THE MEXICAN ECONOMY
AFTER TWO DECADES OF TRADE LIBERALIZATION

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Abstract:

This paper examines the evolution of the Mexican Economy after two decades of trade liberalization. The "export promotion strategy" adopted by Mexico in December 1982, has notably increased the country's participation in world trade, but it has not significantly raised productivity or real per capita income; with the "structural reforms" initiated two decades ago it was expected that the country would enter upon a rapid growth path. So far, none of these goals have been met. Productivity has not grown in any significant measure and the Mexican economy has become less competitive. Both facts are reflected in the slowdown in per capita income growth both relative to the period before 1982, and *vis-à-vis* its main trading partners. Two types of lessons can be drawn from the Mexican experience: one for those who insist against all odds upon the universal benefits of trade liberalization for productivity and growth, and a second one for Mexican policy makers. The first lesson regards cross-country studies: every individual country exhibits a number of specific factors that may either enhance or offset the potential positive effects of trade liberalization; studies ought, therefore, to be carried out country by country, analyzing all the factors involved, and paying attention to the peculiarities of each nation's history. The second lesson concerns trade liberalization and Mexico's opening to FDI: these alone would not be enough to raise the country automatically to higher levels of productivity and to improve the population's living standards. The remedy for the stagnation of the Mexican economy rests in designing and implementing more imaginative measures than those applied until now. It requires a comprehensive economic policy able to generate conditions for a truly virtuous circle of innovation, productivity, growth, and international trade. To improve Mexican competitiveness requires an economic strategy designed in accordance with the interests of the Mexican people, one based on sound economics and less on ideology and the mechanical adoption of "consensus".

I. INTRODUCTION.

In 1982 —following a balance of payments crisis and with the advice of multilateral development agencies— policymakers in Mexico aggressively opened the country to trade in goods and services.[1] The country unilaterally eased restrictions on *maquiladoras*. In 1985, Mexico joined the General Agreement on Trade and Tariffs (GATT), which entailed cutting tariffs and eliminating many non-tariff barriers. In 1994, NAFTA consolidated and extended these reforms and tied them to reciprocal access to the US and Canadian markets. In the ensuing years the country signed many more trade agreements.

The new strategy took for granted the many advantages that would result from trade liberalization; in particular, it assumed that a radical improvement in technical efficiency would take place once protective trade barriers were lifted. With trade liberalization set in motion, previously protected firms would have no choice but to modernize their techniques and cut their costs in order to compete with foreign producers; this in turn would lead to increased productivity and higher income levels.

The benefits of liberalization would be enhanced if the opening to foreign trade were accompanied by the opening up of the country to foreign direct investment (FDI). The benefits, apart from direct job creation, would be the prompt transfer of technology. Multinational enterprises (MNEs), so it was argued, are an important channel for diffusion of technological improvements between firms' countries of origin and the host country. Accordingly, with the increased presence of MNEs we should expect domestic firms to show an increase in productivity growth as a result of spillovers of knowledge. The argument regarding the benefits of MNEs is thus rooted in the positive externalities they generate in the form of such knowledge spillovers to domestic firms.

In consequence with these ideas, in 1989, Mexico eased restrictions on FDI. As a result of this liberalization of investments flows, foreign direct investment (FDI) —which from 1980 to 1994 averaged 1.3% of Mexico's GDP— came to average 2.8% of GDP from 1995 to 2000. From 1940 to 1982 the average annual rate of growth of FDI in constant

[1] For an account of the political economy of Mexican trade liberalization see Flores Quiroga (1999) and Ortiz Wadgymar (1988).

dollar values, was 6.1%; in contrast, during the 1983-2000 period the figure is 15%. Around two thirds of this investment originates in the United States.

The outcome of such changes in trade policies has been remarkable. The participation of foreign trade in GDP rocketed from 13% in 1980 to 60% in 2000. As a result of NAFTA, Mexico's economic ties with the US were strengthened more than at any time in history. In year 2000, 88.7% of Mexican exports went to the US and Mexico bought 73% of its imports from that country. Manufacturing exports registered the highest rate of growth for the whole 1982-2000 period, an average of 18.8% in real terms, concentrating 87% of total exports, an impressive figure in comparison with the 23% of 1980. In 2000 *maquiladoras* were responsible for 46% of total exports and 35% of total imports. In the same year 63% of total manufacturing exports were effected by firms with FDI participation (61% in *maquiladora* exports and 66.3% in the rest).[2] On the other hand, the average annual rate of per capita income growth has been lower during the past reform periods and systematically lower than in the United States, suggesting that economic convergence between the two countries is not taking place (Puyana and Romero, forthcoming). If some recovery in the per capita GDP growth was registered for the period 1989-2000, compared with 1983-89, it was mainly due to a larger rate of participation of the labor force and was not propelled by productivity increases.

The purpose of this paper is to show that in the Mexican case, trade liberalization has not been accompanied by improvements in technical efficiency nor by an increase in the economic growth rate. We elaborate on the subject and suggest some explanations for this "unexpected" outcome. The paper develops as follows: Section II presents a closer look at the evolution of per capita GDP, analyzing the weight of each of the factors explaining its path of development —participation rate, rates of employment and average labor productivity. Section III describes a method for analyzing the components of average labor productivity. Section IV applies the technique reviewed in section III to the evolution of Mexican productivity, and Section V repeats the exercise for the particular field of the manufacturing sector, finding that productivity has not recovered during the period 1989-2000 and thus reinforcing our arguments about the lack of relation in the Mexican case

[2] Source: Banco de México.

between openness and growth. Section VI examines the possible analytical and empirical evidence from elsewhere that might help to explain these results; Section VII looks for other factors that could explain the "unexpected" consequences, and Section VIII concludes. This paper's contribution has a bearing upon the intense debate concerning the effects of exports and export-oriented policies upon growth. Works analyzing the experiences of several countries in cross-sectional regression analysis have provided mixed results; more case studies like the one presented here are therefore needed in order to obtain a clearer picture.

II. PER CAPITA INCOME ACCOUNTING.

According to the historian John Coatsworth (1990), per capita income is the indicator that best reveals to the economist and historian the level of productivity and therefore the general health of a country's economy.[3]

Per capita gross domestic product (GDP/P) can be decomposed into the following: average labor productivity (GDP/L), the "participation rate", i.e. the labor force as a percentage of the total population (L/P), and rates of employment (E/L). Where GDP = Gross Domestic Product; P = Population; L = Labor force; and E = Employment. Schematically:

$GDP/P \equiv (GDP/E) * (L/P) * (E/L)$	(II.1)

This identity illustrates the fact that the variations observed in per capita income respond both to productivity-related factors, and to those related to demographic trends.

Due to the lack of unemployment insurance in Mexico, unemployed people very quickly find work in any kind of activity, including informal employment; the rate of open unemployment in Mexico is thus small, often negligible. Consequently we assume that $E = L$ at any given time, and therefore that E/L is always unity. Therefore, for the case of Mexico the identity (II.1) becomes:

[3] Coatsworth (1990), p. 25.

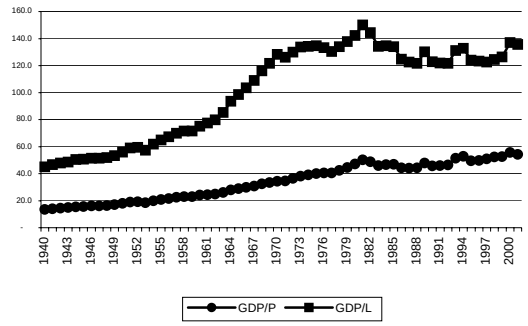
$GDP/P \equiv (GDP/L) * (L/P)$	(II. 2)

Graph II.1 shows the performance of per capita GDP and average labor productivity for the 1940-2001 periods:

Graph II. 1

INCOME PER HEAD AND INCOME PER WORKER

(1940-2001)



Source: Nacional Financiera (1978), La Economía Mexicana en Cifras; INEGI (1999), Estadísticas Históricas de México; Presidencia de la República, Informe de Gobierno (several years).

