Unprecedented Disparities, Unparalleled Adjustment Needs: Winners and Losers on the NAFTA 'Fast Track'

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Abstract: The North American Free Trade Agreement proposed for the U.S., Mexico, and Canada is generally supported by arguments, based primarily in abstract trade theory, that increased efficiency in all three nations, improved allocation of resources, and more rapid economic growth for the combined region will benefit all three countries in the aggregate. In this paper we raise concerns over the distribution of those benefits and the magnitude and incidence of the adjustment costs which each nation will face. The paper illustrates that the magnitude of the disparities among the proposed partners is greater than any disparities that have been associated with prior successful free trade experiences. It notes that the most successful comparable experience, that of the European Community, was facilitated by massive region-wide compensation and adjustment programs designed to ameliorate adjustment costs and compensate for the disparities. But no comparable adjustment programs are contemplated in the NAFTA case. Based on the experiences of Canada during the first three years of its free trade agreement with the U.S., we illustrate the severe dislocation, loss of jobs, and resulting political turmoil that the U.S.-Canadian agreement has wrought.

Then, drawing from a survey of the available empirical estimates of the economic impacts of NAFTA, we characterize the probable "winners" and "losers" and indicate that, in fact, the losers are likely to outnumber the winners by a large factor, even though aggregate benefits may be positive. New information on the strategic planning of the major firms in the textile and garment industries provide harrowing indications of the speed and magnitude of the loss of employment likely under an expedited free trade agreement. And the paper closes with suggestions for concrete alternatives to a 'fast track' to NAFTA, a more reasoned and reasonable process of steady integration of the three economies, reaching a free trade agreement some years in the future, once appropriate programs have been created to ameliorate the negative impacts and lessen the adjustment costs in both nations.

Introduction: The rush to judgement on NAFTA

History will record the almost-frenzied pace with which negotiators from Mexico, the United States, and Canada have proceeded to draft a treaty that will change drastically the nature of economic relations among the three nations. Three nations with severe social and economic problems, declining competitiveness in the global economy, and virtually no plans for remedying their domestic shortcomings have rushed to drop their borders. This act will, ironically, further reduce their ability to provide remedies to their current problems. It casts the three economies into the unpredictable

winds of free trade precisely at a time when conservative policy would have dictated reforms and efforts to resolve major domestic crises.[1]

The most careful and articulate supporters of the proposed free trade agreement base their arguments in the abstract and aggregate theories of international trade. If one ignores the "costs of adjustment," freer trade should, all other things being equal, raise the overall standard of living of each of the trading partners.[2] But formal international trade theory offers little insight into the theoretical distribution of either benefits or costs from freeing trade, especially for economies with marked income disparities, extensive unemployment, and profound social difficulties. And the deeper that one looks into the probable impact of the free trade agreement upon very large industries, major segments of the populations, and whole regions of each, the greater the level of concern with the potential negative impacts.

This paper explores these distributive issues, especially for Mexico and the United States. Who is most likely to gain in each country? Who is most likely to lose? What significance will the magnitude of the disparities among the three partners have for the probable success of the endeavor? Are there comparable experiences from which to draw? If so, what do those experiences suggest.

We begin by comparing the relative disparities between Mexico and the U.S. with the disparities between Portugal and Spain and the rest of the European Economic Community on the eve of their integration into the EEC. On the basis of measures of per capita income, population, and labor supply, we show that the disparities between the U.S. and Mexico are far greater than that experienced by the EEC. U.S. trade officials acknowledge the existence of disparities but have spent

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[1] For further discussion of the competitiveness issue and NAFTA, see M.E. Conroy, "Strategic Global Imperatives and the North American Free Trade Agreement," forthcoming in The United States and Mexico: Economic Growth and Security in a Changing World Order, edited by Bruce Bagley and Sergio Aguayo, Miami: University of Miami Press, 1993.

[2] One of the most comprehensive treatments may be found in Gary Clyde Hufbauer and Jeffrey J. Schott, North American Free Trade: Issues and Recommendations, Washington DC: Institute for International Economics, 1992.

little time crafting adjustment programs to circumvent the worst impacts likely to accompany a NAFTA.

The scale and scope of adjustment programs needed can be gauged, first, through an examination of European adjustment programs. Thus, in section two, we review the EEC adjustment program experience. This analysis illustrates the importance of adjustment programs in mitigating the worst effects of integration and suggests that advanced planning in anticipation of the economic union was important in garnering widespread support for a free trade process. The recent experience of the U.S.-Canadian free trade agreement forms the backdrop of section three. The speed and magnitude of impact experienced by Canada in association with the FTA verifies the need for effective adjustment strategies to counteract the displacement that will accompany a NAFTA.

There have been extensive analyses of potential economywide impacts upon the NAFTA partners, many of which provide evidence, generally little discussed, of the distribution of benefits and costs. Using the empirical results of a wide variety of econometric models designed to gauge the impacts of a NAFTA, we discuss, in section five, the likely winners and losers under the trade agreement. We then expand upon that analysis with a focus on two critical constituencies in the United States that will be seriously impacted by a NAFTA: rural communities throughout the U.S. and the domestic apparel and textile industry. Reviewing the experience of these two groups reveals the need to disaggregate the potential impacts of NAFTA down to the level of people, places and industries. We conclude with a series of recommendations regarding adjustment strategies to mitigate impacts of the pending NAFTA.

I. The Portugal/West Germany Relative Disparity Scenario

The argument that the level of disparity between the United States and Mexico is no greater than that which prevailed between Portugal and West Germany at the time of Portugal's entry into the EEC has been repeated many times, both by the lead negotiator for the United States and by President Salinas de Gortari.[3] Careful scrutiny of the data, however, fail to support the claim.

[3] Response of President Carlos Salinas de Gortari to questions about the proposed NAFTA at the University of Texas in Austin on October 26, 1991.

The best available internationally-comparable data on relative standards of living are the Pennsylvania World Data (Mark 5); they provide data adjusted not only for inflation over time but also for international differences in price levels.[4] The data for disparity in income levels between Mexico and the United States, summarized in table A-1 and figure A-1 of the appendix, show that Mexico increased its relative income from 1960 to 1980, growing from 28% of the U.S. level in the early 1960s to 39.6% at the peak in 1981.[5] Mexico's relative income level then plummeted after 1981, falling to 27.2% of the U.S. level in 1988.

Figure 1 provides an illustration of the comparable relationship between income levels in Portugal and those of West Germany. The data, again in appendix table A-1, indicate that the ratio of Portuguese income levels to those of West Germany were lower than the Mexico/U.S. ratios at the start of the 1960s, but they grew much more rapidly from 1965 to 1975, reaching nearly 43% by 1975. There was, therefore, a moment in 1980 and 1981 when the Mexico/U.S. ratio was very similar to that of Portugal/West Germany. But Portuguese growth after 1983 and the economic crisis in Mexico from 1982 to 1988 created a dramatic divergence. The most that can be said to support the alleged similarity is that if Mexico had entered into a free trade agreement in 1980, at the same time that Portugal joined the EEC, the Mexico/U.S. ratio would have been roughly the same as that of Portugal/West Germany.

The simple comparison of Portugal and West Germany is fundamentally inappropriate in any event. The most important basis for comparison of labor market impacts is the relative size of the populations of the countries being united economically. Portugal had a population of only 10.2 million in 1986, at the time of its accession to the EEC, compared with 61.1 million for West Germany, i.e. it had only 16.7% of the population size. Mexico had 79.6 million at that time,

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[4] See Robert Summers and Alan Heston, "The Penn World Table (Mark 5): An Expanded Set of International Comparisons, 1950-1988," The Quarterly Journal of Economics, (May 1991): 327-368.

