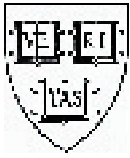

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"Mexico's Market Reforms in Historical Perspective"

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I. Introduction

This paper looks at Mexico's development policies and problems from a historical perspective.[1] It reviews long term trends in the Mexican economy, and examines in particular some past episodes of radical shifts in development strategy and in the role of markets and the state. The shift of the last twenty years is given particular attention. A major theme is that the real obstacles to economic development have often been misperceived in the past and that the same may be happening at present. The paper is organized as follows. The second section, after this brief introduction, reviews the debates on the causes of Mexico's long period of economic stagnation experienced during most of the XIX century. Section Three examines the long expansion of the Mexican economy that began in the *Porfiriato*—in the late 19th century—and ended with the collapse of a short lived oil boom in 1981. Section Four focuses on the economic and policy adjustments to the external shocks of the 1980s and discusses the Mexican economy's prospects under the radical shift in development strategy implemented since the mid 1980s. The paper ends with some thoughts on the challenges of the Mexican economy in 2003, when after more than fifteen years of economic reform it is—for the first time in its modern history—about to experience three successive years of absolute decline in its real GDP per capita.

II. Market reforms in the XIX century

By the end of the 18th century Mexico was probably one of the most prosperous regions [areas] in the world. It was surely one of the wealthiest Spanish colonies in America, with an economy whose productivity was possibly higher than that of Spain herself. Output per capita (in 1800) was around half that of the US, and Mexico's economy was less agricultural, with an advanced mining industry and a significant manufacturing sector. The value of exports was similar to that of Mexico's northern neighbor, even though total output produced was around half (Coatsworth, 1978). Several of the conditions for rapid capitalist development were in place. The creation of an industrial labor force—that "most difficult and protracted process" by which the population's ties to the land are broken (Gerschenkron, 1952)—although far from complete, was probably more advanced than in many European countries (especially in Central and Eastern Europe). The relatively high share of manufacturing in total output in 1800 (22.3 percent, see Table 1) also speaks about the presence of a critical mass of native industrial entrepreneurs.

[1] This paper is intended to be an extended and much revised version of an essay published by the authors nearly ten years ago, at the time NAFTA was put in place (see Moreno-Brid and Ros, 1994).

Table 1. *GDP per capita and by sector;* 1800-1910

	1800	1845	1860	1877	1895	1910
Per capita GDP at constant 1900 prices (index 1800 = 100)	100.0	78.4	70.9	85.0	128.8	190.2
% of GDP						
Agriculture1/	44.4	48.1	42.1	42.2	38.2	33.7
Mining	8.2	6.2	9.7	10.4	6.3	8.4
Manufacturing	22.3	18.3	21.6	16.2	12.8	14.9
Construction	0.6	0.6	0.6	0.6	0.6	0.8
Transportation	2.5	2.5	2.5	2.5	3.3	2.7
Commerce	16.7	16.9	16.7	16.9	16.8	19.3
Government	4.2 2/	7.4	6.8	11.2	8.9	7.2
Other	1.1	-----	-----	-----	13.1	12.9

[1/] Includes livestock, forestry and fishing
[2/] Excludes net fiscal remittances to the Spanish Treasury. Total government revenues, including these remittances, amounted to 7.8 percent of colonial income.
Source: Coatsworth (1989) Tables 4 and 5

Mexico's Century of Decline (1780-1870): obstacles to economic development

Yet between 1800 and approximately 1860—at the time when the US and other now developed economies were recording unprecedented rates of economic growth—total production fell by 5 percent and per capita incomes declined by as much as 30 percent. Between 1820 and 1870, Mexico's income per capita had fallen from 60 percent to 28 percent of that of the US, and has since then fluctuated between 24 and –33 percent (Table 2).

Whether this decline had already started in the later decades of the colonial period or not, everybody agrees that independence did nothing to prevent the economy's stagnation during the half century that followed it. Why didn't independence and the emergence of a nation-state stimulate economic development?

Table 2. GDP, GDP per capita and population, 1820-1998

	1820	1870	1913	1950	1973	1990	1998
GDP Per Capita a/	759	674	1,732	2,365	4,845	6,097	6,655
GDP GAP (Mex/US)	0.60	0.28	0.33	0.25	0.25	0.26	0.24

	1820-1870	1870-1913	1913-1950	1950-1973	1973-1998
GDP Per Capita Growth Rates (%)	-0.2	2.2	0.9	3.2	1.3
GDP Growth Rates (%)	0.4	3.4	2.6	6.4	3.5
Population Growth Rates (%)	0.7	1.1	1.8	3.1	2.2

a/ 1990 international dollars

Source: Maddison (2001)

Independence eliminated the fiscal burden on gold and silver extracted from the colony. This had been a substantial burden—estimated by Coatsworth at 7.2 percent of total output around 1800—much higher, for example, than the burden of British colonialism on its North American colonies. Yet the end of Spanish rule also brought some unexpected costs for the mining sector that partly offset the removal of this burden. Not only were the direct effects of the independence wars on mining production highly disruptive, but they also involved the loss of low cost and guaranteed supplies of mercury (essential for processing low-grade ores) that Spain had provided from its large state-owned mine at Almaden. As a consequence of this disruption, silver production fell to less than one-fifth from 1812 to 1822, and the mining sector did not recover its pre-independence level of production until the 1860s (Cardenas, 1985). The depression of silver production had, in turn, other important consequences for the economy. Besides the contraction of all the activities linked to the mining sector, it implied a reduction in the volume of international trade and a decrease in the means of payment available in the domestic economy (Cardenas, 1985). The latter aggravated the consequences of capital flight brought about by the exodus of Spanish miners and merchants, and thus the general lack of financial capital, which characterized this period up to the 1860s when the first commercial banks were founded.

The abolition of restrictions to foreign trade also turned out to be a mixed blessing. While generally regarded by economic historians as beneficial to the Mexican economy, the end of trade restrictions

accelerated the diversion of Mexican foreign trade away from Spain and towards the emerging industrializing powers in the North Atlantic, a trend which had very harmful effects on domestic manufacturing and, therefore, on the major activity that could have compensated for the decline of the mining sector. Several studies have documented how exposure to US and British competition led to the collapse of the wool textile industry at the turn of the century and to the prolonged decline of cotton textiles throughout the first half of the 19th century. Trade opening towards the Atlantic economy and foreign competition—which in fact started in the period of *'comercio libre'* and *'comercio neutral'* introduced by the Bourbon reforms—also appears to have deepened the fragmentation of local markets and the cleavage between, on the one hand, a mining and agricultural north trading with the rest of the world and, on the other, a manufacturing centre and agricultural south plunged into economic depression (Thomson, 1986).

In addition, little progress was made in other areas. The colony had been one of the regions in the world with the sharpest social and regional disparities; a caste society, in fact, where access to employment as well as geographical and occupational mobility were restricted on the basis of ethnic distinctions, and where a number of institutional arrangements tended to increase, rather than reduce, the gap between the private and social benefits of economic activity. Although some changes did take place with independence,[2] many of these had little effect on a backward social and political order. The ultimate reason is probably the nature of the foundational act of the post-independence state: the fact that having begun and been defeated as a popular insurrection—feared by both the Spanish and Creole conservative elites—independence came eventually to Mexico through "a virtual *coup d'état* by the colony's Creole elite, carried out largely to separate Mexico from the liberalizing process under way in the mother country" (Coatsworth, 1978).

This had several consequences. Institutional modernization was *de facto* and sometimes *de jure* slow. A new civil code was only produced in 1870—almost 50 years after independence—and even then nothing replaced a repudiated commercial code. The mining colonial code remained almost intact until 1877. Modern banking and patent laws were non-existent. In spite of constitutional dispositions, taxes and restrictions on domestic trade remained.

The system of government preserved the arbitrary nature of political power in colonial times. Economic success or failure strictly depended on the relationship between enterprise and political

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[2] Ethnic distinctions in the access to employment, justice and in fiscal treatment – which, among other things, had severely restricted capital and labor mobility - were formally abolished; many corporate privileges, including most of the guilds, were eliminated, while corporate property rights were limited to the Church and the Indian communities and town councils. The number of royal monopolies on the production and distribution

authorities; or as Coatsworth (1978, p. 94) puts it:

> Every enterprise, urban or rural, [was forced] to operate in a highly politicized manner, using kinship networks, political influence, and family prestige to gain privileged access to subsidized credit, to aid various stratagems for recruiting labor, to collect debts or enforce contracts, to evade taxes or circumvent the courts, and to defend or assert titles to land. . . . The chief obstacle was the nature of the state itself, its operating principles, the basis for all its acts. Mexico's economic organization could not have been made more efficient without a revolution in the relationship between the state and economic activity.

Most importantly, repeated efforts to preserve or recreate the arbitrary centralism of the colonial state plunged the country into a prolonged period of political instability and continuous struggle opposing the conservative and liberal factions.[3] Half a century of political, social and international wars annihilated the potentially beneficial effects of independence, while at the same time curtailing the resources needed for the state and the private sector to support the recovery of the mining sector and improve the transport infrastructure in a country where the lack of natural communications and the resulting high transport costs had highly adverse effects on the division of labor and regional specialization (Coatsworth, 1990).

In sum, while economic activity had remained 'state-centered', in the sense that 'every enterprise was forced to operate in a highly politicized manner,´ the state, compared to colonial times, had in fact been weakened and was unable to remove the obstacles to economic development resulting from the decline of mining activity, foreign competition, and the lack of transport infrastructure and financial capital. Economic and industrial stagnation followed, then, as a consequence of a persistent lack of markets and their fragmentation.

Liberal Misperceptions in the Mid-XIXth Century?

This list of obstacles to economic development in 19th century Mexico is equally significant for what it excludes. Revisionism by economic historians suggests, indeed, that two of the traditional culprits, the land tenure system and the economic power of the Church, were not in fact among the major causes of economic stagnation during this period.

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of many commodities was reduced and their activities regulated; efforts were also made to modernize the judiciary and revise archaic judicial codes.

[3] In the 55 years between independence and the *Porfiriato,* the presidency changed hands 75 times (Haber, 1989). The most disastrous consequence of the prolonged civil strife was the loss to the US of half of the national territory in the mid-19th century. Fifty years after the 1848 Treaty which ended the US-Mexico war,

The system of land tenure and agricultural production had been organized since the 17th century into large estates called 'haciendas.'. While highly inequitable and thus , socially and macroeconomically inefficient, the hacienda system was far from a semi-feudal organization, promoting waste and resource misallocation. Recent research has produced a new image of the hacienda as one of a capitalistic and technologically dynamic undertaking with an economic rationality comparable to that of a modern agricultural enterprise, and one which largely exploited its comparative advantages—economies of scale, and access to external credit and information on new technologies and distant markets (see, among others, Van Young, 1981 and 1986). A "division of labor" had, in fact, been established through time between the hacienda and other forms of agricultural production—small landowners, tenant farmers or Indian villagers—by which each of them had specialized in those products and crops where they enjoyed a competitive advantage: cattle, sheep, wool, food grains, pulque, sugar and sisal in the haciendas, and fruits, tomatoes, chiles, silk, and small animals such as pigs and chickens by the villages and small-scale producers.

