

Doctorado
EN ESTUDIOS DEL DESARROLLO

THE STRATEGIC ROLE OF LABOR IN
MEXICO'S SUBORDINATED INTEGRATION INTO THE U.S.
PRODUCTION SYSTEM UNDER NAFTA

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WORKING PAPER NO. 12/11/2005

(A DRAFT VERSION FOR CIRCULATION AMONG
THE INVITED PARTICIPANTS OF THE CONFERENCE)

NAFTA AND BEYOND
ALTERNATIVE DISCIPLINARY PERSPECTIVES IN
THE STUDY OF GLOBAL TRADE AND DEVELOPMENT

PRINCETON UNIVERSITY, DECEMBER 2-3, 2005

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INTRODUCTION:
ON GLOBALIZATION AND NAFTA

There have been innumerable attempts to define and characterize the tendency toward accelerating internationalization (consisting of three simultaneous movements in the current era: rapidly expanding international trade, an explosive growth in international financial flows and activities, and one new element—the creation of globally integrated systems of production). This process of accelerating internationalization is sometimes understood to define “globalization”. Yet, globalization remains an elusive concept often capriciously defined and vaguely employed. Among other objectives, we seek to add some specificity to the process of accelerating internationalization through the examination of what could be considered a paradigmatic case: NAFTA, with particular reference to Mexico’s role in the transnational production system that NAFTA has created. We seek to illuminate in one important instance what has occurred as both the US and Mexico have exhibited a process of asymmetrical integration. This case analysis cannot seek to define “globalization”, least of all because it is an ideologically charged term. Nonetheless, the pathological process we explore below cannot be considered an aberration or an exception to the dynamics of internationalization (or “globalization”). Rather, we maintain, it is clearly derivative of, *and a definitive negation of*, the neoclassical/neoliberal percept that an indiscriminate opening between nations (or “free trade”) will generate significant mutual benefits for these nations (irrespective of their relative power, history, distinct productive apparatuses, relative level of development, etc.).

In this paper we present a new theoretical formulation of the Mexican economy—*the labor export-led model*.¹ In spite of the prevailing presumption that NAFTA is merely a trade-enhancing agreement, we maintain that the underlying objective of NAFTA—its inner “rationality”—is the export of cheap, largely poorly-trained labor through the linkage and combination

¹ We have used the term “maquilization” previously, and believe that Kathy Kopinak originated it—new here is the emphasis is on the *multiple components* and a *theoretical formulation of the model* (Cypher 2004).

of three mechanism: the maquila industry, the disguised maquila sector and the emigration of Mexican labor to the U.S.²

The next section of the paper serves as background, situating the NAFTA problematic. In the following three sections we present the core ideas of this paper. In these sections we elaborate on the main issues and dynamic tendencies in each of the three key areas, namely: (1) the maquila industry, (2) the disguised maquila sector and (3) Mexican emigration to the U.S. In brief, the maquila sector does not entail an export process as the term is commonly conceived. Rather, untaxed inputs of materials, machinery, equipment, technology, design and operational organization from the U.S. are physically placed in Mexico and combined into a production system, a small quotient of cheap Mexican labor (in terms of market-determined values) is mixed with these other components in the process of manufacturing transformation, and then the recomposed product is either immediately shipped back to the U.S., or diverted briefly into the disguised maquila sector. The disguised maquila sector has the same production system as the maquilas, but involves larger, more complex, capital-intensive and technologically sophisticated levels of production. Typically, we can locate, for example, the numerous foreign-owned Mexican-based autoparts companies in the maquila sector, where they both export some output to the U.S. market and send much of the rest to the giant auto producers, who use the maquila-made parts as inputs, but carry-on production with the same tax subsidies and the same export-market objectives as the maquila firms. These processes constitute *the indirect export of cheap labor*, with this labor actually embodied in the exported products. Emigration, on the other hand, is the direct export of labor, but in both

² We are well aware of the influence of other factors (besides labor) in the underlying dynamics of the Mexican Economy: The export of petroleum and other raw materials, particularly in the mining sector, and the role of national autonomous forces (e.g. government policy and institutions—particularly the large conglomerates known as “*grupos nacionales de poder*”, or as “*grupos empresariales de gran capital*”) in the internal market (Basave, 2000; Vidal 2000). Nonetheless, we maintain that these areas do not constitute the significant defining characteristics or parameters of the Mexican economy. In the very short-term some or all of the above factors can play a determinate role. However, this paper articulates the defining characteristics of the Mexican economy over the last 20 years. Hence, our analysis will be limited to the long-term forces and factors defining the Mexican economy—thus our focus on labor exports.

instances Mexico is not really exporting goods because the main Mexican-made value/input in this complex transnational process is (with only minor exception) cheap labor.

The following section focuses on the questions of who “wins” or “loses” and what are the interests behind Mexico’s adoption of the *labor-export led model*. We maintain in this section that the most determinate factor in terms of answering these questions is to be found in the policies adopted by the U.S. as this nation has sought to confront the new structural forces arising from the present era of intense national economic rivalry among the northern nations in the context of an accelerated process of internationalization. In short, the needs of the largest U.S. firms to “restructure” their operations of production has led to a series of strategies and policies whereby these firms and the U.S. nation-state have exercised tremendous leverage over México—often with the willing consent of Mexico’s political class and business elite. The one policy initiative of major note, of course, has been the U.S.-Mexico Free Trade Agreement (NAFTA) which went into effect in 1994—but NAFTA was only one part of a series of agreements, informal accords and economic policy changes that have both opened and subordinated México in an indiscriminate manner to U.S. economic—and geopolitical³—interests. Thus, in this section we will explore how Mexico’s new role is functional to and defined by the U.S.’s ongoing efforts to restructure its industrial sectors.

Finally, the closing section of the paper is devoted to the implications of the above mentioned processes for Mexico. Here we present data

³This process is not limited to economic considerations, instead it also entails the incorporation of Mexico into a deep web of geopolitical relationship—a dimension of integration which John Saxe-Fernández has termed “The Mexican Purchase”, with a distinct “NeoMonroeist” caste. Saxe-Fernández’s envisions this geopolitical web as entailing the ongoing processes of privatization (the current target being the attempted piecemeal breakup of PEMEX) and expatriation of resources/wealth of Mexico, along with ‘the annexation of retail/wholesale commerce’ (the Walmart effect), ‘regional protectionism’ (the NAFTA effect), leading to the de-territorialization of Mexico and the re-territorialization of Mexico under the direction of the U.S. transnational corporations who were the prime promoters of NAFTA (Saxe-Fernández 2002, 134). Saxe-Fernández emphasizes the security dimensions of the process of asymmetric integration, bringing into the discussion the perspectives of the U.S. State Department and the U.S. Department of Defense over “strategic” considerations such as the control of Mexico’s considerable oil and gas reserves.

and analyses that demonstrate the emergence of a disarticulated economy in Mexico;⁴ one where a significant division is to be found between the *maquilized* sectors and the remainder of the economy. The net result is an economy that lacks continuity, autonomy and dynamism. It is one where the productive apparatus has been dismantled and reassembled to fit the structural requirements of the U.S. economy, leaving Mexico with certain low value-added resource-based activities, and a range of other rentier pursuits in tourism, finance and real-estate. Instead of advancing its productive apparatus Mexico is relatively falling further behind because in essence the labor export-led model is structurally designed to transfer Mexico's economic surplus away from its potential positive usage both as a means to advance the productive apparatus of the economy through investments in expanded research, development and technological applications and through public sector infrastructural investments designed to rapidly improve Mexico's quality of education, public health and autonomous industrial base. Symbiotically, the Mexican elite (in its economic and political dimensions) co-exists with and facilitates the perceived structural dimensions of the restructuring process as delimited by U.S. economic interests. In this process, certain benefits befall this elite, while they carefully maintain their option of engaging in devastating capital flight—or deploying the threat of capital flight—to preserve these benefits. Economic structures, however, including the present *Mexican-U.S. Social Structure of Accumulation* under the labor export-led model, evolve and/or decompose. We argue, in the close of this paper, that Mexico is currently at a crucial turning point. The *model*, which entails a ***new modality of dependency***, much more severe than previous modalities experienced by Mexico and other Latin American countries, has imposed a devastating dynamic on Mexico—perhaps best defined by the historically unprecedented levels of

⁴ Disarticulation has occurred relative to the continuities established in the 1940-1980 period of Import Substitution Industrialization (Cypher 2001a). This process has unleashed the *de-structive effects* including massive depopulation of the countryside and the abandonment of productive activities—effects directly derivative of US economic restructuring in terms of incorporating the maquilas, the maquila-like firms and migratory labor into the production processes of US firms.

migration as Mexico has failed to meet even the most minimal needs for tens of millions of its citizens in the neoliberal. In this regard, it represents an unsustainable model. Historically, under even less trying conditions, socioeconomic systems have most frequently been altered. Mexico now is at a crucial crossroad.

II. MEXICO'S SUBORDINATED PRODUCTION SYSTEM: THE LABOR EXPORT-LED MODEL—SITUATING THE PROBLEMATIC

I. THE ORTHODOX/NEOLIBERAL/ WASHINGTON CONSENSUS/ VISION OF NAFTA

In contrast to the cheap-labor model presented below, in Mexico and throughout the world there is a perception—carefully nurtured by the Mexican government—that Mexico's economic restructuring centering the economy on the growth of foreign transactions (Exports + Direct Foreign Investment) has yielded tremendous results. It is common to encounter the premise that Mexico stands as a unique example for the rest of Latin America to follow. Until the economic slump that overwhelmed Mexico in late 2000 and which lasted until early 2004, Mexican authorities and advocates of neoliberal restructuring (particularly at the World Bank, the International Monetary Fund and within the circles of power in the US) frequently cited a series of data that presumably demonstrated the degree of Mexico's economic success: (1) Between 1991-2000 exports grew at an annual average rate of 16.3%, forming the leading sector of the economy. (2) Maquiladora exports were the most dynamic of all, growing at an annual average rate of 19.6%. (3) Manufacturing exports rose from less than 25% of total export in 1982 to over 90% in the late 90s, demonstrating that Mexico was competitive in advance production process, having left behind the earlier "primitive" dependence on exports of coffee, oil, minerals and other basic products that continue to define much of Latin America's intersection with the global economy, (4) Mexico has become Latin America's top exporter and has risen to 7th place in the list of trading

powers in terms of foreign trade [exports + imports](Gonzalez Pacheco and Dussel-Peters, 2001 653). Overall, in this new model the export/GDP ratio rose from less than 10% in 1988 to over 25% in the late 1990s (with over 90% of these export flowing into the US).

