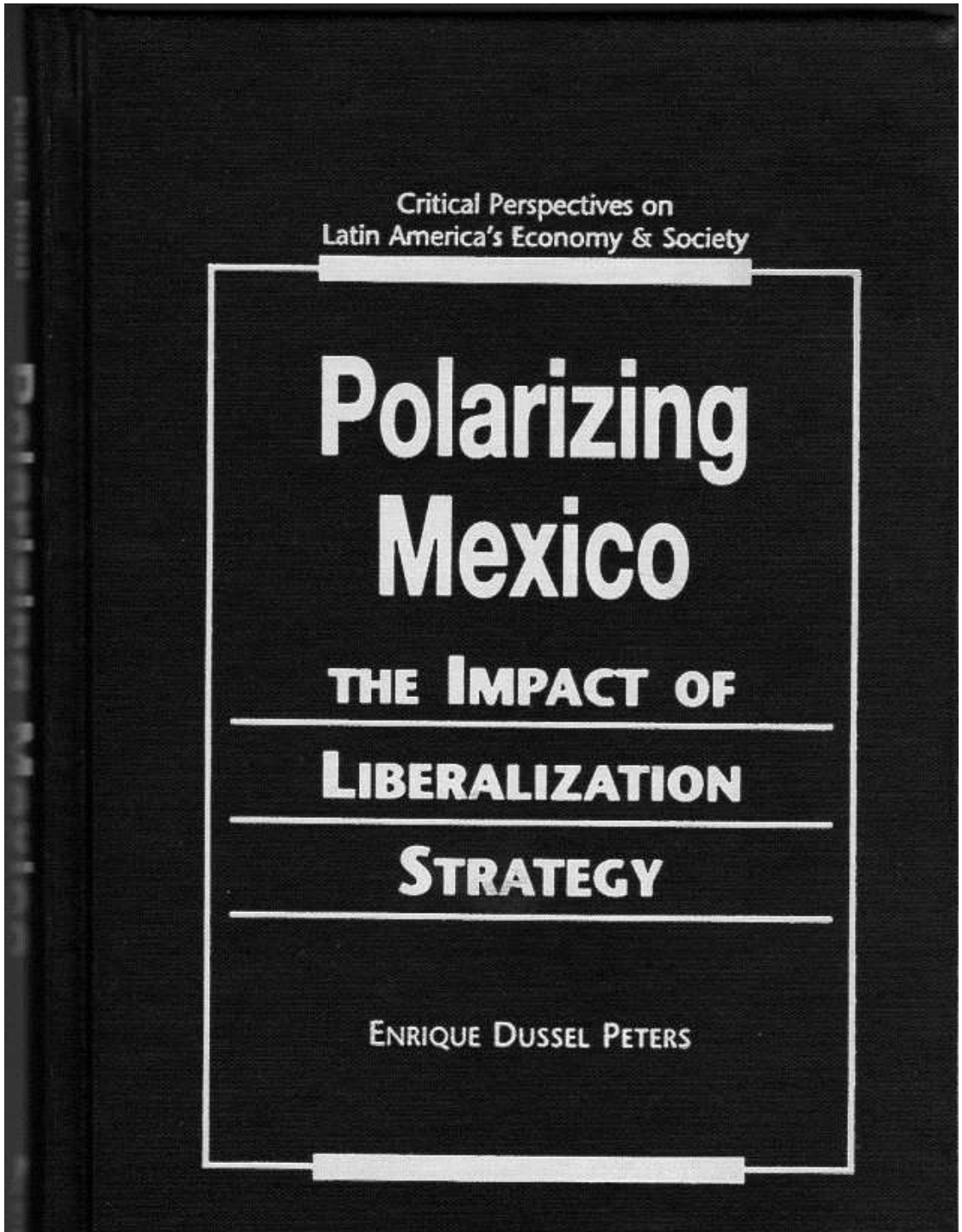
Critical Perspectives on
Latin America's Economy & Society
Polarizing Mexico
THE IMPACT OF LIBERALIZATION STRATEGY
ENRIQUE DUSSEL PETERS

# Polarizing Mexico

*Critical Perspectives on*
*Latin America's Economy and Society*

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# Polarizing Mexico

## The Impact of Liberalization Strategy

Enrique Dussel Peters

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*For Ana María and Mariana*

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# Introduction

Since the 1980s Mexico has been regarded as an international example of sound economic policy, particularly by multilateral agencies such as the World Bank. The country has apparently been able not only to solve the 1982 debt crisis, but also to emerge successfully from the crisis that erupted in December of 1994. Since the 1997 Asian economic crisis, Mexico has again been cited as an example to follow. The international acceptance of Mexico's economic success was further demonstrated in 1994 when Mexico's former president, Carlos Salinas de Gortari, was seriously considered as a candidate to head the World Trade Organization, a candidacy backed by the U.S. government and most nations in the Organization for Economic Cooperation and Development.

Mexico's economic and social development during the 1990s is of utmost interest for several reasons. On the one hand, economic and social policies since the end of the 1980s have been, with few exceptions, some of the most coherent and consistently applied in not only Latin America but on other continents. New policies implemented since the end of the 1980s present the possibility for evaluating more than a decade of the results of Mexico's new development strategy. Mexico's export-led growth, the profound restructuring of its economy, and the North American Free Trade Agreement initiated in 1994, as well as the crisis of 1994–1995, make the Mexican experience a complex and interesting case study from both theoretical and policy perspectives.

Mexico's economy and society have been transformed substantially since the end of the 1980s. The overall departure from the import-substitution industrialization model, constitutional and

macroeconomic changes, the increasing importance of trade, and the impact of global trends are some of the striking features of Mexico's transformation during the 1990s. Simultaneously, recurrent economic and political crises, continual financial and foreign exchange uncertainties, and poverty and social disarray continue to be integral aspects of Mexico's reality. How do these trends converge? What are the prospects for Mexico's economic and social development in the twenty-first century?

What is the theoretical foundation of Mexico's post-1988 strategy? Is it related to "neoliberalism"? What has been the legacy of import-substitution industrialization, and how has the Mexican economy been restructured since the late 1980s? What, after more than ten years, are some effects of this new strategy? What are the economic and social potential and sustainability of this strategy? Are there any general theoretical and policy lessons to be learned from Mexico that might be useful to other nations following similar development paths?

One of the main hypotheses of this book is that the impact of Mexico's new development strategy since 1988, defined as liberalization strategy, can be understood and evaluated in terms of an increasing economic, social, and territorial polarization. Thus, although specific segments of Mexico's economy and society are able to respond to the new challenges of liberalization strategy, which have so far resulted in moderate positive economic outcomes at the aggregate level, a majority of firms, branches, households, and regions have not benefited and pose overall economic and social sustainability problems.

Another premise of the book is that the effects of liberalization strategy have to be presented and evaluated both from a theoretical and an empirical perspective. It is not a coincidence that liberalization has become the main conceptual and policy framework in most Latin American countries and in many other nations since the 1980s. Thus, the book presents the socioeconomic conditions of Mexico at the end of the 20th century in its full complexity and avoids the simplistic approaches and models that have been developed by economists and politicians. This complexity encompassed elements such as the implementation of NAFTA and the simultaneous social and military uprising of the Ejército Zapatista de Liberación Nacional (EZLN) in 1994, as well as world-class manufacturing facilities in the computer and pharmaceutical industries, alongside a majority of Mexico's population who remain in poverty.



Although the book presents historical developments of the respective issues, the primary objective herein is to understand Mexico's present socioeconomic conditions and challenges. Based on a detailed and in-depth analysis of the government's economic and social policies, the book includes—implicitly and explicitly—alternatives to policies imposed in Mexico since the 1980s. However, the presentation of detailed alternatives to the topics raised in the respective chapters goes beyond the scope of the book.

With these sorts of questions in mind, Chapter 1 considers the recent discussion in development economics on the theoretical legitimization and background of liberalization strategy in Mexico. This chapter is relevant in presenting the theoretical justification of a liberalization strategy, as well as in highlighting the richness of current debates in economic development theory and the impact on potential alternatives to liberalization. The increasing consensus on generating endogenous growth conditions or the lack of them, that is, of polarization, are significant for the discussion in later chapters. Departing from conventional criticisms of neoliberalism in Mexico and other nations, the chapter argues that it is not possible to discuss Mexico's current development strategy in terms of neoliberalism. Mexico's liberalization strategy differs both historically and conceptually from neoliberalism. Moreover, this chapter is relevant for understanding different theoretical and policy alternatives to liberalization.

Chapter 2 outlines the general economic and social background of the liberalization strategy implemented in Mexico, arising from an interplay between theoretical, economic, and political domestic and international tendencies. The genesis of liberalization in Mexico and its causes, including the emergence of the private sector as a politically active social sector and the overall critical political situation in Mexico, are relevant in this context. Moreover, this chapter elaborates on the priorities and pillars of the liberalization strategy in Mexico since 1988 and concludes by discussing the relationship between neoliberalism, export-oriented industrialization, and liberalization. Chapter 2 is crucial for associating the more theoretical discussion in Chapter 1 to the specific strategy followed in Mexico and impact of the strategy, as analyzed in the next chapters.

Beginning with Chapter 3, the impact of liberalization is evaluated from several perspectives. First analyzed are the main macroeconomic policies introduced since 1988 and an examination of the evolution of the main macroeconomic variables since then. This chapter also includes a brief analysis of the 1994–1995 crisis from the gov-

ernment's perspective: this crisis, as we shall see, is critical for understanding Mexico's new development path. Because of the importance of the crisis to liberalization's macroeconomic priorities, the chapter also examines the evolution of other macroeconomic indicators, such as the real exchange rate, GDP, inflation, and fiscal deficit.

Chapter 4 looks at the general development and performance of Mexico's manufacturing sector, liberalization's self-proclaimed engine. In its first section, this chapter presents general and specific government policies for the manufacturing sector and its relationship to foreign trade since 1988. Subsequent sections of Chapter 4 provide a more in-depth analysis at the industry level of the manufacturing sector. The characteristics of the most dynamic branches since 1988, including variables like GDP, productivity, employment, real wages, imports, and exports, are highlighted.

Chapter 5 discusses the main financing sources for liberalization beyond cheap labor power: foreign investments. The chapter begins with an overview of the legal and constitutional changes regarding foreign investments and the general trends of foreign direct investments since the 1980s. The third section of this chapter analyzes three different sectors: automobiles, electronics, and telecommunications. These more specific sectorial examinations allow for an understanding of the profound changes occurring in particular segments of Mexico's economy and the impact of economic restructuring for the integration of these sectors into the global economy. This chapter is also complementary to Chapter 4, which examines in more detail the rationality, performance, and specificities of the new industrial organization that has emerged in Mexico since the adoption of a liberalization strategy.

In an effort to understand the social impact of liberalization, Chapter 6 begins by examining recent changes in social policy. The chapter focuses on the social challenges that have emerged in the era of liberalization and evaluates the impact of the strategy on general social indicators, income distribution, and employment generation. Particular attention is given to the evolution of poverty since 1984. This chapter also examines the shift in Mexico's economic and political structures against labor.

Chapter 7 discusses the implications of globalization for Mexico. Beginning with a brief summary of this issue, it is argued that in the future local and regional issues will be of increasing economic, social, and political importance. The chapter explores regional trends



in Mexico, as well as the country's overall polarization, focusing on two specific regional experiences: the electronics industry in Jalisco and the pharmaceutical industry in Mexico City. These specific case studies cannot be generalized to the rest of Mexico, but they do reflect a search for confronting globalization at the local and regional level, a rather new tendency in a country with a historically centralized and authoritarian political structure. This chapter is also closely linked to Chapters 4 and 5. Chapter 4 analyzes the general performance of manufacturing and the emerging structures of export orientation; Chapter 5 expands the discussion of Mexico's economy in the context of a North American industrial network, particularly those activities that have been dynamic since liberalization. In Chapter 7 the analysis of two sectors and their respective industrial organizations is helpful in understanding the polarization of Mexico's economy and its increasing dependence on imported goods and services.

Chapter 8 presents the general conclusions of the book. Since all the chapters already include preliminary conclusions, this last chapter elaborates on general guidelines and addresses the need for further analysis. This chapter also addresses the broader lessons drawn from the Mexican experience and discusses general alternatives to the liberalization model in Mexico.

# 1

# The Debate over Economic Development Since the 1980s

Since the 1980s, Mexico's economy and society have undergone radical changes. In this chapter, a clear understanding of the rationality, concepts, and expectations of the new economic and social strategy are examined.

The first part of this chapter reviews the basic concepts of import-substitution industrialization (ISI), focusing on the "counter-revolution" to ISI: export-oriented industrialization (EOI). This latter school of thought, dominant at academic institutions in the United States and accepted by most Latin American governments, has undergone severe critiques from several neoclassical, structuralist, and marxist authors, among others, which will be analyzed in the second part of the chapter. Finally, in the third part of the chapter, the relationship between EOI and the discussion around "neoliberalism" in most of Latin America will be explored. The second and third parts of this chapter are apparently not directly related to Mexico's economic strategy and performance since 1988. However, an understanding both of EOI and its critiques, as well as a definition of neoliberalism, are important for grasping how neoliberalism and EOI are related. Moreover, this is particularly important for a discussion on alternative development strategies beyond EOI and neoliberalism, as discussed for the Mexican case in Chapter 8. Otherwise, the discussion might result in a "struggle against windmills," reminiscent of Don Quixote's experience several centuries ago.

## Import-Substitution Industrialization and the Counterrevolution: Export-Oriented Industrialization

### *Import-Substitution Industrialization*

Import-substitution industrialization was initiated in most of Latin America in the years preceding World War II. The drive for ISI was accelerated by the war due to the relatively isolated nature of these economies at that time and by the need to create and develop their own infrastructure and industrial sector (Little, Scitovsky, and Scott 1970). The relative isolation of Latin America then also resulted in the alleviation of the trade deficit in manufacturing, allowing these economies relative economic self-sufficiency and the promotion of modernization (i.e., industrialization from the perspective of these developing nations).

Parallel to these economic trends, most of Latin American had been, at least since the international crisis of 1929–1933, in a period of political and social turmoil and transition. The emergence of nation-states and of populism, strongly influenced by socialist doctrines internationally, had led to new social and political configurations in most of Latin America: presidents such as Lázaro Cárdenas in Mexico (1934–1940),[1] Getulio Vargas in Brazil (1930–1945), Juan Perón in Argentina (1945–1955), and Jacobo Arbenz in Guatemala (1950–1954) reflected a search for new social and political institutions, as well as new class configurations to legitimize and justify the nation-state and its relationship with the world market (Dussel 1983; Meyer and Reyna 1989). ISI, from this perspective, was not only an economic strategy; it was also deeply embedded in the emergence of a new political and social consensus among the respective oligarchies, labor unions and agricultural workers, capitalists, and the state.

Most of those who recommended ISI as part of a new Latin American development strategy emphasized the need to develop a protected domestic industrial structure specializing in manufacturing commodities through different forms of state intervention. Assuming different forms of market imperfections—from low-level or underdeveloped economic equilibrium (Nurkse 1955; Rosenstein-Roden 1962) to different forms of domestic constraints on economic development or bottlenecks in (skilled) labor and capital markets, in foreign exchange, and domestic savings and investments—proponents of ISI stressed the need for state intervention as well as industrial and trade policies to achieve a balanced growth strategy that would increase capital accumulation and enhance investments in the modern sectors of the respective economies. The traditional, or underdeveloped, agricultural sector, which had the highest population share, would not only provide labor power to the industrial sector (Lewis 1954), but also resources (through a trade surplus) for modernization. The domestic agricultural sector would be the principal financing source of ISI, and different forms of "mixed economies" (proportions of the state and the private sectors in the economy) were envisaged with complementary functions leading to economic development.



Implicitly and explicitly, ISI supporters believed that economic development was directly related to specialization in manufacturing, since manufactured goods have higher income elasticities[2] than agricultural goods and more backward and forward linkages—that is, linkages with the suppliers of their inputs and to users of their product—than other economic activities (Hirschman 1958). Further, such a shift in production would have a positive effect on the terms of trade[3] of the respective nations and thus on development (Prebisch 1950). The state had a significant role in protecting (public and private) infant industries and the domestic market in general, in providing overall infrastructure, and in promoting economic growth in modern or "strategic" industrial sectors.[4] High and increasing tariff and nontariff barriers, import duties and quotas, multiple exchange rates, direct and indirect subsidies, incentives to domestically produce imported intermediate and capital goods, and the creation of state-owned enterprises were some of the typical devices employed under ISI. In the first stage, these mechanisms were to enhance the substitution of imported goods in general, beginning particularly with consumer and intermediate goods. In later stages, domestic industry would substitute more advanced imports, such as capital goods, which in even later stages would result in exports.

Several issues critical for the development of ISI were recognized by supporters of the strategy:

1. Such mechanisms as overvaluation of the exchange rate, which were initially maintained to allow for cheaper intermediate and capital imported goods in the first stage of ISI, were politically extremely difficult to abolish in later stages and would result in disincentives for exports. Thus, institutional

and social changes were critical to allow for later stages of ISI (Hirschman 1971).

2. Imports in general, but particularly for intermediate and capital goods in the first stage, would play a dual role. They represented powerful technological stimuli for economic development and could allow for enhancing backward and forward linkages of the value-added chain for final goods' production. However, closed or protected economies could also generate economic structures that would not develop economic independence in the medium and long term (Chenery 1960; for the Mexican case, see Chapter 2 of this book).
3. Some observers (Schydlowsky 1967, 1972) argued that the main objective of ISI, an increase in the rate of growth of income, was inconsistent with ISI's main arguments and goals since it depended on continually higher levels of intermediate and capital goods imports and therefore a higher degree of external dependence, contrary to the main postulates of ISI.

These critical issues indicate that a change in the respective economic, social, and institutional setting and the quick achievement of import substitution and eventual export orientation were most significant for the effective development of ISI. Otherwise, the respective economies would generate economic conditions for ever-increasing levels of imported intermediate and capital goods, only being able to substitute for final consumer goods but incapable of deepening to later stages of ISI, which in the long run could not be financed (Cypher 1992).[5] The main financing source, the agricultural sector, failed to be analyzed in depth: most of the proponents of ISI assumed that the sector would be able to provide unlimited labor power and resources for industrialization and modernization.

Although there were some exceptions, ISI in general did not go beyond the first stage, the production and substitution of imported final consumer goods. The disassociation between the respective Latin American governments and the private sector as well as between transnational corporations (TNCs) and the domestic private sector resulted in an increasing dependence on imported intermediate and capital goods, reflected in increasing trade deficits. TNCs concentrated in the most dynamic and "modern" sectors (e.g., industrial metal products and electronics) with few spillover and learning effects on the rest of the economy, particularly on private domestic firms (Fajnzylber 1983; Gereffi 1990). Taking account of national differences, in most countries the agricultural sector proved not to be "unlimited," as assumed by most ISI advocates, and agricultural trade surpluses declined and even turned negative after the 1960s in many ISI-oriented countries. Most important, both economically and politically, in most of the Latin American cases the private sector, which received huge amounts of direct support (to invest in, for instance, automobile production) or indirect subsidies (through tariffs and nontariff barriers) did not perform as expected by ISI supporters in reaching new stages of industrialization, and continued to depend on a significant amount of intermediate and capital goods. As a result, the crisis of ISI's "truncated industrialization" (Fajnzylber 1983) became evident in most of Latin America toward the end of the 1960s and the beginning of the 1970s.



### *Export-Oriented Industrialization: The Counterrevolution*

The crises of ISI after the late 1960s, of Keynesianism, and of the welfare state, along with the debt crisis of the 1980s, gave impetus to a new version of neoclassical industrial and trade theory. The crisis of the historic compromise that emerged as a result of the Great Depression of the 1930s and of World War II in most OECD nations not only weakened the respective states and their institutions, but also specifically weakened labor (Glyn et al. 1989). The emergence of export-oriented industrialization (EOI) and of its particular applications vary by country (as shown in Chapters 2 and 3 for the case of Mexico). Nevertheless, it is remarkable that at least since the mid-1980s most Latin American countries have followed similar economic strategies based on stabilization and other market-friendly economic reforms to confront populism and reduce the role of the state in the name of economic efficiency. The specifics of the different national political systems are significant, since they allow for a different pace of implementation of the new policies, as well as for modification or even disapproval of the policies, depending on the degree of participation by political sectors (Bresser Pereira, Maravall, and Przeworski 1993).

This new school of thought focused on the need for EOI and a radical departure from the ISI model of the relationship between the market and the state: EOI became a theoretical and political response and alternative to ISI. EOI has also become a significant aspect of the so-called Washington Consensus (Williamson 1992) since the 1980s and has been strongly recommended by multilateral agencies.

However, EOI is not "external" to developing countries. Added to the failure of ISI and corporatist sociopolitical structures since the late 1960s, most developing nations have also undergone significant ideological changes and experienced a shift in power between capital and labor. Not only has EOI become mainstream economic theory in international trade and development theory, but also many, if not most, government officials in Latin America (including Mexico) have been strongly influenced by this school of thought. Since the 1980s most government secretaries or ministers in Latin America, through undergraduate or graduate studies in top-ranking schools of economics in the United States, have become advocates of EOI.[6]

The argument in favor of EOI builds on the positive association between exports and economic growth or development. Contrary to ISI, EOI stresses that the world market, through exports, is the point of reference for any economic unit (i.e., firm, region, nation, group of nations). Exports, in general, reflect efficiency, and non-exporting economic units are not efficient from this perspective. EOI emphasizes neutral or export-oriented production of manufactures to maximize the efficient allocation of factors of production and a specialization among nations according to their respective comparative cost-advantages (Balassa 1981). Moreover, it underlines the central role of manufacturing in periphery economies, even though the theoretical justification for doing so has not been sufficiently developed. Contrary to structural restrictions or bottlenecks imposed by industrialization, as stressed by some ISI proponents, this "intuitive Darwinian rationale for free trade" (Bhagwati 1991, 17) argues that the degree and the structure of protection in the periphery under ISI has had a significant negative impact on the allocation of resources and, subsequently, on exports and overall economic structure.

The EOI school of thought has largely defined change in terms of developing a more efficient production environment through the abolition of overall market constraints and interventions. The costs of protection against imports, measured in effective protection rates and the cost of technical inefficiency, among other things, have been among the topics highlighted by EOI theorists. The static gains from improved resource allocation are EOI's most significant benefit from free trade: consumers are better off as real income increases and resources are used more efficiently because they are no longer used to produce commodities that could be imported at a lower price. On the other hand, one of the distinctive features of EOI is its search for



dynamic effects on economic growth. Export growth and mechanisms that promote such growth play a significant role.

Probably the strongest argument of EOI supporters against ISI's infant-industry protection and overall intervention is the rent-seeking behavior it generates. As a result of market intervention under ISI—such as import licenses and tariffs—economic units in general, including firms and countries, generate perverse (or non-market-conforming) results in an environment defined by excess capacity to obtain rents provided by the state, overuse of ISI instruments for development, and, in general, an economic structure meant to "reap" the incentives provided by the state. These mechanisms also generate perverse social incentives and structures, since in most cases incentives are not taken by the initially expected groups (potential "modern/industrial" groups), but rather by rent-seeking and corrupt groups that do not have an incentive to modernize/industrialize. The establishment of a rent-seeking bureaucracy is, from this perspective, one of the most significant obstacles to development (Krueger 1983, 1992).

From the perspective of EOI, East Asian countries provide empirical evidence to support the contention that export performance, especially of manufactured goods within a market-oriented production system, is positively associated with economic growth (Balassa 1981; Balassa and Williamson 1990; Srinivasan 1985; Thomas and Nash 1992; World Bank 1987). Analyzing the case of the newly industrializing countries (NICs) in East Asia, in contrast to ISI in Latin America, Balassa stressed the dynamic effects of export growth on overall economic growth, and concluded:

> Export expansion acts as an engine of economic growth for several interacting reasons. Exports provide a source of demand for domestic inputs and, through higher incomes, for domestic consumer goods. They also provide a source of foreign exchange, thus ensuring financing for the additional imports of intermediate and capital goods required by the increased output. The experience of growth and the assurance that it will not be interrupted by a foreign-exchange crisis encourage investments. The efficiency of investment is increased by the exploitation of comparative advantage, the use of large-scale production methods, and the maintenance of higher capacity utilization. The stick and carrot of competition in foreign markets provide incentives for technological change (Balassa and Williamson 1990, 7–8).[7]

From this perspective, macroeconomic conditions for development—or the generation of a market-friendly environment—are at

the center of economic policy. Free trade and complete openness of economies, the abolition of tariff and nontariff barriers, anti-inflationary strategies, a minimalist state, and restrictive monetary and fiscal policies are the main macroeconomic goals of EOI. The private sector is viewed as the motor for future development and industrialization (Balassa 1988; Krueger 1978, 1983; World Bank 1991). The economic development of the East Asian NICs is put forward as an example of recent EOI success, and the active role of the General Agreement on Tariffs and Trade (GATT) and multilateral agencies have promoted the ideological appeal of the EOI strategy (Bhagwati 1988).

Rising total factor productivity (TFP) is considered to be a key ingredient for industrial and economic development.[8] It is argued that nations that have favored an EOI course or achieved a rapid transition to an EOI strategy have realized higher rates of TFP growth. It is argued that exports generate greater capacity utilization in industries, greater horizontal specialization, increasing familiarity with technologies, and greater learning-by-doing effects, and result in internationally competitive prices and higher quality products. The dynamic effects of export growth are also reflected in variations in productivity and changes in resource allocation, technology, efficiency, and dynamic comparative cost advantages, all of which are significant elements of a successful development strategy (World Bank 1991).

Following this line of thought, Mieko Nishimizu and J. M. Page (1991) analyzed the causality of TFP growth and the relationship between TFP growth and the nature of the economic policy regime. Based on a cross-country study of manufacturing sectors, typical of most EOI studies, these authors conclude that (1) average rates of growth of TFP and output fall with a rising level of per capita income, thus illustrating the "convergence effect" of free trade; (2) export growth is positively associated with TFP growth in the industrial sector, "but only in economies that follow market-oriented policies in general" (Nishimizu and Page 1991, 256)[9]; (3) import-penetration results depend on the nature of industrial adjustment and quantitative barriers; and (4) Verdoorn's Law, which assumes a positive association between output growth and productivity change, is reconfirmed. According to these authors, these results are important since export growth and subsequently productivity growth—based on the necessary macroeconomic conditions and market-oriented policies—result in a dynamic and superior growth performance (see also Balassa 1988; Chenery, Robinson, and Syrquin 1986).



Given these conditions, the EOI school of thought argues that growth performance under an EOI regime has been superior to that of ISI in the agricultural sector. EOI is also more apt to promote linkages within the industrial sector and to eliminate bottlenecks (Krueger 1978). Moreover, under EOI technology transfer, TFP, foreign-exchange revenues, and employment increase and lead to higher income. Finally, Balassa (1981, 1989) and Krueger (1983) argue that manufacturing exports in the periphery are significantly more labor intensive than similar flows in the opposite direction, that is, industrial economic units and nations will be capital intensive, whereas production and exports in developing nations will be intensive in labor.[10]

In the EOI view, industrial development is conceptualized as an outcome of perfect competition and the free development of market forces, that is, that macroeconomic conditions will result in changing microeconomic conditions. This is the main reason why discussion of industrial policies in EOI has, according to Howard Pack (1988, 344), typically been neglected or related to neutral policies because the industrial structure will adjust automatically through comparative cost advantages according to the respective endowments. Thus, "social profitability" (Balassa 1989, 303; World Bank 1991, 99) calls for neutral policies that provide equal incentives to exports and to import substitution. Hence, EOI rejects the possibility of granting preferential treatment to sectors due to society's lack of information and ignorance in correctly calculating the social costs and the potential of these sectors. Supply side (capital accumulation and TFP) determines growth, assuming smooth domestic shifts in internal and external demand (Chenery, Robinson, and Syrquin 1986). Therefore the EOI strategy concludes:

> If all developing countries had followed the outward and private-enterprise-oriented rapid growth North-east and South-east Asian model, their average annual growth rate of GDP per capita would have been around 7 per cent per annum. Standards of living would have doubled every decade. Extremes of poverty would have been largely eliminated. Most people in the world would be living longer, they would have greater access to education and other public goods and they would be living lives of modest comfort (Hughes 1992, 30).

Universal free trade would ensure that goods and services are produced where it is cheapest to do so, since "prices do reflect true social costs" (Bhagwati 1991, 17). Further, this will maximize profits through specialization, given endowments and constraints. Therefore, universal trade must hold for all nations and free trade must apply to all (Bhagwati 1991, 17). However, Bhagwati acknowledges that fair trade is significant for the legitimacy and reproduction of universal free trade.[11]

EOI accepts the case for few state interventions.[12] Even where they are acknowledged, state interventions are second-best options. These potential distortions are regarded as deviations from the general theorem and marginal within a market-friendly environment.[13]

In spite of these considerations, the practical applications of interventionist policies are beset with "many difficulties and dangers . . . and suggest strongly that common sense and wisdom should prevail in favor of free trade" (Bhagwati 1991, 33). It is essentially the economic performance of several export-oriented nations' manufacturing sectors that supports the proof for this argument (Bhagwati and Krueger 1985, 68–72).[14] The World Bank (1987, 1993) in particular has stressed this issue.[15]

With regard to trade policy, as with industrial policy and any other economic and social issue, macroeconomic stabilization plays a crucial role. Overall economic liberalization and export orientation should be strongly implemented on a continuous basis; the greater the reduction of interventions in the market and of bias toward export promotion, the higher the probability of economic success (Baldwin 1982; Krueger 1978; World Bank 1991). Balassa and Williamson (1990) stress the importance of stability of policies, especially in the case of fiscal policies and real exchange rates. These measures not only create confidence and incentives in the export-oriented private sector, but are also a significant factor in stabilizing the balance of payments.

The most important point is that these policies have to be envisioned within an overall liberalization process, beginning with an adjustment process that includes the theoretical macroeconomic core described above. Equal treatment for imports and exports of manufacturing activities are at the center of the most efficient specialization. Anne Krueger (1992) stresses the importance of four types of macroeconomic policies:

1. Macroeconomic stability (affecting inflation and exchange rates)
2. Provision of infrastructure for private production (affecting such things as TFP and output)
3. Redefinition of public services (e.g., tax reforms; privatization of state-owned enterprises; elimination of controls over foreign trade; regulations regarding the labor market; and allocation of credit)
4. Incentives by the public sector for the allocation of resources in the private sector, including the abandonment of discrimination against the agricultural sector (Also see Balassa (1981, 21–24).



Despite the adjustment costs in the short run—balance of payment deterioration, decreasing output and subsequent unemployment—the benefits will always exceed these initial costs. Assuming that these reforms will not increase unemployment, the World Bank (1991) concludes that liberalization should not worsen the distribution of income and the conditions of the poor.

Finally, the employment issue within EOI is viewed as an exogenous variable and has been left aside in most of these studies, not surprisingly considering the full-employment assumption of neoclassical economic theory. As a result, it is assumed that the elimination of overall market distortions and the institution of export orientation will have a positive impact on employment.

## Theoretical Critiques and Alternatives to EOI

Added to the generalized critique of the infant-industry argument, another EOI argument refers to the strong association, and causality, between export and growth performance. The case of East Asia has been highlighted as evidence for this positive association. Taking into consideration the limitations of information of any institution, including the state, any economic unit has to concentrate all endowments to be exported in order to be economically efficient.

Several schools of thought and analysts have discussed in detail the pros and cons of EOI.[16] Some issues can be presented here. First, correlation techniques do not represent a causal relationship but rather an association (Pindyck and Rubinfeld 1991). That is, if most EOI advocates calculate different positive correlations between economic growth and exports, among other variables, it is not possible to conclude that export growth is the cause of economic growth and even development for the respective economies. Thus, and independ-

ently of specific econometric techniques, time-series models, misspecification tests, and their respective limitations, the positive causality (export growth will result in economic growth) could also be understood as economic growth causing export growth. The latter would clearly have a significant theoretical impact on EOI as well as on its policy implications.

Second, there are those who reject the idea that EOI will *a fortiori* result in positive productivity, investment, and economic growth (Dodaro 1991; Ocampo 1986; Pack 1988; Taylor 1991). In the same manner, Rodrik (1992) analyzes TFP gaps between nations and the relationship between TFP and growth in OECD and peripheral nations. Besides changes in allocative efficiency, as stressed by EOI, Rodrik stresses the lack of evidence suggesting that change toward trade liberalization will have a positive impact on technical efficiency. On the contrary, it can be argued theoretically that individual firms might improve technical efficiency in a protected market, while the effect of trade liberalization on increasing returns to scale (and on TFP growth) is uncertain and depends on export growth and the performance of import-competing activities. Evidence on these issues is scarcely provided by EOI.

Third, what are the limits to export and trade growth internationally? Usually, economists assume that the world market is "unlimited," or, in other words, that the demand for goods, mainly manufactured goods, is highly elastic. These analyses, in general, do not include the institutional and political aspects of the world market. Is it possible that most or even all nations in the periphery account for export coefficients (exports/GDP) above 40 percent, such as those of Korea and other successful exporters since the 1980s? What are the social, economic, and political limits to this new dimension of international trade? Who will buy these commodities? Will developing countries be plagued continually with hard-currency and current-account crises? Or will OECD countries face increasing employment difficulties? It is not being argued that international trade cannot grow in the future, but that it is embedded in an institutional setting that is being overlooked by most of the studies, including those of EOI.

Fourth, is EOI ecologically sustainable? This question, which is completely overlooked by development economics, has become critically important in the past few decades. Labor-intensive exports as EOI states, but also energy- and matter-intensive exports, seem to be the alternative for the periphery according to their comparative



advantages. Some analysts stress that in this context, with the global ecological crisis (from oil spills in Alaska to nuclear-power disasters at Chernobyl, the disappearance of rain forests, and global warming) economic theory has not been able to go beyond the *homo oeconomicus* and a mechanical view of transformation processes of energy and matter (Altvater and Mahnkopf 1996; Georgescu-Roegen 1971; Mirowski 1988). From this perspective, the transformation of energy and matter is an irreversible process and economics should deal not only with scarce resources and their allocation, but with irreversible processes that result in destruction of existing endowments and require global solutions.[17]

Fifth, and last, many authors question and criticize the extent to which the "Asian tigers" can be taken as an example of EOI as opposed to ISI. Several authors stress that the economic success of Taiwan, South Korea, and Singapore, among others, reflects the success of highly interventionist states that were able to generate economic and social institutions to promote ISI and EOI simultaneously (Gereffi 1990). Independent of the particularities of each nation (Amsden 1989; Kim 1991; Singh 1996), the linkages between the financial sector, the state, and the respective industrial sectors of these countries are unquestionable (Singh 1992). The industrial organization in economies such as the Japanese (Aoki 1988), with an important historical impact in the region, shows that in many, if not most, cases such countries as South Korea explicitly followed incentives originated by the state; in many cases the countries' experience had nothing to do with "getting prices right" (Chang 1994). In several cases macroeconomic variables were dominated by industrial priorities (Kim 1991). From this perspective ISI and EOI are not contradictory, but complementary. EOI was the result of ISI and state policies, which included trade and industrial policies and import substitution. Different degrees of cooperation with the private sector and incentives and agreements among different classes allowed an impressive growth in domestic savings and investments, as well as increasing linkages with the rest of the economy.

These issues reflect some of the current discussions on development economics and, clearly, topics that go far beyond this debate. A discussion of EOI versus ISI regarding the state and the market is of little use in the present context of developing economies. Although it might be ideologically appealing to visualize and conceptualize these extremes, it seems much more significant to distinguish between the two within the historical industrialization and development experi-

ences of different nations. The "counterrevolution" of EOI against ISI reflects two extreme positions, in which one stresses the imperative of stable and market-friendly macroeconomic conditions, a minimalist state, and the world market as the unique reference point for any economic unit, while the other highlights the potential of sectoral policies and the crucial importance of the state in enhancing economic development.

Beyond these analyses, what concepts and theoretical issues are being discussed in development economics? Are there any arguments that go beyond EOI's imperative of the world market? Most economists, academics, and government officials seem to have accepted EOI's view of the world market and of economic development. Economic theory, particularly development economics, has been a very prolific field in the last decades. Although it has not been able to respond to several of the critiques of EOI noted above, there are significant conceptual developments that have to be taken into account to discuss both EOI and possible alternatives.[18]

First, and probably the most outstanding trend in economic development theory in the past two decades, is agreement on the importance of "endogenous growth conditions" for economic units (firms, regions, and countries) confronting globalization (see Chapter 7). From new neoclassical theories (such as those of Paul Romer and Paul Krugman) to structuralism and neo-Marxist schools of thought, there is a recent widespread theoretical consensus regarding "endogenous growth conditions" for these economic units. On the one hand, even among neoclassical authors, there is the widespread belief that capital and labor, as expressed in the basic Cobb-Douglas production function,[19] are not sufficient to understand growth, and particularly the growth differentials among economic units. From this perspective, growth (which in general is similar to development for these analysts) is significantly correlated (or explained) by other factors such as "human capital" conditions (from increasing the skills and education level of workers).

Paul Romer (1993, 1994) is particularly interesting in this context. He attempts to explain growth and growth differentials as a result of the difference between using and producing ideas or knowledge. Ideas and knowledge, unlike other commodities, are nonrival goods—that is, they can be "consumed" by many individuals, and it is difficult or impossible to prevent individuals from benefiting from them. In this regard, these commodities have apparently new appropriation properties with respect to most commodities (Romer 1993).



However, these commodities are not public goods either, but can, to a certain extent, be controlled by individuals. These specific commodities do on the one hand respond to market incentives, but on the other there are profound market imperfections because there is no existence of direct opportunity costs,[20] and ideas and/or knowledge can only partially be controlled. From this perspective, market forces can generate "perverse" outcomes.[21] Thus ideas and/or knowledge can respond to market incentives and can be used by many individuals at the same time, but there might exist incentives working against their generation, diffusion, and development, since monopolies seem to have no direct opportunity costs. Romer concludes that

> we must take seriously the economic opportunities presented by the potential for producing new ideas and for diffusing existing ideas to the widest possible extent. In so doing, we must recognize that ideas are economic goods which are unlike conventional private goods and that markets are inherently less successful at producing and transmitting ideas than they are with private goods (Romer 1993, 89).

From this perspective, endogenous growth conditions refer not only to the attempt to include new variables to any form of production function (from ideas and/or knowledge to human capital), but also to generate these conditions within the respective economic unit. Otherwise, growth will not be sustainable in the long run (as in the case of Mauritius that Romer uses).

On the other hand, authors of the school of French regulation theory stress that endogenous socioeconomic conditions are of critical importance to understand the sustainability of a regime of accumulation.[22] Different modes of regulation (e.g., of industrial, technological, political, and social consensus) might emerge and coexist within a regime of accumulation. It is the internal consistency of a mode of regulation and the coherence between the regime of accumulation and the mode of regulation (i.e., between macroeconomic and microeconomic aspects) that lead to sustainability or crisis. The Fordist regime of accumulation, which emerged by the beginning of the twentieth century and accelerated after World War II in most OECD countries, was characterized by Taylorist principles of work organization and rationalization in manufacturing, the intensification of production through mass production of consumer goods, and the predominant extraction of relative surplus value. However, the Keynesian welfare state and corporatist forms of mediation between

capital and labor have been at least as important in understanding the "golden age of capitalism" since World War II and until the beginning of the 1970s (Boyer 1990). These changes in labor and production organization, as well as in the creation of new social and political institutions, were reflected in productivity growth and sharing of the gains of productivity between profits and real wages. Thus, Fordism in OECD nations after World War II was characterized by an "endogenous virtuous cycle" of a relative stable and increasing profit rate, increasing intensity of capital, and increasing real wages. The relatively "autocentric" or endogenous growth processes of OECD nations after World War II of finding domestic markets for industrial goods was critical for Fordism and reflected in the so-called Fordist equation, in which productivity increases and real wage growth increased in parallel (Glyn et al. 1989). The endogeneity of Mexico's economy, from this perspective, will be discussed in Chapters 4, 6, and 7.

Second, there is widespread consensus, with the exception of EOI, that state policies are not only justified but necessary to generate absolute advantages and endogenous growth conditions within economic units. As already analyzed, different policies result from neoclassical authors and regulation theory. It is important to stress that other schools of thought also stress absolute advantages, or the head start, between economic units and their endogenous growth conditions to understand economic growth and their differences. Different forms of market imperfections—such as oligopolies, barriers to entry, learning economies, or dynamic economies of scale—are the key for these authors. Krugman and other proponents of the new trade theory (Helpman and Krugman 1985; Krugman 1991) contend that population and industry size, as well as barriers to the entry of competitors and the elasticity of (domestic and international) demand of the respective economies, are fundamental to understanding trade differentials between nations. Thus, the volume of interindustry trade depends on the difference in relative factor endowments, which the "traditional" neoclassical trade theory and EOI theory examine. But the volume of intraindustry trade, which has accounted for a high percentage of total trade since the 1980s (as discussed in Chapter 4 for Mexico), increases in accordance with the similarity of relevant countries' sizes. As a result, trade between nations with larger capital stock, technology, and productivity growth can result in "an ever-increasing divergence between regions" (Krugman 1981, 98). From this analysis, strategic trade



policies and state incentives to promote economies of scale and increase international trade of specific sectors and firms that have positive spillover effects or externalities are suggested.[23]

Along the same lines, structuralist and neostructuralist authors have stressed the importance of multiple market imperfections to point out that different policies are required to overcome a variety of gaps that evolve in any market-led growth process. The demand elasticity of exports of underdeveloped nations (Ocampo 1986; Taylor 1991), the emergence of new factors of production and the increasing differentiation of commodities (Ffrench-Davies 1990), and the new challenges of international competitiveness (Fajnzylber 1990), among many other issues, point to a variety of policies to overcome the structural limitations of these respective economic units: from policies to generate new comparative advantages to exchange rate, interest rate, and trade policies, among others. Thus, free trade and neutral policies per se, as suggested by EOI, are rejected and a market-friendly macroeconomic environment is seen as insufficient for economic development. Rather, interventionist and, in some cases, active industrialization and foreign trade policies are required to integrate the economic units into the world market.

Third, the process of globalization does not only generate new global commodity chains, but also new regional tendencies and an economic disintegration of the nation-state.[24] As a result of the liberalization strategy in most of Latin America, which will be discussed in detail for the case of Mexico in the next chapter, global commodity chains (Gereffi 1994) and an increasing flexibilization of production and consumption patterns have resulted in impacts and challenges at the local and regional level of those economies.[25]

These concepts are useful to highlight some of the new challenges for economic units and the potential of endogeneity: (1) Economic development and growth are determined by time and space coordinates; it is not sufficient to concentrate on factors of production, mostly capital and labor, but on the complete chain of products, from inputs to marketing and consumption. Otherwise, an economic unit could be extremely successful in particular segments of the value-added chain—in the production process reflected in a high total factor productivity, for example—but it could turn out that most of the value added to the final commodity is generated in the other segments of the value-added chain (see the case of computers, for example, in which research and development and different forms of services account for the biggest share in total value added of per-

sonal computers. (2) From this perspective, it is regions that face globalization. If K-Mart in the United States requires the sale at home and in Europe of a batch of T-shirts, which are acquired in Hong Kong and whose fabric was bought in the United States and cut and sewn in Mexico and Central America, for example, such global commodity chains generate local and regional impacts within nations (see Chapter 7). In a socioeconomic international and national context in which capital and trade flow barriers have been almost completely abolished and in which labor is relatively "flexible," as in Mexico (see Chapter 6), particularly regarding *maquiladoras*, the impact of this shipment—and in general of *maquiladoras* and other activities—will have an effect on Tijuana and not on San Cristóbal de las Casas in Chiapas. This is of utmost importance since, on the one hand, the regions will have to face globalization, its potential integration, and the (endogenous) conditions to face this process. On the other hand, national policies in this context seem to "vanish," since one national policy seems to be more and more useless (or at least unable) to confront the variety of local and regional specific socioeconomic conditions in time and space. The local and regional socioeconomic response to globalization seems to be the most appropriate, while national mechanisms are, in the best of the scenarios, highly limited.

Fourth is a discussion that goes far beyond the objectives of this chapter but is nevertheless of utmost importance. It refers to the relevance of prices—relative, international (exchange rate), and equilibrium prices—for economic development, which is being seriously questioned. Most schools of thought, including neoclassical theory, EOI, and most of EOI's critiques, see prices as the fundamental "signal" for any economic activity. However, empirical work seems to contradict this assumption. It has already been shown that intraindustry trade does not make sense or cannot be explained by most of neoclassical theory and EOI, since capital-rich (or labor-rich) countries are trading commodities with the same factor intensity. However, initial empirical findings (see Chapters 4 and 7) show that, at least for the Mexican case, trade overwhelmingly does not respond to different forms of prices. As presented in Chapter 4, an estimated 90 percent of Mexican exports, for example, do not respond primarily to different forms of prices: from PEMEX, the state-owned oil exporter, to private enterprises and transnational corporations (TNCs) with an increasing level of intrafirm trade, prices (within certain limits) do not affect their activities. Or, in other words, although the Mexican



economy in 1995 showed an inflation rate (relative prices) of 54 percent and a devaluation (international prices) of over 100 percent, neither PEMEX's nor TNCs' activities were significantly affected.[26] This runs against most theoretical principles in economics, including, again, neoclassical theory, and EOI and most of its critiques. And, at least in the Mexican case, this is quite relevant because more than 90 percent of total Mexican exports in 1998 seem to organize their activities by a logic in which prices are but one of other important variables. Other variables, such as economic, social, and political certainty; supply of inputs; location and proximity to markets; and the global strategy of the respective firms, including what Nicholas Kaldor (1970) called the "process of cumulative causation," are at least as important to understanding economic activities and economic growth. More than prices, industrial organization, intra- and interfirm relationships, and a firm's long-term strategy in a domestic and global network seem to be at least as important as prices. From this perspective, most economic theory seems to be confronted with a conceptual and empirical dilemma to be solved and discussed in the future.

The preceding issues are relevant for understanding what nations following EOI policies can experience in polarizing economic conditions—a lack in generating endogenous growth conditions. In the context of an overall growth of competition and economic liberalization (particularly of capital and goods) and global commodity chains, EOI policies can result in polarizing economic units in which most of the participants and activities within an economic unit are not able to integrate successfully into the world market. As covered in current economic development theories, neglecting market imperfections (Krugman 1981, 1987b; Romer 1993), structural economic conditions (Ffrench-Davis 1990; Ocampo 1986), and institutional and industrial organization issues (Dussel Peters 1997; Lipietz 1987) can result in ever increasing gaps between and within economic units under polarizing economic conditions. As described above, successful integration into the world market through exports says little about the specific form of integration and the linkages of these activities to the rest of the activities within an economic unit. If the linkages of these "successful" activities are weak and/or most of the activities do not integrate into the world market, negative effects on production, employment, real wages, technology creation, learning processes, among many other variables can generate economically unsustainable conditions. Moreover, these conditions will also have a negative

impact on social, political, and regional or territorial issues in the respective economic units.

## And Neoliberalism?

Since the mid-1990s—and after the tequila, vodka, and samba crises, as well as international financial instabilities, specifically in Asia—there has been widespread pessimism about "neoliberalism." Demonstrations in Argentina, Mexico, Indonesia, South Korea, and the United States show an apparent consensus against neoliberalism, and this new consensus apparently comprises liberals, radicals, and Marxists on several continents. Any attempt to define neoliberalism would surely disrupt the apparent consensus, given that a common definition would not be possible among so many different groups. Here I will argue against this superficial consensus and for the need to be much clearer and specific, both academically and politically, about neoliberalism and to compare it with and differentiate it from EOI and specific development strategies followed in different countries.

Such a discussion is relevant since, (and this is independent of the putative consensus against neoliberalism) there are few, if any, economics analysts or schools of thought that subscribe to neoliberalism. In the Mexican context, for example, at the beginning of 1996 a debate took place among political parties and social movements in which all of them distanced themselves from neoliberalism. The Mexican government led by President Zedillo and the main political parties did so, too. Who, then, are the neoliberals? It is too easy to point at neoliberalism as the cause of all economic and social "evils" of our society since the 1980s. Or was only one person in Mexico a neoliberal?[27] Aside from these issues, several authors (Vargas Llosa et al. 1996) openly ridicule the "perfect antineoliberal Latin American idiot" who assumes a conspiracy without any conceptual and empirical/historical foundation. Independent of the "fashionable" and superficial treatment of the arguments, this book touches on an important issue: What is the foundation of today's consensus against neoliberalism? What is the "charm" (Altvater 1981) of neoliberalism?

From this perspective, a clear understanding of the principal hypothesis and rationale of this school of thought is important. As we shall see, neoliberalism is not exclusively an economic school; rather, its analysis reaches across several facets of social science.



This is significant because on the one hand, many authors and schools of thought might include neoliberal arguments, even if they distance themselves somehow from "neoliberalism." On the other hand, it is essential to differentiate neoliberalism from current policies and schools of thought. Thus, it is not a matter of fighting new ghosts or finding new scapegoats in the face of the complex crisis that the Mexican and Latin American societies are facing, but to allow for a more profound and critical discussion of the topic and to elaborate alternatives.

### *Concepts and Implications of Neoliberalism*

Neoliberalism is not new in the social sciences. Since at least the 1960s this concept has been related to the theoretical work of the "Chicago Boys" and the policy application of their work in several nations, particularly in South America during the 1960s and 1970s (Foxley 1988; Valdés 1995). So, neoliberalism already had established a certain tradition in Latin America. Neoliberalism, as opposed to other schools of thought such as liberalism and conservatism, had emerged after the 1930s to counter not only the rise of Keynesianism in OECD nations, but also that of Marxism, Leninism, and later Stalinism around the world (Hinkelammert 1984). It is in this historical context that such authors as Karl Popper and later Milton Friedman, but particularly August Friedrich von Hayek, illuminate the core of neoliberal thought and its profound influence, initially in the United States and Europe.

Here we will briefly highlight the most relevant characteristics of neoliberalism, which is much more complex than the descriptions presented, and beyond the scope of this chapter.[28] The concept of science is of critical importance to neoliberal thought. Hayek differentiates between simple and complex phenomena. Social sciences, which in general deal with "complex phenomena," should not analyze what is but "what is not: a construction of hypothetical models of possible worlds that could exist, if . . . all scientific knowledge (*wissenschaftliche Erkenntnis*) is knowledge, not of specific facts, but of the hypotheses which have survived in the presence of systematic efforts to refute them" (Hayek 1981, I:33). According to Hayek, the main scientific discrepancies in social science are the result of two schools of thought: critical rationalism and constructive rationalism. Constructive rationalism, which searches for a specific and determined social construction, is a reflection of socialist thought

and all those "totalitarian doctrines" that are not erroneous "because of their values, on which they are based, but on a wrong conception of the forces that allowed for the Great Society and civilization" (Hayek 1981, I:18). On the other hand, critical rationalism is based on the premise that information is limited, "the necessary ignorance of the majority of details . . . is the central source of the problems of all social orders" (Hayek 1981, I:28). Thus, the attempt of any form of planning is irrational and unscientific because it attempts to determine and overcome individual and natural attitudes and behaviors.[29] Furthermore, individuals who persist in attempting different forms of social or economic planning or building are dangerous for society and civilization, and in some cases there is an explicit reference to their elimination, since they will become a threat to the existing social order.

From this perspective, social science should be wary of using history and historical experiences, particularly regarding social justice and social planning (Hayek 1981, II:188), as a direct response to the multiple activities, interventions, and measures by the state in general and the welfare state specifically. Given the constraints on information and ignorance of reality, any pretensions to planning or constructing any other type of society is not scientific, but utopian, useless, and a threat to human development.

Cultural evolution or Hayek's social Darwinism are based on the belief that "all sustainable (*dauerhaft*) structures . . . are the result of processes of selective evolution and that they can only be explained in this framework" (Hayek 1981, III:215). From this perspective, this process of evolution determines the development and history of human beings: natural selection among human beings and the survival of the strongest and fittest. The final motif of this is competition, since "our current order is . . . first . . . not a result of a project, but . . . of a process of competition, in which the most efficient establishments (*Einrichtungen*) carried through" (Hayek 1981, III:211). Competition is, from this perspective, also raised to a most successful methodological approach, as an "error and trial" or as a "method of discovery" (Hayek 1975b). In this view, historical processes are procedures of survival of the fittest and strongest individuals, a process of competition begun historically with the most primitive societies.

Neoliberalism assumes that individuals and their private properties, which are assigned by competition, generate their respective societies. Thus freedom, and particularly economic freedom, are the



main means and end for any society. Most neoliberal authors, but especially Milton Friedman (1962, 7ff.) stress that economic freedom is an indispensable condition for social development, while political freedom will result from economic freedom. Most important, freedom is understood as a utopian concept: "The need for government in these respects arises because absolute freedom is impossible" (Friedman 1962, 25). Neoliberalism adopts from liberalism the concept of freedom; and what is new is neoliberalism's openly legitimizing intention (Gutiérrez R. 1998). Capitalism is a necessary condition for political freedom, but authoritarianism does not limit economic freedom, and "it is therefore clearly possible to have economic arrangements that are fundamentally capitalist and political arrangements that are not free" (Friedman 1962, 10).

The market is the main theoretical and historical social, economic, and political institution of neoliberal thought, which is a "system of communication, which we call market, and that has demonstrated to be a more efficient mechanism for the use of dispersing information than any other that a human being has created consciously" (Hayek 1975a, 21–22). The market is an institution in which "the price system is a system of signals and allows human beings to participate and adapt to facts, of which they know nothing; that all our modern order, all our world market and welfare are based on the possibility of an adjustment of facts that we ignore" (Hayek 1981, I:66). But which are the functioning conditions for the market? It is impossible to know the specific properties regarding conditions and results of this "spontaneous order." From this perspective, the market constitutes an apparent autopoietic system: it self-reproduces its conditions and needs. The market, apparently, creates its own supply and demand. Where do prices—the last instance to which human beings can relate their needs and their relationship to the rest of the human beings—come from? Just like planning, prices are also utopian, and neoliberalism becomes an apparent theology: "The *pretium mathematicum*, the mathematical price, depends on so many specific events, that it will be never known by any human being, but only by God" (Hayek 1975a).

Neoliberal thought does not only justify the status quo and does not consider time and space in the development of individuals and societies, but it also creates polarized thought: the market or planned economies, capitalism or socialism, freedom of individuals or chaos, God or Satan. This dogmatic and antiutopian thought is almost violent in its response to any attempt to plan societies and economies,

through Keynesianism, Marxism, and other socialist proposals formulated during the twentieth century and after World War II, and is explicitly against the "social welfare state." Thus, it proposes, among other things, a minimalist state, or even the state's abolishment, the installation of market mechanisms at all economic and social levels and, as a basic condition for development and evolution to modern and great societies, private property and free competition and trade, without any state intervention or any form of institutional barriers.