Similar revisionism applies to the Church as an economic institution. By the middle of the 19th century, the Church had become the country's single major landowner and an important lender in the emerging financial markets. With respect to its first role, according to Coatsworth (1978, 1990), several studies suggest that Church haciendas were at least as well managed as private haciendas; and, in any case, after independence most of these estates were rented to private farmers and hacendados so that their efficiency did not depend on Church administration. On the other hand, the Church appropriated the tithe *('diezmo'),* a 10 percent tax on gross output and charged mainly on agricultural and livestock production. As any other tax, the tithe reduced the profitability of agricultural production and probably discouraged it (although some authors have doubts about this[4]). More important, however, is the use to which these revenues were put. Far from financing wholly 'unproductive' expenditures, the Church invested a considerable portion of its revenues (including also private donations and net income from its various properties) in loans to private entrepreneurs with no legal or practical restrictions to prevent recipients from investing in factories rather than haciendas or other activities. It did this by lending at below market interest rates—usually at a 6 percent rate on the security on real property. Because it dominated the mortgage-lending market, this probably had the effect, in turn, of bringing market interest rates down. As Coatsworth (1978) has put it, the Church acted like a modern development bank raising

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and also after the beginning of the California "Gold Rush", the mineral output alone of the lost territories exceeded Mexico's total GNP (Coatsworth, 1978).

[4] See, in particular, Garcia Alba (1974) and Coatsworth (1978). The reason is that the effect of the tithe in pushing labor and capital out of private agriculture was probably very small because the Church itself, and the Indian villages, produced a major portion of the country's farm products and livestock. And the net effect on GNP was, in any case, probably positive since differences in productivity between private agriculture and the rest of the economy suggest that nonagricultural activities were already more productive than agriculture.

the rate of capital accumulation above what it would have been in the absence of the tithe.

If this revisionism by economic historians is correct, then some of the main elements of the liberal economic program—free trade, the privatization of corporate and public property, and the liberalization of the land market—were largely misdirected from a strictly (and admittedly narrow) economic development perspective. The first, free trade, probably gave further stimulus to the decline of local manufacturing—and to the 'ruralization' of the labor force—as the expansion of railways in the late 19th century sharply reduced the natural protection provided by traditionally high transport costs. The second, the privatization of corporate property, had the effect of destroying the major, and for a long time practically the only, banking institution in the economy; while the third, the liberalization of the land market, was to contribute to further land concentration and, eventually, to the social explosion of 1910.

The conservative faction was, of course, no better. Although some of its members, Lucas Alamán in particular, pioneered the first, and short-lived, industrialization efforts in the 1830s—through industrial protection and the creation of the first public development bank (*Banco de Avío*) to finance the development of the textile industry[5]—the social and political forces that supported them tended to perpetuate the very arbitrary centralism of political power that had had such harmful effects on economic development since colonial times.

As a result, the coalition that could forge a developmental state did not emerge; and in its absence, some of the major obstacles to economic development remained in place. The politically liberal that could and were willing to carry out the country's political and social modernization were also furiously anti-statist in economic terms; while the only ones that favored an economic modernization through an interventionist state were the politically conservative, strongly opposed to political and social modernization. It would take a social explosion and a popular revolution in the early 20th century to bring these two requirements for economic development into a less conflictive relationship.

III. The traumatic emergence of a Gershenkronian developmental state

The Porfiriato: Political Stability and the Emergence of a Unified National Market

[5] Another figure worth mentioning is Estevan de Antuñano, a creole industrialist, whose very many pamphlets best articulated the case for protectionism and industrialization.

Modern economic growth began, in fact, in the late 19th century.[6] In 1895, 72 percent of the population lived in rural areas and more than 80 percent of those aged ten and above could not read or write (Table 3). In 1877, when Porfirio Diaz seized power, 42 percent of Mexico's GDP was generated by rural activities and only 16 percent by manufacturing (Table 1). In the following two decades, a turnaround in Mexico's long-term decline was becoming evident. The barriers to economic recovery had been brought down by the transformation of the international economic environment and by domestic changes in Mexico's political and economic structure that took place under the dictatorship of Porfirio Diaz, a 33-year period of political stability (1877-1910), aptly named 'the *Porfiriato'* by Mexican historians.

Melding a liberal political background with conservative economic goals, the *Porfiriato's* ideology is summarized in the positivist lemma of Order and Progress. Order was considered a *sine qua non* for economic growth. The end of the military and political struggles that had plagued Mexico since its independence were seen as an essential pre-condition for business confidence and the recovery of private investment. Strengthening of the central government was efficiently pursued, and combining the use of force and alliances with relevant groups brought Diaz full hold of the political structure.

Table 3. Population and social indicators, 1895-2000

Year	Total Population (millions)	Rural Population (percent)	Life expectancy at birth (years)	Literacy[1] (percent)	Average Years of schooling[2]
1895	12.6	72	30	17.9[3]	NA
1910	15.2	NA	NA	27.7	NA
1930	16.6	66.5	33.9	38.5	NA
1940	19.7	64.9	38.8	41.8	2.6
1980	68.3	33.7	66.2	83[2]	4.6
1990	81.2	28.7	70.8	87.4	6.6
1995	91.2	26.5	73.6	89.4	7.2
2000	97.0	25.4	75.3	90.3[2]	7.6

[1]Population age 10 or above
[2]Age 15 or above
[3]Age 6 or above
NA = Not available

Source: Maddison (1989) and INEGI (various years).

[6] For accounts of economic growth during the Porfiriato, see Beatty (2001), Rosenzweig (1965), and Solís

Progress meant transforming Mexico into an industrialized nation by effectively addressing some of the traditional barriers to economic recovery, such as the lack of transport infrastructure and financial capital.[7] To foster expansion of the railway network, the state awarded concessions and financial incentives. Subsidies granted on railway construction amounted to 50 percent of their total cost. The railway system expansion enormously amplified the market's size, brought down local and regional trade barriers and intensified competition.[8] This effect was reinforced by the significant increase in road travel safety that the Diaz regime achieved.

Foreign investment was another key aspect of Diaz' development strategy, and was actively sought through various incentives. These inducements and the profitable investment opportunities led to the inflow of foreign capital. From 1880, US capital flowed in, later followed by European investments (Coatsworth, 1989). This flow increased continuously for the next 15 years, and boomed in the first decade of the 1900s (King, 1970). More generally, state policies were geared to promote private investment and guarantee the best conditions for its operation. The legal framework for the conduct of private business was soon transformed. In 1883 new legal codes for trade and mining were adopted to improve conditions for foreign investment. Regional tariffs on domestic trade were abolished. Trade policy combined focused tariff protection consistent with supporting industrialization in consumer goods sectors, with declining *average* tariffs that enhanced manufacturers' access to low-cost capital and intermediate goods (Beatty, 2002; Kuntz Ficker, 2002).

Foreign investment meant access to world markets, and between 1870 and 1913 Mexico's exports as a share of GDP increased threefold. The expansion of foreign trade helped also to increase government funds, as taxes on foreign trade provided more than half of public revenues. Greatly helped by the depreciation of silver at the end of the XIX century,[9] the export sector became an engine of growth, as it had done previously in colonial times. This time the export basket became considerably more diversified than in the colonial period as it included, besides silver, other

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(2000).

[7] The importance of these obstacles to economic development was well recognized at the time. In the words of Matias Romero: "This nation…has in its soil immense treasures of agricultural and mineral wealth, which now cannot be exploited due to the lack of capital and communications.." (cited by Rosenzweig, 1965, translation by the authors).

[8] The railway system expanded from 900 km to 19,000 km in the 1880s. According to Coatsworth's estimates, this brought an 80 per cent reduction in freight costs per kilometer from 1878 to 1910.

[9] The depreciation of silver was provoked by the adoption of the Gold standard towards 1870 in the advanced countries (Cardenas and Manns, 1989). It amounted to a continuous real devaluation of the Mexican peso of 26 percent throughout the 1890s. See Zabludovsky (1984) which assesses the view, held by Rosenzweig (1965) and Nugent (1973), that devaluation promoted export led growth and the PPP view of Limantour, Porfirio Diaz´s minister of finance, according to which the silver depreciation was ultimately reflected in the price level. Zabludovsky´s evaluation of the evidence supports the first view.

minerals—industrial metals such as copper, lead and zinc, whose demand from the industrial centers of the world economy was expanding rapidly—as well as a number of agricultural products (coffee, livestock and others which were added to those already with some importance in the composition of exports, such as henequen, furs and wood).

Accompanying these policy changes and responses was a more propitious external economic environment. By 1870 the second industrial revolution in the industrialized countries had spurred demand for minerals and other raw materials. In addition, there was a notable expansion of international investment to several less developed countries: between 1870 and 1900 this flow doubled the value of the outstanding capital stock held by foreign investors (Maddison, 1989). Combined with the end of political instability, the new environment helped to restore international creditworthiness.[10]

What was the overall development outcome of this strategy? Economic growth and modernization was felt in many areas, reversing a century of decline, and from 1877 to 1910 Mexico's GDP per capita increased at an annual average growth rate of 2.1 percent (Bortz and Haber, 2002, see also Table 2). The railroad boom benefited some old activities—such as mining[11]—and simultaneously helped in the creation of new activities whose production scales and capital intensity had made them unprofitable in the absence of a unified national market. Indeed, underlying this modernization was Mexico's first wave of large-scale industrialization. Through import substitution in textiles, beer, papermaking, cement and steel, manufacturing output increased at an average rate of 3.6 percent per annum from 1877 to 1910 (Coatsworth, 1989). Manufacturing changed from being an artisans' activity, carried out in small handicraft firms, to a productive process done in large-scale plants. The rural areas were also deeply transformed in their social and economic structure. Based on a diagnosis of the rural sector as unproductive, with most agricultural output distributed through non-market channels, the Diaz administration pushed an accelerated redistribution of federal and communal land to private development companies and wealthy individuals. Privatization would promote large-scale commercial cultivation. By 1890, 20 percent of Mexico's total area was held by less than 50 individuals or companies. By the early 1900s, 95 percent of all arable land was in the hands of 835 families (Manzanilla Schaffer, 1963).

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[10] Having defaulted on its external debt on six different occasions between 1824 and 1880, in 1889 the Mexican government finally reached an agreement with foreign bankers on rescheduling Mexico's foreign debt. By the early 1890s, the country's access to international capital markets was restored and, from then until 1911, Mexico's external debt increased 300 per cent, mostly to finance public works in infrastructure.

[11] Mining would most likely have remained abandoned without the railway expansion as neither the necessary capital inputs for its development nor the commercialization of mineral products would have been profitable.

By the early 1900s, this pattern of development started to show symptoms of exhaustion. From 1903, real wages began to decrease in a systematic and persistent way. Droughts in 1907 reduced output of food products, and furthermore increased their prices. By 1910, the cumulative decline in real wages was 26 percent relative to 1903. If hunger was not evident, poverty was most common, especially in the rural areas.[12] At the same time, recourse to force to repress labor and suppress political opposition became more frequent and eventually unsuccessful. By 1910, the system's unequal distribution of benefits and access to power reached its limit. The emerging middle classes excluded from political decisions, and the workers and peasants marginalized from the benefits of economic growth, were successful in developing a triumphant coalition under the banners of political democracy, agrarian reform and labor rights.

