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# THE NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA):

# ISSUES AND IMPACTS FOR MINNESOTA*

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## EXECUTIVE SUMMARY


This brief study addresses four questions and issues posed by both supporters and critics of the North American Free Trade Agreement (NAFTA).

(1) Will NAFTA cost Minnesota jobs?

The response to this question is based on numerous estimates of the employment impacts of NAFTA in different sectors. Before looking specifically at Minnesota, four general findings are worthy of notice. First, because the U.S. economy is very large in comparison with Mexico's (with national income roughly 25 times as great), the impact of tariff reductions under NAFTA on the U.S. will be positive but small relative to Mexico. A second general finding is that NAFTA will contribute to a process of North American trade growth that is already underway and to which the current government of Mexico is committed; to the extent that Mexico grows more rapidly and dynamically under NAFTA, its role as an importer of U.S. exports, and generator of future U.S. jobs, will grow accordingly. Third, NAFTA's impacts on wage levels in Mexico will be positive, while those in the U.S. are barely (although positively) affected. A 1992 University of Michigan study concludes that "the narrowing of the wage gap is not accomplished at the expense of U.S. workers." Fourth, the impacts of trade expansion with Mexico will be positively related to employment growth not only in multinational companies but in smaller U.S. businesses which have accounted for most job gains since 1988.

In Minnesota, all four trends are at work. First, the Minnesota economy will be positively affected, although the employment effects will be small. Most of the gains will come in agriculture; in manufacturing and services, gains are likely in nonelectrical machinery and miscellaneous manufactures. Total employment generation due to NAFTA itself has been estimated at between 400 and 3,500 jobs, depending on the study and the methods used with greater impacts if dynamic and "multiplier" effects are considered.

Second, the impacts of NAFTA on Minnesota will be in addition to those already underway due to expanding Minnesota-Mexico trade. In agriculture, the major beneficiaries will be corn, soybeans and oilseeds such as sunflowers, wheat, pork, poultry and beef, and dairy products such as cheese and butter. Even in the sugar industry, it is possible that Mexico will remain a sizeable net importer. In manufacturing and services, Minnesota has increased trade with Mexico steadily since 1987; it now ranks seventh as a foreign destination for Minnesota exports. Among the leading export industries are industrial machinery, scientific instruments, and electrical equipment. The indirect effects of NAFTA in stimulating dynamic income growth in Mexico are at least as important as its direct effects in building these markets over time.

Third, wage levels in Minnesota are highly unlikely to show effects from NAFTA; but to the extent that NAFTA raises wages in Mexico, the incentives of Minnesota firms to move south will be diminished.

Fourth, employment growth in Minnesota due to NAFTA will occur in firms of all sizes, including small firms specializing in new environmental technologies important to the changing Mexican economy, such as wastewater treatment.

(2) What impacts will NAFTA have on environmental and labor standards, and on environmental quality and working conditions on both sides of the border?

This largely depends on how certain "side-agreements," currently under negotiation, are developed to confront the serious environmental and labor issues that NAFTA poses. While the side-agreements will determine the outcome, it is clear that without them, NAFTA will face significant opposition. And if NAFTA fails, not only will Minnesota (and Mexico) forego employment gains, it will be much less likely that Mexico will make progress on environmental and labor issues. Most of the criticisms of NAFTA on environmental grounds project that it will make existing environmental problems worse. Yet without NAFTA, it is doubtful that these problems would have received the attention they have, or that Mexico and the U.S. would have committed themselves to environmental improvements. In this sense, while NAFTA may lead to trade patterns with negative environmental effects, it also has created an opportunity to influence Mexico's environmental policies, and to address these effects more openly than ever before. And if it succeeds in generating economic and income growth of the sort projected in Mexico, it can help create the wherewithal to expand remedial environmental efforts.

It is noteworthy that one of the sectors in which small Minnesota companies are leading global competitors is in environmental technologies, such as wastewater treatment. To the extent that an environmental side-agreement to NAFTA encourages further diffusion of these technologies, Minnesota will be a beneficiary. Ironically, if NAFTA is defeated (on environmental or other grounds), a major opportunity for environmental improvements may have been lost. Environmental opponents of NAFTA, if they persist in urging its defeat rather than marshalling support for additional safeguards, will thus lose an important lever for change.

Change is clearly necessary. Existing environmental problems in the border region are especially grave in the maquiladora industries where both government and industry have made insufficient investments in water treatment and hazardous waste disposal facilities. In addition to concerns of a Mexican pollution haven, other environmental issues have arisen as NAFTA was negotiated. These include pesticide residues on imported crops and increased levels of air pollution and more toxic spills due to higher levels of traffic.

These issues, together with a desire to promote trade through NAFTA, led the Clinton administration to trilateral negotiations beginning in March, 1993 on an environmental side-agreement to the NAFTA text based on a North American Commission on Environment (NACE). These negotiations are driven by the following logic. First, NAFTA as a trade measure could lead to environmental damages, or at a minimum might aggravate existing environmental conditions, notably in the maquiladora sector and border region. Second, remediating these damages requires some regulating mechanism to enforce environmental safeguards. Third, since the environmental problems include not only local but transnational problems, a coordinated trilateral response is required involving new institutional authority. In sum, improving environmental safeguards seems not only compatible with a NAFTA treaty, but probably depends on it.

On May 4, 1993, a coalition of seven national environmental interest groups announced provisional support for NAFTA, if a satisfactory environmental side-agreement containing the NACE could be successfully negotiated. The group included the World Wildlife Fund, the

National Wildlife Federation, the National Audubon Society, the Environmental Defense Fund, the Nature Conservancy, Defenders of Wildlife, and the Natural Resources Defense Council.

Labor standards are the subject of the second "side-agreement" negotiations. Organized labor has maintained that NAFTA will create incentives for manufacturing to move where wages are lower. Like environmental issues, the labor side-agreement has come to the fore largely <u>because</u> of the NAFTA discussions. The results of the University of Michigan study noted above suggest that rather than creating additional downward pressure on U.S. wages, the primary impact of NAFTA will be to raise Mexican wages, perhaps by as much as 9 percent, without lowering those in the U.S. This will reduce the incentive of U.S. firms to seek lower wage levels by relocating to Mexico. A labor side-agreement, like its environmental counterpart, can help to raise occupational, health and safety standards to U.S. levels, and compel U.S. firms to adopt similar standards in both countries. But neither process is likely without the opportunities and incentives created by NAFTA.

(3) <u>What are the risks of "import surges" under the current agreement, especially for Minnesota's sugar producers, and can safeguards be developed which continue to protect the sugar industry?</u>

The third "side-agreement" under discussion revolves around possible increases in imports from Mexico in commodities currently protected at the border. The most important in Minnesota is sugar. Currently, Mexican sugar consumption outpaces production, ranking among the highest levels in the world, at 102 pounds per capita. Population growth and economic recovery have shifted Mexico from net exporter to major net importer status, with a large share of imports coming from the U.S. as refined sugar under the U.S. re-export program, which allows U.S. refiners to import world market sugar and re-export the refined product. Total U.S. sugar exports to Mexico (including both beet and cane) were 219 thousand metric tons in 1991, 38 percent of total U.S. exports. Total U.S. imports from Mexico were 7,800 metric tons, less than one percent of total U.S. imports of 1.613 million tons, which are restricted under tariff rate quotas.

The concern of the U.S. sugar industry is that new investment in Mexican sugar production, together with imports of high-fructose-corn-syrup (HFCS) for use in food processing (especially soft-drinks), will free up sugar for export to the United States. It is held that U.S. producers will be inadequately protected under NAFTA from such import surges if and when Mexico reverts to net exporter status because of provisions granting market access for sugar to the U.S. after six years. These fears are reinforced by excess production of sugar in the U.S. in response to government subsidies. In the 1993 crop year, beginning October 1, 1992, sugar beet production is up 12 percent. This is the reason that the sugar industry has requested an additional side agreement to safeguard it from such surges. While such surges are hypothetically possible, a study tour conducted by the American Farm Bureau concluded that "Scenarios can be developed in which Mexico has sizeable exports, but there are equally plausible scenarios that leave Mexico a major net importer of sugar." The Minnesota sugarbeet industry is relatively low cost among U.S. producers and, therefore, gains more or suffers less than other U.S. sugar producers from changing market conditions.

(4) <u>What if NAFTA fails?</u>

Much of the debate over NAFTA focuses on the impacts if it passes (with or without side-agreements). Relatively little attention has been given to the opposite question: What if NAFTA fails? Four possible impacts deserve careful consideration. First, because the impacts of NAFTA are proportionately much greater for Mexico than for the U.S. and Minnesota, failure will also bear much more heavily on the Mexican economy and people. The consequences of failure will be counterproductive not only for economic growth and development in Mexico, but in Latin America generally. Latin America is one of the fastest growing markets for U.S. exports. Together, U.S. exports to Argentina, Chile, Mexico and Venezuela grew by an average of 49 percent between 1985 and 1988. Defeating NAFTA would discourage this process of expansion, lowering standards of living in Latin America and dampening exports to one of the most promising markets for U.S. exporters in the world.

Second, these job and income losses will contribute to greater political and economic instability in Mexico and Latin America, which will in turn provoke additional illegal migration of Mexican and Latin workers to U.S. markets. Half of the population of Mexico is 20 years of age or younger.

Third, NAFTA failure will almost certainly end U.S. interest in environmental problems in Mexico; even if an interest persists, both the leverage and the wherewithal to confront these problems will have been lost. NAFTA has been a key in motivating the Mexican government to upgrade its environmental standards; the North American Commission on the Environment (NACE) is one of the most exciting transnational efforts to deal with environmental problems in history. NAFTA's defeat will probably spell the end of such efforts.

