

Attached to the appended Fact Sheet is a list of published major reports concerning the consulting engineering industry.

#### 4. Evolving Environment

While the domestic market has improved from the 1982/83 low, only very modest growth is anticipated for the remainder of the decade. Neither is the rapid growth in export markets, seen prior to 1982, expected to return. Essentially, the activity in this industry will vary directly with the country's capital investment performance. This volatility can be illustrated with reference to the past four years. In 1981/82 there was concern in the industry that there would be a shortage of qualified personnel to handle the large demand. Yet since 1982 the industry has experienced massive layoffs and today the situation is completely reversed with firms having a wide choice from which to recruit highly qualified people.

In tandem with this modest outlook for the remainder of the 1980's, the competitive environment has changed, involving greater emphasis on price competition among an increased number of bidders. In some circumstances, this emphasis precludes innovative engineering processes which would otherwise improve overall or long-term cost efficiency for the project. At the same time, foreign governments are expected to continue to provide heavy support to their consulting engineering firms. As well, firms from the backing countries appear to be moving toward greater exploitation of the R&D potential. To the extent this apparent trend continues and solidifies, the Canadian industry will find itself at a disadvantage in competing internationally unless it receives commensurate support from government and more effort is directed into R&D activity.

In addition, productivity and cost factors will assume greater importance in the future in offsetting industry cyclical changes. This will be reflected on a number of areas such as hiring practices, reduction of overhead through sharing of facilities, more emphasis on improving people productivity, speedier adoption of computer technologies, and greater focus on technological development.

Internationally, the competition will be much stronger. Canadian firms will have to be encouraged to export and programs developed so as to meet the needs of both small and large firms. Firms will have to offer more complete services including training, financial engineering and EPC. Also, they will have to recognize the opportunity and be ready to organize and group with other companies which offer complementary services. Of increasing importance also will be the ability to work with local firms to effect transfer of technology.

#### 5. Assessment of Competitiveness

The consulting engineering industry, and in particular the corps of companies accounting for the bulk of the activity, is considered generally competitive on an international basis. Recession-induced downsizing and movement toward adoption of leading-edge, less labour intensive methods augur well for improved competitiveness and hence profitability when markets eventually recover. However, to the extent the core of experienced talent has been weakened through layoffs, vulnerability to competition at home and abroad could be heightened.

Specifically, large firms, because of technology, unique technical skills, diversification, marketing skills and financial resources, are in a better position to compete internationally. Medium sized firms have less scope because their marketing resources are relatively restricted and their services are in more conventional fields where there is greater competition. The situation of small firms is far more pronounced. Their export prospects are considerably lower on account of both financial and technical (i.e., offering conventional services available elsewhere) factors, except for those companies in highly specialized fields. Moreover, most small firms are not oriented internationally and prefer to concentrate on the domestic market.