THE UNITED STATES INSERTION IN THE WORLD ECONOMY AND THE NORTH AMERICAN FREE TRADE AREA

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(Resumen)

En este ensayo se analizan los orígenes, el desarrollo y el impacto económico del Acuerdo de Libre Comercio de América del Norte (NAFTA) sobre las economías de los países que integran este bloque regional. Se presta especial atención al estudio de los efectos del tratado de libre comercio sobre la economía de la región fronteriza entre México y Estados Unidos -fundamentalmente sobre el sector de maquiladoras-, y al análisis de sus consecuencias medioambientales. El estudio presenta al NAFTA como una pieza clave en la estrategia de inserción de la economía de Estados Unidos en la economía mundial, y muestra que la expansión del comercio y de la inversión generados por la apertura comercial traerá consigo significativas ganancias de bienestar para el conjunto del bloque regional. Sin embargo, la distribución de estas ganancias de bienestar entre las distintas regiones y sectores económicos será muy desigual si no se arbitran las políticas correctoras adecuadas.

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Introduction

For much of this century international trade of goods and services -the sum of imports and exports- was less than 10 per cent of US gross domestic product (GDP). Only twenty years ago the US economy could be adequately characterized as an almost closed economy. But in the last two decades that figure grew closer to 20 per cent of GDP. In the 1980s the sum of exported and imported goods rose from 55 per cent of US manufacturing output to 82 per cent. However, even with a more integrated world economy than ever before, about 87 per cent of the goods and services consumed in the US are still produced domestically. The progressive US insertion in the world economy meant that imports began to displace low-skilled workers or depress their wages in labor-intensive industries such as textile, electronics and auto parts.

During the 1980s an average of 350,000 less skilled immigrants entered the US each year. The dollar suffered a strong real appreciation during the first half of the decade, following the *Reaganomics* policy mix of fiscal expansion and monetary contraction, and the soaring imports eliminated factory jobs.[1] The factory workers displaced by trade were competing in service industries. The real wage and benefits of US factory workers fell 6 per cent, and Germany factory compensation surpassed US levels, after inflation and exchange rate adjustments, for the first time in recent history. In many other European countries and Japan factory pay also grew above the US average. The potential losers from more free trade in the US scene are the 64 million workers who never went beyond high school. Since 1979, real wages for high school dropouts have fallen by 20 per cent. By contrast, free trade has benefitted the 54 million workers who finished college. Their real income grew by 8 per cent during that time. Thus, it seems that the US is developing a pattern of income inequality caused, at least in part, by the current pattern of trade liberalization.

In 1986 the US had a current-account deficit of 3.5 per cent of GDP. By 1991 the deficit was almost back in balance. But by 1992 the trade deficit soared again, jumping to an annual rate of about $90 billion, up from $65 billion for 1991. The main reason was a 10 per cent increase in imports in 1992, following an increase of less than 3 per cent in the five previous years. The implied current-account deficit widen again last year to around 1 per cent of GDP.

In this context the emergence of a North American Free Trade Agreement (NAFTA) has been seen for some observers as an accord that is more likely to harm than help the overwhelming majority of workers in the US economy.[2] The main concern

[1] After adjusting for changes in family size, the real income before taxes of the average family in the top 10 % of the population rose by 21 % from 1979 to 1987, while that of the bottom 10 % fell by 12 %. The fraction of U.S. citizens who are "rich", in terms of a constant standard, nearly doubled in that period, even while the fraction of families defined by the U.S. government as living in poverty simultaneously increased by 15 %. According to Krugman (1990) "one sees a picture of simultaneous growth in wealth and poverty unprecedented in the twentieth century," 20.

[2] See, for example, Koechlin and Larudee (1992). Slow productivity growth is, however, the single most important factor affecting the U.S. economy. However, as Krugman (1990) puts it, this "is not a policy issue, because we are not going to do anything about it," 17.

is that more free trade would cost less-skilled jobs in the near future. Other analysts have pointed out that the treaty is too much silent on the critical issues of labor standards, workers' rights and environmental, health and safety stipulations. On this view the Bush-Salinas blueprint for economic integration promotes *social dumping*.[3] US multinationals would transfer operations to Mexico not only to benefit from low wages, but to make additional savings by avoiding the cost of complying whit US environmental, health and safety regulations. Echoing these fears, President Clinton promised during the electoral campaign to revisit NAFTA, armed with new legislation (*supplemental agreements*) intended to appease the environmentalists, labor unions and black interest groups that conform the anti-NAFTA coalition.