By dividing the graph into two periods —one corresponding to the period of industrialization by import substitution 1940-1982), and the other to the trade liberalization period (1983-2001)— two distinct trends emerge in each of the two variables. In both, the slope for the first period is steeper than for the second. The second period shows a negative slope for GDP per worker and a positive, but almost flat, slope for per capita GDP.

From this observation a first fact can be established: the average productivity of labor has declined during the trade liberalization period. This decline has been compensated for by an increase in the participation rate, the two combining to produce an almost constant per capita income.

In order to achieve greater precision, we take logarithms to both sides of equation II.2 and take derivatives in respect of time, and we obtain the rate of growth of per capita GDP as

the sum of labor productivity growth and that for the participation rate; using the notation $x^0 = \frac{dx}{x}$, we have:

$$\left(\frac{GDP}{P}\right)^0 = \left(\frac{GDP}{L}\right)^0 + \left(\frac{L}{P}\right)^0 \qquad \text{(II. 3)}$$

Assuming that this variable grows through time at exponential rates, table II.1 presents the estimates for these growth rates during the periods under study.

Table II.1

AVERAGE EXPONENTIAL GROWTH RATES

	1940-1982	**1983-2000**	**1983-1988**	**1989-2000**
GDP/P	3.14%	1.11%	-1.20%	1.53%
GDP/L	3.21%	-0.13%	-2.41%	0.34%
L/P	-0.06%	1.24%	1.21%	1.19%

Data used as basis of these estimates taken from: Nacional Financiera (1978), *La Economía Mexicana en Cifras*; INEGI (1999), *Estadísticas Históricas de México*; Presidencia de la República, *Informe de Gobierno* (several years).

Between 1940 and 1982, per capita GDP grew at an annual rate of 3.1% and average output per worker at a rate of 3.2%, while activity rates slightly declined. This information leads us to the following conclusion: that the continuous increase in per capita output during the entire 1940-1982 period was entirely originated by an uninterrupted increase in average labor productivity.

In contrast, during the 1983-2000 period, per capita GDP showed a growth rate of 1.1%, average output per worker declined at a rate of -0.1%, and the country experienced a significant increase in the participation rate averaging 1.2% per annum. This means that the modest increase in per capita income during the 1982-2000 period originated mainly in the increase in the participation rate, while average labor productivity declined.

During the De la Madrid administration (1982-1988), economic reforms were undertaken by policy makers in Mexico in the hope that —as long as wage restrictions were accepted— such measures would enhance growth rates in productivity and per capita income in the years to come. As it happened, during the 1983-1988 period, per capita income decreased at a rate of 1.2% despite an average annual 1.2% increase in the participation rate.

What had not been expected was that, after economic reforms had had time to mature, neither GDP/P nor the growth rate in labor productivity recovered. The average growth rate in per capita income during the 1989-2000 periods was 1.5% a year. This modest increase was in the main not the result of a higher rate of labor productivity, since this only grew at a rate of 0.34% a year during this period; it was due, rather, to a growth in the participation rate of 1.2% during this period.

To deepen our understanding of the origin of this stagnation of the Mexican economy's long-run growth rate, expressed in that of income per head, we need to explore in greater depth the evolution of Mexican labor productivity. Before we enter upon discussion of the Mexican experience it is important first to decompose the growth rate of labor productivity into its main components.

III. LABOR PRODUCTIVITY ACCOUNTING.[4]

Average labor productivity in the economy as defined in section II, is Gross Domestic Product (*GDP*) divided by total labor force (*L*). Using a different notation, this can be expressed as (*y*) and can be manipulated to obtain the following expression:

$$y_t \equiv \frac{GDP_t}{L_t} = \frac{\sum_{i=1}^{n} GDP_{it}}{\sum_{i=1}^{n} L_{it}} = \sum_{i=1}^{n} \frac{GDP_{it}}{L_{it}} \frac{L_{it}}{\sum_{i=1}^{n} L_{it}}$$

Where the subscript *t* indicates time, GDP_{it} is the value added in industry *i*, and L_{it} is the employment in industry *i*. Moreover, $GDP_t = \Sigma GDP_{it}$ and $L_t = \Sigma L_{it}$.

[4] This section draws heavily upon a method proposed by Nordhaus (2001). In the abstract to this article, which concludes that "none of the measures generally used to measure productivity growth is consistent with the theoretically correct measure", Nordhaus describes his own approach, which sets out to examine "the welfare-theoretic basis for measuring productivity growth and shows that the ideal welfare-theoretic measure is a chain index of productivity growth rates of different sectors, which uses current output weights". On this basis Nordhaus proposes a methodology consisting in "a technique for decomposing productivity growth which separates aggregate productivity growth into three factors — the pure productivity effect, the effect of changing shares, and the effect of different productivity levels…"; this leads to a demonstration of "how to apply the theoretically correct measure of productivity growth" and an indication of "which of the three different components should be included in a welfare-oriented measure of productivity growth".

Average labor productivity in the entire economy could thus also be expressed as the weighted average of labor productivity in the different sectors which make up the economy. The weights are the share of each sector in the total labor force. That is:

$y_t = \sum_{i=1}^{n} y_{it} l_{it}$	(III.1)

Where $y_{it} \equiv GDP_{it}/L_{it}$ is the labor productivity in each industry, and $l_{it} \equiv L_{it}/L_t$ is the share of each industry in total employment.

A country's productivity level depends on each sector's productivity as well as on the distribution of employment (i.e. the degree to which the productive structure shifts towards the sectors with greater or lower productivity).

Absolute levels of productivity vary enormously between industries, and these values depend mainly on the capital to labor ratio in each one of them. A greater level of capital per worker will result in a higher level of average output per worker and vice versa. For example, in Mexico at the level of 73 sectors (two digits SIC), the crude oil and gas sector in the year 2000 had an average labor productivity 17 times greater than the average, followed by the automobile industry, which in the same year had a level 14 times greater than the average.

We can calculate the change in total labor productivity as follows:

$$\Delta y_t = \sum_{i=1}^{n} y_{it} l_{it} - \sum_{i=1}^{n} y_{it-1} l_{it-1}$$

$$= \sum_{i=1}^{n} y_{it} l_{it} - \sum_{i=1}^{n} y_{it-1} l_{it} + \sum_{i=1}^{n} y_{it-1} l_{it} - \sum_{i=1}^{n} y_{it-1} l_{it-1}$$

or,

$$\Delta y_t = \sum_{i=1}^{n} l_{it} \Delta y_{it} + \sum_{i=1}^{n} y_{it-1} \Delta l_{it}$$

Now dividing by y_{t-1}, we obtain the growth in labor productivity:

$$\frac{\Delta y_t}{y_{t-1}} = \sum_{i=1}^{n} l_{it} \frac{\Delta y_{it}}{y_{it-1}} \frac{y_{it-1}}{y_{t-1}} + \sum_{i=1}^{n} \frac{y_{it-1}}{y_{t-1}} \Delta l_{it}$$

Defining relative productivity as $R_{it}=y_{it}/y_t$. This leads us to:

$$\frac{\Delta y_t}{y_{t-1}} = \sum_{i=1}^{n} l_{it} \frac{\Delta y_{it}}{y_{it-1}} R_{it-1} + \sum_{i=1}^{n} R_{it-1} \Delta l_{it}$$

We now define: $\alpha_{it} \equiv l_{it} R_{it-1} = \frac{L_{it}}{L_t} \frac{y_{it-1}}{y_{t-1}} = \left(\frac{L_{it}}{L_t} \frac{GDP_{it-1}/L_{it-1}}{GDP_{t-1}/L_{t-1}} \right)$. For smooth time series and small steps: $\alpha_{it} \approx GDP_{it}/GDP_t = v_{it}$, where v_{it} is the share of industry i in total GDP. This leads us to:

