

The Origins of the Maquila Industry in Mexico

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The maquila industry has come to characterize, in large part, Mexico's northern border region due to the accelerated changes which its presence in this region has brought about in terms of population growth, subsidiary or supporting industries, trade businesses and services. Although it remains heavily concentrated in this region, over the last two decades it has also increasingly spread throughout the country's interior.

The term "*maquiladora* industry", which is commonly used to refer to the production sharing operations carried on by transnational companies and their assembly plants located in low wage regions around the globe¹, is somewhat of a misnomer. This term is derived from the word *maquila*, of Spanish origin, which in its earliest usage referred to the act of grinding wheat brought by farmers to the miller to be converted to flour. It was also used to define the portion of grain retained by the miller in exchange for this service. The word subsequently evolved in meaning and became used to designate "any particular activity in an industrial process, such as assembly or packaging effected by a party other than the original manufacturer."² Maquila, thus defined, means a process that describes a broad industry involving a wide variety of goods and services. The modern maquiladoras constitute assembly operations for products which, after processing, are re-exported to the U.S. and other countries.³

The maquila's development has coincided to some extent with the initiation of the various Mexican federal programs of development for the border region in

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¹ Not in all cases are assembly plants located in underdeveloped countries. As the noted British sociologist Leslie Sklair has pointed out, they have also taken root in western Ireland, which, while not a highly industrialized country, is not part of the Third World either. Leslie Sklair, *Assembling for Development: The Maquila Industry in Mexico and the United States*, 2nd. ed., expanded and updated (La Jolla, Cal.: Center for U.S.-Mexican Studies, University of California at San Diego, 1993), p. 199.

² Carlos Angulo P., "Foreign Investment and the Maquiladora Export Industry," in *Inversión extranjera directa: Direct Foreign Investment* (México: Banamex, 1990), p. 139.

³ The term "maquiladoras" in the connotation of either a business or industry is more applicable, perhaps, when referring to a distinct category or group of profit-making operations or enterprises. For a discussion of the term "maquiladora" and its various applications, see Jesús Tamayo y José Luis Fernández, *Zonas fronterizas: México-Estados Unidos* (México: Centro de Investigación y Docencia Económica, 1983), pp. 221-223 (Anexo A.4: Definición de empresa maquiladora).

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general, as well as the successive federal presidential or executive decrees which have affected the industry. These programs and initiatives, in turn, have arisen in response to both domestic and international developments which have heavily influenced the considerations of maquila investors and Mexican government leaders with regards to the establishment and operation of the plants in Mexico.

This paper seeks to trace the evolution of the maquila industry in Mexico during its initial stages up to the early 1970's in order to pinpoint the particular forces and circumstances which contributed to its growth and development and which assured its establishment as an integral part of the national economy.

THE HISTORICAL BACKGROUND OF THE MAQUILA IN MEXICO

The roots of the maquiladora business in Mexico date back to the early 1930s and, more particularly, to the administration of president Lázaro Cárdenas del Río (1934-1940) and its policy of national integration.

The northern border region has constituted a source of preoccupation for the Mexican central government throughout the country's history. It has traditionally been viewed with suspicion and concern, especially since the Texan independence struggle from 1835-1836 and the war between Mexico and the U.S. from 1846-1848. Since that time, it has been associated with tensions between the two countries and has often been the zone in which conflicts of one type or another have arisen. It was only in the 1920s that the violent stage in the history of the borderlands ended; however, it was not until the 1930s and early 1940s, that the region became more effectively integrated with the rest of the nation.⁴

From the 1930s on, the Mexican government attempted to promote the economic and industrial development of the northern border areas by means of various programs. One of such programs was that of the *perímetros libres* (free trade zones). This was urged by many local leaders as a means of liberating border areas from U.S. economic dominance. On August 31, 1933, president Abelardo L. Rodríguez gave some relief to border communities from the effects of the Great Depression by enacting the *Ley de Perímetros Libres* (Free Zone Law), which converted Tijuana and Ensenada into districts with the right to import foreign goods without paying duty. Rodríguez contemplated that the creation of such free zones would stimulate the development of the local economies and also result in an expansion of trade. This would result, it was hoped, in a much more varied economy than one based essentially on bars and casinos, which had hitherto prevailed in the border region. In 1935 Tecate and Mexicali were also designated

⁴ César Sepúlveda, *La frontera norte de México: historia, conflictos, 1762-1982*, 2nd. ed. (México: Editorial Porrúa, 1983), pp. 83-93; Mario Ojeda, "Mexico: The Northern Border As a National Concern," (El Paso, Tex.: Center for Inter-American and Border Studies, 1983), unpublished paper (mimeographed), pp. 3-4, 6-7; Oscar J. Martínez, *Troublesome Border* (Tucson, Ariz.: University of Arizona Press, 1988), pp. 38-46, 55-70.

perímetros libres with the inauguration of the transpeninsular highway in that same year. The *perímetros libres* formed the basis of the *zona libre* (free zone) in northern Baja California, which, two years later, in 1939, was extended to include all of the peninsula as well as the Río Colorado delta. Although there was a significant increase in the number and variety of businesses in the region, the *zona libre* did not result in the creation of a local manufacturing industry. In addition, although it reduced the need for Mexicans to shop on the U.S. side of the border, it also induced a behaviour of importing articles of consumption in increasingly large quantities.⁵

The Second World War, along with the demand that it created for Mexican materials and manpower to work in U.S. factories and agriculture, stimulated a startling growth along the border that far surpassed the previous boom during Prohibition (1920-1933). The population of Mexico's border cities doubled and in some cases even tripled.⁶

In the meantime, the governments of many Latin American nations became convinced that, in order to develop and prosper, they would have to establish their own industries and become self-reliant. This could be accomplished by a variety of programs and means, but the prevailing policy adopted was that of "import substitution industrialization" (ISI). The policy of import substitution, which had dominated Mexico's economic development strategy since the onset of its national industrialization programs in 1940, mainly benefitted the larger industrial cities, such as Mexico City, Guadalajara and Monterrey.⁷

Although the Mexican government continued to invest in the border region in the postwar years, this region lagged far behind the country's major centers in terms of industrial development.⁸ In Ciudad Juárez, the main border city, a group of distinguished citizens consisting of businessmen, civic leaders, politicians, bureaucrats and even agricultural and labour union leaders, felt that the growing urban population needed a more stable base than one built solely on services like tourism, bars and nightclubs. Despite the fact that their city possessed a

⁵ Ulises Irigoyen, *El problema económico de las fronteras mexicanas*, 2 vols. (México: s.e., 1935), II:379-382; Ulises Irigoyen, *Carretera transpeninsular de la Baja California*, 2 vols. (México: Editorial América, 1943), I:138-139; Francisco Alcalá Quintero, "Desarrollo regional fronterizo," *Comercio Exterior*, XIX:12 (diciembre de 1969), p. 961.

