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**MEXICO'S MAQUILADORA PROGRAM:
A CASE FOR REVISING DEVELOPMENT POLICY**

BRIAN JAMES LONERGAN

*A THESIS
IN
THE DEPARTMENT
OF
POLITICAL SCIENCE*

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ABSTRACT

Mexico's Maquiladora Program: A Case for Revising Development Policy

Brian James Lonergan

The debate over the orientation of modernization and development is one that has occupied scholars for over half a century. This thesis will explain how two main paradigms of modernization and dependency originated and as development models are inadequate as both focus on economic growth without considering social, cultural, and ideological values, or other national interests of security and citizen participation in society.

Strategies of developmental success and the differences between development and growth shall be explained in making a case for sustainable development. In this light, the historical, political, and economic evolution of Mexico will be surveyed with particular attention paid to its Maquiladora assembly plants. The objectives of this program, its industrial impact, work force characteristics, and working conditions will be comprehensively evaluated along with the social, environmental, and cultural effects it has had on the nation.

This thesis will argue that the proceeds from industrialization are insufficient to provide ample employment for all. By improving agricultural self-sufficiency through agrarian reform, many of the marginalized will return to the economic mainstream of Mexican society. Establishing rural workplaces and encouraging tertiary activities will further help mobilize and rebuild the country's labor base. By implementing an indigenous strategy that does not compromise the environment or deplete national wealth, Mexico can harness its large labor pool, utilizing its natural resources to great advantage in the international market place.

List of Tables	vi
List of Abbreviations	vii
I. BACKGROUND	1
Introduction	1
The Modernization Paradigm	2
The Dependency Paradigm.....	4
Paradigm Analysis	8
Measuring Development Success	13
The Case for Sustainable Development	15
Understanding Mexico's Developmental Circumstances	19
II. HISTORY AND POLITICS OF MEXICO'S DEVELOPMENT	25
Historical Background	25
The Political Structure	31
The Economic Structure.....	34
The Class Structure.....	36
Development Policy	40
The State and the Public Sector	43
Industrialization Review	45
III. INDUSTRIAL IMPACT OF THE PROGRAM	48
Objectives	48
Antecedents of Mexico's Border Industrialization Program	50
Objectives and Administration of the Maquiladora Program	54
Industrial Impact of the Maquiladora Industry	61
Criticism and Evaluation of the BIP	62
IV. SOCIAL, ENVIRONMENTAL & CULTURAL EFFECTS	68
The Border Area	68
Work Force Characteristics	70
Inside the Maquiladora Plants	76
Environmental and Safety Issues	78
The Cultural Effects	81
The Multinational Viewpoint	82

V. ASSESSING DEVELOPEMENT STRATEGIES	84
Mexico's Past Development Strategies	84
The Choice Of Development Strategies	86
Modern Mexican Development in Retrospect.....	89
Achieving Agricultural Self-Sufficiency	96
Implementing Agrarian Reform	103
Mobilizing the Labor Force	108
Rebuilding the Rural Base	110
Encouraging Tertiary Activities.....	115
Maintaining the Environment	118
VI. CONCLUSIONS	126
VII. EPILOGUE	135
Appendix I	137
Appendix II	138
Maps ..	140
Tables	142
Selected Bibliography	165

LIST OF TABLES

1. Data on the Maquiladoras

- 1.1 Population Growth in Principle Mexican and U.S. Border Cities.
- 1.2 Growth of In-Bond Industry.
- 1.3 Production Technicians and Administrative Staff in the Maquiladoras.
- 1.4 Mexico's Share of U.S. 806/807 Imports.
- 1.5 Maquiladora Wage Rates.
- 1.6 Employment: Maquiladora Industry by Activity.
- 1.7 Mexico: Total Export Value of Maquiladora Processed Goods.
- 1.8 Mexico: Value Added by the Maquiladora Industry.
- 1.9 Distribution of Maquiladora Workers in Ciudad Juarez and Mexicali by Manufacturing Activity (Table on two pages).

2. Data on the Country of Mexico

- 2.1 Exports.
- 2.2 Foreign Trade.
- 2.3 Total External Debt.
- 2.4 Gross Domestic Product.
- 2.5 Per-Capita GDP.
- 2.6 Structure of Gross Domestic Product.
- 2.7 Inflation.
- 2.8 Total Public Domestic Debt.
- 2.9 Number of Public Enterprises.
- 2.10 Land Distribution Since Carranza Decree of 1915.
- 2.11 Economically Active Population by Sector.
- 2.12 GDP by Sector.
- 2.13 Main Agricultural Exports.

LIST OF ABBREVIATIONS

(English Translations of Spanish Supplied in Text)

ASEAN	Association of Southeast Asian Nations.
BIP	Border Industrialization Program.
BTA	Border Trade Alliance.
CODEF	La Comisión Coordinadora del Programa Nacional de Desarrollo de la Franjas Fronterizas y Zonas Libras des País.
CTM	Confederación de Trabajadores de México.
ECLA	Economic Commission for Latin America.
FDN	Frente Democrático Nacional.
GATT	General Agreement on Tariffs and Trade.
GDP	Gross Domestic Product.
INEGI	Instituto Nacional de Estadística.
NAFINSA	Nacional Financiera, S.A.
NAFTA	North American Free Trade Agreement.
NDC	Newly Democratizing Countries.
NIC	Newly Industrializing Countries.
OECD	Organization for Economic Co-operation and Development.
PAN	Partido de Acción Nacional.
PEMEX	Petroleos Mexicanos.
PRI	Partido Revolucionario Institucional.
PRM	Partido de la Revolución Mexicana.
PRONAF	Programa Nacional Fronterizo.
SECOFI	Secretaria de Comercio y Fomento Industrial.
SHCP	Secretaria Hacienda de Crédito Público.
TELMEX	Teléfonos de México.
USITC	United States International Trade Commission.
WCED	World Commission on Environment and Development.

I. BACKGROUND

Introduction

The debate over the orientation of modernization and development strategy is one that has occupied social science scholars for over half a century. Modernization and development is about people and the manner in which they achieve progress, best described as the improvement in their well-being in effectuating a better quality of life and a higher standard of living.

Traditionally, the concept of development has been concerned with altering the economic status of less-developed nations. It involves a continuous, far-ranging process of change, that encompasses the totality of human experience. This process is pursued by raising living standards, improving education and health services, while at the same time, providing for greater equality of opportunity of all citizens, who are encouraged to participate in their community. The ultimate success of a development policy also depends on an internal atmosphere of peace and security, in which political and civil rights are guaranteed and enforced by the government in power, enabling citizens to realize their true potential in contributing to society what they are most capable of. People have basic needs and aspirations as individuals which must be satisfied in order that their fuller participation may be expressed in transforming their community to a more valued state.

The Modernization Paradigm

Many theorists have equated development with modernization and it is in this context that much disagreement has surfaced. The difference in the two notions is that development is a movement toward a more valued state which may or may not be achievable while modernization is a measurable process of change, the consequences of which can be debated and evaluated [D.Harrison: 156].

Modernization is also about what is considered to be 'up to date' in a specific location at a given time [D.Harrison: xiii]. Modernization theorists have tended to assume that material advances of the Western world can be repeated in developing countries with the help of appropriate guidance, capital, and technology. It is a process which involves economic, political, social, and cultural change in sharp contrast to the invariable stability of an existing traditional society. There is also disagreement as to whether or not development can indeed occur in spite of modernization.

To understand the problem more fully, we must begin by analyzing the process of industrialization which began with Great Britain and the other nations of Western Europe during the industrial revolution of the eighteenth and nineteenth centuries. The world market became an instrument of development for the original capitalist powers [Harrington: 116], as the global economy of the period changed to favor the capitalist system. Those who industrialized early when competition was limited required little capital and technology and therefore gained a head start over the rest of the world. As the world economy became more advanced, entry costs increased and the fulfillment of

requirements for industrializing became more intricate. As new nations entered the international capitalist market system, they became 'late developers' [Gershenkron: 5-30]. Capital requirements rose dramatically and the organization of production and distribution networks became more complex. By the beginning of the twentieth century, development often called for state intervention in building the economic structures necessary for successful industrialization. To use Gershenkron's terminology, each new entrant into the race faced a new game with altered rules because of the continually changing character of the world economy at the time in which they attempted industrialization [Gourevitch: 888]. The actual impact of industrialization on a given country could only be determined by a knowledge of the internal character of that particular society. This first model of modernization, initially put forward by Durkheim, presupposed that development was largely an internal matter, focusing on the nation state and its role in the developmental process.

Thus most Third World nations became late developers, having had to construct themselves politically and socially within a very short period of time. As Gershenkron pointed out, the later the beginning of development, the greater the use of public power and authority required to develop the economy. State efforts were seen as indispensable to attain the primary modernization goal of increasing national income. To do this, the state had to legitimize its political authority to develop industry and trade, as well as provide the financial conditions necessary for its achievement. To generate growth, resources had to be directed to specific sectors, often to the exclusion of others. This created resentment within many of the old ruling elite and brought on a clamor for freedom from state control from others who had more recently become the new beneficiaries of state policy.

These differences in the time and nature of the evolution of modernization gave the First World early developers a great advantage over Third World late developers. The First World had had a much longer time frame to organize their administrative functions and build their political institutions. Their state makers were able to effectively consolidate and extend their power structures over the population occupying the physical territory they controlled. On the other hand, many newly developing countries of the Third World were under great pressure to complete their process of state making in only three or four decades, as opposed to the three or four centuries that it took many of the original industrializing countries [Ayooob: 269-70].

This hurried organization and centralization of state power, provides some explanation for the internal challenges and high level of violence directed against the integrating and legitimizing processes of the state structures of many newly developing countries. They had to consolidate their authority and transform their societies swiftly, to compete effectively in the international world market system. Thus, a preoccupation with security often took precedence over a regime's ability to effect national development, frequently leading to an erosion of participation by those citizens who became marginalized in the process. This greater emphasis on security became the primary objective of hasty modernization and took precedence over those dimensions able to confer legitimacy, that is, development and participation [Hawthorn: 20-22].

The Dependency Paradigm

There were many scholars during the 1950s and 1960s who found fault with modernization theory and who were quite hostile to the Western

capitalist expansion going on in the Third World. They paid little attention to the internal structures of Third World societies, arguing that it was the international capitalist system itself that exploited and incorporated the newly developing countries into its sphere. Harris [1986:187] aptly described it as the slow colonization of the globe by the market. This view became variously identified as dependency theory, world systems theory, and underdevelopment theory.

Dependency theory first emanated from Latin America during the 1950s and 1960s, and was advanced by such theorists as Raúl Prebisch and Fernando Cardoso. The incorporation of the Third World into the international system was seen as inhibiting their industrialization, as they became economically dependent on the multinational corporations of the industrialized 'core' countries. These corporations used local elites to expand their market of manufactured products in return for the export of cheap agro-mineral commodities, which as a result, destroyed local artisan craft production and many small light manufacturing operations. The resulting dependency of these 'periphery' nations on the 'core' for their economic survival constituted the Marxian view of dependency, initiated by the spread of international capitalism.¹

Marxists viewed foreign trade as the tool of capitalists to increase surplus value, giving them the competitive edge to plunder developing countries by way of their superior production methods. These countries remained undeveloped until exploited by capitalists. Underdevelopment theorists like Andre Gunder Frank on the other hand, believed that as a result of

¹ This centre-periphery model is described by Johan Galtung in his *Development, Environment, and Technology: Towards a Technology of Self-Reliance*. UNCTAD Secretariat, New York (1979)

Third World countries being incorporated into the international capitalist market system, their development was blocked, culminating in their underdevelopment.

In the *Political Economy of Growth* (1957), Paul Baran viewed it to be in the interests of capitalism to keep the undeveloped countries as they were, providing the 'core' with raw materials as well as the opportunity to extract economic surpluses. The only escape from this scenario for the country was to withdraw from the world capitalist system completely, introducing non-exploitative socialist economic planning as the ideal alternative to the capitalist monopolies which had kept wages down, encouraging local elites in the developing countries to squander their natural resources in return for the importation and consumption of luxury goods. State builders in these developing countries cooperated by imposing high tariffs which helped support the military institutions necessary to uphold their authority and maintain the security of their regimes. At the same time, the rich few benefitted at the expense of the masses of poor.

This view of the international market system led to a call for indigenous industrialization, better known as import substitution, advocated during the 1950s by the United Nations Economic Commission for Latin America [ECLA] under Raúl Prebisch. ECLA proposed that local national protectionism coupled with inspired state planning would increase employment in the newly industrializing countries, and lead to a better utilization of local capital supplemented by foreign investment.

Unfortunately this strategy ultimately failed as exemplified by the turn of events in Brazil and Mexico. It led to the fall in the value of agricultural exports relative to imported goods, and was compounded by rapid population growth and the displacement of rural land dwellers who fled to urban centres in search of employment opportunities. This accentuated the unequal distribution of wealth as well as the marginalization of the masses of poor, who had left their family plots for large cities which in turn soon degenerated to congested slums. Economic independence faltered, social inequalities persisted, and the capital generated by commodity exports was shipped abroad for payment of imported luxury goods.

It was this outflow of capital to the 'core' countries which dependency theorists believed prevented underdeveloped societies from investing in their own destinies, and which they claimed subsidized growth in the West. The countries in the economic 'periphery' existed to meet the requirements of the 'centre', through their exports of cheap commodities and the foreign transfer of their capital. The resulting low wages engendered by capitalist monopolies in developing countries distorted the domestic market, resulting in the impoverishment and marginalization of the masses [Amin]. Thus participation in the world economic system extracted a heavy price, leading to a decline in small agricultural producers and industrial entrepreneurs.

Immanuel Wallerstein introduced an intermediate category of nations which he called the 'semi-periphery', composed of the larger and more efficient of the newly developed countries that have been able to produce both low and high wage products. This category of nations, also exploited by the 'core', in turn also exploited the 'periphery'.

There has also been focus on unequal exchange by Arghiri Emmanuel [1974] who recognized that capital has been able to cross international boundaries to take advantage of cheaper labor available in Third World countries. Since the industrialized nations had powerful unions which had been successful in maintaining high wages in their own respective countries, the terms of trade became biased in favor of the 'core' countries who have been able to control the Third World's necessity to produce for export in order to pay for luxury imports. At the root of this unequal exchange were the multinational corporations who prevailed over local elites, utilizing the low wages which reduced production costs, further encouraging the transfer of even greater profits back to the 'core' countries. These local elites acted in their own selfish interests much to the detriment of their own particular societies as a whole. In sum, Marxists focused on the factors of production and on the class formations resulting from the inequalities of trade which had been brought about by the international capitalist system.

Paradigm Analysis

Following World War II, the analytic unit of modernization theory was the nation state. An evolutionary pyramid was set up as a model with Third World nations placed at its lower end and the modern nations at its apex [Rostow]. The former were expected to rise towards the latter only by discarding their traditions in favor of the Western way of doing things. It was envisioned that a modernized sector with its industrial, capital intensive, and rational conventions, would help transform backward, traditional, and mostly rural societies into the Western mold.

Instead of pursuing indigenous development, modernizing nations were encouraged to construct imitation western societies. Modern industry took precedence over agriculture, skyscrapers were erected before the masses were housed, and western-style education was introduced that was unfitting for its recipients to play a constructive role in developing their own rural societies [P.Harrison : 46].

This modernization focused on economic growth, per capita income, and the expansion of consumer durable manufacturing. It was believed that opportunity and income would eventually trickle down to the masses of Third World countries as their societies successfully progressed to a more advanced, industrialized state.

The dependency theorists saw development of the 'centre' nations occurring only at the expense of underdevelopment elsewhere, as both the developed and non-developed countries participated in the same world system that had originated with mercantilism, colonialism, and subsequent capitalist expansion. It was a pattern characterized by unequal exchange resulting in a structural disadvantage whereby peoples with backward traditions lacked an educated elite who could successfully employ the necessary entrepreneurial spirit to proceed to a more desired, advanced, and developed state. Those who had progressed to the 'semi-periphery' had become only partially developed, but mainly at the expense of those nations below them in the evolutionary scale. Socialism was advocated as the only political and economic alternative to participation in the world capitalist system.

Unfortunately, these two competing views of development were inadequate for analyzing the reality of Third World societies that existed in the post WWII era. One paradigm blamed internal forces and the other attributed external factors for the lack of successful development outcomes. Both paradigms approached the study of Third World political systems in search of structural determinants that were seldom present. Development agendas were inappropriate in the context of political economy. Questions were raised as to whether it was even desirable to fit patterns of development into paradigms at all [Manor:3]. Equilibrium in Third World societies had often been presumed when in fact, turbulent change often resulted in these countries once societal transformations had been undergone. An interdisciplinary view had not been taken in assessing these nations in the context of state-society relations.

Third World politics cannot be analyzed in isolation from social, cultural, and ideological values. Development must involve the realization of the potential of the human personality. This is best achieved through the elimination of poverty, unemployment, and inequality [Seers: 2]. What people choose to purchase, sell or exchange cannot alone form the underpinnings of developmental reality. To suggest that development is concerned only with political authority and economic direction ignores the material aspects of the social welfare state, that is, health, sanitation, decent living conditions, education, and employment opportunities for citizens, materializing in an atmosphere of stable societal relationships free from intimidation from above.

Some political scholars remained preoccupied with the study of the relationship between democracy and socio-economic development, concluding that development is essentially a two-dimensional phenomenon.

