An Alternative Strategy for Equitable Growth: with Special Reference to Mexico

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AN ALTERNATIVE STRATEGY FOR EQUITABLE GROWTH: WITH SPECIAL REFERENCE TO MEXICO*

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Abstract

This paper formulates a framework of development strategy emphasizing productive employment and equitable distribution in a labor surplus economy. Taking Mexico as a case, the paper evaluates its past and current development strategies and explores their implications for future developments using the framework of such a strategy. It is argued that in the present context of the Mexican economy, reliance on a strategy emphasizing economic growth alone will not alleviate the problems of employment and poverty. An equitable, growth-sustaining strategy for structural reforms needs to include three elements: the shift in production within the modern, leading sector toward more competitive, labor-intensive, high-value added and diversified activities; the development of the lagging, backward sector based on the concept of collective self-reliance; and the articulation of linkage in productive and marketing structures between the leading and lagging sectors.

I. Introduction

Economic growth in the post-World War II era in many developing countries has largely failed to alleviate the problems of employment and income distribution. More recently throughout the 1980s, these countries, faced with an aggravating debt burden, have ceased to develop and improve the living conditions of their people. For the developing world as a whole, the debt crisis of the 1980s has meant a process of de-industrialization and immiserization: both unemployment and underemployment have steadily risen; per capita income in a number of developing countries, particularly in Africa and Latin America, is lower today than in 1980.

The reality in the developing world today should indeed alert us to the magnitude of the problems of employment and impoverishment. With an anticipated 2.5 percent annual growth of the labor force and stagnant economic growth in many indebted countries, the immediate problems will be to prevent the new entrants to the labor force from sinking into underemployment and to raise the productivities and incomes of today's more than a billion underemployed workers. In Latin America alone, some five million new jobs

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have to be created annually simply to keep unemployment from rising further.

The prevalent response to the crisis has, however, taken the form of austerity measures, while emphasizing a strategy for outward orientation, liberalization of domestic markets, and enhanced roles of the private sector. All these are perceived as essential to ensure self-sustaining growth along with the continued servicing of external debts. Although liberalization of the markets—outwardly and inwardly—offers enormous potential for economic recovery, this neoliberal strategy has so far failed to adequately deal with the more pressing issues of widespread poverty. With the austerity measures causing unemployment and stifling growth throughout the 1980s, the working poor in the developing world have suffered particular hardship.

The development issues of employment, poverty, and equity are inseparable. Employment yields output and provides income to the employed, which together enhance the social capability to satisfy basic human needs. The intimate linkage between poverty and employment in the developing world is an empirical reality. The proportion of the population considered as destitute is roughly equal to that of the labor classified as unemployed or underemployed in the Third world. Currently, more than 40 percent of developing country labor force is considered unemployed or underemployed in the sense that workers either are underutilized, or even if fully utilized, earn incomes inadequate to satisfy a minimally adequate living standard.¹

Hence, raising the productivity of the underemployed should become an integral part of employment policy in developing countries. Such policy will stimulate growth and alleviate poverty. While one needs to consider both the volume and pattern of economic growth that would provide a maximum increase in employment, it is equally imperative to include as part of the broad framework a strategy aiming to make resources available to the working poor in amounts that would steadily lift their productivities and incomes above abject poverty.

Recognizing the essential linkage among growth, employment, and poverty, this paper formulates an alternative development strategy for employment and growth with equity, with special reference to the case of Mexico. Mexico is no exception in terms of severity of the crisis: it has carried one of the largest debt burdens in the hemisphere with the resulting recessionary impact on the economy.

In the next two sections, along with the general discussion on the nature of the current crisis, the consequences of the country's past and current development strategies will be evaluated based on the analytical framework developed for this purpose. The subsequent section then explores alternative possibilities and their implications for the prospective development.

¹ Minimum standards are based on national concepts and one should be aware of the noncomparable nature of national statistics. Open unemployment in many developing countries typically accounts for less than 5 percent of the labor force. This is because of a very liberal definition of 'open' employment. A person who has some kind of work, regardless of the length of work hours, is considered employed in the employment statistics in many countries. For an empirical measure of poverty, see World Bank (1991), International Labor Office (1976), and UN Social and Economic Council (1991).
II. The Crisis and the Analytical Framework

Mexico has been in economic hardship since 1982 when the debt crisis surfaced openly. It has since carried out austerity measures that slashed government spending and imports, shoving the economy into a painful recession. Although Mexico, with the aid of massive inflows of external resources, has recently made headway in the stabilization process, the economic conditions for the population at large now are still worse than in 1982. As the provisions of such basic need goods as health, education, food, and shelter have diminished, per capita income has also fallen, for instance, at an average annual rate of 1.5 percent between 1981 and 1988. Especially of concern should be the widespread impoverishment of the working population and inflation, once soared into the triple-digit range, drastically eroded the working poor's real wages which were slashed by nearly half over the decade of the 1980s. The real minimum wage in the first half of 1991 averaged 38 percent of the 1970 level [UNECALC (1991, p. 60)], and in terms of per hour earnings the 1990 level was about 40 percent of the pre-crisis level in 1981 (see Figure 1).

Table I reports data on income distribution for 1981 and 1987. The years reflect the period, respectively, before and during the debt-induced recession in Mexico. The share of the "poor" households—defined as those earning less than twice the legally stipulated minimum wage income—increased by almost 25% from 46.9% in 1981 to nearly 58.6% in 1987. This is shown in Figure 2. The distributional change over the period is indicated by the shift in the Lorenz curve. Points A and B, located on the respective Lorenz curve for 1981 and 1987, mark the poverty-line income. The tangent line at both points is drawn

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*Figure 1. Trends in Minimum Real Wage Rate*

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Mexico's real GNP rose by 3.9% in 1990 by 3.1% in 1991. The amount of the total external debt declined slightly over the period between 1982 and 1992. Debt services in 1992, however, still accounted for over 40% of the total exports. Mexico continued to incur large trade deficits in the early 1990s, which have largely been made up by massive capital inflows from the U.S.