⁶ T.D. Proffitt III, *Tijuana: The History of a Mexican Metropolis* (San Diego, Cal.: San Diego State University, 1994), p. 299. Regarding the demographic increases of some principal border communities, see Oscar J. Martínez, *Border Boom Town: Ciudad Juárez since 1848* (Austin, Tex.: University of Texas Press, 1975), pp. 161-162 (Appendices: Tables 4 and 5); David Piñera Ramírez and José Ortiz Figueroa, coords., *Historia de Tijuana*, 2nd. ed., 2 vols. (Tijuana, B.C.: Centro de Investigaciones Históricas, UNAM-UABC, Universidad Autónoma de Baja California, 1989), I: 334 (Appendix VI: Estadística de Tijuana").

⁷ Manuel Martínez del Campo, *Industrialización en México: hacia un análisis crítico* (México: El Colegio de México, 1985), pp. 70-91; Leopoldo Solís, *La realidad económica mexicana: retrovisión y perspectivas*, ed. revisada (México: Siglo XXI, 1987), pp. 183-185.

⁸ David E. Lorey, *The U.S.-Mexican Border in the Twentieth Century: A History of Economic and Social Transformation* (Wilmington, Del.: Scholarly Resources Books, 1999), p. 98.

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prosperous economy based on commerce, cotton, construction and tourism, they believed that it required a new industrial direction for the future.

By the mid-1950s a movement, headed by the Cámara Nacional de Industria de Transformación (CANACINTRA), had gotten underway in the border city to promote the establishment of national industries to substitute importations of foreign goods. Towards the end of the decade the situation had become more critical, since the production of cotton, the region's major agricultural income crop, had stagnated. Some civic leaders favored the promotion of local industries --without foreign input-- to supply the needs of domestic markets; others, who argued that Ciudad Juárez was far from the country's main domestic consumer markets, preferred the production of goods for export as an optional strategy.⁹

Near the end of 1960, president Adolfo López Mateos (1958-1964) approached Antonio J. Bermúdez, Ciudad Juárez's foremost *empresario* or businessman, to head a new organization charged with the task of transforming the northern border region.¹⁰ The new project, which Bermúdez called the *Programa Nacional Fronterizo* (PRONAF), or National Border Program, which was initiated in January 1961, was an ambitious plan to promote economic and social development in Mexico's border regions and also to transform them into a kind of *vitrina* or "showcase" for foreign visitors. At the same time, it was to foster closer economic and social links between the region and the rest of the country.¹¹

Soon after PRONAF's establishment, an advisory committee was formed by prominent members of the country's business and commercial sectors: Octaviano

⁹ Antonio J. Bermúdez, *El rescate del mercado fronterizo: una obra al servicio de México* (México: Ediciones Eufesa, 1966), p. 134; Alejandro Mungaray Lagarda and Patricia Moctezuma Mungaray, "La disputa del mercado fronterizo, 1960-1983," *Estudios Fronterizos*, 1:3 (enero-abril 1984), p. 93; María Elena Vargas Olmos, "Antecedentes de la industria maquiladora en Ciudad Juárez: el período 1956-1964," *Nóesis*, núm. 15 (julio-diciembre de 1995), pp. 101-108.

¹⁰ Bermúdez, *Rescate del mercado fronterizo*, p. 20. Bermúdez had also occupied several public positions, such as mayor of Ciudad Juárez, senator of the state of Chihuahua and director of PEMEX, the national petroleum company, during the Miguel Alemán Valdés and Adolfo Ruiz Cortines presidential administrations (1946-1958). For biographical information on Bermúdez, see Antonio J. Bermúdez, *La política petrolera mexicana* (México: J. Mortz, 1976), prefacio; Vargas Olmos, "Antecedentes," p. 115.

¹¹ México, *Programa Nacional Fronterizo* (México: PRONAF, n.d.), pp. 11-12, 19; Bermúdez, *Rescate del mercado fronterizo*, pp. 23-29, 33, 112; "National Border Program: Objectives," *Boletín del Programa Nacional Fronterizo*, Mexico City, November 1964, in *Economic Linkage of the Border Areas: San Diego and Baja California*, ed. James L. McAfee (La Jolla, Cal.: Copley International Corporation, 1966), p. 79. Although PRONAF also included the Mexico-Guatemala and Mexico-British Honduras borders, its principal focus of concern was the northern areas bordering the U.S. The activities undertaken by PRONAF undertaken in the southern border areas were marginal. Bermúdez, *Rescate del mercado fronterizo*, pp. 57-59, 93-94, 127; Antonio Ugalde, "Regional Political Processes and Mexican Politics on the Border," in *Views Across the Border: The United States and Mexico*, ed. Stanley R. Ross, (Albuquerque, N.M.: University of New Mexico Press, 1978), p. 114n.29. For a listing of PRONAF works in both the northern and southern border regions, see México, *Programa Nacional Fronterizo*, pp. 43-48.