What had gone wrong? Clearly, the *Porfiriato's* 'primary contradiction' was in its results: the growing imbalance between rapid economic growth, on the one hand, and the slow pace of political and social progress on the other. Porfirio Diaz had set out to make of Mexico a modern industrial nation. But, by 1910 only 28 percent of Mexicans could read and write, and life expectancy at birth was not above 37 years (Table 3). With two-thirds of its population still living in rural areas, Mexico was still a fundamentally backward economy and, overall, a backward society.

There were also shortcomings in the design of the development strategy. Three of these turned out to be particularly relevant. First, rather than increasing labor mobility, the enclosure system implemented in the *Porfiriato* strengthened labor's links of dependency with the rural areas. Deprived of land plots, the great majority of the population was forced to work permanently as indebted labor in the haciendas. Thus, at the same time that the expansion of the railway system was creating a national market, huge contingents of the population were cut out from the possibility ofentering it.

A second aspect concerns the sources of finance for development. The existing banking system was simply a source of short-term loans, most suitable for purely commercial needs. By 1897 no bank had legal authorization to give loans for a period longer than a year. By 1910, some banks were legally allowed to give such loans, but the great majority of them were provided for investments in real estate. Besides foreign investors, Mexico's first wave of industrialization was carried out by the merchant élite who financed it through the reinvestment of their accumulated

[12]As noted by Haber (1989), the extent of poverty was such that the increase in the price of corn due to any bad harvest would reduce workers´ consumption of manufactures by enough to provoke a crisis in the cotton garment industry.

profits.[13] At the end of the *Porfiriato,* Mexico still faced the urgent need to create banking institutions capable of financing its long-term investment needs.

The third is related to the role of the state in the quest for development in backward economies. For the *Porfiriato's* elite, the role of the state, besides ensuring social peace, was to guarantee the best conditions for private investment without intervening directly in the productive sphere. Public investment never amounted to more than 5 percent of total investment, and only 7 percent of public expenditure was directed at capital formation purposes. While the emergence of a national market had broken through some of the barriers of stagnation, this limited role of the state proved insufficient to overcome the still enormous obstacles to economic development.

Revolution and the consolidation of a Developmental State

In 1910 the Pax Porfiriana drew to a dramatic close with the Mexican Revolution. Once more, the absence of social consensus became the fundamental obstacle for Mexico's development. The construction of a stable social pact would be fully achieved only three decades later.

The most violent stages of the Mexican Revolution ended with the adoption of a new Constitution in 1917. Political unrest continued for the next ten years—marked by the killings of important figures such as Zapata, Carranza and Obregon, and numerous uprisings—but the scale of armed struggle diminished significantly. The 1917 Constitution redefined the legal framework for land property and labor relations. It placed the nation over and above private property on matters regarding land, water and subsoil resources; established the right to form trade unions, a system of minimum wages, eight-hour workdays within a six-day workweek, and equal pay for equal work; and included an agrarian reform through the expropriation of large land holdings and its allocation to *'ejidos'*, a land tenure system combining collective ownership with private exploitation of the land,

A fundamental move towards the consolidation of social peace and political stability was the creation of the Partido Nacional Revolucionario (PNR) in 1929[14]. Renamed Partido de la Revolución Mexicana (PRM) in 1938 and Partido Revolucionario Institucional (PRI) in 1946, the official party encompassed all relevant social forces of the Mexican Revolution and soon became a functional vehicle for political control and the only legitimate arena in which to settle political differences. By

[13] For accounts of finance, banking and industry during the *Porfiriato,* see Batiz and Canudas (1980), Haber (1989) and Bortz and Haber (2002).

[14] For detailed accounts of the creation of the PNR and its role in long-term political stability, see Newell and Rubio (1984).

1940, the government party had formed solid alliances with labor through the Confederación de Trabajadores Mexicanos (CTM) and the Federación de Sindicatos de Trabajadores al Servicio del Estado (FSTSE), and controlled peasants' organizations through the Confederación Nacional Campesina (CNC). The private sector, although not formally included in the official party, was recognized and taken into account by the political system through a number of business organizations and chambers. In addition, by the 1940s the military had been professionalized, divested of its political role. The age of Caudillos was over, and Mexico's particular form of institutionalized authoritarian control had begun.

The process of consolidation of political power after the Revolution had been accompanied by an expansion in policy instruments available to the government.[15] Under the Cardenas presidency (1936-1940), the public sector expanded further with several development or financial entities. Most important, the oil industry was nationalized and agrarian reform began to be implemented on a massive scale. Fiscal policy became countercyclical and budget deficits were run to boost productive and social investment. Public expenditure was reoriented away from military and administrative spending. The highway system increased sevenfold, covering 9900 km by 1940. In addition, temporary flotation of the exchange rate led to a depreciation of the peso in real terms.

With the turnaround in the conduct of government policies and the extraordinary recovery in the terms of trade of silver and oil (the country's main exports), Mexico resumed growth in 1933-34. The first new round of investment since the *Porfiriato* began in manufacturing and concentrated on new textile activities. Manufacturing became the economy's most dynamic sector.

The Post- War Golden Age of Industrialization (1940-80)

In the process of achieving hegemony, the Mexican state arrived at the strong conviction that it should play an active role in investment and production if Mexico was to develop. By the late 1940s, it controlled fundamental resources and had increased the number of its policy instruments significantly. Public investment expanded systematically (Table 4) and was oriented to urban and industrial development. Additional incentives such as tax concessions were used to promote manufacturing activities. Investment in education and welfare held their share in federal expenditure. The industrialization drive also came hand in hand with a deepening of trade

[15] The Bank of Mexico was established in 1925, and started to operate as a central bank in the early 1930s as a response to the Depression. By then, the Public Agricultural Credit Bank had been established, and the creation of other banks followed. In 1933, the Budget Ministry created the National Finance Entity, which was soon to become Nacional Financiera, the first fully fledged development bank and the financial pivot for industrial and other long term investment.

protection.[16] By 1947 protectionism had been officially adopted as a government intermediate objective (Mosk, 1950).

Table 4. Investment rates and GDP growth, 1900-1980

Year	Total investment (% of GDP)	Public Investment (% of the GDP)
1900	10.1	0.5[1]
1910	10.1	0.4
1921	10.1	NA
1930	9.4	2.2
1940	9.3	3.5
1960	17.2	5.2
1980	24.8	11.4

[1]1895.
NA= Not available

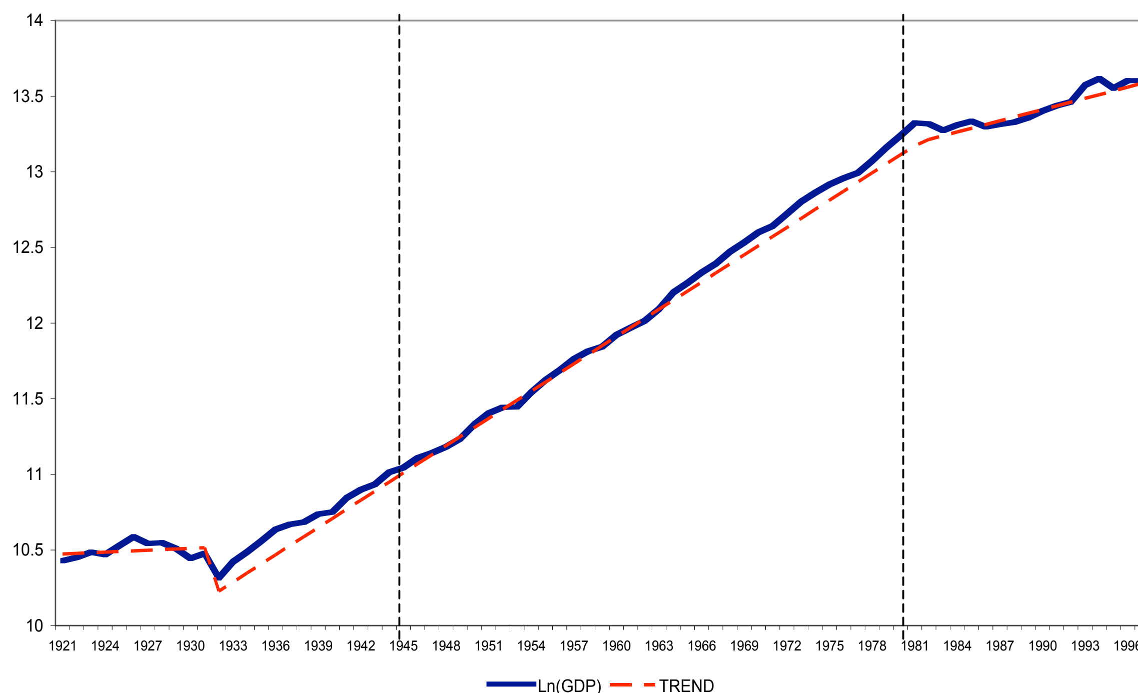
Source: ECLAC and INEGI

A complete overhaul of the economy and society took place from 1940 to 1980. Mexico's economy grew at a sustained pace of 6.4 percent per annum in real terms and GDP per capita at 3.2 percent per annum. Manufacturing became the engine of growth, with rates of growth of production of 7.4 percent per annum from 1940 to 1955 and accelerated its pace of development in 1957 to 1970 expanding at annual rates of 8.9 percent per annum with the dynamic domestic market as its major source of demand. The country was transformed from an agrarian into an urban, semi-industrial society. From 1940 to 1980, the output share of manufacturing rose from 15.4 percent to 24.9 percent (Table 5) and the share of the population living in urban areas soared from 35 percent to 66 percent at a time when the total population increased from 20 to 70 million people (Table 3). Literacy rates nearly doubled, reaching 83 percent in 1980. The average number of years of schooling of the adult population jumped from 2.6 to 7.1, and life expectancy at birth increased 24 years to 65 (Table 3). Despite these improvements, the benefits of growth were far from being evenly distributed. By the end of this period, 20 percent of the population accrued more than 50

[16] At the time of the War, in 1942, Mexico and the US signed a reciprocal free trade agreement committing both sides to freezing tariffs on various products. A year later, however, the agreement was cancelled and Mexico proceeded to raise trade tariffs and, for the first time, in 1944, imposed license requirements (King, 1970).

percent of total disposable income while 58 percent of Mexicans were still in poverty (less conservative estimates put this figure as high as 63 percent (see Hernandez Laos, 1989). Thus, at the end of Mexico's Golden Age, poverty and inequality were still major problems to be solved.

Figure 1: Mexico Gross Domestic Product, 1921 - 1997



Source: Solís, L. (2000)

Table 5. Structure of GDP, 1895 – 2002 (%)

	1885	1910	1926	1932	1940	1955	1970	1970	1980	1980	1990	2000-2002
	(based on 1960 prices)							(based on 1980 prices)		(based on 1993 prices)		
Agriculture*	29.1	24.0	19.7	24.1	19.4	18.3	11.6	12.2	9.0	7.1	6.7	7.6
Mining	3.0	4.9	9.3	7.2	6.4	4.8	4.8	2.5	3.3	1.4	1.5	2.1
Industry	9.0	12.3	14.7	13.3	18.7	22.1	29.7	30.1	31.9	25.0	24.1	27.0
(Manufacturing)	(7.9)	(10.7)	(11.6)	(10.2)	(15.4)	(17.5)	(23.3)	(23.7)	(24.9)	(19.2)	(19.6)	(21)
Services	58.9	58.7	56.3	55.4	55.5	54.7	53.9	55.2	55.8	66.5	67.6	63.3
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

*Includes livestock, forestry and fishing

Source: Banco de México and INEGI

The macroeconomic performance from 1940 to 1970 was undoubtedly impressive. The strategy on which it was based tackled important obstacles on the road to Mexico's development. However, it ignored or underestimated the magnitude of other obstacles.