They have made use of political system classification to set the stage for their empirical work, using case studies to support their binary models of traditional versus modern societies, and democratic versus non-democratic systems [Chai-Anan: 15-16].² This has led to an inclination where political development is reduced to analyzing changes in values, structures, and functions of political systems as the new replaces the old, often in an atmosphere of societal conflict.

To avoid the determinism of this approach, Chai-Anan Samudavanija proposes that we consider the relationship between state and society in developing nations as a three dimensional one [in Manor: 15-23]. He classifies the three main preoccupations of politics as security, development, and participation. In many countries, security has priority over the other two goals which must be tempered in operational legitimacy, integration, and policy capacity [Ayooob: 259]. A state may also be vulnerable to military, economic, or ecological threats, and will act defensively to conserve and defend itself. In some cases, the build-up of weaponry and associated technologies may have contributed to the substitution of economic dependence for weapons technology dependence [Ayooob: 275]. Nations may also become dependent on others for oil and fuel supplies, foodstuffs, and strategic minerals.

The world-wide arms race has had a devastating effect on the capacity of many Third World nations to successfully develop their societies. In many of these societies, the security sector may have captured the bulk of the state's disposable resources, much to the detriment of real economic

² Two classic examples of the use of classification in political systems typology in democratic and non-democratic societies can be found in Gabriel A. Almond's *Comparative Politics Systems*, *Journal of Politics* 18 (August 1956) pp 391-409; Arend Lijphart made modifications of this classification in his later publication of "Typologies of Democratic Systems": *Comparative Political Studies* 1 (April 1968); pp 3-44.

development. This has often led to the imposition of the authoritarian regimes found in many Third World countries that have oppressed and marginalized their masses into situations of poverty and despair. Resources are inadequate for the necessary reallocation that would remedy many of the problems in their societies and lead to successful national development.

Looking at the problem in that perspective, it is questionable whether any single paradigm is likely to suffice in predicting the development outcomes of Third World nations. As Hawthorn captions so suitably in his article which discusses the issue, many theorists are still '*waiting for a text*,' or the emergence of a new paradigm which they can apply to successful development. In sum, there can be no enduring synthesis but rather an evolving admixture where the three dimensions coexist within a particular order fitting a regime's priorities and objectives [Chai-Anan: 16].

The domination of one objective over another concerns the relationship between the four major variables related to the operation of the state: Ideological domination, structure institutionalization, the capacity to control and utilize resources, and the capacity to adapt and manipulate social forces [Chai-Anan: 19]. These objectives take on much greater importance in determining the character of a state and of its leadership, at the expense of the ordering of developmental and participatory priorities vis-a-vis each other [Chai-Anan: 22]. In effect, each objective comes to influence the direction and nature of the others.

Measuring Development Success

Let us now analyze the reasons why some nations have been successful in their development strategies. Looking at Taiwan and South Korea, for example, there have been four elements that have been paramount in their successful transition to development as described by Sandschneider [267-277].

First of all, they were able to enact resource redistribution before national productivity improvement took its big jump upward. Land reform was instituted, bringing about dynamic change in the countryside leading to a mixed agrarian, commercial, industrial economy, with a subsequent growing emphasis on the commercial and industrial sectors.

Looking at the example of South Korea following the Korean War, the Americans expropriated Japanese holdings and pressured the new administration to purchase all large South Korean estates. This served to eliminate the landowner class as the maximum land size allowed was limited to three hectares, serving to cumulatively increase national agricultural output an average of 3.5 percent annually [Harris: 1986: 33].

Secondly, since neither South Korea nor Taiwan has a significant natural resource base, their growth acceleration had to be focused on a labor intensive growth process. Thirdly, both countries invested heavily in education, to the point of sending their students abroad to learn new technologies and manufacturing production methods.

Finally, the democratic element was important in encouraging vitality among their peoples. Human beings cannot initiate entrepreneurial

abilities and develop economic efficiency if they are forced to obey and comply without question to policies and directives from above.

As a result of the foregoing, the respective status of Taiwan and South Korea were soon transformed from being "Newly Industrializing Countries" (NICs) to that of "Newly Democratizing Countries" (NDCs) [Sandschneider: 272].

During the period from 1961 to 1979, the South Korean economic miracle was in full stride. The value of the currency was lowered and interest rates were allowed to rise to encourage domestic savings. Tax incentives were enacted to encourage exports and there was an easing of external trade restrictions to permit exporters to import, provided they exported [Harris: 1986: 33]. As a result, South Korea's obsession to raise exports became the key to its growth as its people were encouraged to work and save. As we shall subsequently see, Mexico languished in its development by following adverse economic strategies. South Korea and Taiwan used world markets to force growth, whereas Mexico tried to exclude the world from its domestic market.

There may be other reasons for the failure of development strategies even when a successful formula as was undertaken in Taiwan and South Korea is followed. There may be a lack of resources and capability to attain desired goals due to certain inefficiencies in state implementation of development policy. Countries such as Malaysia, Taiwan, and South Korea have relied extensively on the private market for investment and development. In contrast, countries like India and Cuba have relied heavily on state planning which has resulted in a long period of economic stagnation. This can lead one to conclude that by increasing trade and opening the economy, the reduction of

government intervention has generally led to greater development success. Those countries which have protected selected industries as seen by those who went the way of import substitution and other policies of domestic market protection have generally stagnated.

The Case for Sustainable Development

To understand development more clearly, it is necessary to distinguish it from growth. Economic growth is an increase in quantity which cannot be sustained indefinitely on a finite planet. Economic development is an improvement in the quality of life which does not necessarily imply an increase in quantity [von Droste and Dogse: 85]. Thus true sustainable growth is an impossibility, yet sustainable development remains within the realm of the possible.

A new factor currently being introduced in development strategy is the greater role of natural capital over human made capital. Economic goals do not have to be in conflict with ecological responsibility. The evolution of the world economy has passed from an era where human made capital was the limiting factor in economic development, to a new era in which remaining natural capital has become the limiting factor [Daly: 29]. It is obvious of the necessity to preserve this remaining natural capital and hopefully increase its supply. Is there any point to a saw mill which does not have a source of wood after the forest has been cut? The limiting factor thus becomes one of maintaining an available supply of wood rather than increasing the cutting capacity of the saw mill.

Development economists have always assumed that natural resources are abundant relative to the scarcity of skilled labor needed to transform those resources into useful manufactured goods. This perception has led to a fall in the value of commodities on world markets and contributed to the increasing gap between the industrialized nations and the resource producing countries [Haavelmo and Hansen]. Poor countries are often being encouraged to exhaust their valuable natural resources at low prices by the World Bank and other international development agencies, in return for the imported machinery required to extract those resources; this has increased their debt burdens and mitigated their ability to ensure future earning capacity.

There is thus a complimentary relationship between human made and natural resource capital. The accumulation of the former puts pressure on natural capital stocks, resulting in their liquidation when over-used [Daly: 31] Empty-world economics considers natural resources to be free goods, necessary to support and add to the value of human made capital. The price of natural capital is in this way regarded as having no specific price, as costs of future scarcity are routinely discounted. Since no one owns the oceans, the atmosphere, or the ozone layer, they are not protected from over-exploitation.

National income disguised as Gross National Product (GNP) does not take environmental destruction into account. To assess environmental losses in terms of final consumption for calculation of national income is therefore erroneous. Even the owners of a sand pit using their resource to produce cement will one day have to reckon with the cost of access to another source when the first has been depleted.

Countries like Brazil and Indonesia who are burning their forests are in fact liquidating their capital. Reserves of depletable resources must be treated as inventories and not as fixed capital. [El Serafy: 61-62]. Thus the current economic growth premise of a permanent acceleration is incorrect since the economy cannot exceed its physical limits. The focus of national accounting must therefore shift to an environmentally sustainable net product and not rely on the current Gross National Product, a shift which will result in a different interpretation of true national income. Economic goals and ecological ones must be linked as the economy and the environment must not be regarded as being in conflict.

The traditional concept of growth relying on an ever-increasing throughput of energy and natural materials can no longer be sustained on a planet which has a limited capacity to accommodate an exploding population that is straining the ecosystem. Humanity is but a subsystem within the larger planetary ecological system, making it dependent on the latter for such human essentialities as breathing, feeding, and providing shelter.

It was estimated in 1986 that the human planetary economy used about 40 percent of the net primary product of photosynthesis [Vitousek et al: 372]. The study goes on to conclude that this signifies that a single net doubling of the world's population during the subsequent quarter century will require 80 percent, with total capacity following soon after.

Maintaining the planet's capacity to regenerate itself should thus become an important pre-occupation of development policy for all peoples and nations. Much current industrial technology is not environmentally sustainable making it also economically unsustainable over time. Past policies of several East

European countries has revealed striking examples of the ecological catastrophe that can be brought about by irresponsible industrial development that had little regard for its environmental impact. As Gershenkron would put it, these countries are now faced with a new game with altered rules as the deteriorating state of the environment affects everyone's quality of life. Abuses of the past now require corrective action, placing additional stresses on the fiscal ability of many governments to allocate adequate resources for clean-up operations.

Complaints by industrial producers that their businesses would be unprofitable if they had to pay for the cost of the environmental deterioration they have caused is unacceptable. The ecosystem's natural capacity to absorb waste is a vital resource unto itself, often assumed to be inexhaustible. The natural environment cannot be treated gratuitously as surviving generations will eventually have to pay the piper if humanity is to survive on a finite planet. The production of consumer goods at any cost must give way to considerations which seek to use the planet's resources to benefit all [Haavelmo and Hansen: 44-45].

Finally, the developed countries should strive to discontinue their subsidies, trade barriers, and unsustainable energy intensive manufacturing production. This would allow developing countries to produce their commodities and other goods on an equal footing, without the current price depression that currently exists for much of their outputs. This is especially true for agricultural producers who are the least able to diversify and undertake other strategies to remain competitive [von Droste and Dogse: 78]. Unfortunately, the call for the elimination of agricultural subsidies has gone largely unheeded by Western

nations who continue to protect their own farmers from the realities of the international market. Developing countries must therefore reorient their strategies to policies that will help them become truly self-sufficient, especially in the production of adequate food supplies for their people.

Understanding Mexico's Developmental Circumstances

In the light of the preceding analysis, a case study of Mexico's Maquiladora assembly plants will be the focus of this thesis. Fitting that particular strategy within the context of total development, this thesis will show that if regulated and implemented properly, harnessing a large labor surplus to national advantage with such a program can be an important component in realizing development aims. By itself, however, the Maquiladora program is insufficient for providing adequate employment for the magnitude of Mexico's unemployed citizenry. There must be complimentary activity in other economic sectors such as increasing agricultural self-sufficiency, rebuilding the rural labor base by establishing industrial workplaces, and encouraging tertiary activities such as tourism. Together, these and other additional endeavors will complement assembly-type operations, raising the national standard of living as workers increase their purchasing power.

To understand these aims more clearly, Mexico's history, its world geopolitical position, and the development of its state apparatus, must be examined for purposes of evaluating the reasons for its choice of development strategies, so that recommendations for policy change can be more readily formulated.

Beginning with its history, it is necessary to understand how Mexico evolved to the particular world position it occupies today. Mexico was originally an Indian nation, conquered by Spain, and later invaded and occupied by the French and subsequently by the Americans. It had a long violent Revolution which ravaged and destroyed much of the productive apparatus of the country. The majority of the population had been enslaved by an elite that exploited the country's natural resources at the expense of the nation as a whole. There were numerous dictators who presided over a constant military presence, cultivating an authoritarian atmosphere which tolerated undemocratic practices throughout the country.

Its Revolution behind it, Mexico developed its institutional conventions of a strong president in charge of the country's all-encompassing, one-party, political system. Privilege and rank served to further the aspirations of a corrupt bureaucracy, in which a strong state oversaw internal development and export policy. The discovery of oil, making it the world's fourth largest producer, gave Mexico an economic advantage which corruption and mismanagement has unfortunately compromised by incurring a \$100 billion debt that has all but strangled its economic growth.

In order to increase its industrialization efforts, Mexico initiated a job-creation program in 1965 with the hope of providing viable employment and entrepreneurial opportunities for its citizens. Originally, assembly plant operations were set up along Mexico's northern border in a string of factories geared for export to the United States. The word Maquiladora came to be applied to these plants and means "toll-taker", a reference to the fact that they operate under special tariff exemptions. Today, Maquiladora operations have been set-up in

plants well into Mexico's interior if not almost all over the country, although 80 percent are still located near the border. The economic advantages of these plants lies in the lower wages paid to Mexican workers as well as their comparable productivity with workers to the North. These plants are able to operate quite efficiently and because of their proximity to the United States, are often managed by American executives of multinational corporations who reside in American cities in close proximity to these plants.

By 1992, close to 2500 such plants provided Mexico with close to a half million jobs and \$3 billion in value added. As a group, they represented 40 percent of Mexico's exports, estimated at U.S. \$36 billion in 1989.

There are criticisms by analysts that these plants undermine Mexico's autonomy, as foreign control over industry has come to dominate the industrial process. There have been accusations of exploitation of women laborers, the enfeeblement of male employment opportunities, and the disruption of family and traditional societal patterns. These criticisms will be scrutinized with statistical data, indicating any resulting social dislocations of rural-urban migratory patterns. The composition of the work force will be examined, as well as the working and environmental conditions which have evolved as a result of the Maquiladora plants.

This thesis will explain how some aspects of Mexico's Maquiladora program should be revised. Today's global economy has moved beyond mere economic dependence to an ecological interdependence, suggesting that development policy must be harmonized within the constraints of planetary capabilities. Environmental standards must be more strictly enforced so as not

to encourage countries such as Mexico to become a dumping ground for polluting industries rejected by the more industrialized nations. A new emphasis must focus on sustainable forms of development as well as greater worker participation in higher skilled occupations. Only by insisting on a quality development strategy will Mexico achieve the best possible life for all of its citizens.

The world oil crisis of 1973 indicated the finiteness of natural resources and the need for structural change in the global economic and political system. The concurring international monetary crisis led to the floating of major world currencies that altered the existing world economy that had been based on the assumptions of the Bretton Woods order created in 1944 [Harris 1990: 2511]. Mounting Third World debt burdens forced many countries like Mexico to react by internationalizing their economies. Eventually, Mexico would have to privatize, reduce government intervention in the economy, and increase exports, policies which it has begun to implement under the administration of Salinas de Gortari.

The new world order of competing states requires that nations produce the essentials for their survival, a goal which effectively reduces dependence on the rest of the world. For this reason, Mexico's first priority must be to increase food production. This thesis will examine the strategies that must be undertaken to achieve this, including agrarian reform and mobilization of the rural labor force.

The new emerging multilateral system will not be a hegemonic one as there will likely be a future diffusion in world economic leadership. The

existence of major regional trading blocks is rapidly forming: Japan and the Far East, the European Common Market and Eastern Europe, and the recently signed North American Free Trade Agreement including Canada, Mexico, and the United States. Another group called the Association of Southeast Asian Nations (ASEAN) consisting of Brunei, Malaysia, the Philippines, Singapore and Thailand signed an agreement which took effect on January 1, 1993. This warrants that there will be no dominant state or groups of states in our evolving forthcoming era. There will yet emerge important world powers, a factor that will require increased global cooperation and a recognition of growing interdependence within an increasingly open world, with all nations sharing a common interest in preserving the current international economic system and the planet's delicate ecological balance.

In sum, development and dependency theory paradigms had formerly been envisioned within a national context associated with outmoded concepts of the nation-state. Others formulated visions of a desired development blueprint believing that the process could be satisfactorily guided by the state. The values inherent in the latter process are normative as that strategy must lie in the state's capacity and predilection to act, implying that its behavior must conform with the values and norms of the global family of nations. In that context, developing countries must be given access to technological innovations which will permit them to develop cleanly without projects that can be harmful to their ecological balance. Policies must build up rather than deplete natural resources, as rich and poor countries move forward together, since a further widening of international economic disparities will only serve to cultivate a sense of hopelessness and despair on the part of the poorer nations. The downgrading of the quality of the environment can only be seen as

a prelude to the decline in the quality of life of the entire planet. Thus, the transfer of ecologically destructive industries to developing countries must halt since the resulting despoliation concerns the entire world community. Development must not be initiated at the cost of ecological stability. By implementing agrarian reform and rebuilding its rural base, Mexico can mobilize much of its inactive population, leading it to become a showroom for sustainable, equitable, and responsible development.

Finally, development must inspire a sense of community in its citizens that includes even the poorest. When a man has no land, no home, no job, or no one or no place to turn to for help, comfort, food, and other support, he feels rejected and alienated from society and the nation. His participatory role has been quashed, often leading him to crime, substance abuse, prostitution, and begging, as the only viable alternatives for sustaining a sequestered and desolate existence. Poverty and inequality must be overcome by social reform programs that need to accompany development. Channelling investment to rural areas will help ease poverty, slow forced migration to cities, and curb the excesses of urban over-privilege. By developing a strong rural base that establishes workplaces and encourages the tertiary sector, Mexico will be better prepared to furnish the necessary instruments that increase the employment and participatory opportunities of its citizens. Programs that establish assembly-type operations like the Maquiladoras can help meet employment objectives and improve technical skills in regional centers. However, they must also aim to elicit agreeable working conditions, be responsive for the safety and welfare of employees, and be sensitive to environmental surroundings. Anything short of these objectives will in the end be futile and self-defeating.