From this perspective, neoliberal thought is a highly dogmatic and legitimizing theory of the status quo, explicitly of capitalism, and goes far beyond economic theory and policy. The market becomes the first and unique institution necessary for any other society and economy. Neoliberalism's methodology is intolerant of different perspectives; its proponents had a direct impact in the 1960s and 1970s on such people as Augusto Pinochet and Jeanne Kirkpatrick (Kirkpatrick 1979), who in many cases inclined toward fascism, but have lost any presence since the 1980s in Latin America, particularly in official circles. The dogmatic, aggressive, and authoritarian form of neoliberalism, as known in several countries in South America in the recent past, have, with few exceptions, not reappeared in most of Latin America during the 1980s and 1990s.

This does not mean that neoliberalism has disappeared. On the contrary, and as highlighted above, issues such as an antiutopian thinking (Hinkelammert 1984), the conceptual basis on information limitations, and the lack of any alternative in a process of trial and error within free competition, maintain a high influence in Latin America and in most of economic thought.

## Preliminary Conclusions

Export-oriented industrialization has become the predominant theoretical school in economic theory and policy since the 1980s in Latin America, and particularly in Mexico. As already discussed, EOI is a direct response and alternative to ISI and became preeminent in the context of the crisis of the Keynesian welfare state in OECD nations, as well as the international debt crisis of the 1980s and the overall crisis of ISI. The interplay between domestic and external tendencies in the shift to EOI in Mexico will be presented in the next chapter.



For EOI, the world market as the point of reference for any economic unit, as well as the causality between export growth and economic growth, is probably one of the most significant contributions to this school of thought. Overall neutral or horizontal policies, a minimalist state, and the apparent "induction" from macroeconomic stabilization to microeconomic structural change are some of the policy prescriptions of this school.

In general, the policy assumes that market mechanisms have proven more effective for economic growth, while state interventions (as in the case of ISI) have resulted in market distortions, high economic and social costs, and an overall failure in most of the countries following these policies, at least since the 1960s. As suggested, EOI proponents have had a tremendous impact on academic institutions in the United States, at which most Latin American government secretaries and ministers have studied since the 1980s, as well as on such multilateral agencies as the World Bank and the International Monetary Fund. In different versions (as analyzed in the next chapter), EOI has become the economic theoretical mainstream and policymaking core of not only Mexico but of most Latin American governments since the 1980s.

However, and as discussed in detail, EOI is only a small stream of current economic thought. From neoclassical to neo-Marxist and structuralist schools of thought, there are widespread arguments against EOI. Against the simplicity and primitiveness of EOI, it is averred that correlations (between exports and economic growth) do not prove a causal relationship, that is, that exports cause economic growth. Moreover, most of these schools of thought agree that the territorial endogenous growth conditions are of critical importance for the respective economic units; in the best of scenarios export growth might be an important condition for growth, but not a sufficient one alone.[30]

This is opposed to the vision of EOI, in which the "efficient" relationship of the economic unit with the world market through exports is sufficient to explain economic growth, development, and their respective differentials. Moreover, and with the exception of EOI, it is useless to argue in a discussion about the state versus the market in timeless and spaceless economic units, since there are multiple causes for state interventions. For example, different market imperfections (from ideas and knowledge to demand elasticity for specific commodities and overall absolute advantages among eco-

nomic units) or specific regimes of accumulation or socioeconomic institutions legitimize state interventions at a firm, sectorial, regional, or macroeconomic level.

The earlier schools of thought, as well as EOI, go much deeper into their respective analyses and results. However, it is most important to understand that there is currently an important and rich discussion surrounding development economics that in general does not seem to have been noticed, either by policymakers or by many academics. The complacency of so many academics, at least in most of Latin America, is impressive and is directly related to critiques regarding the lack of alternatives to EOI. As stated, economic thought, from neoclassical to neo-Marxist authors, presents a variety of theoretical and policy mechanisms that so far have received little notice. A discussion is critical to the apparent "dictates of the world market" and globalization, as well as to macroeconomic stabilization and free trade, among other related issues

Based on the earlier schools of thought, EOI can result in polarizing economic conditions (i.e., a lack of endogenous growth conditions, in which the economic units are characterized by increasingly oligopolistic and monopolistic structures and economically unsustainable conditions.) The increasing polarization of economic units as a result of successful integration to the world market, with no linkages with the rest of the territory's economic units, is not considered by EOI. Other issues such as employment and income distribution are not analyzed by EOI. And EOI's responses are rather primitive in this respect: the market will have to create the respective opportunity costs and comparative advantages, although in only a few cases do these authors specify the period in which these reforms would be successful or at least reach a level to be evaluated. Rather, it is suggested that Latin America after the the "lost decade" of the 1980s should deepen structural change, with some authors proposing a "second generation" of reforms (Edwards and Burki 1995), as discussed in Chapter 2.

Independent of these criticisms, most of the discussion about EOI fails to consider a variety of aspects. The limitations of energy and matter have been so far ignored—these processes are irreversible and cannot be solved by market mechanisms—and the impact of globalization, which generates local and regional tendencies and countertendencies, has received little attention. Moreover, in most of this discussion economic theory has been thus far not able to overcome "economicism," that is, to include social, political, and cultural



aspects of "endogeneity." Most important, economic theory will have to include issues that seem to be far more significant than prices as the main signal of producers and consumers: industrial organization, intrafirm and interfirm relations, and overall firm strategies. The case of East Asia, as examined by several authors critical of EOI, is an important example of this issue.

This chapter has also concentrated on the issue of neoliberalism. Aside from the widespread consensus against neoliberalism, it is argued that neoliberalism is not the main conceptual and policymaking framework currently predominant in most of Latin America, or on other continents. EOI and neoliberalism are conceptually and historically different. Even though it is possible to argue that EOI is a form of neoliberalism, that still has to be proved, theoretically, historically, and empirically. It is not sufficient to say that both favor privatization and free-market policies, for example. Adam Smith and David Ricardo, among many others, have also done so. This chapter argues that neoliberalism theoretically goes far beyond EOI and attempts to understand social, cultural, and economic development, while EOI is far more strictly economic.[31]

Neoliberalism is far more aggressive, dogmatic, and authoritarian than EOI. Since the 1980s, and particularly in the 1990s, no government would argue, at least explicitly, "in the name of freedom" for authoritarian governments to impose economic freedom. Neoliberal authors are clearly coherent and consistent in their arguments: free trade and markets are the solution to all problems, from commodities to capital, drugs, and labor (migration), among many other issues. Policies and state intervention in these problems will cause new and deeper problems. Such a position would nowadays hardly be adopted by any EOI advocate; the dictate of the world market, rather, seems to be the motto. The historical situation in Latin America, but also on other continents, from the 1960s and 1970s to the 1980s and 1990s also changed dramatically. From the perspective of the 1990s, the discussion about "national security" and economic freedom versus totalitarianism has disappeared. Economic units now have to be somehow competitive and integrated into the world market. Similarly, the discussion surrounding the benefits and evils of TNCs has almost disappeared; it is now apparently more a matter of how to deal most effectively with this apparently irreversible process.

This discussion leads to much of the superficiality and ignorance in the current consensus against neoliberalism. Again, it is possible

to trace similarities between EOI and neoliberalism—from an overwhelming belief in the market to severe restrictions on state actions—but this is not enough to conclude that the two approaches are identical. If it is argued that Pinochet's and Salinas's policies, even economic policies, are undifferentiated, such a conceptual and historical/empirical view obscures more than it clarifies. And, most important, it is impossible to discuss alternatives to EOI, independent of the specific results, under these terms. Economic development theory, with important challenges and limitations, gives some answers and in general goes substantially beyond EOI.

## Notes

1. For a more detailed analysis on Mexico, see Chapter 2.

2. The income elasticity of demand refers to the percentage increment of the quantity demanded of a good or service relative to the percentage increment of income. Income elasticities for agricultural raw materials are often less than 1. For a producer of a given good or service, a high income elasticity of demand (greater than 1) means that demand for these specific goods or services will translate into a higher income.

3. The terms of trade of a nation are defined as the relationship between the prices of exports and the prices of imports. Thus, an improvement (a rise) in the terms of trade implies that a given quantity of exports represent a larger volume of imports, which is assumed to represent an increase in the standard of living.

4. It is important to keep in mind that all OECD nations historically achieved an industrial development through such policies and arguments. Friedrich List (1841) is an excellent example for such a view in the nineteenth century.

5. Cypher (1992) highlights the importance of technology, since ISI does not explain the source of the technology to be used (i.e., an increasing technological dependence could become one of the main limitations and difficulties of such a development path).

6. The impact of these changes in universities in the United States on Latin America and other nations has so far not received sufficiently detailed attention. As discussed by Peter Gourevitch, based on an analysis of several OECD countries, "the forms and the ideologies of the organizations themselves shape the ways in which societal actors choose options" (Gourevitch 1986, 32). This issue is discussed in detail for the Mexican case in Chapter 2.

7. "The experience of the East Asian exporters did several things. Most important, it provided concrete evidence that a developing country could achieve industrialization without relying on domestic markets to absorb almost all additional output. That demonstrated the fallacy of the earlier view that industrialization could take place only through import substitution" (Krueger 1997, 17).



8. TFP measures changes in output per unit of all inputs combined. Usually capital or labor productivity are calculated (i.e., changes in output per unit of capital or labor). TFP, however, attempts to measure the residual inputs for explaining economic growth, in most of the cases defined as technical change (Chenery, Robinson, and Syrquin 1986; Elias 1992; World Bank 1991).

9. The World Bank (1991, 45) shows for developing countries that productivity growth accounts for "more than half of the variation in growth rates across countries. . . . It holds across regions and in different periods."

10. This issue is critical for economic policy and will be discussed in detail for Mexico's economy throughout Chapters 2–8, particularly in Chapters 5 and 6.

11. Balassa comments on those nations that have adopted an "ideal incentive system" (Balassa 1989, 308), South Korea, Singapore, and Taiwan. "The three countries provided a free trade regime for exports and ensured stability in the incentive system over time. They also granted comparable incentives to exports and to import substitution in manufacturing while there was little discrimination against primary activities" (Balassa 1989, 308).

12. Some of the authors accept the case of "externalities" or spillover effects—market imperfections, since they are not included in the price of the respective goods, and "immiserizing growth"—in which the existence of monopolies (a form of market imperfection) leads to a deterioration of the terms of trade of the respective nations to justify state interventions (Bhagwati and Ramaswami 1963).

13. "The existence of infant industries, of cases in which there are rents that might be captured by appropriate strategic trade policy, and of informational asymmetries and other market imperfections cannot be doubted. But until the magnitude of these phenomena can somehow be measured, or incentive-compatible mechanisms for correcting them can be devised, theorists asserting their presence are simply providing a carte blanche for policy makers and bureaucrats to intervene in whatever ways they like, and this will simultaneously be seized upon by special interests to bolster their causes" (Krueger 1997, 19).

14. The theoretical incoherence of this argument is a "practical compromise between a free trade strategy, which looks good in theory but has not been practiced, and the ISI strategy, which looks bad in theory and worse in practice" (Riedl 1991, 69).

15. The World Bank, for example, states that it "has always viewed industrialization not as an end in itself, but as a means to raise productivity and incomes. And it is this view that has shaped and guided the Bank's support for industrialization in its member countries" (World Bank 1987, 2).

16. For a discussion on several schools of thought on these issues see Dussel Peters (1997, 17–116).

17. "If we abstract from other causes that may knell the death bell of the human species, it is clear that natural resources represent the limitative

factor as concerns the life span of that species. Man's existence is now irrevocably tied to the use of exosomatic instruments and hence to the use of natural resources just as it is tied to the use of his lungs and of air in breathing, for example. . . . There can be no doubt about it: any use of the natural resources for the satisfaction of nonvital needs means a smaller quantity of life in the future" (Georgescu-Roegen 1971, 21).

18. For a full discussion on several schools of thought, from the Heckscher-Ohlin-Samuelson model to ISI, EOI, new growth, and new trade theory, including structuralism, neostructuralism, and regulation theory, among others, see Dussel Peters (1997).

19. The Cobb-Douglas production function is an equation that defines physical output as the product of labor and capital. It has been dominant in neoclassical economic theory over the last 50 years.

20. In the best of the cases, opportunity costs differ in time: for example, opportunity costs of increasing qualification or skills and/or education might have a positive impact on income of individuals (and on aggregate growth) in the long run, although it is difficult to measure this impact in time and space.

21. These concepts can be explained in the following way. Romer (1993, 74ff.) exemplifies how two nations (Mauritius and Taiwan) diverge in their respective economic growth, mainly as a result of different enhancements and uses of ideas and knowledge. Mauritius concentrated on the enhancement of foreign investment and in-bond industries, processes that required a minimal endogenous learning process and that privileged exclusively labor-intensive processes. Taiwan, on the other hand, searched for mechanisms to use, produce, and reproduce productive and general knowledge, both institutionally and individually. The use, production, and reproduction of this knowledge is what largely explains the economic divergence between the countries. Other authors have discussed the same process in terms of a "self-learning process" (Dussel Peters, Piore, and Ruiz Durán 1997).

22. A regime of accumulation embraces the most important historical phases of capitalist development, and is defined as the long-term socioeconomic, domestic, and international conditions that enable a sustainable relationship between changes in the structure of production, distribution, and consumption. A mode of regulation refers to the specific rules and social procedures that guarantee the reproduction of a given regime of accumulation, defined by "the wage relation, the form of competition between capitals, the form of the monetary system, the specific relationship with noncapitalist modes of production and with the world market" (Hurtienne 1989, 199). For a discussion of these concepts see Aglietta (1979); Dussel Peters (1997); and Lipietz (1985, 1987).

23. Krugman himself has publicly distanced himself from several conclusions regarding "strategic trade policies," since their instruments only represent optimal trade options in few occasions and their costs are in general higher than with free trade (Krugman 1987a, b, 1994, 256ff.).

24. Globalization is defined here, and will be developed further in the next chapters as a new process that has taken place since the 1980s and that



is determined by (1) the development of global commodity chains and (2) an increasing flexibilization of production as a result of differentiation of products and demand, mainly in OECD nations (Dussel Peters, Piore, and Ruiz Durán 1997).

25. This concept can be traced back to Hirschman's backward and forward linkages. However, "global commodity chains" refers to the new historical process in which commodity chains—inputs, production, distribution/exports, and marketing—are operated at a global level.

26. In complete contrast to PEMEX, a state-owned monopoly, is a subsidiary of a TNC that produces, for example, in Mexico and will not interrupt production in the short and medium run, despite changes in "prices," since it would interrupt global production of specific products (see Chapter 7).

27. For the Mexican case, the apparent "only" neoliberal, former President Carlos Salinas de Gortari, has publicly distanced himself from neoliberalism, and is even offering alternatives to neoliberalism (which, incidentally, openly contradict the policies he pursued during his presidency) (Salinas de Gortari and Mangabeira Unger 1999).

28. For a historical and conceptual discussion of neoliberalism see Gómez (1995); Gutiérrez (1998); and Hinkelammert (1984).

29. This is probably one of the most important assumptions of neoliberal thought: the limitation on information, an issue that has been adopted by other authors in economics (Lucas 1985).

30. The endogeneity variables in the context of globalization, without a doubt, are different in the respective schools of thought.

31. This is relevant, since most of authors and government policies in Latin America and other continents since the 1980s seem to be highly influenced by "economic" arguments.

# 2

# Liberalization Strategy in Mexico Since 1988

Export-oriented industrialization theory has had a significant impact on economic policies in Mexico and Latin America, at least since the beginning of the 1980s. What, if any, modifications have been made to EOI during the policy implementation process in Mexico? What were the specific causes for the emergence of a new development strategy?

EOI has been the theoretical inspiration for Mexico's liberalization strategy, although several important nuances have to be stressed in the case of Mexico. This chapter presents political and economic causes of EOI and the general guidelines for the implementation of EOI in Mexico, leaving the economic and political specifics to later chapters.

It is not the goal of this chapter to give a detailed analysis of the historical development of import-substitution industrialization (ISI), but to understand the genesis of EOI and liberalization in Mexico, as well as the socioeconomic conditions in Mexico during the 1990s. The chapter analyzes in depth the liberalization strategy in Mexico, implemented in full since 1988 and based upon the first Pacto de Solidaridad Económica signed in December 1987. This strategy is discussed in detail in order to understand its theoretical linkages with EOI, as well as the "rationale" of the liberalization strategy. As stressed earlier, it is of utmost importance to have a clear understanding of this strategy, in order to both evaluate its coherence and to propose alternatives in Mexico at the beginning of the twenty-first century. Finally, the theory, policy coherence, and resulting contradictions from the implementation of a liberalization strategy in the Mexican case are examined.

## Import-Substitution Industrialization, 1940–1982

It was probably President Lázaro Cárdenas (1934–1940) who established the foundation for ISI in Mexico, although some authors trace ISI back even further (Haber 1989). Based on Mexico's Revolution (1910–1921) and several decades of social and political turmoil, Cárdenas's government not only eliminated regional *caudillos*,[1] but incorporated them into its political structure in the urban and rural organized sectors through a system known as *corporativismo*. Cárdenas was probably the last president who attempted to realize some of the revolution's goals, including agrarian and labor rights and laws, as well as important improvements in the education system.With the emergence of the Partido de la Revolución Mexicana (PRM), later the Partido Revolucionario Institucional (PRI), in 1938 under Cárdenas, the Mexican one-party state became increasingly omnipresent and authoritarian in the following decades, incorporating the working class, peasants, and bureaucrats, all of which legitimated State control in Mexico. The hegemonic position of PRM, which initially included independent political forces and the Communist Party, changed significantly beginning in the 1940s. By the end of the 1940s, most of the democratic and revolutionary leaders were expelled from the Confederación de Trabajadores de México (CTM) and it became one of the most important institutions for controlling workers (Cypher 1992; Gutiérrez Garza 1989; Valdés Ugalde 1997).

Since the 1940s the "official" labor movement has been a centerpiece of Mexico's corporatist political structure. CTM, CROC (Confederación Revolucionaria de Obreros y Campesinos), and CROM (Confederación Regional de Obreros Mexicanos) suppressed dissident labor factions, moderated demands to avoid class conflicts, and were the most important segment of the PRI through union membership and related structures to maintain the existing corporatist structures in general, as well as through specific elections. On the other hand, these official party-unions received in exchange political weight, preferential treatment, and consequently a share in economic development from state authorities and institutions. Added to these economic benefits, the PRI shared and guaranteed important political posts with union leaders. Moreover, the government was able to coerce the labor movement since it had the power to declare strikes illegal, which weakened potential independent unions (Bizberg 1990; Durand Ponte and Manuel 1991; Samstad and Collier 1995)



It is also relevant to point out that the business sector, which was not incorporated directly into the ruling party, began to increase its political weight substantially at the beginning of the 1940s. This sector, particularly in the north of Mexico and in Monterrey, began to organize against Cárdenas's policies and legacy, and founded the first opposition party in 1939 (Partido Acción Nacional, PAN). Since then, the private sector has been "consulted" on economic policies and even had an informal veto right on these topics. The Consejo Mexicano de Hombres de Negocios initiated in 1962 showed that the business sector in Mexico, national and transnational, was able to incorporate private-sector interests as well as increase the sector's direct political influence on economic policy (Valdés Ugalde 1997). The increasing political activity of the private sector, the participation by labor and peasants in the corporatist political structures, and the theoretical proposal of ISI allowed economic policies to enhance industrialization and Mexico's manufacturing sector based on the revolutionary legacy of populism and nationalism.[2]

From this perspective, the political system in Mexico since the 1940s has been distinguished by a consistent authoritarian party setup, with no alternatives. However, the political system is also characterized by its increasing "presidentialism" (Zaid 1987), that is, a vertical political decisionmaking structure that requires PRI and its political machinery to subordinate their interests to the will of the sitting president, including the designation of the next candidate. This situation remained unchanged until the end of the 1990s, and so one of the main features of the political system was the subordination of the private sector, the labor movement, and the political structure as well to the will and strategy of the president in power. Such a political system is viable as long as the respective supporters and participants in the corporatist structures achieve their own interests and benefits. However, peasants and labor unions, the private sector, and the state are not necessarily functional in such a political system. In different periods, they may follow economic and political agendas that might disrupt an initial consensus and that require continual negotiations and new forms of agreements (Bizberg 1990; Cordera and Tello 1981; Valdés Ugalde 1997).

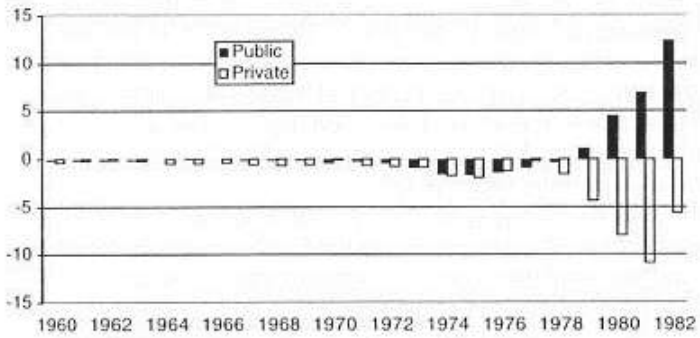
Embedded in this social and political consensus, ISI became the pillar of Mexico's modernization process through industrialization. Based on massive transfers, both in terms of hard currency through a trade-balance surplus as well as labor power, from the agricultural to the manufacturing sector, ISI was, at least initially, of "exogenous"

character because most of the technology and capital inputs were imported, though it was assumed that they would be substituted for by national production in the medium run and even exported in the long run.

Industrial policy in primary or "easy" ISI (1940–1950) (i.e., replacement of imported nondurable with domestically produced commodities), in which the state had a crucial role in promoting infrastructure and strategic sectors, accounting for around 40 percent of total investment during the 1950s, was one of the most significant mechanisms for enhancing ISI. Trade policy emerged as an important instrument for Mexico's industrialization and as a source of fiscal revenue. Tariffs, official import reference prices, and, most important, import licenses generated around 30 percent of the federal government's total fiscal revenue in 1940–1955, and around 60 percent of all imports were subject to these tariff and nontariff barriers in 1960 (King 1970; Ten Kate et al. 1980). In addition to its direct participation in creating the necessary infrastructure for industrialization—by such laws as Ley de Industrias Nuevas y Necesarias (1945), the creation of a development bank to finance long-term projects (Nacional Financiera, 1934), and the establishment of rules to abolish partially or totally import tariffs for capital goods for manufacturing (Regla XIV, implemented in different forms since 1929)—the state also allowed significant instruments such as fixed nominal exchange rates and the creation, protection, and substitution of domestic consumption and intermediate goods for imported inputs (Aboites 1989; Ayala Espino 1988; Villarreal 1988). Until the end of the 1960s ISI could be characterized as follows:[3]

1. For the period 1950–1970, GDP and GDP per capita increased annually by 6.6 percent and 3.3 percent, respectively. Manufacturing and particularly capital goods, as a result of evolving ISI, were the most dynamic sectors of Mexico's economy during this period. This impressive growth process allowed for an increasing share of investment/GDP, from 7 percent in 1940 to 20 percent in 1970.
2. The agricultural sector, with a relatively high dynamism in terms of GDP during 1940–1955, began to deteriorate—relative to the rest of the economy—after the 1950s, in spite of positive growth rates.
3. Although the share of manufacturing in Mexico's economy increased, from 15.4 percent in 1940 to 23.3 percent in 1970, it was the service sector, with a relatively constant share of the total economy of around 55 percent, which was the most important sector.[4] This process continued throughout the 1970s, including the period of secondary import substitution, in which consumer durable imports began to be substituted in the 1960s.
4. Capital goods reflected the most dynamic performance in terms of GDP from 1940 to 1970. In spite of this evolution, capital goods' share in total GDP was only 3.58 percent in 1970. That is, the basis for capital goods' production was minimal at the beginning of ISI, and, in spite of important growth rates, the socioeconomic impact was still rather small in 1970.
5. Mexico's foreign trade also changed significantly during the years from 1950 to 1970. While the cumulative current account deficit reached $7.7 billion and was rising, the private sector's trade deficit, at fivefold the government sector's in the period 1960–1970 (Figure 2.1), accounted for 78.6 and 80 percent of total exports and imports. Along with this, the agricultural exports' share for the period 1950–1970 fell from 51 to 38 percent in total exports. Agriculture, the main source of net foreign exchange, besides tourism and foreign direct investment, and which accounted for export dynamism beyond its own GDP growth and the rest of the economy, declined drastically after the mid-1960s.
6. Changes in wage relations and the production process constituted a central element in the case of Mexico's ISI. Since the expansion of domestic consumption and intermediate goods production constituted the main endogenous elements of ISI, the economic stability of ISI required an increase in real wages to at least a segment of the urban population.[5] The homogenization of wages—reinforced through new labor legislation (Gutiérrez Garza 1988), the ability to absorb much of the growth of the economically active population within the formal labor market, and a redistribution of income during 1950–1968, away from the poorest 40 percent and the richest 5 percent—allowed for an increase in total income among the "medium" deciles of the income distribution that contributed to increased government spending. However, these new wage and income distribution patterns were only adopted by a segment of Mexico's urban population.[6]

**Figure 2.1 Trade Balance of Private and Public Sectors (1960–1982) ($U.S. billion)**




*Source:* Author's calculations based on Banco de México (1992).

As a result, one of the distinctive features of Mexico's ISI was that industry specialized mostly in production of consumer and intermediate goods, while it continued to rely heavily on imports. Moreover, the success of ISI in industry depended on external financial resources, such as the agricultural and tourism sectors, and the implementation and diversification of technologies introduced by TNCs. Taking advantage of their market power and technological and productivity developments in OECD nations, TNCs began to dominate in such protected and fast-growing sectors as transportation equipment, electrical and nonelectrical machinery, chemicals, rubber products, and modern consumer goods. A seemingly "peaceful coexistence" evolved: State-owned enterprises and national private firms provided the infrastructure, producing consumer and intermediate goods, while TNCs, with higher total factor productivity and profit rates (Casar et al. 1990), concentrated their activities in relatively more advanced manufacturing branches.[7] According to some analysts, TNCs contributed significantly to the rise in imports and the increasing trade deficit, accounting for 48.9 and 115 percent of Mexico's trade deficit in 1970 and 1980, respectively. Thus, the most dynamic sectors of Mexico's economy, and particularly the TNCs, were primarily responsible for increased trade deficit in the industrial sector, as well as in Mexico's economy as a whole (Blomström/Wolff 1989; Péres Núñez 1990a).

Because the agricultural sector was not accorded the same level of protection as the industrial sector, its long-run production and



financing capacities were undermined, shifting the structure of production toward importable and nontradable goods (Zabludovsky 1990). The inability of the Mexican economy to "deepen" its industrial structure in spite of higher nominal protection for capital goods, with TNCs showing higher capital-labor ratios, intraindustrial trade, and import and export coefficients than national firms, led to rising propensities to import. This lack of depth also revealed progressive contradictions between growth and balance-of-payments equilibrium.

External conditions during this period were also adversely affecting Mexico. The oil shock in 1973 widened Mexico's current-account deficit. The collapse of the Bretton Woods System, inflation in the United States, and the crisis of U.S. hegemony directly affected Mexico, destabilizing its exchange rate (Dussel Peters 1993; Glyn et al. 1989; Schubert 1985). At the same time, most of the OECD nations and Latin America were faced with deep social and political turmoil. The legitimization of the PRI and the authoritarian character of the Mexican state were profoundly questioned and openly criticized, the latter being partly reflected in the killings at Tlatelolco in 1968.[8]

However, the crisis of ISI in Mexico was primarily a result of domestic factors: industrialization and modernization since the 1950s were still highly dependent on imports,[9] the private domestic manufacturing sector was not able to go beyond "easy ISI" despite a massive public transfer of resources to this sector, and the main financing source of ISI, the agricultural sector, reduced its trade surplus and began generating deficits as a result of having financed industrial modernization for several decades. Structurally, the incapacity of ISI to expand the Fordist equation to the rest of the economy also demonstrated the limitations of ISI.

The period 1970–1981 can be viewed as a transition period,"[10] since ISI was only to be continued as a result of high external borrowing and a "petrolization" of Mexico's economy, particularly during 1977–1981. Mexico's external debt increased from $5.97 billion in 1970 to over $70 billion in 1981. Parallel to this, massive oil exports during 1977–1981 generated as much as $31.9 billion, accounting for 72.5 percent of total exports in 1981. These tendencies allowed for a continuation of ISI, although the underlying economic structures had become unsustainable by the late 1960s and permitted relatively high GDP growth rates: for 1970–1981 the GDP's average annual growth rates for the economy and for manu-

facturing were 6.7 and 9.4 percent, respectively.[1] However, over the period 1970–1981, the current account and trade balances recorded accumulated deficits of $52.1 billion and $28 billion, which could only be managed through massive capital inflows, such as foreign debt. The performance of Mexico's private sector was particularly tenuous as it contributed to a trade deficit of $34 billion, reducing its share in exports from 83.6 to 21.1 percent, while its import share remained relatively constant at 70 percent (Banco de México 1992).

It is relevant to stress that the foreign debt crisis had a tremendous impact on Mexico's economy and on the overall economic impasse. As a result of international tendencies and the crisis of ISI, Mexico's net transfer of resources (i.e., all capital income minus profits and net interests) was positive for 1960–1979 and became negative for 1980–1987. For 1983–1987, for example, Mexico's net transfer of resources accounted for an annual average of –$9.8 billion, –35.8 percent of exports of goods and services or 6.3 percent of its GDP (CEPAL 1990); thus, while its GDP had only increased annually on average 1.0 percent for the period, Mexico was transferring 6.3 percent of its GDP. Foreign debt service had a significant impact not only on economic growth for the period but also on the fiscal deficit and inflation rates, as well as on an overall reduction of the government's investment and expenditures on social policies (see Chapter 3).

From this perspective Mexico's crisis in 1982, initially a result of its inability to service its foreign debt, reflected similar symptoms faced by ISI during its beginnings in the 1940s in the manufacturing sector. These were an excessive scale of the technology employed with a continuous excess capacity depending on the domestic effective demand and a high degree of capital-costly vertical and horizontal integration, capital-intensive industrialization with a high degree of concentration of ownership and noncompetitiveness, and, finally, its incapacity to produce the required forward and backward linkages into products and processes (Haber 1989).

However, as had also occurred at the beginning of the twentieth century, ISI in Mexico made little progress in developing endogenous growth conditions. As examined in Chapter 1, the exclusion of a majority of the population from new consumption patterns did not provide a sufficient endogenous growth dynamism, as happened in other OECD nations. Moreover, the ownership structure—based on "peaceful coexistence" between TNCs, the domestic private sector, and the state, in which the former imported already created technology and inputs—and the highly protected and subsidized domestic market (which did not create sufficient incentives to export and to develop technologies domestically) were some of the fundamental constraints on Mexico's development strategy. Thus, after adopting foreign technology and methods, in spite of high GDP growth rates and a relative substitution of consumer good imports, manufacturing was unable to upgrade and develop forward and backward linkages and to consolidate further stages of ISI.



The historical collaboration of the private sector with the government evolved to increasing confrontation and struggle in which business openly supported economic reforms against the government's populist economic and social policies, at least since the government of Luis Echeverría (1970–1976). The foundation of Consejo Coordinador Empresarial (CCE) in 1975 (which became the top business organization in Mexico as part of the proliferation of private business organizations) allowed for direct and increasingly active economic and political pressure and added to an ideological offensive against state interventionism (Millán 1988; Valdés Ugalde 1997). Massive public expenditures during 1978–1981, revived with the expansion of significant oil exports and the nationalization of Mexico's banks in 1981, were probably the last attempts to allow for an open state intervention, although it socialized the losses of the banking sector, which was technically bankrupt (Cypher 1992; Dussel Peters 1993; Tello 1984).

Therefore ISI was truncated in both economic and political terms. The economic and political model of ISI in Mexico had resulted in a private sector unable to develop sufficiently beyond the first stages of ISI and failing to generate endogenous growth conditions and macroeconomic sustainability under the economic and political tutelage of the state. Moreover, international financial instability and domestic economic uncertainty—such as the economic crises of 1976 and, most important, 1982, as well as accelerating inflation in the early 1970s—resulted in increasing losses for both the private sector and workers, including the official organized labor movement.

The above elements paved the way to the breakdown of four decades of Mexico's ISI, the "Mexican miracle," and included initial debates about the corporatist and authoritarian political system and "presidentialism." The fight for the nation (Cordera and Tello 1981) and the debate over its future erupted.

## Liberalization Strategy, 1988–

Mexico's crisis in 1982, which initially resulted from the private and public sectors' inability to service foreign debt, was not a solvency or liquidity crisis, but instead manifested the unsustainability of ISI. Oil revenues and massive international credits had not been sufficient to finance the crisis of ISI since the late 1960s.

The specific international conditions—and particularly those of the United States, which generated increasing trade deficits and consequently a demand for capital imports in 1981—had not allowed the "recycling" of old international credits for new ones since 1982. Paradoxically, it was the demand for capital by the U.S. economy in international markets that increased interest rates and changed capital flows to the United States and other OECD nations, resulting in a massive international inability to service external debt after 1982 and causing the international debt crisis of the 1980s.[12] Moreover, in 1979–1980 a twofold increase in oil prices caused exaggerated future oil revenue estimations by Mexico's government (Gurría and Angel 1993), while prices began to fall in 1982 and eventually collapsed in 1986. Finally, the crisis of U.S. hegemony implied that the United States in the 1980s was no longer able and willing to pay the costs of financial stability in the capitalist world economy, as it had done in the 1950s and 1960s. In response, the United States followed a much more selective policy toward the periphery, particularly favoring Mexico in Latin America, either directly and/or indirectly through multilateral agencies. The importance of Mexico to the United States was demonstrated by frequent debt rescheduling after 1982: Mexico was one of the main beneficiaries of the Baker initiative in 1985; it was also allowed to be the first nation to implement an "exit bonds" system in 1987. Mexico's overall trade liberalization and application to the General Agreement on Tariffs and Trade (GATT) in 1986 were also significant in this context. In the 1989 rescheduling of Mexican debt, multilateral agencies provided 20 percent of their total funds to Mexico as conceded by the Brady initiative. The agencies rescued Mexico from total bankruptcy, but also prevented an international "debtor cartel" (Castro 1985). However, it was the Enterprise for the Americas Initiative, and particularly the North American Free Trade Agreement (NAFTA), implemented on January 1, 1994, which clearly reflected the increasing selective interest of the United States in terms of favoring Mexico over the rest of Latin America.

The period 1982–1987 should be understood as a transition period[13] to manage the socialization of economic crisis,[14] including the failure of a gradual approach to liberalization that ended in 1987 with an inflation rate of 159 percent and a fiscal deficit of 16.1 percent of GDP, as well as a drastic fall in GDP, investments, and overall economic activity and in the increasing pressure from foreign debt servicing and by multilateral agencies. In this context, December 1987 marked the culmination of the crisis of ISI and the beginning of a new socioeconomic development strategy: liberalization strategy.



Mexico's political system was in general disarray when Salinas de Gortari took power in 1988. From as early as the beginning of the 1970s an important segment of the private sector had stepped aside from the traditional subordinate political role it had played since the 1940s and developed an active and aggressive stance against the economic and political legacy of the revolution, state intervention, and overall populist policies. This development was also reflected in the increasing importance of PAN. The debate over Mexico's mixed economy and state intervention, as well as the reform of social and labor laws, had been politically extremely acute since the 1970s (Valdés Ugalde 1997). On the other hand, one of the striking features of the Mexican political system throughout the 1980s and after the debt crisis was the consolidation of the pact between labor and the state (Samstad and Collier 1995). Despite the labor movement's overall losses throughout the 1980s in such areas as real wages and employment generation, and an overall decline of its living standard, the organized and official labor movement became the principal social and political support of the government. The unions tightened their authoritarian and hierarchical control and began a dramatic decline in their overall political and social legitimacy. As a result of their subordination within the corporatist political system (and its crisis), traditional unions began to experience a significant deterioration in their organization as a whole (Bizberg 1990).[15]

A relatively new social actor began to develop in Mexico in the 1980s. Adding to the charm of EOI, a new generation of policymakers, mostly economists who had studied in academic institutions in the United States where export-oriented industrialization was the conceptual mainstream, permitted the implementation of liberalization strategy. Historically, in Mexico since the 1940s few high-ranking policymakers had been economists. Since the end of the 1960s a number of economists had begun their political careers as politicians, including Raúl Salinas Lozano, father of Carlos Salinas

de Gortari, as secretary of Secretaría de Comercio y Fomento Industrial (SECOFI). Since then the proportion of economists, who studied mostly in Mexico at the Universidad Nacional Autónoma de México, increased (Lindau 1993). The incorporation of this new breed of policymakers in the government has achieved a new qualitative level since the government of Carlos Salinas de Gortari: nine out of 19 secretaries and the president were economists, out of which five had earned their last degree in the United States. Furthermore, the three main economic departments (Secretaría de Programación y Presupuesto [SPP], Secretaría de Hacienda y Crédito Público [SHCP], and SECOFI) were all headed by economists who had done graduate studies at MIT and Yale (PEF 1989b).

Finally, it is worth mentioning that during the early to mid-1980s the corporatist political system embodied in the PRI and presidentialism was in its deepest crisis since its beginnings. Salinas de Gortari was elected with only 50.3 percent of the votes and confronted massive protests by opposition parties as a result of the electoral fraud and an overall legitimation crisis. PRI was still digesting the most important split in its history when the Frente Democrático Nacional (FDN) emerged shortly before the 1988 election as a coalition of social movements and important political figures of PRI itself[16] and other social movements and political parties of the left. These overall tendencies reflected a total loss of the system's credibility among the population, but also generated high expectations of the new president. Most remarkably, and independently of these tendencies, the structure of presidentialism had remained untouched (Sánchez Susarrey 1991; Zaid 1987).

It was under these conflict-ridden and complex domestic and international conditions that Salinas de Gortari, minister of SPP during 1982–1987, and his administration, supported and pressed by the private sector,[17] became the starting point of the new liberalization strategy in 1988. Mexico's strategy was consolidated by means of a series of *pactos económicos* (economic pacts), the first one being issued on December 1987. The pacts, which included wage ceilings and allowed for an ex post indexing of wages, were negotiated jointly by union officials, the government, and the private sector. These pacts became the centerpiece of the new strategy under the Salinas administration, which Zedillo continued with few changes after his election in 1994.

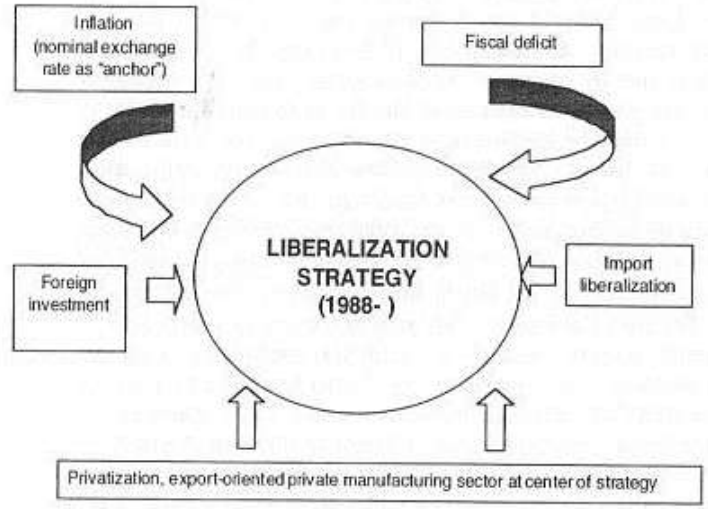
It is in this international and national economic context that the major pillars and guidelines of this strategy of liberalization were



introduced (Aspe Armella 1993; Córdoba 1991; Gurría 1993; Martínez/Fárber 1994; Zabludovsky 1990; Zedillo 1994; Figure 2.2):

1. Macroeconomic policies were to "induce" the process of microeconomic and sectoral growth and development, that is, all sectoral and specific policies were to be abolished in favor of neutral policies. Significant savings in resources destined for direct or indirect subsidies, including trade and industrial policies, for example, were expected (see Chapters 3 and 4).
2. The main priority of the government was to stabilize the macroeconomy. Since 1988, the government views controlling inflation rates[18] (or relative prices) and the fiscal deficit, and attraction of foreign investments (the main financing source of the new strategy, since oil revenues and massive foreign credits were not available and/or sufficient) as the main macroeconomic variables or priorities of liberalization, backed up by restrictive money and credit policies by the Banco de México (see Chapters 3 and 5).
3. The (nominal) exchange rate is a result of controlling the inflation rate. Since the control of inflation rate is one of the

**Figure 2.2 Liberalization Strategy**



priorities of macroeconomic stabilization, the government will not allow for devaluation, which will have an impact on inflation as a result of imported inputs (see Chapter 3).

4. Supported by the reprivatization of the banking system beginning in the mid-1980s, and the massive privatization of state-owned industries (*paraestatales*), the Mexican private sector was to lead Mexico's economy out of the "lost decade" of the 1980s through exports. The massive import liberalization process, initiated at the end of 1985, was supposed to support the private manufacturing sector to orient it toward exports as a result of cheaper international imports (see Chapters 3 and 4).
5. Government policies toward labor unions were of utmost significance. As reflected in the respective *pactos*, only a few (government-friendly) labor unions were deemed acceptable to negotiate inside firms and with the government,[19] while the rest were declared illegal, with few exceptions. This process, which has included violent disruptions of independent labor unions, has since 1987 made national wage negotiations in Mexico possible within the framework of the respective economic pacts (see Chapter 6).

Thus, in general the strategy adopted since 1988 can be seen as a rapid acceleration of what had already been initiated during 1982–1987. From the perspective of the Salinas administration, the failure of gradual reforms after 1982 and mounting uncertainty left the Mexican government with no other alternative but to rely economically more heavily on the U.S. economy and overall liberalization, since the United States—accounting historically for around 65 percent of Mexico's total imports and exports—would be the main destination for Mexico's growing exports. By the end of the 1980s, international pressure from multilateral agencies (SHCP/BM 1995) and from the U.S. government played an important role in continuing and intensifying the measures initiated after 1983. These measures consisted of cutbacks in public spending, privatization of state-owned enterprises, exchange rate adjustments, and reorientation of the generalized subsidy scheme for "horizontal" policies, and, in a few cases, active promotion of export-oriented manufacturing activities. Moreover, the guarantee of cheap labor constituted a crucial element of this strategy. These elements were expected to improve the growth of private investments and total factor productivity, to



enhance the transition toward export-oriented specialization, and subsequently to have a positive impact on overall economic growth.

Finally, it is relevant to stress that the rapid imposition of liberalization in Mexico was possible as a result of the still-existing political and corporatist structures (presidentialism), the ongoing collaboration between of the government and main labor unions, and the absolute majority held by PRI in both legislative chambers. These peculiarities allowed for quick changes of laws dating from the 1940s affecting land tenure, foreign investments, trade, and even NAFTA, as well as specific laws to increase taxes during the 1990s. In most of these cases little public discussion was allowed, given the dimension of the respective changes.

### *The Liberalization Strategy After the 1994 Crisis: The "Second Generation" of Reforms*

The government stressed that the "political and criminal events" (Banco de México 1995, 23) as well as the "policy errors" of December 1994 were responsible for the outbreak of the crisis of 1994–1995.[20] Most remarkably, up to 1999 the government had not been able to present a clear analysis of the lessons drawn from the crisis. In the best of cases, and this view was adopted internationally, the Mexican crisis was addressed as a "financial crisis."[21]

From this perspective, the Zedillo administration was relatively coherent with regard to liberalization and particularly to its macroeconomic priorities (control of inflation and of the fiscal deficit, as well as attraction of foreign investments). It is important to understand that liberalization strategy since 1988 remained, with few changes, relatively unaltered until 1999. After the crisis and beginning with the Zedillo administration, the Plan Nacional de Desarrollo 1995–2000 (PEF 1995) stressed the need to increase domestic savings through exports and foreign investments, within "fundamental macroeconomic equilibriums" (PEF 1995, 145) (i.e., market-friendly macroeconomic policies as discussed within the EOI framework). Initial departures from liberalization strategy after the crisis, particularly regarding industrial policy,[22] were abandoned and viewed as unnecessary after the post-1996 apparent recovery of the Mexican economy.

It is in the context of the crisis of December 1994 that liberalization strategy proposed a "second generation" of reforms: "Macroeconomic stability and the removal of allocation distortions

will be necessary, but certainly not sufficient." (Edwards and Burki 1995, 9), meaning that liberalization will have to be deepened to achieve success. This view acknowledges that liberalization has already been successful for macroeconomic priorities, as well as productivity and export growth, but future success still requires the removal of profound distortions, particularly in the labor market and regarding social issues and social security. In general, this view stresses that the direction of reforms is correct, but they now have to reach to the privatization of education and social security and the abolition of labor laws and minimum wages, for example, to correct policies that have generated perverse incentives and hindered growth (World Bank 1995a, b). From this perspective liberalization still has a long way to go.

Up to the end of 1999, the Mexican government continued with few exceptions to follow liberalization. The continuation of macroeconomic priorities and the private export-oriented sector as the basis for economic growth, privatization and import liberalization, and abolition of overall subsidies for goods and services—culminating at the beginning of 1999 with the end of subsidies for tortillas and most "basic food basket" commodities—reflect this process.

Probably the most significant incoherence of liberalization since 1988 has been the massive public bailout of the financial sector in 1995. The privatization of state-owned banks at the beginning of the 1990s in the context of liberalization resulted in a credit boom for consumer goods and real estate. Given the positive expectations that liberalization generated under the Salinas administration, both nationally and internationally, as well as high real interest rates, the crisis of December of 1994 resulted in a massive amount of bad loans for the recently privatized financial sector. The government, however, contrary to its policy on social issues, small and medium enterprises, subsidies, and industrial policy, decided to stage the bailout, with a cost of around 19 percent of Mexico's GDP.

## Contradictions of the Liberalization Strategy

Liberalization gives priority to macroeconomic stabilization (control of inflation and the fiscal deficit and attraction of foreign investments) and to private manufacture of exports for economic growth and overall development. However, what are some of the results of this strategy? Some of these issues have already been outlined in the previous chapter in regard to theoretical contradictions of OEI. Nevertheless, it is important to analyze the following in the actual case of Mexico's liberalization strategy:



1. As a result of macroeconomic stabilization, particularly control of inflation and the fiscal deficit, many policies used under ISI, but also under other strategies and in other nations, will be functional and subordinate to liberalization. Thus, industrial and trade policies; public expenditures in education, against poverty, and for other social purposes; and public investments will be subordinated (in a minimalist or lean state) to the successful development of the private and export-oriented manufacturing sector. However, is it possible that all (or at least most) firms, sectors, and regions adjust in terms of liberalization's proposed export orientation? What happens to firms, households, sectors, and regions that are not able to integrate with and link directly to the world market? Assuming horizontal or neutral policies, liberalization does not present an answer to these socioeconomic conditions—particularly for firms that have evolved for decades under ISI and that then have to face liberalization rapidly. This situation becomes much more extreme if liberalization is imposed quickly and with few or no countervailing policies. This situation does not refer only to microeconomic (firm-level) bankruptcies, but to overall macroeconomic and social sustainability in the case that a large share of households, firms, and regions are not successful in terms of liberalization.
2. Strictly as a result of the strategy's priorities, the process will result in an overvaluation of the real exchange rate. Since inflation becomes the main priority of liberalization, and the nominal exchange rate is fixed through different mechanisms ("dirty flotation") to prevent devaluation and increases in inflation (the exchange rate as a nominal "anchor" to inflation), an appreciation in the real exchange rate is unavoidable (i.e., it will result in incentives to import and disincentives to export goods and services) (Ibarra 1996).
3. As a result of attracting foreign investments, the main financing source of liberalization, real interest rates in U.S. dollars will have to be relatively high to attract foreign investments.

Otherwise, capital flows will not come into Mexico. However, high real interest rates will have a direct impact on the domestic capital market because domestic investors, affected negatively by uncertain economic and political conditions in Mexico, will prefer to put their capital into the financial rather than the production sector. Thus, one of the results of liberalization could be a falling domestic investment rate (investments as a percentage of GDP), precisely as a result of the strategy's priorities.

4. Given the structural conditions reflected in current-account deficits in most Latin American nations, particularly in Mexico, capital inflows and foreign investments are required at least in the short run to finance these deficits. From this perspective, it is possible that nations that follow a liberalization strategy will be increasingly dependent on short-term capital inflows or portfolio investments, competing with other nations in international markets. A merry-go-round process might begin, in which high real interest rates are offered for portfolio investments, which will stay and increase only if higher real interest rates are offered or else will shift to the next international competitor. This highly volatile financial dependence might increase with domestic economic, social, and political events and uncertainty.
5. Liberalization, which assumes that the export-oriented private manufacturing sector will be the mainstay of economic growth, might result in an import-oriented industrialization; that is, overall macroeconomic "signals" and incentives might particularly allocate resources to import goods. Disincentives in the productive sector, such as rapid import liberalization, an overvalued exchange rate, and a low domestic investment rate, might cause this import-oriented industrialization—clearly in contrast to the initial EOI.
6. Issues such as employment, real wages, and income distribution are in general not covered by liberalization strategy. It is "somehow" expected that successful integration into the world market will have a positive impact on these variables: export orientation and successful macroeconomic stabilization will "induce" microeconomic changes. What if this trickle-down effect does not occur? What is the time frame in which these mechanisms should take place? Liberalization does not give any answers.



The above issues show some of the contradictions and incoherencies of a liberalization strategy, some of which arise from EOI. Surprisingly, and as a result of overall disincentives for the export-oriented private manufacturing sector, as discussed in point 5 above, EOI might result in import-oriented industrialization. And, what happens if only some or a few of the households and firms in regions or nations are successful in terms of liberalization (i.e., in linking directly to the world market through exports) while the rest are not? What are the economic, social, and political implications of such a process? Is this process sustainable, not just from a social and political perspective, but even from a macroeconomic perspective (as stressed by EOI and liberalization)? These questions refer to the issue of territorial "endogeneity" of growth conditions raised in Chapter 1 and are not addressed by EOI and liberalization strategy.

## Preliminary Conclusions: Neoliberalism, EOI, and Liberalization Strategy

Given the foregoing discussion, what are, in general terms, the differences and similarities between neoliberalism, EOI, and liberalization?

Chapter 1 pointed out the historical and conceptual differences between neoliberalism and EOI. The theoretical radicality and consistency of neoliberalism—which results in an aggressive conceptual core for the market and against totalitarianism and any form of regulation that might affect its evolution—is lost in the economic discussion of EOI. EOI is much more influenced by globalization and the apparent requirement that any economic unit is subject to linking itself directly to the world market to be efficient and survive. Contrary to neoliberalism, EOI does not require a legitimization of capitalism and of authoritarian regimes for economic freedom. As pointed out in Chapter 1, EOI is highly permeated by a more strictly economic view of development.

On the other hand, liberalization in Mexico, and in most of Latin America, is a result of the theoretical discussion of EOI, which does not mean that liberalization and EOI are equal. It must be said that liberalization strategy in Mexico, as the policy application of EOI, is a further theoretical primitivization of EOI. Liberalization is based on a further economic reductionism in which free trade and EOI are sufficient conditions for nations of the periphery to integrate them-

selves into the world market and to achieve economic development generally. Moreover, since EOI and liberalization are much more economically oriented, they may return to neoliberal theory to justify and ideologically legitimize their visions, concepts, and policies. However, as explained above, their historical and conceptual starting points, their respective theoretical perspectives, and their conclusions are different, in spite of certain similarities and affinities.

Liberalization is, in effect, much more practical and policy oriented than theoretical. In comparing EOI and liberalization several issues stand out. While EOI is able to discuss conceptually and empirically the relationship between GDP growth and export growth, including some market imperfections and "second best options," liberalization in general assumes that this causal relationship is a sufficient condition for development. Probably the most significant difference between both schools is that liberalization is much more primitive than EOI, independent of either's shortcomings. Liberalization attempts to determine economic growth by controlling relative prices (inflation), fiscal deficit, and foreign investments. Besides critiques of neoliberalism (see Chapter 1), liberalization strategy is primitive even from a neoclassical perspective. Mainstream neoclassical textbooks (Samuelson and Nordhaus 1948; Dornbusch and Fischer 1978) stress many other variables that are significant to understanding economic growth. Savings, investment, employment, domestic demand, wages, and labor markets, among many other variables, go far beyond liberalization strategy's approach. These variables, with important theoretical and policy implications, as already noted, are not considered in a liberalization strategy.

From this point of view, there is a significant difference between neoliberalism and liberalization. Aside from the significant historical differences in the contexts within which both strategies were developed and implemented, liberalization is characterized by an economic reductionism that does not require the aggressive political posture of neoliberalism against totalitarianism and supporting authoritarianism. On the other hand, the strategy of liberalization reflects the apparent dictates of globalization and the need to liberalize the totality of existing institutions and markets to foster higher productivity and efficiency independent of time and space.

Finally, this chapter has argued that liberalization's priorities might result in severe contradictions. Strictly in terms of the strategy, it might result in an import-oriented industrialization, contrary to an



export-oriented industrialization, given overall disincentives for the export-oriented private manufacturing sector. Moreover, such a strategy might pose increasing challenges to macroeconomic stabilization, the most important priority of a liberalization strategy, since its financing source, foreign investment, and, particularly, portfolio investment, generate increasing domestic shortcomings—affecting the domestic investment rate and producing a potential merry-go-round process between increasing real interest rates and the continual possibility of massive capital flight. The economic sustainability of liberalization, even if successful economic units link themselves through exports directly to the world market, is severely questioned: this form of economic growth might not generate endogenous growth conditions, as stressed by other schools of thought. Further, this direct link, or its lack, of economic units might result not only in economic polarization in regions and nations, but also in social and political polarization.

These potential outcomes, as well as the expectations of liberalization, will be presented in detail in the next chapters.

## Notes

1. According to Paz (1987, 232ff.) *caudillos* in Latin America are a Spanish-Arab inheritance, born with the independence of Latin American nations, and included such presidents as Perón in Argentina and Díaz, Carranza, Obregón, and Calles in Mexico. *Caudillos* are those individuals who were beyond the law and not bound to any institution; to the contrary, *caudillos* and their heroic and almost sacred personalities create laws and institutions. In the case of Mexico, its political system, through PRI and the constitutional power of the president, has resulted in presidentialism.