2. A HIGH-TECH MIRACLE?

Moreover, it is commonly argued that *qualitative* changes of great significance have occurred in the export sector—specifically that Mexico is now shifting toward the export of high-technology and/or technology intensive manufacturing. Indeed, according to one data set (prepared by Cepal) that compared nations in terms of the percentage of their global exports that were either high-tech or intermediate tech, Mexico outranked the E.U. and was virtually at the same level (63.81% for Mexico, 67.17% for the U.S) in 2000 (Dussel-Peters, 2004, 2). Table 1 below, disaggregates the three components of Mexico's technology-intensive production. Note that for 1998 twenty percent of this production consists merely in the most simple assembly operations in the maquila sector, where all technology and advanced equipment is imported. (Such is hardly the case for Europe or the U.S. when their high tech/intermediate tech exports are examined.) Further, 33% of total exports consist of the same importation of technology and equipment, this time coupled with modestly skilled work processes, such as are found in Mexico's auto and electronics sector where most output is derived from the disguised maquila sector. Meanwhile the small residual labeled high-tech amounts to only 9% of the value of exports: In the years analyzed, a rapid double movement from raw material exports to manufactures, and within manufactures toward medium skill/medium technology manufactured products has occurred—taking all developing nations as a whole. The table, which registers these changes, exhibits the total value of exports by categories. Hence, the leading role of the Asia Tigers and other nations such as Thailand and Malaysia, along with India and China, are the force behind the shift to 33% of total exports in the high-tech category. Notice that for Mexico the high-technology/high skill production levels, 8-9% from 1980-1998, merely keep pace with the export boom, whereas for developing nations as a whole between

1980 and 1998 the share of exports in this category rose from 12 to 31 percent (UNCTAD 2002: 68). Rather than being a leader in this shift toward higher skill intensive production processes, Mexico lags far behind the global trend set by the Asian nations.

Table I: Composition of Exports and Global Share of Exports					
(In percentage terms)					
Export Category	1980	1985	1990	1998	
	DN	M	M	M	DN
Natural Resources	51	54	33	16	19
Resources-based Manufacturing	22	13	12	9	23
Low Skill / Technology Intensive Manufacturing	6	7	14	20	7
Medium Skill / Technology Intensive Manufacturing	8	15	26	33	17
High Technology Manufacturing	12	8	8	9	31
Source: Data form (Montimore and Peres 2001: 44; UNCTAD 2002: 65). Figures have been rounded-of and category of non-classified production has been excluded. Therefore the total is<100.					
DN = all developing nations; M = Mexico.					

Notice that the data suggest a growing proportional reliance on lowed skill operations—reflecting labor trends observed by Fleck (2001). The jump is impressive—nearly a 200 percent proportional increase (from 7 percent of Mexico’s exports to 20 percent in only 13 years). Medium skilled output, reflecting the growth in autoparts, autos/vehicles, electronics and machinery rises proportionately by over 100 percent—from 15 percent of Mexico’s exports to 33 percent. This seems to corroborate the enhanced learning scenario suggested by many observers of the maquila sector—but, those who advocate this position go much further, suggesting that the relatively minor impact of upgrading production workers from the most basic level to those that have more honed/specialized skills (which could involve only a few months of training and apprenticeship) somehow carries profound implications for Mexico in terms of spread effects (Cypher 2004). Note, however, that there is relative stagnation in the high technology manufacturing activities—a result strongly in contrast to those who argue that “learning” is occurring due to the growth of maquila production. On the face of it, the data suggest a stronger shift toward medium skill processes (a 17 percentage point increase) over the shift to low skill production (a 13 point increase).

Care, however, must be taken in analyzing these trends. It cannot be assumed that because the product itself is classified as either “intermediate” or “high” technology that the production process has undergone a necessary upgrade. Dussel-Peters, in fact, maintains that this perception, or leap in logic, is flawed—Mexico is not experiencing “learning” through some autonomous evolutionary process in the maquila sector:

One possible conclusion is that because we can locate high technology products—that is those products wherein Mexico has been integrated into certain segments of value added [global] production chains in electronics, autoparts or autos, among others—this also implies that in Mexico [production] processes involving high levels of innovation and/ or technological applications. But the preceding is incorrect from the perspective of analyzing production processes: By definition, with certain exceptions which should be analyzed in the future, the use of temporary imports for the purpose of export implies relatively simple and primitive production processes. To achieve a higher level of “local content” or to achieve a greater level of national integration [with the production processes of the TNCs] requires the payment of higher tariffs, or income taxes or value-added taxes [by domestic producers in relation to TNCs] (Dussell Peters 2002: 13-14).

3. NAFTA: THE “WIN-WIN” PROPOSITION?

Most of the above mentioned changes in trends and the composition of production are commonly attributed to the NAFTA accord, eventually signed in late 1993—trends that would seemingly confirm the rhetoric of the projects advocates, that it would be a “win-win” policy for both the U.S. and Mexico. Elsewhere we have explored this issue separately for the U.S. and for Mexico, presenting the conclusions that arise from a more systematic analysis of the trends and data: (1) NAFTA has been a “losing” proposition for workers, small and medium sized businesses and particularly peasants in Mexico, and (2) for the working class and portions of the middle class, and for some sectors of business in the U.S. the impact of NAFTA has been negative (Cypher 2001b, Delgado-Wise 2006). At the same time, NAFTA has directly benefited a small set of interests on both sides of the border, specifically numerous U.S. based TNCs and Mexico’s

largest conglomerates. More broadly, NAFTA has served to lower production costs for U.S. corporations, with potential spread effects in the U.S. of facilitating the restructuring of U.S. capital through the use of Mexico's economic surplus. At the same time NAFTA (and the package of other neoliberal policy changes of which NAFTA constitutes the principal element) has correlated with massive waves of emigration and this injection of cheap labor has served to indirectly lower the reproduction costs (hence wages) of U.S. labor. These results should only be surprising to neoliberal policymakers, and is entirely consistent with the fact that for separate reasons both the Mexican conglomerates and certain sections of the largest U.S. manufacturing TNCs converged on the idea of the subordinated integration of the two distinct national production systems in the late 1980s.

4. A BITTER, CONTRASTING REALITY:

I. THE SAGA OF EMIGRATION

The widely-disseminated vision portraying NAFTA as a resounding success—particularly for Mexico stands in sharp contrast to the fact that at the very moment when NAFTA's proponents had flouted the growth in manufacturing exports a darker association was ignored—the explosive growth of emigrants to the degree that Mexico has now become the principal country of emigrants in the world. Further, NAFTA was conceived as the very antidote to emigration, with proponents asserting that the workings of the “free trade” arrangement would lead to Mexico specializing in labor-intensive activities that would absorb the idle and underutilized labor force. Instead, few jobs in the formal sector, and even fewer jobs of a permanent nature, have been created, forcing as many as 3/4th of the annual new entrants into a “free to choose” scenario wherein the options consist of entering the informal sector as a house servant, a street vendor or something similar *or* emigrating to the US. Indeed, emigration has become such a powerful current that 31% of the municipalities in the country are now suffering from depopulation (Delgado-Wise & Mañán. 2005, 21-22). Far from creating a new dynamic to solve Mexico's structural unemployment/underemployment situation, the country has become a classic example of what Gunnar Myrdal long ago termed the “backwash” effects

of unbalanced, market-led, institutional changes (Myrdal 1984; Cypher and Deitz 2004, 174-176). In the following analysis we locate the issue of emigration at the center of our interpretation of the complex economic processes unleashed by the NAFTA project. In doing so we present a model of subordinated integration that is very distant from the prevailing treatment of emigration issues and equally removed from the conventional framework in which NAFTA is analyzed.

5. THE ONSET OF STAGNATION?

After a three year recession (2001-2003) when per capita income growth was negative, Mexico's economy rebounded in 2004 (GDP growth of 4.4%) and is estimated to finish 2005 with a credible, if unremarkable 3.8% growth rate (Becerril 2005, 12). But, this growth is certainly not due to any positive effects from manufacturing. Manufacturing growth for 2005 is anticipated to be only roughly 1.4% above levels achieved in December 2004, while the overall manufacturing sector's exports are insufficient to pay for manufactured imports—the sector faces an anticipated trade deficit of \$20.4 billion for 2005 (Zuñiga and Rodriguez 2005, 24). Thus, even while Mexico's economy enjoys a modest two year expansion, the manufacturing sector remains stagnate, and its failure to cover the cost of manufactured imports means that in the highly-touted area of the foreign sector, overall manufacturing performance is serving to *reduce* Mexico's standard of living and GDP.

Consider, for example, the case of wages in the manufacturing sector—without specific reference to the maquilas: In relation to real wages received in December 2000, mid-2005 wages are on average 24% lower (Bendensky 2005, 25). But, real average wages overall (including service sector wages) in 2000 were only 72.5% of their level in 1982 (Unger 2002, 3). If the maquila sector (or more broadly the export sector) had the effect that its proponents pretend—positing manufacturing export-led development as a viable strategy for Mexico—one should anticipate that real wages would have some positive correlation with the rate of growth of exports and the rise in the Exp/GDP ratio in the 1982-2005 period. Yet, the correlation is negative, and this correlation has lasted long enough to

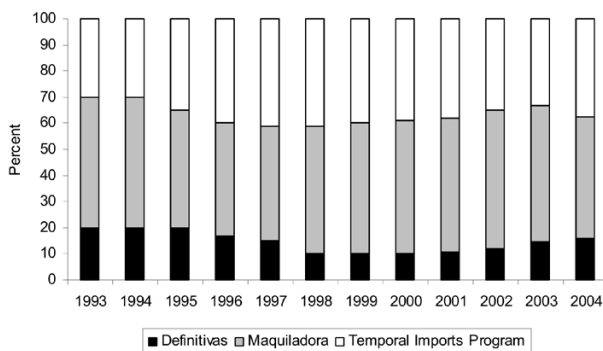
discard the perception that it is somehow an anomaly. Instead, the negative correlation, in fact, is the positive expression of the underlying premise of the labor export-led model—Mexico’s static comparative advantage rests in the exportation of (cheap) labor, either via the maquilas and national firms that export because they use inputs from the maquilas (or maquila-like tax-avoidance schemes and subsidies), or via migration. Thus, the model cannot, and does not, offer “development” in the most basic sense to its broader population, *because it cannot*. Of course the dismal recent history of wage rates is not reflected in (somewhat) rising average per capita income figures. Viewing the Mexican case through the prism of average per capita income figures serves to hide the fundamental structural elements of the labor-export-led model. Viewed through the prism of Mexico’s distribution of income, it is possible to gain another perspective: Due to the skewed distribution of income it should be clear that if average per capita income is rising while wages are falling or in some cases roughly stagnate, *all* the benefits of economic growth are either being exported via transfer prices, repatriation of profits, sumptuous salaries and benefits paid to high-level transnational firm employees, payment of interest on foreign debts *and/or* high incomes, ample profits, rents and interest payments received by Mexico’s technocracy, its political class and the owners of the giant Mexican conglomerates.

