

6. Industrial Policies and Promotion of Indigenous Enterprises: Desc in the Autoparts Industry

権利	Copyrights 日本貿易振興機構 (ジェトロ) アジア経済研究所 / Institute of Developing Economies, Japan External Trade Organization (IDE-JETRO) http://www.ide.go.jp
シリーズタイトル(英)	Occasional Papers Series
シリーズ番号	36
journal or publication title	Industrialization and Private Enterprises in Mexico
page range	94-114
year	2001
URL	http://hdl.handle.net/2344/00010668

6

Industrial Policies and Promotion of Indigenous Enterprises: Desc in the Autoparts Industry

Desc and the Autoparts Industry

Overview of the Desc Group

Desc is an enterprise group consisting of a holding company of the same name under which are intermediate holding companies which control numerous subsidiary operational firms. Its principal business activities are autoparts, chemicals, and foods with the first two accounting for 80 per cent of the group's total sales (as of 1996). All of the group's subsidiary firms are large-scale enterprises with majority Mexican ownership, and many of these firms are joint ventures with foreign companies with Desc being the majority shareholder (Desc 1997; *Expansión*, August 14, 1996, p. 308).

The holding company Desc was established in accordance with the 1973 "Government Decree Giving Favorable Treatment to Enterprises Promoting Industry." Based on this decree, indigenous holding companies that fulfilled certain conditions were eligible for favorable tax treatment. Desc was founded through share swaps with Mexican entrepreneurs who operated their own businesses and those who had invested in joint ventures with foreign companies, thereby bringing these entrepreneurs in as Desc shareholders. Then soon after its founding, Desc acquired stocks in enterprises working in the autoparts,

petrochemical, and chemicals sectors. In this way Desc grew into an enterprise group (*Expansión*, September 17, 1975, p. 32). The advantages of becoming an enterprise group, besides the favorable treatment it was afforded under the 1973 decree, were that the firms that became subsidiaries were able to increase their financial strength, their managerial capabilities, and their negotiating strength vis-à-vis the government, and in the case of joint ventures with foreign companies, the influence of Mexican entrepreneurs in business operations.

Desc's founder and promoter was Manuel Senderos who along with family members and relatives provided about 60 per cent of the initial capital. Other capital subscribers included such prominent industrialists as Eneko Belausteguioitia, Crescencio Ballesteros, Gastón Azcárraga, and Antonio Ruiz Galindo Jr. (RPPCDF, C-3-890-7-4). With the exception of Belausteguioitia, the other three investors were also founding members of the Mexican Council of Businessmen mentioned in Chapter 5 (Camp 1989, p. 153). The Senderos family remained the top shareholders in Desc, and as of 1996, Manuel's son, Fernando, was chairman of the board of directors. Manuel Senderos was born in Mexico and has Mexican citizenship, but his father had immigrated from Spain. After arriving in Mexico his father had set himself up as an import agent and as a representative of foreign insurance companies. Through this work he was able to move into the insurance business himself, ultimately setting up the big insurance company Seguros La Comercial. Manuel Senderos succeeded his father in 1937, making the financial sector his main area of business while also becoming actively involved in the establishment of various companies in the manufacturing sector (*Expansión*, January 16, 1985, p. 33). Important among these was the autoparts maker Spicer, which will be discussed in more detail later.

The course of Desc's growth can be divided into two periods: one of rapid growth between 1973 and 1982, and a second period of business restructuring after 1982. During the rapid growth period, Desc rapidly expanded the number of its subsidiaries and promoted business diversification. At the same time it raised the share of its stockholdings in its joint ventures with foreign companies. Although these moves greatly increased the scale of the group's operations, it had to rely on loans from foreign commercial banks to fund this growth, and Desc became caught up in Mexico's foreign debt problems that broke out in 1982. Thereafter the group was compelled to restructure its business operations as it faced a lengthening economic recession and struggled to cope with Mexico's economic reforms which liberalized trade and brought sweeping deregulation of controls on foreign investment. Desc sold off unprofitable businesses, strengthened its profitable operations, and entered new

businesses that held promise for the future. It also reexamined its relations with foreign companies, reducing the share of its stockholdings in the autoparts sector and buying up from foreign companies holdings in the joint venture in the chemicals sector. Desc also slimmed down its organization which made it possible to reduce costs and improve its ability to adapt promptly to the changing business environment. These restructuring efforts raised the level of Desc's sales and increased exports despite the protracted recession, and the group was able to survive Mexico's economic crisis that lingered on into the 1990s.

Autoparts manufacturing has always been Desc's core business. The next section will examine the position of the group in the autoparts industry during the period of import substitution industrialization.

The Autoparts Industry and Indigenous Enterprise Groups

Mexico's automobile industry began to grow at the start of the 1960s, and except for a brief slump in the mid-1970s, it continued to grow rapidly right up until the outbreak of the country's economic crisis in 1982. In 1981 the automobile industry in the narrow sense (i.e., automobile assembling and the production of the requisite autoparts, excluding tires) accounted for 5.3 per cent of Mexico's gross manufacturing output. But considering the diffusive effect to the production of steel and other materials and to sales, repairs, and other service industries, the importance of the auto industry in the national economy was much higher than this figure represents. A comparison of output value between auto assembling and autoparts production showed that in 1981 it was 6:4, indicating a higher growth rate in the assembly industry where the local subsidiaries of multinational enterprises predominated. Nevertheless, the autoparts industry where indigenous enterprises were the principal players also achieved a high rate of growth within the manufacturing sector.

