



Cornell University
ILR School

Cornell University ILR School
DigitalCommons@ILR

Federal Publications

Key Workplace Documents

11-4-2008

NAFTA and the Mexican Economy

M. Angeles Villarreal

Congressional Research Service, Foreign Affairs, Defense, and Trade Division

Marisabel Cid

Congressional Research Service, Foreign Affairs, Defense, and Trade Division

Follow this and additional works at: http://digitalcommons.ilr.cornell.edu/key_workplace

Thank you for downloading an article from DigitalCommons@ILR.

Support this valuable resource today!

This Key Document is brought to you for free and open access by the Key Workplace Documents at DigitalCommons@ILR. It has been accepted for inclusion in Federal Publications by an authorized administrator of DigitalCommons@ILR. For more information, please contact hlmdigital@cornell.edu.

NAFTA and the Mexican Economy

Abstract

The North American Free Trade Agreement (NAFTA), in effect since January 1994, plays a very strong role in the bilateral economic relationship between Mexico and the United States. The two countries are also closely tied in areas not directly related to trade and investment such as security, environmental, migration, and health issues. The effects of NAFTA on Mexico and the state of the Mexican economy have important impacts on U.S. economic and political interests. As NAFTA approaches its 15th anniversary, a number of policymakers have raised the issue of revisiting NAFTA and renegotiating parts of the agreement. Some important factors in evaluating NAFTA include the effects of the agreement on Mexico and how these relate to U.S.-Mexico economic relations. In the 110th Congress, major issues of concern have been related mostly to economic conditions in Mexico, the effect of NAFTA on the United States and Mexico, and Mexican migrant workers in the United States.

In 1990, then Mexican President Carlos Salinas de Gortari approached the United States with the idea of forming a free trade agreement (FTA). Mexico's main motivation in pursuing an FTA with the United States was to stabilize the Mexican economy by attracting foreign direct investment. The Mexican economy had experienced many difficulties throughout most of the 1980s with a significant deepening of poverty. The intention of Mexico in entering NAFTA was to increase export diversification by attracting foreign direct investment (FDI), which would help create jobs, increase wage rates, and reduce poverty.

At the time that NAFTA went into effect, the expectation among supporters was that the agreement would improve investor confidence in Mexico, attract investment, and narrow the income differentials between Mexico and the United States and Canada. Measuring the effects of NAFTA on the Mexican economy is difficult because the economy was also affected by other factors, such as economic cycles in the United States (Mexico's largest trading partner) and currency fluctuations. In addition, Mexico's unilateral trade liberalization measures of the 1980s and the currency crisis of 1995 both affected economic growth, per capita gross domestic product (GDP), and real wages.

While NAFTA may have brought economic and social benefits to the Mexican economy as a whole, the benefits have not been evenly distributed throughout the country. Wages and employment tend to be higher in states experiencing higher levels of FDI and trade. The agricultural sector experienced a higher amount of worker displacement after NAFTA because of increased competition from the United States and because of Mexican domestic agricultural reforms. In terms of regional effects, initial conditions in Mexico determined which Mexican states experienced stronger economic growth as a result of NAFTA. States with higher levels of telecommunications and transportation infrastructure gained more benefits than poorer states with lower levels of education, infrastructure, and institutional capacity. Some economists argue that while trade liberalization may narrow income disparities over the long run with other countries, it may indirectly lead to larger disparities in income levels within a country. This report will be updated as events warrant.

Keywords

North American Free Trade Agreement, NAFTA, Mexico, economy

Comments

Suggested Citation

Villarreal, M. A., & Cid, M. (2008). *NAFTA and the Mexican economy* (RL34733) [Electronic version].

Washington, DC: Congressional Research Service. http://digitalcommons.ilr.cornell.edu/key_workplace/565/

CRS Report for Congress

NAFTA and the Mexican Economy

November 4, 2008

M. Angeles Villarreal
Specialist in International Trade and Finance
Foreign Affairs, Defense, and Trade Division

Marisabel Cid
Research Associate
Foreign Affairs, Defense, and Trade Division



Prepared for Members and
Committees of Congress

NAFTA and the Mexican Economy

Summary

The North American Free Trade Agreement (NAFTA), in effect since January 1994, plays a very strong role in the bilateral economic relationship between Mexico and the United States. The two countries are also closely tied in areas not directly related to trade and investment such as security, environmental, migration, and health issues. The effects of NAFTA on Mexico and the state of the Mexican economy have important impacts on U.S. economic and political interests. As NAFTA approaches its 15th anniversary, a number of policymakers have raised the issue of revisiting NAFTA and renegotiating parts of the agreement. Some important factors in evaluating NAFTA include the effects of the agreement on Mexico and how these relate to U.S.-Mexico economic relations. In the 110th Congress, major issues of concern have been related mostly to economic conditions in Mexico, the effect of NAFTA on the United States and Mexico, and Mexican migrant workers in the United States.

In 1990, then Mexican President Carlos Salinas de Gortari approached the United States with the idea of forming a free trade agreement (FTA). Mexico's main motivation in pursuing an FTA with the United States was to stabilize the Mexican economy by attracting foreign direct investment. The Mexican economy had experienced many difficulties throughout most of the 1980s with a significant deepening of poverty. The intention of Mexico in entering NAFTA was to increase export diversification by attracting foreign direct investment (FDI), which would help create jobs, increase wage rates, and reduce poverty.

At the time that NAFTA went into effect, the expectation among supporters was that the agreement would improve investor confidence in Mexico, attract investment, and narrow the income differentials between Mexico and the United States and Canada. Measuring the effects of NAFTA on the Mexican economy is difficult because the economy was also affected by other factors, such as economic cycles in the United States (Mexico's largest trading partner) and currency fluctuations. In addition, Mexico's unilateral trade liberalization measures of the 1980s and the currency crisis of 1995 both affected economic growth, per capita gross domestic product (GDP), and real wages.

While NAFTA may have brought economic and social benefits to the Mexican economy as a whole, the benefits have not been evenly distributed throughout the country. Wages and employment tend to be higher in states experiencing higher levels of FDI and trade. The agricultural sector experienced a higher amount of worker displacement after NAFTA because of increased competition from the United States and because of Mexican domestic agricultural reforms. In terms of regional effects, initial conditions in Mexico determined which Mexican states experienced stronger economic growth as a result of NAFTA. States with higher levels of telecommunications and transportation infrastructure gained more benefits than poorer states with lower levels of education, infrastructure, and institutional capacity. Some economists argue that while trade liberalization may narrow income disparities over the long run with other countries, it may indirectly lead to larger disparities in income levels within a country. This report will be updated as events warrant.

