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**Title:**

The Social Impacts of the Maquiladora Industry on Mexican Border Towns

**Journal Issue:**

[Berkeley Planning Journal, 2\(1\)](#)

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**Publication Date:**

1985

**Publication Info:**

Berkeley Planning Journal, Department of City and Regional Planning, UC Berkeley

**Permalink:**

<http://escholarship.org/uc/item/0cn4r0w2>

**Local Identifier:**

ucb\_crp\_bpj\_13197

**Abstract:**

Since 1965 the region bordering the United States and Mexico has experienced both population and economic growth. This growth and development has been attributed to the economic policy agreements between the two nations. Three programs stand out as particularly important in this process: The Bracero Program, The Programa Nacional Fronterizo, and The Border Industrialization Program. While academicians and politicians have discussed the economic consequences of these programs, they have neglected to examine the social impacts on the border populations.

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# THE SOCIAL IMPACTS OF THE MAQUILADORA INDUSTRY ON MEXICAN BORDER TOWNS

Frieda Molina

## Introduction

Since 1965 the region bordering the United States and Mexico has experienced both population and economic growth. This growth and development has been attributed to the economic policy agreements between the two nations. Three programs stand out as particularly important in this process: The Bracero Program, The Programa Nacional Fronterizo, and The Border Industrialization Program. While academicians and politicians have discussed the economic consequences of these programs, they have neglected to examine the social impacts on the border populations.

This article will focus on the social issues facing Mexican border towns. The analysis will be presented in three sections. The first will describe the historical and social foundations which contributed to the growth and development of border towns. The following section will analyze the social impacts of the recently established manufacturing plants on working relations, health care, social relations outside the workplace, housing, and infrastructure. The last section suggests that planners need to formulate policy objectives that address the social as well as economic impacts of the Border Industrialization Program discussed in the second section.

## Socio-Historical Background

The origins of the Bracero Program date from the bilateral agreement between the governments of Mexico and the United States in 1942. The objective was to alleviate agriculture and railroad labor shortages in the United States resulting from World War II. This program allowed Mexicans to legally enter the United States as seasonal workers. The U.S. War Administration in conjunction with the Department of Labor, and the Immigration and Naturalization Service, thus initiated a labor recruitment program.

The prospect for employment in the U.S. attracted many Mexicans north. It is estimated that some four million seasonal workers or *braceros* found temporary work in the United States between 1942 and 1960. If undocumented workers are included in the number of *braceros*, total migration to the U.S. is believed to have reached 8.9 million during these years. The border areas of Mexico attracted people waiting to cross the border for

employment in the U.S., putting tremendous pressures on the border regions. Consequently, shortages of housing and municipal services occurred in Mexico's northern cities (Baerrensen 1971:2).

In 1961 the Mexican Government responded to this growth by establishing a program targeted at the border region, known as the Programa Nacional Fronterizo (PRONAF). This was the first attempt to integrate the border region with the rest of the nation. From 1961 to 1970 PRONAF invested 40 million dollars on infrastructure, buildings, paved roads and industrial parks. The construction of this new facade for the northern border and the investment in infrastructure, was aimed at promoting import substitution and increasing U.S. tourism. PRONAF was fairly successful in attracting U.S. tourism to Mexico; however, it failed to improve the unemployment situation in the border regions (Bustamente 1983:232).

In 1964 the Bracero Program was terminated. This intensified the problems of the border towns. An estimated 200,000 braceros who were returned to Mexico were suddenly faced with unemployment. According to some sources 40 to 50 percent of the workforce in the border towns was unemployed (Weaver 1983:255, Bustamente 1983:232). It thus became necessary for the Mexican Government to respond in order to neutralize the escalating unemployment problem. In 1965 Mexico acted by creating the Border Industrialization Program.

The primary goals of the Border Industrialization Program (BIP) were the alleviation of widespread unemployment along the 200 mile border; the increase of incomes and better standards of living for workers in the border areas; the improvement of labor skills through training supplied by assembly plants and; the reduction of Mexico's trade deficit by increasing the consumption of Mexican raw materials.

The aims of the BIP were to be reached by providing incentives for U.S. manufacturers to operate on the Mexican side of the border. The Minister of Industry and Commerce, during this time, stated that their "idea was to offer free enterprise as an alternative to Hong Kong, Japan, and Puerto Rico" (Bustamente 1983:238). The program permitted -- and continues to permit -- assembly plants or *maquiladoras*, to be established in a twelve mile wide free zone starting at the border as long as 100 percent of the finished products were exported out of Mexico. Provisions also allow duty-free importation of components to be assembled in Mexico and duty-free exportation after assembly.

