

The type of industrial research and development covered by these surveys ranges from pure research designed to obtain new knowledge in the physical and life sciences to conceiving and developing new products and processes, or major changes in products and processes, and bringing them to the stage of production. Such activities as market research and process and quality control are excluded. Companies surveyed were asked to report the cost of research and development done within the company in Canada and payments for research done outside the company in and outside Canada.

Spending on industrial research and development has increased every year during the period 1963-66. The annual increases in current expenditures from 1963 to 1964 and from 1964 to 1965 were about 20 p.c., but this rate seems to have declined to about 5 p.c. in 1965 to 1966. However, the 1966 estimates are largely forecasts. A possible explanation of this apparent decline may be that several major projects with heavy costs for prototype materials or 'expendable' research equipment are reaching completion. Both the aircraft and primary metals industries forecast declines in expenditures in 1966.

Two other observations may be made from the data in Table 1. The first is that expenditures for research and development plant and equipment seem to continue at a rate of about 20 p.c. of current intramural costs. The second is that the size and relative importance of payments for research and development performed abroad seem to be declining. Indeed, in 1965 companies reported receiving almost as much for such purposes from other countries as they spent abroad.

#### 1.—Total Industrial Research and Development Expenditures, 1963-66

Item	1963 <sup>1</sup>	1964 <sup>2</sup>	1965 <sup>2</sup>	1966 <sup>3</sup>
	\$'000,000	\$'000,000	\$'000,000	\$'000,000
<b>Current Expenditures—</b>				
Intramural costs.....	153.6	188.3	235.0	248.0
Wages and salaries.....	81.4	95.0	115.0	128.2
Other.....	72.2	93.3	120.0	119.8
Extramural payments.....	30.8	35.4	29.3	30.5
In Canada <sup>2</sup> .....	1.4	1.6	2.2	2.5
Outside Canada.....	29.4 <sup>2</sup>	33.8 <sup>2</sup>	27.1	28.0 <sup>2</sup>
<b>Totals, Current Expenditures.....</b>	<b>184.4</b>	<b>223.7</b>	<b>264.3</b>	<b>278.5</b>
<b>Capital Expenditures—</b>				
Land and buildings.....	10.6	14.8	13.8	20.6
Equipment.....	17.1	31.7	36.1	31.5
<b>Totals, Capital Expenditures.....</b>	<b>27.7</b>	<b>46.5</b>	<b>49.9</b>	<b>52.2</b>
<b>Totals, All Expenditures.....</b>	<b>212.1</b>	<b>270.2</b>	<b>314.2</b>	<b>330.7</b>

<sup>1</sup> Forecast by respondents.      <sup>2</sup> Adjusted by DBS to remove those payments made by one Canadian firm to another, since such payments are covered in the intramural costs.      <sup>3</sup> DBS estimate.

Table 2 shows the current intramural research and development expenditures by performing industry. In 1965, three industries—electrical products, aircraft and chemical products—accounted for about 57 p.c. of the total expenditures. Since 1955, the year of the first survey, these industries have spent more for current intramural research and development than all others combined.