The first obstacle arose from the neglect of agriculture, which, after 1965, faced serious difficulties in expanding production. Its rate of growth in the second half of the 1960s fell below the pace of demographic expansion. Among the factors explaining this decline were the dual character of the sector, the adverse trend in the prices of agricultural goods relative to manufacturing goods (as urban consumption was subsidized), and the continuous decline of its share in public investment after the 1950s. All these elements contributed to an increase in poverty, a contraction of the potential domestic market, and a loss of social cohesion, which led to emergent social instability.

Secondly, while trade protection proved a valuable instrument in promoting growth and import substitution in many sectors, there was no explicit policy, either from the private or the public sector, to strengthen over time the economy's export potential. Neither was it clear whether the policy as it stood could complete the most difficult phase of import substitution involving high-technology capital goods.

Finally, tax reforms were systematically aborted, and public finances became increasingly dependent on external debt.[17] So too did the balance of payments, which became more and more vulnerable to short term capital flows, with their potentially destabilizing influence. As long as the Golden Age of world economic growth continued, misperceptions regarding the potential relevance of these issues could remain. Unfortunately, this Golden Age was coming to an end.

“Shared development,” the oil boom and the debt crisis

To the extent that the administrations of the 1970s did not solve these obstacles, they could, and did, become painfully costly. The new Echeverria administration taking office in late 1970 had as a central point of its political platform the claim that the 'stabilizing development' strategy of the period between 1956-70 had failed to address the fundamental problem of inequality. A new strategy of

[17] By 1972, the debt-GDP ratio and the debt-service-exports ratio had both reached 18 per cent (compared to 1 per cent in 1946). While these magnitudes did not yet imply a serious macroeconomic imbalance, they reflect the dynamic evolution of foreign indebtedness during the period.

'shared development' was thus proposed in which the benefits from economic growth would be more evenly distributed. In practice, however, the policies adopted would fail to fulfill these objectives.

Temporarily, the strategy did have the intended impact on the functional distribution of income. Gil Diaz (1987) shows that the share of labor in net national product went from 40 percent in 1970 to 43 percent in 1972-74, and reached 49 percent in 1976. In addition, GDP achieved an average rate of growth of 6.1 percent per annum. Unfortunately, these achievements were accompanied by the emergence of severe macroeconomic imbalances.

A number of reasons accounted for this. On the external front, the collapse of the world's Golden Age had its toll on the Mexican economy. The first oil price shock found Mexico as a net importer of oil and, together with the decline in external demand, tightened the balance of payments' constraints on growth. Moreover, the increase in domestic inflation rates to the 20 percent range, the expansion of public investment, and a fixed exchange rate, tripled the trade deficit from 1970 to 1975. The model of industrialization also began to show some signs of exhaustion. Investment was carried out to modernize plants in old sectors already conquered by foreign competition, but failed both to increase exports significantly and to deepen import substitution in the capital goods sector. The limitations of capital goods manufacturing were evident, for example, in the fact that during 1974-75 they accounted for less than 8 percent of manufacturing output, while at the sametime they represented more than 50 percent of total imports. As a share of GDP, overall exports declined, largely as a result of stagnating agricultural supplies and productivity. Manufacturing export coefficients increased but remained at low levels, and the share of imports in the domestic market started to climb as the investment process failed to diversify into new activities.

To the extent that tax reform was not addressed, public revenues lagged behind. The fiscal deficit climbed from 2.5 percent of GDP to 9.9 percent between 1971 and 1976, and was increasingly covered through monetary expansion and external debt (which increased at an average annual rate of 40 percent from 1973 to 1976[18]). In addition, private enterprise did not find a fertile ground in the 'shared development' rhetoric, and soon public spending was exclusively driving the economy's expansion. Eventually, the situation worsened significantly as a result of capital flight. Notwithstanding the increase in import controls and tariffs, balance of payment pressures forced the government to depreciate by nearly 100 percent in 1976, thus abandoning the exchange rate parity

[18] The belief that development, especially social development, could be accelerated while sacrificing fiscal discipline was rightly criticized by orthodox economists at the time. See Solis (1977) for a forceful statement.

that had remained fixed for more than 20 years.

Despite the severity of the 1976 crisis, in a year or so the economy's prospects were fully turned around with the announcement of Mexico's vast oil resources. Their exploitation and sale in the international market would bring a swift and strong recovery. The trade deficit was under control again, averaging 1.5 percent as a share of GDP. The term profile of foreign debt was restructured and, for a while, new indebtedness did not grow in a noticeable way. An ambitious industrialization plan was launched on the assumption of a sustained long-term increase in the price of oil. Manufacturing investment soared, boosted by public and private entrepreneurship, and GDP reached rates of 8 to 9 percent per annum from 1978 to 1981. A major tax reform was also carried out in this period, and these changes reduced some of the inequities of the Mexican tax system.[19]

However, with the benefit of hindsight, some signs were already worrying by the late 1970s. The inflation rate had reached a plateau of around 18 percent and did not seem to be decreasing. Interest payments were increasing as nominal rates in the international credit markets floated upwards in an unprecedented way. Few investments were directed to the export sector, although two exceptions are worth noting: the motor-vehicle industry—where a new generation of plants was being built with state-of-the-art technology, explicitly designed to compete in the world markets—and the petrochemicals sector, where the public sector was investing heavily.

The whole strategy had been based on: (1) the premise of a long-term foreign exchange and fiscal abundance from oil exports –(and the 1979-80 oil price hike had only confirmed expectations that the era of high real oil prices had come to stay); and (2) the notion that the external debt problem was over, given the low real interest rates that had so far prevailed. Thus when the oil market started to crumble and foreign interest rates drastically jumped upwards in 1981, both of these shocks were taken to be transitory, and thus to be dealt with by additional external finance. Short-term external indebtedness was accelerated in an effort to sustain economic expansion. The increase in foreign indebtedness in 1981 was equivalent to 10 percent of GDP and by the end of that year the account deficit reached 12.5 million dollars, half of it due to interest payments, while capital flight was soaring. Indeed, the whole international economic environment that made the oil

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[19] An adjustment for inflation was introduced in personal income taxation. A value-added tax and a new corporate income tax were established. The tax base broadened as loop-holes were closed, and the whole administrative and compliance process was simplified. The one to five minimum wage bracket went from contributing 58 per cent of labor income tax collections in 1978, to 28 per cent in 1981; whereas the highest wage bracket - more than 15 minimum wages - went from 8 per cent to 25 per cent of the total. For a detailed description, see Gil Diaz (1987).

boom possible had been tragically misperceived (by the government, foreign banks and international financial institutions alike) and when this became clear Mexico suddenly became a highly indebted country, that is, an over-indebted borrower given the new levels of interest rates and export revenues with which the old debt had to be serviced. In 1982, the oil boom was over.

IV. The shift in the market-state balance since the mid 1980s

The Mexican economy was subject to two major external shocks during the 1980s: the 1982 debt crisis, which increased debt service and curtailed new external finance, and the 1986 oil price shock, which dramatically cut off a major part of the country's main source of foreign exchange and fiscal revenues. These external shocks created imbalances in both the balance of payments and the fiscal accounts.

The strategies adopted to restore domestic and external balance and the adjustments that followed can be briefly summarized as follows. In the wake of the 1982 debt crisis, a very orthodox, stabilization-first strategy was adopted, with the aim of rapidly restoring price and balance-of-payments stability. This was to be followed by a gradualist approach to structural adjustment, which would promote an incremental process of resource reallocation in a stable and growth-oriented macroeconomic framework. This strategy—which prevailed as a policy stance during 1984 and part of 1985—was soon to be abandoned in favor of an increasing radicalization of market reform measures which, contrary to conventional wisdom and advice, took place within the highly adverse macroeconomic environment created by the 1986 oil price shock. At the same time, and after the failure of successive orthodox attempts at inflation control, macroeconomic policy shifted in late 1987 to a rather heterodox approach to stabilization—the 'Economic Solidarity Pact'—aiming at rapid disinflation through the combination of wage and price controls, an exchange rate freeze, and tight fiscal and monetary policy. From then, market reform measures, especially in the areas of trade policy and privatization, underwent a radical acceleration.

By the early 1990s the foreign exchange and fiscal gaps that were opened by the debt crisis and the oil shock had been closed. But the legacy of these external shocks—the collapse of public and private investments in the wake of the debt crisis and the loss of foreign exchange and fiscal revenues after the 1986 oil shock—had been harsh. Together with the stagnation of productive activity and the contraction of the population real incomes that followed, these shocks adversely affected the economy's growth potential by reducing the domestic savings rate and producing an

ageing of the capital stock and lower overall economic efficiency.[20] The economy emerged weaker, rather than stronger, from the years of crisis and adjustment.

At the same time, a 'great transformation' had been taking place, if we may appropriate Polanyi's expression for events of a different scale. Balance of payments liberalization and the North American Free Trade Agreement (NAFTA) have closely integrated the economy with that of the US, both in terms of trade and capital flows. Foreign participation in the economy has increased through direct investments in new plants, as well as mergers and acquisitions, following the elimination of restrictions on foreign ownership. State banks and public enterprises have, with few exceptions, been turned into private hands. Privatization revenues, together with debt relief (under the 1989 Brady Plan) and fiscal adjustment allowed the government to reduce its debt, as a proportion of GDP, to rather low levels by international standards. A market oriented rural economy emerged following far reaching changes in the land tenure system, price policies, and the privatization or elimination of state enterprises and its substitution by a combination of subsidies and public programs. In sum, a massive reform process occurred with a view to giving a larger economic role to the private sector and greater scope to market forces, and to accelerating integration into the international economy.[21]

Some policy reforms—especially those affecting the domestic regulatory framework—were long overdue (as exemplified most strikingly by the regulations in road transportation) and, overall, were clearly desirable on both efficiency and equity grounds.[22] Their adverse impacts have been rather limited or even absent, and the benefits of regulatory changes in many areas have by and large exceeded the costs. These have not been, however, the most radical reforms, nor the most beneficial. In what follows we focus on the most important of these reforms—privatization and state reform, trade, investment and financial liberalization—and on an evaluation of their effects.

Privatization and Economic Efficiency

The case for greater selectivity in state participation in the economy and, indeed, for state disengagement in a number of productive activities, has been based on macroeconomic grounds: a government rationed in credit markets, pressing social needs to be met, and a private sector with ample financial resources abroad ready to be invested in previously state-dominated activities

[20] For a detailed analysis, see Ros (1993).
[21] For a detailed review of the reform process, see Lustig (2002)
[22] For an analysis of reforms in the domestic regulatory framework, see Lustig (2002) and Ros (1991). For an international comparison of policy reform in these areas, see Williamson (1990).

which do not have a high social priority.[23][confusing sentence] The case is certainly extremely powerful; but this is so for macroeconomic reasons related to the special conditions of the 1980s. It has less significance for the long-term growth potential of the economy, beyond the promise (which so far largely remains just that) of a considerable expansion in human capital investments that huge privatization revenues make possible.

