Employer-assisted Housing in Maquiladoras in Mexico: A Case Study of the Delphi Automotive Housing Program

By

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ABSTRACT

In June 1996, the US and Mexican press announced a unique partnership that sought to address the dramatic housing shortage in Ciudad Juárez, Mexico. This public-private partnership involved construction companies, a major US multinational corporation, and the national Mexican housing agency. General Motors and its subsidiary, Delphi Automotive, formed a partnership with INFONAVIT, the Mexican worker-housing agency, that would provide 7000 housing credits to Delphi employees in 7 Mexican cities. Grupo Condak, a Mexican construction company, would build the homes with the financial backing of Pulte Mortgage Company, the largest US homebuilder at the time.

The Mexican government has attracted foreign direct investment through the maquiladora program because of low labor costs due not only to low wages, but also because of low levels of employee benefits. Why then, would a foreign company voluntarily choose to increase employee benefits, implicitly as a substitute for increasing wages? This thesis will analyze the underlying incentive structure that brought about this unique housing partnership, and ultimately examine if this program is a desirable way of mitigating worker housing shortages in Mexico. Analyzing how the benefits of the program accrue to different actors sheds some light on the motives for starting the program. Although an evaluation of the program is not the main purpose of this thesis, this study will examine the benefits of housing program from the perspective of all participants.

In particular, this research examines the incentives that prompted General Motors to offer housing benefits. If Employer-assisted housing is to be replicable, and if there is a future for other public-private partnerships in social interest housing, then understanding the firm's motives for participating in such a program is of critical importance. There are two mainstream hypotheses of why a private firm like Delphi might offer housing benefits. The reduction of employee turnover and associated training costs are the main reasons that Delphi Automotive cites as its incentives for starting the program. Additionally, the desire to generate a positive corporate image and the importance of public relations is a second prominent theory. This research will also examine more closely two alternative hypotheses on the motives of General Motors and Delphi Automotive in offering employer-assisted housing benefits in Mexico: 1) to discourage labor organizing in Mexico and to counteract the US labor force's anti-Mexico propaganda and 2) external pressure from the construction industry and US sources of capital interested in using Mexican government subsidies to create housing markets in Mexico.

Thesis Advisor: Dr. Diane E. Davis
Thesis Reader: Dr. Anna Hardman

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PROLOGUE

When I began exploring potential thesis topics, I became intrigued by the June 2001 issue of *Time* magazine that featured stories about the *Nueva Frontera* of the US-Mexico border. I soon began investigating a story about an innovative housing program in Ciudad Juárez, Mexico, the sister city of El Paso, Texas. I quickly became hooked on the idea of employer-assisted housing in low-income communities in Mexico. I started looking at the housing program from the perspective that public-private partnerships have a real opportunity to address worker-housing shortages in Mexico. However, what started out as a story about access to credit for low-income housing, really turned into a story about creating profitable housing markets for large multinational corporations.

Originally, I thought my research could explore the outcome of the Delphi housing program and look at ways to encourage more US maquiladoras to become involved in housing programs for their workers. However, I soon began to question the motives of a profit-motivated firm that voluntarily chose to offer employee benefits, when most firms relocate to Mexico to lower labor costs.

Throughout the past year, my research carried me through numerous hypotheses on GM's motives for starting the program. The firm's stated purpose was to reduce employee turnover. The other obvious hypothesis was that GM wanted to improve its public image and generate positive public relations, particularly given the recent anti-NAFTA attacks on US firms operating in Mexico.

My research evolved after speaking with activists in the labor community, and I became convinced that GM had started this program as a means to control labor and prevent unionization in Mexico. I initially suspected that maquiladoras were re-creating the industrial company town, similar to the Pullman Company town in Pullman, Illinois. My suspicions about Mexican labor unions turned out to be incorrect, or at least unsubstantiated. To the contrary, the Mexicans I met in Ciudad Juárez had little consciousness of labor movements. However, I did make some interesting conclusions about the transnational effects of US and Canadian labor unions and their effect on Mexican labor.

The interesting story that I did uncover was that what appeared to be a story about low-income housing, was really a story about how American financial companies used Mexican government subsidies to assist their entry into the Mexican housing market. In 1994, NAFTA legislation forced the liberalization of Mexico's financial sector. This was an open door for US sources of capital interested in Mexico's housing sector. Furthermore, diversified MNCs like General Motors found that they could supplement their primary activities in automobiles and trucks, and invest in financial markets through their mortgage subsidiary, GMAC-RFC.

In a large corporation like GM, different actors were motivated by different incentives, and there was a confluence of factors that allowed this program to emerge. Exploring the different motives of the various factors has been an interesting journey with numerous twists and turns, but ultimately, General Motors behaved in a predictable manner, and what appeared to be a "low-income" housing program was really just business as usual.

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Cambridge, MA
May 7, 2002

Chapter 1
Introduction: Housing and Maquiladoras in Mexico

In June 1996, the US and Mexican press announced a unique partnership that sought to address the dramatic housing shortage in Ciudad Juárez, Mexico. This public-private partnership involved construction companies, a major US multinational corporation, and the national Mexican housing agency. General Motors and its subsidiary, Delphi Automotive, formed a partnership with INFONAVIT, the Mexican worker-housing agency, that would provide 7000 housing credits to Delphi employees in seven cities in northern Mexico. Grupo Condak, a Mexican construction company, would build the homes with the financial backing of Pulte Mortgage Company, the largest US homebuilder at the time.

The Delphi housing program was to assist its employees in securing government-subsidized housing and to provide down payment assistance for up to 7000 houses. This was a program that was intended to help Delphi's employees gain access to formal sector mortgages. Additionally, it was intended to help alleviate the pressure on informal housing in the *colonias,* the self-built shantytowns where many of the maquiladora workers live.

The Mexican government has attracted foreign direct investment through the maquiladora program because of low labor costs due not only to low wages, but also because of low levels of employee benefits. Why then, would a foreign company voluntarily choose to increase employee benefits, implicitly as a substitute for increasing wages? One of the originating questions of this thesis is familiar to many academic researchers specializing in labor issues: "Under what conditions do private firms act for the public good?" Under what conditions did Delphi and its parent, General Motors, decide to offer progressive worker housing benefits?

This thesis will analyze the underlying incentive structure that brought about this unique housing partnership, and ultimately examine if this program is a desirable way of mitigating worker housing shortages in Mexico. Analyzing how the benefits of the program accrue to different actors sheds some light on the motives for starting the program. This research will look at the outcomes of the program but is not an evaluation. Rather, I will explore the incentives that prompted a multinational corporation to offer employee-housing benefits in Mexico, and to see if this is a sustainable and replicable housing program.

General Motors is the world's largest auto manufacturer, operating manufacturing facilities in 30 different countries, and employing 362,000 people worldwide. In 2001, GM reported $177.3 billion in sales and sold more than 8.5 million cars and trucks[1]. In addition to auto manufacturing, GM also operates one of the largest financial services companies, GMAC, which offers automotive, mortgage, and business financing and insurance services.

Until 1999, GM owned Delphi Automotive, the largest autopart manufacturer in the world in the $720 billion-a-year industry. (Blumenstein & Stern, 1996) In 1999, Delphi posted sales of $29.1 billion, making Delphi three times larger than its nearest competitor. Delphi employs 179,000 workers worldwide and in 1998, Delphi had 53 plants in Mexico, and employed 72,000 workers, making Delphi the largest private sector employer in Mexico. Delphi's presence in Ciudad Juárez is also significant with 15 plants and 23,000 employees in this border city.

Why did Delphi-GM[2] decide to offer this lucrative employee benefit and is Delphi's employer assisted housing program a desirable one for workers and for employers? As has already been mentioned, most US companies relocate to Mexico precisely because they want lower labor costs. Of all manufacturing production costs, labor is the only factor that is cheaper in Mexico than it is in the United States. Shipping, telecommunications, real estate, energy, and the costs of capital are all more expensive in Mexico, making labor costs a critical factor for companies considering relocation to Mexico.[3]

In the theoretical world, this is an interesting conundrum because many economists would argue that Delphi is not behaving in a profit-maximizing manner, and is defying the pattern set by other multinational corporations that relocate to the developing world to reduce labor costs. In the policy world, this is an equally interesting question, because by analyzing Delphi's behavior, policy analysts might search for ways to encourage more private sector actors to follow Delphi's lead. If expanding public-private partnerships can generate real solutions for Mexico's housing crisis, then the program has lessons not just for the municipality of Ciudad Juárez, but also for Mexico as a whole. Furthermore, defining the conditions under which private firms do positive things for workers has applications around the world.

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[1] Company web site, http://www.gm.com/company/corp_info/profiles/

[2] I have used Delphi and GM interchangeably in this paper because General Motors was Delphi's parent company when the program was initiated in 1996, and according to Delphi executives, the program would not have been possible without its parent. However, the two companies split in 1999, but General Motors remains Delphi's number one client, purchasing over 80% of Delphi's autoparts.

[3] From TeamNafta.com, an organization that gathers information on Mexican industrial cities for US clients.

1.1 Border Industrialization and the Rise of Maquiladoras

In 1965, the Mexican government established the Border Industrialization Program (BIP) as a means of encouraging US companies to relocate to the Mexican border. Antonio Bermúdez, a resident of Ciudad Juárez, provided the inspiration for this program and gained support for the program with President Gustavo Díaz Ordaz.

The benefits of the Border Industrialization Program (what would eventually become known as the *maquila*[4] program) for US multinational corporations: 1) Access to cheap labor in Mexico 2) Lower manufacturing costs in Mexico 3) Modern buildings and infrastructure in Mexico that were higher quality than that offered in other developing countries at the time 4) The BIP removed restrictions requiring sole Mexican ownership, which was attractive for multinational corporations and 5) US firms "could not only enjoy, but also *control* the corporate investment throughout the border region." (Soden, 1999, emphasis added)

Similarly, the Border Industrialization Program had to realize benefits for Mexico to be sustainable and to be accepted politically. The program sought to attract foreign direct investment, which would stimulate industrial growth. The three main objectives of the program for Mexico's industrialization process were: 1) Solve the unemployment problem 2) Generate foreign exchange and 3) To attract foreign capital and technology. (Soden, 1999)

Since the inception of the maquiladora program in Mexico, hundreds of companies have relocated to Mexico to take advantage of the tax benefits, lower labor costs, and ultimately reduce overall production costs to maximize the firms' profits. In recent years, and in particular since the NAFTA debate, labor economists and activists concerned with the quality of life of Mexican workers are increasingly interested in the relocation of US firms to Mexico.

1.2 Theoretical Approaches

In addition to the specifics of the maquiladora growth in Mexico, there is a broader literature on industrial relocation to developing countries. There are four alternative theoretical approaches that can be used as framework for examining Delphi's decision to relocate to Mexico. The focus of this thesis is not to analyze the motives of Delphi Automotive and General Motors

[4] The terms *maquila* and *maquiladora* are used interchangeably to refer to Mexico's export promotion industries located primarily along the US-Mexico border. The terms are derived from the Spanish term *maquilar* meaning "to retain a portion of flour in payment for milling wheat." The modern day analogy refers to Mexican maquiladoras as processors of imported goods, which are then re-exported to the original producer to be re-sold. (Peña-Villaseñor, 1994)

in relocating to Mexico, but these theories have implications for the firm's behavior. Analyzing the motives for relocating plants to Mexico is useful because it reveals something about the firms' preferences and ultimately, the incentives that may have influenced the company's decision to offer its employees housing benefits.

Starting with Neoclassical microeconomics, the theory of profit-maximization predicts that firms will relocate to areas with lower production costs. As seen in the description of the Border Industrialization Program, lower manufacturing costs in Mexico were used to lure foreign companies to the border region.

A second popular theory that explains firms' relocations to developing countries is the new international division of labor theory, which emerged to explain the 1970s de-industrialization of developed economies and the concomitant industrialization of developing countries. This theory draws on empirical evidence from companies from the United States, Germany, and Japan who relocated labor-intensive manufacturing activities to low-wage regions in the developing world including Mexico and Southeast Asia. Developed countries are not only characterized by high wages of industrial labor, but are also characterized by high rates of unionization (Carrillo, 1994, p.21) which typically add pressure to wages and benefits associated with labor.

Proponents of the new division of labor theory cite three reasons for this significant change of the international economy which is promoting industrialization in the developing world: surplus labor in developing countries, fragmentation of the production process, and technological improvements that have lowered communication, transportation and freight costs. (Frobel, et al, 1981) All of these characteristics can also be applied to Mexico's Border Industrialization Program.

The third dominant theory on industrialization in developing countries is Raymond Vernon's product cycle theory of 1966. Vernon shows how a product's life cycle corresponds with different economic phases. From 1948 to the mid 1950s, new products were created for the mass market by companies characterized as pioneers. During the second phase, 1951-1960, US companies began exporting primarily to Europe. During the third phase, pioneering companies see a decline in their oligopolistic markets. The fourth stage, called the maturity stage, occurs in the 1970s when oligopolies compete against each other in the North American market. Japan and several Western European countries have by this time recovered from World War II and are

actively competing in the world markets. This competition drives a de-industrialization of the regions that were originally "pioneers" and relocation to low wage regions.

The fourth theoretical framework is a Mexico-specific analysis that rejects the mainstream theories on industrialization and highlights Mexico's unique comparative advantages, vis-à-vis other developing countries. Although the new international division of labor and the product cycle theory are powerful ideas that can explain some of the capital movements and de-industrialization of the 1970s, they are insufficient in explaining Mexico's industrialization process and its special comparative advantages in attracting multinational companies to Mexico. Dombois notes that neither of these theories can explain the relocation of capital-intensive industries, such as the automobile industry in Mexico. (Dombois, 1985, p. 12) Perhaps more importantly, labor costs as a percentage of overall production costs have declined dramatically. (Dombois, 1985) When these factors are taken into account, why do multinational firms relocate to Mexico?

A strong argument can be made that the Mexican government's policy on promoting export-led development has been a major impetus in luring MNCs to Mexico. Multinational corporations have benefited from government subsidies, financing assistance, and infrastructure provision have all been active policies of the Mexican government to encourage foreign direct investment. (Carrillo, 1994) Previous literature cites Mexican government subsidies and other incentives as major factors influencing foreign direct investment. (Jenkins, 1984; Carrillo, 1994) Mexican scholar Jorge Carrillo also tries to ascertain if it is transnational corporations and the international economy that is defining Mexican industrialization or if it is the Mexican government that controls these policies. (Carrillo, 1994, p. 27) Carrillo poses the question of whether low-wage labor or Mexican government subsidies are the principle comparative advantage that motivates firms to relocate to Mexico.

Other scholars have quantified the Mexican government's assistance to overseas companies. Rhys Jenkins analyzed a large automobile manufacturer and shows that "Mexico has a decisive cost advantage over the US and Japan, resulting from subsidies and financial concessions offered by the Mexican government." (Jenkins, 1984, p. 50) *This thesis argues that Delphi Automotive and General Motors are examples of companies that were able to benefit from Mexican government subsidies to prosper in the marketplace – both in the automobile industry, a traditional maquiladora, and in the housing sector, an industry that has not typically attracted foreign investment. Furthermore, this work*

examines diversified MNC's expansion in Mexico and focuses on the heavily subsidized housing sector as a new path for foreign investment.

1.3 Mexico's Housing Shortage

Mexico is a country of 100 million people that has experienced rapid industrialization in the 1990s. A growing percentage of its population is employed in the formal sector, in particular along the US-Mexico border. In 1995, Mexico's Secretary of Social Development (SEDESOL) estimated that Mexico had a housing shortage of 4.6 million units, and by the year 2000, the country would need to produce 750,000 new units annually. This housing shortage has been exacerbated by the explosive population growth along the US-Mexico border. Although housing is scarce and under-serviced across Mexico in general, Ciudad Juárez has been severely affected by a recent population boom associated with the rapid growth in the maquiladora industry. Ciudad Juárez experienced a 52.6% growth in population from 1990-2000, as Mexican workers moved to the border in search of jobs. Estimates show that the city is at least 70,000 units short, and thousands of more workers live in shantytowns on the edge of the desert town.

Mexico's housing shortage has not gone unnoticed. All levels of Mexican government and several political parties have become actively involved in promoting "social housing." This term is widely used in Mexico in reference to low-income housing. INFONAVIT, *Instituto Nacional del Fondo de la Vivienda de los Trabajadores*, the federal government's worker housing agency, is a major player in providing financing at subsidized rates for Mexican workers. FOVI, *Fondo de Operación y Financiamento Bancario para la Vivienda*, or Fund for the Operation of Bank Housing Finance, is another federal housing agency that provides financing for Mexican workers, ostensibly for workers who cannot qualify for commercial mortgages, but earn too much money to qualify for INFONAVIT subsidized homes. It is not just the government that has become interested in this market. The private sector has quickly recognized the potential profits in Mexico's housing market, particularly by taking advantage of government programs.

Private sector banking has had a difficult time competing with the subsidized interest rates of the Mexican government housing agencies, but the increasing demand for housing has forced INFONAVIT and FOVI to seek private sector involvement in housing finance. The increased demand for housing and the inability of the Mexican government to single-handedly provide subsidized housing for 100 million Mexicans has increased cooperation between Mexican

housing agencies and the private sector. The private sector's interest in this growing market and NAFTA legislation which liberalized Mexico's financial markets have all contributed to growing cooperation between the public and private sector housing institutions in Mexico.

1.4 Employer-assisted housing

Employer-assisted housing remains rare in the United States and other market economies, and is more common today to specific sectors like mines, agriculture, universities, or hospitals. Employers might provide housing in areas where the workplace is immobile (mines or agriculture) and housing is scarce. Alternatively, universities and hospitals offer housing benefits to attract highly skilled professionals to areas where housing is scarce and expensive[5]. For these types of EAH, there is an easy economic rationale for offering housing benefits.

In contrast, the Delphi labor pool does not display these characteristics. In Delphi's case, it appears that housing is parallel to other worker benefits, as opposed to other instances of EAH where the emphasis was actually on housing. Housing analysts note that employers offer EAH primarily to address "job-housing imbalances and compete for workers in a tight labor market." (Carr, 2000, p. 16) In the early 1990s, there was a tight labor market in Ciudad Juárez. However, the housing imbalance can be better described as one in which *formal sector housing* was scarce, and difficulty gaining access to credit made mortgages inaccessible for most workers. Delphi's housing program is therefore unique when compared to previous housing programs that were facilitated by employers, because informal solutions to the housing market imbalance have been accepted for years. Unlike many other instances of EAH in which employers *must* provide housing to attract workers, Delphi did not have to offer housing benefits to lure Mexican workers to the border.

Similarly, there is a literature on employers who provide housing for their workers, but Delphi Automotive's program does not fit easily into any of these strands of literature. The literature on Employer-assisted housing is idiosyncratic, ranging from discussions of the Pullman company town (Adelman, 1977; Harding, 1951; Lindsey, 1942) to housing in industrial towns (Mosher, 1995) and mining towns (Kluger, 1970). More recently, there has been an equally sporadic interest in housing for migrant workers, (Chia, 1981; Fassil, 1998) in particular housing

[5] Harvard University and Yale University are two examples.

for agricultural workers. Although I will reference some literature on EAH in the body of the thesis, most of the theoretical background for this research does not refer to housing literature.

1.5 Structure of Thesis

This thesis will examine four hypotheses that might explain why Delphi Automotive chose to offer an employee-assisted housing program in 1996. Chapter 2 provides a descriptive summary of the housing program, how it got started, the employee selection process, and the mechanics of INFONAVIT and FOVI housing finance. This descriptive chapter will detail who were the real beneficiaries of the program.

In Chapter 3, I examine two conventional views of why a private firm might offer socially responsible housing benefits for employees: reducing employee turnover and positive public relations. Reducing employee turnover is ostensibly Delphi's objective for initiating the housing benefits, but I will discuss why this explanation is unsatisfactory and how statistics on turnover reduction can be misinterpreted. Additionally, this chapter will examine the overwhelming response from the media. After the media extravaganza over NAFTA and Ross Perot's campaign against sending jobs south of the border, positive press coverage of General Motors' business practices in Mexico were sorely needed.

In Chapter 4, I examine the hypothesis that housing benefits were offered to counter propaganda of American labor groups protesting GM's relocations to Mexico. This chapter draws on literature that shows how housing can be used as a means of control of labor, recalling episodes of company towns. Furthermore, an analysis of General Motors' labor relations in the United States and the debilitating effect of strikes will show how GM and Delphi Automotive had a vested interest in preventing legitimate unionization in Mexico. Additionally, the distribution of houses shows that areas with low levels of unionization received a disproportionate amount of housing benefits, while unionized General Motors' plants were not included in the housing program.[6]

Increasing employee retention, reducing training costs associated with high turnover, improving the company's corporate image, and discouraging the formation of militant labor unions have all been identified as potential reasons for Delphi Automotive to offer employee-

[6] Housing need varies in different cities, but since low-income housing is scarce in most areas of Mexico, need alone does not explain the distribution of housing benefits across Mexico.

housing benefits. However, these explanations can only be accepted as *secondary* motives for initiating the housing program, but there is insufficient evidence to prove that they are primary incentives that pushed GM into the housing commitment. Chapter 5 will delineate how construction companies and US sources of capital worked together to promote the housing program in order to secure large government contracts with substantial subsidies. I will analyze the role of the construction industry in generating the impetus and political backing to push forward the housing project at a time when the construction industry was nearing economic and financial collapse. The financial relationship of the construction industry and General Motor's mortgage financing subsidiary, GMAC-RFC (General Motors Acceptance Corporation-Residential Funding Corporation) will also be scrutinized. This chapter will also analyze a variety of political considerations and political connections that helped bring about this public-private partnership. The importance of outside interests is perhaps the most compelling hypothesis of why Delphi Automotive decided to introduce their housing program.

The Delphi-INFONAVIT partnership was a complex arrangement with many actors, including the 6000 families[7] that eventually received government-subsidized housing. This $100 million housing contract had many other beneficiaries behind the scenes and this is critical to understanding the fact that this was not just an ordinary social housing program designed to provide housing to Mexico's urban poor. If housing planners would like to see greater private sector participation in housing finance and housing provision, then examining the incentives that promote this type of public-private housing partnership is a good way to analyze the costs and benefits of this type of arrangement.

1.6 Methodology

Personal interviews were my most important source of data. I spent two weeks in Ciudad Juárez in January 2002, and spoke with Delphi personnel officers, management, and public relations officers. I visited the Delphi-INFONAVIT housing complexes and interviewed Delphi workers that received houses through the project. I have named only those Delphi workers that were explicitly instructed by the Public Relations office to assist in my research, and have preserved the anonymity of all other Delphi employees.

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[7] There is some inconsistency with the exact number of housing credits in the Delphi program. There were several phases of the project, and not all of the credits that were approved by INFONAVIT were actually distributed. The total number of credits approved was 7000, but only 6000 were actually disbursed as of 2002.

I toured a Delphi maquiladora in Ciudad Juárez, called *Sistemas Electrónicos y Conmutadores* (SEC), and interviewed employees and personnel officers. (Serrano interview, January 24, 2002) I attempted to gain access to another Delphi plant, but was instructed that the only plant that I was authorized to visit was SEC. I had access to personnel files to obtain figures on housing costs, housing subsidies, and workers' wages.

I also interviewed professionals in the construction industry in Ciudad Juárez. I interviewed David Arelle, owner of the construction company that started the housing program, and also spoke with branch offices of Su Casita, the mortgage company that financed Delphi's houses. Additionally, I spoke with several public housing agencies including INFONAVIT and IVI, the *Instituto de Vivienda*, the state of Chihuahua's housing agency.

Secondary sources of information, including newspaper articles, videos, and journals that featured the Delphi housing program were useful in comparing the media's different perspectives on the program. Newspaper articles in business and real estate magazines were also critical in researching investments made by US companies in the Mexican housing sector. An analysis of the Mexican housing market since the 1994 financial crisis is also important in understanding the private sector's activity in social interest housing.

The literature review looks at a broad range of disciplines including corporate social responsibility (CSR), labor turnover and labor markets, housing markets, social housing and housing finance in Mexico, Mexican labor movements and the maquiladora, company town literature, the role of the construction industry in Mexico, the history of unions within General Motors and Delphi, and the history of INFONAVIT.

Chapter 2
The Housing Partnership

The anecdote of how the Delphi housing program began has become almost legendary within General Motors and its subsidiary, Delphi Automotive. Lee Crawford, executive director of Delphi Mexico at the time the housing program began in 1996, is considered the father of the program. In the early 1990s, Jack Smith, the Chairman of General Motors, visited its Delphi subsidiary in Ciudad Juárez. Lee Crawford made a point of driving the visiting CEO to the shantytowns where many of Delphi's employees live. From that moment on, the story goes, Delphi and General Motors became committed to improving the living conditions of its Mexican workers.

Crawford dedicated a considerable amount of time looking for the "right" housing program, and started by working with a consultant who had been hired by INFONAVIT to design a project that would fit the needs of border workers. (Crawford interview, January 22, 2002) Many young workers came to the border to work in maquiladoras, but often they could not qualify for INFONAVIT homes. According to Crawford, often the workers "didn't have enough points to qualify for government housing." (Crawford interview)

Lee Crawford had been frustrated with INFONAVIT because for years Delphi had been paying the required 5% employer contribution, but were not seeing a reasonable return in terms of the number of housing credits for their employees. When asked if he felt that Delphi had been contributing much more [to INFONAVIT] than they were receiving in return, Crawford replied, "Oh yes, but this was true with all other companies, not only Delphi." (Crawford interview) Most critics noted that INFONAVIT's income from employer contributions far exceeded what it was producing in housing. Several times, the housing agency had been accused of funneling housing funds towards the PRI's election campaigns. (Natalie Pickering interview, April 1, 2002; Angel Garcia interview, January 2002)

Crawford recounted other attempts at starting housing projects, including a pilot project with the Chihuahua state government that had been designed to provide 400 houses. By his own accounts, the project turned out to be a disaster because of the heavy documentation the Chihuahua housing agency required. Since many of Delphi's workers came from the interior, they did not have their birth certificates and other legal documentation that was necessary to

participate in state programs. Additionally, Crawford cited the heavy administrative burden that was placed on Delphi's employees. He noted, "Our personnel people were doing all the work. In terms of loan qualifications...it was a major, major effort, in Mexico in particular because people don't have credit history or the necessary documentation." (Crawford interview, January 22, 2002) Crawford went on to say that Delphi had learned a lot about what NOT to do in a housing project. A housing project would be more successful in Delphi's eyes if Delphi were not responsible for auditing the contractor, auditing the construction site, and performing loan qualifications. This put an undue administrative burden on Delphi, and it was important to find a partner that could take over some of these administrative responsibilities. Although Delphi was committed to worker housing, they remained an autopart manufacturer and did not have the personnel or the expertise to become heavily involved in the loan qualification process.

