

American printers and associated longer printing runs. However, given equivalent manufacturing facilities, Canadian printing labour is generally as productive as American labour. At present, these cost disadvantages are offsetted by relatively high Canadian tariff barriers and a favourable exchange rate.

As a general rule, the level of management sophistication in the Canadian printing industry increases with the size of the firm. In most instances, larger firms are managed by professionals who tend to employ effective management systems. Small firms tend to be owned by entrepreneurs with production or direct selling backgrounds and little experience in other functions. Consequently, managerial decisions are frequently made by instinct. However, it is generally recognized that, on an equivalent size basis, management characteristics are basically similar in both the Canadian and American printing industries.

b) Trade Related factors

Canada, like most developed nations, provides duty-free entry to periodicals, newspapers and books, whether supplied by publishers or printers. For most of the remaining printed products, Canadian tariff rates are usually higher than those in its main trading partners. With final implementation of the staged duty reductions coming under the MTN on January 1, 1987, Canadian tariff rates will average over 10 per cent compared to 5 per cent for the United States. Except for government procurement, there are no significant non-tariff barriers affecting Canada's trade in commercial printed products. Commercial printing is not covered by the MTN Agreement on Government Procurement.

c) Technological Factors

In terms of manufacturing processes, the commercial printing industry, worldwide, generally relies on suppliers of machinery and equipment to originate technological developments. Because of the existence of several competing printing methods, extensive on-going research and development programs are conducted by these suppliers in order to capture a larger share of the market. Most efforts in the last few years have been directed at further automating the processes and improving the speed and efficiency of machinery and equipment. These new and more sophisticated manufacturing technologies are available on a worldwide basis. As a result of these technologies, the industry is slowly shifting from a labour-intensive, craft-oriented activity to a capital-intensive, technology-oriented sector.

Generally speaking, the Canadian industry has kept pace with its counterpart elsewhere in the world in modernizing its manufacturing facilities. In particular, most large Canadian firms use state-of-the-art technology. For a number of reasons, including economic and market factors, the rate of implementation of technological innovations is much slower in smaller firms in Canada as well as in other developed countries. However, the relatively small size of the domestic market restricts the printing industry's ability to acquire some highly specialized and expensive technologies, such as in-line finishing equipment which necessitate very long print runs to be operated economically. With the notable exception of business form presses, manufacturing equipment used by the Canadian industry must be imported. Generally speaking, this equipment enters Canada duty-free.

3. Federal and Provincial Programs and Policies

Government involvement in the Canadian printing industry through special measures is modest. Instead, horizontal policies in the areas of taxation, tariffs, public procurement, postal distribution, culture and copyright and horizontal incentive programs, such as CIRB and IRDP (and its predecessor RDIA), are those that have had the strongest influence. The use of these incentive programs was restrained in 1983-84 because of a serious overcapacity situation within the industry.

Government departments and agencies at all levels, federal, provincial and municipal, are major users of print materials. For example, in 1984-85, the Department of Supply and Services purchased \$150 million worth of print materials on behalf of the federal government. On the other hand, the federal and several provincial governments are engaged in printing activities; at times, these activities have had an adverse impact on private sector printers.