Campos Salas, Secretario de Industria y Comercio (Secretary of Industry and Commerce), Sergio Luis Cano; Nathaniel Gravinsky, Armando Vega and Benito Berlín (representatives of the Banco de México); Juan Sánchez Navarro, Ramiro Alatorre, Enrique Ayala Medina, Manuel Fernández Landero, Pablo Morera, Miguel Blázquez, Juan Martínez del Campo and Antonio Gutiérrez Prieto (representatives of Mexican Chambers of Industry, Commerce and Construction). Over the next five years (1961-1965), this group met on a weekly basis to discuss issues of planning and execution of the border program project. The program was financed by the Secretaría de Hacienda and administered through Nacional Financiera, the government development bank.¹²

The Advisory Committee, in turn, appointed another committee to begin research and analysis on the question of the feasibility of industrialization in the border region. This committee recommended as the best option the establishment of manufacturing industries or plants to produce goods for U.S. markets.¹³ Subsequent to these initial studies, a larger commission was formed with representatives from the Nacional Financiera, chief of whom was Dr. Alfredo Navarrete. The other representatives were: Mario Mendiola, of the Confederación de Cámaras Industriales; Armando Fernández, of the Confederación de Cámaras Nacionales de Comercio; Nathan Grabinsky, of the Centro Comité Regional de Estudios Económicos del Banco de México; and Benito Berlín, member of PRONAF's Advisory Committee. This larger commission undertook several studies in order to provide guidelines for the project in its distinct areas. The Arthur D. Little Company was also contracted to make assessment studies on the question of industrialization in the border region, the results of which were later published. One of the studies' key recommendations was the establishment of a maquila industry in Mexico which would not only create jobs there but would also complement the productive processes of U.S. companies.¹⁴

In *El rescate del mercado fronterizo*, a book which Bermúdez later wrote concerning PRONAF and his experiences as its director, the author reiterated the words of a speech given by president Gustavo Díaz Ordaz (López Mateos's successor) in 1965: "Let us make our country economically free so that it may be politically free."¹⁵ PRONAF was essentially a nationalist project. It was aimed at building a sufficiently powerful commercial and industrial base in the Mexican borderlands. PRONAF could act as a counterweight to U.S. influence. It was designed to wean major border cities such as Ciudad Juárez and Tijuana away

¹² Although the Nacional Financiera is state-controlled, it contains some private capital. Bermúdez, *Rescate del mercado fronterizo*, pp. 27-29.

¹³ Bermúdez, *Rescate del mercado fronterizo*, p. 51.

¹⁴ Bermúdez, *Rescate del mercado fronterizo*, p. 51; Sklair, *Assembling for Development*, p. 43; Reginald L. Davis, *Industria maquiladora y subsidiarias de co-inversión: régimen jurídico y corporativo* (México: Cárdenas, 1985), pp. 23-24.

¹⁵ Bermúdez, *Rescate del mercado fronterizo*, p. 138 (Author's translation). See also pp. 133-139 of the same publication.

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from the U.S., which they depended on for the majority of their commercial transactions.¹⁶

One key *PRONAF* goal consisted in stimulating domestic purchases and economically integrate the border cities with the rest of the country. To this end, it sought to make available goods and services that would be competitive both in terms of prices and quality with those of the U.S.¹⁷ As incentives for domestic producers, the federal government authorized tax and freight subsidies for goods marketed at the border. One important incentive consisted of a federal tax exemption of 1.8 percent on sales income on primary materials or finished goods sold by Mexican manufacturers and industries within a 20 kilometer (12.5 mile) *franja* or strip running the length of the northern border and also within the previously established *perímetros libres* in Baja California and Quintana Roo. It also granted a 25 percent reduction in rail, air or maritime freight charges for goods sent to the border.¹⁸

In an effort to strengthen Mexican retailing in the border region, *PRONAF* supported projects such as the construction of a number of *centros comerciales*, or shopping malls, in the border cities, where shoppers could obtain both Mexican and foreign manufactured goods. Eventually, by the mid-70s, about a dozen such malls would be constructed in Ciudad Juárez, Matamoros, Piedras Negras, Nogales and Ensenada, at a cost of approximately 250 million pesos.¹⁹

Another of the program's priority areas was that of tourism. Efforts were made to encourage the construction of hotels and convention centers in the major border cities, as well as other services for tourists. The government attempted to attract larger tourist groups to the region, particularly families, by promoting interest in the country's national cultural values rather than in the border towns' traditional attractions: *cantinas*, gambling houses and prostitution. It was also hoped that tourists, when in Mexico, would venture further into the country's interior and stay for longer periods, instead of merely crossing the border for one day excursions.²⁰

¹⁶ México, *Programa Nacional Fronterizo*, pp. 12, 51-55, 94, 117.

¹⁷ México, *Programa Nacional Fronterizo*, p. 12; Bermúdez, *Rescate del mercado fronterizo*, pp. 21, 103-108.

¹⁸ By 1965 this freight discount had been raised to 25 percent for primary materials and 50 percent for finished goods. México, *Programa Nacional Fronterizo*, pp. 22, 27; Bermúdez, *Rescate del mercado fronterizo*, pp. 37-38; Nacional Financiera, S.A., "La política industrial," en *La economía mexicana*, ed. Leopoldo Solís, 2 vols. (México: Fondo de Cultura Económica, 1973), I:208-209.

¹⁹ México, *Programa Nacional Fronterizo*, p. 33; Bermúdez, *Rescate del mercado fronterizo*, pp. 45-47, 106-108, 137; Mario Arriola Woog, *El Programa Mexicano de Maquiladoras: una respuesta a las necesidades de la industria norteamericana* (Guadalajara, Jal.: Instituto de Estudios Sociales, Universidad de Guadalajara, 1980), p. 108n.14; México, Secretaría de Industria y Comercio, *La frontera norte: diagnóstico y perspectivas* (México: Secretaría de Industria y Comercio, 1975), p. 135. In August 1973, following a labor dispute, streetcar service between El Paso and Ciudad Juárez was also terminated in an effort to prevent Mexican shoppers from crossing over into El Paso. Martínez, *Border Boom Town*, pp. 124-125.

²⁰ México, *Programa Nacional Fronterizo*, pp. 12, 21, 30-33; México, *Programa Nacional*

The government hoped that increased economic activity would result in the creation of new sources of employment for Mexicans in the region and would help to improve living conditions. It also anticipated that the program would have considerable economic impact on other regions of the country linked to the border zone and thus stimulate the nation's economy as a whole.