Other attempts at finding the right housing program included an attempt to form a partnership with Habitat for Humanity. Several Delphi employees volunteered at Habitat in Mexico, but ultimately, no formal agreement was made because Habitat would not agree to earmark housing for Delphi employees. For ideological reasons, Habitat for Humanity only builds community housing and will not designate recipients based on religion, employment, or political affiliation. Although Crawford said he understood Habitat's decision and respected their work, a partnership with Habitat would not produce the Delphi worker housing that the company was looking for, and certainly not as fast as Delphi wanted it.

Lee Crawford indicated that by 1996, INFONAVIT had designed the Housing Savings Program, *Binomio Ahorro Hogar* and Delphi was ready to sign on, but was looking for the right contractor. Delphi met with several construction companies, until finally, Grupo Condak and Pulte found him.

Grupo Condak

Accounts from David Arelle, owner of Grupo Condak, indicate that the construction company played a major role in designing the INFONAVIT program, *Binomio Ahorro Hogar.* (Arelle interview, January 21, 2002) INFONAVIT had launched a similar savings program for the restaurant industry in Mexico City in 1995, but the program never took off because there was not enough interest on the part of the private sector employers. The basic premise of the original savings program was that the employees would save 20% of the price of the home for the down payment and INFONAVIT would award the workers a loan of up to 80% of the price the house.

This was a departure from previous government housing practice, because a standard INFONAVIT credit would award the worker loans of up to 100% of the price of the house.

Grupo Condak had been building homes in Ciudad Juárez since 1974, but the economic crisis associated with the 1994 devaluation of pesos had crushed the construction industry. In 1995, Condak needed a partner to provide capital so that the construction company could continue building homes. It partnered with Pulte Mortgage Corporation, the largest homebuilder in the US. Shortly after the two construction companies partnered, they approached INFONAVIT to suggest that the agency's savings program be expanded for the maquiladora industry. According to David Arelle, it was Condak-Pulte that founded the idea of *Binomio Ahorro Hogar*, the INFONAVIT program that was launched in 1996 with Delphi Automotive. (Arelle interview, January 21, 2002)

Mr. Arelle adds that Condak's real contribution was in paying attention to the smaller administrative details that made INFONAVIT's first attempt with the savings program a failure. (Arelle interview, January 21, 2002) Lee Crawford agrees that it was Condak's attention to detail that made the program a success. Condak employees would come into the Delphi maquiladoras and have information sessions with interested workers, explaining the savings program and the INFONAVIT selection process. The construction company would take an active role in working with INFONAVIT in the loan qualification process, removing the burden from Delphi's personnel department. Additionally, Crawford adds, Condak built good houses so neither Delphi nor INFONAVIT had to audit the constructor's work. This was an administrative task that had plagued the national housing agency, since working with so many contractors had required enormous oversight to ensure that workers received quality homes. (Crawford interview, January 22, 2002)

In addition to earmarking housing credits for Delphi and requiring a down payment, another important divergence from INFONAVIT's traditional method of supplying housing credits was the fact that a single construction company received all the housing contracts. Normally, construction companies build houses according to INFONAVIT specifications and then offer their houses to INFONAVIT to be put on the market for the workers. Workers can then choose their preferred construction company or their preferred lots, given their budget constraint. Under the Delphi-INFONAVIT program, Delphi employees had to take Condak houses, but could choose from several Condak lots. When questioned about the fairness of a government

program that assigned an exclusive contract with a private company[8], David Arelle replied jokingly, "my houses are the best." On a more serious note, he continued, "we were the ones that invented this product." (Arelle Interview, January 21, 2002) Ultimately, Condak's reward for their innovation was a $100 million project for 7000 homes that was a pilot program for *Binomio Ahorro Hogar.*

2.1 How the program works: financing and employee selection

Employer-assisted housing models vary significantly, and some schemes for lowering housing costs include matching savings program, offering below market interest rates, subsidized secondary mortgages, mortgage guarantees, and home buyer education. (Jennings, 2000, p.8) Delphi's housing program can be considered a comprehensive program because it features all of these characteristics (for different borrowers, different incentives are offered) whether it is offered directly by Delphi (matched savings), by the construction company (home buyer education) or by INFONAVIT and FOVI (below market interest rates and mortgage guarantees.)

The housing program had three distinct components, targeting different housing markets and Delphi employees. The main program that receives the majority of the press attention is the *Hourly Program*, the original agreement that was signed in June 1996 between INFONAVIT and General Motors for its Delphi employees. The Hourly Program is also called the Binomio Ahorro Hogar under INFONAVIT's classification system. In 1999, Delphi began a smaller *Salary Program* for its salaried workers whose earnings exceeded the parameters of INFONAVIT[9] financing. The second program used INFONAVIT workers' contributions, but credits were actually assigned by the Mexican Housing Agency, FOVI. Finally, the *Gerente Program*[10] was designed for Delphi's management and supervisors, presumably under the same financing structure as the Salary Program, but with higher quality homes. Due to the limited amount of information available on the *Gerente Program*, and ostensibly because it involved only a small number of Delphi's management, I will not be discussing the details of the third housing

[8] Most government contracts are awarded through a "Convocatoria" or a special bidding process. Although INFONAVIT does not have a strong record in this area, for a $100-million contract for 7000+ homes to be awarded without a bid process seems unusual.

[9] Throughout its 30-year history, the various administrations have targeted different populations in it patronage. In 1995, INFONAVIT targeted households that earn between 1 – 10 minimum wages, but the bulk of the lending actually went to those households that earned between 2-3 minimum wages. (Lea & Bernstein, 1995)

[10] *Gerente* is the Spanish term for boss or manager. Several workers referred to the *Gerente Program*, but no one would give me a formal interview about the program, nor did I find a manager who would answer my questions.

program. However, this section will review the financing and employee selection process of the Hourly program and the Salary program.

Hourly Program – INFONAVIT financing

INFONAVIT's new housing product[11], *Binomio Ahorro Hogar*, differed from previous housing credits in that it required worker savings toward a down payment. A goal of 20% savings was set and when a worker signed up for the program, they would agree to a "Savings goal" or a salary deduction and would save money for a designated amount of time, from 1, 2 or 3 years, depending on how much money they already had in their INFONAVIT sub account. The employer was providing a 5% contribution toward every worker's INFONAVIT sub-accounts, so a worker that had been contributing to the fund for several years or who had a good salary could have already accrued 20% of the price of a house. This scheme is typical of other Employer-assisted housing programs in the US, which frequently offer forgivable loans to help with down payments and closing costs. (Jennings, 2000, p.8)

Text Box 1: Sample Chronology of Housing Finance Process

1. June 1996 – Delphi signs agreement with INFONAVIT/Grupo Condak.
2. Sept. 1996 – Maria, a Delphi employee, signs an agreement to save money for the following year towards the down payment on her house.
3. Sept. 1997 – Maria's saving period of 1 year has matured but she still does not have 20% down payment, so Delphi Automotive provides 'special' support and completes her down payment. Average Delphi assistance was $2000 US.
4. Maria signs a promissory note with Grupo Condak, so on paper her loan was from the construction company.
5. Oct. 1997 – Maria receives her house.
6. Oct. 1998 – Maria has been making payments on her INFONAVIT house through INFONAVIT payroll deduction. Her debt to Condak is similar to a second mortgage. Her first repayment to Condak is now due.
7. Oct. 1998 – Maria is still working with Delphi, so she receives $400 bonus, which equals the amount she owes Condak. The repayment of the $2000 was over a 5-year period. Condak repays Delphi for this loan. This circular payment (Delphi>Employee>Condak>Delphi) was designed for tax purposes.
8. June 1999 – Maria has quit working with Delphi, but now works at another maquiladora. Her new employer continues to take 25% automatic deduction from her weekly paycheck, which goes toward INFONAVIT house payments.
9. Oct. 1999 – Maria still owes Condak $400, even though she is no longer working for Delphi. She must make this payment, even without Delphi's bonus.
10. If Maria defaults on her payment, Condak is still responsible for repaying Delphi the $400. Delphi therefore recovers the "special" assistance money if the employee leaves the company.

Source: Delphi finance employee, G. Gutiérrez, outlined the sample process in a January 16, 2002 interview.

[11] The program was open for other employers as well, and Delphi can in some ways be considered to be the pilot project.

To qualify for INFONAVIT housing, workers were required to be first-time homeowners.[12] Since this meant that most of the potential homebuyers had limited knowledge of the finance process, Grupo Condak implemented a homebuyer education program. Delphi allowed construction company's 'promoters' to come into maquilas and conduct meetings with interested workers to explain the finance process, the costs, and help workers understand the qualification process.[13]

By the end of the designated saving period, if an employee did not save 20% of the price of the home, then Delphi Automotive[14] would provide financial assistance to complete the 20%. Under the contract, the employee would sign a loan agreement in which s/he was committed to repaying the loan over a 5-year period. If the employee continued to work with Delphi, they would receive an annual "bonus" equal to the amount of the required loan repayment. In this manner, the loan was actually forgiven if the employee remained with the firm. If an employee left the firm 2 years after receiving the house, they would have received 2 annual bonuses and would have made 2 payments toward Delphi's loan. However, they would be responsible for the remaining payments in years 3, 4, and 5, but without their employers' annual bonus.

Tax issues made this loan agreement more complex. According to Mexican law, an employer is not allowed to give employees tax-free loans. Therefore, the balance of the down payment was structured as a loan from the construction company, Grupo Condak. This meant that Delphi would give Condak the down payment assistance, and the employee would sign a loan agreement with the construction company. Additionally, having the workers owe the construction company removed a possible moral hazard in which the employees might not take the loan agreement with their employer seriously. (Gutiérrez interview, January 16, 2002) It also prevented the appearance that Delphi was controlling its workers' homes.

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[12] Technically, this restriction is to prevent using government funds to obtain a second house. In practice, the restriction applies only to using your funds for a second INFONAVIT house, and Mexicans who had purchased a house independent of INFONAVIT could still try to cash in their government housing credit.

[13] The Condak model of sending promoters into maquilas to explain the mortgage/savings process to workers has precedents. In Rogers, Arkansas, a small town comprised mainly of poultry processing firms, Tyson Foods began a housing program to address severe shortages of workers in 1994. Tyson's program was a partnership with First National Bank and Trust company which provided workers with financial literacy education to help poultry workers understand the housing finance process. (Housing Facts & Findings, 2000, p. 9)

[14] Delphi Automotive's subsidiaries were actually contributing this down payment assistant, but since there are close to a dozen subsidiaries, I am using the parent company's name to avoid confusion. Subsidiaries include Packard West, Delphi Electronic, Rio Bravo Electric, Delphi Energy, Delco, SEC, etc.

The first phase of houses was delivered from 1997-1999 under the program *Binomio Ahorro Hogar.* (See Table 1) This program was a Delphi-INFONAVIT partnership targeting Delphi's hourly employees that mostly work in Delphi's maquiladoras. This category of hourly employees also includes some entry-level office staff or "auxiliaries."

However, an interview with Maria Teresa[15], an office assistant that received a house under the "hourly" program, indicated that for most white-collar staff, INFONAVIT housing quality was undesirable. Maria Theresa is a 23-year old office assistant at Delphi Automotive's technical headquarters. She recounted the story of growing up in a middle class Mexican home in Ciudad Juárez and how difficult it was to move into INFONAVIT housing complexes.

Although for blue-collar workers who were leaving the colonias, INFONAVIT housing was an improvement, for office staff, the story was quite different. Maria Teresa had only been working at Delphi for 1 year, but her income as a finance assistant qualified her for Type IV housing, the second largest home. In her case, she and her husband spent thousands of pesos making improvements on the home, including an addition to the house, and adding steel bars to all the windows and the front door. Maria Teresa indicated that such protection measures were absolutely necessary in an INFONAVIT neighborhood. She expanded her 600 square foot house before moving into it, and plans on moving out within the next two years. Like others who received housing, she will either sell her house or use the rental income as an investment. It was difficult to collect data on the number of housing recipients who used housing credits as a source of rental income as opposed to using the units as a primary residence. This practice is illegal under INFONAVIT rules, but is tolerated. Some amount of flexibility is necessary with this law, because it is quite natural for a family that needed government housing at one point in their lives to advance economically and want to move out of these homes once they can afford to move into a better neighborhood.

The Director of Ciudad Juárez Municipal Planning Office, Dr. Siqueiras, agreed that INFONAVIT housing had a high level of delinquency and crime in their neighborhoods. High density and limited green spaces meant that youth had nowhere to go but to hang out in the streets. The high crime rate is characteristic of INFONAVIT housing complexes in general, and not just Delphi-INFONAVIT housing. However, the crime rate, the stigma of government housing, and the limited amenities of INFONAVIT housing made it undesirable for many white

[15] Fictional name used to conceal her identity.

collar workers. In Maria Teresa's situation, they invested substantially in their new home, but plan on selling the home or renting it out within the next two years. She indicated that most supervisors who received houses rented the houses or gave them to their adult children instead of residing in them.

The Salary Program – FOVI financing through SOFOLES

In interviews, both Lee Crawford and Eduardo Serrano, indicated that the salary-housing program was started in 1999 in response to the overwhelming demand from salary employees about being excluded from the hourly housing program. This program only provided 800 houses, but it was able to take advantage of a loophole in INFONAVIT laws. The housing program did help Delphi workers gain access to housing credits, when they would not have been able to qualify for INFONAVIT housing under normal circumstances. Ironically, Delphi helped its employees that could not qualify because they made *too much money*, as opposed to the helping out those that made too little money.

Just as in the hourly program, the salaried workers did not have a choice of construction companies, and were required to buy Condak houses. FOVI, Fund for the Operation of Bank Housing Finance, is a housing agency similar to INFONAVIT, but for higher income workers. FOVI financing typically works through a SOFOL, a non-depository financing agency working exclusively with housing finance, in cooperation with the Mexican housing agency. In this case, the Delphi salary workers were also obligated by contractual arrangements to use Hipotecaria Su Casita, a subsidiary of Pulte Mortgage Company, the construction company's partner. It is these contractual arrangements with the construction company and the mortgage lender that make this program unique from other INFONAVIT and FOVI housing credits. Securing high volumes of government subsidized contracts also made it an attractive investment for construction companies and for the foreign capital used to finance Su Casita's mortgages.

Jezabel Fernández, an office assistant in the public relations office at Delphi, received a house under the salary program. When asked about the company's financial assistance with her house, she replied, "No, the company didn't provide me with down payment assistance or with any money. What the company [Delphi] did was help negotiate with INFONAVIT to get me the money that Delphi had been contributing to my INFONAVIT sub-account." (Fernández Interview, January 16, 2002) Essentially, Delphi had been paying the required 5% contributions to Jezabel's INFONAVIT account, and INFONAVIT kept those savings in her housing sub

account. However, Jezabel's income was too high for INFONAVIT's qualification process. Although the Juárez INFONAVIT director would later state that there was no clear cut-off point in terms of wages and qualifications, workers making more than 8 minimum wages had a very difficult time qualifying for housing credits. In Mexico, income distribution is expressed in minimum wages. In 2002, the minimum wage was approximately $4.61 a day, so multiples of this figure would represent the different income brackets that are used for determining eligibility for government housing, or for any government statistics.

In Jezabel's case, she made too much money, and her income would probably only increase with time. Since the INFONAVIT reforms in 1992, her employer's contributions would not disappear, but they would remain in her accounts until her retirement. At retirement, if she had never received a housing credit from INFONAVIT, her housing savings would be transferred into her "AFORES" account, or a retirement account. Although the savings were not lost, for Jezabel, who appeared to be in her mid-20s, she would have to wait 40 years to access these savings. With the help of Delphi, she was able to gain immediate access to her savings and make an investment, as well. However, this was not an INFONAVIT credit. This was a transfer of funds from INFONAVIT to a FOVI-financed house.

Jezabel and her husband were living with her mother-in-law prior to receiving the house. Although she is the happy owner of a new house, Delphi's salary program was not what INFONAVIT had envisioned. One Delphi employee familiar with the Delphi-INFONAVIT negotiations claimed that INFONAVIT was displeased with this program, but had realized too late what was happening with the funds. Essentially, INFONAVIT had turned over the savings of the salary employees without realizing that this money would be turned over to Hipotecaria Su Casita as a down payment for a FOVI loan. This is money that INFONAVIT would have preferred be used for INFONAVIT credits, and not to help another government agency. Since the salary housing was almost twice the cost of INFONAVIT housing, the money used for down payments could arguably have been used for twice as many INFONAVIT credits.

In terms of leveraging financing for poor households, the Delphi salary-housing program essentially defeated INFONAVIT's purpose in creating the *Binomio Ahorro Hogar.* Ostensibly, the main benefit of the saving program was that it was a way for INFONAVIT to increase the number of housing credits it awarded annually. If it was no longer financing 100% of the price of a home, the agency could increase the number of workers that received assistance. The INFONAVIT director in Ciudad Juárez added, "The idea is not to award 10 houses of 200,000

pesos a piece, but it is better to award 20 houses at 150,000 pesos." (Garza interview, January 18, 2002) The employer's down payment assistance could fill the gap between the INFONAVIT credit and the price of the home.

Xochitl Diaz, Delphi Media Relations officer in Ciudad Juárez, explained that the salary program filled a gap in the housing finance market. Low-income workers could qualify for INFONAVIT financing, and high-income workers could afford to go to a private bank. However, in between these layers, there existed a class of young, entry-level office workers that could not afford private sector mortgages, but whose higher earnings disqualified them from INFONAVIT loans. (Diaz interview, January 16, 2002)

Table 1: Summary of Delphi's Housing Program

	Hourly Program "Binomio Ahorro Hogar"	**Salary Program**
Years	1997-1999	1999-2001
Beneficiaries	Hourly employees, mostly maquila workers, and entry level office staff	Office workers, supervisors, managers
Average income	1.7 - 8 minimum wages	12-13 minimum wages
Housing agency	INFONAVIT	FOVI
Financing source	INFONAVIT	Hipotecaria Su Casita
Ave price of houses	$17,000-$24,000 (4 types of houses available)	$33,000-$52,000 (2 main types of housing)
Interest rate	6%	8.5%
Down Payment required	20%	20%
Delphi down payment assistance	Workers earning <3 minimum wages typically received assistance to complete the required 20% down payment.	No Delphi financial contribution, but negotiated the use of INFONAVIT funds
Amount of average Down payment assistance from Delphi	$1500-$2000 (Per worker)	$0
Number of houses	5173	800

Source: *Compiled by author with information from Delphi's Personnel office, Hipotecaria Su Casita, and Grupo Condak sales agents*

Housing types and quality

In examining the size and quality of housing, two different products are available. INFONAVIT housing is intended for lower income workers, and the largest homes are typically 60 square meters, or approximately 600 square feet. Some houses are on larger lots, to allow the worker the opportunity to enlarge the house or add rooms to the house if necessary. The

number one complaint about INFONAVIT housing is that they are "shoebox" houses that are small and located in neighborhoods where hundreds of your neighbors have the exact same house. Although improvements have been made in design to allow for the option of expanding the house, recipients of Type I housing did not have lot sizes large enough for expansion.

The other interesting factor is that the quantity of Type I houses was capped at 30% by Grupo Condak. (Delphi personnel department) This meant capping the number of low-income workers that could qualify for the program. As earlier, the vast majority of the housing was targeting the upper range of housing. Condak that requested a cap in the smaller houses, presumably because of the lower profit margin with smaller houses.

Claudia[16], a Delphi personnel officer, indicated that most of the workers who earn less than 3 minimum wages have to renegotiate the terms of their payment with INFONAVIT. As already noted, only 30% of Delphi's credits actually went to workers earning less than 3 minimum wages, but of these workers, Claudia estimated that the majority of them could not afford the 25% salary deduction that INFONAVIT takes for monthly payments. These workers must then go to INFONAVIT offices and negotiate a longer payment term, which will reduce their monthly payments. Therefore, despite good intentions to reach lower income workers through INFONAVIT housing credits, these are precarious mortgages when the workers earn so little that they can barely make payments.

2.2 Employee selection

In 1992, INFONAVIT went through a dramatic reform and restructured the agency to improve its services and increase transparency. One reform included the introduction of a points system, which would qualify workers for housing. The previous system had awarded housing credits in a raffle, but this system heightened criticism of INFONAVIT for awarding houses for political benefits. The new qualification systems examined a worker's salary, age, number of years worked, number of dependents and total contributions to the fund. This employee profile is then used in a qualification system in which workers are assigned points and must reach a certain level to be considered for a housing credit. Prior to this, the agency was criticized for its method of allocation of housing credits.

[16] Name concealed

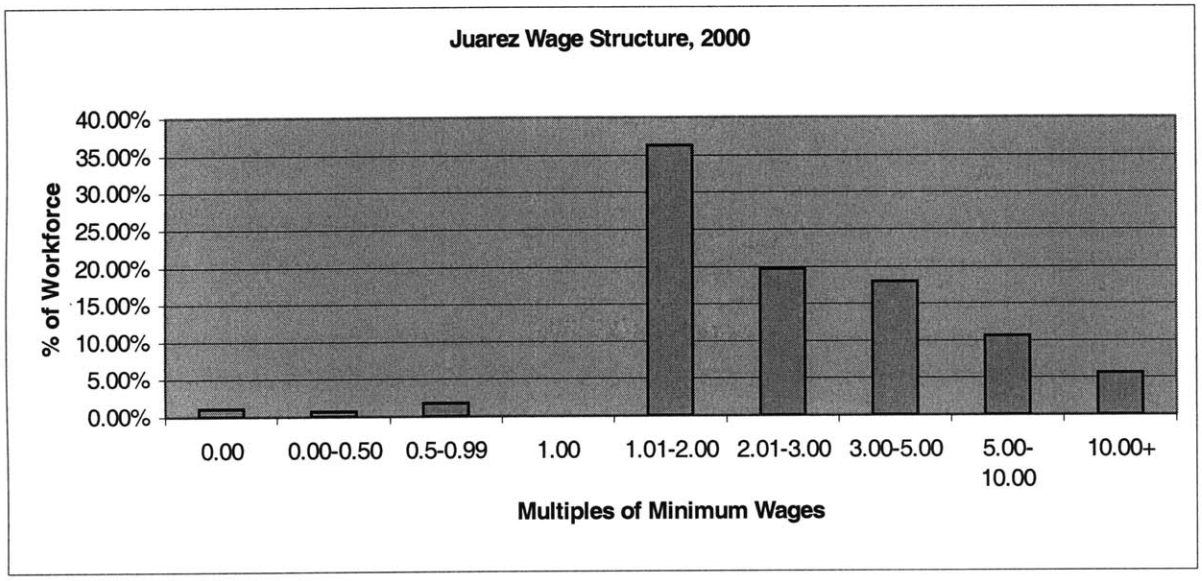
In designing any housing program in which social and economic development is an implicit goal, the selection of the recipients of housing is a critical factor in determining the impact of the program. It is for this reason that INFONAVIT had designed their qualification system to benefit those workers who had low salaries, but who still had steady employment and were capable of making payments. Under the initial Delphi-INFONAVIT housing program, (hourly program) workers had to make between 1.7 – 10 minimum wages[17] to qualify for the hourly program.

In examining the distribution of housing benefits, it appears that providing housing for the 'poor' was not a priority in the selection process. The following table shows the salaries of the Mexican population. By providing subsidized housing benefits to workers that earn more than 10 minimum wages, the government is subsidizing housing for workers in the top 5% of the country. The Salary program actually targets workers that made 12-13 minimum wages, (Serrano interview) which are truly some of the wealthiest wage earners in Mexico, and is well above the target income of FOVI. As a methodological note, it should be stressed that these statistics are for individuals, and that for purposes of mortgages, household income is considered, as opposed to individual income.

[17] This figure was disputed. Although all interviewees agreed that 1.7 was the minimum, the Arelle interview indicated that the range was 1.7-8.0 minimum wages, while the Delphi Personnel staff indicated that the qualifying range was 1.7-10.0. The initial Delphi press statements indicated that 8 minimum wages was the maximum, but it is assumed that employee pressure for houses made Delphi raise the qualifying wage.

Table 2: Percentage of labor with given minimum wages, 2000 Census

Income level	Juárez	Chihuahua	Matamoros	Ramos Arizpe	Sabinas	Saltillo	National
0.00	1.13%	4.62%	2.84%	3.13%	1.87%	2.14%	8.35%
0.00-0.50	0.65%	1.15%	1.89%	1.26%	1.22%	0.85%	3.52%
0.5-0.99	1.75%	2.66%	5.20%	3.20%	3.26%	2.25%	8.79%
1.00	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.00%
1.01-2.00	36.34%	29.31%	43.56%	20.45%	33.87%	19.52%	30.32%
2.01-3.00	19.66%	21.61%	24.45%	28.88%	21.14%	26.84%	17.64%
3.00-5.00	17.94%	18.67%	13.03%	21.46%	16.53%	23.25%	14.06%
5.00-10.00	10.64%	10.48%	4.38%	8.51%	10.59%	11.74%	8.01%
10.00+	5.58%	5.39%	1.15%	5.04%	6.45%	7.47%	3.85%
Undeclared	6.32%	6.11%	3.49%	8.06%	5.06%	5.92%	5.44%
Total population	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
% under 2 vsm	39.86%	37.73%	53.49%	28.05%	40.23%	24.78%	51.00%



Source: INEGI 2000 Census. "Censo General de Población y Vivienda. 2000" Table 11: Población ocupada por entidad federativa, sexo, y ocupación principal, y su distribución según ingreso por trabajo en salario mínimo.