$\frac{\Delta y_t}{y_{t-1}} = \sum_{i=1}^{n} \alpha_{it} \frac{\Delta y_{it}}{y_{it-1}} + \sum_{i=1}^{n} R_{it-1} \Delta l_{it}$	(III.2)

Finally, we add and subtract $\Sigma\alpha_{ik}(\Delta y_{it}/y_{it-1})$ to equation (III.2), where k is the year base. This yields:

$\frac{\Delta y_t}{y_{t-1}} = \sum_{i=1}^{n} \alpha_{ik} \frac{\Delta y_{it}}{y_{it-1}} + \sum_{i=1}^{n} (\alpha_{it} - \alpha_{ik}) \frac{\Delta y_{it}}{y_{it-1}} + \sum_{i=1}^{n} R_{it-1} \Delta l_{it}$	(III.3)

As long as all series are smooth series and with small time steps, this becomes:

$\frac{\Delta y_t}{y_{t-1}} = \sum_{i=1}^{n} v_{ik} \frac{\Delta y_{it}}{y_{it-1}} + \sum_{i=1}^{n} (v_{it} - v_{ik}) \frac{\Delta y_{it}}{y_{it-1}} + \sum_{i=1}^{n} R_{it-1} \Delta l_{it}$	(III.3')

This last equation will provide the basis for further analysis of the evolution of productivity in Mexico. The three terms on the right hand of equation (III.3') represent the three different effects that influence total labor productivity, Nordhaus designates these three terms as follows.

- *Pure Productivity Effect*. "The first term on the right hand side of equation (9) is a fixed-weighted average of the productivity growth rates of different sectors. More precisely, this measures the sum of the growth rates of different industries weighted by base year nominal output shares of each industry. Another way of interpreting the pure productivity effect is as the productivity effect if there were no change in output composition among industries."

- *The Baumol Effect*. "The second term captures the interaction between the differences in productivity growth and the changing shares of different industries over time […] According to Baumol, those industries which have relatively slow output growth are generally accompanied by relatively slow productivity growth" and vice versa (as we shall see in the case of the automobile industry in Mexico).[5]

- *Denison Effect*. As Nordhaus explains, this third term "captures the effect of changing shares of employment on aggregate productivity. This effect was named after Edward Denison who pointed out that the [factor] movement from low-productivity-level agriculture to high productivity level industry would raise [total] productivity even if the productivity growth rates in the two industries were the same. Dennison showed that this effect was an important component of overall productivity growth. The Denison effect is the sum of the changes in output shares of different industries weighted by their relative productivity levels."[6] The Denison effect appears as a consequence of existing differences in the absolute levels of labor productivity among industries; if the absolute productivity levels were the same, the third right term in equation (III.3') would not exist ($R_{it} = 1, \vee i$).

IV. LABOR PRODUCTIVITY ACCOUNTING IN MEXICO.

As indicated in section II, the trend in labor productivity in Mexico over the last twenty years has been negative. Figure IV.1 shows the evolution of labor productivity for the

[5] See William J. Baumol, (1967). Later on this work was updated and revised in Baumol *et al*., (1985), pp. 806-817.

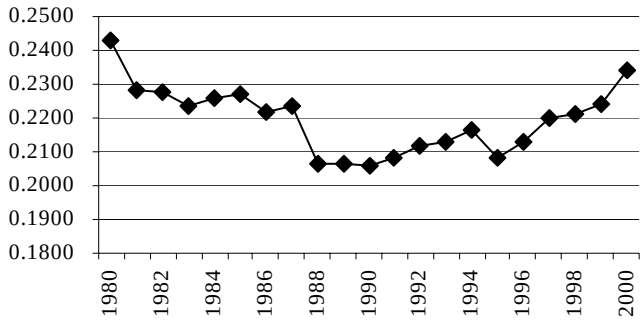
[6] See Denison, Edward F. (1967), (1980) and (1989).

1980-2000 period. The average growth rate for the economy in this period was (-0.3%). The figure also shows, however, a positive trend for the 1990-2000 period.

Graph IV.1

AVERAGE LABOR PRODUCTIVITY

(Thousands of 1980 pesos)



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In order to investigate the components of this trend, the methodology presented in the last section was applied by calculating equation (III.3') for the entire Mexican economy. Data for value added and employment for 73 activities (two digit SIC) during the 1980-2000 period were used.

The calculations are presented in graph IV.2. The graph shows that the contribution of the Baumol effect aggregate productivity was more or less stable (average 0.4% and standard deviation of 0.3%); the Denisson effect varied somewhat more but it stabilized at the end of the 1990s (average: -0.2%; standard deviation: 0.9%). The level and the volatility of the observed average labor productivity is explained mainly by the pure productivity effect (average: 0.2%; standard deviation: 2.9%). In other words, the changes in the evolution of labor productivity are due to the varying productivity of different sectors and not to modifications in the composition of output.

Graph IV.2

COMPONENTS OF TOTAL LABOR PRODUCTIVITY

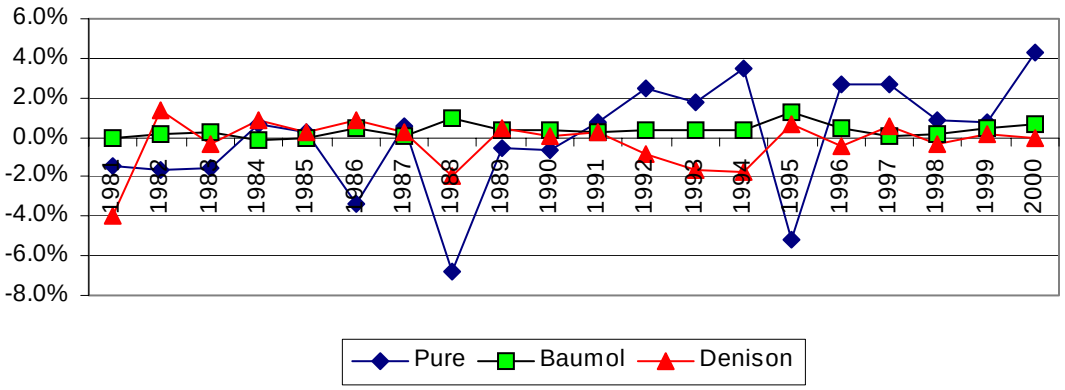


Table IV.1 presents the first fifteen sectors that, in year 2000, contributed most to the rate of productivity growth. That year showed an outstanding net growth rate for labor productivity, 4.9%. Only two of these sectors involved manufacturing activities (automobiles, meat and milk products) and their contribution to the overall growth rate of labor productivity was a mere 0.6%. Meanwhile "commerce" (a non tradable activity), contributed more than half of total growth in that year (that is, 2.6%).[7]

Another interesting fact to be noted from table IV.1, is that two of the three main contributors to the increase of labor productivity in that year —communications and automobiles— are sectors that are still not fully exposed to international competition.

Finally the entire range of "others" (comprising a total of 57 activities) only contributed 0.2% to the total growth of aggregated labor productivity, which means that the increase in labor productivity was highly concentrated.

[7] This increase in the labor productivity of "commerce" was due however, to an increase in the relative price of the non-tradables, product of the overvaluation of the peso, more than an increase in the "productive efficiency" of that activity. See Graph VII.2.