6. TWO DISSENTING HYPOTHESES: LABOR EXPORTS AND INDUSTRIAL RESTRUCTURING

Enrique Dussel-Peters has recently stated that up to the moment the role of the maquilas and the disguised maquilas have been treated as separate unrelated components of the economy isolated by the terms “maquila manufacturing” and “non-maquila manufacturing”. Yet, within the “non-maquila manufacturing” sector as much as 40% of the output, or more, is undertaken via temporary export incentive schemes that grant the same subsidies and fiscal exemptions to firms engaging in exports as those that are defined within the maquila sector. Dussel-Peters refers to these two sectors together as representing one larger key manufacturing sector—the sector that *defines the essence of the new model* as based in “temporary

imports for the purpose of exportation” Dussel-Peters, 2006, 83-84). At the same time that he suggests this conceptual advance, he laments the fact that heretofore neither official sources nor academic researchers have been capable of understanding the inner logic/rationality of the new model, “*as an analytical concept*” (Dussel-Peters, 2005, 83). As can be seen from Figure I, below, the disguised maquilas and the maquilas account for 84.6% of Mexico’s exports in 2004:

FIGURE I
MEXICO: MANUFACTURED EXPORTS BY TYPE



Source:

Banco Nacional de Comercio Exterior,
Atlas de Comercio Exterior, Mexico

It is precisely the objective of this paper to define the new model as an analytical concept: The hypotheses of this theoretical/empirical study are the following:

- a) Rather than being a successful model based in the exports of manufacturing, Mexico has created a new model based in cheap labor in three areas: (1) the maquiladra industry, (2) the disguised maquila sector, and (3) the escalating emigration of millions of Mexican workers excluded from the labor market as a result of the internal “logic” of the new export-based model.
- b) The new labor-export model constitutes a fundamental element

in the process of *industrial restructuring* of the US economy that began in the 1980s, continuing through 2005.

III: THE MAQUILA SECTOR:
THE INDIRECT EXPORTATION OF LABOR

PART I

Nearly ten years ago the perceptive Mexican economist Carlos Tello disputed the then prevailing interpretation of México's economic model, stating that "...it is necessary to evaluate the assertion that Mexico had become an export-led manufacturing nation. In reality ...what we really export is cheap labor, whether it leaves the country or not" (Tello 1996, 50). Tello, then, was emphasizing a dual process of emigration and the reliance on cheap labor in the maquilas as an indirect export. Unfortunately, there has been insufficient examination of Tello's hypothesis in the following years. Tello's argument, unfortunately, was lost in the wave of triumphalism that began to sweep over the analysis of NAFTA in 1997 through 2000 as Mexico's exports and GDP both grew at a strong rate.

The maquila sector constitutes the starting point in the examination of our first hypothesis because it has by definition been associated with manufacturing exports and in many formulations it has been linked to the concept of cheap, unprotected and essentially non-unionized labor.⁵ In the 3,000 + maquiladora firms that primarily cluster along the US border from Tijuana, in Baja California to Matamoros, Mexico on the Gulf of Mexico are employed over 1,200,000 maquila workers who generated 55% of Mexico's manufactured exports in 2004 (Bancomext, 2005).⁶ Essentially, the maquila industry imports its inputs—components, parts, design, engineering, etc. (overwhelmingly from the US) combines

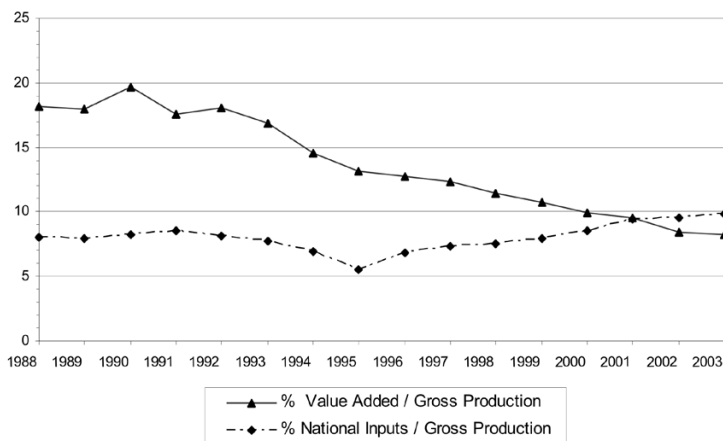
⁵ For details on many qualitative points regarding the maquilas see (Cypher, 2004).

⁶ Maquila firms are also present, to a much lesser degree of concentration in many of the interior States.

these various inputs with cheap production labor (pay per day in 2005 ranged from \$4 to \$10) and a slight element of technical labor, assembles the finished products and primarily re-exports these products into the US economy. Some of the finished products are intended for final sales (such as domestic electronics goods), but many are intermediate goods (such as autoparts) intended to be utilized as inputs in the US manufacturing sector. And, a significant portion of the output is shuttled to the disguised maquila firms, discussed in the following section.

In Figure 2, below, it can be seen that the maquila sector's value-added constitutes a declining share of the total value of the gross production (sales) in that sector. Thus, in spite of the overall growth in maquila employment in the NAFTA era, and in spite of the rise in the total value of Mexico's maquila exports, Mexico retains a smaller and smaller relative share of the economic benefits for these activities even as the costs in terms of aggregate physical effort rises—the ratio drops from 18.2% in 1988 to only 8.2% in 2003—a decline of 55%. In terms of opportunity costs Mexico also gives up more relatively every year—which is to say that if Mexico had a viable developmental strategy it could either extract a larger share of the benefits of the maquila industry, or engage in a national project of upgrading which would eventually lead to a viable national development project based in other forms of manufacturing activities. Also of note in Figure 2 is the essentially static level of national integration into the maquila sector as indicated by the coefficient of integration (national inputs/gross production). The data presented in Figure 2, however, exaggerate the degree of national linkage between the maquila industry and the national production system: Roughly 60% of the national inputs in 2003, for example, derived from the service sector in terms of cleaning, accounting, packaging and shipping and similar activities. Only 3% of the national inputs are component/manufacturing inputs—indicating the nearly non-existent integration of the Mexican production system into the maquiladora complex. This long standing situation essentially negates much of the projections of the New Growth Theory in terms of spill-over and externality effects of DFI in the maquila sector serving as a medium for the transference of know-how and manufacturing capacity upgrading.

FIGURE 2
MEXICO: COEFFICIENT OF NATIONAL INTEGRATION



Source:

INEGI (Instituto Nacional de Estadística),
Cuentas Nacionales de México y Capdeville (2005)

In spite of the quantitative data which has repeatedly demonstrated the futility and negativity of the maquila industry, a significant cadre of Mexican researchers, continues, up to the moment, to furnish qualitative studies of so-called “second and third generation” maquila firms that, according to this body of research, hold the potential for the many externalities posited by the New Growth Theory (Cypher 2004; Dutrénit and Vera-Cruz, 2005, Lara, Arellano and García 2005, Villaviencio and Casalet 2005).⁷ However,

⁷ Specifically, a brief list of these effects would include the following—all presumably flowing from enhanced DFI: (1) improvement in the level of international competitiveness in manufacturing; (2) ‘transfer and assimilation of technology’, (3) ‘improving the capacities/capabilities of human resource’, (4) ‘creation and deepening of production linkages’, (5) ‘development of an indigenous entrepreneurial culture’, (6) ‘upgrading of the production process as platform assembly operation evolve into an indigenous manufacturing center’, (7) ‘improvement of the basic level of science and the scientific infrastructure’, (9) ‘achievement of a high propensity to invest in and develop technology’ (CEPAL 2004, 32).

none of these studies has ever presented convincing quantitative data suggesting that *in the aggregate* the maquila sector is anything more than a cheap-labor assembly operation with virtually no backward or forward linkages to Mexico's production system. Nor, in spite of many efforts to do so, have these studies ever established a significant dynamic trend sufficiently large to change the fundamental (cheap dispensable labor) nature of the maquila industry.

Once thought to be a serious generator of employment (as well as a source of skill-upgrading), the maquila sector has ceased to create new jobs, with employment, in August 2005, 16% below levels achieved in August 2000. When the maquila sector was growing (in employment terms) between 1994 and 2000, jobs created paid 52% less than non-maquila manufacturing, while living costs for the 78% of maquila workers clustered along the US/Mexican border were considerably higher than in other interior states (Cypher 2004, 362). In short, and in spite of the rosy predictions of an indefatigable cadre of Mexican researchers, the maquila project was never a national development strategy, and is even less so today.

IV. THE DISGUISED MAQUILA SECTOR: THE INDIRECT EXPORTATION OF LABOR

PART II

A significant and rapidly growing volume of production is generated by the maquila firms and then sent to the large TNCs throughout the interior of Mexico which incorporate maquila-made parts and components into finished manufacturing products—often of a sophisticated nature, such as autos—which are then exported, primarily into the US market. At the same time, a variety of programs are offered by the Mexican state to non-maquila firms that are engaged in export activity. These effects are so pervasive that roughly 38% of Mexico exports (45% of all manufacturing exports) come from the disguised maquila sector (Capdevielle 2005, 564-565, Dussel-Peters 2006, 83-85). Frequently, this movement of inputs from the maquila firms to the larger TNCs constitute “intrafirm transactions” since through joint-ventures or direct ownership the large TNCs

control many maquila supplier firms. Although data is not available regarding intrafirm transaction inside of Mexico, U.S. intrafirm transactions for imports in the auto and electronics sectors—the two largest export sectors for Mexico—stood at 75.9% and 67.5%, respectively, in 2002 (Duran Lima and Ventura-Dias, 2003, 59).

These indirect maquilization activities employ at minimum 500,000 workers, representing approximately 37% of all non-maquila manufacturing workers who are normally assumed to be working in the *national* manufacturing sector⁸ (Capdevielle 2005, 568). Workers employed in the *indirect labor export “disguised” maquila sector* have somewhat higher skill levels, have some likelihood of better representation of their labor rights via their unions, and are generally paid at least 50% more than direct maquila workers because their productivity levels are much higher, because they have legacy union representation from the ISI era and also because the major TNCs generally accept a policy of industrial relations wherein payment of subsistence wages is not a goal (Cypher 2004, 363.). Nonetheless, workers are paid meager wages given the fact that their productivity often approximates levels found in the (Northern) industrial nations—frequently the South/North wage differential (Mexico/ U.S.) will be in the range of 1:7 in the indirect maquila sector, and nearly double that gearing ratio in the maquila sector. Thus, the ILO has found that for Mexican manufacturing workers *overall* (maquila +non-maquila) in relation to U.S. manufacturing sector workers in 2003 the ratio was 1:11.39 (Howard, 2005, 2). Throughout the NAFTA period wages in the indirect maquila sector have fallen by more than 12%, while in the maquila sector, in spite of some rising productivity, they have increased roughly 3% or less—3% of the lowest paid maquila workers daily wage was 12 U.S. cents in 2005, roughly one peso in Mexico (Cypher 2004, 363).