The characteristics of Mexico's autoparts industry during the import substitution industrialization period can be summed up as follows. One was the concentration of production in a small number of enterprises. According to Mark Bennett, in 1981 there existed about 400 autoparts companies, but his survey showed that 27 of these companies accounted for 65 per cent of the industry's gross sales and 65 per cent of its gross exports (Bennett 1986, p. 3). A survey in 1986 by JETRO's office in Mexico found some 540 companies working in the autoparts sector; 120 of these belonged to the Association of the National Autoparts Industry (INA), and 80 per cent of the sector's gross sales were concentrated in these 120 companies (JETRO 1986, p. 223).

TABLE 6-1
ENTERPRISES LISTED IN *Expansión* WHICH BELONGED TO THE 106-MEMBER INA, 1984

Enterprise Name	Ranking*	Sales (Million Pesos)	Workforce (Number of Workers)	Remarks
Spicer	30	38,854	6,266	Spicer itself did not belong to the INA, but its following subsidiaries did: Ejes Tractivos, Transmisiones para Servicio Pesado, Transeje, Velcon, Cardanes.
Rassini Rheem	95	11,484	2,283	
Industrias CH	106	10,418	2,006	
Metalsa	118	9,430	1,061	
Eaton Manufacturera	131	8,213	n.a.	This enterprise itself did not belong to the INA, but its subsidiary Eaton Ejes did.
Fomento Manufacturero	146	7,092	1,590	This enterprise itself did not belong to the INA, but its subsidiary Bujias Mexicanas did.
Kelsey Hayes de México	152	6,651	n.a.	
Industria Automotriz	153	6,651	1,370	
Auto Manufacturas	164	6,234	n.a.	
Industria de Baleros Intercontinental	175	5,973	1,094	
Automagneto	203	4,984	982	
Aralmex	253	3,774	1,300	
Industria Eléctrica Automotriz	264	3,552	589	
Industrias Metálicas Monterrey	320	2,742	832	
Transmisiones y Equipos Mecánicos	29 ⁺	23,487	3,246	

Sources: *Expansión* (August 21, 1985; September 4, 1985); INA (1983).

* Ranking among the 500 largest individual enterprises listed in *Expansión*.

⁺ Ranking among the largest enterprise groups listed in *Expansión*.

The major autoparts makers of the first half of the 1980s are shown in Table 6-1 which presents companies from among the 106 belonging to the INA in 1983 and which also appeared in the ranking lists of enterprises and enterprise groups published in *Expansión* in 1984. Fourteen from the ranking list of individual enterprises and one from the ranking list of enterprise groups are shown in the table. When the parts makers which are not members of the INA are included, the number of autoparts companies appearing in *Expansión*'s ranking list of individual enterprises comes to 23. This is clear indication that many of the autoparts manufacturers were large-scale enterprises. A second characteristic was the extensive participation of foreign capital investment in the sector. This writer was able to get information on 62 of the 106 companies belonging to the INA, and of these 62 companies, at least 43 had foreign capital invested in them, most of this foreign capital participation being 49 per cent or less. A third characteristic was the short history of most of the parts makers. Of the 106 INA companies, 61 provided dates of establishment, and of these, 43 had been set up after 1960, 19 of them during the first half of the 1960s (Hoshino 1998, p. 198). The reason for this concentration of foundation dates was the shift in government policy toward promoting the automobile industry. A fourth characteristic was that most of the large-scale parts manufacturers were subsidiaries of indigenous enterprise groups. The autoparts subsidiaries of the major indigenous enterprise groups are shown in Table 6-2. The characteristics of these subsidiaries were firstly their large size and secondly their very close connections with foreign companies. The 10 companies with asterisks in Table 6-2 are also included among the 15 major autoparts companies in Table 6-1. Table 6-3 sets forth subsidiaries of indigenous enterprise groups from among the 43 companies in the INA having foreign capital participation. These number at least 20. This indicates that the above-mentioned characteristics of Mexico's autoparts manufacturers, i.e., the concentration of production in a small number of large-scale enterprises and the close connection with foreign firms, are reflection to a large extent of the characteristics of the subsidiaries of the indigenous enterprise groups.

The Desc subsidiary Spicer, as shown in Table 6-1, is the largest manufacturer in the autoparts sector. Besides this subsidiary, the Desc group also contains the 6th, 7th, and 10th largest manufacturers in the sector. Regarding connections with foreign companies, as shown in Table 6-3, all of the group's major subsidiaries have foreign capital participation of 49 per cent or less. These facts mean that Desc is by far the most important indigenous enterprise group operating in the autoparts industry, and its subsidiaries most clearly exemplify the characteristics of the industry.