TABLE IV.1

CONTRIBUTIONS OF THE FIRST FIFTEEN ACTIVITIES TO THE GROWTH OF TOTAL LABOR PRODUCTIVITY OF MEXICO

CIIU	BRANCH	1983	1984	1985	1990	1995	1996	1997	1998	1999	2000
62	**COMMERCE**	-1.2%	0.4%	0.2%	-0.7%	-3.4%	1.1%	1.5%	0.4%	0.0%	2.6%
65	**COMUNICATIONS**	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	0.2%	0.1%	0.4%	0.5%
56	**AUTOMOBILES**	-0.1%	0.1%	0.1%	0.1%	0.0%	0.6%	0.1%	-0.1%	0.1%	0.5%
66	**FINANCIAL SERVICES**	0.1%	0.1%	0.1%	0.2%	0.0%	-0.1%	0.0%	0.4%	0.3%	0.4%
64	**TRANSPORTATION**	0.1%	0.2%	0.1%	-0.1%	-0.2%	0.0%	0.3%	0.0%	0.1%	0.2%
60	**CONSTRUCTION**	0.0%	-0.1%	0.0%	-0.4%	-0.5%	-0.2%	-0.2%	-0.2%	0.1%	0.1%
63	**RESTAURANTS AND HOTELES**	-0.1%	-0.2%	-0.2%	-0.1%	-0.4%	0.0%	0.2%	0.0%	0.0%	0.1%
8	**NON FERROUS METALS**	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%
11	**MEET AND MILK PRODUCTS**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
69	**EDUCATION SERVICES**	0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
54	**ELECTRONIC APPLIANCES**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
22	**NON ALCOHOLIC BEVERAGES**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
51	**MACHINERY AND NON ELECTRIC EQUIPMENT**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
39	**SOAPS, DETERGENTS AND COSMETICS**	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
19	**OTHER FOOD PRODUCTS**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
	Rest	-0.2%	0.0%	-0.1%	0.6%	0.4%	1.1%	0.5%	0.1%	0.2%	0.2%
	TOTAL	**-1.35%**	**0.52%**	**0.16%**	**-0.24%**	**-3.94%**	**3.08%**	**2.81%**	**1.02%**	**1.19%**	**4.94%**

This result shows some of the factors behind the lack of dynamism in the Mexican economy. The increase in productivity, registered in aggregated data for example, in year 2000, has been produced to a large extent by increased relative prices in the non-tradable sectors and not by an increase in labor productivity in manufacturing, the main sector responsible for the surge in Mexican exports. To supplement this point, in the next section we study the evolution of labor productivity in manufacturing.

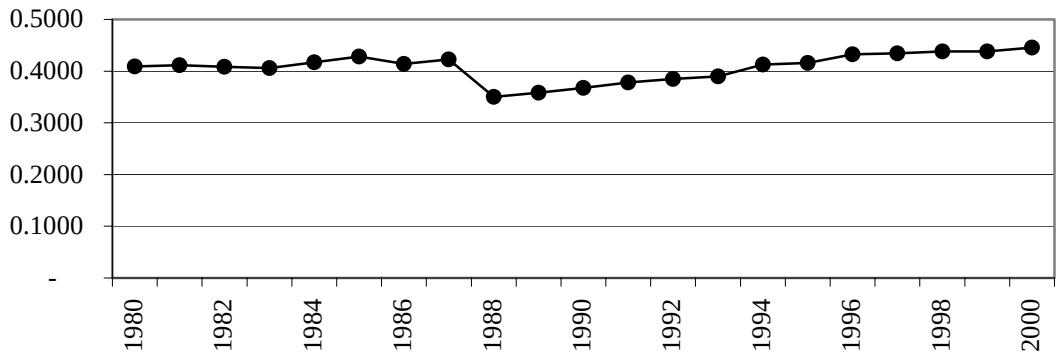
V. EVOLUTION OF LABOR PRODUCTIVITY IN THE MEXICAN MANUFACTURING SECTOR.

The average growth rate observed for labor productivity over the 1980-2000 period was slightly positive, 0.33%. See Graph V.1.

Graph V. 1

LABOR PRODUCTIVITY IN MEXICAN MANUFACTURES

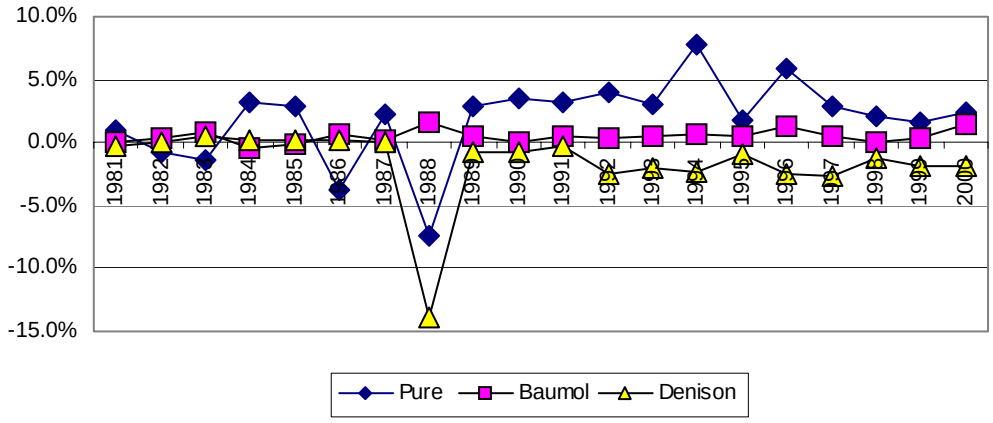
(Thousands of 1980 pesos)



In order to discover the origin of the increase in efficiency in manufacturing and to identify the principal activities that contributed to it, equation (III.3') was calculated for the Mexican manufacturing sector; data on value added and employment for 49 manufacturing activities (two digits SIC) over the 1980-2000 period were used. The results are presented in Graph V.2.

GRAPH V.2

THE COMPONENTS OF LABOR PRODUCTIVITY IN MANUFACTURING



Graph V.2 shows some interesting results. Starting in 1990, a slight upward trend in the Baumol effect can be observed. What the Baumol effect indicates is that the sectors where the highest production growth rates were observed were also the ones registering the highest levels of growth in productivity. This means that the most productive activities are gaining participation in manufacturing GDP. The increases in productivity in these sectors have, therefore, an ever increasing weight in the total productivity of the manufacturing sector. This is just what has happened in the automobile sector, where a spectacular increase has been registered regarding its participation in manufacturing GDP; this jumped from 3.7% in 1980, to 8.9% in 1999, and to 10.4% in 2000. In contrast, the pure productivity effect shows a negative trend starting in 1994. This effect means that the almost flat tendency in the growth rate of overall labor productivity in the manufacturing sector from 1990 on (Graph V.1), was basically due to the growth rate of the Baumol effect. The manufacturing sector has not experienced a harmonic and balanced growth of the majority of manufacturing activities. Growth has become concentrated, and reorganized, in a small handful of successful activities.

A point worth mentioning concerning the last Graph is the negative Denison effect registered for the Mexican economy since 1989. Since that year the Mexican manufacturing sector has experimented a reallocation of the labor force toward activities with lower

capital labor ratios, and labor productivity in the manufacturing sectors as a whole has suffered from this phenomenon.[8] We suggest that this path has been originated by the intensive expansion of the *maquila* activity, characterized by low capital intensity and low, almost stagnant, value added per worker (Puyana and Romero forthcoming). Table V.1 shows that the most successful manufacturing activity is the automobile industry. This activity was the one that most contributed to the growth of manufacturing labor productivity. In year 2000 labor productivity growth in manufacturing was 3.8%, while productivity growth in the automobile industry was 1.95%; this means that this activity contributed 65% of the net growth rate of the labor productivity of manufacturing in 2000.

[8] If we consider that sectors with high capital-labor ratios are sectors with potential economies of scale, and are also knowledge-intensive sectors, this employment shift has severely adverse repercussions in the long term for the growth rates of productivity and per capita income of the kind indicated by Young (1991). See Section VI.

