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EXPORT-ORIENTED INDUSTRIALIZATION AND THE DEMAND FOR FEMALE LABOR: Puerto Rican Women in the Manufacturing Sector, 1952-1980

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This article examines the relationship between Puerto Rico's export-oriented development program and the demand for women workers in the manufacturing sector from 1952 to 1980. Its central proposition is that the consistently high proportion of women in the manufacturing sector was the result of an employment structure characterized by specialization in assembly-type activities and low wages. Although the Puerto Rican government pursued a development strategy designed to increase job opportunities for men, the manufacturing industries attracted to the island by its export-oriented industrialization policies generated a strong demand for women workers. The apparent contradiction between the employment practices of manufacturing establishments and government policies is due to the restructuring of the global economy and the emergence of a new international division of labor that brought increasing numbers of women into the labor market.

The gendered division of labor is manifested in the differential distribution of men and women in the labor force. If men and women are concentrated in gender-typed industries and occupations, they are operating in different labor markets, and hence, they are relatively noncompetitive (Oppenheimer 1977). Changes in the labor force participation of men and women are the result of differences in the rates of growth of specific industries and occupations, since women enter and men stay in the labor force in proportion to the rates of growth of sectors in which they are typically employed. In other words, changes in the relative participation of women and men in the labor force are not solely determined by general changes in the economy but by

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changes in the demand for labor in female-typed and male-typed industries and occupations.

Several studies have noted the high proportion of women working in Puerto Rico's manufacturing establishments (History Task Force 1979; Reynolds and Gregory 1965; Silva-Bonilla 1982; U.S. Department of Commerce 1979). There is extensive evidence that manufacturing activities historically played a key role in the proletarianization of Puerto Rican women (Azize 1979; Picó-Vidal 1980; Rivera-Quintero 1980). Although women do not represent the majority of the Puerto Rican manufacturing work force, their share of total manufacturing employment is greater than their share of all jobs in the Puerto Rican economy. While women represented 36.5 percent of Puerto Rico's total work force in 1980, they represented 48.3 percent of the manufacturing work force.

As in other developing countries, industrialization in Puerto Rico did not exclude women from the paid labor force or marginalize them in the informal economy (Elson and Pearson 1981; Lim 1978; Safa 1981). Rather, the expansion of manufacturing activities in those countries that resulted from the restructuring of the global economy and the emergence of a new international division of labor generated a strong demand for women workers (Fernández-Kelly 1985; Frobel, Heinrichs, and Kreye 1980; Sassen 1988). Where job opportunities for men workers declined, developing countries have experienced a growing feminization of their labor forces.

This article analyzes the gender-typing of industries by Puerto Rico's export-oriented industrialization program and the resultant persistently high proportion of women in Puerto Rican manufacturing from 1952 to 1980. In spite of an official public policy to promote more jobs for Puerto Rican men, the industries attracted by export-oriented incentives rely extensively on women workers.

OPERACIÓN MANOS A LA OBRA (OPERATION BOOTSTRAP)

In 1950, the government of Puerto Rico launched *Operación Manos a la Obra* (Operation Bootstrap), a modernization program that aimed to industrialize the economy and improve the welfare of the population. Operation Bootstrap relied on incentives to private investors, both local and foreign, in order to finance the industrialization of the Puerto Rican economy. The principal features of Operation Bootstrap are well known: tax exemptions to new industries, subsidized factory space, recruitment of trained personnel, and assistance in obtaining loans. The government of Puerto Rico also made a commitment to develop the island's economic infrastructure by building

TABLE 1: Puerto Rican Labor Force Participation Rates by Gender and Women as a Percentage of the Total Employed Population, 1950 to 1980

	<i>Labor Force Participation Rate</i>		<i>Women as Percentage of Total Employment</i>
	<i>Men</i>	<i>Women</i>	
1950	70.6	21.2	23.4
1960	65.8	20.0	24.4
1970	58.8	24.5	30.8
1980	54.4	29.1	36.5

SOURCE: U.S. Bureau of the Census (1953, 1973, 1983).