Contents

Introduction	1
Mexico's Motivations for Entering NAFTA	1
Economic Conditions in Mexico Before and After NAFTA	3
GDP Growth	4
Poverty	5
Effects of NAFTA on Mexico	7
Economic Effects	7
Mexican Wages and Per Capita GDP	8
U.S.-Mexico Trade	10
Regional Effects of NAFTA	11
Mexico's Agricultural Sector and NAFTA	12
Mexican Productivity, Exports and Prices	12
Employment	14
Rural-Urban Migration	15
Mexican Programs for Farmers	16
Views of NAFTA in Mexico	16
Discussion	18
Appendix. Map of Mexico	20

List of Figures

Figure 1. Real GDP Growth in Mexico	5
Figure 2. Poverty Levels in Mexico	6
Figure 3. Mexican Agricultural Production	13
Figure 4. Mexican Public Opinion of Trade Liberalization	18
Figure 5. Map of Mexico	21

List of Tables

Table 1. Mexican Wages and Per Capita GDP: 1996-2008	9
Table 2. U.S.-Mexico Trade: 1994-2007	11

NAFTA and the Mexican Economy

Introduction

The North American Free Trade Agreement (NAFTA), in effect since January 1994, plays a very strong role in the bilateral economic relationship between Mexico and the United States. The two countries are also closely tied in areas not directly related to trade and investment such as security, environmental, migration, and health issues. The effects of NAFTA on Mexico and the state of the Mexican economy have important impacts on U.S. economic and political interests. As NAFTA approaches its 15th anniversary, a number of policymakers have raised the issue of revisiting NAFTA and renegotiating some aspects of the agreement. In evaluating NAFTA, it is important to examine the effects of the agreement on Mexico and how these relate to the economic relationship of the United States with Mexico. In the 110th Congress, some of the issues of concern have been related mostly to economic conditions in Mexico, the effect of NAFTA on Mexico, and Mexican migrant workers in the United States. This report provides an overview of Mexico's motivations for entering NAFTA, the Mexican economy, the economic effects of NAFTA in Mexico, and the views of NAFTA within Mexico. It also provides information on NAFTA's effect on Mexico's agricultural sector because this has been one of the more controversial issues surrounding NAFTA in Mexico. This report will be updated as events warrant.

Mexico's Motivations for Entering NAFTA¹

In 1990, the President of Mexico at the time, Carlos Salinas de Gortari, approached then U.S. President George H.W. Bush with the idea of forming a free trade agreement (FTA). President Salinas de Gortari's main motivation in pursuing an FTA with the United States was to stabilize the Mexican economy by attracting foreign direct investment (FDI). The Mexican economy had experienced many difficulties throughout most of the 1980s with a significant deepening of poverty. Mexico's intention in entering NAFTA was to increase export diversification by attracting FDI, which would help create jobs, increase wage rates, and reduce poverty. At the time NAFTA went into effect, many studies predicted that the agreement would cause an overall positive impact on the Mexican economy.

¹ This section draws upon information from the following sources: CRS Report 93-668 E, *Mexico's Changing Policy Toward Foreign Investment: NAFTA Implications*, by M. Angeles Villarreal, July 19, 1993. United Nations, Economic Development Unit, *Mexico: Economic Growth, Exports, and Industrial Performance after NAFTA*, by Juan Carlos Moreno-Brid, Juan Carlos Rivas Valdivia, and Jesús Santamaria, December 2005.

From the 1930s through part of the 1980s, Mexico maintained a strong protectionist trade policy in an effort to be independent of any foreign power and as a means to industrialization. Mexico established a policy of import substitution in the 1930s, consisting of a broad, general protection of the entire industrial sector. Mexico placed high restrictions on foreign investment and controlled the exchange rate to encourage domestic industrial growth. Mexico also nationalized the oil industry during this time. These protectionist economic policies remained in effect until the country began to experience a series of economic challenges caused by a number of factors.

The 1980s in Mexico were marked by inflation² and a declining standard of living. The 1982 debt crisis in which the Mexican government was unable to meet its foreign debt obligations was a primary cause of the economic challenges the country faced in the early to mid-1980's. Much of the government's efforts in addressing the challenges were placed on privatizing state industries and moving toward trade liberalization. In the late 1980s and early into the 1990s, the Mexican government implemented a series of measures to restructure the economy that included steps toward unilateral trade liberalization.

Mexican began to reverse its protectionist stance in the mid-1980s when the government was forced to declare that it was unable to repay its debts and to default on its loans. Then President Miguel de la Madrid took steps to open and liberalize the Mexican economy and initiated procedures to replace import substitution policies with policies aimed at attracting foreign investment, lowering trade barriers and making the country competitive in non-oil exports. In 1986, Mexico acceded to the General Agreement on Tariffs and Trade (GATT), assuring further trade liberalization measures and closer ties with the United States.

In November 1987, the United States and Mexico entered into a bilateral understanding on trade and investment called the *Framework of Principles and Procedures for Consultation Regarding Trade and Investment Relations*.³ Prior to this agreement, there had been no legal framework to govern commercial relations between the two countries. There were two parts to the agreement, one served as a mechanism to address trade issues, and the other established an agenda for the removal or reduction of trade barriers. Seven topics were listed in the agenda for possible future discussions: textiles, agriculture, steel, investment, technology transfer and intellectual property, electronics, and information on the service sector. Under this framework understanding, two sectoral agreements were reached which liberalized trade in steel, textiles, and alcoholic beverages. In addition, working groups started meeting on agriculture, industry, services, tariffs, and intellectual property rights.

² High inflation causes interest rates and prices to go up and real wages to fall, thus decreasing consumption and investments due to the uncertainty in the market flow which contributes to a decline in the overall standard of living.

³ Gary Hufbauer and Jeffrey Schott, *North American Free Trade: Issues and Recommendations*, Institute for International Economics, 1992.

In October 1989, the two countries entered into a second trade and investment understanding called *The Understanding Regarding Trade and Investment Facilitation Talks*.⁴ This agreement built on the work of the 1987 agreement, establishing a negotiating process for expanding trade and investment opportunities. These two agreements significantly improved trade relations between Mexico and the United States and other improvements in trade relations followed. Marking the advances in trade relations between the two countries, Mexico proposed negotiations for a free trade agreement with the United States. In June 1990, then President Carlos Salinas de Gortari of Mexico and then President George H.W. Bush issued a joint statement in support of negotiating a free trade agreement.

Economic Conditions in Mexico Before and After NAFTA

The Mexican economy is strongly tied to economic conditions in the United States, making it very sensitive to economic developments in the United States.⁵ Mexico is highly reliant on exports and most of Mexico's exports go to the United States. In 2007, Mexico's exports as a percent of GDP equaled 33%, up from 10% twenty years ago, and over 80% of Mexico's exports went to the United States. The state of the Mexican economy is important to the United States because of the close trade and investment ties between the two countries, and because of other social and political issues that could be affected by economic conditions, particularly poverty and how it relates to migration issues.

Not all changes in economic growth or trade and investment patterns in Mexico since 1994 can be attributed to NAFTA. The economy has also been affected by other economic factors such as economic growth in the United States and currency fluctuations. Also, trade-related job gains and losses since NAFTA may have accelerated trends that were ongoing prior to NAFTA and may not be totally attributable to the trade agreement. It is difficult to isolate the economic effects of NAFTA from other economic or political factors. For example, Mexico has experienced at least two major events outside of NAFTA that had economic consequences. Mexico's unilateral trade liberalization measures prior to NAFTA and the currency crisis of 1995 both affected economic growth, per capita GDP, and real wages in Mexico.

