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Oligopolistic Competition and Enterprise Innovation: Cuauhtémoc in the Beer Brewing Industry

The Mexican Beer Brewing Industry Today

Cuauhtémoc and the VISA Group

Cuauhtémoc, the leading beer brewing company in Mexico, is the core enterprise of the indigenous enterprise group VISA (Valores Industriales, S.A.), and is affiliated with the group via FEMSA (Fomento Económico Mexicano, S.A.), one of the intermediate holding companies controlled by the group.

One outstanding feature of VISA is that it has grown as a family-controlled enterprise. Until the surfacing of the foreign debt problem in 1982, a predominant portion of its shares had been held by the founding family. More recently, its ownership and management have become less closed since its listing on the stock exchange and the equity participation of foreign companies. As part of its effort to cope with the foreign debt problem, VISA reorganized itself by establishing under itself the intermediate holding company FEMSA in 1986 and then reducing its shareholdings in FEMSA to 51 per cent while encouraging nonfinancial holding companies under FEMSA to bring in the capital participation of foreign companies. VISA and FEMSA were listed on the Mexican Stock Exchange in 1978 and 1987 respectively,

and FEMSA on the New York Stock Exchange in 1991 (*El Norte*, October 8, 1991). These measures have had the effect of lowering the founding family's stockholdings. Nonetheless, a considerable portion of VISA's shares is still said to be held by Eugenio Garza Lagüera, the third-generation head of the founding family, and his family.

Another feature of VISA is that as a business group it is very well diversified. Under the intermediate holding company FEMSA are five holding companies for the divisions of beer, cola, containers, packages and packaging materials, and a convenience chain store operation; each holding company supervises the operation of its own business enterprises. Cuauhtémoc is a business enterprise in the beer brewing division. Cuauhtémoc is a leading enterprise in the beer brewing industry, and the business enterprises of VISA's other divisions also rank among the leaders in their respective industries (FEMSA 1995, p. 11; *Expansión*, August 14, 1996, p. 382). In 1991 at the time banks were privatized, VISA extended its reach into banking when its major shareholders joined hands with other entrepreneurs and acquired Bancomer, the second largest bank in Mexico. VISA now has a close connection with the bank through these shareholders. VISA is thus very well diversified, but the beer brewing division is the group's mainstay, accounting for 47.2 per cent of the group's entire business earnings in 1994 (FEMSA 1995, p. 13).

The Duopolistic Structure of the Mexican Beer Brewing Industry

Beer production in Mexico is divided more or less equally between Cuauhtémoc and Modelo. The history of the country's beer brewing industry that led to this duopoly has left vestiges on the industry's present structure. One is the geographical distribution of beer breweries. These are distributed across the whole of the country as well as being located in the three major urban centers of Mexico City, Monterrey, and Guadalajara. There is nothing unusual about breweries being sited in or near large consumption centers (Estrada 1957, p. 17); one would expect this. What is noteworthy in Mexico is that both members of the duopoly have their breweries distributed widely across the country, although Cuauhtémoc's plants are relatively more concentrated in the northern part of the country while Modelo's are found more in the southern part. Taking into consideration transportation costs, it would be possible, and economically rational, for the two companies to locate their plants in the north or south and divide the market between them into their respective spheres of influence. The market had been divided in this manner until the 1950s. The present geographical distribution of breweries is a result

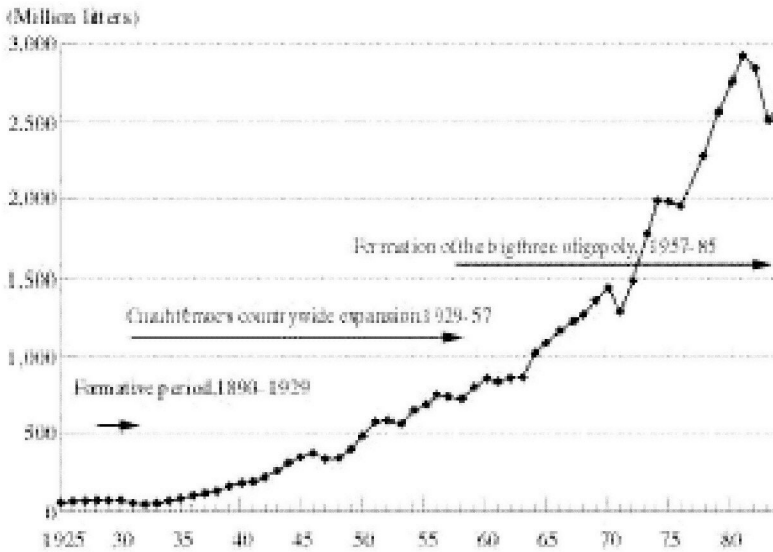
of the harsh competition between the two companies which has induced each to penetrate its rival's sphere of influence.

Another vestige left by the industry's history is that both Cuauhtémoc and Modelo maintain vertically integrated production systems, internally undertaking all operations from the production of raw materials to the distribution of the final products. To produce the malt they need, Cuauhtémoc operates malt plants in Monterrey and in the states of Baja California Norte and Puebla, while Modelo has two malt plants in Mexico City and one in the state of Tlaxcala (Asociación Nacional de Fabricantes de Cerveza c1989, p. 8). The internalized production of malt is a practice common among beer brewers around the world. What is peculiar to the procurement of raw materials for beer production in Mexico is that materials other than malt, namely, containers, bottle caps, labels, packaging materials, etc. are produced internally. For Cuauhtémoc these materials are supplied by affiliated business enterprises (FEMSA 1995, p. 60), while Modelo has three subsidiary firms manufacturing labels and cartons, one producing glass bottles, and two others making bottle caps (BMV 1995, p. 16). The two brewing companies also share a common feature in the distribution and marketing of their products: they have their own distribution networks. Cuauhtémoc has depots in more than 600 cities around the country, and operates more than 3,500 trucks to deliver its products to more than 300,000 sales outlets. Important among the outlets are convenience stores affiliated with FEMSA (Cervecería Cuauhtémoc 1990, pp. 82–83). Modelo likewise has a network of warehouses and depots located across the country through which it delivers its products by trucks to its sales outlets (*Expansión*, March 30, 1994, p. 23). The two companies' vertically integrated systems, stretching from the production of various raw materials all the way to the distribution of the final products have been instrumental in enabling them to win out in oligopolistic competition.