II. HISTORY AND POLITICS OF MEXICO'S DEVELOPMENT

Historical Background

All nations are the sum product of their history and the institutions and processes that evolved as a result. The land which comprises Mexico today was originally occupied by peoples of Indian descent who came under Aztec rule prior to the arrival of Cortés in 1519. The arriving Conquistadors slaughtered most of the ruling Aztec leaders, establishing their colony of New Spain in an area which today comprises Mexico and Central America.

The Aztecs and the other peoples of Indian descent assumed the role of a defeated population as they were enslaved to work the large estates and the gold and silver mines that helped finance Spain's other colonies and its European wars. Eventually, Indians would work the small factories that supplied textiles, metalwork, and other craft occupations, laying the foundation for subsequent industrial development and urban growth.

Slavery evolved to debt peonage, a system little different in its subjugation. European diseases such as smallpox decimated most Indian communities to the point that more than two-thirds of the population were wiped out between 1519 and 1650 [Fred Harris in Black: 280]. Spanish colonialism was, in sum, an exploitation of people and natural resources. The establishment of Spanish mercantilism kept Mexico a producer of raw materials in exchange for their purchases of Spain's manufactures. Roman Catholicism was the established Church as well as the largest landholder and exploiter of Indian labor.

By 1809, political dissatisfaction was growing in Mexico between the criollos, Spaniards born in Mexico, and the peninsulares, those Spaniards born in Spain. A parish priest named Miguel Hidalgo led a first insurrection which was to become a thirteen year struggle for Independence. By 1823, Mexican independence was declared by Augustín de Iturbide, a conservative military general who had the backing of the Church. He was soon driven into exile and replaced by Antonio Lopez de Santa Anna, a general who was to occupy the presidency off and on until 1855 and under whom the bureaucracy swelled and the economy stagnated. Foreign conflicts with the Republic of Texas, France, and the United States ultimately led to Mexico losing half its territory to the United States, including what is present-day California, Arizona, New Mexico, Texas, and parts of Nevada and Colorado.

By 1854, much of the country had had enough of Santa Anna's dictatorial government, and he too was driven into exile. The Reform (*La Reforma*) began, much of it under the direction of the new Secretary of Justice Benito Juárez. The right of priests and military men to be tried in their own courts was abolished and the Church's large holdings of two fifths of the country's land area were put up for sale. The Church also lost to the state its civil jurisdiction over the registration of births, deaths, and marriages. Once Pope Pius IX declared that those who followed these laws were heretics, the War of the Reform broke out in 1858 with lines drawn between the liberals led by Juárez and the conservatives supported by the Church.

By January 1861, Juárez victoriously marched into Mexico City and was officially elected president. Subsequently Juárez defeated the French troops who had invaded Mexico, but the Cinco de Mayo victory at Puebla was

short-lived as Napoleon III imposed Ferdinand Maximilian, the Hapsburg prince from Austria, as Emperor of Mexico. Eventually in December of 1867, Juárez succeeded in defeating occupation forces and entered Mexico City once more, re-instituting the constitution of 1857. He was elected to a third term as President and over the next few years, Juárez reduced the size of the army, and instituted comprehensive educational and economic reforms. During this period, Mexico had learned to cultivate an intense nationalism in response to the numerous foreign invasions and occupations it had suffered since it had first declared Independence.

Juárez centralized much of the country's authority in the presidency, increasing the power of the federal government to the detriment of state and local authority. Porfirio Díaz, a military hero of the war with the French, succeeded Juárez as President in 1876, under the slogan of 'No Re-election'. True to that theme, Díaz did not seek re-election in 1880 but after the subsequent short administration of an undistinguished successor, Díaz became President in the election of 1884.

The Porfiriato, as the regime of Díaz was called, was a period of law and order, stability, and economic progress. Díaz ran the country from the top, rewarding those who shared his coalition with jobs, land, subsidies, and whatever it took to transform the country into his vision of an emerging modern nation. However, he was concerned only with retaining personal power, ignoring those who could not effectively oppose him, co-opting or liquidating those who had any capacity to confront him. Díaz had modern transportation facilities built which helped increase exports of cotton and minerals, the mainstays of the Mexican export economy. However, the great majority of Mexicans continued

to live under intolerable conditions as the country's agriculture was largely connected to cash crops, forcing Mexico to become a net importer of corn and beans, the main staples of the Mexican diet. Díaz ignored the Indians, a large segment of the population, most of which had lost their traditional lands to Mexicans of European descent and had been forced into slavery.

Hostility towards the government intensified as most of the citizenry was excluded from political participation, thereby stifling opposition to the undemocratic practices of the Díaz Regime. By 1907 the economy was in ruins, a situation further exacerbated when the United States cut off credit to Mexico, resulting in the closing of mines and the raising of prices for food and clothing to exorbitant levels. There were major internal regional uprisings led by such leaders as Emiliano Zapata and Pancho Villa which ultimately plunged the country into Revolution by 1911 when Díaz was forced from office. Hostilities were to continue for another decade as the economy was destroyed and the country ravaged with casualties totalling almost one million people. A struggle for power ensued which culminated in the presidency of Venustiano Carranza who re-established control over the Mexican government by 1917. New legislation was quickly passed to limit the presidency to one term, a law still in effect to this day. Primary education responsibilities were removed from the Church and the right to exploit water and mineral resources was restricted to Mexican nationals. Labor reforms as well as plans to equitably redistribute land were enacted. However violence persisted as Zapata and Carranza were subsequently killed during the continuing violent national struggle. A new president, General Alvaro Obregón, was elected in 1920, finally bringing the Mexican Revolution to an end.

The economy recovered when foreign investment returned and oil was discovered, making Mexico one of the world's largest oil producers. Plutarco Elias Calles became president in 1924, ruling through puppets for a decade in a drive to establish a national ruling party which could institutionalize his political control. His successor, Lázaro Cárdenas, was to become the greatest hero of Mexico's modern history as he undertook the major land reforms stipulated by the social goals of the Revolution, organized a national labor union, raised minimum wages, nationalized the railways, and in 1938, nationalized the oil industry under PEMEX, a public corporation. During his six-year term as president, Cárdenas redistributed more than 10 percent of Mexico's entire territory that included some of the finest agricultural land in the country [See Table 2.10].

Cárdenas was a man of the people who spent much of his term visiting small villages and travelling frequently to all regions of the country. The people saw him as one of their own, a leader who had stood up against the oil companies and the power of the United States as well as the leader responsible for crushing the power of the large estate owners by distributing land to the poor. The large majority of the Mexican population began to share in the redistribution of Mexico's wealth. Cárdenas reorganized the Mexican Revolutionary Party (PMR), changing its name to the Party of the Institutionalized Revolution (PRI), making it truly representative of the people, and it has continued to be the country's ruling party to this day. He popularized the presidency, elevating the office to a degree of legitimacy not seen before in Mexico's history.

After the regime of Cárdenas, succeeding presidents focused their attention and efforts on rapid economic growth, much to the detriment of

economic justice, as the distributive trends of the Cárdenas regime soon reversed themselves. His successor, Avila Camacho (1940-1946), was the last military man to serve as president, and ironically the one who disbanded the military arm of the PMR, serving to end military influence on government and policy. He was succeeded by Miguel Alemán (1946-1952), the first civilian president, and the first to allow new political parties to form. Díaz Ordaz (1964-70) was the last president to have held prior elective office as well as the last to come from outside Mexico City. His administration eventually soured under massive demonstrations from students, in which he dispatched government troops who attacked and killed several hundred of them, imprisoning many others.

The succeeding four presidents were all from the federal district: Luis Echeverría (1970-76) was the first to devalue the peso, introduce family planning, and prompt Mexico to take an activist role in world affairs, diverged from United States policy; López Portillo (1976-1982) expropriated Mexico's private banks, after a crisis of confidence and corruption plagued his government; Miguel de la Madrid (1982-1988) led his country during an unpopular six-year austerity program which increased unemployment and poverty as he faced the consequences of a \$100 billion foreign debt; and Carlos Salinas de Gortari who took over in 1988, the first modern president to take office under a question of legitimacy, clouded by charges of election fraud. During the election campaign, he promised to fight corruption and integrate the population into the political system, and also called for a North American Free Trade Agreement.

The Political Structure

Mexican politics and the institutional structures they formed are the products of its history. The role of the president is paramount as he must respect the principles of the Revolution, uphold the national honor and endeavor to realize the country's highest aspirations. For over sixty years, the Mexican system has been one of stability as the principles of the Revolution and the legitimacy of the ruling party have converged in carrying out ideals which have become nationally institutionalized.

The most distinctive feature of the president's limitation of power is the one prohibiting his re-election after one six-year term. This provision as modified by Mexico's tumultuous history is designed to prevent dictators who would extend their mandates indefinitely. The dominance of the official party has been the result of its broad appeal among most of the population, as its corporatist organizational structure encompasses labor, agrarian, and popular interests. The labor sector is comprised of most of the country's unions, and the agrarian sector consists of the ejidos or landholding units which were established under various reforms emanating from the Cárdenas period. Popular interests are those originating from the country's growing middle class, and consist of government workers and members from white-collar organizations, as well as new expanding urban interests as they are popularized. Within the framework of the party, each segment gets an allotment of a specified number of offices in local, state, and national politics. Thus a system of institutional bargaining and compromise is aggregated into the policy process.

In principle, these groups have a voice in candidate selection and policy formation, but in practice, the president gets to choose his own people and eventually his successor. He designates some elected officials who in turn select those below them, co-opting them into the political hierarchy. As for opposition in the electoral sense, there has been some allowance made recently for representation of opposition parties, but in reality, effective opposition is still not truly tolerated. Since 1940, no presidential election has really been contested. Within the bureaucracy, personal gain has been the primary motivation of those in the administration, a factor which has led to anti-democratic and corruptive practices, an area pinpointed for change by Carlos Salinas. Each president tries to distinguish himself by making his own mark on Mexican history, indicating a real change from the previous administration. It is the president's prerogative to assess the current political picture, and then take necessary steps in consequence of that assessment. Thus López Portillo ended his regime by nationalizing the banks, a move that will give him his place in history, and revise the assessments that many analysts had during the loss-of-confidence crisis of his administration. We shall see if Carlos Salinas can end his regime by ridding the bureaucracy of the corruptive practices that have so characterized the Mexican political system.

Mexico's political system is authoritarian, as democratic elements are paid lip service to preserve the status quo. Individual freedoms exist as long as they do not take on an organizational nature that would challenge the government. Dissent, when allowed, is carefully monitored and controlled. Efforts are made to achieve progressive economic and social goals, but the plight of the lower classes has not improved much as corruption and privilege continue as a way of life. However, political stability has been maintained, as

Mexico is the only major Latin American country not to have had a military coup since WWII. Every president since 1934 has survived the full duration of his six-year term.

Mexico's regularized leadership change has come to promote diversity by offering new opportunities to aspiring elites. Present problems are always blamed on outgoing leaders, as the entire government leadership steps down, culminating in a new administrative renewal that hopefully encompasses real policy changes. Most senior officials retire with their leadership, and the same pattern prevails at state and local levels as the practice of "no re-election" has become the established norm. Thus circulation of elites occurs at upper levels of the bureaucracy as well as throughout the entire system of elective offices. It is estimated that every six-year change in the presidential administration brings on a turnover of 18,000 elective offices and more than 25,000 appointive posts [Hansen: 178]. Thus successful politicians climb to the top of the political pyramid and then step down to make room for those below them. It should also be stated that an increasing number of people are co-opted into the political system for the sole reason that they are talented, assuring a broadening of political support which drains opposition parties and popular reform movements of potential new recruits.

As for the labor sector, when their leaders climbed the socio-economic ladder along with the mestizo elites, they were co-opted, softening much of their commitment to the goals of the Revolution. In addition, many industrialists contributed to the financing of these leaders' lavish life styles, guaranteeing them immunity from labor disputes [Hansen: 197].

As for the Indians, the psychological impact of the conquest and its accompanying destruction of Indian society, has been a major contribution to their passive acceptance of a subordinate position in Mexican society. Over four hundred years of racial oppression has left its mark. Those Indians who live mainly in small rural areas have kept many of their ancient customs and languages, which has disadvantaged them when they have been forced to leave their communities for the cities.

Looking at political freedom, the concept falls somewhat short of that practised by the democratic countries of the West. The Mexican regime will respond repressively when threatened as it did to student protests in 1968. As for elite interests, the regime will bargain and compromise to bring various groups into the policy process for reasons of legitimizing support. As for those at the bottom of the income scale, the system has only assumed limited responsibility, as most resources have been left for the privileged.

The Economic Structure

Throughout the colonial period, mining was the center of Mexico's economic life and the engine of its internal economic growth. Existing agriculture was expanded to service the booming mining centers, leading to its increasing commercialization. Large haciendas (plantations) were established that supplied foodstuffs and processed ore from the mines, made bricks, milled grains, cured hides, and initiated light manufacturing activities, functioning as self-contained units to service surrounding mining hubs.

The Porfiriato encouraged the further expansion of agriculture for exporting Mexico's cash crops through railway networks that connected to gulf

ports and accessed to the United States. Regional markets were also linked by the railways, helping to create an integrated national domestic market. During this period, the centralization of economic and political power converged in Mexico City. Mining's share of export value began to taper off at the end of the nineteenth century as investment shifted to large-scale units of industrial production and mechanization of agriculture, financed mainly by foreign interests. This economic process continued through to the post WW II period, in which agriculture became the leading sector of the Mexican economy.

During the mid 1950s, agricultural production levelled off rather suddenly as economic growth shifted towards heavy industry. This came as a result of strong state expansion in the economy motivated by a policy of rapid industrialization and import substitution. Inadequate state investment in the rural sector had induced a sharp decline in agricultural efficiency.

Between 1960 and 1990, agricultural export earnings rose at a much smaller rate than other sectors of the economy [See Table 2.12] in spite of a rise in the economically active population involved in it [See Table 2.11]. This coincided with a period of maximum population growth rate of over 3 percent per year during the 1970s, as the agricultural sector was unable to keep pace with rising urban demand. Production of maize, beans, and wheat all slumped drastically as the harvested areas for these crops contracted in favor of feed grains. In addition, the vast gap in productivity between U.S. maize producers and the Mexican peasant made it cheaper for the government to import these staples rather than buy them on the domestic market.

The government also used grain and other food imports to hold down domestic food prices, which contributed to agricultural sector contraction as well as serving to keep wages low on the farm, a factor that appeared to bolster the prosperity of the cities. This urban privilege eventually pushed rural peasants

off their land as they migrated to the urban labor market in search of employment.

As for the large commercial farm enterprises, investment by owners declined and was diverted to more lucrative areas such as commerce and urban construction. Correspondingly, the state had reduced rural investment and credit programs and land reform came to a virtual halt.

The reforms of the last decade by the de la Madrid and Salinas administrations have led to continued growth in the Maquiladoras and other areas of manufacturing activity, as that sector has almost doubled between 1980 and 1990 in its economically active participants [See Table 2.11]. As to GDP, manufacturing and commercial enterprises now comprise half of Mexico's economic activity [See Table 2.6]. As we shall subsequently see, Mexico must put new efforts into improving its agricultural sector if it is to reduce its reliance on foreign imports. A strong rise in harvested crop yields is needed to alleviate Mexico's current agricultural crisis.

The Class Structure

The Revolutionary period was a class confrontation between the peasants who joined with the working class against the large landowners and industrialists who sought to maintain and protect their status quo. The new constitution vested ultimate authority in the "nation" whose sole representative was the executive power of the state symbolized by the president. Strong executive power exercised by past leaders like Juárez and Díaz had become the law of the land and had legitimized the power of the state to govern and control the country.

The Revolution initiated a state-labor alliance begun by Calles and Obregón and extended by Cárdenas when he recognized labor's right to strike. He wanted to divert class struggle relationships into safe channels under state regulation and encouraged workers, peasants, public employees, small enterprise owners, teachers, and others to bargain with the state and affiliate with the national political party, yet keeping these groups separate from each other while granting them legal recognition. Cárdenas thus consolidated the institutional corporate structure of the state by allying with labor, subscribing to a politics of the masses that granted them controlled concessions when necessary.

From 1940, there was strong state support for capitalist development as it merged with domestic and foreign capital to industrialize the nation. Strong economic growth depended on cheap labor which the state enforced through strict labor discipline, thereby accentuating class cleavages between workers and owners. The state became the ultimate arbiter among the various classes, granting modest concessions to popular movements to tie these organizations to its tutelage. It thus became an important agent of class formation and transformation. [Cockcroft: 187]

It was the indigenous commercial-industrial group whose origins can be traced to the Díaz period that have evolved to become the elite in contemporary Mexican society. When Díaz came to power, they already possessed the capital, the initiative, and the experience needed to govern, manage, and industrialize, requiring political stability and the assurance of a profit-oriented private sector to develop the nation. Many in this group were descendants of the colonial aristocracy that had owned the large plantations and other commercial and mining enterprises prevalent in the colonial economy. They linked up with the emerging political elite as most of them were

friends and relatives of the successful revolutionary politicians and generals, and further increased their early sources of wealth through highly profitable government contracts.

Mexico's upper class today has a largely urban orientation as only a small percentage still remains at the rural level. Today's urban elite governs the nation, runs its commercial and industrial enterprises, leads its financial community, and manages the top administrative functions of government, business, and finance.