⁸ We are referring to formally registered workers as defined by coverage under the social security system as tabulated by the Secretary of Labor. All maquila workers are included in the formal manufacturing labor force. This definition leaves aside over 2 million informal workers who are defined as being part of the manufacturing labor force according to the Economic Census. The census definition includes workers who are unpaid or receive no income as well as those who actually work virtually no time in the manufacturing sector. The unreliability and non-comparability of the Census data leads to the analytical exclusion of these so-called “manufacturing” workers, hence our focus on the formal sector.

Progressively, Mexican exports are intraindustry and frequently intrafirm transactions. For example, in the 1990-94 period 55% of the growth in exports was accounted for through intraindustry trade. In the 1995-99 period this portion explained 88% of the growth of exports (Leon Gonzalez and Dussel-Peters 2001, 657.). This growth was concentrated in a narrow band of the industrial sector—9% of the 88 industrial division accounted for 88% of the growth of trade, with the two largest areas being autos and autoparts and electronics. (The capital-intensive auto sector employed 466,000 in 2003, down from 539,000 in 1999.). These dominant areas of export trade are also the areas where U.S. TNCs are heavily represented. Overall, by 1999, the level of intraindustry transactions had reached nearly 50% of the value of all exports, up from slightly more than 40% of all exports at the beginning of the decade (Leon Gonzalez and Dussel-Peters 2001, 664.). The growth of intraindustry transactions means that firms operating in Mexico, either as US owned maquilas or disguised maquilas, or firms owned by Mexican business groups are becoming (through enhanced DFI and varieties of Joint-Venture/Strategic Alliance operations) components of a US/Mexico globally integrated production system designed to subordinate the Mexican production system to the dynamic needs of US-based TNCs.

In the export-led model the disguised maquila firms play an important role that has generated little research and commentary (see Figure 1—where 37.8% of Mexico's exports came from this sector in 2004). Increasingly, these firms engage merely in the indirect export of labor: Nationally produced inputs/components have fallen from 32% in 1993 to 22.6% in 2004 (Cadena, 2005, 13). In essence export firms outside of the maquila sector are progressively *deindustrializing*, leaving (increasingly) only the value of Mexican labor as the determining component of value-added as (currently) 77% of the inputs into the production process are imported. When Mexican-made inputs are extinguished the impact is not limited to destroying supplier firms and jobs, but also the complex set of socioeconomic relationships and skills that have accumulated over decades. Once this web of relationships has been swept away only long-term, systematic industrial policy can reverse the deindustrialization/deskilling effects. At least 40 “production chains” that involved small and medium sized Mexican owned firms have been destroyed in this process—firms that supplied

both the large exporters and the domestic market according to recent research (Cadena 2005, 13). In one case study, the drop of national suppliers to the TNC 'Volvo' in recent years has been remarkable: In 1999 Volvo contracted with 430 Mexican suppliers, while in 2003 only 99 remained—providing Volvo with low technology, low value-added components (Ivarsson and Alvstam 2005, Table 6). As these effects continue, so does the level of the 'informal' sector (workers without benefits or standard on-the-job forms of protection): In 2000 24.9% of the labor force was relegated to the informal sector—in mid-2005 the percentage had rise to 28.3% indicating that an additional 2.21 million workers had descended into this category (Fernandez-Vega, 2005, 28). (Adding the underemployed, the unemployed and informal sector activities accounts for nearly 40% of all Mexicans of working age who would normally be counted as part of the labor force in an industrial nation.). In spite of measured growth of GDP in 2004/2005, the disguised maquila manufacturing sector has continued to shed jobs as firms have opted for more and more imported inputs—overall job growth has been negative from 2002 to late 2005.

Intrafirm transactions, mentioned above, are another way to observe the growing web of dependent relationships controlled by US TNCs operating in Mexico. The pressures on both sides of the border for an investment agreement between the two countries (later know as NAFTA) was greatly stimulated by the US auto industry in the 1980s. Seeking to confront the growing competition from Japanese producers the large auto producers commence to build a vast production corridor stretching from Mexico City and Toluca to Canada. In 1982, for example only 7% of Mexico's exports to the US were intrafirm transactions. By 1988 this had leaped to 27% of all Mexican exports to the US—from \$774 million to \$4.3 billion, a burst of 450% in seven years (Duan Lima and Ventura Dias 2003, 44). One UNCTAD study which included *both* exports and imports concluded that intrafirm transactions between the US-based TNCs and their Mexican affiliates (in both the domestic and export markets) rose from 27% of all sales *in* or from Mexico in 1982, to 67% by 1989 (Duan Lima and Ventura Dias 2003, 45). In another study that excluded intrafirm transactions inside Mexico, the burst of intrafirm transactions reached its peak in 1994, with 33.5% of total Mexican exports falling under this concept (Duan Lima and Ventura Dias 2003, 62). We would

hypothesize that the underlying institutional matrix created by NAFTA *reduced* the need to maintain complete control over trade movements, creating space for increasing subcontracting with other U.S. (or other foreign) supplier firms now operating in Mexico. Growing affiliation with the Mexican grupos through joint-ventures and other arrangements enabled the US TNCs to expand their supplier web—while at the same time *reducing* their inputs from Mexican suppliers. Some of the apparent decline in intrafirm transactions as a percent of all transactions after 1994 could arise from new strategies employed by the TNCs: For example G.M. decided to set up the autoparts giant Delphi as an independent company that still would have a deep supplier relationship with G.M. In this arrangement intrafirm transactions would decline, but no qualitative change occurred for G.M. In the above mentioned case of Volvo, a similar process is occurring—fewer Mexican suppliers and a greater portion of inputs supplied by other TNCs operating in Mexico. One study estimates of the 600-800 first tier suppliers in the auto sector and the 10,000 second tier suppliers in 2001, only 25-100 first tier suppliers and 2,000-4,000 second tier suppliers would remain in 2010 (Mortimore and Baron 2005, 10). Mortimore and Baron note that in this process, increasingly it is US first tier suppliers—subsidiaries of US TNCs that are dominating the autoparts industry (Mortimore and Barron, 2005 19). Enhancing outsourcing has collateral benefits in that the U.S. transnational firms can sidestep or fragment unions by shifting significant portions of production input production to captive suppliers—this has been well-documented at the giant Volkswagen plant in Puebla that primarily exports finished autos to the U.S (Juarez y Babson 1999).

In any case, incorporating the concept of disguised maquilas into the labor export-led model constitutes a methodological advance, although clearly much research is required at the empirical level to establish the nature and inner workings of the web of intrafirm transactions, intraindustry exchanges and short-term production sharing agreements between the TNCs in this sector and the Mexican grupos. Nonetheless, at this point it is clear that between the maquila sector and the disguised maquila sector roughly 65% of all manufacturing labor is accounted for. Qualitatively, these workers operating the Mexican production system with the requisite machinery and managerial cadres produce roughly 84.5% of all Mexican exports.

V. INTERNATIONAL MIGRATION:
THE DIRECT EXPORTATION OF THE LABOR FORCE

In spite of the growth of the maquila and disguised maquila sectors in the NAFTA era, taken as a whole—and in relation to the needs of the Mexican labor force—these programs have failed to create adequate employment opportunities. And, given the fact that inputs into these sectors aside from labor are primarily imported or limited to small additions of value-added in the service sector, employment multiplier effects via forward and backward linkages have been minimal. Instead, the institutional policies that undergrid the export-led model—neoliberal market fundamentalism, a tax regime that favors the temporary importation of inputs, subsidies of various types—all tend to narrow the market demands for Mexican labor. Meanwhile, the prevailing restrictive macroeconomic policy coupled with an open/unrestricted trade policy has resulted in a disproportional growth in imports which have grown even faster than exports. This combination of policies has given rise to a near stagnate economy when viewed from the perspective of the rate of growth of per capita income: Between 1980 and 2003, per capita income increased only 0.5% per year, between 1988-2003 the level was a unimpressive 1.4% per year—far below the nearly 3% rate achieved from 1940-1980 under a policy of state-led development (Cypher, 1990, Dussel-Peters 2006, 77). This virtual stagnation has carried with it adverse impacts in terms of the creation of sufficient employment, and the quality of employment opportunities outside the exports sectors (Polasky 2003). Further exacerbating the situation, the growth in productivity in the non-maquila manufacturing area (which includes the disguised maquilas, the source of major dynamism in this area) has failed to lift wages (see figure 3) while in the maquila sector productivity and wage growth have essentially been stagnate.

On this point, however, Mario Capdevielle has made an important observation that calls into question the official figures regarding maquila productivity:

... maquila firms frequently operate with capital goods that are imported for a limited period of time, being property of the home-based firm or

a foreign contracting firm which operates the equipment on consignment, and for this reason in the accounting process the depreciation of these machines is not registered [as value-added in Mexico]. This process makes it difficult to accurately measure value added and the level of capital utilized. (Capdevielle 2005, 569).

FIGURE 3
MEXICO: MANUFACTURING PRODUCTIVITY AND REAL WAGES
INDEX: 1993=100



Source: INEGI/STPS, Monthly Industrial Survey (EIMI, Economic Information Bank (BIE), Indicadores Económicos de Coyuntura. Notes: Productivity and wage data cover both production and non-production workers. The maquiladora sector is not included in this data series. Wages include salaries, bonuses, and benefits. Data for 1993-2002 are annual averages; 2003 is January-September average.

In all likelihood, the rate of growth of maquila productivity is higher than registered—currently it is calibrated at only 27% of the level achieved in non-maquila manufacturing—because the maquilas do not necessarily register all value-added when the maquilas report the value of their exports: The level of value-added and the profits received from maquila

activities are not calculated from market prices, rather they are registered through transfer prices, prices which are determined within the organization structure of the transnational firms. These firms can under-invoice or over-invoice their purchases and sales, according to their desires in terms of minimizing taxes (Capdevielle 2005, 659).

The emphasis, clearly, must be placed on the fact that the rate of productivity growth in the disguised maquila sector, and most probably in the maquila sector, has not had a positive impact on workers' wages. This effect, in turn, has undermined whatever possibility might exist for growing wage pays to serve as a catalytic factor in terms of the growth of the internal market—a potential but unrealized force serving to create additional employment and perhaps increasing efficiency in the economy as the consumption spending of workers increased in consonance with their contribution to the Mexican production system.⁸ To this situation it is necessary to introduce the fact that in the entire manufacturing sector (maquila + disguised maquila + domestic manufacturing) overall employment growth was an extremely modest 38,116 positions per year in the 1988-2003 period (Dussel-Peters, 2004: 26).