On the next sections I will consider the genesis, rationale and costs and benefits implied by NAFTA for the economies of the three nations signatories of this decisive free trade agreement. The impact of NAFTA on the maquiladora system and on the economics of the Mexican-American border region, and the environmental consequences of NAFTA will also be addressed. I arrive to the conclusion that the expansion of trade and investment flows will bring meaningful welfare increases for the countries members of NAFTA, but these gains will continue to be very unequally distributed.

The genesis of NAFTA

The Canada-US Free Trade Agreement (CUFTA) signed by both countries on January 1st, 1989, represents the first step towards the creation of a continental common market in America. The CUFTA main aims were to foster the international goods and commercial services trade and to spur investment flows by removing tariffs and non tariff barriers between the two countries. The agreement brought about an immediate 15 per cent tariff reduction on all traded goods. The CUFTA established a ten year phaseout of all trade barriers -with the sole exception of those barriers aimed to protect the cultural sector-, instituted a mechanism to settle trade disputes, and promoted a policy of *national treatment* for commercial services. This last procedure ensures that companies in over 150 service sectors can provide their services in the partner country without discrimination by eliminating existing federal and local regulations restricting partner country access to national markets.

Canada and the US form a *natural* regional economic zone, as the *Table 1*

[3] See Friedman (1992), on this issue.

shows: the US does more than 5 times more trade with Canada than is suggested by Canada's share of world output (excluding the US), and Canada does almost 3 times more trade with the US than is implied by the US' share of world output. However, the ratio of US (or Canada) share of trade to the rest of American countries share of world output is much lower.

One step further in the process of regional integration in America was the *Enterprise for the Americas Initiative*, formulated by President Bush on June 27, 1990. This glamorous project is a global proposal intended to extend trade liberalization to a widening circle of Latin American countries, *from Anchorage to Tierra del Fuego*. This free trade crusade does not stop in international trade issues, covering also foreign debt, financing and investment topics. Once Latin America has at last understood that it needs to open up, towards the end of this century the American countries ought to start building a single market for the benefit of them all. The process of decentralization, deregulation and competition brought about for the economic liberalization programs will nurture the process of economic reforms and enable the development of an equally competitive political system in the Americas.

In this context, the Mexican government made it clear, in March 1990, that his country would move quickly toward the objective of a free trade association with Canada and the US. The reasons for this move on the Mexican side were two-folded. First, Mexico is the US' third-largest trading partner. Second, the stabilization program under way of the Mexican economy required an opening up to international trade in order to attract foreign capital flows to sustain investment and promote growth. Mexico suffered at the time rampant inflation, an overwhelming national debt, and it had been cut out of the world capital markets. As a result, this country had been unable to invest as much as it should to facilitate the continuation of the program of economic and political reforms. *Table 2* shows the basic indicators of the three economies just before the beginning of negotiations. And *Table 3* shows the intra-region trade at the start of the process of economic integration.

TABLE 1
RATIO OF SHARE OF TRADE TO PARTNER'S SHARE OF WORLDOUTPUT

Trader	US	CANADA	OTHER AMERICAN	JAPAN	E.C.
US	--	5.2	1.3	1.1	0.6
CANADA	2.9	--	0.4	0.6	0.4
OTHER AMERICAN	1.5	0.6	2.0	0.6	0.8
JAPAN	1.1	0.9	0.5	--	0.5
E.C.	0.3	0.3	0.3	--	2.5

SOURCE: Lawrence Summers data for 1989, quoted by *The Economist* (August 31st 1991).

TABLE 2
NORTH AMERICAN BASIC STATISTICS IN 1990

	POPULATION (millions)	AREA (million Km^2)	GDP ($billion)	GDP per capita ($)
CANADA	26.6	9,976	572	21,527
US	250.0	9,373	5,514	22,055
MEXICO	82.1	1,958	241	2,935
NAFTA	358.7	21,307	6,327	17,639

SOURCE: World Bank (*World Development Report*).

