



Industrial Development in Mexico:
Problems, Policy Issues and Perspectives.

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Abstract

This study undertakes an evaluation of the Mexican Government's industrial development strategies from a historical perspective, focusing on the relationship between policy measures and the pattern of industrial development in the post-World War II period. It also attempts to identify constraints on the possibilities of industrial development for Mexico. The paper concludes with some suggestions for future directions of industrial development for Mexico.

Resumen

Este trabajo busca hacer una evaluación de las estrategias de desarrollo industrial del Gobierno Mexicano, desde una perspectiva histórica. Para ello, la atención será focalizada sobre las relaciones entre las medidas políticas y el modelo de desarrollo industrial del período posterior a la Segunda Guerra Mundial. Además, el trabajo intenta identificar las dificultades y posibilidades para el desarrollo industrial mexicano. El texto finaliza con la presentación de algunas sugerencias sobre las proyecciones futuras del desarrollo industrial de México.

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1. Introduction.

Mexico is currently faced with the most serious economic and financial crisis in its modern history. The current crisis, however, has several historical parallels, and as such, calls for stabilization policy measures. The solution of the current problems is evidently most urgent. At the same time, there is now a real need to evaluate long-term development strategies for establishing a viable industrial structure for Mexico.

This paper is about the longer-term industrial development strategies for Mexico. A careful evaluation of the government's industrial development strategies is undertaken from a historical perspective, so that the failures and successes of a policy strategy can be identified for future lessons. Although the focus is on the industrial sector, the analysis will take into account, as it must, the linkages between the macroeconomic and sectoral behavior. In particular, special attention will be given to the relationships between sectoral and trade policies in Mexico.

The paper begins with a discussion of the origins of Mexico's industry, and its historical role in overall

development. It proceeds to examine the current situation, to identify constraints on industrial development as well as possibilities of further development. The paper also suggests recommendations for future directions of industrial development for Mexico.

2. Industrialization and Economic Development.

Compared with other developing countries, Mexico already has a relatively well developed industrial structure, and at this level of development, it is hardly necessary to attempt to rationalize Mexico's efforts for industrialization.¹ The historically important roles played by the industrial sector in the overall development of advanced, industrialized countries are well-known. One simply cannot find a developed economy in which the proportion of the labor force employed in industry is insignificant. Even in the country with the most advanced agricultural sector in the world (the U.S), less than four percent of the labor force is engaged in agricultural activities.

This need not be taken to imply that agriculture or other primary-sector activities are relegated to a secondary role in development planning. Expansion of agricultural production and

¹ For a comparative performance analysis of semi-industrialized countries, see B. Balassa, et. al., Development Strategies in Semi-industrial Economies, (Baltimore; John Hopkins Press for the World Bank, 1982). pp.38-62.

productivity requires the use of industrial inputs in the form of fertilizers, machinery, irrigation and electrification. On the other hand, increased agricultural production permits a more rapid industrial growth through the provision of primary inputs and through its contribution to the balance of payments. In sum, a healthy expansion of the industrial sector seems to require a balanced growth in both sectors.

Nonetheless, while the production in agricultural and extractive activities is generally constrained by natural resource endowments, the development of the industrial sector is less restrained by these factors. Its growth essentially depends on the expansion of demand in the economy. The industrial sector, in addition to creating its own demand for intermediate and capital goods, also generates demands originating in sectors outside industry in the growth process.

By contrast, for example, the service sector is more vulnerable to the activities in the rest of the economy, and does not in general provide an autonomous force to stimulate other sectors. Manufacturing activities thus constitute a dynamic force in stimulating economic growth. They alter the technical foundation of the economy and increase the use of machinery. Thus, they not only provide necessary capital goods inputs to raise productivity and to generate employment and income in these and other sectors, but also accelerate their own growth as well as growth in other sectors. In particular, expansion of industrial activities leads to improved productivity in

agriculture through the industrial inputs it provides and through the absorption of underemployed agricultural labor.² The productivity in the tertiary sector is similarly affected through increased demands for services and through the reduction of labor which otherwise is likely to be retained in that sector. Also, the expansion of industrial employment enhances the purchasing power of the lower-income groups, which is likely to stimulate increased demands for low-income oriented basic goods.

As compared with industry, agriculture and service industries generally experience fewer economies of scale as markets expand in size.³ There is a reinforcing relationship between industry and market size. Manufacturing industries are generally affected by scale of economies that accompanies market size. Some industries continue to improve their efficiencies with larger scale.

Given the important role of industry in the overall development process, it seems that Mexico with an industrial base servicing domestic-market industries must continue to strive for a rapid industrialization if it desires to expand opportunities for employment and for the production of basic necessities for the masses. Also, manufactures exports are more apt to be successful for a country such as Mexico.⁴

² For a discussion of the dynamic attributes of industry in the economic growth process, see A. Hirschman, The Strategy of Economic Development, (New Haven; Yale University Press, 1958).

³ For an empirical study on the efficiency saving related to industrial firm size, see Yotopoulos P.A. & J.B. Nugent, Economics of Development: Empirical Investigations, (New York; Harper & Row, 1976). pp. 149-153.