In rural areas, the landowning elite lives off both state subsidies and the cheap labor of the peasants. He is a landlord and leads the agro-commercial sector which is linked to urban-based finance capital. The agro-industrial elite, on the other hand, is not a landlord but derives his wealth from ownership of the mills and food-processing plants, also benefitting from the cheap labor of those he employs.

The lower rural class is composed mostly of landless peasants who engage in seasonal low-paid labor. Those who have small land plots can supplement their meagre wages with agricultural produce as they cannot survive otherwise. The most worse off are the Indians, especially those who do not speak Spanish as most do not attend schools and are virtually excluded from national political participation. Women are also exploited as they are mostly unpaid for the household tasks, care of garden plots, and handicrafts they produce.

As the agricultural sector declined bringing waves of peasants to the cities, they provided the surplus labor force necessary for the growth of industrialization, commerce, and the service industries. Wages remained depressed and helped produce the economic surplus for the capital

accumulation required by the domestic and foreign monopoly interests that extracted the surplus value of their labor.

In the cities, the lower classes consist of salaried workers who work long hours at high work intensity, for low wages insufficient to maintain a household. Families require multiple wage earners to survive under these circumstances. Many of these workers are underemployed and undergo long periods of unemployment. They often move in and out of agrarian, industrial, and service work, migrating frequently to other areas in search of employment. Cockcroft designates them as the arm of capital accumulation [236].

As for the intermediate classes, they have gained their status by means of industrial production, commerce, and finance. They consist of medium-size manufacturers, professionals, business people, shopkeepers and merchants, bankers, government bureaucrats, white-collar workers, military officers, and local political leaders. This group constitutes the popular sector of the official government political party.

Most of the rural intermediate class feeds on rural misery at the lower levels of production and exchange. They own the smaller farms and production facilities and benefit from the cheap labor of the peasants. They have access to credit and have been able to rise above a mere subsistence level, some of them becoming leading regional merchants in the process.

Another segment of the intermediate class in rural areas are those who hold administrative positions in the higher ranks of the rural bureaucracy. They are the local decision makers and have usually attained these positions by appointments from within the political system.

Finally, the proportion of national population in each class structure can be estimated by examining statistics of family income distribution. This would put the current size of the lower class at about 65 percent, the upper class at

approximately 10 percent, with the remainder falling somewhere in the middle [Agenda Estadística 1990, INEGI]. This division has changed little since the 1950s and 1960s [Cockcroft: Table 10; 188].

Development Policy

From the period leading to Independence in 1810 to the presidency of Porfirio Díaz in 1876, Mexico was a country of economic stagnation. The destructiveness of the struggle for Independence had destroyed much of the mining and agricultural activity that had contributed to the colonial economy. The fifty years following Independence saw more than fifty governments who were unsuccessful at establishing any coherent development policy. The wars with the French and Americans were also disruptive factors contributing to the crippling of the economy, and inducing capital flight in major proportions. Nor was the turmoil conducive to attracting foreign investment, nor was it a climate to stimulate domestic savings.

Internally, the inadequacy of the road and railway network could not sustain national industry to any degree, as the country was fragmented into thousands of small isolated communities. There was also a lack of necessary infrastructure to elicit internal improvements, as a system of corruption pervaded at local, regional, and federal bureaucracy levels. The use of office for personal enrichment has been the norm since colonial times, when offices were purchased and sold to the highest bidder. As for the tax system, it was inadequate, as the external debt was far beyond the capacity of the government to repay it. Revenues were dependent on a transaction tax which discouraged internal production for commercial gain, giving a strong

advantage to imported products and the elites who controlled their internal distribution.

Mexico's modern economic growth originated in the substantial foreign investments that were made during the Díaz dictatorship (1876-80; 1884-1911). His regime brought the stability necessary to attract the capital necessary to build roads and railways which tied the country together, securing the peace that enhanced the federal government's ability to transform its own domestic periphery. Internal markets were integrated into the national economy and into the world market, providing Mexico with substantial earnings for its exports. Under the Díaz government, internal free trade was achieved and transport costs were slashed as the national transportation system expanded. It cost a textile manufacturer \$61. per ton to ship cotton goods from Mexico City to Querétaro in 1877; by 1910 the cost had been reduced to only \$3. per ton [Hansen: 19].

By the turn of the century, real growth slackened as wages failed to keep pace with rising prices, affecting internal consumption patterns. There was an increasing concentration of land ownership among a select few, who exploited the labor force by securing the peasants to the large estates in a form of debt bondage. Loans were advanced by the hacienda store for the purpose of tying the peasant to the hacienda, guaranteeing a cheap supply of labor which due to seasonal demand, was held captive and generally underemployed. Agricultural production declined as a result, and the Díaz regime was forced to import large amounts of corn and wheat during the last decade of his rule, leading to a populace that was hungry and discontented. With the overthrow of Díaz, the country went through a violent Revolution which brought extensive destruction on the country. The social and political upheaval

combined with the world-wide depression of the period to almost reverse the growth process itself.

The ultimate effects of the Revolution reshaped the Mexican social structure and provided the access and opportunities for social mobility and indigenous entrepreneurs that led to the post - 1940 commodities boom. The land reform program of the Cárdenas regime managed to significantly alter the structure of Mexican land tenure, integrating many of those formerly excluded into the nation's economic life. Land reform also stabilized the peasants on the receiving end, giving rising expectations to those who also hoped to benefit. The Revolution combined to remove an economically nonproductive elite, by redistributing some wealth and ending antiquated patterns of nonproductive investment. There was also a new socio-economic mobility for the lower and middle classes, which encouraged a new stability and led to renewed saving and investments.

Rapid growth during the 1950s and 1960s, however, came at the hands of the upper quarter of Mexican society, returning the country to an even more inequitable income distribution than had existed before the Cárdenas years. Union activity became tightly controlled and agrarian reform slowed to a trickle. It was the culmination of mestizo and elite power that viewed politics as a means to personal wealth and enrichment at the expense of the masses. Government policies were invariably designed to concentrate rewards at the top of the income scale, as little was done to eradicate the poverty at the bottom.

The State and the Public Sector

To understand the state's impact on the nation, it is important to look at the three stages in the evolution of the Mexican state since the Revolution. It was the Cárdenas administration (1934-40) that shifted much of Mexico's production away from neocolonial forms to that of a mixed economy, where public and private forces cooperated to expand the national economy. It was a nationalist-populist state that encouraged capital formation and accumulation, created the first parastate firms, and nationalized foreign capital for internal development. A nationalist industrial bourgeoisie was encouraged by the state through government financing of new industries, as bureaucratic efforts were directed to important priority sectors. Cárdenas sought to legitimize state power by redistributing land to the peasants, and by enforcing existing labor laws that gave workers the right to unionize, as well as earn a decent living wage. Thus broad segments of society became wholly integrated into the national political process.

From the 1940s through to the 1970s, the nationalist-populist objective was reoriented toward a capitalist-rentier state [Cypher 1990: 11]. This involved the growth of a merchant capitalist class and landowning, banking, and industrial elites who appropriated a portion of what was being produced in the form of economic rents and unequal exchange.

From 1940-1967, the public sector in Mexico ranged from 30 to 52 percent of all gross fixed capital formation [Hansen: 43; Table 3-4]. This had a strong influence on Mexico's economic growth as it transformed national priorities. The government owned the petroleum and electric power industries,

the railways and railway equipment factories, major steel and fertilizer plants, as well as many of the major banks and financial institutions. It also had significant interests in petrochemicals, aviation, motion pictures, newsprint, and mineral exploitation [Hansen: 44]. As for infrastructure expenditures, over half went to crucial investments in mechanized agriculture for vast irrigation networks and the expansion of rural road systems and electrical power distribution to service those efforts.

During this capitalist-rentier period, state labor policy was one of keeping wages low and the supply of workers plentiful. Peasants were reduced to a near-starvation existence as they were forced to sell their staple crops at near or even below the cost of production. As a result, the industrial work force was subsidized by way of cheap food produced by the peasantry.

The exemptions from tariffs on the import of capital goods and accelerated depletion allowances, created an industrial sector that suffered from excess manufacturing capacity due to over investment in low-cost imported capital goods. This policy failed to absorb much of the labor force that was released from the agricultural sector as agriculture became increasingly mechanized. A corresponding policy of very low taxes on capital, commerce, and landholding, forced the state to borrow from international financial markets as it lacked the necessary capital to continue its designated rapid growth development strategy.

When commodity prices collapsed in the early 1950s, state direction intensified and accelerated the importation of foreign capital to continue rapid growth objectives. This growth model culminated with the oil boom bust of

1981, when Mexico's foreign debt reached \$100 billion, and foreign financing could no longer be expected to continue without fundamental structural change.

From the presidency of Miguel de la Madrid Hurtado in 1982 to the present time, there evolved a neoliberal state whose primary function has become that of a watch-dog. No longer the main precipitator of industrial projects and the standard-bearer of economic priorities and nationalist sentiment, the role of the Mexican state has been redefined as it has privatized or disbanded 80 percent of its parastate firms [See Table 2.9]. Foreign investment is now welcomed to participate directly in the economy, with a growing emphasis on the expanding Maquiladora sector. Today, the function of the Mexican state is continuing to evolve in the Western mold, ensuring that standard competitive rules are followed, as property rights and the sanctity of contracts are being more rigidly enforced. This has laid the foundation for luring more direct foreign investment, which has become more at ease since Mexico joined GATT in 1986. Active state intervention in the market place has all but been abandoned, along with former internal market priorities and import substitution-industrialization, policies repudiated by such international lending agencies as the World Bank.

Industrialization Review

Mexico is one of several countries in Latin America which adopted a policy of import-substitution industrialization during the 1940s. By the late 1950s, an elaborate system of import licensing had been put into place which served to protect domestic production from foreign competition. This served to

guarantee the domestic market for the Mexican entrepreneur. Substantial tax concessions were given to industrialists in sectors considered crucial for the development of manufacturing in Mexico. Duties on imported raw materials and machinery needed for manufacturing were rebated, as subsidies and reduced rates of interest were administered for such enterprise. In short, import substitution sought to manipulate the external balance of trade so that the national economy could be independent of the rest of the world [Harris: 1986 :118].

Another significant element which stimulated industrialization was the inflationary financing policy of the Mexican government. It instituted high annual price increases to finance public sector programs by way of inflation rather than by direct taxation, serving to assure capital formation and accumulation for its growing entrepreneurial elite. During the period between 1940 and 1970, the rate of economic growth often exceeded 6 percent, a figure exceeding many of the world's most successful economies. Those employed in agriculture dwindled from two-thirds of the work force in 1940, to little more than one-third by 1970 [Nacional Financiera "Statistics on the Mexican Economy, 1977]. The creation of the Central Bank in 1925, the National Development Bank (NAFINSA) in 1934, and the nationalization of the railroads and the oil industry during the 1930's, was indicative of the policy of a political elite committed to creating a strong public sector. Parastate enterprises were to play a crucial role in the economy, and lay the groundwork for an accompanying supporting infrastructure, as private investment complimented state industrialization objectives.

Over time, the government improved transportation networks to facilitate the internal movement of goods throughout the country to shipping points on its two coasts. This integrated the national market and provided the nation with the means to expand its agricultural and industrial capacity. Investment in irrigation systems and the regulatory instruments necessary to facilitate imports of capital goods required for industrialization, were other measures along with selected protective tariffs that stimulated these sectors. But the encouragement given to industry to use capital intensive technologies when Mexico had a huge labor surplus is a policy that has increasingly come under question. Since 1970, the Maquiladoras have had a major impact on the external sector of the economy and have provided almost half a million jobs for Mexican workers [See Table 1:2]. It is a program that has been a primary objective in propelling Mexico's drive for industrialization. In the following section, this particular feature of Mexico's development strategy will be analyzed in detail.

III. INDUSTRIAL IMPACT OF THE PROGRAM

Objectives

Export industrialization financed by foreign investment and the use of advancing technology became a favored Third World strategy for economic and social development following WWI. From the political imperialism of the capitalist centres to their subsequent economic control over nations of the periphery, global capitalism was able to expand through its multinational corporations who adapted their development processes to fit the new realities of the Third World. As we have seen in Mexico, import substitution was responsible for causing excessive import growth, resulting in balance of payments deficits and an internal widening of national social formations.

The East Asian NICS (New Industrializing Countries) on the other hand, pursued a strategy of not only substituting imports, but in promoting manufactured exports for the purpose of earning the necessary foreign exchange to finance their industrial and infrastructural growth. From the 1950s onwards, multinational corporations began to split production processes not only by way of the division of labor on a particular factory floor, but in a geographic sense whereby a product could be assembled in numerous plants located across different countries. This was the result of the domination of capital over labor on a global scale [Frobel et al: 1980], in which the operations of multinational firms initiated overseas production of manufactured exports for their domestic markets.

Manufactured products requiring the assembly of standard parts in a series of simple easily-divided operations, became the object of labor intensive manufacturing in countries that had large pools of cheap labor. These countries permitted unrestricted access to foreign capital and had the political stability necessary to accommodate such operations. In the case of Mexico which insisted that these companies be jointly owned with its own nationals, this strategy also guaranteed protection against nationalization or expropriation.

There was an additional aspect to offshore manufacturing which enabled multinational corporations to maximize profits to their great advantage. This was the practice of 'transfer pricing' in which artificial prices were placed on the exported goods to maximize the profits of these multinational corporations, thereby escaping corporate taxation in their own countries. This prompted many host countries like Mexico to cooperate by establishing export processing zones within their respective boundaries. This involved the storing of manufacturing equipment and materials in bonded warehouses until needed, free of duty and exempt from other import and export controls, until operations were ready to proceed.

Thus, if a company operating in Mexico imported 100 percent of its raw materials and components and exported 100 percent of the end product, there were no sales in Mexico and consequently no corporate income tax. The amount of municipal and state taxes payable was usually negotiated at the local and state level. Reduced labor costs became the main advantage for locating these plants in Third World countries who were motivated by the number of jobs created and the foreign currency earned. Goods assembled abroad with American components could then re-enter the United States with duty

applicable on only the value added, which consisted in inexpensive labor in combination with low overhead and production costs. Entry for these goods came under items 806/807 of the United States Tariff Act [See Appendix I], and were the chief motivating factor in stimulating the growth of plants along Mexico's northern border, with its low transportation costs to the United States being an additional attractive incentive.

This network of Mexican factories along the border was first identified as "in-bond" plants or Maquiladoras as they are known in Spanish, the word for "toll taker". In colonial times, the maquila was the portion of flour kept by the miller after grinding the corn. To apply the concept in contemporary terms, American companies provide the corn or materials, and Mexico keeps its portion of wages earned before the finished product is shipped back to the United States [Sklair:10].

Antecedents of Mexico's Border Industrialization Program

With the signing of the Treaty of Guadalupe-Hidalgo in 1848 following the Mexican-American War, a new border existed between the two countries. With the exception of the boundary traced by the course of the Rio Grande, the separation of the two nations west of Texas was not clearly defined. The creation and development of a Zona Libre began shortly after this period, comprising of a strip between the two countries that extended for 1,833 miles from the Gulf of Mexico to the Pacific Coast, being 12.5 miles in width [Fernández: 77].

The border area brought on a clash between two economic systems, characterized by the American free market version of the capitalist mode of production, contrasting with highly protectionist Mexico which had high import taxes and a variety of levies against internal trade that discouraged domestic consumption, making most goods more expensive on their side [Fernández: 76-77]. The Zona Libre became a haven for American commercial interests that benefitted from the absence of tariffs, much to the detriment of independent development by Mexico on its part. In the eyes of many United States officials, the Zona Libre became the focalization for smuggling, banditry, and border violence that was to plague the area, becoming the central issue in relations between the two countries for much of the last quarter of the nineteenth century.

Foreign investment had been quite substantial in Mexico during the regime of Porfirio Díaz, continuing after Mexican Independence. As a consequence of the 1929 depression and the loss of tourists to border areas due to repeal of United States prohibition in 1933, the Mexican government tried to encourage its own industrialization in 1934 by extending the Zona Libre to parts of its territory adjacent to California and Arizona. In 1942, the Mexican Labor or Bracero Program was created to regulate the transfer of Mexican agricultural workers to Southwestern United States, a program which was unilaterally terminated by the United States in December of 1964 due to growing undocumented migrant and tax application abuses. Suddenly, 200,000 braceros found themselves unemployed, many of them settled in border towns unable to absorb their large numbers into local economies.

For American agribusiness, Mexicans had been the perfect migrants. Irrigation of the American Southwest had allowed the reclamation of millions of acres of previously arid and unproductive land that required the use of intensive labor. The Mexicans showed up for the harvest and went home in the off-season as their homelands were close. They were available in large numbers, and were at the mercy of immigration authorities when they became unwanted. They did not require education or special training, as the cost of their rearing was borne by their home country [Fernández: 99]. Mexican workers performed an essential function of being a large reserve of cheap labor for American industry and agriculture. Most had migrated to the border region from the interior looking for work, having sold their possessions in the process to pay for the cost of the travel northward. When the bracero program ended, many had been gone from their original villages for long periods of time, and were stranded with little to return to. As for the urban centres along both sides of the border, they had never developed the productive industrial capacity needed to support the large population living there.