PRONAF also aimed at providing a wide range of social services and cultural facilities to the inhabitants of the border area. *PRONAF* Centers were established in Ciudad Juárez and Tijuana, with museums and Mexican handicrafts centers. Certain cultural events were held periodically in these centers, such as art and photographic exhibitions, book fairs, etc. Several schools and libraries were also built in Tijuana, Ciudad Juárez and Matamoros.²¹

Although *PRONAF* resulted in a relative decline in the numbers of Mexicans shopping in U.S. stores, at least in the El Paso-Ciudad Juárez area, it failed to fulfil its larger goals.

Some concrete attempts were made to promote the development of border industries; to that end, *PRONAF* supported such projects as the establishment of an olive packing plant in Tijuana, a coffee company in Tecate, a pasteurization plant in Nogales, an oil filter factory in Reynosa and a milk products plant in Matamoros.²² Tracts of land were purchased for the future creation of industrial parks, such as one located five miles southeast of the *PRONAF* Center in Ciudad Juárez, which eventually became the Antonio J. Bermúdez Industrial Park. Large-scale industrialization, however, did not take place.²³

A major drawback of the *PRONAF* concept was the lack of financing or liquidity to carry out the wide range of projects on its agenda. Investment was heavily concentrated in the Ciudad Juárez region. About a third of the limited funding allocation --a little more than 411 million pesos in all (32.8 million dollars)-- was spent in that city and its environs.²⁴

Bermúdez resigned from the *PRONAF* directorship at the end of 1965. The program languished during the latter part of the 60s and was eventually phased out after 1971, during the Luis Echeverría presidency (1970-1976).²⁵ Despite the

Fronterizo/National Border Program: Ciudad Juárez, Chihuahua (México: *PRONAF*, 1961), pp. 20-29; Bermúdez, *Rescate del mercado fronterizo*, pp. 46-47.

²¹ México, *Programa Nacional Fronterizo*, pp. 19, 27, 33, 36; Bermúdez, *Rescate del mercado fronterizo*, pp. 41, 46, 91-94, 137.

²² Bermúdez, *Rescate del mercado fronterizo*, p. 52.

²³ Bermúdez, *Rescate del mercado fronterizo*, pp. 40-41, 54-55; Martínez, *Border Boom Town*, pp. 116-119; Mungaray Lagarda and Moctezuma Mungaray, "Disputa del mercado fronterizo," pp. 98-100; Sklair, *Assembling for Development*, pp. 28-29.

²⁴ Bermúdez, *Rescate del mercado fronterizo*, pp. 33-35.

²⁵ Bermúdez, *Rescate del mercado fronterizo*, pp. 100, 117; John S. Evans, "Taxation and Fiscal Policy," in *Borderlands Sourcebook: A Guide to the Literature on Northern Mexico and the American Southwest* (Norman, Okla.: University of Oklahoma Press, 1983), p. 172.

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limited nature of its achievements, *PRONAF*, with its emphasis on developing the economy of the border region, served as an important basis for the subsequent Border Industrialization Program, inaugurated in 1965. Nevertheless, *PRONAF*'s focus was primarily nationalistic and, rather than create an export based economy in the border region, its fundamental purpose consisted of stimulating Mexican production and the sale of Mexican goods. It was also intended to help in achieving the economic integration of the northern border areas with the rest of the republic.

Another borderlands initiative, which originated during this period and which would have an important bearing on the development of the maquila industry in Mexico, was the *Border Cities Association*. This bilateral organization was formed by the chambers of commerce on both sides of the border for the purpose of lobbying governments in order to develop and improve business in the border regions. Although by the end of the 1960s the Border Cities Association had all but become defunct, other formal and informal cross-border links between U.S. and Mexican business communities in the border region also emerged during this period. Many of these organizations, some of which were connected with the maquiladora sector, would survive into the present era and act as important "facilitator"²⁶ groups for the growth and expansion of the maquila industry in Mexico.

THE BORDER INDUSTRIALIZATION PROGRAM

The maquiladora industry had its real beginning in the Border Industrialization Program, which was inaugurated in May 1965, and formally instituted in October 1966.

The BIP originated as a response by the Mexican government to the cancellation by the U.S., in December 1964, of the *Bracero Program*, as a result of pressure from domestic labour unions.²⁷ The *Bracero Program*, officially called the *First International Migrant Labor Agreement/Primer Acuerdo Internacional de Trabajadores Migratorios*, had been initiated in 1942 due to the need to obtain Mexican labourers as a substitute for the great numbers of U.S. males who were entering the armed services at that time. The program's cancellation aggravated the problems of unemployment in the border areas. In the larger border cities, such as Ciudad Juárez, Tijuana, and Mexicali, between 40 and 50 percent of the

²⁶ Milton Jamail, "Voluntary Organizations along the Border," in *Mexico-United States Relations*, ed. Susan Kaufman Purcell (New York: Academy of Political Science, 1981), p. 84; Sklair, *Assembling for Development*, p. 31; Leslie Sklair, "The Maquila Industry and the Creation of a Transnational Capitalist Class in the United States-Mexico Border Region," in *Changing Boundaries in the Americas: New Perspectives on the U.S.-Mexican, Central American, and South American Borders*, ed. Lawrence A. Herzog, (La Jolla, Cal.: Center for U.S.-Mexican Studies, University of California at San Diego, 1992), pp. 71-72.