2.3 Sample Maquiladora: SEC, Sistemas Electrónicos y Conmutadores, Cd. Juárez

For purposes of this study, it is assumed that SEC is a typical Delphi maquiladora in Ciudad Juárez. However, it is not necessarily representative of the 20 other Delphi subsidiaries in 6 Mexican cities that participated in the housing program. The character of labor, unions, and wages in different Mexican industrial cities will be discussed in more detail in Chapter 4.

In Ciudad Juárez, SEC is a model plant, frequently used when Delphi gives tours of its facilities. SEC has received awards for safety and cleanliness including ISO 14000 certification for environmental standards. Because 60% of the program's houses were allocated to Ciudad Juárez, the case study of the SEC plant is relevant for developing a framework of Delphi's plants in Juárez. Delphi has 15 plants in Juárez, which represents approximately 25% of its workforce in Mexico, so Ciudad Juárez employees received a disproportionate number of housing credits.

The most interesting result of the tour of SEC and of extensive interviews with personnel officers was the fact that line operators[18] could not qualify for subsidized housing because they did not earn enough money. At SEC, 92% of the factory's 3518 workers were hourly workers. Among hourly workers, a full 79% were line workers, who earned 1 minimum wage[19] when they entered the factory and who got a raise up to 1.61 the minimum wage after 3 months of work. ($7.43/day) Since the minimum requirement of the housing program is 1.7 minimum wages, the line workers could not qualify because they did not earn enough money. Until a line worker gets a promotion, or until the Mexican government changes the minimum wage, it is impossible to get a raise. When I asked why line workers did not receive houses, Eduardo Serrano, the Director of Personnel, responded, "Well that's why we call it the hourly program and not the line worker program." He continued by saying that Delphi may have tried to negotiate with INFONAVIT, but "not hard enough." (Serrano interview)

Of the remaining 21% of hourly workers that could qualify for homes, most were technical workers, line leaders, quality control workers, and office staff. Graciela, a Delphi veteran of 22 years, received a home in 1998. She had started as a line worker, and then moved her way up to quality control. Although these workers are also deserving of homes, if Delphi's goal had been to improving the living conditions of its workers, this housing program excluded the vast majority of its poor workers. In the two weeks that I spent in Ciudad Juárez, Graciela

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[18] The term operator comes from the Spanish word *operador* or *operadora*, which refers to what American factories would call line workers. The terms operator and line worker will be used interchangeably. Note that line workers are entry-level workers in factories with no training.

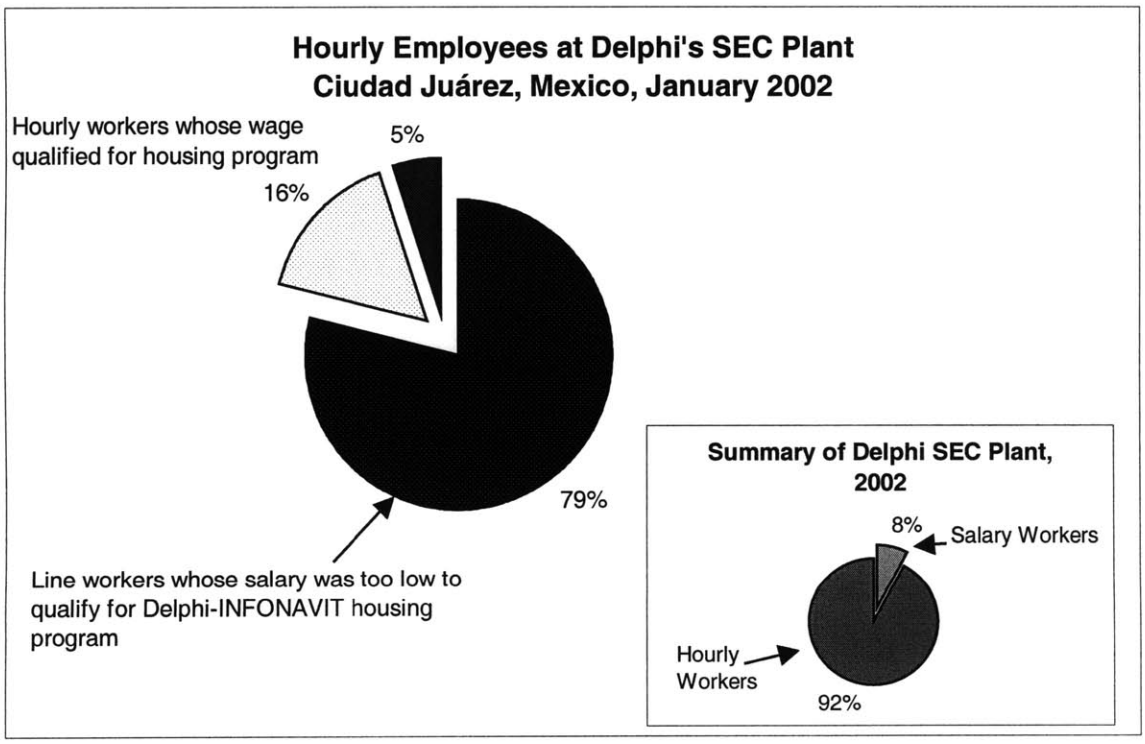
[19] According to the exchange rate in January 2002, 9.15 pesos=$1, thus 1 minimum wage=$4.61/day

was the only worker that I met that received housing that did not work in an office or technical center and actually worked in an assembly plant.

Table 3: Break Down of SEC's Hourly Workers

	Direct	Indirect		Totals
Classifications:	Line workers, Levels I, II and "Special"	Quality control, line leaders, and technical staff	Auxiliares or Office assistants	All Hourly Workers
1st Shift (6:30-3:30)	1135	271	163	1569
2nd Shift (3:30-Midnight)	943	171	0	1114
3rd Shift (Midnight – 6:30)	483	73	0	556
3rd Shift (Midnight – 6:30)	0	2	0	2
Totals	2561	517	163	3241
Percentages	79.02%	15.95%	5.03%	100.00%

Source: Data compiled by author from personnel records provided by Eduardo Serrano, Director of Personnel, Delphi SEC, January 24, 2002. (For Table 3 and for pie chart)



Prior to meeting with SEC personnel officers and obtaining these statistics, I questioned Lee Crawford, former Chief Executive of Delphi Automotive Mexico, and asked him why Delphi had not opted to give its employees a raise, rather than supply housing benefits. Economists argue that most workers prefer benefits in cash as opposed to benefits in kind. Crawford replied, " Had we given the employees raises they still wouldn't have been able to get a

house." While this is true that a raise would not have allowed Delphi's workers to qualify for a loan from a commercial bank, if Delphi had raised the wages of line workers, they would have made the INFONAVIT housing program available to a larger percentage of its employees. In this case, therefore, it is not accurate to say that giving workers a raise is insufficient to help workers get their own housing. Precisely the opposite is true. Giving workers a raise was the *only* way for workers to qualify for government subsidized housing with INFONAVIT.

Given the characteristics of the unskilled labor market in Juárez, it may not have been possible to raise the wages of all entry-level line workers. However, a slight pay increase for line workers that had seniority could have opened the program to many more workers. Eduardo Serrano indicated that there were some line workers that were "Special Line Workers" who earned 1.8 minimum wages. He did not have statistics available for this, but estimated that there were less than 100 line workers at this level, or 3.2% of hourly workers. If Delphi had expanded this class of line workers, however, the number of people qualifying for Type I housing would have exceeded Condak's desired amount of the lowest line of housing.

Another interesting part of Delphi's employer-assisted housing program is the level of government involvement. Without the cooperation of the Mexican government by providing housing finance and subsidized interest rates, both Grupo Condak and Delphi contend that the program would not have been possible. (Crawford interview; Arelle interview) How common is state support of EAH program elsewhere? Stephanie Jennings notes that it is most common for *employers* to fully finance the administration and financial assistance of EAH. (Jennings, 2000, emphasis added) However, examples of state aid include the creation of a corporate tax credit for EAH programs, which was approved by the Connecticut state legislature in 1994. (Jennings, 2000, p. 10) Other options for state aid include establishing a matching fund for EAH, which is the path taken by the state of Maryland and by cities including Milwaukee and the District of Columbia. (Jennings, 2000, p.10)

However, none of these state programs have provided the magnitude of support for Employer-assisted housing that INFONAVIT and FOVI have awarded for Delphi's housing program. INFONAVIT provided 80% of the financing of the hourly program, which includes the administrative costs and shouldering the burden of repayment. Similarly, with FOVI, the housing agency subsidized the private sector lender by paying for origination and servicing fees and providing below-market interest rates. Interestingly enough, this means that it is the SOFOL that is actually accruing the benefits of the housing finance. (Bernstein interview; Pickering

interview) This factor will be examined more carefully in Chapter 5, but in this case, Hipotecaria Su Casita, a subsidiary of Pulte Mortgage Company, reaped the benefits of FOVI subsidies to make financing Delphi's salary program a lucrative business.

One researcher of social interest housing in Mexico said, "In all cases, housing is provided not for the poorest of Mexicans, but for lower-income working Mexicans that earn incomes between established minimums and maximums." (Yoder, 2001, p.2) Michael Yoder's insight is also true of the Delphi-INFONAVIT housing program. Lee Crawford's repeated attempts at improving worker housing through the Chihuahua State housing program and through Habitat for Humanity are evidence that the Delphi housing program was initiated with good intentions to improve worker-housing conditions. However, somewhere along the line, this well-intentioned housing innovation compromised its commitment to low income workers.

Furthermore, neither Delphi nor the construction company wanted to take advantage of INFONAVIT loans for progressive housing. INFONAVIT has a line of financing that is designed to award smaller amounts of money ($1000-$2500) for workers that want to make improvements on their existing lots. The construction companies were not interested in this part of the market, because frequently, workers used the money to buy materials and did much of the work themselves to build additions or make improvements. Furthermore, these loans improved informal housing, but did not create properties that would be part of the formal housing market, which is what financing companies are interested in. However, by offering smaller loans, Delphi could have increased the percentage of low-income workers that had access to credit. By making finished housing units the only option, the poorest workers could never qualify for such a program.

How do we explain the fact that so many low-income workers were excluded? Does the maquiladoras low-wage structure have to eliminate so many formal sector workers from homeownership? Why was the construction company able to cap the number of housing units for the lowest-income workers? Why did INFONAVIT not regulate the process and allow the construction company to control the allocation process? Or should we just accept that in Mexican society not every one has a right to a home, even if they are employed in a very profitable US business? How do we address the difference between the press releases and the reality of the housing program? Finally, if the program was not started to give homes to 'poor' workers, what were GM's motives?

Chapter 3
Public Relations and Employee Turnover

> "This is a great day for General Motors and for Mexico. The agreement we are signing today will make affordable housing a reality for thousands of our Delphi employees in Mexico. Without this partnership between government and private industry, such housing would remain only a dream for many of our Mexican employees. We have entered this agreement because we believe that social responsibility and business success go hand in hand. Our record in caring for our employees and communities as well as the natural environment has become a model for other companies operating in Mexico to follow."
> - *GM CEO &President, John Smith, Jr., Canada News Wire, June 18, 1996*

This chapter examines what I have termed the "mainstream" hypotheses of motives for offering employee housing. These conventional views are common interpretations of why a firm might offer progressive employee benefits such as housing. The first part of the chapter will examine the importance of generating positive public relations as an incentive for starting the housing program. The second section of the chapter examines the notion that employer-assisted housing benefits were offered to reduce employee turnover and associated training costs. I will show that both of these conventional views are unsatisfactory explanations that are not the primary incentives that prompted GM to offer its workers housing benefits.

3.1 Public Relations

Increasing criticism of labor practices in Mexico has forced companies like GM and Delphi to be on the defensive about their business practices south of the border. The introductory quote is an example of sound bytes that General Motors was able to disseminate in the press, accompanying the announcement of the housing program. Improving their corporate image and generating positive public relations was a strategic move by GM. General Motors had experienced negative press by Ross Perot's anti-NAFTA campaign in the early 1990s. More important than pleasing consumers and the general public, General Motors' publicity campaign was aimed at shareholders and US unions. This section will draw on Corporate Social Responsibility (CSR) literature to show how GM and Delphi worked to promote an image of social responsibility in Mexico, and the housing program was a way for the company to show its commitment to workers and communities around the world.

In the US press, newspapers such as the *Wall Street Journal, the Los Angeles Times*, and the *Christian Science Monitor* praised Delphi-GM for their progressive business practices in promoting housing for Mexico's urban poor. [20] The Mexican press took a slightly different angle and applauded the cooperation between Mexico's national housing agency and Delphi-GM. Despite the different approaches, the press was very cooperative in offering free advertising for this housing partnership. Both INFONAVIT and General Motors gained from the positive press coverage, and the rewards came in a combination of financial and political benefits.

The vast majority of media coverage on the housing initiative was extremely positive. I found only two slightly negative articles in the mainstream press, which suggest that General Motors should offer workers a living wage if it were really concerned about employees' welfare. The title of the Los Angeles Time article is quite revealing: " Pesos Don't Seem to Trickle Down in Ciudad Juárez, Mexico: Thanks to US prosperity, this border city is booming, but little of the wealth finds its way to workers." (Stevenson, 1999) However, in a review of major newspaper and journal articles on the Delphi housing program from 1996-2002, only two press agents presented slightly negative interpretations of the Delphi housing program. (Stevenson 1999; Blumenstein & Solis, 1997)

How much effort did General Motors commit to promoting positive press coverage? GM President Jack Smith, the president of the largest company in the world, came down to Ciudad Juárez for the inauguration of the first 20 homes in 1997. Jenalia Moreno of the *Houston Chronicle* reported, "The workers showed off their homes to foreign dignitaries and gave tours to executives such as General Motors' Chairman Smith." (Moreno, 2001) All the local media carried this story and journalists from the US and Canada were also invited. Although Jack Smith's presence could be interpreted as his genuine commitment to workers' housing, the president cooperated with Grupo Condak who would later produce a promotional video featuring this event, signaling the fact that his flight to Mexico was motivated by more than just compassion for Mexican workers. By sending VIPs from Detroit down to Mexico, Delphi and General Motors ensured that the housing program received the media attention that the company wanted. The fact that Canadian press (see opening quote) was also invited to the ceremonies is

[20] Millman, Joel. "Labor: In Mexico, a GM Worker Sprints Into the Middle Class." Wall Street Journal. 07/29/98; Moreno, Jenalia. "More Casas for Workers: US Companies, Builders creating better housing for prices affordable to *maquiladora* employees." Wall Street Journal, 03/04/01; Kraul, Chris. "Mortgaging the Future: Firms Help Employees at Mexico's Border Factories Buy Homes" Los Angeles Times. 12/21/96; LaFranchi, Howard. "Mexico struggles with shortages on the homefront." Christian Science Monitor, March 13, 2001, p.7.

also telling. Not only was GM concerned with reaching American labor unions like the United Auto Workers (UAW), but recent labor disputes with the Canadian Auto Workers (CAW) made Canada a critical audience as well.

In recent years, public awareness of labor rights issues has increased dramatically in the United States. In Mexico in particular, labor rights activists have exposed firms that repress labor organizing, practice discriminatory hiring practices,[21] force overtime, and have non-democratic union representation. Many multinational firms in developing countries have found that they must cater to two audiences. Back home, their business practices are policed by the ubiquitous media coverage and by non-governmental organizations and labor organizations concerned with worker rights. More importantly, stockholders are increasingly demanding responsible business practices. Within Mexico, Delphi is also under the vigilance of local pressure groups including local government, local worker organizations, and national agencies that regulate the maquiladoras.

Additionally, Delphi Automotive is under the added pressure of being a subsidiary of General Motors, a major US automaker that has had many confrontations with the United Auto Workers (UAW) unions and the Canadian Autoworkers Union (CAW) in its North American Operations. By sponsoring a progressive housing program that is in the best interests of workers, and by capitalizing on the positive press coverage, Delphi could avert criticism from labor rights activists, and take a positive role with community development and housing advocates. In the United States, labor unions that typically criticize businesses for abusing third world workers would have to confront the fact that Delphi had instigated a program that was for the genuine public good.

Is General Motors susceptible to criticism for its labor practices in Mexico? This is a difficult question to address because it presupposes that GM executives believe that criticism of labor abuses will affect car sales in the US. Previous literature that supports this hypothesis includes stakeholder theory, the dominant paradigm in the Corporate Social Responsibility literature, which states that customers, employees, suppliers, community groups, government, and some stockholders can apply pressure on companies for socially responsible business practices. (Freeman, 1984) Under this hypothesis, Delphi-GM was responding to its constituent's demands for social responsibility and just labor practices. The housing project

[21] Examples of discriminatory hiring practices include asking women if they are pregnant and requiring women to use contraception in order to avoid paying health benefits that are required under Mexican law.

would need a lot of positive press coverage so that constituents in Detroit, Washington, DC, and Mexico City were aware that GM was responding to their demands.

Why do American and Canadian autoworkers care how General Motors treats their counterparts in Mexico? This is a complicated question, and most evidence[22] suggests that there is little genuine solidarity between workers in the US and Mexico. (Coronado interview, January 14, 2002) However, US workers *are* concerned about losing jobs to Mexicans, and a key part of the labor rhetoric to prevent jobs from heading south of the border is to accuse companies of labor abuses in Mexico. This will be discussed in more detail in Chapter 4 in an analysis of General Motors' US, Canadian, and Mexican labor unions. Whether labor unions pursue this tactic out of genuine concern for Mexican workers or not, it has become a popular way of embarrassing companies.

Labor rights activists are also increasingly launching campaigns aimed at embarrassing corporate America. (Varley, 1998) Targeting familiar stores like Gap, Nike, or Starbucks has become a popular tactic to raise awareness of labor abuses or exploitation of natural resources. "These companies have devoted tremendous resources to become household names associated with particular images or values, and are susceptible to embarrassment in a way that more obscure companies are not" (Varley, 1998, p. 14) However, Barnet and Cavanaugh add that attacks on a company's image are more effective "against companies that depend on strong consumer brand loyalty like Nike and Starbucks, and less well in industries in which there isn't strong brand awareness...or where consumers are companies (auto parts)." (Barnet & Cavanaugh, 1994) In this case, consumers are less familiar with Delphi Automotive and many do not realize that it was a subsidiary of General Motors. The notion that American car consumers would modify their consumption patterns based on Delphi's community practices in Mexico seems implausible.

Consumer-oriented CSR theory assumes that consumers reward companies that promote various social issues and that reputation building is a key part of this strategy (Weigelt & Camerer, 1988) But is General Motors concerned about destroying its image for *consumers*, or is it more concerned about the effect of negative publicity on labor relations in the United States and Mexico? Given its long history of labor problems in the United States and costly strikes, (See

[22] Irasema Coronado, PhD, University of Texas, El Paso, will be publishing her findings on solidarity between US and Mexican laborers by the end of 2002.

Chapter 4) generating a positive image for labor unions is perhaps more important than luring consumers with a publicity campaign of good conduct.

General Motors' concern for its image and desire to portray the company as a good corporate citizen is a special bonus of the housing program, but it is unlikely that it was a primary motive for initiating the program. After the agreement was signed, it is natural for the company's public relations department to capitalize on the media attention. However, it is implausible that the public relations department has the necessary muscle to induce GM executives in Detroit to engage in an $8 million housing program simply to improve the company's public image.

3.2 Turnover

According to maquila plant managers, academics, and the American Chamber of Commerce in Mexico, "labor turnover is possibly the biggest problem facing US in-bond[23] managers." (Farquharson, 1991) Delphi Mexico is no different than other maquiladoras with rampant problems with employee retention. Interviews with media representative Xochitl Diaz and with Delphi-Mexico Executive Director Lee Crawford indicate that reducing turnover was a primary reason for implementing the housing program. (Díaz interview; Crawford interview)

As one housing analyst notes, "Employers increasingly recognize that long-term retention of employees depends on availability of quality affordable housing within a reasonable commuting distance." (Jennings, 2000, p.1) Delphi's *expectation* that turnover would decline with housing benefits may be a legitimate one, and is documented in both housing literature and labor economics. However, the actual turnover statistics reveal something different. Although the company did report a decline in turnover, the statistics can be misleading.

In July 1996, Delphi public relations officer Michael Hissam noted that turnover rates[24] had fallen to 4% per month in Delphi's Mexican plants, compared to the 15% monthly turnover that the company experienced in the 1980s. (Black, 1996) This is a dramatic reduction in turnover,

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[23] The terms in-bond, twin plants, *maquila*, and *maquiladora* are used interchangeably to refer to export-oriented industries that are located in Mexico, typically along the US border. These industries are primarily US and Japanese firms that locate manufacturing facilities in Mexico for export primarily to the US market, but increasingly to other overseas markets.

[24] Delphi Automotive did not supply any disaggregated turnover statistics for the period of 1995-2000. The only turnover statistics that I have available are from news articles and are reported by the Public Relations Officers. However, in a tour of Delphi's SEC plant, the Delphi personnel manager, Eduardo Serrano, made note of the fact that HR managers do keep track of weekly turnover and absentee rates and they are posted in public spaces in the factories. The turnover rate for the week that I visited the plant was extremely low, but the current statistics are not useful for this analysis.

and Mr. Hissam offered evidence from 50 plants and over 63,000 workers in 1996. However, this reduction in turnover occurred *before* a single INFONAVIT house was delivered, and only 1 month after the program was announced in all the major media. Since the first homes were not delivered until mid 1997, and in particular, since Hissam refers to a decline since the 1980s, this dramatic decline in turnover cannot be attributed to the housing program. Only a decline from the 4% monthly turnover that was cited in July 1996 (at the inception of the program) could potentially have been caused by the incentive of housing benefits. The reported fall in employee turnover occurs *before* the housing program was initiated and leads us to alternative explanations for falling turnover rates.

A review of the literature on employee turnover and retention cites numerous potential explanations for high turnover. Employee profiles on characteristics such as age, sex, marital status, and employment history have been painstakingly examined in numerous studies to determine which employees experience higher turnover rates. Many of these variables are beyond the scope of this thesis, but a few of the relevant theories on labor turnover will be examined in this section.

Leticia Peña Villaseñor wrote a comprehensive analysis[25] of employee turnover in Mexico's maquiladoras in the state of Chihuahua, Mexico, which is particularly useful for this thesis. (Peña Villaseñor, 1994) Two cities in the state of Chihuahua received a disproportionate amount of Delphi's housing benefits. Sixty-one percent of Delphi's housing program went to workers in Ciudad Juárez and an additional 12% went to the city of Chihuahua. Peña's analysis of turnover in Chihuahua in the 1990s is therefore relevant to Delphi's turnover situation in a comparable period.

Explanations for labor turnover can be divided into work and non-work factors. (Peña 1994) Work factors can include issues such as worker satisfaction, wages and compensation, and interaction of management with labor. Non-work factors are external characteristics that affect labor's behavior. The dominant external factors in this case are general fluctuations in the labor market in northern Mexico, and the shifts in the Mexican economy and the US economy.

Compensation is a key work factor in employee retention, and opinion polls show that pay and benefits are the two most important factors for workers in every job classification. (Shiemann, 1984) A key characteristic of high skilled labor is the expectation for *higher pay.*

[25] Peña examined 6 maquiladoras in Chihuahua from 1988-1994, including the automobile industry. The maquiladoras provided actual statistics and evidence from exit interviews. (Peña Villaseñor, 1994)

Confidential interviews with office personnel and management at Delphi Technical Center[26] unanimously revealed that Delphi's workforce was the lowest paid in the industry and in Ciudad Juárez, regardless of the skill level. For many professionals, Delphi was a place to get started, but not a desirable place to end up for a career because of the low pay. Since Delphi is the largest employer in Mexico, there were lots of opportunities for entry-level professionals, but most used the company as a stepping-stone to better positions. The introduction of the housing program in 1996 and also of an employee pension plan for salary workers is evidence that Delphi was concerned about losing its skilled workers, but chose to improve benefits rather than to increase direct compensation.

In examining non-work factors, external factors such as the effects of the US economy on the maquiladora industry have been well documented. (Soden, 1999; Carrillo, 1994) The maquiladora industry is characterized as an export-led industry whose major trading partner is the US, although increasingly, operations in Mexico are exporting to Europe and Asia. Throughout the 1990s, the US economy was in an expansion period which was consistent with the expansion in investment in Mexico's maquila industry during the same time period. Similarly, the 1994 devaluation of the Mexican peso made investment in Mexico even more profitable for foreign investors whose foreign currency would go much further in Mexico. Note that investment in the maquiladora industry was therefore inversely related to the state of the Mexican economy and positively related to the US economy. The downturn in the Mexican economy associated with the devaluation of the peso in 1994 caused an upturn in the maquiladora industry, which also coincided with a boom of the US economy. These factors pointed to an increase in maquiladora jobs along the US-Mexico border in the early 1990s, which would be accompanied by an increase in turnover since jobs were increasing in most maquiladora labor markets.

The current decline in turnover[27] can be attributed to the deterioration of the economy in the US and the subsequent slow down of the auto industry in Mexico according to Eduardo Serrano, Personnel Director at SEC. (Serrano interview) Although Delphi's SEC plant has not laid anyone off, they are not hiring workers or replacing workers that have voluntarily left the company. When alternative employment possibilities are abundant, turnover is high, and when

[26] Delphi's Technical Center in Juárez is not a factory and does not manufacture auto parts. The Technical Center is where technicians and engineers conduct research and where functions such as finance and human resources are performed. Interviews at the Technical Center are therefore reflective of Delphi's high skilled workers.