TABLE 6-2

MAJOR INDIGENOUS ENTERPRISE GROUPS WITH SUBSIDIARIES IN THE AUTOPARTS INDUSTRY, 1984

Ranking	Enterprise Group Name	Name of Autoparts Subsidiary	Remarks
1	Grupo Industrial Alfa	Nemak	C
2	Vitro	Vidrio Plano de México	A
		Vitro Flex	A
		Shatterproof de México	B
		Cristales Inastillables de México	B
6	Desc, Sociedad de Fomento Industrial	Spicer* (subsidiaries under Spicer are:)	A
		Kelsey Hayes de México*	A
		D.M. Nacional	C
		Ejes Tractivos	A
		Cardanes	A
		Transmisiones para Servicio Pesado	A
		Transeje	A
		Velcon	A
		Autoprecisa	B
		Engranés Cónicos	B
		Autopar Distribuidora	B
		Auto Forja	B
		Auto Metales	B
		Kelsey Hayes de Chihuahua	B
		Direcspicer	B
		Industrias Ruiz Galindo	B
		Servispicer	B
		Industria de Baleros Intercontinental*	A
		Fomento Manufacturero* (subsidiaries under Fomento Manufacturero are:)	C
		Bujías Mexicanas	A
		Industria Eléctrica Automotriz*	A
		Plataformas y Carrocerías	A
13	Grupo Condumex	Macopel	A
		Sealed Power de México	A
		Arcomex	B
		Tubos Flexibles	B

TABLE 6-2 (Continued)

Ranking	Enterprise Group Name	Name of Autoparts Subsidiary	Remarks
15	Sociedad Industrial Hermes	Industrias CH*	A
		Aralmex*	A
19	Grupo Industrial Saltillo	Cifunsa	B
		Cía. Impulsora Mecánica	C
27 ⁺	Industrias Nacobre		A
		Tubos Flexibles	B
		Productos Especiales Metálicos	C
45	Transmisiones y Equipos Mecánicos*		A
53	Grupo Industrial Ramírez	Industrias Metálicas Monterrey*	A
		Industria Automotriz*	A
		Industrias Vortec	A
		Ruedas y Estampados	C

Sources: INA (1983, n.d.); *Industridata, empresas grandes* (1985–86); *Expansión* (September 4, 1985).

Notes:

1. Ranking is as listed among the largest enterprise groups in *Expansión*.
2. The letters in the remarks column indicate: A = a member of the INA; B = not a member of the INA, but in the directory of autoparts manufacturers compiled by the INA; and C = not a member of the INA, and not in the directory of autoparts manufacturers compiled by the INA.

* Indicates autoparts makers appearing on *Expansión*'s ranking of the 500 largest individual enterprises or its ranking of the largest enterprise groups as shown in Table 6-1.

⁺ Ranked according to its 1986 sales. It was not on the ranking list in 1984.

Government Policies to Promote the Automobile Industry

The Mexican government's policies for promoting the automobile industry during the 1960s and 1970s were contained in three government decrees.

The Founding of Mexico's Autoparts Industry: Decree of 1962

Until the decree of 1962, Mexico only undertook the assembling of automobiles from CKD (completely knocked down) kits which were imported. The importing of finished cars was prohibited, and imports of autoparts were controlled through licensing and quota systems. But these restrictions were

TABLE 6-3
 SUBSIDIARIES OF INDIGENOUS ENTERPRISE GROUPS THAT HAVE RELATIONS WITH
 FOREIGN COMPANIES

Subsidiary Name	Indigenous Group Name
Enterprises producing under foreign license agreements:	
Industrias Metálicas Monterrey	Grupo Industrial Ramírez
Enterprises having foreign capital participation (of 49% or less):	
Aralmex	Sociedad Industrial Hermes
Bujias Mexicanas	Desc, Sociedad de Fomento Industrial
Cardanes	Desc, Sociedad de Fomento Industrial
Ejes Tractivos	Desc, Sociedad de Fomento Industrial
Industria Eléctrica Automotriz	Desc, Sociedad de Fomento Industrial
Industria de Baleros Intercontinental	Desc, Sociedad de Fomento Industrial
Kelsey Hayes de México	Desc, Sociedad de Fomento Industrial
Transmisiones para Servicio Pesado	Desc, Sociedad de Fomento Industrial
Transeje	Desc, Sociedad de Fomento Industrial
Velcon	Desc, Sociedad de Fomento Industrial
Conductores de Fluidos Parker	Industrias Nacobre
Industrias Nacobre	Industrias Nacobre
Manufacturera Mexicana de Partes para Automóviles	Industrias Nacobre
Productos Especiales Metálicos	Industrias Nacobre
Macopel	Grupo Condumex
Sealed Power de México	Grupo Condumex
Transmisiones y Equipos Mecánicos	Grupo ICA
Vidrio Plano de México	Vitro
Vitro Flex	Vitro

Sources: ACCM (1984); *Expansión* (August 21, 1985); *Industridata, empresas grandes* (1985-86).