[5] The relative levels of Mexican purchasing-power-parity real income per capita as a proportion of that of the United States that emerge from these data are considerably higher than those normally cited, but they reflect the PWD5 adjustment for the lower cost of living in Mexico as measured by United Nations cost-of-living data.

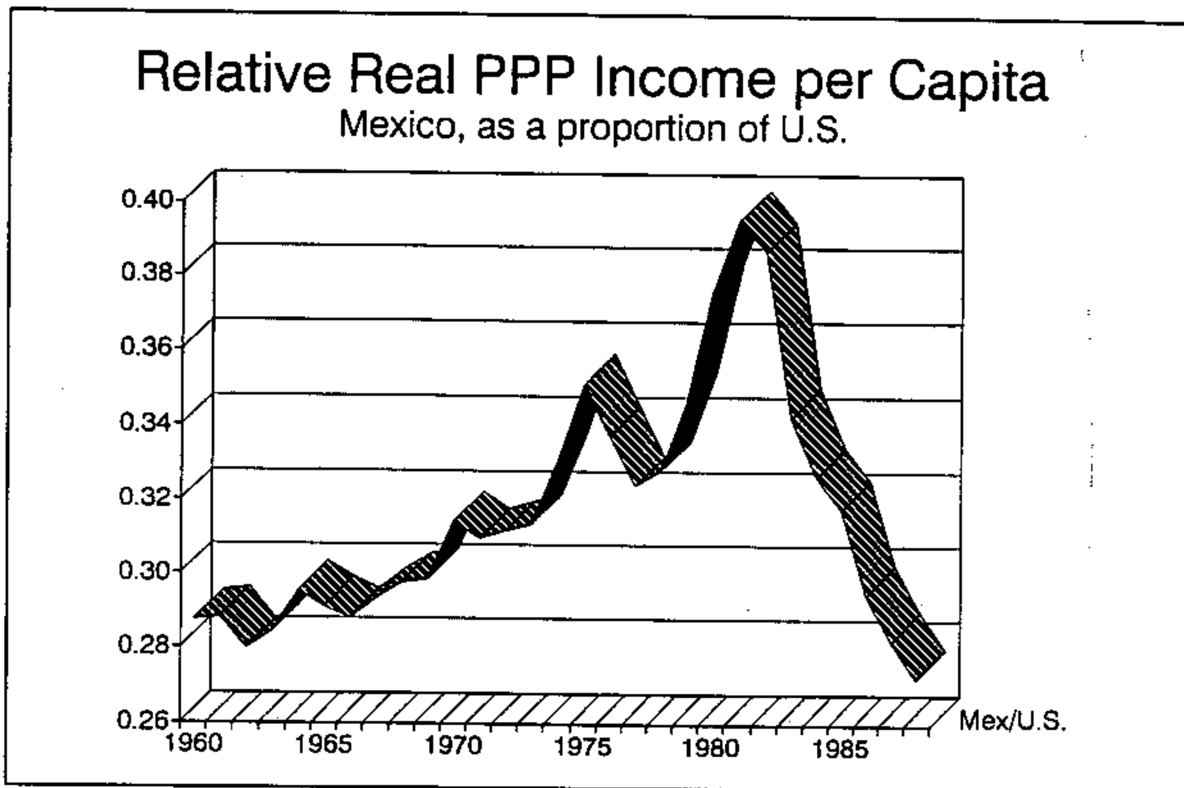

Figure 1

relative to 241.6 million in the U.S.; that is, the Mexican population was closer to 32.4% of that of the U.S.[6] The potential competitive low-wage labor supply in Portugal was only half the relative size of Mexico's vis-a-vis the United States. But that labor market impacts of Portugal cannot be measured solely with respect to West Germany. West Germany constituted only 22.3% of the total 1986 EEC population of 273.8 million, prior to the accession of Portugal.[7] Portuguese population

[6] World Bank, World Tables, 1991.

[7] The other eight nations in the EEC prior to the addition of Spain and Portugal, and their respective 1986 populations, were: Belgium (9.9 million), Denmark (5.1 million), France (55.4 million), Greece (10.0 million), Ireland (3.54 million), Italy (57.2 million), Luxembourg (370 thousand), Netherlands (14.6 million), and United Kingdom (56.8 million).

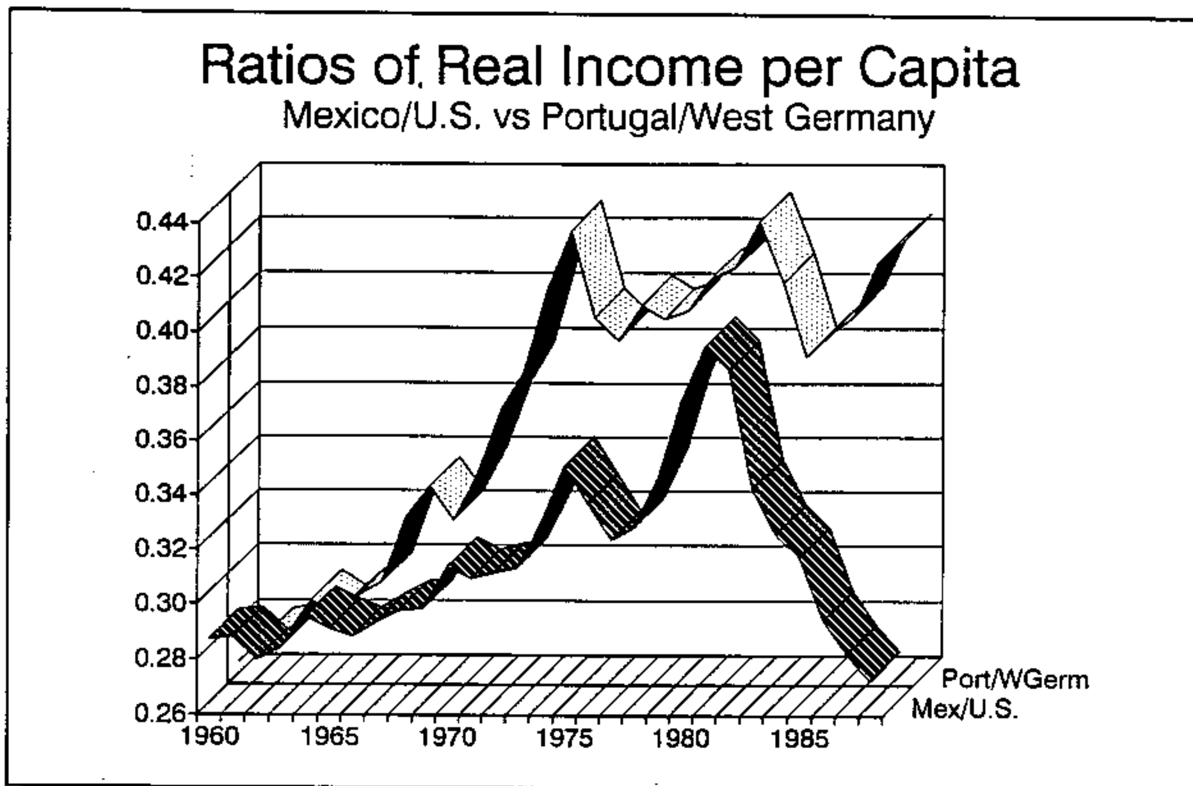

Figure 2

alone was only 3.7% of the prior EEC population, about one-tenth of Mexico's ratio to the U.S.[8]

The relative economic disparity of the combined entry of Spain and Portugal is even less comparable to that of Mexico and the U.S. Figure 2 shows ratios of PPP-adjusted income per capita for Portugal and Spain (combined in population-weighted averages) relative to the four largest EEC nations (West Germany, France, Italy, and the United Kingdom). These four states account for 84.5% of the 1986 population of the EEC. When Portugal and Spain joined the EEC their average income per capita was fully 55% of the level of the four largest nations in the previous grouping; that is more than twice the ratio of Mexico to the U.S. in the latest data available.[9] So the combined

[8] The separate economic impact of Portuguese arrival in the EEC, in terms of new labor market competition for workers in the other countries, cannot be estimated reliably, furthermore, because both Spain and Portugal joined the EEC at the same time. Spain had a population of 38.7 million at that time, so their joint population was nearly 50 million, still only 17.9% of the prior EEC total.