TABLE V.1

CONTRIBUTIONS OF THE FIRST FIFTEEN ACTIVITIES TO THE GROWTH RATE OF TOTAL LABOR PRODUCTIVITY IN MEXICAN MANUFACTURING

CIIU	BRANCH	1983	1984	1985	1990	1995	1996	1997	1998	1999	2000
56	**AUTOMOBILES**	-0.42%	0.67%	0.61%	0.50%	-0.15%	2.55%	0.49%	-0.24%	0.46%	1.95%
11	**MEAT AND MILK PRODUCTS**	-0.08%	-0.10%	-0.03%	0.04%	-0.11%	-0.06%	0.15%	0.04%	0.11%	0.21%
54	**ELECTRONIC APPLIANCES**	-0.10%	0.09%	0.19%	0.11%	-0.09%	0.17%	0.29%	0.18%	0.03%	0.15%
22	**NON ALCOHOLIC BEVERAGES**	-0.03%	-0.04%	0.05%	-0.12%	0.08%	0.14%	0.01%	0.19%	0.00%	0.15%
51	**MACHINERY AND NON-ELECTRIC EQUIPMENT**	-0.13%	0.10%	0.10%	0.15%	-0.02%	0.12%	0.18%	0.06%	-0.10%	0.14%
39	**SOAPS, DETERGENTS AND COSMETICS**	0.02%	0.01%	-0.04%	0.00%	-0.04%	0.23%	0.12%	0.19%	0.06%	0.14%
19	**OTHER FOOD PRODUCTS**	-0.14%	-0.09%	0.09%	-0.01%	0.15%	0.10%	0.16%	0.25%	0.08%	0.14%
37	**SYNTHETIC RESINS AND ARTIFICIAL FIBERS**	0.09%	0.14%	0.04%	0.02%	0.26%	0.21%	0.09%	0.14%	0.13%	0.12%
46	**BASIC IRON AND STEEL INDUSTRIES**	-0.12%	0.25%	0.19%	1.33%	0.84%	0.59%	0.42%	0.01%	0.38%	0.11%
13	**WHEAT MILLS**	0.00%	-0.01%	0.04%	-0.02%	0.12%	0.00%	0.01%	0.01%	-0.06%	0.09%
50	**OTHER METALIC PRODUCTS EXCEPT MACH.**	-0.02%	0.01%	0.05%	0.04%	0.02%	0.37%	0.14%	0.00%	0.07%	0.09%
40	**OTHER CHEMICAL PRODUCTS**	-0.06%	0.21%	0.04%	0.05%	-0.02%	0.14%	0.18%	0.18%	0.13%	0.08%
26	**OTHER TEXTILE INDUSTRIES**	0.02%	0.00%	-0.07%	0.07%	-0.01%	0.06%	0.07%	-0.03%	-0.04%	0.08%
12	**FRUITS AND VEGETABLES**	0.04%	0.00%	0.06%	0.06%	-0.05%	-0.04%	0.11%	0.08%	0.09%	0.08%
45	**NON METALIC MUNERAL PRODUCTS**	-0.08%	-0.04%	-0.02%	-0.05%	0.17%	0.28%	0.04%	0.05%	0.12%	0.08%
	Rest	0.35%	1.66%	1.35%	1.48%	1.08%	2.41%	0.84%	1.03%	0.45%	0.18%
	TOTAL	**-0.6%**	**2.9%**	**2.7%**	**3.6%**	**2.2%**	**7.3%**	**3.3%**	**2.1%**	**1.9%**	**3.8%**

This is a surprising and revealing fact. The automobile activity is the most successful of all in the manufacturing sector, and this is an activity that has not faced full international competition and for which a sector development policy exists.[9] This industrial policy will one day cease to exist, and it is not clear what effects will be induced by the elimination of

[9] Following the Automobile Decree of 1989, the assembly firms were obliged to maintain a national value added (NVA) from Mexican sources; in 2002 this amounted to 30%, falling to 29% for 2003. The Decree also established that the assembly industry could import new vehicles only when a positive trade balance existed. The Automobile Decree also laid down that manufacturers of auto parts have to maintain an NVA of at least 20%.

trade controls upon the industry. If the pattern found in other activities is repeated, it is highly probable that labor productivity growth in both the manufacturing sector and the economy as a whole will be negatively affected, as will Mexican income per head [10]

This result leads us to conclude once more that the Mexican economy is not becoming more competitive; its manufacturing sector presents a generalized stagnation as regards productive efficiency with the exception of its automobile sector, which is the only one that shows a positive growth rate, although this is maintained by a favorable industrial policy.

VI. ANALITICAL AND EMPIRICAL CONSIDERATIONS FOR THESE RESULTS.

A. Analytical considerations.

How it is possible that neither trade liberalization nor the influx of foreign investment have produced the expected productivity growth and growth in per capita income? The answer is that the connection between trade liberalization, FDI, and higher rates of economic growth does not necessarily exist. The existence of such causal relations between these elements has no foundation, either in theory or empirical evidence.

Most economists agree that increased trade should lead to a one-off increase in GDP as country resources are allocated more efficiently. They do not seem to agree on whether trade can influence the long-run growth rate of the economy. While the role of trade in promoting economic well-being in a static framework has a long tradition in trade theory, the interaction between international trade and long-run movements in output and productivity is less well understood.[11] The theory of trade is generally silent on the effects of liberalization on the growth rates of both output and productivity. Different, but equally reasonable, models can lead to opposite conclusions on this subject,[12] but the overall theoretical conclusion is a matter for doubt. “The conventional benefits of trade liberalization are once-and-for-all welfare gains, and although such gains can accumulate

[10] As a result of NAFTA and EUFTA, Mexico will have to eliminate, no latter than December 31st , 2003, all its tariffs and non-tariff barriers to the automobile sector in respect of the signing countries. This means that, from then on, the trade-balance and NVA requirements will cease to exist.

[11] Bernard and Jensen (1999), p. 1.

[12] See Rodrik (1992) p.157.

over time, they do not necessarily set the economy on a superior path of technological development."[13] Moreover,

> The net benefits of increased trade on economic growth are not necessarily positive, as demonstrated by Grossman and Helpman (1991) and others. While there might be an overall efficiency gain that raises the level of income, increased trade openness can also change the relative price of tradables and divert resources away from sectors where increasing returns exist. Whether increased competition pushes an economy's resources toward or away from activities that generate increased long-run growth depends on the country's comparative advantage at the time of the liberalization. Put somewhat differently, if an economy is lagging in technological development, temporary import protection can allow it to catch up on more advanced economies rather than being forced to specialize in the production of traditional goods and experience a reduction in long-run growth, along with the higher level of income.[14]

The void of fundamental theories linking trade and productivity was filled by scores of arguments regarding how free trade could increase domestic productivity; most of them with very shaky analytical bases. Among such arguments, five deserve mention:[15]

1) *X-efficiency*. The first set of arguments revolves around X-efficiency. The argument is that protection makes it more likely that domestic entrepreneurs will succumb to the "quiet life" of the monopolist. Why work hard to improve productivity and cut costs if foreign competition presents little threat? This is however a very controversial issue.[16]

2) *Macroeconomic instability.* The second major line of reasoning relies on the evidence that inward-oriented regimes are prone to foreign exchange bottle-necks and stop-go macroeconomic cycles. The instability in the macro-economic environment and the consequent tendency for output to fall periodically below the full-capacity level certainly do not foster growth and measured productivity. While these arguments have an important grain of truth, they say practically nothing about the role of trade policy *per se*.

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[13] *Ibid*. p. 157.

[14] Brunner (2003), p. 3

[15] The presentation of the first three arguments is based on Rodrick (1992).

[16] An in-depth analysis can be found in Corden (1974, pp. 224-31), who carefully dissects the argument and shows its fragility.

Conceptually, any level of trade protection is compatible with macroeconomic stability, realistic exchange rates, and the like. The view that protection leads to chronic current-account deficits mixes up macroeconomics with microeconomics. Mexico for example, between 1940 and 1970, had a very restrictive trade regime in combination with exchange rate and macro policies that were quite unobjectionable.[17] During the 1970-1982 period the country underwent a degree of trade liberalization, and macroeconomic management was so poor that this led to the debt crisis. To correct this crisis and the unfortunate macroeconomic policy that created it, the Mexican policy makers of the De la Madrid administration adopted a package of "structural reforms". This "structural change" entailed the adoption of a radical and costly social experiment, which as we have seen, has yet to present results and is giving rise to questions regarding the extent to which these changes were appropriate. In this respect it is worth mentioning that under the umbrella of "outward orientation or export promotion strategy", a large set of different macroeconomic policies and trade measures are mixed to form what could be described as a colorful cocktail. Prescriptions regarding trade policies were advised where sound macroeconomic principles were all that were needed. Such confusion led to the implementation of policies in which ideological content predominated over economic reasoning.