In the mid-1990s, Mexico experienced a financial crisis caused by a number of complex financial, economic, and political factors. The early 1990s in Mexico were marked by a large increase in foreign investment as investor confidence in the Mexican economy grew due to the prospect of NAFTA. However, signs that Mexico's economy was not as fundamentally strong as it appeared began to surface after the assassination of Mexican presidential candidate Luis Donaldo Colosio in

⁴ Ibid.

⁵ For more information, see CRS Report RL32934, *U.S.-Mexico Economic Implications: Trends, Issues, and Implications*, by M. Angeles Villarreal.

March 1994.⁶ The shock of the assassination resulted in a subsequent outflow of foreign exchange reserves and growing concerns about a currency devaluation. In response to these concerns, the Mexican government issued short-term dollar-indexed notes to finance the growing current account deficit.⁷

The Mexican government expected investor confidence to be restored after the August 1994 presidential election. Foreign investment flows, however, did not recover to the level of expectation. In the months following the election, the current account deficit widened as imports surged due to an overvalued peso. The government began to experience a short-term liquidity crisis.⁸ By December 1994, the continued decrease in the inflows of foreign direct investment and foreign exchange reserves put pressure on the government to abandon its previous fixed exchange rate policy and adopt a floating exchange rate regime. As a result, Mexico's currency plunged by around 50% within six months, sending the country into a deep recession.⁹

In the aftermath of the 1994 devaluation, the Mexican government took several steps to restructure the economy and lessen the impact of the currency crisis among the more disadvantaged sectors of the economy. The United States and the International Monetary Fund (IMF) assisted the Mexican government by putting together an emergency financial support package of up to \$50 billion. Mexico adopted tight monetary and fiscal policies to reduce inflation and absorb some of the costs of the banking sector crisis. The austerity plan also included an increase in the value-added tax, budget cuts, and increases in electricity and gasoline prices.¹⁰

The peso steadily depreciated through the end of the 1990s, which led to greater exports and helped the country's exporting industries. However, the peso devaluation also resulted in a decline in real income, hurting mostly the poorest segments of the population, but also the newly emerging middle class. Yet, NAFTA and the change in the Mexican economy to an export-based economy may have helped to soften the impact of the currency devaluation.

GDP Growth

Between 1960 and 1980, the Mexican economy grew at an average annual rate of over 6.5%, resulting in significant improvements in per capita GDP and living standards. Between 1980 and 1987, however, average real GDP growth dropped to less than 1% and productivity growth fell to negative numbers. The economic reforms in the latter part of the 1980s helped Mexico to recover from the 1982 debt

⁶ U.S. General Accounting Office, *Mexico's Financial Crisis: Origins, Awareness, Assistance, and Initial Efforts to Recover*, GAO Report GGD-96-56, February 1996, p. 9.

⁷ *Ibid.*, p. 10.

⁸ GAO Report GGD-96-56, pp. 5-6.

⁹ Economist Intelligence Unit (EIU), "Mexico Finance: The Peso Crisis, Ten Years On," January 3, 2005.

¹⁰ Joachim Zietz, "Why Did the Peso Collapse? Implications for American Trade," *Global Commerce*, by , Volume 1, No. 1, Summer 1995.

crisis, with GDP growth averaging 3.8% between 1990 and 1994 (see **Figure 1**).¹¹ In 1995, after the financial crisis, GDP growth declined by 6.2%, but the Mexican economy managed to grow 5%-6% the following three years. Real GDP growth dropped from 6.2% in 2000 to -0.2% in 2001. Improved economic conditions in the United States after 2001 helped Mexico's economy improve as well. Real GDP growth in 2004 was 4.4%, up from 1.4% in 2003 and 0.8% in 2002. In 2006, GDP growth was 4.8% but decreased to 3.3% in 2007.¹² Real GDP growth for 2008 is forecast at 2.3%, and 1.6% for 2009.¹³



Source: Economist Intelligence Unit.

Poverty

Poverty is one of the more serious and pressing economic problems facing Mexico. President Felipe Calderon stated early in his administration that his top economic priorities were to reduce poverty and create jobs. Former President Fox also considered the problem of poverty as one of Mexico's principal challenges and stated that the highest priority of his administration was to combat poverty. According to a 2004 World Bank Study,¹⁴ the Mexican government had made progress in its poverty reduction efforts, but poverty continues to be a basic challenge for the country's development. Poverty is often associated with social exclusion, especially of indigenous groups of people who comprise 20% of those who live in

¹¹ International Monetary Fund (IMF) Working Paper, *GDP Growth, Potential Output, and Output Gaps in Mexico*, by Ebrima Faal, May 2005.

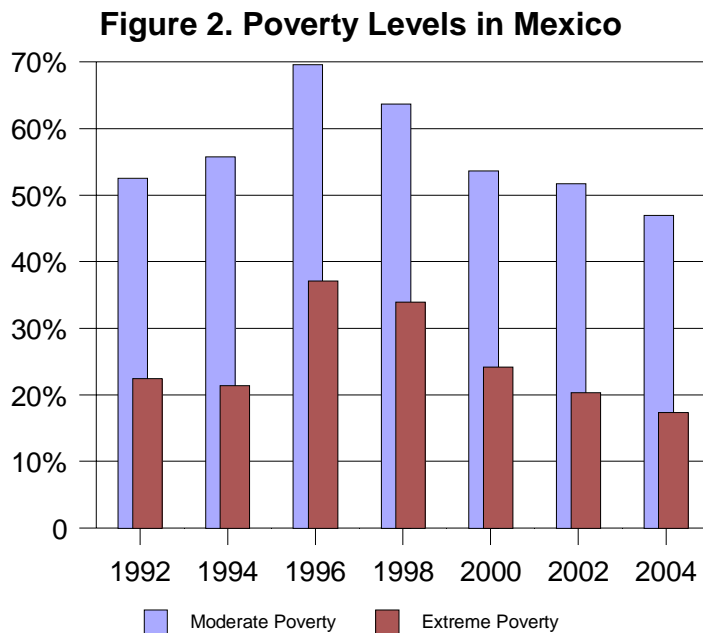
¹² EIU, *Country Reports: Mexico*, various years.

¹³ EIU, *Country Outlook*, September 2008.

¹⁴ The World Bank Group, *Mexico Makes Progress and Faces Challenges in Poverty Reduction Efforts*, June 2004.

extreme poverty. The 1995 currency crisis was a major setback to Mexico's efforts in alleviating poverty levels, and though there was some improvement after the crisis, the poverty levels did not decline to their pre-crisis levels until 2002 (see **Figure 2**).¹⁵

The percentage of people living in extreme poverty as measured by the World Bank¹⁶, fell from 24.2% of the population in 2000, to 20.3% in 2002, and 18.6% in 2005. Those living in moderate poverty fell from 53.7% of the population in 2000 to 51.7% in 2002 and 47.8% in 2005. Mexico's continuing problem of poverty is especially widespread in rural areas and remains at the Latin American average.¹⁷ The government has made significant efforts to combat poverty, but it remains widespread and is closely linked to high levels of inequality in terms of unequal access to healthcare, education, and available work opportunities.¹⁸



Sources: World Bank and the Woodrow Wilson International Center for Scholars, *Mexico Institute*.