There is also, of course, the more traditional microeconomic case for privatization based on the notion that greater participation of the private sector will bring about improvements in the overall efficiency of investment. If the latter is a positive function of the share of private investment in overall investment, then part, if not all, of the drop in the overall rate of accumulation could be compensated for by the shift in the composition of investment. And as shown in Table 6, there has indeed been a dramatic shift in the composition of investment during the 1980s: from 56 percent in 1980-81, the share of the private sector in total fixed investment rose to 77 percent ten years later and then to 84 percent by the late 1990s.

The first point to be made in addressing this issue is to recognize that the efficiency of overall investment does not depend only on its private/public sector composition, but also on the rate of investment itself, which affects investment efficiency through its consequences on the age distribution and the structure of the capital stock (residential/non-residential, net investment/depreciation). Now, as clearly shown also in Table 6, the shift in the private/public composition of investment was a result of the absolute decline in the rate of public investment, rather than of an absolute increase in private investment: the latter, as a fraction of GDP, was in the early 1990s at approximately the same levels as ten years earlier and only 3 to 4 percentage points higher in 2001-2002. Thus, if the share of private investment in overall investment increased, this was only because of the collapse of public investment rates. Unless the productivity of public investment was actually negative—and nobody to our knowledge has argued this—the efficiency losses resulting from the absolute fall in the overall rate of investment are bound to outweigh any efficiency gains brought about by the shift in its composition. The rise in the capital-output ratio since 1982 is fully consistent with this conclusion.

In addition, the relationship between the efficiency and the composition of overall investment is surely more complex than generally assumed. It is likely to have the shape of a Laffer curve with

[23] Under such conditions, a clear comparative advantage argument can be made for privatization, even if public enterprises had absolute efficiency advantages over private firms, for society as a whole would clearly gain from a reallocation of public investments from areas where social and private returns do not differ greatly to activities yielding a higher social/private returns differential.

low efficiency levels being consistent with both too high and too low shares of public investment. This is so because public investment itself, as much recent empirical research suggests,[24] affects positively the productivity of private investment, and thus at low levels of public investment, further

Table 6: Structure of Gross Fixed Capital Formation

		Investment							
		Total		Public			Private		
	GDP	billions	% of GDP	billions	% of total investment	% of GDP	billions	% of total investment	% of GDP
1980	948.6	206.3	21.8	88.8	43.0	9.4	117.5	57.0	12.4
1981	1029.5	239.8	23.3	108.8	45.4	10.6	131.1	54.6	12.7
1982	1024.1	199.6	19.5	88.3	44.2	8.6	111.3	55.8	10.9
1983	988.4	143.1	14.5	56.5	39.5	5.7	86.6	60.5	8.8
1984	1022.1	152.3	14.9	58.8	38.6	5.8	93.5	61.4	9.1
1985	1044.5	164.3	15.7	59.3	36.1	5.7	105.0	63.9	10.0
1986	1012.3	144.9	14.3	50.9	35.1	5.0	94.0	64.9	9.3
1987	1029.8	144.7	14.1	44.6	30.8	4.3	100.1	69.2	9.7
1988	1043.0	162.5	15.6	40.6	25.0	3.9	121.9	75.0	11.7
1989	1085.8	171.9	15.8	43.5	25.3	4.0	128.4	74.7	11.8
1990	1142.0	194.5	17.0	48.4	24.9	4.2	146.1	75.1	12.8
1991	1190.1	215.8	18.1	48.7	22.6	4.1	167.2	77.4	14.0
1992	1232.3	239.2	19.4	47.1	19.7	3.8	192.2	80.3	15.6
1993	1256.2	233.2	18.6	47.3	20.3	3.8	185.9	79.7	14.8
1994	1312.2	252.7	19.3	64.9	25.7	4.9	187.9	74.3	14.3
1995	1230.6	179.4	14.6	44.6	24.8	3.6	134.9	75.2	11.0
1996	1293.9	208.9	16.1	38.0	18.2	2.9	170.9	81.8	13.2
1997	1381.5	252.8	18.3	41.8	16.5	3.0	211.0	83.5	15.3
1998	1449.3	278.8	19.2	38.7	13.9	2.7	240.1	86.1	16.6
1999	1503.5	300.3	20.0	42.9	14.3	2.9	257.4	85.7	17.1
2000	1602.3	334.4	20.9	54.5	16.3	3.4	279.9	83.7	17.5
2001	1597.2	314.9	19.7	47.5	15.1	3.0	267.5	84.9	16.7
2002a/	1611.7	310.9	19.3	50.9	16.4	3.2	260.0	83.6	16.1

billion of 1993 pesos
source: ECLAC and INEGI
a/ preliminary

reductions can bring about losses rather than gains in overall efficiency. Given the sharp contraction of public investments during the 1980s, and the fact that the microeconomic efficiency gains and performance improvements of the newly privatized enterprises are yet to be seen in most cases, the question arises as to whether the economy moved to the wrong side of the Laffer-type curve. In such circumstances, an increase in public investment in areas with high social returns and high positive externalities for the productivity of private investment is the best way of addressing the problem of investment efficiency.

Trade liberalization, productivity and growth

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[24] See in the public capital literature, the studies by Aschauer (1989a, 1989b, 2000), Deno (1988), Munell

The results of trade policy reform are also controversial. Let us look first at the static efficiency gains expected by classical trade theory.[25] One of the striking features of the Mexican transition towards a liberalized trade regime is the smoothness of the microeconomic processes of resource reallocation. The absence of massive reallocation processes is revealed by the fact that current trends in the trade *pattern* and industrial *structure* are largely an extrapolation of the past. Beyond a few exceptions—such as the accelerated expansion of labor-intensive maquiladora exports in the 1990s—the reallocation processes have witnessed an extrapolation of past trends in the trade and industrial patterns marked by the increasing importance of heavy intermediates, consumer durables and capital goods. The counterpart of this smoothness and of the lack of reversal in the direction of structural change in manufacturing is, however, that the classic efficiency gains expected from trade liberalization cannot possibly be very important. For those expecting a large, painful but greatly beneficial reallocation of resources in favor of traditional exportable goods (labor- and natural resource-intensive), the experience with trade liberalization to date should have been, in fact, greatly disappointing.

In our view, two major factors explain these developments. First, and perhaps paradoxically, the adjustment to the debt crisis and declining terms of trade in the 1980s, and then later the adjustment to the 1994-95 financial crisis, forced macroeconomic policy to provide unprecedented levels of 'exchange rate protection' which facilitated the adjustment of industrial firms to a more open economy. The second is simply Mexico's successful import-substitution experience in the past and the advanced stage that intra-industry (and intra-firm) processes of specialization and trade had already reached by 1980, including in those capital-intensive, large-scale manufacturing industries which have been partly responsible for the export boom of the last two decades. The industrial policy reforms of the late 1970s, especially in the automobile industry, gave further impulse to those processes. The incentives provided later by a very attractive exchange rate and by the mid-1980s' trade reforms fell thus on an already fertile ground. The outstanding export performance of Mexico's manufacturing is thus, to a large degree, a legacy of the import substitution period and highlights in a very real sense its success: it led, indeed, to an irreversible change in the economy's structure of comparative advantages.

What can be said now about the dynamic effects of trade liberalization on productivity and growth

(1990, 1992), and Easterly and Rebelo (1993), among others.

[25] For a detailed discussion of resource reallocation processes see Ros (1992) and, in particular, Moreno (1988) for an analysis of a most important aspect of these processes, the restructuring of the automobile industry and its role in the 1980s manufacturing export boom.

performance?[26] In the economy as a whole, labor productivity has stagnated since the early 1980s (compared to a trend growth of the order of 4 percent per annum in 1950-73; see Table 7), and this applies to the periods both before and after the 1985 trade reform. At the same time, growth in manufacturing productivity shows a recovery in the post-trade liberalization period since 1985 compared to the first half of the decade. Although difficult to disentangle from other effects, including those of privatizations, industrial policy[27] and a declining real exchange rate from 1988 to 1994, trade liberalization's contribution to productivity growth appears to have been positive in a number of manufacturing industries. In those sectors producing capital goods and heavy intermediates, it has facilitated a greater degree of intra-industry (and intra-firm) specialization in foreign trade, as suggested by the rapid and simultaneous expansion of both exports and imports in some of these industries. In some light manufacturing industries—such as food processing and segments of the textile industry—it has shaken out less efficient local producers or forced them to modernize, as conveyed by the fact that the recovery of productivity growth has taken place in the midst of a slowdown of output growth partly explained by the high rates of import penetration in these sectors. However, the benefits of import penetration, in terms of productivity performance, become much more doubtful when we look at other manufacturing sectors—such as the wood industry and other manufacturing—which also show a rapid displacement of local producers resulting from increased exposure to foreign competition. Here, the result of import penetration has been a worsening of both output and productivity performance whether compared to historical trends or to the period immediately preceding trade liberalization.

The surge in imports that followed the 1987-88 acceleration of the trade-liberalization program had other impacts of doubtful value. Import trends from 1988 to 1994—by which imports at current dollars grew at an annual rate of over 30 percent—left the country's current account balance in a very vulnerable position. These developments are also partly explained by the real appreciation of the peso during the period, the decline of the domestic savings rate, and the eventual recovery of aggregate demand and private investment. But the fact that the import boom was clearly linked to the trade liberalization measures of late 1987 provides a strong indication that trade liberalization

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[26] For a more detailed analysis, see Ros (1992 and 1993).

[27] For example, in the case of the auto industry, one of the star performers in the productivity growth recovery, the improvement appears to be associated with its special policy regime and the international developments in this sector since the late 1970s. In particular, the export-oriented investments of the late 1970s and early 1980s, following the 1977 reform of the automotive decree, must have made a significant contribution to the technical modernization of the industry, whose effects were only fully felt well into the 1980s as the new plants created by these investments came into operation and rapidly expanded their share in the industry's output (see Moreno, 1988). In the basic metals sector, the industry's rationalization has probably been determined by a government program with precisely that goal, and which included the shutdown and privatization of many public enterprises in a sector where the latter have traditionally shown a relatively high share of the industry's output.

since 1987 contributed to the worsening of the trade-off between growth and the current account of the balance of payments that preceded the 1994-95 crisis.