After WWII, many American multinational firms began large-scale exporting of components and raw materials for assembly into finished products for the United States market from Taiwan, Singapore, and Hong Kong. Mexico sought similar occupational and investment opportunities conditions for its citizens, believing that such a strategy could energize a strong response in its northern region. During the early part of 1966, Octaviano Campos Salas, Minister of Industry and Commerce, travelled through the Far East to observe the assembly operations of American firms in those countries. He concluded that Mexico was in a privileged position to compete in the international market, as a source of highly trainable unskilled and semiskilled labor [Wall Street Journal, May

25, 1966]. Fernández-Kelly [1983:28] substantiated these conclusions by reporting various studies which demonstrated that Mexican workers yielded between 10 to 15 percent higher productivity as compared to those performing similar operations in the United States, with less absenteeism and employee turnover comparing favorably as well. There was also found to be a willingness among Mexicans to do shift work on a six-day basis, working conditions unheard of in the United States.

Looking at Northern Mexico as the region first selected for Maquiladora development, it had always had a rivalry and a remoteness with Central Mexico. Its isolation was based on a lack of efficient transportation and other communication links with the national economy. When the railroads were built, landless peasants displaced by the Revolution travelled northward in droves to seek wage-earning jobs available in the border labor economy.

The "Norteños" had always been a powerful component in the Mexican federation, providing leaders like Carranza and Villa during the 1910 Revolution, as well as supplying much of the armaments and fighting personnel necessary for its eventual success. The Revolution had climaxed the military triumph of the North over the Centre, whose latter Indian origins contrasted sharply with the more Caucasian heritage of the North, in which the United States played a strong role in defining regional attitudes. The Norteños had few real roots and little cultural ties with the Centre, who viewed Norteños as having been corrupted by American culture, lifestyle, and a free wheeling economy [Williams: 1990]. The successive leftist governments of Mexico City, especially that of Echeverría during the 1970's, when he expropriated some 405,000 hectares of land in Durango and Sinaloa on his last day of office [Teichman: 53], alienated

the Norteños to the point where a racial bias developed as manifested on signs of "Chilangos Go Home", seen on walls and automobile bumper stickers in Northern communities [Williams: 1990]. This crude reference to citizens of Mexico City and the surrounding federal district, has led to a disruption of national and interregional harmony, fuelled by the continued migration of southerners to border regions in search of employment.

The Objectives and Administration of the Maquiladora Program

The Maquiladora Program was designed to simplify foreign investment, particularly for American companies who wanted to exploit the logistic advantages of the United States- Mexico border region. Between 1970 and 1987, total American imports increased from \$40 billion to \$400 billion, but imports during the same period under Tariffs 806/807 increased thirty-four times that much, from about \$2 billion to over \$68 billion, representing 17 percent of total American imports [Sklair:11]. Thus production sharing with other countries constitutes a significant portion of American manufactured imports and the trend is expected to continue growing [see Table 1.4].

Originally, the Mexican federal government administered the program but there has since been significant decentralization, giving state and local governments greater autonomy in their relations with the Maquiladora industry. Many local communities have developed organizations devoted to industrial development and to the Maquiladora industry in particular. The border is presented as an alternative to Asia with reduced transportation costs, more expedient customs transactions, as well as contributing to a better integration of complimentary activities performed by twin plants on both sides of the border.

Fernández-Kelly [1983:29] cites the example of the Antonio J. Bermudez Industrial Park in Ciudad Juárez, which promotes the advantages of an American manager utilizing American schools, hospitals, clubs, and climate, while residing in El Paso and supervising a foreign plant across the border. The proximity of Mexico is said to enrich the cultural and educational experience of his family, providing international shopping facilities as well as a plentiful supply of domestic services if needed.³

The twin plant concept was developed to accommodate United States processing in Mexico. The procedure was to set up two plants, one on each side of the border. Products were initially processed by the American plant, then sent on to its subsidiary in Mexico for assembly, finally being returned to the United States for 'finishing'. The plant on the American side was much smaller, being there primarily to fulfil stipulations of the tariff schedule that goods be finished in the United States.⁴

The Mexican government has facilitated such procedures by encouraging local municipalities to handle import clearances, and has limited its customs inspections to spot checks. Bonding has been made easier by permitting firms to post an annual bond, and the disposal of industrial wastes was changed in 1973 to enable processing by Mexican institutions [Fernández-Kelly:32]. However, what started out as clear territorially defined areas of economic zones, has been transformed to a program for stimulating development throughout the entire country. In spite of local criticism that Maquiladoras are a threat to Mexican national industry, the whole country with

³ Fernandez-Kelly refers to information published by the American Chamber of Commerce in El Paso entitled *Border Industrialization Program*. 1970 pp 75).

⁴ See Appendix I for Section 807 of the U.S. tariff regulations

the exception of Mexico City, is open to Maquiladora development, and as of December 1992, a North American Free Trade Agreement (NAFTA) has been signed among Canada, the United States, and Mexico, further extending the original boundaries and intentions of the Maquiladoras as a development strategy beyond the United States.

Looking at the border area, Herzog [1989:60] alludes to the fact that the international boundary is hardly logical in terms of ecology, culture, and history. With few exceptions, those cities called border towns defy economic location theory, owing their entire existence to the border line [Fernández: 4]. The evolution of the Maquiladora program has come as a result of economic, political, and cultural forces, acting horizontally along the border, but vertically through the regions affected by it [Sklair:25]. Although the United States-Mexican borderland regions operate through their respective local and state administrative structures, there are also many complimentary and interlocking social systems facing each other across the border.

There are basically five pairs of border cities in three regions: Tijuana and Mexicali facing San Diego and Calexico in the Californias; Ciudad Juárez in Chihuahua and El Paso in West Texas; and Reynosa and Matamoros in Tamaulipas facing Mc Allen and Brownsville in South Texas. These areas account for approximately three-quarters of total employment and number of plants. ⁵ [See Table 1.1, and Map on page 140].

⁵ The other Maquiladora sites are Nogales and Agua Prieta in Sonora; Ciudad Acuña and Piedras Negras in Coahuila, and Nuevo Laredo in Tamaulipas.

Before the arrival of the Maquiladora industry, American communities north of the border with the exception of San Diego, could not be described as being industrialized. On the Mexican side, most manufacturing output took place far away in Mexico City and its surrounding central region. There was some industrialization in such northern cities of Mexico as Monterrey and Torreón, but the borderlands to the north were backward when compared to those areas of the country that were industrialized.

As a result, it became the objective of the Mexican government to create a Border Industrialization Program (BIP) in 1965, to integrate the region with the rest of the country so that it would not be as dependent on supplies from the United States. In addition, a strong development program was needed to relieve the chronic unemployment of the area.

There had always existed widespread smuggling of goods from the United States to the borderlands and from there to the Mexican interior. The Maquiladora Program had been established with the intention of stemming this flow of goods, and for the retention of population to halt the large migrations of Mexicans to American border states which had taken place in the past. The main result of the Program's creation, however, was to open up even more areas of the Mexican frontier to an even greater profusion of American products, instead of stimulating local Mexican producers to ship North to their own borderlands.

After the termination of the bracero program, it was President López Mateos who established the Programa Nacional Fronterizo (PRONAF) with the intention of creating a strong industrial base along the border. Antonio J. Bermudez, a former Director General of PEMEX, was chosen to lead, develop, and implement it. His main objective was to coordinate government and

private enterprise for their mutual benefit, in spite of a highly protected domestic bourgeoisie and an export sector that was being increasingly dominated by foreign interests. Part of his strategy was to convince Mexican business of the fact that there were opportunities and profits to be made along the border. It was viewed as a question of national survival in which Mexico had to capture a larger portion of cross-border spending than it currently had, as well as bringing the border region economically closer to the rest of the country.

Tourism was and still is the main industry in most border towns but their most visual aspects can be quite deceiving. They represent a service oriented economy, devised to satisfy the foreign visitor. The souvenir shops, peddlers, restaurants, night clubs, car watchers, barber and beauty shops, gasoline stations, and store clerks, are the visible facade of the service economy [Fernández: 118]. Under PRONAF, new emphasis was redirected to attracting industry to industrial parks, initiating visibly appealing public work projects, and providing elaborate new shopping malls to attract tourists. Some border towns had gained nefarious reputations in the United States, much to the detriment of attracting and building a viable family tourist trade.

PRONAF was eventually replaced by the BIP as the funds made available to it were quite inadequate for the enormity of tasks needed to modernize and transform all the border towns. It had provided some infrastructure such as new buildings, paved roads, electrification, and water delivery systems. It was also successful in creating the framework within which the BIP was to organize itself. [Turn to Appendix II for the official translation of the BIP 1971 regulations].

There were numerous commissions established for border development between the Presidents of Mexico and the United States, but little progress ultimately resulted from these initiatives. The "Operation Intercept" program initiated by the Nixon administration to stop transborder drug trafficking was universally resented in Mexico, and eventually led to the discontinuation in 1970 of the many binational commissions formulated by the Johnson and Nixon administrations. It had been during the 1960s that various border city associations and other regional commissions had been formed by Chambers of Commerce on both sides of the border. These associations became more successful at lobbying their respective governments for material improvements along the border, creating the formal ties and cross-border contacts between border cities and state governments, and eventually growing to become influential economic and political organizations particularly concerned with the Maquiladora industry. By 1980, the Governors Southwest Border Regional Commission met in Ciudad Juárez, marking the beginning of cross-border diplomacy conducted by local rather than central government officials, being federally funded by the United States Commerce Department [Sklair:32].

In sum, there were many organizations formed on both sides of the border for the purpose of stimulating socioeconomic development of the area. On the Mexican side, consumers were encouraged to spend at home and merchants in the interior were encouraged with freight subsidies to supply the border market with products of their manufacture. It is not the intention of this thesis to go into all the intricacies and details of all the various programs that were introduced. Rather suffice it to say that Mexico developed various strategies for industrializing its border region, and encouraged local communities along that border to develop cross-border connections that would further that

development. Presidents like Echeverría held regular meetings in border towns to attract high-level personnel from Mexico City and encourage their contact with local elites. Lastly, there were numerous public work programs along the border that were initiated to improve highway and communications networks, build airstrips, and undertake sewage and drinking water projects.

In 1977 when Echeverría was succeeded by López Portillo, the inclusion of principle border towns in Mexico's industrial decentralization became a priority of his administration. Portillo established CODEF⁶ which operated as a coordinating agency for all the interdepartmental policies of his administration that might affect the border and other Free Trade Zones.

In August 1983, Miguel de la Madrid replaced CODEF and organized a new commission called SECOFI⁷ under the control of his Industry Minister Mauricio de Maria y Campos, who was to specifically implement the administration's border policy as outlined in the 1983-1988 National Development Plan. It was Campos who extended the Maquiladoras to the interior, permitting them to sell up to 40 percent of their production locally in the hope of utilizing idle plant capacity to national advantage.

Carlos Salinas de Gortari has initiated his own National Development Plan (1989-1994) in which he refers to the Maquiladoras as constituting the backbone of the manufacturing industry on both sides of the border between Mexico and the United States [Government of Mexico: Mexican Agenda 1991;

⁶ CODEF stands for "La Comisión Coordinadora del Programa Nacional de Desarrollo de la Franja Fronteriza y Zonas Libres del País" Translated this means "The Inter-Ministerial Commission for the Economic Development of the Northern Border Zone and Free Zones "

⁷ SECOFI stands for Secretaría de Comercio y Fomento Industrial

27]. He has recently accomplished his administration's major goal of entering a North American Free Trade Agreement which is hoped will bring even greater prosperity to Mexico's border region.

Industrial Impact of the Maquiladora Industry

Of countries participating in labor-intensive offshore manufacturing for the United States market, Mexico has become one of the largest contenders. By 1989, these plants provided the Mexican economy with over 462,000 jobs and \$2.9 billion in value added [See Tables 1.2, 1.8]. In 1965, there had been only 12 plants employing 3,000 workers; by 1975, the number of plants had risen to 454 employing 67,214 workers; by 1980, there were 620 plants employing 123,879 individuals; and finally by 1989, there were 1,773 plants of which 1,415 were in the frontier zone and 358 in the interior. As of August, 1992, there are 513,342 workers employed in 2,480 plants [See Table 1.2].

Looking at the United States side, thousands of American manufacturers employing over 100,000 workers, are involved in supplying parts and components to the Maquiladora plants. Tim Gilman [1989:13] arrived at these figures from a study conducted by Wharton Econometric Forecasting Associates for the United States Department of Labor in 1988 which analyzed the effects of the Maquiladora Program on the United States economy. The study concluded that the elimination of Mexico's Maquiladora program would result in increased American prices, lowered American industrial output, and reduced American employment. For these reasons, there is little doubt that the impact of Maquiladora operations will continue to increase especially when

NAFTA is eventually ratified by Parliament in Canada and the Congresses of the United States and Mexico.

Criticism and Evaluation of the BIP

Many critics in the United States, particularly organized labor, see the Maquiladora plants as competing for American jobs. They believe that unemployment in the United States has accentuated as a result of the transfer of manufacturing operations to other countries and see these plants in Mexico as a Trojan horse through which Japanese products enter the United States. However, many advocates of free trade insist that it is only low-paying and unskilled jobs that are being exported, and that the United States should concentrate on upgrading its own work force by encouraging more technically innovative employment for its citizens. Others maintain that the concentration of labor intensive operations in low wage countries helps keep American manufacturing industry competitive, thus saving American jobs. Since the Maquiladoras use mainly American components, even more jobs are saved than when American manufacturers go to the Far East for production sharing [Sklair:183].

In Mexico, critics have censured the program as a form of national economic servitude, undermining notions of economic autonomy and national sovereignty. They see foreign control over industry as leading to the transformation of the entire country into an export processing zone in the style of a giant Taiwan.

On the positive side, Maquiladoras have tended to keep many Mexicans in Mexico who would otherwise have crossed illegally into the United

States in search of work. The Maquiladora industry has not only offered jobs but also the precious dollars needed to repay at least the interest on Mexico's foreign debt.

Leslie Sklair [19-20] describes six dimensions along which the development success or failure of development zones can be measured. These are product linkages within the host country, the amount of foreign exchange retention, upgrading of local personnel, genuine technology transfer, favorable labor conditions, and the equitability of the distribution of costs and benefits among the local population.

The Mexican government has encouraged the Maquiladoras to trade among themselves to prevent existing triangulation whereby Maquiladoras sell semifinished products to parent firms in the United States, who in turn resell these same products to other Maquiladoras in Mexico. Unfortunately, the existence of the Maquiladoras has not resulted in any significant increase in consumption of raw materials and components, for the reason that internal mechanisms have not developed as desired. The consumption of Mexican parts by in-bond plants in 1976 amounted to only 3 percent of all inputs used by the Maquiladoras, decreasing even further to 1.5 percent in 1979 [Fernández-Kelly: 37]. Low quality, inadequate stocks, long delays, high prices, and low reliability, have been the major reasons given by Maquiladora plant managers for their reluctance to incorporate more Mexican parts into their manufacturing processes [Fernández-Kelly:40-41; Sklair: 198-202].

As for foreign exchange retention, some studies undertaken by the Border Trade Alliance (BTA) have suggested that Maquiladora workers were

spending more than half their wages in the United States [Sklaire: 204]. This may have been true during the early period of the Maquiladoras, but it is certainly not so today. Although there are definitely many food items and products that still remain cheaper on the American side of the border, it is doubtful that a worker earning only \$5. a day would have much left to spend in the United States after he has taken care of his essential necessities. The successive devaluations of the peso over the last decade has reduced Mexican purchasing power considerably [See Table 1.5]. Sklaire [205] suggests that the spending from those in the Maquiladora industry referred to by the BTA must come from higher-paid salaried personnel, which makes the extent of foreign exchange retention an uncertainty due to the difficulty of substantiating such data. There is also little doubt that wealthy Mexicans from the interior travel to border towns to make purchases of luxury articles in the United States, invalidating the Maquiladoras as the spending source for BTA data.

In general revenues, the Mexican government does retain a significant portion of foreign exchange in taxes paid by local companies and workers in the border cities. At any rate, the current foreign exchange earned is not really sufficient to significantly affect the Mexican balance of payments deficit to any great degree.

As for upgrading of personnel, there has been a definite uplifting and acquisition of professional skills by Mexican nationals within the Maquiladora industry. The main indicator of the changing nature of jobs is signified by the proportion of the workforce in various industrial sectors [See Table 1.6]. These sectors are 12 in number [See Tables 1:7 , 1:8], and show the relative decline of the apparel trades and the growth of transport equipment and electrical and

electronic parts sectors. The resulting exposure of the workforce to new industries in which they are required to adapt to new techniques and skills has brought about an upgrading of personnel to supervisory and other technical positions [See Table 1:3].

Looking at technology transfer, however, this criterion cannot be satisfied within the current Maquiladora structure as most plants use intensive labor rather than place reliance on sophisticated new machinery or complex technical innovation. As the nature of most Maquiladora industries is labor intensive, it makes them highly vulnerable to international market fluctuations and changes in design and technology. Mexican firms will seek technical advice and direction from American consultants in order to produce cheaper goods that employ technologically inferior production methods. As a result, there is increasing technology relocation in the Maquiladora industry, as industrial production has become dependent on the importation of entire used automated plants, leading to the institutionalization of uneven technological development between the United States and Mexico [Fernández: 125]. As to technology anchorage, this is not found as most high technology tends to originate in high wage developed countries rather than in the low wage Maquiladoras [Sklair: 212].