All of the above serves to reveal the fact that the export-led model employed in Mexico is characterized through its low capacity to create national employment, the counterpart of which is the blooming of the “informal” sector which has accounted for roughly 50% of the growth in employment, while at the same time the income received by manufacturing workers in 2004 had dropped 15.6% below the level attained in 1980 (Dussel-Peters, 2005: 75, Polaski, 2003: 25).⁹ As a direct result of the failure of the model, between 1984 and 2004 the number of households registering at either the poverty level or the extreme poverty level rose from 12,970,000 to 15,915,000 (Cypher, 2005; Dussel-Peters 2005: 87). Furthermore, this

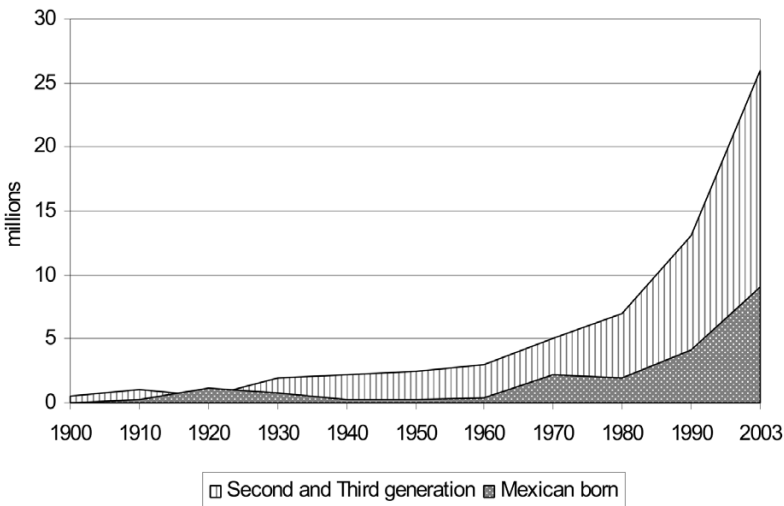
⁸ In actuality the situation is even more restrictive given that 77% of maquila activity remains along the U.S. frontier where a considerable portion of workers' consumption is diverted into the U.S. economy, further undermining whatever potential multiplier effects might be anticipated through rising wage payments.

⁹ The estimated “jobs deficit” in Mexico (jobs created – jobs needed to employ school dropouts + high school graduates + university graduates) stated on an annual basis has been estimated at 500,000 per year, on average, from 1988-2003 (Dussel-Peters 2005: 75).

situation has been the nurturing ground for the explosive international migration process that currently characterizes Mexico. Regarding this movement the following outstanding elements must be considered:

- Between 1990 and 2004 the Mexican-born population with residence in the U.S. rose from 5,413,082 to 10,230,089 (Conapo, 2004).
- The U.S. is the nation with the highest levels of immigration in the world (absorbing 20% of all migrants). The largest contingent of immigrants, 27.6%, is Mexicans (Conapo, 2004).
- The number of residents of Mexican origin in the U.S. has been estimated in 2003 at 26.7 million. (Conapo, 2004).
- Between 2002-2004, an estimated average annual outflow of 436,718 of Mexican residents entered the U.S. According to the United Nations, Mexican emigration exceeded outflows from China and India (UN, 2004).

FIGURE 4
MEXICANS RESIDENTS IN THE UNITED STATES, 1990-2003

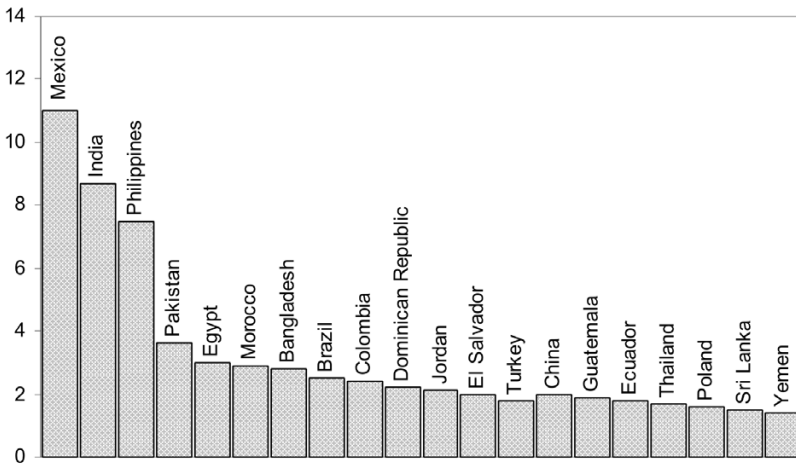


Source:

Conapo, Migración Internacional, <http://www.conapo.gob.mx>

- In 2004, Mexican emigrants remitted \$16.6 billion to Mexico (Banco de Mexico, 2005). In correspondence with data previously presented, Mexico is the largest recipient of remittances, exceeding by 27% the sum sent to India and by 36% the amount remitted by Filipinos (UN 2004).

FIGURE 5
MAIN COUNTRIES RECIPIENT OF REMITTANCES



Source:
UN (2004).

At the same time that these quantitative measures locate Mexico in first place in terms of migratory trends worldwide, a number of qualitative transformations should be noted:

- Virtually every part of the national territory of Mexico is impacted by these migratory flow—96.2% of all the municipal regions of Mexico are being impacted by migratory shifts to the U.S. (Conapo 2004). In a parallel fashion, Mexican residents in the U.S. are spreading out across the U.S.—although it still remains the case that Mexican are concentrated in a small number of states.

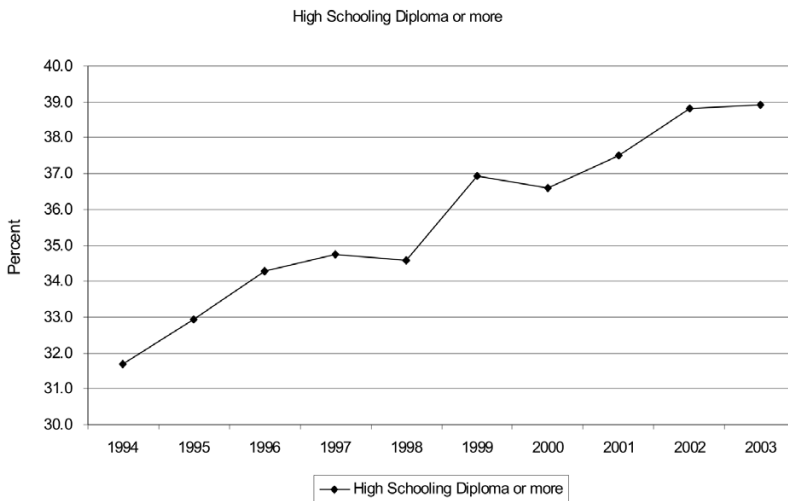
Of note in this respect is the strong expansion of migrants into the Eastern and North-Central states that contain the most dynamic industrial areas, all continuing to experience profound restructuring of their production systems.

- In the course of the last decade a sustained increase in the schooling level of Mexican immigrants is to be noted (see figure 6). In 2003, 34.9% of the population 15 years or above who were born in Mexico but now reside in the U.S., had high school degrees (by Mexican standards this to constitute “qualified workers”). Considering all Mexicans in the U.S. (including those born there), 49% had high school degrees—while in Mexico the figure stood at 27.8% (Conapo 2004; INEGI 2000). This relationship stands in sharp contrast to widely held perceptions—Mexican immigrants have higher qualification levels, as a group, than those who remain in their country. To put the matter in another light, immigration flows exhibit a selective tendency, and this is consistent with the underlying rationality of emigration patterns worldwide. Nonetheless, it should be noted that in relation to other emigrants to the U.S., the Mexicans possess the lowest schooling levels. This persistent gap in educational attainment has only been accentuated by neoliberal policies directed at reducing state educational expenditures and social-support programs that might otherwise keep children in school (OECD 2005).
- An element of this process that is scarcely note, standing in sharp contrast accepted stereotypes regarding the emigration of Mexicans are the numbers who hold B.A. or graduate degrees: At the B.A. level there were 385,000 who were born in Mexico. Those holding graduate degrees came to 86,000 (Conapo 2004). This leads us to the conclusion that the issue of a “brain drain” is now a relevant matter. Unfortunately, under the structure of the prevailing export-led model the demand for highly trained labor is very limited (given the export-led model’s tax exemptions and subsidies to foreign firms, along with intrafirm practices, and the disinterest in investment in research, technology and advanced production processes on the part of the *grupos nacionales de poder económico*—the Mexican conglomerates specializing in low value-added

production—all of which mitigate against the widespread application of higher learning and technical expertise either directly or via backward and forward linkage effects).

- A comparison between the industrial occupation of Mexican workers in both nations is of interest: In the U.S. 36.2% of the migrants work in the industrial sector, while in Mexico only 27.8% are so employed. These data disconfirm the widespread notion that Mexicans are primarily employed in agriculture. Employment in all areas of the primary sector, including agriculture, accounted for only 13.3% of the workforce. In contrast, Mexicans have the highest representation of all immigrants in the industrial sector as well as the lowest level of wages of all immigrants (Conapo, 2004). This fact serves to support the second hypothesis of this paper regarding the role of Mexican labor in the restructuring of the U.S. Production system.

FIGURE 6
LEVEL OF SCHOOLING OF MEXICAN EMIGRANTS



Source:
Current Population Survey

Finally, it is necessary to add that all these changes noted above have occurred at a time when the pattern of migration has undergone a profound transformation: There has been a shift from a circular migratory pattern towards one wherein the dominant form of migration is to establish residence—and this has been accompanied¹⁰ by widespread immigration of Mexican women and even entire families.

VI. IMPLICATION OF THE LABOR EXPORT-LED MODEL
IN THE RESTRUCTURING OF THE U.S.
PRODUCTION SYSTEM

NAFTA and the general neoliberal restructuring of the Mexican economy that began in the 1980s has had a profound impact on the U.S. production system. Notable in this process has been the shifting of U.S. investment into Mexico. Without the neoliberal restructuring process in Mexico, these investments would have been made—in most instances—in the U.S., creating jobs, raising the skill level, enhancing productivity and producing spread effects via forward and backward linkages, along with stimulating aggregate demand through consumer spending of workers.

