

## Manufacturing Employment In North America: Where the Jobs Have Gone

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### Introduction

The Bush administration has been trying to sell the North American Free Trade Agreement (**NAFTA**) as a policy that will create jobs in the United States. The administration has continuously denied that the **NAFTA** will induce more American firms to relocate jobs — especially manufacturing jobs — to Mexico, where manufacturing wages average only about one-seventh of U.S. wages at present exchange rates, and are even lower in many occupations. Administration officials have maintained this position in spite of the fact that the Mexican government is advertising the agreement to its people as a way of drawing in large amounts of U.S. direct foreign investment that will create new industrial jobs — in Mexico.

Throughout the debate over the **NAFTA**, there have been many studies which have forecast job gains or losses. Generally, these studies are based on economic models which are only as valid as the assumptions, both theoretical and empirical, that are built into them. In all of these studies, however, remarkably little attention has been paid to the actual employment trends in the U.S. and Mexico in the last several years. While these trends must be analyzed cautiously, in view of the large macroeconomic fluctuations in both economies, they nevertheless reveal a picture which is quite at odds with the Bush administration's public claims.

Both supporters and opponents of the **NAFTA** have agreed on one thing: the draft **NAFTA** agreement will largely ratify and extend a process of economic integration between the U.S. and Mexico that has already begun. In the last five

years, Mexico has abandoned decades of efforts to protect its national industries from foreign competition in trade, as well as to restrict foreign investment and foreign ownership of productive assets in Mexico.’ The recent liberalization of Mexico’s trade and investment regulations has led to an enormous boom in both U.S. investment in **Mexico**,<sup>4</sup> and in two-way trade between the two nations. The **NAFTA** agreement will lock in these “market-oriented reforms” in Mexico, and deepen them in several respects — especially by **giving** strong guarantees to foreign companies investing in Mexico that their property rights and profits will be protected by future Mexican governments.

In seeking to understand the likely effects of the NAFTA on employment trends in the future, **then, it is extremely** informative to examine what those trends have been in the recent past while Mexico was already opening up its markets and welcoming foreign investment. In this paper, we focus on the behavior of U.S. multinational corporations (**MNCs**) in creating manufacturing jobs at their affiliates in Mexico (and, for purposes of comparison, Canada), compared with the changes in manufacturing jobs in U.S. domestic manufactures. Our main findings are that:

- From 1986 to 1989 — **before the** recession in the U.S. economy — manufacturing jobs in affiliates of U.S. multinationals in Mexico increased by nearly 20 percent, while domestic manufacturing jobs increased by only 3 percent.
- Between 1986 and 1990, a period which includes the beginning of the **U.S.** recession, manufacturing jobs in affiliates of U.S. multinationals in Mexico increased by almost 25 percent, while domestic manufacturing jobs increased by less than 1 percent.
- Although the total number of manufacturing jobs at U.S. multinational affiliates in Mexico (462,500 in 1990) may seem small relative to the total for U.S. domestic manufacturing (about 13 million in 1990). the **annual** changes in those jobs in Mexico have been much larger compared with domestic job creation. For example, in 1989, the year **before the** U.S. recession began, U.S. multinationals added 46,100 manufacturing jobs in Mexico compared with 48,000 new manufacturing jobs in the U.S. And over the whole period 1986 to 1990, U.S. multinationals added 92,300 manufacturing jobs in Mexico compared with 97,000 new domestic manufacturing jobs.

- Contrary to what the Bush administration would have us believe, the jobs which have been moving to Mexico are **not** low-wage jobs. About three-quarters of the **manufacturing** jobs which have moved in recent years have been in the electronics and motor vehicle industries, in which wages are either close to average or well above average.

## **U.S. Multinationals and Job Creation in North America**

Table 1 compares manufacturing employment by U.S. multinational **affiliates** in Canada and **Mexico** with domestic U.S. manufacturing employment. We make this comparison in order to focus **specifically** on the activities of U.S. multinational firms abroad for which data is available from U.S. government sources. We compare U.S. multinational affiliates' employment in Canada and Mexico with total employment in the U.S. in order to capture all the sources of job creation and job loss at home, including national **firms** (those with no foreign affiliates) and foreign firms (with **affiliates** in the U.S.) as well as the "parents" of U.S. multinationals. Of course, this makes the absolute level of the multinational affiliates' employment look small in relation to the total for all U.S. manufacturing. But it is the trends or changes in these levels over the last few years which are of the greatest interest.