Formation of an Oligopoly in the Beer Brewing Industry

Figure 2-1 traces the changes in total national beer production during the period 1925–84. As evident from the figure, output started to increase beginning in the latter half of the 1930s, and the rate of increase gained further momentum in the latter half of the 1960s. In stark contrast to the increasing trend of production, the number of beer brewing companies decreased phenomenally from thirty-six companies (with a total of thirty-six brewing plants) in 1918 (Musacchio 1990, vol. A-D, pp. 342–43) to nine companies (nineteen plants) in 1957 (*International Brewers' Directory* 1959, pp. 267–68), then fell further to two companies (sixteen plants) by 1989 (Asociación

Fig. 2-1. Trend of Beer Production, 1925–84



Source: INEGI (1985, vol. 2, pp. 503–4).

Nacional de Fabricantes de Cerveza c1989, p. 8). The emergence of this duopoly can be broken down to the following four phases. Phase 1 extends from 1890, the year Cuauhtémoc was established and a modern beer brewing industry was born in Mexico, to 1929 when the company began to transform itself into a producer for the national market. This first phase can be characterized as one in which brewers catering to local markets were established around the country. As such, it can be called the formative stage of the Mexican beer brewing industry. Phase 2, extending from 1929 to 1957, saw Cuauhtémoc expand its production network throughout the country, becoming a national producer. Phase 3 extends from 1957 to 1985. In 1957 Cervecería Moctezuma began to expand its production bases into several states; Modelo followed suit several years later with the result that the industry had become a three-company oligopoly by the 1970s. Phase 4 extending from 1985 to the present has seen the industry turn into a duopoly. In 1985 Cuauhtémoc began moves which led to the absorption of Moctezuma after it fell into financial distress because of its foreign debt problem. This has left Modelo as Cuauhtémoc's only nationwide competitor.

The Formative Stage: 1890–1929

Cuauhtémoc was the first modern brewer in Mexico and took the lead in establishing a modern beer brewing industry in the country. Following the company's establishment in 1890, major firms which were to play important roles in the development of the industry were established one after another. These included Moctezuma which was established in 1896 in the state of Veracruz by a German citizen named Guillermo Hasse, and Cervecería de Sonora established also in 1896 in the state of Sonora by a German named Jacob Schele. In 1900 Schele sold Cervecería de Sonora and established in the state of Sinaloa a brewery that later became Cervecería del Pacífico. In the same year, P. Cámara, a Mexican national, established Cervecería Yucateca in the state of Yucatán (Cervecería Cuauhtémoc 1990, p. 19), and in 1925 a group of immigrants from Spain, which included Braulio Iriarte, established Modelo in Mexico City. Cuauhtémoc and the other breweries established during this period had the following characteristics. First, foreigners or immigrants played important roles in launching these early breweries. They contributed greatly to the development of the Mexican beer brewing industry by transferring advanced technologies from Europe and the United States. Second, these firms were local producers in the sense that each of them catered primarily to the local market in its vicinity. There was no company having more than one production base until 1929 when Cuauhtémoc purchased a firm in Mexico City.

Cuauhtémoc's Nationwide Expansion: 1929–57

Cuauhtémoc gained a foothold in Mexico City in 1929 with the purchase of Cervezas la Central. Then during the 1930s it tried to take over Moctezuma, but the buyout negotiations fell through (Hamilton 1983, p. 286). In 1945 it expanded into the state of Veracruz, the homeground of Moctezuma, by purchasing Cervecería de Nogales which also operated in the state. In 1953 Cuauhtémoc bought out Cervecería de Humaya in the state of Sinaloa. In 1954 the company also took over Cervecería Tecate in the state of Baja California Norte, as well as Cervecería Occidental in Guadalajara, the state of Jalisco, in which it already had a partial shareholding (Cervecería Cuauhtémoc 1990, pp. 53–67). Through these takeovers, Cuauhtémoc had established itself as a national producer by the mid-1950s.

A comparison of the volume of beer produced by various enterprise groups in 1955, shown in Table 2-1, reveals the following points. First, already in