Fourth, labor standards are unlikely to be addressed either; since wages in Mexico will remain depressed, the incentive to move factories south to Mexico will continue and could even accelerate, since the narrowing of the wage gap predicted under NAFTA will not occur.

Given these consequences of failure, the package of the NAFTA already concluded and the side-agreements being negotiated are more attractive than the alternative of a failed agreement.

# THE NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA):

# ISSUES AND IMPACTS FOR MINNESOTA

C. Ford Runge

## INTRODUCTION

The North American Free Trade Agreement (NAFTA) represents a major attempt to ratify and encourage a process of economic integration between the economies of Canada, the United States and Mexico. NAFTA builds upon the Canada-U.S. Trade Agreement of January 1, 1989, when a plan for tariff elimination over 10 years began. Under NAFTA, tariffs will be eliminated on commodities traded between the U.S. and Mexico, or phased out over 5, 10 or 15 years. When weighted by value imported, 1991 Mexican tariffs on U.S. imports averaged 11 percent, while U.S. tariffs on Mexican imports averaged 4 percent.[1] Hence, Mexico will open its economy to the U.S. more than vice-versa.

Negotiations between the Bush Administration and the Mexican and Canadian governments were completed August 12, 1992, and signed on December 17, 1992. Under U.S. law, final "fast track" approval of the text requires that 90 calendar days be set aside for Congressional consideration, followed by an additional 90 days while Congress is in session for debate over implementing legislation before a final up-or-down vote. There is now the likelihood that additional "side-agreements" will be added to the text, so that the process will not come to a vote before late 1993 or early 1994.

If approved, NAFTA will create a market of over 360 million people with a total GNP of nearly 7 trillion U.S. dollars. The larger process of economic integration between Canada, the U.S. and Mexico which NAFTA acknowledges has been underway for many years. However, recent developments have accelerated economic integration in all parts of the world, especially in North America and in Europe. This process would continue without agreements such as NAFTA. However, such agreements can help to bolster the ability of North American firms to compete globally, especially with the European Community, Japan, and other emerging trading blocs. Such agreements provide rules which make the transition smoother, and help the parties to commit themselves to continue opening markets while protecting against adverse developments for the natural environment, labor standards, or sudden shifts in patterns of trade.

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[1]T. J. Kehoe. "Assessing the Economic Impact of North American Free Trade." University of Minnesota. Department of Economics. May, 1992.

This study focuses on the particular impacts of NAFTA on the State of Minnesota and its people. It draws on available academic and policy research to respond to several key questions and issues posed by both supporters and critics. The first of these is: ***Will NAFTA cost Minnesota jobs?*** The response to this question is based on numerous estimates of the employment impacts of NAFTA in different sectors. These sectors are divided into two categories: (1) agriculture and (2) manufacturing and services. The overall employment effects of NAFTA on these Minnesota sectors in the future will be modestly positive, especially in agriculture, and may be even more positive as Mexico's economy grows, importing additional goods and services from the upper Midwest.

The second issue addressed is: ***What impact will NAFTA have on environmental and labor standards, and on environmental quality and working conditions on both sides of the border?*** This will largely depend on how certain "side-agreements," currently under negotiation, are developed to confront the serious environmental and labor issues that NAFTA poses. While the shape of these side-agreements will ultimately determine the outcome, it is clear that without them, NAFTA will face significant opposition. And if NAFTA fails, not only will Minnesota (and Mexico) sacrifice employment gains, it will be much less likely that Mexico will make progress on environmental and labor issues.

The third issue is: ***What are the risks of "import surges" under the current agreement, especially for Minnesota's sugar producers, and can safeguards be developed which continue to protect the sugar industry?*** The sugar industry has warned of the possibility of import surges due to technical production shifts combined with the dismantling of current border protection which insulates U.S. sugar from Mexican competition. This has resulted in discussions of a third side-agreement to prevent such surges.

A final issue of relevance to Minnesota is: ***What if NAFTA fails?*** What opportunities and advantages will be lost to Minnesota exporters and importers, and how might such failure relate to Mexico's commitment to economic growth, environmental and labor standards, and hemispheric stability and security?

These four issues form the basis of this brief report. It is designed to help Minnesotans form views and opinions about the basic impacts of NAFTA, and to advance the process of discussion and debate. Minnesota is heavily dependent on foreign trade especially in agriculture and high technology, has strong environmental and labor standards, a major, efficient sugar industry, and a citizenry largely sympathetic to economic development in developing countries such as Mexico. These characteristics make an accurate appraisal of NAFTA of considerable importance to the state and its people.

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## I. WILL NAFTA COST MINNESOTA JOBS?

One of the most-debated issues surrounding NAFTA is its potential impact on employment. Critics of the agreement contend that it will cause U.S. jobs to migrate South, and that U.S. workers will therefore lose employment opportunities to Mexico. Often cited is the "maquiladora" sector along the U.S.-Mexican border, where foreign-owned plants import raw materials duty free, and exports are subjected to duties only on the added value. This sector, where many U.S. firms employ Mexican nationals, and where serious environmental problems are evident (see Section II), is described by some as a scenario likely to characterize Mexico as a whole if NAFTA becomes a reality.[2] In order to estimate NAFTA's employment impacts, a survey was conducted of various econometric modelling efforts. These studies forecast the likely impacts of NAFTA on various sectors of the U.S. and Mexican economies.

Before looking specifically at Minnesota, four general findings are worthy of notice. First, because the U.S. economy is very large in comparison with Mexico's (U.S. national income is roughly 25 times that of Mexico), the relative employment impact of tariff reductions on the U.S. will be positive but small relative to Mexico. One study conducted in 1991 at the University of Michigan estimated that simple reduction in tariff and nontariff barriers under NAFTA would increase Mexico's Gross Domestic Product (GDP) by 1.6 percent, Canada's by 0.7 percent, and U.S. GDP by one-tenth of one (0.1) percent. If capital flows were liberalized too, the GDP figures rise to 5.0 percent for Mexico, remain 0.7 percent for Canada, and go up to three-tenths of one (0.3) percent for the U.S.[3]

A second general finding is that NAFTA will contribute to a process of North American trade growth that is already well underway. When Mexico joined the General Agreement on Tariffs and Trade (GATT) in 1986, it was obligated to reduce its general tariff from around 80 percent to about 50 percent. Mexico went further, unilaterally reducing its average tariff to between 10 and 20 percent. In economic terms, NAFTA's added contribution to this process will be positive but "at the margin."

Over 5, 10 or 15 years, many factors other than simple tariff reductions will affect U.S.-Mexico and U.S.-Canada trade, notably the overall levels of growth in all three economies and the continuation of market integration underway pre-NAFTA. To the extent that Mexico grows more rapidly and dynamically under NAFTA, its role as an importer of U.S. exports, and generator of future U.S. jobs, will grow accordingly. It is this general and dynamic growth in

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[2] See, for example, Clyde Prestowitz, "Making the Free-Trade Agreement Work," and Harley Shaiken, "Will Manufacturing Head South?" both in *Technology Review*, April 26, 1993, pp. 23-31.

[3] D. K. Brown, A. V. Deardorff and R. H. Stern, "A North American Free Trade Agreement: Analytical Issues and a Computational Assessment." University of Michigan. Institute of Public Policy Studies. Discussion Paper 289. October 18, 1991. See Table 5.

trading activity, rather than the slice of trade affected by NAFTA-inspired tariff reductions, that will largely determine overall job creation in North America. A study conducted in the Research Department of the International Monetary Fund estimated that such dynamic increases may lead average levels of consumption to increase permanently in Mexico by as much as 500 percent, with corresponding implications for U.S. exports.[4]

A third general finding of econometric studies is that (in part because NAFTA's effects will be marginal in the U.S. and more pronounced in Mexico), wage levels in Mexico are expected to rise while those in the U.S. are barely (although positively) affected. The University of Michigan study cited above estimated that wage rates in Mexico would rise by 0.7 percent as tariffs and nontariff barriers (NTBs) are removed and by 9.3 percent if tariffs, NTBs and capital flows were liberalized, compared with a two-tenths of one percent (0.2) increase in the U.S. The authors conclude that the effect of such a narrowing in the wage gap will be to reduce the pressure for illegal immigration. In short, "the narrowing of the wage gap is not accomplished at the expense of U.S. workers."[5]

A fourth finding is that because the fastest growing source of jobs in the U.S. economy is small business, the impacts of trade expansion with Mexico will be positively related to employment growth not only in multinational companies doing business on both sides of the border, but smaller firms doing export/import trade in the United States. From 1988-1990, about 2.7 million jobs were created in the United States on net, resulting from total losses of 1.3 million and total gains of 4.0 million jobs. The jobs gained were overwhelmingly in firms of fewer than 500 employees, and most in firms of less than 20 employees.[6]

What about employment impacts in Minnesota? All four general trends are at work here. First, the Minnesota economy will be positively affected, although the employment effects will be small. Job growth in Minnesota during the last three years has been roughly 35,000 per year. A 1992 study by the University of Michigan Institute of Public Policy Studies estimated that over the first ten years of the agreement, total employment generation in Minnesota will be between

[4]Enrique G. Mendoza. "Dynamic Gains from North American Free Trade in an Equilibrium Model of the Current Account." *North American Journal of Economics and Finance* 3:2(Fall, 1992): 141-161.

[5]Brown, et. al., 1991, op. cit. note 3, p. 11. Some accounts of job "losses" to Mexico include the decision of hundreds of thousands of Mexican workers to stay at home. Counting this as a job "loss" to the U.S. economy is a questionable assertion on both economic and policy grounds.

[6]U.S. Department of Commerce, Small Business Administration. *Statistical Abstract of the United States.* Bureau of the Census. Washington, DC, 1992. Table 851.