Although all the absolute figures for Mexico in Table 1 may look relatively small, in fact the **annual** changes in U.S. MNC employment in Mexico are large enough to have a substantial impact on the U.S. labor market. The number of workers at MNC **affiliates** in Mexico rose from 370,200 in 1986 to 462,500 by 1990, an increase of 92,300 or 24.9 percent. The number of U.S. domestic manufacturing production workers was much larger to start with, about 12.9 million in 1986. This number increased by 392,000 (3 percent) from 1986 to 1989, and then fell by 295,000 from 1989 to 1990, resulting in a total increase of 97,000 (0.8 percent) from 1986 to 1990. Thus, at the margin, the number of jobs created by U.S. multinational affiliates in Mexico is comparable in magnitude to the number of jobs created in the U.S. domestic manufacturing sector in recent years. The claims that Mexico is too small to have an appreciable effect on the U.S. manufacturing workforce are therefore not credible.

**Table 1**

**Employment of Manufacturing Production Workers in North America,  
at U.S. Multinational Affiliates In Mexico and Canada,  
and Domestic Manufacturing Production Workers in the U.S., 1986-1990**

	Numbers of Workers (in thousands)			Annual Change In Number of Workers (in thousands)		
	U.S. MNC Affiliates		Total Domestic U.S.	U.S. MNC Affiliates		Total Domestic U.S.
	In Canada	In Mexico		In Canada	In Mexico	
1986	472.7	370.2	12,877.0	...	...	...
1987	469.7	377.0	12,970.0	-3.0	4.8	93.0
1988	483.0	397.4	13221.0	13.3	20.4	251.0
1989	475.6	443.5	13269.0	-7.4	46.1	48.0
1990	452.0	452.5	12,974.0	-21.1	18.5	-295.0
	Percent Change			Total Change		
1986-1989	0.6%	19.8%	3.0%	2.9	73.3	392.0
1986-1990	-4.4	24.9	0.8	-20.7	92.3	97.0

\* There is a break in employment data from 1988 to 1989 caused by the Benchmark Survey taken in 1989 that was more inclusive than for the annual data used in 1988. In the aggregate, the benchmark caused a net decline of 46.3 thousand workers in all U.S. affiliates—worldwide, and regardless of industrial sector. This is because there were more losses from affiliates leaving the survey, than gains from affiliates being added to the survey. However, there was a net gain in employment among affiliates through an increase in affiliates and an increase in employment in affiliates that operated in both 1988 and 1989. The effect of the benchmark is only for the year to year comparison from 1988 to 1989, and data before 1989 with 1989 and later. The net change in worldwide U.S. affiliate employment represents 17.5 percent of the gross change in worldwide affiliate employment. The effect for individual countries may vary. A revision of the data is forthcoming possibly in 1993.

Source: U.S. Dept. of Commerce, *Survey of Current Business*, Vol. 72 (August 1992): Table 13.1 and Table 13.2, pages 77-78; Vol. 71 (October 1991): Table 20.1 and Table 20.2 pages 52-53; Vol. 70 (June 1990): Table 6, page 37; Vol. 69 (June 1989): Table 7, page 33 for employment by U.S. multinationals in Canada and Mexico; and, U.S. Dept. of Labor, Bureau of Labor Statistics, *Hours, and Earnings, United States, 1909-90, Volume 1, Bulletin 2370* (March 1991), page 61, *Supplement to Employment, Hours, and Earnings, United States, 1909-90* (July 1991), page 11. Numbers for U.S. affiliates' employment in Canada and Mexico are for all manufacturing workers. Employment in the U.S. is for production workers only. Employment in the U.S. includes all U.S. firms—including U.S. multinationals, domestic U.S. and foreign direct investors in the U.S. And authors' calculations.