TABLE 3
INTRA-NORTH AMERICAN TRADE IN 1990

(in percentage of total exports)				
from/to	CANADA	US	MEXICO	NAFTA
CANADA	–	72.7	0.4	73.1
US	21.1	–	7.2	28.3
MEXICO	2.4	73.1	–	75.5
NAFTA	15.1	21.2	5.2	41.5

(in percentage of total imports)				
to/from	CANADA	US	MEXICO	NAFTA
CANADA	–	62.9	1.2	64.1
US	18.1	–	6.0	28.3
MEXICO	1.3	72.0	–	73.3
NAFTA	14.1	14.7	4.8	33.6

SOURCE: CEDEAL (1993).

In 1987 the US- Mexico Framework Agreement set up a bilateral forum to address trade disputes. In May 1989 Mexico announced widespread revisions of regulations governing foreign investment. During 1990 Mexico and the US began discussing a free trade deal.[4] From Mexico's point of view, such agreement would give

[4] The first round of negotiations was held in Toronto (Canada), beginning in June 12, 1991. Arriving to the final agreement required six more rounds, held in the following places and dates: Seattle (U.S.), in August 18-20, 1991; Zacatecas (Mexico), in October 26-27, 1991; Chantilly (U.S.), in February 9-10, 1992; Montreal (Canada), in April 6-8,

credibility and raise confidence in the recent reforms, preserving the economic stability that Mexico was working so hard to build. This could help to restore the flow of finance towards the Mexican economy, allowing the country to finance the excess of investment over national saving by running a current-account deficit. In the end this process of economic reforms would yield also political benefits, securing long-term political stability.

On February 5th, 1991, Canada, US and Mexico announced the beginning of negotiations on a North American Free Trade Agreement. President Bush asked Congress to extend the *fast track* procedures for approval of trade agreements for two years, in order to have time to negotiate NAFTA, conclude the Uruguay Round, and develop the first stages of the *Enterprise for the Americas Initiative*.[5] On August 12th, 1992, it was announced that the three countries had completed the negotiations for the creation of a continental market. Finally, on September 14th, 1993 the side-accords on labor, the environment and import surges were signed. The next step is to develop and submit to national parliaments enabling legislation that will activate the trade agreement. If the process conducting to full implementation of the treaty is successful, despite the substantial political resistances at work, the NAFTA agreement will take effect on January 1st, 1994. At that time, customs duties on about half of US products will be eliminated straightaway. Other tariffs will be reduced to zero from the 10 per cent current average, over 10 or 15 years.

The rationale for NAFTA

NAFTA means a regional trading block with 365 million consumers and a combined GDP approaching $6,5 trillion, parallel only to the European Community market. This comprehensive agreement is expected to increase competitiveness, reduce consumer prices and promote the creation of export-related jobs. Moreover, NAFTA will help the partner nations sell more goods and services to each other, facilitating resource allocation among sectors, and enabling the combination of these resources to face

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1992; D.F., Mexico, in July 25-26, 1992. The last one took place in Washington, in August 2-12, 1992.

[5] Under *fast track*, Congress approves or disapproves the final text of the agreement and its implementing legislation without amendment within 90 working days. In this way the *fast track* process makes it possible to negotiate credibly and undertake solid commitments.

competition from other countries. In 1991 intra-NAFTA trade was near $245 billion, compared with an extra-NAFTA trade of $760 billion. Intra-regional exports in North America reached 42 per cent of total exports, a figure that compares favorably with the 31 per cent attained by the Japan and East Asia trade block, but that remains distant from the 71 per cent achieved in the EC and EFTA free trade area.

NAFTA introduces two additional disciplines not covered by the CUFTA - protection of intellectual property rights and liberalization of land transportation. Other chapters of the CUFTA are however essentially reproduced in NAFTA -including provisions to remove barriers to energy trade and to facilitate border-crossing procedures for business travel.

The key elements implied by NAFTA are: 1) a gradual reduction and eventual elimination of tariff and nontariff barriers to agricultural and manufacturing trade (including reduced motor vehicle and auto parts tariffs, and reduced textiles and apparel barriers); 2) a removal of barriers to the flow of services (including financial services); 3) a removal of barriers to the flow of investment; and 4) in addition, NAFTA is the first comprehensive trade agreement in the history of US trade policy that directly deals with environmental problems.