2. According to some authors (Valdés Ugalde 1997), the emergence of the private sector since the beginning of the 1940s also characterizes the beginning of the "revolutionary fiction" and a shift of state policies from social to industrial development in which the business sector was able to increase its influence substantially without the need to assimilate other political and social perspectives. The consulting role of business chambers prohibited, on the other hand, their direct involvement in political activities.

3. See Dussel Peters (1997) and INEGI (1985).

4. In spite of this, Mexico's service sector is relatively unknown and has received little attention from academics and in public policies.

5. For the period 1940–1970 labor productivity, measured as GDP/employment, and real wages in the manufacturing sector presented significant and positive tendencies of 3.2 and 0.7 percent annually, respectively, while wages as a share of GDP increased from 29.1 percent in 1940 to levels above 40.0 percent in the 1970s (Aboites 1989, 90ff.). From this

perspective, the Fordist equation between real wages and productivity increases generated a rather high level of endogeneity in Mexico's economy, but was only prevalent for a small sector of Mexico's society, particularly of its urban population.

6. See Lipietz (1982).

7. For authors such as Fajnzylber (1983), the inability of ISI to generate new national firms in these dynamic sectors, particularly in industrial metal products, is one of the main reasons for ISI's "truncated" development.

8. In October of 1968 the army and the police crushed a demonstration of students in the Plaza de las Tres Culturas in Tlatelolco, Mexico City, killing several hundred of them, and detained the leaders of the movement (Poniatowska 1973). Many political analysts viewed the killings at Tlatelolco as the beginning of a decisive rupture between the Mexican middle class and the government.

9. Manufacturing's domestic demand satisfied by imports increased from 10 to 17 percent during 1950–1970, but was partly reversed during the 1970s because the coefficient of manufacturing's domestic demand / imported goods accounted for similar levels as in the 1950s (Casar et al. 1990).

10. Also from a political perspective, "one of the most notorious contradictions of the government of de la Madrid was its determination not to finish with the legacy of the postrevolutionary pact and to try, at the same time, to open the way for economic modernization" (Valdés Ugalde 1997, 213; also Cypher 1992).

11. For a detailed analysis of this period see Solís (1988); Villarreal (1988).

12. One of the central features of U.S. hegemony and the Pax Americana since 1945 has been the massive supply of capital by the United States to the rest of the world. Paradoxically, the external debt crisis in Latin America and Mexico erupted in 1982 mainly because the United States, principal capital exporter and creditor since 1945, was no longer able to sustain its productive and financial superiority and thus became a net importer of capital. In 1982 the U.S. capital balance had a surplus of $27.9 billion, but in 1983 it reached a deficit of more than $29.0 billion. The need by the United States to finance its trade and fiscal deficit with external credits drastically changed the direction of capital flows and the function of the transnational baking system, while sharply increasing international interest rates. Clearly, though, the United States was a far more secure debtor than the highly indebted countries in the periphery, including Mexico (Dussel Peters 1993).

13. The period 1982–1987 under President de la Madrid was sharply restricted to external conditions—total external debt service accumulated to $81.5 billion and several sharp oil price falls constantly restricted economic policy conditions—and inflation rates and capital flight boomed throughout this period. It is important to notice that initial liberalization policies, regarding imports and capital movement, were significant for the period (Péres Núñes 1990a).

14. Several devaluations since 1982 have added to a drastic fall in domestic demand and caused a significant depreciation of the real exchange rate for 1983–1987 and the inability of the private financial sector and important parts of the private productive sector to continue with ISI. The nationalization of the private financial sector, including its debts, as well as massive debt rescheduling and foreign debt guaranteed by the government were some of the important means taken to "socialize" the losses of the 1982 crisis and bail out the highly indebted private sector (Dussel Peters 1997; Gurría 1993).



15. Sánchez Susarrey (1991, 23) recalls that the corporatist model is in crisis because "first, the corporatist enclaves are a minority with respect to the population as a whole; second, because the model worked in a climate of privatization and apolitization which does not correspond to current tendencies; third, because the apolitical corporativism is no more functional for the private sector itself."

16. In 1987 and 1988 several major figures of PRI founded FDN. The most prominent politicians were Cuauhtémoc Cárdenas, former governor of Michoacán and son of former President Cárdenas, and Porfirio Muñoz Ledo, who had been secretary of education and president of PRI.

17. In May 1988, several months after the government signed the first economic pact, the president of CCE, Agustín F. Legorreta (former president of the administrative council of Banamex), who would later become the main shareholder of Inverlat and owner of Multibanco Comermex, asserted that the pact had been agreed to "by the president of a presidentialist country with a small and very comfortable group of 300 persons which are the ones that take the economically important decisions in Mexico" (quoted in Valdés Ugalde 1997, 220).

18. As Aspe Armella (1993) stresses, lowering inflation rates was the crucial targeted variable because high inflation rates did not allow for improvements in the fiscal deficit during 1982–1987.

19. Institutions such as Comisión Nacional de Salarios Mínimos were of critical importance for these objectives.

20. These arguments refer to the uprising of the Ejército Zapatista de Liberación Nacional in January of 1994 and to several murders of high-ranking politicians (including the PRI presidential candidate) and to policy errors in December of 1994, the transition period between the Salinas and Zedillo administrations. In this debate, it is still not clear which administration made the "errors" in not reacting "correctly" to capital outflows and in permitting the 100-percent-plus devaluation of the Mexican peso after December 1994.

21. As discussed in the next chapter, the outbreak of the crisis was the inability of the Mexican government to service its public debt issued in U.S. dollars. This understanding of the crisis that focuses exclusively on 1994, however, falls short in understanding the structural problems of liberalization and limitations of the strategy that go back to before 1994.

22. The Programa de Política Industrial y Comercio Exterior (1995–2000) (PEF 1996), for example, stressed that industrial policy could not be left to spontaneous market forces, but required an "active industrial policy" (PEF 1996, 33). However, after impressive GDP and export growth rates these visions were put aside and viewed as unnecessary.

# 3

# Macroeconomic Effects of Liberalization Strategy

The previous chapters analyzed the richness of economic development theory and the theoretical primitiveness of export-oriented industrialization, particularly liberalization. Even from a strict neoclassical perspective, both schools of thought present severe limitations. Moreover, both EOI and liberalization result in profound contradictions. It is theoretically, with all due respect to their proponents, not clear if EOI and liberalization generate, in the best of cases, sufficient conditions for economic growth and development. Other analysts and schools of thought question whether single economic units (firms and regions) within nations link themselves directly to the world market through exports as the main process for economic growth and development. So far, economic theory has not been able to definitively state the causality of this relationship, whether export growth generates economic growth or economic growth results in exports. The policy implications of this causal relationship are of crucial importance: if, contrary to EOI, economic growth that results in exports, it would be necessary to stimulate and enhance the main variables that spur economic growth (and not necessarily exports as stressed by EOI), a discussion that goes far beyond the approach of EOI and liberalization. Finally, a growth strategy based on an export orientation represents a "positional good," that is, its use value loses its characteristics as soon as other economic units follow the same production and development path. This more profound critique poses a serious challenge to growth and development based on competition and has, so far, not been addressed sufficiently by economic development theory.

What have been the results of liberalization strategy in Mexico?

Has it been "successful"? Does it present for the Mexican economy and society the possibility of medium- and long-term sustainable and endogenous economic conditions, or has it resulted in an increasing polarization? Is Mexico a model to follow? Surprisingly little work, nationally and internationally, has come from official sources and academic writers. Most of the discussion focuses on specific issues such as highly sophisticated models of NAFTA or export and import tendencies and estimations, among others, but with little reference to liberalization and its long-term sustainability. Another part of the discussion has remained exclusively "against neoliberalism" or for free trade and further liberalization. As stated in preceding chapters, most of these attempts are too simplistic and continue with an apparently highly ideological and/or technical debate over, for instance, the role of the state, the market, or free trade.

Although there are those who assert that liberalization still requires a "second generation" of reforms, and that the strategy will thus require a longer time to change Mexico's economy, I believe that more than 10 years is a sufficient period to evaluate the economic and social results of a development strategy and to point to the direction and sustainability of the resulting structures.

## Macroeconomic Visions, Programs, and Impacts Since 1988

What have been the main programs and the impact of liberalization on Mexico's macroeconomy? This section will examine in detail macroeconomic instruments and mechanisms in order to follow the rationale and goals of liberalization strategy.

Liberalization strategy was initiated following the oil price collapse in 1985–1986, the extreme difficulties encountered in servicing the external debt despite several rescheduling programs after 1982, high inflation rates,[1] a fiscal deficit that surpassed 15 percent of GDP, and the beginning of a new presidency. According to the government, these conditions required a deepening of the stabilization programs beginning in 1982: "It has been a difficult and arduous process. . . . We reached today a pact that implies the adoption of strong measures, of bitter measures, painful, that require sacrifices and efforts from everybody; we are not offering a 'magic cure' of our economic misfortunes; we are asking society for more effort and more sacrifice" (PSE 1987, 1079).



The Pact of Economic Solidarity (Pacto de Solidaridad Económico, PSE), signed by government-friendly labor unions and the private sector in the middle of December 1987, was the first highly publicized effort to impose liberalization in Mexico, and the first of several forthcoming pacts extending to 1997. What was new and different from prior policies under ISI and since 1982? In general, the PSE included a clear vision of a "lean state" in which overall subsidies were to be eliminated.[2] Later versions of the PSE and other official documents (PEF 1989a) eliminated the fixed exchange rate (in November 1991) and stressed the importance of the private export-oriented manufacturing sector as the pillar of Mexico's new development strategy. The PSE became the first public economic policy document under the new administration of Salinas de Gortari.[3] The PSE and the more elaborated Plan Nacional de Desarrollo 1989–1994 (PEF 1989a) suggested that, given the difficult circumstances in 1986 and 1987 and in the theoretical context of EOI, the government needed to enhance macroeconomic stability and create market-friendly economic conditions. Subsidies in general, inefficiencies of state-owned firms, sectoral policies, and development banks (acting now exclusively as second-tier banks), were the main culprits according to liberalization strategy and were subject to deep fiscal reductions.[4]

The control of inflation became the top socioeconomic priority of liberalization and the deepening of stabilization programs after 1982, since high inflation rates might "endanger social harmony and the achievements of national renovation" (PSE 1987, 1080). Control of inflation, aiming for an annual rate of below 5 percent, was significant because according to this view inflation affects mainly low-income groups and generates overall uncertainty. Reducing inflation was also understood as part of social policy; thus "economic recovery on just bases is only possible consolidating price stability" (PEF 1989a, 54).[5] From this perspective, the exchange rate policy was instrumental in controlling inflation "without being a source of inflation or imposing burdens on consumers in order to maintain artificially the profitability of inefficient firms" (PEF 1989a, 63).

The second macroeconomic priority of liberalization was the control of the fiscal deficit. The PSE acknowledged that "nobody will be happy" (PSE 1987, 1079) with significant changes in the budget to achieve a fiscal surplus, mainly by decreasing overall expenditures.[6] The achievement of a fiscal surplus—particularly of a primary fiscal surplus (i.e., government income minus expenditures,

not including internal and external debt service)—is of relevance for monetary and credit policy, since the government would not be permitted to increase the money supply above rates of economic growth. Thus, expenditure levels would "support price stability and the adequate functioning of financial markets . . . expenditure has to be financed with non-inflationary resources" (PEF 1989a, 60).

Foreign investment became the critical variable to finance liberalization, considering that oil prices fell dramatically during 1986–1987 and that massive external debt was no longer possible. Foreign investment, it was argued, not only "generates employment, direct or indirect, permanent and well-paid; it also provides the country with fresh resources for the sound financing of firms, provides modern technologies to the industrial plants, and enhances the export efforts of the country" (PEF 1989a, 88).

The export-oriented private manufacturing sector became the motor of liberalization for driving the rest of the economy as the government pulled back significantly from economic activities, including massive privatization or "disincorporation" of state-owned enterprises (PEF 1989a, 90–91) and general liberalization of imports, which already had begun in 1986 in order to join GATT to allow cheap inputs for the export-oriented sector. From this perspective, the reduction of the highest levels of tariffs—from 40 to 20 percent in the PSE in 1987—and an overall deregulation of trade barriers (measures to make exports and imports more efficient) were necessary for the strategy and its main objectives. Because prior excessive protections had prevented the efficient allocation of resources and enhanced "less labor-intensive activities" (PEF 1989a, 84), the export orientation would not enhance the "irreversible" opening of Mexico's economy (PEF 1989a, 84), but would also provide resources to the economy and added to foreign investments.

Policies to control and index real wages are probably one of the most important forgotten pillars of liberalization strategy. With the backing of government-friendly labor unions, the PSE had already acknowledged in 1987 the fall of real wages since 1982, but it also acknowledged that they would have to continue to fall. The PSE allowed for two wage increases of 15 percent in December of 1987 and of 20 percent for January 1988, even though inflation rates had averaged 160 percent in 1987 alone. For the future, real wages were to be indexed and revised periodically according to the price index of a basket of basic products (PSE 1987, 1081). Seen this way, the



macroeconomic priorities would gradually benefit employment and real wages: "It is preferable to accept beforehand that the creation of employment and strengthening of real wages will have to be gradual, as the success of economic growth will be gradual, in proportion to advances in the correction of barriers and disequilibriums that oppose it" (PEF 1989a, 99).

Through these measures the government not only expected GDP growth to increase by 6 percent annually after 1988, but also that this performance would eradicate poverty and generate around one million jobs annually (PSE 1987; PEF 1989a).

It is important to understand the conceptual and political background of the PSE, as well as its implications and radical departure from prior import-substitution policies. Theoretically, liberalization and the PSE are closely linked to EOI, as already discussed in Chapter 2. As for economic policy, the "inflation obsession" was related to the high inflation rates during the 1980s and its inertial causes and those related to wage increases (Aspe Armella 1993; OECD 1997, 32).

Pedro Aspe Armella, former secretary of finance and public credit under Salinas, is probably one of the few government officials who has clearly stressed the importance of liberalization: inflation is the main economic variable because it sends signals to producers and consumers and its main structural inertial cause is the real wage increase (Aspe Armella 1993, 29ff.).[7] Thus, it is necessary to negotiate a new social consensus in which labor limits its demands, formerly state-owned enterprises are privatized, and imports are liberalized to permit the development of the export-oriented manufacturing sector. Restrictive credit and monetary policies are a necessary result of the new strategy in order to control inflation rates and limit the fiscal deficit. Moreover, the privatization of the banking system is intended to increase savings, and particularly to generate domestic and external investments.

From a macroeconomic perspective the strategy was not significantly altered until 1999, except for specific sectoral policies, which are discussed below in this chapter. However, several macroeconomic changes since 1988 need to be stressed.

1. Monetary and credit policies have been tightened and made more restrictive, in part as a result of the constitutional autonomy given to the Banco de México after 1993. The bank has

since then explicitly established control of inflation as one of its main objectives through such mechanisms as money and credit policies as well as exchange rate interventions.

2. The privatization of state-owned enterprises was continued throughout 1999, including telecommunications, railroads, ports and airports, and the financial sector. By 1993 only 217 state-owned enterprises were left out of a 1982 total of 1,155 (Rogozinski 1993). Since then, the privatization process has further deepened, with the exception of primary petrochemicals. In 1999, President Zedillo made a proposal to begin the privatization of Mexico's electricity system (Comisión Federal de Electricidad, CFE), a proposal that still needs to be approved by the Mexican Congress. Privatization revenues have reached an accumulated value of around $30 billion since 1988 and have become an important source of income for the government over the past decade.
3. Between 1988 and 1999 subsidies in general have been completely eliminated. Development banks such as the Nacional Financiera and Banco Nacional de Comercio Exterior have performed under strict market criteria. Interest rates at both institutions are similar to commercial banks' rates. Product-, firm-, and branch-level subsidies have been removed. Since 1988, and up to 1998, direct subsidies and price controls for the "basic food basket," including tortillas and other products, were gradually abolished. Therefore, savings from subsidies will probably be used for targeting the needs of specific population groups.
4. Since 1988 countless macroeconomic programs, including several pacts, were established to continue liberalization. During Ernesto Zedillo's presidential race and before the crisis of December 1994, Zedillo strongly supported Salinas's economic policy and strategy (PEF 1995; PEF 1997a; Zedillo 1994). Not even the crisis of 1994–1995 changed Zedillo's macroeconomic policies—and this stance did not change after the crisis. On the one hand, the new Zedillo administration stressed the importance of exports and pointed out that domestic savings, along with foreign investments, were required to finance liberalization. On the other hand, the "reform" or privatization of social security was expected to become one of the new supports for domestic savings and overall economic growth (PEF 1997a). Thus, independent of these reforms, the vision and pillars of liberalization were left intact: "fundamental macroeconomic equilibrium" was to be followed strictly (PEF 1995, 145). The control of inflation and the fiscal deficit, as well as the attraction of foreign investment—added to a new "set of actions directed to eliminate distortions that limit efficiency in several key sectors of the economy" (PEF 1995, 137), particularly in the labor market—were to continue as the basis of the economic strategy.



## Macroeconomic Effects

There is a broad range of perspectives and countless variables that could be included under the heading of "macroeconomic effects." However, in this section I will only refer to the main macroeconomic variables stressed by liberalization strategy itself: inflation, fiscal deficit and foreign investments, and savings. Other variables, such as employment, imports and exports, real wages, and income distribution, will be discussed in detail later.

### *The Crisis of December 1994*

Mexico's economy grew at an annual average growth rate (AAGR) of 3.9 percent during 1988–1994. Both national and international expectations were already high and still rising. During 1993–1994, President Carlos Salinas was seriously considered as a candidate to head the World Trade Organization (WTO), in recognition of his successful economic reforms in Mexico. The United States and multilateral institutions publicly declared that Mexico was an example for developing countries to follow. Moreover, NAFTA, initiated on January 1, 1994, and the strong U.S. economy supported these expectations. Under these "overwhelmingly positive conditions," what were the official causes and the government's explanations for Mexico's worst crisis since the 1930s?

From the government's perspective, Mexico's financial crisis had both international and national causes. Since the government was heavily burdened by short-term debt owed in U.S. dollars—known as *tesobonos*, which were exclusively issued in 1994—one of the main challenges was to roll over and extend the maturities of these bonds (Banco de México 1996). However, given overall economic and political uncertainties, which led to interest rate levels, in

U.S. dollars, above 25 percent, this was not possible. Massive capital outflows from Mexico and difficult international conditions regarding foreign investments—particularly increasing interest rates in the United States—did not allow for extending *tesobonos* in 1995.

Moreover, there were domestic conditions that contributed to the crisis: the uprising by the Ejército Zapatista de Liberación Nacional on January 1, 1994, political instability in the 1994 presidential election year, and the assassination of PRI's presidential candidate in March and its secretary general in September of that same year. The economic uncertainty generated by these "political and criminal events" (Banco de México 1995, 23) resulted in severe losses of foreign exchange reserves by Banco de México that could not be countered by increasing interest rates in December 1994. Moreover, it was widely believed that Mexico's peso was significantly overvalued and that domestic saving rates were not sufficient (PEF 1995, 129ff., 1997a), thus increasing the pressure for capital outflows. Mexico's government was forced to devalue the peso on December 20, 1994 and throughout 1995, accounting for a devaluation of over 100 percent.[8]

Multilateral agencies, which were openly positive and enthusiastic about Mexico's liberalization strategy until the crisis, also supported the government's analysis and added little to the understanding of the situation. The International Monetary Fund (IMF) acknowledged economic policy errors during 1994 (IMF 1995), but stressed that in the same year that trade and current-account deficits in Mexico, the latter achieving 8 percent of GDP, had become "unsustainable." The World Bank (Edwards and Burki 1995) also agreed about the problems caused by the current-account deficit in 1994, but stressed the development of the "infamous *tesobonos*" (Edwards and Burki 1995, 4) and the dangers of relying on short-term capital financing. The World Bank emphasized that in order to allow for future stabilization and growth, Mexico had to deepen overall liberalization and begin with a "second generation of reforms" (Edwards and Burki 1995, 15), particularly in the labor market and in the privatization of social security. Finally, the undersecretary of the U.S. Treasury stated that "sound" economic policies are required in the current international context (Summers 1996); negligence toward some of these variables could result in massive capital outflows and other forms of punishments, as did happen in Mexico.[9]

Since the Mexican government was not able to service



*tesobonos*, a multilateral financial assistance package—supported by the U.S. Federal Reserve, the IMF, the Bank for International Settlements, and the Bank of Canada—of more than $50 billion was negotiated during 1995, assuming that the crisis was one of short-term liquidity (Banco de México 1996, 153ff.). The assistance package allowed the Mexican government to overcome the crisis financial of December 1994.

It is clear from the official perspective that the crisis was, in general, viewed as a financial crisis caused by several events during 1994 (see also Sachs, Tornell, and Velasco 1995). Exchange rate and current-account tendencies might have been the result of economic structures and long-run tendencies, but they are not considered in the official analysis. Concluding with this view, the macroeconomic pillars of liberalization had to be deepened through a second generation of reforms.

### *The Impact of Liberalization Strategy on Inflation, Fiscal Deficit, Foreign Investment, and Foreign Trade*

Liberalization strategy, in its own terms, has been relatively successful. The vision that macroeconomic changes would induce microeconomic and overall sociopolitical changes is of critical importance for its implementation. Thus, the control of inflation and the fiscal deficit and the attraction of foreign investments are crucial in evaluating liberalization on its own terms. More recently, the Mexican government has emphasized the importance of overall savings for general economic growth and stability. And, as highlighted above, foreign trade, particularly exports, was to be the motor for liberalization.

What has been the performance of these "fundamental" macroeconomic variables in Mexico since 1988?

Inflation, the "obsession" of liberalization strategy, has declined significantly since 1988, and with few exceptions has been below 30 percent since then. As shown in Table 3.1 and Figure 3.1, inflation reached its maximum during 1987, and accounted for levels of above 60 percent during 1982–1987. Seen this way, and with the exception of 1995 when the crisis hit Mexico's economy, the inflation rate had been under control. More important, inflation rates are now expected to stay below 20 percent in the coming years.

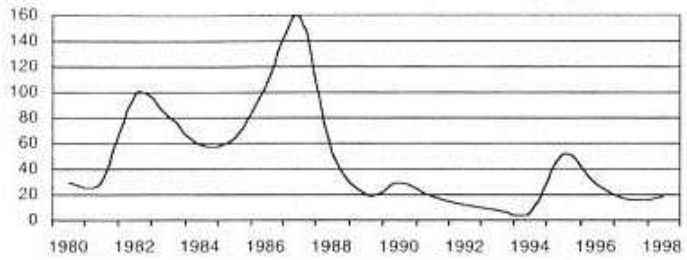
Similarly, since 1988 the financial deficit of the government (i.e., total income less total expenditures by the public sector) was reduced dramatically, particularly if compared with the period 1980–

**Table 3.1 Selected Macroeconomic Variables (1980–1998)**

| | 1980 | 1985 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GDP growth rate | 8.3 | 2.6 | 1.3 | 3.4 | 5.2 | 4.3 | 3.7 | 1.8 | 4.6 | −6.2 | 5.2 | 7.0 | 3.5 |
| GDP per capita growth rate | 5.3 | 0.3 | −0.8 | 1.3 | 3.3 | 2.2 | 1.9 | 0.0 | 2.7 | −8.0 | 3.5 | 5.0 | 1.7 |
| Employment growth rate | 14.7 | 2.2 | 0.9 | 1.3 | 0.9 | 2.6 | 0.4 | 0.2 | 1.2 | −7.5 | 3.4 | — | — |
| Open unemployment rate | 4.7 | 4.4 | 3.6 | 3.0 | 2.8 | 2.6 | 2.8 | 3.4 | 3.7 | 6.2 | 5.5 | 3.7 | 3.3 |
| Real wages (1980=100), total economy | 100.0 | 84.1 | 76.4 | 73.9 | 71.5 | 73.6 | 77.5 | 79.2 | 81.6 | 69.7 | 60.0 | 58.7 | 57.0 |
| Real wages (1980=100), minimum wages | 100.0 | 70.9 | 53.7 | 49.4 | 43.1 | 40.7 | 39.4 | 38.9 | 38.8 | 33.3 | 30.3 | 30.1 | 29.5 |
| Gross fixed investment GDP | 24.8 | 17.4 | 18.5 | 17.2 | 17.9 | 18.7 | 19.6 | 18.6 | 19.4 | 16.1 | 17.2 | 19.1 | 19.3 |
| Public | 10.7 | 5.4 | 4.4 | 4.2 | 4.3 | 4.1 | 3.8 | 3.8 | 3.8 | 3.3 | 3.7 | 3.6 | 2.3 |
| Private | 14.1 | 12.0 | 14.1 | 13.0 | 13.6 | 14.6 | 15.8 | 14.8 | 15.6 | 12.8 | 13.5 | 15.5 | 17.0 |
| Gross savings GDP | 25.5 | 20.1 | 22.6 | 22.9 | 23.1 | 23.3 | 23.3 | 21.0 | 21.7 | 19.8 | 23.1 | 25.9 | 24.3 |
| National | 20.5 | 20.5 | 21.3 | 20.3 | 20.3 | 18.7 | 16.6 | 15.1 | 14.8 | 19.3 | 22.5 | 24.1 | 20.5 |
| Foreign | 5.0 | −0.4 | 1.3 | 2.6 | 2.8 | 4.7 | 6.7 | 5.9 | 6.9 | 0.5 | 0.7 | 1.8 | 3.8 |
| Inflation | 29.8 | 63.7 | 51.7 | 19.7 | 29.9 | 18.8 | 11.9 | 8.0 | 7.1 | 52.0 | 27.7 | 15.7 | 18.6 |
| Nominal interest rate[b] | — | 62.4 | 69.5 | 45.0 | 34.8 | 19.3 | 15.6 | 15.0 | 14.1 | 48.4 | 31.4 | 19.8 | 33.0 |
| Real interest rate | — | −1.3 | 17.8 | 25.3 | 4.9 | 0.5 | 3.7 | 7.0 | 7.0 | −3.6 | 3.7 | 4.1 | 14.4 |
| Financial deficit GDP[d] | 3.1 | 9.9 | 9.7 | 5.0 | 2.6 | 0.2 | −1.4 | −0.3 | 0.7 | 0.8 | 0.5 | 1.4 | 2.2 |
| Exports of goods and services[c] | 24.9 | 35.9 | 42.1 | 48.1 | 56.1 | 58.1 | 61.7 | 67.8 | 78.4 | 97.0 | 115.5 | 131.5 | 140.6 |
| Imports of goods and services[c] | 35.3 | 35.1 | 44.5 | 53.9 | 63.5 | 72.7 | 86.1 | 91.2 | 108.0 | 98.6 | 117.8 | 139.0 | 156.4 |
| Current account[c] | −10.4 | 0.8 | −2.4 | −5.8 | −7.5 | −14.6 | −24.4 | −23.4 | −29.7 | −1.6 | −2.3 | −7.4 | −15.8 |
| Capital account[c] | 11.4 | −1.5 | −1.2 | 3.2 | 8.4 | 25.1 | 27.0 | 33.8 | 15.6 | −10.5 | 4.1 | 15.4 | 16.2 |
| International reserves[c] | 4.2 | 5.7 | 6.6 | 6.9 | 10.3 | 18.1 | 19.3 | 24.3 | 6.1 | 15.7 | 17.5 | 28.0 | 30.1 |
| Foreign investment[c] | 2.1 | 1.4 | 3.9 | 3.5 | 6.0 | 17.5 | 22.4 | 33.3 | 23.1 | −0.2 | 23.2 | 18.3 | 12.0 |
| Direct[c] | 2.1 | 2.0 | 2.9 | 3.2 | 2.6 | 4.8 | 4.4 | 4.4 | 14.9 | 9.5 | 9.7 | 13.2 | 10.7 |
| Portfolio[c] | 0.1 | −0.6 | 1.0 | 0.4 | 3.4 | 12.8 | 18.0 | 28.9 | 8.2 | −9.7 | 13.4 | 5.0 | 1.3 |
| Total foreign debt GDP | 57.5 | 76.0 | 58.9 | 44.6 | 39.2 | 37.2 | 32.4 | 30.4 | 48.7 | 59.4 | 42.6 | 34.0 | 38.3 |
| Foreign debt service of public sector exports of goods and services | 19.2 | 34.7 | 22.0 | 34.3 | 22.5 | 31.2 | 46.3 | 40.4 | 46.1 | 35.7 | 39.9 | 32.7 | — |

*Sources:* Author's estimations based on data from Banco de México (1999); CEPAL (1998c); INEGI (1999); PEF (1999).
*Notes:* a. Preliminary
b. Treasury bills (CETES), 28 days, average period
c. Billion U.S. dollars
d. Refers to total income less total expenditures of public sector

**Figure 3.1 Inflation Rate (1980–1998)**

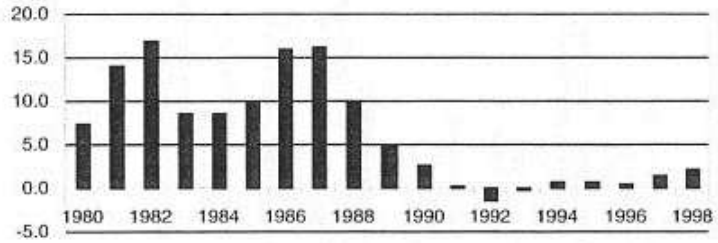



*Source:* Table 3.1.

1987. In 1986–1987 the deficit had reached its highest level, with more than 16 percent of GDP. Moreover, levels since 1980 never were below 8 percent. In contrast, financial deficits since 1990 were below 5 percent of GDP, and even accounted for a surplus in several years (Figure 3.2). From this perspective liberalization was a tremendous success, and even during the 1994–1995 crisis the deficit was kept below 3 percent of GDP. Even with the natural disasters in 1999 and the bail-out of the financial sector, the fiscal deficit is not expected to rise to more than 3 percent of GDP.

Since 1988 foreign investments have surged. Even though foreign investments during 1980–1987 did not account for more than $4 billion annually, they averaged $14.8 billion annually and accumulated more than $162 billion during 1988–1998 (see Table 3.1). During the 1990s, Mexico was one of the most successful nations in attracting foreign investments—portfolio foreign investments represented 50.73 percent during this period—both in absolute and GDP terms.

**Figure 3.2 Financial Deficit/GDP (1980–1998)**




*Source:* Table 3.1.

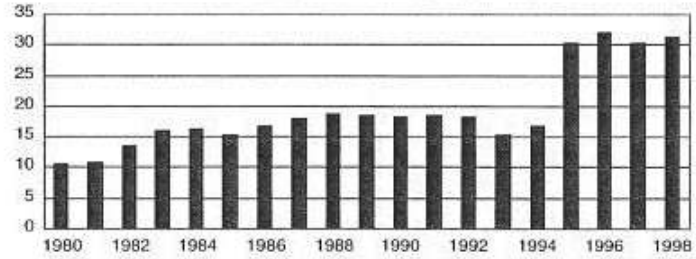


Although foreign investments were expected to decrease during 1999, levels should nevertheless be significantly higher than for the period before liberalization.

Finally, the savings rate as a percentage of GDP has also recently been stressed as a significant variable for macroeconomic success of liberalization since 1988. In this case, however, overall gross savings have not been able to achieve levels similar to those at the beginning of the 1980s. Gross savings, as a percentage of GDP, fell for the period 1988–1995 but have recovered since then. Table 3.1 shows, though, that gross savings have picked up since 1996, and official sources expect that gross savings/GDP will reach 25 percent in 2000. Moreover, it is important to underline the increasing importance of foreign savings, which increased from 1.3 percent of GDP in 1988 to 7.1 percent in 1994, and fell again as the result of the crisis. The latter reflects the increasing dependence of liberalization on foreign capital, whether portfolio or direct investment. As will be discussed in Chapter 5, this capital also accounts for an increasing share of Mexico's total investment.

Probably one of the most impressive areas of success of liberalization is the increasing importance of exports for the total economy. Total exports have increased more than fivefold since 1980, reaching nearly $117.5 billion in 1998, and accounted for 31.24 percent of GDP. As reflected in Figure 3.3., much of this increase in terms of GDP is a result of the crisis of 1994–1995 and the devaluation. Nevertheless, there is a clear trend since 1980 to increase the share of exports for the total GDP. Seen thus, and particularly since 1994,

**Figure 3.3 Exports of Goods and Services as a Percentage of GDP (1980–1998)**



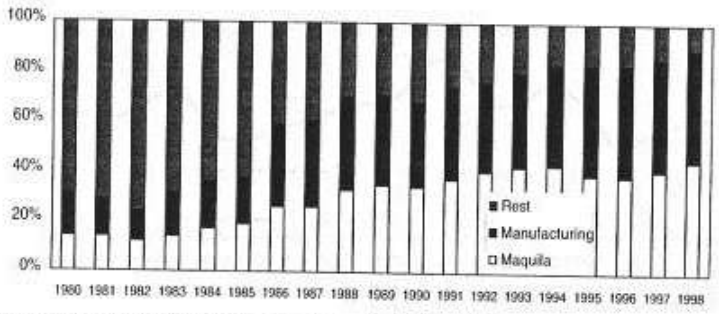

*Source:* Author's calculations based on INEGI (1999).

exports have become the unquestioned motor of Mexico's economy. From a macroeconomic perspective, and in the manufacturing sector, exports have been the main (and practically only) source of growth in Mexico's economy.

The most dynamic sources of total exports have been *maquiladoras* and manufacturing. Although oil exports accounted for 68.50 percent of total exports in 1982, they had fallen to 6.08 percent in 1998. As seen in Figure 3.4, manufacturing, but not including *maquiladoras*,[10] has increased its share of total exports from 12.54 percent in 1982 to 63.41 percent in 1988 to more than 80 percent of goods in 1998. From this perspective, Mexico's private manufacturing export-oriented sector has been the pillar of economic growth since 1988. On the other hand, *maquiladoras* have maintained their share over total exports at around 40 percent during the period 1988–1998, achieving in 1998 their highest share since 1980: 44.99 percent of total exports or $52.9 billion.

It is also important to keep in mind that Mexico's foreign trade has concentrated substantially in recent years. The United States has historically been Mexico's main trading partner. And its role has grown significantly, with a share of total imports and exports increasing from 66.96 percent in 1990 to 80.83 percent in 1998. Its share of imports is over 70 percent: the U.S. export share increased from 68.62 percent to 87.76 percent for the period 1990–1998. The share of other groups of nations, such as those in Latin America, the European Union, and Asia, has declined significantly over the same period. For example, the European Union's share of Mexico's total

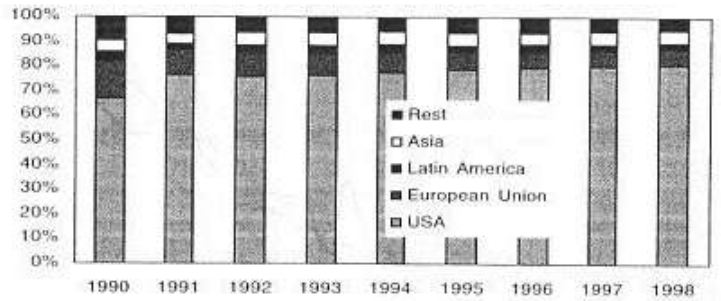
**Figure 3.4 Export Structure (1980–1998) (total = 100%)**




*Source:* Author's calculations based on Banco de México (1999).



**Figure 3.5 Country of Origin of Imports and Exports (1980–1998) (total = 100%)**




*Source:* CEPAL (1999).

trade declined from 15.05 percent in 1990 to 6.43 percent in 1998 (see Figure 3.5).

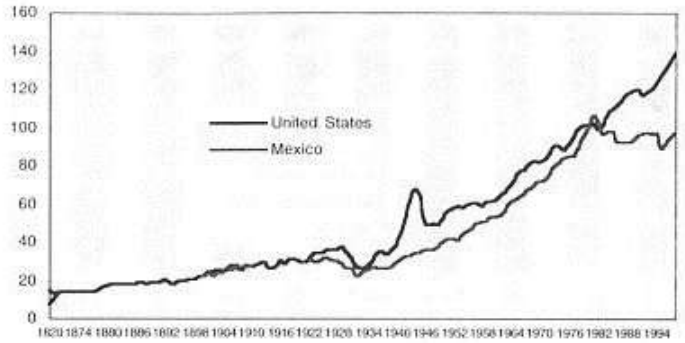
Other variables such as capital and labor productivity also manifest the outstanding performance of Mexico's economy since liberalization.

### *The Impact on Other Macroeconomic Variables*

Clearly, macroeconomics goes well beyond these variables, even in neoclassical textbooks. Besides the "relative success" on inflation, the fiscal deficit, and the attraction of foreign investments, there are other macroeconomic variables that require analysis. In spite of the relative success of liberalization, it is important to refer to the contradictions that resulted strictly from its implementation.

It is possible to see from Table 3.1 (pages 72–73) that other variables such as GDP and GDP per capita—growing at 2.6 and 1.1 percent annually during 1988–1997—had been well below the levels achieved during import substitution, 6.4 percent and 3.1 percent for 1940–1980, respectively. Moreover, the period since 1988 has been characterized not only by slower growth, but also by stronger fluctuations if compared with earlier periods in Mexico's economy. Figure 3.6 also reflects these tendencies in Mexico's economy from 1820 to 1998, in terms of GDP per capita. From this long-term perspective, Mexico's economy boomed from 1940 through 1980 during ISI, while the fall of GDP per capita since the mid-1980s is only comparable with that of the Mexican Revolution from 1910–1921. The gap

**Figure 3.6 GDP per capita (1820–1998) (1980 = 100%)**




*Source:* Maddison (1995) and author's estimations for 1994–1998.

between Mexican and U.S. per capita GDP that evolved after 1980 is comparable only to that of the 1940s.

Although exports have increased, so have imports, resulting in high and increasing trade and current-account deficits since liberalization, as well as in the economic crisis of 1994–1995. In 1995 both deficits fell dramatically because of the crisis. However, they have picked up again since the recovery, at least in terms of GDP.

Nominal and real interest rates, throughout the period have also not declined significantly and, since 1994, have remained relatively high and independent of the inflation levels (see Table 3.1). This remains one of the most significant failures of the liberalization strategy: through 1999, the banking sector has not been able to increase resources for the rest of the economy, in spite of its own massive bailout in 1995 (see Chapter 4). Similarly, Mexico's economy since 1988 has been far from generating the required 1.2 million jobs for Mexico's growing economically active population. Finally, real wages in 1998, after the "lost decade" of the 1980s, are well below the levels of 1980 (Table 3.1 and Chapter 6).

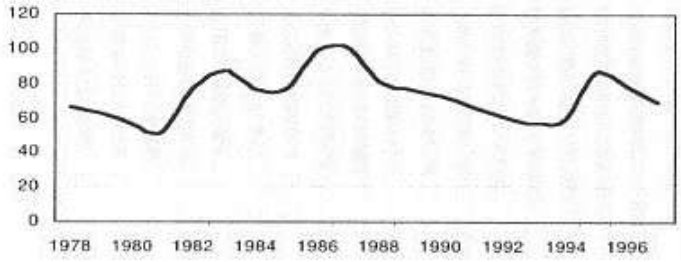
It is important to highlight the issue of the exchange rate in Mexico. As already noted, Mexico's nominal exchange rate (i.e. the price of one U.S. dollar in Mexican pesos) was fixed and controlled during ISI. The 1990s began a slow flexibilization process of the exchange rate, achieving a "dirty flotation" from 1995 onward.[11] Considering that the exchange rate policy was of critical importance



for liberalization—the nominal exchange rate was an "anchor" for inflation—the real exchange rate appreciated continually since 1988 (i.e., imports became cheaper in the domestic market in pesos and Mexican exports more expensive in U.S. dollars in foreign markets. The tendency of the real exchange rate to appreciate was only altered during the crisis of 1994–1995 and the resulting devaluation of the Mexican peso. Independent of the debate on the real exchange rate, the tendency to appreciate the exchange rate since 1988 (Figure 3.7) was a necessary outcome of liberalization.[12] The strategy required controlling the real exchange rate to control inflation; that is, significant devaluations of the Mexican peso, given crucial imported inputs for Mexico's economy, would have generated a relative price increase. Moreover, massive capital inflows, both direct and portfolio investments, also made it possible to keep the real exchange rate relatively overvalued. It is from this perspective that the overvaluation of the real exchange rate is a necessary outcome of liberalization.

This provides one of the first and most astonishing paradoxes of liberalization strategy: although exports are the growth pillar of liberalization, the strategy generates disincentives to export as a result of exchange rate policies. Clearly, after several years, a continuation of the real exchange rate reached sustainability limits, which are reflected in burgeoning current-account deficits and therefore increasing difficulties in financing these deficits. The overvaluation of the real exchange rate was one of the main causes for the crisis of December 1994, but was also a result of the performance of manu-

**Figure 3.7 Real Exchange Rate (1978–1997) (1987 = 100)**




*Source:* Author's calculations based on CEPAL (1998c).

facturing and industrial organizations, as discussed in Chapters 4, 5 and 7.

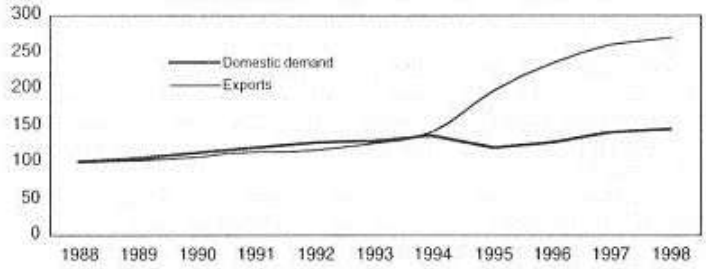
Two other issues are relevant for these general macroeconomic tendencies. Mexico's foreign debt has not been reduced in absolute terms, and accounted for around $161 billion in 1998 (SHCP 1999). During the 1990s total foreign debt, as a percentage of Mexico's GDP, was significantly below the levels of the 1980s, but still accounted for 34.2 percent of GDP and 32.7 percent of exports of goods and services in 1997. Although public-sector foreign debt has remained relatively stable—with the exception of 1995 when *tesobonos*, which were initially domestic public-sector debt, became foreign public-sector debt as a result of the foreign support package—private-sector foreign debt surged, from $5.9 billion in 1988 to $43.7 billion in 1998. For the period 1996–1998 private-sector external debt increased by $17.3 billion. In 1999, for example, private-sector debt servicing accounted for more than $10.5 billion, a huge burden for the country and the private sector itself. Sudden capital flight, international financial fluctuations, and other factors could result in a sudden incapacity to service foreign debt, as during 1994–1995. Moreover, it is important to stress that liberalization, until 1998, has not been able to achieve constant and growing gross fixed-investment/GDP coefficients. As reflected in Table 3.1, the government has substantially retreated from overall investment activities, although the private sector has not been able to substitute for the government in these activities to achieve an aggregate high investment share.

Most of the variables analyzed above are reflected in the increasing polarization of Mexico's economy between the export-oriented and the domestic-oriented sectors. But from a macroeconomic perspective, it is important to point out that domestic demand and exports have performed rather differently. While domestic demand reflected tendencies similar to those of exports during 1988–1994, and this for the first time since the "lost decade" of the 1980s, the period since the crisis of 1994–1995 shows a rapidly widening gap between domestic demand and export performance (see Figure 3.8). This increasing polarization in Mexico's economy, as we shall see, is critical to understanding both liberalization strategy and the structure of Mexico's economy, as well as its potential.

In this context, is it possible to ask whether "the operation was successful but the patient died"? Has liberalization been successful



**Figure 3.8 Exports and Domestic Demand (1988–1998) (1988 = 100)**




*Source:* Author's calculations based on INEGI (1999).

according to its own concepts, theory, and vision, but failed to generate sustainable growth conditions for GDP expansion, investments, trade deficit, employment, and real wages, among other macroeconomic variables? It is possible, however, to stress from a macroeconomic standpoint that, independent of the relative successes of liberalization on its own terms, the strategy generates significant macroeconomic contradictions that will fail to result in sustainable macroeconomic conditions, including a continual appreciation of the exchange rate and overall incentives to increase net imports. Both topics have been of critical importance for Mexico's economy since 1988.

## Notes

1. Inflation refers to a rise in the general price level. In Mexico, the inflation rate is measured according to the price of a basket of selected goods and services that can change over time.

2. "The public will be better served by indirect support of economic activity through deregulation, privatization, trade liberalization, and a competitive environment than by direct government participation in production activities" (Aspe Armella and Gurría 1992, 9).

3. The PSE was signed by the outgoing President de la Madrid, but it was already under the strong influence of the newly elected President Salinas, who was not yet in office.

4. Second-tier banks are financial institutions that offer guarantees or other instruments to firms but that do not channel direct financing.

5. "The clearest symptom for economic stability, or its lack, is the stability or instability of the general level of prices" (PEF 1989a, 57).

6. This issue of achieving a fiscal surplus by decreasing expenditures is of utmost importance, since a surplus can also be achieved, for instance, by increasing government income through new taxes or broadening the population that pays taxes.

7. Other important officials during the Salinas administration stressed that the fiscal deficit is the main source of inflation. "To achieve as soon as possible a position of fiscal equilibrium is the unique consistent strategy with the instrumentation of a sustainable policy of structural change" (Córdoba 1991, 32)

8. In adding to this version of the crisis, other official sources said that bank credit to the private sector increased recklessly and, in the context of rising international interest rates, added to the dynamics of the crisis (Banco de México 1995, 161ff.).

9. Lawrence Summers was very positive about the causes of the crisis and its solution by the Mexican government, stating that "the Mexican crisis does not look like one that will figure prominently in history books written 50 years from now" (Summers 1996, 48).

10. Official statistics since 1991 include *maquiladora* activities in the manufacturing sector, and thus substantially overvalue the share of this sector.

11. This concept reflects the fact that since the end of 1994 the Mexican government has abandoned the fixed exchange rate and that official institutions supposedly do not have to intervene in exchange rate markets, as they did in earlier periods by setting fixed and preferential exchange rates. However, since 1994 the Banco de México continues to intervene in the exchange rate markets through several mechanisms (Banco de México 1996, 1999).

12. Particularly at the end of 1994 and 1995 some authors (Ibarra 1996; Ros 1995) and official institutions (Banco de México 1995) acknowledged that the real exchange rate was significantly overvalued, causing the current-account deficit and the overall crisis in December of 1994. Most of these approaches, however, do not realize that the overvaluation of the exchange rate was the other side of the coin of liberalization strategy to control inflation.

# 4

# The Effects of Liberalization Strategy on Manufacturing and Foreign Trade

The private export-oriented manufacturing sector is at the center of liberalization and should be the generator of Mexico's growth and development. In this context, and independent of macroeconomic trends, what have been the characteristics and development of the manufacturing sector since 1988? Similarly, how has Mexico's foreign trade evolved, particularly the foreign trade generated by manufacturing that has accounted for more than 85 percent of Mexico's total exports (including those by maquiladoras) since the mid-1990s?

Keeping these questions in mind, this chapter is divided in three parts. The first part briefly outlines the programs and policies oriented toward manufacturing and foreign trade since 1988, and the second part analyzes general trends in manufacturing and in Mexico's foreign trade. Finally, the last part examines sectoral and branch-level issues in more depth, which is critical to comprehending the impact of liberalization strategy on manufacturing and foreign trade, and on their structural legacy and potential. As in many other cases, macroeconomic tendencies or aggregated data might hide important features of the structure of the new emerging economy.

## Programs and Perspectives Since 1988: Manufacturing and Foreign Trade

Until the end of the 1970s, Mexico's industrial and foreign trade policies were intertwined and an important part of ISI. Manufacturing had been considered essential to modernizing the country since the 1930s, and foreign trade was understood as a tool to enhance

import substitution and achieve industrial self-sufficiency and economic independence in the long run. The "peaceful coexistence" with TNCs and multiple instruments, such as preferential exchange rates and import licenses and price controls, which in many cases resulted in prohibiting the import of certain commodities, were critical in supporting the private manufacturing sector. Direct intervention by the government in "strategic industries" was of crucial importance for manufacturing, since the intervention provided infrastructure and required inputs. A look at new labor laws and overall political circumstances, known as *corporativismo*, is essential for understanding the period up until the end of the 1970s.

In general, until the end of the 1970s the Mexican government provided a policy framework for a mixed economy in which both the government and the private sector supplied resources for economic development. During the 1970s, under an import-substitution regime the government began to enhance more selective import protection for Mexican industry to allow for increasing exports, particularly for the in-bond (maquiladoras) and automobile industries. The National Plan for Industrial Development (Plan Nacional de Desarrollo Industrial) in 1979 was one of the main industrial programs to promote complementarity between export promotion and ISI (Péres Núñez 1990c). It is in this protected economic environment—at least from the perspective of the 1990s, and not necessarily from the experience of other OECD nations in their respective industrial processes—that 1988 marks an important breakthrough.

However, the industrial structure that has evolved since the 1940s, accounting for important growth rates in labor and capital productivity, substantially increased Mexico's trade balance deficit. Over the period 1970–1981 current-account and trade balance accumulated a $52.1 billion and a $28 billion deficits, respectively. The performance of Mexico's private sector was particularly tenuous because it contributed to a trade deficit of $34 billion for this same period (Dussel Peters 1997). After more than 30 years of state support for Mexico's private manufacturing sector, TNCs during the 1980s continued to perform significantly better than national firms in terms of profit rates, growth rate of GDP, and labor productivity (Blomström and Wolff 1989; Maddison 1989). However, it was this particularly dynamic TNC sector that accounted for the highest current-account deficit, reaching $16.4 billion for 1971–1982. The TNCs accounted for a high degree of intraindustry trade, revealing the specialization of TNCs in areas in which Mexico did not have



traditional comparative advantages, such as electronics, automobiles, and auto parts (Ros 1991; Ruiz Durán, Dussel Peters, and Taniura 1997). By the 1970s, these TNCs were characterized by economies of scale and favorable access to the U.S. and world markets (Perez Núñez 1990a).

So, Mexico's private manufacturing sector was favored throughout 1940–1981 through selective trade, industrial policies, and massive subsidies. Manufacturing as a whole, with few sectoral exceptions, did not generate the conditions to modernize Mexico's economy to reach integration into the world market. On the contrary, increasing technological dependence and specific industrial organization structures (reflected in high intraindustry trade and trade-balance deficits), with few exceptions, did not generate the conditions to allow modernization according to ISI, but instead produced unsustainable macroeconomic conditions that resulted in the crisis of 1982.

Micro- and macroeconomically, ISI manufacturing and trade policies proved increasingly ineffective, both from the perspective of ISI and of EOI, which argued that ISI policies were captured mainly by rentier classes. The "truncated industrialization" (Fajnzylber 1983) was economic and political, and it reflected the inability of Mexico's private manufacturing sector to develop sufficiently beyond the first easy ISI. These elements paved the way for the breakdown of four decades of Mexico's ISI, the "Mexican miracle." The conceptual framework of EOI in the context of the respective *pactos económicos* since 1987 radically transformed the approach and function of industrial and trade policies.

From this perspective, industrial and trade policies since 1988 have functioned for the objectives of a liberalization strategy. In contrast to previous periods, a "horizontal" or neutral industrial policy—that is, one affecting all firms and sectors equally and avoiding any form of selection and subsidies—became the new catchword in industrial and trade policies after 1988.[1] Assuming in general that macroeconomic changes would induce microeconomic and structural changes in manufacturing, industrial and trade policies focused on (1) liberalizing the import regime; (2) achieving overall economic deregulation; and (3) abolishing price controls, subsidies, state intervention, direct state ownership in firms, and earlier sectoral programs.

Following the crisis December of 1994, the industrial program for 1995–2000 (PEF 1996) initially attempted to present several

doubts about prior industrial and trade policies,[2] but such doubts were put aside because of the economy's GDP recovery after 1996 and the apparently redundant mechanisms to enhance foreign trade and manufacturing in general.

Although industrial policy had been subordinated to macroeconomic policies in previous times, industrial and trade policies were subordinated not only in practice to liberalization but also theoretically—consistent with assumptions of generating a "market-friendly" environment for the private export-oriented sector. As was stated by a former secretary of commerce and industrial development: "The premises of the program were stability and openness, since Mexico's experience, and that of many other nations have ratified that, without them, it is not possible to develop an effective industrial policy, since investment declines and competitiveness falls, as well as wages and employment. This is the reason for the emphasis in fighting inflation and perfecting openness" (Serra Puche 1994, 8).

Even after the crisis of December 1994, the Mexican government publicly stated that "economic openness has generated the basis for a productive establishment of international competitiveness, [and] as a result of the modernization of its national industry during the last years . . . [it] constitutes a solid base to extend conditions for international competitiveness to all the national production infrastructure" (PEF 1995, 5).

By the end of 1985, import liberalization had already begun. Most official import prices and licenses were replaced by tariffs (Ten Kate and de Mateo 1989). In 1986, Mexico continued import liberalization, including the elimination of official import prices, to join the GATT, and by the end of 1987 this process had been accelerated unilaterally through the *pacto económico* (Blanco Mendoza 1994; Zabludovsky 1990). Since the end of this period, and with few changes, import tariffs have accounted for five different levels between a minimum of 0 percent and a maximum of 20 percent *ad valorem*. Table 4.1 reflects the quick pace of import liberalization; 1987 was a watershed for the average tariff for Mexican imports, falling from 24.5 percent in 1986 to 11.8 percent in 1987. The weighted average tariff also displays similar tendencies and represents less than 3 percent since 1996.

This fast and unilateral import liberalization was accomplished with little discussion or input from other economic and social sectors in Mexico. The liberalization was made possible in this short time because PRI had the required majority to pursue legal reforms.[3]



**Table 4.1 Import Tariff Structure (1980–1997)**

| | 1980 | 1985 | 1986 | 1987 | 1988 | 1990 | 1994 | 1998 |
|---|---|---|---|---|---|---|---|---|
| Average Tariff | 22.8 | 28.5 | 24.5 | 11.8 | 10.2 | 12.5 | 12.5 | 13.1 |
| Tariff Dispersion | 25.4 | 25.3 | 17.9 | 7.8 | 7.8 | 6.4 | 7.9 | 6.5 |
| Tariff Levels | — | 10 | 11 | 5 | 5 | 5 | 5 | 5 |

*Sources:* Banco de México (1999); PEF (1999); SECOFI (1999).

Interestingly, some of the few exemption programs that remain after import substitution referred to temporary imports, duty-free, to be exported, including the maquiladora program (Perez Motta 1991; PEF 1999; Sánchez Ugarte, Fernandez Pérez, and Pérez Motta 1994). Three export promoting programs that still exist are relevant in this context.