This situation became vividly apparent in the 1994 Mexican exchange rate crisis. By 1994, Mexico was already one of the most open economies of the world. Nevertheless, erroneous exchange rate and macro policies were implemented throughout almost the entire Salinas administration.[18] Such mismanagement led Mexico to its severest economic crisis since the nineteen-thirties.

3) *Increasing returns to scale.* The third line of argument is based on economies of scale. More open trade regimes, it is argued, are conducive to lower overall costs since domestic firms can achieve larger levels of output by participating in world markets. In a broad general equilibrium sense, this is of course true. Small, open economies are likely to specialize in a narrow range of products which they can produce and export on

[17] This period is well remembered as that of "desarrollo estabilizador" (stabilizing development).

[18] As Caves *et. al*. (1999) put it: "Blind adherence to purchasing power parity (among other things) got Mexico into trouble in 1994". p. 381.

a sufficient scale to be competitive. In more practical terms, as long as trade liberalization leads to an expansion (on average) of firms and sectors with increasing returns to scale (IRS), the conventional resource allocation benefits are magnified by enhanced overall productivity. But getting from here to there could be problematic. If IRS activities are predominantly located among import-competing (that is, protected) sectors, as they indeed tend to be,[19] we cannot take it for granted that liberalization will work to expand such activities. Whether scale effect adds to or subtracts from the resource allocation gains depends on a variety of factors (see the discussion in Rodrik 1988) with no clear-cut findings either way.

4) *International knowledge spillovers.* Some new developments indicate that free trade could be beneficial for growth to the extent that it increases the total size of the market, and hence the monopoly rents that can be appropriated by successful innovators. International knowledge spillovers will reinforce the positive effects of opening up economies: the fact that researchers in each economy can benefit from discoveries made elsewhere will increase the incentive for individuals to engage in research rather than production activities, thereby enhancing growth.[20]

   Considerations like these have renewed the optimism of a number of economist and decision makers regarding the beneficial effects of trade liberalization on growth. First, because free trade increases the size of the market and therefore the size of the rewards to successful innovators; second, because it enlarges the scope for knowledge spillovers, both of which effects are conducive to faster technological change. However, this optimistic view overlooks a number of potentially counteracting effects.

   As argued by Young (1991), trade liberalization between developed countries (DC) and less developed countries (LDC) may have effects contrary to those expected: trade between such dissimilar countries, may inhibit learning by doing, and hence the growth of general knowledge in LDCs. Liberalization could induce LDCs to specialize in product lines in which the potential for learning has been largely exhausted.

[19] See the evidence presented in Rodrik (1988, Table 4).

[20] A major theme in this research agenda has been the notion that trade facilitates the transfer of knowledge and ideas across countries, e.g. Grossman and Helpman (1991), Ben-David and Loewy (1998).

Considerations of comparative advantage imply that a less developed country (LDC) that begins with a lower level of technology knowledge will specialize in relatively unsophisticated goods with less potential for learning by doing. As a result, the LDC may experience a reduction in its rate of economic growth, which might result in dynamic welfare losses from trade. In contrast, the DC with which it trades enjoys an increased rate of growth and dynamic welfare gains, which augment the standard static benefits from the exploitation of comparative advantage.[21]

The conclusion of the proponents of these ideas is that the effect of the resource reallocations induced by comparative advantage on growth is ambiguous.

5) *Foreign direct investment*. Opening the economy to FDI, it is argued, is another way to improve productivity and economic growth. Liberalizing investment, the story goes, apart from creating more employment, helps the host country to increase its technical efficiency and facilitates technology transfer. It is further argued that multinational enterprises (MNE) are an important channel for dissemination of technological improvements between the host country and that originating FDI; in other words, we should expect a productivity increase among domestic firms through knowledge spillovers provoked by the presence of MNE. However this line of reasoning has certain problems.

First, FDI may have the effect of displacing indigenous investment and the aggregate net employment effect will thus be less than that generally attributed to FDI. Second, and more important, it is in the nature of firms providing FDI to avoid diffusion of their industrial knowledge; there is this little scope for a host country to benefit on this account. The strength of MNEs lies precisely in their reluctance to license technology to independent firms in order to prevent these from appropriating the benefits of exploiting it.[22] In effect, if not properly controlled, the value of technological advancements can be easily appropriated by outsiders:

> The same characteristics that make knowledge capital easy to transfer to a new plant make its value easily dissipated outside the firm if it is not carefully controlled. Blueprints, formulae,

[21] Aghion and Howitt. (1999), p. ¿?

[22] Caves, Richard E., *et. al*. (1999), p. 157.

> and reputations are just a few examples of knowledge capital that can be lost to competitors without carefully monitoring.[23]

The brief description of these arguments will lead us to doubt the solidity of the arguments in which the Mexican undertook its "structural reforms". This section indicates that it is difficult to identify *a priori* the effects of globalization on productivity and long run per capita income growth. Although the conventional position is that free trade has a beneficial effect on growth and welfare, this need not always be the case. Hence, empirical work assumes great importance.

B. World-wide empirical evidence.

On balance, much empirical work supports the idea that openness is growth-promoting,[24] but this is controversial and subject to a wide variety of criticisms.[25] While many studies have found positive relationship between trade and income, this relationship is generally not robust. Economists have pointed to a number of methodological and econometric problems that may account for this lack of robustness.[26] Much of this literature consists of cross-sectional regression analysis, where income or income growth for a number of countries is regressed on some measure of trade. These measures of trade in most cases are constructed using quantitative indicators and qualitative judgments. Rodrick (1992) questions the results of many of these empirical studies, suggesting that there is no strong evidence that trade liberalization and technological performance are positively linked:[27]

> Until more evidence becomes available, then, a healthy skepticism is in order. In the meantime, if truth-in-advertising were to apply to policy advice, each prescription for trade liberalization would be accompanied with a disclaimer: 'Warning! Trade liberalization cannot be shown to enhance technical efficiency; nor has it been empirically demonstrated to do so'.[28]

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[23] *Ibid*. (1995). p. 406

[24] Dollar (1992); Sachs and Warner (1995); Ben-David (1993); Edwards (1998); Berg and Krueger (2003).

[25] Rodríguez and Rodrick (1999).

[26] Brunner (2003), p. 3.

[27] *Ibid*. p. 3.

[28] *Ibid*. p. 172.

But, what about FDI? Policymakers in many developing and transition economies place attracting foreign direct investment (FDI) high on their agenda, expecting FDI to bring new technology and know-how, and thus contribute to increasing the productivity and competitiveness of domestic industries. As the economic rationale for this special treatment, policy makers cite positive externalities generated by FDI through productivity spillovers to domestic firms.

The only trouble is that there is no proof that positive productivity externalities generated by FDI actually exist. As Dani Rodrik (1999) remarks, "today's policy literature is filled with extravagant claims about positive spillovers from FDI but the evidence is sobering."