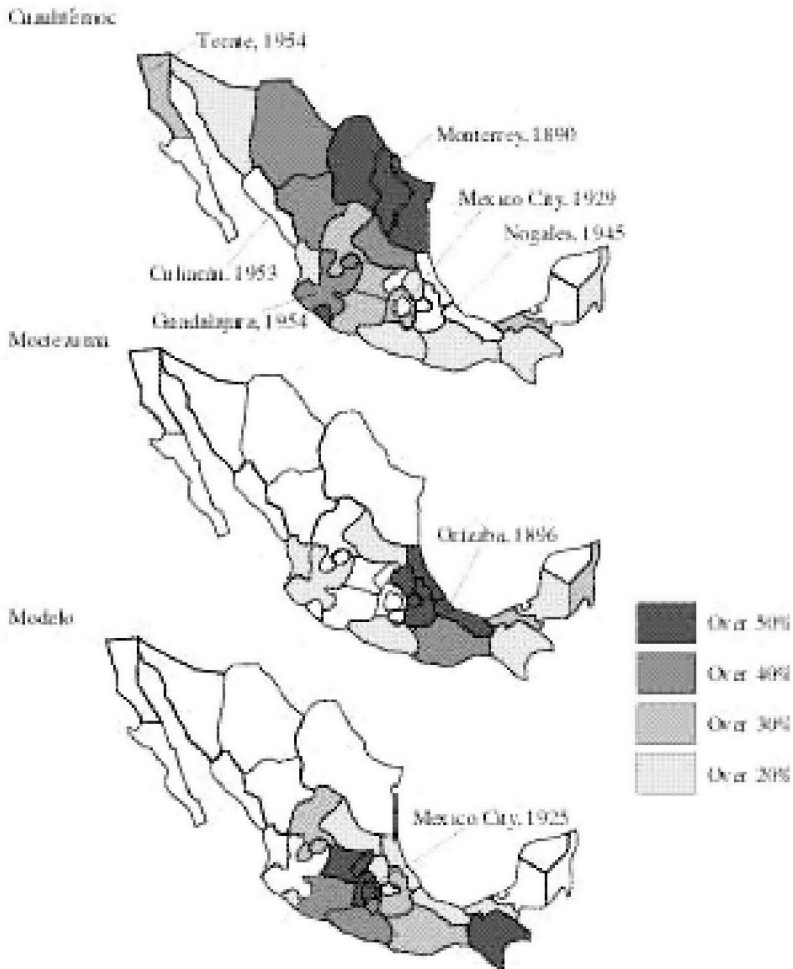
TABLE 2-1
BEER PRODUCTION OF VARIOUS BREWERIES, 1955

Brewery	Output	%	Remarks
Cervecería Cuauhtémoc:			
Monterrey Plant	113,420	16.6	
D.F. (Mexico City) Plant	62,831	9.2	Purchased in 1929 by Cuauhtémoc
Nogales Plant	12,326	1.8	Purchased in 1945 by Cuauhtémoc
Cervecería de Humaya	9,535	1.4	Purchased in 1953 by Cuauhtémoc
Tecate Plant	15,701	2.3	Purchased in 1954 by Cuauhtémoc
Guadalajara Plant	13,493	2.0	Purchased in 1954 by Cuauhtémoc
Subtotal	227,306	33.3	
Cervecería Moctezuma	154,664	22.7	
Cervecería Modelo	210,310	30.8	
Arrendataria de la			
Cervecería Juárez	7,841	1.1	Purchased in 1965 by Cuauhtémoc
Cervecería Cruz Blanca	4,296	0.6	Purchased by Cuauhtémoc, date unknown
Cervecería Sabinas	6,193	0.9	Disappeared by 1971
Cervecería de la Laguna	7,704	1.1	Disappeared by 1971
Subtotal	26,034	3.8	
Cervecería del Pacífico	18,016	2.6	Purchased by Modelo in the period 1965–71
Cervecería Yucateca	13,950	2.0	Purchased by Modelo in the period 1965–71
Cervecería del Norte	8,081	1.2	Purchased by Moctezuma by 1957
Cervecería La Estrella	3,941	0.6	Disappeared by 1963
Cervecería de Mexicali	12,402	1.8	Disappeared by 1971
Cervecería de Sonora	7,533	1.1	Disappeared by 1971
Cervecería de Tijuana	193	0.0	Disappeared by 1971
Subtotal	64,116	9.4	
Total	682,430	100.0	

Source: By the author based on data from Estrada (1957, pp. 150–51).

1955 the beer brewing industry was approaching a state of oligopolistic control by the three largest companies which together accounted for 86.8 per cent of the total production. Second, among the big three, Cuauhtémoc enjoyed the largest share, with the breweries acquired after 1929 contributing half of the company's production, indicating that corporate takeovers were instrumental in boosting Cuauhtémoc's market share. Third, at the time both Modelo and Moctezuma had only one brewing plant each, in Mexico City and the state of Veracruz respectively, but their shares of production were a high 30.8 per cent and 22.7 per cent respectively. The two companies were

Fig. 2-2. Big Three's Market Shares in Various States, 1955



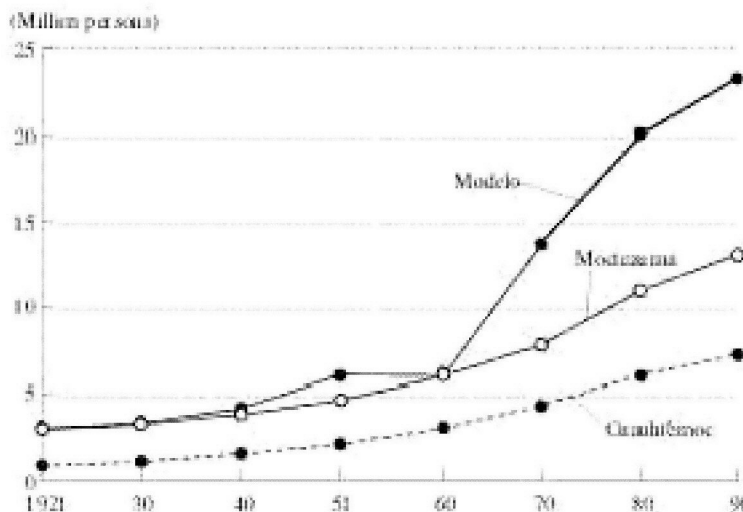
Source: By the author based on Estrada (1957, p. 121).

Note: The figures indicate the year of establishment or acquisition.

able to attain large production volumes because they were located in densely populated areas where large markets were readily available. A fourth point is that all the companies other than the big three were small in size with individual production shares of less than 3 per cent at the most.

Figure 2-2, which compares market shares of the big three on a state-by-

Fig. 2-3. Population Growth in the Big Three's Major Markets, 1921-90



Source: INEGI (1994, vol. 1, pp. 16-25).