[9] Elimination of Italy from that calculation lowers the ratio of relative income levels by only 1%.

impact of Spain and Portugal; and in relative population terms it would still have been considerably less than that of Mexico vis-a-vis the U.S.

II. The European Compensation and Adjustment Programs

The European experience with programs to generate support for potential economywide gains have seldom been discussed in the context of the NAFTA debate. Yet the size and scale of the European adjustment programs could be reasonable benchmarks for officials in the U.S., Canada and Mexico promoting the NAFTA.

The creation of the European Community has taken many years of lengthy negotiation. More importantly, it has been assisted by (and often conditioned upon) the creation of massive multinational compensation and adjustment funds designed to lessen the negative impacts on those regions, those industries, and those workers most negatively effected.[10] The European Community has consistently allocated sizable sums of community funds to programs designed to assist both regions and individuals who have been harmed by each successive stage of trade liberalization and each increase in the size of the common market. The two most important programs of this sort are the European Regional Development Fund (ERDF) and the European Social Fund (ESF).[11] The total amount of funds allocated for this purpose after Spain and Portugal joined the EEC in 1986 exceeded

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[10] It is to be expected that the structural changes produced by major changes in tariff and non-tariff barriers to trade will create not only regions, but also industries, and segments of the population who benefit greatly; these are the "winners." But it is also to be expected that significant components of each participating nation will be harmed, economically, and will see significant reduction in their wages, employment opportunities, and general welfare. A large proportion of the technical studies conducted to this date acknowledge this fact. For example, one group of authors at the U.S. International Trade Commission NAFTA modeling conference in February 1992, authors who strongly support the proposed free trade agreement and two of whom work for the International Trade Commission, note that results that claim economywide and global increases in efficiency from removal of import tariffs are, in fact, "dictated by theory." But trade policy, they note, responds much more directly to the "dramatic sectoral adjustments and tradeoffs" that generally take place when import protection is removed.

[11] See Willem Molle, The Economics of European Integration: Theory, Practice, Policy, Brookfield MA: Dartmouth Publishing Company, 1990.

$5.4 billion each year (5.5 billion ECU), and those amounts are expected to double after 1992 when the internal markets are completely unified. The creation and expansion of the funds has been a direct and explicit part of the bargaining process between richer and poorer nations in the EC and among voters in richer and poorer regions or industries within individual countries. Yet nothing comparable is even contemplated within the NAFTA negotiations.

The ERDF was created specifically as a program to provide compensating subsidies to stimulate investment and the development of infrastructure in regions designated "EC problem areas." These are largely regions that have below-average wealth levels and above-average unemployment levels, especially those that have been affected negatively at each stage. These regional programs in recent years have been expanded to include 1) aid to the creation of agencies to compile and distribute information on product and process innovation, and 2) direct support to companies in the evaluation of the technical feasibility and marketing prospects of new products and production processes.

From 1975 to 1984 the fund allocated an average of $1.7 billion each year to these activities, heavily favoring the three lowest-income nations among the ten members of that time: Greece, Ireland, and Italy. With the entry of Spain and Portugal, the magnitude of the ERDF was expanded to nearly $3.5 billion per year, with 66% of the funding mandated for the four Mediterranean countries (Greece, Italy, Spain, and Portugal) which contained 36% of the population and produced only 22% of the combined GDP.[12]

The European Social Fund (ESF) was created even earlier (1958) and was designed explicitly to increase efficiency by retraining and assisting in the relocation of workers to take jobs in a new industry "after having been made redundant in an old industry."[13] Although funded at relatively low levels from 1958 to 1972, it grew rapidly as the size and industrial diversity of the EEC grew. By 1982 it amounted to $1.4 billion per year, with 50% allocated regionally-defined retraining programs and the rest to selected industries (such as textiles) and specific classes of workers (women, the

[12] Molle, The Economics of European Integration..., pp. 425-430.

[13] Molle, p.429.

young, migrants, and the handicapped).[14] With the accession of Spain and Portugal, the ESF grew to $2.5 billion per year, focused primarily on the education, training, and initial hiring of young workers, with regional emphasis upon the more distressed regions of Europe.

Many observers have documented the significance of these programs for creating initial political support for more integrated markets.[15] The need for them in the NAFTA environment has also been noted (and the lack of programs of this sort lamented) by pro-NAFTA authors such as Hufbauer and Schott. They note, first, that U.S. expenditures on labor market adjustment programs are lower and benefits are provided for shorter periods than in most other industrialized countries.[16] In fact, they note, total U.S. expenditures on job training is less than one half the level of Canada, Germany, England, and France; and total labor market programs in the U.S. are at one-quarter of the average levels in those countries. Yet, Hufbauer and Schott note, the retraining needed for the more than 100,000 U.S. workers that they (conservatively) expect will be displaced by NAFTA will require "at least $900,000,000" in additional funding.[17] But the Bush administration has eliminated all funding from the 1993 fiscal year budget for the principal program that could be expanded to meet this need, the Trade Adjustment Assistance program, at the same time that it has pushed aggressively for NAFTA.[18]

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[14] D. Collins, The Operations of the European Social Fund, London: Croom, Helm Publishers, 1983.

[15] Cf., for example, Christopher Bliss, "Adjustment, compensation, and factor mobility in integrated markets," José Viñals, et al., "Spain and the 'EC cum 1992' Shock," and Jorge Braga de Macedo, "External liberalization with ambiguous public response: The experience of Portugal," all three in Christopher Bliss and Jorge Braga de Macedo, editors, Unity with Diversity in the European Economy, Cambridge: Cambridge University Press, 1990; and Angel Gomez Fuentes, Así Cambiará España: La Batalla del Mercado Común, Madrid: Plaza & Janes, Editores, 1986.

[16] Hufbauer and Schott, North American Free Trade..., p. 113.

[17] Hufbauer and Schott, North American Free Trade..., p. 340.

[18] In the 1992 fiscal year TAA was funded at barely $200 million. See Donald E. Newquist, chairman of the U.S. International Trade Commission, in "The Trade Pact -- Plus a Tax"; The New York Times, August 12, 1992; p. A15.

III. Canadian experience with free trade: 1989-1991

The Canadian experience with initial stages of the free trade process is distinctly sobering. On the eve of the passage of the U.S.-Canadian Free Trade Agreement (FTA), the Canadian economy was heading into the worst recession since 1982. The FTA could not have occurred at a less opportune time. One of the original architects of the U.S.-Canadian agreement has admitted that "a majority of Canadians believe that the FTA was a bad deal for Canada and many perceive it as a root cause of the country's economic problems [in 1992]."[19] Canada under the free trade agreement has been characterized, in general, by "slumping profits and record corporate and individual bankruptcies, persistent insupportable levels of government deficits, and continued double-digit rates of unemployment, with record losses of jobs in the manufacturing industries..."[20]

Both the magnitude and the rapidity with which the Canadian economy appears to have been affected by free trade with the United States provides further reason for concern. The traceable effects appear to cover three principal areas: loss of manufacturing jobs, unexpected damage to leading innovative services and other industries, and the cumulative impact upon Canadian labor negotiations or, more generally, upon the Canadian social compact.