⁴ See J.N. Bhagwati and T.N. Srinivasan, "Trade Policy and

Of course, economic growth is not synonymous with economic development. However, one must not presume that it is possible to obtain an equitable development without growth in the economy. Precisely because this objective cannot be automatically attained in a market-oriented economy, the state needs to intervene to favor less privileged groups by means of fiscal and other economic policies. The capacity of the state to carry out this objective depends on the growth of output and of the economy. It is simply not feasible to redistribute income under conditions of economic stagnation.

3. Industrial Performance from a Historical Perspective.

The performance of the industrial sector in Mexico in the postwar period has been in general impressive. As a consequence, Mexico is now the tenth largest country in the world in terms of gross domestic product originating in manufacturing. The industrial sector accounts for nearly a quarter of the gross domestic product, and employs about 20 percent of the country's labor force. In terms of the dollar value of output,⁵ the size of this sector is far greater than that in such developed

Development," in (R. Dornbush & J. Frenkel ed.,) International Economic Policy, (Baltimore; Johns Hopkins Press, 1979).

⁵ See United Nations, Growth of World Industry, various issues.

countries as the Netherlands, Switzerland, Belgium, Denmark or Norway. In absolute terms, it is more than five times that of Israel, Colombia and Chile, three times that of South Korea and Taiwan, and comparable with that of India. The significant fact in these comparisons is that industrialization in Mexico has been achieved during the last three decades.

Mexico pursued the strategy of import substitution industrialization in the postwar decades.⁶ The basic framework of the protective system was in many ways strengthened from the early 1950s through the mid-1970s.⁷ Criticisms against such a strategy aside, achievements in industrial development must be given due credit. Among the more significant achievements were:

(1) During 1950-80, the share of non-oil industrial activities in national income increased from 19 to 25 percent, and the proportion of labor employed in industry jumped from 12 to 20 percent, with labor productivity growing at 3 percent and employment at 4 percent.

(2) During the decades of the 1960s and 1970s, gross industrial output in real terms increased at an annual average of 8.3 percent and 7 percent, respectively (see Table 1).

(3) Imports of manufactures as a proportion of the gross domestic product declined from 10.5 percent in 1956 to 5.5 percent in 1973, although in recent years they rose to about 8 percent.

⁶ In 1970 effective protection in Mexican industry averaged 60 % with a significant rank correlation between the importance of import-substitution in an industry and the level of protection. See Ten Kaate, A., et.al., Protection and Economic Development in Mexico, (Mexico City, 1981).

⁷ For instance, the value of controlled imports rose to 72 % of total imports in 1974, from the prevailing level of 6 % in the 1960s.

(4) During the 1960s, Mexico's exports of manufactures grew at an annual rate of 8.5 percent (Table 1). In particular, from 1965 to 1973 they increased at an annual rate of 14 percent. This was slightly above the average performance of all developed countries, and was 4 percent higher than the average growth rate in world manufactured goods trade. Mexico's manufactured exports grew at an annual rate of 7 percent, which again was far above the world average .

TABLE 1
INDUSTRIAL GROWTH IN MEXICO, 1950 - 1980 (1).

Average Annual Rates of Growth (%)

	GDP	Gross manu- factured output	Imports of manufactures	Exports of manufactures
1950-1960	5.6	6.3	6.3	4.9
1960-1970	7.2	8.3	4.6	8.5
1970-1980	6.6	7.0	10.2	4.8
1970-1974	6.8	7.4	10.6	8.7
1974-1977	4.4	4.1	-7.2	0.6
1977-1980	8.6	8.8	32.2	9.9

(1) Based on data in constant prices.

Sources: National accounts data published by Secretario de Programacion y Presupuesto; and GDP data taken from World Statistical Tables (IBRD).

One must note in this connection the important contribution to export expansion made by Mexico's border industries which engage in processing imported materials for reexport, mainly to

As domestic demand expanded,¹¹ investment opportunities developed, followed by improved industrial organization, realization of the scale economies, and incorporation of new technologies in production, all of which further led to increased productivity. This improved productivity with the resulting narrowing of the differences in internal and external prices, promoted further import substitution industrialization as well as expansion of exports. Perhaps more important, this may have directly improved Mexico's industrial competitiveness in the world market.

4. Trade liberalization and the Recent Setback.

Beginning in the early 70s, Mexico started to experience balance-of-payments difficulties, which eventually led to the devaluation in 1976. However, it must not be presupposed that the worsened balance-of-payments situation was entirely caused by import-substitution industrialization policies. Rather, the

¹¹ In recent years, some industries, such as textiles and clothing, have been identified as the cases in which the lack of demand acted as a constraint on domestic production. However, there had recently developed a substantial import competition in demands for these products, which can be attributed to the latest import liberalization measures.

TABLE 2
SOURCES OF INDUSTRIAL GROWTH IN MEXICO, 1950-1980.

Sources of growth (1)

	Domestic demand	Export expansion	Import substitution
1950-1960	99.4	2.1	-1.5
1960-1970	89.0	2.6	8.4
1970-1980	104.0	3.3	-7.3

(1) The percentage of the increase in output related to the components; see Hollis B. Chenery, "Patterns of Industrial Growth," American Economic Review, vol.50, pp. 624-654.