Notes: Percentages of those living in moderate poverty, include those living in extreme poverty. The World Bank defines *extreme poverty* as living on less than U.S. \$1 a day and *moderate poverty* as living on less than U.S. \$2 a day.

¹⁵ The World Bank Group, *Poverty in Mexico - Fact Sheet*, 2008. Woodrow Wilson International Center for Scholars, *More than Neighbors: An Overview of Mexico and U.S.-Mexico Relations*, by Andrew Selee, undated.

¹⁶ The World Bank defines *extreme poverty* as living on less than U.S. \$1 (purchasing power parity) a day and *moderate poverty* as living on less than U.S. \$2 (purchasing power parity) a day.

¹⁷ *Ibid.*

¹⁸ The World Bank, *Poverty in Mexico: An Assessment of Conditions, Trends and Government Strategy*, Report No. 28612-ME, June 2004.

Mexico's main program to reduce poverty is the *Oportunidades* program. The program seeks to not only alleviate the immediate effects of poverty through cash and in-kind transfers, but also by improving nutrition and health standards among poor families and increasing educational attainment. This program provides cash transfers to families in poverty who demonstrate that they regularly attend medical appointments and can certify that children are attending school. Monthly benefits are a minimum of \$15 with a cap of about \$150. The majority of households receiving *Oportunidades* benefits are in Mexico's six poorest states: Chiapas, Mexico State, Puebla, Veracruz, Oaxaca, and Guerrero.¹⁹

Effects of NAFTA on Mexico

NAFTA is a free trade agreement that eliminated trade and investment barriers among NAFTA trading partners. Upon implementation, almost 70% of U.S. imports from Mexico and 50% of U.S. exports to Mexico received duty-free treatment. The remainder of duties were eliminated over a period of 15 years after the agreement was in effect. The agreement also contained provisions for market access to U.S. firms in most services sectors; protection of U.S. foreign direct investment in Mexico; and intellectual property rights protection for U.S. companies. At the time that NAFTA went into effect, a number of economic studies predicted that the trade agreement would have a positive overall effect on the Mexican economy, narrowing the U.S.-Mexico gap in prices of goods and services and the differential in real wages.

Economic Effects

While a number of studies have found that NAFTA has brought economic and social benefits to the Mexican economy as a whole, the benefits have not been evenly distributed throughout the country. Most studies after NAFTA have found that the effects on the Mexican economy tended to be modest at most.²⁰ While there have been periods of positive growth and negative growth in Mexico after the agreement was implemented, much of the increases in trade began in the late 1980s when the country began trade liberalization measures. Though its net economic effects may have been positive, NAFTA itself has not been enough to lower income disparities within Mexico, or between Mexico and the United States or Canada.

A 2005 World Bank study assessing some of the economic impacts from NAFTA on Mexico concluded that NAFTA helped Mexico get closer to the levels of development in the United States and Canada. The study states that NAFTA helped Mexican manufacturers to adopt to U.S. technological innovations more quickly and likely had positive impacts on the number and quality of jobs. Another finding was that since NAFTA went into effect, the overall macroeconomic volatility, or wide variations in the GDP growth rate, has declined in Mexico. Business cycles

¹⁹ Santiago Levy, *Progress Against Poverty*, Brookings Institution, 2006.

²⁰ For more information, see CRS Report RS21737, *NAFTA at Ten: Lessons from Recent Studies*, by J.F. Hornbeck, June 8, 2005.

in Mexico, the United States, and Canada have had higher levels of synchronicity since NAFTA, and NAFTA has reinforced the high sensitivity of Mexican economic sectors to economic developments in the United States.²¹

Several economists have noted that it is likely that NAFTA contributed to Mexico's economic recovery directly and indirectly after the 1995 currency crisis. Mexico responded to the crisis by implementing a strong economic adjustment program but also by fully adhering to its NAFTA obligations to liberalize trade with the United States and Canada. NAFTA may have supported the resolve of the Mexican government to continue with the course of market-based economic reforms, resulting in increasing investor confidence in Mexico. The World Bank study estimates that FDI in Mexico would have been approximately 40% lower without NAFTA.²²

One of the main arguments in favor of NAFTA at the time it was being proposed by policymakers was that the agreement would improve economic conditions in Mexico and narrow the income gap between Mexico and the United States. Studies that have addressed the issue of economic convergence²³ have noted that economic convergence in North America might not materialize under free trade as long as "fundamental differences" in initial conditions persist over time. One study argues that NAFTA is not enough to help narrow the disparities in economic conditions between Mexico and the United States and that Mexico needs to invest more in education; innovation and infrastructure; and in the quality of national institutions. The study states that income convergence between a Latin American country and the United States is limited by the wide differences in the quality of domestic institutions, in the innovation dynamics of domestic firms, and in the skills of the labor force.²⁴ Another study also notes that the ability of Mexico to improve economic conditions depends on its capacity to improve its national institutions, adding that Mexican institutions did not improve significantly more than those of other Latin American countries during the post-NAFTA period.²⁵

Mexican Wages and Per Capita GDP

This section provides information on Mexican wages over a period of time, however any changes in Mexican wages since NAFTA implementation cannot be solely attributable to trade integration. Wages are reflective of a number of economic

²¹ The World Bank, *Lessons from NAFTA for Latin America and the Caribbean*, by Daniel Lederman, William F. Maloney, and Luis Servén, 2005. (Hereinafter *Lessons from NAFTA*, 2005)

²² *Ibid.*

²³ Economic convergence can be broadly defined as a narrowing of the disparities in the economic levels and the manufacturing performances of particular countries or their regions. The goal of the theory of economic convergence is to research and analyze the factors influencing the rates of economic growth and real per capita income in countries.

²⁴ *Lessons from NAFTA*, 2005.

²⁵ *Economia*, "NAFTA and Convergence in North America: High Expectations, Big Events, Little Time," by William Easterly, Norbert Fiess, and Daniel Lederman, Fall 2003.

variables including GDP, productivity, exchange rates, and international trade. Mexican wages rose steadily from the early 1980s until the mid-1990s, when the currency crisis hit. After a drop in average real wages in 1996 of 15.5%, real wages increased steadily until 2000, when the average rate of growth was 11.8%. Since then the average rate of growth has only varied slightly (see **Table 1**).

