In the critical area of real output, the high and medium research-intensive industries were well ahead of the low- or no-research groups. Similarly, they show growth above average for all manufacturing. Moreover, the overall real economic growth of Canada in this period was approximately 5.5% annually, so the high- and medium-research groups beat the GNP as a whole. *These figures argue that they were the "leading edge" of the economy.*

Moreover, growth in employment is impressive. Exactly the same pattern repeats itself. The high and medium research-intensive industries had a higher growth rate in employment.

## 2. INTERNATIONAL COMPARISONS OF HIGH RESEARCH-INTENSIVE INDUSTRIES?

A 1984 OECD paper [2] investigates the relative performance of high, medium and low research-intensive industries across OECD countries. Accordingly, this comparison does not examine one country's performance against another, but rather investigates how industries compare regardless of their national distribution. The OECD data shows the relatively higher research-intensive industries in a good light. The classification is not dissimilar to the one used by MOSST in its earlier work: R&D expenditure is related as a percentage of total value of output. By this index, the 1980 rankings of the industries used by the OECD would be as follows:

| | | INDEX OF RESEARCH INTENSITY | |
|---|---|---|---|
| HIGH | 1. | Aerospace | 22.7 |
| | 2. | Office machines, computers | 17.5 |
| | 3. | Electronics & components | 10.4 |
| | 4. | Drugs | 8.7 |
| | 5. | Instruments | 4.8 |
| | 6. | Electrical machinery | 4.4 Average 11.4 |
| MEDIUM | 7. | Automobiles | 2.7 |
| | 8. | Chemicals | 2.3 |
| | 9. | Other manuf. ind. | 1.8 |
| | 10. | Non-electrical machinery | 1.6 |
| | 11. | Rubber, plastics | 1.2 |
| | 12. | Non-ferrous metals | 1.0 Average 1.7 |
| LOW | 13. | Stone, clay, glass | 0.9 |
| | 14. | Food, beverages, tobacco | 0.8 |
| | 15. | Shipbuilding | 0.6 |
| | 16. | Petrol refineries | 0.6 |
| | 17. | Ferrous metals | 0.6 |
| | 18. | Fabricated metal products | 0.4 |
| | 19. | Paper, printing | 0.3 |
| | 20. | Wood, cork, furniture | 0.3 |
| | 21. | Textiles, footwear, leather | 0.2 Average 0.5 |

From the OECD figures, one can compare these industries with their growth in total output (volume) over the ten-year period 1970–1980.

[2] Specialization and competitiveness in high, medium and low R&D intensity manufacturing industries. Working Paper No. 4, Directorate for Science, Technology and Industry, OECD, Paris, 1984.