Source: NAFINSA, Mexico, Future Directions of Industrial Strategy, Mexico City, 1983 (mimeo). p.35.

secular deterioration in the nonoil external payments was due in part to a combination of various forces: (1) A progressive stagnation of the agricultural sector with a gradual diminution of surpluses for export; (2) the worsening in the balance of payments in services; and (3) the increasing debt burden to the rest of the world. Thus, even before the process of import substitution could advance to the next stage, these forces virtually dimmed the prospects for a sustained industrial growth.

While the decelerated pace of industrialization in the first half of 70s was largely caused by balance-of-payments difficulties, the reasons for a slow-down in industrial growth in

the United States.⁸ Mexico's exports from border industries rose from practically nothing in the mid-1960s to US\$ 800 million in 1980.⁹ About 50 percent of this can be attributable to value added in Mexico. In gross terms, border-industry exports amounted to some two-thirds of Mexico's total manufactured exports in the same year.¹⁰

Investigation into structural changes in Mexican industry points to the important role played by a growing domestic demand in the development of the industrial sector. According to an available estimate (see Table 2), the percentage of the increase in industrial output related to the growth in domestic demand was about 90 percent during the 1960s, with the remainder explained by export expansion and advance of import-substitution. The share of the contribution by increased domestic demand was close to, and exceeded, 100 percent for the decade of the 1950s and the 1970s, respectively. Sustained growth in aggregate domestic demand contributed to reductions in the share of imports in the gross value output, and at the same time, to increases in the proportion of manufactured output exported.

⁸ Duty-free treatment was accorded beginning in the mid-1960s and a tax rebate scheme on manufactured exports (11 percent) was introduced later in 1973.

⁹ These "maquila" industry activities are recorded in Mexican balance-of-payments data as "net income from transformation services."

¹⁰ An important issue concerning the development of border industries is the problem of effectively integrating the maquila plants with the rest of the economy. Small-scale local industries have been shown particularly affected by maquila plants. Hence, despite increases in local value added made possible by border industries, expansion of this trade entails complex issues to be resolved.

the second half were quite distinct, being in good measure related to abrupt changes in economic policy. Although Mexico's industrial strategy over the past few decades has led to notable achievements in industrial development, it has certain weaknesses which became manifest during the early 70s and reappeared in a more acute form during the recent crisis. It is important to properly account for these weaknesses.

Returning to the more recent episode, the sudden discovery of large oil reserves opened the possibility of quickly overcoming the balance-of-payments constraint and of undertaking expansionary economic policy. The policy framework during the period of 1976-81 was composed of two main elements; the first relating to the macroeconomic strategy and the second specific to the industrial sector. The macroeconomic strategy called for an expansionary government spending and trade liberalization. While maintaining a relatively stable nominal exchange rate regime, the government resorted to subsidized prices of energy and other basic needs goods to moderate domestic inflationary pressures. Sector-oriented policies included an incentive system for promoting private investments as well as public-sector investments in "strategic" branches of the industrial sector.

A broad spectrum of industrial branches quickly benefitted from these sectoral policy measures. From 1975 to 1981, the production of crude oil increased 3.2 times; natural and refined oil products 1.9 times; basic petrochemicals 2.5 times; fertilizers 2.3 times; steel and cement 1.5 times; automobiles 2

times; and electricity 1.7 times. Once the depressive economic conditions that extended until 1977 were overcome, the real gross domestic product grew at an average rate of 8.5 percent, while industrial output grew at 9.6 percent between 1978 and 1982. The average annual rate of employment absorption in manufacturing was 5.4 percent, and real investment in industry increased by nearly 18 percent per annum. Private-sector investments, largely induced by a new input subsidy scheme, were particularly marked in industries producing intermediate goods which are intensive in the use of energy as well as capital goods. It is worth pointing out that in spite of the liberalization measures, effective protection levels, reflecting the effects of subsidized inputs to industry, still remained sufficiently high to provide incentives for industrial expansion.¹²

The manufacturing sector, however, after the initial expansion in 1978 and 1979 at a rate greater than 10 percent per annum, slowed down to a growth rate barely exceeding 7 percent in the following two years. This decelerated pace of growth was accompanied by increases in imports of industrial origin and attendant balance-of-payments difficulties.¹³ In real terms, imports rose almost three times between 1977 and 1981. This

¹² According to Nacional Financiera data, in 1979 an average effective subsidy rate in intermediate goods industry in Mexico was about 25 percent, and 79 percent in a few capital goods industries, in contrast to a negative rate in the food-processing industry.

¹³ A prevailing view has been that an 'overheated Mexican economy' stemming from the expansionist government policy was the fundamental cause of balance-of-payments problems. A counter-argument is given in the discussion that follows.

contrasts with the earlier 75 percent increase registered between 1960 and 1978. It is remarkable to note that imports of consumer goods experienced the largest relative increase. Their share in total imports jumped from 6 percent in 1977 to 12 percent in 1981.¹⁴

An expansion of this magnitude quickly turned out to be untenable even with a massive export of crude oil. Finally, precipitated by destabilizing speculation, the financial crisis stemming from external payments problems culminated in 1982. At the same time, the influx of imports began to adversely affect growth of domestic industries.