The evidence with respect to manufacturing employment is dramatic. Canada lost 23.1% of all its manufacturing employment, more than 460,000 jobs, during the first three years after the January 1, 1989, startup of free trade with the United States.[21] Canadian government data indicate that one-third of that loss occurred in 1989, before the recession began to be felt in both Canada and the U.S. Sixty-five percent of those job losses come from permanent plant closings, three times the proportion from plant closings that was felt in the 1981-82 recession.[22] Although there is some

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[19] Gordon Ritchie, "Trade Tempered," Hemisfile 3(July 1992)4: p.1; Ritchie, a Canadian ambassador to the trade negotiations, was one of the principal architects of the FTA between Canada and the U.S.

[20] Gordon Ritchie, "Trade Tempered," p.2.

[21] Bruce Campbell, "Canada Under Siege: Three Years into the Free Trade Era," a report by the Canadian Centre for Policy Alternatives, January 1992, p.1.

[22] Campbell, "Canada Under Siege," p. 2.

evidence that Canadian production costs were rising prior to 1989, the Canadian economy had been creating an average of 325,000 jobs, in all sectors, each year. Continuation of that rate would have generated more than a million new jobs from 1989 to 1991; in fact, Canada experienced a net destruction of more than 100,000 jobs over that period, the first three years under the FTA.

Canadians are convinced that their economic downturn is directly related to the relocation of production to lower-cost sites in the U.S., and they fear that the process will only be worsened as Mexican locations for unrestricted production become available to Canadian, U.S., and other investors. The magnitude of the cost differentials between a Canadian location and a mid-South location in the U.S. is presented in figure 3, together with comparable data for a location in Mexico.[23] Interviews in the press with Canadian companies that have recently relocated to the U.S. because of lower wage rates and generous business incentives simply verify the mobility of Canadian capital in the face of substantially lower operating costs.

Canadian business concern is very high, for it is not simply the peripheral manufacturing industries that were most susceptible to low-wage competition that have suffered. Some of Canada's most productive and most innovative industries have been seriously weakened by less-impeded import competition and by the movement of plants to lower-wage areas in the U.S.[24] Canadian service sector firms that had supported the free trade pact as a way of gaining access to apparently unlimited U.S. markets are finding that the inrush of U.S. service providers is overwhelming them.[25]

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[23] The Toronto-Tennessee data in figure 4 are from The Globe and Mail, November 30, 1991; the Jalisco data have been provided by a major U.S. manufacturer that recently opened a plant there.

[24] Canada's carpet manufacturing industry supplied 92% of the Canadian market in 1988; just three years after the onset of free trade that share had fallen to 64%, and employment in the industry had fallen by almost half, even though tariffs had only fallen from 20% to 16% in the five-year negotiated fadeout [Toronto, The Globe and Mail, 11/26/91].

[25] In the advertising industry, for example, rather than Canadian firms expanding into U.S. markets, the importation of advertising from the giant, dominant firms in New York and Los Angeles is flooding Canadian markets ["Trend to foreign-made adds a severe blow to Canadian firms," The Globe and Mail, January 6, 1992; B1].

Relative Manufacturing Cost Conditions: (1991)	Canada, U.S., Mexico		
	Ontario	Tennessee	Jalisco
Avg. Hourly Mfg. Wage (USD)	15.25	9.76	1.30
Average Hourly Health Costs	0.35	1.34	0.0
Average Acre Industrial R.E.	$120,000	$24,000	$5,000
Maximum Corporate Tax Rate	38.3%	38.0%	10.0%
Maximum Personal Income Tax	48.1%	33.0%	15.0%
Payroll Taxes	2.2%	7.7%	1.3%
Percent of Workers Unionized	36.2%	12.8%	2.1%

Figure 3

The political opposition in Canada, especially the New Democratic Party that has grown rapidly and won several provincial elections on the strength of anti-FTA platforms, is being pressured to call for canceling the FTA.[26] The broader concerns that they raise include a growing recognition that the free trade agreement serves big business as a "lever" to reduce labor standards, guaranteed social services, reducing environmental standards, forcing down corporate taxes, and, ultimately, reducing public spending on social programs, by forcing Canadian workers, unions, and the national and provincial governments to "compete" with non-union, low-tax states in the U.S. and, eventually, with conditions that prevail in Mexico. "To adjust to this new reality," one observer notes, the local and provincial governments "must eliminate many features that make the Canadian economy distinctive, and remove or weaken (in the name of competitiveness) the social services that give expression to values which have defined [Canada] as a more caring society."[27]

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[26] The Globe and Mail, November 26, 1991.

[27] Campbell, "Canada Under Siege...," p. 15.

There is a very real possibility that the negative economic consequences of the U.S./Canadian recession of 1990-92 have become confused with the tangible consequences of the integration of the U.S. and Canadian economies, but popular opinion in Canada in 1992 appears to link the majority of the nation's economic difficulties to the free trade pact.[28] And in the absence of credible evidence that separates the effects of the recession from the effects of the FTA, both Mexico and United States have reason for concern over the short-run and medium-term consequences.

IV. Winners and Losers on the 'Fast Track' to NAFTA

It has not been popular, either in Washington or in Mexico City, to delve into the distributive implications of NAFTA. The International Trade Commission (ITC), in contracting for studies and in publicizing results, has emphasized "economywide" implications, playing down analyses of specific sectors, regions, or classes of workers that might gain or lose. In Mexico, similarly, there has been little attempt to publicize even what is widely known about negative implications.[29] A comprehensive review of the available literature, however, permits the preliminary summary of positive and negative effects, gains and losses, that we produce here. The analysis is summarized in figure 4.

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[28] Canadians have also become greatly distressed with the attitude that the United States has taken with respect to disputes that have arisen under the FTA. According to Gordon Ritchie, a continuing supporter of the agreement, aggressive trade policy actions by the Bush administration have further undermined Canadian support for the pact. According to Ritchie: "The U.S. actions have included continued breaches of the agreement (on plywood), capricious application of the rules of origin (on automotive products), excessive standards of inspection at the border (meat), customs harassment at the border (origin markings on printed products), and an extraordinary (and ultimately unsuccessful) challenge of an FTA panel decision on pork."

[29] See, U.S. International Trade Commission, "Economy-Wide Modeling of the Economic Implications of a FTA with Mexico and a NAFTA with Canada and Mexico," USITC publication 2516, May 1992. This study summarizes the principal contributions to a symposium with the same title, held under USITC auspices on February 24th and 25th, 1992. The principal creators of the sole Mexican general equilibrium model of the impacts of NAFTA developed results that reflect impacts upon each of ten major sectors in the Mexican economy. They have chosen to release only the economywide results, glowingly positive in the long run, because, as they admitted under condition of anonymity, "there will always be major sectors hurt under the structural adjustments that trade liberalization creates, and the Mexican government wants the overall treaty to be approved."

NAFTA: Who Gains? Who Loses?