Indeed, difficulties associated with disentangling the different effects at play, in addition to data limitations, have prevented researchers from providing conclusive evidence of positive externalities resulting from FDI.[29]

In the words of a recent study for Lithuania, "since multinationals have an incentive to prevent information leakage that would enhance the performance of their local competitors, but at the same time might want to transfer knowledge to their local suppliers, spillovers from FDI are more likely to be vertical […] than horizontal in nature. In other words, spillovers are most likely to take place through backward linkages, that is contacts between domestic suppliers of intermediate inputs and their multinational clients, and thus they would not have been captured by the earlier studies." The study arrives at the following conclusions:

> We find empirical evidence consistent with the existence of positive spillovers from FDI taking place through backward linkages but no indication of spillovers occurring through horizontal channels. These results are consistent with the existence of knowledge spillovers from foreign affiliates to their local suppliers but they may also be due to increased competition in upstream sectors. The latter may be the case if multinationals entering down stream sectors force less productive domestic producers to exit thus lowering the demand for

[29] For an updated review of the literature on the effects of FDI see Smarzynska (2003), pp. 2 and 3. She concludes that "…most of these studies, either fail to find a significant effect or produce the evidence of negative horizontal spillovers, i.e., the effect the presence of multinational corporations has on domestic firms in the same sector".

domestically produced intermediates, either because they are more efficient and need fewer inputs or they choose to import their inputs (due to their higher quality, constraints imposed by the parent company, etc.). The welfare implications of the two scenarios are quite different. While the former case would cal1 for FDI incentives, it would not be the optimal policy in the latter. More research is certainly needed to disentangle these effects.[30]

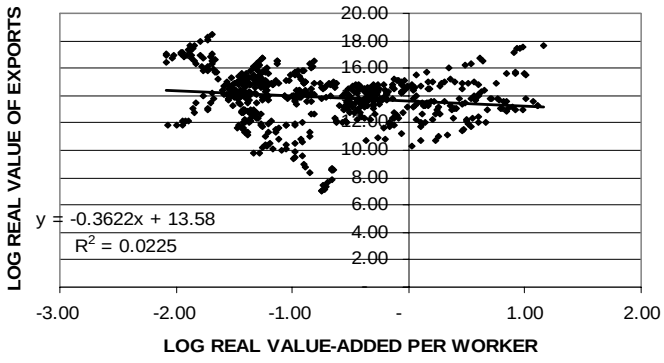
C. Is there a strong positive link between the Mexican export boom and productivity growth?

In order to examine what lessons are to be learned from Mexico's economic performance following the implementation of reforms, two relations between trade and productivity need to be examined. The emerging pattern provides arguments in favor of claims that there is no evident causal link between the two elements. Figures VI.1 and VI.2 present two versions of the relationship between trade and productivity. Figure VI.1 shows the log of the levels of annual average labor productivity and that of the level of real exports (both series for the Mexican manufacturing sector, 2 digits SIC) for the 1989-2000 period. Figure VII.2 illustrates the annual growth rate of total factor productivity (TFP) and the annual real growth rate of exports (also for manufacturing industries, 2-digits SIC) for the 1989-2000 period.

Figure VI 1

EXPORTS AND LABOR PRODUCTIVITY IN MEXICAN MANUFACTURING

1989-2000

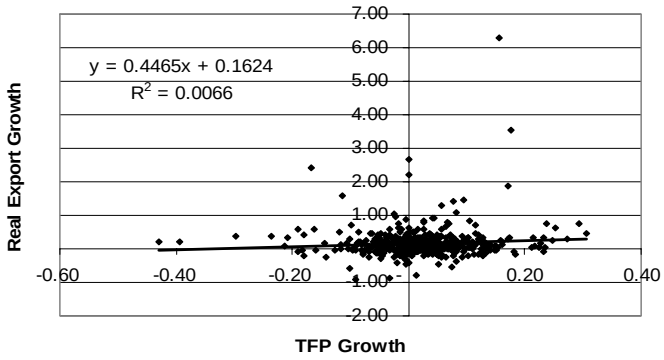


[30] Smarzynska (2003), p. 3.

Figure VI 2

EXPORT GROWTH AND TOTAL FACTOR PRODUCTIVITY GROWTH IN MEXICAN MANUFACTURING

(1989-2000)



Within the manufacturing sector, levels of labor productivity and rates of growth of total factor productivity do not show any significant relation with the level of manufacturing exports. (The first relation is negative with a correlation coefficient for panel data for 49 manufacturing industries for the period 1989-2000 of -0.1501, and the second also for 49 activities and the same period, with a correlation coefficient of 0.0811).

These relations show that trade liberalization has not yet resulted in improvements of efficiency for the Mexican economy as a whole, and therefore in the overall rate of economic growth.

Table VI.1 presents the evolution of the growth rate of income per head for Mexico and its major trading partners from 1940 to 2000. As is shown in the Table, during the 1940-1982 period Mexico had a respectable rate of economic growth, that for per capita income being almost one percentage point above that of the USA and higher than that of Canada, the United Kingdom, Argentina, Chile and Colombia. By contrast, the rate of economic growth after the "reforms" (1983-2000) is the lowest among all the economies considered in the table.

Table III.1

AVERAGE ANNUAL GROWTH RATE OF PER CAPITA INCOME FOR MEXICO AND ITS MAIN TRADING PARTNERS

	1940-1982	1983-2000	1983-1988	1989-2000
United States	1.64%	2.00%	3.20%	2.00%
Canada	2.55%	1.40%	3.20%	1.50%
Germany	4.75%	1.60%	2.50%	1.20%
United Kingdom	1.90%	2.00%	3.70%	1.90%
Holland	3.56%	2.20%	2.00%	2.10%
France	4.23%	1.60%	2.00%	1.30%
Spain*	3.92%	2.60%	3.10%	2.20%
Japan	5.61%	2.40%	3.60%	1.20%
China	3.09%	8.10%	9.20%	8.60%
South Korea	3.65%	6.00%	8.10%	4.80%
Argentina	1.65%	1.50%	-0.70%	3.10%
Brazil	3.40%	0.90%	3.30%	1.10%
Chile	1.41%	5.40%	4.90%	5.10%
Colombia	2.03%	1.60%	2.40%	1.20%
Mexico♥	2.71%	0.90%	-1.30%	1.40%

♥ The estimated growth rates for Mexico differ from the ones presented in Table II.1 due to differences in data sources.

* 1960-1982.

Sources. For 1940-1982: Maddison (1989 and 1991); for 1983-2000, 2002 World Bank Indicators, Washington D.C.: The World Bank.

When we divide the 1983-2000 period into two subsections a different picture emerges. The 1983-1988 period should be considered independently as these were the years of the debt crisis and structural changes. The 1989-2000 period seems to suggest that the structural changes did achieve the objective of increasing productivity and the rate of economic growth (even if this rate is half the average for the 1940-2000 period and lower than that of the US). The larger share of the increase in the rate of per capita income growth in Mexico during the 1989-2000 period is due to a grater participation of the population in the labor force, and not to improvements in productivity.[31]

VII. OTHER FACTORS THAT COULD EXPLAIN THE "UNEXPECTED" RESULTS

There are at least three other factors associated with the "outward-oriented", "private sector based" strategy that may explain in part the stagnation of productivity and per capita income in Mexico.

The first factor is the decline in public investment. Since the debt crisis of 1982 this has fallen dramatically, affecting the expansion of urgently needed infrastructure, and

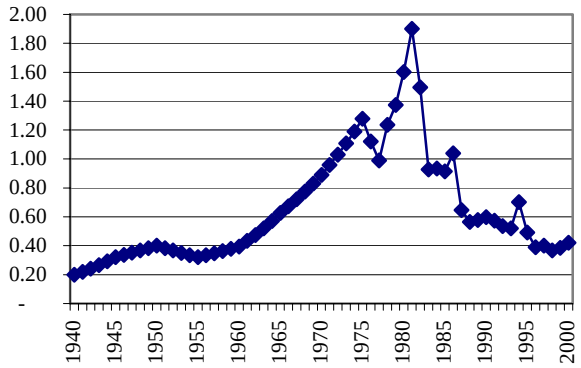
[31] As has already been shown above.

thereby severely curtailing the competitiveness of Mexican producers and limiting the potential externalities of public works. From 1940 to 1982 public investment per worker grew at an average rate of 4.7% a year; from 1983 to 2000, in contrast, it decreased at an average rate of 6.2% (see Graph VIII.1). Ideologically the decline was part of the "private sector based strategy", but in practical terms it was the easiest way to balance the budget.