Note: Modelo's main markets consisted of Mexico City, and the states of México, Guanajuato, and Querétaro; Moctezuma's consisted of the states of Veracruz, Puebla, Hidalgo, and Tlaxcala; and Cuauhtémoc's consisted of the states of Nuevo León, Tamaulipas, and Coahuila.

state basis in 1955, shows how the markets were divided among them at the time. Cuauhtémoc took up more than 50 per cent of the market in the north-eastern states of Nuevo León, Tamaulipas, and Coahuila; Modelo dominated the central part of the country which included Mexico City, the states of México, Guanajuato, and Querétaro; while Moctezuma was strongest in the states of Veracruz, Tlaxcala, Puebla, and Hidalgo close to the Gulf of Mexico. It is possible to say that Cuauhtémoc had the northeastern part of the country under its sphere of influence, Modelo the central part, and Moctezuma the states near the Gulf of Mexico. Figure 2-3 compares changes over time in the population of the major market areas served by the three companies. It is immediately evident from the figure that the total population of the three states within Cuauhtémoc's sphere of influence was much smaller than that in the spheres of influence of its two rivals. In other words, it was imperative for Cuauhtémoc, with its market much smaller than those of its two rivals, to secure production bases in other locals in order to keep growing. It thus advanced first into Mexico City, which was part of Modelo's sphere of influ-

ence and also a superbly large market promising to grow rapidly, and then into the state of Veracruz, which constituted Moctezuma's sphere of influence and which was also deemed to be a very promising market. It should be noted that Figure 2-2 indicates that there were areas not under the influence of any of the big three, notably the northern area along the Pacific Coast (the states of Sinaloa and Baja California Sur) and the Yucatán Peninsula (the states of Yucatán and Campeche). The former area was the territory of Cervecería del Pacífico which controlled 50.2 per cent of that regional market, while the latter was dominated by Cervecería Yucateca with an 81.3 per cent share of the market (Estrada 1957, p. 121). Later, however, these two areas were incorporated into the spheres of influence of the big three.

Modelo and Moctezuma Expansion into Provincial Markets: 1957–85

Table 2-2 summarizes the evolution of enterprise groups in the Mexican beer brewing industry from the 1950s until the late 1980s. Let us use this table and look into the development of enterprise groups since 1957. In the latter half of the 1950s, both Modelo and Moctezuma began to expand aggressively. Moctezuma began when in or around 1957 it took over Cervecería del Norte located in Monterrey, the home ground of Cuauhtémoc. This move was followed in 1961 by Modelo which established a subsidiary company, Cervecería Modelo de Noroeste, in the state of Sonora, and another subsidiary, Cervecería Modelo de Guadalajara, in Guadalajara city in the state of Jalisco. Subsequently in 1966 Modelo established a subsidiary, Cervecería Modelo de Torreón, in the state of Coahuila, while purchasing Cervecería del Pacífico and Cervecería Yucateca, mentioned above. This expansion pushed Modelo's influence into Cuauhtémoc's territory (the state of Coahuila and the city of Guadalajara), and also into areas previously untouched by the big three, namely, the northern area along the Pacific Coast and the Yucatán Peninsula. Cuauhtémoc responded to its rivals' offensives by opening a counteroffensive. In 1965 Cuauhtémoc took over Arrendataria de la Cervecería Juárez located in the state of Chihuahua, and toward the end of the 1960s, it established in the state of México a new brewery equipped with the most advanced technologies. In the early 1970s Moctezuma built a brewery in Guadalajara, giving each of the big three a brewery in the country's second largest city. Meanwhile, Modelo established a subsidiary, Cía. Cervecería Tropico, in the state of Oaxaca, thereby strengthening its competitive position in the southern market. As the three largest beer brewing companies expanded their production networks across the country by penetrating into each other's sphere of influence, smaller firms disappeared one after another.

TABLE 2-2
HISTORY OF BEER BREWING COMPANIES IN MEXICO

Company	Year of Establishment	The Company Existed in the Year(s):				Location*
		1955	1963-65	1971	Around 1989	
Cervecería Cuauhtémoc (Monterrey Plant)	1890	yes	yes	yes	yes	Monterrey (Nuevo León)
Cervecería Cuauhtémoc (Mexico City Plant: formerly Cervezas la Central which Cuauhtémoc purchased in 1929)	1901	yes	yes	yes		Mexico City
Cervecería Cuauhtémoc (Nogales Plant: formerly Cervecería de Nogales which Cuauhtémoc purchased in 1945)	Began to produce Cuauhtémoc's products on a commission basis in 1933	yes	yes	yes	yes	Nogales (Veracruz)
Cervecería Cuauhtémoc (Guadalajara Plant: formerly Cervecería del Oeste which Cuauhtémoc completely took over in 1954)	Formerly Cervecería Occidental which Cuauhtémoc partly took over in 1935 and renamed Cervecería del Oeste	yes	yes	yes	yes	Guadalajara (Jalisco)
Cervecería Cuauhtémoc (Tecate Plant: formerly Cervecería Tecate which Cuauhtémoc purchased in 1954)	1943	yes	yes	yes	yes	Tecate (Baja California Norte)

TABLE 2-2 (Continued)