Mexico's trade liberalization measures may have affected the ratio between skilled and non-skilled workers in Mexico. In 1988, the real average wage of skilled workers in Mexico's manufacturing industry was 2.25 times larger than that of non-skilled workers. This ratio increased until 1996, when it was about 2.9, but then remained stable until 2000.²⁶ The World Bank study found that NAFTA brought economic and social benefits to the Mexican economy, but that the agreement in itself was not sufficient to ensure a narrowing of the wage gap between Mexico and the United States. The study states that NAFTA had a positive effect on wages and employment in some Mexican states, but that the wage differential within the country increased as a result of trade liberalization.²⁷

Table 1. Mexican Wages and Per Capita GDP: 1996-2008

	1996	1998	2000	2002	2004	2006	2008 ^a
Average Real Wage Index ^b (LCU, 1995=100)	78	80	89	96	99	103	103
Average Real Wages ^c (% change from previous year)	-15.5	2.6	11.8	1.6	0.0	2.7	-0.1
Per Capita GDP (\$ US)	3,527	4,328	5,819	6,334	6,512	7,820	8,910
Per Capita GDP (\$ PPPs ^d)	7,649	8,543	9,551	9,769	10,550	11,820	12,920

Source: Economist Intelligence Unit

- a. Forecast.
- b. Average real wage index in local currency rebased to 1996=100.
- c. Percentage change in hourly wages in local currency adjusted for inflation over previous year.
- d. PPP refers to purchasing power parity, which reflects the purchasing power of foreign currencies in U.S. dollars.

According to a report published in the *Journal of Development Economics* that examines wage inequality in Mexico before and after NAFTA, studies on NAFTA have not always agreed on the effect of trade on wages or the reasons for the

²⁶ Esquivel, Gerardo, and José Antonio Rodríguez-López, "Technology, trade, and wage inequality in Mexico before and after NAFTA," *Journal of Development Economics*, 2003.

²⁷ *Lessons from NAFTA*, 2005.

increasing wage differential between skilled and unskilled Mexican workers.²⁸ Some studies conclude that the reason for the rise in wages for more highly skilled workers is the technological change brought about by trade. Others link the rise in wage differentials to trade and the changes in prices of skill-intensive goods that result from trade liberalization. As prices for skill-intensive goods decline after trade liberalization, the demand for skilled workers rises and wages rise. The authors of the report conclude that the sharp increase in wage inequality in Mexico was caused by technological change. They argue that trade liberalization alone had almost no effect on the wage gap, but that the technological change that came about after NAFTA caused the wage gap to widen.²⁹

U.S.-Mexico Trade

Mexico's trade with the United States has grown considerably since 1994. Mexico had a trade deficit of \$1.3 billion with the United States in 1994, the year of NAFTA implementation (see **Table 2**). In subsequent years, the trade balance shifted to a surplus as exports to the United States increased. While imports from the United States also increased after NAFTA, the rate of growth was not as high. In 2007, Mexico had a trade surplus of \$90.8 billion with the United States. U.S. imports from Mexico totaled \$210.2 billion in 2007 while exports to Mexico totaled \$119.4 billion. In 2007, the top U.S. imports from Mexico were crude petroleum oil, television apparatus, motor vehicles, and motor vehicle parts. The top U.S. exports to Mexico were motor vehicle parts, petroleum oil products (other than crude), motor vehicles, and insulated wire or cables.³⁰

Much of the increase in U.S.-Mexico trade could be attributable to NAFTA, but, as stated previously, exchange rates and economic conditions have also been a factor. The devaluation of the Mexican peso against the U.S. dollar in 1995 limited the purchasing power of the Mexican people and also made products from Mexico less expensive for the U.S. market. U.S. imports from Mexico increased from \$49.5 billion in 1994 to \$74.2 billion in 1996, while U.S. exports to Mexico also increased but at a slower rate. As economic conditions in Mexico improved in the late 1990s, trade with the United States rose steadily until 2001 when the downturn in the U.S. economy caused trade to slow down. In the years after 2001, Mexico's economy continued to follow U.S. economic trends and trade increased in the following years, though at a slower rate.

²⁸ Esquivel and Rodríguez-López, p. 553.

²⁹ *Ibid.*, pp. 551-552.

³⁰ Based on trade data from the United States International Trade Commission.

Table 2. U.S.-Mexico Trade: 1994-2007
(US \$ billions)

	1994	1996	1998	2000	2002	2004	2006	2007	% Change 1994-2007
U.S. Exports	50.8	54.7	75.4	100.4	86.1	93.0	114.6	119.4	135%
U.S. Imports	49.5	74.2	93.0	134.7	134.1	155.0	197.1	210.2	325%
Trade Balance	1.3	-19.5	-17.6	-34.3	-48.0	-62.0	-82.5	-90.8	

Source: Compiled by CRS using trade data from the United States International Trade Commission.

Regional Effects of NAFTA

While the overall effects of NAFTA on the Mexican economy might have been positive, the effects have been unequal across regions and sectors. Wages and employment tend to be higher in states experiencing higher levels of foreign direct investment and trade. The effects of trade liberalization have varied widely among regions, and while trade liberalization may narrow income disparities over the long run with other countries, it may indirectly lead to larger disparities in income levels within a country.

Studies have found that initial conditions in Mexico determined which Mexican states experienced stronger economic growth as a result of NAFTA.³¹ States with less developed infrastructure (transportation and communications) did not receive the benefits from NAFTA as other states. Telecommunications infrastructure and human capital were especially important in determining the economic performance of individuals states. The states with more telephone service and a higher skilled labor force experienced more positive impacts. Northern and central states grew faster throughout the 1990s, modestly reducing the income differentials with those of the Mexico City area. Poorer southern states grew slower during the same time period due to low levels of education, infrastructure, and quality of local institutions, making them less prepared to gain from trade liberalization.³²

³¹ William Easterly, Norbert Fiess, and Daniel Lederman, *Economia*, "NAFTA and Convergence in North America: High Expectations, Big Events, Little Time," Fall 2003. The World Bank, *Lessons from NAFTA for Latin America and the Caribbean*, by Daniel Lederman, William F. Maloney, and Luis Servén, 2005. Gerardo Esquivel and Miguel Messmacher, *Economic Integration and Sub-National Development: The Mexican Experience with NAFTA*, February 2003.

³² Easterly, Fiess, and Lederman, "NAFTA and Convergence in North America: High Expectations, Big Events, Little Time," Fall 2003.

Mexico's Agricultural Sector and NAFTA

One of the more controversial aspects of NAFTA has been its effect on the agricultural sector in Mexico and the perception that NAFTA has caused a higher amount of worker displacement in the agricultural sector than in other sectors of the economy. While some of the changes in the agricultural sector are a direct result of NAFTA, as Mexico faced increasing import competition from the United States, many of the changes are also attributable to Mexico's unilateral agricultural reform measures. Mexico began to reform its agricultural sector in the 1980s; most domestic agricultural and trade policy reform measures included privatization and resulted in increased competition. Mexico's unilateral reform measures included eliminating state enterprises related to agriculture and removing staple price supports and subsidies.³³ With the reform of Mexico's Agrarian Law, lands that had been distributed to *ejidos* or community rural groups following the 1910 revolution gained the right to privatize. Another major reform was the abolishment of *CONASUPO*, Mexico's primary agency for government intervention in agriculture. The agency bought staples from farmers at guaranteed prices and processed the products or sold them at low prices to processors and consumers. By 1999, the company was abolished.³⁴ Many of Mexico's domestic reforms in agriculture coincided with NAFTA negotiations, beginning in 1991, and continued beyond the implementation of NAFTA in 1994. The unilateral reforms in the agricultural sector make it difficult to separate those effects from the effects of NAFTA.