NOTE: 1970 and 1980 refer to population 16 years and older, otherwise the data refer to population 14 years and older.

the transportation, energy, and communications systems, and improving the educational and health systems of the island. Puerto Rico offered other important incentives: a large labor pool, a government willing to accommodate the demands of foreign capital, and financial and military protection to investments assured by the island's colonial relationship with the United States. Consequently, that Caribbean nation became a modern industrial society within a short period of time.

The expansion of the manufacturing sector under Operation Bootstrap followed three distinct stages. Most of the industries established during the first stage of the program (1950-63) were labor-intensive light manufacturing like apparel and textiles. The second stage (1967-77) was characterized by the growth of capital-intensive heavy industry such as petrochemicals and pharmaceuticals. The third and current stage has been characterized by the rapid expansion of high-technology industries, such as electronics and the production of professional and scientific instruments.

Throughout the Operation Bootstrap period, employment in manufacturing increased at a moderate rate, and its share of total employment remained stable at 20 percent. Manufacturing generated about 30 percent of all net *new* jobs created by the Puerto Rican economy between 1950 and 1980. During the 1960s, the manufacturing sector overtook agriculture as the leading employer in the island, a position now held by the professional and related services sector.

Between 1950 and 1980, the labor force participation rate of Puerto Rican men declined significantly, from 70.6 to 54.4 percent. Although Puerto Rican women's labor force participation dropped between 1950 and 1960, it has increased steadily since, and by 1980 it reached a new height of 29.1 percent. Moreover, women's share of total employment increased from 23.4 to 36.5 percent. Consequently, the Puerto Rican labor market experienced a growing feminization of its ranks during the past three decades. (See Table 1.)

During the same period, women's employment in manufacturing grew at a lower rate than the overall growth of the total manufacturing labor force. While women's jobs increased by 149 percent, total manufacturing employment increased slightly faster at 157 percent. The proportion of women in manufacturing went from 49.9 percent in 1952 to 48.3 percent in 1980. (See Table 2.)

DISTRIBUTION OF PUERTO RICAN WOMEN AND MEN WORKERS IN MANUFACTURING

The distribution of women in Puerto Rico's manufacturing sector differs from that of men. During 1950-80, the Puerto Rican manufacturing work force experienced significant changes in size and composition, and the employment of women reflected many of those changes. In 1952, the two leading sources of manufacturing jobs were the apparel and food industries. Two non-durable light industries, apparel and tobacco, employed 75 percent of all women in the manufacturing sector. The food industry was the principal source of manufacturing jobs for Puerto Rican men, an industry still today dominated by men.

Almost three decades later, men and women are still concentrated in different manufacturing sectors, although the electronics and apparel sectors were important sources of employment for both. Men are still found in larger numbers in the food industry, and new industrial sectors, such as the chemical and petroleum industries employed significant numbers of men. In 1980, the apparel, electronics, and the professional and scientific instruments industries employed 63.1 percent of all women in the manufacturing sector. Moreover, five industrial sectors had a majority of women workers: apparel, leather, textiles, electronics, and professional and scientific instruments.

A closer examination of employment changes between 1952 and 1980 indicates why women have a strong presence in the manufacturing sector. They have been concentrated in the industry with the largest number of jobs (apparel), as well as in some of the fastest-growing sectors (electronics and professional and scientific instruments). However, the expansion of female employment, with the exception of the 1970-80 decade, trailed the expansion of the manufacturing sector. Therefore, women's share of total employment dropped slightly.

In the decades examined, the female manufacturing labor market suffered in three ways: (1) a dramatic drop in tobacco manufacturing, an industry that played a historical role in incorporating women into the labor force (Azize 1979); (2) a sluggish apparel labor market; and (3) a below-average presence

TABLE 2: Employment in Puerto Rico's Manufacturing Industries and Percentage of Women in Major Industry Group, 1952-1980

