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## 1. STRUCTURE & PERFORMANCE

With the increasing use of computer-related services and products by nearly all sectors of the economy, the computer service industry has become one of the cost dynamic and fastest growing sectors in Canada. Despite the recont economic decline this industry has been registering an average annual growth rate of 27 percent since 1976, a rate unmatched by any other economic sector. In 1982, some 1,700 firms with an employment level of about 22,000 and estimated revenues of \$1.65 B were operating in the sector (Statistics Canada SIC 772).

This industry is comprised primarily of three major sub-sectors: processing services, professional services and the software products sector. On a sub-sector level there were an estimated 250 businesses performing processing services in 1982, with a combined revenue of almost \$700 M. This sub-sector is dominated by a few large firms, with the largest Canadian-owned firms being Canada Systems Group, Datacrown and I.P. Sharp. The cop 10 firms accounted for over 60 percent of revenues, while the top 34 accounted for over 80 percent. Growth of this industry has slowed down significantly from an average rate of 19% over the preceeding 5 years to 72 in 1982. The major impetus to accelerated growth in earlier years was due to improvements in on-line storage technology, the emergence of reliable telecommunications networks designed for data transmission, and the development of database management systems. These developments, together with the introduction of the micro and mini computers and increasing use of communicating word processors, have led to the on-line provision of a variety of sophisticated socio-economic databases (I.P. Sharp, Cansim, Infoglobe, etc.) and other business services (such as stock market quotations, insurance brokerage etc.).

In the software sub-sector in 1982 more than a thousand firms supplying and developing software generated about \$640 M in revenues. About 50 firms had estimated revenues of over \$1 million and represented almost 30% of market revenues. This structure suggests that the sector consists mainly of small firms. The largest software houses are Cognos Inc., Systemhouse and Sydney Development Corporation. The software product and services field has been dramatically affected by the "unbundling" of software by the hardware manufacturers which has given birth to a new industry dedicated to the design and development of software. The emergence of applications software, particularly in the micro-computer market has also provided a major growth area.

While the professional services sector is highly fragmented several firms with revenues in excess of \$5 million are now emerging. The total revenue for all professional services activity was about \$340 million in 1982, with employment standing at about 4,000. The largest firms are DMR and Associates, Computech, Synerlogic, Systemhouse and BSS.

The computer services sector is small relative to Canada's traditional resource and manufacturing industries, and accounts for less than 1% of GNP. However, the products and services derived from the industry affect all sectors of the economy, and are crucial for ensuring productivity improvements and increased competitiveness for Canadian industry.

The strength of the Canadian industry rests for the most part on the ability to adapt and utilize existing technology to unique domestic and international needs. Accordingly, the Canadian computer services industry has achieved international competitiveness in certain niches, including specialized software and vertically