Much has been written on labor conditions in the Maquiladoras and this will be discussed more fully in Part IV. Due to the continual devaluations of the peso during the last decade, many Maquiladora workers had difficulty earning a decent living wage [See Table 1:5]. However, this is fact of life all over Mexico and for that reason, the Maquiladoras cannot be accused of being any

different. Their net effect in terms of creating favorable labor conditions can therefore be assessed as being neutral.

As for distribution of benefits among the population, there is no question that there has been a multiplier effect reflected throughout the entire economy as a result of the Maquiladoras. Attorneys, customs workers, real estate agents, and other professionals, as well as those in the construction trades, have profited greatly. A new entrepreneurial bourgeoisie has sprung up around the Maquiladoras which includes bankers, accountants, contractors, and others, setting the foundation for the emergence of a border ruling class. However, one must keep this in perspective with the effects the Maquiladoras have had on the vast majority of the workforce, since the distribution of benefits has been inequitable. The expanded infrastructure in the border cities has not really kept pace with the growing population there, signifying that the benefits from redistribution of state revenues by the federal government is also inequitable.

It can thus be concluded that the Maquiladoras have only really benefitted a local elite in the border areas, but in doing so, have contributed to the country's industrial growth as a whole. The program has supplied a steady source of revenue in the form of taxes and payments to municipal, state, and federal governments, in addition to providing many benefits to Mexico City and its economic, bureaucratic, and political elites, fulfilling the interests of the country's power structure. It has also served to maintain political stability, contribute to national social programs, and provide employment to many who would not otherwise be employed. In this context, the Maquiladora program has been a success since without it, the border region would have remained

backward, offering little hope to its residents who would be almost entirely dependent on the tourist trade and on goods imported from the United States.. However, Mexico's objective in transforming the program into a strong instrument for national development, falls short of its original ambitions. The question that remains is whether the Mexican government should continue to encourage further expansion of these Maquiladora plants. In Part IV, the social effects of the program will be examined in detail, before moving on to Part V, which presents a more complete evaluation of alternative development strategies that should be considered to compliment the Maquiladora program.

IV. SOCIAL, ENVIRONMENTAL & CULTURAL EFFECTS

THE BORDER AREA

From the streets of Ciudad Juárez in Mexico, one can glance across the Rio Grande to downtown El Paso, Texas, and observe the contrast of bright modern buildings against the drab, decaying, surroundings of Juárez, where close to a million Mexicans live and work. Many live in cardboard shacks clustered in squatter's camps, devoid of the modern conveniences of light, heat, running water, and toilet facilities. There is often widespread disease brought on by piled-up garbage, open sewage discharge along unpaved dirt roads, and inadequate local health-care prevention programs. There is a marked absence of the modern sanitation facilities taken for granted by most citizens living in the United States or Canada.

For those who would venture crossing the border illegally, El Paso and points North offer a promise of higher wages, greater opportunity, better living and working conditions, and access to the American dream. At all hours, one can see people sitting along the edge of the narrow canal separating the two cities, waiting for a chance to cross over unobserved. Many are caught, detained, and deported, only to subsequently try again.

For the American executive commuting to Juárez from the affluent suburbs of El Paso, this Mexican city is a growing industrial complex symbolizing the largest concentration of Maquiladora firms in the country. Ciudad Juárez has consistently led other Mexican cities in the creation of jobs and number of plants involved in Maquiladora operations. Of the 156,000 persons employed in

those industries in 1982, more than 42,000 lived in Ciudad Juárez alone. By 1988, the figure of those living in Juárez and working in the Maquiladoras had risen to well over 100,000.

Looking at the population growth of Mexico as a whole, it has truly been explosive during the last half century. In 1940 there were 20 million inhabitants in that country and by 1975, the figure had grown to 60 million. Current population estimates for 1991 are 88 million and by the year 2000, the population of Mexico is expected to reach almost 105 million if current growth rates persist. The birth rate peaked at 3.7 percent per year in 1977 decreasing to a little over 2 percent by 1986, thanks to President Echeverría's national family planning program. The current rate is 1.8 percent and a goal of 1 percent is the targeted objective of the current government administration.

Mexico is a Third World Country which is struggling to modernize and has enormous mineral and petroleum resources awaiting development. With a total land area of 760,290 square miles, Mexico is larger than the six largest West European nations or the five largest American States combined, and is poised to join the world's big leagues in industrial growth.

The capital, Mexico City, is the largest urban metropolis in the world with a population estimated at over 20 million. As a result of the growing industrial pollution and decline of air quality over Mexico City, its largest industrial centre, the federal government has implemented measures which it hopes will relocate industry to other parts of the country under the development guidelines of its Maquiladora Program. The social effects of this transfer and the diversion of new industries to the interior will eventually transform the economic life of the

entire nation. Working conditions and other factors in the Maquiladoras have become a national focus of prime concern. For these reasons, it is important to be aware of the social, cultural, and environmental effects that the program has had on the border regions, and what changes should be made to improve it.

Work Force Characteristics ⁸

Focusing on Ciudad Juárez, the largest of the Maquiladora cities, social conditions are appalling as the government has failed to attend adequately to such critical needs as housing, sanitation, and public transportation. Many of those employed in the Maquiladora industry are females who are head of their households and have children, or are daughters supporting parents and siblings [Fernández-Kelly:52]. These families are often forced by poor economic conditions to live in barrios full of idle bums:

"The men stand at the street corners smoking pot, drinking, playing, and occasionally harassing pedestrians as they have no jobs" [Fernández-Kelly:48] ⁹

Looking at age distribution, almost half of the population in Juárez is 14 years or younger, 49 percent being in this age group [Fernández-Kelly: 48]. The median age of laborers in the electric/electronic industries is 20 years as

⁸ For a summary of the distribution of Maquiladora workers in Ciudad Juarez and Mexicali by manufacturing activity as discussed in this section, refer to Table 1.9.

⁹ Fernandez-Kelly quotes this from an interview with eighteen-year-old Rosario Rivera, a woman working for a Maquiladora plant in Juarez. After two years of marriage, she was deserted by her husband after the death of her child and now lives with her mother, a younger brother, and two aunts. The latter are also employed by a clothing Maquiladora, and have two children between them. They all live in a two-room adobe house, paying a monthly rent of U S \$60. Rivera works forty-eight hours for a six-day week, getting paid about \$ 43 of which she gives half to her mother

compared to 26 years in the needle trade, the latter requiring a higher level of skill [Fernández-Kelly: 50]. A similar study taken from the Mexicali area finds the age of electronics workers there to be 22.6 years with their counterparts in garment Maquiladoras averaging 27.9 years, findings which corroborate Juárez figures [Tiano: 83].

The ideal worker seen from the Maquiladora viewpoint is young, single, and childless, 57 percent of the sample taken fitting that category of daughters with parents and siblings. [Fernández-Kelly: 52]. The remainder are divorced, separated or widowed, and are employed in the apparel industry, having had practical experience as seamstresses. Tiano [b, 83] had similar findings in Mexicali in which 65 percent of electronics workers were single compared to 52 percent of those working in the garment trade.

While the average education level for Mexican workers is 3.8 years, Fernández-Kelly [52] found 55 percent of Maquiladora workers in Juárez had completed at least 6 years of schooling. In Tiano's Mexicali sample [b: 86], she found that the education level of workers in apparel firms averaged 5.2 years, while those in electronics firms was higher at 7.5 years. Because of better education and familiarity with an urban environment, these workers were more employable as they were easier to train within a shorter period of time. Maquiladoras prefer hiring local residents as recently arrived immigrants from the interior find it more difficult to adapt to the demanding work of assembly plants.

Looking at those employed in the electric/electronic assembly industries in Juárez, 60 percent had not held jobs prior to the one they currently

had, compared to less than 30 percent for those employed in the apparel industries [Fernández-Kelly: 53]. Tiano's findings [b:86] in Mexicali had similar figures of 44 percent for electronics workers and 25 percent for those employed in apparel firms. Of those from the garment trade, Fernández-Kelly [53] found that 36 percent of prior positions were held in the service sector as clerks, cashiers, salespersons, beauticians, and other office auxiliaries or secretaries. The remainder were composed of those who had worked as maids in either Juárez or El Paso, most of which had done so as illegal aliens who began work between the ages of 13 and 15.

The Maquiladora alternative thus becomes a highly desirable employment objective for most participants, although some loss of income may come as a result. This loss is compensated by guaranteed access to medical care for workers and their dependents, a benefit denied them in the United States where better occupations are accessible only to those who are highly trained and speak English.

Much of the initial employment in the Maquiladoras was dominated by females of which many headed their households. This situation was probably responsible for the origination of tensions related to the distribution of power and resource allocation between men and women living together under the same roof. As their roles change, most women seek greater participation in familial matters which invariably threaten the authority of fathers and husbands, resulting in the family fragmentation of households they lead [Fernández-Kelly: 55]. There should be some allowance made for the fact, however, that many female headed households were in existence before women worked in the Maquiladora industry. Tiano [a: 24,27] has also substantiated that in each of the

border states as in the nation as a whole, between 69 and 81 percent of the economically active female labor force was unmarried in 1970 [IX Censo de Población]. The absence of male support either through death, desertion, or work sought by travelling to the United States, has been a major factor motivating women to seek local employment. In other cases where the male works, women are forced to seek employment out of economic necessity to supplement the family income.

The average number of members per household for Ciudad Juárez in general is 5.3 compared to 7.0 for Maquiladora workers, suggesting that household size is an important variable for encouraging women to enter the labor force [Fernández-Kelly: 56]. Tiano [b: 88] reported similar findings in Mexicali where electronics workers' households averaged 6.3 members, while those of garment assemblers averaged 5.6 members, a slightly smaller distribution.¹⁰ Fernández-Kelly [57] divided this further, finding that 53 percent of Maquiladora workers were living in houses with one to three children 14 years old or younger, compared to 20 percent of households with four to seven children of the same age group. It was also found that 68 percent of young women combined their income with other household members to meet expenses.

In sum, as primary beneficiaries of Maquiladora employment, women have been transformed to becoming either the main providers or important supplemental contributors to their households. However, there is no evidence that the Maquiladora program has led to a disproportionately higher

¹⁰ Tiano did not record the average size of household members for Mexicali in general in her data. Her other findings are applicable as they seem to corroborate those of Fernandez-Kelly and are thus included.

level of female labor force participation along the border. Tiano [a; 25, 29] shows that women's average rates of economic activity are no higher there than in the nation generally. This leads one to conclude that the Maquiladora program has not really propelled women to a new category of workers employed by the Maquiladora labor force. The tendency to define all women as full-time wives and mothers is false and has little basis for application in reality. Nor has the Maquiladora program enhanced women's position relative to men compared to Mexico generally [Tiano: a; 30,32,35]. However, Ruiz and Tiano [235] conclude that the quality of Mexico's predominantly female labor force is such that it is unsurpassed by women in other export processing zones. For this reason, many multinational firms have been willing to stay on there rather than move to Southeast Asian countries where wages are lower and worker safeguards are even more minimal than those found in Mexico [Ruiz and Tiano: 235].

Looking at the residency of workers employed in the Juárez Maquiladoras, the majority had lived in that area for an average of 14 years, long before the BIP was in effect [Fernández-Kelly: 55]. However, many of them had not been born in Juárez, migrating there from other areas. For this reason it can be safely concluded that the Maquiladoras were not the main attraction that originally brought them to the border, accompanied by other family members. Only 8 percent came from a rural environment suggesting an urban-urban pull rather than a rural-urban migratory pattern [Fernández-Kelly: 59]. This is an important criteria for defining the hiring practices of Maquiladora personnel managers who seem to prefer employing urban workers for reasons of migratory stability and ease of training. It should also be mentioned that these policies are fairly universal among assembly industries world-wide [Tiano,b:85].

Many of the worker characteristics reported by Fernández-Kelly during the 1970's are changing since the government has encouraged a more diversified occupational structure for the Maquiladoras. The proportion of men in the industry has steadily risen during the 1980's to the point that by 1988, they constitute 35.8 percent of the work force, up from 22.7 percent in 1975 [Sklair: 167]. The reasons for this lies in the pronounced sexual division of labor that exists in many occupations. Very few men are employed in the needle trades and by the same token, very few women can be found working in machine shops or in the automotive trades. There is strong evidence to support the fact that the majority of young women who work in the assembly industries did so as one of their first experiences of paid employment as not much else was initially open to them [Sklair: 168].

The majority of Maquiladora assembly jobs are similar to those found elsewhere in other countries, in that much of the work is highly monotonous and tedious with limited advancement opportunities. Since the demand for such employment often exceeds the supply, these jobs are also low-paying. There has been much debate in the literature as to whether the Maquiladoras create male unemployment due to a demonstrated preference for hiring females. Current research has not found this to hold true and as stated previously, male employment in the Maquiladoras is rising substantially.

There is no doubt that the border cities have made it more attractive for Maquiladoras to set up there as a result of the large pool of unemployed women available in those areas. Women are employed in greater numbers than men as these companies are able to exploit them by paying them less in an atmosphere of stringent working conditions. It is thus a question of

economics rather than sexism, as Mexico had sex equality in wages long before the arrival of the Maquiladoras.

Inside the Maquiladora Plants

Looking for a job in the Maquiladora industry involves much more than searching the 'wanted' ads in the local newspaper. Most workers are part of an informal information network communicated by word of mouth among relatives, friends and acquaintances. Many assembly plants prefer hiring applicants recommended by employees who have already proven to be dependable and hard working, some firms even going so far as to establishing policy of not hiring outsiders. Fernández-Kelly [110] reports that such a policy was established at Electro Componentes de Mexico, a subsidiary of General Electric, who would only consider applicants who had been personally introduced to the manager. By resorting to such personal linkages, plant managers protect themselves from being infiltrated by union organizers and other potential troublemakers.

Many plant managers develop a watchful eye over their employees for the purpose of establishing a paternal bond. These linkages are often used to exert control, especially when there are demands to increase production. Others may use their position to make sexual advances insinuating that the job is at stake if the female employee does not submit. However, similar conditions are found all over the world and should not be seen as applying only to the Maquiladoras.

Looking at many of the physical attributes of the plants themselves, many are located in old, run-down buildings where workers are crowded into cramped quarters amidst a disorganized squalor of obsolete machinery in need of constant repair. This is not the case, however, in the larger Maquiladoras that are subsidiaries of Fortune 500 companies.

It is usually in the apparel plants that working conditions are at their worst. Workers are continuously intimidated to improve production by domineering supervisors nervously pacing the aisles. The resulting stress may motivate workers to skip lunch in order to improve output for fear of dismissal for unacceptable achievement. Fernández-Kelly [128-9] describes such situations where the expectations of other workers can become one of the most effective work incentives devised by factory management. For instance, cuffless sleeves cannot be attached to shirts or sewed without collars or pockets. Thus when one worker on the assembly line fails to keep pace with the others, the entire process is slowed and production goes down. The resulting tension between the slow unproductive worker and those who are anxious to maintain production quotas can quickly become hostile. In this way, labor relations become the inter-connection of efficiently performed individual activities, rather than a structured imposition of direction from above [Fernández-Kelly: 129].

It is interesting to note that on a different plane, Devon Peña [142] found that 56 percent of production workers offered promotional opportunities in assembly plants, rejected them for reasons that friendship ties might be endangered. Such personal linkages played a major role in the formation of informal shop networks which resisted company attempts to raise production quotas. Often the coordination of planned resistance among workers will take

place outside the factory where personal friendships develop and become most important to those participating [Devon:143].

As for formal organizing, few employees in small Maquiladoras are unionized. However, those Maquiladoras with large work forces have found that unionization can be an effective instrument in labor-management interactions, helping to maintain effective control over employees led by union leaders whose main concern is to generate more jobs. Many worker protests are not directed for the purpose of achieving higher wages, but are exercised to force firms to improve working conditions. Many employees see unions as corrupt organizations and it is for this reason that many are indifferent to being organized. The official unions affiliated with the Confederation of Mexican Workers (CTM) are considered to be mostly ineffectual.

In November 1989, leaders of an official union in Agua Prieta encouraged workers to strike as they had not been paid in five weeks. Once the strike began, workers learned that the union was in league with company owners who subsequently closed the company's doors and sold off the equipment, depriving workers of their wages. In other situations, according to Victor Clark Alfara who was head of the Binational Centre for Human Rights in Tijuana, workers who have tried to form independent unions have been fired, blacklisted, arrested, tortured, and even killed [Davidson].

Environmental and Safety Issues

There is great concern that Mexico is fast becoming a haven for industrial polluters who prefer to locate there rather than comply with the tougher

environmental laws of the United States and other more developed countries. This issue is a difficult one for business groups and environmental advocates to counter, since Mexico would never agree to extra-territorial enforcement of American and other international environmental standards. In the United States, many companies complain that their pollution control costs are far in excess of those operating in Mexico, where environmental standards are rarely enforced.

Looking at waste disposal conditions in Mexico, toxic-waste barrels which once contained cancer-causing chemicals, are innocently used by families in Nogales to collect rainwater [Davidson]. It is estimated that 16,000 tons of hazardous waste are discarded every day along the border, according to Homer Aridjis, President of Grupo de Los Cien, a Mexican environmental group [Eggertson: Montreal Gazette; September 6, 1991]. The Mexican government lacks the political will and the financial and personnel resources to properly enforce its own environmental laws. One third of these plants give no accounting of the nature and quantity of the wastes they generate, where they are stored, or how they are ultimately disposed, testified Aridjis last spring before a United States Senate sub-committee [Eggertson: September 6, 1991].