To protect members from unexpected importation surges, NAFTA contains temporary safeguard clauses. In the case of the financial sector, Mexico has asked for temporary protection for its newly privatized banking industry, limiting the number of US and Canadian banks that could operate in Mexico and the kind of products that foreign banks could offer. And to guarantee that the free trade agreement advantages apply only to goods and services domestically produced, NAFTA incorporates *regional content* or *rules of origin* standards to be satisfied by all products subject to preferential tariff benefits. The final agreement establishes that the regional value added of motor vehicles should initially be at least 50 per cent and then increase gradually, for a period of eight years until it reaches 62,5 per cent.

A distinctive aspect of NAFTA is that it involves a core agreement among Canada, US and Mexico that covers fee trade in goods, services, investment flows and dispute settlement. This core agreement is complemented by arrangements designed to accommodate the special needs of each participant. This approach, faithful to the spirit of the *Enterprise for the Americas Initiative*, will permit to extend the free trade agreement to other nations so long as they are willing to submit to the provisions contained in the core plan. Negotiations have already begun involving other Latin American countries, particularly Chile and the Mercosur group (headed by Argentina and Brazil).

But what makes NAFTA *singular*, compared to other free trade areas, are the great differences among the participants. Actually, NAFTA is an arrangement between two highly advanced industrial countries and one relatively much less developed country. Mexican economy is only 5 per cent the size of the US'. In 1990, the US' per capita income was $22,055, for only $2,935 in Mexico's case (well below the $3,500 obtained in 1981).[6] Mexican productivity is one fifth of the productivity of the US and Canada - and its expenditures on education and R & D are weak. This gap reflects differences in technological development, infrastructure, and capital and resources availability. In part because of these differences, the impact of NAFTA on different sectors, groups and industries will vary, at least in the short term.

Table 4 shows the evolution of the relative factor content of industrial exports in each country. The evidence is consistent with the expansion of both inter-industry and intra-industry trade among the North American nations. The comparative advantage theory of international trade assesses that, to compete, countries must specialize where they have a relative edge. If goods trade freely, the prices of similar goods will equalize, and so will factor prices, even in absence of international mobility of labor and capital. Under the free trade agreement the low-wage Mexico will tend to make labor-intensive goods, while their capital-abundant neighbors will specialize in technology-intensive products. Therefore, US and Canada low-skilled workers should flow overseas, or wages of low-skilled workers must fall.

[6] However, if purchasing power parities -which take account of international differences in prices- were used to convert the local-currency GDPs into dollars (instead of using market exchange rates), Mexico's GDP would experience a sharp jump ($590 billion in 1992), surpassing Canada. In this case mexican GDP per head would grow to $6,590 in 1992 (from $3,700 using market exchange rates).

TABLE 4
FACTOR CONTENT OF NORTH AMERICAN INDUSTRIAL EXPORTS
(in percentage)

	1969-71	1976-78	1986	1988
CANADA				
Natural resources	33.0	31.2	22.3	24.7
Low-skilled labor	2.4	2.0	2.8	3.1
Technology	19.2	20.2	21.1	23.1
High-skilled labor	45.4	46.6	53.8	49.1
US				
Natural resources	15.9	14.2	13.0	14.3
Low-skilled labor	5.0	5.6	3.9	4.3
Technology	51.0	51.7	56.6	54.2
High-skilled labor	28.1	28.5	26.5	27.2
MEXICO				
Natural resources	52.7	43.5	19.8	25.0
Low-skilled labor	10.2	14.3	9.8	8.1
Technology	22.2	21.5	43.4	35.2
High-skilled labor	14.9	20.6	27.0	31.7

SOURCE: J. Berlinski (1992).

Anti-NAFTA circles, led by US labor groups, have expressed their opposition to the treaty, fearing the potential loss of jobs induced by the vast wage differences between US and Mexican workers.

Intra-industry trade - the cross-flows of similar goods between trade partners - does not depend on the differences in factor proportions and, thus, cannot generate changes in income distribution. But US intra-industry trade is dominated by trade in made-to-order intermediate goods that do not form an essential part of major current exports of developing countries. However, leading areas of the Mexican exports to the

US are made up by products included in the domain of intra-industry trade, such as motor vehicle parts and accessories, petroleum refining, radio, television, and audio and video equipment. This intra-industry trade between the US and Mexico primarily involves intermediate goods that are produced in large plants using labor-intensive techniques. To the extent that the industrialized countries are reducing selectively the protection on intra-industry trade, whereas other trade is being undercut by trade restrictions, the trade liberalizing effects of intra-industry trade are not likely to redress the current bias in protection in the US against manufactured exports from developing countries.[7] This makes NAFTA especially advantageous for a country like Mexico, that will enjoy a privileged access to the US and Canadian markets, despite current biases in US protection.