400 and 630 jobs.[7] This can be compared with 1992 trade-related employment in Minnesota linked to Mexico of approximately 3,400 direct manufacturing jobs.[8] While hardly a boon to the state, this finding does not support the dire warnings of those who claim that NAFTA will cost Minnesota jobs. Second, the impacts of NAFTA will be in addition to those that are already underway due to increasing Minnesota-Mexico trade. In recognition of these trends, the International Business Committee of the Duluth Area Chamber of Commerce, for example, recently passed a motion in strong support of NAFTA, citing exports from Minnesota up 141 percent since 1987, an average annual increase of 28 percent.[9] Third, the wage impacts of NAFTA on Minnesota are likely to be consistent with those of the nation as a whole: essentially none. Because of its modest effect on employment, NAFTA will neither depress nor elevate wage levels in Minnesota. Fourth, employment and trading opportunities from expanded trade with Mexico will include not only large but many small and medium sized Minnesota firms. In 1991 78.5 percent of Minnesota workers were employed in firms of less than 500 employees, and 51 percent were employed in firms of less than 100 employees.

## Sectoral Impacts

Utilizing several models developed to estimate sectoral impacts of NAFTA, separate assessments were made of the sectoral impacts of the agreement (and more general growth in U.S.-Mexico trade) on (1) agriculture and (2) manufacturing and services in Minnesota.

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[7] R. M. Stern, A. V. Deardorff and D. K. Brown. "A U.S.-Mexico-Canada Free Trade Agreement: Sectoral Employment Effects and Regional/Occupational Employment Realignment in the United States." Appendix A in U.S. Department of Labor, National Commission for Employment Policy. *The Employment Effects of the North American Free Trade Agreement: Recommendations and Background Studies*. Special Report No. 33. Washington, D.C., October 1992.

[8] U.S. Department of Commerce. Minneapolis District Office. Ronald Kramer, Director. Correspondence.

[9] Duluth Area Chamber of Commerce. Letter of March 23, 1993. Signed David P. Cordeau.

Agriculture

The agricultural sector (which also includes forestry and fisheries) accounts for a large share of Minnesota's employment benefits from NAFTA (see Table 1). Mexico is the third largest agricultural trading partner of the U.S., purchasing food and fiber valued at 2.5 billion dollars in 1992, up 9 percent from 1990.[10] Growth in agricultural exports to Mexico under NAFTA will occur in products where Minnesota has strong comparative advantages. Because the agricultural sector does not take on additional labor as rapidly as many others, such employment impacts tend to underestimate farm income benefits that will accrue from increased trade to Minnesota family farming operations, food and forest products exporters, and processors.

NAFTA will add to a process of Mexican tariff elimination in agriculture that is already underway. Mexico has unilaterally eliminated import licenses for many agricultural products, but over 25 percent of all U.S. agricultural exports to Mexico are still subject to import licensing as well as nontariff barriers such as trading regulations. The remaining barriers will fall over 5, 10 and 15 year schedules, although tariff-rate quotas (TRQs) will be retained for some products.

The major beneficiaries will be Minnesota producers and exporters of the following commodities: corn, soybeans and other oilseeds such as sunflowers, wheat, pork, poultry and beef, and dairy products such as cheese and butter. In 1991, Minnesota ranked fourth in total U.S. production of corn, third in soybeans, eleventh in wheat, third in sunflowers, third in hogs marketed, second in turkey production, ninth in cattle and calves on feed, fifth in milk production, third in total cheese production and fourth in butter.[11]

Despite particular concerns about more open trade in Minnesota's beleaguered dairy sector, Mexico is a bright spot for dairy producers. Mexico is the world's largest importer of dairy products, and the largest dairy export customer of the U.S., accounting for almost half of U.S. dairy exports since 1985. Most of these exports consist of nonfat dry milk, and are government to government sales used to provide subsidized milk to lower income Mexican families through state-run distribution programs. As incomes increase, this demand is likely to shift into higher value-added cheeses, butter and other products such as yogurt and ice cream. The main NAFTA impact on U.S. dairy exports thus will occur indirectly through overall income growth in the Mexican economy, rather than from tariffs eliminated under NAFTA itself. In a recent evaluation of NAFTA conducted by a task force of the Council for Agricultural Science and Technology (CAST) the following observation was made:

> Mexico continues to have a high rate of population growth. When the effects of

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[10] Gary W. Williams and C. Parr Rosson, III. "Agriculture and the North American Free Trade Agreement." *Choices* (Fourth Quarter 1992): 16-19.

[11] U.S. Department of Agriculture. Minnesota Agricultural Statistics Service. *Minnesota Agriculture Statistics 1992*. July 1992, p. 3.

> that growth in population are combined with the effects of increases in per capita income on the order of 3 to 5 percent per year -- which are entirely feasible -- the demand for food in the Mexican economy may well expand over the next decade at rates of 4 to 6 percent a year. Very few countries have been able to expand their production of food at that rate on a sustained basis. It is most unlikely that Mexico will be able to do so. Thus the import demand for food in Mexico is likely to be strong at least into the next decade.[12]

In the grains and oilseeds sector, estimates made at the University of Nebraska indicate that if current trends continue through 1991-95, even without NAFTA, corn imports by Mexico will rise by 26 percent; wheat imports by 25 percent; soybean imports by 8 percent; and total grain imports (including rice and sorghum) will rise by 18 percent. Under a NAFTA scenario of partial liberalization, the figures rise to 44 percent for corn, 59 percent for wheat, 14 percent for soybeans, and 39 percent for total grains. If full liberalization is achieved consequent to NAFTA, the figures rise to 73 percent for corn, 75 percent for wheat, 21 percent for soybeans, and 63 percent for total grains. The Nebraska study concludes by noting that these relatively short-term effects do not include the "economic stimulus and income growth that would probably be associated with a NAFTA," which "could lead to even greater increases in U.S. grain and oilseed exports."[13]

In the livestock sector, the U.S. mainly exports livestock products to Mexico, and imports live animals, making our trade highly complementary. Overall, Mexico is the second largest U.S. export market, after Japan, for meat and meat products. In 1990, Mexico accounted for about 10 percent of total U.S. livestock exports (valued at 6.6 billion dollars) and about 8 percent of U.S. livestock imports (valued at 5.5 billion dollars). Mexico is the fourth largest U.S. beef market, after Japan, Canada and South Korea. Mexico accounts for nearly all (95 percent) of U.S. feeder cattle imports.

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[12]Council for Agricultural Science and Technology (CAST), "U.S. Agriculture and the North American Trade Agreement." Second Draft. March 24, 1993, p. 16.

[13]E. Wesley F. Peterson. University of Nebraska. "U.S.-Mexico Free Trade: Grains and Oilseeds." Leaflet No. 2. Proceedings of an Agricultural Satellite Broadcast. November 21, 1991. Edited by Emily McClain. Clemson University. Southern Rural Development Center. Clemson, S.C.

Because of lower feeding costs and transport infrastructure, lowering tariff and nontariff barriers and raised sanitary standards due to NAFTA are expected to give short-run advantages to U.S. exports of live animals to Mexico, as well as low cost processed meats, edible offals, and high quality beef and pork. As in the dairy sector, higher incomes in Mexico are likely to produce additional demands for high quality meat products.[14] In the turkey market, for example, which Minnesota dominates together with North Carolina, in 1991 29,000 metric tons of fresh or frozen turkey was exported to Mexico, up from 7,100 in 1990, accounting for 62 percent of total U.S. exports of nearly 47,000 metric tons.[15] In contrast, increased Mexican livestock and poultry products exports to the U.S. are unlikely to occur, although export-oriented cattle and hog feeding will probably grow.[16]

A final and important issue concerns Minnesota's sugar industry. While this issue will be discussed in detail in Part III under "Import Surges," it is important to note that Minnesota is a major producer of sugar beets, ranking first among the states in 1991, with 6.17 million tons.[17] It is also a relatively low-cost producing area, which will remain competitive compared with other U.S. producing regions. Substantial capital and employment is tied up in sugar processing in the Red River Valley and Renville area, making it an important part of Minnesota's agricultural employment base.

Currently, Mexican sugar consumption outpaces production, ranking among the highest levels in the world, at 102 pounds per capita. Population growth and economic recovery have shifted Mexico from net exporter to major net importer status, with a large share of imports coming from the U.S. as refined sugar under the U.S. re-export program, which allows U.S. refiners to import world market sugar and re-export the refined product. Total U.S. sugar exports to Mexico (including both beet and cane) were 219,000 metric tons in 1991, 38 percent of total U.S. exports. Total U.S. imports from Mexico were 7,800 metric tons, less than one percent of total U.S. imports of 1.613 million tons, which are restricted under tariff rate quotas.[18]

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[14]Williams and Rosson, op. cit. note 9, 1992.

[15]U.S. Department of Agriculture. Economic Research Service. *Foreign Agricultural Trade of the U.S. Calendar Year 1991 Supplement*. Washington, D.C. July, 1992. p. 114.

[16]Eduardo Segarra. Texas Tech University. "U.S.-Mexico Free Trade: Livestock Products." Leaflet No. 3. Proceedings of an Agricultural Satellite Broadcast. November 21, 1991. Edited by Emily McClain. Clemson University. Southern Rural Development Center. Clemson, S.C.

[17]U.S. Department of Agriculture. Minnesota Agricultural Statistics Service. *Minnesota Agricultural Statistics 1992*. July, 1992. p. 23.

[18]U.S. Department of Agriculture. Economic Research Service. *Foreign Agricultural Trade of the U.S. Calendar Year 1991 Supplement*. Washington, DC, July, 1992. pp. 262; 421.