Note: The table indicates subsidiaries of indigenous enterprise groups which are among the forty-seven enterprises belonging to the INA that have relations with foreign companies. The forty-seven enterprises include those acting as agents for foreign firms, those producing under foreign license agreements, and those having foreign capital participation.

aimed primarily at improving the trade balance rather than fostering the production of automobiles, and they tended to fluctuate between tightening and relaxing in response to the fluctuations in the trade balance. It was the López

Mateos government (1958–64) that began to reassess policy toward the automobile industry and drew up plans for domestic autoparts production aimed at improving the trade balance as well as promoting the auto industry. These plans were effected through the decree of 1962.

The essentials of the new decree were as follows. The importing of engines and mechanical parts was to be prohibited from September 1964. Car assembly companies and importers which had been importing these parts were required to submit plans to the government by September 1962 for producing these parts domestically. Only upon submission of such plans would these companies be allowed to import parts needed for the production of engines and mechanical parts. By September 1964 the domestic production ratio in the direct production cost of a finished automobile had to be 60 per cent or higher (*Diario oficial*, August 25, 1962, pp. 4–5). The production of autoparts by auto assembly companies, excluding engines and those parts which had been manufactured from before the promulgation of the 1962 decree, was to be prohibited, and foreign capital investment in newly established autoparts makers was to be held to 40 per cent or less (Bennett and Sharpe 1985, p. 129). The government's decree did not specify clearly what was meant by "mechanical parts," but it was assumed this referred to parts for such pieces of equipment as transmissions, clutches, propeller shafts, accelerators, brake drums, and wheels (Vázquez Tercero c1975, p. 30).

With the import of mechanical parts to be prohibited, automobile assembly companies would have to set up a sector to produce those parts in order to continue domestic assembly production. But the decree restricted the entry of assembly companies into that sector, meaning that other companies would have to undertake such parts production. Thus the 1962 decree brought into being two types of parts makers. One was a small number of large-scale enterprises producing principal autoparts; a number of these enterprises had multinational autoparts makers as shareholders, but the majority stockholders were Mexican entrepreneurs. The other type was a large number of small-scale manufacturers producing simple, low-cost parts; most of these were 100 per cent Mexican capital, and many carried on production through the licensing of overseas technology. Involved in the establishment of the first type of parts makers were auto assembly companies which functioned as the matchmakers bringing together multinational autoparts manufacturers and Mexican industrialists. At the same time the Mexican government urged Mexican businessmen to participate in joint ventures (Bennett and Sharpe 1985, pp. 129–30; Bennett 1986, pp. 18–19). Thus right from its start the autoparts industry was characterized by the concentration of production and the participation of foreign capital.

During the four years from 1962 to 1966, the amount of investment in the autoparts industry increased from 2 billion to 5.6 billion pesos; the labor force expanded from 29,000 to 52,000 workers; and the value of output rose from 1.3 billion to 3.8 billion pesos. At the same time the growth of this industry spurred the establishment of the machine tools industry and growth of foundry capabilities, promoted the overall improvement of Mexico's technological capability, and helped significantly to accelerate the industrialization of the country's economy (Bennett and Sharpe 1985, pp. 115–16).

Export Promotion and Raising the Ratio of Domestic Production: Decree of 1972

The 1962 decree succeeded in establishing a Mexican autoparts industry, but within a few years it began to show its limitations in the area of production efficiency and the saving of foreign exchange. When drawing up the 1962 decree, the government had intended to bring about economies of scale and greater production efficiency through a substantial reduction in the number of assembly companies and the number of vehicle types and models, but it had to abandon this idea because of opposition from the assembly companies. Thus the problem of production efficiency was already presupposed right from the time the decree was enacted. As for the saving of foreign exchange, domestic production of autoparts brought down the volume of imported parts per vehicle, but the volume for the industry as a whole increased as the number of cars produced increased, and the automobile industry's imports as a ratio of total imports, which had been trending downward, began to rise in 1968 (Bennett and Sharpe 1985, p. 151). In an effort to overcome these problems, the Díaz Ordaz government (1964–70) drew up a policy for export promotion. By expanding exports it hoped to realize economies of scale in the auto industry and at the same time bring about an improvement in the trade balance. In October 1969 a new method for promoting exports was introduced into the existing production quota system for assembly companies. Up to that time the production quotas that the government allocated to each assembly company consisted of a basic quota and an additional quota. The latter was given for each additional 1 per cent rise in the ratio of domestic production when it surpasses the 60 per cent level. Under the new method, in order for an assembly company to maintain its basic quota, it would have to earn from its own exports a certain percentage of the foreign exchange needed for importing parts. In 1973 that percentage was to be set at 30 per cent of the parts imported. Thereafter the percentage was to gradually rise until 1979 when it would become 100 per cent. At the same time 40 per cent

of the exports would have to consist of autoparts manufactured by autoparts makers having 60 per cent or higher Mexican capital. Companies that succeeded in exporting more than their designated quota would receive an additional quota (Vázquez Tercero c1975, p. 41; Tsunekawa 1988, p. 95).

The decree of 1972 was drawn up to unify and systematize the variety of regulations pertaining to the automobile industry that had come into effect since the 1962 decree and had been modified by the introduction of the new production quota system in October 1969. The major changes compared with the 1962 decree were the retention of the new production quota system, the promotion of exports, and the stipulation that autoparts makers also meet the 60 per cent domestic production requirement (*Diario oficial*, October 24, 1972, pp. 3–8).