[27] Evidence on the current turnover in 2002 is to show the factors that influence turnover in general, but today's turnover rate does not affect the housing program.

there are few job opportunities, workers are less likely to leave their current employer. *The economy's impact on the labor market and employee turnover should therefore be considered a primary reason for fluctuations in maquiladora turnover.*

Characteristics of workers and their relationship to turnover rates are other important factors to consider. The literature on demographic and socioeconomic factors that affect turnover is vast. However, for this analysis, the more important factor is determining which positions within the company experience the highest turnover. Paul Osterman's human capital model concludes that workers with minimal levels of human capital are most likely to have high turnover. (Osterman, 1987) These workers have lower productivity and lower wages. More experienced and more skilled workers would be more likely to stay because they have more stability and better wages. (Peña-Villaseñor, 1994)

Leticia Peña's statistical compilation of turnover rates is revealing. (Peña-Villaseñor 1994) According to Peña's work, maquiladora technicians and upper level management, including design engineers, have briefer median employment duration than operators. Her study found that operators have a median duration of 9.7 months. Supervisors, support staff, and mid-level administrators, and human resource personnel had an average duration of 24 months. (Peña-Villaseñor, 1994) This evidence is contrary to the human capital since higher skilled workers have briefer stays than unskilled workers in Peña's sample.

There are conflicting theories about whether high skilled or low skilled workers should experience higher turnover, and the actual statistics are not available. However, the sheer volume of line workers as a percentage of the total maquila hourly workforce (79% in Delphi's SEC plant) suggests that an incentive program aimed at line workers would appear to be the best approach. As discussed in Chapter 2, line workers did not earn enough money to qualify for homes. Therefore, the program excluded the workers that theoretically should have the greatest turnover.

When questioned about the effect of the housing program on turnover, Delphi finance officer, Guillermo Gutiérrez, noted that turnover for employees that received housing benefits was "not high, but higher than we expected." (Gutiérrez interview, January 16, 2002) Mr. Gutiérrez has been actively involved in formulating the financial arrangements between Delphi, INFONAVIT and Grupo Condak, and his responses seemed to indicate that turnover was indeed something that company considered when creating the program.

I received a more detailed account of turnover statistics from a Delphi personnel officer who said that 800 out of the 5173 workers that received houses[28] had left the company. This represents 15.5% of the beneficiaries of the housing program. However, because turnover statistics are typically cited as monthly statistics and because the program has been in effect for 5 years, the corresponding monthly turnover would be a fraction of 1% per month.

The fact that Delphi's housing program did not give housing credits to line-workers (those most likely to experience high turnover according to the human capital model) can be interpreted in three ways: (note that these interpretations are not mutually exclusive)

1. Delphi initially created the program for line workers, but pressure from the construction company and/or INFONAVIT would not permit Delphi to award homes to low income workers. This interpretation assumes that Delphi's turnover problems were highest with the operators, consistent with the human capital model.

2. Delphi's turnover problem is more severe among skilled labor including office staff, technicians, supervisors, and line leaders.

3. Delphi has labor turnover problems with <u>both</u> skilled and unskilled workers, but is more concerned with employee retention of skilled workers.

One interpretation is that Delphi wanted to reduce turnover among skilled employees, but were less concerned about turnover amongst unskilled workers. By setting the requirement that all workers had to be at Delphi for at least one year, the housing benefit was offered to those employees who were statistically less likely to leave the company. One might argue that entry-level line workers might want to stay with Delphi for the year in order to be able to qualify. However, the line workers would only be fulfilling the veteran requirement of minimum of one years service, but they would not be able to qualify based on pay. Line workers in Ciudad Juárez would not have 1.7 minimum wages unless they had been promoted to a new position.

My interpretation is that the original housing program was intended for line workers, but that somewhere along the line, compromises were made with INFONAVIT and the construction companies. INFONAVIT may have wanted to limit the number of the lowest-income workers for credit-risk reasons. To maximize their profits, the construction companies wanted to have higher profit homes which meant higher income workers. Delphi Personnel officers indicated that an agreement was made with Condak to cap the number of Type I houses (the most

[28] Statistics on the exact number of houses varied, but the assumption here is that 5173 workers had received houses as of January 2002, but it is expected that close to 6000 workers will receive houses once the program is completed in 2003. The original number of housing credits that INFONAVIT awarded to Delphi was 7000.

economical houses) at 30%. It is also possible that when compromises were made, the top level Delphi executives signing the agreements probably had no idea that setting a qualifying wage for the housing program would disqualify such a large volume of its workers. Other than the human resources directors (and maybe plant managers) it seems unlikely that top level executives would be familiar enough with maquila workers' wages and the complex Mexican wage structure (quoted in multiples of minimum wages) such as to realize that they had signed an agreement that excluded 79% of factory workers at a typical maquila.

Although it might seem plausible that the 1 year minimum requirement was meant to lure workers to stay with the company and thus lower turnover, it is important to remember that workers needed to fulfill other criteria to receive housing, and arguably, they could wait to qualify for a regular INFONAVIT house at any other maquiladora. The Delphi program did expedite the process, but mostly for higher-wage workers. Since the regular INFONAVIT program targeted lower income workers, the Delphi housing program would only have been effective in reducing turnover for line workers under the following conditions:

The housing program could have been more effective at reducing turnover for salary workers if they received matching contributions from their employers. Under the current system, most salary workers had enough savings in their INFONAVIT accounts to make the down payment requirement. After they received the housing credit, they were not indebted to the company to repay the down payment. Additionally, since the mortgage was serviced and originated by a private sector bank (that used FOVI financing and received fees from FOVI) there was no incentive for even skilled workers to stay with the company. The only factor that might affect salary workers' turnover was the intangible effect of increased loyalty for the company. Previous research has shown that firms that satisfy employee demand for socially responsible behavior have higher levels of worker loyalty, morale, and productivity. (Parket & Eibert, 1975)

The fact that the housing program did not affect turnover does not mean that it was not an incentive for the program. Reducing turnover was one consideration for introducing the program, and it was a practical way to justify the initial capital outlay. Lee Crawford would later state that he believed that the company had gotten its money's worth and had recuperated its investment by reducing turnover. (Crawford interview) The executive directors' *expectations* that the program would reduce turnover can be accepted as an incentive for initiating the program.

However, there are conflicting theories as to which employees the company hoped to retain, based on the allocation of the housing benefits.

Evidence that the company had initiated other employee benefits such as a retirement plan, also indicates that the company was very concerned about losing its skilled workers, but it is interesting to note that they chose to offer benefits instead of salary increases. One possible explanation for this is that the housing program was a way to offer employees a service without having to absorb the full cost of the benefit. With a salary increase, Delphi would have been responsible for 100% of the cost of the wage increase. However, with subsidized housing benefits, Delphi was really facilitating access to credit. Although lower-wage workers did receive financing assistance for down payments, the majority of workers did not receive money from Delphi.

As we have seen, the program was not as successful at reducing turnover as the company would have liked. The dramatic reduction of turnover that is cited in the media actually occurred before the program was implemented. Current reductions in turnover are attributed to the US recession, and cannot be linked to housing benefits. Additionally, the program was not successful at reaching the lowest income workers, which arguably had the greatest turnover problems and cost the company the most money in training costs.

Although concern with employee retention and with improving public relations may have been considerations for implementing the program, I contend that neither of these were the primary motives for initiating Delphi's housing program. The next two chapters will discuss alternative hypotheses that shed some light on the influence of labor unions, construction companies, and INFONAVIT on General Motors' decision to implement the housing program.

Chapter 4
Labor and Unionization

> "The UAW may have introduced the sit-down strike to America, but in its relationship with GM management it has also helped introduce...mutually beneficial cooperation...What comes to my mind is the progress we have made, by working together, in such directions as providing greater safety and health protection, in decreasing alcoholism and drug addiction, in improving the quality of work life."
> *-Thomas Murphy, former Chairman of General Motors, February 1977 (Freeman & Medoff, 1983, p. 4)*

This chapter will examine the hypothesis that General Motors initiated its employee-housing program in order to control labor or to discourage labor unionization in its plants in Mexico. Contrary to the company's altruistic rhetoric (i.e. the desire to be a "good corporate citizen") and to its stated desire to reduce training costs associated with high turnover, this section analyses two potentially malicious motives for offering employee housing benefits. The purpose of this analysis is not to attack the character of General Motors' Mexican operations, but rather to address common criticisms of maquiladoras and to determine if these criticisms can be applied to the Delphi housing program. The common leftist perspective of Mexican labor unions is to summarily dismiss all unions as corrupt and regressive. Similarly, attacks on multinational corporations accuse them of exploitation of labor and of repression of labor movements. These attacks are not without basis, but can these characterizations be applied to General Motors and were ulterior motives to control labor a motive for starting an employer-assisted housing program?

An added twist to the labor hypothesis is the notion that GM may have offered housing benefits in Mexico in order to offset propaganda by US and Canadian unions. Furthermore, I will examine the notion that by offering benefits to Mexican workers, GM was really sending a message to the rest of its North American labor force to discourage them from future strikes. By investing in workers' housing, GM was showing that it is committed to its investments in Mexico and had no intention of stopping its plant relocations.

4.1 Methodological Note

The nature of labor relations in Mexico make this theory extremely complex to examine, particularly given the frequent characterization of Mexican labor unions as corporatist[29] and corrupt organizations that were used by the Mexican state and the PRI as a means of control of labor. Most Mexican unions behave in a manner that is opposite to what Americans typically imagine when they hear the term "unions." Some US labor organizers even argue that the regressive nature of Mexican unions make some US companies *welcome* the official unions because they are a method of control of labor. (Feigen interview, March 13, 2002)

Additionally, there is a dearth of solid empirical evidence on Mexican labor unions. Due to the delicate nature of the investigation, many companies have historically been uncooperative with labor investigations by limiting access to employees. On a methodological note, my field research was limited to Ciudad Juárez, the only city in Mexico in which Delphi plants are non-union facilities.[30] A more comprehensive investigation of this theory would have required visiting Delphi's unionized plants in Reynosa, Matamoros, Monterrey and Saltillo and meeting with workers and labor leaders in regions with stronger union representation. Additionally, an analysis of General Motors' older facilities in the interior of Mexico would have added tremendously to this analysis.

Due to lack of resources and time, a comprehensive analysis of Delphi-GM's labor relations was not possible for this investigation. Most of the information on unions is therefore from secondary sources, interviews with US labor organizations and watchdog groups, and from telephone interviews with Mexican labor researchers. Much of the information on unions is anecdotal evidence, and frequently, data from the Mexican government reveals information that does not paint a complete picture of labor politics in Mexico. One example of information gaps is data collection on strikes by INEGI, Mexico's national statistical bureau. Since the Mexican government must approve formal labor strikes, wildcat strikes, in which workers rebel against their own [undemocratic] unions, are rarely documented in government statistics. (Roxborough, 1984) Despite the difficulty in data collection and the limited amount of academic investigations

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[29] Corporatist state institutions can be defined as those managed by labor, business, and state representatives. (Murillo, 1996)

[30] In an interview with Lee Crawford, former Executive Director of Delphi Mexico, he indicated that Delphi has unions in all of its plants in Mexico, except for those in Ciudad Juárez. When pressed about why Juárez was unique, Crawford indicated that it was "the Mexicans that thought that allowing unions would deter companies from relocating to Mexico – Delphi doesn't have a problem with unions."

on Delphi's labor unions, this chapter will attempt to shed some light on Delphi's labor practices in Mexico, and ultimately examine the importance of labor relations in the decision to offer housing benefits.

4.2 Mexican Labor Unions

Industrial relations expert Jorge Carrillo notes that analyses of Mexico's maquila industry are "sharply divided along ideological lines." (Carrillo, 1991) This refers to general perceptions of whether or not maquilas offer Mexico a genuine path to economic development, but can also be extended to analyses of labor relations within Mexico. This section will provide two broad frameworks for analyzing unions in Mexico and then briefly note some historical events that are credited with further weakening unions in Mexico. One of the frameworks will show the dichotomy between official unions and independent unions and the second one distinguishes between maquiladora unions and unions in older industrial centers. Finally, I examine some geographic differences of unionization along the US-Mexico border which can be used to analyze GM/Delphi plants.

Social scientists have widely accepted the notion that Mexican "trade unions are passive instruments of an authoritarian state." (Roxborough, 1984) This standard view of Mexican labor relations[31] viewed trade unions as instruments of political stability used to repress and co-opt the rank file. Roxborough disagrees with this over simplified view of Mexican labor and the political system. Ian Roxborough's book, "Unions and Politics in Mexico: The Case of the Automobile Industry" examines the rise of independent unions and their potential threat to the official unions and the overall threat political stability in Mexico. "Official" unions are those unions that have historically been associated with the PRI, Mexico's dominant political party that ruled Mexico for 70 years. These official unions are also frequently called '*sindicatos charros,*' a pejorative Spanish term that reinforces the notion that official unions are a means for the PRI to control and co-opt labor. Corrupt union leaders in Mexico continue to be popularly known as *charros.* (Hathaway, 1998)

The distinction between official unions and independent unions is an important tool for analyzing Mexico's labor relations. Independent unions represent a movement to organize labor

[31] This view dominated social scientist discussions in the 1980s before NAFTA but persists among many academics and labor rights activists. Arguably, labor relations have changed in the 1990s in the post-NAFTA world.

through unions that are not associated with the PRI or with other political parties. Leftist labor movements in the United States, including the AFL-CIO, back the independent labor movement in Mexico, believing that independent unions are the path to democratic union representation in Mexico. The bulk of Mexico's labor unions, however, remain in the hands of the official unions. There are 932 unions which belong to 30 official trade federations, and only 179 classify themselves as independent. (Steiert, 2001) Union membership in Mexico fell 30% over the past decade from 28.8% to 22.8% which puts Mexico in between its NAFTA counterparts. Canada has a 37% unionization rate, and the US has the lowest unionization rate[32] at 12.4%. (Steiert, 2001)

However, a long history of corrupt labor unions has left Mexican workers suspicious of all unions. For many workers, a union's only purpose is to deduct union fees out of workers' paychecks. Victor Muñoz, a former union leader in the US who worked for several years with unions on the US-Mexico border, noted that companies feared organizing of independent unions. A common method to prevent independent unions from gaining a foothold in their companies was to invite the official unions in to their plants and give them free access to employees. (Muñoz interview) Companies generally had a high level of cooperation with official unions, whereas independent unions represented uncertainty for companies. References to "repression of labor organizing" can refer to tactics such as this one.

In addition to the distinction between independent and official unions, another common generalization about Mexico's industrial character is often used to distinguish Mexico's labor movement. Mexico's traditional industrial centers in Puebla, Toluca, (the area surrounding Mexico City) Monterrey, and Saltillo, should be distinguished from the Mexico's new industrial activities along the US-Mexico border. Industries developed during Mexico's import substitution stage from the 1940-1970s had different labor-state relations than the export promotion stage. (Middlebrook, 1995)

Mexico's shift from import substitution to export promotion and the concomitant growth in the maquila industry provided one historical event that dramatically changed the face of labor organizing in Mexico. Another important event that further eroded labor's power was the economic crisis of the 1980s. The crisis resulted in the De la Madrid administration's

[32] The low overall unionization levels in the US can be misleading for this analysis because certain industries, such as automobile manufacturing, have extremely high unionization rates in the United States.

controls on wage increases from 1982-1988, (Middlebrook, 1995) which might be characterized as a turning point in the power of organized unions. The weakening economy made Mexico's rulers more concerned with macroeconomic stability and national interest, and less concerned with the needs of the working-class. This same economic crisis forced Mexico into a new stage of rapid industrialization that was accompanied with an explosion of the maquiladora industry in the 1980s.

President Salinas began a general crackdown on organized labor when he took office in 1988. (Bryce, 1993) Salinas imposed austerity measures in the name of neoliberal economics and macroeconomic stability, and repressed worker wages. Salinas is also responsible for putting Mexico's most militant labor leader in jail. In 1992, Agapito[33] Gonzalez, the leader of 35,000 workers in Matamoros' 95 maquiladoras, was put in jail because Agapito sought to negotiate a 20% increase in wages. (Bryce, 1993)

Also during the Salinas presidency, NAFTA was passed, which is another factor that will continue to erode Mexican wages and the power of labor unions. (Shaiken, 1993) Harley Shaiken notes that in Mexico's controlled labor markets, the "government holds down wages to attract investment, labor rights are truncated and employers often conspire to set wages." (Shaiken, 1993) Although proponents of NAFTA argued that increased demand for industrial workers would raise wages, Shaiken points out that wages are artificially depressed in Mexico, with wages held down, despite gains in productivity.

The weakening of labor unions has left a void in the state housing agency, which was now dominated by negotiations between the private sector and INFONAVIT. As we will see, General Motors negotiated the housing program with INFONAVIT without any input from organized labor, and without consultation of its workers.

The distinction between maquiladora towns and traditional industrial centers is an important one in analyzing Delphi and General Motors activities in Mexico. The maquiladora industry typically deserves its own unique analysis of labor and cannot easily be compared to the traditional industrial towns. General Motors' installations in Mexico began in 1935 in the traditional industrial areas in the south-central part of the country, near Mexico City. By 1937,

[33] Known simply as "Agapito" in Mexico, this legendary union leader is considered Mexico's most militant union leader. His union, the SJOIM, is a local branch of the CTM, which is one of the PRI's official unions. Despite his affiliation with one of the most corrupt unions, Agapito is applauded by the left for pursuing progressive worker rights, associated with traditional unions.

GM workers formed unions, which Roxborough characterizes as "relatively militant." (Roxborough, 1984, p. 80) GM workers in Mexico City went on strike in 1965, 1973, and two lengthy strikes in 1975 and 1977. The 1975 strike grew from fears that GM would transfer its plant activities to Toluca, and resulted in a 13% pay increase. (Roxborough, 1984, p. 81) More strikes occurred in 1979 and 1980, primarily because existing union leaders were struggling to control new plants opening in Ramos Arizpe, Coahuila in the northern part of Mexico. (Roxborough, 1984, p. 81) In general, it can be surmised that GM's Mexico City plants had militant unions that were not afraid to challenge management during the 1980s. Other scholars note that "only the General Motors union in the Federal District enjoyed both a democratic tradition dating from the 19940 and considerable organizational autonomy." (Middlebrook, 1995) Another potential conclusion is that General Motors' strategic movement of plants to the northern part of Mexico was designed to escape from its militant unions in Mexico City.

While it is generally accepted that traditional industrial towns in the south had stronger unions, a closer analysis of unions in maquiladora towns shows that labor organizing varies dramatically between cities, and vague generalizations are meaningless when examining local unions. (Rothstein interview) On one side of the spectrum, Matamoros is frequently characterized as a city with militant unions, while at the other side of the spectrum is Ciudad Juárez, a city often viewed as the weakest industrial city in terms of organized unions. However, this analysis ignores fluctuations in labor leaders' power and presents a static view of a city's labor movement. Mexico's most militant labor leader, Agapito[34] Gonzalez, is credited for negotiating the highest wages in Mexico. His representation of workers in Matamoros gave union members wages that were 3 to 5 times the wages paid in Ciudad Juárez in the 1980s. However, the Salinas administration threw Agapito in jail and Matamoros workers no longer enjoy the dramatic wage differentials present in the 1980s.

How can these broad generalizations about Mexican labor relations be applied to General Motors and Delphi Automotive? For starters, there are several studies of General Motors labor relations which have been briefly mentioned. (Middlebrook, 1995; Shaiken, 1994; Roxborough, 1984) These authors paint a picture of the automotive giant in which labor unions started out from a position of relative strength, but this power declined dramatically in the 1980s with the

[34] According to the US labor movement, Agapito is the *only* labor leader in Mexico to negotiate collective bargaining contracts that reflect the genuine interests of his members. (Feigen interview, March 13, 2002)

economic crisis during the administrations De la Madrid and Salinas. Instances of strikes and democratic union practices resulted in steady wage increases in GM's plants surrounding Mexico City from 1940-1970. However, Jorge Carrillo describes a broad restructuring of the auto plant industry which is characterized by a movement toward the north to secure lower wages, increase workplace flexibility, and find more compliant unions than those in the historical heart of auto production in central Mexico. (Carrillo, 1989) Similarly, in a thinly disguised description of GM[35], which Harley Shaiken calls "Universal," interviews with plant managers reveal that they were "searching for workers with few preconceptions about industrial organization and for either no unions or compliant unions." (Shaiken, 1994, p. 43) By 1990, 80.5% of GM workers (including Delphi Automotive workers) were employed in maquiladoras. (Quintero, 2001, p. 7)

Delphi Automotive does not have the same history of representative unions, and can be unambiguously defined as purely a maquiladora industry. Delphi's plants are all located in the northern part of Mexico in maquiladora towns. It should be noted that maquiladora wages are the lowest among Mexican manufacturing industries, despite the success of the maquiladora sector. (Quintero, 2001) Analyses of Delphi's labor relations and more generally, labor relations within maquiladoras are much less prominent in the literature, but there has been increased attention in recent years. (Quintero, 1997; Carrillo, 1994; Sanchez Diaz, 2000) It is generally true that if a maquila plant has a union, then the plant will be 100% union because membership is compulsory[36]. (Rothstein interview.)

Additionally, Cirila Quintero distinguishes two types of maquiladora unions. Traditional unions are concerned with making improvements in the working conditions of their members, and subordinated unions are concerned with management priorities. Traditional unions are commonly found in the northeast (Matamoros, Tamaulipas) while subordinated unions predominate the northwestern part of Mexico: Tijuana, Ciudad Juárez, and Nogales. (Quintero, 1997)

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[35] Shaiken's 1994 article describes a fictional auto plant called "Universal" and features anonymous interviews with management. However, Shaiken makes reference to "Universal's" plants called Azul and Verde, which are genuine GM plants.

[36] Note that compulsory union membership is outlawed in US labor law, and is a characteristic of Mexico's labor law that is frequently criticized because of the extraordinary control it gives union leaders that can fire dissident workers that rebel against the union.

Table 4: Distribution of Delphi's housing by City

City	1997	1998	1999	2000	2001	Total	%
Juárez	1730	651	351	263	150	3145	60.8%
Chihuahua	252	316	2	29	9	608	11.8%
Nuevo Laredo	11	56	72	36	29	204	3.9%
Reynosa	9	91	213	23	0	336	6.5%
Matamoros	23	145	340	0	32	540	10.4%
Monterrey	17	130	111	0	20	278	5.4%
Saltillo	0	59	0	0	3	62	1.2%
Total	2042	1448	1089	351	243	5173	
	39.5%	28.0%	21.1%	6.8%	4.7%		

Source: Delphi Finance Department

One of the hypotheses that I wanted to examine was to see if the allocation of housing benefits was actually inversely related to unionization. That is to say, the lower the unionization presence, the more housing credits the plants received. If this were the case, then one might hypothesize that Delphi was "rewarding" those workers that did not belong to unions, and that unionization did not increase workers' benefits. A cursory examination of the housing credits per city does seem to show that cities with low unionization levels such as Juárez and Chihuahua, received the bulk of the housing credits with 72.5% of the houses going to these two cities. Additionally, Saltillo and Monterrey, two older industrial cities, that are not are on the US border and are not technically "maquiladora" cities, received an extremely small percentage of houses. Similarly with Matamoros, a relatively small number of houses went to the maquila city that is reputed to have had the most militant labor leader in Mexico.

This evidence is insufficient to prove that the company was biased in housing allocation based on unionization, however. There are alternative explanations about Juárez's disproportionate amount of houses. One explanation is that the housing scarcity in Ciudad Juárez is worse than the housing deficit in other border cities, so it would be logical to allocate more houses in areas with the greatest shortages. A 1997 study on Affordable Housing on the Mexico-US Border showed that Ciudad Juárez had the largest housing deficit of 70,000 units, followed by Tijuana with 60,000, Mexicali with 40,000 and Matamoros with 30,000 housing units. ("Affordable Housing on the Border," 2000)

A second explanation is that Grupo Condak, the construction company, is very active in this market and had been building in Juárez for over 20 years. It is natural that the construction

company would be more prepared to expand construction services in Juárez and would have a network of builders established in this city.

A third hypothesis is that Ciudad Juárez is one of the cities in which Delphi had a disproportionate amount of skilled workers, and as we have seen, it was skilled workers such as technicians, engineers, and office staff that actually received housing. In early 2002, the Ciudad Juárez Technical Center was expanding its Finance division, because an Ohio office was closed down. Not only did Delphi move to Mexico for cheaper manual labor, but office assistants and young college graduates in Mexico were cheaper than their counterparts in the US and filled jobs in human resources and finance.

The following table shows some 1995 estimates of unionization levels in 8 border cities in Mexico. Note the low rates of unionization in Tijuana (30%) and Ciudad Juárez(13%), the two largest maquila towns in Mexico.

Table 5: Unionization rates in Maquiladoras in 1995

City	Unionization level
Piedras Negras	100%
Nuevo Laredo	100%
Reynosa	100%
Matamoros	100%
Tijuana	30%
Nogales	19%
Ciudad Acuña	16%
Ciudad Juárez	13%

Source: Carrillo, Jorge. "Maquiladoras en México: Evolución Industrial y Retraso Sindical." 2001.

In Ciudad Juárez, the automotive sector does not have unions. "GM, Ford, and Chrysler are the biggest auto firms, and although these MNC's have unions in almost every plant in the world, (including in Mexico) they do not have unions in plants in Ciudad Juárez." (Carrillo, 1994, p.133) Carrillo says this is not because auto plants relocate to regions with low unionization, but because it "reflects how weak the local unions are, and in particular after 1980 when the plants arrived." (Carrillo, 1994, p. 133)

A further clarification of Delphi's operations in Ciudad Juárez should also be made, particularly since a full 25% of Delphi's workforce in Mexico is in Juárez. Rebecca Blumenstein, a reporter for the Wall Street Journal, noted that Delphi plants in Mexico are mostly union facilities, but notes that:

> "In Juárez, wages are a pittance by US standards, but GM does provide onsite education and volleyball courts, organizes Mother's Day parties and sponsors a Mexican folk-dance troupes...and two meals a day are provided at no charge. In return, management has been able to run the plants almost exactly as it wishes, with virtually no work rules."
> (Blumenstein & Stern, 1996)

Also interesting is the fact that in 1996, Delphi had 189 manufacturing facilities in 37 countries, but the housing benefit was only offered in Mexico, and only for Delphi employees. Its parent, General Motors, did not extend the housing benefits to its employees in Mexico. According to its company web site, GM employees 64,000 workers in 54 facilities in Mexico, but this substantial workforce was excluded from the housing benefits that General Motors negotiated for its Delphi employees. One of the intriguing parts of the program was the fact that General Motors negotiated with INFONAVIT to provide housing credits for its subsidiary, but not for its own direct employees.