The concern of the U.S. sugar industry is that new investment in Mexican sugar production, together with imports of high-fructose-corn-syrup (HFCS) for use in food processing (especially soft-drinks), will free up sugar for export to the United States. It is held that U.S. producers will be inadequately protected under NAFTA from such import surges if and when Mexico reverts to net exporter status because of provisions granting market access for sugar to the U.S. after six years. These fears are reinforced by excess production of sugar in the U.S. in response to government subsidies. In the 1993 crop year, beginning October 1, 1992, sugar beet production is up 12 percent.[19] This is the reason that the sugar industry has requested an additional side agreement to safeguard it from such surges (see Part III). While such surges are hypothetically possible, a study tour conducted by the American Farm Bureau concluded that "Scenarios can be developed in which Mexico has sizeable exports, but there are equally plausible scenarios that leave Mexico a major net importer of sugar."[20]

## Manufacturing and Services

Minnesota's manufacturing sector has increased exports to Mexico from 3.8 million dollars to 5.9 million dollars from 1987-1991, or by 55 percent. The most recent calculations of the Minnesota Trade Office based on U.S. Department of Commerce data, show Mexico accounting in 1991 for 3.52 percent of total Minnesota manufactured exports, ranking seventh overall.[21] The leading export industries in the sector (and their share of the total for the same period) were industrial machinery (37.9 percent), scientific instruments (15.1 percent), electrical equipment (10.8 percent), transportation equipment (8.8 percent), and food and kindred products (5.2 percent). Of these, the most rapid growth in percentage terms occurred in scientific instruments (32.2 percent); followed by transportation equipment (23.2 percent) and electrical equipment (21.4 percent).

Given this rapid growth in exports pre-NAFTA, NAFTA itself will increase demand at the margin, producing a small gain in Minnesota employment. In the first ten years, the 1992 University of Michigan study estimates a net increase in employment in Minnesota between roughly 400 and 630 jobs, of which a large share occur in agriculture, the rest in manufacturing, with minimal but modestly negative impacts on services. These estimates are based on four different scenarios increasing from simple tariff elimination to tariff and quota elimination plus 10 percent increases in capital flows (see Table 1). The highest estimates of job creation are roughly twice those of the U.S.-Canada agreement, but are still small.

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[19]"USDA Weighs Imposing Quotas on American Sugar Production." *Journal of Commerce.* April 12, 1993, p. 7A.

[20]American Farm Bureau Federation. *Study Tour of the Mexican Sugar Industry.* November 15-20, 1992. p. 6.

[21]U.S. Department of Commerce and the University of Massachusetts at Amherst, MISER.

When manufacturing and service jobs are separated from agriculture (shown as ISIC category 1 in Table 1) the major gains come in nonelectrical machinery and miscellaneous manufactures, with some losses indicated in electrical machinery, transport equipment, and mining and quarrying. Impacts on the services sector are relatively small. When employment is broken down into occupational categories (Table 2), agriculture, forestry and fishing again account for the bulk of jobs, with the remainder distributed across other professional categories. The same modest losses (a total of 22 jobs) in services and precision production are shown. Table 3 shows the same results, but compares Minnesota to the rest of the West North Central States. The relative employment gains in Minnesota are greater, and losses fewer, than in the rest of the region.

It may be useful to compare these results to other econometric studies. Data Resources Incorporated/McGraw Hill of Lexington, Massachusetts also estimated employment effects by sector, comparing the gradual implementation of NAFTA for the West North Central States to the year 2000 against a baseline of current U.S.-Mexico trade (Tables 4, 5, and 6). While only regional figures were reported, the 1992 study found benefits widely distributed by category, with modest losses concentrated in a few, mainly non-traded sectors.[22]

A third study, conducted by the U.S. Department of Labor in 1990, compared Minnesota's base employment to the year 2000 with a NAFTA limited to tariff elimination and a wider liberalization including tariffs and other trade barriers (Table 7). The overall results showed increases in state employment from 2,593 to 3,457 jobs.[23]

In summary, where specific estimates of employment effects for Minnesota are available, the overall impact on manufacturing and services is small but positive. These sectoral impacts are distributed widely, amounting to a few hundred jobs here and there, with total impacts ranging from the hundreds to several thousand. These estimates do not account for dynamic growth effects, which could multiply the impact of NAFTA. In these sectors, as in agriculture, the overall employment impacts of NAFTA appear modestly positive.

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[22]DRI/McGraw-Hill, Lexington, Massachusetts. "The Impact of the North American Free Trade Agreement on U.S. Regional and Sectoral Labor Markets." Appendix B in National Commission for Employment Policy. U.S. Department of Labor. *The Employment Effects of the North American Free Trade Agreement: Recommendations and Background Studies*. Washington, D.C. October, 1992.

[23]U.S. Department of Labor. *Industrial Effects of a Free Trade Agreement Between Mexico and the USA.* Washington, D.C. September, 1990.

## II. ENVIRONMENTAL AND LABOR STANDARDS

### Environmental Standards

One of the central issues surrounding NAFTA is the impact of expanded trade on the environment. It is for this reason that a NAFTA "side-agreement" on the environment is now under negotiation. The salience of the environmental issue is due in part to the major environmental problems of the border region pre-NAFTA, when the "maquiladora" sector[24] became the focus of widespread criticism because of the absence of enforced environmental regulations. Unless NAFTA is accompanied by environmental safeguards, it is widely felt that it might add to Mexico's environmental problems. Because the environmental damages could cross the borders of the agreement's signatories, the appropriate regulatory response appears to be not only enforced regulations in the home markets of the three nations, but trilateral instruments responsive to the transnational problems involved.

Despite parallel Canadian concerns, the majority of attention in environmental circles has been on the wide gaps in enforced regulations between the U.S. and Mexico. In response to criticism, the Bush administration and Mexican government included provisions in NAFTA designed to encourage higher Mexican environmental standards and compliance. Former U.S. Trade Representative Carla Hills stated that NAFTA "goes further than any previous trade agreement in addressing environmental concerns and actively promoting environmental protection."[25] Yet environmentalists have called for more and stricter environmental regulations as part of a final NAFTA package.

Most of the criticisms of NAFTA on environmental grounds project that it will make <u>existing</u> environmental problems worse. Yet without NAFTA, it is doubtful that these problems would have received the attention they have, or that Mexico and the U.S. would have committed themselves to environmental improvements. In this sense, while NAFTA may lead to trade patterns with negative environmental effects, it also has created an opportunity to address these effects more openly than ever before. And if it succeeds in generating economic and income growth of the sort projected, especially in Mexico, it can help create the wherewithal to expand remedial environmental efforts. It is noteworthy that one of the sectors in which small Minnesota companies are leading global competitors is in environmental technologies, such as wastewater treatment. To the extent that an environmental side-agreement to NAFTA encourages further

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[24]A maquiladora is a foreign-owned plant in Mexico subject to duty free import of raw materials, in which finished products are exported duty free except for value added in Mexico. See Malissa H. McKeith, "The Environment and Free Trade: Meeting Halfway at the Mexican Border." *Pacific Basin Law Journal 10:1*(1991): 183-211.

[25]Carla Hills, U.S. Trade Representative. Testimony before the U.S. Senate Committee on Finance. Hearing, September 8, 1992.

diffusion of these technologies, Minnesota will be a beneficiary. Ironically, if NAFTA is defeated (on environmental or other grounds), a major opportunity for environmental improvements may have been lost. Environmental opponents of NAFTA, if they persist in urging its defeat rather than marshalling support for additional safeguards, will thus lose an important lever for change.

Change is clearly necessary. Existing environmental problems in the border region are especially grave in the maquiladora industries. As these industries have expanded, uncontrolled industrial growth, undeveloped infrastructure to deal with industrial, municipal and animal wastes, and a lack of enforced environmental regulations have resulted in an "environmental disaster zone."[26] Even the conservative American Medical Association called the U.S.-Mexico border a "breeding ground for infectious disease" in a report in June, 1990.[27] Factories in Mexico which operate under the maquiladora program have been major contributors to the pollution problem. In response to a question posed in a survey of maquiladora plants about the typical technology used to treat industrial wastes, 54 percent stated they used Mexican standards, 29 percent used U.S. standards and 17 percent used best available technology.[28] The essential question is whether the maquiladora sector is an indicator of future development under NAFTA, or will be taken as a warning of what happens when trade is left to expand without accompanying environmental regulation and remediation.

In addition to concerns of a Mexican pollution haven and the maquiladora pollution problem, other environmental issues have arisen as NAFTA was negotiated. These include pesticide residues on imported crops and increased levels of air pollution and more toxic spills due to higher levels of traffic. Pesticide standards are a major issue for American consumers. A significant gap exists between U.S. and Mexican pesticide standards both in legalized pesticide use and in levels of pesticide applications. If pesticide applications in Mexico result in local environmental damage such as groundwater contamination, these damages are largely local. But when pesticides are applied to crops which are exported and the exported crops contain harmful pesticide residues, a transnational problem arises. Whether such problems can be confronted effectively through harmonization of standards, or whether the U.S. should restrict market access to these products, will remain an important issue in relation to the environmental side-agreement.

Concern has also arisen about the environmental effects of higher levels of traffic resulting

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[26]Michael Scott Feeley, and Elizabeth Knier, "Environmental Considerations of the Emerging United States - Mexico Free Trade Agreement, 2" *Duke Journal of Comparative and International Law* 259, 276 (1992) cited in David Voigt, "The Maquiladora Problem in the age of NAFTA: Where Will We Find Solutions?", *Minnesota Journal of Global Trade* Vol. 2, Issue 2 (forthcoming).

[27]"Crowded Border Imports High Rate of Disease: Maquilas Bring Workers, But Sewage, Health Systems Aren't Ready," *El Paso Times*, May 14, 1991, p. 1A.