For one thing, Mexico's financial stabilization was aided by the freezing of the minimum wage at the level set in November 1990.
TABLE 1. THE DISTRIBUTION OF INCOME IN MEXICO: 1981–1987

<table>
<thead>
<tr>
<th>Household income as multiples of minimum wage</th>
<th>1981</th>
<th>1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of population</td>
<td>% of income</td>
<td>% of population</td>
</tr>
<tr>
<td>0-2</td>
<td>46.87</td>
<td>10.59</td>
</tr>
<tr>
<td>2-4</td>
<td>21.88</td>
<td>13.48</td>
</tr>
<tr>
<td>4-14</td>
<td>22.92</td>
<td>35.72</td>
</tr>
<tr>
<td>14 &amp; more</td>
<td>8.33</td>
<td>40.21</td>
</tr>
</tbody>
</table>

Source: Division of Socioeconomic Studies, Bank of Mexico: National Survey on the Values of the Mexicans.

FIGURE 2. DISTRIBUTIONAL IMPACTS OF THE DEBT CRISIS

Cumulative % of income

Cumulative % of population

46.9
58.6

4 For discussions on the measures of poverty, see Sen, A.K. (1976).
employment. For instance, between 1983 and 1987, manufacturing output grew at an average annual rate of 1.8% while manufacturing employment and hours worked actually fell by 0.1% and 1.7%, respectively, in a country where a million young Mexicans enter the work force each year.\(^5\) By the end of 1988 an additional five million workers became openly unemployed, which swelled the rank of the total unemployed alone to 6.2 million. It is worth pointing out that more than a half of the Mexican population considered as living in poverty roughly corresponds to the proportion of the underemployed\(^6\) and unemployed working population, which is estimated to have reached 54 percent in 1988, a drastic jump from the 40 percent estimate in the pre-crisis period.\(^7\)

Clearly, the twin problems facing Mexico are massive underemployment and widespread poverty. Foreseeable prospects for productive employment are not encouraging. A recent projection [Corteza and Gonzalez-Tiburcio (1989, p. 12)] shows that the economy will have to grow at a sustained rate of close to 11 percent per year to the year 2000 to furnish jobs for the newcomers to the labor market as well as for those left unemployed over the past seven years. Even if one were to disregard the country’s debt obligation, such a fast-track growth would be tantamount to a miracle. Mexico, historically, has not experienced such rapid growth. What is called for in the current context of the Mexican economy is a strategy for gradual structural reforms oriented toward employment and equitable distribution.

To evaluate alternative strategies open to Mexico, it will be useful to postulate an analytical framework. Relegating the details of the model to the appendices of this paper, we postulate a dichotomy of the Mexican economy between the modern, higher-income, mostly urban, formal economy and the subsistence, lower-income, mostly rural, informal economy. We shall refer to the former as the high-productivity (HP) sector, and to the latter as the low-productivity (LP) sector. The working population in the LP sector, as opposed to that in the HP sector, consists of the labor force considered as either unemployed or underemployed in the sense that the workers, even if fully utilized earn inadequate income to maintain a minimum standard of living. This dichotomy of the economy will thus help us to direct our attention to the central feature of poverty—the phenomenon of unemployment.\(^8\)

### III. Strategies and Consequences

#### Inward Orientation

The long period of import substitution policies adopted by the Mexican government prior to its recent shift toward outward-orientation had significant implications for employ-

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\(^5\) Despite a modest recovery of the economy starting in the late 1980s, there is no clear evidence for declining trends in urban unemployment. Although the average real wages rose slightly, the minimum wage has continued to descend in real terms (UNECLAC, 1992, p. 55).

\(^6\) Underemployment here refers to the situation in which a person, although employed, does not earn income sufficient for minimal living standards.

\(^7\) For details of estimation, see the Appendices.

\(^8\) The quantitative nature of linkages among growth, employment, and poverty is elaborated by Kim and Hanson (1982).
Protection of import substituting industries, which acted as a tax on unprotected sectors of the economy, adversely affected the development of agriculture and nontradable industries—thus by implication, that of the LP sector—as it led to the worsening of the terms of trade against LP-sector goods in domestic markets. The efficiency of industries producing exclusively for domestic markets was impaired by distorted tariff structures and heavy reliance on import restrictions. Moreover, the maintenance of an overvalued exchange rate to support modern sector industries encouraged the import of foreign capital goods by reducing import goods prices to domestic producers. This not only deepened the capital intensity in the HP sector but has also made the country increasingly dependent on capital goods imports.

These policies had limited effects on employment. Available studies confirm that industrial employment growth in the Latin American countries that pursued import substitution has been slower in relation to their manufacturing output growth than that of East Asian countries that pursued a more outward-looking strategy. The favorable access to capital markets by larger establishments and the monopsonistic labor market that usually results from the policy bias against smaller establishments in inward-looking countries served to reduce the overall demand for labor. The pace of growth in employment in the HP sector in the latter group of countries, including Mexico, has generally fallen short of that in labor supply.

**Liberalization of Trade**

The economic reforms started by the de la Madrid administration include liberalization of foreign trade. Many import licenses have since been done away with. Import tariffs were slashed by 80 percent, which resulted in a flood of cheaper, better made imported products, shutting down many factories in Mexico. Nonoil exports, accounting for nearly two-thirds of the country’s total exports, emerged as the most dynamic sector in the economy with textiles, autoparts, petrochemicals, and construction material leading the way.

The policy incentives favoring exports contributed to increased profits in the export sector, and consequently to its expansion. But it should be noted that unlike the case of East Asia’s newly industrializing countries, there are three significant factors—rather specific to Mexico—that tend to inhibit the export sector’s contribution to employment and incomes of the working poor. First, recent studies show that in Mexico exportable goods are more capital-intensive in production than import substitutes or nontradables, and that the direct and indirect effects on employment—at least in the short run—are more limited under export expansion than they would be under alternative choices [Santiago (1981), and Kim and Turrubiate-Marín (1984)]. The tenuity in indirect employment of exports is explained by the fact that Mexican exportables have in general a low local content.