From the U.S. investor's point of view this program offers firms a cheap source of labor along with proximity to their administrative offices in the U.S. United States Tariff Regulations also provide incentives to U.S. businesses abroad. Item 806.30 of the U.S. Tariff Code requires tariff duties to be paid only on the value added to any article of metal processed outside the country. Item

807.00, "reduces duties on any product whose parts originate in the United States and which is sent abroad for assembly" (NACLA's Latin American and Empire Report, April 1977:11-12). In essence, duties are to be paid only on the value added abroad, which in the case of assembly operations are the wages paid to laborers.

Since its inception the BIP has been successful in attracting assembly plants to border towns. In December 1965, 12 maquiladora plants, employing 3,087 workers, were located along the Mexican border (Bustamente 1983:241). In 1973, 82.9 percent of all jobs in maquiladoras were concentrated in the five border cities of Tijuana, Mexicali, Ciudad Juarez, Nuevo Leon and Matamoros (Bustamente 1983:243). A 1980 study placed this figure at 620 plants with approximately 120,000 workers.

The increase in industrial activity in the border region parallels the increase in population of the border municipalities. From 1950 to 1960 the average increase in population along the border was 6.3 percent, compared to 3.1 for the nation as a whole. During these years the principal cities of Tijuana, Mexicali, Ciudad Juarez, and Ensenada were growing at a rate of 9.8, 8.5, 7.8, and 7.6 percent respectively. Between 1960 and 1970 the rate of growth fell from 6.3 to 4.1 percent but Tijuana continued to experience a high growth rate of 7.5 percent with Ensenada commanding a growth rate of 5.9 percent (Urquidi 1978:141).

The migration to these cities contributed to these growth rates. In 1970 the total proportion of migrants for border cities was 29.3 percent compared to 15.3 percent for the country. In Tijuana migrants comprised 47 percent of the population, 34 percent for Mexicali, 23 percent in Ciudad Juarez, 35.7 percent in Ensenada, 21 percent for Matamoros, 33.2 percent in Nuevo Laredo and 30.9 percent for Reynosa (Bustamente 1983:231).

While it is indisputable that the Mexican border has experienced and continues to experience growth in economic activity, this growth has not kept pace with the growth in the population. This situation clearly suggests the need to review the effects that maquiladoras have had on the social conditions of Mexico's northern border. The effects of these plants can be gauged by their impact on social relations, healthcare, and housing.

## **Social Impacts of Maquiladoras**

### *In the Workplace*

The salient characteristic of the BIP workforce is its gender specific nature. While the BIP has increased the number of jobs available, the majority of these jobs are occupied by women between the ages of 17 and 25 (these ages vary slightly by the type of industry). Most studies generally agree that the percentage of female workers exceeds 70 percent. One study estimates this

figure to be as high as 80 to 90 percent. The majority of these jobs are to be found in low-skilled and low-paying occupations.

The characteristics of the maquiladora labor force are significant in terms of the social pressure placed on women. The predominance of women workers in the assembly plants has enabled managers to exercise control over the labor force. Employers have argued that women are particularly suitable to maquiladora employment because they possess greater manual dexterity and bear tedium better than males (NACLA's Latin America and Empire Report, April 1977:14, Seligson and Williams 1983:25). This issue is put into context when the productive system is discussed as a whole.

According to Maria Patricia Fernandez-Kelly,

Women are hired to perform the tedious and unrewarding operations that accompany assembly work for reasons that are political and economic in nature. Because of their behavior, expectations and attitudes (linked to gender specific socialization processes), because of their relative youth and because of their subordinate position within their households, these women constitute a highly vulnerable, docile and manipulable workforce (Fernandez-Kelly 1983:72).

Women are also preferred because they are paid less than their male counterparts and are less likely to move into positions of higher authority.

In this manner gender is used as a tactic to divide the labor force. In an atmosphere where job opportunities are limited, women are forced to compete with each other (especially those who are older than 25 years of age). Candid interviews with maquiladora women revealed that some women see their sexuality as a means to gain access to employment. "Therefore, they 'offer' themselves to men in decision making positions" (Fernandez-Kelly 1983:141). Sexual harassment does not cease after women are hired, for middle management and personnel staff are inclined to ask for sexual favors in exchange for job stability (Fernandez-Kelly 1983:140). Other sexual games are also used within the workplace. Donald Baerensen states that women workers "from their earlier conditioning show respect and obedience to persons in authority, especially men" (Baerensen 1971:36). Firms take advantage of this traditional upbringing and hire men for supervision and management positions. These social conditions point to the feeble political standing which women have in the labor market and in society. The status of women in the labor market is used to divide the sexes and to reinforce control over women.