[28]Ibid., p. 35.

from NAFTA, especially in the U.S.-Mexico border region. The standards for vehicle smog emissions are lower in Mexico than in the U.S. In addition, truck traffic, which has increased in recent years as trade between the U.S. and Mexico has grown, is expected to increase further after NAFTA is enacted. If the pollution generated by traffic between the U.S., Mexico and Canada affects all three nations by contributing to poor air quality, an additional reason exists for a trilateral response.

These issues, together with a desire to promote trade through NAFTA, led the Clinton administration to trilateral negotiations beginning in March, 1993 on an environmental side-agreement to the NAFTA text. These negotiations are driven by the following logic. First, NAFTA as a trade measure could lead to environmental damages, or at a minimum might aggravate existing environmental conditions, notably in the maquiladora sector and border region. Second, remediating these damages requires some regulating mechanism to enforce environmental safeguards. Third, since the environmental problems include not only local but transnational problems, a coordinated trilateral response is required involving new institutional authority.

This new authority was proposed in the form of a trilateral North American Commission on the Environment (NACE). A variety of responsibilities for the NACE have been proposed by environmental groups.[29] The NACE would monitor the implementation of the environmental provisions of NAFTA, and provide information on compliance with domestic laws in all three countries, reviewing and recommending on a regular basis improvements in compliance and enforcement. In addition, by promoting cooperative trilateral environmental actions, including raising and harmonizing environmental standards, NACE would help reduce incentives for pollution havens and the use of different standards. The effectiveness of the NACE would depend on its degree of true oversight authority, and its ability to influence the flow of funds for trilateral environmental actions.

On May 4, 1993, a coalition of seven national environmental interest groups announced provisional support for NAFTA, if a satisfactory environmental side-agreement containing the NACE could be successfully negotiated. The group included the World Wildlife Fund, the National Wildlife Federation, the National Audubon Society, the Environmental Defense Fund,

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[29]Among the specific proposals advanced were, *inter alia*, Stewart J. Hudson and Rodrigo J. Prudencio (for the National Wildlife Federation), "The North American Commission on Environment and Other Supplemental Environmental Agreements: Part Two of the NAFTA Package." February 4, 1993. Justin Ward (for the Natural Resources Defense Council), "Environmental Elements of the NAFTA Package: Testimony of the Natural Resources Defense Council Before the Committee on Environment and Public Works, U.S. Senate." March 16, 1993. J. Michael McCloskey and John Audley (for the Sierra Club), "Environmental Concerns Regarding the North American Free Trade Agreement." February, 1993. See also Steve Charnovitz, "NAFTA: An Analysis of its Environmental Provisions." *Environmental Law Reporter*. News and Analysis 23 ELR 10067-10073.

the Nature Conservancy, Defenders of Wildlife, and the Natural Resources Defense Council.[30]

In sum, improving environmental safeguards seems not only compatible with a NAFTA treaty, but probably depends on it. As Peter Emerson of the Austin office of the Environmental Defense Fund noted recently:

> On the environment, it would make more sense to push all three countries to recognize a convergence of interest in solving joint problems. Motives that brought them to the bargaining table for freer trade in goods, services and capital across national boundaries should be used to reduce the unintended trade in environmental degradation. This means working together to set priorities, finding the means to enforce laws and international agreements on the books, and creating incentives and institutions that benefit the environment.[31]

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[30]"Environmental Organizations Outline Proposal for NAFTA Side-Agreements." Press Release. May 4, 1993. Contact Justin Ward, Natural Resources Defense Council (202) 783-7800.

[31]Peter M. Emerson, letter to the editor, *The New York Times*, "Making Trade Pact Work for the Environment," March 30, 1993, p. A14. See also "Testimony of Dr. Peter M. Emerson, Senior Economist, Environmental Defense Fund, before the Subcommittee on Trade, Committee on Ways and Means, U.S. House of Representatives," Washington, DC, March 11, 1993.

## Labor Standards

Labor standards are the subject of the second "side-agreement" negotiations. Organized labor has maintained that NAFTA will create incentives for manufacturing to move where wages are lower. An example often cited is the decision of Smith-Corona to move operations to Tijuana, from its plants in Cortland, New York. As one labor analyst argued, "Mexico's low wages could add to the significant downward pressure on U.S. wages already occurring as the United States integrates further into the global economy."[32] In addition to the wage issue, many are concerned that lower levels of enforced occupational, health and safety standards in Mexico will draw investment away from the United States, analogous to the "pollution havens" discussed above.

Like environmental issues, the labor side-agreement has come to the fore largely because of the NAFTA discussions. Smith Corona's move preceded, and was not caused by, NAFTA. In this respect, those advocating improvements in both labor and environmental standards are divided into two groups. One group seeks actual improvements through negotiated side agreements which they insist accompany the NAFTA treaty text. The other group supports side-agreements only in the hope that they will lead to an overall defeat of the treaty package. Yet if NAFTA is defeated, it will not prevent firms from relocating to Mexico, nor will the Mexican government have the same incentives to raise labor standards.

The results of the 1991 University of Michigan study noted above suggest that rather than creating additional downward pressure on U.S. wages, the primary impact of NAFTA will be to raise Mexican wages, perhaps by as much as 9 percent, without lowering those in the U.S. And the Council for Agricultural Science and Technology analysis of NAFTA noted:

> The fact that labor in Mexico tends to receive a lower wage rate than does labor in the United States does not mean it is "cheap" labor. Moreover, the issue is not the difference in wage rates per se between the two countries, but rather the difference in the cost of labor that matters; low-wage labor need not necessarily be low-cost labor. In fact, low-wage labor may well be high-cost labor. It all depends on the productivity of that labor. High-wage labor, as we tend to have in the United States, can well be low-cost labor if its productivity is high enough.[33]

With respect to labor standards, a labor side-agreement, like its environmental counterpart, can help to raise occupational, health and safety standards to U.S. levels, and compel U.S. firms to adopt similar standards in both countries. But neither process is likely without the

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[32]Harley Shaiken. "Will Manufacturing Head South?" *Technology Review.* April 24, 1993. pp. 28-29.

[33]CAST, op. cit. note 11, 1993, p. 18.

opportunities and incentives created by NAFTA.

In a series of studies undertaken by the National Commission for Employment Policy of the U.S. Department of Labor, the slight impact of NAFTA on U.S. labor markets was documented. The 1992 University of Michigan study concluded that "the worker dislocation associated with NAFTA appears to be very small in comparison to the U.S. labor force and in comparison to the sectoral/regional/state employment levels. This is even more the case when the labor-market dislocation effects are expressed in annual terms to take into account the fact that a NAFTA would be phased in over a period of a decade or maybe even longer."[34]

A second study, the Data Resources Incorporated/McGraw-Hill analysis noted above, concluded that the region of which Minnesota is a part will be relatively unaffected in employment terms by NAFTA, with Minnesota actually positioned more favorably than the rest of the region.[35]

A third study, analyzing NAFTA's impact on migration patterns, concluded that increased Mexico-U.S. migration due to NAFTA should be limited to 100,000 migrants annually, of which perhaps 10,000 might settle. This compares to estimates of from 4 to 5 million in legal and illegal migration in the 1990s.[36]

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[34]Stern, et al., op. cit note 7, 1992, p. iii.

[35]DRI/McGraw-Hill, op. cit. note 21, 1992.

[36]P. L. Martin. "NAFTA, Migration, and U.S. Labor Markets." Appendix C in U.S. Department of Labor. National Commission for Employment Policy. *The Employment Effects of the North American Free Trade Agreement: Recommendation and Background Studies*. Special Report No. 33. Washington, D.C. October, 1992.

## III. "IMPORT SURGES"

The third side-agreement under discussion revolves around possible increases in imports from Mexico in commodities currently protected at the border. The most important is sugar, as noted in the discussion of Minnesota agriculture above. The U.S. sugar program is based on prices to domestic growers of beet and cane sugar supported at 200-400 percent of world market levels. In order to maintain these artificial domestic price levels, foreign imports of sugar are restricted through border measures called tariff rate quotas (TRQs), a two-tier tariff instrument. The first tier is a low tariff for imports up to a specified quantity. The second tier is a high tariff on additional imports: 16 cents a pound.[37]

Because the domestic market for U.S. sugar depends on these TRQs for its existence, any additional market access granted to low-cost sugar from tropical cane in the Caribbean, including Mexico, is a concern. The NAFTA provides that if in any of the first six years of the agreement, Mexico is projected to be a surplus producer, its duty-free access will increase to 25,000 metric tons, from its current TRQ of roughly 7,200. The U.S. second tier tariff (16 cents) also will drop 15 percent to 13.6 cents from year 1-6. In years 7-15, the 13.6 cent tariff will be reduced to zero and a common U.S.-Mexico tariff will prevail against the rest of the world. Throughout the 15-year period, if Mexico fails to achieve surpluses for two consecutive years, its market access can increase to 150,000 metric tons in year 7, and 10 percent a year to as much as 322,000 tons in year 15. On the other hand, if Mexico is in surplus for two consecutive years, it may export its entire surplus to the U.S. After year 15, Mexican exports to the U.S. will face no restrictions. Sugar producers contend that this widening "window" gives Mexico considerable incentives to shift from net importer to net exporter status, especially if the Mexican soft-drink industry shifts to high-fructose corn syrup (HFCS).[38]

The study tour of the Mexican sugar industry conducted by the American Farm Bureau Federation maintained that seven conditions will be necessary for Mexico to achieve net exporter status:

1. There must be a significant quantity of sugar displaced by HFCS.

2. There must be a favorable price for sugarcane relative to other crops.

3. The move must continue toward little or no government interference in the sugar

[37]Current program-supported domestic price levels average about 21 cents per pound for raw cane sugar. World prices average 9-12 cents. See Robert Barry, "The U.S. and World Sugar Markets in Transition." Paper presented at Fifth Annual Agribusiness Outlook Forum. Piper, Jaffray and Hopwood: New York City, NY. January 23, 1991.