1. The Program for Temporary Imports to Produce Export Products (Programa de Importación Temporal para Producir Artículos de Exportación, PITEX), since 1985. It allows exporters to import temporarily different goods used for the elaboration of exports. These imports do not pay any tariffs and value-added taxes.
2. The High-Exporting Firms program (Empresas Altamente Exportadoras, ALTEX), since 1986. Firms that export directly more than $2 million or 40 percent of their sales, or indirectly 50 percent of their sales, can benefit from ALTEX. The ALTEX program promotes fiscal and administrative mechanisms for firms that export Mexican products, including quick return of value-added taxes and quick revisions in customs.
3. The Program for Exporting Maquilas (Programa de Maquila de Exportación), initiated in 1965, allows exporters to temporarily import goods necessary for use in the alteration or repair of products, as well as for services required for the export process. These needed goods can enter free of duty and do not have to pay value-added taxes.

In 1998 maquila, or in-bond, exports accounted for 45.02 percent of overall exports (see Chapter 4.2), while PITEX and ALTEX have also been relevant in exports promotion.[4] However, there has been no evaluation of the costs (particularly fiscal losses) and benefits of these programs.

**Table 4.2 Tariff Schedule: Percentage of U.S. and Canadian Imports Entering Mexico Duty-Free Under NAFTA (1991)**

| | United States | Canada |
|---|---|---|
| Immediate | 41.4 | 41.0 |
| 5 years | 19.3 | 18.6 |
| 10 years | 37.7 | 38.5 |
| 15 years | 1.6 | 1.9 |

*Source:* BANCOMEXT (1994).

From this perspective, other trade agreements such as NAFTA, implemented on January 1, 1994, enhanced an ongoing process that had already begun in the mid-1980s. This agreement is of particular importance for Mexico since trade with the United States accounts for 85 percent of total trade since the mid-1990s. Table 4.2 shows the percentage of all imports in 1991, or 5,900 products, from the United States and Canada (41.4 and 41.0 percent, respectively), of which 80 percent was capital goods (e.g., machinery and equipment, nonautomobile transportation equipment, chemical products not produced in Mexico), that entered free of duty in January 1994. The rest of imports are to enter free of duty between 1998 and 2008: 2,500 items in 1998, and 3,300 items, which represent 38 percent of imports from the United States and Canada in 2003, and the rest by 2008.[5] It is important to note that tariff policies and structures do generate strong incentives to create trade with NAFTA members, while tariffs for non-NAFTA members are significantly higher.[6]

The second important issue in foreign trade and industrial policy since 1988 refers to deregulation, that is, the general mechanisms and instruments that allow better functioning of Mexico's private export-oriented manufacturing sector. Information services covering foreign markets and commercialization,[7] modernization of customs procedures, ports, and railroads; and measures to counter bureaucratic obstacles were at the center of the deregulation. In addition to these measures, price controls were abolished because they "impose high costs on producers and limit competition through unjustifiable high prices, discriminate among diverse productive agents, discourage productivity, and result in an inefficient allocation of resources" (Martínez and Fárber 1994, 11).

However, the privatization of state-owned enterprises (*paraestatales*) since 1988 was probably the most significant measure in this



deregulation process. As seen in Chapter 3, between 1988 and 1993 the *paraestatales* were reduced significantly, and since then several changes to the Mexican constitution have allowed for the further privatizing of former "strategic" sectors, such as secondary petrochemicals, railroads, public transportation, airports, and ports.[8] Measures to allow foreign investment (to be be analyzed in Chapter 5) in sectors that were previously restricted also permitted an intensification of private and foreign activities in Mexico's economy.

Finally, most firm- and sectoral-level industrial policies were abolished. Such action is closely tied to one of liberalization's priorities: the control of the fiscal deficit and the elimination of overall subsidies to allow for a market-friendly allocation of resources in the private sector. As price controls, with a few exceptions, have been abolished, traditional export measures have been dismantled and replaced by "self-financing" programs.[9] Reimbursement for indirect taxes and the traditional export program were eliminated by the mid-1980s. Moreover, since 1988 the traditional development banks, Banco de Comercio Exterior (BANCOMEXT) and Nacional Financiera (NAFIN), which in earlier periods had financed firm- and sectoral-level projects according to industrial priorities and "strategic" sectors, currently offer financing under market conditions and have become second-tier banks. Local-content requirements for such industries as automobiles, auto parts, and electronics have been diminished since 1994, and will be abolished gradually under NAFTA. Interestingly, several programs remaining from the pre-NAFTA period 1988–1994, including automobiles and computers, are aimed at sectors dominated by TNCs. Until 1999 most of the existing promotion programs did not constitute a direct fiscal burden for the government, such as the maquila program, PITEX, and ALTEX.[10]

It should be kept in mind that almost all federal programs today offer different kinds of information (through the Internet and expositions) to potential firms to be established in Mexico. Programs such as the Mexican Business Information System (Sistema de Información Empresarial Mexicano, SIEM) and other real or virtual matchmaking programs offered by SECOFI, NAFIN, and BANCOMEXT are the main industrial policy instruments today. Similarly, the main development banks (NAFIN and BANCOMEXT) have until very recently offered loans based exclusively on commercial interest rates.[11] Of the remaining programs it is important to highlight the following (PEF 1999).[12]

1. The Program to Promote Industrial Clusters (*Programa para Promover Agrupamientos Industriales*), initiated by SECOFI in 1998, is probably one of the most relevant programs since 1988. Based on a study of nine clusters in Mexico, the program attempts to generate a common vision among business, state governments, and the federal government, and to take advantage of local and regional specialization patterns, in addition to strengthening linkages with other firms and sectors. In general this program does not include financing, but it does not exclude firms from participating in other programs.
2. The Network of Regional Centers for Business Competitiveness (*Red de Centros Regionales para la Competitividad Empresarial*, CRECE) has offered (since the mid-1990s) consulting support to micro, small, and medium enterprises (MSMFs),[13] which are of 100 percent Mexican ownership, established in Mexico, and at least 2 years old. The objective is to solve technical and organizational problems in these firms. CRECE offers financial consulting activities that include an evaluation of the respective firms and overall diagnoses and measures to increase competitiveness. Regional business chambers and SECOFI finance CRECE. By June 1999, CRECE had already been established in all Mexican states[14] and had provided support to more than 5,150 small and medium firms (around 160 firms per state), resulting in income increases of 33 percent on average, preserving approximately 20,000 jobs, and creating almost 2,000 new jobs.
3. The National Committee of Productivity and Technological Innovation (*Comité Nacional de Productividad e Innovación Tecnológica*, COMPITE) was created in 1996. COMPITE offers specialized and certified courses for manufacturing activities. Certified consultants initially check a firm at no cost, and then the firm has to pay for half the cost of the course (around $1,500 in 1999). Up until 1999 COMPITE had taught more than 800 such courses, which covered just-in-time measures, optimization of inventories, introduction of new machinery and equipment, and measures to save space and minimize costs—resulting in productivity increases of over 100 percent in some cases.
4. The Program for Developing Subcontractors (*Programa de Desarrollo de Proveedores*) was established in March 1999 in conjunction with SECOFI and NAFIN. This is probably one of the most important programs since 1988. Acknowledging the problems with Mexico's forward and backward value-added linkages, the program's main objective is to provide quick working capital for subcontractors' specific contracts. With specific requirements, NAFIN offers automatic guarantees for commercial banks as well as direct loans for demonstration processes or products. These loans may not exceed 50 percent of the value of the contract, or a maximum of around $650,000. Initially, the program will offer these options to firms subcontracting for the government, but expects to broaden the program in 1999 to include other firms oriented toward the private sector. So far 43 agreements have been signed.[15]



Independent of the above programs, overall financing to the private sector, including loans granted by development banks, by 1998 had not achieved levels in real terms equal to those of 1994. During 1994–1998 development banks had substantially reduced the number of their employees by 34.4 percent, and, in terms of Mexico's GDP, loans granted fell by 41.2 percent.[16]

## Manufacturing: General Trends Since 1988

According to the last Industrial Census of 1999, 361,000 firms represent the manufacturing sector. A smaller sample of manufacturing firms, provided by the Instituto Mexicano del Seguro Social (IMSS), divided into micro, small, medium, and big firms, allows for an in-depth analysis of some of these firms' directions since 1988 (SECOFI 1999).

As in many other countries, MSMFs accounted for around 98 percent of manufacturing firms during 1988–1998, and few changes can be observed in this. However, as reflected in Table 4.3, the years 1994 and 1995 show the important negative effect of the crisis of those years on these firms, accounting for an average growth rate of total firm generation of –1.5 percent and –5.7 percent, respectively. Moreover, big firms (i.e., those with more than 250 workers) present an average annual growth rate (AAGR) of 4.2 percent for 1988–1998, while MSMFs only account for 2.5 percent. Employment data for manufacturing at this level are significant from more than one perspective.

**Table 4.3 MSMFs: Number of Firms and Employment in Manufacturing (1988–1998)**

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1988–1998 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Number of firms | | | | | | |
| Micro | 76,526 | 81,332 | 92,556 | 99,695 | 101,446 | 99,279 | 97,996 | 93,194 | 93,600 | 97,479 | 100,062 | 23,536 |
| Small | 17,668 | 18,281 | 19,685 | 20,279 | 19,895 | 18,633 | 18,070 | 16,278 | 17,543 | 18,755 | 19,853 | 2,185 |
| Medium | 2,941 | 3,209 | 3,266 | 3,364 | 3,297 | 3,164 | 3,230 | 3,050 | 3,382 | 3,579 | 3,861 | 920 |
| Subtotal | 97,135 | 102,822 | 115,507 | 123,338 | 124,638 | 121,076 | 119,296 | 112,522 | 114,525 | 119,813 | 123,776 | 26,641 |
| Big | 2,104 | 2,279 | 2,386 | 2,427 | 2,367 | 2,270 | 2,347 | 2,285 | 2,629 | 2,933 | 3,165 | 1,061 |
| Total | 99,239 | 105,101 | 117,893 | 125,765 | 127,005 | 123,346 | 121,643 | 114,807 | 117,154 | 122,746 | 126,941 | 27,702 |
| | | | | | | Employment | | | | | | |
| Micro | 317,157 | 338,304 | 384,465 | 412,389 | 415,757 | 402,224 | 394,145 | 365,139 | 375,100 | 392,676 | 406,312 | 89,155 |
| Small | 664,556 | 690,927 | 737,230 | 756,650 | 740,870 | 696,195 | 673,779 | 610,238 | 657,274 | 707,062 | 748,908 | 84,352 |
| Medium | 458,683 | 500,866 | 512,280 | 524,447 | 510,398 | 493,040 | 506,204 | 478,637 | 525,814 | 558,384 | 606,178 | 147,495 |
| Subtotal | 1,440,396 | 1,530,097 | 1,633,975 | 1,693,486 | 1,667,025 | 1,591,459 | 1,574,128 | 1,454,014 | 1,558,188 | 1,658,122 | 1,761,398 | 321,002 |
| Big | 1,452,801 | 1,575,515 | 1,635,629 | 1,676,931 | 1,601,142 | 1,542,905 | 1,646,369 | 1,612,342 | 1,876,427 | 2,125,280 | 2,352,634 | 899,833 |
| Total | 2,893,197 | 3,105,612 | 3,269,604 | 3,370,417 | 3,268,167 | 3,134,364 | 3,220,497 | 3,066,356 | 3,434,615 | 3,783,402 | 4,114,032 | 1,220,835 |
| | | | | | | Number of firms (percentage of total) | | | | | | |
| Micro | 77.11 | 77.38 | 78.51 | 79.27 | 79.88 | 80.49 | 80.56 | 81.17 | 79.89 | 79.42 | 78.83 | 79.37 |
| Small | 17.80 | 17.39 | 16.70 | 16.12 | 15.66 | 15.11 | 14.85 | 14.18 | 14.97 | 15.28 | 15.64 | 15.74 |
| Medium | 2.96 | 3.05 | 2.77 | 2.67 | 2.60 | 2.57 | 2.66 | 2.66 | 2.89 | 2.92 | 3.04 | 2.79 |
| Subtotal | 97.88 | 97.83 | 97.98 | 98.07 | 98.14 | 98.16 | 98.07 | 98.01 | 97.76 | 97.61 | 97.51 | 97.91 |
| Big | 2.12 | 2.17 | 2.02 | 1.93 | 1.86 | 1.84 | 1.93 | 1.99 | 2.24 | 2.39 | 2.49 | 2.09 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| | | | | | | Employment (percentage of total) | | | | | | |
| Micro | 10.96 | 10.89 | 11.76 | 12.24 | 12.72 | 12.83 | 12.24 | 11.91 | 10.92 | 10.38 | 9.88 | 11.47 |
| Small | 22.97 | 22.25 | 22.55 | 22.45 | 22.67 | 22.21 | 20.92 | 19.90 | 19.14 | 18.69 | 18.20 | 20.96 |
| Medium | 15.85 | 16.13 | 15.67 | 15.56 | 15.62 | 15.73 | 15.72 | 15.61 | 15.31 | 14.76 | 14.73 | 15.48 |
| Subtotal | 49.79 | 49.27 | 49.97 | 50.25 | 51.01 | 50.77 | 48.88 | 47.42 | 45.37 | 43.83 | 42.81 | 47.91 |
| Big | 50.21 | 50.73 | 50.03 | 49.75 | 48.99 | 49.23 | 51.12 | 52.58 | 54.63 | 56.17 | 57.19 | 52.09 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| | | | | | | Number of firms (growth rate) | | | | | | |
| Micro | — | 6.3 | 13.8 | 7.7 | 1.8 | −2.1 | −1.3 | −4.9 | 0.4 | 4.1 | 2.6 | 2.7 |
| Small | — | 3.5 | 7.7 | 3.0 | −1.9 | −6.3 | −3.0 | −9.9 | 7.8 | 6.9 | 5.9 | 1.2 |
| Medium | — | 9.1 | 1.8 | 3.0 | −2.0 | −4.0 | 2.1 | −5.6 | 10.9 | 5.8 | 7.9 | 2.8 |
| Subtotal | — | 5.9 | 12.3 | 6.8 | 1.1 | −2.9 | −1.5 | −5.7 | 1.8 | 4.6 | 3.3 | 2.5 |
| Big | — | 8.3 | 4.7 | 1.7 | −2.5 | −4.1 | 3.4 | −2.6 | 15.1 | 11.6 | 7.9 | 4.2 |
| Total | — | 5.9 | 12.2 | 6.7 | 1.0 | −2.9 | −1.4 | −5.6 | 2.0 | 4.8 | 3.4 | 2.5 |
| | | | | | | Employment (growth rate) | | | | | | |
| Micro | — | 6.7 | 13.6 | 7.3 | 0.8 | −3.3 | −2.0 | −7.4 | 2.7 | 4.7 | 3.5 | 2.5 |
| Small | — | 4.0 | 6.7 | 2.6 | −2.1 | −6.0 | −3.2 | −9.4 | 7.7 | 7.6 | 5.9 | 1.2 |
| Medium | — | 9.2 | 2.3 | 2.4 | −2.7 | −3.4 | 2.7 | −5.4 | 9.9 | 6.2 | 8.6 | 2.8 |
| Subtotal | — | 6.2 | 6.8 | 3.6 | −1.6 | −4.5 | −1.1 | −7.6 | 7.2 | 6.4 | 6.2 | 2.0 |
| Big | — | 8.4 | 3.8 | 2.5 | −4.5 | −3.6 | 6.7 | −2.1 | 16.4 | 13.3 | 10.7 | 4.9 |
| Total | — | 7.3 | 5.3 | 3.1 | −3.0 | −4.1 | 2.7 | −4.8 | 12.0 | 10.2 | 8.7 | 3.6 |

*Source:* Author's calculations based on IMSS (SECOFI 1999).

1. In general, employment generation for 1988–1998 accounted for an AAGR of 3.6 percent and was significantly below Mexico's annual growth rate of economically active population (see Chapter 6).
2. Big firms accounted for significantly more employment generation than MSMFs. During 1988–1998, the AAGR in employment by big firms was 4.9 percent and more than doubled the dynamism of MSMFs at 2.0 percent. Small firms with an AAGR of 1.2 percent have been the less dynamic sector in employment generation.
3. As a result, the share of MSMFs fell from 49.79 percent of total employment in manufacturing in 1988 (though achieving levels above 51 percent in 1992) to 42.81 percent in 1998, the lowest employment level since 1980. Individually, MSMFs decreased their employment share for 1988–1998.
4. Big firms accounting for 3,165 firms, or 2.49 percent, of all manufacturing firms in 1998 represented 57.19 percent of total employment in manufacturing.

These trends show that MSMFs have had the most difficulty in adjusting to liberalization since 1988 and that they were particularly hit by the crisis of 1994–1995, from which they have not recovered yet in terms of new firms and employment generation.

The latter tendencies are complemented by firm-level data for the main exporting firms established in Mexico. Table 4.4 shows that the share of the biggest firms, both national and foreign, established in Mexico during 1993–1998 (between 264 and 312 firms) increased constantly, accounting for 59.16 percent of total exports in 1996 and falling to 43.48 percent in 1998. Their share fell in 1997–1998 as a result of declining oil revenues of Petróleos Mexicanos (PEMEX). Interestingly enough, although exports by Mexico's biggest national firms declined from 35.76 percent in 1993 to 24.33 percent in 1998, foreign firms substantially increased their share from 14.36 percent in 1993 to 19.15 percent for the same period. Maquila firms (3,130 firms in 1998) produced 41.49 percent of total exports during 1993–1998 (maquila and main exporting firms accounted for 93.35 percent of total exports for the period) while accounting for only 5.59 percent of total employment. Mexican exports, therefore, reflect a high concentration in a limited set of firms, other firms in Mexico representing only 6.65 percent of all exports during 1993–1998.[17]



**Table 4.4 Firm-level Concentration of Mexican Exports (1993–1998) (exports in thousands of dollars, employment in thousands)**

| Million U.S. Dollars | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|
| Maquila | | | | | | |
| Exports | 21,853 | 26,269 | 31,103 | 36,920 | 45,166 | 52,864 |
| Employment | 547 | 601 | 681 | 799 | 938 | 1,039 |
| Main exporting firms[a] | | | | | | |
| Exports | 26,008 | 32,011 | 44,811 | 56,795 | 56,976 | 51,074 |
| Employment | 1,002 | 994 | 1,243 | 1,348 | 1,276 | 1,333 |
| Foreign[b] | | | | | | |
| Exports | 7,452 | 10,084 | 12,878 | 20,308 | 22,310 | 22,497 |
| Employment | 147 | 169 | 216 | 239 | 227 | 232 |
| National | | | | | | |
| Exports | 18,556 | 21,927 | 31,933 | 36,487 | 34,667 | 28,577 |
| Employment | 855 | 825 | 1,027 | 1,110 | 1,049 | 1,101 |
| Total exports | 51,886 | 60,882 | 79,542 | 96,000 | 110,431 | 117,450 |
| Total employment | 32,534 | 33,208 | 33,881 | 35,226 | 37,360 | 38,618 |
| **Percentage of Total Exports of Goods and Services** | | | | | | |
| Maquila | | | | | | |
| Exports | 42.12 | 43.15 | 39.10 | 38.46 | 40.90 | 45.01 |
| Employment | 1.68 | 1.81 | 2.01 | 2.27 | 2.51 | 2.69 |
| Main exporting firms[a] | | | | | | |
| Exports | 50.13 | 52.58 | 56.34 | 59.16 | 51.59 | 43.48 |
| Employment | 3.08 | 2.99 | 3.67 | 3.83 | 3.42 | 3.45 |
| Foreign[b] | | | | | | |
| Exports | 14.36 | 16.56 | 16.19 | 21.15 | 20.20 | 19.15 |
| Employment | 0.45 | 0.51 | 0.64 | 0.68 | 0.61 | 0.60 |
| National[c] | | | | | | |
| Exports | 35.76 | 36.01 | 40.15 | 38.01 | 31.39 | 24.33 |
| Employment | 2.63 | 2.48 | 3.03 | 3.15 | 2.81 | 2.85 |
| Total exports | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Total employment[d] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

*Sources:* Author's calculations based on Banco de México (1999); *Expansión* (several years) and PEF (1999).
a. For 1993 and 1994, 264 and 283 firms were considered; for 1995, 1996, 1997, and 1998, 302, 312, 300, and 305, respectively.
b. Firms with a majority of foreign capital. For 1993 and 1994, 54 firms were considered; for 1995, 1996, 1997, and 1998, 78, 66, 72, and 74, respectively.
c. Firms with a majority of national capital. For 1993 and 1994, 210 and 220 firms were considered; for 1995, 1996, 1997, and 1998, 224, 246, 228, and 231 firms, respectively.
d. Refers to total occupied population (PEF 1999). 1994 was estimated from the same source.

It is important to recall that the most impressive export growth, in addition to maquila exports, is a result of intraindustry trade (i.e., trade within the same industries).[18] Intrafirm trade—particularly among TNCs in such sectors as automobiles and auto parts, electronics, machinery, and, in general, maquiladoras—represents a large share of total intraindustry trade, although it has not been possible to measure the specific degree. Intraindustry trade accounted for 42.92 percent of total trade in 1990 and increased to 49.26 percent in 1998 (see Table 4.5). Moreover, sectors at the four-digit level of the Harmonized Tariff System with an intraindustry trade coefficient (IITC) higher than 0.5 increased from 330 in 1990 to 453 in 1998 and increased their share of total exports from 47.70 percent to 59.00 percent for the same period. These trade tendencies indicate that intraindustry trade has accounted for an increasing share of overall trade growth. Thus, marginal intraindustry trade has increased substantially since NAFTA and the crisis of 1994–1996.[19] For the period 1990–1994, 55 percent of total trade was a result of intraindustry trade increase, but this percentage rose to 61 percent for 1994–1998 (León González Pacheco 1999). This trade reflects a new pattern in the industrial organization of Mexico's economy, and particularly of the dynamic and export-oriented sectors.

**Table 4.5 Intraindustry Trade (1990–1998)**

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|
| Intraindustry trade / total trade | 42.92 | 41.79 | 41.13 | 42.35 | 44.29 | 45.55 | 46.10 | 48.46 | 49.26 |
| Share over total exports of IITC > 0.5[a] | 47.70 | 48.77 | 49.44 | 49.37 | 53.20 | 47.33 | 52.64 | 55.10 | 59.00 |
| Share over total imports of IITC > 0.5[a] | 42.47 | 39.87 | 36.45 | 37.58 | 40.01 | 47.88 | 52.96 | 48.71 | 47.00 |
| Marginal intraindustry trade | — | 0.25 | 0.37 | 0.23 | 0.62 | 0.00 | 0.98 | 0.71 | 0.47 |
| Numbers of sectors with an IITC > 0.5 | 330 | 409 | 405 | 390 | 393 | 457 | 456 | 466 | 453 |
| Total number of considered sectors | 1,242 | 1,246 | 1,244 | 1,240 | 1,242 | 1,248 | 1,248 | 1,246 | 1,247 |

*Source:* León González Pacheco (1999).
*Note:* a. Refers to all four-digit sectors that present an IITC higher than 0.5.



The increasing weight of intraindustry trade is significant from several perspectives. For one, it indicates that trade in Mexico has specialized in products that are also increasingly imported. Moreover, and contrary to EOI and neoclassical economic trade theories that assumed that Mexico would specialize in trade in labor-intensive sectors, particularly capital-intensive sectors such as automobiles and auto parts have substantially increased their share of total exports and their degree of intraindustry trade.

Furthermore, financing for the private sector by national institutions has had a negative growth rate since 1995; 1998 levels are below of those of 1989. As a result of liberalization in general, and more specifically of high real interest rates since 1988, the financial crisis of 1994–1995, a high percentage of bad loans, and the ability of big firms to issue debt and bonds on international markets, most Mexican firms have difficulty in finding formal financing channels in their own country. Paradoxically, and in spite of the high financing requirements for modernization, most Mexican development banks have not been able to place their total portfolio since 1994. To some, this signifies a lack of "effective demand"; for others, it is a result of learning from the crisis of 1994–1995, when interest rates reached levels above 100 percent for several months, as well as the inability to pay high real interest rates since then.

In addition, Mexico's manufacturing sector, and only including trade of goods (i.e., not including maquiladora activities), has been characterized by several important structural changes (see Table 4.6).

1. GDP growth since 1988 oscillated a lot until 1998. Yet manufacturing's share over total GDP remained relatively stable, at around 21 percent of total GDP throughout the period.
2. The share of manufacturing's employment as a percentage total employment fell significantly, from 12.61 percent in 1988 to around 11.50 percent since 1997. This tendency not only reflected the higher capital intensity of the sector (capital/employment) than the rest of the economy, but also limitations in generating employment.
3. In terms of productivity, manufacturing outperformed the rest of the economy. Labor and capital productivity increased by 24.8 percent and 15.02 percent during 1988–1996, and both at a significantly higher growth rate than that of the total economy.
4. Manufacturing probably performed most successfully in terms of exports. Not including maquiladora activities, manu-

**Table 4.6 General Trends in the Manufacturing Sector (1988–1998) (does not include maquiladora activities)**

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997p | 1998e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GDP[a] | — | 7.90 | 6.80 | 3.40 | 4.20 | –0.70 | 4.10 | –4.90 | 10.90 | 10.00 | 7.40 |
| GDP[b] | 23.86 | 21.90 | 20.80 | 20.59 | 20.25 | 19.04 | 18.76 | 20.86 | 21.54 | 21.71 | 21.97 |
| Employment[a] | — | 4.40 | 3.40 | 1.00 | 2.20 | –2.10 | –2.10 | –5.30 | 7.30 | 3.30 | 4.50 |
| Employment[b] | 12.61 | 12.79 | 12.62 | 12.38 | 12.44 | 12.05 | 11.50 | 11.21 | 11.63 | 11.50 | 11.65 |
| Labor productivity (1988=100) | 100.00 | 103.35 | 106.73 | 109.33 | 111.43 | 113.02 | 120.20 | 120.68 | 124.80 | — | — |
| Labor productivity (total economy=100) | 147.68 | 150.71 | 155.27 | 157.11 | 157.05 | 158.01 | 165.03 | 171.44 | 174.32 | — | — |
| Capital productivity (1988 = 100) | 100.00 | 111.09 | 123.98 | 127.54 | 129.53 | 120.41 | 116.67 | 105.48 | 115.02 | — | — |
| Capital productivity (total economy=100) | 43.25 | 45.96 | 48.60 | 49.81 | 50.76 | 48.12 | 46.44 | 46.23 | 49.50 | — | — |
| Export of goods[a] | — | 3.10 | 7.00 | 7.40 | 4.30 | 9.90 | 20.20 | 48.50 | 20.80 | 18.00 | 11.40 |
| Export of goods[b] | 63.41 | 60.70 | 57.96 | 63.80 | 64.78 | 69.84 | 73.22 | 77.49 | 76.45 | 78.00 | 84.08 |
| Export of goods (1988=100) | 100.00 | 103.11 | 110.36 | 118.52 | 123.61 | 135.90 | 163.36 | 242.55 | 292.91 | 345.63 | 385.03 |
| Import of goods[a] | — | 22.30 | 24.60 | 22.90 | 23.60 | 0.40 | 20.30 | –27.70 | 24.10 | 25.20 | 14.50 |
| Import of goods[b] | 90.33 | 91.18 | 92.70 | 94.12 | 93.69 | 94.77 | 94.40 | 93.71 | 91.94 | 91.11 | 91.56 |
| Import of goods (1988=100) | 100.00 | 122.32 | 152.41 | 187.24 | 231.47 | 232.32 | 279.44 | 201.92 | 250.64 | 313.80 | 359.30 |
| Trade balance (million $) | –6,245 | –10,647 | –15,088 | –20,632 | –29,429 | –27,704 | –32,597 | –7,465 | –11,517 | –13,129 | –16,700 |
| Trade balance/GDP | –15.40 | –23.70 | –30.16 | –34.84 | –43.70 | –39.24 | –44.90 | –13.69 | –17.69 | –18.57 | –20.89 |

*Source:* own calculations based on INEGI (Sistema de Cuentas Nacionales, 1999) and Banco de México (1999).
*Notes:* a. Annual growth rate.
b. Percentage of total economy.
e. Estimations.
p. Preliminary.



facturing's share increased from 63.41 percent in 1988 to more than 80 percent of total exports of goods in 1998.

5. However, and in spite of GDP and export growth, manufacturing has not been able to overcome its most severe structural limitation since import substitution: its high trade deficit. Thus, exports have been increasing, but so have imports, resulting in a high, increasing, and unsustainable trade deficit. This lack of endogenous growth conditions, which has deepened since the implementation of liberalization in 1988, suggests that manufacturing requires high and increasing imports to allow GDP and export growth. From this perspective, the trade deficit since 1988 increased sharply, from $6.3 billion in 1988 to $32.6 billion in 1994 and fell during 1995 as a result of the crisis. Since the apparent recovery of Mexico's economy in 1996, the trade deficit in manufacturing has again increased substantially. It is important to recall in this context that this trade deficit by no means generates an automatic mechanism for its financing (Banco de México 1995). On the contrary, Mexico's economy and society have to finance these deficits by different means, either by achieving a trade surplus in other sectors (such as oil or agriculture) or by attracting foreign investments through high real interest rates.
6. Independent of the absolute value of the trade deficit of manufacturing, it is important to relate the trade deficit to manufacturing's GDP, that is, as a coefficient that reflects the penetration of net imports. From this perspective, the trade balance/GDP coefficient increased from –15.40 percent in 1988 to –44.90 percent in 1994. These high levels had not been reached in Mexico since the 1960s.

## Manufacturing: Sectoral Trends

Mexico's National Accounting System disaggregates the manufacturing sector into 49 branches, allowing an in-depth analysis of different variables for the 1988–1996 period.

Given the polarized performance of manufacturing since liberalization, as well as the theory of EOI, it is useful to group the 49 manufacturing branches according to specific criteria. In this case, manufacturing branches were classified according to their AAGR in terms of exports for the postliberalization period, 1988–1996.[20] Further-

more, subgroups of branches within each of the groups were established. Hence, the branches with an AAGR of GDP higher than manufacturing's average during 1988–1996 are in group A, while the branches with an AAGR of GDP lower than manufacturing's average are in group B (Table 4.7).

Although there are different grouping criteria (Casar et al. 1990; Dussel Peters 1997), this typology is useful for various reasons. It attempts to evaluate liberalization strategy by its own main variables: exports and GDP as a proxy for capital accumulation. Moreover, both variables are important because exports have been the motor for GDP growth since 1988. Thus, it is anticipated that group I with its 16 branches, but particularly the six branches of group I.A, will represent the "leading" branches of the Mexican manufacturing sector since they have responded successfully in terms of increasing exports and GDP.

However, what are the characteristics of this group and the rest of the manufacturing sector? Table 4.8 summarizes some of the main structural issues of Mexico's manufacturing sector, not including maquilas, since 1988. From this perspective, it is important to stress the following:

1. Group I (i.e., branches with the highest export growth for 1988–1996) most significantly increased their share of manufacturing's GDP, from 28.16 percent in 1988 to 33.51 percent in 1996. However, if compared with the total economy, the share of groups I and I.A only represents 6.72 and 2.53 percent, respectively, of GDP of total economy in 1996. Moreover, it is not possible to point to a positive association between GDP growth and export growth, since, for example, group III presents the lowest AAGR of exports, but its share of manufacturing's GDP remains relatively stable at 34 percent for 1988–1996. Thus, one of the main economic results since 1988 in manufacturing is the impressive dynamism of a small group of branches, those of group I.A, and particularly of the automobile sector, which more than doubled its share of manufacturing's GDP from 3.13 percent in 1988 to 7.22 percent in 1996. The impressive GDP growth performance of group I.A for the period is also the result of automobile and electronic equipment export, both achieving the highest growth rates in terms of GDP in Mexico's economy for 1988–1996.



**Table 4.7 Typology of Mexico's Manufacturing Sector by Annual Average Growth Rate of Exports and GDP**

| | | AAGR of exports (1988–1996) | AAGR OF GDP (1988–1996) |
|---|---|---|---|
| GROUP I | | 25.2 | 5.1 |
| GROUP I.A | | 25.6 | 8.5 |
| 56 | Automobiles | 27.3 | 12.8 |
| 54 | Electronic equipment | 22.9 | 9.8 |
| 26 | Other textile industries | 23.2 | 6.4 |
| 53 | Household appliances | 24.2 | 6.0 |
| 52 | Machinery and electric equipment | 21.8 | 5.6 |
| 22 | Soft drinks and flavorings | 21.1 | 4.4 |
| GROUP I.B | | 23.0 | 2.2 |
| 27 | Apparel | 21.3 | 3.9 |
| 39 | Cleaning and cosmetic preparations | 20.7 | 3.4 |
| 17 | Fats and oils | 23.6 | 2.5 |
| 14 | Corn milling | 21.3 | 1.8 |
| 51 | Non-electrical machinery | 21.2 | 1.8 |
| 58 | Other transportation equipment | 21.1 | 1.3 |
| 13 | Wheat milling | 23.5 | 1.1 |
| 36 | Pesticides and fertilizers | 36.4 | 0.3 |
| 48 | Metal furniture | 36.1 | –0.1 |
| 18 | Food for animals | 28.5 | –0.4 |
| GROUP II | | 14.4 | 3.2 |
| GROUP II.A | | 15.2 | 5.2 |
| 46 | Steel and iron | 16.0 | 6.0 |
| 59 | Other manufacturing industries | 15.4 | 5.6 |
| 43 | Glass and products | 10.2 | 5.2 |
| 11 | Meat and milk products | 16.8 | 5.1 |
| 50 | Other metal products | 16.7 | 4.2 |
| GROUP II.B | | 13.8 | 1.6 |
| 40 | Other chemicals | 14.4 | 3.3 |
| 42 | Plastic products | 10.5 | 3.2 |
| 35 | Basic inorganic chemicals | 13.0 | 3.0 |
| 34 | Basic petrochemicals | 12.0 | 2.4 |
| 55 | Electrical equipment | 15.5 | 2.3 |
| 45 | Ceramics | 15.5 | 2.3 |
| 23 | Tobacco | 18.0 | 1.3 |
| 28 | Leather and footwear | 12.7 | 0.8 |
| 24 | Cotton, wool, syn. textiles | 12.4 | –1.4 |
| 29 | Lumber, plywood | 10.5 | –3.5 |
| GROUP III | | 4.8 | 3.4 |
| GROUP III.A | | 3.4 | 4.8 |
| 12 | Fruits and vegetables | 9.0 | 7.3 |
| 19 | Other food products | 6.5 | 5.1 |
| 21 | Beer and malt | 5.8 | 5.0 |
| 57 | Motors and autoparts | 3.0 | 4.4 |
| 31 | Paper and paperboard | 0.9 | 4.4 |
| 16 | Sugar | –4.9 | 4.1 |

(Table 4.7 continues)

**Table 4.7** ***(continued)***

| | | AAGR of exports (1988–1996) | AAGR OF GDP (1988–1996) |
|---|---|---|---|
| GROUP III.B | | 6.7 | 2.1 |
| 38 | Medicinal products | 9.0 | 3.8 |
| 37 | Plastic resins, syn. fiber | 9.3 | 3.6 |
| 44 | Cement | 4.2 | 2.4 |
| 20 | Alcoholic beverages | 7.6 | 2.3 |
| 30 | Other wood products | 4.3 | 2.0 |
| 49 | Structural metal products | 8.8 | 1.8 |
| 41 | Rubber products | 8.7 | 1.7 |
| 47 | Non-ferrous metals | 8.2 | 1.6 |
| 15 | Coffee | 6.2 | 1.6 |
| 25 | Jute, rough textiles | −3.6 | 1.6 |
| 33 | Petroleum refining | 3.8 | 1.3 |
| 32 | Printing | 3.3 | 0.7 |
| AGRICULTURE | | 5.4 | 1.9 |
| MINING | | 0.9 | 1.9 |
| MANUFACTURING | | 14.4 | 3.9 |
| TOTAL ECONOMY | | 13.4 | 2.7 |

*Source:* Author's calculations based on INEGI (1999).

2. Regarding employment, there are no significant changes in the composition of manufacturing employment. Even group I does not substantially increase its share of total employment for 1988–1996. Only group I.A increases its share and accounts for 17.39 percent of manufacturing employment, or 2.02 percent of total in 1996. Surprisingly, it is not group I.A that accounts for the highest growth in employment since 1988, but rather group III.A (i.e., all those branches with the lowest export growth for 1988–1996 but highest GDP growth in this group of branches). These trends are also reflected in capital intensity and labor productivity of the respective groups. While labor productivity (GDP/employment) has risen most significantly for branches in group I and particularly in group I.A, it is important to stress that labor productivity increased significantly for manufacturing as a whole. However, the latter process is a result of the low employment generation and GDP growth with important economic and social consequences.
3. Also surprisingly, branches in groups I and I.A are not the ones that accounted for highest performances in capital pro-



**Table 4.8 Performance of Manufacturing's Branches (1988–1996)**

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|
| *GDP (manufacturing =100)* | | | | | | | | | |
| Group I | 28.16 | 29.02 | 30.28 | 31.84 | 31.76 | 31.66 | 31.59 | 31.69 | 33.51 |
| Group I.A | 10.61 | 11.54 | 12.68 | 14.62 | 15.38 | 15.73 | 16.06 | 16.56 | 18.28 |
| Group I.B | 17.55 | 17.48 | 17.60 | 17.22 | 16.39 | 15.93 | 15.53 | 15.12 | 15.23 |
| Group II | 37.14 | 36.35 | 35.09 | 33.06 | 33.30 | 33.56 | 32.76 | 32.92 | 32.32 |
| Group II.A | 16.56 | 16.27 | 15.94 | 15.20 | 15.68 | 15.86 | 15.68 | 16.11 | 16.24 |
| Group II.B | 20.58 | 20.08 | 19.15 | 17.86 | 17.63 | 17.70 | 17.08 | 16.81 | 16.07 |
| Group III | 34.70 | 34.63 | 34.63 | 35.10 | 34.93 | 34.78 | 35.65 | 35.39 | 34.18 |
| Group III.A | 13.85 | 14.82 | 15.20 | 16.28 | 16.30 | 16.16 | 16.75 | 16.67 | 16.77 |
| Group III.B | 20.85 | 19.81 | 19.43 | 18.82 | 18.63 | 18.62 | 18.90 | 18.72 | 17.41 |
| Manufacturing | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| *GDP (growth rate, 1988=100)* | | | | | | | | | |
| Group I | 100.00 | 110.12 | 119.82 | 127.44 | 133.43 | 132.35 | 138.29 | 130.22 | 148.78 |
| Group I.A | 100.00 | 115.57 | 134.99 | 149.23 | 160.04 | 159.86 | 169.15 | 155.06 | 191.42 |
| Group I.B | 100.00 | 106.31 | 109.21 | 112.21 | 114.82 | 113.12 | 116.72 | 112.85 | 118.97 |
| Group II | 100.00 | 105.01 | 110.89 | 111.94 | 116.44 | 117.77 | 122.45 | 117.51 | 129.01 |
| Group II.A | 100.00 | 105.87 | 115.76 | 118.93 | 126.77 | 130.78 | 137.42 | 135.97 | 150.35 |
| Group II.B | 100.00 | 104.37 | 107.27 | 106.76 | 108.79 | 108.13 | 111.37 | 103.84 | 113.21 |
| Group III | 100.00 | 108.90 | 115.62 | 119.39 | 123.95 | 121.17 | 125.75 | 119.47 | 130.29 |
| Group III.A | 100.00 | 112.21 | 120.52 | 124.98 | 131.95 | 128.40 | 134.31 | 131.05 | 145.73 |
| Group III.B | 100.00 | 106.32 | 111.79 | 115.03 | 117.71 | 115.51 | 119.07 | 110.42 | 118.24 |
| Manufacturing | 100.00 | 107.89 | 115.19 | 119.15 | 124.11 | 123.27 | 128.29 | 121.95 | 135.29 |
| *Employment (manufacturing =100)* | | | | | | | | | |
| Group I | 35.72 | 35.36 | 35.55 | 35.89 | 35.38 | 35.89 | 36.43 | 36.98 | 37.70 |
| Group I.A | 14.68 | 14.93 | 15.47 | 15.84 | 15.97 | 16.27 | 16.61 | 16.88 | 17.39 |
| Group I.B | 21.04 | 20.43 | 20.08 | 20.04 | 19.42 | 19.62 | 19.82 | 20.10 | 20.31 |
| Group II | 34.00 | 33.63 | 33.22 | 33.07 | 32.48 | 32.51 | 32.10 | 31.60 | 31.35 |
| Group II.A | 12.04 | 12.36 | 12.57 | 12.31 | 12.26 | 12.19 | 12.16 | 12.38 | 12.32 |
| Group II.B | 21.96 | 21.28 | 20.65 | 20.76 | 20.23 | 20.32 | 19.94 | 19.22 | 19.03 |
| Group III | 30.28 | 31.01 | 31.24 | 31.04 | 32.14 | 31.60 | 31.47 | 31.42 | 30.95 |
| Group III.A | 13.95 | 15.07 | 15.43 | 15.18 | 16.70 | 16.18 | 16.24 | 16.88 | 17.04 |
| Group III.B | 16.33 | 15.94 | 15.81 | 15.86 | 15.44 | 15.42 | 15.23 | 14.54 | 13.91 |
| Manufacturing | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| *Employment (growth rate, 1988=100)* | | | | | | | | | |
| Group I | 100.00 | 103.34 | 107.40 | 109.48 | 110.31 | 109.59 | 108.86 | 104.62 | 114.42 |
| Group I.A | 100.00 | 106.17 | 113.70 | 117.62 | 121.12 | 120.89 | 120.76 | 116.22 | 128.42 |
| Group I.B | 100.00 | 101.36 | 103.00 | 103.80 | 102.76 | 101.70 | 100.55 | 96.53 | 104.65 |
| Group II | 100.00 | 103.26 | 105.43 | 106.00 | 106.39 | 104.27 | 100.75 | 93.92 | 99.95 |
| Group II.A | 100.00 | 107.16 | 112.68 | 111.47 | 113.39 | 110.46 | 107.79 | 103.92 | 110.97 |
| Group II.B | 100.00 | 101.13 | 101.46 | 103.00 | 102.56 | 100.88 | 96.90 | 88.44 | 93.92 |
| Group III | 100.00 | 106.91 | 111.35 | 111.74 | 118.22 | 113.83 | 110.94 | 104.86 | 110.83 |
| Group III.A | 100.00 | 112.76 | 119.39 | 118.63 | 133.34 | 126.54 | 124.26 | 122.29 | 132.44 |
| Group III.B | 100.00 | 101.91 | 104.49 | 105.85 | 105.31 | 102.98 | 99.56 | 89.97 | 92.37 |
| Manufacturing | 100.00 | 104.39 | 107.93 | 108.98 | 111.37 | 109.07 | 106.73 | 101.06 | 108.41 |

*(Table 4.8 continues)*

**Table 4.8 (*continued*)**

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|
| *Exports (manufacturing =100)* | | | | | | | | | |
| Group I | 23.64 | 27.10 | 31.83 | 37.22 | 39.40 | 40.75 | 41.55 | 43.37 | 49.06 |
| Group I.A | 18.64 | 19.85 | 24.67 | 29.47 | 31.47 | 33.29 | 33.53 | 34.64 | 40.96 |
| Group I.B | 5.00 | 7.25 | 7.16 | 7.75 | 7.93 | 7.46 | 8.02 | 8.73 | 8.09 |
| Group II | 25.56 | 26.30 | 25.89 | 27.01 | 26.22 | 26.94 | 27.30 | 27.03 | 25.14 |
| Group II.A | 11.09 | 11.53 | 11.96 | 11.88 | 10.78 | 11.28 | 10.70 | 12.35 | 10.79 |
| Group II.B | 14.47 | 14.76 | 13.93 | 15.13 | 15.44 | 15.66 | 16.59 | 14.68 | 14.35 |
| Group III | 50.80 | 46.60 | 42.28 | 35.77 | 34.37 | 32.30 | 31.16 | 29.60 | 25.80 |
| Group III.A | 26.83 | 23.37 | 20.88 | 17.93 | 17.29 | 16.36 | 16.87 | 14.38 | 13.45 |
| Group III.B | 23.97 | 23.23 | 21.39 | 17.84 | 17.08 | 15.95 | 14.29 | 15.22 | 12.35 |
| Manufacturing | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| *Exports (growth rate, 1988=100)* | | | | | | | | | |
| Group I | 100.00 | 127.84 | 158.08 | 185.99 | 198.32 | 231.95 | 287.61 | 435.08 | 602.30 |
| Group I.A | 100.00 | 120.12 | 154.86 | 183.35 | 197.64 | 235.85 | 288.73 | 421.92 | 621.26 |
| Group I.B | 100.00 | 159.38 | 171.22 | 196.78 | 201.13 | 216.06 | 283.03 | 488.86 | 524.85 |
| Group II | 100.00 | 103.49 | 114.14 | 124.26 | 126.80 | 140.60 | 173.75 | 260.99 | 293.00 |
| Group II.A | 100.00 | 103.43 | 126.26 | 126.61 | 125.86 | 148.98 | 171.97 | 293.37 | 309.59 |
| Group II.B | 100.00 | 103.53 | 106.23 | 122.72 | 127.42 | 135.12 | 174.91 | 239.83 | 282.15 |
| Group III | 100.00 | 91.12 | 85.63 | 83.37 | 86.33 | 87.67 | 98.71 | 141.16 | 145.35 |
| Group III.A | 100.00 | 82.13 | 75.64 | 71.78 | 75.50 | 73.25 | 89.98 | 118.81 | 130.32 |
| Group III.B | 100.00 | 104.96 | 100.99 | 101.19 | 102.98 | 109.84 | 112.14 | 175.52 | 168.45 |
| Manufacturing | 100.00 | 103.11 | 110.36 | 118.52 | 123.61 | 135.90 | 163.36 | 242.55 | 292.91 |
| *Imports (manufacturing =100)* | | | | | | | | | |
| Group I | 33.89 | 32.02 | 33.41 | 33.34 | 35.24 | 33.96 | 34.98 | 32.33 | 35.45 |
| Group I.A | 12.88 | 12.47 | 13.26 | 13.57 | 14.05 | 14.22 | 15.35 | 13.32 | 16.53 |
| Group I.B | 21.01 | 19.55 | 20.15 | 19.77 | 21.19 | 19.74 | 19.63 | 19.01 | 18.92 |
| Group II | 34.13 | 34.31 | 32.12 | 32.60 | 32.29 | 32.85 | 32.59 | 35.14 | 35.49 |
| Group II.A | 17.90 | 18.51 | 17.81 | 17.90 | 17.82 | 17.36 | 17.16 | 18.10 | 18.60 |
| Group II.B | 16.23 | 15.80 | 14.31 | 14.70 | 14.47 | 15.50 | 15.43 | 17.03 | 16.89 |
| Group III | 31.98 | 33.67 | 34.47 | 34.05 | 32.47 | 33.19 | 32.43 | 32.53 | 29.05 |
| Group III.A | 21.60 | 22.25 | 23.45 | 22.39 | 21.18 | 21.90 | 21.14 | 20.61 | 16.88 |
| Group III.B | 10.38 | 11.42 | 11.02 | 11.67 | 11.29 | 11.29 | 11.29 | 11.93 | 12.17 |
| Manufacturing | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| *Imports (growth rate, 1988=100)* | | | | | | | | | |
| Group I | 100.00 | 112.77 | 149.32 | 182.02 | 235.30 | 227.96 | 283.28 | 189.84 | 253.07 |
| Group I.A | 100.00 | 113.32 | 157.72 | 196.99 | 249.90 | 252.34 | 324.65 | 205.06 | 308.46 |
| Group I.B | 100.00 | 112.44 | 144.20 | 172.91 | 226.41 | 213.12 | 258.10 | 180.59 | 219.37 |
| Group II | 100.00 | 125.78 | 146.88 | 183.59 | 227.30 | 228.81 | 271.94 | 210.30 | 268.23 |
| Group II.A | 100.00 | 128.83 | 152.44 | 188.40 | 234.82 | 226.06 | 268.95 | 204.82 | 263.53 |
| Group II.B | 100.00 | 122.28 | 140.48 | 178.06 | 218.65 | 231.96 | 275.39 | 216.60 | 273.64 |
| Group III | 100.00 | 129.02 | 161.51 | 196.67 | 231.69 | 240.67 | 283.09 | 206.25 | 229.67 |
| Group III.A | 100.00 | 125.29 | 162.67 | 188.51 | 216.53 | 226.87 | 265.34 | 190.14 | 196.46 |
| Group III.B | 100.00 | 137.74 | 158.79 | 215.71 | 267.07 | 272.88 | 324.51 | 243.82 | 307.18 |
| Manufacturing | 100.00 | 122.32 | 152.41 | 187.24 | 231.47 | 232.32 | 279.44 | 201.92 | 250.64 |

(*Table 4.8 continues*)



**Table 4.8 (*continued*)**

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|
| *Capital productivity (growth rate, 1988=100)* | | | | | | | | | |
| Group I | 100.00 | 116.28 | 135.94 | 141.61 | 138.80 | 127.01 | 108.62 | 94.87 | 109.20 |
| Group I.A | 100.00 | 123.58 | 155.21 | 167.88 | 166.13 | 149.17 | 117.15 | 97.47 | 119.16 |
| Group I.B | 100.00 | 110.36 | 121.68 | 122.60 | 119.80 | 113.00 | 112.47 | 105.31 | 115.96 |
| Group II | 100.00 | 109.55 | 121.31 | 122.59 | 127.26 | 117.01 | 116.20 | 105.66 | 118.90 |
| Group II.A | 100.00 | 109.65 | 125.60 | 133.69 | 149.89 | 133.81 | 131.79 | 118.67 | 135.67 |
| Group II.B | 100.00 | 110.18 | 118.95 | 112.29 | 106.05 | 102.66 | 103.92 | 98.13 | 108.02 |
| Group III | 100.00 | 108.88 | 118.51 | 122.01 | 123.70 | 117.60 | 121.22 | 112.18 | 112.85 |
| Group III.A | 100.00 | 106.90 | 113.59 | 117.32 | 122.91 | 117.57 | 118.39 | 115.61 | 117.24 |
| Group III.B | 100.00 | 109.91 | 121.67 | 124.91 | 123.32 | 116.77 | 122.39 | 108.32 | 107.90 |
| Manufacturing | 100.00 | 111.09 | 123.98 | 127.54 | 129.53 | 120.41 | 116.67 | 105.48 | 115.02 |
| *Labor productivity (growth rate, 1988=100)* | | | | | | | | | |
| Group I | 100.00 | 106.57 | 111.57 | 116.40 | 120.96 | 120.77 | 127.04 | 124.47 | 130.03 |
| Group I.A | 100.00 | 108.86 | 118.72 | 126.88 | 132.14 | 132.24 | 140.08 | 133.42 | 149.07 |
| Group I.B | 100.00 | 104.88 | 106.04 | 108.09 | 111.74 | 111.23 | 116.08 | 116.91 | 113.68 |
| Group II | 100.00 | 101.69 | 105.17 | 105.61 | 109.44 | 112.94 | 121.54 | 125.11 | 129.07 |
| Group II.A | 100.00 | 98.80 | 102.74 | 106.69 | 111.80 | 118.39 | 127.49 | 130.84 | 135.49 |
| Group II.B | 100.00 | 103.21 | 105.73 | 103.66 | 106.07 | 107.19 | 114.94 | 117.40 | 120.54 |
| Group III | 100.00 | 101.86 | 103.83 | 106.85 | 104.85 | 106.44 | 113.36 | 113.93 | 117.56 |
| Group III.A | 100.00 | 99.51 | 100.94 | 105.35 | 98.96 | 101.48 | 108.09 | 107.16 | 110.03 |
| Group III.B | 100.00 | 104.33 | 106.99 | 108.67 | 111.77 | 112.17 | 119.60 | 122.74 | 128.01 |
| Manufacturing | 100.00 | 103.35 | 106.73 | 109.33 | 111.43 | 113.02 | 120.20 | 120.68 | 124.80 |
| *Real wages (growth rate, manufacturing =100)* | | | | | | | | | |
| Group I | 87.96 | 89.01 | 90.29 | 90.79 | 91.22 | 90.40 | 90.87 | 90.07 | 88.94 |
| Group I.A | 101.81 | 104.42 | 106.38 | 105.61 | 107.29 | 104.57 | 105.21 | 105.39 | 104.25 |
| Group I.B | 78.30 | 77.74 | 77.90 | 79.07 | 78.01 | 78.65 | 78.86 | 77.20 | 75.84 |
| Group II | 101.54 | 101.60 | 101.63 | 99.50 | 99.95 | 99.40 | 98.16 | 98.41 | 98.36 |
| Group II.A | 118.83 | 118.30 | 112.84 | 107.49 | 107.27 | 105.48 | 105.28 | 105.00 | 104.14 |
| Group II.B | 92.06 | 91.90 | 94.81 | 94.76 | 95.51 | 95.75 | 93.82 | 94.17 | 94.62 |
| Group III | 112.48 | 110.80 | 109.31 | 111.18 | 109.72 | 111.52 | 112.45 | 113.29 | 115.13 |
| Group III.A | 105.49 | 104.43 | 103.18 | 105.22 | 102.10 | 106.79 | 106.84 | 106.77 | 109.06 |
| Group III.B | 118.45 | 116.82 | 115.30 | 116.88 | 117.95 | 116.48 | 118.43 | 120.86 | 122.57 |
| Manufacturing | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| *Capital Intensity (manufacturing=100)* | | | | | | | | | |
| Group I | 66.10 | 65.11 | 63.02 | 63.39 | 66.96 | 66.96 | 75.05 | 75.80 | 72.55 |
| Group I.A | 93.24 | 88.29 | 82.85 | 82.20 | 86.21 | 88.07 | 108.22 | 111.56 | 107.51 |
| Group I.B | 47.17 | 48.18 | 47.74 | 48.51 | 51.14 | 49.46 | 47.25 | 45.77 | 42.62 |
| Group II | 115.75 | 115.49 | 116.57 | 116.32 | 115.71 | 119.04 | 117.52 | 119.80 | 115.81 |
| Group II.A | 201.35 | 195.00 | 191.31 | 187.45 | 174.58 | 189.80 | 189.06 | 194.05 | 185.32 |
| Group II.B | 68.85 | 69.32 | 71.08 | 74.14 | 80.04 | 76.58 | 73.91 | 72.00 | 70.80 |
| Group III | 122.30 | 122.98 | 124.47 | 124.94 | 120.49 | 117.94 | 111.02 | 108.57 | 117.42 |
| Group III.A | 106.01 | 106.07 | 109.43 | 111.04 | 99.20 | 97.48 | 93.95 | 85.88 | 91.69 |
| Group III.B | 136.22 | 138.97 | 139.14 | 138.25 | 143.51 | 139.41 | 129.22 | 134.91 | 148.94 |
| Manufacturing | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

(*Table 4.8 continues*)

**Table 4.8** ***(continued)***

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|
| *Trade balance (in million $US)* | | | | | | | | | |
| Group I | –3,397 | –4,068 | –5,280 | –6,201 | –9,632 | –7,991 | –9,756 | 1,579 | 2,030 |
| Group I.A | –64 | –318 | –241 | –102 | –1,049 | 38 | –452 | 6,718 | 9,075 |
| Group I.B | –3,333 | –3,750 | –5,039 | –6,099 | –8,583 | –8,029 | –9,304 | –5,138 | –7,046 |
| Group II | –3,200 | –4,733 | –5,801 | –7,652 | –10,577 | –10,335 | –11,951 | –5,554 | –8,738 |
| Group II.A | –1,972 | –2,915 | –3,586 | –4,700 | –6,489 | –6,076 | –7,210 | –3,432 | –5,650 |
| Group II.B | –1,228 | –1,818 | –2,216 | –2,952 | –4,087 | –4,259 | –4,741 | –2,122 | –3,088 |
| Group III | 413 | –1,810 | –3,994 | –6,714 | –9,217 | –9,377 | –10,889 | –3,490 | –4,807 |
| Group III.A | –672 | –2,207 | –3,933 | –5,358 | –6,922 | –7,222 | –7,960 | –3,791 | –3,486 |
| Group III.B | 1,085 | 398 | –62 | –1,356 | –2,295 | –2,155 | –2,928 | 301 | –1,322 |
| Manufacturing | –6,184 | –10,610 | –15,076 | –20,568 | –29,425 | –27,702 | –32,596 | –7,465 | –11,516 |
| *Trade balance / GDP* | | | | | | | | | |
| Group I | –30.04 | –31.30 | –34.88 | –32.99 | –45.03 | –35.75 | –42.54 | 9.14 | 9.30 |
| Group I.A | –1.51 | –6.16 | –3.80 | –1.18 | –10.13 | 0.34 | –3.88 | 74.35 | 76.27 |
| Group I.B | –47.30 | –47.89 | –57.28 | –60.00 | –77.79 | –71.40 | –82.52 | –62.28 | –71.08 |
| Group II | –21.46 | –29.08 | –33.07 | –39.21 | –47.17 | –43.62 | –50.26 | –30.93 | –41.54 |
| Group II.A | –29.66 | –40.01 | –45.01 | –52.37 | –61.47 | –54.27 | –63.35 | –39.05 | –53.44 |
| Group II.B | –14.87 | –20.22 | –23.14 | –28.00 | –34.44 | –34.08 | –38.24 | –23.15 | –29.51 |
| Group III | 2.97 | –11.67 | –23.07 | –32.40 | –39.18 | –38.19 | –42.07 | –18.08 | –21.61 |
| Group III.A | –12.08 | –33.26 | –51.75 | –55.75 | –63.07 | –63.31 | –65.47 | –41.69 | –31.94 |
| Group III.B | 12.96 | 4.49 | –0.64 | –12.21 | –18.29 | –16.39 | –21.34 | 2.94 | –11.66 |
| Manufacturing | –15.40 | –23.70 | –30.16 | –34.84 | –43.70 | –39.24 | –44.90 | –13.69 | –17.69 |

*Source:* Author's calculations based on INEGI (1999).

ductivity (GDP/net capital stock) and capital intensity (net capital stock/employment).[21] As reflected in Table 4.8, branches in group II.A, particularly such branches as other manufacturing industries and meat and milk products, have outperformed the rest of the sector since liberalization. This trend is important because it shows that export orientation is not enough for increasing both productivity and GDP.