Table 7. Employment, working hours and labor productivity

	1950	1973	1990	1998
GDP per person employed a/	7,685	18,399	20,747	20,810
Labor productivity b/	3.6	8.9	10.1	10.0
Employment as percent of population	30.8	26.3	29.4	32.0
	1950-1973	1973-1998	1973-1990	1990-1998
Growth of GDP per hour worked c/	4.1	0.5	0.7	-0.04

a/ 1990 international dollars

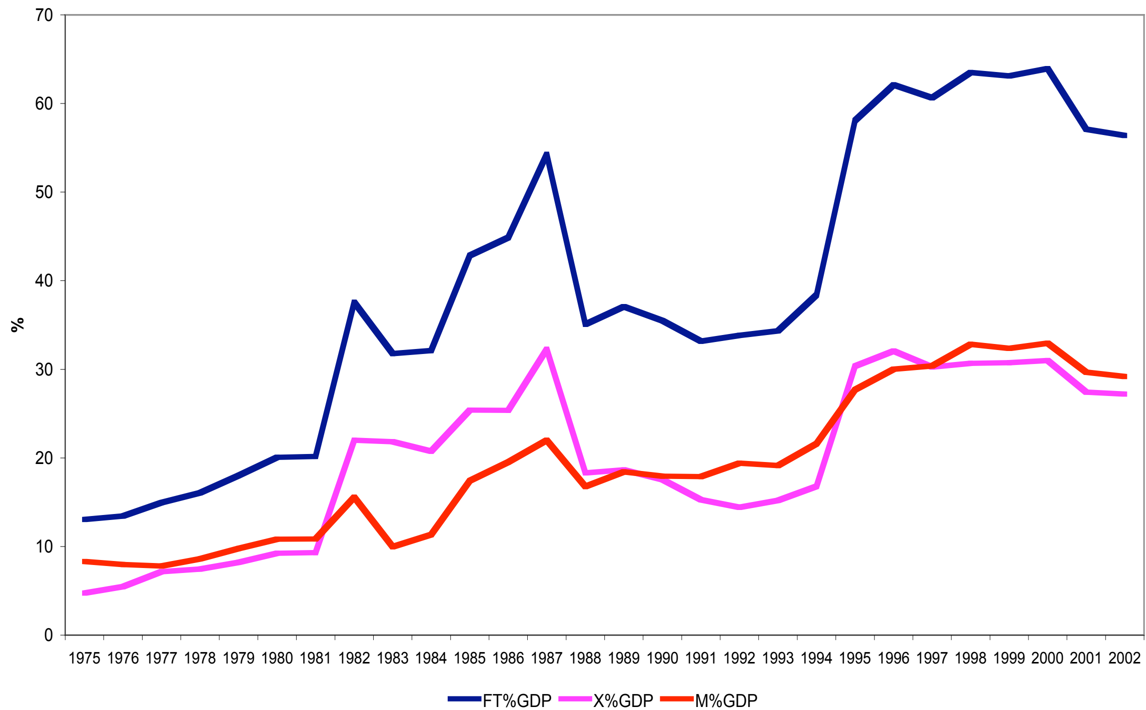
b/ GDP per hour worked (1990 international dollars per hour)

c/ Annual average compound growth rate.

Source: Maddison (2001).

Thus, while trade and foreign investment liberalization have resulted in fast export and labor productivity growth in a limited number of sectors, overall economic growth has remained problematic. GDP growth finally resumed at relatively fast rates from 1996 to 2000 but it did so in an exceptionally favorable international environment. The recovery turned out, indeed, to be short-lived. The renewed appreciation of the peso eventually slowed down the export boom and the US recession starting in 2001 put an end to the short period of export-led growth. Since 2001 the economy has stagnated and income per capita is very likely to fall in 2003 for the third consecutive year. Rapid, sustained, and even economic growth is yet to be seen.

Figure 2: Foreign Trade as % GDP, Mexico 1975 - 2002



Note FT = sum of exports and imports, as a share of GDP, measured at current prices.
Source: Solis, L. (2000) p. 94, and INEGI.

This experience raises serious doubts about the current industrial structure's ability to generate self-sustained growth. The counterpart of the processes of intra-firm and intra-industry trade specialization is that many, if not most, exporting sectors and firms, while dynamic, lack domestic linkages and a number of other industries have witnessed a 'disintegration of linkages.'[28] The consequences have been negative for the trade balance and learning processes. Moreover, the fragility of Mexico's pattern of industrial production and trade specialization goes beyond the lack of domestic linkages in export-oriented activities and the dependence of export demand on US economic activity. The increasing dominance of the maquiladora industry in export activities is a motive for concern. The maquiladora industry is characterized by a low potential for productivity growth, the counterpart of its high capacity of employment absorption. As the real exchange rate has appreciated again in the recent past and dollar wages have increased, profit margins have declined in the face of low and stagnant labor productivity. This, together with the US recession,

[28] Dussel (2000) illustrates this with a case study of the pharmaceutical industry where the share of locally produced raw materials fell from around 80percent in the late 1980s to around 20percent in 1998.

has put a brake on the expansion of productive capacity and output in the maquiladora sector and has led to a sharp decline in employment starting in the third quarter of 2000. With no productivity growth, the maquiladoras constitute a sector that can only expand on the basis of low wages. Given the tendency of wages to increase in other sectors along with productivity gains, the maintenance of the “internal competitiveness” of the maquiladoras, i.e., their capacity to attract resources from the rest of the economy, would require a continuously undervalued currency.[29]

Financial liberalization, the capital surge and the financial crisis

If the efficiency and productivity effects of market reforms have been unable to make up for the loss of growth potential during the 1980s, what about their effects on external capital inflows and the prospects for increasing the rate of accumulation by these means? Would the shift in the market-state balance bring about a permanently higher flow of external savings, significantly greater than historical rates that would allow an increase in the rate of accumulation, despite the sharp decline of the domestic savings rate? Such was the optimistic outlook of many observers in the early 1990s, for whom Mexico, a model reformer and successful emerging market, would turn into a Latin-American economic miracle. These optimistic expectations became rampant when NAFTA was approved in 1993.

Market reforms and positive external shocks, such as the fall in foreign interest rates in the early 1990s, together with the beginning of NAFTA negotiations, contributed in three main ways to a capital surge from 1990 to 1993. The first was the liberalization of domestic financial markets. (In a 1994 study on the determinants of capital inflows, Ros found that the opening of the bond market was the main determinant of the “change in asset preferences” during the period. The second was a drastic reduction in the country risk premium—an improved image of Mexico as “good place to invest”—which resulted from the debt relief agreement, the fall in international interest rates and the repayment of foreign debt, financed by the large privatization revenues of 1991-92. The third, which interacted with the reduction of country risk, was the real appreciation of the peso and the very high interest rates that prevailed in the initial stages of the disinflation program of late 1987.

The size and composition of capital inflows, heavily biased towards short-term portfolio investments, had three consequences on the economy. First, the continuous appreciation of the real exchange rate that was taking place in the midst of a radical trade liberalization, produced a profit squeeze in the tradable sectors of the economy with negative consequences on investment (Ros, 2001). Second, as a result of the difficulties in intermediating massive capital inflows, an allocation of

[29] See Frenkel and Ros (2003) for an analysis of the performance of the maquiladora industry in the 1990s.

resources biased towards consumption rather than investment (Trigueros, 1998), reinforced the decline in the private savings rate, while the bias towards the production of non-tradable goods, resulted, together with the real appreciation, in a slow economic expansion. Third, an increasing financial fragility, which resulted from the concentration of the inflows in highly liquid assets accompanied a progressive deterioration of the banking system balance sheets (Trigueros, 1998).

These trends should have been a legitimate concern for economic policy. They were not. By 1993, the current account deficit reached levels of the order of 6-7 percent of GDP and by early 1994 the capital surge was over. Throughout 1994 the authorities financed the massive current account deficit through the depletion of international reserves. Clearly the government incorrectly diagnosed the causes of the macroeconomic disequilibria, as the pressure on the reserves and dilemmas of policy makers were considered temporary and would be corrected without needing to depreciate the exchange rate. No significant exchange rate depreciation was implemented on the grounds that it would rekindle inflation, and would "give alarming signs to the market," augment capital flight and trigger a balance of payments crisis. In any case such policy was steady but surely being perceived as non-sustainable by investors in Mexico's capital and money markets. In the course of the year, the Bank of Mexico not only had to allow for increases in the interest rates on CETES and Tesobonos (Mexican Treasury Bonds), but had to allow for greater guarantees on the rates of return on government paper denominated in foreign currency. In any case, the foreign exchange reserves kept being depleted, ultimately creating the perception that macroeconomic policy was unsustainable. At the end of 1994, scarcely a year after NAFTA came into effect, the Mexican economy was in the midst of a financial crisis and on the brink of the worst recession since the great depression of the 1930s. Moreover, the country had been experiencing instability and political violence throughout 1994, starting with the armed revolt of the Zapatistas in January (the same day that NAFTA came into effect).

The boom and bust cycle that culminated with the banking crisis of 1994-95, was a consequence, at least in part, of an excessive reliance on financial deregulation and capital market liberalization (Clavijo and Boltvinik, 2000; Lustig 2002; OECD 2002). The result of that cycle was a bankrupt banking system whose bailout added some 20-percentage points of GDP to the public debt and left those households and firms, mostly small and medium enterprises with no access to foreign finance, virtually without access to bank credit. It is ironic that the banking sector returned to a situation of credit rationing characteristic of the era of financial repression that preceded the

financial liberalization of the late 1980s. This situation has been an obstacle to faster growth and has also reinforced the dual structure of the productive sector.[30]

Recent growth and investment performance

After the decline of 6.2percent in real GDP in 1995—the sharpest drop in more than fifty years—economic growth resumed in 1996-2000. However, its expansion abruptly stopped in 2001-02 and GDP per capita actually declined in real terms. On average, from 1985 to 2002, GDP expanded at an annual rate of 2.2 percent, or barely half a percentage point above the rate of population growth. Furthermore, the most recent estimates by the Finance Minister indicate that Mexico's GDP will grow 1.5% in 2003, the third year in a row with a decline in per capita terms. Thus, by the end of the year, in constant dollars it will be barely above 20 percent of the U.S. figure, a gap almost 10 percentage points wider than in 1981 and similar to the level recorded fifty years earlier. Thus in these five decades, in terms of real GDP per capita the Mexican economy has so far failed to "catch up" in any significant way with its northern neighbor.

Crucial to the slowdown in Mexico's rate of economic expansion has been a weak investment performance.[31] The failure of capital formation to grow at a fast pace—after the years of decline during the debt crisis—has deterred the expansion and modernization of productive capacity and simultaneously restricted the growth of aggregate demand. Indeed, gross fixed investment followed a path similar to that of GDP in real terms. It increased rapidly during the oil boom, then collapsed in 1982-87, and began a slow recovery in 1988 (Figure 3). This rebound gained some strength in 1990–92, responding to the favorable expectations associated with the beginning of NAFTA negotiations. The recovery was cut short in 1995, but vigorously proceeded in 1996–2000. However, in 2001-02 investment again collapsed in real terms. In synthesis, during the last two decades, the investment process has been wanting.