Aside from income distribution effects, the trade liberalization package could entail a better allocation of resources. The efficiency gains from the internal market can be considered equivalent to shifting the production function upwards. Thus, the marginal productivity of capital will increase at any given capital stock. This implies that firms will increase their capital stock until the marginal efficiency of capital had returned to the opportunity cost of capital. This change in the capital stock will lead, in turn, to an increase in output in the medium-run. The general-equilibrium models that assume constant returns to scale and product differentiation show that the welfare gains for the Mexican economy of more trade liberalization between Mexico and the US will be modest.[8]

This *medium-run growth bonus* delivered by NAFTA does not translate itself into an increase in the long-run or steady-state growth path, under constant returns to scale. But it has long been recognized that the assumption of constant returns to scale was not satisfactory since it could not explain continuing economic growth, except by introducing exogenous technological progress. Thus, to explain endogenous economic growth we must

[7] Expanding intra-industry could contribute to, rather than reduce, the current bias in U.S. exports against manufactured exports from developing countries. Therefore, further intra-industry trade liberalization among the industrial nations may well reduce export opportunities for manufactured goods exports from developing countries. See on this, Ray (1991).

[8] These gains will amount to less than 2 per cent of gross national product when the tariffs are eliminated. With increasing returns the welfare gains are substantially larger. A summary of the results of recent empirical studies is provided in Waverman (1993). See also Lustig *et. al.* (1992) and O'Driscoll (1993).

consider increasing returns to scale. These new growth models [9] come to the conclusion that the static efficiency gains from the internal market could permanently increase the regional trading block growth rate. According to a recent study by the US International Trade Commission, NAFTA will increase US real gross domestic product up to 0.5 per cent per year once it is fully implemented. The welfare gains for Mexico could be much larger.

The costs and benefits of NAFTA

The appeal of NAFTA from the US side comes from the fact that Canada and Mexico are the US' first and third export markets, respectively. Mexico is also the US' largest manufactured goods market. Thus, the enhancing of trade relationships with such important partners is vital to spur US competitiveness, economic growth and job creation dependent on exports - which essentially means jobs in the production of machine tools and auto parts, textile fabrics, and medical equipment.

The gains from NAFTA for the US and Canada will stem not only from higher exports in response to expanded capital investment and consumption in Mexico, but also from an increase in low-priced Mexican imports. Besides, Mexico is a growing market for trade and investment - the Mexican population, now one third of that of the US will reach 100 million by the year 2,000. Capital-intensive and technology-intensive sectors will get gains from increasing Mexican demand for such goods. And labor-intensive sectors could suffer some production loss because of Mexican competition. In addition, the US hopes that NAFTA will contribute to curb the tide of Mexican migrants heading north by stimulating market-led growth in Mexico.

Canada participation in NAFTA is also explained by the fact that an agreement limited to the US and Mexico could undermine Canada's ability to attract foreign investment in the near future. The potential impact of NAFTA on the Mexican economy will depend essentially of the extent of foreign direct investment and related technology transfers. Mexico's workforce is expanding by 3 per cent a year, and this means that it has to grow at a sustained rate of 5-6 per cent, to create the 1,2 million jobs each year

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[9] A survey of this approach is provided by P. Romer, "Increasing returns and new developments in the theory of growing," NBER *Working Paper*, Nº 3098 (September, 1989).

required to avoid an increasing rate of unemployment.[10] To achieve this goal, Mexico needs to supplement a scanty savings rate of 19 per cent of GDP with foreign investment. And recent history shows that sufficient capital flows for Mexico come mainly from the US.[11]

Bilateral trade between Mexico and the US has grown rapidly in the last few years (from $21 billion in 1987 to $62 billion in 1991). About 80 per cent of Mexico's trade takes place with the US. In 1991 Mexico's imports from the US reach $33.3 billion (12 per cent of Mexico's GDP); meanwhile its exports to the US came to $29 billion (10.5 per cent of GDP). Mexico's current account deficit ($20 billion in 1992, about 6.3 per cent of GDP) is now the biggest challenge for the Mexican economy. The US exports to Mexico doubled in the past four years, to a projected $41 billion in 1992.