4. Another surprising result of this typology is that export-oriented branches (i.e., those in group I) account for the lowest growth in real wages of Mexico's manufacturing sector. These results—which are evident if comparing much higher real wages in branches of group III (those branches with lower export growth for 1988–1996)—contradict the sense that export orientation will equalize real wages with those of the rest of the world or even with the most important trading partners. Thus, there is not a tendency to achieve higher real wages in those export-oriented branches, though probably with the exception of automobiles, even when compared with Mexico's manufacturing sector in 1988–1996. International comparisons, particularly with the United States, show larger gaps for that period (Valle Baeza 1998).
5. Shifts in international trade have been most impressive. Groups I and I.A more than doubled their share of manufacturing exports, which, as already analyzed, accounted for an impressive dynamism for 1988–1996. This performance is almost exclusively a result of the export performance of group I.A, which increased its share of total manufacturing exports from 18.64 percent in 1988 to 40.96 percent in 1996; automobiles alone accounted for almost 30 percent of total manufacturing exports in 1996, up from 11.33 percent in 1988. Export growth for all groups is impressive, however. In 1996 exports of group I.A represented 621 percent of their 1988 exports. The leader in these statistics, as in other indicators, is the automobile sector.
6. However, it is most important to stress that although exports have surged significantly, imports have also done so. One of the most significant paradoxes of liberalization is that imports rose most for the most dynamic branches in terms of exports and GDP (i.e., groups I and I.A). Thus, as reflected in Table 4.8, imports by group I.A represented in 1996 306.46 percent of 1988 imports. Other branches, such as those of group III.A (those with low export growth and high GDP growth) had import levels much lower than the rest of the manufacturing sector.
7. The latter tendencies have resulted in high and increasing trade deficits in the manufacturing sector since liberalization. Manufacturing as a whole, and not including maquiladora activities, increased its trade deficit from $6.2 billion in 1988 to $32.6 billion in 1994, which fell again as a result of the crisis and the decrease in overall economic activity, including imports. It is important to note that although the absolute value is significant, its relationship with GDP is more important. Thus, the trade balance deficit/GDP for manufacturing as a whole reached –44.90 percent in 1994, a level that had not been reached since ISI.

All these trends are most significant for more than one reason. They indicate that manufacturing as a whole requires ever increasing net imports to allow GDP and export growth. This lack of endogenous growth has been most evident since 1988 for manufacturing, but particularly for the most dynamic branches and established groups. This trend decreased only as a result of the 1994–1995 crisis, and several branches (such as the automobile sector) were able to shift overall production from the domestic market to exports in the 1990s (Ruiz Durán 1997).[22] The other branches, however, were not able to accomplish this shift and increased their imported inputs as soon as the economy "recovered" in 1996, at least from a macroeconomic perspective. This issue is also macroeconomically relevant because it shows that manufacturing requires ever increasing imports, which generate costs that have to be paid through infusion of capital.

From this perspective, it is the manufacturing sector, and particularly its most dynamic branches and groups—export oriented and private—that generated the crisis of 1994–1995. Thus, in 1994 manufacturing generated a trade deficit of $32.6 billion that had to be paid for. This is also important since the private export-oriented sector, the pillar of liberalization strategy, failed to succeed in integrating with global markets.

## Preliminary Conclusions

Discussion of industrial and trade policy since the implementation of liberalization in Mexico leads to five broad and critical issues regarding the manufacturing sector.

First, and consistent with EOI theory, liberalization since 1988 has not been able to develop a long-term industrial strategy. Neutral or horizontal industrial and trade policies per se cannot be a development strategy for a nation of almost 100 million inhabitants. From the government's perspective, the discussion of industrial and trade policies—similar to other sectoral issues that will be discussed in following chapters—has been subordinated to macroeconomic priorities, that is, the control of inflation, fiscal deficit, and the attraction of foreign investment. Only after the crisis of 1994–1995 did the government take initial, cautious steps to "complement" horizontal industrial policies, but in general these attempts have been insufficient to counter the effects of liberalization since 1988.



Second, industrial and trade policies since 1988 reflect a lack of coherence and consistency with macroeconomic policies. This is particularly important for manufacturing, since the import liberalization process was implemented quickly and with little analysis or considerations of countermeasures for the impact of opening up Mexico's economy. Thus, instead of a coherent and compatible macroeconomic and sectoral approach to liberalization, the government relied heavily on the "induction" of macroeconomic structural change into sectoral and microeconomic changes, expecting that this overall market-friendly environment would provide the necessary conditions for the development of Mexico's economy.

Third, there are serious incompatibilities and contradictions between liberalization and EOI. Given the structural conditions of Mexico's economy and its manufacturing sector, which had been very protected for several decades, there is a trade-off between macroeconomic priorities (which might result in overvaluation of the exchange rate, high real interest rates, and a quick opening of its economy through lowering import tariffs) and manufacturing's exports and overall growth (i.e., macroeconomic variables turned "against" manufacturing since liberalization), while horizontal and neutral industrial and trade policies have far from offset these negative impacts.

Fourth, since 1988 industrial and trade policy in Mexico reflects a lack of coordination of programs and priorities among responsible institutions such as SECOFI, BANCOMEXT, and NAFIN. In many cases they have overlapping functions and programs, with similar objectives and goals; but in other cases they might even contradict each other. Moreover, and until 1999, these institutions lacked any mechanisms to evaluate their instruments and programs.[23] For example, even in the case of the maquila program it has not been possible to evaluate its fiscal costs and the impact of the maquilas' activity in Mexico. This is of critical importance for discussing future alternatives; it is not just a matter of implementing new and more sophisticated programs, since there has been no assessment of social, economic, and political costs and benefits of these measures. Any future industrial alternative has to begin with an evaluation of several decades of industrial and trade policies; otherwise the probability of repeating the errors of similar past programs is rather high. The lack of accountability of public institutions, deeply rooted in Mexico's political system, is one of the critical causes of this situation.

Fifth, the government has, for the first time in the past decades,

given an explicit role to business chambers and other private institutions themselves to commit to support for industrial policy and institutions (PEF 1995, 174ff.). However, as with other such issues as regional industrial policy, there is a lack of institutions to allow a long-term commitment that would not simply vanish with the next government secretary or presidential term.

The evolution of Mexico's manufacturing sector since 1988 also shows that a rather paradoxical industrial organization has arisen since liberalization. Unquestionably, manufacturing has been relatively successful *on its own terms*—exports, capital, and labor productivity, among others. This is stressed in Mexican government and multilateral agency documents (Banco de México 1995; PEF 1995; World Bank 1998).

However, this sector has failed to generate sustainable medium- and long-term structures strictly from an economic perspective. In addition to a lack of employment generation and a significant real wage decrease in the export-oriented branches and groups (contrary to the expectations of EOI and liberalization strategy), export orientation has generated a strongly export-oriented group of branches—those of groups I and I.A. These have increased GDP and exports, but have been unable to increase their linkages with the rest of the economy. The rest of the manufacturing sector's branches have not been able to grow significantly in relation to these dynamic activities. This deepening of an "import-oriented industrialization," not to be confused with import substitution, is reflected in the overall trade balance deficits and trade balance/GDP coefficients for manufacturing, at both sectoral and branch levels. The lack of endogenous growth conditions and the increasing net penetration of imports is a result of macroeconomic conditions that have emerged since liberalization and has had profound implications for the development of technology, employment, value-added product generation, and real wage increases, as well as general learning effects in Mexico's economy. Thus, weak linkages of the dynamic and export-oriented branches in Mexico's economy go far beyond strictly macroeconomic issues. However, the Mexican manufacturing sector's increasing dependence on imports and its increasing polarization also correspond to Mexico's specific industrial organization during the 1990s. Similarly, macroeconomic and sectoral trends are not sufficient to explain the significant increase in intraindustry trade.

Most important for the sector considered the mainstay of Mexico's development strategy since 1988, manufacturing has generated an industrial organization structure that requires ever increasing net imports to support GDP and export growth. This directly affected the rest of the economy—resources had to be "found" to finance increasing trade deficits—and resulted in the crisis of 1994–1995. So it was not the public sector, which already reduced substantially most of its spending after 1988, but the private export-oriented manufacturing sector that caused the economic crisis. Moreover, these general trends reflect that manufacturing has generated a perverse industrial organization, highly concentrated in a few export-oriented firms, branches, and established groups that are not linked to the rest of manufacturing and total economy. This structure is not new, and it has already been described in discussions of import substitution. However, the level of the lack of linkages shows that the degree of EOI organization has fallen to new levels of disintegration along with the rest of the economy since liberalization.



Finally, earlier trends in manufacturing (i.e., decreasing real wages and high increments in capital and labor productivity) reflect not only significant economic, but also political, changes in Mexico's society. These trends resulted in an overall loss of labor: while the Fordist equation, or the relative stability between productivity and real wage growth, remained the same for the urban and manufacturing sector for the period 1940–1970, the gap between both variables increased dramatically after 1988. Similarly, the wage/GDP coefficient for manufacturing fell from levels above 37 percent in the 1970s to 25.57 percent in 1996. This trend reflects not only an increasing capital intensity in manufacturing, but also a significant shift in the appropriation of GDP from labor since liberalization, as well as important changes in the corporatist political structure since the 1940s.

## Notes

1. For a detailed description of the respective issues of this chapter, see National Development Plan (Plan Nacional de Desarrollo 1989–1994) (PEF 1989a), National Program for Industrial Modernization and Foreign Trade (Programa Nacional de Modernización Industrial y del Comercio Exterior 1990–1994, 1989), and Program for Industrial and Foreign Trade Policy (Programa de Política Industrial y Comercio Exterior 1995–2000) (PEF 1996).

2. The industrial and foreign trade program for 1995–2000 stresses that industrial and trade policies cannot "be accomplished successfully

through the spontaneous action of market forces, they require an active industrial police that generates the coordinating social mechanisms, collaboration and support to individual actions through the concertation of factors of production" (PEF 1996, 33). The program also suggests integrating production chains and substituting imports efficiently, among other issues.

3. In other countries such as Brazil, for example, this process would have been unimaginable in such a short period, or would have taken much longer as a result of negotiations between classes, parties, and other economic, social, and political interests (Bresser Pereira et al. 1993). The authoritarian political structures of Mexico played a crucial role in liberalization (see Chapter 2).

4. From September 1998 to June 1999, for example, PITEX generated more than $3 billion (PEF 1999, 503).

5. From this perspective, it is difficult to make definitive statements about quicker import liberalization in broad sectors and to make generalizations among more than 11,800 products. Sectoral- and product-level studies are required to reach conclusions on these issues.

6. For example, the 1999 budget raised tariffs for nations with which Mexico has no trade agreement, that is, all but the United States, Canada, Bolivia, Colombia, Chile, Venezuela, Costa Rica, and Nicaragua. The budget expects additional income of around $500 million by raising tariffs for products from 170 nations, which accounted for around 15 percent of Mexico's trade by 1998.

7. Institutions such as BANCOMEXT initiated several "matchmaking" programs in the mid-1990s, with the aim of potential Mexican suppliers' learning about the specificity of international demand in such sectors as, automobiles, auto parts, garments, and electronics (Dussel Peters, Piore, and Ruiz Durán 1997). With the same objective, SECOFI began with a new program, SIEM, in 1997, offering basic information by Internet on firms established in Mexico.

8. One of the most important measures during the 1990s was the change in article 27 of the Mexican constitution, which allowed the selling of land and redefining the *ejido* structure. At the beginning of 1999 President Zedillo launched a proposal to begin with privatization of Comisión Federal de Electricidad, the only distributor of electricity. By the end of 1999 it was yet not clear if the Mexican Congress would accept the proposal.

9. Until the mid-1990s there were still price controls for a basic basket of commodities. But these controls were abolished in 1999, including for tortillas. The only remaining commodities include pharmaceutical products, which are still under price controls. It is expected that these remaining controls, in many cases more a political gesture than a real prevention of unjustifiable high prices, will be abolished soon.

10. A number of specific programs proposed by BANCOMEXT, NAFIN, and SECOFI have detailed Web pages, including regional and supplier programs, among others. However, many of these programs have been developed only very recently, and still lack information to allow an evaluation of specific results and benefits.



11. One of the most important impacts of the development banks in Mexico is that since 1994 their portfolios have decreased constantly. They have not been able to place loans for different kinds of firms in Mexico because of relatively high interest rates.

12. Most of the information about these programs was obtained directly from SECOFI and Nacional Financiera. However, some of it can be obtained from http://www.spice.gob.mx/, http://www.cetro-crece.org.mx, and http://www.nafin.gob.mx/desarrollo.html.

13. Until 1998, MSMFs refer to all those with fewer than 15 workers, between 16 and 49 workers, and between 50 and 250 workers, respectively. Big firms have more than 250 workers, according to national definitions.

14. Although CRECE was formally established in all Mexican states, they only operate and accomplish their respective activities in a few states in Mexico.

15. In January 1999, the Mexican Council for Subcontracting (Consejo Mexicano de Subcontratación) was created to coordinate already existing subcontracting institutions, particularly Bolsas de Subcontratación and Centers for Developing Subcontractors (Centros para el Desarrollo de Proveedores).

16. Data obtained directly from development banks. See also *El Financiero*, March 16, 1999, p. 3A.

17. The data provided by the Mexican business journal *Expansión* have at least two important limitations. On the one hand, not all of the biggest national and foreign firms are reported (export concentration is underestimated). On the other hand, some of the main exporting firms might export under maquila criteria (Dussel Peters 1999a).

18. Intraindustry trade of goods was calculated at the four-digit level of Mexico's trade as:

$$B_i = \frac{(X_i + M_i) - |X_i - M_i| * 100}{(X_i + M_i)}$$

where:
$B_i$ = percentage of intraindustry trade over total trade
$X_i$ = value of exports of industry i
$M_i$ = value of imports of industry i
$|X_i - M_i|$ = intraindustry trade in industry i
$X_i + M_i$ = total trade of industry i
i = 1,2,3, ... *n*, where n is the number of industries depending on the disaggregation level. The coefficient oscillates between 1, when trade is completely intraindustrial, and 0, when trade does not have an intraindustry component or is completely interindustrial. See also Grubel and Lloyd (1975).

19. Based on Hamilton and Kniest (1991), the marginal intraindustry trade coefficient is:

$MIITC = (X_t - X_{t-n}) / (M_t - M_{t-n})$ for $M_t - M_{t-n} > X_t - X_{t-n} > 0$
$MIITC = (M_t - M_{t-n}) / (X_t - X_{t-n})$ for $X_t - X_{t-n} > M_t - M_{t-n} > 0$
$MIITC$ = indefinite for $X_t < X_{t-n}$ or $M_t < M_{t-n}$

The MIITC coefficient oscillates between 1, when new trade is completely a result of intraindustry trade, and levels near 0, when intraindustry trade becomes insignificant to explain trade growth. The MIITC becomes 0 or indefinite if either exports or imports have decreased or there is no change in trade.

20. Branches in group I account for an AAGR of exports higher than 5 percentage points of manufacturing (of 14.4 percent), while each branch in group II accounts for an AAGR of exports, which falls between 5 percentage points above and below the manufacturing average. Branches in group III show an AAGR more than 5 percentage points below manufacturing's AAGR of exports for 1988–1996. Based on these established groups, subgroups A were defined by branches with an AAGR of GDP above manufacturing's AAGR for 1988–1996 (of 3.85 percent), with subgroups B by branches with an AAGR of GDP below manufacturing's AAGR for 1988–1996.

21. Branch-level data for net capital stock was obtained directly from Banco de Mexico.

22. However, if we consider that the autoparts sector imports most of the inputs for the automobile sector, both sectors achieved a trade deficit until 1994 and a surplus since then.

23. For example, the latest industrial and trade program (PEF 1996) does not include any reference to the causes of the crisis of December 1994, or to the industrial and trade policies of 1988–1994. Similarly, it praises the existing import programs, simply assuming that they have benefited manufacturing.

# 5

# Foreign Investment and Liberalization Strategy

Foreign investment, added to cheap labor, has become the most significant financing source for Mexico's growth strategy since 1988. Foreign direct investment (FDI) reflects the strategic interests of TNCs and other firms in search of market access and competitiveness of their global production networks (UNCTAD 1998). What have been the most significant tendencies in terms of foreign investments?

Most of the chapter will examine FDI—the most significant trend for growth and development—since, in contrast to portfolio investments, it has a direct impact on the productive sector and provides a higher degree of certainty for the affected economies. In general, this chapter is relevant for understanding both the extraordinary efforts of the government to attract FDI since 1988 and the impact FDI has had on Mexico's economy. The chapter also deepens our understanding of the emerging industrial organization in Mexico since the adoption of a liberalization strategy. In addition to the aggregated FDI trends that will be examined, Mexico's importance as part of U.S. firms' networks in the 1990s will also be presented. The first part of this chapter will analyze general policy responses regarding FDI since 1988. The second will examine the general trends of FDI during the 1990s. The third section will highlight several sectoral trends of FDI, particularly the automobile, telecommunications, and electronic industries.

## Foreign Investment Since Liberalization Strategy: Visions and Legal Changes

Until recently, FDI in Mexico was not permitted in strategic, basic, or semibasic activities. The 1973 Law for the Promotion and Regulation of Foreign Investment (Ley Para Promover y Regular la Inversión Extranjera) reserved several activities for the government only, (e.g., petroleum, basic petrochemicals, railroads, telegraphic and wireless communications).[1] The law restricted nonreserved investments by foreigners to a maximum of 49 percent in activities such as minerals, automotive components, and secondary petrochemicals (Peres Núñez 1990b). This law gave the government the power to determine in which activities and sectors national ownership had to be at least 51 percent. Moreover, FDI faced significant specific performance requirements depending on the particular sector, including balance-of-payment or trade surplus requirements, employment generation, FDI financed through external sources, and a minimum of domestic value added. There were also regulations for FDI establishment in specific regions: certain activities were not allowed in the main economic centers of Mexico, Mexico City, Monterrey, and Guadalajara. These issues have to be understood in the context of ISI.

The National Commission on Foreign Investments (Comisión Nacional de Inversión Extranjera, CNIE), the main official institution to establish policies concerning foreign investment, including its promotion, issued new amendments in 1984 that outlined the following: (1) no authorization was required for a foreign equity share of more than 49 percent of a firm's equity, except in the activities established by the law; (2) foreign investment of 49 percent or more would be allowed in activities where technological development, export promotion, job creation, and/or import-substitution were enhanced. As a result of the liberalization strategy FDI was significantly liberalized in 1988.

In line with the liberalization strategy, the 1973 law was further amended in 1989. Amendments provided for an automatic approval of major foreign investment in activities not restricted by the law when such investment fulfilled a set of criteria.[2] The new law also significantly speeded the approval of new investment projects. Once the requirements were met, investments did not require approval by CNIE, which had 45 days to [illegible]



Most of the amendments of 1989 were formally incorporated to the new Foreign Investment Law (Ley de Inversión Extranjera) of 1993, which further increased the range of activities subject to FDI not requiring approval. The new law of 1993, which had already attempted to make Mexican law compatible with NAFTA, and its amendments in 1996, 1998, and 1999, and later specific changes, and NAFTA,[3] represented a breakthrough for FDI and allowed FDI in most of Mexico's economic activities (Dussel Peters 1999a).

It is relevant to note several issues in this respect. On the one hand, there has been a clear tendency to increase liberalization for FDI in practically all economic sectors, with few exceptions, since 1988. In 1994 sectors completely open to FDI represented 82.5 percent of Mexico's GDP, while only 4 and 6 percent of GDP were restricted to the Mexican capital and to the state, respectively (SECOFI 1994a, b). Since then, FDI policies have been liberalized significantly. Until 1999 FDI was restricted to sectors such as petrochemicals and electricity (both of which were proposed for opening to private investment by the president in 1999) as well as the control and supervision of airports. Moreover, there are still limitations to FDI: for instance, it has to be below 49 percent of total capital and/or require the permission of CNIE in such sectors as commercial fishing, local and long-distance telephone services, and specific financial services. However, in all other economic activities, including the vast majority of financial services that were liberalized in January 1999[4] as well as railroad services and gas distribution, there are no limits for FDI. Moreover, performance requirements were completely abolished with the law of 1993 and persist only in such sectors as automobiles and auto parts, and will be eliminated gradually according to NAFTA schedules by 2004. National value-added requirements will be replaced by regional or North American rules of origin. In several cases in which FDI is restricted to levels below 49 percent, neutral investment and trust funds allow for 100 percent foreign ownership with CNIE approval (Máttar and Péres Núñez 1997). FDI is automatically allowed and does not require any authorization by CNIE if FDI accounts for less than $42 million, with the exception of the sectors in which FDI is restricted. In most of these cases, and as negotiated in NAFTA, FDI from Canada and the United States are given preferential treatment.[5]

Finally, it is important to stress that as of 1994 the Mexican gov-

and authorized FDI to the National Registry for Foreign Investment (Registro Nacional de Inversión Extranjera), which did not necessarily coincide with actual or realized investment, i.e., firms could have asked for authorization of FDI without actually investing. Since 1994 FDI refers exclusively to realized new investments. As a result, it is not possible to make comparisons between FDI before and after 1994, which is why FDI trends in the next section are divided into the period before and after 1994.

## General Trends in Foreign Direct Investment

Since the end of the 1980s, Mexico has been one of the most successful nations in the world in attracting foreign investments, accumulating $162.1 billion in FDI and portfolio investment between 1988–1998 (CEPAL 1998a; Table 3.1, pages 72–73). Two important periods can be highlighted for these investments: 1988–1993 and the period after the crisis of 1994–1995 (that is, 1994–1998). In the first period, portfolio investments accounted for 74.35 percent of total foreign investments, and 86.79 percent in 1993. Since then, this share has fallen significantly because of the crisis of 1994–1995 and subsequent capital flight and overall national and international uncertainties, as discussed below. For the whole period of 1988–1998, portfolio investment's share of total foreign investment was 50.73 percent (Table 3.1).

The first period, until 1994, reflects an impressive AAGR of FDI of 21.9 percent for 1974–1993. Particularly the periods after 1982 (i.e., 1983–1987 and 1988–1994) stand out with an AAGR of FDI of 28.1 percent and 31.5 percent, respectively. As a result, FDI increased from $362.2 million in 1974 to $14.9 billion in 1994. In general, the most relevant trend over the 20-year period was the increased share of FDI in manufacturing and the service sector, while the agricultural sector lost in relative importance over the period.

For FDI, the period 1989–1993 is characterized by the following (SECOFI 1994a, b):

1. There was increasing macroeconomic weight of FDI in terms of GDP and of gross fixed investments, generating more than 1.3 million jobs or 16.2 percent of total employment in the activities in which there was FDI participation until 1993.
2. Growing FDI, with an average annual growth rate of 18.3 percent and more than twice as high as that for the period 1980–1988, reached an accumulated $22.9 billion. The expectations and discussions of NAFTA prior to FDI's approval, both in the United States and Mexico, generated uncertainty, reflected in negative growth rates for FDI in 1992 and 1993.
3. There was a high, and increasing, share in total FDI from the United States (63.2 percent on average for the period), while the European Union accounted for 24.4 percent of the total.
4. Manufacturing has been the most significant economic activity for FDI. It presents a share of total FDI of 66.34 percent for 1980–1988, falling to 28.63 percent for the 1989–1993 period. This decrease was also a result of growing FDI in telecommunications due to the privatization of Telmex (Teléfonos de México) in 1991, as well as a general increase in FDI in the service sector.
5. At the branch level, the five most important receptors of FDI (including automobiles, food and beverages, other chemical products, and basic chemical products) accounted for 36.9 percent of total FDI. The automobile sector stands out, with 12.4 percent of total FDI for the period.



Beginning in 1994, after the enforcement of the new law and the reform of the accounting methods used to measure FDI, the expectations of the liberalization strategy, estimated higher economic growth, and accession to NAFTA were important reasons for the higher levels of FDI until the end of that year. All the same, political and economic instability was manifested in the crisis of December 1994 (see Chapter 2), leading to setbacks in FDI—and only in 1997 did FDI reach 1994 levels. Thereafter, however, the international crisis in Asia, Brazil, and Russia added to economic and political uncertainties in Mexico during 1998–1999, resulting in a substantial fall in FDI in 1998, estimated at 40.3 percent (see Table 5.1).

In general, and contrary to the period 1988–1993 with its high growth rates in FDI, the realized FDI AAGR was –10.7 percent for 1994–1998, due primarily to the fall in FDI in 1995 of –22.5 percent and –40.3 percent in 1998. With the exception of maquiladoras (Table 5.1), actual FDI fell during 1994–1998 for all important sectors.[6] Nevertheless, it is relevant to note that in spite of this generally negative trend, FDI was able to recover significantly in 1997 and is expected to continue in this positive direction over the next few years. Similarly, and in spite of these oscillations, it is important to

**Table 5.1 Real Foreign Direct Investment (1994–1998)[a]**

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1994–1998 |
|---|---|---|---|---|---|---|
| *Millions of U.S. Dollars* | | | | | | |
| Agriculture | 11 | 11 | 30 | 10 | 33 | 95 |
| Extractive | 88 | 79 | 83 | 101 | 32 | 382 |
| Manufacturing | 6,073 | 4,722 | 4,585 | 6,985 | 4,472 | 26,837 |
| RNIE | 5,179 | 3,356 | 3,169 | 5,304 | 2,361 | 19,368 |
| Maquiladoras | 895 | 1,366 | 1,417 | 1,680 | 2,111 | 7,468 |
| Electricity and Water | 15 | 2 | 1 | 5 | 8 | 32 |
| Construction | 259 | 26 | 25 | 107 | 34 | 451 |
| Trade | 1,250 | 997 | 713 | 1,786 | 730 | 5,476 |
| Transportation and Communication | 710 | 861 | 406 | 669 | 311 | 2,957 |
| Financial Services | 951 | 1,063 | 1,204 | 862 | 581 | 4,662 |
| Other Services | 1,155 | 391 | 449 | 668 | 484 | 3,147 |
| TOTAL | 10,512 | 8,152 | 7,496 | 11,194 | 6,684 | 44,038 |
| *Share Over Total FDI* | | | | | | |
| Agriculture | 0.10 | 0.14 | 0.39 | 0.09 | 0.49 | 0.21 |
| Extractive | 0.83 | 0.97 | 1.11 | 0.90 | 0.47 | 0.87 |
| Manufacturing | 57.78 | 57.92 | 61.17 | 62.40 | 66.90 | 60.94 |
| RNIE | 49.26 | 41.16 | 42.27 | 47.39 | 35.32 | 43.98 |
| Maquiladoras | 8.51 | 16.76 | 18.90 | 15.01 | 31.57 | 16.96 |
| Electricity and Water | 0.14 | 0.03 | 0.01 | 0.05 | 0.12 | 0.07 |
| Construction | 2.47 | 0.32 | 0.34 | 0.96 | 0.50 | 1.02 |
| Trade | 11.89 | 12.23 | 9.50 | 15.96 | 10.93 | 12.43 |
| Transportation and Communication | 6.76 | 10.56 | 5.41 | 5.98 | 4.65 | 6.71 |
| Financial Services | 9.04 | 13.04 | 16.07 | 7.70 | 8.70 | 10.59 |
| Other Services | 10.99 | 4.79 | 5.99 | 5.97 | 7.25 | 7.15 |
| TOTAL | 100 | 100 | 100 | 100 | 100 | 100 |
| *Growth Rate* | | | | | | |
| Agriculture | — | 4.7 | 166.7 | −65.2 | 219.4 | 32.7 |
| Extractive | — | −9.7 | 4.8 | 22.1 | −68.8 | −22.5 |
| Manufacturing | — | −22.3 | −2.9 | 52.3 | −36.0 | −7.4 |
| RNIE | — | −35.2 | −5.6 | 67.4 | −55.5 | −17.8 |
| Maquiladoras | — | 52.7 | 3.7 | 18.6 | 25.6 | 23.9 |
| Electricity and Water | — | −86.2 | −47.6 | 363.6 | 58.8 | −14.6 |
| Construction | — | −90.1 | −1.6 | 321.7 | −68.7 | −40.1 |
| Trade | — | −20.3 | −28.5 | 150.7 | −59.1 | −12.6 |
| Transportation and Communication | — | 21.3 | −52.9 | 64.8 | −53.6 | −18.7 |
| Financial Services | — | 11.8 | 13.2 | −28.4 | −32.6 | −11.6 |
| Other Services | — | −66.2 | 15.0 | 48.7 | −27.5 | −19.5 |
| TOTAL | — | −22.5 | −8.0 | 49.3 | −40.3 | −10.7 |

*Source:* Author's calculations based on SECOFI (Dussel Peters 1999a).
*Notes:* a. Does not include reinvestments of profits and accounts/flows between firms.

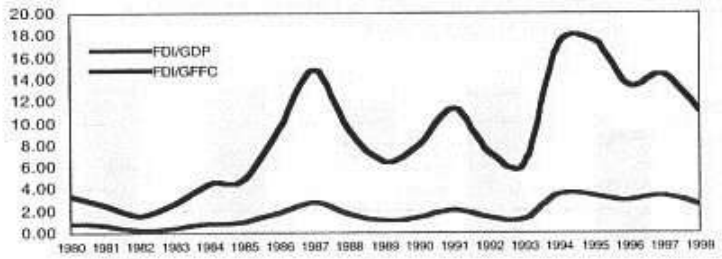


stress that realized FDI accumulated more than $44 billion for 1994–1998.

More important, and added to the specific trends for 1994–1995, FDI for 1994–1998 reflected several important features, particularly in comparison with prior periods. For one thing, FDI played an increasing role from a macroeconomic perspective. For the periods 1980–1987 and 1988–1998, FDI as a percentage of GDP and gross formation of fixed capital (GFFC) increased from 1.98 percent and 10.42 percent, respectively, to 2.61 percent and 12.34 percent. And since 1994 FDI has accounted for more than 12 percent of GFFC (Figure 5.1). It is expected that these coefficients will fall in the next years because of the recovery of the macroeconomy. From another perspective, FDI has also increased its weight in balance-of-payment variables: although it accounted for only 11.82 percent of imports of goods for 1988–1998, its share of the capital account increased from 27.73 percent during 1980–1987 to 52.67 percent in 1988–1998.

Moreover, total FDI reflects profound oscillations, particularly as a result of the crisis of 1994–1995 and the international crisis in 1998, both of which had negative effects on FDI for 1994–1998. Manufacturing has constantly increased its share of total FDI since 1994; however, this latter trend is mainly a result of maquiladora activity, which increased its share of total FDI from 8.51 percent in 1994 to 31.57 percent in 1998 (Table 5.1). Agriculture and extractive industries accounted for less than 1 percent of total FDI in the same period. Finally, of 126 branches of Mexico's economy, the 10 main branches alone account for 55.78 percent of total FDI during

**Figure 5.1 FDI as a Percentage of Gross Formation of Fixed Capital and GDP (1988–1998)**



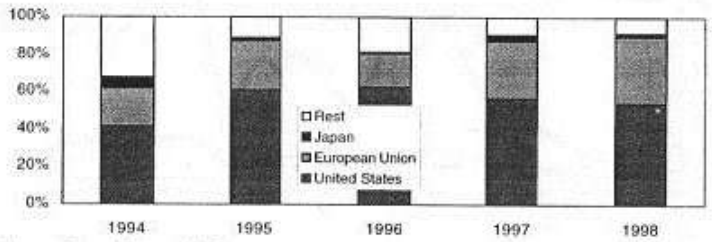

*Source:* Dussel Peters (1999a).

1994–1998. Automobiles, credit institutions, manufacturing, and assembly of electronic equipment and accessories, added to tobacco, financial institutions, and trade, are some of the main branches that received FDI (Dussel Peters 1999a).

Not including maquiladoras, the European Union constantly increased its share in total FDI for 1994–1998, accounting for an average of 20.14 percent. However, the United States is without a doubt the main source of FDI in Mexico, and the U.S. share grew substantially from 41.74 percent in 1994 to 62.05 percent in 1998 (Figure 5.2). For FDI in maquiladoras, the U.S. portion accounted for 86.60 percent for the same period.

Data provided by the U.S. Department of Commerce (DC-US 1999) allow a more in-depth analysis of U.S. FDI in Mexico. Affiliate companies established in Mexico with majority ownership held by U.S. firms increased FDI from $1.3 billion in 1992 to $2.5 billion in 1998. This dynamism, accumulating $21.8 billion for 1992–1998, also reflects that most of U.S. FDI has been concentrated in manufacturing, with a share of 50.73 percent during 1992–1998. The growth path in FDI for these activities is almost exclusively a result of export-led growth and, to a much smaller degree, domestic sales in Mexico. For 1992–1997, total exports by total U.S. affiliates and manufacturing increased by an AAGR of 17.9 percent and 18.2 percent, respectively, while domestic sales only increased by an AAGR of 9.4 percent and 9.5 percent, respectively. These trends became even more acute after the crisis of 1994–1995: such sectors as electronics and transport equipment accounted for shares in export with total sales above 70 percent after 1995 (DC-US 1999). Thus, these trends are similar to those already examined in Chapter 4.

**Figure 5.2 Realized FDI by Country of Origin (not including maquiladoras) (1994–1998)**




*Source:* Dussel Peters (1999a).



One of the few studies on FDI after the 1994–1995 crisis (AmCham 1997), based on a survey of 405 U.S. firms established in Mexico at the end of 1996, revealed the following:

1. Mexico represents an important investment opportunity for these U.S. firms, which put in $11.7 billion during 1993–1996. Investing firms expected a 15.8 percent increase in investments, regardless of the crisis.
2. However, there was a positive association between the size of firms and their investment expectations. It was mainly the very big firms that expected to increase their investments, big firms expected to maintain their investments, and small and medium firms expected a decrease in their investments.
3. For these firms, favorable factors and conditions for investing in Mexico were these, in descending order: size and potential of the market; low cost of labor; strategic localization of Mexico; trade openness, NAFTA, and other free-trade agreements; and quality of labor and managers. These issues reflect the main interests of and reasons for U.S. firms to invest in Mexico.
4. For the period 1993–1996, 20 percent of all firms interviewed responded that they had lost potential investments in Mexico to other countries—particularly to the United States, Brazil, China, Venezuela, Ireland, and Colombia—accounting for an estimated $7.2 billion to $16.6 billion for the period 1993–1997.
5. The main reasons for these lost investment opportunities were: economic instability and uncertainty; political and social instability and uncertainty; fiscal burden and lack of fiscal competitiveness or fiscal incentives; contraction of the Mexican market; and bureaucracy and slow decisionmaking by the government.

These issues are relevant from more than one perspective. Liberalization has been particularly successful in integrating the Mexican with the U.S. economy,[7] as reflected in increasing trade and FDI flows between both countries, and particularly in the maquila sector. But the earlier trends show that the interest of U.S. firms in investing in Mexico was mainly related to low labor costs and the guarantee of FDI in the context of NAFTA, including intellectual property rights, low trade barriers, and other free-trade agreements.

The trends reflect the high sensitivity of FDI, in this case originated in the United States, over economic and political topics. Macroeconomic stability is by no means the only criterion for promoting economic activities in such countries as Mexico; political uncertainty is just as important.

These issues, added to the generation of a complex North American network in particular economic sectors, will become clearer in the next section. Moreover, it is also important to keep in mind the general trends in manufacturing since liberalization, as discussed in Chapter 4.

## Sectoral Trends in Foreign Direct Investment

Depending on the strategy of the respective firms, FDI flows can be characterized according to their search for efficiency—through exports and as a segment of their global activities—as well as for access to the domestic market (CEPAL 1998a). Therefore, three different sectors will be analyzed: the automobile and electronics sectors, in search for efficiency, and the telecommunications sector, in which the various firms search for market access. It is of utmost importance to understand the economic conditions of the three sectors, as well as the structural changes achieved by them from a wider perspective to estimate the potential of FDI in the respective sectors in the context of liberalization.

### *The Automobile Industry*

The automobile industry had been one of the most regulated sectors in Mexico's economy.[8] Since 1962 five decrees had regulated this sector. Foreign investors were allowed to own up to 100 percent of auto parts plants and companies, but they were regulated by rules prohibiting imports of new cars, by the division between car assemblers and parts production, and by minimum requirements for local content and exports for finished cars, depending on the respective period and decree.

In 1977 price controls and production quotas were abolished. The most recent decree, in 1995, made domestic auto industry regulation compatible with NAFTA legislation by gradually abolishing



cent annually until 2003, at which time they will be completely eliminated—will be replaced by a regional domestic content requirement of 62.5 percent. Beginning in the year 2003 there will be no more barriers to trade or investment in the North American automobile industry. In the maquiladora activities, moreover, domestic sales in general will be allowed to increase substantially, from 55 to 100 percent in 2001, when the maquiladora program ends (Moreno 1994; Ruiz Durán, Dussel Peters, and Taniura 1997).[9]

The automobile industry in Mexico has been strongly influenced by domestic and international factors. Added to legal changes, which allowed for increasing liberalization since the 1980s, the crisis of Mexico's economy in 1982 is a point of reference for the industry, which only recovered in terms of sales in the beginning of the 1990s. However, after the crisis of 1994–1995, domestic sales in 1998 still had not returned to 1980 levels. On the other hand, and strongly influenced by U.S. firms, firms established in Mexico increasingly orient their production toward exports. Since the end of the 1980s, and as part of U.S. firms' strategies to counter Asian competition, Mexico has become an increasingly important production site for the U.S. automobile industry (Mortimore 1998).

The automobile industry has been since the 1960s the fastest growing sector in Mexico's economy in terms of GDP and exports. More recently, the automobile sector has been the most successful in terms of restructuring due to liberalization (see Chapter 4). Production, labor productivity, and exports have increased substantially, as well as trade surplus. Moreover, since NAFTA and as a result of the crisis of December 1994, the automobile sector has been most successful in shifting from domestic to export-oriented markets. The export share in vehicle production increased in only 10 years (1985–1995) from 13.2 to 83.62 percent, and fell to 68.57 percent in 1998 only because of the recovery of the general economy after 1996. No other Mexican manufacturing branch accomplished such a shift. The main reasons for this change are, on the one hand, the strong and high degree of intraindustry and intrafirm trade (with a few exceptions in trucks and buses, all manufacturers and assemblers are TNCs) and, on the other, the increasing integration of the North American market in this specific sector, led by the U.S. "Big Three" (Ford, Chrysler, and General Motors).[10] After the 1994 crisis, the sector was actually able to absorb a 71-percent decline in domes-

Mercedes Benz, BMW, and Volvo, among others.[11] All these firms already have production and distribution centers in the United States, and they will have to decide either to expand their operations in that country or move substantially to Mexico.

These trends result from the main strategies of export-oriented firms in the automobile industry, particularly the Big Three. Ford, General Motors, and Chrysler are among the most important exporters in Latin America and have become some of the most relevant foreign investors there. In the case of Mexico, five out of the seven main exporting firms in Mexico are automobile firms. As a reflection of the integration of the Mexican industry as a segment of the U.S. automobile commodity chain to deal with Asian and Japanese challenges, Mexican exports in automobiles to the United States grew from $3.7 billion in 1990 to $16.8 billion in 1998, representing 92.32 percent and 90.37 percent, respectively, of automobile exports. Mexico has become the third main exporter to the United States, increasing its share of total U.S. imports in automobiles from 4.95 percent in 1990 to 13.52 percent in 1998, and displacing countries such as Germany and the United Kingdom (Dussel Peters 1999a; Mortimore 1998).

In 1998–1999 U.S. firms expected to invest more than $5.5 billion in the auto industry, including a $200 million new Navistar truck plant. Other firms such as Delphi Automotive Systems, with 53 plants and sales of over $28.5 billion, have also concentrated several of their activities in Mexico. However, Chrysler and Ford, with FDI of more than $3 billion over 5 years, are the most significant foreign investors in this sector. Chrysler expects to build eight new plants in northern Mexico, whereas Ford expects to deepen export-oriented activities in Mexico, with new plants in Chihuahua representing investment of $500 million. The auto parts industry reflected similar trends, with FDI expected to total more than $260 million for 1998/1999. Japanese, U.S., and Canadian firms such as Kasai Mexicana, Unik, Magna Internacional, United Technologies, Mannesmann, and Easton Control, among many others, are either establishing new plants or expanding their operations in Mexico.

Mexico's automobile industry had already begun its integration into the North American market long before the 1994 crisis, although this process was significantly intensified after the crisis. Supplier systems in North America and an integrated regional network, in which the respective plants produce models for the North American market and significantly increase intraregional trade, are critical in understanding this particular sector of Mexico's economy (Ruiz Durán, Dussel Peters, and Taniura 1997).

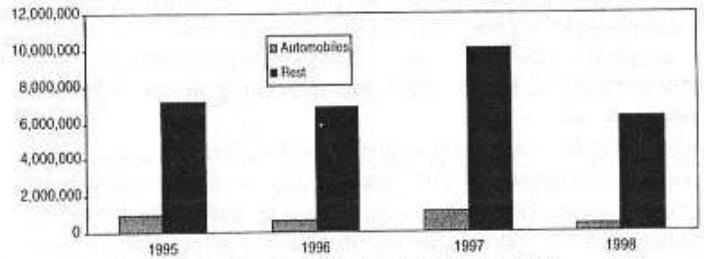


Considering the already liberalized legal framework for FDI and the creation of an automobile production and distribution network in North America, the impact of the 1994 crisis on FDI was negative, but much less than expected when contrasted to the contraction of the domestic market. Nevertheless, FDI for the automobile sector fell from $917 million in 1994 to $630 million in 1996. Moreover, this decrease in FDI was sharper than that experienced in other sectors, and, after a strong 1997, in 1998 it dipped far below the levels achieved in 1994 (Figure 5.3).

Nevertheless, FDI is expected to increase significantly in the coming years. Projects such as Volkswagen's Beetle,[12] production expansion of the Big Three and Nissan Mexicana, and new investments by such newcomers as BMW, Honda, and Mercedes Benz seem to reinforce Mexico's status as an important production and distribution site, both for its domestic market and as an export platform. It is expected that exports as a share of total production will decrease in the coming years and stabilize at around 60 percent as a result of the recovery by the domestic market. However, the domestic market's recovery might be hindered because of the full implementation of the tax on new cars, already averaging 6.5 percent in 1999. In 1996, after the strong recovery by more than 30 percent of vehicle production, official sources estimated that vehicle production could reach 2 million units by the year 2004. For this to be the case, FDI would have to increase significantly to expand capacity.

It is important to stress that light- and heavy-truck production has been extremely dynamic since the crisis, with output growing by

**Figure 5.3 Realized FDI in the Automobile Sector (1994–1998) ($U.S. thousands)**




Source: Author's calculations based on SECOFI (Dussel Peters1999a).

147.6 percent during 1995–1998. Nissan, Ford, General Motors, and Chrysler have been the most important producers in this segment. However, Mercedes Benz, Navistar, Kenworth, and other such firms as Mexicana de Autobuses and Dina Nacional have significantly increased both their production and exports, suggesting that in the future this segment will be even more dynamic than passenger vehicles.

From a macroeconomic and development angle, one of the most critical issues for Mexico's automobile industry is the transition from domestic to North American between domestic and regional (North American) value added. With NAFTA, the domestic content requirement will be phased out over a 10-year period, from 34 percent in 1994 to 29 percent in 1999, and will be reduced to zero after 10 years. Thereafter, the rules of origin will shift from domestic to regional value added, which must come to 62.5 percent for passenger automobiles. It is possible that Mexican value added will significantly decrease as it is replaced by North American or regional content. Whether or not this happens will depend heavily on the medium- and long-term strategy of TNCs and the economic and political situation in the region, as well as the respective governments' actions. Nevertheless, regional integration in the automobile-manufacturing sector has been a continual process over the past years, and it is expected that integration will only expand, accompanied by an increased FDI flow to Mexico.

### *Telecommunications*[13]

In general, the 1993 law on foreign investment specified that foreign investment above 49 percent was prohibited under any circumstances in telecommunications, with the exception of cellular telephones, if approved by CNIE. The telecommunications sector is currently governed by the Federal Telecommunications Law (Ley Federal de Telecomunicaciones, LFT), enacted in 1995, which affected long-distance services, specifically allowing the resale of domestic and international long-distance services pursuant to Mexican government regulations.

As a result of the LFT, in 1996 the Mexican telecommunications regulatory agency (Comisión Federal de Telecomunicaciones, COFETEL) was created as an autonomous institution to organize, regulate, and promote the development of [illegible]



the telephone and long-distance services. These amendments, as well as the concession title for Telmex in 1990, established Telmex's exclusive right to provide domestic and international long-distance services until January 1, 1997. Competition among long-distance services, as well as for local services, began on this date. Initial competition with new firms or carriers required Telmex's infrastructure to interconnect with other public long-distance networks until the firms are able to build their own telecommunications infrastructure.

Both the conditions of the long-distance market in Mexico and its legislation are strongly tied to Telmex, which was founded in 1947. In 1972 the government became the majority owner of Telmex. In the context of a liberalization strategy, Telmex was privatized in 1991 and, in spite of new entrants in 1997, it continues to maintain the only local and intercity networks in Mexico. Telmex was privatized to a group of enterprises, which paid $1.8 billion for 20.4 percent of the firm's shares and got 51 percent of the firm's voting rights.[14] Until 1996, Telmex had the exclusive right to international calls and the option for telephone services to all towns with more than 500 inhabitants in return for specific increases in the number of lines and significant reduction in the waiting time for new telephone lines.

The telecommunications sector—which includes not only long-distance carriers but also such activities as satellite services and new forms of communication—increased its share of total GDP from 1.07 percent in 1990 to an estimated 2.5 percent in 1998. However, employment in the sector remained relatively stable over the same period. As a result of Telmex's efforts, the number of telephone lines almost doubled over 1990–1998, increasing the telephone density from 6.4 per 100 persons to an estimated 10.8 in 1999. Since its privatization, Telmex has invested more than $14 billion in the modernization and expansion of its network, as reflected in the high degree of digitalization from 29.0 percent to 97.7 percent during 1990–1998. It is by far the largest firm in the sector. Employment in Telmex has remained relatively stable since 1990, at around 50,000 workers, which reflects the high increases in productivity of the firm (COFETEL 1998, 1999).

However, it is not enough to highlight former trends. The long-distance market has also gone through important changes during the 1990s. International long-distance calls have accounted for an AAGR [illegible]

lines were canceled, particularly because of steep price rises by Telmex for local phone calls during this period. Moreover, the government proposed a new telephone tax of 15 percent in the 1999 budget. Telecommunication firms threatened to take legal action against this tax, as well as to reduce FDI; so the Mexican Congress did not approve the government measures. The power of foreign long-distance telephone carriers was also reflected recently, when in March 1999 Telmex agreed to significantly lower its interconnection tariff for most of the long-distance firms, including MCI and AT&T, from $0.37 in 1998 to $0.25 in 1999 and $0.19 in 2000. Telmex calculates that these agreements will result in a loss of revenue of around $650 million for 1999/2000, but expects that this agreement will allow it to enter the U.S. operating market.

Mexico's liberalization experience in telecommunications is relevant from several views. One the one hand, it has triggered massive foreign investments (almost exclusively from the United States) in the long-distance telephone market, which is worth around $5 billion. It was expected, moreover, that during 1999 firms such as Amaritel, Megacable, and Nextel would begin important investments in the local telephone market, directly challenging Telmex's monopoly. The major new entrants, particularly Alestra and Avantel, are also expected to continue with significant FDI and the development of their own long-distance infrastructure. Mexico's local and long-distance markets are key in the long term, even though the possibility exists for losses in the short and medium run. As well, it can be concluded that the crisis of 1994 did not affect the general dynamic of this sector and, contrary to expectations, FDI for communications increased by more than 30 percent in 1995. Since liberalization, moreover, tariffs for national and international long-distance calls fell in 1996 and 1998 by more than 50 percent and 40 percent in real terms, respectively, while the waiting period for installation was reduced from 2 years in 1990 to 27 days in 1998 (COFETEL 1999).

It is important to recall that the long-distance carriers decided during 1994–1995 to realize their respective investments in Mexico and would have been able to withdraw their concession charter after the 1994 crisis and the slow economic recovery, but, so far, this has not happened. The long-distance infrastructure has not only been increased substantially, but has also been modernized and offers new



for services. Finally, recent trends in telecommunications in Mexico are also relevant since they show that Mexican firms by themselves, particularly in this sector (with the exception of Telmex), require joint ventures and different forms of associations with foreign firms to compete even in the Mexican market. No only huge investments but also foreign firms' experience, as well as technological development, are some of the reasons for this structure (Dussel Peters 1999a).

Nevertheless, Mexico's experience in the long-distance market also shows that it is most important to have a transparent and defined regulation frame before implementing competition and FDI liberalization. For telecommunications, COFETEL and other regulatory institutions had to issue regulations and incentive agreements between firms long after they began their respective investments. Without the appropriate legal environment, liberalization can result in disincentives and the creation or legitimization of monopolies. This experience cannot be generalized for Mexico, but is very significant for sectors in which entry costs are exceptionally high. So far, negotiations between Telmex and the rest of the carriers have been extremely difficult and have even had a negative impact on Telmex's attempt to provide services in the United States, which, so far, has not been allowed. This experience is also of utmost importance for other developing nations trying to open up their telecommunications sector, since the economic and political power of TNCs in telecommunications is very high and the TNCs are able to force governments to negotiate by threatening to cancel planned investments. The latter did not occur in Mexico, but the threat was sufficient to begin a long negotiation process from which the TNCs eventually emerged triumphant.

Finally, the legal framework and specific circumstances of telecommunications, in addition to individual firm strategies, are of critical importance in increasing and improving services to the population in general. In the Mexican case, so far, telecommunication services have improved significantly, particularly in telephone density and tariffs for long-distance calls. However, telephone density is still low (around 10 telephones for each 100 inhabitants), and an important challenge will arise in the next few years after the new entrants have penetrated most of the urban areas for long-distance and local calls. After this initial saturation, it will have to be seen if

*Electronics*[20]

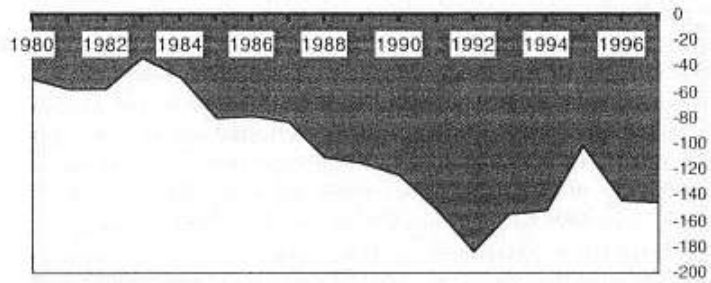
During the 1990s the electronics sector was one of the most dynamic sectors of Mexico's economy. The foreign investment law of 1993, as well as later amendments abolished limitations in this sector, and 100-percent foreign ownership is now permitted under the law. The sector has become, with the automotive sector, one of the most successful branches to orient its production toward exports, accounting for an AAGR of exports of 34.7 percent for 1990–1997. Interestingly, the share of total GDP of the electronics sector produced by maquilas accounted for almost 30 percent in 1997, with a sharply falling trend due to the decreasing importance of tariffs in trade with the United States as well as the projected elimination of maquilas beginning in 2001.[21] As a result of NAFTA, there was an immediate 40-percent reduction in tariffs for products such as office equipment, electromagnetic products, and parts and components of photocopying machines. In 1998, tariffs will be reduced by 50 percent for such products as telephone equipment, televisions, and computers, and import tariffs will be completely abolished by 2003 (Dussel Peters 1998).