²⁷ Jorge Farías Negrete, *Industrialization Program for the Mexican Northern Border* (México: Editorial Jus, 1969), pp. 8-9.

population was unemployed. Many *braceros* who could no longer work in the U.S. elected to remain in northern Mexico instead of returning to their places of origin in the south.²⁸

The BIP also had its roots in the development of Export Processing Zones (EPZs) in Hong Kong, Taiwan, Malaysia, Singapore, the Philippines and other regions. The trend toward offshore manufacturing in the 1960's was a response to the decline in manufacturing profits in advanced industrialized countries due to rising wages, especially in those nations where unions were strong. The idea of locating some manufacturing processes abroad or in foreign countries, in those areas where labour costs were lower, was held to be one method of raising the profitability of operations. Generally, the EPZs performed assembly operations for multinational corporations as part of the then emerging phenomenon of global or international "production sharing." This practice of dividing manufacturing production among different countries emerged in response to the differences in wage rates between advanced industrialized countries and less developed countries. It also grew up in the wake of technological innovations that led to significant cost and time reductions in relation to transport and communications.²⁹

The idea for the creation of the BIP supposedly had its origins in a visit which Octaviano Campos Salas, Mexico's Secretario de Industria y Comercio (Secretary of Industry and Commerce), made to the Far East in 1965. Campos Salas had been invited by a number of U.S. industrialists to tour their plants in that region which assembled goods for American markets. Campos Salas evidently was favorably impressed with his visit since, shortly after his return to Mexico, the SIC went to work in order to establish foreign assembly plants in Mexico.³⁰

On May 20, 1965, the SIC formally announced the establishment of the *Programa de Industrialización Fronteriza*/Border Industrialization Program, or, as it was officially called, *Programa de Aprovechamiento de la Mano de Obra sobrante a lo*

²⁸ Otey M. Scuggs, "The Evolution of the Mexican Farm Labor Agreement of 1942," *Agricultural History*, XXXIV (July 1960), pp. 140-149; Manuel García y Griego, "The Importation of Mexican Contract Laborers to the United States, 1942-1962: Antecedents, Operation, and Legacy," in *The Border That Joins: Mexican Immigrants and U.S. Responsibility*, eds. Peter G. Browne and Henry Shue, eds., (Totowa, N.J.: Rowman & Allanheld, 1983), pp. 55-77. The Bracero Program of 1942-1964 was not the first such binational labor agreement, since there had been another such program in operation between the U.S. and Mexico during World War I. See Fernando Saúl Alanís Enciso, *El primer programa bracero y el gobierno de México, 1917-1918* (San Luis Potosí, S.L.P.: El Colegio de San Luis, 1999), pp. 11-44.

²⁹ Bennett Harrison and Barry Bluestone, *The Great U-Turn: Corporate Restructuring and the Polarizing of America* (New York: Basic Books, 1988), pp. 7-11; Patricia A. Wilson, *Exports and Local Development: Mexico's New Maquiladora Industry* (Austin, Tex.: University of Texas Press, 1992), pp. 7-13; Sklair, *Assembling for Development*, pp. 4-9.

³⁰ Raúl A. Fernández, *The United States-Mexico Border: A Political-Economic Profile* (Notre Dame, Ill.: University of Notre Dame, 1977), p. 134; Arreola Woog, *Programa Mexicano de Maquiladoras*, p. 50. For an interesting discussion of other accounts of how the maquiladora idea took root in Mexico, see Sklair, *Assembling for Development*, pp. 43-45.

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largo de la Frontera con Estados Unidos (Program for the Use of Excess Manpower in the Border Region adjacent to the U.S.). A month later, in June of that same year, the SIC, in conjunction with the Secretaría de Hacienda y Crédito Público (Secretary of Finance and Public Credit), issued a set of rules or guidelines which, together with the previous announcement, specified the terms under which the BIP was to operate. Raw materials and components could be imported into Mexico duty free to be assembled and subsequently reexported as finished products, as long as they remained in-bond while in Mexico. The capital equipment used to process them could also be imported duty free. The establishment of this framework of operation marks the birth or creation of the maquila industry, with the term "in-bond industry" used as its official designation. The maquila industries could also, by way of permits issued by the Secretaría de Gobernación (Secretary of the Interior), bring into Mexico the technicians and other foreign personnel required for the management and maintenance of the plants. Such operations would only be allowed, however, within a 20 kilometer (12.5 mile) strip along Mexico's northern border with the U.S. and were limited to PRONAF administered industrial parks. The companies involved had to rent their localities and the foreign portion of the social capital could not exceed 49 percent of the shares.³¹

The establishment of maquila plants in Mexico was facilitated by two important modifications to the U.S. Tariff Schedules during the previous decade. The first of these, Item or Fraction 806.30, implemented in 1956 by way of the Customs Simplification Act of that year, contained provisions for facilitating the processing in foreign countries of metal products of U.S. origin, except in the case of precious metals. Metal products processed partially in foreign countries were taxed only on the value of the processing carried out abroad or in the foreign country. A more important provision, in terms of the future development of the maquiladora industry, was the addition, in 1963, of Item 807.00, which had its origins in the Tariff Act of 1930. Fraction 807.00 provided that those products which were assembled outside the U.S. from materials and components of U.S. origin would be charged as a tariff only for the value added to them in foreign countries before being shipped or re-exported to the U.S. The value added consisted principally of labour and overhead costs. The original purpose of these additions was to maintain U.S. production by stimulating the utilization of U.S. components in foreign-made products. With regards to the labour aspects of production, they caused a shift whereby U.S. companies came to increasingly rely on low-wage unskilled labor in Third World or developing countries for the assembling of products for domestic markets.³²

³¹ Donald W. Baerresen, *The Border Industrialization Program of Mexico* (Lexington, Mass.: D.C. Heath and Company, 1971), p. 3; Davis, *Industria maquiladora*, pp. 23-25; Arriola Woog, *Programa Mexicano de Maquiladoras*, p. 77. See also José Luis Santiesteban Fernández, "Algunas consideraciones sobre los progresos de industrialización fronteriza, sus efectos y perspectivas," in *La frontera del norte: integración y desarrollo*, comp. Mario Ojeda (México: El Colegio de México, 1981), p. 238.