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9 For an excellent discussion of Mexico’s industrialization strategies, see Villareal (1976).
10 See for instance, Chenery, Robinson, and Syrquin (1966). For empirical estimates, refer to the Appendices.
11 An example of this is Mexico’s modern-sector, market-oriented agriculture which is concentrated in highly mechanized large firms. Because of large farms’ advantage in factor markets, they tend to employ highly labor-saving technologies, See Squire (1981, p. 163).
12 In the long run, export promotion policies could eventually alter the factor intensity in favor of labor.
since production in industrial exports heavily depends on imported components and parts. For example, a Mexican-made refrigerator is sold to the U.S. only because the motor used for it can be imported from the U.S. The removal of policy biases against exports in itself cannot be a guarantee for significantly raising industrial employment in Mexico.

Secondly, Mexican exports are concentrated in a few products and large firms. For example, a recent survey by BANAMEX (1987, p. 408) reports that as of the mid-1987:

Forty-five of the economy's 72 subsectors were actively exporting, yet only 12 products from 5 subsectors accounted for half of the sales, and 35 products from 14 subsectors for 75%. In agriculture, 40% of the dollars earned were from coffee and 35.3% from tomatoes and vegetables. Seventeen subsectors sold one sole product. Exporting companies tend to be large ones, especially those producing motors and automobile parts.

Other important shipments are from a few large companies, such as the brewery industry. Thus, the benefits from exports tend to accrue to a small proportion of the economically active population. Clearly, Mexican exports must be diversified; more products, more subsectors, and particularly, more medium and small firms must take part.

Thirdly, as shown by a recent study [Kim and Turrubiate-Marin (1984)], the differences in the commodity composition of foreign trade do not affect the distribution of income, when both the direct and indirect interindustry linkage effects are considered. But when direct effects alone are taken into account, production per unit of output in the nontradable sector generates slightly greater factor income than that in the export sector. Thus, the strategy for stimulating domestic demand appears to produce a somewhat larger income, in particular to the lower income groups, than does the export promotion strategy.

Finally, it is important to evaluate the developmental implications of the in-bond assemblies (called maquiladoras) set up in the 1960s mostly along the northern border of Mexico. The U.S. agreed to charge no duties for parts made in the U.S., shipped to Mexico for assembly and then exported either to the States or elsewhere. Tariffs are charged only on the value added created inside Mexico or on foreign parts. American investors' incentives in investing in the maquiladoras are cheap Mexican labor and the U.S. tariff provision that allows duty-free movements of American goods across the border. For Mexico, the border zone has turned out to be one viable sector of an economy teetering on the edge. At a recent count in 1990, about 1500 assembly plants along the border and about 500 in the interior Mexico, employed more than 500,000 Mexicans, bringing in some $4.0 billion worth of foreign exchange, which has been second only to petroleum earnings.

There are, however, serious constraints to the maquiladora program; in essence, it cannot be relied on as a basis of industrial development. First, most of Mexican workers in maquilas receive subsistence wages: as of the end of 1990, the average daily wage in a Juarez plant was estimated at $5.60, equal to about one-fifteenth of the wage across the border in El Paso. Secondly, the domestic content in maquiladoras is at an extremely low level of two or three percent, as there is no extensive transportation and communications network linking the border zone to the interior, and basic infrastructure for production is

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14 See footnote 13.
inadequate along the border. The benefits to Mexico of in-bond industry have been confined to creation of subsistence employment.\(^{15}\)

Nonetheless, the border industry will likely serve as an important source of job creation and foreign exchange earnings for years to come. The North American Free Trade Agreement (NAFTA) concluded in 1992 focuses attention on maquiladoras as a source of nearby inexpensive labor for the U.S. Although a gradual phasing out of the inbond industry is agreed upon, there is some concern that the free trade agreement in the current context of the economic situation will continue to encourage the process of maquiladorization of the economy.

IV. Programs for Structural Reform

What then are specific, strategic choices available to Mexico for the self-sustaining growth process that can forge a new future of equity and harmony for its people? This section formulates action programs consonant with the goals of growth, equity, and basic needs within the framework of a dual economy consisting of the LP and HP sectors.

As already discussed, the imminent issue facing Mexico is: can its HP sector grow at a sufficiently fast rate to absorb not only a million new entrants to the work force each year but also those remaining in the LP sector? To answer this question, a simulation model is developed in the Appendices on the basis of available data on demographics, output and employment in Mexico. The simulation results indicate that under all reasonable scenarios assumed about past and future growth in the Mexican economy, absolute poverty in Mexico cannot be alleviated by direct employment in the HP sector alone. Mexico needs a comprehensive employment and poverty-alleviation strategy: while we need to consider both the volume and pattern of economic growth that can provide maximum productive employment in the HP sector, we must also include the programs to lift productivities and incomes of the working poor in the LP sector above abject poverty, and to enhance the economic link between the two sectors. The last point deserves attention since the extreme inequity in income distribution in Mexico, in a large measure, is attributable to intersectorally disarticulated market structures. Thus, the alternative strategy calls for action programs in the three broad areas of (1) the restructuring of the HP sector, (2) balanced convergence in domestic production and consumption structures, and (3) enhancement of the productive capacity in the LP sector.

Restructuring of the HP Sector

If liberalization of trade is to have a quantitatively significant impact on employment and incomes of the poor, the HP sector must be restructured in the following four aspects.

First, growth in the HP sector must be more labor-absorbing. Otherwise a large proportion of the entrants to the labor force will continue to be residually consigned to low-productivity work or underemployment. Future industrial policy should not only be concerned with higher growth rates of modern sector output but also with increases in

\(^{15}\) As most of the earnings of Mexican twin-plant workers are spent across border, there is considerable leakage in foreign exchange earnings.
its employment elasticity. At present, expansion of the modern sector is constrained by external market conditions, the external debt and resources bottlenecks in the domestic economy. In this context, larger scope for maneuverability must be sought in enhancing the HP sector's labor intensity. The existing data attest to a relatively low value of elasticity of employment with respect to output in Mexico's modern sector. According to a World Bank study, the employment elasticity for Mexico was, on average, 0.45 during the period of 1960 and 1970. The Mexican figure contrasts with export-oriented Asian countries [Haley (1972)] such as South Korea, which registered an employment elasticity of 0.67.