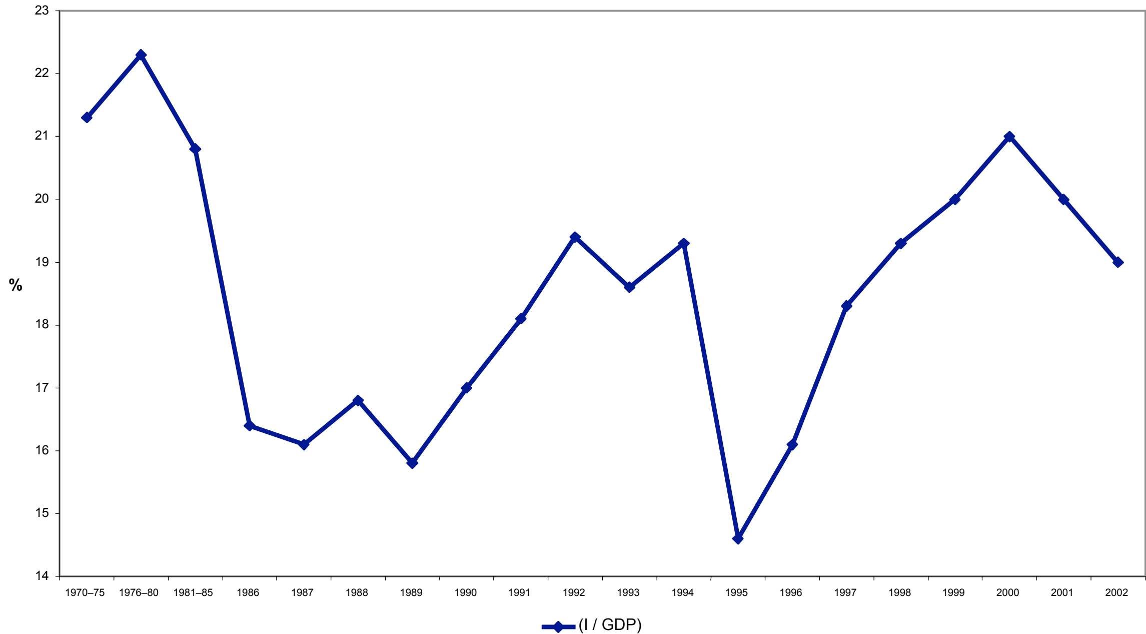
This poor performance is even more evident in the evolution of the investment/GDP ratio. During most of the 1970s this ratio followed a downward trend that was drastically but only temporarily offset by the oil boom, reaching a historical peak (26.5percent of GDP) in 1981. However, the recovery was very short lived. In 1982–83 the ratio fell again, placing its value way below 20 percent for the first time in years. It hovered around 18 percent thereafter and only began rising

[30] Giugale et al. (2001) and Dussel (2000) document how the credit decline affected differently large firms and small and medium enterprises, and the large and increasing gap between the export performance of these two types of enterprises.

[31] For a extended analysis of the performance of investment in the Mexico's manufacturing sector after the macroeconomic reforms see Moreno-Brid (1999) and Mattar, Moreno-Brid and Peres (2003).

consistently at the

Figure 3: Investment / GDP Ratio in Mexico 1970 - 2002



Source: Authors own work based on Table 4 of Mattar, Moreno Brid and Peres (2003) on the basis of ECLAC and INEGI data.
Note: Figures for 1970–1988 were calculated on the basis of data given in 1980 constant pesos; figures for 1989–2001 were based on data in 1993 constant pesos

end of the 1980s. Its rise was sharply curtailed in 1995 when it dropped 5 percentage points, to reach an all time low of 14.6 percent. And as mentioned above, in spite of its subsequent expansion, by 2001-02 it stood at 19.5 percent; still below its 1980–1981 levels. These ratios are way below the 25percent minimum that UNCTAD (2003) has identified as necessary to launch a process of high and sustained growth in less developed countries.

The disappointing performance of investment is a reason for concern over Mexico's future economic growth. What are the causes behind it? Were there any limitations or shortcomings in the macroeconomic reforms that failed to consider or misperceived the nature of key determinants of Mexico's investment process? Recent research on the topic has identified a set of factors that help explain Mexico's poor performance of investment (Mattar, Moreno-Brid and Peres, 2003).

First, the reforms were adopted in a stagnating economy under severe rationing in the access to foreign or domestic capital and finance. The adverse economic environment was aggravated by the fall in public investment, because "crowding in" between public and private investment has

historically been more important than “crowding out” effects (UNCTAD, 2003).

In addition, the reforms had the explicit goal of eliminating all types of incentives, including measures to promote domestic investment both aggregate and in specific sectors. No attempt was made to orient domestic spending to investment as opposed to consumption expenditure. Such explicit refusal to promote investment was combined with the uncertainty inherent in any radical change in development strategy. Not surprisingly such uncertainty was far from favorable to investment, thus leading to the postponement or interruption of investment projects. The elimination of sector incentives had an especially strong adverse impact on manufacturing investment, given that manufacturing had traditionally been the most favored sector under the previous development model based on import substitution and state led industrialization. The adverse incentives—exacerbated by the intense and sudden competition from imports—reduced manufacturing’s relative rate of return, which in turn curbed investment. The appreciation of the real exchange rate in 1988–1994 vis-à-vis the US dollar, further conspired against investment in manufacturing and more generally in tradable goods sectors. While real exchange-rate appreciation can encourage fixed investment in developing countries by lowering the relative prices of imported machinery and equipment, it also shifts relative prices in favor of non-tradables, inducing a reallocation of labor and investment away from the production of tradable goods and services. This last effect appears to have dominated in the Mexican case.

State Reform and the Tasks of Development Policy

The other side of market reform is the retreat of the state and its restructuring. By shrinking in size, the chances improve that it will be able to do a better job in its priority tasks, or so the argument goes. However, while the state is smaller, it is not necessarily more effective. The tax burden continues to be extremely low by international standards (OECD, 2002). At 12 percent of GDP in the late 1990s, tax revenues are below those of Latin American countries with similar income per capita and well below those of OECD countries. As a result, the fiscal accounts continue to be highly vulnerable to changes in oil income, which still represent around a third of total government revenues. Together with the loss of policy instruments and the reorientation of monetary policy from growth to purely stabilization objectives as well as the volatility of external capital flows, this is the source of a major macroeconomic problem: the fact that it contributes to procyclical macroeconomic policies that exacerbate the negative effects of shocks on economic activity.

Nor is the state necessarily more efficient. Mexico's fiscal adjustment did not encourage a greater internal efficiency of the public sector, despite, or perhaps because of, its massive character.

Especially before 1985, fiscal adjustment was, by and large, achieved through deep cuts in public investment and the real salaries of public employees, hardly a useful means to improve the efficiency of the state and its bureaucracy. Moreover, the state's retreat has gone well beyond areas where the private sector has a comparative advantage. In fact, public infrastructure investment has been the main victim of fiscal adjustment in the context of falling oil prices. Giugale et al. (2001) strikingly illustrate with two figures the close correlation between oil price declines, fiscal deficit cuts and reductions in public investment (the correlation coefficient between the last two turns out to be 0.82 from 1980 to 1997). As a result, public investment was barely 3 percent of GDP in 2001-2002 down from 5 percent in 1994 and 10 percent in 1980-81 (Table 6). It is also clear that, despite some positive recent trends in social spending, state disengagement has not served its main stated purpose: the expansion of social infrastructure. The main contribution of privatization revenues was to support (very effectively, no doubt) stabilization efforts. The revenues temporarily compensated for the inflation tax decrease and strengthened the capital account of the balance of payments through the financial assets that the private sector had to bring back home to purchase public enterprises on sale.

The implications of all this are more important than generally acknowledged because the priority tasks of the state, social policy in particular, are today far more formidable than in the past. This is so for several reasons. There is, first, the accumulated backlog of unmet social needs and the legacy of increased inequality from the 1980s. In the face of slow growth in agriculture and the expansion of the urban informal sector, the recovery of social spending in the 1990s has not prevented an increase in the number of poor and a persistently high inequality in income distribution. Lustig (2002) shows that income inequality measured by the Gini concentration coefficient increased quite sharply from 1984 to 1989 (around four percentage points) and then fell from 1989 to 1994 (although remaining slightly above its 1984 level). Then from 1994 to 2000, the OECD (2002) estimates show a slight increase in income inequality (the Gini rises from 0.477 to 0.481). Poverty rates (both extreme and moderate) show a similar behavior across time while the number of poor shows a continuous increase through 1994.

Secondly, there are at least two ways in which the present development pattern is exacerbating social disparities. The state retreat from agriculture and the reform of the land tenure system may have brought private capital and prosperity to some rural areas, but has also inadvertently tended to impoverish large masses of rural workers in a similar way that agricultural modernization under the *Porfiriato* did on purpose and on a much more massive scale. There has been a clearly differentiated behavior between the commercial sector producing exportable goods—which benefited from and responded positively to the reforms (exports have grown by 70 percent during

the first five years of NAFTA)—and the ejido sector, which has not (imports grew by 60 percent affecting this sector which largely produces importable goods). Today, this sector barely survives on an increasing integration into non farm activities (about 40 percent o—f its income comes from non farm sources including remittances[32]). The overall stagnation of agricultural output and the persistenc of rural poverty are related to the reforms themselves, as recognized by Giugale et al. (2001). The downward trend in real agricultural prices throughout the 90s was strengthened by the removal of trade protection (and exchange rate overvaluation in the early part of the decade). The elimination of extension programs and technical assistance has affected a large proportion of small producers. The state's retreat from distribution was followed by the domination of marketing channels by oligopolistic intermediaries that depress the prices obtained by producers, affecting particularly the poorest areas. In the absence of competitive markets and without proper consideration to the large regional diversity and income heterogeneity of the Mexican countryside, liberalization did not yield the expected benefits.

On the other hand, the benefits of a greater integration with the international economy, and with the US in particular, are also being very unevenly distributed within the country. Greater integration has been accompanied by a substantial increase of the wage premium on skilled labor with a resulting relative decline in unskilled labor incomes, a major cause of persistent inequality. As documented by Godínez (2000) and Dussel (2000), general regional trends from 1970 to 1985 pointed towards a de-concentration of economic activity (away from the main industrial centers in the metropolitan area of Mexico City, Nuevo León and Jalisco) and convergence of income levels. Since 1988, a process of divergence has been taking place, especially as the Northern States—linked to export activities—have been rapidly increasing their share in national income. By contrast, the relatively poor South (with the exception of Quintana Roo, which benefited from the expansion of tourism) has been lagging behind. These regional trends are clearly linked to the economy's structural changes, such as the lagging grain agriculture, expanding export sectors of agro-industrial products, fruits and vegetables and the rapidly growing export-oriented manufacturing activities in the Northern and Central areas. Just as in the late 18th century the 'opening of North Atlantic trade' exacerbated the 'fragmentation of regional markets,' there is today a tendency towards a deepening of regional disparities, especially between a prosperous north increasingly integrated with the US economy and a poor and backward south plunged into agricultural stagnation.

Finally, and no less fundamentally, by abandoningthe trade and industrial policy instruments that have worked successfully in the past without any effective replacement, current development strategy encourages the exploitation of present rather than potential comparative advantages. The

[32] See Giugale et al. (2001).

basic task of development policy—the task of changing and enhancing the present endowment of resources and, over time, shifting the pattern of comparative advantages towards higher value-added, technology-intensive activities—falls now fully, in the absence of industrial policy, upon social policies. A proportionate response to this challenge could actually make things better than otherwise (that is, than, under an active industrial policy with little social policy, for example), but our point is that the challenge itself is much bigger and the response remains to be seen. A less than proportionate response would lead to freezing the present stage of development—getting stuck in the relatively unskilled and low-pay tasks of the production processes of capital-intensive industries. This is a far from desirable prospect for a country that needs to grow rapidly to increase the living standards of its 100 million people.

V. Concluding Comments

All this leads us to the final and most important aspect of the overall reform process, on which we can only raise the relevant questions. Is the shift in the market-state balance a sign that, after having reduced economic backwardness by state-sponsored industrialization, use of a different set of ideas becomes more suitable in the new stage, a shift that is the natural companion of the transition from Gerschenkronian to Schumpeterian entrepreneurship? Or is it still the case that "to break through the barriers of stagnation in a backward country, to ignite the imaginations of men, and to place their energies in the service of economic development, a stronger medicine is needed than the promise of better allocation of resources…" (Gerschenkron, 1952)? Dealing with these questions falls outside the scope of this paper, and of the wisdom of its authors. But on their answers depend Mexico's longer-term prospects for rapid economic development.