At the same time that increasing capital mobility undermined the rate of capital formation in the U.S., a counter-tendency was created through the increasing portion of the Mexican economic surplus that was displaced to the U.S. as profits rose from the Mexican operations of U.S. TNCs. This counter-tendency was reinforced as Mexican emigrants flowed into the U.S. and into the industrial sectors, lowering production costs and raising profits. Thus, the impact of capital shifting to Mexico fell on the U.S. labor force, particularly organized labor, while the U.S. restructuring process

¹⁰ In this process the U.S. Immigration Reform Act has not been the sole catalyst: the neoliberal policies employed by the Salinas, Zedillo and Fox administrations have forced millions from the countryside, with NAFTA playing the most outstanding role in orchestrating “push” factors, while the hardening of migratory policies and surveillance in the U.S. has led to a greater tendency toward permanent residence.

created two significant avenues to increased profits, with these benefits flowing to a small percentage of owners and managers and stockholders located in manufacturing and finance.

Shifting capital to Mexico destroyed jobs in the US, as did the sizeable trade deficit the US developed with Mexico once the NAFTA agreement had been consummated. Bringing more of Mexico's economic surplus back to the US stimulated the economy, and the influx of millions of Mexican emigrants helped push down labor's share of National Income. The net effect was to create a new "social structure of accumulation", a leaner and meaner social environment for all workers, emigrant or not, and a fatter more contented business elite in the US, now better positioned to meet foreign competitors either by locating production in the US or in Mexico, as profit maximization strategies indicated.

These resulting macroeconomic relationships, however, were not determinant in the repositioning of U.S. capital in Mexico. Viewing the matter from the standpoint of the restructuring of the U.S. production system, a separate logic—driven by the desire to maximize profits and outperform the competition—prevailed: Under this logic shifting capital to Mexico could enable U.S. firms to purchase labor processes at as low as 9% of the cost in the U.S., while accepting that productivity per hour might not be as high as that in the U.S.¹¹ From the level of the microeconomics of the firm—assuming the stability of final demand for products exported from Mexico to the U.S.—shifting capital to Mexico to achieve "labor efficiencies" was a logical step in many instances. In highly oligopolized industries, such as autos, the available research indicates that the cost saving production processes adopted in Mexico were taken as profits (Cypher, 2001b). In less capital-intensive industries, such as apparel, where brand identity is strong, similar profit-enhancing results should be anticipated. In

¹¹ Differences in productivity levels are much narrower than the variation in wages. In the auto sector it is common to find statements that productivity levels are 60-80% of those in the U.S.; but, numerous plants actually exceed productivity levels achieved in the U.S. and Canada according to the U.S. International Trade Commission. At the same time the GM plant in Silao and the DaimlerChrysler plants in Saltillo and Toluca have higher vehicle quality levels than do similar plants in the U.S. (Mortimore and Barron 2005 18).

the production of intermediate inputs for delivery to final-product producers in the U.S., contractors/suppliers would not necessarily appropriate (all of) the profits of shifting to Mexico, if they faced buyers at higher levels in the commodity chain with greater bargaining power. In some undifferentiated products, such as non-branded apparel, electronics products, etc., part of the cost-reducing process of shifting to production in Mexico could be shifted to the final consumer via lower prices: This would serve to lower the reproduction costs of labor in the U.S., leading to diminishing pressure in the labor market for increased wages—thereby facilitating the restructuring of the U.S. production system.

Shifting production to Mexico made credible the threat of further production shifts, thereby weakening all U.S. labor and particularly organized labor. The stagnation in U.S. production workers' pay is broadly consistent with the increasing tendency of U.S. corporations to move their production operations to Mexico. Thus, in the process of restructuring the U.S. production system—a perceived necessity during the course of the 1980s—a complex, mutually reinforcing, triple-movement began: (1) Significant elements of U.S. capital shifted to Mexico, thereby lowering costs of production, (2) while either the same or other elements of capital threatened to move to Mexico, thereby strengthening their bargaining power with labor, reducing wage increases or lowering wages, while (3) as growing numbers of workers were displaced by the shifts to Mexico the portion of the labor force in unions declined, reducing the collateral impacts of union labor to generally push up wages for all but near minimum-wage workers.

At the same time, in 2003, 1.2 million Mexican emigrants were working in the manufacturing sector (U.S. Bureau of the Census, 2003). Since 1995 through October 2005, the U.S. labor force employed in manufacturing has declined by 17%—from 17.1 million to 14.2 million (Norris, 2005; U.S. Bureau of Labor Statistics, 2005). Here we note a double-movement, U.S. workers are replaced by Mexican emigrants—the logic of this process, often deployed through closing in-plant operations and acquiring subcontractor (out-sourcing) is clearly to lower the direct costs of labor while weakening the bargaining capabilities of organized labor. All this serves to drop the cost of manufacturing and close the circle of the labor export-led model. Mexican labor in the manufacturing sector will lower production costs that will then be distributed in terms of lower

the reproduction costs of (U.S. workers) by cheapening basic wage-goods (food, clothing, etc.), and/or cheapening the production costs intermediate inputs, capital goods and durable consumer goods.

The role of Mexican labor in U.S. manufacturing, however, is actually much higher than the above figures would suggest. If we include under the heading of U.S. manufacturing not only that which is physically based in the U.S., but also than based in Mexico either in the disguised maquila sector, or in the maquila sector we find a total of 1.2 million in the U.S., an estimated 0.5 million in the disguised maquila sector and 1.2 million in the maquila sector as of August 2005. Adding these Mexican-based workers into the base number of manufacturing workers (14.2 + 1.7 million) generates a total of 15.9 million manufacturing workers in the amplified U.S. Production system, of which an estimated 18% are derived from the labor export model. These relationships, which are merely rough but telling estimates, yield the surprising conclusion that nearly one-in-five manufacturing workers in the amplified manufacturing base can be attributed to the labor export-led model. Thus, the data exhibit strong complementary trends, cheap labor is introduced, replacing higher-wage more experienced and, presumably, more unionized labor, younger workers displace older workers and the operating costs in the manufacturing sector drop, enhancing the competitiveness of the manufacturing sector physically based in the US.

In Table 2, below, we find the largest block of Mexican emigrant workers in the US are clustered in the basic metal industries and the metallic products, machinery and equipment areas—43% of the total. We hypothesize that this high concentration is indicative of a consorted effort in these mature industries (once comprising the “Rust Belt”) to restructure in order to meet enhanced global competition, partly with a new ingredient—inputs provided by the labor export-led model of Mexico. In Table 3 we note a commonly-cited time series showing the decline in employment of 3.2 million high-paying manufacturing jobs for U.S. workers (column 1). But, at the same time a rarely noted a seemingly counterintuitive trend appears: Mexican emigrants not only fail to be impacted as millions of jobs are lost, they actually find employment opportunities *rising*. Of course, this is only counterintuitive in a context that excludes the labor export-led model. In our framework, these trends clearly make perfect “sense”.

TABLE 2
MEXICAN EMIGRANT LABOR IN U.S. MANUFACTURE

Manufacture	Mexican Emigrant Labor
Tobacco, food and beverages	273,753
Textiles, apparel and leader	163,580
Wood and wood products	24,391
Paper, paper products, printing and editorial	42,006
Chemicals, petroleum derivatives, plastic and rubber products	96,678
Non metallic mineral products, except oil and coal derivatives	45,167
Metallic basic industries	140,479
Metallic products, machinery and equipment	361,837
Other manufacturing industries	25,901
Total	1,173,792

Source:

Estimations based on the Bureau of Census,
Current Population Survey (CPS), Washington, March, 2003

TABLE 3
EMPLOYMENT TRENDS IN U.S. MANUFACTURING
(THOUSANDS)

Year	U.S.	Mexican Emigrant Labor
1995	17241	974
1996	17237	966
1997	17419	1,013
1998	17560	1,048
1999	17322	990
2000	17263	1,067
2001	16441	1,149
2002	15259	1,165
2003	14510	1,174
2004	14329	1,107

Source:

Estimates based on Bureau of Census, *Current Population Survey (CPS)*,
Washington, March Supplement 1994-2004.

VII. THE MEXICAN DIMENSION IN
THE RESTRUCTURING OF THE US ECONOMY

The vast restructuring of the Mexican economy via the NAFTA process could not, and did not, occur without the consent and active participation of the “political class” and Mexico’s industrial elite. Yet, in the preceding three sections of this paper we have presented systematic theoretical arguments and empirical data that demonstrate Mexico’s subordinate integration into the US’s process of internationalization. This apparent paradox necessitates explication: Specifically, what material or political interests were served (or were anticipated to be served) by entering into NAFTA?

The response to this question must be divided into two parts: First, the “political class” underwent a metamorphosis during the Presidential sexenio of Miguel de la Madrid (1982-88). Within the State sector a new critical cluster of state managers began to emerge, notable among them Pedro Aspe (who would become Carlos Salinas’ powerful neoliberal Secretary of the Treasury, Carlos Salinas, who received the candidacy of the PRI to replace de la Madrid, and—at a lower level at the time—Ernesto Zedillo who would relentlessly carry forward the neoliberal agenda under his sexenio (1994-2000). These new groups of state managers were distinguished from the customary PRI (Partido Revolucionario Institucional) state managers who had orchestrated Mexico’s State-led process of economic development in the 1940-1980 period (Cypher 2000). All were Ph.D.-educated, with degrees from top-ranked U.S. universities, usually in the field of economics. There they were inculcated with the heady fashionable ideas of the dominant orthodoxy in economics—particularly in the area of International Trade Theory. In the 1970s and 80s the field International Trade Theory began to emphasize as never before the most optimistic interpretations of David Ricardo’s theory of comparative advantage, to which was appended “The New Growth Theory”. Fashionable presentations of Comparative Advantage theory greatly exaggerated the benefits of specialization in global trade, while nearly eliminating considerations of the socioeconomic costs of such transitions—suggesting that the fastest way to economic development was to restructure the economy away from production for the domestic market, towards exports. According to the prevailing interpretation—widely propa-

gated by the World Bank and the International Monetary Fund—“resources” would be best used if the decisions governing their use were determined by the blind forces of the market, rather than through the State-led process that had governed Mexico’s economic history (with some notable success) until the devastating crisis of 1982. With the intention of favoring the large international corporations and the so-called “compact group”¹¹ the new State managers stood behind the insipient neoliberal project to privatize state firms and open up many sectors of the economy to (1) the influx of Direct Foreign Investment (DFI), (2) the free flow of international funds into (and out of) financial markets. As a result, under the Salinas administration roughly 200 state firms were privatized/transferred to the private sector, with the state receiving \$23 billion, well-below the true market value of these public assets (Saxe-Fernández 2002, 91). The fortunate few who acquired these assets were primarily Mexican businessmen from the first circle of power of salinismo and the *grupos nacional de poder* (the conglomerates) and which came some foreign interests, largely from the U.S. The new ideology also entailed the end of subsidies (except for the large interests who received state assets at highly subsidized prices in most instances via privatization)¹² intended to provide some sustenance to the most marginalized social sectors and the elimination of all barriers to international trade.¹³ The “New Growth Theory” as applied to the foreign sector claimed that a single-minded focus on international trade and investment would yield “external” results: Firms that exported would be forced to adopt “best practices” in manage-

¹¹ This refers to “the first circle of power composed of the business allies of salinismo-zedillismo-foxismo” (Saxe-Fernández 2002, 117-118).