Mexican Productivity, Exports and Prices

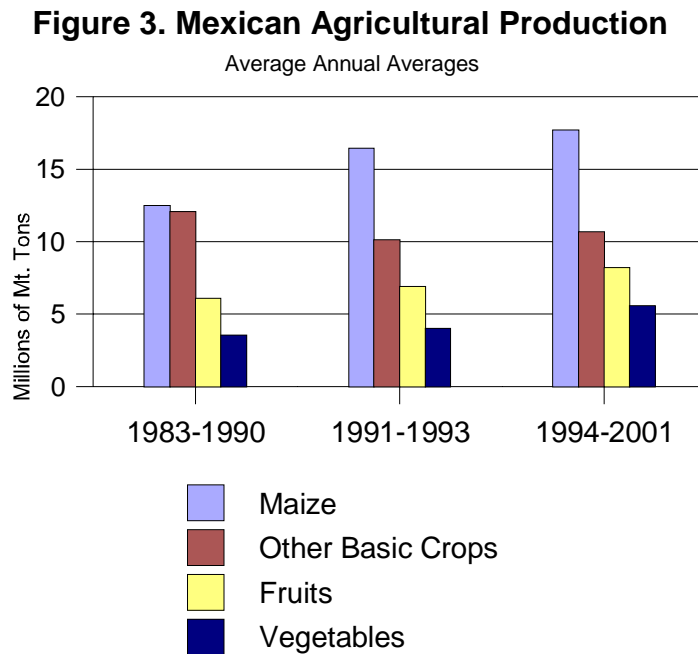
With Mexico's entry into NAFTA, the expectation was that relative prices for certain Mexican crops would decrease while prices for other crops would likely remain the same. This was based on the economic expectation that, by removing Mexico's price and trade interventions in basic crops such as grains and oilseeds, prices for the same goods in Mexico and the United States would equalize. Prices for crops that were exported such as fruits and vegetables were expected to stay the same because these had not been subject to major government intervention before or since NAFTA. NAFTA and Mexico's internal reforms were expected to lead to the "law of one price" for all agricultural goods produced in North America. This meant that prices for basic crops such as grains and oilseeds produced in Mexico, which previously had fixed prices by the government, would decline as these goods faced competition from U.S. goods. NAFTA and agriculture reform measures were also expected to increase efficiency in Mexico's agricultural production as farmers adjusted to competition from lower cost imports. Production in agricultural sectors that had prior price and trade interventions was expected to decrease as lower-priced imports from the United States entered the market, while production in export-

³³ Mexico's agricultural reform measures of the 1990s removed government subsidies and price controls in the agricultural sector that resulted in rising prices for tortillas. Tortillas are the basic staple for the Mexican diet and a necessity of the poor. For this reason, higher prices had a greater effect on the poor than on middle- and higher-income Mexicans.

³⁴ Yuñez Naude, Antonio, and J. Edward Taylor, *The Effects of NAFTA and Domestic Reforms in the Agriculture of Mexico: Predictions and Facts, Région et Développement No. 23-2006*, 2006, p. 163. (Hereinafter Yuñez Naude and Taylor)

oriented sectors, mainly fruits and vegetables, was expected to increase. As a result of these shifts, employment was expected to increase in some areas, but, according to one study, the increase was not expected to be large enough to absorb all the workers who would be displaced by reduced production in other sectors.³⁵

After NAFTA, Mexican prices of basic crops such as maize dropped and, subsequently, Mexican imports of those crops increased. Mexican agricultural production, however, did not decrease after NAFTA. The Mexican government's unilateral liberalization of corn and NAFTA were both factors in declining prices of corn in Mexico. In 1993, the price of corn in Mexico was \$4.84 per bushel; the price fell to \$3.65 per bushel in 1997 and has remained at about the same level ever since.³⁶ Mexican corn production, however, increased despite the decline in prices (see **Figure 3**). Total production of maize increased from an annual average of 12.5 million metric tons during the 1983-1990 period to an annual average of 17.7 million metric tons, representing an increase of 41%, during the post-NAFTA period of 1994-2001.³⁷ Mexican corn production yields were a fraction of U.S. corn production yields in 2003, but in spite of the low yields, Mexican corn production increased after NAFTA. Between 1990 and 2003, Mexican corn production increased 44%, a faster rate of growth than U.S. corn production which increased by 27% during the same time period.³⁸



Source: Yunez Naude and Taylor, 2006.

³⁵ Yunez Naude and Taylor, p. 165.

³⁶ Hufbauer, Gary Clyde, and Jeffrey J. Schott, *NAFTA Revisited: Achievements and Challenges*, pp. 333-334. (Hereinafter Hufbauer and Schott)

³⁷ Yunez and Naude, p. 179.

³⁸ Hufbauer and Schott, p. 331-332.

Most of the effects from NAFTA likely took place within the first ten years of implementation. From 1993 to 2003, Mexican exports to the United States in agricultural products increased from \$2.7 billion in 1993 to \$6.3 billion in 2003, while Mexican exports to Canada increased from \$136 million to \$409 million over the same time period. Mexican imports from the United States also increased during this time period, from \$3.6 billion in 1993 to \$7.9 billion in 2003. Mexican exports to the United States sharply increased in the following categories: sugar and related products (595%), beverages excluding fruit juices (584%), and grains and feeds (328%). U.S. foreign direct investment in the Mexican food processing industry more than doubled from \$2.3 billion in 1993 to \$5.7 billion in 2000.³⁹

Employment

Changes in agricultural employment in Mexico since NAFTA implementation cannot be attributed entirely to trade liberalization, not only because of Mexico's unilateral reform measures which coincided with NAFTA, but also because these changes may result from the industrialization process. Some economists argue that as countries become more industrialized, agriculture plays a smaller role in the economy and employs a smaller share of the workforce. One study covering 76 countries shows that a 1% increase in per capita GDP is associated with a reduction in agriculture value-added as a share of GDP by about 0.6 percentage points. In South Korea, for example, the agricultural share of GDP declined from about 25% in 1970 to 5% in 2000 due to rapid industrialization.⁴⁰

A report by the Institute for International Economics (IIE) on the achievements and challenges of NAFTA discusses the effect of NAFTA on the agricultural sector. The report uses international comparisons that suggest that the Mexican agricultural labor force as a proportion of total labor was very high at the time of NAFTA and that many farmers were likely to lose their jobs as the country became more efficient in agricultural production. The study cites an estimate that, once all Mexican tariffs were eliminated, total farm employment in Mexico would decline by an estimated 800,000 workers.⁴¹ Agricultural production in Mexico has been increasingly centered on large-scale farms, factory-type livestock lots, and capital-intensive food processing, which puts pressure on small-scale farms and household farmers in Mexico. Another study states that the number of Mexicans employed in rural agriculture declined from 8.1 million to 6.8 million and that the value added⁴² by Mexican agriculture dropped from about \$32 billion in 1993 to about \$25 billion in 2003.⁴³

³⁹ Hufbauer and Schott, p. 288.

⁴⁰ Ibid, p. 286.

⁴¹ Hufbauer and Schott cite the study by Antonio Yuñez-Naude in the World Bank, *Lessons from NAFTA: The Case of Mexico's Agricultural Sector*, Washington, DC, 2002.