The adoption of a more labor intensive industrialization strategy should also improve the distribution of income through changes in the functional distribution. Since wage income, as a rule, is less concentrated than property income, labor intensive industrialization should improve the distribution by raising the wage share. The low employment elasticity in Mexico is attributed to the past industrial policy of overprotecting the domestic industry, and in particular of subsidizing the use of capital, which encouraged a capital-intensive production in the modern sector. While an equal treatment must be provided to both users of capital and labor to ensure an optimal resource use, generalized and specific labor force training programs should stimulate the demand for labor by reducing per unit labor cost.

The pattern of aggregate growth also affects the labor intensity in the HP sector. For Mexico, the importance of nontradable activities must not be overlooked. As already noted, nontradable activities in Mexico generate a larger number of jobs than that of tradable activities, thereby improving the economic position of the poor in relation to other income groups. There is no assurance that trade liberalization will be more beneficial in terms of employment and equity implications. Future trade policy will have to be concerned with some balancing of activities in the tradable and nontradable sectors.

The second aspect of restructuring strategy has to do with intersectoral linkages of HP-sector activities. Owing largely to the past policies of neglecting the development of capital and intermediate goods industries, Mexican industry has not generally been well-integrated inwardly. The eventual goal of restructuring strategy must be sought in building a more efficient national productive system that is inwardly integrated and competitive abroad. For this, greater efforts must be made to promote an integrated development of industries that can foster a more efficient linkage of the productive process and markets, thereby providing increased opportunities for productive employment. In particular, the future issue facing Mexico will be what may have to be done to increase the local content and to strengthen the linkage of the maquiladoras to the rest of the economy. Mexico's ultimate objective from foreign investment should be the indigenous development of adapted technologies as a way to expedite entry into the ranks of

16 World Economic and Social Indicators, 1984, and also Squire (1981, Table 41). Brailovsky (1981, p. 46)'s estimate was a lower one of 0.4.
17 Taiwanese experience confirms the relations between industrial growth path and income distribution. The labor intensive bias of its manufacturing activities resulted in increased wage share, which rose, for instance, from 0.41 in 1951 to 0.55 in 1972, paving the way for improvement in the overall distribution of income (Fei, Ranis, and Kuo, 1979).
18 An exception is the automobile industry in which the local content has been as high as 70%.
advanced industrialized countries. Mexico’s official policy governing the transfer of technology has been based on the administrative control of foreign firms, the targeting of the domestic content and exports, and the acquisition of know-how. The instrument used is an incentive system. For instance, the firms registered for technology-intensive projects are exempted from tariffs on inputs. Unlike the case of more successful countries in East Asia, however, the Mexican government does not compel the development of indigenous capacity for assimilating, or innovating on, borrowed technologies. Without a comprehensive, far-reaching technology policy to promote indigenous R&D efforts, one can expect that the maquiladorization of the economy will continue.

Other industries that can be targeted for development include those having a broad reach and ample growth of domestic demand (food products, textiles, wearing apparel, and domestic appliances); those that produce raw materials or intermediate goods widely used by other sectors of the economy (petrochemicals, steel, and cement, among others); and those that form the basis of technological development and structural change (capital goods, biotechnical products, electronics, etc.). Along with the development of a competitive export sector, it is important that selective and efficient import substitution, in particular in the areas of capital goods industry, is advanced as part of the self-sustaining process of balanced growth. Import substitution must proceed through a progressive rationalization of the existing industrial structure, as Mexico’s import substitution sector has so far failed to link, in any significant degree, to the country’s total productive sector [Villarreal (1986, p. 53)].

The third aspect of structural reform will be the streamlining of industry for improved efficiency. Strengthening the tradable sector is especially important in the light of ongoing efforts for trade liberalization and economic integration in North America. Reform measures should include the programs to facilitate industrial reconversion by renovating or replacing obsolete productive structures, to promote the financial and physical restructuring of private enterprises for improved business environment, to force less efficient state firms to reorganize or to rationalize their operation, or simply to privatize inefficient state firms.

It is well to note in this connection the hidden problems of Mexico’s state enterprises. Although the Mexican government has recently been selling off a number of state-owned companies, including the banking system, the state still owns more than 400 large enterprises in the backbone industries, such as oil, mining, textiles, electricity, railroads, newspaper, aviation, sugar, etc. [Kim (1987)]. The problem of the public enterprise sector has been its money-losing performance. State companies have mostly been subsidized by the state, which aggravated the public sector’s financial situation in the external as well as internal debts. Toward the end of 1989, the government’s internal debt reached over $50 billion. Although the size of the internal debt is smaller than that of the external one, the
former has been causing a heavier drain on Mexico's Treasury than payments on the latter. This is because of the need to push up domestic interest rates above foreign rates for debt servicing. In 1989 nearly four-fifths of each peso spent for debt service went for domestic debts, with the remaining accounting for foreign debt. It appears that Mexico's financial problems would still remain unresolved even if its external debt were totally written off.\textsuperscript{22} Mexico's challenge is thus to reequip the industrial sector that has so far been dominated by inefficient public-sector enterprises, to expand its productive capacity, and at the same time to improve industrial productivity in order to make the economy more competitive as both an exporter and import competitor in world markets.

The fourth area of restructuring concerns the case of small and medium industry. The restructuring plan should call for the development of small-scale establishments and the introduction of a rationalization scheme for integration with larger units. Small industry development deserves special attention because of both its importance to the economy and its implications for equity. Mexico's small- and medium-scale establishments—broadly defined to include those informally-organized or self-employed units—account for more than 90 percent of the total industrial units and about 50 percent of employment in manufacturing. Nonetheless, small-scale industry has been more severely affected by the economic recession of the 1980s. Despite the recent government attempt to reach small businesses, evidence at hand suggests that the level of employment in this sector is not much different from the period prior to the debt crisis. The state will have to come up with a more comprehensive policy framework to facilitate access of small businesses to financial markets, to stimulate investment in research and development, and to provide fiscal incentives, where appropriate.