³² Davis, *Industria maquiladora*, pp. 18-19; Joseph Grunwald and Kenneth Flamm, *The Global Factory: Foreign Assembly in International Trade* (Washington, D.C.: The Brookings Institution, 1985),

In terms of labour wages, Mexico could not hope to compete with the Asian countries. Nevertheless, Mexico's minimum wage levels were still significantly much lower than those of industrialized, developed countries. Owing to a moderate rate of inflation, from 1964-1973 minimum wage rate levels in Mexico were determined on a biannual basis. The medium rate of increase for this period was at the rate of 13.97 percent every 2 years. At the end of the 1960s, the Mexican minimum wage in the northern border region on the average was between a quarter and a third of factory workers' salaries in the U.S.³³

Other considerations made Mexico even more attractive for potential investors. The country's proximity to the U.S. meant lower transportation costs, as well as the ease in supplying the foreign plants with machinery, components and materials in general. Proximity would also facilitate the coming and going of U.S. supervisors and technicians to train personnel and carry out repairs and maintenance tasks. Mexico's political stability was an additional consideration, since, given the context of the Cold War period, the country appeared to offer a more secure environment for manufacturing purposes than those beset by military coups or communist takeovers.³⁴

By allowing the introduction of foreign assembly plants in the border areas, Mexico hoped to provide sources of employment in that region as well as to acquire additional foreign exchange. The income paid out in wages would also, it was deduced, help to elevate the standard of living for border people in general. There was also the potential for technology transfer in terms of the introduction of modern manufacturing technologies, as well as increased consumption of Mexican raw materials and components. The maquiladoras, in the long run, would help to enlarge the northern borderlands manufacturing base. This latter consideration was important in terms of decentralizing Mexico's industrial production. In addition, during the 1960s, manufactured goods were increasingly becoming more exportant in Mexico's export trade.³⁵

pp. 34-37 (Appendix: Explanation of Items 806.30 and 807.00); Naciones Unidas, Comisión Económica para América Latina y el Caribe, *México: la industria maquiladora* (Santiago de Chile: CEPAL, 1996), pp. 106-107.

³³ Ernesto Galarza, *Merchants of Labor: The Mexican Bracero History; An Account of the Managed Migration of Mexican Farm Workers in California, 1942-1960* (Charlotte, Cal.: McNally and Loftin, 1974), p. 13; Albert Levy Oved and Sonia Alcocer Marbán, *Las maquiladoras en México* (México: Fondo de Cultura Económica, 1983), pp. 56-58. A discussion of then-existing salary rates and levels for the Mexican border region states is given in Farías Negrete, *Industrialization Program*, pp. 55-58.

³⁴ Farías Negrete, *Industrialization Program*, pp. 45-46; Arreola Woog, *Programa Mexicano de Maquiladoras*, pp. 52-54; Sklair, *Assembling for Development*, pp. 9-10.

³⁵ Gustavo Díaz Ordaz, *Primer informe de gobierno rendido al pueblo mexicano por conducto del H. Congreso de la Unión*, 2da. ed. (México: Ediciones del Centro de Estudios Nacionales, 1965), pp. 15-16; "Protección a la industria del país y más comercio exterior: asistencia técnica a los Estados para más zonas industriales," *El Sol de México*, 1 de septiembre de 1965, en Díaz Ordaz, *Primer informe*, p. 175; "Facilidades para industrializar el norte del país," *El Sol de México*, 1 de septiembre de 1965, en Díaz Ordaz, *Primer informe*, p. 178; Gustavo Díaz Ordaz, *Segundo informe que rinde al H. Congreso de la Unión el C. Presidente de la República Lic. Gustavo Díaz Ordaz* (México: Secretaría de Gobernación, 1966), p. 32; Farías Negrete, *Industrialization Program*, pp. 13, 20. For the change which

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Although the relief of the unemployment situation caused by the *Bracero Program's* cancellation may have constituted the more immediate short-range objective of the BIP, in reality, it was conceived and implemented in order to transform the largely isolated and underdeveloped northern border region into a dynamic development area for the entire nation. The Mexican government harbored the hope that, in time, it would succeed in creating large numbers of jobs, generate substantial quantities of foreign exchange and eventually enable the country as a whole to create its own manufacturing export industries.³⁶

In a sense, the free zones had already possessed much the same functions as the BIP.³⁷ However, for all intents and purposes, the BIP transformed the whole of the northern border region into a free zone. It also marked a significant shift in U.S. investment in Mexico. Prior to 1965, U.S. investment in that country had been concentrated in the extractive industries; by the late 1960s and early 1970s, however, it had shifted to factory assembly and production. The BIP also constituted a reversal of the traditional Mexican policy of attempting to bolster the northern border economy against U.S. economic penetration and dominance and of attempting to integrate the borderlands with the national economy.

In June 1966 the Secretaría de Industria y Comercio, conjointly with the Secretaría de Hacienda y Crédito Público, defined the terms under which the in-bond plants would operate. These rules of operation, which came to be known as the *Plan de Cinco Puntos* or *Five Point Plan*, were published by the government in separate Spanish and English versions in 1968 and 1969 respectively. These dispositions were only of an administrative nature and there was, as yet, no regulatory legislation on the matter.³⁸

The first machinery and manufacturing materials for the plants' establishment began arriving before the end of 1966. Over the next three years, from 1966 to 1969, the industry grew rapidly. By 1967, the BIP had been fully implemented, with a total of 57 maquiladoras and 4,257 employees. The cities involved were Matamoros, Nuevo Laredo, Ciudad Juárez, Mexicali and Tijuana. Maquiladoras were established in Nogales and Agua Prieta somewhat later, in 1967 and 1968, respectively.³⁹

Mexican economic thought concerning exports underwent during this period, see Fernández, *United States-Mexico Border*, pp. 133-134; and Raúl A. Fernández, *The Mexican-American Border Region: Issues and Trends* (Notre Dame, Ind.: University of Notre Dame, 1989), p. 104.

³⁶ Sklair, *Assembling for Development*, pp. 17, 27.

³⁷ As previously indicated, Mexicali and Tijuana, for example, already lay within the *zone libre* or free trade area and were therefore not subject to fiscal norms applied to the other communities along the border.

³⁸ Farías Negrete, *Industrialization Program*, pp. 9-12; "Régimen legal y de promoción de las industrias fronterizas," *Comercio Exterior* XIX:11 (November 1969), pp. 865-866; "Empresas maquiladoras fronterizas: facilidades aduaneras y debate sobre el futuro," *Comercio Exterior*, XX:6 (June 1970), p. 453; Arriola Woog, *Programa Mexicano de Maquiladoras*, p. 77.