There was a particular incident reported by Eggertson in which Juárez children played with some of the green rock waste found at a local garbage dump. When the children became sick and disoriented from the rock fumes, authorities discovered they contained toluene, a chemical that can damage the central nervous system.

It is estimated that 40 percent of the Maquiladoras in Juárez simply dump their wastes down the drain into open sewage canals, as there are no

other available water treatment facilities. Some of the waste reaches rivers and ground water affecting drinking supplies for communities along both sides of the border. Tests of the Rio Grande and other rivers, canals, and sewers, have found ammonia, arsenic, copper, lead, mercury, and a variety of solvents in the water that were found in some cases to be one hundred times the limits for safe drinking water [Eggertson: September 6, 1991].

Inside the Maquiladora plants, workers are at risk, especially those carrying unborn children. It is unfortunate that both the United States and Mexico have refused to include environmental problems as subjects in trade negotiations. As for work standards, Mexico's labor laws are among the most progressive in the world but in practice, are widely ignored. On-the-job deaths in Mexico run at four times the United States average [Eggertson: Montreal Gazette; September 14, 1991]. When accidents occur mainly on account of negligence, the companies under Mexican law have no responsibility to provide compensation. Most workers are inadequately trained to handle hazardous equipment requiring that certain safety precautions be undertaken.

There has been some success since the Confederation of Border Workers has managed to implement some improvements in their factories such as supplying gloves, fans, safety equipment, clean rest rooms, and an end to verbal harassment by supervisors. However, these are isolated incidents as only 10 percent of the Maquiladora work force is organized as compared to 25 percent of all Mexican workers [Davidson].

The Cultural Effects

There are many nationals who are concerned with the cultural impact that the Maquiladoras have had on Mexican society. Although they represent more jobs for Mexico of which the majority are not of high quality, some are satisfied that they are a necessary evil in an underdeveloped society [Sklair: 228].

Some critics point out that Mexican pride is damaged by being a cheap source of labor for American industry. To some extent, there is agreement that much of the population working in the Maquiladoras is being economically exploited and forced to live under deplorable living conditions. Much of the literature complains of the social ills existing at the border and that alien values have crept into Mexican society, destroying the moral standards of the Mexican family. Again this must be put into proper perspective as many of the social ills that exist in border cities were there before the arrival of the Maquiladoras. Without the Maquiladora program, the area would undoubtedly be even worse off than before.

Improvements in the Maquiladora program are giving many Mexicans the expectation that progress will eventually result in a higher standard of living, and that regardless, they are able to remain in their own country. When the entire development process eventually succeeds, they can proudly acclaim that they did it themselves.

There is little evidence to suggest that on a broader perspective, Mexicans are reacting any differently than other nationals in responding to rapid

cultural and structural changes present in their society. Climbing unemployment is a social condition that exists universally and politicians are frantically seeking solutions to reduce the situation to more tolerable levels. The world is swiftly undergoing a restructuring of industrialization, urbanization, and bureaucratization, factors that demand greater skills and higher educational levels to meet a technologically changing world service economy. National culture must be modified with the innovation and foresight necessary to adjust to these changes. In that light, the effects of Maquiladora industrialization are no different in Mexico than they are in other parts of the developing world.

The Multinational Viewpoint

When multinational firms operate in underdeveloped countries, they tend to offer secondary jobs which are more or less transitory, poorly paid, and have few advancement opportunities. Most Maquiladoras are not really self-containing factories, but are rather branch departments belonging to large corporations that can be easily and quickly relocated should the need arise.

Large pools of cheap labor are an important factor in selecting the location of host countries. In Mexico, the Maquiladoras enlarge the existing labor supply by recruiting population sectors not previously employed, ultimately diminishing the bargaining capacity of the local working class. This gives capitalists a strong control over a large labor pool either incapable or uninterested in organizing demands for better wages and working conditions.

In Mexico, the apparel and electronics industries have little effect on American operations, which could not exist under similar conditions of low wages and inferior work atmosphere. The capital invested and start-up costs per worker in Mexico is substantially lower than that of the United States, as these industries lack the technical sophistication required for capital intensive heavy industries. Since the fragmentation of productive processes are easily separated from administrative and marketing functions, this facilitates the export of various stages of production abroad, while branches maintain links to the home office. Automation is not encouraged since it would require large capital outlays for operations that quickly become outdated. It is therefore concluded that it is the large capital costs incurred in new sophisticated machinery that has limited increased mechanization.

In sum, the Maquiladoras are subsidies of large parent firms in the United States that operate as subcontracted shops in order to take advantage of cheap labor and other export incentives granted by the Mexican government. Looking at Mexico's future development strategy, low wages cannot continue to be the sole feature of its economic relationship with the United States, as it is ultimately too humiliating and unproductive. The current ten-to-one wage differential is unacceptable over the long term. In Part V, Mexico's future development strategies will be evaluated. Possible solutions to its becoming a true and equal partner among the world's industrialized nations will be assessed.

V. ASSESSING DEVELOPMENT STRATEGIES

Mexico's Past Development Strategies

In Part II, the foundation of development policy was explained in the context of the position Mexico occupied as it emerged as an independent nation. Like most other Third World countries, it was the multinational corporations that first introduced methods of modern industrial production, integrating Mexico into the international capitalist system.

The dynamics of economic development in Mexico was determined by rapid growth with a minimum of direct foreign involvement. During the late 1960s, with financial assistance from the world banking community and various international development agencies, Mexico expanded its domestic economic institutions and structures. It pursued a strong nationalist orientation by courting indirect foreign investment, as the Mexican state channelled loans through the public sector for the purpose of expanding parastate enterprises and building needed domestic infrastructure. The ideals of the Revolution made it necessary for the state to lead in the process of industrialization, becoming the primary vehicle harnessed by the ruling elite to legitimize itself and the political system, in an ambience of severe domestic capital shortage available to finance growth. The direction taken was one of state investment in railways, communications networks, and electrification projects and in such heavy industries as steel, mining, and petroleum, in conjunction with a policy of high tariffs on imported consumer goods which served to promote domestic production. It was a system of import substitution financed by deepening budgetary deficits, forcing

regular currency devaluations that reduced the value of the peso from over twenty cents in 1948 to only eight cents in 1954.

Government policy also encouraged indirect foreign investment in priority manufacturing sectors which along with its extensive number of parastate corporations, induced a growing balance of payments deficit. Capital goods and equipment were needed to run the new factories which had been financed domestically by earnings derived from agricultural exports to the United States. By the late 1960s, rapid population growth coupled with a declining rural sector had reduced much of the surplus product available for export. The only alternative left available was to encourage increased foreign investment in the form of bank loans and international bond issues. There was also strong internal pressure by Mexico's growing economic elite to limit the competition represented by local subsidiaries of foreign multinational corporations.

It was during the late 1960s that the administration of Díaz Ordaz had launched Mexico on this course of heavy borrowing from foreign banks and international development agencies. The subsequent administration of Echeverría inherited the results of a thirty-year emphasis on import substitution that had caused chronic balance of payments deficits, a distorted domestic market, inefficient industries, reliance on imports of capital equipment, and highly inequitable national income distribution [Frieden: 416].

In order to satisfy increasing demands for social programs and state support for economic development, Echeverría considerably expanded the state's involvement in the economy by increasing foreign borrowing. His successor, López Portillo extended this borrowing even further when Mexico's oil

boom came into play. It was a pragmatic phenomenon undertaken to ensure rapid economic growth and further legitimize the regime. Since local businessmen were unable to raise the capital required to develop heavy industries which were either too politically sensitive or too unprofitable to be attractive to foreigners, the state was compelled to take the leading role. The international financial markets provided the means to embark on a path of indebted industrialization, drawing Mexico further into the international market system making it dependent on the core. To service its debt, Mexico had to sell its manufactured products to the industrialized countries often at uncompetitive prices, which forced the introduction and expansion of state subsidies.

The Choice of Development Strategies

There are many roads to development which ultimately depend upon specific policy choices that determine national economic strategy. The direction may be either an outward one which responds directly to international market forces, or it may be an inward one that serves to insulate the domestic economy from the international market. Import-substitution industrialization is an inward strategy that limits export capability by protecting the domestic market in selected sectors from international competition. As a result, the innovation necessary to constantly remain competitive slackens to result in cost-inefficient and market-deficient products that are often overpriced for overseas markets. Let us review various strategies government leaders might use to satisfy the need for imports while maintaining a semblance of fiscal responsibility.

The most simple method that can be employed is by deliberately slowing economic growth as Columbia did during the late 1970s, a strategy

which served to substantially halt the flow of imports, thereby reducing domestic demand for foreign currency.

Secondly, a country can increase its ability to pay for imports in three ways: intensify the value of exports through price increases; expand the quantity of its exports; or introduce the production of new non-traditional exports [Mares: 668]. The expansion of Mexico's winter exports of vegetables to the United States and Canada in the early 1970s served to increase the total value of its foreign earnings.

Finally, a country can finance greater outputs by encouraging foreign investment to locate there and build up equity as Mexico has done in the Maquiladoras, or it can undertake debt through loans and other debt instruments.

The encouragement of measures to satisfy growing imports and the undertaking of debt to force industrial growth cannot be viewed as a permanent solution to basic structural problems. A country may also exercise policy strategies dependent on dominant social coalition, state, and ideology approaches [Mares: 670].

In the dominant social coalition approach, various economic sectors join together to establish their economic priorities. Thus the banking and industrial sectors may join to initiate a shipbuilding facility with the support of government and labor unions, who cooperate for financial gain to establish this particular industry as a national priority.

The statist approach, in contrast, directs its resources to the nation as a whole, independent of particular societal interests. Brazil developed its aircraft industry as a measure of national priority to maintain military superiority over its neighbors, so as not to be dependent on Western technology and other supply restrictions. In this approach, societal influences have little determination on policy choices, leaving the state the latitude to develop its particular priorities.

In the third approach, the formulation of state policy is dependent on the ideology of government policy makers. A socialist government will not adopt a laissez-faire attitude in regards to its banking industry. It will have its own agenda as to regulation and formulation of monetary policy, legislating accordingly to suit its particular ideology and intentions.

In authoritarian Mexico, the state had the power to pursue statist objectives and its leaders continually chose import substitution as the preferred way to insulate the country from foreign influence. This strategy was initially supported by revenues generated from its tourism industry and through the export of agro-mineral commodities. It attempted to change economic policy through three presidents as it became clear that the inequitable distribution of wealth within the country was causing a growing marginalization and alienation of the majority of its people. To understand why the shift in strategy failed, it is necessary to examine policy changes attempted by those presidents which resulted in a continuing economic and political crisis.

Modern Mexican Development in Retrospect

Despite various measures of land reform both during and after the Cárdenas regime [See Table 2.10], wealth is more unevenly distributed in Mexico than in many other developing countries. From 1950 through 1983, the top 20 percent of income groups earned between 50 and 59 percent of national income, compared to a range of 3.29 to 5.6 percent for the lower 20 percent during the same period [Cypher: 79].¹¹

However the ideals of the Revolution have transmitted a belief among the majority of the public that social justice is still attainable within the bounds of the existing government system. The Revolution represented a xenophobic reaction to the foreign domination imposed over four centuries of history, instilling a strong desire for self-determination as a formative component of the national psyche [Mares: 675]. The attraction of import substitution satisfied nationalist aspirations, in its promise to insulate the domestic economy from international political events and commodity market fluctuations, circumstances which made many other countries vulnerable to the vagaries of the international economic system. Thus vulnerability became limited primarily to the import side of Mexico's domestic economy.

As for the ruling coalition presiding over Mexico, it had encompassed most social groups giving it the necessary legitimacy to ensure its popular acceptance. As Mexico was late industrializing [Gershenkron], the state took a leading role in developing the economy. The single term presidency gave the

¹¹ The source of Cypher's income distribution is taken from Instituto Nacional de Estadística, Geografía e Informática (INEGI), Estadísticas Históricas de México (Secretaría de Programación y Presupuesto (SPP), 1985), pp 233, INEGI, Encuesta Nacional de Ingreso-Gasto de los Hogares (Mexico SPP, 1986)

head of the government complete dominance over the policy process as Congress obediently did his bidding, and the judiciary followed his lead. Criticism of the president is never done in public as the office is the one most respected by all segments of Mexican society.

The emphasis on import substitution to encourage growth began around 1940 as heavy industry and foreign capital began to exercise dominance over development strategy. Alliances were formed among industrialists, businessmen, large landowners, banking interests, foreign investors, and the government bureaucracy. However by 1970, the importance of agriculture had declined to favor the urban industrial sector. The demand for foreign exchange skyrocketed along with the tremendous growth in the economy, but the current-account deficits of preceding years became a serious difficulty as agricultural exports continued their precipitous decline. There was a corresponding alienation of the middle class as their democratic aspirations continued to be frustrated, serving to increasingly alienate them from the political system. There were major labor strikes during the 1950s, student strikes in the 1960s, and repeated land occupations by peasants during this same turbulent period. Much of this dissent was suppressed by brutal military force, underscoring the growing failure of the established political system. The old tactics of ignore, co-opt, and repress of the Porfiriato era no longer worked.

President Luis Echeverría (1968-72) had sought to lead a populist coalition among Mexico's various social forces to include labor, peasants, the middle class, businessmen, and much of the national elite. Reforms initiated had hoped to distribute benefits across this alliance by providing higher wages and social welfare assistance, increased employment and export diversification,

accelerated land reform and investment in rural infrastructure, electoral and tax reforms, and Mexicanization of foreign firms.

Ultimately, the reforms failed as opposition grew when expectations were not met, new employment did not materialize, and the economy floundered. Development had been financed by unsustainable methods such as currency overvaluation, a reliance on heavy foreign borrowing, and manipulation of internal banking reserve requirements that permitted the Central Bank to utilize private savings for its own use. Echeverría's strategy of diversifying exports also failed due to the resulting protectionism and multiple exchange rates and subsidies that served to make the economy even more cumbersome and inefficient. There was a ten-fold expansion of parastate enterprises during this period, of which many provided services below cost [Mares: 682]. Meanwhile, capital flight became rampant as currency speculators challenged government efforts to support the peso, leading to its eventual devaluation. The country was in a severe economic crisis as the new President took over in 1976.

President López Portillo (1976-82) inherited an economy in ruins coupled with a political crisis that threatened the very stability of the country. He sought to make the economy more efficient and internationally competitive by seeking to diversify both agricultural and manufacturing exports. He subsidized basic foodstuffs and increased social welfare benefits, but in terms of real wages, the people were worse off than before. He did introduce major electoral reforms that broadened universal participation in the political system, going so far as to legalize the Communist Party. However, rather than stay on a course of mainstreaming the economy to increase international competitiveness, he returned to the old tenets of import substitution during his country's oil boom.

It was the international oil crisis of 1979 that was to substantially increase Mexico's petroleum revenues, sending the government on a new spending spree and returning it to the old policies of domestic market protection. Oil would pay for Mexico's development and open the door to market access and technology transfer, as well as finance the importation of basic foodstuffs, leaving the mainstreaming of the economy to another day. Unfortunately, oil prices began to fall in 1981, followed by lower prices for coffee, the country's second-largest foreign exchange earner. Other exports in manufactured goods also declined as world recession further contracted earnings from agricultural commodities as well. Import permits and increased tariffs were subsequently reestablished for non productive and luxury goods, completing the cycle leading back to the same problems that existed at the beginning of the Portillo presidency. World interest rates rose dramatically, capital flight accelerated again, currency controls were imposed, and the peso was devalued by 80 percent. In one of his last acts in office, López Portillo nationalized the nation's banks, an action which earned him broad national support.

Incoming president Miguel de la Madrid Hurtado attempted to return to a program of stabilization based on a diversification of exports when he took office in 1982. The oil boom had allowed Portillo to return to import substitution policies which was the direction that most Mexican leaders had always preferred. However, this made the economy more vulnerable to international circumstances over which Mexico had little control. The government had also overinvested in oil industry infrastructure as well as in such slow-growth sectors as petrochemicals, cement, and steel. The end result was a balance-of-payments crisis, rampant inflation, devaluation of the currency, and

a foreign debt that had risen to \$ 100 billion [See Table 2.3, 2.7, 2.8]. Both Echeverría and Portillo had limited the integration of Mexican industry into the international political economy by favoring rapid and inefficient growth through the expensive and unsustainable procedure of increasing the nation's foreign debt.

The Miguel de la Madrid presidency (1982-88) ushered in a period of glum austerity whereby Mexico became obligated to respond to the demands of the International Monetary Fund and the world banking community. It successfully restructured its foreign debt by extending payments over a longer period with lowered interest payments. Unlike his predecessors, de la Madrid could not resort to new foreign borrowing to finance economic expansion. Mexico had to live within its means as imports were slashed [See Table 2.9], and government expenditures reduced by decreasing the number of civil servants. Unprofitable parastate enterprises were closed or privatized [See Table 2.9], and government subsidies were all but eliminated. It was finally recognized that the economy could not recover by focusing almost exclusively on producing for a captive domestic market. The economy would have to become more export oriented and foreign investors would have to be encouraged and made to feel more welcome.