GAINS	LOSSES
United States	United States
-- workers in certain sectors e.g., high-tech, services e.g., urban areas, west coast	-- workers in certain sectors e.g., low-wage, low-productivity e.g., rural areas, esp. non-farm
-- some farmers e.g., grains, feeds	-- some farmers e.g., dairy, sugar, specialty
-- consumers of imported goods	-- consumers of social services
-- corporate profits esp. large, transnational firms	-- corporate profits esp. small, local, domestic firms
	-- wage levels, in general
Mexico	Mexico
-- workers in certain sectors e.g., low-wage mfg., low prod.	-- workers in certain sectors e.g., previously protected mfg.
-- farmers in specialty exports	-- farmers in basic grains
-- wage levels, in gen'l (maybe)	-- domestic corporate profits
-- consumers of imported goods	-- consumers of exported goods

Figure 4

In the following section we discuss each of the categories of "winners" and "losers" briefly, citing the evidence that exists. We then delve further into two of the biggest groups of probable U.S. "losers" in the process, non-farm rural America in general, and the textile and garment industry in particular. This analysis is intended to clarify further the magnitude of the assistance likely to be needed if the proposed treaty is implemented as appears presently planned. All of the analysis, of

course, whether theoretical and strongly intuitive or backed by sophisticated modeling, has been developed under conditions where analysts have had only vague notions of the concrete dimensions that a negotiated NAFTA might take. Much of the evaluation has assumed that NAFTA will follow patterns set in the U.S./Canada FTA. But there is substantial evidence (based on preliminary versions of the draft agreement) that many sectors, only superficially covered in the earlier FTA, were the subject of intense discussions that resulted in new, very specific language governing their operations. Nonetheless, as negotiators continue almost non-stop discussions about key sticking points there remains no alternative to broad speculation. One of the fundamental advantages to slowing the rush to judgement on NAFTA under the 'Fast Track' process would be to permit adequate time for the creation of more reliable estimates of probable impacts, once the terms of the proposed treaty are clarified.[30]

Likely "Winners" under NAFTA

Winner: Multinational businesses. It is increasingly clear that the unambiguous winners in all three participating countries are also NAFTA's principal supporters: the multinational business communities (or those capable of becoming, or wishing to become, multinational). Despite the global economic difficulties of the Canadian economy, "Canadian business has generally been highly supportive of the NAFTA on the grounds that considerable commercial benefits can be realized by

[30] The technical problems involved in estimating either sectoral or economywide impacts of changes as great as those envisioned under NAFTA are formidable. One must make strong assumptions about rates and patterns of phasing-in; but most of the models to date provide evidence of the overall long-term impact after all changes have been made. One must make strong assumptions about the magnitude of changes in investment patterns, modelling both where the investment will go and where it will come from; but these require understanding of the investment patterns of all three partners to NAFTA as well as all potential alternative investors, including those in Japan and Europe where recent dramatic changes have made such modelling virtually impossible. And none of these estimates can be done credibly without answers to the details on patterns of phase-in, strong assumptions about future macroeconomic policies in all potentially participating nations, and extrapolation of models that must be based on very erratic recent past behavior in the economies of all three NAFTA nations. To paraphrase "Star Trek" language, these models take modeling into realms and regions where modeling has never before ventured! The USITC summary of modeling results also concludes by noting, "...no modeler can predict let alone model the intricacies of the final agreement." [USITC, "Economywide Modeling...," p.15.

Canadian firms," notes Gordon Ritchie.[31] The few U.S. business groups that have raised concerns are those, such as local fruit and vegetable producers, who cannot effectively move their production to Mexico, and small business owners in sectors such as glass. where large U.S.- Mexican joint ventures threaten to dominate the industry.[32] Mexican business sees NAFTA as an enormous opportunity, despite the concerns that many of the nation's previously heavily protected businesses will not weather the storm of increased competition.[33]

Two of the USITC studies confirm the implications of liberalization for previously-protected domestic industries when faced with increased imperfect competition dominated by multinational firms under NAFTA. In one case, much of the gains in efficiency for the combined region comes from the economies of scale embodied in a smaller number of firms, each producing at a larger scale.[34] In another study examining motor vehicle industry, where much of the benefits accrue to multinational producers who ship components under free trade but restrict full competition, the benefits to consumers are limited and the disappearance of a large proportion of local (non-multinational) producers is expected in theory and found in simulation results.[35]

Winner: High-tech sectors in the United States. There is virtual unanimity among the studies available to date to suggest that certain industries in the United States should benefit significantly. These are the industries that share the following characteristics: a) they employ high-skilled workers, b) they produce sophisticated products in short production runs, and c) they have high research and

[31] Ritchie, "Trade Tempered," p.2.

[32] GAO, "U.S.-Mexico Trade: Impact of Liberalization in the Agricultural Sector," GAO/NSTAD-91-155, pp.39-50.

[33] Hispanic Business...

[34] Horacio E. Sobarzo, "A General Equilibrium Analysis of the Gains from Trade for the Mexican Economy of a North American Free Trade Agreement," Addendum Paper #11 in USITC, "Economy-wide Modeling..."

[35] Linda Hunter, James R. Markusen, and Thomas F. Rutherford, "Trade Liberalization in a Multinational-Dominated Industry: A Theoretical and Applied General Equilibrium Analysis," Addendum Paper #5, in USITC, Economy-Wide Modeling...

development components. The aircraft and aerospace industry, optical instruments, heavy transportation equipment, and capital goods industries share these characteristics. They also extend to biotechnology, computer software (at most levels), and research and development phases of many industries.

The very earliest of the attempts to quantify and distribute gains and losses from the proposed NAFTA provided evidence to support this expectation. The U.S. Council of the Mexico-U.S. Business Committee hired the Peat-Marwick accounting firm to estimate global gains and losses and to distribute them across 44 sectors in both countries.[36] The Peat-Marwick (Bachrach-Mizrahi) report indicated that the biggest winners in the U.S. would include the sectors noted above, plus finished autos, rubber and plastic products, and food products. The research staff of the Office of the Comptroller for the State of Texas, a group that has been heavily focused on potential NAFTA impacts -- for obvious reasons, also concluded that electronics, computers, industrial machinery, and high tech services would be among the sectors most benefitted by NAFTA.[37]

Winner: Labor-intensive manufacturing in Mexico. The obvious comparative advantage of a very large country with ample supply of low-wage workers is in those industries for which labor-intensive processes are presently dominant. All available studies support the notion that the apparel and textile industries will be the biggest "winner" in this category.[38] But there are also studies that

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[36] U.S. Council of the Mexico-U.S. Business Committee, "Analysis of the Economic Effects of a Free Trade Area between the United States and Mexico," February 27, 1991. This report has been played down by subsequent analysts, partly because the full structure of the model wasn't revealed until the USITC symposium; it is now available under Carlos Bachrach and Lorris Mizrahi, "The Economic Impact of A Free Trade Agreement Between the United States and Mexico: A CGE Analysis," Addendum paper #2 to USITC, "Economy-wide Modeling..." (May 1992).

[37] Office of the Comptroller, State of Texas, Special Financial Report: "The U.S.-Mexico Free Trade Pact: Payoffs and Tradeoffs," November 1991, p.7.