	1952		1955		1960		1965		1970		1975		1980	
	% of		% of		% of		% of		% of		% of		% of	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
All industries	60,056	49.9	71,691	52.5	81,740	47.2	111,953	47.3	136,737	48.5	136,617	49.0	154,643	48.3
Food and kindred products	14,130	6.5	13,747	9.6	15,883	10.7	19,877	13.5	20,580	15.8	22,950	23.6	23,368	24.5
Tobacco manufacture	10,800	81.9	11,929	80.6	5,628	74.0	8,446	59.9	6,120	59.8	4,980	52.1	2,104	45.8
Textile mill products	3,103	41.7	3,971	56.3	5,018	47.8	5,987	47.7	8,904	53.8	4,898	56.8	3,356	52.2
Apparel and related products	15,176	90.0	18,736	89.7	22,409	88.4	30,809	87.4	36,819	86.5	36,075	86.6	33,575	83.9
Lumber, wood, and related products	3,031	4.3	3,139	4.9	3,454	6.6	4,729	6.8	5,089	7.7	3,891	11.6	3,573	12.5
Paper, printing, publishing, and allied products	1,578	11.7	1,962	11.8	2,538	12.6	3,255	13.1	3,950	16.7	3,812	15.6	5,051	18.4
Chemical and allied products	989	15.8	1,630	14.3	1,921	17.0	2,477	19.7	4,890	22.5	10,615	27.5	15,606	32.8
Petroleum, rubber, and related products	N.A.	—	N.A.	—	2,359	18.5	4,072	24.9	6,964	26.0	5,364	21.4	7,726	24.5
Leather and leather products	1,972	75.5	2,272	62.2	3,881	63.1	8,018	64.9	8,309	70.6	5,161	71.2	6,642	68.0
Stone, clay, and glass products	3,035	11.4	3,884	9.6	4,458	7.5	5,856	5.7	6,838	5.6	6,169	8.5	4,816	11.9
Metal products	279	5.3	2,385	10.8	2,670	10.1	4,208	8.4	6,066	7.6	5,597	7.0	5,349	9.5
Machinery, except electrical and transportation equipment	1,082	4.0	N.A.	—	1,049	6.6	1,725	6.7	1,937	8.6	3,469	28.1	7,931	39.9
Electrical machinery, equipment, and supplies	748	55.7	2,087	58.9	4,502	49.6	6,310	52.5	10,716	54.0	9,919	55.1	18,024	58.0
Professional and scientific instruments	525	60.0	1,195	52.4	1,772	67.7	2,383	63.3	5,246	68.7	10,829	65.9	13,607	63.1
Miscellaneous	3,608	60.4	4,754	66.8	4,198	62.8	3,801	63.2	4,309	58.8	2,888	56.9	3,915	47.7

SOURCE: Department of Labor (P.R.; 1953, 1956, 1961, 1966, 1971, 1976, 1981).

in some key capital-intensive sectors, such as the chemical industry. Puerto Rico's success in attracting heavy industries with many male-typed jobs and competition with other sectors of the economy certainly should be considered in explaining the slow rate of growth of women's employment in this sector. Women, however, were the beneficiaries of the post-1975 recovery of the manufacturing labor market. The postrecession recovery was led by four capital-intensive industries (electronic, chemical, machinery, and professional and scientific instruments), two of which have a majority of women workers. The electronic industry alone added over 8,000 jobs from 1975 to 1980.

CHARACTERISTICS OF PUERTO RICAN FEMALE-DOMINATED INDUSTRIES

Five manufacturing sectors have a majority of women workers. They are apparel, textiles, leather products, electrical machinery, and professional and scientific instruments. In 1980, these female-dominated industries employed 48.6 percent of all manufacturing workers, but 71.5 percent of all women workers in the manufacturing sector. An analysis of the type of manufacturing activity, proportion of production workers, size of establishments, average level of wages and rate of profit, ownership, and product destination provide strong evidence that Puerto Rican women are an integral component of Puerto Rico's export-oriented manufacturing strategy.

At first sight, female-dominated industries seem to defy simple classification. They cannot be classified as labor intensive, non-durable industries because electrical machinery and professional and scientific instruments are durable goods, and their production is capital-intensive. The common denominator of female-dominated industries is assembly-type operations. Even the sophisticated operations of the professional and scientific instruments industry, such as making heart pacemakers are, essentially, the assembly of very small units.