*Health Care and Working Conditions*

The working conditions in maquiladora plants has placed the health of the workers at risk. The hazards associated with this industry, although not necessarily unique to assembly plants in Mexico, nonetheless does call for further investigation. Hazards within the workplace are a function of the types of instruments and materials used to produce goods and the work characteristics of assembly operations. For example, in the electronics industry workers are required to come into contact with strong chemicals and resins. The assembly work requires workers to spend long hours behind powerful microscopes often leading to eye strain and severe headaches. In the apparel industry dust particles from fabric have been responsible for respiratory illnesses. Thus, the worker is confronted with two potential sources which can be detrimental to her health: the instruments of production and assembly characteristics.<sup>1</sup>

Since the health of maquiladora workers is not well documented, I have developed a heuristic model to be used for speculative purposes. This causal model divides the working hazards (causes) into three main categories; those associated with the direct work instruments (machinery, microscopes, cutting machines, etc.); those associated with intermediate working instruments (toxic chemicals, resins, solvents, etc.); and the hazards related to the work characteristics (assembly procedures, long work hours, monotonous tasks, etc.). However, the relationship between the causes and effects are conjunctural, especially when extended to the community. The purpose of this model is to provide a contextual framework in which to begin to analyze the health problems of the maquiladora workers.

In terms of the hazards associated with toxic chemicals many direct and indirect relationships can be drawn. At the individual level, exposure to toxins may result in burns, skin disease, nausea, fainting, vomiting, blindness, or respiratory illness. At a second stage this exposure could result in cancer, working disabilities, absenteeism, or fatalities. Given that most workers are of child-bearing ages, it is probably safe to assume that their contact with toxic substances can have effects on their fertility and on fetal development. The ramifications of this health hazard can be extended to the community. The possibility of an increase in miscarriages and birth defects is not unlikely. Illnesses or poisoning resulting from the contamination of the water are also likely. The increase in accidents and illness related to maquiladora plants clearly suggests a need for more health services in these communities.

In a more indirect way the exposure to toxins may result in a lower birth rate; a change in male-female relationships due to infertility; environmental degradation due to contamination; and/or an increase in child malnutrition for female headed households, if a greater percentage of wages needs to be spent on health care. In general the overall health of the community is in jeopardy.

Related to these hazards is stress produced from assembly procedures. The fatigue and boredom resulting from monotonous work tasks often translates into stress and hysteria for the worker. In a study conducted by Jorge Carrillo and Monica Jasis (1983) many accidents occurring on the job were found to be related to stress. When data for the number of accidents occurring on the job in northern Mexico in 1976 are compared to accident rates for the nation as a whole the statistics reveal that the northern region surpasses the rest of the country.

The mental health of the worker is also important to consider in relation to stress. The disposition of a worker can place a strain on family relationships resulting in child, alcohol, or drug abuse.

Hazards related to machinery can be hypothesized. One need only read about the Union Carbide accident in India to be convinced that safety standards in developing countries are not as rigid as they are in industrialized nations. We can assume that workers face the risk of being burned, cut, scraped, and exposed to radiation. These hazards can result in physical disabilities and ultimately in the loss of employment for the worker. At the community level this may translate into an increase in unemployment and an increase in the number of residents living in poverty.

An important service related to employment, not covered in the model, is childcare. Little has been written on whether working mothers have someone to take care of their children while they are at work. This can pose problems for women who do not have family or friends to watch after their children. Not only are children more apt to get into trouble, but for young children lack of care and supervision can be a frightening experience.

These health hazards place the need for health facilities in the forefront. Equally as important for workers is the affordability and the access to adequate health care. These issues call for a need to develop policy objectives to provide social services to maquiladora workers and the society at large.

#### *Outside the Workplace*

Perhaps one of the most significant social impacts to result from the introduction of maquiladoras in the border economy is the transformation of the family structure. Although this change is occurring slowly, evidence points to the growing tension between males and females.

Contrary to the alleged intent of the program, maquiladoras have failed to provide jobs for those left idle by the cessation of the bracero program, namely, male agricultural workers (Fernandez-Kelly 1983:210). The hiring practice of maquiladoras has tended to exacerbate the preexisting imbalance in local labor markets by employing sectors of the population that were previously not considered part of the workforce (i.e., women).

It is evident that employment opportunities for women in the manufacturing industry have increased. However, the majority of men belonging to the same household are either unemployed or underemployed (Fernandez-Kelly 1983:16). This situation has ultimately transformed the role of women into main providers of stable income for their families. Even in the cases of single women, it is not uncommon for daughters to contribute to the support of their parents and siblings.