Company	Year of Establishment	The Company Existed in the Year(s):				Location*
		1955	1963–65	1971	Around 1989	
Cervecería de Humaya (Purchased by Cuauhtémoc in 1953)		yes	Became the Culiacán Plant of Cervecería Cuauhtémoc in 1958	yes	yes	Culiacán (Sinaloa)
Cervecería Cruz Blanca (Purchased by Cuauhtémoc, date unknown)		yes	yes	yes		Chihuahua (Chihuahua)
Arrendataría de la Cervecería Juárez	1931	yes	yes	Purchased by Cuauhtémoc in 1965; renamed Cervecería Cruz Blanca in 1968	Became the Ciudad Juárez Plant of Cuauhtémoc by 1989	Ciudad Juárez (Chihuahua)
Cervecería Cuauhtémoc (Toluca Plant)				yes	yes	Toluca (México)
Cervecería Moctezuma	1896	yes	yes	yes	Cuauhtémoc made a partial purchase of company shares in 1985, then purchased all shares in 1988	Orizaba (Veracruz)
Cervecería del Norte		yes	Taken over by Montezuma by 1957	yes	yes	Monterrey (Nuevo León)
Cervecería Moctezuma (Guadalajara Plant)	Established in or after 1973				yes	Guadalajara (Jalisco)
Cervecería Modelo	1925	yes	yes	yes	yes	Mexico City

TABLE 2-2 (Continued)

Company	Year of Establishment	The Company Existed in the Year(s):				Location*
		1955	1963–65	1971	Around 1989	
Cervecería Modelo de Noroeste	1961		yes	yes	yes	Ciudad Obregón (Sonora)
Cervecería Modelo de Guadalajara	1961		yes	yes	yes	Guadalajara (Jalisco)
Cervecería Modelo de Torreón	1966			yes	yes	Torreón (Coahuila)
Cervecería del Pacífico	1900	yes	yes	Taken over by Grupo Modelo by 1971	yes	Mazatlán (Sinaloa)
Cervecería Yucateca	1900	yes	yes	Taken over by Grupo Modelo by 1971	yes	Mérida (Yucatán)
Cía. Cervecería Tropicó	1979				yes	Tuxtpec (Oaxaca)
Cervecería La Estrella		yes				Guadalajara (Jalisco)
Cervecería de Tijuana		yes				Tijuana (Baja California Norte)
Cervecería de Mexicali		yes	yes			Mexicali (Baja California Norte)
Cervecería de Sonora	1896	yes	yes			Hermosillo (Sonora)

TABLE 2-2 (Continued)

Company	Year of Establishment	The Company Existed in the Year(s):				Location*
		1955	1963–65	1971	Around 1989	
Cervecería de la Laguna	during 1946–50	yes	yes			Torreón (Coahuila)
Cervecería Sabinas		yes	yes			Ciudad Lerdo (Durango)

Sources: By the author based on data from Estrada (1957, p. 121), *International Brewers' Directory* (1959, pp. 267–68), *La cerveza y la industria cervecera mexicana* (c1964, p. 171), Asociación Nacional de Fabricantes de Cerveza (c1989, p. 8), Cervecería Cuauhtémoc (1990), and *Industridata, empresas grandes* (1985–86).

Note: Lightly shaded companies are affiliated with Cuauhtémoc; darkly shaded ones with Modelo; and stripe-shaded ones with Moctezuma. “Yes” indicates the year when the existence of the company can be confirmed.

* State names are in parentheses.

Underlying the rapid increase in beer production taking place in Mexico was a favorable turn in market conditions brought about by a rapid increase in the urban population and expanding national income. However, such a favorable turn in market conditions only meant that the potential market was expanding. Turning the potential market into a real market required action on the part of the beer producers. Let us look at the growth of Cuauhtémoc to see what action was taken.

The Growth and Innovation of Cuauhtémoc

Cuauhtémoc was founded in 1890 in Monterrey in the state of Nuevo León close to the border with the United States. Its founding came out of a proposal by an American named Joseph Schnaider who was a member of a beer brewing family in the United States. Schnaider's business was importing beer into Mexico, and he made his proposal to a merchant at Casa Calderón y Cía. which was very prosperous commercial house in Monterrey at the time. Isaac Garza took the lead in the firm's establishment becoming its first president, while Schnaider took charge of production. Along with these two, Francisco Sada, José Muguerza, and José Calderón contributed initial capital. All the contributors of funds other than Schnaider were related by blood or by marriage. In 1894 Francisco G. Sada, another kinsman of the Mexican founding families, joined the company as its general manager (Naranjo 1955, p. 29). Schnaider sold his shares in the company in 1897, and thereafter it developed as a family-controlled business (Cervecería Cuauhtémoc 1990, pp. 23, 26). The company's growth was characterized by its active adoption of new technologies, its energetic pursuit of policies to internalize production of raw materials and to geographically expand its network for the production of these materials, and its emphasis on the formation of its own distribution network and on advertising.

The Adoption of New Technologies

The major beer brewing companies in Mexico have shown keen interest in introducing advanced technologies from abroad for beer brewing (Departamento de Estudios Económicos de Banco Nacional de Comercio Exterior 1973, p. 580). What is salient about the growth of Cuauhtémoc, moreover, is that it has energetically sought to improve not only the technology for beer production but also that for manufacturing containers and packages.

One improvement in containers, in addition to conventional bottled beer,

was the production of barreled beer which Cuauhtémoc produced for the first time in Mexico in 1893. In 1903 the company introduced metal bottle caps to replace cork caps which it had been using previously. Bottle caps had begun to come into wider use in the United States following their invention there in 1892, and Cuauhtémoc was among the earlier companies in the world to start using them. Other bottle cap innovations introduced by Cuauhtémoc included the development in 1967 of a “quitapon,” a cap which can be opened without using a bottle opener, and the development in 1969 of a “quitaquitapon,” a beer bottle equipped at its bottom with a bottle-opening function. Regarding container materials, Cuauhtémoc replaced wooden barrels with metal barrels in 1930; in 1953 it started using brown bottles to prevent change in the quality of beer; and in 1954 it started producing canned beer. The existence of the affiliated steel company Hylsa, to be described in greater detail in another chapter, made it possible for Cuauhtémoc to adopt cans at an early date even by world standards. Cuauhtémoc’s efforts to improve packages began in 1892 when it started replacing wooden barrels with wooden boxes, which work better for transportation and storage. During the 1920s wooden boxes were replaced by cardboard boxes, and the package size was reduced from sixty bottles per box to twenty-five. The reduced size and weight of a unit package went a long way toward making transportation faster and safer, and toward reducing costs and storage space. The company started using a six-bottle carton in 1960, plastic cases in 1971, and refrigerator tank lorries in the early 1980s (Cervecería Cuauhtémoc 1990, pp. 31, 50, 70–71, 76; Naranjo 1955, p. 38; Fuentes Mares 1976, p. 135).