³⁹ Martínez, *Border Boom Town*, p. 132.

By the end of the 1960s, the number of plants had risen to 147, with a total of 17,000 employees, mostly women. Mexico ranked third as exporter to the U.S. of products registered under Item 807.00, but occupied the first place in terms of the value of U.S. exported components and re-exported to that country. Although the majority of the maquiladoras were concentrated in Tijuana and Mexicali, the Ciudad Juárez area constituted the preferred locality for investors on account to its proximity to El Paso, the largest and most important border city in the U.S., as well as its urban and industrial infrastructure.⁴⁰

From the early 1970s on, the maquilas began to exert a considerable impact on the manufacturing industry in Mexico's northern border region with Ciudad Juárez assuming the lead in terms of number of plants and personnel. Up until this time, the border maquiladoras dealt principally with the assembly of electronic components, mainly those of television and radio sets, and garment fabrication. The maquila sector as a whole was characterized by the lack of diversity in terms of production and an increasing specialization in electronic products.⁴¹

In mid-March 1971, by which time there had been established more than 200 plants with about 30,000 workers --again, predominantly female-- , the Luis Echeverría government gave the maquiladoras their first formal legal framework of operation with the addition of Article 321 to the *Código Aduanero de la Federación* (Customs Code of the Federation). This amendment to the customs code functioned along the lines of fractions 806.30 and 807.00 of the U.S. customs code in permitting in-bond manufacturing in Mexico. Maquiladora plants were only permitted within a 20 kilometer (12.5 mile) wide coastal strip. Along the western side of the border, companies could no longer obtain the same privileges as maquiladoras under the region's free zone category (in Baja California and Sonora), but instead were required to register themselves as such.⁴² An additional decree, emitted a month later, allowed the establishment of maquila and tourist enterprises in coastal and border regions by means of *fideicomisos* or national credit institutions, thus allowing them to circumvent the prohibition contained in Article 27 of the 1917 Constitution which had hitherto prohibited foreign ownership in those areas.⁴³

⁴⁰ Jorge Carrillo and Alberto Hernández, *Mujeres fronteras en la industria maquiladora* (México: Consejo Nacional de Fomento Educativo/Secretaría de Educación Pública/Centro de Estudios Fronterizos del Norte de México, 1985), pp. 87-89; Leslie Sklair, "The Maquila Industry and the Creation of a Transnational Capitalist Class in the United States-Mexico Border Region," in Herzog, *Changing Boundaries*, pp. 82-86.

⁴¹ Baerresen, *Border Industrialization Program*, p. 6; Carrillo and Hernández, *Mujeres fronteras*, pp. 91-92.

⁴² "Reglamento del Párrafo 3o. del Artículo 321 del Código Aduanero de los Estados Unidos Mexicanos," *Diario Oficial*, March 17, 1971; "Nuevo reglamento para las industrias maquiladoras de exportación," *Comercio Exterior*, XXI:4 (April 1971), pp. 290-291; "Impulso al desarrollo de la zona fronteriza norte," *Comercio Exterior*, XXI:5 (May 1971), pp. 387-388; México, Secretaría de Industria y Comercio, *Programa de Industrialización de la Frontera Norte de México* (México: Secretaría de Industria y Comercio, 1971), pp. 12-16.

⁴³ *Diario Oficial*, April 30, 1971.

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With the publication of these rules, the application procedures for establishing plants became fairly bureaucratic. Foreign companies and investor groups wishing to establish maquila plants in Mexico, which could be either of foreign or Mexican nationality, or even both, forwarded applications and other papers requesting authorization for the importation of goods and also for obtaining in-bond status for them, to the Secretaría de Industria y Comercio for approval. They would also be required to register with Mexico's Secretaría de Hacienda for taxation purposes. They also had to register with the Oficina Central de Estadística and, as a requirement of every employer organization in Mexico, the Instituto de Seguro Social (the Mexican social security or medical insurance system for government or government affiliated workers).⁴⁴

In May 1971, in order to better coordinate development in the border region, the Echeverría government established the Comisión Intersecretarial para el Fomento Económico de la Franja Fronteriza Norte y de las Zonas y Perímetros Libres (Intersecretarial Commission for the Economic Development of the Northern Border Zone and of the Free Trade Zones and Ports). This new Commission had as its main area of concern the development of the maquilas.⁴⁵ In October 1972, the new ruling was modified to allow the establishment of plants in Mexico's interior, with the exception of those areas which were already highly industrialized. Those companies which operated with temporarily imported machinery and which exported the totality of their production could also qualify as maquiladoras, as well as those industrial plants which were dedicated partly or wholly to exporting and as long as the direct cost of manufacturing their export products was lower than 40 percent.⁴⁶ In June 1973, maquiladoras were also exempted from the law which limited foreigners to a maximum of 49 percent ownership of Mexican firms. Henceforth, with the exception of some minor restrictions in the areas of textiles and apparel, maquiladoras could be 100 percent foreign-owned.⁴⁷

⁴⁴ México, Secretaría de Industria y Comercio, *Programa de Industrialización*, pp. 5-8, 17-26; Sklair, *Assembling for Development*, p. 46; Wilson, *Exports and Local Development*, pp. 38, 139n.4.

⁴⁵ "Decreto por el que se crea la Comisión Intersecretarial para el Fomento Económico de la Franja Fronteriza Norte y las Zonas y Perímetros Libres," del *Diario Oficial*, May 11, 1972, en *Antología de la Planeación en México, 1917-1985*, 22 vols. (México: Secretaría de Programación y Presupuesto, 1985), IV:651-652;

María del Rocío Barajas Escamilla, "Estructura y crecimiento de la industria maquiladora en México, 1965-1986," in *Maquiladoras: Primera Reunión Nacional sobre Asuntos Fronterizos, Monterrey, 21-22 de mayo de 1987*, ed. Arturo García Espinosa (Monterrey, N.L.: Asociación Nacional de Universidades e Institutos de Enseñanza Superior/Universidad Autónoma de Nuevo León, 1988), pp. 33-34.