[38]"NAFTA: The Sugar provision and its potential effects. *AgWeek*. Grand Forks, ND. March 8, 1993. p. 15.

industry's privatization.

4. There must be greater efforts by government and industry to direct research and development funding into sugar production.

5. Transportation and infrastructure problems must be solved.

6. Privatization of property and/or changes in the land tenure system must be achieved.

7. An environment conducive to investment must be maintained.[39]

Depending on the likelihood attached to these conditions, the side-agreement negotiations on import surges will seek mechanisms to safeguard domestic U.S. sugar support prices. These include (a) the inclusion of HFCS in the 15-year transition calculations; (b) limiting market access after 6 years; (c) adjusting TRQs to other nations to compensate for Mexican imports; and (d) adjusting other border measures operating outside of NAFTA. As noted above, Minnesota's sugar producers are relatively low-cost and will remain competitive with other U.S. producers under any scenario.

[39]American Farm Bureau Federation. *Study Tour of the Mexican Sugar Industry*. November 15-20, 1992. p. 6.

## IV. WHAT IF NAFTA FAILS?

Much of the debate over NAFTA focuses on the impacts if it passes (with or without side-agreements). Relatively little attention has been given to the opposite question: What if NAFTA fails? From the analysis above, four possible impacts deserve careful consideration.

First, because the impacts of NAFTA are proportionately much greater for Mexico than for the U.S. and Minnesota, failure will also bear much more heavily on the Mexican economy and people. While modest job opportunities for Minnesota will be lost, the employment impacts in Mexico will be far more profound. The government of Mexico has, in effect, staked its future economic vitality on NAFTA. The immediate consequence of its failure will be to derail a process of market-oriented reforms begun in the 1980s, and to discredit export-oriented strategies which depend on greater market access between the U.S. and Mexico. Other Latin American countries are watching the NAFTA process closely, and at least three (Argentina, Chile and Venezuela) are actively pursuing membership in an expanded NAFTA trading area.

The consequences of failure will be counterproductive not only for future economic growth and development in Mexico, but in Latin America generally. Latin America is one of the fastest growing markets for U.S. exports. Together, U.S. exports to Argentina, Chile, Mexico and Venezuela grew by an average of 49 percent between 1985 and 1988.[40] Defeating NAFTA would discourage this process of expansion, lowering standards of living in Latin America and dampening exports to one of the most promising markets for U.S. exporters in the world. In sum, the intermediate term job losses from a defeat of NAFTA are likely to considerably exceed those associated with its passage.

Second, these job and income losses will contribute to greater political and economic instability in Mexico and Latin America, which will in turn provoke additional illegal migration of Mexican and Latin workers to U.S. markets. Half of Mexico's population is under 20 years of age; their future and NAFTA are closely linked. A defeat for NAFTA could cause the U.S. will lose in two ways. Greater political and economic instability in Latin America may lead to unwanted U.S. commitments to restore order, a tradition unpopular at home and reminiscent of "Yankee imperialism" in Latin America. In response, some Latins are likely to seek political or economic refuge north of the border, leading to additional displacement of U.S. workers and strains on government and social services. Others will remain to foment further political upheaval and to radicalize Latin American politics, armed with new evidence.

Third, NAFTA failure will almost certainly end U.S. interest in environmental problems in Mexico; even if an interest persists, both the leverage and the wherewithal to confront these problems will have been lost. NAFTA has been a key in motivating the Mexican government to

[40] U.S. Department of Agriculture. Economic Research Service. *World Agriculture Trends and Indicators* 1961-89. Washington, D.C. 1991.

upgrade its environmental standards; the North American Commission on the Environment (NACE) is one of the most exciting transnational efforts to deal with environmental problems in history. NAFTA's defeat will probably spell the end of such efforts, and the maquiladora sector will remain the environmental trouble spot that it is today.

Fourth, labor standards are unlikely to be addressed either; since wages in Mexico will remain depressed, the incentive to move factories south to Mexico will continue and could even accelerate, since the narrowing of the wage gap predicted under NAFTA will not occur.

Given these consequences of failure, prudence suggests a careful evaluation of the foregone benefits and additional costs of defeating NAFTA, especially if a set of side agreements providing appropriate safeguards can be negotiated.

## V. SUMMARY AND CONCLUSIONS

This study has attempted to respond to four key questions surrounding the debate over NAFTA and its impact on Minnesota. The first question concerns its employment impacts: Will NAFTA cost jobs in Minnesota? The answer appears to be no. The magnitude of employment impacts from NAFTA is small but positive. Many of the gains will be in Minnesota agriculture with some widely distributed benefits in manufacturing and no effect on services employment. If the effect of NAFTA is to lead Mexico into a period of higher sustained growth, the dynamic process of income generation that results could boost demand for trade with Minnesota to levels higher than predicted, with accompanying increases in employment. But taking the most conservative predictions, a range of estimates resulting from various econometric studies suggests job creation from NAFTA over the next decade in Minnesota is likely to be from 400 to 3,500 jobs.

The second question concerns the "side-agreements" under discussion on environmental and labor standards. These are important issues for Minnesotans, and the success of the negotiating process in this area will be key to a final NAFTA package. The North American Commission on the Environment (NACE), and proposals to upgrade labor standards in Mexico, are important steps in the process of integrating the Mexican, U.S. and Canadian economies. It is important to keep in mind that without NAFTA, those issues would not have come to the fore. If NAFTA is defeated, so will be much of the associated effort to raise environmental and labor standards. It is also important to distinguish those who advocate side-agreements because they believe that they must accompany trade liberalization, from those who would use them to defeat a trade agreement, thus defeating their ostensible environmental and labor goals. Most of the major national environmental interest groups have now announced provisional support for NAFTA, if a satisfactory side-agreement and NACE can be negotiated.

A third question concerns the side-agreement discussions over import surges, especially in sugar. There is evidence to support the possibility of such surges; there is also evidence which casts doubt on this possibility. It would appear that safeguards can be found to prevent such surges, in the event that they materialize, without sacrificing the entire NAFTA agreement.

A final question is: What if NAFTA fails? Failure will hurt Mexico's growth prospects far more than those of the U.S. or Minnesota; yet in a larger sense, it may also bring additional and as yet uncalculated costs. Among them is a probable slowdown in the process of economic reforms and growth in Latin America generally, which has been a rapidly growing market for U.S. exporters. Political and economic stagnation in Latin America has traditionally been associated with higher rates of illegal migration and growing political instability, which have imposed costs on U.S. taxpayers for both domestic and foreign programs of intervention. Finally, as noted above, failure would probably end the attention currently given to badly needed reforms in the environmental and labor areas.

For these reasons, the NAFTA "package," including the side-agreements discussed above, is more attractive than the alternative of a failed agreement.

Table 1

Minnesota Employment Effects

| ISIC # | ISIC Sector | Est. 1989 Minnesota Employment | Est. 1989 Employment Distribution For MN - % | Est. 1989 Employment Distribution For US - % | MN - US Local Impact | ***************** Employment Effects - Number of Workers ***************** Scenario A NAFTA Tariff Elimination | Scenario B Tariffs + 25% Expansion of US Import Quota | Scenario C Tariffs + 25% Expansion of Bilateral Quota | Scenario D Tariffs + 10% Capital Flow | Scenario E US-Canada FTA |
|---|---|---|---|---|---|---|---|---|---|---|
| | Tradables | | | | | | | | | |
| 1 | Agriculture, For., & Fish | 99,000 | 4.4 | 2.32 | 2.08 ++ | -67 | -86 | 82 | 498 | 29 |
| 2 | Mining & Quarrying | 7,000 | 0.3 | 0.36 | -0.06 | -67 | -62 | -72 | -91 | -32 |
| 310 | Food, Beverages, & Tobacco | 61,000 | 2.7 | 2.06 | 0.64 + | -6 | -15 | -12 | 44 | -10 |
| 321 | Textiles | 6,000 | 0.25 | 1.13 | -0.88 * | 37 | 34 | 34 | 50 | 35 |
| 322 | Wearing Apparel | 10,000 | 0.45 | 1.01 | -0.56 * | 38 | 21 | 19 | 61 | 31 |
| 323 | Leather Products | 6,000 | 0.26 | 0.72 | -0.46 * | -2 | -2 | -2 | 1 | 0 |
| 324 | Footwear | 1,000 | 0.06 | 0.19 | -0.13 | 0 | 0 | 0 | 2 | 1 |
| 331 | Wood Products | 8,000 | 0.35 | 0.34 | 0.01 | 4 | 4 | 2 | 22 | -2 |
| 332 | Furniture, Fixtures | 11,000 | 0.48 | 0.51 | -0.03 | 14 | 14 | 12 | 17 | 30 |
| 341 | Paper Products | 15,000 | 0.66 | 0.63 | 0.03 | 31 | 30 | 28 | 39 | 32 |
| 342 | Printing, Publishing | 51,000 | 2.24 | 1.78 | 0.46 + | 16 | 16 | 14 | 22 | 12 |
| 35A | Chemicals | 24,000 | 1.06 | 1.36 | -0.3 | 80 | 80 | 78 | 97 | 69 |
| 35B | Petroleum Products | 4,000 | 0.16 | 0.44 | -0.28 | -1 | 0 | -1 | -1 | 0 |
| 355 | Rubber Products | 11,000 | 0.5 | 0.81 | -0.31 | 11 | 11 | 11 | 22 | 2 |
| 36A | Nonmetal Min. Prod. | 5,000 | 0.21 | 0.33 | -0.12 | 5 | 6 | 5 | 7 | 2 |
| 362 | Glass Products | 3,000 | 0.11 | 0.26 | -0.15 | -25 | -26 | -27 | -17 | -41 |
| 371 | Iron, Steel | 5,000 | 0.22 | 0.51 | -0.29 | -2 | -1 | -1 | -4 | -16 |
| 372 | Nonferrous Metals | 7,000 | 0.3 | 0.54 | -0.24 | -71 | -68 | -72 | -142 | -50 |
| 381 | Metal Products | 67,000 | 2.98 | 2.87 | 0.11 | 32 | 34 | 35 | 37 | 9 |
| 382 | Nonelectrical Machinery | 84,000 | 3.75 | 1.88 | 1.87 ++ | 606 | 620 | 614 | 637 | 289 |
| 383 | Electrical Machinery | 38,000 | 1.71 | 1.94 | -0.23 | -249 | -231 | -261 | -564 | 48 |
| 384 | Transport Equipment | 38,000 | 1.71 | 3.37 | -1.66 * | -200 | -198 | -171 | -134 | -249 |
| 38A | Miscellaneous Manufactures | 44,000 | 1.95 | 1.9 | 0.05 | 253 | 257 | 233 | 172 | 228 |
| | Nontradables | | | | | | | | | |
| 4 | Utilities | 17,000 | 0.77 | 1.02 | -0.25 | -1 | 0 | -2 | -8 | -2 |
| 5 | Constuction | 125,000 | 5.56 | 6.37 | -0.81 | 34 | 37 | 33 | 24 | 12 |
| 6 | Wholesale Trade | 501,000 | 22.25 | 20.73 | 1.52 ++ | -4 | 4 | -10 | -48 | -22 |
| 7 | Transportation | 136,000 | 6.03 | 5.43 | 0.6 | 15 | 17 | 13 | -1 | 2 |
| 8 | Financial Services | 201,000 | 8.92 | 9.42 | -0.5 | -29 | -25 | -34 | -50 | -15 |
| 9 | Comm.,Soc., & Pers. Serv. | 668,000 | 29.66 | 29.89 | -0.23 | -55 | -51 | -64 | -58 | -67 |
| | TOTAL | 2,253,000 | 100.0 | 100.0 | | 397 | 420 | 484 | 634 | 325 |

