This trend has been inhibited to some extent by a shortage of capital, especially since the abrupt devaluation of the peso in December 1994. On the other hand, the devaluation has had the effect of dramatically stimulating Mexican export demand. This means that Mexican manufacturers need to modernize to meet export standards, but must do so at minimum capital cost. This is creating a demand for technologies that can be adapted to existing equipment, with relatively fast results.

Notwithstanding the economic crisis and capital shortage, the Mexican industrial automation market provides good opportunities for Canadian companies, particularly those that specialize in systems integration. The strongest need is for technologies that can increase productivity while taking maximum advantage of existing facilities. Opportunities for more advanced, fully-integrated systems exist, but are likely to develop fully only in the longer term.

THE INDUSTRIAL AUTOMATION MARKET

There are no official statistics to demonstrate either the size of the Mexican industrial automation market or the degree of import penetration. Computer and related equipment is not identified by its intended use in the international trade statistics. Moreover, the very large service component involved in industrial automation is excluded from the trade data.

Informal estimates by knowledgeable observers place annual imports of industrial automation equipment and software at more than US $400 million annually. One expert assessed the total industrial automation market, including services, at US $700 million for 1994, and projected a drop to about US $450 million in 1995. Annual growth was predicted to be in the 15 to 20 percent range beginning in 1996.

Estimated Industrial Automation Market Size, 1994

Component	US $ millions
Computer software	40
Professional services	150
Support	80
Numerical control hardware	430
Total	700

Note: hardware is defined as including the numerical control component of machine tools, but not the machine itself.

There are no domestic producers of advanced automation equipment in Mexico and only a few computer software developers. On the other hand, many types of services are available from domestic companies. Locally-available services include training and support as well as systems integration. Most industrial automation equipment suppliers have Mexican subsidiaries and can provide support services through a combination of local and imported resources.

The bulk of automation technology used in Mexico is imported from the United States or Germany. According to one estimate, those countries each have a 40 percent market share. France, Spain, Holland and Austria are also significant competitors. Japan is a major supplier of specialized robotics technology.

Several Canadian software products are available in Mexico, including those from Speedware and Cognos. Specific Canadian products that were mentioned in interviews were MOOPI, MAXIMA and DESCARTES. On the other hand, several industry participants said they were unaware of any Canadian products.

Prior to the devaluation of the peso in December, 1994, market growth for 1995 had been forecast at about 25 percent in real terms. However, now the market is expected to contract in 1995, even though automation technologies have not been as hard hit by the crisis as some other products.

Most experts believe that the market will have to recover soon because the solutions are needed for survival. They are predicting a return to growth rates in the range of 15 to 20 percent per year beginning in 1996. Services offer the best prospects for increased import penetration, because the Mexican industrial automation industry does not have enough well-trained professionals who can use the latest technologies to develop creative solutions.

CUSTOMERS

Customers for industrial automation products are found throughout the manufacturing sector, as well as in electricity generation and petrochemicals. The best prospects are industries with a heavy reliance on exports as well as those which involve intense domestic competition.

AUTOMOTIVE INDUSTRY

Almost all of Mexico's automobile manufacturing is conducted by five companies: The "Big Three" of the United States, Volkswagen and Nissan. For the most part, these companies manage their sourcing on a global basis. The automotive parts industry is a more likely prospect for most Canadian suppliers. This industry is made of medium- to large-sized firms that supply the major original equipment manufacturers (OEMs).

ELECTRICITY GENERATION AND DISTRIBUTION

The *Comisión Federal de Electricidad (CFE),* Federal Electricity Commission, uses industrial automation products for controlling maintenance, parts distribution, vehicles and warehouse inventories. The company has also developed a national program for managing electrical service contracts, electricity