Female-dominated industries employ a high proportion of Puerto Rico's production workers. In 1980, the average proportion of manufacturing workers engaged directly in production activities was 80.5 percent. All female-dominated industries were above that average: leather, 93.9 percent; apparel, 93.4 percent; textile, 91.4 percent; electrical, 86.5 percent; and professional and scientific instruments, 85.2 percent. Only two other industrial sectors had an above-average proportion of production workers, the tobacco (93.2 percent) and the miscellaneous (87.5 percent) industries.

Female-dominated manufacturing establishments have a high number of employees. While manufacturing establishments employed on the average 65.4 workers, in 1980, four female-dominated industries were among the top five industries with 100 or more employees per establishment. The industries with the largest concentration of workers were leather (166.0), professional and scientific instruments (151.1), electrical machinery (125.1), textile (111.8), and tobacco (100.1). The sixth largest establishments, with an average of 99.9 employees per establishment, were apparel manufacturers.

Real wages in female-dominated industries in 1980 were below or barely above average. The average weekly salary in Puerto Rico in 1980 was \$70.29. Only one female-dominated industry (electrical) was among the five industries that paid the highest wages. Three female-dominated industries (apparel, textiles, and leather goods) were among the five industries with the lowest salaries. The highest salaries were paid by the chemical (\$102.44), machinery (\$80.70), metal (\$80.44), electrical (\$76.49), and paper goods (\$75.51) industries. The lowest salaries were paid by tobacco (\$64.26), lumber (\$56.19), leather (\$57.28), textile (\$55.85) and apparel (\$54.12) industries. The corsets and related garments industry, which employed 26.3 percent of all women in the apparel sector, paid even lower salaries: an average of \$52.87 per week. The average weekly salary in the professional and scientific instruments industry (\$73.99) was only slightly above average.

Female-dominated industries were mostly foreign-owned or subsidiaries of United States industries, and they produced for the U.S. and foreign markets. Although data on ownership is very hard to find, the evidence available indicates that the proportion of foreign and U.S. ownership among female-dominated industries in 1979 was leather, 88.0 percent; electrical, 82.0 percent; professional and scientific instruments, 82.5 percent; and apparel, 53.6 percent. The textile industry is mostly foreign owned also, but no specific figures are available (U.S. Department of Commerce 1979, 2:246). The Economic Development Administration (EDA) reports that some firms in the professional and scientific instruments, electrical, and apparel industry are in the Fortune 1000 list (EDA 1982, 1983a, 1983b). Other industries with a high proportion of foreign-owned establishments were the pharmaceutical (90 percent), paper (78 percent), food (71 percent), and machinery (56 percent) industries. The lumber, rubber, and metal industries had greater or equal proportions of native owners.

In summary, the data available strongly indicate that Puerto Rican women were not employed by declining manufacturing industries. Quite the contrary, the majority of the women in Puerto Rico's manufacturing sector are working in large assembly-line factories that are also concentrated in rela-

tively low-paid industries with lower rates of profits. Puerto Rican women did not remain on the sidelines of the export-oriented industrialization process but were key actors in this development strategy. In actuality, I would argue, low-paid women workers are the key to the survival of these highly competitive industries in the new global economy.

GENDER AND DEVELOPMENT POLICIES

In any country with strong patriarchal traditions in which a growing number of men cannot find a foothold in the labor force, one should not be surprised by expressions of concern over economic development policies that seem to benefit women more than men. Many Puerto Rican government officials have expressed their concern with a development strategy that seemed to be ineffective in alleviating male unemployment (Barton 1966; Reynolds and Gregory 1965). Some officials recognized that there is a relationship between the island's manufacturing structure and the gender composition of its labor force.

Various government documents, both public and private, indicate that gender considerations played a conscious role in the formulation of development policies in Puerto Rico. There is documentation that the Commonwealth of Puerto Rico assigned a top priority status to the reduction of male unemployment and that it was not concerned with female unemployment. For example, in 1960, the women's share of the labor force dropped to its lowest level in the post-World War II period. A report published by the Government Bank for the Development of Puerto Rico interpreted that figure as an indicator of progress. According to the report, the declining proportion of women workers was an indicator that more men were able to find well-paid jobs, which in turn allowed more women to become full-time homemakers (Guzmán and Esteves 1963).