[38] U.S. Council of the U.S.-Mexico Business Committee, "Analysis of Economic Effects...," p.18; David Roland-Holst, Kenneth A. Reinert, and Clinton R. Shiells, "North American Trade Liberalization...," Appendix tables 5.4 and 5.7; Clinton R. Shiells and Robert C. Shelburne, "A Summary of 'Industrial Effects of a Free Trade Agreement Between Mexico and the U.S.A.," by the Interindustry Economic Research Fund, Inc.," USITC symposium paper, p.2.

suggest that manufacture of automobile components, electronic components, computer equipment, and a wide range of appliances will also be a winner for Mexico.[39]

Winners: Some agricultural sectors in the U.S., Canada, and Mexico. Certain portions of U.S. and Canadian agricultural production are expected to benefit very greatly. The Great Plains producers of corn, grain sorghum, and soybeans have historically been hindered in their access to Mexican markets by Mexican subsidies to local basic grains production. Nevertheless, exports of just those three products from the U.S. to Mexico accounted for fully 36% if all U.S. agricultural exports to Mexico in 1989, a total of nearly $3 billion.[40] Elimination of Mexican subsidies and other tariff barriers are expected to expand these exports greatly, for the price-competitiveness of U.S. and Canadian production is very high. Deciduous fruit producers also expect greatly expanded exports to Mexico.[41]

The two most important agricultural "winners" in Mexico are expected to be the sugar industry and producers of fruits and vegetables. Although some had argued that there was more complementarity between U.S. and Mexican fruit and vegetable production, a G.A.O study confirmed that for some of the most important U.S. vegetable and fruit crops, e.g., tomatoes, cucumbers, bell peppers, melons, and strawberries, direct competition was common and Mexican exports could be expected to expand under NAFTA. Tariffs on Mexican imports of these products are the highest agricultural tariffs in the U.S., approaching 20% ad valorem, even though in some cases they are restricted to specific competing seasons. Nonetheless, there is substantial concern among producers in three key U.S. areas (California, Texas, and Florida) that local production of these products will be severely impacted.[42]

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[39] See, for example, Bachrach and Mizrahi, "The Economic Impact..."; Roland-Holst, et al., "North American Trade Liberalization..."; and Sobarzo, "A General Equilibrium Analysis..."

[40] G.A.O., "U.S.-Mexico Trade...," p.24.

[41] GAO, "U.S.-Mexico Trade...," p.43.

[42] U.S. General Accounting Office, "U.S.-Mexico Trade: Extent to Which Mexican Horticultural Exports Complement U.S. Production," GAO/NSIAD-91-94BR (March 1991).

Sugar is the agricultural and ag-processing industry widely expected to gain the greatest advantage in Mexico. U.S. sugar production has been highly-subsidized and highly-protected for more than a generation. Peat-Marwick estimates of the expansion of sugar production in Mexico exceed 32%, with declines in U.S. production and employment that are the highest of any sector, although much smaller (because of scales of production) than those of Mexico.[43]

Likely "Losers" under NAFTA

It is not necessary that "winners" as discussed above will be matched directly and completely with "losers" in the other countries, for expansion in production for the Rest-of-the-World is also possible. Practically speaking, however, sectoral and regional modeling has been able to suggest little about the realistic nature of future gains, under NAFTA, with respect to global competitiveness. For practical purposes, therefore, most of the "winners" above will be matched by "losers" in the other countries. The matching and correspondence of winners and losers is laid out in figure 5. The single largest areas of negative impact in both the U.S. and Mexico is likely to be rural areas. In Mexico this fact is based on the impacts of NAFTA on subsistence production of basic grains. In the United States it is related to the concentration of low-wage, low-productivity jobs as non-farm employment in rural America.

Loser: Mexican basic grain producers. Two World Bank researchers have drawn critical attention to the potential implications of NAFTA for rural Mexico and, in particular, to the vast population of small-scale basic grains producers. Mexican basic grains producers have benefitted from import quotas that effectively raised their prices some 70% above prevailing world prices.[44] Nevertheless, this has barely been adequate to sustain hundreds of thousands of farmers on the land. Elimination of that protection, the resulting massive imports of grains from the U.S., and the decline

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[43] U.S. Council, "Analysis of Economic Effects...," Tables 10 and 11.

[44] See Santiago Levy and Sweder van Wijnbergen, "Transition Problems in Economic Reform: Agriculture in the Mexico-U.S. Free Trade Agreement," Addendum Paper #7, and Sherman Robinson, et al., "Agricultural Policies and Migration in a U.S.-Mexico Free Trade Area: A Computible General Equilibrium Analysis," Addendum Paper #9, in USITC, Economy-wide Modeling...

in Mexican prices for grains are expected to generate massive migration from rural to urban areas of Mexico and, according to some analysts, dramatic increases in migration from Mexico to the United States.[45]

Surprise Loser: Wages in Mexico. There is widespread expectation that wage levels will rise in Mexico as a result of the NAFTA. This would seem to be certain for some portions of the labor force, especially the better-educated or better-trained workers. But the magnitude of the increase in wages for the majority of Mexican workers (or even for urban workers overall), if any, will depend upon the impacts of the full range of sectoral changes. There are two studies that provide evidence that net changes in Mexican urban wages may be negative, rather than positive. Both, a Berkeley-based analysis and a World Bank study, factor the impact upon basic grain production in Mexico under trade liberalization into the overall wage picture. Both studies, discussed in greater detail below under "losses" in Mexican agriculture, note that the dependence of a very large proportion of Mexico's rural labor force on the production of basic grains implies that rapidly falling prices under free trade in grains, as is expected, will generate very large flows out of Mexican rural areas, into the cities. Falling wages, rather than rising wages, are a plausible result of their simulations.[46]

V. The U.S. textile and apparel industries

The textile and apparel industries are two of the largest manufacturing industries in the U.S. In 1989 the textile mill sector employed 726.1 thousand workers and the apparel industry employed 1,091.5 thousand workers.[47] The industries are important sources of employment for women (who

[45] Simple elimination of Mexican tariffs and subsidies to grain production may account for one-time shifts of from 500,000 to 700,000 workers from rural to urban areas, and declines in both rural land values and wages nationwide. More complicated scenarios, involving reciprocal elimination of U.S. protection on farm products from Mexico and massive re-investment in Mexican agriculture, lessen these impacts. But there are no scenarios consistent with full and simple free trade that generate improvements in the standard of living of Mexico's poorest farmers.

[46] Levy and van Wijnbergen, "Transition problems...", p.2. See also Robinson, et al., "Agricultural Policies and Migration..."

[47] The statistics cited in this paragraph are drawn from Stephen Herzenberg, 1992. Unpublished Department of Labor report.

comprise 76 percent of the apparel work force and 46 percent of the textile workforce) and minorities (Blacks: 25 percent in textiles, 15 percent in apparel; Hispanics: 4 percent in textiles and 21 percent in apparel, respectively (Herzenberg 1992). Overall, the two industries employ workers with below average levels of educational qualifications than other sectors (39 percent of textiles and 44 percent of apparel workers had not completed a high school education). This compares with 21 percent for manufacturing as a whole and 16 percent for all sectors.

The implementation of NAFTA, as presently anticipated, will introduce a profound change in the fundamental structure of the apparel and textile complex. The only detailed government-sponsored study of NAFTA impacts on the apparel industry is being produced by the Office of Technology Assessment at the direction of the Congress. The study focuses on the competitive potential of the Mexican apparel and textile industry. The contracted author, Thomas Bailey of Columbia's Teaching College, concludes that there will be little competitive threat presented by Mexico's apparel or textile industries. According to Bailey, and others, both Mexican industries are inefficient and small in scale. As presently configured, the OTA study is largely correct. But the analysis is misdirected, for it does not take into account the strategy of U.S. firms planning to take advantage of the significant wage-cost differences (currently about 10-to-1) between Mexico and the United States among garment and textile workers.

There are three principle means by which a NAFTA will influence domestic textile and apparel producers: elimination of the requirements to cut and finish material in the U.S.; creation of surplus capacity with the opening of new facilities to service the Mexican market; attraction of foreign producers to Canada and Mexico to gain access to the U.S. market.

Perhaps the biggest impact of a NAFTA will be the reduction in the glue binding the textile apparel complex together in the U.S. If firms are no longer restricted to assembly tasks in Mexico, in order to qualify for reduced tariffs quota free imports, and are allowed to undertake all phases of apparel production and finishing operations in Mexico, such phases as cutting and finishing will follow

apparel production southward.[48] Large textile producers already acknowledge that with the passage of a NAFTA, they will move pre- and post-assembly operations to Mexico to be closer to their customers.[49] Other firms indicate that NAFTA investment guarantees make attractive larger capital investments in the more sophisticated ends of the industry such as spinning and weaving.