⁴² Value added refers to the additional value created at a particular stage of production. The number is often used by economists to avoid double-counting the units of production in the final value of the product.

⁴³ Hufbauer and Schott, p. 289.

Rural-Urban Migration

Several studies found that the composition of Mexico's agricultural supply did not change significantly after NAFTA, although there were shifts in production as the agricultural sector adjusted to trade liberalization. One study found that some commercial farmers shifted production from staple crops to crops for export purposes and that yields of basic crops increased after NAFTA, but only for those crops grown under irrigated conditions.⁴⁴ The study states that Mexico's productivity of irrigated lands increased after NAFTA, but non-export, non-irrigated agriculture did not increase. The study also cited a disparity in agricultural productivity between the northern and southern states due to the poor transportation and irrigation networks in the central and southern states of Mexico, making transportation costs very expensive. Another reason is access to credit. Those with small farms in the rural areas have difficulties finding access to credit. Without government guarantees, Mexican commercial banks often hesitate to provide loans because of the historically high default rate on agricultural loans. To help address this problem, the Mexican government created *Financiera Rural* in 2002, which helps provide access to microcredits for farmers to buy machinery, equipment, and technology.⁴⁵

The effect of NAFTA on rural-urban migration within Mexico or on migration from Mexico to the United States is difficult to quantify because of the various factors affecting migration. Mexican migration after NAFTA was affected by a combination of higher efficiency in Mexican agricultural productivity, sectoral adjustments to trade as some sectors experienced higher growth than others, urban growth in Mexico, and demands for unskilled labor in the United States. A study by the Carnegie Endowment for International Peace discusses the experience of Mexico since the enactment of NAFTA. The study's analysis focuses on people, the communities they live in, and the choices they make in response to their social and economic environment. The study states that NAFTA accelerated the transition of Mexico to a liberalized economy but did not create the necessary conditions for the public and private sectors to respond to the economic, social, and environmental effects of increased trade with its NAFTA partners. One of the study's conclusion is that NAFTA's agricultural policies did not benefit subsistence farmers, while providing larger commercial farmers with substantial support.⁴⁶

On the issue of Mexico's demographic patterns, one study found that NAFTA has had a minor role in Mexico's rural-urban migration. The study argues that the observed trend of migration from rural areas of Mexico to urban centers is directly the result of agricultural liberalization. However, the study also notes that these migration patterns have been in place since 1960.⁴⁷ Therefore, it is not clear how much of a role NAFTA has had in Mexico's rural-urban migration. While some

⁴⁴ Yúñez and Naude, p. 166.

⁴⁵ See [<http://www.financierarural.gob.mx>].

⁴⁶ Audley, John J., Demetrios G. Papademetriou, Sandra Polaski, Scott Vaughan, Carnegie Endowment for International Peace, *NAFTA's Promise and Reality: Lessons from Mexico for the Hemisphere*, 2004.

⁴⁷ Ibid.

observers believe that the trend of migration from rural areas of Mexico to urban centers is directly a result of NAFTA, many economists argue that rural-urban migration trends are common in the industrialization process of most countries. For this reason, some argue that the high concentration of poverty in rural areas makes it very important for Mexican policymakers to understand the nature of Mexico's farming structure when proposing development policies.⁴⁸

Mexican Programs for Farmers

Anticipating the possible effects of NAFTA on farmers, the Mexican government established the Program of Direct Support for the Countryside, *Programa de Apoyos Directos Para el Campo* (PROCAMPO), in 1993. PROCAMPO provided income support to farmers over a 15-year transitional period through hectare-based direct payments to producers. However, budget austerity caused by Mexico's 1995 peso crisis resulted in budget cuts for the program. Another Mexican program, *Alianza para el Campo*, or *Alianza*, was created in 1995 to improve agricultural productivity with modern equipment and technology. A third program, *Produce Capitaliza*, provides infrastructure and extension-type assistance and support to livestock producers for upgrading pastures. While these three programs have provided support for Mexican farmers, there continues to be a huge disparity in subsidy levels between the United States and Mexico.⁴⁹ One study suggested that if the United States continued to subsidize corn production in the United States, Mexico should be permitted to impose some form of safeguard measures to protect farmers.⁵⁰

Views of NAFTA in Mexico

Views of NAFTA within Mexico are mixed. Media reports tend to highlight the anti-NAFTA sentiment in the Mexican agricultural sector, but according to an extensive non-partisan opinion survey conducted by two independent groups in Mexico, the majority of the Mexican population views NAFTA favorably. A public opinion survey conducted in 2006 showed that the majority of the Mexican population favors trade liberalization with the United States and Canada. The survey, conducted by the *Centro de Investigación y Docencia Económicas* (CIDE) and the *Consejo Mexicano de Asuntos Internacionales* (Mexican Council on Foreign Relations, COMEXI)⁵¹, also showed that Mexicans have a very positive view of globalization, though there is some division on whether NAFTA should be

⁴⁸ Yúñez and Naude, p. 176.

⁴⁹ Hufbauer and Schott, pp. 295-296.

⁵⁰ *Ibid*, pp. 343-344.

⁵¹ The *Centro de Investigación y Docencia Económicas* (CIDE) is an academic non-government organization dedicated to research and education in Mexico. The *Consejo Mexicano de Asuntos Internacionales* (Mexican Council on Foreign Relations, COMEXI) is an independent, non-government organization in Mexico financed by membership dues and corporate support; members have a broad spectrum of professional experience from all over the world.

renegotiated and whether Mexico should continue forming new trade agreements with other countries.⁵²