Graph VII. 1

PUBLIC INVESTMENT PER WORKER

(Thousands of US dollars at 2000 values per worker)



Sources: Nacional Financiera (1978), *La Economía Mexicana en Cifras*; INEGI (1999), *Estadísticas Históricas de México*; Presidencia de la República, *Informe de Gobierno* (several years).

The second factor is the overvaluation of the currency. Since 1988 (starting with the Salinas administration) macroeconomic management has produced a permanent overvaluation of the currency.[32] This has been done with the hope that pegging the currency to the USA dollar would reduce inflation and interest rates and that this would be beneficial for stimulating the inflow of portfolio capital and domestic investments.

In order to illustrate the extent of such policies' effects on the overvaluation of the currency, we can use the purchasing power parity theory (PPP). This theory is generally accepted to be valid in the long run. Let "E" be the long-run exchange rate, defined (according to the PPP) as the quotient of the Mexican consumer price index (INPC) with a base year 1970, divided by the US equivalent price index (CPI) with the same base year.

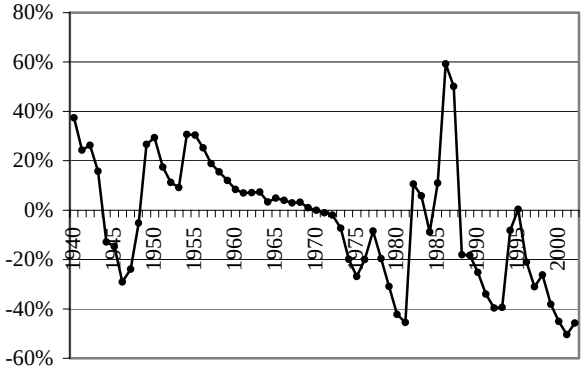
[32] Which incidentally proves that macroeconomic mismanagement was not an exclusive prerogative of the "populist" governments.

That is *E=INPC/CPI*. Letting "S" be the observed peso value of the dollar at the close of each year, and normalizing this time series, making the 1970 value equal to one, we have S_{1970}=1. The overvaluation of the peso is illustrated in graph VIII.2, which shows the deviation of the short run exchange rate from its long-run value. That is: *[(S-E)/E]*.

Graph VII.2

DEVIATION OF THE OBSERVED EXCHANGE RATE FROM ITS LONG-RUN VALUE

[(S-E)/E]



The graph shows, since 1988, a tendency to overvalue the currency (negative values) that was only interrupted by the 1994 currency crisis. In 2002, the short-run deviation of the exchange rate from its long-run value was more than 40% — reason enough to expect severe effects on the competitiveness and profitability of the Mexican trading sectors, in turn inhibiting investment and therefore growth in productivity.

The third factor is the inefficient Mexican financial system: the preceding account of Mexico's recent growth performance may partly be explained by the weakness of this sector. For its level of development, Mexico has an extremely underdeveloped banking system and stock market. Its weakness became even more evident under the new policy than under the previous one. During the import-substitution period the financial system played a less crucial role, and thus posed less of a growth constraint in the state coordinated, inward-oriented development strategy applied in Mexico during the 1940-1982 period than it came to exercise under the outward-oriented, private-sector based strategy adopted subsequently. Once the private sector was "designated to take the lead in

investing", the financial system was shown to be ill-prepared to perform its intermediating role. This resulted in the misallocation of savings in projects and assets with low returns, which in turn manifests itself in reduced productivity growth. The weak financial system constituted a handicap for domestic producers, reducing their ability to compete effectively in a global context. The emphasis on the benefits of liberalizing capital flows has linked the Mexican financial system more closely with the world capital markets, making it more vulnerable and less capable of fulfilling its task of allocating resources among investors.

If the evidence linking trade liberalization and FDI with economic growth is weak, the evidence of the benefits of liberalizing capital flows is even more so. The arguments in favor are not sufficient to prove that a better global allocation of resources will be achieved. Capital markets are nervous and sometimes irrational subject to bubbles (both national and otherwise), panics, shortsightedness, and self-fulfilling prophecies. There is plenty of evidence that financial liberalization is often followed by financial crash, as indeed already occurred in Mexico, Thailand, and Turkey, while there is little convincing evidence to suggest that higher rates of economic growth follow capital account liberalization.[33] Facing the evidence of the disappointing results of the "structural reforms" undertaken in Latin America, some policy makers and their advisers lay the blame on the insufficiency of these reforms. Mexican finance minister Francisco Gil suggests that the reforms implemented in Latin America are not even a shadow of what they ought to be. He explains (in his own words):

> "… anybody who asserts that Latin America has been under a neo-liberalism mantle, or market economics, has failed… is either ignorant (ignorant of the facts, or ignorant of the institutional setup needed for the model to function), or is simply hostile to market economics and opines dishonestly."[34]

In this context Rodrik argues that some advocates of liberalization are asking for a full package of additional reforms covering all economic and political institutions:

> … Asking any World Bank economist what a successful trade-liberalization program requires will likely elicit a laundry list of measures beyond the simple reduction of tariff and non-tariff

[33] Rodrik (2001), p. 2 and 3

[34] Gil Díaz (2003), p. 7-11.

> barriers: tax reform to make up for lost tariff revenues; social safety nets to compensate displaced workers; administrative reform to bring trade practices into compliance with *WTO* rules; labor market reform to enhance worker mobility across industries; technological assistance to upgrade firms hurt by import competition; and training programs to ensure that export-oriented firms and investors have access to skilled workers. As the promise of trade liberalization fails to materialize, the prerequisites keep expanding. For example, Clare Short, Great Britain's secretary of state for international development, recently added universal provision of health and education to the list.
>
> […] A cynic might wonder whether the point of all these prerequisites is merely to provide easy cover for eventual failure. Integrationists can conveniently blame disappointing growth performance or a financial crisis on 'slippage' in the implementation of complementary reforms rather than on a poorly designed liberalization. So if Bangladesh's freer trade policy does not produce a large enough spurt in growth, the World Bank concludes that the problem must involve lagging reforms in public administration or continued 'political uncertainty' (always a favorite). And if Argentina gets caught up in a confidence crisis despite significant trade and financial liberalization, the IMF reasons that structural reforms have been inadequate and must be deepened.[35]

VIII. CONCLUSIONS

The "export promotion strategy" adopted by Mexico since December 1982, has notably increased the country's participation in world trade, and significantly attracted FDI, but it has not appreciably increased productivity growth or real per capita income. With the "structural reforms" initiated two decades ago it was expected that Mexico would enter upon a rapid growth path, but the results have been unsatisfactory.

The country has not increased its productivity in any significant way and the Mexican economy has become less competitive than ever, this being reflected in the average growth rate of Mexican per capita income *vis-à-vis* what it was prior 1982, and compared to that of its main trading partners.

We cannot generalize from the lack of relationship between trade liberalization and productivity growth which we find in the Mexican case to conclude that such a lack of

[35] Rodrik (2001), pp. 2-3.

relationship is universal. It only shows that the relationship does not hold for the Mexican case. This could be the result of other "complementing" policies operating to neutralize the possible effects, if any, of trade liberalization.

The Mexican evidence gives rise to two types of lessons. One for those who tenaciously insist in trying to prove (or disprove) the universal benefits of trade liberalization on productivity and growth by means of cross country studies. There are many specific factors in each country that can offset or enhance the possible positive effects of trade liberalization (as this study on the Mexican case shows). Therefore studies should be carried out country by country analyzing all the factors involved, including specific historical factors.

The second lesson is for Mexican policy makers: trade liberalization and opening the country to FDI are not sufficient by themselves to bring about generalized increases in productivity and in the living standards of the population.

The remedy for the stagnation of the Mexican economy rests in designing and implementing more imaginative measures than those applied until now. It requires a comprehensive economic policy that will generate the conditions for a truly virtuous circle of innovation, productivity, growth, and international trade.

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