++ Indicates Sector of Much More Importance to MN than to the US.
\+ Indicates Sector of More Importance to MN than to the US.
* Indicates Sector of Less Importance to MN than to the US.

Source: A U.S.-Mexico-Canada Free Trade Agreement: Sectoral Employment Effects and Regional/Occupational Employment Realignments in the United States. Institute of Public Policy Studies, University of Michigan, September 2, 1992. Constructed From Tables A28-A32, pp. 116-144.

Table 2

Change in Minnesota Employment by Occupation

| Occupation | Scenario A NAFTA Tariff Elimination | Scenario B Tariffs + 25% Expansion of US Import Quota | Scenario C Tariffs + 25% Expansion of Bilateral Quota | Scenario D Tariffs +10% Capital Flows | Scenario E U.S. Canada FTA | RANGE of IMPACTS |
|---|---|---|---|---|---|---|
| | ****************** Employment Effects - Number of Workers ****************** | | | | | |
| Executive, Administrative and Managerial | 72 | 77 | 66 | 30 | 52 | 30 - 77 |
| Professional Specialty | 52 | 56 | 49 | 41 | 23 | 23 - 56 |
| Technicians and Related Support | 58 | 62 | 58 | 40 | 41 | 40 - 62 |
| Marketing and Sales | 41 | 38 | 30 | 31 | 28 | 28 - 41 |
| Administrative Support, including Clerical | 93 | 99 | 85 | 50 | 59 | 50 - 99 |
| Service | -4 | -2 | -8 | -13 | -15 | -15 - -2 |
| Agriculture, Forestry, Fishing and Related | -57 | -74 | 78 | 456 | 28 | -74 - 456 |
| Precision Production, Craft, and Repair (skilled) | 56 | 66 | 48 | -9 | 41 | -9 - 66 |
| Operators, Fabricators and labors (semi-/unskilled) | 89 | 98 | 78 | 7 | 68 | 7 - 98 |
| Total | 400 | 420 | 484 | 633 | 325 | |

Source: A U.S.-Mexico-Canada Free Trade Agreement: Sectoral Employment Effects and Regional/Occupational Employment Realignments in the United States. Institute of Public Policy Studies, University of Michigan, September 2, 1992. Constructed from Tables A36-A40, pp. 149-158.

Table 3

Change in Employment by Region and Occupation - Minnesota Very Competitive

| | Scenario A NAFTA Tariff Elimination ( Number of Workers ) | | Scenario D Tariffs + 10% Capital Flows ( Number of Workers ) | |
|---|---|---|---|---|
| Occupation | West North Central States (IA,KS,MN,MO ,NE,ND,SD) | Minnesota | West North Central States (IA,KS,MN,MO ,NE,ND,SD) | Minnesota |
| Executive, Administrative and Managerial | 93 | 72 | -3 | 30 |
| Professional Specialty | -28 | 52 | -36 | 41 |
| Technicians and Related Support | 56 | 58 | 15 | 40 |
| Marketing and Sales | 185 | 41 | 149 | 31 |
| Administrative Support, including Clerical | 71 | 93 | -45 | 50 |
| Service | -59 | -4 | -90 | -13 |
| Agriculture, Forestry, Fishing and Related | -283 | -57 | 2263 | 456 |
| Precision Production, Craft, and Repair (skilled) | 10 | 56 | -160 | -9 |
| Operators, Fabricators and labors (semi-/unskilled) | -62 | 89 | -290 | 7 |
| Total | -17 | 400 | 1803 | 633 |

Source: A U.S.-Mexico-Canada Free Trade Agreement: Sectoral Employment Effects and Regional/Occupational Employment Realignments in the United States. Institute of Public Policy Studies, University of Michigan, September 2, 1992. Constructed from Tables T10,T11,A36,A3.

Table 4

West North Central States (IA,KS,MO,MN,NE,ND,SD) Impacts For Employment

(Thousands of Persons)

| GRADUAL NAFTA CASE* | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|
| Food & Products | 219.6 | 219.9 | 219.2 | 217.8 | 215.8 | 213.9 | 211.9 | 209.9 |
| Textile Mill Products | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 |
| Apparel Products | 35.6 | 34.6 | 33.8 | 32.9 | 31.9 | 31.1 | 30.3 | 29.5 |
| Lumber & Wood | 42.1 | 44.0 | 45.2 | 45.0 | 44.6 | 44.4 | 44.1 | 43.6 |
| Furniture & Fixtures | 25.4 | 26.3 | 26.8 | 26.9 | 26.9 | 26.8 | 26.8 | 26.8 |
| Paper & Products | 55.4 | 55.5 | 55.4 | 55.0 | 54.6 | 54.4 | 54.2 | 53.9 |
| Printing & Publishing | 155.0 | 157.2 | 159.1 | 160.6 | 161.4 | 162.0 | 162.6 | 163.0 |
| Chemical & Products | 57.5 | 57.3 | 56.9 | 56.7 | 56.4 | 56.4 | 56.4 | 56.3 |
| Petroleum & Coal | 5.4 | 5.3 | 5.3 | 5.3 | 5.2 | 5.2 | 5.1 | 5.1 |
| Rubber & Plastics | 33.8 | 34.9 | 36.1 | 36.5 | 37.1 | 37.6 | 38.1 | 38.5 |
| Leather & Products | 11.2 | 9.8 | 8.7 | 8.0 | 7.7 | 7.4 | 7.1 | 6.6 |
| Stone, Clay, & Glass | 34.6 | 35.3 | 36.1 | 36.4 | 36.2 | 36.0 | 35.7 | 35.4 |
| Primary Metals | 31.0 | 31.5 | 32.1 | 32.0 | 31.6 | 31.4 | 31.2 | 30.9 |
| Fabricated Metal | 110.1 | 113.4 | 115.8 | 116.3 | 115.9 | 115.8 | 115.6 | 115.1 |
| Nonelectrical Machinery | 192.1 | 196.6 | 201.6 | 206.4 | 209.4 | 211.9 | 213.2 | 213.4 |
| Electrical Machinery | 99.5 | 98.6 | 99.2 | 99.2 | 99.2 | 99.1 | 98.8 | 98.3 |
| Transportation Equipment | 144.2 | 145.0 | 145.9 | 144.9 | 143.4 | 143.1 | 143.2 | 143.3 |
| Instruments | 51.7 | 52.2 | 52.9 | 53.8 | 54.3 | 54.9 | 55.5 | 56.0 |
| Miscellaneous | 28.7 | 28.3 | 27.8 | 27.4 | 27.0 | 26.6 | 26.3 | 25.9 |
| Sub-Total | 1334.6 | 1347.3 | 1359.5 | 1362.6 | 1360.1 | 1359.4 | 1357.5 | 1352.8 |
| | | | | | | | | |
| Construction | 323.2 | 346.2 | 366.2 | 378.4 | 387.0 | 390.1 | 392.0 | 390.9 |
| Finance, Insurance, RE | 487.3 | 494.7 | 499.7 | 505.6 | 511.1 | 516.1 | 521.0 | 525.6 |
| Trade | 2029.0 | 2085.8 | 2130.8 | 2160.7 | 2184.3 | 2210.7 | 2240.0 | 2270.0 |
| Trans. & Utilities | 464.9 | 467.7 | 469.5 | 470.6 | 470.2 | 470.3 | 470.7 | 470.4 |
| Services | 2169.9 | 2233.0 | 2277.5 | 2318.8 | 2361.6 | 2404.8 | 2446.7 | 2487.8 |
| Mining | 32.8 | 32.8 | 32.3 | 31.6 | 31.2 | 30.8 | 30.6 | 30.4 |
| Sub-Total | 5507.1 | 5660.2 | 5776.0 | 5865.7 | 5945.4 | 6022.8 | 6101.0 | 6175.1 |
| | | | | | | | | |
| TOTAL | 6841.7 | 7007.5 | 7135.5 | 7228.3 | 7305.5 | 7382.2 | 7458.5 | 7527.9 |

Source: The Impact of the North American Free Trade Agreement on the U.S. Regional and Sectoral Labor Market DRI/McGraw Hill, Sept, 1992. Tables 11-36.