Improvements in containers and packages enhanced product convenience, prevented quality deterioration, reduced transportation costs, and added novelty to the products. These benefits helped the company improve its cost competitiveness, and differentiate its products from those of its rivals and thus attract consumers.

Internalized Production of Raw Materials and Geographical Expansion of Production

Cuauhtémoc also took the lead in internalizing the production of raw materials, one of the salient features of the Mexican beer brewing industry. Cuauhtémoc’s internal production system began with the production of beer bottles. In 1899 the company’s founders and other influential merchants in Monterrey put up funds to establish a company for manufacturing beer bottles domestically and replace imported bottles. Problems such as the company’s use of the unreliable hand blowing method, high costs of production, and

difficulties in the procurement of raw materials led to its bankruptcy in 1903, but it was reestablished in 1909 as a new company named Vidriera Monterrey. The investors in the earlier company were joined in the launch of the new beer bottle manufacturing company by a group of entrepreneurs licensed to use in Mexico the patent for an automatic bottle making machine, developed by Owens, a U.S. company. The use of the automatic bottle making machine to replace the hand blowing method helped get the new company's production off the ground. Along with the geographical expansion of beer production, there was a similar expansion in the production of beer bottles. In 1934 Vidriera México, a subsidiary of Vidriera Monterrey, was established in Mexico City to preempt a plan by Moctezuma and a soft-drink maker to jointly establish a bottle manufacturing plant. In 1944 Vidriera Monterrey established another subsidiary, Vidriera Los Reyes, in the state of México, and in 1951 it purchased Vidriera Guadalajara, a glass bottle manufacturer in Guadalajara. Keeping pace with the geographical expansion of the beer bottle production, Vidriera Monterrey's glass manufacturing also diversified. In the 1920s and 1930s it set up Vidrio Plano, a subsidiary specializing in the production of flat glass, and Cristalería, another subsidiary specializing in the production of crystal glass. In 1943 it established Fabricación de Máquinas, a subsidiary for manufacturing molds, machines, and parts for the production of glass products. This was followed by the establishment of Materias Primas Monterrey in the early 1950s, a subsidiary for mining mineral materials for glass production (Barragán and Cerutti 1993, pp. 183–84, 190; González Garza 1994, pp. 95, 99, 101–2).

In 1920 Cuauhtémoc established Fábricas Monterrey, a subsidiary to undertake the internal production of bottle caps and cartons (Cervecería Cuauhtémoc 1990, p. 49). Previously Cuauhtémoc had imported bottle caps. But even after the launching of its own cap manufacturing, Fábricas Monterrey had to depend on foreign supplies of steel sheets, the raw material for bottle cap manufacturing. In 1936 the carton manufacturing division of Fábricas Monterrey was reorganized into an independent subsidiary, Empaques de Cartón Titán. This company in turn established a subsidiary in Monterrey in 1946 that specialized in the production of kraft paper and cardboard. In the early 1950s Empaques de Cartón Titán started the geographical expansion of its production facilities, establishing a plant in Mexico City in 1951, and another in Guadalajara in 1952 (Barragán 1991, pp. 31, 35, 38).

In 1929 Cuauhtémoc started the internalized production of malt instead of importing it from Europe and the United States. A malt producing division was added to the above-mentioned Fábricas Monterrey; then in 1936 the division became the independent subsidiary Malta (Cervecería Cuauhtémoc

1990, p. 56). As of 1955 Cuauhtémoc had malt producing plants in Monterrey, Mexico City, and the state of Baja California Norte. At early stages of Cuauhtémoc's internal production of malt, it used imported barley, the raw material for malt production. But the company took steps to encourage local farmers to grow barley suited for beer production by guaranteeing the purchase of their crops and by distributing imported seeds of high-yielding varieties. Consequently by the 1950s it was able to procure barley locally (Naranjo 1955, pp. 58–59). To procure this barley, the company's beer sales agents (to be mentioned later) began to double as middlemen to purchase barley (Medellín 1980, p. 930).

The suspension of imports of steel sheets during World War II pushed Cuauhtémoc to internalize the production of steel sheets for use in the manufacturing of bottle caps. A new subsidiary, Hysla, was established in 1942 to undertake this internal production. (Hysla will be discussed at length in Chapter 3.) Cuauhtémoc established a label-printing subsidiary, Grafo Regia, in 1957, and a plastic products manufacturing subsidiary, Plásticos Técnicos Mexicanos, in 1975; in both cases, the company reorganized its manufacturing divisions into independent subsidiaries (Cervecería Cuauhtémoc 1990, p. 69; *Industriadata, empresas grandes* 1985–86). In 1936, in its efforts to save on taxes and deal effectively with its rapidly growing number of its subsidiaries, Cuauhtémoc restructured itself by establishing the holding company VISA and concentrating its shares in the subsidiaries under this holding company.