In 1976 no one would have suspected that five years later (in 1981) as a result of the doubling of the world oil price, Mexico would be able to export 14 billion dollars worth of crude oil, an amount equal to four times the current account deficit in that year. Imports, however, continued to exceed any increases in oil revenue, and consequently substantial trade deficits persisted throughout these five years. For instance, in 1981 total imports reached 24 billion dollars with a trade deficit of close to 12 billion dollars.

Various reasons have been advanced for this explosive growth in imports. First of all, there is the hypothesis that as a result of expansionary demand management,¹⁵ bottlenecks in

¹⁴ Imports of machinery for manufacturing activities also experienced increases with their share in total rising from 49.4 percent in 1977 to 52.1 percent in 1981.

¹⁵ For instance, the public sector deficit rose from 5.7 % of GDP in 1977 to 14.8 % in 1981.

certain sectors, characterized by the excess demand in relation to the installed capacity, quickly developed. But this still does not explain why there were substantial increases in income elasticities of import demand in a large number of industries that were not particularly constrained by capacity limits.

Above all, the period of 1977-81 witnessed substantial investments in industries from both public and private sectors.¹⁶ This should have reduced demand pressures on capacity utilization with the resulting reduction in elasticities of import demand. As is well-known, the contrary happened: Values of import demand elasticities increased greatly rather than diminished. There is also evidence that rates of capacity utilization in industry decreased during this period. This seems to contradict the hypothesis of the bottlenecks as a factor primarily responsible for the explosive growth in imports.¹⁷

An alternative explanation seeks the answer in the deterioration of the competitive position of Mexican industry in the world market, caused largely by the accelerated inflationary trend seen during the period. Despite the exchange rate policy which permitted the peso to slowly appreciate in real terms following the initial devaluation in 1976, the average unit cost of Mexico's industries relative to its trading partners actually

¹⁶ Note that foreign investment still represents only 4 percent of total investment in plant and equipment in Mexico, and is not significant.

¹⁷ For empirical evidence, see Eatwell, J., & A. Singh, "Se Encuentra 'Sobrecalentada' la Economía Mexicana? - Un Análisis de los Problemas de Política Económica a Corto y Mediano Plazo y Post Scriptum," Economía Mexicana No.3, 1981, 253-278.

remained lower at least until well into the late 1970s. Thus, it does not seem all evident that the overvalued peso seriously affected the competitive position of Mexican industry.

Thus, the sudden growth in imports during the period can be seen as largely stemming from the abrupt shift in economic policy from protection to liberalization. Although an alternative hypothesis relating to expansionary domestic demand cannot be ruled out, in view of the foregoing discussion the question still remains whether the observed increase in import elasticity did result from the bottlenecks in the economy.

The Mexican government turned to export promotion when it encountered increasing difficulties in the balance of payments. As a means to promote an export-conscious industrial sector, it resorted to various forms of subsidies to exporters, precluding only the use of imported inputs in export production whenever domestic substitutes were available. Thus, at the beginning of the 1970s, manufactured goods exports constituted only 4 percent of the gross value of industrial output with processed foodstuffs containing only about one third of export sales. Exports of industrial goods rose to 5.5 percent of the value of industrial output by 1978.

This effort for export promotion was soon accompanied by policy measures that permitted increased imports. In particular, the dismantling of quantitative controls on imports proceeded rapidly during this period and embraced equally consumption, intermediate and capital goods alike. Even for

industries subjected to import controls, import licenses were issued automatically and indiscriminately. Quantitative controls were eventually to be replaced by tariffs set at the rates sufficient to provide an equivalent degree of protection. This measure, however, was never put to implementation. The average level of tariff, net of subsidies, actually declined over the period.

By mid-1981, the structure and level of industrial protection were practically no different from those prevailing in the member states of GATT, the agreement Mexico has repeatedly boycotted. Moreover, unlike many of those countries, Mexico lacked indirect, subtle mechanisms of protection which would include such measures as anti-dumping legislation or other industrial or sanitary regulations.

5. Policy Issues on Liberalization v. Protection.

Although the performance of manufacturing industry under a protective regime in Mexico has in general been satisfactory, the protective policy has been criticized for promoting inefficiency in industry. Armed with the theory of comparative advantage, critics have often influenced policy-decisions, and in a large measure were responsible for the progressive trade liberalization measures instituted since 1976. The theoretical foundation of the critics is the orthodox proposition that free trade leads to an optimal use of society's resources.

In this connection, a more important issue at stake would be the dynamic effects of protection, which unfortunately are difficult to gauge. The orthodox theory tells us that given the limited size of domestic markets in developing countries, protection could create monopolistic and oligopolistic market structures that may lead to inefficiencies in the allocation of resources among industries as well as to inefficiencies resulting from the loss of incentives for efficient operations.