This path reflects in part the Mexican efforts to modernize its industrial base by importing capital equipment. Nevertheless, this huge current-account deficit puts pressure on the currency and it could force a devaluation of the Mexican peso. This, in turn, could endanger the successful Mexican economic stabilization program. The rate of inflation was 12 per cent in 1992, from a peak of 159 per cent in 1987; and the government run a surplus of about 1 per cent of GDP in 1992 - excluding money raised from privatization measures -, from a record deficit of 16 per cent of GDP in 1987. Devaluation fears will decrease if these three things happen: a) future capital inflows are of a long term nature rather than volatile speculative movements; b) productivity increases are large enough to offset real appreciation; and c) NAFTA is ratified in due time - because it will provide the regulatory framework necessary to convince foreign investors that the liberal economic reforms, that began in 1986 with Mexico's entry into the General Agreement on Tariffs and Trade (GATT), will not be reversed. In this sense, NAFTA is a natural step forward in the liberalization process of the Mexican economy.

NAFTA will convert Mexico in an entry point into the large North American

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[10] With the exception of the *lost decade* of the 1980s (where the economy did not grow at all, manufacturing real wages diminish by 31 per cent, and the inflation rate averaged nearly 100 per cent), Mexico's real GDP rate of growth has been remarkable, averaging 6.6 per cent (3.4 per cent, in per capita terms) between 1950 and 1981. See *IMF Survey* (December 4, 1992) and J. Kolbe, "US-Mexico Relations: Building a Golden Age," *Economic Development Review*, Vol. 6, Nº 3 (Fall, 1988).

[11] Direct foreign investment in Mexico during the period 1989-1992 totaled a record $25 billion (67 per cent of this figure went into manufacturing activities and 20 % into tourism). The US accounts for 65 per cent, the EC 25 per cent, and Japan 5 per cent.

market. US' investors will find less costly to produce there than in Korea or Taiwan. Thus, foreign direct investment that would otherwise have gone to East Asian countries will be diverted to Mexico. It has been estimated that, assuming capital inflows to Mexico ranging from $1.5 billion in 1992 to about $5 billions in 2001, Mexico's growth rate would be 13 or 14 per cent higher than it would have been in the absence of NAFTA.[12]

The problem with a regional free trade area -like NAFTA- is that it can only improve global welfare if the amount of trade it creates exceeds the amount it diverts. However, in the case of NAFTA trade creation will likely exceed trade diversion, because this particular trading block is formed by neighbors who already have significant trade with one another (see *Tables 1* and *3*). Relative little trade will be diverted and benefits from economies of scale will be large.[13]

The Mexican-American border region and the maquiladora system

The Mexican-American border region holds around 13 million people living within 80 km. of the 3,200-km. border that stretches from the sister cities of San Diego-Tijuana, verging on the Pacific Ocean, to Brownsville-Matamoros, on the Gulf of Mexico, going trough Nogales (Arizona)-Nogales (Sonora), El Paso-Ciudad Juarez, and Laredo-Nuevo Laredo. These Mexican-American neighbor cities can be called "sisters", but they are no "twins". Although about three-quarters of all family incomes along the border are below the official US' poverty line, average income on the Mexican side (that suffers from high rates of labor turnover) is less than half - and sometimes much less - the average income across the border, bearing a 16 per cent unemployment rate (8 per cent

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[12] See *IMF Survey* (January 25, 1993); and L. Rubino, "The Rationale for NAFTA: Mexico's New 'Outward-Looking' Strategy". *Business Economics*, Vol. 27, Nº 2, (April, 1992).

[13] Assume that the U.S. originally imported a traded good from Taiwan, which produces that good more cheaply than any of the NAFTA countries. Then, the increased trade between partners would had been at the expense of more efficient trade with Taiwan. Comparative advantage is denied, and global welfare would suffer. As a rule, the larger the initial trade flows between partners, the higher tariffs were before the formation of the free trade area, and the lower the external tariffs afterwards, the more likely is that NAFTA will create more trade than it diverts. However, the intra-NAFTA trade is still well below the intra-European Community trade (that exceeds 60 per cent of total trade).

on the US side). The environmental conditions are also very different on each border side.