Clearly, the construction companies would have liked to service the full market in order to increase the number of housing credits, expand into more cities, and ultimately increase profits. When I asked Mr. Arelle why GM employees were not included in the program, he responded, "Because the unions did not want to." (Arelle interview) When pressed further, he revealed that the CTM leader that represented GM's Ramos Arizpe[37] plant had refused to cooperate with the original plan. According to David Arelle, the union leader had argued that workers should not be required to make a down payment, particularly since regular INFONAVIT loans did not require it. The union was unable to negotiate a better deal with GM or INFONAVIT, and ultimately, all GM plants were excluded from the program. (Arelle interview)

I was unable to corroborate this information with the local union, because the leader of the CTM in Saltillo, Gaspar Gaspar, died in 1997. However, the fact that the union did not cooperate leads to some interesting conclusions. One is that weak unions were afraid of losing their power and did not want GM to take the credit for providing benefits. Another is that unions do have power, although not in the ways one might imagine. By thwarting the housing program for all GM plants, the Ramos Arizpe union leader did not behave in a manner to

[37] The Ramos Arizpe plant is in the state of Coahuila outside of Saltillo, an industrial center in Mexico. This new GM plant is a showcase of technology and is considered one of the most advanced automobile plants in the country.

improve the working conditions of his constituents. Since official unions such as the CTM used to control INFONAVIT's housing allocation process before the INFONAVIT reforms of 1992, it is very possible that unions resented the company's interference with the traditional patronage system that existed in organized labor in Mexico. My conclusions based on this limited amount of anecdotal evidence is that the GM union did think they could negotiate a program that did not require down payments, but were ultimately motivated by the possibility of resurrecting the union's role in the housing negotiation.

4.3 North American Unions: A long history of strikes

Volatile labor relations in General Motors' North American operations have been prominent in the news for decades. The Canadian Auto Workers (CAW) and the United Auto Workers (UAW) went on strike numerous times in the early 1990s, (see Appendix 3:*Timeline of GM Union Confrontations*) at enormous cost for GM and Delphi.

How have strong unions in the US and Canada reacted to General Motors' expansion into Mexico and did their actions shape the housing program as much as local unions did? The traditional response of organized labor to foreign competition has been a push for trade barriers, but this turned out to be a losing strategy when Bill Clinton signed NAFTA legislation in 1994. In a 1996 report in the Wall Street Journal, staff reporters note "unions face huge political and cultural obstacles to working across borders…unions are political organizations essentially limited to a single country." (Davis, et al., 1996) Pharis Harvey of the International Labor Rights Fund contends, "most workers see foreign workers as competitors, not allies [and] international solidarity has been more rhetorical rather than real." (Davis, et al, 1996)

This division between autoworkers across borders has sparked a fierce debate. US and Canadian autoworkers are justifiably afraid of losing their jobs to Mexicans. In 1992, Delphi Automotive, headquartered in Troy, Michigan, laid off 42% of its United Auto Workers members. (Lippert, 02/14/99) This lay off in the US was matched by a 32% increase in Delphi's Mexico operations. A superficial analysis of GM/Delphi's wage structure is also quite revealing. In GM plants in Michigan, "UAW employees receive $43/hour in salary and benefits. In Ciudad Juárez, the average Delphi worker earns $2.25/hour in salary and benefits." (Lippert, 02/14/99) Accusing General Motors of relocating to Mexico to find cheap labor cannot be dismissed as mere rhetoric.

Professor Dennis Soden of the University of Texas-El Paso, credits labor union resistance as a major factor that has prevented General Motors from outsourcing its autoparts, which GM has historically received from Delphi Automotive. (Soden, 1999) Other commentators have called the Delphi-GM relationship corporate welfare, with GM continuously purchasing parts from its inefficient subsidiary. The Delphi-GM split in 1999 was designed to curtail this relationship and make Delphi compete for GM contracts. American labor unions were vehemently opposed to the split, fearing that an independent Delphi could do as it pleased with its workers, and shut down US facilities to relocate to Mexico's maquiladoras. Delphi's downsizing started in 1988, and many of these plant closing occurred in Midwestern states, often considered the stronghold of the United Auto Workers union. (Soden, 1999)

Accordingly, there is some evidence that labor relations in distant parts of North America affect GM's strategy in other parts of the world, especially of maquila plants like Delphi. The evidence of plant shut downs in the US followed by plant inaugurations in Mexico would suggest that there is a definite connection in its worldwide activities. It is also interesting to note that Canadian and US autoworkers used to belong to the same union, the United Auto Workers (UAW). The 1984 creation of the Canadian Auto Workers (CAW) union allowed the Big 3 Auto companies to flaunt Canada's cheaper labor in the face of UAW workers. The Canadians formed their own union because the UAW was representing US workers' rights during an economic downturn in the US economy, but was forgetting about its Canadian counterparts. The interests of Canadian workers do not necessarily coincide with the interests of American autoworkers, and the split shows that GM autoworkers really do not have solidarity across borders, whether in reference to the US-Canada border or the US-Mexico border. It seems counterintuitive, but even Canadian plants have lower labor costs than US plants, which gives General Motors an extra bargaining chip when dealing with US unions. The notion of UAW losing jobs across the border because of lower wages is therefore true across both borders.

As we have seen, there is little solidarity among GM workers in North America. But the more relevant question here is whether or not militant union activity in Canada and the US can affect the company's labor practices in Mexico. By merely glancing through the list of union confrontations, one can be confident that the UAW and CAW are active unions that have caused GM a lot of headaches and a lot of money with strikes. The most interesting strike for purposes of examining the Delphi housing program, are the strikes in 1996 that occurred just months

before the housing program was announced. The strike started in March 1996 at two Delphi plants in Lordstown, OH. Since these plants produced 90% of brake parts needed for General Motors' plants, (Soden, 1999) the 17-day strike idled 175,800 workers, shut down 26 of its 29 plants, and cost General Motors $900 million. (Soden, 1999)

How eager was General Motors to prevent other such strikes? Just one month later, a wildcat strike occurred at a Lordstown, OH assembly plant, but this time, rather than negotiating with the UAW, GM obtained a federal court order to end the strike. That notion that union activities in one part of the United States affect operations in other parts of the country is clear for most observers, but could costly strikes in the US have been an impetus for creating the housing program in Mexico?

The literature on the effects of unions on non-union labor shows that nonunion companies can offer desirable benefits and compensation to deter unionism. (Freeman & Medoff, 1983) Although firms have sought regions with low unionization rates for many years, Delphi's tactic is slightly different. By offering an attractive benefits package, the firm might hope to discourage workers from unionizing, and prevent costly strikes like the ones occurring in the US. The theory asserts that workers are less likely to unionize if they feel that their current working conditions are fair, or if they are being rewarded in kind, rather than with wages. Previous literature has also found that non-union firms may adopt progressive work practices to avoid unionism. (Foulkes, 1980.) This is a particularly strong argument when applied to Delphi Automotive who was experiencing labor strikes in plants in Dayton, Ohio and must have been eager to avoid similar problems in their expanding Mexico operations. This is a slightly different hypothesis than Foulkes' because it suggests that union activities in the United States elicit changes in the firm's practices in international branches.

Furthermore, the threat of unionization can improve wages and working conditions, although not as good as they might be under collective bargaining. (Freeman & Medoff, 1983) The "threat effect" of unions can be a strong impetus for firms to reform their human resources practices before labor begins to organize. (Freeman & Medoff, 1983) This hypothesis is particularly relevant for Delphi's housing program. If the company felt that the threat of unionization in Mexico's maquiladoras was imminent, there would be a strong motive to voluntarily supply worker benefits, in order to avoid collective bargaining agreements with unions that could exact greater concessions from management.

Although Freeman and Medoff were referring to the effects of unions on non-unions *within* the US economy, did General Motors offer desirable benefits to deter unionization in Mexico? All of these were examining *domestic* labor unions when testing this hypothesis. Also, why did the company choose to improve benefits as opposed to compensation? What makes Delphi's case unique is the transnational effect of the labor unions. Could high unionization in a domestic setting affect the provision of social goods in the firm's international operation? The United Auto Workers were prominent in Delphi's domestic plants, but unionization levels remain low in Mexico's border region. However, as we have seen, there is little solidarity between US workers and Mexican workers, and GM certainly did not give Mexicans benefits due to demands from US labor unions. Quite the contrary, US workers were striking in the US to prevent plant closings in the US which resulted from relocations to Mexico.

Although there is little or no labor organizing across borders, a related issue is the idea that GM used Delphi as an example of how well they treated their workers in Mexico. This would be a valuable tool when responding to US labor unions that attack GM's practices in Mexico. In this manner, GM could take the moral high ground with respect to US workers.

All of these theories that suggest that General Motors may have offered housing benefits to prevent unionization presume that the company felt that there was genuine threat of legitimate labor organizing within Mexico. With the exception of Ciudad Juárez, all of Delphi's plants in Mexico had official unions. As noted earlier, these official unions worked to maintain the status quo. *Only a legitimate threat of independent unions* that could challenge the official unions could have prompted General Motors to offer housing as a preventative measures. I have found no evidence of such a threat in Ciudad Juárez, or in any other Mexican city. The FAT, *Frente Autentico de Trabajadores*, the independent union that works with electrical workers and autoworkers, is not a sufficient threat at the moment to suggest that GM may have needed to offer this benefit as a preventative measure.

4.4 How Labor Views Housing Benefits

In determining how "labor" views housing benefits, it is important to note that labor is not a homogenous entity, and there are numerous labor groups within countries. For example, even though ostensibly the UAW and CAW represent US and Canadian autoworkers, they do not have the same stance on compensation and benefits packages. Furthermore, different academics and

labor organizations come from across the ideological spectrum and are likely to have different motives and divergent views. I will briefly examine the literature on organized labor and housing in Mexico, followed by three different perspectives on housing benefits. I have termed the different views as the "company-town" perspective of American academics and American labor organizers, the "living wage" perspective of non-profit organizations and of the Mexican left, and finally, the "take it or leave it" perspective of Mexican workers will be the third view I will examine.

Aldrete Haas notes that there are four prominent reasons why organized labor in Mexico is interested in state housing intervention: (Aldrete Haas, 1990)

1. Public housing can improve the living condition of unionized workers
2. The 1917 Constitution established the provision of worker housing.
3. Providing housing is important not only for the legitimacy of unions, but is also "an effective means to reward and control organized labor's rank and file." (Aldrete Haas, 1990, p. 42)
4. State housing provides business opportunities for the construction companies of labor leaders.

The Mexican housing agency, INFONAVIT, was formed during Echeverría's administration in 1972 and was composed of three important parties: the state, the private sector and organized labor. The decision to make organized labor an official partner in the housing agency has meant that the CTM, one of the PRI's official labor unions, dominated the housing allocation process for many years. When INFONAVIT implemented its reforms in 1992, one observer noted that this new arrangement "upset Mexico's labor unions which will no longer be able to hand out houses to workers or receive kickbacks for favors rendered." (Fraser, 1992) Starting in 1993, the housing agency would now use a new, non-discretionary formula to allocate loans to qualified workers. (Mansell Carstens, April 1992) *It is therefore important to note that official labor unions had once controlled the housing allocation process, had lost the privilege in 1992, and that the General Motors' program was actually taking organized labor's former role in the allocation of housing credits.*

General Motors initiated the housing program without any input from labor and furthermore, there is no evidence that employees actually approached the company to request housing benefits. As seen in Chapter 5, the impetus for the program came from the construction industry, not from the labor movement.

In an interview with Lee Crawford, former President of Delphi-Mexico, I asked him why General Motors had decided to offer the program only to Delphi employees, and purposely

exclude General Motors' employees. Crawford's response was that it was a "different situation, with different workers that had different needs." (Crawford interview) When I posed the same question to David Arelle, owner of the construction company, he responded that it was the labor unions in Ramos Arizpe that did not want the housing benefits. (Arelle interview)

Can it be true that a Mexican labor union[38] actually *refused* housing benefits? Although the answer is counter intuitive for many American who are familiar with traditional labor unions, in the case of Mexico, it is possible that unions sought to thwart the housing program. Before the 1992 reforms of INFONAVIT, labor unions essentially controlled the housing allocation process of INFONAVIT. The increased transparency that resulted from INFONAVIT's new qualification system, made it more difficult for labor leaders to award housing benefits through the state-housing agency. Furthermore, unions had experienced a severe erosion of their power in the Salinas administration in the late 1980s and early 1990s. Not only was the CTM, losing its power vis-à-vis the state, but now, US firms were showing up the labor unions by providing benefits to workers without allowing the unions to take the credit. Analyzing why the Ramos Arizpe plant did not participate in the housing program is unfortunately pure speculation, but it is an interesting analysis of the perverse incentive structure of Mexican unions and the relationships between firms, unions, and workers.

In turning to the perspective of leftist academics, it is interesting to note that almost unanimously, academics were suspicious of Delphi's motives for offering the program. Professor Irasema Coronado of the University of Texas, El Paso immediately drew parallels with Arizona mining towns in the early 1900s. Similarly, Professor Diane Davis of MIT likened Delphi's housing program to the Pullman Company town in Pullman, Illinois. This "company town" perspective of housing benefits views the benefits as a means to control labor. Because the company is responsible for an employee's housing, a worker is indebted to its employer and the safety and economic security of their family is in the hands of the company. The creation of company towns refers to towns that exist purely to benefit a company and economies, which are centered on the firm's activities. Social reformers criticize company towns believing that excessive company involvement in workers' lives is manipulative and infringes on workers' rights. (Housing Facts & Findings, 2000, p. 7) The company owns the housing, runs the company

[38] I used this hypothetical response because Gaspar Valdes Valdes, the CTM union leader of Saltillo in the state of Coahuila, died in 1997. His successor, Tereso Medino Ramirez, was unavailable for comment.

stores, employees all the town's population, and control the town in every sense. From a management perspective, the rationale for company towns is that good company housing and good living conditions make good people, but more importantly, good people made good workers. (Reynolds, 1983)

The history of company towns proves that the model industrial towns[39] that emerged at the turn of the 20th Century in the US were not motivated purely by philanthropic desires. George McMurtry, a steel and iron magnate of the late 1800s and early 1900s, contracted a respected landscape architecture firm to design the model industrial town of Vandergrift, Pennsylvania which opened in 1900. McMurtry's company town had the explicit purpose of combining "social reform, urban design, comprehensive infrastructure planning, and private home ownership principles." (Mosher, 1995, p. 84) However, just like in Delphi's case 100 years later, McMurtry had other motives, beyond social reform.

Steel producers across the United States were experiencing labor problems which prompted Carnegie Steel to eliminate unions after the union contracts ran out in the spring of 1892. A violent altercation occurred in their Homestead Mill, but the Pennsylvania militia intervened to quell the resistance and re-open a non-union mill. Perhaps closer to home for McMurtry, the neighboring steel mill in Apollo went on strike in 1893-1894. These two high profile union strikes, in addition to other violent episodes in Chicago's Haymarket and in Pullman, Illinois, were strong motives for George McMurtry. (Mosher, 1995) Interestingly enough, McMurtry's work paid off in the end when loyal steel workers in Vandergrift helped their owner break an important strike against the entire US Steel Corporation in 1901. (Mosher, 1995, p. 84) At an anti-union meeting in July 1901, 57 Vandergrift steel workers spoke in support of the steel company, believing that at McMurtry's mills, they received good wages AND got to live in a moral and model industrial town. (Mosher, 1995, p. 101) McMurtry's model town was so useful in deterring the threat of unions, that in 1906, US Steel modeled the industrial city of Gary, Indiana after Vandergrift.

The company town is more than just a model of cooperation between capital and labor designed to prevent unionization, however. Examples from both Pullman, Illinois and from Vandergrift, Pennsylvania show that a positive return on real estate investments was a critical part

[39] Model industrial towns existed in Europe in the late 1800s as well. Le Creusot, France, the Krupp estates near Essen, Germany, and several British factory villages helped George McMurtry avoid some of the problems that previous company towns had confronted. (Mosher, 1995)

of the design of the company town. George Pullman and his investors fixed rents in Pullman in order to secure a 6% return. (Mosher, 1995, p. 91) In 1894 during difficult financial times, workers could not afford Pullman's shelter, and demanded either lower rents or a fixed minimum wage. If the company refused, moving out of the company town or rebellion against the Pullman Company were the only options for workers. (Mosher, 1995)

George McMurtry benefited from hindsight and learned from Pullman's experience. Instead of pursuing rental housing, McMurtry's company town followed the lead of European company towns (Le Creusot and Krupp), which promoted home ownership. For McMurtry and for Delphi Automotive, the advantages of home ownership included the fact that by owning residential property, workers could take pride in their homes and build equity. Additionally, fixed investments in housing forced workers to make financial commitments to the town and to their jobs. Finally, for investors in real estate ventures, the burden of maintaining housing and infrastructure was shifted from the company to the workers. (Mosher, 1995, p. 91)

The fact that housing needed to be affordable for workers made companies become more creative with housing finance. Andrew Carnegie's alternative to the McMurtry model included offering low-interest loans for housing near the US Steel plant of Homestead in Munhall, Pennsylvania. (Edel, Sclar, and Luria, 1984) In 1896, McMurtry followed Carnegie's low-interest financing just as Delphi would do 100 years later in Mexico. However, in the case of Delphi Automotive, private sector investors did not have to finance the low-interest loans because the Mexican government agencies of INFONAVIT and FOVI provided these subsidies which benefited both homeowners and investors. Homeowners would have affordable loans, and investors could secure a larger market without having to shoulder the risk and the capital of the investment.

Just as we will see in Delphi housing, the Vandergrift housing gave priority to loyal workers. According to Anne Mosher, "loyal workers" were those workers that had replaced striking workers during the Apollo strike of 1893-1894. Also, because of elevated costs of housing, in both cases, higher skilled workers were the ones who could afford to buy housing.

Another analogy between Vandergrift's company town and Delphi's employer assisted housing can be drawn with respect to the housing of the lowest income workers. In Vandergrift, the bottom of the worker hierarchy were mainly immigrants and ended up settling in small shanties without sewers or running water in a settlement called Morning Sun. (Mosher, 1995, p.

98) Similarly with Delphi, the line workers at the company's maquiladoras were excluded from the program and continue to reside in the un-serviced shacks in the colonias on the periphery of the city.

The company town has been modified by Delphi for several reasons. Although most of Delphi's plants are located in maquiladora towns whose economies are dominated by maquiladoras, it is not accurate to say that Delphi controls the economy of these towns. Delphi may be the largest employer in many of these towns, (as it is Ciudad Juárez) but there are alternative employment opportunities in all of these maquiladora cities. Similarly, the company town characterization applies to housing which is owned by the company. Unlike the company town in Pullman, Illinois which involved rental housing for workers, the Delphi program allows Delphi employers to become homeowners. As seen in Chapter 2 in the description of the housing program, if a worker leaves Delphi, they may still be indebted to the company to repay their down payment, but the title of their home is controlled by either INFONAVIT or Hipotecaria Su Casita, the FOVI service provider that originates and services FOVI loans for the Delphi housing program.

A second popular view of Delphi's housing program was the "living wage" response. Victor Muñoz, a former AFL-CIO representative based in El Paso, immediately responded that instead of offering housing benefits, the maquiladoras should be more concerned with giving their employees a decent wage. (Muñoz interview) The Inter-Faith Council on Corporate Responsibility (ICCR) agrees. Since 1989, the ICCR, a dissident shareholder group composed of religious institutional investors, has been pressuring US companies to pay their workers a living wage. Sister Barbara Glendon, the Catholic nun who leads the ICCR, says, "We feel the housing is a compassionate response, but a just response...as long as workers are not receiving a living wage, GM sill has an obligation to look at increasing the wage base." (Blumenstein & Solis, 1997) Furthermore, General Motors is accused of starting the housing program "after benefiting from low Mexican wages for 20 years." (Blumenstein & Solis, 1997)

Delphi's official company response to the living wage attacks is to note that Delphi pays a "competitive" wage in Mexico and that even if they did raise their workers' wages, they still would not be able to buy a house. (Crawford interview; Diaz interview) By competitive wage, the company is referring to Mexico's minimum wage, which for most observers can hardly be considered a competitive wage at $4.61/day. Furthermore, paying more than the prevailing wage

rate would "damage its own competitiveness in a cutthroat global economy and hurt Mexican-owned companies compelled to respond by matching the higher wages." (Blumenstein & Solis, 1997)

While it may be true that a raise would not make a worker eligible for a commercial mortgage, a raise could make a worker eligible for government subsidized housing. Under the Delphi-INFONAVIT agreement, only workers making 1.7 times the minimum wage could qualify for the housing program. By instituting a wage structure in which some line workers received raises and made $7.84/day, (1.7 times the minimum wages) General Motors could have increased the number of workers that had access to INFONAVIT housing. For only $3.22/ day more, the company could have made a real impact on the lives of its line workers. The fact that they chose not to offer raises is evidence to suggest that providing housing for the poor was not Delphi's main concern.

The third perspective of the housing benefit is the Mexican worker's view – the "take it or leave it" perspective. As seen in Chapter 2, most of the workers that qualified for housing were not the poorest line workers, but were frequently entry-level office assistants. For these workers, the quality of INFONAVIT housing was not an enticing worker benefit. For line workers that did not make enough money to qualify for the program, the housing benefit was a distant goal. The average line worker would probably have to work at Delphi for several years before moving up in the ranks enough to fulfill the minimum wage requirement. Even then, the lower priced housing had been capped at 30%, so the lower-end of the income distribution at Delphi's plants had to compete for these housing credits. Finally, every Mexican worker was eligible for an INFONAVIT house, with or without Delphi's assistance. Regardless of whether or not you worked for Delphi, workers in the formal sector all made contributions to INFONAVIT and could all participate in the standard qualification procedures to receive housing credits. This was a long process that could take many years, but this was also true for line workers at Delphi. For most of the workers I interviewed, the housing benefits were not viewed as a revolutionary benefit that could entice workers to seek Delphi employment, thus generating an attitude I have called "take it or leave it."

4.5 Conclusions

Do union activities in Ottawa and Indiana affect a company's decisions in Mexico? Could expensive union confrontations in Canada and the United States motivate General Motors to take preventative action in Mexico? This is an intriguing hypothesis with plenty of evidence of worker dissatisfaction in the US and Canada. However, the weakness of Mexican labor unions and general worker dissatisfaction with unions make it implausible that General Motors officials in Detroit felt a real threaten from Mexican labor movements. There is insufficient evidence to suggest that GM and Delphi workers were actually seeking legitimate labor representation. Furthermore, after years of dealing with cooperative unions, it would appear that GM had nothing to fear from Mexican workers. Perhaps more disturbing, General Motors had learned to deal with the Mexican government, and there was no evidence that the Mexican president would support dramatic wage increases or a genuine reform of the labor union system. Without evidence of a valid worker threat or of a political threat in the form of progressive Mexican administrations, I cannot conclude that GM started its employer assisted housing program with the intention of preventing union formation.

The fact that line workers did not receive housing benefits is additional evidence that anti-unionization was not a motive in Delphi's decision to offer housing benefits. The fact that a disproportionate number of houses went to office personnel that do not typically belong to unions suggests that Delphi did not feel that it had to satisfy its line workers as a preventative measure to avoid union formation.

Additionally, Mexican workers were completely disillusioned with corrupt labor unions, and for most workers, the only thing that unions did was deduct union fees from their weekly paychecks. For those workers that have a collective history with unions, there was little incentive to unionize with official unions. Similarly for younger workers in Juárez with little history of labor movements, there exists a weak consciousness of labor movements and the potential benefits of unionization. Finally, the fact that many companies actually wanted official unions in their companies to control the labor force is further evidence that there was no reason for Delphi Mexico to fear a costly labor uprising. The fact that militant unions in Canada and the United States were striking against Delphi and General Motors is insufficient evidence to prove that Delphi management feared a similar uprising from Mexican workers.

A more plausible hypothesis might be that Delphi wanted to be able to control skilled labor, without particular reference to unionization. However, since most of the higher wage skilled labor did not receive down payment assistance from Delphi, the company did not control workers' mobility in any tangible way. These skilled laborers were free to leave Delphi and continue making mortgage payments at whatever company they were working at. Only the intangible creation of worker loyalty associated with the housing benefits could have kept skilled workers at Delphi. However, there is no evidence to prove that Delphi initiated the housing program with the intent to control skilled labor.

Taking a moral high ground with respect to belligerent US unions may have been a consequence of the program, but as an isolated variable, it does not seem to be sufficient incentive for GM to start the program. Just as was seen in Chapter 3, turnover and public relations are also insufficient incentives to motivate a profit-maximizing firm like General Motors to commit $8 million in an employee-housing program. Although US unions have led costly strikes, it does not appear that GM had reason to fear similar uprising in Mexico. If the program was not explicitly started to affect labor, why did the program emerge? As I will show in the next chapter, profit motives of US companies interested in investing in the Mexican housing industry had the greatest incentives to encourage the Delphi housing program.

Chapter 5
The Construction Industry, US Capital & INFONAVIT

The Mexican construction industry has a close relationship with government agencies that finance and subsidize housing construction for social interest housing. This has been well documented by many housing analysts, but what is most interesting is the important role of Mexican construction companies in creating the INFONAVIT housing saving program and ultimately in selling the idea to US multinational firms, both to Delphi, the recipient of housing benefits, and to Pulte, the mortgage finance firm.

