



Mexicanos (Pemex), the national oil company. Preferential purchasing policies have so far directed this business almost entirely to Mexican firms. A larger number of Mexican companies supply the major producers of dosage forms with pharmochemicals and other inputs.

The public health system covers virtually all of the population. But since the drugs they distribute are mostly generic and are purchased at low prices under large annual contracts, the public sector accounts for 36 percent of the market by volume and only 10 percent by value. The private sector concentrates on more expensive patented drugs with wider profit margins. Import penetration is about 10 percent of the domestic market, including both the private and public sectors.

By restraining profit margins and encouraging copying, this environment discouraged the development of pharmaceutical research facilities. As a result, Mexico does not have an established infrastructure for the development of new drugs.

Trade liberalization and deregulation is beginning to change this picture. In 1992, Mexico enacted new intellectual property regulations, which prohibited the outright copying of drugs. Two years later, the loophole that allowed copying as long as the manufacturing process was unique, was closed. Beginning in 1991, price controls were liberalized and retail prices have risen substantially. The advent of the North American Free Trade Agreement (NAFTA) on 1 January 1994, might have been expected to lead to the further integration of the pharmaceutical industry in Canada, the United States and Mexico. So far it has not, largely because of strict regulation governing the introduction of new drugs.

In the medium term, however, new opportunities are expected to emerge. Under NAFTA, Mexican firms will gradually lose their tariff protection, currently about 14 percent, and also their preferential access to public tenders. This will force them to broaden their product lines and compete more directly with the multinationals. Increased patent protection is likely to lead to a new emphasis on generic drugs as a substitute for patented drugs that are no longer being copied. And the industry is likely to expand its exports of such products to countries in Central and South America which do not have their own pharmaceutical industries.

These developments will create opportunities for Canadian firms to form joint ventures with Mexican counterparts to develop new products, based either on Canadian patents or on generic versions of drugs with expired patents. There will also be increased opportunities for Canadian firms to bid on Mexican government procurements.

THE MEXICAN PHARMACEUTICAL SECTOR

The Mexican pharmaceutical sector is one of the country's most dynamic industries, contributing about 13 percent of manufacturing gross domestic product (GDP) and about 0.5 percent of total GDP. The industry developed rapidly following the discovery of steroid hormones in the early 1940s. Mexico has an abundant supply of certain plants of the *discorea* family, which are used to produce these hormones, and it soon became the source of almost all the world's steroids, including both raw material and dosage forms.

In the 1960s, government programs designed to encourage import

displacement were successful in stimulating the growth of the pharmaceutical industry to provide raw materials to pharmaceutical manufacturers. Nonetheless, both the pharmaceutical and pharmonochemical sectors continue to rely heavily on imported inputs. According to estimates by the *Instituto Mexicano de Ejecutivos de Finanzas*, two thirds of pharmonochemical inputs and 20 percent of packaging materials are imported. Overall, import penetration in the pharmaceutical industry is only 10 percent.

There are more than 300 pharmaceutical enterprises registered with the *Cámara Nacional de la Industria Farmacéutica (Canifarma)*, National Chamber of the Pharmaceutical Industry. They include 88 foreign companies and 135 Mexican companies which manufacture medicines for human consumption. Another 43 companies produce pharmonochemicals and the rest are manufacturers of auxiliary health products. Employment is estimated at about 50,000 persons, of which about 15 percent are engaged in pharmonochemical production.

Large economies of scale are reflected in a high concentration of production among a few large firms. According to *Canifarma* data, one-third of the enterprises account for 93 percent of sales and 77 percent of employment. The industry is concentrated in the Federal District and the State of Mexico, which together account for 63 percent of pharmaceutical undertakings. Jalisco is another important pharmaceutical production centre.

The bulk of production comes from about 60 multinational firms and a few large Mexican companies. Virtually all of the major international pharmaceutical producers have a presence in Mexico. The multinational production facilities are generally world-class, although there is a lack of research infrastructure. Their products are