¹² Another notable consequence of the neoliberal free-market model pertains to the delicate issue of capital flight: This is an “option” that only a few can exercise, wherein at a critical juncture wealthy Mexicans take their liquid funds out of Mexico, wait for a massive devaluation of the peso and then return the funds to Mexico, at a huge multiple of the value of the original fund—or drain the circuits of finance in Mexico and leave their funds elsewhere in the world. This old game was applied between 1994-1997 involving more than \$25 billion US (Saxe-Fernandez 2002, 120).

¹³ Recently, the World Bank has devoted considerable attention to “directed” strategies designed to provide funds for families existing in the condition of “extreme poverty”. This, perhaps well-intended approach allows the Bank to continue to pursue an all-out neoliberal agenda with a “human face”, leaving the mass of workers subject to an employers’ offensive designed to hold wages constant (or drop them) while pushing up productivity levels.

ment, quality control and labor training. These new forms of doing business would flow laterally throughout Mexico's productive system dynamizing areas of the economy that were never directly impacted by international trade. The influx of international capital would bring with it other externalities: Technological know-how (scarce in Mexico) would spill-over from the transnational corporations (TNCs) relocating to Mexico as Mexican managers and engineers and skilled workers learned new applications and later carried these forms of learning into firms owned by Mexicans. A series of virtuous circles would carry Mexico to levels of economic development never imagined—Salinas predicted that if NAFTA was passed Mexico would shortly become a “first world” (or advanced industrial) country. Eliminate the role of the state, abandon the role of economic leadership from this sector, “unleash” market forces and Mexico would only have to wait for a reasonable number of years to see its standard of living rise to European levels (Pozas 2002: 208-209).

This rather silly set of ideas was also supported by the Mexican economic conglomerates not because they necessarily were convinced of David Ricardo's theory of comparative advantage or the applications of the New Growth Theory to International Economics. Rather, the large conglomerates, particularly those based in Monterrey, had always held a neoliberal/anti-state view. The stagnation of the 1980s in Mexico had forced many of them to seek growing markets in the international economy. Closest and cheapest to export to is the vast U.S. market. But, in the 1980s many of the grupos faced legal difficulties as they were accused and convicted of dumping by US trade authorities. In other instances they faced non-tariff trade barriers or other hurdles that the U.S. adroitly placed in the way of would-be foreign competitors. In their struggle to find ways to expand production in the 1980s the largest conglomerates eventually became convinced that a new bilateral trade agreement (which would eventually be known as NAFTA) could circumvent the legal hurdles to access to the vast US market. These conglomerates, however, were specialized in the production of one or a few key potential exports, all with a common denominator: Low value-added products such as cement, minerals, beverages, and undifferentiated intermediate-goods industrial products, such as steel or plastics, were their specialties. Expanding the output of these products has benefited the grupos, but not Mexico. The expected spin-offs of learning and technological deepen-

ing have never occurred. Instead, the grupos modernized as they expanded their sales by importing new, cutting edge machinery and equipment. If there were any “learning” or technological spinoffs from this process, they occurred in Europe, the US and Japan where the new technologies were created adapted and produced. Aspe, Salinas and Zedillo (among others) thought that the growth of the conglomerates would have “spread effects” as the conglomerates sought new suppliers in the national economy. According to neoliberal/neoclassical economic theory the spread effects of “learning” and “technological know-how” would spread to small and medium-sized suppliers as the giant firms were compelled to share their knowledge, while forcing supplier firms to adopt high quality control standards, just-in-time delivery procedures, etc. This however never occurred in the Mexican production system, partly because the Mexican producers have a relatively low level of technological know-how and are not prone to diverting their profits into long term (and often unfruitful) research into advanced technological processes and products. Primarily, however, it is the secretive vertically-integrated nature of the conglomerates that has nullified the naïve scenarios of the neoliberal/neoclassical economists: The grupos do not spin-off their know-how to suppliers. They tend to create their own tightly-controlled suppliers. The grupos also tend to import inputs of higher technology, or buy other inputs from other large national grupos. When they do resort to a supplier network these small and medium sized suppliers normally are incorporated into the web of international production at the lowest possible level of production—labor-intensive simple products with low quality levels and production standards. No “learning” is transmitted, no modern forms of production are needed and no “spread” effects occur (Pozas 2002, 226-227). In a study of one of the major conglomerates’ supplier relationships Maria de los Angeles Pozas found that 60% of the value of industrial inputs came from subsidiaries within the vast complex of the grupo itself, 35% of the inputs were either supplied by other grupos—or, in the case where inputs had a high degree of technological sophistication, by TNCs—leaving a mere 5% of inputs—the least complex and the lowest value added products—to be supplied by small and medium firms (Pozas 2002, 226).

Opening the Mexican economy under NAFTA has meant somewhat greater access for the grupos to the US market, which has enabled them to export processed food products, minerals, basic plastics inputs, chemicals,

construction supplies and basic steel products. None of these products, however, tend to show great technological dynamism in the production process—they are all “mature” products with only moderate value added.

The massive influx of foreign firms, particularly in the auto and electronics sector—Mexico’s two main export areas by value—has led to only a very small number of Mexican-owned firms who have indirectly gained access to intrafirm trade in internationalized production (Pozas 2002, 193-197). And, in these rare instances, overwhelmingly, the suppliers who have formed joint-ventures or other arrangements are Mexican conglomerates with vertically-integrated structures who do not share their technological know-how with other Mexican firms, short-circuiting all potential technological externalities (Salas-Porrás 1998). The entire Mexican experience stands in stark contrast to numerous successful strategies of state intervention in developing Asian nations, yet the removal of the State’s leadership role was the point in commonality that fused the new state manager’s project to that of the *grupos*’ (Cypher 2003; Delgado-Wise and Invernizzi 2005).

In addition to the above consideration in this section we briefly highlight and summarize below a number of further implications for Mexico arising for the neoliberal project and, in particular, the NAFTA accord:

- Net transference of profits, interest income, licensing fees and disguised profits through transfer pricing and intrafirm transactions in the maquiladora and disguised maquila firms. In its essence the labor export-led model gives rise to a process of disaccumulation, as the economic surplus is transferred abroad, depriving Mexico of endogenous economic growth as well as potential multiplier effects and spread effects through forward and backward linkages. This is a case of a new modality of dependency which entails new forms in the creation and the transference of the economic surplus—forms that are more severe and limiting than were the transferees in the era of Import Substitution Industrialization that became the target of much analysis carried on by CEPAL and by those who became known as the Dependency School (loss of potential capabilities through declining terms of trade, or through payment of interest, amortizations and the repatriation of profits, etc.).
- To this should be added the aggregate transference (from Mexico

to the U.S.) of the derived benefits from education, health care, and the daunting social costs in terms of non-market time and effort to guide and nurture children to maturity. An impressively large fund of social capital created in Mexico is then transferred to the U.S. either directly as emigrants produce in the U.S. while the costs of their formation are paid in Mexico, or indirectly as these social costs fail to yield societal stability when Mexican workers are employed in the maquila and disguised maquila sector. Here the social costs of nurturing workers to maturity, including through substantial levels of spending by the Mexican State on education and health care, are essentially subsidized inputs into the US transnational production system. To the above transfers should be added the subsidies and lost tax revenues that the Mexican government has permitted to continue up to the moment. Firms operating in the maquila and disguised maquila sector pay no tariff charges, they are exempt from the value added tax, and, at least for the maquila sector in 2000 the value of subsidies received exceeded taxes paid to the degree that these firms had a net profit tax rate of -7.2% (Dussel-Peters, 2003, 334, Schatan, 2002).

- Inside Mexico, as we have emphasized in previous sections, the labor export-led model has not been restricted to the transference of the economic surplus created in the disguised maquila and the maquila, it has also had a collateral cost in terms of deindustrialization and rising unemployment, along with deskilling as industrial workers are forced to shift to the informal sector or to underemployment—in effect dismantling much of the productive apparatus of Mexico.
- While the above processes have taken place, the promised reverse flow of benefits has not materialized: The dynamic spillover effects and positive externalities in the area of spread effects of technology, learning and skill enhancement, upgrading of production capabilities and products, greater investment in science and research etc., have not materialized—nor have the promised “entrepreneurial” skills and new managerial techniques which would transform the family-oriented manner in which many, particularly some of the largest, firms operate.

The above points convey a synthesis of the process of asymmetric subordinated integration in Mexico—a process to a great degree accelerated by NAFTA and the neoliberal policies that formed the framework for the NAFTA accord. And, at the same time, they capture the passivity and emptiness of the state policymaking process in Mexico—the adoption of a neoliberal “horizontal” stance where there will be no intervention to attempt to direct production by way of the creation of new forms of dynamic competitive advantage, or to forestall processes that are clearly undermining Mexico’s production base. Instead, the Mexican state has adopted a posture wherein it is assumed that the dynamic external effects of new forms of production orientated toward the foreign market will bring automatically, through “the forces of the market” a positive restructuring of Mexico’s production system.

VIII. SUMMARY/ CONCLUSIONS

In the above sections we have presented a case study of a complex asymmetric process of economic integration under NAFTA—a case which we contend exhibits “paradigmatic” characteristics of one type of “globalization”. We are well aware, however, that the difficult-to-define process known as “globalization” manifests other characteristics under other institutional arrangements, but within the U.S. bloc of what has become known as the “global triad”, we have attempted to present an accurate model of the socioeconomic relationships of Mexico’s subordinated integration into the U.S. production system. The prevailing methods of data collection, in both Mexico and the U.S. have limited us to generalizations and inferences in some instances, while the broad array of empirical evidence and trends strongly supports the two hypotheses stated in the introduction.

The theoretical and empirical analysis presented above comprises a large and complex set of elements. Among them certain components stand out in terms of their sharp contrast with the widely-disseminated image of Mexico under NAFTA as representing a highly-successful process of adaptation to an outward-oriented manufacturing strategy of development:

First, the actual model deployed by Mexico is not a triumphant

example of outward-oriented industrialization, instead it is typified by a very basic form of “primarization”: While many Latin American nations have taken a step backward into specializing on low value-added exports of commodities or undifferentiated resource-based industrial products (most notably Argentina) Mexico has taken “two-steps backward” reverting even further, offering-up as its absolute advantage cheap, usually modestly-trained labor in an institutional setting wherein this labor can be deployed with few constraints either in terms of unions, benefits, labor rights, legal recourse to adverse health effects, or severance protections.