This policy was restated a decade later by the EDA when it made the following argument:

Another cardinal objective of the industrialization program is to create jobs for men. Undoubtedly, a society in which a greater part of the jobs are held by women, unless it be a matriarchal society, creates serious social problems when the woman works and the man is unemployed. Not only does it affect the matrimonial institution of a society in which traditionally the male is the principal provider but it also affects the development of the family when the mother is not able to give proper attention to the home and children. The problem requires attention on a high priority since projections of the work force for 1975 anticipate a greater growth in the number of males than females. (EDA 1971, 20)

A similar argument appeared in the *29th Economic Program* (1973-76) issued by the Planning Board of Puerto Rico. The report stated that “female unemployment is not necessarily associated with poverty nor with great human suffering since, in most cases, it does not fall upon the head of household. Therefore, in the development of a public policy to reduce unemployment, the masculine factor should occupy a top priority” (Comisión de Derechos Civiles [P.R.] 1972, 2). Accordingly, tax incentives were tailored to meet the needs of men’s labor market. In 1963, the Puerto Rican Legislature approved a Law of Industrial Incentives that aimed to promote, among other things, manufacturing establishments that would employ men (EDA 1982).

The Story of Petrochemical Complex

Although the story of Puerto Rico’s petrochemical complex is well-documented, few studies have paid attention to the role that gender considerations played in the formulation of the capital-intensive strategy. The success of Operation Bootstrap was such that by 1963, plants promoted by the EDA employed almost 70,000 workers. However, about 60 percent of the new jobs were held by women, leaving most of male unemployment unaffected (Reynolds and Gregory 1965). The belief that Operation Bootstrap was not helping much in reducing the high unemployment rate of Puerto Rican men forced policymakers to review their strategy. Barton recognized that Puerto Rico’s manufacturing sector did not represent a cross section of the American manufacturing sector. Puerto Rico’s manufacturing industries were concentrated in a relatively narrow range of industries that covered almost one-third of the spectrum of industries found in the United States and other industrialized countries (Barton 1976, 2). The specialization in the assembling of goods, especially non-durable goods, explained the continuing demand for women workers (Barton 1966, 13).

As early as 1957, at the Annual Meeting of the Puerto Rico Economic Association (a meeting in which Teodoro Moscoso, the head of the EDA, was a discussant), Hubert Barton, another key officer in the EDA, articulated the rationale for a new course in the industrialization program. Heavy industries, Barton argued, would generate a large number of jobs, increase the general levels of wages, and decelerate the growth of nonintegrated, labor-intensive industries (Barton 1957). Furthermore, heavy industries represented “largely male employment, in contrast to the present situation among Fomento plants which employ two-thirds women” (Barton 1957, 13). Barton recognized that the gender-typing that he observed was not the product of Puerto Rican practices; it was the general practice of those types

of industries both in Puerto Rico and the United States. In a 1966 report, Barton said:

This concentration in the non-durable goods industry accounts for the high proportion of women in Puerto Rican manufacturing. Nearly half of the factory workers in Puerto Rico are women while in the United States women account for only about a quarter of total factory employment. Industry by industry, the sex ratios are similar but Puerto Rican employment is concentrated in apparel, especially women's underwear and brassieres, and in leather goods industry, in electronics, all of which employ a high proportion of women in the United States as well as in Puerto Rico. (Barton 1966, 13-14)

The economic development strategy that followed promoted different kinds of industries, those in which men typically worked.

Consequently, by the mid-1960s, Puerto Rico inaugurated a new strategy for economic development. The Economic Development Administration actively promoted capital-intensive industries like petrochemicals and pharmaceuticals and sought investors to exploit the island's copper mines. The petrochemical refineries were conceived as a first step in the development of a vast industrial complex based on the manufacturing of petroleum derivatives. The Economic Development Administration envisioned the establishment of a chain of interdependent plants that would produce everything locally, from tires to textiles and plastic products. The strategy included the building of a special dock in Guayanilla where oil tankers could deliver the black gold. Officials estimated that the multiplying effect of the proposed industrial network would generate approximately 200,000 new jobs. They also hoped that this industrial complex would increase the level of wages and give more stability to Puerto Rico's industrial sector (EDA 1982).