The liberalization of foreign markets currently ongoing in Mexico is opening up new opportunities for many intra-industry links that can be advantageously exploited by smaller units,\textsuperscript{23} either as manufacturers of components and parts or as agents able to undertake certain processes and operations for larger units. At the same time, competitive world markets will require Mexican industry to operate at higher levels of efficiency. It will thus be necessary to gain industrial efficiency through rationalization of industrial structure. One such framework entails assignment of different roles to be played by large and small units: the large one serve primarily as an assembly plant, putting together for the marketing of viable products the components and parts produced by the myriad of smaller firms.\textsuperscript{24} Under such an arrangement, the large units would be in the driver's seat in developing and passing along new technologies down to the hierarchically lower units. Smaller firms often lack information on new technologies available in the market, and require proper assis-

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\textsuperscript{22} The financial situation was mitigated in 1992 with the completion of privatizing commercial banks. The non-recurrent resources obtained from privatizations (in the amount of US$ 12 billion) were used to reduce government debt.

\textsuperscript{23} The Taiwanese experience in small industry development is a useful lesson. Its success in export push is attributed to the kinds of products that are internationally marketable and flexibly adjustable to the vagaries in international markets, its export structure represents a highly flexible, diversified basket of goods produced by a myriad of small- and medium-sized firms. They make up 98.2 percent of all Taiwanese corporations. See "A Survey of Taiwan," The Economist, March 5, 1988.

\textsuperscript{24} This arrangement called "the system of systemization" is popular in the current effort for industrial restructuring in South Korea. In Taiwan, small firms—frequently run on an extended family system—operate as "satellite" factories serving "parent" factories. Woronoff (1986, Chapter 2).
to restructure their businesses as well to develop new technical and managerial skills. As for small units whose technology and type of output do not fit into a vertical production linkage with larger units, the formation of production cooperatives can be encouraged to secure commercial economies of scale.

**Articulated Market Structure**

Another crucial element in the equitable, productive employment strategy is the maintenance of demand for basic needs output produced in the LP sector. The problem with unequal income distribution is that it creates a "disarticulated" market structure in the sense of a fundamental imbalance in market demands for, and supplies of, basic and non-basic need goods: while the high-income group demands a large proportion of non-basic needs goods—and frequently through imports—that are not produced in the LP sector, the poor cannot afford to purchase the non-basic goods produced in the HP sector. Stagnant rural incomes and subsistence urban wages in the LP sector imply that the market for the HP sector's output will be limited to the urban, high income classes.

Thus, unless appropriate measures for balanced development are taken, economic growth is likely to accentuate the existing dual structure in which the better-off continues to accumulate wealth while the more vulnerable lags behind. In this context, a more broadly-defined industrial policy to expand the domestic market through a more even income distribution must be instituted. In this way, the HP sector can continue its dynamic growth and provide employment opportunities.

Of course, the ideal strategy in the present context of the Mexican economy calls for the redistribution of income in favor of the working poor. Such a strategy would be doubly beneficial: first, given the differences in the propensity to spend, the redistribution raises aggregate demand and output in an economy with excess capacity. Secondly, in the open economy the demand for imported luxury goods by the rich can be switched to domestic goods produced by the poor, which should raise domestic activities.

Although a drastic change in the distribution is not an option in the current political reality of Mexico, there are still steps that can be taken in the evolutionary process of change. For instance, policies for preventing the poor from being 'left behind' can include the guaranteeing of a parity in the urban-rural terms of trade as well as in the real minimum wage rate, which should keep pace, at least, with per capita national income. The safeguarding of real incomes of the working population at the bottom scale is an essential means of attaining a more equitable distribution, which is not only desirable in itself but also because it provides a stronger domestic market for the HP sector output, thereby also stimulating employment.

It is likewise essential that the overall demand for output of the LP sector does not decline in relation to aggregate output growth, if both the absolute and relative incomes of the poor are expected to rise. The simulations in the Appendix show that the poverty-alleviating effect of increasing the income elasticity of the demand for LP sector

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25 There is a growing literature on the Kaleckian thesis of redistribution and growth (Marglin, 1984; and Dutt, 1984).

26 A simulation result based on 1968 data for Peru shows that redistribution of 10 percent of national income in favor of the poor increases industrial employment by as much as 5 percent. Figyeroa (1975).
output is substantial in Mexico.\footnote{Conceivably, increased aggregate demand through redistribution could trigger the expectations of inflationary pressure and devaluation, leading to capital outflows or to reduced private investment if profits are expected to fall. Under these circumstances, policies to curb capital flight or increased public-sector investment would be needed to accompany redistribution policies.} Policies that can be suggested to raise the demand for LP sector output include increased access to urban and international markets through infrastructure-building and improved market arrangements. Public work and self-help housing projects are other types of programs that can stimulate demands for the services of low-productivity workers.

The related issue is the safeguarding of access of basic needs goods for the poor. It is imperative to safeguard adequate provisions of such basic goods as housing, water, energy, education and health services, and transportation for the masses of the population [Kouwenaar and Vos (1987)]. One reason for the widening urban-rural gap in Mexico is that most of the country’s public sector services, productive infrastructure, and industry are geographically concentrated in a few urban centers (Mexico City, Monterrey, and Guadalajara),\footnote{According to the 1987 census, 44 percent of Mexico’s industrial establishments were located in Mexico City alone.} catering often to the nonpoor segments of the urban population. For instance, there has been a wide gap in provisions of educational services between the urban and rural areas in Mexico; Mexican children are obliged to go to cities in order to acquire any formal education beyond the primary level. Industrial policies in the past encouraged the development of large-scale, capital-intensive industry, which has resulted in a centralized pattern of industrialization. The phenomenon of “urban poles of growth” thus reflects the character of Mexico’s centralized planning system, and is evidence that the rural regions are not given equal opportunities to share the benefits of growth. The rural population is generally deprived of access to alternative sources of earnings from nonfarm activities unless they migrate to the city.

In recent years, Mexico has witnessed a flood of imports while its exports have not been able to compensate for the falling domestic demand. In particular, since the basic needs goods demanded by the poor are largely nontradable, it is important that the fruits of opening up trade are not reaped at the expense of domestic markets. To ensure an industrial structure capable of satisfying the basic needs of the people, an expansion of tradable-sector activities must be complemented by a viable domestic market integrated with activities of the LP sector.

Self-Help in the LP Sector

Throughout the 1980s Mexico has gone through an unprecedented economic recession. The recession has affected the vulnerable and poorer classes in society most severely, as unemployment has doubled and the real income of the working population has been halved [Kim (1987b)]. In agriculture, there are now more landless peasants than before the famed revolution. The recession has also caused the shift of many workers from formal employment into informal activities. Reduced domestic activities and incomes have at the same time created excess capacities in the country’s formal industrial sector.