Mexico's importance to the US is shown by the maquiladora system - offshore production in Mexico. The maquiladora program was begun in 1965. Under this industrial structure US-made components are imported by Mexico, tax free, for assembly and immediate re-export to the US, duty free except on the value added in Mexico. Maquila trade represents a net import for the US, since the raw materials and components exported to Mexico for processing are worth less than the imported finished products. The cheap and abundant labor supply along the US-Mexican border is, of course, the main reason for the maquiladoras success. Average labor costs per worker-hour in 1992 were $2.05 in the maquiladoras, about 40 per cent of those in the US. This has risen concerns on the effect of maquiladoras on US low-skilled jobs. But in a world were competitiveness depends on just-in time inventory control techniques, teamwork systems, and quality management providing high quality and a short time to market, cheap labor is not everything, and there is a limit to the incentives to move jobs to low-cost countries like Mexico.

Despite these fears, the maquiladora program has contributed to revitalize the Mexican-American border region. It has been estimated that the elimination of the maquiladora system would result in the permanent loss of almost 100,000 US jobs by 1994. For every plant on the Mexican side, there is usually a warehousing activity on the US side. Mexican workers spend 40 to 60 per cent of all wages earned at the maquiladoras on the American side. And just 2 per cent of the materials used by the maquiladoras come from Mexico.[14]

Maquiladoras account for only 8 per cent of total foreign direct investment in Mexico. However, the more than 1,700 maquilas along the border provide over 500,000 jobs to the depressed Mexican labor market. Second-generation maquilas, where more reliance is put on skilled design and manufacturing than on basic assembly, not only will provide more jobs, but also will become in the near future a source of technology for the Mexican economy. The new foreign investment will not be going mainly, as it has happened so far, into polluting sweatshops on the Mexican-US border.

The auto industry has already become an important example of industrial integration between Mexico and the US Mexico has a large dependence on imports of US components (primarily, engines and other technology-intensive products) for its

[14] See *The Economist* (December 12, 1992) 25-27.

growing domestic market as well as for automobile exports. And the US imports from Mexico labor-intensive products (including car seats, ignition wiring, wind-shield wipers, and seat belts). In turn, as Canada did in the sixties, Mexico will offer the opportunity for the creation of a large new automobile market in the US backyard. Mexico now wants to encourage the domestic manufacture of components that are currently imported in the country for use in maquiladora plants.

The effect of NAFTA on the economic future of the border region is unclear. One basic motive for Mexico's interest in NAFTA is to spread more widely the economic growth that has been taking place along the border. Even after the liberalization of trade, the border area could remain an attractive site to companies interested in locating their labor-intensive processes on the Mexican side, and the capital-intensive ones on the US side, because, despite the trend towards the equalization of wages brought about by NAFTA, this event will only take place in the long run.

However, the Mexican border region has some comparative disadvantages with other southern areas (like the Monterrey region): it lacks infrastructure (an inevitable consequence of the inability to set corporate taxes on the maquilas) as well as a native industrial, financial and educational system. Therefore, it will be needed a huge effort to secure the economic potential of the border region after NAFTA. The most likely result is that NAFTA will increase the geographical diversification of Mexico's manufacturing base, by spreading foreign investment away from the border areas.

The environmental impact of NAFTA

Another big difference between the sister cities along the border is that, whereas the northern ones are relatively unpolluted (possessing proper waste-water treatment and safe drainage), their southern neighbors do not have the adequate controls and technical means to avoid the indiscriminate release of solvents into the atmosphere, nor to avoid dumping of raw sewage into the border rivers. Besides, although the maquiladora program rules that the worst wastes have to be shipped back to the US, in practice the waste is stored or burned on site, and dumped illegally.

Adding to this, many environmentalists have argued that NAFTA would expand economic activity, which would lead to more pollution. The idea that the own economic success of NAFTA would induce more environmental degradation has been recently challenged by Grossman and Krueger (1992). These economists argue that NAFTA will raise Mexican incomes. In turn, the added GDP growth in Mexico will induce a greater demand for a cleaner environment in Mexico.[15] Freer trade will permit Mexico to produce goods in which it has a comparative advantage, like agricultural goods and more labor-intensive manufactured goods, both of which are "cleaner" than the average. And it will entail a substantial cut in the production of goods that generate larger amounts of toxic waste per unit of output (like chemical, rubber and plastic products).