Of course, it is necessary to view these shifts in North American manufacturing employment in the light of the upswings and downswings of the business cycle. From 1986 to 1989, these shifts took place during economic expansions in all three countries, and thus went unnoticed in the aggregate statistics for the three labor markets. In the United States, the unemployment rate fell from 6.9 percent in 1986 to 5.2 percent in 1989. The unemployment rate in Canada fell from 9.5 to 7.5 percent during the same period. However, in 1990

the U.S. and Canadian labor markets began to deteriorate. The U.S. unemployment rate increased to 5.4 percent and the Canadian to 8.1 **percent**.<sup>5</sup>

Since the U.S. and Canada both went into recessions at that time, the shifts in manufacturing employment for 1990 should be interpreted carefully.

Nevertheless, it is interesting to note that U.S. affiliates\* manufacturing jobs in Mexico continued to increase in 1990 while domestic manufacturing jobs in the U.S. fell by nearly 300 thousand. This pattern raises some questions about what will happen when the recession ends, if the NAFTA is about to go into effect at that time. When the U.S. economy recovers, and manufacturing firms decide to increase output to **satisfy** renewed domestic demand, will they do so increasingly by utilizing plants located in Mexico? To the extent that this happens, many of the lost **manufacturing** jobs will not be regained in the U.S., but will move permanently to Mexico. Moreover, these data raise some questions about the persistence of the U.S. recession itself. Is it only domestic macroeconomic factors which are inhibiting a recovery, or are American firms increasingly taking the opportunity to move some jobs south of the border — **permanently**? (Canadians have been asking the same question about jobs moving to the U.S. as a result of the U.S.-Canada Free Trade Agreement and their recession: note the large declines in U.S. **affiliates'** manufacturing jobs in Canada in 1989 and 1990 shown in Table 1.)

It is important to note that the type of comparison made in Table 1 actually understates the extent to which changes in the North American labor market show shifts away from employment in the U.S. and Canada. This is because only the actions of U.S. multinational affiliates are considered when looking at Canada and Mexico, while all firms are included in the U.S. domestic figures. Thus, for example, these data do not reflect jobs created by Japanese or European firms in Mexican manufacturing. The data may also undercount U.S. multinationals' true employment in Mexico. Some U.S. corporations have used "shell" operations to limit the risk of outright ownership of a Mexican plant. These shell operations still result in increased employment in Mexico (**Sinkin** 1990).

## **Perspectives from Two Key Industries**

Supporters of the **NAFTA often** argue that changes in total jobs are unimportant, and only the **sectoral** reallocation of employment matters. They admit that the NAFTA will cause some low-wage jobs to leave the U.S., but claim that this will only free up American workers to enter more highly paid jobs in other sectors. In fact, about three-quarters of the manufacturing jobs created in Mexico by U.S. firms in the last several years have been in just two sectors: transportation equipment (especially automobiles and parts), and electronics. Motor vehicles is a highly capital-intensive industry with above-average wages, while electronics is a “high-tech” industry with close-to-average **wages**.<sup>6</sup> These two industries would probably be considered important ones for the U.S. to keep if it is to move in a high-wage direction. In fact, the record shows that the U.S. has been steadily losing jobs in these sectors over the last few years, while U.S. affiliates have been increasing jobs in these two sectors very rapidly in Mexico.

Table 2 shows employment by U.S. multinationals in electrical and electronic products and in transportation equipment in Mexico from 1986 to **1991**, along with total domestic employment in the analogous industries. Motor vehicle and equipment production workers are shown separately for the U.S. because most of the transportation equipment jobs in Mexico are in that industry, whereas the transportation equipment category for the U.S. also comprises the aircraft, ship building, railroad, and aerospace industries. Therefore, the transportation equipment category in the U.S. covers employment trends which are not directly comparable to those in Mexico.