The requirement that 40 per cent or more of assembly companies' exports had to consist of autoparts put pressure on parts manufacturers to export by way of assembly companies. The assembly industry of the world, which is the export market for autoparts, was oligopolized by multinational enterprises operating on a global scale. Therefore the government expected that its export promotion policy which relied on the market strength of multinational assembly companies that moved into Mexico would have more effect on autoparts manufacturers than direct government pressure. Also the stipulation that autoparts manufacturers comply with domestic production requirements compelled these companies to procure domestically a portion of the raw materials that they had been importing.

A look at the results of the export promotion policy shows that from 1970 through 1974 assembly companies achieved their required export levels. From 1975, however, they began to have difficulties meeting their requirements, and around that time too the automobile industry's percentage within the total trade deficit began to rise. The reasons for the stagnation of exports were the worldwide recession that followed the first oil shock of 1973 and the inefficiency of the autoparts industry (Tsunekawa 1988, p. 96–99). The growing trade deficit became a major cause for the economic crisis at the close of the Echeverría government (1970–76), and the succeeding López Portillo government (1976–82) was compelled to reexamine the export promotion policy for the automobile industry.

The Second Phase of Export Promotion and Raising the Ratio of Domestic Production: Decree of 1977

To promote the auto industry's exports, the decree of 1977 introduced a foreign-exchange budget system which set down annual foreign-exchange

budgets for auto assembly companies. These budgets were made up of a government-funded portion of foreign exchange, the initial authorized quota, and another portion funded from assembly company exports. The government portion was to be gradually reduced until 1982 when the assembly companies would have to procure all of their foreign exchange through their own efforts. The initial authorized quota was to be calculated based on the past levels of a company's imports and exports, on its rate of Mexican capital participation, and on its ratio of domestic production. Also at least 50 per cent of assembly company exports had to have parts from autoparts makers who carried out the government's authorized manufacturing plan. In other words, the hitherto 40 per cent rate of parts in assembly company exports was raised to 50 per cent which meant that the government was using the assembly companies to increase the pressure on autoparts makers to export. The 1977 decree also raised the ratio of domestic production. For assembly companies the required ratio of domestic production was lowered to 50 per cent, but because the method of calculating was changed, the ratio was essentially raised. For autoparts makers the ratio was raised in two ways. One was by raising the ratio of autoparts produced domestically from 60 per cent to 80 per cent starting in 1980. Exports by parts makers were also to be added into this calculation. The other way was by requiring that when assembly companies export autoparts the domestic production ratio of parts had to be 80 per cent or more. Common to both of these ways was the pressure applied via the assembly companies onto autoparts makers to increase the latter's exports (*Diario oficial*, June 20, 1977, pp. 2-7).

The decree of 1977 produced the following results. The major assembly companies began setting up new factories to build engines for export. However, as the initial authorized quota from the government was reduced, the assembly companies found it increasingly difficult to meet their foreign-exchange budgets. In 1979 one company was penalized for not meeting its budget, but in 1980 the number of such companies grew, and the government had to reexamine the system. This led to an extension of the time limit when companies would have to procure all of their foreign exchange from their own exports, and companies were allowed to take out interest-bearing foreign-exchange advances. The main reasons why the foreign-exchange budget system did not progress as smoothly as planned were because of the length of time that was needed from when assembly companies started producing engines for export until these exports had expanded sufficiently; the contraction of export markets and ensuing reduction in worldwide automobile production due to the recession in Europe and the United States after the second oil shock of 1979; and conversely the growth in Mexico's auto production

and parts imports because of the rapid increase in automobile production for the domestic market brought about by the oil boom. The trade deficit in the automobile industry swelled threefold during the three years from 1977 to 1979, and the industry's deficit as a portion of Mexico's total deficit rose from one-fourth in 1979 to one-third in 1980 (Bennett and Sharpe 1985, pp. 238–39).