Parallel to the strong growth in terms of GDP and exports, electronics reflects the most significant trend of the Mexican manufacturing sector as a whole and particularly for the most dynamic branches: high dynamism in exports, GDP, and labor productivity, among other variables, and a high and increasing penetration of net imports (see Chapter 4). Thus, one of the characteristics of electronics, as well as of Mexico's manufacturing in general, is its high and increasing tendency to import inputs required for GDP and export growth, as shown in Figure 5.4. This trend has strengthened since the implementation of liberalization in 1988, and net imports as a percentage of GDP have only decreased in 1 year (1995) since then.

The trends, as in the automobile sector, had already begun in the early 1990s. The export/GDP coefficient was 3.92 percent in 1980, and has continually increased to 40.20 percent, 46.31 percent, and to an estimated 103 percent for 1990, 1994, and 1997, respectively. Parallel with this process, employment in electronics has substantially increased, accounting for an estimated 239,585 jobs in 1997, of which 75.47 percent are located in maquila activities. Employment in nonmaquila activities in this sector have decreased in absolute numbers since 1990 (INEGI 1999).



**Figure 5.4 Electronics: Trade Balance/GDP (1980–1996)**




*Source:* Author's calculations based on INEGI (1999).

As in the automobile sector, the integration of Mexico's electronics industry into a North American production and distribution network is of critical importance. Moreover, given the high degree of intraindustry trade, required inputs (most of them imports) and production (most of them exports) are calculated in U.S. dollars (with few exceptions, these firms established in Mexico are not affected by exchange rate fluctuations). Most of the dynamic and export-oriented firms in electronics are foreign firms and/or TNCs (CANIETI 1997b).

With the expectations raised by the founding of NAFTA, these firms invested heavily in Mexico during the 1990s in maquila activities or in maquila-like industrial organizations that do not operate under the legal maquiladora program. For the period 1994–1997, and in contrast to the negative trends in other sectors, the AAGR for actual FDI in electronics was 18.5 percent, with a total real FDI of $2.5 billion. Although it decreased in 1996 and 1997, real FDI in 1998 was still 97 percent higher than in 1994 and became, together with actual FDI in the automotive and financial sectors, one of the most important recipients of FDI (Carrillo, Mortimore, and Alonso Estrada 1998; Dussel Peters 1999a).

The majority of FDI in electronics came from the United States. Nevertheless, and this is one of the main characteristics of recent FDI in Mexico, the sources of FDI have diversified profoundly, particularly in the television production in Ciudad Juárez and Tijuana, which is considered the television set production capital of the world. Firms such as Philips (the Netherlands), Daewoo Electronics

(South Korea), and Computer International Acer (Taiwan) have chosen Mexico as an important assembly, manufacturing, and distribution site for their production networks. And as is the case of the automobile sector, most of the electronics sector in Mexico has become part of a North American production and distribution network, and variables such as FDI, exports, and GDP have become relatively independent of Mexico's domestic economy.

Television set production is particularly relevant, since it is one of the few export-oriented sectors in Mexico dominated by non-U.S. foreign capital. Mainly Japanese, Korean, and European firms participate in this sector and will produce an expected 25 million sets by 2000. In other subsectors, such as the computer industry, Mexico has become increasingly important for IBM and Hewlett Packard, which have firms there that assemble important parts for personal and laptop computers, as well as ink-jet printers.

The crisis of December of 1994 did not have a profound impact on FDI in the electronics sector, which continued as one of the most successful sectors in shifting from domestic-oriented to export production. Mexico's exporters of electronic goods substantially increased their share in the total U.S. market, from 13.32 percent in 1990 to 19.59 percent in 1998, becoming the largest exporters of such products to the United States. Most of the export-oriented firms do not even depend on the domestic market and, in some cases, export 100 percent of their production to the United States. These firms, with strong intrafirm linkages and transnational distribution networks, will probably not change their FDI flows in the near future.

Finally, several analyses (Carrillo, Mortimore, and Alonso Estrada 1998; Dedrick and Kraemer 1998; Dussel Peters 1999a; Dussel Peters and Ruiz Durán 2000) concluded that Mexico had become strategically important for U.S. electronic firms to confront Asian competition in the 1990s. Since 1998, Mexico has been the most important exporter of electronic products to the United States, displacing Japan, China, and Canada, for instance, and accounting for $25.8 billion in exports in 1998 alone. Firms such as IBM have not only substantially increased activity in Mexico, but have significantly raised North American-produced content since NAFTA (see Chapter 7). European and Asian firms have also increased their activity in Mexico to export to the United States: these firms have benefited particularly from maquila activities and from relatively low tariffs.



## Preliminary Conclusions

Attracting FDI has been a priority for Mexico's liberalization strategy. Several amendments to the law of 1973, as well as the foreign investment law of 1993, show the critical importance of FDI (added to portfolio investments) as an important source for financing liberalization. FDI has increased its weight in Mexico's economy in terms of GDP, productivity, gross formation of fixed capital, and foreign trade, among other variables. Moreover, there was a clear trend in massively increasing FDI in the 1990s, particularly in the automotive, electronics, and telecommunications sectors.

FDI and particularly TNCs in the United States have been most successful in integrating part of Mexico's economy into the North American market and in recognizing the critical importance and potential of NAFTA. In general, FDI and U.S. foreign affiliates established in Mexico have been able to benefit from liberalization because of investments, modernization, and already existing intrafirm and intraindustry linkages of the 1990s. Thus, the new legal framework established in 1993 made compatible with NAFTA regulations has enabled part of Mexico's industry to link up with specific global networks. The cases of the automobile and electronics industries are revealing from this perspective and show that these firms and export-oriented sectors have become, up to a point, independent of domestic economic and political events. Changes in the exchange rate and a fall in the domestic market only marginally affect their operations in Mexico, this being so for both maquiladora and nonmaquiladora activities since most of their inputs and sales are valued in U.S. dollars.

Even further, such sectors as electronics reflect one of the outstanding features of Mexico's economy and manufacturing in general: the inability to generate endogenous growth conditions and the need to import more and more inputs to allow growth in production and exports. The electronics sector, with a negative trade balance/GDP coefficient of over 100 percent, reflects this structural deficiency and inability to increase linkages with Mexico's economy.

The search for market access of FDI in telecommunications, particularly in the long-distance market, also shows that FDI is a result of long-term company strategies, which were not significantly affected by the crisis of 1994. FDI in telecommunications is of particular relevance for other developing nations because it indicates that a

market opening has to be preceded by transparent regulations. The learning process for the responsible Mexican institutions, as well as the political and economic power of the TNCs, resulted in uncertainty and disincentives in some cases. Nevertheless, and even under these circumstances, it is expected that FDI will flow massively in this sector, even for the local telephone market.

In spite of fluctuations during the 1990s in FDI, there is a clear upward trend in FDI flows to Mexico. All sectors analyzed reflect a long-term interest in efficiency or market access for any firm's strategies. The sectors analyzed reflect that Mexico is becoming a significant part of a North American network. But Mexico's macroeconomy, particularly in portfolio investments, has been affected since 1997 by different international events, and various forms of foreign portfolio investments, such as in the stock exchange, have been relatively volatile—with even a tendency to fall since 1995 (Table 3.1 in this book). In addition, for the medium and long term it is expected that international devaluations, such as those in Asia and Brazil, will lead to stronger competition in the U.S. market and to greater Mexican imports from Asia. Electrical, electronic, and clothing products are some of the branches that might be affected by these trends and it is possible that these trends will result in current-account difficulties.

In sum, FDI has integrated part of Mexico's economy into the world market, particularly in the United States. The network of intrafirm and intraindustry linkages has, by and large, integrated Mexico into the relatively low-value-added segments of capital-intensive activities that face Asian competition. The massive penetration by FDI, almost exclusively from the United States, is practically in all legally permitted economic activities. These sectors, not by coincidence, include the most dynamic sectors of Mexico's economy in terms of GDP and exports (e.g., automobiles, auto parts, electronics, and telecommunications). However, the penetration of FDI has been at least as relevant in other sectors, such as energy-related sectors (e.g., secondary petrochemicals, gas distribution), mining, and services (financial services and retail services). Detailed FDI analyses for several sectors (CEPAL 1998a; Dussel Peters 1999a) show that foreign investors, in most instances, buy out their Mexican counterparts. Only in such cases as telecommunications, where a majority FDI ownership is not allowed, do Mexican firms continue to hold a share in the relevant firms. One reason for any buy-out is the asymmetry between potential foreign and Mexican partners: the association, for example, between Cifra and WalMart (with its annual sales of $137.6 billion and more than 2,800 stores) was too much for the Mexican firm to have a long-term relationship and share in expansion. Foreign partners would like to invest heavily, but most Mexican firms, including big industrial groups, depend on the domestic market, which has not recovered in the last decade, and are unable to finance their operations through the Mexican financial system. Seen this way, foreign partners most often either break their associations with Mexican firms or buy out their partners, if legally allowed to (Dussel Peters 1999a).



Finally, FDI has been an important element that allows increasing polarization of Mexico's economy. As stated, sectors that are highly dynamic in terms of GDP and exports are the main recipients of FDI. Thus, FDI has allowed the increasing integration of a complex North American (particularly industrial) network, with extensive intrafirm and interfirm trade that permits quick adjustments to the market and demand, depending on the specific product and sector. However, it is just as relevant to point out that this emerging industrial structure has few linkages with Mexico's domestic economy (this issue will be also elaborated for two specific industries in Chapter 7). As we have seen the impact of these activities not only on other sectors, but also on Mexico's balance of payments, employment, learning processes, and ability to generate an endogenous growth process in the long run, is extremely limited.

## Notes

1. For a discussion on the historical development and relevance of FDI see Dussel Peters (1999a).

2. The most significant criteria specified that invested fixed assets should not exceed $100 million, that only external funds could be used for initiating the investment, and that foreign investment activities should obtain a positive trade balance during the first 3 years of operation.

3. NAFTA significantly changed investment-related issues and provided a wide investment definition. Each nation in NAFTA has to treat foreign investors and investments no less favorably than the investments by its own investors. The main provisions for foreign investment for Mexico affect its energy (oil and gas exploration and development) and operations in the electricity sector (Hufbauer and Schott 1993; SECOFI 1994a).

4. In January 1999 the government allowed for a direct 100-percent share by foreign investors in most of the financial sector, particularly in banks. This was a response to the precarious situation of domestic banks

after 1995, in spite of the public financial bailout. It is expected that foreign financial institutions, particularly in Spain and the United States, will significantly increase their investments over the coming years, particularly by buying established Mexican institutions (Dussel Peters 1999a).

5. In addition to the overall preferential treatment for NAFTA member countries, maximum amounts of allowed FDI are higher for NAFTA members then for other countries.

6. All FDI information for the period since 1994 was obtained directly from SECOFI and refers to all FDI reported up until June 30, 1999.

7. Moreover, of the main foreign companies in Mexico (by sales) seven are U.S. firms, with one each from Germany, Japan, and Switzerland (Dussel Peters 1999a).

8. This section analyzes only finished vehicles for passengers, including light and heavy truck manufacture and assembly up until 1998: it will not include the auto parts industry.

9. There are important exceptions. For used cars, free trade will be gradually liberalized, but will not be completed until 2018, and the domestic-content requirement will be phased out over a 10-year period.

10. Mexico's vehicle exports have increasingly concentrated on the North American market, accounting for 91 percent of total exports in 1998. Not surprisingly, Chrysler's, Ford's, and GM's shares of total exports to the U.S. market are 100 percent, 100 percent, and 92 percent, respectively, while Nissan's share is 34 percent.

11. Several international acquisitions and mergers during 1998 and 1999—such as Mercedes Benz and Chrysler, the acquisition of Scania by Volvo, and the merger between Nissan and Renault—will also have an important impact in the sector, although it is too early to estimate their potential.

12. Interestingly, Volkswagen decided to invest in Mexico beginning in 1995, during the crisis, to produce the Beetle exclusively in Puebla. Investments of over $1 billion for a longer time, generating 2,000 new jobs and production of around 160,000 units annually, of which more than 90 percent will be exported to the United States and Europe, are expected.

13. This section includes general data on the telecommunication sector but concentrates on long-distance firms and issues. Most of the data were obtained from COFETEL (COFETEL 1998, 1999), CANIETI (CANIETI 1997a) and interviews with relevant firms in 1997–1998. Most of the firms established in Mexico also have a web page with valuable information.

14. The Mexican group Carso S.A. de C.V. bought 10.4 percent of the shares and control in Telmex, while Southwestern Bell and France Cables et Radio each bought 5 percent of the shares.

15. According to Avantel, 69 percent of Telmex shares are owned by foreigners (Southwestern Bell Cable 10.6 percent, France Télécom 6.7 percent, and foreign investors on the New York Stock Exchange 52.1 percent), while only 31 percent is owned by Mexicans (Ortega Pizarro 1998).

16. These investments are both foreign and Mexican, and cannot be considered exclusively FDI.

17. Most of the new entrants obtained their concessions after December 1994; that is, these firms could have either not applied for their concessions and/or significantly decreased their investments. However, the latter did not occur. NAFTA and the relatively low degree of telephone density of 10.8 percent in 1999 (i.e., telephone lines per 100 inhabitants) compared with densities in Korea, Hong Kong, and Singapore, with levels above 40 percent, reflect the high potential of the Mexican market.



18. The per-minute settlement rate for the U.S.-Mexican route for traffic terminated by Telmex, which was determined before the establishment of the new long-distance carriers, was $0.395 and was to be reduced to $0.19 on January 1, 2000. U.S. carriers paid interconnection costs of $6.5 billion during 1989–1997, with $875 million in 1996 alone. (For a discussion of this issue, see FCM 1997.)

19. From this perspective, the 30-percent loss of the Mexican long-distance market is much less, since most of the revenues of the entrant firms are transferred to Telmex, thus amounting to a real loss of between 5 and 10 percent of the market.

20. Most of the information in this chapter was obtained from CANIETI and interviews with the firms.

21. The decision to continue the maquila system is being discussed by the industrial chambers and Mexican officials, and the outcome of these negotiations is uncertain so far.

# 6

# The Costs of Liberalization: Social Development

So far, I have examined the impact of liberalization on economic issues, and in some cases its social and political consequences. However, what have been the consequences of the liberalization strategy for specific such social issues as income distribution, poverty, and employment?

This chapter focuses on the social challenges that have emerged since liberalization, but does not discuss in detail social policy measures adopted since 1988. The chapter begins with a general debate about social reform in Mexico, as well as on the new labor culture (*nueva cultura laboral*), the proposed changes to the Federal Law of Employment (LFT), and the general conditions of unions and their current role and participation in the government since 1988. This analysis is closely linked to the topics analyzed in Chapters 2 and 3. Moreover, it briefly analyzes social policy responses and the general vision regarding social issues since 1988, as well as changes since the crisis of 1994–1995. The second part looks at income distribution in Mexico from 1984 to 1996 as well as other general social issues. Of particular relevance are the general income distribution trends and specific income sources that affect lower income classes, poverty, and extreme poverty. The third part examines the employment challenge and real-wage trends in Mexico, and, as described here, the employment issue is of utmost economic and social importance because wages from employment are one of the largest sources of income for Mexico's population. This is particularly true in societies in which social security systems are either weak or nonexistent. The chapter concludes with the social challenges that have emerged since

liberalization, as well as the possibility of resolving them in the medium term.

## Changes and Visions in Social Policy Since Liberalization

The emergence of liberalization and the new term under Salinas de Gortari was paralleled by significant changes in Mexico's corporatist structures—in addition to the worst electoral results in PRI's history. Moreover, while the private sector had been able to increase its informal weight in the government and PRI, there was a widespread consensus that the traditional constituencies of PRI had weakened significantly. Not only had party-union linkages deteriorated, but so had the institutions that historically represented these sectors, particularly labor. However, and this is probably one of the main features of Mexico's political system until 1999, even though debilitated, the old corporatist structures still coexist with the dramatically changing economy and aim to democratize and reform the political system, unions, different laws, and PRI itself.[1]

The Salinas administration initiated at the beginning of the 1990s a project of "new unionism" that assumed that labor relations and unions had to change in response to economic changes, otherwise the unions could be endangered. His project focused mainly on (1) increase of the representativity of unions, (2) their relationship with the state, and (3) their relationship with the private sector (Samstad and Collier 1995). These guidelines were, in general, useful to liberalization's allowing economic restructuring in relevant industries. Nevertheless, the historic legacy of corporatist structures, the tensions within PRI where corporatist unions were represented, and the importance of these unions for federal and state elections also had to be considered.

Regarding the first issue, in general three types of unions could be distinguished since the 1980s (Bizberg 1990; Samstad and Collier 1995). The government strongly supported apparently representative unions, which are to be distinguished from democratic unions, in that the former did not follow a confrontational path against the government. The most prominent union supported by the Salinas government was the Union of Telephone Workers of the Mexican Republic (Sindicato de Telefonistas de la República Mexicana, STRM) headed by Francisco Hernández Juárez since 1976. Hernández Juárez was



supported during the 1980s several times by the government, the Labor Congress, and the Confederation of Mexican Workers (CTM) in his efforts to expel internal opposition and create the model union after 1988. The union was able to preserve many of its contractually granted benefits since the 1980s during the privatization of Telmex and also negotiated the introduction of new technologies at Telmex, linking wage increments to productivity increases. This cooperative stance with the government was further reflected in its rather neutral attitude toward NAFTA. With no internal opposition, Hernández Juárez became the head of the new Federation of Unions of Goods and Services Companies (Federación de Sindicatos de Empresas de Bienes y Servicios, FESEBS) created in 1990. However, the relative success of STRM has to be put in context: no other union in Mexico has been able to negotiate such high increments in real wages through productivity growth with the government, consequently, the more collaborative unions are characterized by their uniqueness.

A second group of unions or movements within unions can be identified by their democratic structures, although they were much smaller than other unions in Mexico. In practically all cases this second type of union openly opposed Salinas's reforms and the undemocratic control exercised by corporatist unions, and were suppressed in different ways by the government and/or by other unions. Major conflicts at Modelo, Ford, and Volkswagen in 1990 reflected the government's low level of tolerance for union opposition to economic reform. In some of these cases, the CTM and the affected firms violently broke up strikes by these unions, with the knowledge and implicit support of the government.

Finally, corporatist unions remained the most significant ones through 1999. In contrast to the smaller independent unions, corporatist unions such as the CTM, Revolutionary Confederation of Workers and Peasants (CROC), and Regional Confederation of Mexican Workers (CROM) had close ties to the government, and, contrary to the STRM and FESEBS, they were still represented in important positions in the government and PRI. The CTM continued as the main union allied to the government and Salinas, but other corporatist unions expressed their discontent with economic and political reforms. In response, Salinas made full use of presidentialism and authoritarian state institutions in his first year to arrest several of the main union leaders, such as in PEMEX and the teachers union. However, even the CTM and the rest of the corporatist unions rejected any plans for democratization of the unions so as to preserve

the old state-labor alliance that dated from the 1940s. Thus these unions, and particularly their leaders, continued to benefit from the traditional corporatist structure but became completely subordinated to the goals and interests of Salinas's liberalization strategy. From this perspective corporatist unions did change dramatically after the 1940s: although they initially had enjoyed major influence in economic and social policy, by the 1980s, the corporatist unions had shed most of their nationalist and postrevolutionary ideology and become one of the most reactionary sectors of Mexico's economy in order to preserve the status quo (Valdés Ugalde 1997). While conceding and legitimizing the profound economic and social changes of liberalization, the corporatist unions (particularly CTM, CROC, and CROM) became completely immobilized to preserve the alliance.

It is in this context that by the mid-1980s a debate was begun over changes in the federal labor law and general labor conditions, as well as labor's privileged status in PRI.[2] Both the Salinas and Zedillo administrations failed to deal with these issues, but received full support for wage indexation after the pacts of 1987 (which resulted in dramatic real-wage losses), as well as for NAFTA and other important constitutional changes.

These issues are strongly linked to Salinas's attempt to reorganize PRI, even to eliminate its membership by sector altogether in favor of individual membership, since the party had increasingly lost its attractiveness for the urban and middle-class sectors. The National Program of Solidarity (Programa de Solidaridad Nacional, PRONASOL), which became the social centerpiece of the Salinas administration, was also of critical importance for Salinas's political projects. PRONASOL functioned on a very wide participation base, independently of the PRI and directly controlled by the president. As such, many analysts regarded PRONASOL as a political structure parallel to PRI, which could be used by Salinas as a new political party in the future (Cornelius 1995).

Finally, it is important to look at the issue of modifying the federal labor law (or making it more flexible). On the one hand, it is relevant to recall that multilateral agencies, particularly the World Bank and the Interamerican Development Bank, have followed an aggressive agenda since the end of the 1980s for making labor laws flexible. The agencies state that "there is no more powerful mechanism to raise incomes of workers than market-led development. . . . Transitions to more market-oriented systems inevitably generate winners and losers" (World Bank 1995a). Based on the experience of



East Asian nations, the agencies assert that labor market rigidities, such as promotions based on seniority, weak social security systems not linked to benefits, and structures that do not reward entrepreneurship and individual effort are the main causes for the increasing weight of the "unregulated informal sector" (World Bank 1995a, 7), which accounts for more than a third of GDP and employment in Mexico in 1993 according to official sources (STPS 1993). From this perspective, policies should eliminate antilabor biases and moderate tax and regulatory burdens on formal activities, while government action should mainly focus on providing urban infrastructure.[3] However, and specifically regarding labor policy, in line with export-oriented industrialization (see Chapter 1) it is recommended, that governments should abolish "detailed conditions of the labor contract (wages, job security, number of vacation days, employer obligations, and so on)" (World Bank 1995a, 9). These are regarded as burdensome requirements that discourage formal labor contracts. The "flexibilization" of labor conditions and contracts, from this perspective, is quite clear: the government should retreat and abolish laws regarding wages and job security and protection, which do not allow for market-conforming results and doom firms and workers to informality. Wage regulation in particular is seen as an inhibition to employment generation.

On the other hand, corporatist unions and particularly the CTM rejected any formal measures that would directly affect their formal and informal benefits in the past decades. In spite of this radical posture, but also as a result of heavy pressure from multilateral institutions, President Salinas himself, business, STRM, FESEBS, and a few union leaders from corporatist unions (particularly Juan S. Millán, former secretary of social security and labor qualification of CTM) started a dialogue in 1993 with business leaders on labor qualification, productivity, promotions, and wages. The dialogue was interrupted in 1994–1995 and reestablished in 1996, and resulted in the publication of an agreement on the principles of the new labor culture. In general, it stresses that the new labor culture should be based on reforming the labor laws to preserve and generate new employment as well as the linkage of wage growth with productivity increases. Moreover, guidelines were established to limit contractually granted benefits, cancel fringe benefits, and weaken the constitutional right to strike. This labor-business code has been strongly criticized by independent labor union leaders, including Hernández Juárez, stressing that only a few corporatist union leaders supported

this agreement. But government and business expect these principles to be the basis for the future reform of the federal labor law (*El Financiero* 1999).

Aside from these unsettled issues, including the future position of labor in the political system, it is an undisputed fact that labor conditions have changed significantly since the 1980s. In addition to severe unemployment, dramatic real-wage losses, and employment reduction as a result of privatization, the weakness of corporatist unions has permitted important changes in labor conditions. The increasing informalization of employment and the incorporation of part-time workers whose workdays entail long journeys seem to have prevailed since the 1980s, whereas subcontracting and real-wage growth linked to productive growth was applied heterogeneously. Moreover, the participation of workers in firms' decisionmaking is very limited, even in modern firms and sectors, and in general restricted to their work area (De la Garza 1999). Thus, separate from the formal reform of federal labor laws, labor and working conditions have already changed de facto.[4]

In this context, what have been the role and function of social policy in the past decade? Historically, and as a result of the revolution, social policy had become one of the pillars of development strategy. Agrarian and labor legislation had strongly supported industrialization during ISI. Moreover, an extensive infrastructure (including rural communications), key programs for building publicly financed housing, and universal services offered by the federal government (e.g., schools, hospitals and health care, electrical and telephone networks, highways), allowed integrated social and economic projects since the 1940s. In spite of significant shortcomings, including persistent income disparities and increasing inequalities between rural and urban areas, social policy was fundamental to the modernization and industrialization process and was aimed at all Mexicans. This universal approach was displaced after the 1970s, particularly since the implementation of liberalization strategy (Cornelius 1995; Jusidman 1999).

Social policy, together with other specific economic and social issues, was given low priority in the economic framework of the liberalization strategy.[5] To make social policy more efficient despite fiscal constraints—and contrary to prior policies of affecting welfare through subsidies, price controls, minimum wages, and labor legislation, among other state interventions—social policy since the end of the 1980s has attempted to target extreme poverty in specific groups



and regions, focusing on such issues as nutrition, education, and health. Other social issues like social security, health, and education are to be managed and financed increasingly by the private sector and market-friendly mechanisms (CCPNS 1994; Dresser 1997; Levy and Dávila Capalleja 1998; Narro Robles 1993; Sheahan 1998).

In general, economic and social policy have not changed substantially since the crisis of December 1994, in spite of the effort to maintain at least social funding as a percentage of total public expenditure, and the goals of the liberalization strategy have remained unchanged through 1999. However, as a result of the 1994 crisis, the government has been forced to take several measures to counter the most dramatic crisis that Mexico has experienced since the 1930s.

From a macroeconomic perspective, the bailout in 1995–1999 of the privatized banking system (with costs equal to an estimated 19 percent of GDP)[6] as well as continuing the service on the foreign debt have been the main priorities of the Mexican government—in addition to the guidelines in place since 1988 (see Chapter 2; PEF 1995, 1997b). The government raised the value-added tax from 10 to 15 percent in the middle of the crisis in 1995, given that other sources of government income had shrunk significantly. Similarly, the severe fall in international oil prices during 1998 resulted in three expenditure cuts, totaling about $4 billion, also affecting social and education expenditures.

A widely held opinion among specialists on Mexico (Cornelius, Craig, and Fox 1994; Dresser 1997; Guevara Sanginés 1997) is that social policy has been given a low priority since the beginning of the Salinas government in 1988 (and this situation has been exacerbated since the 1994–1995 crisis) in addressing the social damage brought on by liberalization. Specific programs, such as PRONASOL[7] for 1988–1994 or the Program for Education, Health, and Nutrition (Programa de Educación, Salud y Alimentación, PROGRESA) during the Zedillo administration, were designed to target specific segments, regions, and/or ethnic groups in Mexico in the context of a lean and efficient state (Dávila and Levy 1999). As is the case with PRONASOL, the targeting of social policy involved political interests and became increasingly dependent on the discretionary power of the president: Presidents Salinas and Zedillo had a strong direct influence on allocating resources from both programs according to political interests and needs.

Thus, in line with the constraints of the liberalization strategy the 1994 crisis, several expenditure cuts in 1998, and particularly the

new and massive social challenges that have emerged since 1988, have left little room for new employment and social policies[8] or for the availability of the required resources, with but a few notable exceptions.[9] All the same, since the crisis the government has enforced a "second generation of reforms" (Edwards and Burki 1995) to make the labor market more flexible—that is, to abolish all those institutions that do not allow for wage flexibility—and induce market or price mechanisms in different areas of social issues.[10] Moreover, in its 1995 letter of intention to the IMF, the government specified that policies to reduce poverty and raise living standards among the Mexican population would only begin "once financial stability recovers" (SHCP/BM 1995, 12).

From this perspective, PROGRESA, created in 1997, has become the most important social program for combating poverty, and particularly extreme poverty, during the Zedillo administration. It assumes that at least three different sectors coexist in Mexico: an export oriented sector, Mexico's traditional sector with no export linkages, and "a third sector . . . characterized by the persistence of extreme poverty and social backwardness. This sector consists of subsistence economies that have no ties whatsoever with the most advanced sectors of the national reality" (Moctezuma Barragán 1998, 6).

Several issues are relevant in terms of PROGRESA. On the one hand, in contrast to earlier programs, PROGRESA's "spirit and basic concept . . . [are] precisely to increase the potential of individuals" (Moctezuma Barragán 1998, 13). In the medium run the program is expected to increase, through nutrition, health, and education, the efficiency, the productivity, and ultimately the income of individuals. Other government officials stress the trade-off between social policy (or subsidies) and higher taxes and/or increased public debt and/or reduced investment expenditures with a "high future social cost" (Levy and Dávila Capalleja 1998, 19). To identify families living in extreme poverty, PROGRESA established a rigorous evaluation of the socioeconomic condition of such families, including educational level, economic activities, and income (Gómez de León 1998, 22ff.). In many cases, this has encountered opposition from families and communities.[11] However, the main elements of PROGRESA are educational support, basic health care, and monetary support to buy food (Gómez de León 1998, 21). Benefits from PROGRESA include, for example, nutrition for families, children, and women during pregnancy and scholarships for children between the third grade and the third year of secondary school. At the beginning of the 1998/1999 school year the monthly scholarship per child averaged 123 pesos or $12.30 (Moctezuma Barragán 1998, 17). In some cases, allowances as a percentage of total income for a family averaged as much as 44.85 percent. Finally, the number of recipient families under PROGRESA increased substantially, from 404,241 families in 1997 to almost 2 million families in 1998, in more than 45,546 cities in 1,926 counties (*municipios*). The program is expected to affect around 20 percent more families in 1999 than in 1998.



It is important to make some comparisons between social policies enacted by either Salinas or Zedillo. During the 1980s, and particularly since 1988, there was a widespread deterioration of the public infrastructure, also as a result of fiscal constraints and the new priorities of liberalization. In 1988 liberalization began an important process of cutting subsidies, eliminating the control of basic goods, and promoting financially specific sectors and small and microenterprises. Nevertheless, PRONASOL still inherited part of Mexico's social policy legacy. PRONASOL attempted to solve several social issues at the same time, including education, and infrastructure in low-income rural and urban areas, and to provide assistance to family income through the promotion of small firms. Another critical aspect of PRONASOL was the important role of the participation by communities, through solidarity committees, which became the main instrument of social policy in PRONASOL, since they articulated their needs to PRONASOL (Cornelius 1995; Jusidman 1999).[12] Aside from criticisms that the program's resources seemed to be aimed at areas of strong political opposition, PRONASOL initiated the replacement of an integral approach to social policy with a more narrowly focused approach supported by the World Bank (Cornelius, Craig, and Fox 1994; Dresser 1997).

PROGRESA, on the other hand, has become the main social instrument of the Zedillo administration. In contrast to earlier approaches, it focuses exclusively on extreme poverty, particularly in rural areas. Added to its questionable focus on individuals in extreme poverty, PROGRESA itself dictates which families are or are not "extremely poor." This high degree of tightly focused social policy, given the many diverse challenges that have arisen since 1988, is very questionable.[13]

Given the newness of PROGRESA, it is impossible to evaluate this program. One of the most important questions in this regard is the program's continuation, since it has become strongly tied to the Zedillo administration. Just as PRONASOL was dissolved during the Zedillo administration, it is highly possible that PROGRESA will

also be discontinued by the next government. In the end, social policy since 1988 has depended on the leadership and political will of the president in office.

## General Social Issues and Income Distribution (1984–1996)

In general, social indicators (see Table 6.1) show that in spite of massive public expenditure in social sectors, particularly in education, health, and poverty programs, targeting has so far had a limited impact on Mexico's population. The expenditure has not been able to counter the general impact of the "lost decade" of the 1980s and the crisis of 1994–1995. On the one hand, GDP per capita in 1996 was still below levels achieved in 1980, and poverty and indigence levels in 1994 were similar to, or just above, 1980 levels. Similarly, and in spite of an extraordinary effort on the part of the government not to cut nominal social spending, expenditure levels on such items as education and total social spending in 1996 were still below 1982 levels. On the other hand, indicators such as life expectancy and infant mortality show continually improving performances, in spite of the trends in other areas analyzed.

As in most of Latin America, the uneven income distribution in Mexico remained unchanged or was even accentuated during the 1990s. High capital and financial concentration, social exclusion, population increase, as well as poor and big families with a relatively lower share of employed members, and difficulties in achieving advances in education and health have been some of the persistent trends in income distribution (CEPAL 1998a). Even according to government officials, Mexico's income distribution worsened during 1984–1994 (Moctezuma Barragán 1998:6).

What has been the impact of the liberalization strategy on Mexico's income distribution? Although there are still shortcomings in information, the period 1984–1996 allows us to examine the period prior to and since liberalization with regard to income distribution. In general, a high level of relative inequality distinguishes Mexican society. The two poorest deciles of population do not account for more than 5.3 percent of total income, while the two deciles of population with the highest income do not, with the exception of 1984, account for less than 50 percent of Mexico's total income. Table 6.2 and Figure 6.1 do not reflect only the absolute



**Table 6.1 Mexico: Selected Social Indicators (1980–1996)**

| | 1980 | 1982 | 1985 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Life expectancy | 65.5 | — | 67.7 | — | — | 69.9 | — | — | 70.3 | — | 71.5 | 72.4 |
| Infant mortality[e] | 56.8 | — | 47 | 46.6 | — | 39.5 | — | — | 35.2 | — | 34 | 31 |
| GDP per capita (U.S. dollars) | 3,050 | 3,141 | 3,009 | 2,819 | 2,860 | 2,932 | 3,000 | 3,054 | 3,054 | 3,139 | 2,882 | 2,960 |
| Poverty (by household), total[ab] | 34 | — | 34 | — | 39 | — | — | 36 | — | 36 | — | — |
| Urban | 20 | — | 28 | — | 34 | — | — | 30 | — | 29 | — | — |
| Rural | 49 | — | 45 | — | 49 | — | — | 46 | — | 47 | — | — |
| Indigency (by household), total[ac] | 12 | — | 11 | — | 14 | — | — | 12 | — | 12 | — | — |
| Urban | 6 | — | 7 | — | 9 | — | — | 7 | — | 6 | — | — |
| Rural | 18 | — | 20 | — | 23 | — | — | 20 | — | 20 | — | — |
| Public social spending (% of GDP) | 7.0 | 8.4 | 6.4 | 5.1 | 5.5 | 5.0 | 7.0 | 7.8 | 8.5 | 9.1 | 8.3 | 8.1 |
| Public social spending, per capita (in U.S. dollars) | 213 | 264 | 193 | 144 | 157 | 147 | 210 | 238 | 260 | 286 | 245 | 253[e] |
| Public expenditure in education (% of GDP) | 3.2 | 3.9 | 3.0 | 2.4 | 2.7 | 2.4 | 2.9 | 3.2 | 3.6 | 3.9 | 3.7 | 4.0 |
| Public expenditure in education, per capita (in U.S. dollars) | 98 | 122 | 90 | 68 | 77 | 70 | 87 | 98 | 110 | 122 | 110 | 114[e] |
| Public expenditure in health (% of GDP)[d] | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 3.3 | 3.4 | 3.7 | 3.8 | 3.4 | 3.2 |
| Public expenditure in health, per capita[d] | 12 | 13 | 9 | 11 | 11 | 9 | 99 | 104 | 113 | 119 | 101 | 104[e] |

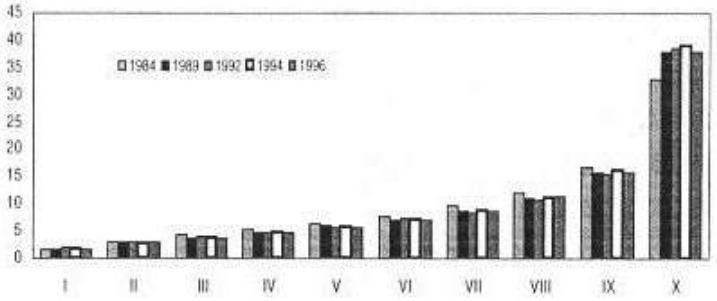
*Source:* CEPAL (1998b); data for 1996 and 1997 were estimated from several official sources.
*Notes:* a. 1980 refers to 1970 and 1985 to 1984 for poverty.
b. Percentage of households whose income is less than twice the basic food basket. Includes households at indigency level.
c. Percentage of households whose income is less than one basic food basket.
d. Does not include health spending of social security institutions before 1991.
e. For children of 1 year for every 1,000 born alive.

**Table 6.2 Income Distribution in Mexico by Deciles (1984–1996)**

| Deciles | TOTAL | I | II | III | IV | V | VI | VII | VIII | IX | X | Lowest two deciles (1) | Highest two deciles (2) | (1) / (2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *PERCENTAGE OF TOTAL INCOME* | | | | | | | | | | | | | | |
| 1984 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 1.72 | 3.11 | 4.21 | 5.32 | 6.40 | 7.86 | 9.72 | 12.17 | 16.73 | 32.77 | 4.83 | 49.50 | 9.75 |
| Current monetary income | 100.00 | 1.51 | 2.85 | 4.05 | 5.28 | 6.34 | 7.95 | 9.70 | 12.32 | 16.36 | 33.65 | 4.36 | 50.01 | 8.72 |
| Labor income | 100.00 | 1.10 | 2.34 | 3.97 | 5.31 | 6.25 | 8.57 | 10.25 | 12.48 | 18.73 | 31.00 | 3.45 | 49.73 | 6.93 |
| Business rent | 100.00 | 2.17 | 3.33 | 4.40 | 5.59 | 6.47 | 7.07 | 9.73 | 12.46 | 12.20 | 36.59 | 5.50 | 48.78 | 11.28 |
| 1989 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 1.68 | 3.09 | 3.75 | 4.69 | 5.92 | 7.18 | 8.85 | 11.22 | 15.64 | 37.97 | 4.77 | 53.61 | 8.90 |
| Current monetary income | 100.00 | 1.42 | 2.69 | 3.68 | 4.74 | 5.89 | 7.31 | 9.21 | 11.37 | 15.68 | 38.02 | 4.11 | 53.69 | 7.65 |
| Labor income | 100.00 | 1.18 | 2.63 | 4.07 | 5.25 | 6.76 | 8.38 | 10.65 | 13.20 | 17.85 | 30.05 | 3.80 | 47.90 | 7.94 |
| Business rent | 100.00 | 1.72 | 2.73 | 3.04 | 3.76 | 4.62 | 5.74 | 6.90 | 8.44 | 12.90 | 50.17 | 4.44 | 63.07 | 7.05 |
| 1992 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 2.13 | 3.09 | 3.92 | 4.68 | 5.79 | 7.25 | 8.53 | 10.75 | 15.41 | 38.46 | 5.21 | 53.87 | 9.68 |
| Current monetary income | 100.00 | 1.00 | 2.27 | 3.36 | 4.38 | 5.45 | 6.76 | 8.62 | 11.22 | 16.09 | 40.84 | 3.27 | 56.93 | 5.75 |
| Labor income | 100.00 | 0.52 | 1.88 | 3.29 | 4.64 | 5.86 | 7.43 | 9.43 | 13.26 | 18.09 | 35.60 | 2.39 | 53.69 | 4.46 |
| Business rent | 100.00 | 1.72 | 2.53 | 2.76 | 3.57 | 4.26 | 5.17 | 7.41 | 7.39 | 10.92 | 54.28 | 4.24 | 65.20 | 6.50 |
| 1994 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 1.58 | 2.72 | 3.61 | 4.56 | 5.59 | 6.96 | 8.62 | 11.19 | 16.07 | 39.10 | 4.30 | 55.17 | 7.79 |
| Current monetary income | 100.00 | 1.34 | 2.61 | 3.53 | 4.51 | 5.55 | 6.83 | 8.38 | 11.15 | 16.24 | 39.88 | 3.95 | 56.11 | 7.03 |
| Labor income | 100.00 | 0.95 | 2.33 | 3.23 | 4.41 | 5.81 | 6.90 | 8.71 | 11.23 | 16.65 | 39.78 | 3.28 | 56.43 | 5.81 |
| Business rent | 100.00 | 1.77 | 2.84 | 3.32 | 4.20 | 4.63 | 6.50 | 7.07 | 10.95 | 16.05 | 42.68 | 4.61 | 58.72 | 7.84 |
| 1996 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 1.75 | 2.92 | 3.83 | 4.77 | 5.84 | 7.16 | 8.77 | 11.26 | 15.81 | 37.89 | 4.67 | 53.70 | 8.69 |
| Current monetary income | 100.00 | 1.60 | 2.83 | 3.86 | 4.81 | 5.89 | 7.21 | 8.77 | 11.29 | 16.02 | 37.71 | 4.43 | 53.73 | 8.25 |
| Labor income | 100.00 | 1.29 | 2.39 | 3.69 | 4.85 | 6.07 | 7.72 | 9.43 | 12.02 | 17.33 | 35.20 | 3.68 | 52.53 | 7.01 |
| Business rent | 100.00 | 1.94 | 3.39 | 3.98 | 4.32 | 4.85 | 6.42 | 7.54 | 9.35 | 12.56 | 45.65 | 5.33 | 58.21 | 9.16 |
| *PERCENTAGE OF TOTAL INCOME OF THE RESPECTIVE DECILE* | | | | | | | | | | | | | | |
| 1984 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Current monetary income | 78.80 | 69.33 | 72.21 | 75.86 | 78.20 | 78.10 | 79.63 | 78.65 | 79.78 | 77.02 | 80.91 | 70.77 | 78.97 | 89.62 |
| Labor income | 46.88 | 30.11 | 35.38 | 44.23 | 46.80 | 45.78 | 51.10 | 49.41 | 48.10 | 52.47 | 44.36 | 32.74 | 48.41 | 67.63 |
| Business rent | 22.18 | 28.06 | 23.75 | 23.19 | 23.33 | 22.43 | 19.95 | 22.20 | 22.71 | 16.17 | 24.77 | 25.91 | 20.47 | 126.57 |
| 1989 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Current monetary income | 74.30 | 62.78 | 64.65 | 72.91 | 75.01 | 73.93 | 75.62 | 77.29 | 75.27 | 74.45 | 74.40 | 63.72 | 74.43 | 85.61 |
| Labor income | 44.47 | 31.18 | 37.74 | 48.27 | 49.75 | 50.74 | 51.87 | 53.49 | 52.30 | 50.75 | 35.20 | 34.46 | 42.97 | 80.19 |
| Business rent | 20.69 | 21.17 | 18.24 | 16.78 | 16.57 | 16.14 | 16.53 | 16.12 | 15.56 | 17.07 | 27.34 | 19.71 | 22.20 | 88.76 |
| 1992 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Current monetary income | 68.16 | 32.15 | 50.11 | 58.31 | 63.88 | 64.23 | 63.56 | 68.89 | 71.16 | 71.17 | 72.38 | 41.13 | 71.77 | 57.30 |
| Labor income | 41.89 | 10.18 | 25.45 | 35.12 | 41.57 | 42.41 | 42.92 | 46.35 | 51.66 | 49.20 | 38.77 | 17.82 | 43.98 | 40.51 |
| Business rent | 18.77 | 15.16 | 15.35 | 13.19 | 14.35 | 13.82 | 13.39 | 16.31 | 12.91 | 13.30 | 26.50 | 15.25 | 19.90 | 76.65 |
| 1994 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Current monetary income | 71.48 | 60.45 | 68.64 | 69.87 | 70.69 | 70.97 | 70.15 | 69.47 | 71.18 | 72.22 | 72.91 | 64.54 | 72.57 | 88.94 |
| Labor income | 47.12 | 28.25 | 40.39 | 42.10 | 45.65 | 49.03 | 46.73 | 47.57 | 47.26 | 48.84 | 47.94 | 34.32 | 48.39 | 70.92 |
| Business rent | 16.96 | 18.95 | 17.70 | 15.61 | 15.62 | 14.05 | 15.82 | 13.91 | 16.59 | 16.93 | 18.51 | 18.33 | 17.72 | 103.43 |
| 1996 | | | | | | | | | | | | | | |
| TOTAL INCOME | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Current monetary income | 70.91 | 64.99 | 68.83 | 71.38 | 71.41 | 71.51 | 71.40 | 70.91 | 71.14 | 71.85 | 70.58 | 66.91 | 71.22 | 93.95 |
| Labor income | 44.51 | 32.91 | 36.46 | 42.87 | 45.21 | 46.26 | 47.98 | 47.88 | 47.54 | 48.80 | 41.35 | 34.68 | 45.07 | 76.95 |
| Business rent | 17.74 | 19.67 | 20.62 | 18.41 | 16.08 | 14.73 | 15.90 | 15.26 | 14.73 | 14.10 | 21.38 | 20.14 | 17.74 | 113.57 |

*Source:* Author's calculations based on INEGI (1998).

**Figure 6.1 Income Distribution by Deciles (1984–1996)**




*Source:* Table 6.2.

inequality of Mexico's society, but also a trend toward increasing inequality in relative terms. For the period 1989–1996 (i.e., when liberalization started) an increasing concentration of total income can be observed. The two lowest deciles decreased their share of total income from 4.77 percent in 1989 to 4.67 percent in 1996, while the two highest deciles increased their share in total income from 53.61 percent in 1989 to 53.70 percent in 1996. Moreover, the fifth, sixth, and seventh deciles had a decrease in their share for the period, resulting in an income distribution away from Mexico's middle classes.

As for total income, it is important to note that the two lowest deciles were not able, through 1996, to achieve an income share similar to that of 1984. On the contrary, the two highest deciles increased their share of total income from 49.50 percent in 1984 to 53.70 percent in 1996. This impressive income concentration is exclusively a result of the concentration in Mexico's richest 10 percent (or decile) of population, from 32.77 percent of total income in 1984 to 37.89 percent in 1989. Out of total income,[14] labor and, particularly, business incomes have fallen noticeably as a share of total income, from 46.88 percent and 22.18 percent in 1984 to 44.51 percent and 17.74 percent in 1996. In general, these trends are a result of the increase of nonmonetary current income from such items as house rents.

Labor income as a percentage of total income fell from 46.88 percent of total income in 1984 to 44.51 percent in 1996. This trend is primarily a result of the two highest income deciles (see Table 6.2), whose labor income as a percentage of total income fell by



almost 3 percent during 1984–1996. Business income as a percentage of total income fell from 22.18 percent in 1984 to 17.74 percent in 1996. This trend can be observed for most population deciles. However, it fell by almost 6 percent for the two lowest deciles during 1984–1996. The latter reflects the impact of liberalization on micro and small firms.

In what follows, extreme poverty is defined as all those households, counting an average of 4.6 persons in 1996, that earn between 0 and 2 minimum wages (MWs), and poverty as all those households whose income is between 2.01 MW and 5 MWs.[15] Several important tendencies can be highlighted (see Table 6.3 and Figure 6.2). Extreme poverty in Mexico has been relatively high since 1984, accounting for more than 31.15 percent of total households in 1984–1996, and households in extreme poverty are concentrated in rural areas. Between 58.27 percent and 76.11 percent of total rural households are in extreme poverty for different years in 1984–1996, while the number of urban households in extreme poverty was less than half of this for the 1984–1996 period. Outside these trends, the percentage of households in extreme poverty and in poverty have fallen substantially. Total poverty fell from 80.52 percent of total households in 1989 to 73.32 percent in 1996. However, considering population growth and the fact that households with lower incomes have more members than rich households, in absolute terms the number of persons in total poverty for the same period increased from 63.3 million persons to 67.8 million. However, households with 8 MWs or more have benefited most since 1989 in terms of the income distribution. Their share of total households increased from 8.02 percent in 1989 to 13.30 percent in 1996, accounting for 12.3 million persons in 1996. It is important to stress that this category consists mainly of urban high-income households. In 1996, 13.30 percent of households with more than 8 MWs accounted for 45.13 percent of current monetary income. Rural households with more than 8 MWs were one-quarter of such urban households. Finally, the middle-class households had their share of total income reduced from 19.26 percent of current monetary income in 1989 to 17.95 percent in 1996.

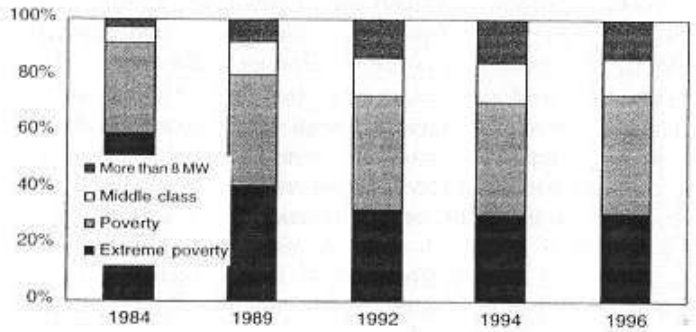
These trends are significant for more than one reason. For instance, they show that liberalization has had an impressive negative impact on Mexico's income distribution, favoring the country's top income earners. On the other hand, both lower and middle-income classes have lost for the period. These trends are, moreover,

**Table 6.3 Current Monetary Income: Poverty (1984–1996)**

| | NATIONAL | | URBAN | | RURAL | | NATIONAL | | URBAN | | RURAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Households | Income | Households | Income | Households | Income | Households | Income | Households | Income | Households | Income |
| 1984 | | | | | | | | | | | | |
| Total | 14,988,551 | 2,028,235 | 9,735,338 | 1,586,611 | 5,253,213 | 441,624 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Extreme poverty | 8,922,188 | 536,108 | 4,924,173 | 341,181 | 3,998,015 | 194,927 | 59.53 | 26.43 | 50.58 | 21.50 | 76.11 | 44.14 |
| Poverty | 4,768,308 | 860,255 | 3,670,261 | 684,140 | 1,098,047 | 176,115 | 31.81 | 42.41 | 37.70 | 43.12 | 20.90 | 39.88 |
| Total poverty | 13,690,496 | 1,396,363 | 8,594,434 | 1,025,321 | 5,096,062 | 371,042 | 91.34 | 68.85 | 88.28 | 64.62 | 97.01 | 84.02 |
| Middle class | 887,781 | 340,429 | 785,775 | 306,727 | 102,006 | 33,702 | 5.92 | 16.78 | 8.07 | 19.33 | 1.94 | 7.63 |
| More than 8 MWs | 410,274 | 291,443 | 355,129 | 254,563 | 55,145 | 36,880 | 2.74 | 14.37 | 3.65 | 16.04 | 1.05 | 8.35 |
| 1989 | | | | | | | | | | | | |
| Total | 15,955,536 | 42,763,004 | 10,287,361 | 34,148,400 | 5,668,175 | 8,614,604 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Extreme poverty | 6,563,606 | 5,288,079 | 3,085,248 | 2,889,361 | 3,478,358 | 2,398,718 | 41.14 | 12.37 | 29.99 | 8.46 | 61.37 | 27.84 |
| Poverty | 6,283,357 | 14,355,984 | 4,563,312 | 10,742,770 | 1,720,045 | 3,613,214 | 39.38 | 33.57 | 44.36 | 31.46 | 30.35 | 41.94 |
| Total poverty | 12,846,963 | 19,644,063 | 7,648,560 | 13,632,131 | 5,198,403 | 6,011,932 | 80.52 | 45.94 | 74.35 | 39.92 | 91.71 | 69.79 |
| Middle class | 1,828,811 | 8,237,311 | 1,506,188 | 6,880,156 | 322,623 | 1,357,155 | 11.46 | 19.26 | 14.64 | 20.15 | 5.69 | 15.75 |
| More than 8 MWs | 1,279,762 | 14,881,630 | 1,132,613 | 13,636,113 | 147,149 | 1,245,517 | 8.02 | 34.80 | 11.01 | 39.93 | 2.60 | 14.46 |
| 1992 | | | | | | | | | | | | |
| Total | 17,819,414 | 90,624,822 | 13,464,152 | 81,162,302 | 4,355,262 | 9,462,520 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Extreme poverty | 5,813,071 | 7,010,287 | 3,035,085 | 4,217,867 | 2,777,986 | 2,792,420 | 32.62 | 7.74 | 22.54 | 5.20 | 63.78 | 29.51 |
| Poverty | 7,181,802 | 24,673,641 | 5,924,140 | 20,826,276 | 1,257,662 | 3,847,365 | 40.30 | 27.23 | 44.00 | 25.66 | 28.88 | 40.66 |
| Total poverty | 12,994,873 | 31,683,928 | 8,959,225 | 25,044,143 | 4,035,648 | 6,639,785 | 72.93 | 34.96 | 66.54 | 30.86 | 92.66 | 70.17 |
| Middle class | 2,428,507 | 16,246,770 | 2,214,377 | 14,891,159 | 214,130 | 1,355,611 | 13.63 | 17.93 | 16.45 | 18.35 | 4.92 | 14.33 |
| More than 8 MWs | 2,396,034 | 42,694,124 | 2,290,550 | 41,227,000 | 105,484 | 1,467,124 | 13.45 | 47.11 | 17.01 | 50.80 | 2.42 | 15.50 |
| 1994 | | | | | | | | | | | | |
| Total | 19,440,278 | 121,740,626 | 14,721,762 | 108,946,595 | 4,718,516 | 12,794,031 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Extreme poverty | 6,055,938 | 8,556,612 | 3,167,050 | 5,023,607 | 2,888,888 | 3,533,005 | 31.15 | 7.03 | 21.51 | 4.61 | 61.22 | 27.61 |
| Poverty | 7,672,994 | 30,324,803 | 6,253,643 | 25,119,668 | 1,419,351 | 5,205,135 | 39.47 | 24.91 | 42.48 | 23.06 | 30.08 | 40.68 |
| Total poverty | 13,728,932 | 38,881,415 | 9,420,693 | 30,143,275 | 4,308,239 | 8,738,140 | 70.62 | 31.94 | 63.99 | 27.67 | 91.30 | 68.30 |
| Middle class | 2,802,919 | 21,804,370 | 2,530,552 | 19,790,867 | 272,367 | 2,013,503 | 14.42 | 17.91 | 17.19 | 18.17 | 5.77 | 15.74 |
| More than 8 MWs | 2,908,427 | 61,054,841 | 2,770,517 | 59,012,453 | 137,910 | 2,042,388 | 14.96 | 50.15 | 18.82 | 54.17 | 2.92 | 15.96 |
| 1996 | | | | | | | | | | | | |
| Total | 20,467,038 | 170,318,104 | 15,537,825 | 149,369,923 | 4,929,213 | 20,948,181 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Extreme poverty | 6,413,716 | 13,547,096 | 3,541,495 | 8,100,400 | 2,872,221 | 5,446,696 | 31.34 | 7.95 | 22.79 | 5.42 | 58.27 | 26.00 |
| Poverty | 8,593,384 | 49,332,218 | 6,992,914 | 40,955,154 | 1,600,470 | 8,377,064 | 41.99 | 28.96 | 45.01 | 27.42 | 32.47 | 39.99 |
| Total poverty | 15,007,100 | 62,879,314 | 10,534,409 | 49,055,554 | 4,472,691 | 13,823,760 | 73.32 | 36.92 | 67.80 | 32.84 | 90.74 | 65.99 |
| Middle class | 2,737,631 | 30,566,157 | 2,474,317 | 27,855,729 | 263,314 | 2,710,428 | 13.38 | 17.95 | 15.92 | 18.65 | 5.34 | 12.94 |
| More than 8 MWs | 2,722,307 | 76,872,633 | 2,529,099 | 72,458,640 | 193,208 | 4,413,993 | 13.30 | 45.13 | 16.28 | 48.51 | 3.92 | 21.07 |

*Source:* Author's calculations based on INEGI (1998).
*Notes:* Extreme poverty = from 0 to 2 MWs out of current monetary income.
Poverty = from 2.01 to 5 MWs out of current monetary income.
Total poverty = sum of extreme poverty and poverty.
Medium class = from 5.01 to 8 MWs.