Cuauhtémoc's active pursuit of its policy to internally produce various raw materials can be explained by the following advantages of such production. First, internalized production had the advantage of ensuring stable supplies of raw materials. Before they began to be produced internally, many of the raw materials had been imported, and thus had been subject to sudden price increases or supply stoppages caused by fluctuations in foreign exchange rates, outbreaks of wars, and other factors. By switching to internal production, the company could expect to procure raw materials at stable prices and on a continuous basis. Second, internal production had the effect of boosting the company's competitiveness. Internally produced raw materials were not only used internally, but were sold to other companies (Naranjo 1955, p. 61). In a situation where the number of domestic suppliers was limited, it was often possible for producers of raw materials to manipulate prices and supplies as they pleased. It is thus plausible to assume that by procuring raw materials on conditions advantageous to the company, Cuauhtémoc must have gained a competitive edge over its rivals. Third, many lines of business which the company expanded into as part of its effort at internalizing production

had promising futures themselves. Many of the subsidiaries established by Cuauhtémoc as a means of procuring raw materials internally were the first modern enterprises established in Mexico in their respective fields. Moreover, given the fact that these subsidiaries were assured of Cuauhtémoc's very reliable market, they constituted very sound and lucrative investments, and many of them later grew into major enterprises in their respective fields.

To compete with Cuauhtémoc, its rivals also embarked on the internalization of raw material production. Modelo started producing malt in 1929, beer bottles in 1935, and cardboard in 1954, all in Mexico City. It also established a carton producing subsidiary in 1959, and a bottle manufacturing subsidiary in 1968, both in the state of México (Cordero and Santín 1977, pp. 36–37; *Industridata, empresas grandes* 1991). Moctezuma established its own malt producing subsidiary in 1957, and completed systems for the internal production of beer bottles and cardboard by 1962 (Pineda Gurrión 1963, p. 48).

Cuauhtémoc's Distribution Network and Advertising Activities

As the potential market for beer expanded rapidly in response to Mexico's rapid urbanization and rising income levels, companies had to find ways to transform this potential market into a real one. And it was their efforts to expand distribution networks and advertise aggressively that proved instrumental in bringing about this transformation. Since documents describing Cuauhtémoc's performance in these areas during the mid-1950s are unavailable, the discussion in this subsection will focus on the developments in the beer brewing industry as a whole. It is plausible to assume, nonetheless, that many of the features of the industry in distribution and advertising at this time would have primarily reflected Cuauhtémoc's activities.

In the mid-1950s, as much as 75 per cent of total beer shipments was transported by road, and the three largest beer brewing companies owned fleets of trucks and trailers. They divided the entire country into several districts, establishing a warehouse in each district. Marketing activities in each district were undertaken by sales agents. Qualifications required of would-be sales agents differed from one company to another. In some cases would-be sales agents were required to have certain amounts of business funds; in other cases these funds were lent by the brewing company; and in yet other cases, sales agents were required to deposit certain sums of money as security to cover the costs of the products and containers they handled. The beer brewers provided services, such as granting retail stores the use of refrigerators free of charge or providing them with ice. In Mexico City, the most important market, the major companies maintained direct distribution sys-

tems of their own. They maintained staffs of employees responsible for the distribution of their products in the city, and assigned each vehicle with a specific area of distribution. The costs of distribution, including the costs of maintaining vehicles and fuel costs, were borne by the companies, while the employees engaged in distribution were paid, in addition to their wages, commissions in proportion to the volumes of their sales (Estrada 1957, pp. 111–18; Pineda Gurrion 1963, pp. 61–62; Departamento de Estudios Económicos de Banco Nacional de Comercio Exterior 1973, p. 581; Medellín 1980, p. 930). Beginning in the 1980s, however, the major brewing companies expanded these direct distribution systems across the country. In the case of Cuauhtémoc, it switched to the practice of distributing all its products through its own, direct distribution system by 1990 (Cervecería Cuauhtémoc 1990, p. 83).

Cuauhtémoc has put special emphasis on advertising since its establishment, employing a wide variety of methods such as exhibiting its products at international trade fairs (Cervecería Cuauhtémoc 1990, pp. 31, 36), placing advertisements in newspapers and magazines, running spot advertisements on radio and television and in movie theaters, sponsoring radio and television programs, distributing posters and leaflets, placing billboards, sponsoring various social events, and distributing advertisement gifts (Estrada 1957, pp. 77–78). With the spread of mass media, the geographical reach of advertising activities expanded rapidly (NAFIN 1971, p. 162). The major beer companies tried hard to win over drinkers of “pulque,” the agave-based indigenous liquor that is a formidable competitor of beer. They actively disseminated the image of “beer as a modern beverage,” trying to urge consumers to change their taste. At the same time, the three largest beer brewers vied strenuously with each other for new customers by repeatedly hammering the brand names of their respective products into the minds of consumers, and trying to nurture consumer allegiance to their own brands. As a result of these aggressive advertisement campaigns, which both expanded and enhanced the market, the consumption of beer increased much faster than the increase in income.

The Split-up of VISA

For decades after 1938, when Francisco G. Sada resigned as general manager, two sons of Isaac Garza, Eugenio Garza Sada and Roberto Garza Sada, were jointly at the helm of VISA’s operations. Then in 1973 Eugenio was assassinated by a leftist guerrilla group. Following his death, a dispute erupted over the question of who should be his successor (*Proceso*, April 21, 1986, p.

20), and this led to the split-up of VISA in 1974 (Cordero and Santín 1977, p. 29). In that year, two of VISA's subsidiaries, Hylsa and Empaques de Cartón Titán separated themselves from VISA's control and became affiliated with Grupo Industrial Alfa, a holding company which was established in the same year under the management of Roberto's son, Bernardo Garza Sada. Meanwhile, VISA was left with Cuauhtémoc and a host of other subsidiaries, including Fábricas Monterrey, Malta, Grafo Regia, and Plásticos Técnicos Mexicanos. Eugenio Garza Lagüera, a son of Eugenio, took control of VISA's management. After the split, VISA began diversifying its operations, but it became caught up in the foreign debt problem during the 1980s and had to liquidate or sell off many of its new ventures. Among the new business undertakings launched after 1974, only two divisions, the cola division and the convenience chain store division, are still in existence. The two divisions work closely with the beer brewing division in the use of the distribution network and raw materials. Subsequently, VISA acquired Moctezuma, an acquisition that proved very significant not only because it boosted Cuauhtémoc's market share, but also because VISA acquired Moctezuma's raw material producing subsidiaries which enabled Cuauhtémoc to reestablish its system for the internalized production of raw materials which had been weakened following the transfer of some subsidiaries to Alfa.