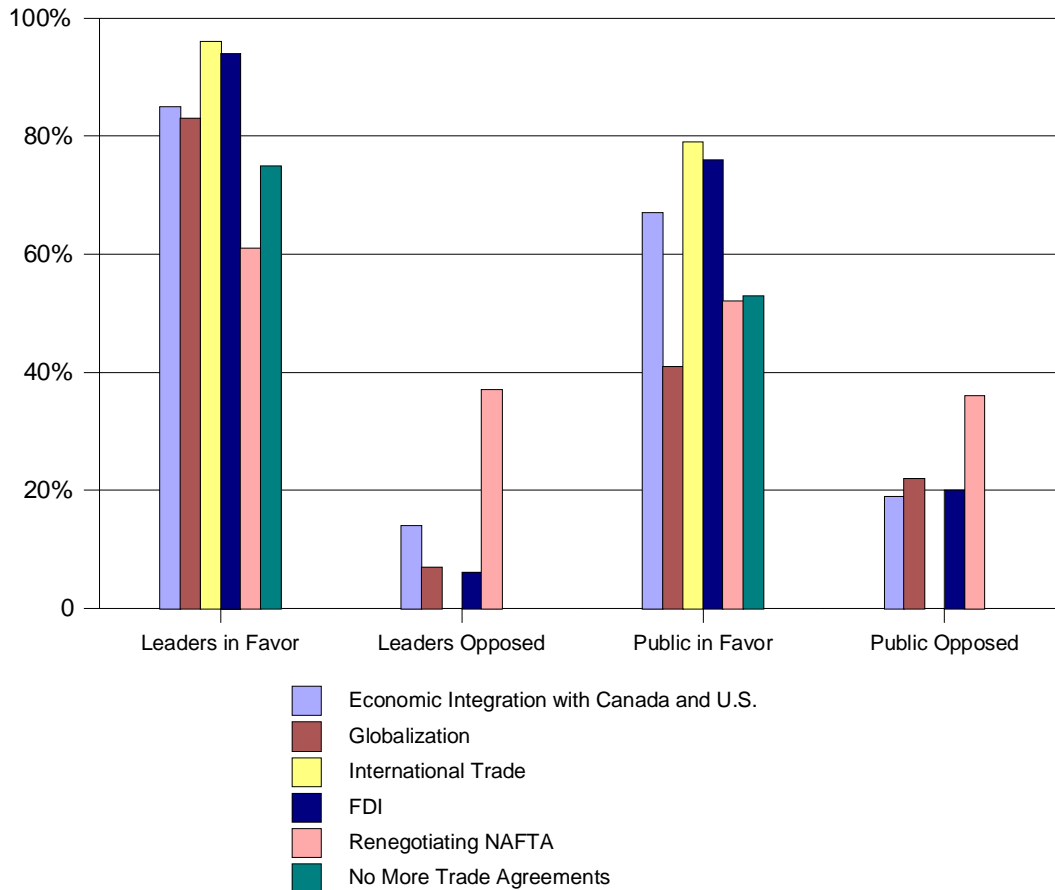
The survey examined the views of the general public and another group of individuals, labeled as “leaders” in the study, which comprises 259 representatives from five sectors (government, politics, business, media and academic, and non-government organizations) with an interest in international affairs or professional ties with other countries. Both groups ranked export promotion among Mexico’s two most important foreign-policy objectives and hold a largely favorable opinion of international trade. The poll showed that both the general public and the “leaders” considered international trade to be beneficial for the country’s economy, job creation, Mexican businesses, poverty reduction, and their own living conditions. Ninety-six percent of the “leaders” and 79% of the general public favored increasing international trade (see **Figure 4**).⁵³

The most vocal opponents of NAFTA in Mexico have criticized the agreement because of its negative effect on Mexico’s agricultural sector. Labor and farmers’ coalitions joined forces in early 2008 to protest the final tariff eliminations under NAFTA on corn. Tens of thousands marched on the streets of Mexico City in February 2008 to protest the agreement. Many of these were farmers or peasants with farm plots of less than 12 acres and criticized the Mexican government for not doing enough to help them adjust to increased competition from the United States. They stated that most of the government aid to help farmers has gone to large agricultural businesses in northern states. Groups representing the small farmers argue that, in the long run, small farmers in Mexico will not be able to compete with the “Americans’ heavily subsidized and mechanized farms.”⁵⁴

⁵² *Mexico and the World 2006 - Leaders, public opinion and foreign policy in Mexico, the United States, and Asia: A Comparative Study*, CIDE and COMEXI, 2006.

⁵³ *Ibid*, pp. 20-21.

⁵⁴ *International Herald Tribune*, “Mexican Farmers Protest End of Corn-Import Taxes,” by James C. McKinley Jr., February 1, 2008.

Figure 4. Mexican Public Opinion of Trade Liberalization

Source: *Mexico and the World 2006 - Leaders, public opinion and foreign policy in Mexico, the United States, and Asia: A Comparative Study*, CIDE and COMEXI, 2006.

Discussion

Mexico's economic relationship with the United States is of mutual importance to both Mexico and the United States. As NAFTA approaches its fifteenth anniversary, policymakers in the United States and Mexico have mentioned the possibility of revisiting NAFTA. Economic studies on NAFTA's effects on Mexico and the Mexican views of NAFTA could provide a valuable perspective when evaluating the possibility of reopening parts of the agreement or alternative policy options. Some observers have suggested that one of the lessons from NAFTA for developing countries is that they negotiate trade agreements in a way that would be more beneficial to them. This could take place by including provisions such as financial assistance from trading partners or new minimum wage requirements.⁵⁵ Possible areas of consideration for U.S. and Mexican policymakers may include furthering economic integration between Mexico and the United States; enhancing

⁵⁵ Audley, John J., Demetrios G. Papademetriou, Sandra Polaski, Scott Vaughan, Carnegie Endowment for International Peace, *NAFTA's Promise and Reality: Lessons from Mexico for the Hemisphere*, 2004.

or strengthening institutions created under NAFTA side agreements; or taking other measures to help resolve the issues related to income disparity between Mexico and the United States.

Some proponents of economic integration in North America have maintained that the emergence of China and India in the global marketplace may be putting North America at a competitive disadvantage with other countries and that NAFTA should go beyond a free trade agreement. Some observers have written policy papers proposing that the U.S. government consider the possibility of forming a customs union or common market.⁵⁶ However, critics of this level of economic integration believe that NAFTA has already gone too far and that it has harmed the U.S. and Mexican economies and undermined democratic control of domestic policy-making.⁵⁷ If the United States were to potentially consider the further economic integration in North America, it would require cooperation by the governments of Mexico and Canada, and approval by the U.S. Congress. Expanding NAFTA to a customs union or common market would likely be very controversial.

A possible option to address Mexico's income disparities with the United States is to consider expanding the mandate of the North American Development Bank (NADBank). NADBank and its sister institution, the Border Environment Cooperation Commission (BECC), were created under a bilateral side agreement to NAFTA called the Border Environmental Cooperation Agreement (BECA). The objective of NADBank and BECC is to help U.S.-Mexico border communities plan and finance environmental infrastructure projects. A number of Members of the U.S. Congress and elected officials from Mexico have discussed the possibility of expanding the mission of the NADBank to go beyond environmental and border issues. Some policymakers have proposed expanding NADBank projects to include transportation and other types of infrastructure projects. Others have suggested expanding eligible projects to the entire region of Mexico. An option that was mentioned at the June 2008 U.S.-Mexico Inter-parliamentary Group meeting in Mexico is for policymakers in the United States and Mexico to consider creating an infrastructure fund that would be managed by NADBank to provide investment in infrastructure, communications, or education.

Another possible option for U.S. policymakers is to consider increased cooperation with Mexico in its efforts to address the continuing problem of poverty and the difficulties being faced by farmers in the southern Mexican states. The Mexican government has taken a number of measures to lessen the impact of NAFTA on farmers and to address on-going poverty issues, but the results of these programs has been mixed. Although the programs are not NAFTA-related, they do benefit segments of the population and regions of Mexico that have benefitted little from trade liberalization.

⁵⁶ U.S. Council of the Mexico-U.S. Business Committee, Council of the Americas, *A Compact for North American Competitiveness*, April 2005; Grubel, Herbert G., The Fraser Institute, *The Case for the Amero: The Economics and Politics of a North American Monetary Union*, September 1999.

⁵⁷ Public Citizen, Global Trade Watch, *North American Free Trade Agreement*, see [<http://www.citizen.org>].

Appendix. Map of Mexico

Figure 5. Map of Mexico