⁴⁶ "Reglamento del Párrafo Tercero del Artículo 321 del Código Aduanero de los Estados Unidos Mexicanos," *Diario Oficial*, October 31, 1972; Arriola Woog, *Programa Mexicano de Maquiladoras*, pp. 86-87.

⁴⁷ The text of this ruling, "Resolución General Número 1: Empresas Maquiladoras," approved by the Comisión Nacional de Inversiones Extranjeras on June 7, 1973, may be found in the *Diario Oficial*, November 5, 1975. Somewhat later, the maquiladoras were also allowed to sell limited quantities of assembled goods which did not compete with domestically produced goods, as long as import duties were paid on them. Mexican manufacturers could also devote part of their productive capacity to assembly production.

As a result of the favorable concessions granted to the industry by the Echeverría government, the number of plants grew from 120 in 1970 to 455 in 1974, and the number of workers from 20,327 to 75,977.⁴⁸ The U.S. recession of 1973-1974 provoked the first major crisis in the maquila industry, forcing many plants to either close or reduce their labor force. The industry rebounded in the late 1970s with the recovery of the U.S. economy, as well as labor and management concessions made to the maquiladora owners by the Mexican government to enable their operations to remain competitive in the global market. This process included the devaluation of the peso by the Echeverría government near the end of August 1976, which substantially reduced maquiladora labor costs.⁴⁹

Much of the development of the maquila in Mexico from 1975 on remained linked to the costs of labour. By the late 70s and early 80s, the government had come to the realization that the maquiladoras had become an entrenched and significant part of the borderlands economy and that their future would depend in part on its policy towards the companies. Successive currency devaluations throughout the late 1970s and 1980s, culminating with that of 1994, ensured that the cost of Mexican labor would remain competitive with labor costs in other countries. From 1983 on, the government became a strong supporter and ally of the maquila, mainly as a result of liberalizing reforms which the Mexican economy was subjected to during this period as well as the general trend towards trade globalization.⁵⁰

CONCLUSIONS

The establishment of the maquila in Mexico was closely related to the federal government's concern for the development of the northern borderlands as a way to protect this region from U.S. economic and cultural influence, and, at the same time, to link it more closely with the country's hinterland. *PRONAF*, which preceded the BIP and the maquiladoras' inception, was essentially nationalistic in focus and, in its economic aspects, was intended to stimulate the production and

⁴⁸ Arriola Woog, *Programa Mexicano de Maquiladoras*, pp. 89-90. For other figures regarding the growth of the maquiladoras in this period, see "Las interrogantes de las maquiladoras," *Expansión*, XI:163 (April 16, 1975), pp. 58-59.

⁴⁹ Arriola Woog, *Programa Mexicano de Maquiladoras*, pp. 91-95; Carrillo and Hernández, *Mujeres fronterizas*, pp. 94-95; Jorge Carrillo, "The Evolution of the *Maquiladora* Industry: Labor Relations in a New Context," in *Unions, Workers, and the State in Mexico*, ed. Kevin J. Middlebrook (La Jolla, Cal.: Center for U.S.-Mexican Studies, University of California at San Diego, 1991), p. 217.

⁵⁰ "Programa Nacional de Fomento Industrial y Comercio Exterior, 1984-1988," in *Antología de la Planeación*, XII:179-201; René Villarreal Arrambide, "The New Industrialization Strategy in Mexico for the Eighties," in *Industrial Strategy and Planning in Mexico and the United States*, ed. Sidney Weintraub (Boulder, Col.: Westview Press, 1986), pp. 51-59; Mauricio de María y Campos, "Mexico's New Industrial Development Strategy," in *The United States and Mexico: Face to Face with New Technology* (Washington: Overseas Development Council, 1987), pp. 68-72; Angub P., "Foreign Investment," pp. 140-143; Carrillo, "Evolution," pp. 215-217, 218-219, 221.

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trade of Mexican goods rather than establish an export based economy in the border region.

Although the more immediate reason for the creation of the BIP was to generate employment in the wake of the *Bracero Program's* cancellation in late 1964, it also came into being as a response to the global trend toward offshore manufacturing during that period. Owing to Mexico's advantages relative to this type of operations in comparison with other areas of the world, the BIP appeared to offer a viable possibility for both alleviating the problem of unemployment and promoting industrial development in the northern border region, however temporary it might prove to be.

The Mexican government hoped that, over time, the maquila plants would help to foster, by means of technology transfer and the demand for raw materials and components, the development of domestically owned and managed industry and manufacturing enterprises in the north. The need to create jobs in sufficiently large numbers to provide employment for Mexico's increasing population, as well as the acquisition of foreign exchange, also provided powerful incentives behind the creation and maintenance of the program.

At the same time, however, the BIP marked an important shift in Mexico's traditional policy of attempting to counteract U.S. influence and economic penetration in the north. Instead of promoting economic links between that region and the interior, the steadily increasing numbers of maquiladoras in the border areas served to accelerate the formation of linkages with the U.S. southwest and its economy, as well as to increase the economic presence of the U.S. in Mexico in general. Even the fact that the maquiladoras had provided employment for thousands of workers remained somewhat illusory, since women formed the bulk of the workforce in many factories. The maquilas as a source of work were dependent on the existence of the plants, which was not in itself a guarantee that they would not be shut down at any time so that operations could be moved to a more cost-competitive region. Also, as critics pointed out, a portion of wages ended up being spent in border towns in the U.S.⁵¹

The accelerated growth of the maquila in general during its first decade (1965-1975) induced the Mexican government to continue its promotion and, during the Echeverría administration, make a number of concessions which lifted some important restrictions on foreign investment and expanded the maquila's field of operations in Mexico. Such conciliatory policies, which would vary in nature with each successive presidential administration, would assure the continued growth and operation of the maquila in Mexico into the present era of NAFTA.

⁵¹ The proportion of wages spent on the U.S. side is a matter of debate. Those maquiladora employees who can afford to shop in the U.S. are mostly plant administrators and technicians. For a fairly detailed analysis of this question, see Sklair, *Assembling for Development*, pp. 204-206.