Apart from the theoretical debates, there is no empirical evidence to suggest that the efficiency cost of protection would be particularly exorbitant for Mexico. The studies show that for developing countries, on average it amounted to less than 3 percent of the gross domestic product.¹⁸ The cost of protection is likely to be much lower in a country such as Mexico which has relatively a large domestic market. On the other hand, there has been a recent concern that a sudden dismantling of the protective mechanism in Mexico would exert adverse impacts on investment in the industrial sector.¹⁹

Even though competition in the international market can eliminate many inefficient firms, there is little certainty that investments channelled into specific branches of industries will

¹⁸ See J. Bergsman, "Commercial Policy, Allocative Efficiency and X-Efficiency," Quarterly Journal of Economics, vol. 88, 1974, pp. 409-33; and World Bank, Mexico, Manufacturing Sector - Situation, Prospects and Policies, Washington, D.C., 1979.

¹⁹ That is, a large number of foreign firms have invested in Mexico, seeking the benefits of tax shelter under protection. They would be unable to penetrate the market in other way. With the removal of tariffs, many foreign firms would be inclined to divert investments from Mexico.

be the ones that turn out dynamically viable and efficient. Those industries judged to be efficient in the statical sense of comparative advantage may not necessarily be the ones in which productivities and technical progress will advance most rapidly, nor will they become industries with large demand elasticities. In any case, as pointed out by many Mexican economists, if a greater degree of competition is necessary to promote industrial efficiency, this can be done through encouraging competition among firms operating within the context of the domestic market.

Other costs of protecting capital-intensive industries, suggested in the traditional theory, include adverse impacts on economic growth, in particular, on the growth in total productivity, which is effected through the transfer of labor from high-productivity to low-productivity industry. Although a few empirical studies confirmed the presence of a positive correlation between output growth and export activities,²⁰ it must be noted that these studies typically covered the period of a world trade boom in the 1960s and the early 1970s.

One argument supporting trade liberalization is that it aims at eliminating monopolistic gains that would accrue to the producers under a system of protection. It is also argued that trade liberalization, by expanding output of labor-intensive industries in Mexico, leads to increased employment of wage-earners, and therefore, to a more even distribution of income.²¹

²⁰ See Balassa, B., et. al., Development Strategies in Semi-Industrialized Economies, Johns Hopkins University Press, Baltimore, 1982. p.56.

²¹ A recent study shows that the long-run effect of export

Even if this were the case, realization of this effect would require essentially a long-term adjustment period. Over this period, as revealed by the recent Mexican experience, it will be necessary to continue to revalue the currency in real terms. Otherwise, the attendant inflationary pressure will set in motion the need for subsequent, nominal devaluations of the currency, larger every time, with the resulting reduction in the real wage rate and its adverse impact on income distribution. In the end, the distribution of income could possibly become more uneven.²²

Other critics of protection have pointed out high administrative costs of the import control system as well as the problems of corruption associated with it. Without doubt, they are a real disadvantage of the system. However, in the context of the Mexican economy, such costs may well turn out to be of secondary importance compared to the adverse impacts on the economy if protection were totally eliminated. In this connection, an important economic effect of the recent trade

promotion in Mexico is almost neutral in affecting the distribution of income. See Kim, K.S., & G. Turrubiate, "Estructuras del Comercio Exterior y sus Efectos en el Contenido de los Factores, el Empleo y la Distribución del Ingreso en Mexico," Trimestre Económico, October-December 1983, 2173-2192.

²² Critics of Mexico's commercial policy often recommend replacement of quantitative controls by tariffs, since a tariff system allows gradual elimination of protection with a planned precision. However, in a country such as Mexico where the income distribution is uneven, demands for luxury goods tend to be highly price-inelastic. Thus, tariff rates would have to be substantial to provide adequate protection. In this regard, other fiscal measures would be more appropriate. Moreover, the use of the pricing mechanism as a commercial policy, as compared with such alternative measure as quantitative controls, increases the propensity to consume in the economy and reduces the availability of savings for investment.

liberalization policy was to retard the development of intermediate and capital goods sectors. Within a few years following a policy of liberalization, the level of investment in these sectors drastically declined. At the same time, both the volume of imports and the share of intermediate and capital goods imports rose rapidly.

Thus, a relevant question to ask would be: had trade liberalization measures not been adopted, to what extent could these imports have been replaced by domestic production? It may well turn out that the security of the domestic market offers the best incentive for sustained investment in capital goods industries in Mexico.

Proponents of trade liberalization argued that the import effect of liberalization was transitory in nature, and that once the initial adjustment process was over, import behavior would return to a normal situation. The recent experience has already shown that the growth rate of imports, far from tapering off with time, accelerated during the period of unrestricted trade.

There is really no assurance that in the future the policy of restricting domestic aggregate demand, combined with a currency devaluation to maintain a realistic effective exchange rate will provide a viable basis for industrial development in Mexico. More likely, the net effect of such a measure is to depress domestic industries more severely than the previous import restriction measures could have afflicted. There have been a number of precedents of such cases as in England, Chile

and Argentina. In those countries, the recession was combined with inflation and recurrent balance-of-payments problems. Mexico could find itself in a permanent crisis without the prospects for a sustained development process into the future.