While total U.S. manufacturing production jobs were increasing between 1986 and 1989, as shown in Table 1 (above), U.S. domestic employment in transportation equipment and electrical and electronic products lagged behind. U.S. employment in the electronics industry declined by 80,300 workers (6.8 percent) from 1986 to 1989, which was before the U.S. recession. In the meantime, Mexican employment in U.S. firms in that industry increased by 33,400 (43.3 percent) during that period. In motor vehicles, U.S. domestic employment declined by 5,800 workers (0.9 percent), while overall employment in

**Table 2**

**U.S. Multinational Affiliates' Employment and U.S. Domestic  
Manufacturing Production Workers in Selected Industries in Mexico and the U.S.**  
(thousands Of workers) 1986-1990

	Mexican Employment In Nonbank U.S. Affiliates In Selected Industries		U.S. Domestic Employment of Production workers In Selected Industries		
	Electric & Electronic	Transportation Equipment	Electric & Electronic	Transportation Equipment	Motor Vehicles & Equipment
1986	77.2	71.8	1,184.2*	1,258.6	670.7
1987	83.2	73.3	1,175.2*	1,279.0	673.7
1988	98.6	84.1	1,113.7	1,274.2	668.3
1989	110.6	92.5	1,103.9	1,279.3	664.9
1990	116.5	102.6	1,055.4	1,218.3	615.2
	Absolute Change		Absolute Change		
1986-1989	33.4	20.7	-80.3	20.7	-5.8
1986-1990	39.3	30.8	-128.8	-40.3	-55.5
	Percent Change		Percent change		
1986-1989	43.3%	28.8%	-6.8%	1.6%	-0.9%
1986-1990	50.9	42.9	-10.9	-3.2	-8.3

. For 1986 and 1987 these are the sum of production workers in the 1989 two digit code 36, i.e., SC 361-369.

Source: U.S. Dept. of Commerce, *Survey of Current Business*, Vol. 72 (August 1992): Table 13.1 and Table 13.2, pages 77-78; Vol. 71 (October 1991): Table 20.1 and Table 20.2, page 6 52-53; Vol. 70 (June 1990): Table 6, page 37; Vol. 69 (June 1989): Table 7, page 33 for employment by U.S. multinationals in Mexico; and, U.S. Dept. of Labor, Bureau of Labor Statistics, *Hours, and Earnings, United States, 1909-90, Volume 1, Bulletin 2370* (March 1991) page 6 61, 290, 329 and 332, *Supplement to Employment, Hours, and Earnings, United States, 1909-90* (July 1991), pages 11, 49, and 58. And, authors' calculations.

transportation equipment (including aircraft, etc.) increased by 20,700 (barely 1.6 percent) -just over half the rate for all manufacturing (3.0 percent). Mexican employment in U.S. firms in the transportation equipment industry increased by 20,700 (28.8 percent) during the 1986-1989 period.

If we move to 1990, U.S. employment in all the sectors shown in Table 2 fell during the recession. But employment by U.S. MNCs in Mexico in these same industries continued to rise in 1990. Over the entire period 1986 to 1990, these two sectors were responsible for 70,100 new jobs at U.S. multinational affiliates in Mexico, or 75.9 percent of the 92,300 total new manufacturing jobs in those affiliates over that period. Meanwhile, domestic employment in those two sectors fell by a total of 184,300 jobs over the same period — even though total

manufacturing jobs were **still** up slightly in 1990 over 1986 (see Table 1, above). Thus, in the very type of industries which the U.S. should be seeking to preserve, the jobs created in Mexico were quite large relative to the jobs lost in the **U.S.**

These trends raise the question of why U.S. firms are shifting employment in these particular industries so rapidly in recent years. Supporters of the **NAFTA** often argue that the incentives for such job shifts are minimal, because the low wages of Mexican workers are offset by their lower productivity. But while Mexican labor has low productivity on average, it can be highly productive in sectors where foreign capital has brought in up-to-date technology and management. In sectors such as domestic corn production, Mexican productivity is of course very low. But in sectors such as electronics and automobiles, Mexican productivity has been converging on U.S. productivity rates in recent years. Although Mexican productivity has come closer and closer to American productivity levels in these industries, Mexican wages have remained far lower. Thus, Mexico has acquired an enormous competitive advantage in unit labor costs (wages relative to productivity).

The productivity and wages (hourly compensation) of Mexican workers relative to U.S. workers in the electronics and transportation equipment industries are shown in Table 3. The period covered is 1975 to 1984, which is the latest period for which data on **sectoral** productivity are available. Much of the convergence in productivity between the U.S. and Mexico is related to the share of the Mexican sector that is made up of U.S. firms. Thus, with the increase in U.S. investment in Mexico in these sectors since 1984, it is very likely that there has been even further convergence in productivity levels.