That strategy enjoyed mixed success. Special quotas granted to Puerto Rico by the U.S. Department of the Interior facilitated the expansion of corporations like the Caribbean Gulf Refining Company, the Commonwealth Oil Refining Company, Phillips Petroleum, and Sun Oil. However, political opposition to the petrochemical complex, fueled by environmental and nationalist concerns, and increases in the price of crude oil dictated by the Organization of Petroleum Exporting Countries (OPEC) slowed the implementation of this policy and led to a crisis in Puerto Rico's petroleum industry. Consequently, government officials set their sights on the high-technology and service industries as an alternative strategy. Ironically, the high-technology industry was yet another sector in which women were typically employed.

It should be pointed out that there is no evidence of a conspiracy to drive women out of the labor force. The creation of jobs for women was not a priority because women's jobs usually are unstable and pay low wages. A

development strategy that relied on such traditional female-typed industries would have been precarious, at best. While Barton believed that capital-intensive industries could exert a positive effect on women's wages (Barton 1957, 17), the bottom line was that government officials seemed to fear only the political consequences of male joblessness.

THE RESTRUCTURING OF THE WORLD ECONOMY

The disproportionate presence of women in Puerto Rico's manufacturing sector is not an aberration or a chance occurrence but an inherent feature of a development strategy that has been part of the post-World War II restructuring of the world economy. Although the hierarchy of the old economic order has survived these changes, this process of global economic restructuring represents a qualitatively different mode of reproducing the most advanced labor processes worldwide and integrating new markets into the global economy (Sanderson 1985).

The restructuring of the world economy consolidated a single world market of capital, labor, and commodities. It also redefined the role of developing nations in the world economy. Several studies have pointed out that a new international division of labor is replacing the traditional function of developing nations as suppliers of raw materials (Frobel, Heinrichs, and Kreye 1980; Nash 1983; Safa 1981; Sanderson 1985; Trajtenberg 1978; Vuskovic 1980). Underdeveloped nations are rapidly becoming sites of manufacturing activities. While advanced nations are specializing in research and development, financing, specialized services, and administration, developing nations are increasingly specializing in the manufacturing of goods for the world market (Fernández-Kelly 1985; Sassen 1988). The proliferation of offshore export-processing zones (or free-trade zones) represents a new mode of insertion of developing nations into the world economy.

The main reason behind the expansion of manufacturing activities in developing nations is that, in many cases, they provide a more profitable environment than traditional sites. Labor costs are usually lower and, in many cases, workers are not organized, giving management greater flexibility and control over the production process. It is not that the production in traditional sites is not profitable but that, in many cases, it is less profitable than in the developing countries (Amin 1977).

The relocation of manufacturing establishments was not just the consequence of economic decisions. Technological innovations made the project of coordinating a global system of production a reality by making it possible

to break down complex manufacturing activities into simple tasks that could be distributed worldwide and that were easily learned by unskilled workers. Innovations in transportation and communications also facilitated the relocation of manufacturing establishments to nontraditional sites. Hence, the global assembly line was born. The implementation of export-oriented development programs throughout the developing world and liberal tariff codes were additional incentives.

Out of these processes emerged a more mobile and flexible capitalist organization of production. The new international division of labor represents a global mechanism of incorporating new segments of the population into the labor force, creating in the process an international labor market (Barkin 1985). That new worker is often a woman (Sassen 1988).

Puerto Rico and the New International Division of Labor

Although there is a growing literature on the new international division of labor, it has ignored Puerto Rico's role as the pioneer of this historical phenomenon. Most studies date the origins to the mid-1960s when Fairchild opened his first offshore electronic plant in Hong Kong (Fernández-Kelly 1985; Nash 1983; Snow 1983). I would argue that Operation Bootstrap paved the way for the new international division of labor and that its basic components were tested in Puerto Rico before being exported to other developing nations. Operation Bootstrap proved, a decade before Fairchild started operations in Hong Kong, that developing nations could be feasible and profitable sites for modern manufacturing.