6. Industrial Policies for the 1980s: A Synthesis.

From the preceding discussions, it is clear that the principal problem facing Mexican industry is the difficulty in sustaining socially acceptable economic growth without incurring external deficits that exceed the financial capacity of the country. The acceptable growth rate can be understood to be the one that provides productive employment to the labor force which grows by 3.5 percent per annum, and that provides basic needs goods for a population that will reach 100 million by the end of this century.

In principle, policy measures for correcting external disequilibrium must be aimed at reducing the magnitude of import coefficients in import-substituting industries, at expanding exportable industries, or at implementing some combination of both measures. However, is it realistic to assume that Mexican industry will be capable of overcoming its tendency toward external disequilibrium through promotion of manufactured goods exports?

The answer to this question is not simple. The reason is the profound changes in the world economy that have taken place in recent years. If one considers the historical evolution of the world economy, the two decades following the Bretton Woods system until the oil crisis in the early 1970s can be viewed as the period of trade boom for the Western industrial economies as well as for the rest of the world. During this period many developed countries could attain and sustain a near full-employment growth. Several developing countries also achieved remarkable progress in industrialization. The developing country share of the total world industrial output climbed from 6 to 9 percent.

The rapid growth of developed countries during the decades of 1950-1970 stimulated expansion of the world market. The world trade volume in manufactured goods increased by more than ten percent over the period. The fruits of this expansion were also shared by Newly Industrializing countries (NICs), including Mexico. A few NICs registered as much as 14 to 16 percent annual growth rates.

This process came to an abrupt halt in the early 1970s. From 1973 to 1978 the total volume of world trade in manufactured goods grew by 5 percent annually, which was only about a half of the trend growth rate of the period between 1950 and 1970. The growth rate of advanced NICs declined to about 9 percent while Mexico's growth rate dropped to 7 percent.

Today the world economy is still in a stagnation. Over the past three years world trade in manufactured goods has stagnated, which has affected the economies of NICs relatively more severely. The neo-protectionism in industrialized countries appears to have been particularly discriminating against exports from NICs. Mexico was no exception to this trend. For instance, the United States, which accounts for the lion's share in Mexico's total trade, has recently imposed a number of restrictive measures against Mexican exportables. In 1980 the U.S. excluded some fifty Mexican export products from its generalized system of preferences. An additional forty-four products were added to the list the next year. The U.S. government is also obligated to impose a countervailing duty on Mexican export products benefitting from a subsidy. Thus, in the first four months of 1981 Mexico's trade deficit with the United States reached US\$ 1.4 billion, about twelve times the deficit size for the same period in 1980.

The prospects for international trade during the current decade remain bleak. The world economy is likely to grow much more slowly than it has in the past. Even if the recent recovery of industrialized nations is assumed to continue in the immediate future, it will not by itself be sufficient to return developing countries to economic growth rates comparable to the past. In addition, the adverse impact of the recent recession in the industrialized countries on developing country terms of trade

proves longer-lived.²³ In the absence of immediate prospects for a terms-of-trade reversal, worsened export prices in the world market are likely to impinge against developing country efforts for export expansion. Thus there is a need for developing countries to reevaluate the relationship between growth and trade, and particularly the role of exports in overall development.

In this respect, the structuralist argument popular in the 50s and 60s in Latin America is likely to gain a new momentum in the 80s. The argument focuses on two policy dimensions: renewed emphasis on import substitution by assigning to the domestic market a more important role in industrialization strategy, and policy priority on technical and economic cooperation among developing countries. The structuralist argument of course lost its cogency during the period of trade prosperity when the opening of the economy seemed a key to the success in industrialization.

Orthodox economists usually cite the experiences of the Southeast and East Asian countries during the 60s and 70s (S.Korea, Taiwan, Singapore, and Hong Kong) as a success story of trade liberalization policy. It is important to note that their success was achieved under rather unusual circumstances. First of all, these are countries relatively small and had no options but to open their economies to the world market. The largest of

²³ The terms of trade confronting the Latin American countries fell by 13.6 percent between 1980 and 1982. See IMF: World Economic Outlook, 1983. Table 14. pp.183-84.

the so-called "Gang of Four", S.Korea, today has a manufacturing sector which is only one third of Mexico's. Secondly, a large share of their exports is accounted for by intra-firm transactions by the multinational corporations. This places them in a position particularly vulnerable to changes in the economic activities in the parent countries of these multinational firms.

From a different point of view, the East Asian economies have structural characteristics very different from those of other industrializing countries of relatively large size. For example, Japan, whose success in manufacturing exports can not be questioned, is an economy in which total exports constitute a relatively small proportion (12 percent) of the gross domestic product, and whose growth has depended mainly on the expansion of internal markets.