**Figure 6.2 Income Distribution by Minimum Wages (percent of households) (1984–1996)**




*Source:* Table 6.3.

more profound if we include the rural and urban dichotomies in Mexico. This increasing polarization of income distribution in Mexico since 1989 reflects one of the major challenges of social policy: total poverty since the implementation of liberalization increased by 4.5 million persons for the period 1989–1996 to 67.8 million.

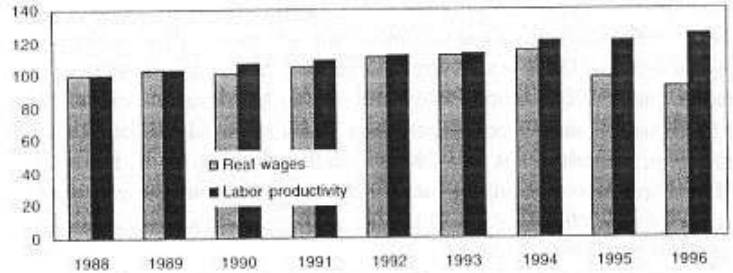
## Employment and Real Wages

The deterioration of corporatist structures since the 1980s profoundly affected labor. Although labor leaders have been able to negotiate their continued participation in PRI and the government, the labor movement as a whole has lost dramatically. Wages in the total economy as a percentage of GDP fell from levels above 40 percent during the 1970s to 31.74 percent in 1996. Similarly, and in spite of significant successes in increasing labor productivity in manufacturing, real wages have continued to decline in this sector (see Figure 6.3). Thus, in contrast to 1940–1970, real wages have not increased along with labor productivity.

Wages are one of the most important sources of income, accounting for 44.51 percent of total income in 1996 (see Table 6.2). Minimum wages are highly relevant in Mexico, since in 1996 49.54 percent of total Mexican households had only one employed person, 69.40 percent of the two poorest household deciles have only one



**Figure 6.3 Real Wages and Labor Productivity Growth (1988–1996) (1988 = 100)**



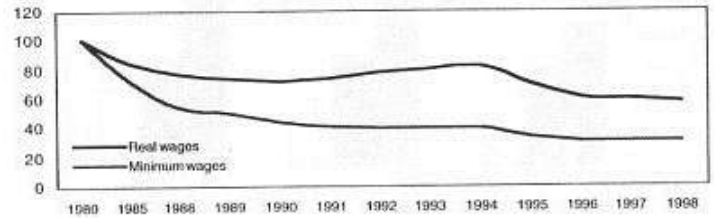

*Source:* Author's calculations based on INEGI (1999).

income earner, and the current monetary income of 51.17 percent of Mexican households is between 0 and 3 times the minimum wage. Thus, real wages linked to employment are of the utmost importance for Mexico's social development and income distribution (López Gallardo 1998).

One of the most relevant effects of liberalization has been its negative impact on Mexico's real wages. Both real wages of the total economy and real minimum wages have fallen dramatically (see Figure 6.4).

In 1998, real wages and real minimum wages equaled only an estimated 57.0 percent and 29.5 percent of their respective levels in 1980 (see Table 3.1, pages 72–73). Thus, income distribution, in several cases measured in terms of minimum wages, as well as real wage comparisons between sectors and branches, have to be seen in terms of a profound loss in Mexico's real wages.

**Figure 6.4 Real Wages for Total Economy and Minimum Wages (1980–1998) (1988 = 100)**



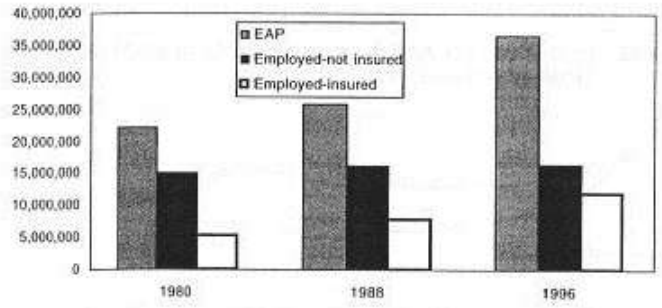

*Source:* Table 3.1.

Official data on unemployment estimate that the open unemployment rate[16] increased from relatively low levels for the period 1988–1994—between 2.6 percent and 3.7 percent—to 7.6 percent in August 1995. The open unemployment rate was below 3 percent during 1998–1999. These levels are comparable to or even lower than those of most OECD nations. However, in the Mexican context, with a limited and in some cases nonexistent social net to allow for unemployment, unemployment is by definition nonexistent. Thus, from an official perspective unemployment apparently does not pose a serious problem or challenge, even though it increased by more than 70 percent during 1994–1995.

In the period 1988–1996, the economically active population (EAP) increased by 10.7 million, whereas the economy only created 4.1 million new jobs with health insurance and other benefits related to social security. During the 1990s, the EAP increased by around 1.5 million annually, and an annual employment growth of 5.2 percent annually has been necessary to absorb this inflow of new workers. However, employment growth was only 2.0 percent for the period 1988–1996, far below the employment generation characteristic of the import-substitution years of 1970–1981 (Figure 6.5; Dussel Peters 1997).[17]

These trends were particularly negative after the crisis of 1994. During 1994–1995 the EAP increased by 2.0 million, while employment decreased by 0.82 million, resulting in a gap in employment generation of more than 2.8 million. Employment generation has

**Figure 6.5 Economically Active Population and Formal Employment (1980–1996)**




*Source:* Author's calculations based on INEGI (1999), PEF (1999), and SECOFI 1999).



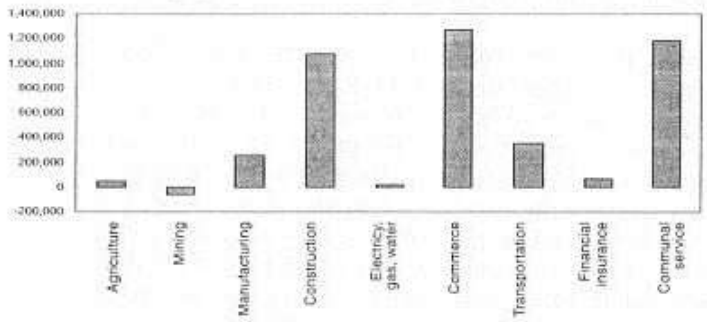
become a massive challenge for Mexican society, which has not only had to live with this legacy since the 1980s but which also depends on the growth of Mexico's relatively young population. For the period 1988–1996, more than 6.5 million persons did not find a formal job in Mexico's economy. As a result, informal-sector employment has increased, as well as Mexican migration to the United States. Absorbing the growing EAP into the formal labor market is probably one of the most important social and economic challenges facing Mexico over the coming decades. However, liberalization strategy has so far failed to do so. Between 1988 and 1996, 6.5 million persons did not find a formal job—that is, only 39.26 percent of the growing EAP found a formal job, while the rest of employment generation was created in the informal sector and/or migration to the United States.

Looking at the employment issue from another perspective, which sectors and branches have generated employment since the crisis of 1995? What are the characteristics of these employment-generating branches in terms of real wages and other economic variables?

Employment generation increased at an AAGR of 2.0 percent during the period 1988–1996, which was considerably lower than that for 1970–1981, with an AAGR of 4.9 percent. Historically, and for this period, commerce, restaurants and hotels, agriculture, manufacturing, and construction have been the most significant sectors in terms of their share of total employment. Specifically related to the period 1988–1996 and the 1994–1995 crisis, it is important to note the following:

1. The service sector was the most significant sector in generating employment for the period 1988–1996; commerce, restaurants and hotels, as well as, communal services and construction accounted for 68.70 percent of employment generation during that same period. Other sectors such as mining, agriculture and financial insurance have remained relatively stable or show negative growth rates (see Figure 6.6).
2. Manufacturing, the mainstay of liberalization, had an AAGR in employment of 1 percent, almost half the performance of Mexico's total economy and only 11.63 percent of total employment generation in 1996.
3. As a result of the crisis of 1994–1995, by 1996, the economy as a whole had barely recovered employment lost during the

**Figure 6.6 Employment Creation at the Sectoral Level (1988–1996)**




*Source:* Author's calculations based on INEGI (1999).

crisis, while several sectors and subsectors still had employment below 1994 levels.

4. After construction, manufacturing presents the most significant fall in employment, accounting for –5.3 percent in 1995.

To examine the impact of liberalization at a more disaggregated level, the Mexican economy's 73 branches were grouped by their absolute employment generation for 1988–1996. Based on these selection criteria, what are the characteristics of the most important five branches in terms of employment generation? (see Table 6.4).

The five most important employment-generating branches—construction, trade, restaurants and hotels, education services, and other services—do not include any manufacturing. The auto parts branch is the eighty most important branch in terms of employment generation for the 1988–1996 period. Moreover, in the five most important branches of employment generation, construction was the most important in terms of GDP and employment, accounting for 25.50 percent of total employment generated during 1988–1996, 10.66 percent of total employment, and 4.16 percent of total GDP in 1996. Not surprisingly, given the selection criteria, the five employment-generating branches were responsible for 74.12 percent of Mexico's new employment in 1988–1996; the rest of Mexico's 68 branches accounted for less than 26 percent of employment generation during the period. Moreover, the share of these five branches increased from 42.53 percent of total employment in 1988 to 47.24 percent in 1996.

On the other hand, in terms of GDP creation, the five employment-



**Table 6.4 Mexico: Performance of Employment-Generating Branches (1988–1996)**

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | Difference 1988–1996 |
|---|---|---|---|---|---|---|---|---|---|---|
| Employment generation | | | | | | | | | | |
| Five Branches | — | 570,769 | 809,173 | 547,530 | 385,762 | 237,979 | 524,079 | −426,353 | 473,108 | 3,122,046 |
| Rest of economy | — | 123,243 | 384,476 | 218,725 | 50,395 | 69,427 | 174,226 | −391,948 | 461,204 | 1,089,748 |
| Employment (1988=100) | | | | | | | | | | |
| Five Branches | 100.00 | 105.58 | 113.48 | 118.83 | 122.60 | 124.92 | 130.04 | 125.88 | 130.50 | 30.50 |
| Rest of economy | 100.00 | 100.89 | 103.67 | 105.25 | 105.62 | 106.12 | 107.38 | 104.54 | 107.88 | 7.88 |
| Employment (Total=100) | | | | | | | | | | |
| Five Branches | 42.53 | 43.64 | 44.75 | 45.52 | 46.21 | 46.56 | 47.26 | 47.12 | 47.24 | 4.71 |
| Rest of economy | 57.47 | 56.36 | 55.25 | 54.48 | 53.79 | 53.44 | 52.74 | 52.88 | 52.76 | −4.71 |
| Real wages (1988=100) | | | | | | | | | | |
| Five Branches | 100.00 | 99.51 | 99.39 | 103.60 | 111.86 | 119.45 | 122.97 | 104.84 | 99.25 | −0.75 |
| Rest of economy | 100.00 | 101.66 | 102.72 | 110.17 | 120.42 | 126.94 | 132.26 | 113.36 | 107.86 | 7.86 |
| GDP (1988=100) | | | | | | | | | | |
| Five Branches | 100.00 | 103.77 | 109.63 | 115.34 | 120.58 | 121.95 | 128.82 | 112.28 | 117.47 | 17.47 |
| Rest of economy | 100.00 | 104.44 | 109.39 | 113.40 | 116.92 | 119.75 | 124.20 | 121.42 | 128.06 | 28.06 |
| GDP (total=100) | | | | | | | | | | |
| Five Branches | 37.91 | 37.35 | 37.05 | 35.92 | 36.54 | 36.63 | 36.74 | 34.91 | 34.85 | −3.06 |
| Rest of economy | 62.09 | 62.65 | 62.95 | 64.08 | 63.46 | 63.37 | 63.26 | 65.09 | 65.15 | 3.06 |
| Labor productivity (1988=100) | | | | | | | | | | |
| Five Branches | 100.00 | 98.29 | 96.61 | 97.06 | 98.35 | 97.62 | 99.06 | 89.20 | 90.02 | −9.98 |
| Rest of economy | 100.00 | 103.52 | 105.52 | 107.74 | 110.70 | 112.85 | 115.67 | 116.14 | 118.70 | 18.70 |

*Source:* Author's calculations based on INEGI (1999).

generating branches performed significantly worse than the rest of the economy and grew, for 1988–1996 by 17.47 percent, compared with 28.06 percent for the rest of the economy. The share of these five branches of total GDP fell to account for 34.85 percent of GDP's economy in 1996. As a result, employment and GDP trends for the period resulted in very substantial labor productivity gaps between the established groups of branches. While labor productivity for employment-generating branches decreased by almost 10 percent during 1988–1996, the rest of the economy increased productivity by 18.7 percent. While real wages in high employment-generating branches fell by 0.75 percent during 1988–1996, in the rest of the economy wages recovered by 7.86 percent for the same period. Thus, one of the most striking effects of employment generation since liberalization is, in addition to low overall employment generation, the low quality of generated employment.

Finally, based on an analysis of foreign trade in goods and services at a more aggregated level, it is possible to conclude that the export share of these branches can be at a maximum of 3 percent of total exports of goods and services and 9 percent of imports of goods and services during 1988–1996.[18] Therefore, it is most remarkable that employment-generating branches do not have a significant share of total foreign trade. Seen this way, and recalling the prior typology of export-oriented and high-growth branches, the patterns of micro, small, and medium firms, and particularly the high concentration of foreign trade, employment generation since liberalization is not associated with trade in general nor with exports specifically. This is a most significant commentary on liberalization's goals and its limitations.[19]

## Preliminary Conclusions

An analysis of the social impact of liberalization, without a doubt, requires a much deeper review of diverse data and variables, including health and education, nutrition, access to services, and many other social issues. Nevertheless, income distribution, employment, and real wage tendencies allow for important findings.

The social trends since 1988 definitely bring us back to the theoretical core of the liberalization strategy. What is the relationship between social welfare and economic growth? Is any development, without employment generation, economically sustainable and desirable?



Social policy has changed substantially in its function and goals since liberalization was implemented in 1988. Social policy has been seen as one more form of subsidy and viewed as a cost for government: a "minimalist" social policy is the product of such a view. From this perspective, liberalization has been relatively coherent in its conceptual approach: to allow for a lean and efficient state that targets extreme poverty, while many other "traditional" social policy instruments have been cast aside. Both PRONASOL and PROGRESA are good examples of this new social vision of policy, which has been publicly backed by multilateral agencies. However, it is also important to recall that in spite of the functionality of social policy for liberalization, the policy also had an important political purpose—as described, particularly under Salinas de Gortari, PRONASOL had an important role in changing both PRI and the respective sectors of corporatist structures.

It is fair to mention that the Mexican government has made a significant effort to at least maintain social expenditure as a percentage of total government expenditures. Nevertheless, public social spending, particularly in terms of per capita spending, in 1996 was below the levels of the early 1980s. This is the result of several crises, falling public expenditure, a falling budget in terms of GDP, and the inability to pursue a profound fiscal and tax reform in Mexico. Thus, while general indicators such as life expectancy and infant mortality have been positive since 1988, other general expenditures, such as those in education and health, have not been maintained, particularly in per capita terms (see Table 6.1).

However, the latter general trends hide the enormous social challenges that have resulted since 1988 and that are not reflected in these aggregated variables. This chapter demonstrated the significant loss of real wages to the economy, and particularly of minimum wages. So, liberalization not only did not reverse the "lost decade" of the 1980s, it also aggravated the conditions set in motion by the debt crisis in 1982.

Since 1989 the income distribution has become more concentrated in the richest deciles, while the two lowest population deciles have seen their share of current monetary income shrink. Since 1984 the highest income decile appropriated 4.77 percent more of total income, accounting for 37.89 percent in 1996. Moreover, while

households in extreme poverty have fallen as a share of total households during 1989–1996, their absolute number has not. It is estimated that in 1996 around 29 million Mexicans lived in extreme poverty—only slightly fewer than the 32.4 million living in such conditions in 1989. However, and again in absolute terms, those in poverty numbered around 67.8 million inhabitants in 1996, more than in 1989.

Employment trends for 1988–1996 highlight the incapacity of Mexico's economy to absorb the growing EAP, and this is related to the priorities of the development strategy that has been adopted. The positive association between GDP growth and employment, which has been established for Mexico by several writers (Dussel Peters 1997; López Gallardo 1998), partly explains the low employment generation performance of Mexico's economy.

However, this association has to be understood in the context of increasing economic polarization: that is, only a small part of Mexico's economy is able to grow in terms of GDP through exports. From this perspective, these results are closely linked to those of Chapters 4 and 5—employment generation is not linked to export-led growth activities due to a lack of endogenous growth conditions and, particularly, the lack of a linkage between export-oriented activities and the rest of the Mexican economy. As shown in Table 4.4 (page 95), the share of these highly concentrated export-led activities on total employment is below 6 percent, although the activities concentrated 94 percent of total employment for 1993–1998. Thus, given the dimension of income distribution patterns and employment generation, these export-driven activities can do little to ameliorate social conditions in Mexico.

Employment generation during 1988–1996 was far below the employment needs of Mexican society because of a rapidly growing EAP, the structure of Mexico's population, and, particularly, the socioeconomic strategy pursued since 1988. Employment generation for 1994–1996 was highly concentrated in a few sectors and branches, and was associated with low-quality employment (i.e., with falling real wages in comparison to both 1988 and the rest of the economy).

Consistent with the findings presented in prior chapters, the Mexican economy has experienced an increasing degree of polarization, particularly in income distribution and employment generation.

The former employment trends also have to be understood in the context of liberalization, the emergence of the private sector as an



important social actor, and the weakening of labor. The crisis of labor, in which corporatist union leaders agreed to pay most of the costs associated with the 1982 crisis and 1994–1995 crises, is fundamental for understanding the relative political and social stability, with important exceptions. However, in order not to formally change the federal employment laws and the status quo of corporatist unions, the latter had to accept most of the government's most important reforms since the 1980s, including overall liberalization, the crisis and reform of the social system, dramatically falling real wages, and worsening income distribution.

The government and the multilateral agencies have not yet adequately addressed the employment issue, probably the most important economic and social issue confronting Mexico, and one that may well persist as the country's most serious economic and social challenge for years to come. The massive challenge posed by the increasing gap between the EAP and actual employment has to be confronted by the government, but so far, market-friendly policies aimed at eliminating labor market rigidities have not been successful. Employment generation limitations do not seem to be a problem of flexibility in the labor market, since minimum and real wages have declined drastically, and it is socially and politically not feasible to call for further flexibility in this respect. On the contrary, increasing employment generation is not an issue of making labor markets more flexible, but rather a reflection of the priorities, results, and contradictions inherent in liberalization. How much further can real wages and employment be "flexibilized"? Are there any political, social, or even ethical "minimum" levels? Apparently not, according to the newer versions of the liberalization strategy and its attempt to eliminate all institutions and regulations that allow for "sticky" wage rigidities.

## Notes

1. "At worst, the result of such 'cohabitation' is the cannibalization of federal government programs—even those, like National Solidarity, that were supposed to operate under tight central controls—when they reach the local level" (Cornelius 1995, 149).

2. Most of the discussion of making the federal labor laws more flexible has concentrated on eliminating the federal labor arbitration councils, which constitutionally mandate that labor disputes are to be solved by councils with biparty representation of business and labor, as well as government

representatives, and that promotions are to be determined by seniority and unionized status (Samstad and Collier 1995).

3. "Labor-market policies—minimum wages, job security regulations, and social security—are usually intended to raise welfare or reduce exploitation. But they actually work to raise the cost of labor in the formal sector and reduce labor demand" (World Bank 1990).

4. José de Jesús Castellanos, former director for institutional development of the Employers' Confederación of the Republic of Mexico (Confederación Patronal de la República Mexicana, COPARMEX), making the case for the New Labor Culture, explains that after twenty-one sets of reforms to the Federal law of Employment, this legislation has entered, after almost a decade, a state of total annihilation, which has impeded its modernization and is a result of "populist policies" and runs against "conditions to develop a market economy" (Castellanos 1996, 9).

5. This aspect, however, cannot be generalized from a political perspective since social policy and PRONASOL were critical for Salinas's modernization of PRI.

6. Surprisingly, these costs, which will be reflected in high fiscal costs, have not been highlighted and criticized by multilateral agencies.

7. PRONASOL was initially created as a short-term mechanism to protect the poorest segments of Mexico's society. However, and mainly during 1988–1994, it became one of the centerpieces of social policy focusing also on financing productive projects for micro and small businesses (Dresser 1997).

8. There are have been several important changes regarding social policy since 1988. Probably the most significant has been the reform to the social security law enacted in 1997. Pension funds are now calculated on an individual basis and managed by private firms (Solís Soberón and Villagómez 1999).

9. The Program for Integral Quality and Modernization, the Project for Modernization of Labor Markets, and the Program for Temporary Employment are some of the few employment programs that have attempted to target employment issues. In general, these programs funded by the World Bank aim to train workers through scholarships, provide information to workers and business on the employment market, and modernize the labor market by making it more transparent.

10. "A third line of action is to try to gradually eliminate the existing rigidities of the Mexican labor market. It is important to reorient public expenditure as well as public investment and to focus on antipoverty programs so as to reduce these regional discrepancies" (Ortiz 1995, 30).

11. Officials at PRONASOL mentioned this. Families do not trust the government with the income information they have to submit. This information could be used against them by the government and/or cause difficulties in their respective communities.

12. PRONASOL was highly decentralized for the needs of the population, but highly centralized in regard to general decisionmaking and the allocation of resources.

13. Jusidman (1999, 9ff.) stresses that social policy in Mexico requires a high degree of diversification, given the new vulnerable sectors that have emerged during the last decades: children, young people, homeless families, indigents, and AIDS-infected persons, as well as existing rural and urban poverty.



14. Total income is divided into current and noncurrent income. Wage and business income are part of the current income (INEGI 1998).

15. In 1999 1 MW accounted for around $100 per month, so under this definition each individual in either extreme poverty or poverty would have an income of less than $100 average a month. There are several national and international definitions for calculating extreme poverty and poverty (see Chávez 1999; CEPAL 1998b; INEGI 1995; UNDP 1992; World Bank 1991).

16. By definition, the open unemployment rate refers to those in the EAP that have not worked for even 1 hour a week in the 2 preceding months, even though they have searched for a job (INEGI 1997). Given the Mexican labor market conditions, particularly the nonexistence of institutions that support the unemployed, such as unemployment insurance and overall social security, the open unemployment rate in Mexico is an inappropriate measure of the employment-generating problem, even though it makes sense in OECD nations. It is even surprising that there is any openly unemployed population at all. The open unemployment rate fails to capture the massive increase of employment in the informal sector and of Mexican migration to the United States.

17. It should be noted that some figures relating to employment, EAP, and their coefficients have changed (Dussel Peters 1997). This is a result of INEGI's changes in the national accounting system and data provided by the Mexican government (PEF 1999).

18. Author's estimations based on INEGI (1999).

19. These results are "the other side" of the results of Chapter 4, where export-oriented branches were shown to create little employment in 1988–1996.

# 7

# Regional Development Since 1988: Two Case Studies

This chapter attempts to elucidate some of the concepts regarding industrial organization and to expand upon the general trends of Mexico's industry at the regional level. This approach will enrich the reader's understanding of Mexico's economy in the 1990s and its increasing polarization, as well as the specific conditions, challenges, and causes for the current model of industrial organization. The sectors analyzed in this chapter, electronics in Jalisco and the pharmaceutical industry in Mexico City, as well as their respective experiences and resulting industrial organizations cannot be generalized for Mexico. Nevertheless, they are useful in deepening the understanding of structural change in Mexico's economy since liberalization, as well as resulting industrial organization and options for facing globalization. Moreover, the case studies are relevant for discussing alternatives to liberalization strategy, particularly at the local and regional level.

The first part of this chapter discusses some of the pillars of globalization since the 1980s and globalization's impact on economies such as Mexico's. The second part includes a brief analysis of regional trends in Mexico during the 1990s, based particularly on GDP and GDP per capita trends in Mexico's economy since the 1980s. The third section analyzes the specific case of the electronics industry in the state of Jalisco, one of the most dynamic sectors of Mexico's economy during the 1990s. This rather new industry in Mexico is relevant to comprehending the specificity of this sector and its industrial organization as part of a North American network. Furthermore, the characteristics of this sector are critical for understanding the challenges and potential of Mexico's manufacturing sec-

tor. The fourth part of the chapter analyzes the case of the pharmaceutical industry in Mexico City and the surrounding metropolitan area. Although the pharmaceutical sector has been very dynamic in terms of GDP during the 1990s, it presents several unique features of industrial organization that differ from electronics and other manufacturing sectors, and that are relevant for understanding the different regional trends in Mexico and the complexity of regional development in general.

## Globalization and Regionalization

At least since the 1980s, globalization has resulted in significant changes for developing nations. The liberalization of capital and goods markets and continually increasing international trade and foreign investments have been some of the features of this process. However, the impact of globalization goes beyond these factors, resulting in profound productive restructuring such as increasing international production by transnational corporations, intraindustry trade, and international subcontracting networks.

From this perspective, globalization is a historical process that became concrete at the beginning of the 1980s and that goes far beyond the transnationalization of productive and financial capital, as reflected in the increasing flows of foreign investment and trade since at least World War II. In addition to these trends, globalization since the 1980s includes both flexible production and global commodity chains. Flexible production refers to the tendency to produce specialized and nonstandardized products to satisfy consumer demand. The reduction of the life cycle of products, as well as the reduction of production time, input costs, and distribution are some of the main characteristics of flexible production (Dussel Peters, Piore, and Ruiz Durán 1997; Piore and Sabel 1984; Sabel 1996).[1]

Global commodity chains, which refer to the spatial and international organization of inputs, production, and distribution, have become one of the main mechanisms to maximize flexible production processes, increase quality (internal and external), implement just-in-time strategies, decrease inventories, and integrate operative tasks with problem solving and benchmarking (Gereffi 1994; see also Chapter 1).

Globalization is thus the process of firms increasing flexible production and of the expansion of global commodity chains, generating



new challenges for nations, regions, and firms. The fundamental economic entity under these new global conditions since the 1980s is a network that controls the complete commodity chain, in contrast to the concept of individual or segmented firms in the world market that produce independently of each other according to relative prices and profit maximization.

Globalization results, paradoxically, in territorial segmentation regarding the whole chain of products, from design to production and distribution of goods and services. Therefore, TNCs, and even non-TNCs, are required to buy inputs to produce and distribute products, services, and processes from many different sites. For example, an electronic producer of personal computers has its firm established in country A, buys inputs from country B, and distributes the computers in countries A, B, and C. Thus, product X is a result of a series or productive processes completed in n countries for global production, distribution, and consumption. In contrast to the structure of transnational firms in earlier decades, TNCs no longer receive inputs from country A to just modify and distribute them in country A.

This new industrial organization—in addition to the traditional industrial organization of transnational firms in which the production process was relatively independent in each production site—has profound implications. Local and regional spaces or territories are the main sites where economies face globalization. In contrast to previous decades, and in the context of the overall liberalization of goods and services, local and regional territories are the places where productive networks and global commodity chains do or do not take root. The endogenous conditions available to confront globalization are of utmost importance. Therefore, firms maximize economies of scale by establishing one place as the site for global production. Consequently, the productive process of goods and services is increasingly segmented in value-added chains. This is particularly important for value added, but also with regard to the use and reproduction of technologies and processes, generation of employment, different forms of subcontracting, and, in general, for potential learning processes that take place at local and regional levels. New political, social, and cultural challenges have arisen as a result of globalization (Altvater and Mahnkopf 1996; Sayer and Walker 1992). As a result, one national policy—covering, for example, industry, education, and poverty—is increasingly ineffective, and even useless, if it refers to a national average and is unable to affect the variety of local and regional conditions that are directly and increasingly related to

global markets through globalization. As a result of globalization, regions, not nations or supranational institutions, become the most important place to implement particular policies. For firms globalization generates a systemic intrafirm and interfirm restructuring. The challenges of this restructuring process are of critical importance for economic development and for the learning process.

Subcontracting has become one of the most critical economic and development issues for regions in the process of globalization, and hence for firms and their upgrading, benchmarking, and even survival. These subcontracting schemes occur at the regional and local level—particularly due to capital, goods, and service liberalization—not nationally. For example, if IBM establishes plants to develop processes and assemble components and parts in El Salto, near the capital of Jalisco, the plants do not affect Chiapas or other regions of Mexico. This is particularly true, considering the effects of liberalization on import and capital liberalization. Subcontracting and the particular way in which the respective regions integrate and link to the world market become most relevant for firms operating in a global commodity chain. Subcontracting also allows for reductions in costs and time, as well as for a learning process of a different degree.

Conceptually and historically it is possible to stress at least three stylized forms of subcontracting (Table 7.1). Short-term subcontracting refers to the search for suppliers by the client firm due to an excess of demand and/or full capacity. Cost, quality, and delivery time of products or processes are some of the important characteristics for this type of subcontracting. Both firms establish a contract for a specific quantity of products and, after the expiration of the contract, this relationship ends. Depending on economic cycles of the economy and the firm, in the future the client might again require suppliers, which might be the same from the previous cycle.

Vertical subcontracting establishes a long-term relationship between the client and the supplier, and does not depend on a short-term supplied quantity of products or processes—in which the supplier becomes an autonomous part of the client—and is considered in the strategy of the client firm. This semi-integration of the respective firms results in benefits particularly for the client, which controls the relationship with its suppliers.

Dynamic or systemic subcontracting, the third stylized case, reflects a long-term and semihorizontal relationship in which both client and supplier participate actively in the design and manufacturing process of final goods and services. The complementarity between firms, in terms of size and specialization, just-in-time, and costs, among others, are important aspects. However, the horizontal information flows and structure between firms (Aoki 1988; Sabel 1996)—with the guarantee that information will not be used against each other, as well as incentives for solving problems—make up one of the most significant components of this subcontracting form. Thus, client and supplier share the costs of the learning process during subcontracting; uncertainty and overall risks are minimized for both firms in contrast to other subcontracting forms, and the client exerts a hierarchical control over the supplier. Finally, it is possible to establish goals for prices; quality; innovation of products, processes, and technologies; and other characteristics in the long run, resulting in enormous benefits for both enterprises. This form of subcontracting can result in a complex network of interfirm relationships.

All these subcontracting forms include several costs, which will be shared in different periods and stages by the client and supplier. In all cases initial costs are very high; costs are not marginal since constant upgrading in products, processes, and labor takes places in all different stages of the subcontracting relationship. In its first stage, systemic subcontracting in particular includes relatively high direct (or assistance) costs in comparison with other subcontracting forms,



**Table 7.1 Stylized Subcontracting Forms**

| Subcontracting Form | Benefits | Costs |
|---|---|---|
| Short-term | In the short run, fewer direct costs for client | Risk/uncertainty for C and S<br>High costs for C and S for constantly changing suppliers<br>Temporary subcontracting<br>Minimum learning process for C and S |
| Vertical | Long-term relationship<br>Increasing certainty for C and S<br>Lower costs for C and S | Risk/uncertainty for C and S<br>Minimum learning process for C and S |
| Dynamic or Systemic | Systemic/integral and long-term relationship between C and S<br>In the long run, lower total costs for C and S | Distribution of costs between C and S in the long run<br>Assistance costs for C and S |

*Notes:* C = Client; S = Subcontracting firm/supplier.

including technological assistance, research and development that are not strictly the activity of the client, different forms of financing, and even organization of labor and productive processes.

Nevertheless, dynamic or systemic subcontracting provides the most transparent and equitable form of sharing costs, while in the other forms the subcontracting firms carry most of the costs. Similarly, only this case enables a long-term learning process for both client and supplier, since the basis of their relationship is the constant flow of information and their cooperative pursuit of shared strategies. In other subcontracting forms, only the supplier learns from its experience, in the best of the cases. Finally, total long-term costs of subcontracting will be lowest in the dynamic case, since the other cases, particularly the short-term subcontracting, might lead constantly to the same initial costs with minimal learning effects.

These stylized forms of subcontracting only reflect different forms of industrial organization. In some cases, analysts characterize intrafirm and short-term subcontracting as dominant in the Western Hemisphere, in contrast to vertical and systemic subcontracting in Japan and East Asia. However, this simplistic view is not sufficient for understanding interfirm and subcontracting relations. Recently, and as a response to globalization, big national firms and TNCs in most sectors, and independent of the specific country or hemisphere, have pursued a dramatic increase in subcontracting, giving rise to a new paradigm for industrial organization (Sturgeon 1997).

Different subcontracting forms and integration into the value-added chain result in different social, economic, regional, and national networks. Economic aspects are only one part of this complex network. A variety of institutions, embedded in a cooperative and/or competitive context, as well as the specific historical, cultural, and political conditions are indispensable in generating these sociopolitical units. Consequently, an exclusively economic perspective is not sufficient (Dussel Peters 1999b). Different forms of subcontracting are not an exclusive result of cost-benefit analysis, but of the industrial organization of regions, nations, and firms in space and time (Aoki 1988; Messner 1995). Thus, different forms of subcontracting are an important though not sufficient condition in generating a social and productive network.

It is relevant to stress that the current globalization process presents profound limitations and is not part of an irreversible process. It seems to be that the market and market-friendly rules strictly determine this process, but historically the market has been only one of



the socioeconomic coordinators: "hierarchies, networks, associations, and states have frequently been important mechanisms for coordinating actors in capitalist societies when adequately designed and blended" (Hollingsworth and Boyer 1997, 433–434). Moreover, there have been no adequate analyses of issues such as the new function of the nation-state, its relationship with regions, and the enormous potential of interregional relations. The charm of capitalist development has important political, economic, institutional, ecological, and cultural limitations (Altvater and Mahnkopf 1996) that have not yet been sufficiently examined. A discussion of the limitations of capitalism at the end of the twentieth century goes far beyond the scope of this chapter but will have to be discussed in the future, at least insofar as the limitations are relevant to the forms and potential of regional integration to the world market.[2]

## General Regional Trends in Mexico

Currently a number of regional and local (at the municipal level) programs to support economic development exist in Mexico. The Program for Industrial Policy and Foreign Trade (1995–2000) (PEF 1996) establishes, among other priorities, the critical importance of regional aspects. For example, it estimates an increasing regional deconcentration of production and industrial exports since trade liberalization. Integration of production chains and industrial clusters can only be understood from a regional perspective, "through the efficient substitution of imports, the complementarity of regional markets and interregional trade relations" (PEF 1996, 56). It stresses further that priority will be given to productive investments in regions with higher disadvantages.

The early objectives, written during the crisis of 1994–1995, were put aside after the apparent recovery of Mexico's economy in terms of GDP and exports since 1996. In general, no substantial, coordinated regional program was created, and horizontal industrial policies were initiated in 1988 and continued until 1999. Nevertheless, it is possible to outline a few regional policies started in 1988, and in general terms for the 1990s.

1. Since the mid-1990s several programs and economic policies at the local and regional level were initiated through the federal government and its multiple institutions such as Nacional

Financiera (NAFIN) and Banco de Comercio Exterior (BANCOMEXT), as well as through business chambers, business associations, international institutions (particularly the United Nations), and educational institutions. An estimated 3,600 local and regional programs exist (Ruiz Durán 1998; Ruiz Durán and Dussel Peters 1999). However, aside from their short period of duration, no mechanism or institution exists to coordinate them, particularly at the federal level. This has allowed for redundant functions, costs, and expenditures, but has not permitted a systematic evaluation of the benefits and costs associated with these programs.

2. In spite of the diversity and richness of local and regional conditions and development, and given the lack of federal coordination, various programs were begun—from foreign investment attraction to standardization and linkage instruments, among many others—in a rather chaotic form, and competing with each other. For example, the creation of industrial parks in specific sectors in several states competes in some cases with the strategies of bordering states.
3. All states have local and regional programs. However, those states where opposition parties have won elections have been the most progressive in terms of implementing the programs, which have transformed the states concerned into national leaders. The cases of Jalisco (Dussel Peters 1998) and Guanajuato (Domínguez and Brown Grossman 1997) are two examples.
4. A coherent strategy for regional policies has not evolved. Most of the Mexican states have developed information support services, instruments oriented toward small and medium enterprises, and programs to link educational institutions and firms. However, given fiscal restrictions and the preference for horizontal industrial policies at the federal level (see Chapter 4), there are practically no resources available for these programs. Thus, in open contrast with international experiences to generate business associations, different forms of interfirm integration and subcontracting, networks, and clusters in Mexico do have little or no government support. The potential success of these experiences will also depend on the costs that will have to be financed by private and/or public institutions.



What have been some of the regional results of liberalization strategy? Clemente Ruiz Durán (1997) argues that since 1988 the Mexican states have been exposed to different degrees of economies of agglomeration, models of state intervention, and different models of foreign investment (oriented to the domestic market, exports, and maquiladoras). For the period 1980–1993 the model defined as foreign investment, characterized by a high degree of industrialization and a higher GDP growth in its manufacturing sector, has been far more dynamic than the rest of the models. Other studies (Dávila Flores 1998) indicate that based on specialization coefficients of employment, states in Mexico have been characterized by a process of relative convergence in terms of GDP growth for 1980–1993, although variability coefficients are very high. Finally, there is an increasing consensus that economic and social disparities and polarization at the regional level have increased since 1988 (Asuad Sanén 2000; Ruiz Durán 1999).

In spite of data limitations,[3] recent data published by the National Institute for Statistics, Geography, and Information Systems (Instituto Nacional de Estadística, Geografía e Informática, INEGI) (INEGI 1999) and the Executive Federal Power (Poder Ejecutivo Federal, PEF) (PEF 1999) on regional GDP, employment, and GDP per capita trends reflect several important features for the period 1970–1996. First, the share of GDP of the main four states—Distrito Federal, Estado de México, Nuevo León, and Jalisco—fell significantly for 1970–1985 from 49.20 percent of total GDP to 44.70 percent. Since 1988 these four states, as well as specific states on the northern border of Mexico, such as Baja California, Coahuila, Chihuahua, Sonora, and Tamaulipas—all of which with very significant maquila and export activities (Mendiola 1997)—have increased their share of total GDP substantially (see Table 7.2). Second, other states, such as Campeche and Tabasco, show strong oscillations during the period, resulting primarily from the oil boom during the 1980s and the activities of PEMEX. On the other hand, Quintana Roo, mainly as a result of booming tourism, constantly increased its share of Mexico's GDP over this period, from 0.18 percent in 1970 to 1.21 percent in 1996 (Table 7.2). Third, during 1970–1988 Mexico City, Mexico's economic and political center, lost its dominance in terms of GDP per capita relative to several states, particularly in respect to the Northern border states, oil-booming states, and Quintana Roo. However, since 1988 Mexico City has again recov-

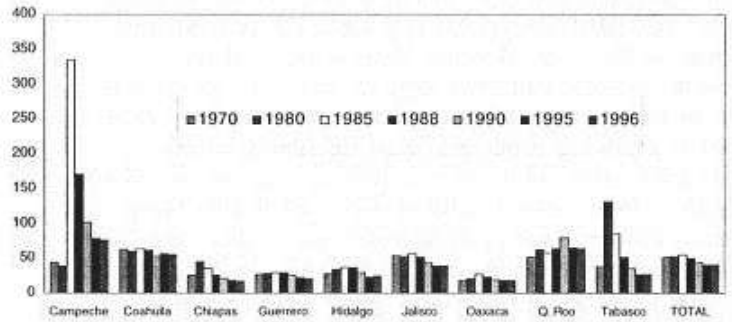
**Table 7.2 Selected Mexican States' Share of GDP (1970-1996) (in current Pesos)**

| | 1970 | 1975 | 1980 | 1985 | 1988 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|
| Four main states[a] | 49.20 | 49.26 | 48.56 | 44.70 | 45.86 | 47.25 | 47.25 | 45.89 | 46.13 |
| Baja California | 2.63 | 2.45 | 2.25 | 2.36 | 2.54 | 2.79 | 2.91 | 3.18 | 3.16 |
| Campeche | 0.44 | 0.47 | 0.48 | 3.94 | 2.23 | 1.19 | 1.17 | 1.37 | 1.31 |
| Coahuila | 2.79 | 2.90 | 2.66 | 2.74 | 2.99 | 2.90 | 2.88 | 3.32 | 3.29 |
| Chiapas | 1.61 | 1.67 | 2.71 | 2.32 | 1.94 | 1.79 | 1.81 | 1.78 | 1.74 |
| Guerrero | 1.72 | 1.80 | 1.67 | 1.74 | 1.88 | 1.87 | 1.86 | 1.78 | 1.68 |
| Morelos | 1.08 | 1.11 | 1.08 | 1.19 | 1.28 | 1.49 | 1.45 | 1.35 | 1.32 |
| Oaxaca | 1.48 | 1.51 | 1.41 | 1.77 | 1.71 | 1.67 | 1.67 | 1.62 | 1.60 |
| Quintana Roo | 0.18 | 0.34 | 0.40 | 0.51 | 0.72 | 1.29 | 1.27 | 1.23 | 1.21 |
| Tabasco | 1.16 | 1.70 | 3.97 | 2.72 | 1.86 | 1.29 | 1.26 | 1.29 | 1.28 |
| The rest | 37.71 | 36.81 | 34.81 | 36.01 | 36.99 | 36.48 | 36.46 | 37.19 | 37.28 |
| TOTAL | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

*Source:* Author's estimations based on PEF (1999).
*Note:* a. Distrito Federal, Estado de México, Jalisco, and Nuevo León.

ered. With the notable exception of Quintana Roo, practically all states lost in terms of GDP per capita when compared with Mexico City (see Figure 7.1). This polarization at the regional level is particularly significant for states such as Chiapas, Guerrero, and Oaxaca, with GDP per capita levels, compared with those of Mexico City, at or below 20 percent in 1996 and showing a downward trend since

**Figure 7.1 GDP per Capita for Selected Mexican States (1970–1996) (Federal District = 100)**




*Source:* Author's calculations based on PEF (1999); author's estimations for population (1985, 1988) and GDP (1990).



1988. In the case of Chiapas, for example, GDP per capita compared with that of Mexico City declined from 25.49 percent in 1988 to 18.40 percent in 1995 and 17.47 percent in 1996.

The economic and regional development in the past decades, and particularly since 1988, has had without a doubt most important social, political, and even military implications. Although it goes far beyond the scope of this book, it is not surprising that during the 1990s several social and guerrilla movements have emerged in the states Chiapas, Guerrero, and Oaxaca. Their disparities in income distribution and GDP per capita performance in comparison with those of the Distrito Federal has been dismal, with apparently little hope for change in the medium term, given current economic and social policies in the context of liberalization. These initial results, which will require much more in-depth analysis in the future, also reflect an increasing north-south polarization in Mexico. The traditional economic and political centers of Mexico—particularly Mexico City and the states of Mexico, Jalisco, and Nuevo León—have increased their share of total GDP (as have the states connected to export and maquila activities), but states south of Mexico City are excluded from regional and global integration. This territorial polarization of liberalization could have devastating economic, social, and political implications for Mexico in the near future, as had already been suggested throughout the 1990s.

## The Electronics Industry in Jalisco

Internationally, electronics has been one of the economic activities most affected by flexible production and global commodity chains. Extremely high capital intensity, high research and development, high entry costs, and the "strategic game" (Ernst 1997) between firms—including extensive cooperation and joint ventures in products and specific processes, even among competing firms, as well as negotiations with governments and regulatory systems—were some of the characteristics of the electronics sector throughout the 1990s. Moreover, extremely high technological turnover, in which the life cycle of some products varies between 6 and 12 months, and an increasing differentiation of products as well as economies of scale, are some of the forces driving the electronics sector.

Electronic industries require a great degree of cohesion and integration at the intrafirm and interfirm level. The relation of these

firms with their subcontracting firms is of critical importance, since the success or failure of products and/or processes depends on the whole commodity chain of a product, and the latter is determined by the weakest link (Dussel Peters 1998, 9ff.). This network of intrafirm and interfirm relations requires different degrees of subcontracting and outsourcing, and integrating some firms into the technological trajectory or into changes in demand, design specialization, distribution, and development of key components. Specialization, in one of these chains, is not sufficient and can rather quickly result in the bankruptcy of firms. Nowadays, the organization and control of the whole value-added chain are probably the most important function of client firms. In many cases, firms such as IBM and Hewlett Packard do not specialize in all parts of the production process related to their products, but, rather, concentrate on research and development and high-value-added segments, while the rest of the processes are assigned to subcontractors. Nevertheless, these firms control the complexity of all global chains, since the failure of one single link can result in a failure to deliver the final product or service. Global outsourcing of manufacturing and distribution processes and services in electronics have increased dramatically since at least the early 1990s, in different degrees, in the United States, Japan, and the European Union (Ernst 1997; Sturgeon 1997).

The electronics industry has been one of the most dynamic branches in Mexico's economy, particularly since the late 1980s, in terms of GDP, foreign investment, imports, and exports. Electronics (excluding maquiladora activities), accounted in 1996 for import/GDP and export/GDP coefficients of 344 percent and 37 percent, respectively. Hence, electronics in Mexico show patterns similar to those of all manufacturing there, that is, a high net propensity to import to be able to grow and produce its share of exports.

In the case of Jalisco, electronics reflects impressive growth in terms of GDP since 1980 and this state's share of Mexico's electronics industry increased from 2.93 percent in 1980 to 12.38 percent in 1995. Total exports have also increased dramatically, accounting for a growth rate above 100 percent for 1994–1997 and for an estimated $6.5 billion in 1998. The United States (which purchased 63 percent of total exports in electronics in 1997) is the main recipient, while the European Union (12 percent) and Asia (10 percent) are of less importance. The three main exporting firms in Jalisco (IBM, Motorola, and Kodak) are all electronics firms. IBM, SCI Systems, Motorola, and Lucent Technologies accounted for 94.89 percent of total exports in electronic products from Jalisco in 1996.



The electronics industry in Jalisco has specialized in products for computer and telecommunications, such as personal and laptop computers, printers, telephones, floppy disks, semiconductors, cables, beepers, and others. According to input-output matrixes, the electronics industry in Jalisco has the lowest level of national and regional integration, importing 56.84 percent of total inputs for production in 1996 (CEED/UDG 1997). Through 1997 the electronics complex in Jalisco included more than 70 firms, with 28,000 direct and more than 100,000 indirect jobs, and was responsible for 53 percent of Jalisco's total exports. In 1999 the cluster already accounted for 320 firms.

Given the newness of this industry, with most of the firms established during the 1990s, and its impressive dynamism, what are the characteristics of the electronics sector in Jalisco?[4]

There have been at least two different generations of firms that established operations in Jalisco. On one hand was a small group of firms, in particular IBM, that expanded activities during the 1980s because of cheap and unskilled labor, low wages, and proximity to the United States. On the other hand were most of the firms in Jalisco's electronics cluster that began their activities only during the 1990s, whose reasons for coming to Jalisco, besides those factors already mentioned, included NAFTA, Mexico's macroeconomic and FDI policies, and the growing significance of the Latin American market. Moreover, there is an increasing process of "cumulative causation" (new subcontracting and specialized firms being established in Jalisco because of the existing complex and, therefore, a guaranteed demand in the region).

With few exceptions, the electronics industry in Jalisco has engaged in assembly processes. Most of the firms operate formally or informally as maquiladoras, with a low degree of linkages to national or regional firms. The sector depends very much, and increasingly so, on imports at all levels, from raw materials to components for the final products to be assembled.[5] In general, this electronics industry does not develop designs or produce parts, components, products, and/or processes, with a few exceptions like software and programming for on-site machinery and equipment. Thus, Jalisco specializes in the lowest segments of the global value-added chain in the electronics industry.

Probably one of the most important industrial organization features of this sector is its failure to "deepen" value-added linkages in Jalisco. This is a result of the industrial structures that have emerged since the 1990s. First-tier firms such as IBM, Hewlett Packard, Motorola, NEC, and Siemens, among others, initially began to search for and even develop subcontracting firms for products and processes too expensive to be imported. Packaging processes and specific processes related to plastic extrusion are very expensive to import primarily due to their high volume. For example, local supplier firms, such as Ureblock and Yamaver, a local firm and a joint venture of Mexican and U.S. capital, respectively, have been directly supported by client firms like IBM for up to 4 years to manufacture their products. In some cases, supplier firms have been supported technologically and financially and/or were a joint venture with some of the client-firms. However, after the development of these "necessary" products in the first stage, client firms established in Jalisco no longer need to develop new subcontracting firms. The latter can buy inputs internationally, either through intrafirm or interfirm trade. Most of the parts and components in electronics, for example, are not subject to volume and weight limitations in shipping. This is relevant for most products that do not have weight limitations, and for electronics firms that were established later and did not develop any subcontracting firms in Jalisco at all.

These industry conditions also have a temporal dimension. Big TNCs and client firms initially searched out and developed local, regional, and national suppliers. However, since the mid-1990s this situation has changed significantly. Today, in Jalisco there is a wide variety of firms, mainly foreign, ranging from raw materials to parts, components, and services. Thus, the barriers to new potential local and national suppliers have increased substantially. Moreover, it is much more difficult for potential new entrants to get integrated into the supplier system of client firms, since the latter expect from the beginning international standards of quality, good manufacturing practices, and high flexibility, among other characteristics. In addition to this structure, during the 1990s more and more foreign-owned second-tier suppliers, such as Solectron and SCI Systems, have been established in Jalisco, making it even more difficult for potential regional or national suppliers to compete in and/or get integrated into this system, since the foreign firms come into Jalisco with their own supplier system.

Another important feature of Jalisco's electronics industry is that



most of the foreign-owned supplier firms use a lot of imported raw materials, components, and parts. The low quality of national inputs, the lack of certification by client firms, and the inability of many Mexican firms to supply large volumes "just in time" are the main reasons client firms give for importing most supplies.

A few firms in Jalisco operate as original equipment manufacturers (OEMs), and country manufacturers are viewed as an important step forward in the value-added chain in electronics, particularly in those processes that are defined as "necessary" for client firms. The latter have tight overall control of the OEM. Strict specifications for production inputs, suppliers, raw materials, machinery, and internal organization of the OEMs reflect not only direct control by the client firm, but also the difficulties suppliers have in diversifying. In several cases, client firms estimate exactly the costs, and even profits, of their subcontractors.[6]

The government of the state of Jalisco, run by the opposition National Action Party (PAN) since 1995, and other private and international institutions have actively promoted the integration of the electronics industry since the mid-1990s. A variety of mechanisms and programs to integrate small and medium firms into these networks and increase the value-added segments of the sector have been developed.[7]

Some national and regional firms have been successful in integrating themselves into Jalisco's electronics industry. These firms, including companies in packaging, plastic extrusion, and assembly processes, increased their local linkages during the 1980s and the first part of the 1990s and have been directly supported technically and financially by client firms. In these cases, client firms made significant efforts and participated in several instances in the costs of developing successful domestic suppliers. In some cases, the newly emerging suppliers went on to become suppliers for other regional firms, and have even been able to export directly. As already seen, the learning process involving client firms and suppliers could take up to 4 years, and was not successful in all cases.

However, these last cases are exceptions. In general, Jalisco's electronics industry reflects a "squeezed" or funnel-like value-added structure. This is a result, on the one hand, of the presence of huge foreign OEMs and assemblers, and on the other, of second- and third-tier firms that are fewer, and foreign-owned.

Finally, costs are not the most important variable for establishing a supplier system and interfirm networks for client firms.[8] A client

firm requires a high degree of certainty regarding just-in-time delivery, quality, and a good knowledge of the internal processes of the supplier. So, even though inputs could be obtained cheaper in Mexico in several cases, client firms decided to import certified goods and services. Given the global scope of these firms and their activities, problems of nondelivery of a single part or component can result in massive costs and failure to ship the final product.

In all the above is reflected the complexity of an industrial organization that has global, national, and regional dimensions. Globalization, including flexible production and global commodity chains, are of utmost importance in understanding the emergence of Jalisco's electronic industry. National policies since liberalization, as described in earlier chapters, have promoted FDI liberalization and overall trade liberalization, and the development of Jalisco's industry would have been unimaginable, in fact impossible, without these policies. However, the electronics complex in Jalisco, though extremely successful in terms of production, exports, and productivity, has generated a structure with few learning effects and little potential for generating endogenous (regional and national) growth conditions in the medium and long run.

All involved firms are "rational" from an economic perspective. Client firms, with a few exceptions already noted, import their supplies because they do not find certified required quality and quantity nationally and regionally. Potential national and regional suppliers have financial problems in upgrading and lack the certainty that these costs will definitively lead to contracts with client firms in the face of continual global competition. The process of deepening value-added segments has to occur in costs, planning, and a variety of programs and mechanisms to go beyond this market rationality. Horizontal industrial policies, as followed by the federal government since 1988, are not sufficient and do not address the massive challenges that have been generated by this industrial organization.

## The Pharmaceutical Industry in Mexico City

The pharmaceutical industry is substantially different from other industries. It is divided into raw material or medicinal chemical (active substances and ingredients to produce drugs) production and processing and auxiliary products for health and drugs. Pharmaceutical products, and particularly drugs, cannot be traded as



commodities in other industrial activities such as automobiles and electronics because of nontrade barriers. Moreover, a high degree of innovation and costs in research and development, national and regional social security and health regulation systems, significant entry barriers, high capital intensity, nontariff barriers, and an international oligopolistic market structure characterize the pharmaceutical industry (Ballance, Pogány, and Forstner 1992). Interests in this industry provide different, and in some cases, diametrically opposed goals and objectives among its actors: big transnational firms, smaller firms with national and foreign capital, national and international institutions, medical associations, and social public entities (with their health and budget considerations).