The final, critical aspect of the equitable, productive employment strategy concerns
the impoverished LP sector itself. For the urban poor, the strategy should seek efforts to raise real wages by improving productivity. The raising of productivity will require substantial efforts for self-improvement on the part of workers themselves as well as the reinvigoration of social programs on the part of the government. In the current context of the Mexican economy, it is important that the self-help programs are oriented toward the working poor in primary health and education and in providing access to capital and technical infrastructure. Evidence from other developing countries suggests that the targeting of the working poor to raise the quality of human capital results in substantial gains in productivity. Social benefits resulting from policy intervention are known to exceed its costs in the long run [Demey and Addison (1987)].

Informal-sector activities in the urban areas, which have rapidly increased during the debt-induced recession, are an important area for policy intervention. As prospects for an early recovery of the HP sector are still bleak, it is necessary that special assistance—for instance, by easing legal requirements for business, providing training in managerial skills, and liberalizing credit markets—is targeted on the retrenched poor to help start up small-scale enterprises and to build a sustaining base for self-employment. Adjustment assistance will be especially necessary to help those informal activities producing tradables.29

Any strategy for Mexican development must center around traditional agriculture, on which the livelihood of its rural poor primarily depends. In Mexico, small-scale traditional agriculture, as opposed to modern commercialized farms, constitutes about 70 percent of the total rural work force. This traditional sector consists typically of small private farms of less than five hectares and communal lands called “ejidos” and produces mainly beans and maize. In contrast, the average size of land-holding in modern agriculture, which produces mostly cash crops such as wheat and cotton, is more than five times that of the former [Squire (1981, p. 163)].

The issue with Mexican agriculture is not only that the distribution of farms by size is highly uneven, but also that the gains in both labor productivity and per acre yields have accrued only to large farms. The reason for the discrepancy is that large farms have had more success in obtaining government subsidies and institutional credits, whereas subsistence farms have to rely on informal sources which tend to charge exorbitant interest rates. The traditional farms are small and geographically dispersed; their access to support services, inputs, and marketing facilities is inadequate. The past policies of an overvalued exchange rate also facilitated the financing of purchases of tractors on large farms. As a result, mechanization and the use of fertilizers are concentrated in large farms, resulting increasingly labor-saving technologies in the HP sector.30

The argument here is that there is no convincing reason to assume that large farms are more efficient. On the contrary, one persistent finding in empirical research is that the labor intensity and per acre yields decrease as farm size increases [Yotopoulos and Nugent (1976, pp. 100-102)]. With equal access to institutional credits, small farms could thus be operated more efficiently. Large farms are relatively more capital-intensive. Their monopsonistic labor markets tend to reduce the overall demand for wage labor, since the

29 For examples of successful cases, see Demey and Addison (1987).
30 Large farms owned as much as 75 percent of all farm machineries in 1960 (Squire, 1981, p. 159).
segmented capital market provides incentives for substituting capital for labor.

Hence, both efficiency and employment gains can be made by according more support to small-scale traditional agriculture. There are two specific areas for policy intervention. The first concerns removal of the past discriminatory incentive measures that have favored both commercial farms and mechanization. Secondly, restructuring of the traditional sector must be based on action programs that include improved price incentives; adequate access to inputs and credit; and a greater use of high-yielding varieties and improved production technologies through agricultural research and dissemination via extension services.

Such efforts would undoubtedly require more resources. With tighter resource constraints facing the government, public subsidization will have to be selective and cost-conscious; resources must be targeted of those most in need, and only for most cost-effective programs. Thus, alternative schemes for development based on the principle of rural self-help are inevitable if rural incomes are to rise without excessive subsidization. For instance, the public sector can provide incentives for implementing projects that are locally designed on a cooperative basis; villages can contribute to labor and local resources for communal projects with appropriate public-sector support.

There have been a number of cases of community development movements where the programs for rural self-help were successfully implemented. An interesting case is South Korea's Saemaul (New Community) Movement that formed the main pillar of rural development [Ban (1981)]. The movement started in the early 1970s to overcome the rural poverty long suffered in Korea. The most stressed factor in the Movement was self-help spirit: the community must identify their own problems and find the solution by themselves with a minimal resource transfer from outside. The useful lesson drawn from the Korean experience is that the conventional, "top-down" approach relying on the state bureaucracy does not provide a self-sustaining basis for development: self-sustaining development is possible by a "bottom-up" approach that is based on the self-perceived interests and initiatives of the grassroots populace. The issue for Mexico is: How can self-help measures be promoted that can well up from the bottom? On the part of the state, it must promote and support the institutions which can assure effective means for the targeted population to participate in actual decision-making and implementation of self-help projects. The public sector can then provide technical assistance by helping the peasants coordinate the programs for farm management and extension services.

Another aspect of the strategy for employment is off-farm activities. In Mexico, there is considerable scope in raising the incomes of the rural poor by providing opportunities for employment in nonfarm activities. In comparison to many Asian countries where rural incomes derived from off-farm activities are substantial, Mexico's rural population primarily lives on the incomes from farming.

For Mexico, certainly, more equitable income distribution can be fostered by a spatially dispersed pattern of industrial location that provides opportunities for off-farm ac-

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31 For a similar experience in Taiwan, see Ho (1978, Chapter 9).
32 The poorest families in Taiwan, identified as those with the least amount of land, earn about two-thirds of income from nonfarm activities. The share of non-agricultural income in rural Japan is equally high.
activities to rural households. Rural industries can include activities related to agriculture, including the production of farm inputs and implements, food-processing, and other agro-businesses. Rural production can also be geared to export activities. Of course, specific branches of industry must be identified for each local area since rural economic conditions differ from region to region in Mexico. Industrial decentralization to the rural areas will avoid the costs in labor transfer to cities, also expediting the process of modernizing agriculture. Apart from its implications for rural development, it should also reduce the social costs of overurbanization in Mexico.