In most countries, housing construction is a domestic affair. In Mexico, the housing market had a volatile history in the 1980s and 1990s with dramatic currency fluctuations, nationalization of the banking system, and a series of economic and financial crises that crippled the banking sector. It is therefore surprising to find US investors interested in Mexico's volatile housing market. The role of FOVI and the World Bank in subsidizing intermediary mortgage lending institutions (SOFOLES) will be analyzed to understand why US companies were drawn to Mexico. Additionally, I will examine the role of NAFTA in opening the Mexican financial markets which coincides with the timing of the Delphi housing investments.

Finally, I will demonstrate that even though there is no evidence that Delphi realized direct profits by housing its workers, another GM subsidiary was directly involved in the housing industry, and would eventually become a source of capital for Pulte's operations in Mexico. The possibility that GM actually profited from its worker-housing program through GMAC and GMAC-RFC's involvement in the mortgage market and through financing schemes with Pulte Mortgage Company is an important incentive for General Motors since the housing program would generate business for another GM subsidiary. Among the hypotheses that I have explored, the role of construction interests and US sources of capital is perhaps the most powerful, because it opens up the possibility of direct financial gain by US companies investing in Mexico's housing industry, consistent with the Neoclassical profit-maximizing motives of the firm.

5.1 The History of Real Estate Developers and Public Policy

There is an exhaustive literature on the active role of real estate interests in forming public policy in cities around the world. Big business is typically a prominent actor in policy decisions,

and in particular, in real estate. Whether it is in New York, Bangkok, Paris, or Mexico City, speculative land developers, construction companies, and real estate interests have frequently dominated the urban political landscape. "Common interests of both government and [real estate] developers in maximizing the potential return on a site allows flourishing public-private partnerships." (Fainstein, 1994, p. 108) The public-private partnership that emerges in Ciudad Juárez is more complex than the one Fainstein describes, since it involves multiple actors and a different kind of "return." Although Delphi plays a key role in tying up the deal, ultimately, this program was a partnership between Pulte-Condak Construction and INFONAVIT, and between Pulte-Su Casita and FOVI. I am also modifying Fainstein's theory slightly because Delphi's financial return is actually passed on to another one of General Motors' subsidiaries that is actively involved in the Mexican mortgage market.

In Mexico, many political analysts and housing specialists have scrutinized real estate developers, and in particular, their relationship with INFONAVIT. There are three main groups with vested interests in Mexico's state housing intervention: the construction industry and construction firms, landowners, and industrialists. (Aldrete Haas, 1990, p.38) Aldrete-Haas goes on to note that in Mexico, "financiers or land owners are often owners of construction companies."

The following section describes the Mexican housing market. It is clear that real estate developers view partnerships with the Mexican government as a key characteristic of residential housing, whether dealing with the construction process, or with the mortgage lending process.

5.2 The Housing Market in Mexico – INFONAVIT, FOVI, & SOFOLES

The character of the Mexican mortgage market differs dramatically from its US counterpart[40] in that public sector agencies are primary actors in almost all mortgages. In particular, two Mexican government agencies dominate the Mexican mortgage market, either by providing direct financing, or by providing subsidies for intermediaries known as SOFOLES. In 2001, INFONAVIT's share of the low-income housing market was 70%, while the other three Mexican housing agencies (FOVI, FOVISSSTE, and FONHAPO) accounted for 27% of that same market. Commercial banks only represented 3% of the low-income housing market in 2001. (US

[40] Unlike in the United States, where most of the government's intervention in housing is indirect assistance through a system of incentives or tax credits, the Mexican government has historically been extremely active in actual housing construction and direct financing for low-income workers.

Commercial Service, 2002) This is an important characteristic of the Mexican housing market, because 97% of the country's formal sector homes are a result of interaction between private sector developers and Mexican government agencies.

INFONAVIT

Since its inception in 1972, INFONAVIT has undergone dramatic institutional changes with the various presidential administrations. The housing agency was started as a tripartite agreement between the state, organized labor, and the private sector, and was originally involved with actual housing construction and land acquisition. Four years before the innovative housing program began in Juárez, the Mexican government had ordered a dramatic reform of the housing agency. Effective as of May 1992, INFONAVIT would undergo a radical transformation from a construction agency into a housing bank. (Fraser, 1992) Beginning in January 1993, INFONAVIT was no longer allowed to purchase land or construct worker housing. Instead, the reformed agency would issue mortgages to workers and make loans to construction companies for worker housing.

It is no secret that housing is an important political reward in Mexico. Some scholars claim that President Echeverría started INFONAVIT in the 1970s to reward labor for their support during his administration's austerity measures. "Conflict between the state and labor arose around control over the allocation of housing. Whoever controlled the distribution of dwellings could use them as political rewards." (Aldrete-Haas, 1990, p. 130) Previously, one of INFONAVIT's most egregious faults had been constructing poor quality homes and "assigning construction contracts in a preferential and inefficient manner." (Mansell Carstens, 1992) The agency was no longer responsible for housing construction, which was now the responsibility of private developers. Private developers and INFONAVIT retained strong ties. (*Mexico Housing Market Study*, 1999, p. 9) However, despite periodic changes in INFONAVIT laws, according to experts, the agency "still has substantial nontransparent elements in its allocation of construction financing." (*Mexico Housing Market Study*, 1999, p. 15)

Working with INFONAVIT has in many ways become a special business. Some Mexican construction companies specialize in working with this housing giant, and have carved out niches to work with Mexican agencies to secure low-income housing credits. In an interview with the owner of a Mexican construction company, he relayed to me this insight::

> "To be profitable in the low-income housing market, you really need to have a large volume of contracts. You can't survive in that market of the construction industry unless you can sell INFONAVIT a large quantity of houses to cover your costs." (Gonzalez interview.)

Grupo Condak's original contract with INFONAVIT for 6000 homes was worth US$80 million and is exactly the type of partnership that the construction company wanted.

FOVI

FOVI, Fund for the Operation of Bank Housing Finance, is the other major Mexican government agency that provides loans for social interest housing in Mexico. FOVI was designed in 1963 by the Mexican Central Bank to fill the gap between low-income workers and private sector banks. Since the mid-1990s, FOVI has worked with private sector SOFOLES, financial intermediaries which originate and service mortgages for Mexican workers. After INFONAVIT, FOVI is the second largest originator of mortgages in Mexico and in 1998, originated 18% of all mortgages through authorized lending agents. (Bernstein, 1998)

FOVI seeks to provide financing for workers that frequently earn too much to qualify for INFONAVIT loans. To receive a FOVI credit, workers must make between 1.5 –15 minimum wages. (*Mexico Housing Market Study*, 1999) However, the agency's efforts were concentrated on those households that earned between 3-6 minimum wages[41] in 1995. (Lea & Bernstein, 1995) Unlike INFONAVIT which is financed by a 5% employer contribution through a direct payroll deduction, FOVI does not raise capital from worker contributions.

According to Steven Bernstein, chief economist at GNMA and former advisor to the Mexican government, "FOVI is one of the least subsidized and best run government housing finance institutions in the country." (Bernstein, 1998) The current head of FOVI, Manuel Zepeda is a man that is so well-respected and known for his honesty in Mexican government, that the Fox administration re-appointed him as head of FOVI despite Zepeda's original appointment in PRI administrations. (Bernstein interview) As a result of its low level of subsidies and solid management, the World Bank chose FOVI as the best candidate for a transition from government subsidized lender to a more sustainable source of lending. (Bernstein, 1998)

[41] Recall that Delphi's salary program through FOVI awarded homes to Delphi workers that made 12-13 minimum wages, twice the level of the agency's target audience.

In 1999, FOVI received a $505 million loan from the World Bank to increase funds for FOVI housing. (*Mexico Housing Market Study*, 1999, p. 14) The 3-year World Bank loan was intended to cover the costs of developing the secondary mortgage market, with FOVI acting as the 'master server.' (Moore, 1998) Manuel Zepeda believes the biggest challenge is bringing in conduits of capital "like GE Capital and GMAC." (Moore, 1998) Attracting GMAC was specifically cited as one of the important parts in developing the Mexican mortgage market.

In addition to offering servicing and origination fees for the private sector and subsidized interest rates, FOVI also provides the private sector with risk mitigation in the housing finance sector. According to a report by Santander Investments, "FOVI already operates a system in which the private sector can participate in mortgage lending with 50% of the risk." (Serrano, 2000) This is because although the SOFOL services loans, FOVI provides a 50% guarantee against loss. (Erb, 1999)

In 1989, FOVI began a system of public auctions to promote transparency and fairness in loan distributions. (*Mexico Housing Market Study*, 1999, p. 16) In 1998 when the Delphi salary program was implemented, Hipotecaria[42] Su Casita, a subsidiary of Pulte Corporation, was able to avoid the formal competitive bid procedure because of the GM-INFONAVIT agreement, and ostensibly because of special agreements with FOVI.

SOFOLES

The SOFOL, *Sociedad Financiera de Objeto Limitado* or limited scope financial society, emerged in the wake of NAFTA in the early 1990s. NAFTA negotiations called upon the Mexican government to open up its relatively closed financial markets. SOFOLES were the new financial intermediaries that allowed US and Canadian investors to become involved in financing without requiring a full banking license from the Ministry of Finance. (Pickering, 2000, p. 3) Because SOFOLES are non-depositary institutions, they rely on FOVI, the Mexican government housing trust, to fund mortgage loans. (Marez, 2000) Although SOFOLES are privately owned, they must follow FOVI guidelines that borrows must satisfy to qualify for FOVI-funded loans.

Natalie Pickering distinguished between three types of SOFOLES in Mexico: 1) Independent and predominantly Mexican-owned SOFOLES 2) those that belong to larger Mexican financial firms and 3) those associated with a foreign corporation. (Pickering, 2000, p.

[42] *Hipotecaria* means mortgage bank in Spanish and *Su Casita* means your little house.

5) Furthermore, of the 32 SOFOLES that were licensed and operating in the year 2000, only 19 were licensed to operate in mortgages, and of those, 14 were FOVI-authorized lenders. (Pickering, 2000, p. 5) This distinction of ownership and FOVI authorization is an important one, and this paper will examine those SOFOLES associated with US firms and those that are lending under the auspices of FOVI in the mortgage market.

The SOFOLES have benefited from their special relationship with FOVI. For the SOFOLES, origination and servicing fees provided by FOVI subsidies are the main source of profits, unlike most traditional lending institutions that profit from interest payments. (Bernstein interview) US firms became increasingly attracted to the new financial institutions in no small part due to the subsidies available and the high profits associated with them. Additionally, SOFOLES have a special relationship with developers who are keenly interested in securing mortgage financing for the homes they construct. (Pickering, 2000)

5.3 Mexican Construction Companies and Housing Finance

Grupo Condak

The idea of the GM-INFONAVIT partnership originated with the Condak Construction Company according to journalist Claire Poole of *Latin Trade*. David Arelle, owner of Grupo Condak, agrees that it was Condak that approached General Motors with the idea of worker housing, after cooperating with INFONAVIT to create the program *Binomio Ahorro Hogar*. (Arelle interview) General Motors CEO Jack Smith and Delphi director Lee Crawford would later claim that the program emerged out of the company's concern for their Mexican workers. Although this may be true, Delphi was not the party to initiate the housing partnership and was prompted by the construction industry.

In Mexico, the construction industry was dependent on public sector contracts both for major infrastructure projects, as well as for residential and non-residential building. The director of Mexico's National Chamber of the Construction Industry (CNIC) noted the importance of the industry by saying that "construction is the leading economic sector and will continue to be so." (Hilbert, March 1994)

However, after the devaluation of the peso in December 1994, the Mexican economy went into a tailspin which was catastrophic for the construction industry. Construction costs sky rocketed, as did interest rates on home loans. Difficulty with monetary policy was coupled with a fiscal crisis in the Mexican government. President Zedillo was forced to implement an austerity

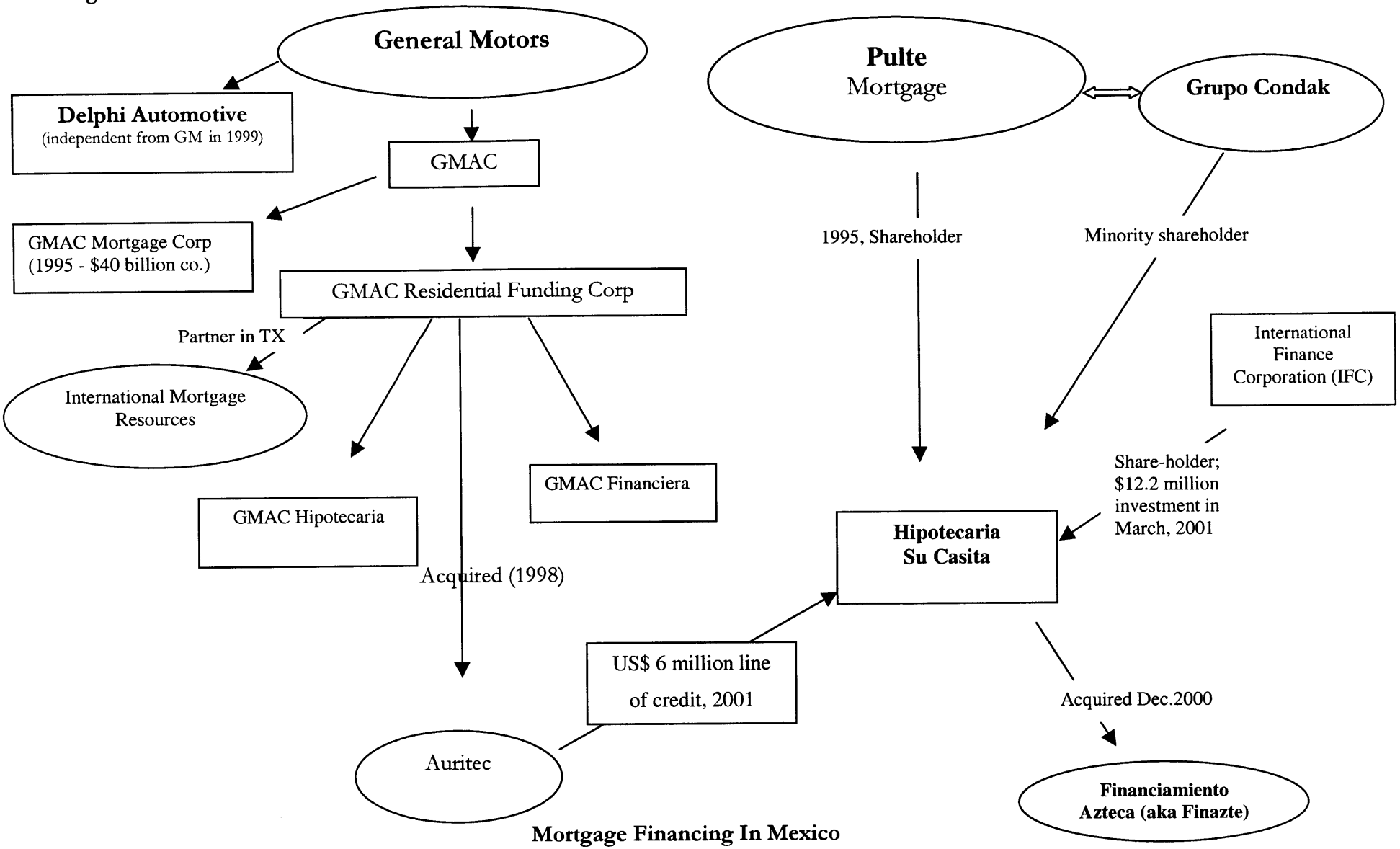
program that cut public spending, including construction industry contracts. Public sector construction also decreased due to privatization. (Hilbert, March 1994)

In addition to the government's spending cuts, the private sector was unable to get financing for construction due to the devaluation and high unemployment rates, which exacerbated the industries problems, since both public and private sector were reducing their demand. A spokesman for the *Camara Nacional de la Industria de la Construcción* (CNIC) predicted that construction was one of the industries hardest hit by Mexico's financial problems, and experienced a 15.5% reduction in production in 1995. (Fonseca Garcia, 06/01/1995) Partnerships with Mexican housing agency would prove to be absolutely critical, since the private sector was not issuing mortgages in this economically precarious period in 1995.

Grupo Condak was desperately in need of contracts in 1995. In 1994, prior to the collapse of the peso, Grupo Condak had built 2000 homes in Ciudad Juárez. Just one year later, the company built only 100 homes, in an industry that relies on high volume construction[43] for profit. Pulte and Grupo Condak decided it would be mutually beneficial to team up to build worker housing in Ciudad Juárez. Condak could bring local expertise to the team and Pulte could cooperate with big American companies and provide the capital to begin the program. The ailing construction company received a blessing from the national housing agency just at the moment when bankruptcy appeared to be the only other alternative.

[43] Due to the administrative work involved with INFONAVIT housing and to the low-income housing, profits were low unless high volume housing was produced.

Figure 1



Mortgage Financing In Mexico
GMAC AND PULTE CORPORATION
PARTNERS AND ACQUISITIONS (1994-2001)

Source: Data compiled by author from business magazines

But how did David Arelle's faltering construction company get so lucky to receive the 6000-credit INFONAVIT contract? The *Binomio Ahorro Hogar* program was a special external promotion by INFONAVIT, but instead of having a public auction for the contract, Delphi and Grupo Condak were able to negotiate the terms of the housing program directly with INFONAVIT without interruption from other bidders. According to a confidential source within Delphi Automotive, although "nothing illegal" happened, the reason that Grupo Condak got the INFONAVIT contract was because David Arelle was a childhood friend of Alfredo Del Mazo,[44] the Director of INFONAVIT. This personal connection explains in part why the construction contract may have been awarded without a competitive bid procedure.

In addition to connections on the national level with INFONAVIT and the PRI, David Arelle had local connections that facilitated acquiring land for his real estate ventures. *Promotora de la Industria Chihuahuense,* a parastatal agency in Chihuahua that promotes industrial development, was embroiled in several scandals in 1997 regarding its sale of industrial land to commercial developers. One of the irregularities involved the sale of serviced industrial lots to David Arelle. During the previous PAN administration[45] (1990-1996), the parastatal agency sold 120 hectares of public land at the below-market price of 10 pesos per square meter and allowed Arelle to purchase the land with only a verbal promise of payment. Arelle re-sold 60 hectares to INFONAVIT at 30 pesos per meter and used the proceeds to pay the *Promotora.* (Quezada, 1997) As the *Diario de Chihuahua* (the local newspaper) would comment, "this triangular operation allowed for juicy profits" and was a risk-free profit opportunity for Arelle, who was able to purchase the remaining 60 hectares with the profits from the sale to INFONAVIT. (Quezada, 1997) No formal investigation was ever conducted on this irregularity of the sale of public land, in part because "industrialists were interested in having worker housing near their factories." (Quezada, 1997)

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[44] The source from Delphi told me the two attended school together and have known each other since childhood. Since Del Mazo is a public figure, his background was easier to corroborate. Del Mazo was born in Toluca, Mexico on Dec. 31, 1943 and attended primary school in Toluca, preparatory studies at Mary Brothers School, Centro Universitario Mexico, and received his business degree from UNAM in 1966. (Camp, 1995) David Arelle Sergent was born on September 17, 1947 in Mexico City; D.F. Information on his educational background was not readily available in the press or in printed material. The two influential men are only four years apart, so although they were not necessarily classmates, it is likely that there families knew each other in Mexico City.

[45] The PAN party was in power in Chihuahua when these irregularities occurred. When the opposition PRI came in to power, several legislators wanted to examine the situation, but ultimately, no formal investigation was conducted.

Although the local media in Chihuahua does not specify that Arelle's questionable land transaction was related to the Delphi housing project, in 1996, there was no other company that was actively involved in employee housing. Regardless of Delphi's involvement in this particular land deal, having a reliable Mexican partner who knows to acquire strategic serviced lots could be a valuable part of the housing partnership for Delphi who wanted their workers housed as close to the maquilas as possible. For Condak's other business partners, (including Pulte) having a partner that knows how to do business in Mexico is a desirable trait for newcomers into the market.

As of January 2002, Grupo Condak is one of the largest constructors of INFONAVIT housing in Ciudad Juárez. Although the construction market is very fragmented with dozens of small companies, José Luis Garza, the Director of INFONAVIT in the Ciudad Juárez office, confirmed that of the 20-25 firms that receive INFONAVIT contracts, three construction companies are the clear leaders. Grupo Condak and Grupo Ruba each constructed 3000 INFONAVIT homes the previous year, and Grupo Ibasa came in third with slightly less than 3000 housing credits per year. (Garza interview) This is fairly typical of the construction industry in Mexican cities, which frequently have dozens of smaller firms, but each city has one or two large construction companies that dominate INFONAVIT contracts.

Due to competition in the saturated Mexico City market and due to the fact that one local firm (Corporación Geo) already dominates the Federal District, Grupo Condak has concentrated its expansion on other markets, such as Ciudad Juárez. Condak would also service the other industrial cities with Delphi factories: Chihuahua, Nuevo Laredo, Reynosa, Matamoros, Monterrey, and Saltillo. For the Mexican construction company, the Delphi housing agreement was a way for the construction company to get a foothold on new urban markets in northern Mexico.

5.4 US capital in Mexico's housing industry

Since the December 1994 currency crisis and the ensuing economic crisis that crippled Mexico in 1995, commercial banks have disappeared from the residential mortgage industry due to the high default rates that followed the crisis. (Bernstein, 1998) Additionally, the presence of subsidized loans in the market meant that commercial banks could not compete with the government housing agencies, and in essence, INFONAVIT and FOVI had crowded out private

sector participation in the Mexican housing industry. Why then were US investors interested in investing in Mexico's housing sector?

One explanation is that Mexico's recent economic history can be divided into pre-devaluation business prospects and the post-devaluation business atmosphere with December 1994 being the critical date that marked the turning point. There is substantial evidence that before the devaluation of the peso, international investors were optimistic about Mexico's future. As recently as 1992, commercial banks provided 70.5 % of new mortgage loans in Mexico, (Barry, et al, 1994) compared with less than 3% only 5 years later. In mid-1994, analysts of Mexico's mortgage market gave the industry favorable evaluations. (Ross & Johansson, 1994; Barry, et al, 1994) Mortgage lending by commercial banks actually went up in the early 1990s, and the Mexican government was actively working to improve legislation to reduce costs associated with property transfer, appraisal, and registration. (Lea & Bernstein, 1995) At this time, the World Bank held seminars designed to encourage investors to take a closer at securitizing Mexican mortgages. (Pickering interview) In 1994, the Mortgage Bankers Association hosted international housing conference in Guadalajara, Mexico and Pedro Aspe, the former finance minister in Mexico, spoke about his efforts to establish a secondary mortgage market in Mexico. (Taylor, 2000) In general, there was a keen interest both inside and outside of Mexico for developing a market for mortgage-backed securities. (Barry, et al, 1995, p. 194)

The excitement over Mexico's mortgage market was not just limited to academic commentators and to World Bank incentives, however. US firms had begun to form partnerships in the housing market, putting their money on the line. Beazer Homes and Pulte Mortgage were two of the earliest US companies to invest their capital in Mexico's market through strategic partnerships with Mexican construction companies. US companies were actually lured into Mexico's market before the economy crashed in December 1994, and in the case of the Pulte Corporation, managed to pull itself out of a precarious financial situation through a series of contracts financed with Mexican government (FOVI) subsidies. This section shows how General Motors' subsidiaries became involved in the mortgage market, at a time when the prospects for developing a secondary mortgage market in Mexico appeared to be bright. (See Appendix 1: Timeline of Pulte and GMAC Expansions in the Mexican Mortgage Market.)

Pulte Mortgage Company

Michael Marez, senior vice-president of Pulte Mortgage, cited three reasons for Pulte's expansion into Mexico's market: 1) the saturation of US housing markets, 2) the desire to get a stronghold in new markets and 3) profit opportunities. (Taylor, September 1998) Although the mortgage banker listed profit motives last on his list, Pulte's major investment in Mexico, a SOFOL called Su Casita, made a 40% return on investment[46] from 1995-1998. (*Mexico's Housing Market Study*, 1999, p. 18) SOFOLES servicing fees are comparable to US servicing fees, however in Mexico, these fees stay fairly constant over the life of the loan, while in the US, servicing fees decline with declining loan balance and due to US inflation. (Pickering, 2000, p. 15) Marez also spelled out Pulte's contribution in Mexico. "In Mexico, capital was a big factor for establishing homebuilding and mortgage operations and we had the capital." (Taylor, September 1998)

Hipotecaria Su Casita

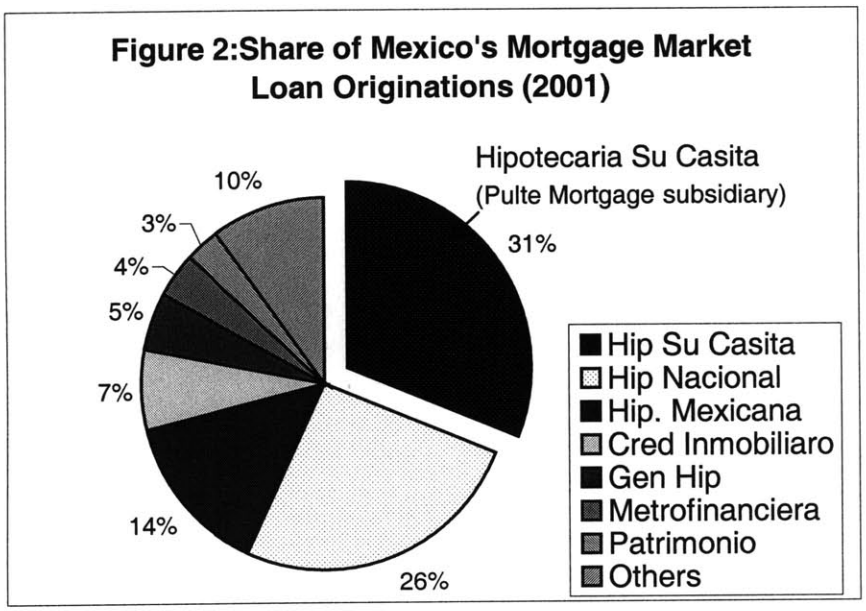
Hipotecaria Su Casita (or simply 'Su Casita') was one of the first SOFOLES and opened in 1994, shortly after the new mortgage institutions were created. By 1995, Su Casita formed a partnership with the US homebuilder, Pulte Mortgage Corporation who became a shareholder [47] in the new SOFOL. These first years were difficult times for the new SOFOL, but by 1997, Su Casita secured 700 mortgages with FOVI through Delphi's salary housing program. This deal would mark the turning point in the company's operations, as it went from a position of near bankruptcy and was transformed into a profitable mortgage lender.