The study by Grossman and Krueger also highlights the fact that the pollution abatement costs for the average US manufacturing industry are only 1.4 per cent of value added, casting doubt on the environmentalists' claim that US and Canadian high-polluting companies could obtain important gains from moving to the less heavily regulated Mexico. The essential factor in determining US-Mexican trade and plant location is the cost of unskilled-labor. The differences in the costs of pollution control explain very little of the changes in current bilateral trade, adding nothing to explaining the maquiladora system localization and production patterns.

The potential environment impact of NAFTA has occupied, at times, the center stage in the debate concerning the costs and benefits delivered by the treaty. Among the environmental provisions of NAFTA are: 1) prospective investors must submit environmental impact studies, and must comply with the environmental standards on new investments; 2) the environmental laws apply equally to domestic and foreign investors; 3) NAFTA countries will cooperate to enhance the protection of health and the environment; and 4) Mexico will refuse entry to investments or manufacturing processes rejected by the US and Canada as ecologically harmful, and will accept only productive activities that maintain the environment and the quality of air and water.

To clean the poor record of Mexico on environmental protection, the Mexican government has recently undertaken a domestic environmental policy campaign, directed to appease the fears of US Congress and US environmentalists. Among these measures stand out the permanent closure of more than 100 companies (including the recent closure of the Azcapotzalco Refinery) and the temporary shut down of more than 1,500 other large and medium-size companies that were major sources of air pollution emissions, the reduction of the lead content of gasoline, and the development of a General Ecological Balance and Environmental Protection Law.

The cooperation efforts between Mexico and the US have recently been

[15] Grossman and Krueger (1992) show that the turning point in the relationship between pollution and per capita GDP comes at about $5,000 (for incomes that exceed $5,000 pollution actually falls as per capita income rises).

reflected in the creation of a binational commission to clean up the Gulf of Mexico, and by the development of an Integrated Border Plan, announced in February 1992, to improve environmental conditions and infrastructure along the shared border. So far Mexico has poured more than $500 million into this program. In June, 1993, the Mexican government announced that the expenditure for environmental protection had soared to 1 per cent of GNP.

Concluding remarks

A trilateral NAFTA aiding liberalization of the Mexican economy will improve economic growth and raise real income, benefiting all the countries directly implicated in the treaty. In addition to this, NAFTA will institutionalize the economic reforms carried over by the Mexican government, cutting down foreign investors fears on the future of these reforms. Mexico has experienced in the last few years an enormous transformation, liberalizing the economy by eliminating a great number of command-economy controls, and by privatizing several important sectors (from the banking industry and the agriculture to the telephone company). The long-run credibility of these reforms will be enhanced by NAFTA.

In addition, the NAFTA success would mean a big step forward for the Enterprise for the Americas Initiative, opening the door in the near future to other Latin American countries for joining the free trade area. But for a successful knocking on NAFTA's doors, these countries must strengthen, in the first place, the liberalization and macroeconomic stabilization of their economies. Chile and the MERCOSUR group are already queuing to join NAFTA, and there is a serious competition to be first in the waiting list.[16]

As regards the regional distribution impact of NAFTA, there are no a priori grounds for predicting the pattern of relative gains and losses. There are risks and opportunities of different types affecting regions, and the costs of absorbing country-specific economic shocks will be minimized if labor costs adjust relatively flexibly. The geographical diversification of Mexico's industrial structure will be promoted by the

[16] In June 19, 1991, and under the auspices of the Enterprise for the Americas Initiative, the MERCOSUR group and the U.S. signed the so called "4+1 Agreement". This agreement is the first step towards the insertion of the Latin American trade block in the hemispheric free trade area proposed by the Initiative.

completion of an ambitious infrastructure program. And the wage losses suffered by US workers in labor-intensive sectors will require more money spent on employee training. Slashing wages and transferring production to Mexico in order to cut costs, can only be a short term solution for US and Canadian companies.

Investing in worker training and education is the one assured trail to achieve higher productivity and to produce high-value-added goods and services. But in order to reduce locational disadvantages of the least favored and peripheral regions, it could be necessary undertake common policies now missing in NAFTA. As the European Community experience has shown, the catch-up process of the least developed countries and regions depends critically on securing synergies between national development and stabilization efforts and the common policies for the single market.

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