The value-added chain of the pharmaceutical industry can be divided into at least three important segments. First, there is R&D which, depending on the specific country, account for around 15 percent of total value added. Second are inputs and manufacturing of active substances: as well as turning out medicinal chemicals, the manufacturing process transforms these inputs into final consumer goods as either drugs or auxiliary products for health. This process accounts internationally for an average of around 40 percent of total value added in this sector. Third is distribution, representing around 25 percent of value added. New drugs or pharmaceutical products, approved by relevant national institutions, are commercialized through different channels (e.g., drugstores, wholesalers, directly to the public sector). After the expiration of the patents of any products, other firms can produce the same drugs (also known as generics). Thus, while prices determine the competition of generic products, competition among drugs under patent is achieved by differentiation (Duetsch 1998).

Finally, it is important to stress that specific features characterized pharmaceutical industries during the 1990s. On the one hand, the industry has an oligopolistic international market structure, in which 25 TNCs control about 50 percent of total international sales. The main firms are from the United States, the European Union, and Japan (Ballance, Pogány, and Forstner 1992). Second, it is important to understand that the basis of the success of the industry is research and development, concentrated almost exclusively in OECD nations and specifically in the United States and the European Union. Given the high costs of developing new active substances and drugs, the innovation, manufacturing, and distribution of a single new approved drug costs around $500 million. Pharmaceutical firms since the

1980s have begun a number of associations and joint ventures. Interfirm collaboration, strategic investments in R&D, and new and more expensive technologies, such as in biotechnology, have reinforced oligopolistic market structures in spite of the high competition among firms in final goods markets.[9] The full development of drugs—from initial R&D to numerous tests and formal approval—can take up to 20 years (investments in this sector are characterized not only by differentiation of products, but also by long-term projects).

Aside from the industry's organization and the processes of globalization, pharmaceuticals TNCs increasingly choose one site to produce active substances and, in some cases, drugs, while distribution is launched simultaneously in several markets (Chappel 1996). From this perspective, specific local, regional, and national conditions are of critical importance for TNCs in making decisions on long-term strategic investments. Finally, a variety of nontrade barriers, particularly national and regional laws, different "good manufacturing practices" and laws, and closed markets that prevent competition with these priority firms have resulted in relatively low levels of international trade in pharmaceuticals (USITC 1998). Nevertheless, and given harmonization efforts among OECD nations, it is expected that international trade will surge in the coming years (PhRMA 1998).

The pharmaceutical industry in Mexico began in the 1940s and was strongly influenced by European and U.S. transnational distributors. During ISI, and particularly after the crisis of 1982, the Mexican government implemented several programs to enhance the pharmaceutical industry, particularly in producing raw materials, in order to guarantee supplies nationally. In addition to specific programs for these sectors, one of the main policies was to control prices of drugs and to discriminate against imported goods through multiple trade barriers, including health and sanitary regulations, import licenses, and domestic value-added requirements. The period 1984–1991 could be considered the golden age of Mexico's pharmaceutical industry, with more than 300 pharmaceutical laboratories, of which only 75 were foreign. As a result of the above programs, domestic value added in the pharmaceutical industry in general was relatively high, estimated at round 80 percent at the end of the 1980s for raw materials (CEPAL 1987; Dussel Peters 1999c).

However, the introduction of the new Federal Law to Enhance and Protect Industrial Property of 1991 dramatically changed the situation for Mexican firms. The most significant change, in comparison with prior law, was that only final new entities or substances



could be patented independently of the procedure for obtaining them. This logic runs against prior policies, which only allowed for patenting processes independent of the final result or substance. The new law was also retroactive, that is, patents still in effect in other countries were also effective in Mexico.

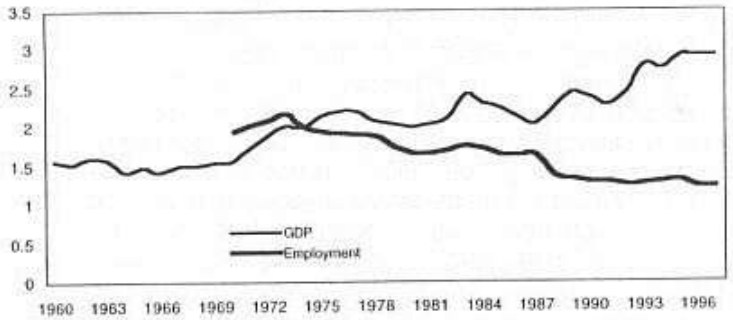
It is also important to point out that NAFTA and prior import liberalization have had a significant impact on import tariffs. For the whole pharmaceutical industry, Mexico immediately abolished tariffs on 51 percent of all imported items in 1994, and another 47 percent will be abolished by 2004. In 1994, tariff abolition was more profound for medicinal chemicals, affecting 61 percent of total imported goods from Canada and the United States immediately. However, and much more relevant for the sector, because nontariff barriers are prevalent in these industries, so were government acquisitions. After 2002, health institutions in Mexico will have to open acquisitions to Canadian and U.S. firms, and preferences for domestic firms are forbidden, with few exceptions (BANCOMEXT 1994).[10]

As for the structure of Mexico's pharmaceutical sector, since the beginning of the 1990s the private market represents around 80 percent of the total market, while the rest is shared among the government's purchases. In general, Mexican firms have oriented their production toward the public sector, while TNCs sell through private channels. The degree of concentration in the pharmaceutical sector has also increased significantly: the 30 most important firms increased their share as a percentage of total sales in the pharmaceutical market from levels below 60 percent in the 1970s to 60.30 percent in 1988 and 72.10 percent in 1998 (Dussel Peters 1999c).

The impact of liberalization on the pharmaceutical industry has been impressive and has allowed for a deep restructuring of its firms, summarized as follows (Dussel Peters 1999c):

1. GDP growth for the pharmaceutical sector has increased substantially above Mexico's average, and its share in Mexico's manufacturing sector increased from 2.30 percent in 1988 to 2.90 percent in 1996 (see Figure 7.2). However, the employment share of the industry fell significantly, from 1.36 to 1.22 percent for the same period. As a result, and similar to most dynamic branches since liberalization, labor productivity increased importantly.
2. TNCs have increased their overall share in the pharmaceutical market, from 70.0 percent in 1993 to more than 72 percent in

**Figure 7.2 Pharmaceutical Products: Share of Manufacturing (1960–1996)**




*Source:* Author's calculations based on INEGI (1999).

1996. TNCs have been very dynamic in Mexico's market, as well as in exporting, and annual FDI has been relatively stable for 1994–1998, in spite of the 1994 crisis, at around $160 million.

3. Exports by the pharmaceutical industry increased from 0.72 percent of total Mexican exports in 1990 to 3.18 percent in 1998, representing $3.74 billion in that year, with an AAGR of 39.3 percent, significantly higher than total exports, 20.3 percent. For the same period, exports of auxiliary health products increased, mainly to the United States, from $79 million to $2.78 billion.
4. Pharmaceutical imports, on the other hand, increased by an AAGR of 13.6 percent during 1990–1998, lower than that of total imports of 18.9 percent, and accounted for $5.36 billion in 1998 or 4.3 percent of total imports. Raw material imports accounted between 1990–1998 for more than 50 percent of total pharmaceutical imports while drug imports grew at an AAGR of 28.8 percent, accounting for $613 million in 1998.
5. These import and export trends resulted in a negative trade balance for the Mexican pharmaceutical industry as a whole. All pharmaceutical subsectors, with the exception of auxiliary health products, accounted for a trade deficit over 1990–1998. The annual trade deficit was relatively stable, at around $2 billion, with raw material or medicinal chemical products representing the main source of the deficit, accumulating $17.7 billion for 1990–1998. It is important to notice that the trade deficit in raw materials rose continually for the period, independent of the crisis of 1994–1995.
6. Most pharmaceutical exports go to the United States, with an average of 74.89 percent of total exports for 1990–1998, and with the trend increasing for that period. Imports from the United States, with a 46.38 percent share over total pharmaceutical imports, are low compared with exports. Other nations such as Ireland, Japan, Switzerland, and, increasingly, China have become major exporters of raw materials to Mexico.
7. The latter trends have resulted in an increasing polarization of Mexico's pharmaceutical industry. While TNCs and several big national pharmaceutical firms have been successful in increasing sales and labor productivity and in innovating products and processes, many local and national firms have gone bankrupt or have been sold to bigger firms. This is particularly the case for the medicinal chemical industry, whose domestic value added decreased from approximately 80 percent at the end of the 1980s to about 20 percent in 1998. Of 300 firms at the end of the 1980s only 35 remained in 1998, and it is expected that around 10 will be left in the medium term.[11]



Mexico City had 68.44 percent of Mexico's pharmaceutical industry in 1998, with more than 34,000 jobs and more than 60 percent of national pharmaceutical GDP in 1995. The pharmaceutical industry in Mexico is part of a large complex of activities—from basic chemicals to raw materials, wholesaling of chemicals, and packaging—that accounted for 62,624 jobs in 1998.[12] This complex includes 3,254 firms, and pharmaceutical products are the major activity. In addition, big firms (i.e., those with more than 250 workers) play an important role, accounting for 74.29 percent of total employment in 1998. Thus, the pharmaceutical industry in Mexico City depends heavily on the dynamic of big firms, much more than is true in other activities, both nationally and in Mexico City.

It is in this general context that the government of Mexico City began a project in 1998 as an attempt to further stimulate the pharmaceutical industry in Mexico City and the Metropolitan Area. After the Party of Democratic Revolution (PRD) won the state election in 1997, the PRD government implemented several programs—including supplier systems for the subway and government acquisitions, and particularly the Trust for the Consolidation of Microenterprises

in Mexico City (Fideicomiso para la Consolidación de la Microempresa en el Distrito Federal, FOCOMI). FOCOMI has been operating since April 1998 and is aimed at financing the productive activities of microenterprises (i.e., those with fewer than 16 workers). The general objectives of FOCOMI are to preserve micro and small firms and to enhance linkages with other firms in the region. More specifically, FOCOMI allows credits of up to $25,000 for each firm at preferential interest rates (GDF 1998a; Manzo Yépez 1999).

Specifically regarding the pharmaceutical sector, the government of Mexico City began in 1998 to implement a program of Acquisitions of the Government of Mexico City (GDF 1998b). The objective of the Mexico City government is to channel its own demand for pharmaceutical products—around $14 million, or 0.4 percent of the total national pharmaceutical market in Mexico—to local firms. Only four institutions in Mexico City's government generate 94.72 percent of this demand, and 22 of the products in 1998 represented 88.74 percent of total demand.

The government of Mexico City has attempted to generate several specific programs for micro- and small enterprises in order to generate linkages with the dynamic TNCs, as well as directly through government acquisitions. By the end of 1998 the program included the possibility of linking these firms to FOCOMI.

Even though, by the end of 1998, the program for pharmaceutical microfirms still had not been initiated and linked to FOCOMI, the program was still relevant. On one hand, the city government's attempt, though still new, is designed to counter potentially negative economic and political global trends at the regional level. Given national industrial policies and global trends, the city government has initiated a regional process to stimulate specific sectors; select them by their social, political, and economic importance; and implement programs in cooperation with business chambers and other sectors of Mexico City's society (Dussel Peters 1999c).

On the other hand, the specific goal of promoting the pharmaceutical industry in Mexico City and its Metropolitan Area is relevant because it reveals several limitations and shortcomings. In general, the pharmaceutical industry, and particularly raw material producers, do not find favorable conditions in Mexico City. Skilled labor and the proximity of markets are two important favorable conditions found in Mexico City, in addition to the existing local pharmaceutical industry. All the same, since the 1980s there has been an overall tendency of pharmaceutical firms to move out of Mexico City. Also, the federal government had promoted the decentralization of pharmaceutical firms from Mexico City at the end of the 1980s through specific programs. The intensive use of solvents and explosive and toxic substances, limitations on water use, high costs of land and of services in general, and transportation problems presented severe limitations to the industry in Mexico City. Moreover, ecological and health regulations restrain the industry's expansion possibilities. Aside from to these specific conditions, the government of Mexico City is confronted with the global strategies of TNCs and competes directly with other regions in Mexico and the world for TNCs' investment. From this perspective, the efforts of the government of Mexico City, whose demand in the national pharmaceutical markets is only around 0.4 percent, is not sufficient. Unless the government is able to coordinate efforts with other regional and federal institutions, as well as education centers, the government of Mexico City alone has little chance for promoting, or even maintaining, existing pharmaceutical activities.



## Preliminary Conclusions

We have just seen some of the new economic dimensions and challenges of globalization. Paradoxically, globalization generates in parallel new processes in localities and regions because these are the predominant sites to be affected in the context of capital and trade liberalization since the 1980s. The relationship between nation-states and regions, as well as interregional linkages, have already changed. The specific form of integration of regional economies with the world market becomes one of the fundamental economic, social, and political challenges for regions and depends on territorial endogeneity aspects discussed in Chapter 1.

Interfirm relationships and particularly subcontracting are relevant in the context of global commodity chains and flexible production. While short-term subcontracting is the more sporadic and usual form of subcontracting, vertical and dynamic or systemic subcontracting forms include higher degrees of learning effects between firms and could give rise to a potential endogenous growth process. All these subcontracting forms include costs that increase from the simpler short-term subcontracting to the more complex systemic or dynamic subcontracting forms.

Most significant for economic theory, prices and costs play an

important role in subcontracting and interfirm relations and industrial organization. However, and depending on the specific case, flows of intra- and interfirm information, long-term cooperation, and overall certainty are at least as important. Thus, it is quite possible to think of "inefficient" subcontracting forms strictly from a cost-benefit analysis that are nevertheless highly "efficient" in the long term. These subcontracting structures are important for firms with many global commodity chains: the certainty of quality, just-in-time delivery, and technological development of all subcontracting firms is at least as relevant as cost-efficiency. Otherwise, the failure of a single part, component, service, or process in the commodity chain of a final good can result in the inability to sell this good and in significant losses. For example, quality problems with harnesses, probably the components of lowest value-added in a personal computer, can lead to lost sales in the final market.

Since 1988 Mexico's regional trends have changed dramatically. On the one hand, the federal government so far has not been able to confront globalization through the coordination of regional policies. Such an approach would have to go far beyond a national horizontal industrial policy, as followed until 1999. Without a doubt, regionalization is not an easy task politically and it is continually in conflict with Mexico's centralist policy structures. Also, a chaotic number of programs and instruments have been implemented in practically all Mexican states, in many cases with opposite and contradictory goals or in other cases competing directly with each other, fueling tensions, and delaying the understanding of regional processes.

In general, Mexico has experienced an important polarization of regional economic activities since 1988. This is present in those regions with linkages to export activities, such as maquiladoras, in addition to the traditional production centers of Mexico, such as Mexico City. Trends in GDP per capita clearly reflect that polarization. With the exception of the state of Quintana Roo, Mexico City has benefited substantially since 1988, while other regions of Mexico, particularly those in the south, have lost importance in GDP and in terms of GDP per capita. It should be noted that these trends compared only within Mexico and with Mexico City. International comparisons of Mexico's regions would show a much more impressive polarization.

The case studies of the electronics industry in Jalisco and the pharmaceutical industry in Mexico City are important from more than one perspective. For instance, they show the emergence of new



institutions at the local and regional level. Local and regional governments, business chambers, and international and education institutions, among others, have begun programs in this activity, and the electronics and pharmaceutical industries reflect these new programs. However, the industries also present the limitations and shortcomings of the programs. Although some programs appear to be more successful than others, in general local and regional governments have difficulty in understanding the rationale and strategy of big firms and TNCs. In most of the cases, policies to support local and regional enterprises are also not very significant, given the global magnitude of sales, for example, and employment of the relevant firms. Finally, and at least for the case studies, the relationship between federal and regional institutions is at best ambiguous. Federal institutions do not directly obstruct regional efforts, but they do not support them directly either: in many cases, regional policies are either delayed or even contradicted by federal guidelines. For states governed by opposition parties, the tensions between them and the center are even more obvious.

Yet the two case studies also show the particular industrial organization of their respective industries. The studies cannot be generalized for Mexico's economy, but do clarify some of the discussed issues for the manufacturing sector. The electronics and pharmaceutical industries have been extremely successful in terms of GDP growth, exports, and productivity, among other variables. Firms such as IBM and SCI Systems in Jalisco, as well as Promeco-Boehringer Ingelheim and Schering Plough in Mexico City, among many others, invested substantially during the 1990s and have plants comparable in technology, quality, and organization with plants in any OECD nation. Liberalization and NAFTA have been significant in generating these investments and have allowed the globalization of parts of these sectors of Mexico's economy.

However, these firms and industries are not solving Mexico's structural problems and contradictions. Since these activities are relatively capital intensive when compared with Mexico's economy, particularly in the pharmaceutical firms, their impact on employment becomes minimal. It could be argued that these export-oriented and modern sectors generate linkages with the rest of the economy, and thus their indirect impact is much larger. But, as analyzed in both industries, this is one of the weakest points of liberalization and its resulting industrial organization.

In the case of the electronics industry in Jalisco, this complex is

part of a global commodity chain organized by TNCs. With few exceptions, assembly is the main global function of this cluster. It is possible that the cluster will be integrated into new areas of the value-added segment of electronics. However, current structures and industrial organization suggest otherwise because they reflect an organization form that is "rational" for all firms. That is, TNCs import most of their parts, components, and processes because they are not available nationally and regionally, while the technological, quality, and organizational shortcomings of regional and national firms are apparently too severe (and costly) to be overcome.

The pharmaceutical industry in Mexico City, but also in Mexico in general, (and with important differences from electronics) also shows similar limitations. While TNCs and a few Mexican firms have been able to successfully face globalization and the liberalization strategy, most Mexican firms have gone bankrupt. This is particularly the case for raw materials producers: the domestic share of raw materials fell from around 80 percent in the late 1980s to around 20 percent in 1998. These trends, as in other sectors, show the disintegration of linkages between the pharmaceutical sector and the rest of the Mexican economy. Neither electronics nor pharmaceutical firms perform relevant R&D activities or high value-added services in Mexico.

In both cases, these specific types of emerging industrial organization account for high and negative trade balance/GDP coefficients. From this perspective, microeconomic and industrial organization patterns result in macroeconomic unsustainability for Mexico's economy, as reflected in the crisis of 1994. Clearly, the generation of intra- and interfirm linkages, of subcontracting, and of integrating the respective firms and branches regionally is not an easy task, since this industrial organization has created a rational but unsustainable economic industrial organization. As in Jalisco and Mexico City, embedding these activities locally and regionally requires financing and costs on the part of participating institutions.

## Notes

1. Other concepts, such as "lean production," are understood as a form of flexible specialization. Lean production refers to a tight relationship between areas of acquisition of inputs, production, and distribution, as well as working groups highly qualified in one firm, based on a high degree of trust between subcontractors and manufacturing firms of final goods. Intra- and interfirm coordination and cooperation become fundamental forms of successful performance in and within firms. Most important, these trends indicate that it is not a matter of segmenting the productive process, but of generating a new systemic integration within and between firms (i.e., to internalize systemically, within and between firms, processes in time and space, in "real time") (Messner 1995; Sayer and Walker 1992).



2. Michael Storper asks, in this sense, "how to create a territorial order in which the possibilities for social and economic development, which we know to exist in learning regions, are not mere islands floating in a sea of lean management and rapid entry and exit?" (Storper 1997, 300).

3. Unfortunately, until 1999 there was not a homogeneous data set for regional GDP for 1970–1996 or later. So far, only INEGI and PEF (PEF 1999) have published GDP at current pesos, which does not allow calculation of growth rates for the period.

4. For a detailed analysis of this issue see Dussel Peters (1998, 1999a).

5. It is not possible so far to establish the exact relationship between imports and production or GDP. Official statistics point out that the local content of electronic industry in Jalisco is around 20 percent. However, these estimations include foreign suppliers that are established in Mexico. In the more than 25 firms visited, imported inputs by value accounted for at least an estimated 95 percent of total production.

6. In some of the firms interviewed, client firms force suppliers to buy imported and certified raw materials that can be found regionally, but without firm and international certification (ISO 9000, among others). In other cases, subcontracting firms concentrate mainly on the operation of equipment and machinery provided and owned by client firms.

7. Institutions such as Productive Chain in Electronics (Cadena Productiva de la Electrónica), which focuses exclusively on projects and programs to deepen linkages in Jalisco's electronics sector, and is being financed jointly by public and private resources, are important in this context. Since 1995, electronics has become one of the selected activities for government support in Jalisco and has been enhanced by several programs (Woo Gómez and Guillermo 1998).

8. This is most relevant for economic thought, since most economics, particularly neoclassical, focus exclusively on prices as the signals for producers and consumers to allocate their respective resources (see Chapter 1).

9. Since the 1980s, an impressive concentration process has taken place in which big TNCs have bought smaller national firms (Hoffmann La Roche bought Genentech, Ciba-Geigy bought Chiron, and Glaxo bought Affymax, among others). However, there is a parallel deep and extensive network of interfirm cooperation: SmithKline Beechman, for example, has around 140 international cooperation agreements in 1995 and Glaxo more than 50 agreements with U.S. universities (UNCTAD 1997).

10. In the health sector according to NAFTA only acquisitions of less than $50,000 are allowed, not including firms of NAFTA members after 2000. Moreover, NAFTA provides a general reserve of acquisitions of $1

billion, out of which $350 million is reserved to auxiliary products for health (BANCOMEXT 1994).

11. In spite of these general trends, it is important to stress that several Mexican firms with between 400 and 500 workers and annual sales of between $20 and $40 million have been successful and have important potential. Firms such as Proquifin and Armstrong have developed their own pharmaceutical products and entered market niches in biotechnology.

12. Author's calculations based on SECOFI (SIEM).

# 8

# Conclusion: A Look to the Future

Recalling the main questions in the introduction of this book, What are the lessons of Mexico's economic and social "success"? Is it that the crisis and some other "mistakes" were the result of a single Machiavellian mind? Is it simply that a second generation of reforms is required? Or is it the failure of neoliberalism, the "mother of all evils" during the 1990s, as some analysts have even suggested? Have there been any theoretical and policy learning processes? What are the implications for Mexico and other nations that have followed a liberalization strategy through the 1980s and 1990s?

This book attempts to answer these questions from different perspectives. It suggests, on the one hand, that the liberalization strategy implemented in Mexico since 1988 has been extremely coherent *within its own conceptual framework* and implemented policies. *On its own terms*, liberalization has been relatively successful.

On the other hand, the conceptual and policy framework of liberalization strategy has significant conceptual and policy flaws. Theoretically, the proponents of liberalization argue, along with export-oriented industrialization proponents, that in a market-friendly context and stable macroeconomic conditions, exports are sufficient for social and economic efficiency, economic growth, and overall development.

However, as discussed in Chapter 1, this reasoning is rather primitive even from a strict neoclassical perspective, since it does not consider many other textbook variables such as employment, wages, trade, and current-account variables, as well as investments and technological development.

Moreover, there is no definitive consensus over the causal rela-

tionship between exports and economic growth. Even if a positive association (or correlation) could be found between exports and economic growth, "for all countries at all times," the causal relationship cannot be considered conclusive in the absence of sophisticated econometric techniques and modeling. The policy implications are extremely relevant because exports could explain economic growth and development or, to the contrary, economic growth and development could be responsible for export growth.

Yet, at least since the 1980s, several schools of thought—from regulation theory to structuralism and newer neoclassical approaches such as the new growth and new trade theories—have reached a basic consensus that goes far beyond export-oriented industrialization and liberalization. From the perspective of these schools of thought, development and economic growth can only be achieved based on territorial endogenous growth conditions, in the context of globalization. There are important differences in the variables that affect endogenous growth conditions—from human capital to gaps in the current account to differences between productivity and real wage growth—but they all stress that export growth per se is not sufficient for economic sustainability. Furthermore, and as proposed by some proponents of regulation theory, an export orientation not embedded economically and socially might lead not only to socially and economically unsustainable conditions, but also to economic, social, and territorial polarization. Thus, economically "efficient" units might be successful in terms of integration through exports to the world market, yet generate unsustainable social and economic conditions in the medium and long term. High-ranking officials at the World Bank (Stiglitz 1998) have even acknowledged some of these criticisms. Sadly enough, these criticisms come after 20 years of implementing the policies, and yet it is still doubtful that any of them will have a real impact on multilateral agencies' policies.

Independently of this rich conceptual discussion, with vast policy implications, most of the governments and government officials in Latin America (as shown in detail in the Mexican case) have not seriously engaged the criticism, and have, so far, preferred to legitimize their economic policies with rather primitive and outdated theories. The learning process of the Mexican government in the past decade, as well as that of multilateral agencies, particularly of the IMF and the World Bank, has been very slow in the best of the cases.

Chapter 1 argued that liberalization strategy has its theoretical roots in export-oriented industrialization, as developed by authors



such as Balassa, Bhagwati, and Anne Krueger, among others. From this perspective, it is both theoretically and historically wrong to argue that policies in Latin America, and particularly in Mexico, are neoliberal. Neoliberalism, particularly based on the work of such authors as August Friedrich von Hayek and Milton Friedman, whose principles were applied under some dictatorships in South America during the 1960 and 1970s, has no direct connection with the liberalization strategies followed in Latin America since the 1980s. No doubt there are theoretical linkages between neoliberalism and liberalization; however, the concepts, interests, historical context, and policy implications of each are very different.

Thus, arguing against neoliberalism is worse than Don Quixote's tilting at windmills. Don Quixote, at least, had a windmill to fight, but there are no neoliberals to be found. Specifically in the case of Mexico, no Mexican government since 1988 would describe itself as neoliberal. Even former president Salinas de Gortari, rather cynically recently presented his own alternatives to neoliberalism. In this context, the differentiation between liberalization and neoliberalism is of critical importance for discussing future alternatives. The critique that mentions the "perfect Latin American antineoliberal idiot" has to be taken seriously, and clearly this stereotype does not only refer to Latin Americans. Without such a critique, discussions of alternatives are difficult or even impossible.

Chapter 2 discussed the origins, arguments, and effects of liberalization in Mexico since 1988. This discussion, in the context of the earlier theoretical debate, is relevant because it follows very strictly liberalization's arguments and their effects.

This text has highlighted the social and political trends and events that have led to liberalization in Mexico. The crisis of the corporatist structures after the 1960s, reflected in the rise of business that was not formally integrated into PRI and the respective governments partly explains the quick rise of liberalization since 1988. Liberalization was further promoted by the decline of labor, particularly after the 1980s when corporatist leaders decided to accept practically all economic, social, and political changes in exchange for being able to hang on to their economic, political, and social status. Moreover, the legacy of presidentialism and authoritarian political structures in PRI and the government, in which PRI maintained a relative and absolute majority in all relevant chambers until 1997, is of utmost importance in understanding the rapid and relatively undiscussed proposal of liberalization and its imposition in 1988, includ-

ing important legal, economic, and institutional changes that have deeply affected the Mexican economy and society. Finally, the rise of export-oriented industrialization and economists in key government posts was also parallel to and significant for understanding the genesis of liberalization. Such issues, as analyzed in Chapters 2 and 6, are meaningful since they explain the relatively stable political and social conditions in Mexico since the 1980s, and particularly since the adoption of liberalization, in spite of the dramatic deterioration of income distribution and a decline in real wages and overall living standards. The ongoing cooperation of corporatist leaders, with important exceptions and oscillations (see Chapter 6), is different from the situation in some other Latin American nations, since more federalist political structures like those in Brazil, for example, have not allowed such a quick imposition of liberalization. Thus, the crisis of corporatist structures and the rise of new political and social actors, including business, is not only relevant for the development and future of liberalization, but also for the search for more democratic political alternatives in the future.

Other issues are significant in this respect. On the one hand, liberalization in Mexico, as in most Latin American countries, arose as a response to the crisis of ISI and resulting political and social unrest. On the other hand, although ISI is considered an "anti-Christ" by most governments that have embraced liberalization based on export-oriented industrialization, it is critical to evaluate the era of the ISI. In spite of multiple economic and political limitations, discussed in Chapter 2, ISI did result in significant employment generation and a tendency to improve the income distribution in Mexico. Added to this, GDP and GDP per capita rose. Import-substituting industrialization generated an industrial structure that would later serve as the basis for liberalization. Sectors such as automobiles, electronics, and maquiladoras, among others, were developed under ISI.

This last point is relevant because it is not possible to argue that the apparent economic success of liberalization in specific branches is "only" a result of the policies since the 1980s, but rather that the process of import-substitution laid the foundation for this new industrialization. Cases such as the automobile industry in Mexico, among others, with multiple efforts, resources, decrees, and instruments, are very persuasive in this sense.

Another important issue highlighted refers to the cause of the crisis of ISI. As stressed in detail in Chapter 2, the private manufacturing sector in particular proved unable to respond to import-substitution expectations. The "peaceful coexistence" between TNCs and the private manufacturing sector resulted in an industrial organization with an increasing trade balance deficit in the private sector that could not be financed by the rest of Mexico's economy during the 1970s, erupting in the crisis of 1982.



Interestingly, and as under ISI, liberalization since 1988 has also supported the private manufacturing sector, based on its export-led growth, expecting this sector to push the rest of the economy. Liberalization has been relatively successful *in its own terms*. Since 1988—and keeping aside the crisis of 1994–1995—macroeconomic stabilization has been impressive. Moreover, Mexico's economy has been dramatically transformed, and a rather small segment of Mexico's economy has been able to integrate itself successfully into global markets. In the Mexican case these branches and firms have performed outstandingly in terms of GDP growth, productivity, and exports, as well as in the attraction of foreign direct investments.

The branches and firms of this small segment, since the 1990s and before NAFTA, have been able to generate a North American industrial organization and network in such sectors as automobiles, auto parts, electronics, telecommunications, maquiladoras, and pharmaceuticals. Based on the firms' strategies, their networks are fully globalized. Globalization in the Mexican case means, however, that Mexico's economy has been increasingly functional for the strategies of U.S. firms to confront Asian competition. Liberalization's priorities, such as macroeconomic stability, import and FDI liberalization, and property ownership laws, have been of critical importance for permitting the establishment of such firms' activities in Mexico. However, and as described in most of the cases, their activities were triggered before NAFTA.

As has been discussed for some industries, sectors, and regions specifically, the integration of a small segment of Mexico's economy into global markets, or more specifically into the U.S. economy, has generated a rather paradoxical result: Mexico has specialized in capital-intensive activities for the rest of Mexico's economy, while the same processes and services represent the lower end of the value-added chain globally. This is specifically the case for such export-led growth activities as the automobile, electronics, and even parts of the maquila sectors.

From this perspective, it is not possible to argue that liberalization in Mexico has been a failure. On the contrary, and this is contin-

ually pointed out by government and multilateral institutions, *in terms of their own concepts, visions, and expectations* liberalization looks promising. International recognition supports this positive attitude toward liberalization. However, added to a strict conceptual and policy review of liberalization, it is at least as important to pay attention to critiques and alternative proposals.

The results of of liberalization strategy on Mexico's society and economy are impressive. Keeping in mind that all the information used in this book is from official sources, several general issues stand out. The most relevant issue refers to the increasing polarization of Mexico's economy and society since the adoption of a liberalization strategy in 1988 at the household, firm, branch, sectoral, and regional levels, including both economic and social indicators. From a strict economic perspective, liberalization has resulted in an economic, social, and regional disintegration in which relatively few firms—around 300 plus maquila activities—have pushed the export orientation of Mexico's economy. These firms represent only 0.12 percent of Mexico's 3.1 million firms in 1998.

Probably the most relevant trend since 1988 refers to the issue that not only manufacturing in general but also the most dynamic branches of manufacturing have tended to deepen net imports since 1988 to allow for GDP and export growth. This topic is important macroeconomically because the trade deficit has to be financed by other sectors of Mexico's economy: specifically since 1988 the trade deficit has been financed through foreign investments, which has resulted in an increasing dependence on rather volatile international financial markets and uncertain strategies of firms.

However, and as examined in detail in Chapters 4, 5, and 7 for manufacturing in general as well as for specific industries, a perverse industrial organization has evolved since 1988 in which the activities of Mexico's most dynamic branches, firms, and regions have increasingly lost value-added linkages with the rest of Mexico's economy. As covered in discussing the electronics and pharmaceuticals industries, and manufacturing in general, initial EOI has given way to an import-oriented industrialization, also as a result of the macroeconomic disincentives.

The latter trends show, surprisingly, similar economic unsustainability patterns for import-substitution and export-oriented industrialization. In both cases, it is the private manufacturing sector that lacks territorial endogenous growth conditions. Nevertheless, the high degree of this economic, social, and regional disintegration is



new since 1988. In the case of industrial organization, detailed sectoral- and branch-level descriptions reflect the "rationality" of the respective firms. While dynamic and export-oriented sectors do not find national suppliers (with some exceptions), potential domestic suppliers have a huge quality and technological gap to overcome. Given overall economic and political uncertainty, macroeconomic disincentives, and uncertainty about the specific interfirm relationships, most domestic firms do not have the options to close this gap to integrate with the existing and emerging global commodity chains and networks. Horizontal industrial policies, based on liberalization's assumptions, are not only conceptually primitive but also far behind the challenges that face most of Mexico's manufacturing firms.

The former issues are of utmost importance for development theory in general, and specifically for economic theory. Economic theory's preponderant approaches, particularly in neoclassical theory, assume that relative and international prices are the main signal for consumers and producers to allocate resources efficiently. The multiple market imperfections analyzed by neoclassical authors, analysis of Mexico's industrial and trade structure, and branch- and firm-level analysis show that prices, in the best of cases, are only one more variable to understand firm-level activity and decisions. Overall infrastructure, proximity to markets and to "factors of production," skilled labor, firm strategies affecting investments and trade (intra- and interindustry), and particularly the quality, just-in-time delivery, and overall certainty of a long-term interfirm relationship are at least as important as price signals and macroeconomic stabilization. Theoretical and policy implications for economic theory and policy are devastating, given the inflation-obsession of liberalization.

Chapter 6 evaluates in detail the social impact of liberalization. Although such general social indicators as life expectancy and infant mortality have improved, others have maintained their levels or worsened since 1988. Income distribution has worsened in relative terms since 1984. New income distribution patterns have particularly benefited the richest deciles of Mexico's economy: their share of total income increased from 49.50 percent of total income in 1984 to 53.70 percent in 1996. Moreover, in absolute terms, in 1996 more people live in extreme poverty and poverty than in 1984 and 1988. Added to this trend, the absolute amount of households under total poverty in 1996 (i.e., the sum of extreme poverty and poverty) is impressive: 73.32 percent of all Mexican households.

At least as important is the fact that employment generation dur-

ing 1988–1996 was dominated by branches with little weight in Mexico's trade, and with lower productivity and real wage levels than the rest of the economy. Thus, significant employment generating branches are not the export-oriented sectors and firms; in other words, the most dynamic firms in terms of exports and GDP generate little employment in terms of Mexico's social requirements. Worsening income distribution, especially for the lowest deciles, is from this perspective linked to low-quality employment generation and the dramatic fall of overall real and minimum wages. From this perspective, the 1990s have been at least as bad, or even worse, than the "lost decade" of the 1980s.

Finally, Chapter 7 elucidates some of the new challenges that have emerged from recent globalization tendencies. Globalization, defined as a historical trend that emerged in the 1980s and included flexible production and global commodity chains, has significantly affected Mexico's society and economy. Not surprisingly, in the context of liberalization, globalization has increased regional polarization in Mexico since 1988. Although these issues will have to be analyzed much more in depth and with better regional information, GDP and GDP per capita indicators reveal regional divergence patterns since 1988. Northern regions, and particularly the traditional economic and political centers of Mexico, especially the Distrito Federal, have substantially regained their weight in Mexico's economy since 1988.

The discussions in Chapter 7 also highlight the increasing challenges that have emerged from globalization for the nation-state. In the context of globalization and the overall opening of economies, globalization generates, simultaneously, local and regional effects. The relationship between the centralist nation-state and local and regional institutions has been increasingly chaotic, overlapping, and, in some cases, openly in conflict. Moreover, it is more difficult, if not impossible, for local, regional, and even national institutions to affect and promote global strategies of firms. The latter relationship will be of critical importance for defining Mexico's social and economic future.

These issues attempt to reanimate the discussion of alternatives to liberalization, the apparent end of history, and the irreversibility and lack of alternatives to globalization. Much of the terms of the discussion are permeated by a lack of conceptual clarity. Moreover, there are no formulas transcending time and space to counter liberalization and globalization.



Nevertheless, Mexico's experience allows for important lessons. Liberalization's priorities can easily be criticized and questioned on their coherence and economic and social relevance. What are the main economic and social variables for a nation such as Mexico? Inflation, fiscal deficit, and the attraction of foreign investment or the generation of sustainable growth conditions, employment, real wage recovery, investment, and an overall social and economic integration to globalization? Is it justifiable—theoretically, economically, and politically—in terms of the fiscal deficit that no additional resources can be found for industrial, social, and educational expenditures, while generously rescuing the financial sector? And, what if, *in terms of liberalization*, "the operation was successful, but the patient died"? Are there any responsible theories, government officials, and other persons at all? Clearly, questioning these priorities in terms of recent social and political developments is at the center of this discussion. By no means can it be assumed that liberalization has the unique, or even coherent, response.

From this perspective, the nation-state will not only have to rethink its political and economic foundations and functions, as a result of globalization and regionalization,[1] but also set new economic and political priorities. Liberalization lacks territorial endogenous growth conditions, thus reflecting unsustainable macroeconomic conditions and increasingly depending on foreign investments and exports. Domestic and external constraints for future macroeconomic policymaking—including the economic and political power of firms and classes that have benefited since 1988, the relationship with the United States particularly through NAFTA, the performance of the U.S. economy, and particularly the economic legacy of liberalization—will be massive, but future policies and alternatives will have to face the new challenges of Mexico's economy since liberalization. The generation of endogenous growth conditions from a macroeconomic perspective will have to reconsider some of the decisions made at least 10 years ago, including the bailout of the banking system, which will have significant costs for Mexico's society for the next decades, as well as the renegotiations of trade and foreign debt agreements. Seen this way, the macroeconomic challenge is to allow an increasing economic domestic activity, particularly generating linkages between export-oriented activities with the rest of the economy, and not excluding and discouraging the integration process in North America and the rest of the world. However, the increasing polarization and exclusion of the majority of Mexico's population,

households, firms, and regions will also significantly shape macroeconomic policymaking in Mexico, as the social and armed uprising in Chiapas has demonstrated since 1994. The macroeconomic and social sustainability of Mexico, in the long run, has to go far beyond the goals of liberalization.

More specifically, the book proposes that alternatives to liberalization have to be considered for Mexico and other Latin American nations. In the future, it is not possible to continue dismissing such variables as employment, real wages, industrial organization, economic integration, and overall value-added linkages for future development. In this respect, any future development strategy has to include increasing or creating local, regional, and national endogenous growth conditions.

All the latter issues will no doubt have costs and an impact on government's expenditures, which is anathema for liberalization. Moreover, and given the massive polarization since 1988, it is difficult, if not impossible, to imagine that any government could implement economic and social policies, given the massive challenges that have emerged since liberalization, including the high concentration of private and export-led dynamic economic activities, an estimated 67.8 million inhabitants living in poverty, and more than 6.5 million persons who have not found a place in the formal job market during 1988–1996. The topics analyzed will not improve in the near future, given the overall general conditions and incentives of the economy and the industrial organization that has prevailed since 1988. On the contrary, if the U.S. economy begins to slow down or even goes into a recession after its longest growth period since World War II, Mexican exports would be severely affected, particularly intrafirm and maquila activities, thus having an impact on the most significant and almost only source of growth for the Mexican economy since liberalization.

However, what are the alternatives to liberalization in Mexico at the beginning of the twenty-first century? First, a serious theoretical, economic, social, and political discussion of liberalization has to take place. Given the enormous challenges that have emerged in Mexico as a result of liberalization, different single policies can do little under these circumstances. Thus, even if the government would be willing to significantly increase resources for industrial and social policy, for example, little could be done if liberalization continues unchanged, with relatively high real interest rates, continuing a tendency to overvalue the real exchange rate, incentives to favor



imports over exports, nonintegration of an important part of EAP into the formal job market, and falling real wages. The pillars of liberalization have to be reconsidered. Any such discussion will face important opposition because certain economic and political sectors have benefited substantially from liberalization and will be strongly against any change.[2]

This latter issue brings us back to Mexico's current political structures. Aside from the existing presidentialism and vertical political decisionmaking process in Mexico, one of the most relevant tasks for Mexico's society and economy is to maintain and generate long-term institutions at the local, regional, and national level. Given the legacy of presidentialism and authoritarian political structures of the past decades that controlled civil society (Bizberg 1990), there is a complete lack of representative and functioning institutions at the meso-level.[3] Thus, Mexico's society and economy face an initial challenge that goes far beyond any economic issue: the creation of government, private, and nongovernment institutions that represent Mexico's society at all levels. In the context of a lean but also "anemic" state, and given the legacy of authoritarian and vertical political and social structures, few parties, unions, business chambers, social movements, or nongovernment institutions have been able to increase representativity and accountability in assuming a more active role in economic, social, and political development. This issue is of utmost relevance because these institutions will be the ones to support and implement future development alternatives.

In general, a future development strategy in Mexico will have to focus on generating territorial endogenous growth conditions to reverse the overall economic and social polarization that results in economic and social unsustainability. Given the impact of liberalization since 1988, a new development strategy will have to center on the economic and social integration of households, firms, sectors, branches, and regions in Mexico—that is, linking the export-led growth firms, branches, sectors, and regions with the majority of Mexico's territory. Such a vision does not represent a magic formula for development and success, but it is absolutely necessary for any kind of policy implementation. Added to the existing and increasing local and regional social and economic disparities, the specificity of the automobile, electronics, and pharmaceutical industries in Aguascalientes, Jalisco, and Mexico City are too deep to allow for one national industrial policy, for example. The same applies, however, to such issues as education, poverty, and technological develop-

ment. Moreover, according to the current theoretical consensus reached among several different schools of thought, as well as to policy experiences internationally, a local and regional vision of development is a necessary but not sufficient condition for generating long-term and sustainable social and economic development conditions. Finally, in this line of thought, it is important that localities and regions propose and develop their own strategies: a territorial vision and perspective of development does not necessarily correspond with a "decentralization" process in which the economic and political center allocates resources to regions according to the center's economic and political interests. The proposed territorial decisionmaking process is embedded in economy and society, and has vast implications for the political structures, particularly in a country such as Mexico with its centralist and authoritarian structures.

Alternative economic development policies, and specifically those for Mexico, will have to emphasize endogenous growth conditions and "rediscover" the domestic market, while not excluding the performance of export-led growth activities. The basis for such alternatives implies that neither inflation nor the attraction of foreign investment can continue as the main pillars of a development strategy, neither from a macroeconomic nor a microeconomic perspective. Moreover, some of the instruments and mechanisms proposed will definitively have costs and impact on the fiscal deficit. Most important, it is not a matter of either returning to ISI or maintaining liberalization. It is historically not possible to return to ISI, but neither is it socially or economically sustainable to continue with liberalization. New forms to counter polarization and the specific challenges of Mexico's society and economy will have to be found and developed.

A final general issue refers to the need to implement long-term institutions and mechanisms that include a variety of elements such as education, technological development, administrative support, qualification of labor and business, and, particularly significant for the Mexican case, financial instruments and credits. The latter are of utmost importance since, at least in the medium term, it is not expected that Mexico's banking and financial institutions will be able to channel credits sufficiently and efficiently to the economy, particularly to the micro, small, and medium firms oriented toward the domestic market. As already discussed in detail, the creation of new institutions and/or support of already existing ones carry costs that, at least initially, will have to be financed with public and/or private funds. The political discussion and the consensus-seeking



process on the priorities of a development strategy—either spending on the socialization of losses from the financial and banking sector or on micro, small, and medium enterprises, social policy, and employment generation—is essential for such developing vision of a new development strategy.

The recovery of the domestic market requires the development of instruments and policies oriented to practically all firms, excluding the approximately 3,500 big and export-oriented firms in Mexico. Several issues are relevant in this respect. For instance, Mexico needs to create and strengthen value-added commodity chains, particularly those incorporating the micro, small, and medium firms, which have been the main losers to liberalization. Institutions specifically dedicated to this segment, including productivity, technological, and administrative support in their activities, are required. The development of local and regional agencies, private and public, preponderantly dedicated to the support and creation of subcontracting mechanisms is one of the keys for endogeneity in the long run.

These latter priorities are the basis for positive effects on GDP growth and learning processes, particularly at the local and regional level. Increasing value-added linkages and subcontracting forms with firms established in Mexico can have a tremendous positive impact on localities and regions as well as on macroeconomics. Just doubling the domestic value-added in activities such as maquila (with around 2 percent of all Mexican value-added on average) would have important employment and learning effects, for example. However, most of the export-oriented firms have a low and decreasing domestic value-added; so, strengthening value-added linkages and subcontracting forms go far beyond the maquila sector. The analyses of the electronics industry in Jalisco and the pharmaceutical industry in Mexico City reflect, for example, an enormous learning and employment potential that has not been used or has even been lost during the last decade. Thus, the recovery of the domestic economy could be the basis for enormous employment generation, the rise of real wages, and the integration of Mexico's economy with higher value-added global commodity chains. These last issues, as discussed in detail, run strictly against liberalization's EOI, overall horizontal policies, and a lean and anemic state.

Even if these alternatives would be implemented coherently, with continual evaluations and strict accountability mechanisms, Mexico's social and regional polarization will not be solved in the medium run, given the dimensions of challenges in regional dispari-

ties, income distribution, and employment polarization and gaps. A local and regional policy to promote micro, small, and medium firms can be significant. However, important fiscal resources will have to be channeled increasingly to infrastructure, education, and the fight against widespread extreme poverty and poverty. As the Mexican case shows, extreme poverty and poverty are not "individual" problems that can be solved by a "focus policy"; they affect the majority of Mexico's population. Liberalization has polarized and systematically excluded the vast majority of Mexico's population from the few benefits of the strategy and of globalization, all of which brings us back to the issue of completely rethinking the priorities of the current development strategy. More participative local and regional institutions and movements will play a key role in demanding resources and mechanisms that are relevant for their communities and territories. This also runs against the current centralist and technocratic decisionmaking process in social policy, as exemplified by PROGRESA.

It is not difficult to imagine that further economic and social polarization will be accompanied by regional polarization. Are there any economic, social, political, or even ethical limits? After the disastrous effects of the first generation of reforms, will a second generation reverse them or, more probably, deepen them? How much further can social and labor market "flexibilization" go, as proposed by multilateral agencies? How much wider can the gaps between Mexico's north and south stretch? It is no surprise that social turmoil and even guerrilla movements have arisen during the 1990s in the poorest regions of Mexico.

Otherwise, let us imagine a Mexico with increasing GDP and exports, segments of Mexico's economy linked to global commodity chains with state-of-the-art factories, stable inflation rates, and huge foreign investments, but with little or no impact on the majority of Mexico's firms and regions, with falling real wages and employment, and a worsening income distribution. Such an economic, social and political scenario, the continuation of polarization, should worry not only Mexico but neighboring nations such as the United States.

## Notes

1. This particular discussion goes beyond the scope of the book. Nevertheless, both the experiences of the increasing regionalization of the European Union in decisionmaking processes at social, political, and economic levels and the current economic, political, and economic disintegration of the ex-Soviet Union are different extremes of facing globalization.



2. One of many striking examples of this massive and doctrinaire view against any social and economic change is the, so far preliminary, rejection by government officials of the proposed Law to Develop the Micro, Small and Medium Industries, unveiled on October 12, 1999. The main business chamber in Mexico, Confederación de Cámaras Industriales de la República Mexicana (National Confederation of Microindustries of the Republic of Mexico) proposed this text after more than a year of consensus-seeking negotiations among businessmen and leaders, as well as with high-level and experienced researchers and former government officials. Nevertheless, and in spite of the general consensus among Mexico's society, parties, and business in favor of this segment of firms, SECOFI's secretary rejected the law outright as a proposal to return to the old and inefficient ISI-style industrial policy—without any further argument. Under these circumstances, and given the existing vertical and authoritarian political structures, the case has apparently been dismissed by the federal executive power, without any further discussion. At the end of 1999, it is not possible to foresee whether this law will even be presented to the relevant legislative institutions.

3. For authors such as Messner (1995), mid-level institutions are those local and regional institutions intermediate between the macro and micro levels (i.e., between national and firm- and household-level institutions). These public or private institutions allow for a communications and consensus-seeking process among local and regional actors.

# Abbreviations and Acronyms

| | |
|---|---|
| AAGR | Annual average growth rate |
| ALTEX | Empresas Altamente Exportadoras (Highly Exporting Firms) |
| BANCOMEXT | Banco Nacional de Comercio Exterior (National Bank for Foreign Trade) |
| BM | Banco de México |
| CANACINTRA | Cámara Nacional de la Industria de la Transformación (National Chamber of Manufacturing Industries) |
| CANIETI | Cámara Nacional de la Industria Electrónica, Telecomunicaciones e Informática (National Chamber of Electronics and Telecommunication Industry) |
| CCPNS | Consejo Consultivo del Programa Nacional de Solidaridad (Consulting Council of National Solidarity Program |
| CEPAL | Comisión Económica para América Latina y el Caribe (Economic Commission for Latin America and the Caribbean) |
| CFE | Comisión Federal de Electricidad (Federal Comission of Electricity) |
| CMHN | Consejo Mexicano de Hombres de Negocios (Mexican Council of Business Executives) |
| CNIE | Comisión Nacional de Inversión Extranjera (National Commission on Foreign Investments) |
| COFETEL | Comisión Federal de Telecomunicaciones (Federal Commission of Telecommunications) |

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|---|---|
| COMPITE | Comité Nacional de Productividad e Innovación Tecnológica (National Committee of Productivity and Technological Innovation) |
| CONCAMIN | Confederación de Cámaras Industriales de la República Mexicana (National Confederation of Microindustries of the Republic of Mexico) |
| COPARMEX | Confederación Patronal de la República Mexicana (Employer's Confederation of the Republic of Mexico). |
| CRECE | Centros Regionales para la Competitividad Empresarial (Regional Centers for Business Competitiveness) |
| CROC | Confederación Revolucionaria de Obreros y Campesinos (Revolutionary Confederation of Workers and Peasants) |
| CROM | Confederación Regional de Obreros Mexicanos (Regional Confederation of Mexican Workers) |
| CTM | Confederación de Trabajadores de México (Confederation of Mexican Workers) |
| EAP | Economically active population |
| EOI | Export-oriented industrialization |
| EZLN | Ejército Zapatista de Liberación Nacional (Zapatista National Liberation Army) |
| FDI | Foreign direct investment |
| FDN | Frente Democrático Nacional (National Democratic Front) |
| FESEBS | Federación de Sindicatos de Empresas de Bienes y Servicios (Federation of Unions of Goods and Services Companies) |
| FOCOMI | Fideicomiso para la Consolidación de la Microempresa en el Distrito Federal (Trust for the Consolidation of Microenterprises in Mexico City) |
| GATT | General Agreement on Tariffs and Trade |
| GDF | Gobierno del Distrito Federal (Government of Mexico City) |
| GDP | Gross domestic product |
| GFFC | Gross formation of fixed capital |
| IITC | Intraindustry trade coefficient |
| IMF | International Monetary Fund |



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| IMSS | Instituto Mexicano del Seguro Social (Mexican Institute of Social Security) |
| INEGI | Instituto Nacional de Estadística, Geografía e Informática (National Institute for Statistics, Geography, and Information Systems) |
| ISAN | Impuesto Sobre Autos Nuevos (Tax on New Cars) |
| ISI | Import-substituting industrialization |
| FTL | Ley Federal de Telecomunicaciones (Federal Telecommunications Law) |
| MSMFs | Micro, small, and medium firms |
| MW | Minimun wages |
| NAFIN | Nacional Financiera |
| NAFTA | North American Free Trade Agreement |
| NICs | Newly industrializing countries |
| OECD | Organization for Economic Cooperation and Development |
| OEM | Original equipment manufacturers |
| PAN | Partido Acción Nacional (National Action Party) |
| PEF | Poder Ejecutivo Federal (Executive Federal Power) |
| PEMEX | Petróleos Mexicanos (Mexican Petroleum [Company]) |
| PITEX | Programa de Importación Temporal para Producir Artículos de Exportación (Program for Temporary Imports to Produce Export Products) |
| PRD | Partido de la Revolución Democrática (Party of the Democratic Revolution) |
| PRI | Partido Revolucionario Institucional (Institutional Revolutionary Party) |
| PRM | Partido de la Revolución Mexicana (Party of the Mexican Revolution) |
| PROGRESA | Programa de Educación, Salud y Alimentación (Program for Education, Health and Nourishment) |
| PRONASOL | Programa Nacional de Solidaridad (National Solidarity Program) |
| PSE | Pacto de Solidaridad Económica (Pact of Economic Solidarity) |
| R&D | Research and Development |

| | |
|---|---|
| SECOFI | Secretaria de Comercio y Fomento Industrial (Ministry of Trade and Industrial Development) |
| SHCP | Secretaría de Hacienda y Crédito Público (Ministry of Finance and Public Credit) |
| SPP | Secretaría de Programación y Presupuesto (Ministry of Planning and Budget) |
| SIEM | Sistema de Información Empresarial Mexicano (Mexican Business Information System) |
| STRM | Sindicato de Telefonistas de la República Mexicana (Union of Telephone Workers of the Mexican Republic) |
| TELMEX | Teléfonos de México (Mexican Telephone [Company]) |
| TFP | Total factor productivity |
| TNC | Transnational corporation |
| UNCTAD | United Nations Conference on Trade and Development |
| USITC | United States International Trade Commission |
| WTO | World Trade Organization |

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# Index

# About the Book

Since the end of the 1980s, structural changes have profoundly altered Mexico's economy and society. But has the outcome been a positive one?

Dussel Peters argues that liberalization strategy in Mexico has been successful in achieving its stated, short-term aims. But in looking at fundamental issues of employment and income distribution, foreign trade, and industrial specialization—regional and overall—he demonstrates that the strategy has caused a polarization of both economy and society. The results, though perhaps not immediately apparent at the macrolevel, are creating unsustainable socioeconomic conditions.

This scenario, Dussel Peters contends, is not unique to Mexico, but is relevant for other nations following similar development paths. He concludes with a discussion of alternative strategies for economic development.

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