Productivity is measured in Table 3 as value added per employee in each industry. The worker compensation cost (wages plus mandated and negotiated benefits and taxes) differential in the two industries is also shown in the table. During the period shown, the relative cost of employing Mexican to U.S. workers was declining. In electronics, Mexican workers' wages fell from 24 to 15 percent of U.S. wages in that industry. In transportation equipment, Mexican workers went from 31 percent of U.S. wages down to **13** percent. Yet, in transportation



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**Table 3**

Mexican labor **Productivity** and Hourly **Labor Compensation**,  
as Ratios of the U.S. **Levels**, 1975-1984

		1975	1979	1982	1984
Electronic Equipment	Productivity	0.63	0.74	0.66	0.83
	Compensation	0.24	0.24	0.20	0.15
Transportation Equipment	Productivity	0.53	0.61	0.59	0.57
	Compensation	0.31	0.28	0.20	0.13

Sources: Magnus Blomstrom and Edward N. Wolff, ● *Productivity Convergence in Mexico*. National Bureau of Economic Research Working Paper No. 3141 (Cambridge, MA: October 1989); Table 8, page 25; U.S. Dept. of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, *Hourly Compensation Costs for Production Workers, 40 Manufacturing Industries, 34 Countries, 1975 and 1979-89*, Unpublished Data (September 1990): pages 86 and 95. Transportation compensation is for motor vehicle equipment. And, authors' calculations.

Note: Productivity is measured by value added per employee.

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equipment, Mexican workers were between 53 and 61 percent as productive as U.S. workers. In the **electronics** industry, the difference is even more stark. In electronics, Mexican workers were from 63 to 83 percent as productive as U.S. workers. Thus, the unit labor costs of production in Mexico are much lower than in the United States. It would not be surprising, therefore, to see U.S. companies seeking to increase employment in Mexico relative to the U.S. And again, these are not low-wage industries by U.S. standards. These are “high-tech” (electronics) and capital intensive (transportation equipment) industries.

### **Why the Current Debate Misses the Actual Trends**

**Although** the NAFTA is, on the surface, a trade liberalization agreement, in fact it is just as concerned (if not more concerned) with **investment liberalization**. The draft NAFTA agreement contains stringent and unprecedented guarantees for foreign investment in each country, intended mainly to secure U.S. multinational **firms** from nationalizations or even more moderate restrictions on the mobility of their capital invested in Mexico. Coupled with provisions to liberalize trade in financial services, it is clear that the goal of the NAFTA is to create an **integrated capital market** along **with** an integrated goods market. The NAFTA will therefore

create a new environment **in** which firms operating in North America will be free to locate production wherever labor costs and other conditions are most favorable, with virtually no restrictions, in most manufacturing industries.

In the late 1980s and early **1990s**, when Mexico was already adopting trade and investment policies that strongly foreshadowed the **NAFTA**, U.S. multinationals increased their manufacturing employment quite rapidly in Mexico while domestic manufacturing job creation was virtually flat. And in certain key sectors, notably motor vehicles and electronics, which account for most of the job creation in Mexico, U.S. employment has fallen dramatically in recent years. Of course, one has to take the recent fluctuations in the two countries' business cycles into account in evaluating these trends. The Mexican economy was in a recovery during those years, while the U.S. economy was in a late expansion phase from 1986 to 1989 and then entered a recession in 1990. Nevertheless, differences in job creation of this magnitude, especially when highly concentrated in certain specific industries, suggest that more than ordinary fluctuations of the business cycle were at work.

It could be argued that some of the manufacturing jobs created by U.S. firms in Mexico in recent years have been in response to the growth of Mexico's domestic market. But the fact that three-quarters of these new jobs are in two industries with falling employment in the U.S. suggests that most of this new employment created in Mexico by U.S. **firms** represented a shift away from the U.S. as a production location. It is also true that the level of employment by U.S. **MNCs** in Mexican manufacturing is still small, relative to total U.S. domestic manufacturing employment. But the data examined in this Briefing Paper show a strong shift in manufacturing employment toward Mexico at the margin. Even though Mexico's total labor force is much smaller than **the** U.S. labor force, it is still capable of absorbing relatively large numbers of manufacturing jobs compared with U.S. manufacturing jobs.