Growth of the Desc Group in the Autoparts Sector

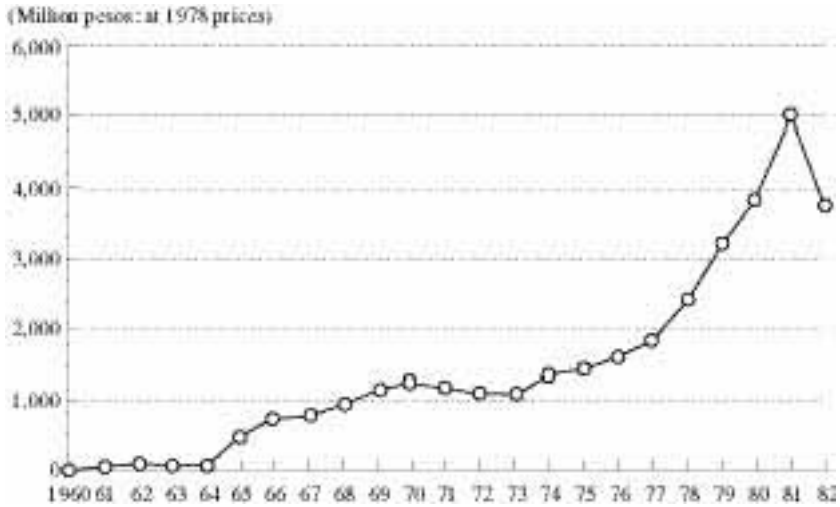
This section will examine Desc's growth in the autoparts sector under the government's policy of promoting the automobile industry. The Desc group has several subsidiaries operating in the autoparts sector, but the most important of these is Spicer which has been operating the longest and which accounts for over 70 per cent of the sector's total sales. For this reason the focus of this section is on the growth of Spicer. Figures 6-1 and 6-2 shows Spicer's annual sales and net profits from 1960 to 1982. From the information in the figures, both can be divided into three time periods: (1) 1960–64 when sales and net profits showed almost no growth, (2) 1964–77 when both experienced gradual growth, and (3) 1977–81 when the growth of both expanded rapidly. In 1964 the decree of 1962 took effect, and in 1977 the decree of 1977 was promulgated, indicating that government policies to promote the industry greatly affected Spicer's growth.

The Entry of Foreign Capital and the Start of Autoparts Production: 1960–64

The predecessor of Spicer was Amarillo de México, set up in 1952 to produce parts for deep-well pumps; it was renamed Engranes y Productos Industriales in 1955 (RPPCDF, C-3-359-153-123). The company was established by five Mexican nationals and was a 100 per cent indigenously capitalized enterprise. However, at the start of the 1960s, foreign capital entered, and the existing stockholders and management were largely replaced. Only two of the original five founders remained as stockholders, and their share was small (RPPCDF, C-3-597-395-338; C-3-646-333-308).

The entry of foreign capital began in 1960 when Engranes y Productos Industriales merged with Perfect Circle México, a subsidiary of the American autoparts manufacturer Perfect Circle. Following the merger, Engranes y Productos Industriales was renamed Industrias Perfect Circle, its capital was increased with the newly issued shares being acquired by Perfect Circle. Thereafter another American autoparts maker, Dana, acquired shares in

Fig. 6-1. Trend of Spicer's Sales, 1960–82



Sources: By the author based on data from Bolsa de Valores de México (1968, 1976); BMV (1977, 1981, 1985a); Ramos G. and others (1979).

Fig. 6-2. Trend of Spicer's Net Profits, 1960–82



Source: Same as for Figure 6-1.

Industrias Perfect Circle. Following Dana's entry, the ratio of stockholdings in Industrias Perfect Circle was Perfect Circle 50 per cent and Dana 26 per cent, meaning that nearly 80 per cent of the stocks in the company were held by foreign shareholders. Then in 1963 in the United States, Perfect Circle was absorbed by Dana (Bennett and Sharpe 1985, p. 133), and after a capital increase in 1964, Perfect Circle's name disappeared from the name list of shareholders in Industrias Perfect Circle. In 1962, following the entry of foreign capital and in accordance with the government decree promulgated in 1962, Industrias Perfect Circle began producing accelerators and propeller shafts (*Expansión*, October 11, 1978, p. 38).

The Entry of the Senderos Group and Indigenization: 1964–77

In 1964 and 1966 the capitalization of Industrias Perfect Circle was further increased in order to expand production lines in compliance with the decree of 1962. In the course of these capital increases, the enterprise group led by Manuel Senderos came into the company as a shareholder. Back in 1960, at the time foreign firms began acquiring shares, Senderos's name was connected with the company's management, but he was not a stockholder (RPPCDF, C-3-473-150-97). But in the course of the 1964 and 1966 capitalization increases, he became the largest shareholder in Industrias Perfect Circle.

With the capital increase in 1964, Dana and Perfect Circle, which together owned 76 per cent of the stock, relinquished part of the priority allocation they had to newly issued shares, and it seems that this relinquished portion was acquired by a group of Mexican entrepreneurs led by Senderos. As a result the ratio of foreign ownership in Industrias Perfect Circle fell to 50 per cent. The paid-in capital of foreign company was in the form of a debt equity swap and investment in kind (machinery and equipment). At the time of the capital increase, the company was again renamed, becoming Spicer Perfect Circle. With the 1966 capital increase, Dana, which still held 50 per cent of the shares, again transferred to Senderos its right of priority allocation to increased shares. Through this process, the holding company Consultorias e Inversiones, which Senderos apparently owned, raised its holdings in the company from 22 per cent to 39 per cent, and the industrialist Carlos Trouyet, a close friend of Senderos, raised his from 14 per cent to 18 per cent. Senderos became the largest shareholder while Dana's holdings fell to 33 per cent. At the time of this second capital increase, the company's name was once again changed, this time simply to Spicer (RPPCDF, C-3-646-333-308).