Puerto Rico represented a relatively safe testing ground. The Commonwealth of Puerto Rico established a free-trade relationship with the United States and was subject to American tariff, monetary, fiscal, and commercial navigation regulations. As an American territory, it offered American and other foreign investors financial and military security that no other developing nation could match at the time. Furthermore, American manufacturers were familiar with the island and its workers since American manufacturing establishments, garment in particular, have been operating in Puerto Rico since early in the twentieth century.

The success of Operation Bootstrap in proving that workers in developing countries could successfully adjust to the modern factory was well published throughout the world by Puerto Rican and American agencies and by academics. Puerto Rico was presented as the model for the developing world, an example of development with democracy. With the establishment of a communist regime in the nearby island of Cuba in 1959, the Puerto Rican model entered into the Cold War rhetoric: democracy's answer to communism.

Many of the architects of Operation Bootstrap played an important role in the formation of similar programs in other developing nations. Governor Luis Muñoz Marín became an international spokesman for Operation Bootstrap. Teodoro Moscoso—who was head of the Agency for Economic Development from 1942-61, U.S. Ambassador to Venezuela in 1961-62, and U.S. Coordinator of the Alliance for Progress in 1962-64—served as consultant to various governments implementing Operation Bootstrap-like programs. Hubert Barton, another developer of Operation Bootstrap, also served as adviser to several Caribbean nations. Variations on the Puerto Rican model are functioning today in the Caribbean and in Mexico, Ireland, and throughout Southeast Asia. Fernández-Kelly (1985) estimates that there are 200 export-processing zones that employ approximately 3 million workers. Although most are engaged in garment, textiles, and electronic manufacturing, new industries are entering into this type of production. The latest entry is the data-processing industry, which is relocating its data-entry activities to countries like Barbados, the Dominican Republic, and Ireland.

As in the case of Puerto Rico, the spread of export-processing zones throughout the developing world plays an important role in the incorporation of women into the labor force. There is extensive evidence of the feminization of the export-processing labor market (Elson and Pearson 1981; Fernández-Kelly 1985; Lim 1978; Safa 1981). Women, mostly young and single, represent between 85 and 90 percent of the export-processing work force (Fernández-Kelly 1985). Countries in which they work are Mexico (Bustamante 1983; Fernández-Kelly 1983); the Dominican Republic (Corten and Duarte 1981); Haiti (Garrity 1981; Lebel and Lewis 1983); Barbados (Gill 1984); Jamaica (Bolles 1983); Curaçao (Abraham-Van Der Mark 1983); St. Lucia (Kelly 1987); Morocco (Elson and Pearson 1981); Hong Kong (Salaff 1981); Malaysia (Grossman 1979; Lim 1978); Singapore (Deyo and Chen 1976; Lim 1978; Wong 1981); Taiwan, Indonesia, and the Philippines (Grossman 1979).

CONCLUSIONS

Gender-segregated employment patterns are shaped as much by economic as by political, social, and cultural constraints. Economic development strategies are not gender-neutral in their intentions or in their consequences. The Puerto Rican experience demonstrates that the social organization of the workplace can pit the interests of employers against those of policymakers. The continuing demand for women workers by Puerto Rican manufacturing establishments was an unintended and unanticipated by-product of Operation

Bootstrap. It did not pass unrecognized. Policymakers were aware that the island's specialization in the assembly of goods and in low-wage manufacturing was attracting women into the paid labor market. That strategy did not help much to alleviate male joblessness in Puerto Rico, a major political problem. The tension between the economic development strategies of a regional economy and the restructuring of the global economy set the stage for new forms of policy intervention to change the gender composition of the labor market. Puerto Rico's capital-intensive strategy was a deliberate attempt to benefit Puerto Rican men by promoting industries in which men typically worked. By pursuing a development strategy that deliberately benefited men, government officials recognized the pervasive character of the gendered division of labor and signaled their unwillingness to tamper with the patriarchal order. The failure of this strategy in changing the gender composition of the manufacturing work force exemplifies the inherent difficulties facing policymakers in developing nations, since discouraging the growth of industries that typically hire women would slow their incorporation into the modern industrial world.

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