By the year 2001, Su Casita became the largest loan originator in the market[48] with 15,228 credits representing 31% of new mortgages in the sector. (See Figure 2) With a loan portfolio of over $1billion and with 56 Su Casita offices[49] in Mexico in 2001, the US SOFOL had expanded significantly since 1995 and is the second largest SOFOL in terms of total capital and overall portfolio with over 45,000 mortgages in 2001. (Su Casita website) Pulte's fellow shareholders in Su Casita include the International Finance Corporation, the private sector lender of the World

[46] SOFOLES profits have been impressive across the board. The 7 largest lenders averaged a 38% return on equity in 1998 (Pickering, 2000, p. 14) making SOFOLES a very profitable enterprise.
[47] According to NAFTA legislation, the foreign companies were only allowed to have a maximum of 49% ownership in a SOFOL during the NAFTA transition period. (1994-1999) Starting in 2000, the barriers to entry for foreign financial institutions were lifted. (Pickering, 2000, p.5)
[48] This includes loans it acquired by purchasing another SOFOL called Financiamento Azteca or Finazte, acquired in 2001.
[49] Statistics from Internet Securities, Inc from South American Business Information, September 25, 2001.

Bank, Grupo Condak, and five of Mexico's largest home-development companies. (*Mexico's Housing Market Study*, 1999, p. 18) Businessmen in Mexico's housing market have seen the potential profits of Su Casita, since it has lured all the major players and the IFC to invest in it.

Besides its regular servicing and lending activities, Su Casita has become the leader in Mexico's infant securitization market. In June 2000, Su Casita issued the country's first mortgage-backed securities with a US$3.7 million bond offering.[50] ("Getting off the Ground," 2001) Mexico's mortgage market is still too small for large securitization, however.



Source: Su Casita company website, 2002

GMAC

Like many diversified multinational corporations, General Motors offers a wide array of services through its myriad subsidiaries. Although the average American consumer is most familiar with General Motors for its cars, in 1996, GMAC Mortgage had over 540,000 customers worldwide and serviced $54.5 billion in residential mortgages. (Business Wire, 10/22/1996) GMAC entered the mortgage business in 1985 and the growth of the GMAC Mortgage Group has been truly impressive. Earnings in 1999 were up 126 percent over 1998 as the group grew aggressively with acquisitions of residential and commercial servicing portfolios, and real estate operations. (Company web site: http://www.gmacfs.com/aboutus)

[50] In this early attempt at securitizing mortgages, Pulte issued a very small amount of securities, just to test the waters to see if the market could support such a sale, but a genuine MBS market in Mexico is several years away. (Bernstein interview)

General Motors Acceptance Corporation, the financing arm of GM, opened GMAC Mexico in 1931 in Monterrey for automotive consumer financing and for commercial auto finance. (GMAC company website) In 1996, GMAC established a separate subsidiary in Mexico called GMAC Mexicana, dedicated to providing finance for consumers and businesses interested in acquiring GM products. GMAC began to contemplate expanding its Residential Finance operations to Mexico in 1994, but the devaluation of the peso in December 1994 halted the initiative.

Even though GM residential finance arm had halted its initiative, in 1995, GMAC and several other US companies applied for SOFOL status. According the Banco de Mexico, GE Capital, Ford Motor Company, Chrysler, and GMAC[51] had all applied for SOFOL status to become authorized lenders in Mexico. (Banco de Mexico website, http://www.banxico.org.mx)

Both General Motors and Ford Motor were granted licenses but originally used their SOFOL status for auto financing[52], which was permissible under the law. (National Mortgage News, 1997) Several of these US companies interested in participating in the SOFOL market were companies that were not traditionally in the housing industry, including Ford Motor and GMAC[53]. For the car companies, SOFOL status was a way for them to become involved in auto financing in order to complement their primary business, and in the case of Ford, does not appear to be a way to enter the mortgage market. However, for General Motors, its financing wing, GMAC, seems to have set the path for its residential financing.

[51] These four financial services companies were also the largest in the US. According the Board of Governors of the Federal Reserve, these non-bank banks had the largest amount of financial assets in the US in 1993 with GMAC at $105.1 billion, GE at $70.4 billion, Ford Motor Credit with $59 billion, and Chrysler Financial Corporation with $24.7 billion in assets. (InfoLatina, November 1, 1995)

[52] By 2001, SOFOLES were lending for mortgages, auto, personal, and small business loans with a total outstanding credit of $6.9 billion. (Malkin, 2001)

[53] Ford and GMAC have a combined $3 billion in outstanding auto loans under their SOFOLES. (Malkin, 2001)

Text Box 2: Divisions of GMAC Latin America Group

(Operating in Mexico)

GMAC Hipotecaria (i.e. GMAC 'Mortgage')

- SOFOL status in Mexico, authorized to originate and service residential mortgages for FOVI

GMAC Financiera

- Provides financing for warehouses for mortgage lenders
- Works with Mexican financial institutions to acquire assets for sale as securities

GMAC Trade Finance

- Provides Mexican manufacturers with medium term lines of credit for purchases from US companies

Subsidiaries of GMAC in Mexico

Operadora Auritec

- Special Servicing Company that acquires and resolves distressed assets from small business loans to residential mortgages in Mexico

Source: GMAC company website

General Motors' Acceptance Corporation-Residential Funding Corporation, (GMAC-RFC), began to reconsider investing in Mexico in September 1996. At a meeting of the Mortgage Bankers Association's International Real Estate Finance Seminar in Costa Rica, Fred Rice of GMAC-RFC, announced that they were "looking again" at Mexico. (National Mortgage News, Sept. 30, 1996) This was 3 months after Delphi had initiated a housing program that would generate $100 million in housing contracts, and 1 year after its parent company, GMAC had secured SOFOL status.

As of 1999, the only two US companies directly investing in Mexican SOFOLES for mortgage financing were Pulte Mortgage Corporation and GMAC-RFC. (Erb, Nov. 1999) It is quite natural for these two giants of the US housing market to be interested in the Mexican housing market. However, as a fully owned subsidiary of General Motors, GMAC-RFC's involvement in Mexico's housing market is evidence to suggest that Delphi's decision to participate in an employee housing program was not purely out of a desire to be a socially responsible corporate citizen.

How important is the link to General Motors for its housing finance subsidiary? Keenan Dammen, head of Global Strategic Alliances and Acquisitions at GMAC-RFC, was quite clear about the importance of their parent company in RFC's overseas expansion. "If General Motors

builds plants overseas, they'll have to get employees and have housing for these people." (Timmons, 1998) Bruce Paradis, president of GMAC-RFC, agrees that being a subsidiary of GM is "a tremendous advantage" and noted that RFC uses General Motors' name recognition and customer foothold in Latin America to market its services, including mortgage securitization, lending, and investment products. ("GMAC-RFC Reaches Overseas", October 13, 1997)

GMAC's involvement in the Mexican housing market can be viewed as a multi-pronged approach. To briefly summarize GMAC's activities in the mortgage market:

1. Direct SOFOL lending through its Mexico subsidiary, Operadora Auritec and through the newly formed GMAC Hipotecaria

2. Supply lines of credit for other SOFOLES, including Su Casita

3. Long-term vision of creating a secondary mortgage market

GMAC-RFC would make clear that the company's main efforts in Mexico were in securitization of mortgage portfolios. (Hahn, 2000) GMAC does have a servicing company and a mortgage bank in Mexico, but in 2000, RFC was really interested in issuing mortgage backed securities (MBS) according to Alejandro Landa, the director of Mortgage Finance at RFC's Mexico subsidiary. (Hahn, 2000) By spurring the construction industry and generating credits in SOFOLES, Delphi was increasing the mortgage pool which would increase the potential of GMAC-RFC to become involved in Mexico's infant mortgage-backed securities market.

RFC's long-term goal may be mortgage securitization, but they have started out with direct lending through their SOFOL. By October of 2000, RFC would open GMAC Financiera and GMAC Hipotecaria[54] and have an initial lending capital of $209 million for its housing program. ("Residential Funding Corporation Starts Ops – Mexico." 2001) GMAC Hipotecaria also teamed up other Mexican SOFOLES to launch a 2-year $280 home lending program in 2001.

Additionally, RFC is interested in providing capital for other SOFOLES, including Su Casita. According to the regulatory arm of the Mexican stock exchange[55], *the Registro Nacional de la Bolsa Mexicana de Valores*, Auritec Operadora, a Mexican subsidiary of GMAC-RFC, provided a $6 million line of credit for Su Casita. In September 2000, GMAC and Su Casita signed an

[54] The delay in opening up the GMAC subsidiaries in Mexico until after 2000 may have been related to NAFTA transition legislation that would have prevented GMAC from having more than 49% ownership in a SOFOL prior to January 2000. By waiting until 2000, GMAC was assured 100% ownership in its new SOFOL.
[55] Data obtained through a July 19, 2001 bond offering by Hipotecaria Su Casita. Su Casita's issued a document to comply with the Mexican stock/bond exchange requirements for financial disclosure.

agreement in which GMAC would make lines of credits available for Su Casita. (Su Casita website.) This is a direct financial link between the GM subsidiary and the mortgage company that GM contracted to service its housing program.

However, why did General Motors make an agreement with Pulte and Su Casita to service Delphi's loans, instead of offering this business directly to GMAC-RFC? One hypothesis is that General Motors wanted to avoid the appearance of direct profiteering from the employees' housing program. Perhaps fearing criticism from activists if GMAC were directly financing its employees' mortgages, GM partnered with Pulte.

A second possibility is that GM believed it could get greater rates of repayment through an intermediary. Delphi Finance Director, Guillermo Gutiérrez, believes that by having another independent company responsible for the loans, it removes a possible moral hazard in which Delphi workers might not take repayment of a loan from their employer seriously. (Gutiérrez interview) This was the justification for having Grupo Condak as an intermediary for the down payment assistance, but the rationale is applicable for the primary mortgage as well.

A third possibility of why RFC did not directly finance Delphi's worker housing was that for strategic reasons, GMAC-RFC wanted to encourage outside investment in housing to strengthen Mexico's mortgage market. Keenan Dammen noted that even though RFC has the capital to invest in Mexico, "we need other companies to come with us" to build a viable mortgage market. (Timmons, 1998) Because secondary mortgage markets require substantial economies of scale, GMAC-RFC was aware that creating a robust and diverse primary mortgage market was an absolute necessity if they had an eye towards securitization.

5.5 Private Vs Public Sector Incentives For The Housing Program

Three final points of analysis merit special attention: the private sector's incentives for participating in the housing program; the motives of INFONAVIT for partnering with Delphi and the construction company; and most interesting, the motives of FOVI, one of the most respected and well-run government agencies, to subsidize SOFOLES and assure them such a high rate of return on low-income income housing.

Examining the private sector's incentives for participation in the housing program is the most clear-cut and is well founded in Neoclassical microeconomics. Firms are profit-maximizing actors that will actively seek high profits such as the 40% rate of return of Su Casita. Understanding how to take advantage of government subsidies such as FOVI programs is in the

firm's interest to maximize its return. Both the Mexican construction firms and the US multinationals understood how to cooperate with the public sector agencies in order to gain financially.

Additionally, both Pulte and GMAC understood the potential financial benefits associated with the first mover advantage. As one mortgage banker commented,

> "US companies that wait the five years needed for the Mexican market to develop further will be eight years behind the long-term players like Pulte, GE Capital and GMAC-RFC, given the time it takes to establish a local presence. Not only are there opportunities for high returns in the Mexican marketplace, but there are synergistic opportunities to support existing US operations."
> *-Debra Erb of the Mortgage Bankers Association (Erb, Nov. 1999)*

By being the first US companies to gain a foothold in the Mexican mortgage market, they could establish themselves and dominate the market in its infancy. The synergistic opportunities that Erb alludes to are cultivating special relationships with FOVI and INFONAVIT.

INFONAVIT's incentives to participate in the housing program are more complex. The housing agency's sole purpose is to finance worker housing, and arguably, the agency had to provide this housing regardless of a partnership with Delphi-GM. This partnership merely gave Delphi employees preferential treatment in INFONAVIT's lottery process. Why then, did INFONAVIT choose to form this exclusive relationship with General Motors and the construction team? As noted earlier, personal connections between INFONAVIT director Alfredo Del Mazo and the owner of Grupo Condak can partially explain INFONAVIT's exclusive contract with the construction company.

Furthermore, the Mexican state has been a willing partner to the construction industry for many years. Ricardo Mendez Silva argues that the state has promoted social housing as a means of stimulating the construction industry. (Mendez Silva, 1991) More than just assisting an important economic sector, construction is also an important employment generation mechanism. The former director of INFONAVIT, Oscar Joffre, bragged that "The construction of each house generates 5.3 jobs for each home." *(Servicio Universal de Noticias*, 11/3/1997) When Delphi's housing program was announced, the Director of INFONAVIT would simultaneously announce the job-creation statistics for the project. An INFONAVIT spokesman noted that the 600 million-peso program (US $79.5 million) would create 31,200 jobs directly, and another 12,000 jobs indirectly. (*El Nacional*, 08/23/1996) This investment would thus have a dramatic impact on the regional economy. Creating jobs during the economic crisis was important

politically, all the better if the government could create jobs while addressing the housing crisis and the crisis in the construction industry.

Another important political factor is that Alfredo Del Mazo had aspirations for higher political office. Specifically, Del Mazo would become the PRI's main candidate for mayor of Mexico City only 6 months after the announcement of the partnership with GM. Arguably, the potential future mayor of the capital city would have many reasons to forge a special partnership with a large multinational firm like GM, which was the largest employer in Mexico at the time. Given General Motors' network of subsidiaries operating across Mexico, a shrewd politician would understand the merits of establishing a good relationship with an important MNC. This is a characteristic of INFONAVIT that has been documented in the past. "Analysis of INFONAVIT demonstrates how administrators chose to produce expensive housing which excluded the worst-off members of the institute's clientele in order to satisfy the private sector and labor bosses, and thus advance their administrative careers." (Aldrete Haas, 1990, p. 18)

More than just personal ties between Del Mazo and Grupo Condak and political ties with General Motors, the Mexican government was keen on preserving its relationship with General Motors. After Alfredo Del Mazo left INFONAVIT in 1997 to run for office, the new director of the housing agency[56] was uncomfortable with the agreement with Delphi, believing it gave the auto company an unfair advantage in the housing allocation process. (Crawford interview) When the new INFONAVIT director attempted to annul the previous administration's agreement with Delphi, the maquiladora was ready for the fight. Jack Smith, the president of GM, made a phone call directly to President Zedillo to ensure that the program was not cancelled. (Arelle interview; Gutiérrez interview) Zedillo's commitment to the program shows that the housing program was not just based on personal connections between one INFONAVIT director and a construction company, but rather, was part of a larger political commitment to the meet the needs of large multinational corporations like General Motors.

Representatives from Delphi and Grupo Condak agree that the housing program would not have been possible without the Mexican government. (Crawford interview; Arelle interview) There is a solid case to show that the Mexican government did need to provide incentives for

[56] The 1997 election made the opposition PAN a majority in the Mexican Congress for the first time in history. President Zedillo of the PRI party was still in power and appointed a PRI politician, Oscar Joffre, as head of INFONAVIT. However, some observers credit Joffre's reforms as a preemptive attempt to avoid PAN criticism of the housing agency. (Angel interview) Angel hypothesizes that INFONAVIT was preparing itself for increased scrutiny by the opposition members in Congress and decided to reform itself to avoid embarrassing political battles.

private firms to participate in the housing sector. The wave of defaults on private mortgages and the moral hazard the government created by renegotiating payments with delinquent borrowers established an atmosphere in the mortgage market that discouraged most private banks from participation in the housing industry. (Pickering, 2000; Bernstein interview) Given the high demand for housing and the government's inability to handle the housing crisis on its own, there is a solid rationale for the Mexican government to provide some incentives to encourage private sector participation in its struggling housing sector.

But why did the FOVI choose to subsidize US firms in the mortgage-finance sector? One explanation has been attributed to NAFTA. However, the trade agreement may have forced the liberalization of Mexico's financial markets, but it did not require FOVI to actively provide subsidies to American companies investing in Mexico's mortgage finance sector.

A second explanation was that the severity of the financial crisis necessitated an inflow of foreign capital to finance new housing construction. Eugene Towle of Softec, a Mexican real estate consulting firm said, "Mexico offers wonderful real estate opportunities for foreign investors, but we don't have the cash to capitalize on the opportunities...because our financial system has slowed since 1994." (Taylor, 1998) Luring US capital into the Mexican housing market was also a strategy that Manuel Zepeda, director of FOVI, specifically cited as a necessary precursor to the creation of a secondary mortgage market.

For US investors interested in emerging markets, a risk premium *is necessary* to compensate for the potential risk. It stands to reason that risky mortgage lending in Mexico needs to offer higher returns to attract capital. Since the Mexican government wants to keep low-income housing affordable, the housing agencies made a conscious decision to subsidize this sector. Arguably, without interference by the Mexican government, mortgages would not be available for low income Mexicans because they could not pay the interest rates that would ensure the desired rates of return. However, is this level of government assistance necessary? Could less extravagant incentives have attracted US capital to Mexico?

In practice, FOVI, the Mexican government, and the World Bank have attempted to reduce subsidies to the private sector, but have been unsuccessful or have been overly optimistic about the mortgage market. Since 1998, Manuel Zepeda of FOVI had been predicting that mortgage-backed securities would help end government subsidized rates. (Moore, 1998) However, securitization has not been the answer to the liquidity crunch in the housing market, nor does it appear that these securities will be able to finance future housing projects.

Chapter 6
Conclusions and Future Research

"The days of employer as landlord – benevolent, but controlling – are history. Today's employer can be a purveyor of dreams by helping workers achieve homeownership."
–Ann D. McLaughlin, former US Secretary of Labor (McLaughlin, 2000, p. 2)

The former Secretary of Labor viewed employer-assisted housing as a modern replacement of the company town, with great potential to improve the lives of workers. More importantly, she believed that employers can (and should) play a role in helping workers gain access to homes. Did Delphi's housing program live up to these expectations? More importantly, based on the incentives of the firm for embarking on the program, is this a sustainable and replicable housing program?

6.1 Findings

General Motors and its autopart subsidiary, Delphi Automotive, were applauded by the press, the Business Roundtable Group, and the United States Office of Housing and Urban Development (HUD) for recent progressive work benefits in housing. Some firms are more socially-conscious than others, and many are acutely aware of the need to improve public relations to improve their image among the communities they work in, and more importantly, among their customers. The positive benefits of the program are not limited to an increase in the housing stock. Delphi was widely portrayed as a progressive US company that wanted to reward its workers with desirable employee benefits.

It is clear that for the 6000 workers that received housing, the Delphi program was a tangible benefit that improved the quality of life. For the lower income maquila workers, the program helped workers gain access to credit and to formal sector housing for the first time in their lives. For white-collar workers, even if they were dissatisfied with the quality of INFONAVIT housing for their own personal consumption, the new housing unit was an investment that could earn them extra income as rental units. Furthermore, even though many of the workers that received INFONAVIT housing were not the lowest income workers, nonetheless, many of them did need assistance to gain access to housing finance, and in this manner, General Motors played an important role in negotiating with the Mexican housing agencies.

However, examining the counterfactual shows that the Delphi program did not make a dramatic difference in housing production, but rather, affected *the allocation of housing credits.* Even without the contractual relationship, INFONAVIT would have awarded those housing credits regardless of the special arrangement with General Motors. Since GM's down payment assistance helped leverage the housing agency's investment, it is possible that INFONAVIT was able to make a modest increase in the number of housing credits, with the same amount of money. The real difference is that 6000 houses were awarded to Delphi employees, and in many cases, employees that earned too much money to qualify under regular circumstances. The Delphi program therefore displaced other Mexican workers that would have received housing, and many of the Delphi workers actually earned more than the INFONAVIT guidelines permitted.

Additionally, the use of INFONAVIT contributions towards FOVI down payments meant that Delphi's higher income salary workers displaced INFONAVIT workers in order to finance FOVI homes. The implication of this is that the potential gains (in producing extra housing) that INFONAVIT made with GM's down payment assistance were lost to FOVI in the salary program. From the perspective of the workers, higher income salary workers were gaining access to taxes they had paid and converting them into credits towards housing. From the perspective of INFONAVIT, this leakage prevented the agency from awarding housing to lower income workers and instead, assisted higher income workers in making down payments with FOVI. The counterfactual is that workers that exceed INFONAVIT earning guidelines must wait until retirement to gain access to their housing fund, but an exception was made for Delphi employees.

From a financial standpoint, it is clear why the company preferred to offer housing benefits instead of increasing wages. Delphi Automotive would have absorbed 100% of the cost of an increase in wages. Negotiating housing benefits with INFONAVIT meant that the government agency absorbed 82% of the cost of this benefit. This was estimated at $100 million project and according to the Delphi finance department, only $8 million was actually distributed in down payment assistance. This means Delphi paid only 8% of this employee benefit, and the Mexican government was in essence subsidizing a private company's benefit program.

The main purpose of this thesis was to examine the incentives and motives for offering employee-housing benefits. Although public relations and turnover have tangible benefits for the company, I have rejected them as primary incentives for offering the housing program. General

Motors was concerned about its public image, particularly with the increasing media attention on multinationals during the NAFTA debate. The company also went to great measures to ensure that the program received media attention by involving top-level officials in the program and through an active public relations office. However, as we have seen, GM may have been more concerned with generating a positive image for its shareholders and for US and Canadian unions, and less concerned with actual consumers.

More importantly, I have shown that there is a gap between the image that the company sought to portray and the actual program. Although the program was ostensibly started to get Delphi's workers out of the *colonias*, and to show that General Motors is a good corporate citizen, the reality is that most of Delphi's maquila workers still live in shantytowns and were excluded from the program. Rather than proving that GM is a responsible corporation that cares for its workers, the evidence shows that social consciousness was not a major factor that led to the creation of the program.

The other conventional view about employee benefits is that reducing turnover is a major incentive for firms to offer progressive work benefits such as housing. I have shown that there may have been an expectation that the housing program would help increase employee retention, but that the real reduction in turnover occurred before the program started. Furthermore, the allocation of housing and the creation of the salary program shows that Delphi was more concerned with reducing turnover for skilled workers than for unskilled line workers, despite the fact that the majority of the firm's turnover problem lies with line workers that make up 79% of the workforce in a maquiladora.

The alternative hypotheses that I proposed had mixed results. I have insufficient evidence to prove that the firm had ulterior motives about the housing program's potential impact on Mexican unionization. The company town mentality[57] does not seem applicable to the Delphi housing program because workers were free to leave the company as they wished and 800 housing recipients did just that. Furthermore, there does not appear to be enough of a consciousness about labor organizing in Ciudad Juárez to suggest that Delphi would need to discourage unionization. I found no evidence that Delphi workers in Juárez were interested in unionizing, but this is partially due to the regressive nature of most of Mexico's official unions.

[57] The days of the company town with absolute power may be over, but in the case of Delphi's housing program, this is due largely to the significant role of the Mexican government in the program. It was INFONAVIT and FOVI that controlled the workers' housing, not Delphi.

Unlike in the company towns of the early 1900s where housing was used to control labor and prevent strikes, the effect of the housing program on Mexican labor organizing appears to be negligible.

However, there is a stronger case to show that General Motors used housing in Mexico as a counter-propaganda mechanism to US and Canadian unions. The United Auto Workers Union and the Canadian Autoworkers Union are active North American unions that have effectively used strikes against General Motors and Delphi and have cried out against MNC's treatment of their Mexican counterparts. General Motors actions in Mexico therefore have a transnational effect on labor in the US and Canada.

This adds a more nuanced assessment of the firm's 'control' since EAH is no longer about controlling labor in the same manner that it was 100 years ago in company towns. In essence, GM used a game theory approach of pitting US and Canadian labor against Mexican labor. By voluntarily offering benefits to Mexican workers, GM showed its US and Canadian labor that it was in Mexico for the long haul and that GM's relocation to Mexico was not about exploitation of labor. More importantly, the UAW and CAW were concerned about losing jobs to their southern neighbors, and GM's response was clear: GM will continue to relocate to Mexico where labor costs are lower and where organized labor is weak. GM could even afford to finance employee housing in Mexico and still have significant labor cost advantages over its US operations.

The most interesting result of my thesis investigation was the discovery that Mexican construction interests and US banking and finance interests were the perhaps the primary beneficiaries of the program. What is interesting here is not that the real estate sector was one of the parties that most benefited, but the fact that a US company is what brought the parties together. Arguably, Grupo Condak was capable of building the homes in Ciudad Juárez and had plenty of experience in this market. However, could the small Chihuahuan company have approached the GM giant on its own? Would the Delphi executives in El Paso have been as amenable to this project if it had not been handed down from the desk of the General Motors CEO? As a major homebuilder in the US, the Pulte Corporation was in a much better position to approach its neighbor with this project, and brought the necessary capital to get Condak off the ground. Similarly, since all real estate is local, Pulte did not have the local expertise to proceed in the Juárez market without Grupo Condak. By partnering with Condak, Pulte could benefit from lower costs because of Condak's existing network of builders.

In determining if the program is replicable, it is important to recall the personal connections between the construction company owner and the head of INFONAVIT. Determining if the program would have gotten off the ground without Alfredo Del Mazo and David Arelle's personal friendship is pure speculation, but at a minimum, the character of the program may have been different in that a competitive bid process might have been used to award the $100 million contract.

