justthree.

First, by bringing forth new and improved commodities, industrial research contributes to the bettering of national living standards.

Secondly, by raising the efficiency of the production and distribution mechanisms of modern society, industrial research reduces costs to the consumer. Export-wise, it makes Canadian producers more competitive. Domestically, it frees resources for use in other tasks and makes possible a gradual increase in leisure and the pursuit of non-material interests.

Thirdly, by developing substitute materials and products industrial research creates competition within competition. It thus represents one of the greatest safeguards of the responsible private enterprise system that we are in the process of evolving on the North American continent. To illustrate: the Canadian steel producer not only competes against other domestic steel producers and foreign manufacturers but he also has to meet the invasion that aluminum might make into fields hitherto almost exclusively reserved for steel. Synthetic fibres are giving the producers of silk, wool and cotton a great battle. Plastics are bidding fair to replace leather, wood and metals for many purposes.

There is another important implication of the development of substitutes. Frequently it is possible to manufacture substitute materials from what would otherwise be waste from another industrial process, thus contributing to the conservation of our natural resources.