The principal conclusion emerging from the foregoing discussion is that during the current decade Third World countries including Mexico may have to rely on, much more so than in the past, the dynamics of their own internal markets and domestic competition for economic growth.²⁴ It will of course be easier for a relatively large developing country like Mexico to pursue a domestic market-oriented industrialization strategy. A large market is a prerequisite to the development of scale economies in production, which is indispensable for a sustained industrial growth. A recent study finds that Mexico's internal

²⁴ This view is similarly subscribed to in the National Industrial Plan prepared by the Secretaria de Patrimonio y Fomento Industrial and the Global Plan formulated by the Secretaria de Programación y Presupuesto.

market is sufficiently large as to justify installation of a large number of industrial plants for producing capital goods.²⁵

In this connection, account may be taken of another reason for the concern with trade liberalization for Mexico. A recent study²⁶ shows that about a half of Mexico's manufacturing exports are related to intra-firm transactions by the multinational firms in Mexico. This leaves these exports vulnerable to the economic activities of parent firms in their countries of origin. The automobile industry in Mexico is a case in point. Despite large investments in plants in Mexico, export-oriented production has not simply materialized because of the recent depression of industries in the United States.

The industrial strategy described above by no means implies an economic autarky. An autarky is impracticable for any economic system, given the country's need for advanced technology. An internally oriented, industrial-sector development cannot, however, be expected to result in an immediate reduction in imports, nor can it be expected to quickly reduce the size of import coefficients. Expansion of industries oriented toward the domestic market is likely to generate, at least initially, an increased demand for capital goods imports from abroad.

²⁵ See NAFINSA-ONUDI, A Strategy for Developing Capital Goods Industry in Mexico. Mexico City, 1977.

²⁶ R. Ramírez de la O, "Mexico-U.S Trade and Foreign Investment: A Firm Level Study of International Trade Patterns of American Firms in Mexico," Ph.D dissertation, University of Cambridge, 1982.

It is also important to note that for Mexico the easy stage of import substitution is over. Given the relative scarcity of physical and human capital in Mexico, an inward-oriented strategy is likely to entail rising costs, as requirements for skilled labor, intermediate and capital goods tend to increase at the next stage of import substitution.²⁷

Some critics argued that Mexico's import-substitution-oriented policy in the past have largely discriminated against export expansion. A careful analysis, however, does not justify this assertion. As has been shown, it was precisely during the period when import controls were rigorously imposed that performance of exports was satisfactory in its own terms as well as in relation to other countries.

In the long run, there does not have to be a conflict between an internal-market oriented development strategy and an export oriented development strategy. History is replete with examples of industries that developed with a growing domestic market, gradually expanding to markets abroad.²⁸ Indeed, the Mexican industrial structure with its diversified products in a growing domestic market provides a substantial base for future exports of manufactures.

²⁷ Similar results are likely to follow even with an export-oriented industrialization strategy for Mexico. As a newly industrializing country, it is unlikely that Mexico will be able to continue to sustain export expansion in traditional, labor-intensive manufactured goods. Capital or technology intensive export efforts are likely to be costly for Mexico.

²⁸ See, for example, the argument by S.B.Linder in An Essay on Trade and Transformation, (New York: Wiley, 1961).

Thus, in the future when the world economy recovers, a better strategy for promoting exports should still in large measure be based on a similar set of the past policies that have succeeded in consolidating a basically viable and dynamic industrial structure. Evidently, Mexico's domestic market can not support all industries. Reliance on protection gives rise to inefficient production in some industries. Thus, measures for export promotion must be industry-selective, based on the principle of complementarity to a viable industrial structure for the economy. At the same time, import-substitution possibilities must not be overlooked for industries where demand growth is expected to be more dynamic (engineering and durable consumer goods),²⁹ or where economy-wide linkage effects in production are substantial (capital goods).³⁰ At bottom, as the Japanese experience authentically demonstrates, there is fundamentally no contradiction between a domestic-market oriented import substitution strategy and other complementary policies leaning toward export promotion.

7. Other Policy Options.

²⁹ This refers to the case in which the income elasticities exceed one.

³⁰ It is important to note that as shown by the historical experiences of many countries, export possibilities generally follow a full development of domestic-market oriented industrialization.

Today, Mexican industry finds itself caught in a dilemma. The enterprises that spent heavily on capital goods for production of exportables are faced with a still depressed world market. Likewise, those firms that invested in industries for domestic markets are faced with similar conditions. To this may be added the effects of the recent devaluations and high interest rates, which undoubtedly are generating further disincentives to investors. In these circumstances, the important question is what policy measures must be adopted to encourage investment in plants and equipments required for strengthening the productive structure of industry.

There is no simple answer to this question. It is clear, however, that in order to avoid a stagnation in investment, investors must be offered an assurance of healthy growth in the economy and reasonable rates of return on investment. The important question is: how can the domestic market be expanded without disproportionately stimulating aggregate demand and without incurring external payments deficits? Sufficient reductions in government spending are an obvious option, which is currently undertaken as part of economic stabilization measures. However, since the bulk of the government spending in Mexico is on social welfare and on subsidies for production of basic needs goods, there is a real limit to the reduction in spending. Apparently the other inevitable option is to restore measures of restricting imports, at least during a transitional period of

adjustment.³¹

In this regard, excluding the cases of manufactures trade that are highly sensitive to the real exchange rate,³² devaluation policy that relies on the working of the pricing mechanism to correct disequilibrium, may not be effective for Mexico in view of the expected delay in the realization of its effects and the consequent inflationary impacts.³³ As argued by many Latin American structuralists, the developing economies are generally characterized by a structural rigidity. Thus, apart from the argument of price-inelasticities in developing country trade sector, the attempt to stimulate exports by changes in the nominal exchange rate may quickly precipitate inflationary pressures, rendering exchange rate policies largely ineffective. Besides, since many Mexican industries have been operating at an

³¹ Reliance on the pricing mechanism for correcting payments deficits is generally considered relatively ineffective in a developing country like in Mexico. Some Mexican economists contend that a more effective method is to employ an innovative system of quantity controls on a selective and judicious basis.