Second, given the prevailing, carefully constructed institutional arrangements under NAFTA Mexico is undergoing a process of *disaccumulation*—the labor force employed is offered subsistence wages under working conditions that frequently lead to job-related injuries and overwhelming economic insecurity—coupled with the failure of the model to create an economic surplus that remains for Mexico to use. Instead, this surplus is transferred to the U.S. where it serves to expand the production base and assist in the restructuring of the economy. The imagined/anticipated external effects of the subordinated integration process—in the form of backward and forward linkages, process upgrading, technological learning, etc., fail to arrive. The very institutional structural “logic” of the maquila/disguised maquila production process insures that these effects will not materialize. Linked directly to this extroverted process, but at a much lower level in terms of magnitude, is the partitioning of a portion of the economic surplus generated through the asymmetric integration model to the large economic “grupos”/conglomerates, thereby assuring the continual, active, consent of both the Mexican political class and the economic elite to this process. Nonetheless, certain sectors of the Mexican economy have been or will be displaced by the model—particularly small and medium manufacturing suppliers and sub-contractors who may have at one point been willing to believe that some of the projected spill-over effects or enhanced production levels would generate positive results in terms of sales and technological upgrading/learning. Some strata of labor, including professionally-trained labor held similar hopes that enhanced productivity would lead to higher living standards. These groups or elements of society now find common cause with social critics of the model whose ideas now resonate—a tendency that could help create a critical mass leading to a

new direction in industrial policies in the context of the Presidential election in 2006, or later at the state level.

Third, we have demonstrated that the NAFTA process was not in any fundamental sense a trade-based policy, leading to a benign and mutually beneficial process of economic specialization through economic competition on both sides of the border, as portrayed in the textbook models of “free trade”. True, already low tariff levels were dropped further, but the underlying logic of NAFTA had to do with the restructuring of U.S. industry—particularly the auto industry—that was made necessary by the trying economic circumstances of the 1980s, particularly defined by an insurgent Japanese export offensive. Rather than trade, let alone “free” or competition-based trade, NAFTA was constructed to serve the end of oligopoly power, the control of markets, by displacing significant portions of the lower value-added processed of the U.S. production system to Mexico. In short, NAFTA was an investment agreement, not a trade agreement, that enable U.S. firms to shift production to Mexico without domestic content legislation, or export quotas or restrictions on the repatriation of profits, technology sharing agreements or any other constraints on the use of this capital. U.S. industrial restructuring involved many elements, all intended to lower production costs and revive profit levels—one important one of which was to shift portions of the production process to Mexico where subsidies were offered, taxes were virtually non-existent and cheap, pliable, creative, essentially non-unionized and committed labor was offered at (often) one-tenth of its equivalence in the U.S. (setting-aside productivity differentials, which have tended to merge, medical benefits and retirement programs). Although all of this would seem to indicate an attempt to seize the opportunity to harness a static short-term comparative advantage in the form of cheap labor (an advantage that all of the computable general equilibrium trade models used to sell the NAFTA agreement claimed would be eroded as the demand for Mexican labor rose, along with the productivity level, forcing up prevailing wages and lifting living standards) the labor export-led model has delivered none of these stylized promises while carrying with it implications of greater complexity: Creating the potential to lower production costs and raising profit levels in the institutional context of the U.S.-based transnational firm can lead to profound dynamic effects within the U.S. production system. For the

U.S., the potential dynamic impacts of the labor export-led model are the following: Lowering production costs in Mexico and/or the U.S. through the insertion of cheap labor into the production process will increase profits which then potentially can

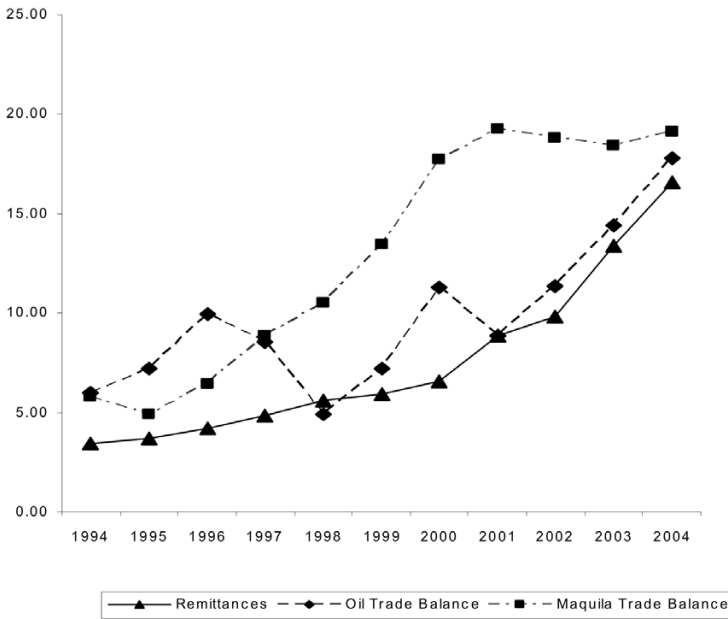
- (1) fund greater R&D spending which, conceivably, leads to greater innovation levels—with these innovations potentially spreading across much of the U.S. industrial system due to technological diffusion
- (2) fund investment in the modernization of machinery and/or equipment and/or labor/managerial organizational restructuring programs and/or labor training programs.

If the lowering of production costs in Mexico and/or the U.S. is partially passed on to U.S. consumers via lower prices, then the labor export-led model serves to lower the reproduction costs of U.S. labor, enabling U.S. corporations and businesses to operate with lower wages than otherwise would be necessary, thereby enhancing the competitiveness of the U.S. production system, while raising profit margins. If the millions of Mexican emigrants employed in the service, or in the construction of new housing, lower prices for servicing and/or housing below what otherwise would be the case without the labor-export led model, then this process also will lower the reproduction costs of U.S. workers, improve the competitiveness of the U.S. production system and enhance profit margins.

In Mexico, however, this new form of asymmetric integration has clearly not been associated with new possibilities for economic development. Stagnating or dropping wages, rising unemployment and informal activities have constituted the environment that has necessitated the explosion in migration involving millions. The lack of linkage effects in the Mexican economy has negated the potential dynamic spillover effects that, according to the New Growth Theory, would spread across much of the production system due to enhance DFI under NAFTA. On one hand, this has meant that Mexico has become increasingly dependent upon remittances in order to stabilize the macroeconomy and society at large—to the point where remittances, net export earnings from oil (even during a boom in prices) and the net export earnings of the maquila sector have all con-

verged, for the first time (see figure 7, below). On the other hand, the uncontrolled leap in emigration has called into question the sustainability of the labor export-led model. With increasing marginalization and poverty the pressures to emigrate escalate, and this could very well collide with U.S. policy given the desires of the U.S. citizenry to guarantee their “security”.

FIGURE 7
MEXICO: THE CONVERGENCE PROCESS



Source:
Banco de México and PEMEX.

Hence, given the labor export-led model’s incapacity to dynamize the Mexican economy, to increase salaries, to create employment positions, to encourage advancements in technological know how, to incorporate national supplier firms into the matrix of production relationships, we find the model to be unsustainable. Consequently, this necessitates vast, fundamental changes in Mexico, and in particular the implications here center on and arise from the form in which economic integration has thus far

been conceived and orchestrated. In stating the above, we are well aware that Mexico's need for change is not mirrored at a general societal level in the U.S. Instead, significant powerful interests sought to implant this model and nurture it, and they have a powerful interest in its continuance. In spite of these interests, however, the lack of viability of the model is overwhelmingly clear. It is well to remember that in many historical instances, including in recent years, the interest of the powerful are not *all*-powerful—they are determinate, often, but rarely always.

In the final analysis, and to view the entire issue clearly—at some distance—it is important to continue to keep in mind the fact that socio-economic development has never been achieved by a nation as a result of exogenous forces. A premise, based in the theory and in the history of economic development is that the responsibility for initiating and maintaining a process of economic development fundamentally rests in endogenous social forces, particularly on the ability of the state to mount and sustain a national project of accumulation. In spite of the recognized interests that both the national groups of economic power and the political class in Mexico, and their counterparts in the U.S., including most particularly the transnational corporations have in this model, the imperative demand for the crystallization of an alternative model is unavoidable. This perspective, perhaps surprisingly, has begun to penetrate even into semi-official circles of power in Mexico—the best expression of the imperative need for fundamental change toward some sort of industrial policy is to be found in René Villarreal's recent critique of NAFTA (Villarreal 2004). The characteristics of this alternative, however, are far beyond the scope of this paper.

Finally, the model we have presented above needs to be situated in terms of its association with a broader current in economic analysis in Latin America. The perspective offered here has some common links with structuralism as expressed by Raúl Prebisch and Aníbal Pinto along with an affinity for Neostructuralism as expressed by Osvaldo Sunkel (Cypher and Deitz, 2004, 160-171; Kay 1989; Sunkel 1990). Yet, our perspective is distinct from theorists of “dependency” who—with the distinction of Marini—insisted in locating their analysis in the *sphere of circulation* (flows and counterflows of profits, interest payments, amortization, licensing fees and transfer prices) rather than in the *sphere of production* (production processes, technology, managerial organization and work pro-

cesses) where we have placed overwhelming evidence (Cypher and Deitz 2004, 177-183; Kay 1989; Marini 1973). Thus, although we have made reference to the “economic surplus”—a concept that owes its genesis to Paul Baran—our approach has been distinct from that of Baran (and Ruy Mauro Marini) in that the primary focus of our analysis has been on the *several means in the maquila sector, the disguised maquila sector and in the application of emigrant labor to the U.S. production process whereby the transferred economic surplus is produced*. Further, although Prebisch was acutely aware of the need to focus on the dual process of accumulation/disaccumulation in a North/South context, our approach has incorporated an analysis of the globally integrated production system as applied to Mexico. Dependency analysis developed in a context wherein the focuses on questions pertaining to the sphere of production were essentially hegemonic. Structuralism and Dependency analysis preceded the latest evolution of production forms as embodied in the globally integrated production system. Hence, our analysis, while clearly resting on elements of the heterodox perspectives long associated with Latin American economic theorizing, is distinct. In the struggle to displace neoliberal economic analysis we believe that it is necessary to rescue the most valid elements of Structuralism, Neostructuralism, Import Substitution Industrialization and Dependency analysis in order to blend the insights of the past with the current structural characteristics of the transnational production process that constitutes the basis for the NAFTA accord.

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