A secondary impact of a NAFTA will arise as firms establish production operations in Mexico to serve the Mexican market. Given the substantial wages differences within the NAFTA region, U.S. firms will be forced to produce in Mexico in order to effectively compete for Mexican market share. As U.S. firms establish new capital intensive facilities this will place cost pressure on existing domestic operations. According to corporate interviews, new facilities will be much larger than the traditional plants in the U.S. At least one company official, in a large apparel firm, indicated that while in the past modernization was accomplished thorough growth, future planned investments in Mexico will generate surplus production capacity and lead to job loss in existing U.S. plants.[50]

Finally, the passage of a NAFTA will virtually force many Far East producers to establish operations within the region. Already the largest foreign investor in Caribbean Basin countries is Korean textile and apparel firms.[51] Foreign producers will be attracted to Mexico to gain access to the American and the Mexican market. Given the very low cost of Far Eastern textiles, firms are likely to set up assembly and finishing operations using cheap Mexican labor to assemble products manufactured with very low cost Asian textiles.[52] While foreign producers using cheap Asian textiles

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[48] Interview with Naomi Freeman, negotiator, Textile and apparel office, U.S. Department of Commerce.

[49] Interview with Juda Mandelbaum, Export-import representative of apparel and textile producers 1992.

[50] Interview with a major industry representative, 1992.

[51] Interview with Dennis Rudy, director of office of textiles and apparel research, International Trade Commission, 1992.

[52] Under NAFTA the benefits of 807a will be diminished as quotas are eliminated (Freeman 1992).

will still initially have to pay tariffs to import goods assembled of Asian fabric into the U.S., the cost differential between U.S. and Chinese or Indian textiles far exceeds the potential impact of tariffs.

Textile and garment industry representatives suggest that a NAFTA will lead to serious restructuring of their industries. Experts involved in the development of new technologies for both industries concede that a NAFTA could result in a loss of half the total employment in the apparel industry in the first five years after NAFTA.[53] U.S. textile industry representatives have also suggested that the Canadian apparel industry will be particularly hard hit given wage rate differences between Mexico and Canada.[54] Textile company spokesmen suggest that the initial impact on textiles will be small, but over time there is likely to be a bandwagon effect as textile producers relocate in mass after apparel producers move to Mexico.[55] Some textile firms with heavy investments in the U.S. fear competitors with low overhead will take advantage of opportunities presented under NAFTA and grab market share from the more vertically integrated firms.

VI. Rural America

Although the negotiating team for the U.S. in the NAFTA talks has included representatives of virtually every "industry" and some who were concerned with the environment were added late in the process, one can legitimately ask who spoke for rural America in the negotiations? Rural America may carry the principal burden of adjustment under NAFTA. Yet there are neither safeguards nor adequate remedies in place to protect rural communities from a potentially devastating impact.

Free trade with Mexico and Canada will probably mean increased exports of agricultural commodities, especially basic grains. But agriculture today provides only a fraction, less than ten percent, of all rural jobs. For decades, manufacturing firms have located new branch plants in places like rural Georgia and Texas. Plants producing textiles, auto parts, and consumer electronics were

[53] Interview with Joseph Off, Director of the Apparel and Textile Technology Institute, Raleigh North Carolina, 1992.

[54] Interview with George Wine, Senior economist, the American Textile Manufacturers Institute, 1992.

[55] Interview with Jerry Cogan, President of Milliken Research Corporation, 1992.

moved to rural areas to take advantage of lower wages, less unionization, friendlier tax-abating local governments, and other contributions to lower costs. For many rural towns, a single branch plant provides a majority of jobs. Plant closures in such cases will destroy the livelihood of entire rural communities.

The decade of the 1980s left rural communities weakened. The 1982 recession accelerated their loss of college educated people. Net out migration of college graduates averaged two percent per year between 1986 and 1989.[56] Department of Agriculture data show that the skill levels of new rural manufacturing jobs declined by 50 percent in key areas such as data handling, verbal aptitude, and GED requirements.[57] In addition, studies have shown that for rural areas, the historic link between education and employment and earnings growth has considerably eroded.[58]

According to the USDA, rural America now has about 50 percent of the nation's low-skilled, low-wage manufacturing jobs. Only 59 percent of rural workers have finished high school, compared with 69 percent in urban areas. More worrisome, only 11.5 percent of today's rural workers in the U.S. have completed college, compared with 18 percent in urban areas.[59] And disparities in levels of educational attainment between urban and rural areas, once converging, now appear to be widening, according to some measures.
Thus anticipated winners under a NAFTA will primarily be urban workers with high levels of education and with positions in the nation's high tech industries.

To illustrate likely impacts of NAFTA on the nation's rural communities we review the geography of the apparel and textile industry. As we showed in the previous section, the industry is a major employer of women and minorities and of workers with less than a high school education.

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[56] Oral presentation by David McGranahan, Economic Research U.S. Department of Agriculture, 1992.

[57] Texiera, Rudy. 1992. U.S. Department of Agriculture, Economic Research Service, 1992.

[58] McGranahan, ERS, 1992.

[59] Mcgranahan, ERS. 1992.

Both industries decentralized out of the nation's industrial heartland starting at the beginning of this century. For many rural communities in the South the textile or apparel plant is the primary employment and it has been that way for decades. And while there are urban concentrations of textile and apparel employment, (concentrations in New York and Los Angeles), the bulk of employment in both industries is concentrated in rural areas of the Northeast and South Atlantic states. Thus any shifts in industry employment will dramatically impact rural areas in a region which has retained its early status as the nation's low wage region.

According to U.S.D.A. estimates, 48 percent of the nation's textile employment is concentrated in non-metropolitan counties.[60] Eighty-three percent of this employment was concentrated in five states, Virginia, North and South Carolina, Georgia and Alabama. Urban and rural areas in these five states account for sixty-nine percent of the nation's textile employment. This level of geographic concentration is only surpassed by the auto industry concentration in the Midwest. The apparel industry is slightly more urban than textiles. Approximately 36 percent of U.S. apparel employment is concentrated in rural areas. Like textiles, 48 percent of this rural employment is concentrated in just five states. There are also approximately 150,000 apparel and textile workers in rural border counties.

Even the most efficient rural operations of multinational apparel producers, such as Levi-Strauss, acknowledge that there is very little competitive basis for a national or a rural apparel industry in the face of a NAFTA.[61] Industry programs such as "quick response" designed to shorten the time between sales, production and stocking, were developed to counteract the cost advantages of Far Eastern production. By eliminating time in process and therefore decreasing losses associated with misspecified stocking levels, firms are expected to experience a 25 percent increase in sales. But these programs can just as easily be operated out of Mexico. As one multinational apparel firm executive noted, "our recent investments in our Mexican and Caribbean operations include the most

[60] John Redmund, Unpublished manuscript on the implications of the NAFTA on rural America, 1992.

[61] Interview with Levi's branch plant manager, Ron Lucas, Warsaw, virginia, 1992.

advanced technologies available. We are incorporating modular construction with quick response capabilities. There is simply no other way to compete.[62]"

Rural communities with heavy concentrations of textile and apparel firms are only the most graphic example of likely losers to the NAFTA. Other industries such as food processing, furniture, auto parts and consumer electronics are also largely rural industries that will experience the pressure of much lower Mexican wages. These industries came originally to rural America because wages were lower, regulations less stringent and the cost of doing business less onerous. Now, like others before them, rural communities are being forced to compete with low wage regions that far surpass the conditions that can be provided in the U.S. Without adjustment policies, while major areas and large proportions of the nation's workforce will find it very difficult to compete in an increasingly global economy. Without mitigation strategies, people will be forced to migrate to the cities or in some cases attempt to eke out a marginal existence in the nation's peripheral regions.