The reason it was possible for Spicer to become 67 per cent Mexican-owned by 1967 was because the foreign firms involved did not consider it necessary to own all the shares. The size of the Mexican market was small, and from the start American autoparts makers had been passive about their expansion into Mexico. Also when planning the decree of 1962, the government had made it known in negotiations with auto assembly companies that it intended to indigenize the autoparts industry. The government was moving to compel the auto assembly companies to establish an autoparts industry, and these companies became mediators between Mexican entrepreneurs and American autoparts manufacturers thereby playing an active role in setting up joint ventures where the local entrepreneurs provided the capital and the U.S. firms provided the technology. The intermediary that brought Dana and Senderos together was Ford (Bennett and Sharpe 1985, p. 133). With these developments, by 1966 two forces driving Spicer's development had come on the scene: Mexican entrepreneurs led by Senderos and the American autoparts maker Dana. Senderos set up Desc in 1973 and had Spicer's stock transferred over to this new company.

During this period changes took place in the area of Spicer's production. One change was the internalization of material production. As of 1977 the company undertook two levels of autoparts production: one was producing materials for making parts and the other was assembling and producing finished parts from these materials. Each level had three subsidiaries. At the materials level, casting, forging, and gear production took place; and at the assembly and finishing level, materials produced at the former level along with imported materials were used to assemble and produce finished parts. Casting and forging operations were set up in the 1970s. A second change in Spicer's production was product diversification. The company began to produce clutches. The 1972 decree required that 60 per cent of the materials for making autoparts be produced domestically. Following this the ratio for domestic production of finished automobiles and parts was raised. These requirements encouraged Spicer to undertake the internalization of material production and to diversify its products. Spicer's growth was also reflected in the size of its workforce. With the inclusion of its subsidiaries, this expanded from 650 to 2,580 workers between 1965 and 1977 (*Expansión*, October 11, 1978, p. 42).

The Start of Exporting, Product Diversification, and Business Expansion: 1977–81

The important developments for Spicer during this period were the start of exporting, the further diversification of its products, and expansion of its business operations. Spicer began exporting in a concerted way in 1976. Exports were worth 55.6 million pesos and accounted for 5 per cent of the company's total sales in 1976; this jumped to 297.8 million pesos and accounting for 18 per cent of sales in 1977. The reasons for this growth in exports were firstly the recession of 1976–77 which reduced automobile production, and the company looked to exports to make up for the fall in domestic demand; and secondly the requirement, as specified in the 1972 decree, that auto assembly companies export autoparts. The worldwide business networks belonging to Ford and Dana played a very large role in Spicer's export expansion (*Expansión*, October 11, 1978, p. 40).

Concerning product diversification and business expansion, in the late 1970s Spicer acquired a majority holding in Kelsey Hayes de México, a subsidiary of the American company Kelsey Hayes, and this added wheels and disc brakes to its product line. In 1979 Spicer's parent company, Desc, set up Fomento Manufacturero, an electric parts maker, in which Dana had a 33 per cent capital subscription. After 1978 Spicer's own group of subsidiaries rose to nine companies.¹ Over a short period of time Spicer's fixed assets and liabilities rose quickly in parallel, and it seems that most of these assets were newly set up or bought up using borrowed funds (INEGI 1984). An important factor for this rapid growth was the oil boom. During this time demand increased, and the production of automobiles rose rapidly which in turn quickly increased the demand for autoparts. A second important reason was the availability of investment capital. After the second oil shock of 1979, Mexico as an oil producer was seen as a creditworthy client in international financial markets, and the Mexican government and large-scale indigenous enterprise groups were able to borrow large sums from foreign commercial banks. For Spicer as well most of the funds it borrowed at this time came from overseas commercial banks, and this large debt burden brought on a financial and management crisis within the company which compelled Spicer to restructure its business during the latter half of the 1980s.

Characteristics of Desc's Growth in the Autoparts Sector

From the above analysis some important points can be noted about the characteristics of the growth of the Desc group in the autoparts industry. One is that the government's policy for the automobile industry set down the broad framework that set the trajectory for Desc's growth in the autoparts sector. To begin with, the government's policy based on its 1962 decree to promote the domestic production of autoparts created a place in the domestic market where indigenous enterprises could expect future opportunities, and this encouraged Spicer to switch over to producing autoparts. Then the indigenization of the autoparts sector made it possible for the Senderos-led enterprise group to enter this sector and acquire managerial control. Thereafter the regulations requiring the domestic production of autopart materials and the increase in the ratio of domestically produced finished automobiles which were mandated by the 1972 and 1977 decrees encouraged Desc to undertake the internalization of material production and to diversify its products. Then the government's policy during the 1970s to promote exports became the driving force behind Desc's export expansion. In effect it could be argued that the growth of the Desc group in the autoparts sector was a product of the regulations and protection of government policies.

A second point is the role that Spicer has played in the development of the Desc group. This company, along with two others in the petrochemical sector, has been one of the three mainstay subsidiaries that have supported Desc since its founding. The profits generated by Spicer and the funds that could be borrowed based on the creditworthiness of this company contributed greatly to the further expansion of Desc's autoparts sector and have been important for the Desc group's overall development.

A third point is the role that Spicer has played for the Senderos family. The major promoter in the establishment of Desc, Senderos's main field of business had been in the financial sector, and his move into the autoparts industry was his first step in securing a foothold in the manufacturing sector. Using the experience he gained, he proceeded to organize Desc. In effect Senderos was able to set up the Desc group because he had Spicer to build on. Thus it is no exaggeration to say that Desc was born from Spicer.