V. Concluding Remarks

The grave, economic situation facing Mexico during the past decade reflects not only a financial crisis between creditor and debtor nations but also a social crisis that manifests itself as a syndrome of internal contradictions within a capitalist economic system. The financial crisis initiated by more well-to-do classes of society led to an eventual socialization of external debt, resulting in the burden of adjustment by the more vulnerable classes.

The resolution of the crisis calls for a just and equitable readjustment strategy. This paper raises the questions about the distributional incidence of current adjustment policies, and in particular, about the kind of future that would emerge from Mexico's pursuing current policies of economic liberalization. In a context of unadulterated free market, there is a perceived risk of the country's turning into a "maquiladora" factory—a permanent supplier of cheap labor with the benefits of growth accruing mostly to the well-to-do.

The argument of this paper is that a market-based growth strategy alone is not likely to alleviate the problems of underemployment and poverty in Mexico. Thus, a very different strategy emphasizing equitable growth is called for. The restructuring strategy should include three aspects as the cornerstones of future development: the shift within the modern sector toward more competitive, higher-value added, more labor-intensive, and diversified activities; the development of the lagging sectors based on the principle of collective self-reliance; and the articulation of linkages in productive and marketing structures between the leading and lagging sectors. It is imperative that Mexico's future economic growth be seen as a means of providing productive employment and meeting basic human needs.

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Appendix I: The Simulation Model

This simulation model postulates a dichotomy of the economy into the high-productivity (HP) sector—modern and mainly urban—and the low-productivity (LP) sector—traditional

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At present, uncontrolled settlements and shanty towns are nowhere as vividly evident as in Mexico City. The city suffers from a severe traffic congestion with 3 million cars in circulation and nearly 130,000 industrial facilities, and is threatened by the level of smog on the edge of safety limits.
and mainly rural. The purpose of simulation is threefold: first, to show using Mexico's historical data on population, employment, and output that an expansion of the HP sector alone is not sufficient for improving the distribution of income, nor for raising the incomes of the poor; secondly, to project the future distributional consequences if a growth-oriented strategy is pursued; and finally, to illustrate the consequences of a more equity-oriented growth strategy and of changes in related policy parameters. The model is summarized by the following four equations:

\[ L^* = (1 - c)L_h^* + cL_p^* \]  
(1)

\[ L_h^* = gY_h^* \]  
(2)

\[ Y^* = (1 - b)Y_h^* + bY_p^* \]  
(3)

\[ Y_h^* = e(Y^* - L^*) + L^* \]  
(4)

where \( L^* \) = growth of employment, for sector \( i \) with \( i = p \) denoting the LP sector and \( h \) the HP sector; \( Y^* \) = growth of output, for sector \( i = p \) and \( h \); \( c \) = the proportion of the labor force in the LP sector; \( b \) = the proportion of income (output) received by the LP sector; \( g \) = the elasticity of employment with respect to output in the HP sector; \( e \) = the elasticity of output in the HP sector with respect to total output growth after both output have been deflated by the total labor force; and \( * \) indicates a logarithmic growth rate.\(^{35}\)

Equations (1) and (3) are definitions—that the labor force must be employed in the HP sector or remain under- or unemployed in the LP sector, and that output growth must equal the weighted sum of output growth in the two sectors. Equation (2) defines the relations between growth in employment and output in the HP sector. Finally, equation (4) specifies the relationships among aggregate growth, labor force growth, and growth in the HP sector.

The employment elasticity, \( g \), depends, among other factors, on the country's trade regime. For example, in many Latin American countries that pursued import-substitution strategy, available evidence for the manufacturing sector in the 1960s and the 1970s shows that employment grew only about one fourth as fast as output, whereas the 70% figure has been exceeded in the 1970s in the manufacturing sector of such countries as Hong Kong, Singapore, Korea, Kenya, and Colombia [Haley (1972)]. The latter group of countries pursued policies that promoted agricultural development, raised the costs of capital, and stimulated labor—absorption capacity, especially in exports.

The parameter \( e \) is equation (4) summarizes demand relations for output of both sectors. For example, with \( e > 1 \), as the total output per worker grows, the HP sector is assumed to grow faster than the total output. In this case, the LP sector will grow less rapidly than the total output.

\(^{35}\) The growth rate in population and output, \( L^* \) and \( Y^* \), are assumed given and constant during the period in consideration.

\(^{35}\) The values of \( c \) and \( b \) change over time, and therefore are recalculated for each point in time to reflect the changes.
Growth and distribution in the golden-age

The distributional implications of the strategy of HP-sector growth are simulated on the basis of the data during the period of Mexico's golden-age growth (1950-1975). This period represents the best example of Mexico's sustained growth path. The average growth rate of GDP, $Y^*$, was 6% with the labor force growth rate, $L^*$, approximating 3.3%. The experience of the 1960s and 1970s suggests the value of $g=0.5$, which is somewhat higher than the averages of Latin American countries but is about equal to that of Brazil. Using the figures cited in the Trejo-Reyes study (1982), the proportion of the labor force in the LP sector, $c$, is assumed as 0.4; and that of output in the LP sector, $b$, as 0.11. The HP-sector output elasticity $e$ is more difficult to estimate. Since there is no available estimate of $e$, one can specify a reasonable range of the values $e$ can take on for Mexico. For an upper limit, $e$ represents the case where the entire increases in per capita aggregate output consist of HP-sector output. In this case, $e$ will be equal to the ratio of the total output to HP-sector output.\(^3\) For our purposes, we assume the upper limit case of $e=1.12$ for Mexico, and explore the implications of changing the values of $e$.

Changing patterns in the distribution of income are simulated by plugging the above historical values into the system of equations (1)-(4). The results show that $Y_p/L_p$, per capita income in the LP sector, rises at a small, annual growth rate of 0.14% while $Y_p/Y$, the income share of the working poor, shows a declining trend at an annual rate of 2.4%. These results roughly conform to Mexico's past reality; available evidence indeed indicates that the distribution of income had deteriorated over the period [Navarrete (1975), and Trejo Reyes (1982)]. It is worth pointing out that the above simulations took into account only the impact of labor absorption by the HP sector. Given the scarcity of data, it was difficult to estimate exactly what the status of the poor in relation to others in Mexico had been. The actual situation might not be as bleak as depicted by the simulations since some agricultural productivity increases could have raised the incomes of the poor. The purpose here is simply to show that growth in the modern sector alone would not be adequate in reducing distributional inequities in Mexico.