VII. Alternatives to the NAFTA 'Fast Track'

Trade liberalization between the U.S., Canada and Mexico is both inevitable and inexorable. The theoretical benefits of económic integration are substantial. But what price are the three nations willing to pay for NAFTA on the 'Fast Track,' which virtually guarantees the elimination of the time needed to allow the adjustment process to catch up with economic trade theory?

Without tangible, concerted, pro-active assistance, rural and less-skilled workers in the U.S. (and displaced workers in all three nations) will face great difficulty in making the transition to the new high-skill economy. President Bush promised to use the Trade Readjustment Act (TRA) and the Job Training Partnership Act (JTPA) as the bases for assistance to communities affected by the Free Trade Agreement (before proposing the elimination of TRA). But these are decidedly urban-oriented, short-term, and reactive labor market programs. The TRA comes into play only after it can be demonstrated that a business has been harmed by unfair trade practices. The JTPA's dislocated worker program provides retraining assistance only after a plant's owners have made and announced

[62] Interview with Warnaco branch plant manager, Millen, Georgia, 1992.

the decision to close it. For what do we train the workers in rural communities whose only source of employment has been allowed to shut down?

If the NAFTA nations wish to create a long-lasting, ultimately harmonious, and mutually-beneficial improvement in trade and mutual development, there are several concrete steps that can be taken:

A. All three countries can recognize that it will be virtually impossible to create the benefits that the European Community enjoys from its economic integration without long periods, and slow processes, of careful, open negotiation and debate on the form and substance of the steps to be taken to bring the nations closer together. NAFTA should be moved to a "side-track" until that process can be created.

B. The inevitable adjustment costs to all three nations will be deeper, more painful, and more dangerous to the overall integration effort if they are born "without anesthesia" in the form of well-planned, carefully-created, and fully-funded multilateral (and national) programs for job retraining, regional impact alleviation, subsidies to labor mobility, and other transitional programs. To ignore the critical role that such programs have played in Europe and to deny that there will be comparable need under the greater disparities of NAFTA constitutes wanton disregard for the future of the NAFTA process itself, and an imminent danger to the successful continuation of the process.

C. The magnitude of the adjustment cost needs will only be fully realized when the careening process of liberalization and integration has had some time to stabilize. Deliberation and delay, continued negotiation, and movement toward an <u>ultimate</u> objective of NAFTA, within five to ten years, will permit the citizens of each of the participant nations to sense and to assess the costs and benefits and to make the kind of measured decision toward further integration that is only now, 24 years after the onset of the European Common Market, sweeping across most of Europe.

Appendix Table 1.
Ratios of Relative Real Income per Capita
[PPP-adjusted, population-weighted]

	MEX/ USA	POR/ W.GER	POR & SPN/ W.GER, FRA, and UK	POR & SPN/ W.GER, FRA, UK and ITA
1960	0.287	0.268	0.413	0.442
1961	0.288	0.277	0.451	0.478
1962	0.280	0.278	0.481	0.506
1963	0.284	0.291	0.507	0.530
1964	0.296	0.285	0.501	0.530
1965	0.291	0.293	0.526	0.560
1966	0.288	0.298	0.550	0.582
1967	0.293	0.321	0.557	0.582
1968	0.298	0.333	0.555	0.581
1969	0.299	0.320	0.564	0.589
1970	0.314	0.337	0.562	0.587
1971	0.310	0.361	0.571	0.598
1972	0.312	0.375	0.595	0.624
1973	0.314	0.406	0.611	0.638
1974	0.331	0.427	0.638	0.660
1975	0.351	0.395	0.632	0.657
1976	0.338	0.387	0.616	0.637
1977	0.324	0.400	0.610	0.630
1978	0.328	0.394	0.590	0.609
1979	0.347	0.398	0.570	0.585
1980	0.376	0.409	0.574	0.583
1981	0.396	0.413	0.568	0.575
1982	0.387	0.430	0.566	0.574
1983	0.343	0.408	0.555	0.564
1984	0.326	0.381	0.542	0.549
1985	0.318	0.389	0.537	0.545
1986	0.295	0.396	0.545	0.552
1987	0.282	0.415	0.563	0.569
1988	0.272	0.422	0.569	0.575

Source: Calculated from Pennsylvania World Tables – Mark 5

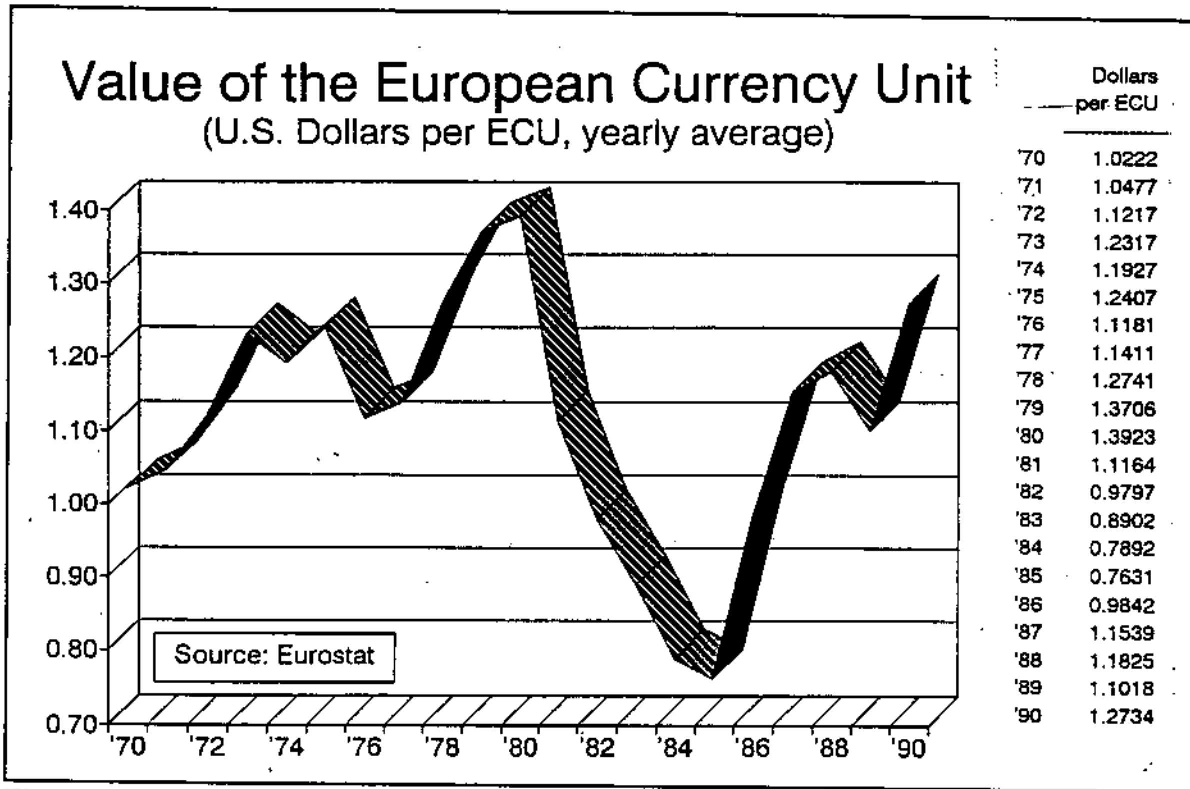

Figure A-1