Determining if the program is replicable in other countries also requires examining the political ties between the multinational corporation and the government. Interviews with Delphi Mexico Chief Executive made it clear that the program would not have been possible without General Motors. When the partnership was about to be cancelled in 1997, the President of GM made a direct phone call to President Zedillo. These factors make it clear that not just any company would have the necessary leverage to forge this type of commitment with the government. Smaller companies might be interested in Employer-assisted housing, but it is not clear that they could instigate dramatic change in the housing sector and negotiate with the Mexican government in the same way that a multinational corporation like General Motors does.

The fact that General Motors' subsidiary, GMAC-RFC is directly involved in the Mexican mortgage market and is investing in SOFOLES makes it clear that General Motors did expect to receive a return on the $8 million contribution for employee down payments. This was not a sunk cost, but rather an indirect investment in the future Mexican housing market. It is not just an investment in its employees, but is an investment that would help generate business for GMAC-RFC. Delphi-Mexico Chief Executive Lee Crawford said that he believed that the company had gotten back its investment. Although he was ostensibly referring to the reduction in training costs, the company's investment made returns elsewhere as well. Although there is insufficient evidence to prove that Delphi received direct financial gain from the housing partnership, (other than the alleged reduction in training costs associated with turnover) the housing contract did serve to generate business for GMAC-RFC. By 2001, GMAC-RFC was providing lines of credit to Hipotecaria Su Casita, the financial institution that services Delphi's salary workers' homes.

There is also an element of hypocrisy in the involvement of multinational corporations in the heavily subsidized Mexican housing market. Conservative MNCs oppose welfare states in the US, but take advantage of the benefits abroad. Mexican government subsidies to foreign firms have been an important factor in relocations to Mexico, (Carrillo, 1994; Dombois 1985; Jenkins,

1984) but the continued reliance on these government benefits when they are attacked as distortionary measures in the States is striking. Additionally, given the recent popularity of Neoliberal economics, the World Bank and IFC subsidies to the Mexican housing sector (and to US companies) are also hypocritical.

Additionally, the role of NAFTA in initiating financial sector reform and in liberalizing the Mexican financial markets can be credited with helping to increase foreign investment in the housing market. The creation of SOFOLES was an unintended consequence of NAFTA that made investment in Mexico's mortgage industry a profitable enterprise. Other external factors that increased interest in Mexico's housing industry include the IFC loan to Hipotecaria Su Casita to establish the SOFOL and loans to FOVI to increase lending and help cover the costs of creating a secondary mortgage market. Both of these interventions show that there was substantial outside interest in the Mexican mortgage industry, and it is unclear if the housing program could have been successful without NAFTA regulations and without IFC support of US businesses.

Finally, it appears that it was INFONAVIT and FOVI who bore the most responsibility for the program, and who may have received the smallest portion of the benefits. Both agencies had to invest in worker housing regardless of the partnership with GM and Pulte-Condak, so it was not necessarily interested in financial gain. Ultimately, INFONAVIT's gains from the public-private partnership were short lived and limited to minor political benefits, while General Motors and the Pulte Corporation appear to be the true beneficiaries of the program, reaping both political and financial benefits.

6.2 Policy Implications

The main purpose of this essay was to examine how the public-private partnership formed in Ciudad Juárez and what motivated the actors to initiate the housing program. Even though it was not a primary goal to examine the policy implications of the program, it is nonetheless interesting to reflect on how this program fits into overall housing policy. The bulk of this paper might inspire cynicism since the main beneficiaries were real estate developers, US sources of capital, and big business. Additionally, the workers that did benefit from the program are not the neediest workers in Mexico. But rather than focusing on negative consequences and the shortcomings of the project, it is more useful to analyze implications on policy for future

housing projects, for other government subsidies, and the implications for MNCs doing business abroad.

The level of subsidies that the Mexican government offers in the low-income housing market and the healthy profit margin for the private sector should be re-examined. Although a risk premium is necessary to attract capital into the Mexican housing sector, it is not clear that the government should be using its scarce resources to generate a 38% rate of return for commercial SOFOLES. Generally, the rate of return on an investment is correlated to the level of risk, and the Mexican housing industry is a risky endeavor. However, in this case, FOVI is taking on 50% of the risk *and* is providing subsidies for loan origination and servicing. For private firms, this means attractive returns with limited risks. Not only does this type of arrangement distort the real mortgage market, but it also increases the potential that predatory lenders will enter the heavily subsidized market. Although many people might believe that subsidized housing is a good investment for the Mexican government and that it is pulling low-income Mexicans out of poverty, the government should re-examine the level of subsidies it offers with an eye to luring capital and investment into the housing sector, but at the lowest possible cost to the government.

Another issue to examine is the Mexican minimum wage structure, which has artificially kept wages down to attract foreign investment in Mexico. Encouraging foreign direct investment is the primary goal of this policy that has been successful at generating employment opportunities for Mexicans, but has simultaneously depressed that standard of living of many Mexicans. The annual minimum wage increases have not kept up with inflation in the past decade, which has eroded the purchasing power of Mexicans. For US companies in Mexico, fluctuations in the exchange rate and inflation have compensated the companies for any nominal increases in wages, and have essentially allowed US companies to maintain a stagnant wage rate. The low wages had repercussions on Mexican workers that could not qualify for government subsidized housing and who could not access credit through Delphi's housing program.

The current Mexican government's policy may increase the supply of housing due to the generous subsidies for housing construction and mortgage origination. However, until Mexican workers can afford to pay for these houses, there will be a mismatch between the supply and demand. Studies of the Mexican housing market frequently cite "the huge unmet demand" for housing, however this is not a real demand because workers cannot afford the housing. What many analysts call "demand" is actually a *desire* for affordable, formal sector housing. Until workers reach a certain income level, however, they cannot be considered as consumers in the

housing market. If the Mexican government wants to use housing as a poverty alleviation measure it will first have to increase the number of Mexicans who can genuinely afford it. Facilitating access to credit is a necessary step in the process, but it is insufficient because it excludes so many formal sector workers.

The allocation of the housing credits within Delphi also merits special attention. Reviewing the wage and employee data at SEC, one of Delphi's maquilas in Ciudad Juárez, revealed that 79% of the factory's hourly workers could not qualify for the housing credits because they did not earn enough money. Conversely, this means that those workers whose incomes were in the top 21% were the employees that actually benefited from the program. Furthermore, the creation of the salary program for office personnel indicates that Delphi was just as concerned (if not more so) with rewarding its skilled workforce as it was with providing housing benefits for the 'poor.'

Delphi's internal allocation system of the housing credits has important implications for the policy world. Government housing agencies should be cautious in regulating the role of developers and construction companies in the housing allocation process. Although ostensibly it was Delphi and General Motors that did preliminary qualifications for the housing credits, ultimately, GM was influenced by contractual arrangements with Grupo Condak that limited the number of houses targeting the poorest workers. Furthermore, the construction company and the financing agency (Su Casita) were both motivated to allocate the housing credits to the top of Delphi's income distribution which conflicts with the target clients of INFONAVIT and FOVI.

Given the scale of Mexico's housing crisis, this partnership idea has not taken off as some might have hoped. Only four or five other maquiladoras have followed Delphi's lead, and few have gotten the media attention that the press has ravished on Delphi-General Motors. The other maquiladoras that have worked with INFONAVIT have generally signed contracts for less than a thousand homes. Sony Magnéticos de México, Soriana and Vishay Vale Electronics are other maquiladoras[y] that would provide worker housing and lucrative construction contracts for Pulte and Grupo Condak. The agreement with Sony produced more than 500 homes in Nuevo Laredo, and Vishay would add another 600 homes in Ciudad Juárez. (Poole, 1999)

However, even though the idea has not taken off among maquilas, the Fox administration has renamed the savings program and launched a "new" savings program called *Cuenta Ahorro Hogar.* Corporación Geo, the largest homebuilder in Mexico that dominates the Mexico City market, is active in the new program and is the largest recipient of housing credits.

Geo has partnered with National Chamber of Commerce, which represents 2000 companies in Mexico. Corporación Geo has built 24,000 homes under the program[58], with almost 50% of the homes in the state of Mexico. The critical difference is that the new INFONAVIT administration under Fox is targeting lower income workers that earn between 3-4 minimum wages. The Delphi program had targeted workers that earned between 1.7-10 minimum wages, with a significant portion of the credits going to upper income households.

The policy implication here is that it appears that INFONAVIT has recognized the housing allocation problems that occurred with the Delphi pilot program. The new administration has addressed the problem by targeting lower-income households and setting thresholds for higher income workers. In the year 2002, INFONAVIT's goal is to award 275,000 homes, and 30% of the homes will be for households earning less than 4 minimum wages. (Véla interview)

Furthermore, if the Mexican government is really interested in making housing available to the poorest workers, then diversifying the financing options is one way to increase access to credit. Although INFONAVIT has a line of credit that is designed to help low-income families take out small loans and make progressive improvements in their existing housing stock, in practice, INFONAVIT has not encouraged workers to use these loans. The Delphi housing program provided only finished housing units for workers, and effectively excluded the lowest-income workers. By facilitating access to $1000-$2000 loans so that workers can make additions to their homes or improve services on their lots, Delphi could have made a tangible difference in the lives of its workers that lived in the informal sector. The current emphasis on finished housing units is beneficial to construction companies and financing agencies, but is not necessarily in the best interest of the lowest-income workers that are excluded from the formal sector mortgage market.

6.3 Further Research

There were many unresolved questions that this research could not address. One of the unresolved questions is whether or not Employer-assisted housing is feasible in other developing countries. EAH varies in developing countries and is frequently dormitory housing for factory

[58] According to the Mexico City construction company, *Binomio Ahorro Hogar* was the pilot program, which did not take off in the border zone. However, in Mexico City, the new savings program, *Cuenta Ahorro Hogar* has been more successful and four major construction companies (Geo, Urbi, Sadasi and Consorcio Ara) have been active in this market. (Véla interview)

workers, temporary housing for migrant agricultural workers, or temporary housing for miners in remote locations. In developing countries, home ownership schemes sponsored by employers remains relatively rare. This research has shown that two main reasons why the housing program occurred in Mexico were because of large government subsidies and because of the important role of a powerful MNC in negotiating with the government. However, in the absence of these two conditions, is employer assisted housing a viable alternative for addressing worker housing shortages?

Additionally, this thesis raises more questions than it answers in terms of the transnational effects of labor movements. Can a company's labor unions in one country affect the company's treatment of its workers in another country? There was weak evidence to suggest that General Motors concern with US and Canadian labor may have led it to offer housing benefits in Mexico, but this question remains unresolved.

More research could also be conducted on the role of diversified MNCs in affecting government policies abroad. One does not normally consider autopart manufacturers as part of the housing industry, but all three major carmakers with operations in Mexico submitted applications to become finance institutions in 1994. More important, one does not normally consider autopart manufacturers as banking/financial institutions. At a minimum, activists, regulators, and policy makers need to see them as such. The nature of globalization and the increasingly diversified activities of so many corporations have changed the way that companies do business. GM does not go to Mexico just to produce cars; it goes to Mexico to make money.

How can developing countries regulate foreign companies that are expanding in every sector of their economies? This is the million-dollar question with no obvious answers. One thing we do know is that regulation and oversight of business would be inadequate if governments (and activists) took programs like Delphi's housing credits at face value and fail to examine the complex motivations and interlocking firm activities and political networks that brought this program to life. Recognizing that GM was involved in mortgage finance might have made regulators more cautious and made them think twice about allowing Grupo Condak and Delphi to play such a prominent role in the housing allocation process. The fact that real estate interests and big business are the real winners should come as no surprise, although it is perhaps disappointing that a program that appeared to have so much promise is really just business as usual. Furthermore, researchers and activists should be wary of projects that seem too good to be true.

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Lujan, Beatriz and Verónica. *Centro de Estudios Laborales y Tecnicos* (CETLAC), Interview by Rossana Dudziak, Tuesday, January 15, 2002.

Muñoz, Víctor M. Retired AFL-CIO, formerly Director of the US-Mexico border region since 1980. Interview by Rossana Dudziak, Monday, January 14, 2002, El Paso, TX.

Morelli, Iribarren, Esteban. Collection Coordinator, *Hipotecaria Su Casita*, Subsidiary of Pulte Mortgage Company, Interview by Rossana Dudziak, Thursday, January 24, 2002, Ciudad Juárez.

Peres, Jaime. Director, *Instituto de Vivienda del Estado de Chihuahua* (IVI). Director of the State housing program in Chihuahua. Interview by Rossana Dudziak, Wednesday, January 23, 2002, Ciudad Juárez.

Pickering, Natalie. Goldman Sachs Housing Analyst in Mexico. Presentation on Mexican Mortgage Market at the Department of Urban Studies & Planning, and interview by Rossana Dudziak following the lecture. April 1, 2002, Cambridge, Massachusetts.

Rothstein, Jeffrey. PhD candidate, University of Wisconsin, Madison. Rothstein's research on Delphi's industrial relations in Mexico coincided with my own research. Phone interview in December, 2001; various e mail exchanges.

Serrano, Eduardo. Director of Personnel for Delphi's– SEC, *Sistemas Electrónicos y Conmutadores*, Interview by Rossana Dudziak, Thursday, January 24, 2002, SEC plant, Ciudad Juárez.

Siqueiras, Luis Felipe. Director of Planning, *Instituto Municipal de Investigación y Planeación* (IMIP), Interview by Rossana Dudziak, Tuesday, January 15, 2002, Ciudad Juárez, Mexico.

Vela, Iván. Corporación Geo, Mexico City construction company active in INFONAVIT housing. Telephone interview by Rossana Dudziak, Friday, February 22, 2002.

APPENDICES

Appendix 1: Delphi and GM Facilities and Operations Worldwide

Delphi Operations in 1998

Worldwide Manufacturing facilities	208
Technical Centers	27
World wide employees	204,000
World-wide annual revenues	$32 billion
Plants in Mexico	53
Workers in Mexico	72,000
Delphi Factories in Cd. Juárez	15
Delphi workers in Cd. Juárez	23,000

Source: Soden, Dennis. *Delphi Automotive Systems: History, Labor Issues, and its Role in Ciudad Juárez.* 1999.

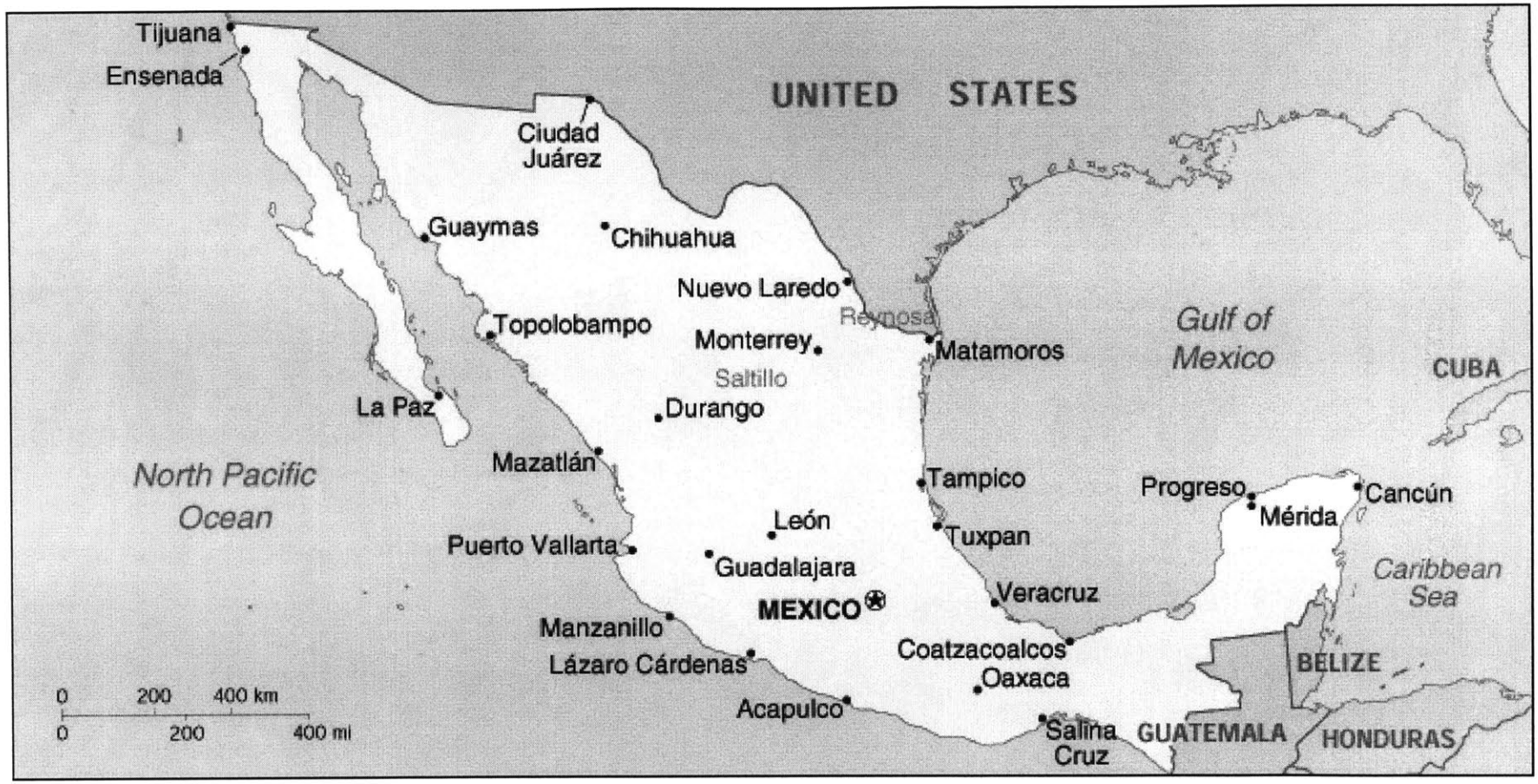
General Motors

Worldwide Manufacturing Facilities	34 countries
Plants worldwide	147

GM Mexico Operations

Total Mexico GM employment:	13,342
Ramos Arizpe – Passenger Car Assembly	
Hourly employees:	
Salary employees:	5284
Year Opened:	474
Union:	1981
	Confederación de Trabajadores de Mexico (CTM)
Silao– Truck Assembly	
Hourly employees:	2991
Salary employees:	245
Year Opened:	1994
Union:	Confederación de Trabajadores de Mexico (CTM)
Toluca, Mexico –Truck Assembly	
Hourly employees:	2246
Salary employees:	320
Year Opened:	1994
Union:	Confederación de Trabajadores de Mexico (CTM)

Appendix 2: Map of Mexico



Cities with Delphi plants: Ciudad Juárez, Chihuahua, Nuevo Laredo, Reynosa, Matamoros, Monterrey, Saltillo

DELPHI

Automotive Systems

Programa Binomio
Ahorro-Hogar
INFONAVIT

Condak

PULTE

Appendix 3: "Hourly" Program Housing Sizes

Type I	48.8 m^2 lot	40 m^2	construction
Type II	58.8 m^2 lot	40 m^2	construction
Type III	78 m^2 lot	52 m^2	construction
Type IV	120 m^2 lot	54 m^2	construction
Type V	120 m^2 lot	60 m^2	construction

Source: Delphi Personnel Department Slide Show Presentation, but lot sizes were adapted to the specifications provided by the construction company, Grupo Condak in a January 30, 2002 phone interview with the sales department.

Appendix 4: Delphi and General Motors – Major Union Confrontations

1984 Canadian autoworkers (CAW) form their own union after years of being represented by the United Auto Workers (UAW). "Since then, car companies have tried to use the split to their advantage by threatening to move work to Canada, which has lower labor costs that the US." (WSJ, 3/25/1996)

1994 Feb – GM workers threaten strike in Flint, Michigan for 7 factory complex (*WSJ*, 02/09/1994)

August – GM strike in Anderson, IN shuts down 8 assembly plants. (*Journal of Commerce, 08/26/1994)*

1996 March - 10 day strike by 3000 GM workers at 2 Delphi plants in Dayton, OH. Strikes forced lay-offs of 90,000 autoworkers in US and shut down half of its 29 assembly plants. (*Journal of Commerce*, 03/15/1996)
The strike at 2 of Delphi's brake parts plants forced the shutdown of "virtually all of GM's North American operations" and cost $900 million. (*WSJ*, 06/03/1996)

April – GM obtains a Federal court order to end a UAW wildcat strike of 1800 workers in Lordstown, OH at a GM assembly plant. This strike was prompted by GM's dismissal of a local union leader for committing fraud. (*NYT*, 04/17/1996)

October – 28,500 Canadian autoworkers threaten strikes. Canada's parts plant supply US assembly plants. (*Journal of Commerce*, 10/02/1996) 15,000 GM workers walked out in Oshawa, Ontario, and another 11,000 employees at 4 other plants threaten to strikes. (*Washington Post*, 10/04/1996)

November – 2750 UAW members strike at GM's Indianapolis metal stamping plant. 4800 workers strike at GM's truck assembly plant in Janesville, WI. Strikes in IN and WI caused 19,000 GM workers to be idle at 7 GM assembly plants. (*Washington Post,* 11/03/1996) Three-week CAW strike in October cause an additional 18,958 US workers to remain idle due to shortages. (*Washington Post,* 11/03/1996)

1997 May – 7 week UAW strike in GM's Oklahoma City plant. The cost of re-launching the plant after strike would cost millions. (*NYT*, 05/23/97)

1998 June - 54-day strike. 10,000 United Auto Workers strike and an additional 25,000 remain idle. (*WSJ*, 06/12/1998) Leads to a loss of $ 214 million in the quarter and cost the company $2 billion. (Soden, 1999)

- In US, Canada and Mexico, strike at the 2 plants in Flint, MI leaves 80,000 workers idle at a cost of between $50 million - $75 million per day. (*WSJ*, 06/18/1998)

Source: Selection compiled by author from headlines of various news sources. This is not an exhaustive list of GM or Delphi union confrontations.

Appendix 5: Timeline of Investments in the Mexican Housing Industry

1989 –Auritec (Mexican financial firm) formed by Alejandro Schwedhelm. Auritec is the oldest servicing company in Mexico and the first servicer to prepare loan portfolios for sale by FOBAPROA/VVA, Mexico's agency responsible for disposing of troubled bank portfolios.

1994- Devaluation of the Mexican peso spurs a financial crisis and private banks stop mortgage lending. The SOFOL is formed as a non-depository mortgage vehicle

1994 – Hipotecaria Su Casita, a Mexican SOFOL is founded by Manuae Cameos

1995 – Pulte Mortgage becomes a shareholder in Hipotecaria Su Casita with a 23% stake

1995 – (November) GMAC financing opens offices in Mexico, with attention focused on automobile leasing

1995 – (November) According to a Nov. 1, 1995 report on Mexico's financial system, General Motor, Ford Motor, and Chrysler Corporation had all independently solicited approval to form SOFOLES, non depository mortgage institutions created in the wake of the Mexican financial crisis.

1996- Grupo Condak is in a financially precarious situation following the 1994 financial crisis. It seeks outside capital to keep the business alive, and partners with Pulte Corporation. At the time, Pulte was the largest homebuilder in the US.

1996 – (June) General Motors and INFONAVIT housing agreement signed

1996 – (September) GMAC-RFC, subsidiary of General Motors, announces at the 3rd annual international real estate finance seminar that it is looking into working in Mexico

1997- First Delphi-GM houses are handed over to employees

1997- Financiamento Azteca receives approval for administering FOVI loans in July. Su Casita eventually acquires Azteca.

1997- Hipotecaria Su Casita qualifies to administer FOVI loans (October).

1998 – (March 12) GMAC-RFC purchases Mexican mortgage finance firm Auritec

1998 – (August) The World Bank and FOVI closed a deal for a 3-year loan worth $500 million, which will be used to cover the costs of developing a secondary market in mortgage-back securities.

2000 – 15 SOFOLES in Mexico originate more than 95% of private sector mortgages. By 2000, Hipotecaria Su Casita has 56 offices in Mexico

2000 – (April) GMAC Mexicana

2000 – (June) Su Casita issues its first mortgage-backed securities offering of $18 million. This was Mexico's first transaction in mortgage-back securitizations.

2000 – (September) Hipotecaria Su Casita and GMAC sign a line of credit agreement

2000 – (October) GMAC-RFC's affiliate, GMAC Trade Finance, Inc., provides revolving lines of credit to qualified Mexican businesses in order to provide financing for purchases of U.S. exports. GMAC-RFC executed an insurance agreement with the Export-Import Bank of the United States (the Export-Import Bank) that will serve as the cornerstone for the innovative trade finance program.

2000 – (December) – Operadora Auritec, subsidiary of General Motors (GMAC-RFC) qualifies for administration of FOVI loans

2000 – (December) Su Casita acquires Financiamento Azteca and becomes the largest loan originator in Mexico with this strategic purchase.

2000 – In a July 2001 Su Casita Bond offering, Su Casita indicated that it had a $50 million pesos line of credit from Financiera Auritec, a GMAC subsidiary in Mexico

2001 – (March) GMAC-RFC opens revolving credit lines for Mexican companies. Financed with assistance US Export-Import Bank

2001 – Jose Landa, General Director of GMAC Hipotecaria, announces the company will team up with Mexican SOFOLES to launch a 2-yr, $280 million home lending program. (Get real date – found in Business Week online, April 30, 2001)

2001- (Sept. 25) IFC, a branch of the World Bank Group, announces it has acquired a minority stake in Hipotecaria Su Casita work $10.5 million. This move is intended to help development of the financial sector and assists Mexican families in house buying

2002- Mexican housing Market dominated by Consorcio Hogar, Consorcio Ara, and Grupo Geo. The Mexico City daily, "El Economista" reports that Pulte Homes is looking to conquer the Mexican market though strategic acquisition. And expects to build 9,700 homes in 2002, a 30% increase from the previous year. (Economista, 01/22/2002)