A fourth point is why Dana picked Senderos and his enterprise group as a joint venture partner. When Mexico's policy to promote domestic autoparts production was promulgated, American parts makers did not show interest in operating wholly owned subsidiaries in Mexico. This led to the alternative measure of setting up joint ventures where the Mexican side would provide

the capital and the American side the technological know-how. There was only a handful of Mexican entrepreneurs who could procure the huge amounts of capital needed for such joint ventures, and Senderos with his solid standing in the upper ranks of Mexico's financial sector became a natural choice as a partner in any such joint venture. And while his position as an established large-scale industrialist led foreign companies to seek joint ventures with him, Senderos's position as a partner in joint ventures helped him to develop and further expand his sphere of business activities.

Concluding Remarks: Industrial Promotion Policies and the Growth of Indigenous Enterprises

The development of Mexico's autoparts industry was a typical example where the characteristics of the industry, the government's promotion policies, and the growth of indigenous enterprises reciprocally determined mutual development.

The government formulated its promotion policies for the automobile industry based on the idea that the principal manufacturers would be multinational enterprises in the auto assembly industry and indigenous enterprises in the autoparts industry. To set up the autoparts industry would require an enormous amount of capital and a high level of technology. At the time the government drew up policy, the assembly industry was under the oligopolistic control of multinational enterprises, and to foster indigenous enterprises in such an industrial environment, the government imposed through its policies various controls on the auto assembly companies while inducing them to set up and promote indigenous autoparts makers. The assembly companies went along with the government's inducements largely because the latter held the domestic market as a bargaining chip in negotiations.

At the time the government formulated policy for the industry, private capital accumulation had been in progress and there existed entrepreneurs who could support the development of an autoparts industry. However, these entrepreneurs were limited in number, and they lacked sufficient capital resources and technological know-how to venture into a new industry solely on their own. The problem of insufficient capital was overcome by inviting in investors. Entrepreneurs who had the wherewithal to enter into autoparts manufacturing were businessmen like Senderos in the financial sector who had already accumulated a considerable amount of capital in the course of Mexico's industrialization. The reason there were many subsidiaries of indigenous enterprise groups among the large-scale enterprises in the autoparts industry was because during the course of Mexico's industrialization, enter-

prises and entrepreneurs with accumulated capital resources moved into the autoparts industry in order to diversify their businesses; thus the number of subsidiaries multiplied. The government assumed that such enterprises and entrepreneurs would be main actors in setting up the industry; or to put the matter another way, it would have been hard to find anyone else other than these large-scale enterprises and entrepreneurs to undertake such a huge task.

The auto industry promotion policies were drawn up on the premise that the country's biggest industrialists would lead the way in setting up new indigenous enterprises in the autoparts industry, and being assured of government support and the cooperation of the multinational auto assembly companies, the success of these new enterprises was virtually guaranteed. One reason was that Mexico's deficiency in technological know-how was overcome through joint ventures with foreign autoparts companies, and it was the assembly companies that searched out partners for setting up joint ventures. Secondly, the existence of the multinational assembly companies assured the new parts makers of a market. Thirdly, policies regulating the level of foreign capital participation in the autoparts companies guaranteed that indigenous entrepreneurs would retain majority control over management. Fourthly, parts makers were expected to export, but they were able to utilize the assembly companies' business networks to carry on their exporting. And finally, the parts makers were able to borrow the capital they needed for their business expansion from foreign commercial banks because of the creditworthiness that arose from having the backing of the government and a close relationship with foreign-owned enterprises. Blessed with such favorable conditions, Mexico's indigenous autoparts manufacturers enjoyed smooth growth.

Given the above conditions, what kind of indigenous manufacturers became the mainstream in Mexico's autoparts industry? Firstly, they were large-scale enterprises. Right from the time they were set up, they were large-scale, and under the favorable conditions noted above, they continued to grow even larger. Secondly, they were highly dependent on foreign firms for technology, markets, and financing. A third characteristic was their lack of international competitiveness; and since they produced only for the protected domestic market, they had no incentive to improve their competitiveness. The prod to improve competitiveness came only in the latter half of the 1980s with the liberalization of Mexico's trade and far-reaching deregulation of controls on foreign investment. The character of the mainstream manufacturers largely determined the character of Mexico's autoparts industry. It was oligopolistic in structure with production concentrated in a small number of large-scale enterprises; it depended on foreign firms for its technology, mar-

kets, and financing; and it lacked international competitiveness. The uncompetitiveness of the autoparts industry made the whole of Mexico's automobile industry uncompetitive, and this became a major stumbling block to the expansion of exports during the period of import substitution industrialization.

Note

- 1 The nine companies were: Autoprecisa, Engranés Cónicos, Transmisiones para Servicio Pesado, Tecnomac, Servispicer Vallejo, Embragues para Servicio Pesado, Fundición a Presión, Velcon, and D.M. Nacional. The last company in the list had been a direct subsidiary of Desc but had been transferred and put under Spicer.