What we can say, however, is that the origin of the adjustment problems and the new problems created by the reform process are not being adequately perceived in current development policy. First, the notion that the crisis was brought about by the exhaustion of past development strategies should not be taken for granted, even though we would be very far from defending every single aspect of past development strategies. Secondly, the solution to the new obstacles may require more and better, rather than less, state participation in the economy. As we have tried to show, the source of these new problems has to be found in part in the retreat of the state, in such areas as public infrastructure investment. But as a result of the shift in ideological climate, very little attention is being given to these problems and to what government policy can do about them while, at the same time, too much is expected from the efficiency gains of market reforms. Is it the case that, just as a century and a half ago, the real obstacles to economic development are being misperceived?

References

Aschauer, David Alan (1989a), Is Public Expenditure Productive? *Journal of Monetary Economics* 23, 177-200.

------- (1989b), Does Public Capital Crowd Out Private Capital? *Journal of Monetary Economics* 24, 171-188.

------- (2000), Public Capital and Economic Growth: Issues in Quantity, Finance and Efficiency." *Economic Development and Cultural Change* 48, 391-406.

Batiz, J .A. and Canudas, E. (1980), 'Aspectos Financieros y Monetarios (1880-1910)', in Ciro Cardoso (ed.), *México en el Siglo XIX* (1821-1910). *Historia Económica y de la Estructura Social,* México, D.F.: Editorial Nueva Imagen.

Beatty, E. (2001), Institutions and Investment, Stanford University Press

Beatty, E. (2002), Commercial policy in Porfirian Mexico: the structure of protection, in J. L. Bortz and S. Haber, The Mexican Economy 1870-1930. Essays on the Economic history of Institutions, Revolution and Growth, Stanford University Press.

Cardenas, E. (1985), 'Algunas Cuestiones Sobre la Depresión Mexicana del Siglo XIX' , *Revista Latinoamericana de Historia Económica y Social,* 3.

Clavijo, F. (1980), 'Reflexiones en torno a la Inflación Mexicana', *El Trimestre Económico,* 47 (188), October-December.

Clavijo, Fernando (ed., 2000), Reformas Económicas en México 1982-1999. Lecturas del Trimestre Económico 92. México: CEPAL, Estrategia y Análisis Económico, Consultores, S. C., Fondo de Cultura Económica.

Coatsworth, J. (1978), 'Obstacles to Economic Growth in Nineteenth-Century Mexico', *American Historical Review,* 83 (1), February, 80-100.

Coatsworth, J. (1989), 'The Decline of the Mexican Economy, 1800-1860', in R. Liehr (ed.), *América Latina en la Epoca de Simón Bolivar,* Berlin: Colloquium Verlag.

Coatsworth, J. (1990), *Los Orígenes del Atraso. Nueve Ensayos de Historia Económica de México en los Siglos XVIII y XIX,* Mexico, D.F.: Alianza Editorial Mexicana.

Cordera R. Y Leonardo Lomelí (2000), "Sobre el presidencialismo económico y su Crepúsculo," en Comercio Exterior, vol. 50, no. 11, Noviembre, Banco Nacional de Comercio Exterior.

Deno, Kevin T. (1988), The Effect of Public Capital on U.S. Manufacturing Activity: 1970 to 1978, *Southern Economic Journal* 55, 400-411.

Dussel Peters, Enrique (2000), Polarizing Mexico. The impact of Liberalization Strategy. Boulder, Colorado: Lynne Rienner Publishers

Easterly, William and Rebelo, Sergio (1993), Fiscal Policy and Economic Growth, *Journal of Monetary Economics* 32, 417-458.

FCE (1963), *Mexico* 50 *Años de Revolución,* México, D.F.: Fondo de Cultura Económica.

Florescano, E. and Gil Sánchez, I. (1976), 'La Época de las Reformas Borbónicas y el Crecimiento Económico', in D.C. Villegas (comp.), *Historia General de México,* México: El Colegio de México, tomo 1.

Frenkel, Roberto and Jaime Ros (2002), Macroeconomic policies, trade specialization, and labor market adjustment in Argentina and Mexico, mimeo

Garcia Alba, P. (1974), 'Los Liberales y los Bienes del Clero', El Colegio de México, manuscript.

Gerschenkron, A. (1952), 'Economic Backwardness in Historical Perspective', in B. Hoselitz (ed.), *The Progress of Underdeveloped Countries.* Chicago: University of Chicago Press.

Gil Diaz, F. (1984), 'Mexico's Path from Stability to Inflation', in A. Harberger (ed.), *World Economic Growth,* San Francisco: Institute for Contemporary Studies.

Gil Diaz, F. (1987), 'Some Lessons from Mexico's Tax Reform', in D. Newberry and N. Stern (eds), *The Theory of Taxation for Developing Countries,* Oxford: Oxford University Press.

Giugale, Marcelo, Olivier Lafourcade, and Vinh H. Nguyen (eds., 2001), Mexico. A Comprehensive Development Agenda for the New Era. Washington, D.C.: The World Bank

Haber, S. (1989), *Industry and Underdevelopment: The Industrialization of Mexico,* 1890-1940, Stanford: Stanford University Press.

Hernandez Laos, E. (1989), 'Efectos del Crecimiento Económico y la Distribución del Ingreso Sobre la Pobreza y la Pobreza Extrema en México (1960-1988)', México, D.F.: Universidad Autónoma Metropolitana (mimeo).

Hernandez Laos, E. (1990), 'Política de Desarrollo Industrial y Evolución de la Productividad Total de los Factores en la Industria Manufacturera Mexicana', Informe presentado al Fondo de Estudios Ricardo J. Zevada, México, D.F.: Universidad Autónoma Metropolitana.

INEGI (1985), *Estadísticas Históricas de México,* México, D.F.: Instituto Nacional de Estadística, Geografía e Informática.

Kessel, G. and Samaniego, R. (1991), 'Apertura Comercial, Productividad y Desarrollo Tecnológico. El caso de México', Reporte final elaborado para el Banco Interamericano de Desarrollo Washington D. C., México, D.F.: Instituto Tecnológico Autónomo de México.

King, T. (1970), *Mexico: Industrialization and Trade Policies Since* 1940, Oxford: Oxford University Press.

Kuntz Ficker, S. (2002), Institutional change and foreign trade in Mexico, 1870-1911, in J. L. Bortz and S. Haber, The Mexican Economy 1870-1930. Essays on the Economic History of Institutions, Revolution and Growth, Stanford University Press.

Lustig, Nora (2002), *México. Hacia la reconstrucción de una economía*. México: El Colegio de México y Fondo de Cultura Económica.

Maddison, A. (1989), *The World Economy in the 20th Century,* Paris: Development Centre of the Organisation for Economic Co-operation and Development.

Maddison, A. (2001), *The World Economy: a Millenial Perspective*. OECD.

Manzanilla Schaffer, Y. (1963), 'Reforma Agraria en México', in FCE, *Mexico:* 50 *Años de Revolución,* México, D.F.: Fondo de Cultura Económica.

Moreno-Brid, J.C. (1988), *The Motor-Vehicle Industry in Mexico in the Eighties,* Geneva: ILO.

Moreno-Brid, J.C. (1992), 'Multifactor Productivity Growth in Mexico: Some Notes on Recent Research', University of Notre Dame, manuscript.

Moreno-Brid, J.C and J.Ros (1994) "Market Reform and the Changing Role of the State in Mexico: a historical perspective" in A.Dutt, K.Kim and A.Singh (Eds.), *The State, Markets and Development*, Edward Elgar,

Mosk, S. (1950), *Industrial Revolution in Mexico,* Berkeley: University of California Press.

Munnell, Alicia H. (1990), How Does Public Infrastructure Affect Regional Economic Performance? in Is there a Shortfall in Public Capital Investment?, edited by Alicia Munnell. Conference Series No. 34, 69-103. Boston: Federal Reserve Bank of Boston.

Newell, R. and Rubio, L. (1984), *Mexico's Dilemma: The Political Origins of the Economic Crisis,* Boulder and London: Westview Press.

OECD (2002), OECD Economic Surveys: Mexico. Paris: OECD

Puyana, A. and Romero, J.C. (2003) "Estimaciones de la productividad total de los factores en México". next to publish.

Reynolds, C. (1970), *The Mexican Economy: Twentieth-Century Structure and Growth,* New Haven: Yale University Press.

Ros, J. (1991), 'The Effects of Government Policies on the Incentives to Invest, Enterprise Behavior and Employment: A Study of Mexico's Economic Reform in the Eighties', Working Paper. no.53, World Employment Programme Research, Geneva: ILO.

Ros, J. (1992), 'Mexico's Trade and Industrialization Experience Since 1960: A Reconsideration of Past Policies and Assessment of Current Reforms', Helsinki: World Institute for Development Economics Research (WIDER, Helsinki).

Ros, J. (1993), 'Trade Liberalization with Real Appreciation and Slow Growth: Sustainability Issues in Mexico's Trade Policy Reform', Helsinki: World Institute for Development Economics Research.

Ros J. (1994) "Financial markets and capital flows in Mexico", in J.A. Ocampo and R. Steiner, *Foreign Capital in Latin America*, Washington, D.C., Inter American Development Bank.

Ros, J. (2001), Del auge de capitales a la crisis financiera y más allá: México en los noventa, in Ricardo Ffrench-Davis (ed.) *Crisis financieras en países "exitosos"*, CEPAL-McGraw Hill.

Rosenzweig, F. (1965), El desarrollo económico de México de 1877 a 1911, *El Trimestre Económico*, 32, n. 5: 405-54

Solis, L. (2000), *La Realidad Económica Mexicana: Retrovisión y Perspectivas,* México, D.F.: Fondo de Cultura Económica.

Solis, L. (1977), A *Monetary Will-O' the Wisp: Pursuit of Equity through Deficit Spending,* Geneva: ILO.

Thomson, G. (1986), 'The Cotton Textile Industry in Puebla during the Eighteenth and Early Nineteenth Centuries', in N. Jacobsen and H. J. Puhle (eds), *The Economies of Mexico and Peru during the Late Colonial Period,* 1760-1810, Berlin: Colloquium Yerlag.

Trigueros, I. (1998), Flujos de capital y desempeño de la inversión: México, en R. Ffrench-Davis y H. Reisen (comps.), *Flujos de capital e inversion productiva: lecciones para América Latina*, CEPAL/OCDE, McGraw-Hill, Santiago

Tybout, J. and Westbrook, D. (1992), 'Trade Liberalization and the Structure of Production in Mexican Industries', Working Paper no.92-03, April 1992, Department of Economics, Georgetown University.

UNCTAD, *Trade and Development Report* 2003

Van Young, E. (1981), *Hacienda and Market in Eighteenth Century Mexico: The Rural Economy of the Guadalajara Region,* 1675-1820, Berkeley: University of California Press.

Van Young, E. (1986), 'The Age of Paradoxes: Mexican Agriculture at the End of the Colonial period, 1750-1810', in N. Jacobsen and H.J. Puhle (eds), *The Economies of Mexico and Peru during the Late Colonial Period,* 1760-1810, Berlin: Colloquium Verlag.

Williamson, J. (1990), *Latin American Adjustment: How Much Has Happened?,* Washington. D.C.. Institute for International Economics.