Concluding Remarks: Enterprise Innovativeness, Competition, and Industrialization

Throughout the history of the Mexico's beer brewing industry, Cuauhtémoc has always spearheaded its development, and at the same time has been the driving force behind the industry's transformation into an oligopoly. The company has been able to play such a leadership role because of its innovativeness which it has displayed in the introduction of new technologies, in embarking on the internalized production of raw materials, in expanding its distribution network, and in its aggressive advertising campaigns. It has vigorously pursued these undertakings because they have served as effective means of ensuring Cuauhtémoc's growth. To a large extent such effectiveness has been dictated by the characteristics of the Mexican beer brewing industry and the course of industrialization in Mexico.

Standardization of technology for beer brewing has made it easy for Cuauhtémoc to introduce advanced technologies. Introduction of advanced technologies has proved instrumental in reducing production costs, improving product quality, and differentiating the company's products from those of its competitors, thereby giving it a competitive edge over its rivals. One

peculiar feature of the beer brewing industry is that while its technological barriers to new entrants are not prohibitive, it readily gives rise to the concentration of production, and once production becomes concentrated, it is very difficult for new entrants to break into the industry. There are several reasons for this. First, as a highly mechanized industry, beer brewing industry is subject to the rule of economies of scale. Since a company which manages to gain economies of scale can readily outperform its competitors with its lower costs of production, companies are often very eager to expand the scale of their operations. Second, once the scale of production is expanded, the increased production capacities call for the corresponding expansion of distribution networks, and the expanded distribution networks work as barriers to new entrants. Third, beer's nature as a mass consumption good allows industry players to nurture consumer allegiance to brand names by staging aggressive advertisement campaigns. And the existence of established brands in the industry also works as a barrier to new entrants. In other words, for any company hoping to remain competitive in the industry, it is imperative to expand its production capacity, improve its distribution network, and establish its brand name; and once a company that has fulfilled these requirements emerges, the fulfillment of these requirements turns into a barrier to entry. Cuauhtémoc moved ahead of its competitors in meeting these requirements. And this fact, in turn, has given the company a competitive edge over its rivals, making it the leader in the industry and in pushing forward the process of oligopolization.

Intense inter-company competition in the beer brewing industry prompted Cuauhtémoc to produce raw materials internally. Before it embarked on such production, many of the raw materials had been imported because of the absence in Mexico of competent producers capable of supplying materials of good quality at appropriate prices and on a stable basis. Internalized production of raw materials offered the company advantages of securing stable supplies of raw materials, reducing production costs, and boosting its competitive position. Cuauhtémoc was the first to launch these internalized operations in Mexico, and they had good business potentials of their own. In all likelihood these advantages must have inspired Cuauhtémoc to undertake the internal production of raw materials. In effect the lag in Mexico's industrialization led Cuauhtémoc to take up the internal production of raw materials, and these internal undertakings, in their turn, had the effect of pushing the process of Mexico's industrialization forward.

At the same time, inter-company competition was also dictated by the state of industrialization in Mexico. First, the development of industrialization caused the urban population and people's incomes to increase at faster

rates than previously which caused a correspondingly rapid expansion in the potential market for beer. The growth in latent demand also created a new arena for inter-company competition. Second, improvements in road networks and the spread of mass media that accompanied the industrialization process enabled companies to improve and expand their distribution networks, and stage advertisement campaigns more effectively. In other words, the advance of industrialization had the effect of enhancing the means of competition. Cuauhtémoc's two latecomer rivals were compelled to adopt the same means as Cuauhtémoc in order not to be left behind, namely, geographical expansion of their production networks, internalized production of raw materials, expansion of their distribution networks, and active use of advertising. As they followed Cuauhtémoc's example, production became all the more concentrated, and competition grew ever more intense. Since the measures adopted in order to fulfill the requisites for corporate growth became the means of competition, and since the adoption of these means was dictated by the characteristics of the Mexican beer brewing industry and by the state of Mexico's industrialization, it was inevitable that the industry grew into an oligopoly.

One important factor explaining Cuauhtémoc's innovativeness was the quality and capability of its managers. Such quality and capability is especially important for a family-controlled enterprise where managerial power tends to be concentrated in its owner-manager. In this respect, Cuauhtémoc was blessed with competent managerial talent. No less important is the entrepreneurial atmosphere of Monterrey which has been conducive to nurturing people of superb managerial talent. Located approximately 150 kilometers from the border with the United States, the city has had close economic and cultural contacts with the United States for centuries. Monterrey's historical role as a contact point between two economic worlds, the industrially advanced United States and the late-industrializing Mexico, has given the city an atmosphere where prospective businesses can be easily discovered, up-to-date information on economics and technology are readily accessible, and personal ties with the American business community can be easily forged. These characteristics of the city have enabled ambitious entrepreneurs to rise to the challenges posed by venture undertakings of uncertain prospects. In this respect, immigrants from economically advanced countries, wherever they settled in Mexico, were positioned at the point of contact between two different economic worlds, and in this sense were in situations similar to entrepreneurs in Monterrey. Given the economic significance of immigrants, it is no surprise that Cuauhtémoc's arch-rival, Modelo, was founded by a group of immigrants from Spain.