Extrapolation of Neoliberal trends

The employment and distributional consequences are extrapolated from the present trends under the assumption that Mexico continues to pursue a neoliberal strategy of growth-prioritization. A recent, government survey\(^3\) indicated that as of the end of 1987 the proportion of unemployed and underemployed (defined as those who make less than certain minimum income) in Mexico's economically active population was about 54%.\(^3\) There was no information on the income share of the poor, $b$. Extrapolating from the 1982 distributional data, the income share $b$ for 1987 is taken to be 22.2 percent.\(^3\) As for other

\(^3\) Given toat $e=(dY_h/Y_h)/(dY/Y)$, since $dY_h/dY=1$, it follows that $e=Y/Y_h$.

\(^3\) The survey was carried out by El Instituto de Estudios Politicos y Economicos del PRI and was reported in *Excelsior*, May 16, 1988. The survey gives a somewhat lower figure than the Bank of Mexico estimate reported in Table 1. The discrepancy largely arises from the difference in the assumption about the poverty line income.

\(^3\) Trejo Reyes (1982). Our calculation is an underestimate. The actual situation is likely much worse, given the severity of the recession.
parameters, the elasticity value of $g$ is assumed to be 0.5 as before, and $e$ is recalculated as 1.28. Mexico's demographics shows a somewhat reduced rate of prospective labor force growth at 2.5 percent.

The distributional impact of growth in the HP sector is calculated by combining the system of equations (1)–(4) and solving for $Y_p^* - L_p^*$ as a function of $Y_h^*$ and $L^*$:

$$Y_p^* - L_p^* = \frac{1}{be} - \frac{1 - b}{b + g} \frac{1 - c}{c} Y_h^* - \frac{1}{be} \frac{1}{b + 1/c} L^*$$

from which

$$Y_p^* - L_p^* = 0.44 Y_h^* - 2.2\%$$

Equation (6) tells us that the elasticity of LP-sector per capita income with respect to HP-sector output is 0.44: each percentage expansion of modern-sector output raises, through the absorption of labor, the average income of the remaining working population in the LP sector by 0.44 percent. The corresponding elasticity of HP-sector income is 0.5, which is greater than the former.\(^{39}\) Hence, the strategy emphasizing growth of the HP-sector worsens the distribution of income against the poorer groups. Furthermore, it is seen from (6) that the real growth rate of the HP sector must exceed 5% per annum\(^ {40}\) just to prevent the living standards in the LP sector from sinking down further. The distributional implications of simple economic liberalization in the case of sluggish growth in the HP sector is illustrated by the path from point B to N in Figure 3. For comparison, the "equitable" growth path discussed in the next section is shown by the movement from B to E in the figure.

Figure 3. Growth and Equity under Alternative Strategies

\(^{39}\) From (2), $Y_h^* - L_h^* = (1 - g) Y_h^* = 0.5 Y_h^*$.

\(^{40}\) In 1990 and in the first half of 1991, the growth rate of the manufacturing sector was 3.8%, still falling below the threshold level.
APPENDIX II: Equitable Development Strategy

In a strategy for equitable growth, targeted growth in the average income of the LP population can be postulated. One simple target which has a straightforward equity appeal is that those who continue to work in the low productivity sector experience the same growth in productivity as the economy as a whole. The second equation of the model is now replaced by a target equation,

\[ Y_p^* - L_p^* = Y^* - L^* \] (2)

which stipulates that growth in average productivity in the LP sector is equal to that in the economy as a whole. Such a target not only implies that the workers remaining in the LP sector will not be left behind but that they will experience faster growth in income than those in the HP sector. This can be seen by combining equations (1), (2)', and (3) to solve for

\[ (\frac{Y_p}{L_p})^* = (\frac{Y_h}{L_h})^* + \frac{(c - b)}{(1 - b)} (\frac{L_h}{L_p})^* \] (7)

Equation (7) tells us that per worker income in the LP sector rises as fast as the sum of per worker income in the HP sector plus the rise in average income resulting from the shift in workers from low to high productivity employment. It is important to note that the relative income of the original poor will improve still more, because of that shift, as well as because of the rise in income in the LP sector.

Applying the previous, initial conditions of \( e=1.12, b=.22, \) and \( c=.54, L^* = 2.5\% \) and the threshold growth of \( Y^* = 5.0\% \) for Mexico, we obtain the target rate of growth in the average income of the LP sector: \( Y_p^* - L_p^* = 2.5\% \); and the rate of growth in that of the HP sector, \( Y_h^* - L_h^* = 1.92\% \) (Figure 3).

Comparative dynamics

The final objective of the simulations is to find the effects of changes in policy parameters of the model. Two policy parameters of interest are \( e \) and \( g \). With a fall in the value of \( e \), toat is, as the demand for LP-sector output rises with per capita income in the economy, it will have favorable consequences on the poor. This can be seen from (5) as \( d\{Y_p/L_p\}^*/de < 0 \), provided that \( Y_h^* > L^* \); the rate of HP-sector growth exceeds that of labor force growth. For example, as the parameter \( e \) falls from the initially postulated value of 1.28 to 1.0, the LP sector's income elasticity with respect to HP-sector output in equation (6) rises from .44 to as high as 1.43. Increases in the HP sector's labor-absorption elasticity, \( g \), likewise raise the income of the poor: from (5), \( d\{Y_p/L_h\}^*/dg > 0 \). For example, increasing the value of \( g \) from the historical value of 0.5 to that of 0.7, the level experienced by East Asian countries, will raise the LP sector's income elasticity in equation (6) from .44 to 0.6.

\[ 41 \] For a reasonable range of values assumed for the parameters of the model, we have from (5), \( d\{Y_p/L_p\}^*/dL^* < 0 \). As expected, the reduction in the growth rate of the population raises the poor's living standards.
The income share of the poor, relative to the nonpoor, similarly increases either with a decline in \( e \) or with a rise in \( g \). Thus, apart from raising productivities in the LP sector, policies to enhance the HP sector’s capacity for labor absorption or to stimulate demands for basic needs goods produced in the LP sector will lead to a more equitable growth path of the economy.

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