*GRADUAL NAFTA CASE assumes that the U.S. and Mexico adapt to a new trading environment. eg. the U.S. Federal Reserve Board partially accommodates the increase in output and prices. The effect is to understate total new job creation in the DRI model. See DRI/McGraw Hill, pp. 20-21.

Table 5

West North Central States (IA,KS,MO,MN,NE,ND,SD) Impacts For Employment

(Thousands of Persons)

| BASELINE* | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|
| Food & Products | 219.5 | 219.7 | 218.9 | 217.2 | 215.4 | 213.6 | 211.7 | 209.8 |
| Textile Mill Products | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 |
| Apparel Products | 35.6 | 34.6 | 33.8 | 32.8 | 32.0 | 31.2 | 30.4 | 29.6 |
| Lumber & Wood | 42.0 | 43.9 | 45.1 | 44.9 | 44.7 | 44.6 | 44.4 | 43.9 |
| Furniture & Fixtures | 25.4 | 26.2 | 26.8 | 26.8 | 26.8 | 26.9 | 26.9 | 26.9 |
| Paper & Products | 55.3 | 55.4 | 55.2 | 54.7 | 54.5 | 54.4 | 54.1 | 53.9 |
| Printing & Publishing | 154.9 | 157.1 | 158.9 | 160.1 | 160.9 | 161.8 | 162.4 | 162.9 |
| Chemical & Products | 57.4 | 57.2 | 56.8 | 56.4 | 56.2 | 56.3 | 56.3 | 56.2 |
| Petroleum & Coal | 5.4 | 5.3 | 5.3 | 5.3 | 5.2 | 5.2 | 5.1 | 5.1 |
| Rubber & Plastics | 33.7 | 34.8 | 35.8 | 36.0 | 36.8 | 37.5 | 38.0 | 38.3 |
| Leather & Products | 11.2 | 9.8 | 8.7 | 8.0 | 7.8 | 7.5 | 7.1 | 6.8 |
| Stone, Clay, & Glass | 34.5 | 35.2 | 35.9 | 36.2 | 36.2 | 36.0 | 35.8 | 35.6 |
| Primary Metals | 30.9 | 31.3 | 31.7 | 31.5 | 31.4 | 31.4 | 31.1 | 30.8 |
| Fabricated Metal | 109.8 | 112.9 | 114.8 | 114.9 | 115.0 | 115.4 | 115.4 | 114.9 |
| Nonelectrical Machinery | 191.4 | 195.3 | 198.2 | 201.6 | 205.5 | 209.1 | 210.9 | 211.1 |
| Electrical Machinery | 99.4 | 98.4 | 98.3 | 97.6 | 98.1 | 98.5 | 98.4 | 98.0 |
| Transportation Equipment | 143.9 | 144.4 | 144.4 | 142.2 | 141.3 | 141.6 | 141.9 | 142.0 |
| Instruments | 51.7 | 52.2 | 52.7 | 53.1 | 53.7 | 54.4 | 55.1 | 55.8 |
| Miscellaneous | 28.7 | 28.3 | 27.7 | 27.2 | 26.9 | 26.6 | 26.3 | 26.0 |
| Sub-Total | 1332.3 | 1343.6 | 1350.6 | 1348.0 | 1349.9 | 1353.4 | 1352.7 | 1348.9 |
| | | | | | | | | |
| Construction | 323.1 | 346.1 | 366.1 | 377.3 | 386.8 | 392.5 | 395.4 | 394.6 |
| Finance, Insurance, RE | 487.2 | 494.9 | 499.8 | 505.4 | 511.2 | 516.7 | 521.8 | 526.6 |
| Trade | 2028.4 | 2084.6 | 2128.5 | 2155.0 | 2181.0 | 2211.7 | 2244.1 | 2274.1 |
| Trans. & Utilities | 464.6 | 467.0 | 468.2 | 468.4 | 468.6 | 469.5 | 470.3 | 470.3 |
| Services | 2169.1 | 2231.7 | 2275.0 | 2313.5 | 2357.6 | 2402.7 | 2445.0 | 2485.6 |
| Mining | 32.7 | 32.7 | 32.2 | 31.4 | 31.1 | 30.8 | 30.6 | 30.4 |
| Sub-Total | 5505.1 | 5657.0 | 5769.8 | 5851.0 | 5936.3 | 6023.9 | 6107.2 | 6181.6 |
| | | | | | | | | |
| TOTAL | 6837.4 | 7000.6 | 7120.4 | 7199.0 | 7286.2 | 7377.3 | 7459.9 | 7530.5 |

Source: The Impact of the North American Free Trade Agreement on the U.S. Regional and Sectoral Labor Market DRI/McGraw Hill, Sept, 1992. Tables 11-36.

*BASELINE assumes no NAFTA agreement, with increases in economic activity and a diminishing federal deficit. See DRI/McGraw Hill, pp. 19-20.

Table 6

West North Central States (IA,KS,MO,MN,NE,ND,SD) Impacts For Employment

(Thousands of Persons)

| GRADUAL - BASELINE | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|
| Food & Products | 0.1 | 0.2 | 0.3 | 0.6 | 0.4 | 0.3 | 0.2 | 0.1 |
| Textile Mill Products | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apparel Products | 0 | 0 | 0 | 0.1 | -0.1 | -0.1 | -0.1 | -0.1 |
| Lumber & Wood | 0.1 | 0.1 | 0.1 | 0.1 | -0.1 | -0.2 | -0.3 | -0.3 |
| Furniture & Fixtures | 0 | 0.1 | 0 | 0.1 | 0.1 | -0.1 | -0.1 | -0.1 |
| Paper & Products | 0.1 | 0.1 | 0.2 | 0.3 | 0.1 | 0 | 0.1 | 0 |
| Printing & Publishing | 0.1 | 0.1 | 0.2 | 0.5 | 0.5 | 0.2 | 0.2 | 0.1 |
| Chemical & Products | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 |
| Petroleum & Coal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rubber & Plastics | 0.1 | 0.1 | 0.3 | 0.5 | 0.3 | 0.1 | 0.1 | 0.2 |
| Leather & Products | 0 | 0 | 0 | 0 | -0.1 | -0.1 | 0 | -0.2 |
| Stone, Clay, & Glass | 0.1 | 0.1 | 0.2 | 0.2 | 0 | 0 | -0.1 | -0.2 |
| Primary Metals | 0.1 | 0.2 | 0.4 | 0.5 | 0.2 | 0 | 0.1 | 0.1 |
| Fabricated Metal | 0.3 | 0.5 | 1 | 1.4 | 0.9 | 0.4 | 0.2 | 0.2 |
| Nonelectrical Machinery | 0.7 | 1.3 | 3.4 | 4.8 | 3.9 | 2.8 | 2.3 | 2.3 |
| Electrical Machinery | 0.1 | 0.2 | 0.9 | 1.6 | 1.1 | 0.6 | 0.4 | 0.3 |
| Transportation Equipment | 0.3 | 0.6 | 1.5 | 2.7 | 2.1 | 1.5 | 1.3 | 1.3 |
| Instruments | 0 | 0 | 0.2 | 0.7 | 0.6 | 0.5 | 0.4 | 0.2 |
| Miscellaneous | 0 | 0 | 0.1 | 0.2 | 0.1 | 0 | 0 | -0.1 |
| Sub-Total | 2.3 | 3.7 | 8.9 | 14.6 | 10.2 | 6 | 4.8 | 3.9 |
| | | | | | | | | |
| Construction | 0.1 | 0.1 | 0.1 | 1.1 | 0.2 | -2.4 | -3.4 | -3.7 |
| Finance, Insurance, RE | 0.1 | -0.2 | -0.1 | 0.2 | -0.1 | -0.6 | -0.8 | -1 |
| Trade | 0.6 | 1.2 | 2.3 | 5.7 | 3.3 | -1 | -4.1 | -4.1 |
| Trans. & Utilities | 0.3 | 0.7 | 1.3 | 2.2 | 1.6 | 0.8 | 0.4 | 0.1 |
| Services | 0.8 | 1.3 | 2.5 | 5.3 | 4 | 2.1 | 1.7 | 2.2 |
| Mining | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0 | 0 | 0 |
| Sub-Total | 2 | 3.2 | 6.2 | 14.7 | 9.1 | -1.1 | -6.2 | -6.5 |
| | | | | | | | | |
| TOTAL | 4.3 | 6.9 | 15.1 | 29.3 | 19.3 | 4.9 | -1.4 | -2.6 |

Source: The Impact of the North American Free Trade Agreement on the U.S. Regional and Sectoral Labor Markets DRI/McGraw Hill, Sept, 1992. Tables 11-36.

Table 7

Impact of NAFTA Scenarios on Total MN Employment

| | (Number of Persons) | | | | |
|---|---|---|---|---|---|
| | 1990 | 1991 | 1992 | 1995 | 2000 |
| Minnesota Base Employment | 2,098,650 | 2,144,820 | 2,196,630 | 2,404,040 | 2,880,660 |
| NAFTA Tariffs Only | 0 | 643 | 1,098 | 2,164 | 2,593 |
| NAFTA Tariffs and Barriers | 0 | 1,072 | 1,757 | 2,885 | 3,457 |

Source: Industrial Effects of a Free Trade Agreement Between Mexico and the USA. Almon, Clopper, et al, U.S. Department of Labor, Washington D.C. September 1990, Chapter VIII-A-1.