³² For instance, textiles and clothing among non-durable consumer goods, have been identified as tradeable goods generally sensitive to the real exchange rate.

³³ For a rigorous estimation of the influences of exchange rate policy, we need to calculate real effective exchange rates, a measure of the real rate after adjusting for changes in export incentives. Because of the lack of data, no such estimates exist for Mexico. However, heuristic evidence exists that shows a general ineffectiveness of exchange rate policy. For instance, between 1970 and 1977 Japan's world market share of manufacturing goods exports increased by four percent, despite the fact that her unit cost, measured in dollars, increased at an annual rate of 24 percent. On the other hand, during the same period the share of the United States and England in the world's total manufactured goods exports decreased by 3 and 2 percent, respectively, although their respective unit cost only increased by 8 and 14 percent. See OECD, "The International Competitiveness of Selected OECD Countries," Economic Outlook, (Paris, 1978).

idle capacity of production, the economic rationale of seeking allocative efficiency through devaluation may be questioned.

The success of devaluation policy also depends on the tolerance of the trade unions and workers to accept the reduction in real wages that normally accompanies a devaluation in the short run. Apart from the question of whether or not Mexican workers will in the national interest accept any prolonged stagnation in the living standard, a policy of currency devaluations has its costs in terms of undue burden imposed on less privileged classes of society.

Once adequate growth in the internal market is secured, other policy measures complementary to import restrictions can be instituted. Among these would be: legislation to redistribute monopolistic gains accruing to protected industries, industry-wide coordination in capital and intermediate goods production, expansion of consumer goods production to accommodate a growing market, preferential financial terms for capital and intermediate goods industries which generally call for long-term investment, and selective use of subsidies to basic-needs goods producers in lieu of price controls.

For Mexico, the question of exports need not be considered solely in the context of an undervalued domestic currency.³⁴

³⁴ Using the recent time-series data, Brailovsky found no significant correlations between Mexico's share of exports in world markets and the real exchange rate. Cf. V Brailovsky, "Exchange Rate Policies, Manufactured Exports, and the Rate of Inflation," A working paper for Institute for Industrial Planning, Ministry of Natural Resources and Industrial Development, Mexico, 1981.

Empirical evidence shows that in the trade of manufactured goods international price differences are less important a factor compared to such factors as product quality or technological innovation. Moreover, in Mexico more than a half of total exports in manufactured goods and, in particular, more than three quarters of metal mechanical products exported take the form of intra-firm transactions by multinational firms. Since many multinational corporations resort to the so-called transfer pricing practice, an overvalued domestic currency has relatively unimportant influences over their export activities.

If an overvaluation of the currency impedes export activities, other policy instruments are available for correcting distortions without subjecting the economy to inflationary or other repercussions. In this regard, it is worth noting that the total number of manufacturing export firms in Mexico perhaps may not exceed 600, a relatively small number for providing financial and fiscal support, perhaps in the form of tax rebates. These sectoral policies clearly do not directly promote export activities. Nonetheless, their favorable impact on investment is conducive to indirectly stimulating expansion of the export sector.

The use of exchange rate variations as an instrument to correct external disequilibrium, particularly under a freely fluctuating exchange rate regime, has serious implications for the level and structure of investment. To begin with, frequent fluctuations of exchange rates make the planning difficult not

only for the government but for the private sectors. Likewise, as evident in the recent Mexican experience, a devaluation can lead to higher interest rates, which even under a sustained demand expansion will discourage investment, particularly in heavy industrial projects.

8. Conclusions.

The recent experience under the administration of President Portillo reveals the importance of implementing sectoral policy as an integrated part of an overall macroeconomic policy framework. Given the then prevailing international market conditions, import-liberalization measures, combined with expansionary domestic policy, proved to be incompatible with an externally-oriented industrial-sector development.

Moreover, if the domestic productive structure is to be strengthened, and the revitalization of industry is to be assured, it will be necessary to do so without resorting to an unrestricted trade and exchange-rate liberalization scheme for Mexico, since future sector-oriented policy must concern itself with sustained industrial growth in the face of uncertain external conditions. Also, one has to be aware of the limits of import substitution for Mexican industry as well as the potential contribution that can be made by certain branches of export industries. Thus, there is a need to take into consideration

specific sectoral conditions in implementing industrial development strategy.³⁵ The future industrial policy for Mexico needs to be based on a more eclectic approach combining the notion of maximally exploiting domestic market potentials, on one hand, and an emphasis on industry-selective export promotional measures on the other.

³⁵ Some branches of industries (notably, light consumer goods) are known to have a saturated domestic market, limiting further possibilities of import-substitution.