Opinions on the overall conditions for women who enter the labor market are divided. One opinion which has been expressed is that the opportunity for women to earn their own income has emancipated them from their dependence on men. Opponents claim that women's participation in the labor force undermines the "traditional patterns of male authority and the overall cohesion of the family" (Fernandez-Kelly 1983:16).

Evidence both supports and disproves these positions. It is not uncommon for women to transfer all of their wages to their family who in return provide them with a weekly allowance. Women's work in the formal sector has not led to a role reversal in the domestic sphere. Of more than 100 married workers interviewed by researcher Fernandez-Kelly, there was only one case where a male companion had taken full charge of housework and child care (Fernandez-Kelly, NACLA's Report on the Americas, 1980:17).

In any case, women's position cannot be characterized as independent, for women's dependence on men has shifted to one of dependence on low wage labor. The reality is that many women who enter the labor force are the prime supporters of their families. One study found that one out of three women employed in textile factories provided the only means of support for their families (Fernandez-Kelly 1983:218). This reliance is detrimental due to the unstable nature of the maquiladora industry.

One well known characteristic of the garment and electronic industries is their ease and relative frequency in moving capital. In fact it is not unusual to find firms moving in and out of Mexico every six months (NACLA's Report on the Americas, April 1977:16) -- thus, the lack of a secure job presents problems for families who depend on maquiladora workers for their livelihood.

The influence of maquiladoras on the traditional family structure is argued from the point of view of moral looseness and promiscuity. One working woman expressed this opinion in the

following manner:

I constantly worry about this because many people, especially men treat you differently as soon as they know you have a job at a maquiladora. They surely think that if you have to work for money, there is also a good chance you're a whore (Fernandez-Kelly 1983:135).

The evidence for the decline of traditional mores is hard to document and measure and thus I will only suggest that this accusation is yet another way to retain control over women.

These opinions indicate that economic restructuring has placed stress on the Mexican household. In the long run these tensions may possibly become manifested in increased rates of divorce, more female-headed households, child abuse, alcoholism, and psychological symptoms of stress and low self-esteem among women. It is safe to assume that any of these pressures are unhealthy for social and family relations.

#### *Housing and Infrastructure*

A 1970 study of the housing conditions in the principal cities of Mexico's northern border found that densities of dwellings in the border states were averaging 5.7 persons per dwelling, compared with the national average of 5.8. When the figures for indoor plumbing, electricity, radio and television are compared with the nation as a whole, one is left with the impression that the border towns are faring well.

In this case comparing data to the national average is not very informative since national figures incorporate both rural and urban dwellings. It could be that the border regions are more crowded relative to other urban areas. Even if border conditions seem better than national conditions, however, it would still be argued that border populations are lacking basic housing necessities. In fact, Urquidi and Mendez state that slums have developed around major border cities (1978:152).

Aside from the presence of substandard housing, the issue of availability and demand for housing needs to be investigated. The tremendous growth of border towns, surpassed only by Mexico City, has given rise to rapid urbanization. Since border towns were not prepared for this growth, housing, infrastructure, public utilities, and social service agencies have not been available to all city residents (Weaver 1983:264). The lack of available housing directly affects the affordability of housing. The basic laws of supply and demand state that if people continue to migrate, the increase in demand for housing will lead to an increase in the price of housing. A greater demand will also increase the need for infrastructure and public utilities.

These pressures will continue if adequate housing is not made available. I would further hypothesize that border regions may

face a growth in slum areas, a decline in housing stock, and the presence of squatter settlements, if affordable housing does not keep pace with the growth in population. In the long run, these unhealthy living conditions will result in the need for more health care and social services to treat these residents.

### **Conclusion and Policy Directions**

In sum, Mexico's Border Industrialization Program has been influential in the growth and development of its border region. While maquiladoras have provided employment opportunities for the border population, their impact should not be judged on their economic merit alone; their success should also be evaluated on the basis of their social impacts.

The introduction of assembly plants, contrary to their intent, have not increased employment opportunities for men. The hiring practices of these firms have created a divided workforce -- one which has placed women in sexually vulnerable positions as well as created social tensions between men and women at home. In addition, the working conditions in the plants have placed employees in unsafe working environments. The growth of these industries, together with the increase in border town populations, has put pressures on social services, health care, housing, infrastructure and public utilities. These impacts call for mitigating measures to be taken. Planners and government officials need to address the problems exacerbated by the Border Industrialization Program. They must look beyond the economic rewards -- which are questionable -- and instead evaluate and formulate policy directions which also take into account the array of social problems facing border municipalities.

### **NOTES**

- <sup>1</sup> Since female workers constitute a disproportionately large percentage of the maquiladora workforce, I have decided to focus on their health status. It is probably safe to assume that men in these plants also face similar health risks, with the exception of child-bearing related hazards.

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