Most importantly, the shift of jobs at the margin can have a big influence on the wages and working conditions which American workers have to accept. This is especially important because of the current weakness in the U.S. labor market,

as well as the inadequacy of our policies for adjustment assistance and labor retraining. Unemployment is stuck at well over 7 percent, while real wages for most American workers have been falling for the past few years. From 1987 to 1990, real wages fell for all groups of male workers with less than two years of post-collegiate education, representing over 90 percent of American men. Real wages fell by 7.0 percent for those men who did not **finish** high school, by 5.8 percent for those who graduated from high school, and by 2.3 percent for those who finished four years of college (**Mishel** and Bernstein 1992). And the real wage increase for American men with two years of post-graduate education or more was only 1.7 percent.

In the context of this overall labor market weakness, any further shifts of well-paying manufacturing jobs away from the U.S. can only help to worsen the current adverse trends in real wages. Moreover, our ability to handle the adjustment costs of further job shifts is hindered by the inadequate funding and coverage of our existing labor adjustment programs. Our expenditures on labor market programs (including training, income maintenance, and others) for workers who are displaced or at risk of being displaced are much lower, as percentages of gross domestic product (GDP), than those of most other industrialized nations such as Germany or **Canada**.<sup>7</sup>

To be sure, **Mexico** is an important neighbor, and it is **in** the United States' interest to see Mexico develop and prosper. Mexico needs to provide more jobs for its rapidly growing working-age population. The problem for Americans, however, is how to make sure that enough well-paying jobs are retained in the U.S. to permit our working people to continue to enjoy a decent standard of living. In terms of North American economic integration, the challenge is to design it so that it provides increased employment and incomes on both sides of the Rio Grande, instead of making American and **Mexican** workers compete against each other for the same jobs by offering to accept lower wages and working conditions.

This Briefing Paper has shown that there is no support in the current pattern of job creation in the U.S. for the belief that more of the same **types** of policies will lead to increased manufacturing jobs and real wages in the United

States. Instead, the current pattern of slow creation of manufacturing production jobs in the U.S. and a faster creation of those jobs outside the U.S. exacerbates a longer downward trend in the U.S. labor market. The labor market policies of the U.S. have been inadequate to reverse that trend, and are certainly inadequate to cope with even greater shifts in the labor market. This weak labor market is what gives Americans great pause when considering the **NAFTA**. The **NAFTA** agreement, as presently negotiated, will only create greater incentives for the kinds of employment shifts we have already witnessed in the past few years during Mexico's unilateral liberalization of its trade and investment regulations. Unless corrective policy measures are adopted, the **NAFTA** as presently conceived is therefore likely to worsen rather than to reverse the deterioration in the U.S. labor market, at least **in** regard to manufacturing.

October 5, 1992

## Appendix

In order to realize the potential for more foreign investment in Mexico, it is important to recognize how such investment was restricted by Mexican laws until just a few years ago. Table 4 shows the limits placed on foreign direct ownership of productive resources in Mexico under its 1973 Foreign Investment Law. These limits were included in the work done by the United States International Trade Commission in preparation for the debate on **NAFTA**. Note that foreign capital was excluded entirely from several important types of activities, and restricted to minority ownership in most other activities. Mexico also had other restrictions which inhibited foreign investment that are not shown in Table 4, such as capital controls (limitations on the right to take money out of the country).

Beginning in 1984, the Mexican National Foreign Investment Commission issued new guidelines to encourage foreign direct investment, but made it clear that this was a change **in** Mexican policy and not a new law. In particular, the new policy was aimed at increasing investment aimed at import substitution and that would aid Mexico's **scientific** and technological development. Several new guidelines issued in 1986 and 1988 sought to convey a new policy attitude. Finally in May 1989, Mexico streamlined the guidelines and instituted new policies to expedite foreign investment. A key provision was the automatic approval of 100 percent of foreign investment in those areas of the Mexican economy that are not "classified." In the manufacturing industry the only classified areas are: firearms, fireworks and explosives: secondary petrochemical products: and, motor vehicle parts and assembly.

Thus the notion that U.S. companies have always been free to invest in Mexico is clearly not the case. The encouragement of U.S. direct foreign investment is a reversal of long-standing Mexican policy dating to the end of the **Porfirio Díaz** Administration in 1910. And, the new policy was intensified with Mexico's entrance into the General Agreement on Trade and Tariffs (**GATT**) in 1986. In addition to the foreign investment policy change, Mexico's new policy is evident in the 1987 U.S.-Mexican Framework Understanding and the 1989

U.S.-Mexican Understanding Regarding Trade and Investment Facilitation Talks.

**Table 4**

**Limits on Foreign Investment in Mexico's 1973 Foreign Investment Law**

Activities Reserved Exclusively to the Mexican State	
•	Extraction of petroleum and natural gas
•	Production of basic petrochemicals
•	Exploitation of radioactive minerals and generation of nuclear energy
•	Certain mining activities
•	Generation of electricity
•	Railroads
•	Telegraphic and radio communications
•	All other activities that may be determined by specific laws.
Activities Reserved Exclusively to Mexicans	
•	Radio and television
•	Urban and interurban automotive transportation and federal highways transport
•	Domestic air and maritime transportation
•	Exploitation of forestry resources
•	Gas distribution
•	All other activities established by specific laws or regulations.
Activities With Specific Restrictions on Foreign Ownership	
•	49 Percent
◦	Mining under ordinary concessions
•	40 Percent
◦	Production of secondary petrochemicals
◦	Manufacture of automotive parts
•	34 Percent
◦	Mining under special concessions for the exploitation of national mining reserves for such minerals as coal, iron ore, phosphoric rock, and sulfur
•	Any other activities for which percentages are indicated in specific laws.
All Remaining Activities	
•	Foreign investment subject to 49 percent limitation.

Source: United States International Trade Commission, *Review of Trade and Investment Liberalization Measures by Mexico and Prospects for Future United States-Mexican Relations*, Investigation No. 332-282: Phase I: Recent Trade and Investment Reforms Undertaken by Mexico and Implications for the United States, USITC Publication 2275 (Washington, DC: USITC, April 1990): Page 5-4.

## ENDNOTES

1. According to the U.S. Department of Labor, Bureau of Labor Statistics, *International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing, 1991*, Report 825, June 1992, Mexican real hourly compensation for production workers in manufacturing was 14 percent of the U.S. level in 1991. However, the Mexican peso is widely considered to have been overvalued in real terms for the last few years, as the nominal exchange rate (in pesos per dollar) has not risen as rapidly as the Mexican-U.S. inflation differential. At a more realistic exchange rate, the Mexican wage would be only about one-tenth of the U.S.
2. For studies which mainly predict job gains see Hufbauer and Schott (1992) and USITC (1992). For a study which predicts job losses see Koechlin et al. (1992). Faux and Spriggs (1991). Faux and Lee (1992), and Stanford (1993 forthcoming) have offered critical evaluations of the models on which the more optimistic predictions are based.
3. See the **Appendix** for a brief description of Mexico's past restrictions on foreign investment.
4. U.S. direct foreign investment in Mexico (measured as the sum of capital outflows plus reinvested earnings) in the manufacturing sector rose from \$0.8 billion in 1987 to \$2.5 billion in 1991, an increase of 222 percent. While this is still a small amount compared to U.S. domestic investment, even in the manufacturing sector, the rate of increase is still quite notable. These data are from the U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various August issues.
5. Organisation for Economic Co-operation and Development (OECD), *Economic Outlook*, July 1991, page 8, Table 1.4. OECD data are used to standardize the comparisons of unemployment rates.
6. In 1990 the average hourly wage for U.S. production and nonsupervisory workers was \$10.30 in electrical and electronic equipment and \$14.59 in motor vehicles. These may be compared with averages of \$10.02 for the entire private sector, and \$10.83 for all U.S. manufacturing.
7. This can be verified from the data on public expenditures on labor market programs in Organisation for Economic Co-operation and Development (OECD), *Employment Outlook*, July 1991, pages 239, 241, and 249.

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