The decision to enter into the General Agreement on Tariffs and Trade (GATT) in 1986 best symbolized a government shift to a more open economy and liberal development strategy. There was also a move to end corruption and a commitment to fair elections, initiatives designed to restore public confidence in the PRI and the political system. However, these attempts failed as the old order continued unabated. Real efforts to eradicate corruption

turned out to be window-dressing, and the fair elections promised resulted in a string of victories for the main opposition party, the Partido de Accion Nacional [PAN], leading to a postponement of further reforms in that direction for the time being.

In the upcoming 1988 election, de la Madrid selected Carlos Salinas de Gortari, his planning and budget minister and the man most identified with his restructuring efforts, to become the PRI candidate for President. A dissident group within the PRI challenged the president's right to name his own successor, splitting from the party and demanding open elections and an end to economic austerity. The leader of this group, Cuauhtemoc Cárdenas, the son of Mexico's most popular president who had distributed land to the peasants during the 1930s, ran for president as head of his own party, the Democratic National Front (FDN). He received 33 percent of the vote according to the official government count but nonetheless claimed that he had defeated Salinas.

On another front, the Party for National Action (PAN) candidate, Manuel Clouthier, siphoned off additional former PRI support by calling for even greater liberalization of Mexico's economic and political system than de la Madrid, objecting to the outflow of capital for debt servicing. Both opposition candidates had called for a moratorium on the debt, claiming that the money should be used to expand social programs on behalf of the poor.

It was in an atmosphere of questionable election results and electoral fraud suspicion that Salinas de Gortari took over the presidency on December 1, 1988. His first commitment was to restore growth with price

stability, as he began renegotiating the foreign debt while attempting to bring down the rate of inflation. The former objective was accomplished by February 4, 1990, resulting .. a reduction of approximately \$20 billion in the total Mexican debt of a \$100 billion [See Tables 2.3, 2.8]. Import permits were replaced by tariffs, whose maximum rate was established at 20 percent, with an average prevailing rate of 10 percent. Reliance on oil shipments had been 75 percent of all Mexican exports in 1982, declining to only 33 percent by 1990 [See Table 2.1]

Salinas de Gortari proceeded to fulfil his campaign promise of eliminating corruption when he ordered the arrest of Joaquin Hernandez Gonzalez, the long time head of Mexico's most powerful Oil Worker's Union. It was a signal that union leaders would have to curb their corruptive practices and be more cooperative in complying with government modernization projects. It also meant that union leaders would have to decentralize their control over union affairs by tolerating greater pluralism within their ranks. The removal of this corrupt union leader and twenty-one of his henchmen, was also necessary to raise the productivity and efficiency of PEMEX, which generated approximately 40 percent of federal revenues. It was also a message that Mexico's political elites were responding to the growing pluralism of civil society by attempting to revitalize and renovate corporatist structures [Cornelius et al: 30].

New regulations were put in place to attract foreign investment by reducing the limitations on foreign property ownership, and intellectual property became protected by the new legislation. The parastate sector was cut from 1,155 to a little over 200 enterprises in 1992 [See Table 2.9], significantly contributing to reduction of the public deficit [See Tables 2.3, 2.8], one of the

principle sources of inflation [See Table 2.7]. The tax base was broadened which helped increase government revenues, a measure that should set Mexico on a course of fiscal responsibility.

It is too early to assess the total effects of the de Gortari presidency in improving Mexico's position in the world economy, and his efforts in ameliorating the living standards of his country's people. Imports have begun to rise in relation to exports during his administration [See Table 2.2]. However, as mentioned previously, it is hoped that the recently signed NAFTA agreement will further encourage direct foreign investment and improve economic conditions, as the Maquiladora program has been extended throughout the country. The only exception to that is Mexico City, where the government is actively encouraging industries to relocate to other areas. The focus is on decentralizing industry in the Capital in order to favor regional development, resulting in a less authoritative and cumbersome bureaucracy.

Achieving Agricultural Self-sufficiency

A major problem facing Mexico today is its huge external debt [See Tables 2.3, 2.8]. A good portion of its balance of payments problems lies with the fact that Mexico must import increasing amounts of food to feed its people. When developing countries must provide food for their people through imports, they are importing unemployment and marginalizing their own citizens [WCED: 129]. Although only one-third of Mexico's population still lives in rural areas, the roots of many of those living in cities remain in the countryside.

Mexico's Maquiladora export policy represents a significant change in new priorities put into effect during the last decade. Domestic industry is being restructured so that it can achieve international competitiveness. Unfortunately, marginalization has displaced and alienated many of those who had once contributed to the national economy, and the state has a responsibility to reintegrate these citizens into contemporary society by allowing them the opportunity to exercise their traditional occupational activities. Mexico's early industrialization was financed primarily by a rural sector that had achieved food self-sufficiency, much as a result of land redistribution under Cárdena [See Table 2.10]. Emphasizing this as a corresponding strategy with the Maquiladoras would further legitimize and strengthen the political system.

Mexico has had a dramatic population growth rate. There will be over 1 million new entrants seeking admission into the labor market during each of the next twenty years [Barkin 1990: 2]. Although the Maquiladoras currently employ a half million people, its expansion alone cannot solve the need for satisfying the employment aspirations of all these people. It is in the rural sector that the emphasis of new growth must be directed, helping to solve the lack of employment opportunities and the national food deficit problem at the same time, while integrating rural land dwellers into the national political and economic system.

The agricultural transformation of Mexico was one which came to favor commercial farmers at the expense of basic food producers. The production of food for the survival of low-wage workers was not as profitable as producing for the more affluent international markets. It was more advantageous to mechanize large farms, using fertilizers, pesticides, antibiotics,

and improved seeds and animal feeds to increase productivity and profitability. As a result, there was an increase in the volume and value of agricultural production, but little change in the size of the total area under cultivation.

There were three major effects of this government policy: permanent agricultural jobs were replaced by machinery; employees and migratory labor were substituted for independent workers; and the ability of agriculture to continue absorbing new workers was greatly reduced [Barkin 1990: 19]. There were enormous social and economic dislocations as a result, as displaced workers left for the cities to seek their livelihood.

The policy shift also prompted a displacement of basic grains such as maize, wheat, rice, and beans, four basic staples of the Mexican diet, to be supplanted by soybeans, alfalfa, sorghum, oats, and other products related to livestock production, which new land utilization favored over products related to satisfying human consumption. Other profitable crops expanded were coffee, cotton, and tobacco, cultivated mainly for export. This specialization ultimately reduced the share of basic food crops available for human consumption as the land area planted in the four basic foods declined from three quarters of the total at the beginning of the 1940s, to less than half by 1980 [Barkin 1990: 20]. This displacement of food crops for direct human consumption required the eventual importation of enormous quantities of food which accelerated rapidly after 1965. It was especially in maize, a labor intensive crop, that accounted for one-third of national import consumption during the early 1980s [ibid]. In sum, entrepreneurial farmers based their choice of crops on those most profitable for export, as well as those utilized in the production of meat and dairy products, to feed the country's growing wealthy and middle classes.

This pattern of agricultural growth without development is part of the modernization process that integrates a nation into the international market in spite of the internal consequences created. Wage labor replaces the small independent farmer, tractors displace their numbers, and processed foods replace home food production, encouraging a consumer-oriented domestic market. Community and family needs are ignored as are those of the nation over the long term. Real incomes decline in rural areas, leading to growing inequality and undernourishment among those most vulnerable, resulting in a tremendous waste and underemployment of large portions of the population, who are forced to move to the cities to further perpetuate the squalid conditions of growing slum communities. The wants of the wealthy minority have taken precedence over the needs of the poor majority, who suffer from malnutrition as a consequence of these short-sighted policies.

Environmental degradation is another phenomenon that has occurred due to agricultural modernization. Single crop production has resulted in their increased vulnerability to pest infestations and disease, leading to the use of toxic pesticides that contaminate the land and supporting water supplies. Ecological methods of ensuring soil fertility have been replaced by expensive fertilizers which also contribute to soil and water contamination. These factors have increased farmers' dependence on external inputs and credit, which have now proven to be uneconomic and unsustainable. Some marginal lands have been cleared to raise beef for export to be used as pet food or for fast-food hamburger chains. Encouragement for these policies has been promoted by such agencies as the World Bank, and tax incentives have been granted by the Mexican government in support of such activities. Rain-forests in the south have

been cleared to accommodate many of these projects, resulting in the land being despoiled and abandoned in only a few short years afterwards.

In the state of Chihuahua in Northern Mexico, there is a World Bank project that plans to harvest its 500 year old pines, representing 37 percent of Mexico's coniferous forests, as a plantation for the forest industry. The area is inhabited by five indigenous native groups who depend on the forest for their survival. The Texas Centre for Policy Studies released a study which stated that the economic benefits of this project would be of only short-term duration, and would have a severe impact on water drainage in the area, posing additional pollution problems for the entire Rio Grande Valley [Quintana: 1991]. If this project goes ahead, it will affect the sustenance of crop production along much of Mexico's Northern border. In seeking short-term solutions for earning essential export currency, the Government of Mexico has indicated a willingness to finance half the \$90 million cost of the project. Large short-term profits will be made by the large lumber companies and their intermediaries within the state apparatus, but the traditional habitat and way of life of those who have lived there for generations will be destroyed.

Until recently, the government has not followed sustenance-effective means of agricultural production, and the lack of standards enforcement has cultivated a tendency toward environmental decay throughout the entire country. The main preoccupation of policy has been to increase exports at whatever environmental cost. A new orientation toward a viable development strategy is mandatory, and must be based on mobilizing the country's own indigenous resources as well as utilizing its idle labor force. By revitalizing Mexico's rural economy, it is estimated that millions of new jobs would

be created permitting these workers to become consumers. It is estimated that the labor needed for increased maize production would require an additional 400,000 new workers, with even more needed at harvest time [Barkin 1990: 122]. However, low wages cannot continue to be a permanent feature of any new agricultural inroads, as small farmers begin to gain new importance in the economic life of the nation. Wages must be forced to rise by removing the barriers which prevent their ascent

There is some question as to why small plots tended by peasants should be encouraged when larger highly-mechanized farms have proven to be more efficient. As mentioned earlier, many small laborers are occupied in low-paying seasonal employment and require the agricultural produce derived from these plots to feed their families. As we shall subsequently see, these plots also maximize land use. In addition, they provide employment activity for millions of peasants who would not be employed otherwise. In countries like labor-rich Bangladesh, for example, it might be more efficient to commercialize most of the country's agriculture into large highly-mechanized farms. The result of this strategy, unfortunately, would leave millions of peasants with no employment at all and with few other alternatives. Occupying the citizenry in viable forms of employment thus becomes an end in itself for government strategists.

The Mexican government would also stimulate production of basic foodstuffs to supply domestic needs by diverting existing import subsidies. By allowing domestic grain prices to find their natural price level, monetary incentives would quickly mobilize new production and revive the rural economy, by making it more profitable for small farmers to increase production from their current subsistence levels. This would restore rural purchasing power and lead to

higher wages in urban areas as well. The result would be a large-scale redistribution of income by demand-driven economic growth that would strengthen the domestic market. National living standards would rise, government tax revenues would increase, and the deficit would subside as imports declined.

Rising grain prices and the resulting wage increases will likely exert inflationary pressures throughout the entire economy. However, the impact of the rise in food prices would affect poorest families least since grains are only a fraction of total household budgets [Barkin 1990: 120]. A program of assistance for the neediest would eventually be less costly than current subsidies that artificially keep grain prices low. The lowering of the government deficit would make foreign exchange more available and ultimately reduce inflationary pressures since deficit financing would become less necessary.

Looking at the irrigation districts which are situated primarily in Northern Mexico, hundreds of thousands of new jobs would be generated when these farmers switch from grains to more profitable agro-export crops such as fruit and vegetables which require considerably more labor than grains [Barkin 1990: 123]. The supply of new grains coming onto the market from small entrepreneurial producers would necessitate that switch. This trend is already evident as seen by Mexico's main agricultural exports in 1991 as shown in Table 2.13. Exports of fruits and vegetables have increased and it is estimated that households in poverty would be reduced from over 50 percent to about 37 percent as wages increase, suggesting that absolute poverty in Mexico would decline by 27 percent to 30 million people, a reduction of 11 million people now living below the poverty line [Barkin 1990: 124; 135]. In addition, there would be

less government bureaucracy required as a result of subsidy cuts. Every \$1 million of income received by small farmers would result in a total national increase in expenditures for goods and services of \$ 3.6 million, utilizing the Keynesian multiplier effect [Barkin 1990: 127-8]. But the greatest advantage to using this strategy is the return of the country to food self-sufficiency, and the restoration of social structures which will integrate millions into the national economy. This can be best accomplished by designing and implementing a new comprehensive agrarian reform program that will suit the needs of those who have been dispossessed. In addition, those who might otherwise seek temporary employment in the United States would find it more advantageous to remain at home with their families.

Implementing Agrarian Reform

Agrarian reform is synonymous with land reform but involves much more than simply redistributing land. The term 'agrarian' also implies that the state institutions directing the accompanying services, inputs, irrigation facilities, credit, and marketing assistance, be also redirected and reshaped when land is redistributed to new beneficiaries [Thiesenhusen: 7]. Agrarian reform thus becomes a process of social transformation in which land tenure and the benefits of economic growth are extended to a wider group of people that should include many of the poor.

To be effective and functional, agrarian reform should be massive, rapid, and firm, according to reformer Jacques Chonchol, a legislator who

helped draft Chile's Frei Agrarian Reform Law of 1967, subsequently becoming Minister of Agriculture during the Salvador Allende regime. Agrarian reform becomes necessary as landowning elites perpetuate their country's fundamental problems of inequality, poverty, and malnutrition, not wishing to voluntarily surrender any portion of their wealth and class privileges. When such reform succeeds, national food production increases as do incomes among the poor, creating a wider market for domestic goods. Social tensions are correspondingly eased as the aspirations of many of the discontented have been satisfied for the moment.

Looking at the standing of land tenure in Mexico over the past several decades, the mechanization of agricultural operations brought on by green revolution technology had drastically cut the need for a year-round labor force, as large enterprises required labor only during planting and harvesting. Many small plots were too small to provide sustenance to a family, leaving owners to seek wage work to supplement their incomes. This system of small peasant holdings was largely ignored by the reform process of the state, as the families who farmed these small plots had to produce within a capitalist system with little capital and few resources of their own, leading ultimately to their pauperization.

It has been shown in many studies that small properties are more agriculturally efficient than many of the large haciendas, as they maximize production yielded by their scarce resources, land, and capital [Thiesenhusen: 18]. In fact, small farms use more labor per hectare than do large farms as they press all arable land into production, extracting as many and as much crops as they possibly can. Larger farms that hire labor on the other hand, do not press

production beyond the point where the wage equals the marginal products of the last laborer hired [ibid: 19].

The origins of Mexico's agrarian reform may be traced to Articles 27 and 123 of the Mexican Constitution of 1917. During the Porfiriato, the Indian communities had been deprived of 90 percent of their holdings, as large landowners in the private sector expropriated Indian communal land, and then attached these newly landless peasants to it through various debts that were carried by subsequent generations. Article 27 was designed to meet the inequities of these peasant farmers, by declaring that all land was owned by the nation and could be transmitted to individuals, or expropriated if deemed necessary for public use.

It was Lázaro Cárdenas who first organized the peasantry and working class, incorporating their organizations into the official party. When increasing numbers of landless peasants demanded the land promised them by the Revolution, he created collective ejidos or communal village plots, that were essentially producer cooperatives. Smaller plots that could not be sold or mortgaged but could be inherited, were handed out to individuals. Cárdenas organized the ejidos as a state apparatus of political control as well as an organ of peasant representation, by creating a pyramidal mass organization along corporatist lines to represent the peasant sector of the party [Fox & Gordillo: 137-8]. In this way, Cárdenas strengthened the state by making the peasants dependent on it, eventually facilitating later state objectives of extracting the agricultural surplus produced [Powelson & Stock: 8-9].

Thus the state and the peasants were indispensable to each other and land reform became the issue that assured their joint political survival. It was for reasons of early state weakness, that the large haciendas could not have been expropriated once and for all in 1917, as the landed aristocracy had maintained much of its political power and was supported by the military establishment. Even after land had been later redistributed, peasants were subject to landowner violence and legal challenges to their title by bribed government officials. This fostered a peasant dependency on the apparatus of the state and secured their political loyalty [Powelson & Stock: 37].

Unfortunately, what little land reform was effectuated in Mexico following Cárdenas was modeled after the needs of the state rather than on those of the peasants. The state concentrated much of its resources on building an irrigation infrastructure in the Pacific Northwest, much to the deprivation of the remainder of the country. The reasons for this were political, as water was a resource that could be exchanged for political support [Powelson & Stock: 43]. It also permitted the government to gain effective control over agricultural production.

The National Ejido Credit Bank, in which the government was the majority shareholder, provided credit to farmers as well as the distribution network for harvested crops. It evolved to become an inefficient and corrupt agency which perpetuated continual peasant discontent, as the Bank made all decisions on capitalization, marketing, and credit in the ejidos. It also owned the processing plants, repair shops for farm machinery, and consumer cooperative stores, provided tools, seeds, and fertilizers, and interjected itself in farming decisions, activities that ranged far beyond its original scope. The government

had attempted to oversee almost all operations of the peasantry, requiring them to buy their inputs from, and sell their outputs to, official agencies at prescribed prices. For this reason, the ejidos never reached their full potential, as the extraction of their surplus value by the state restricted their freedom to buy and sell and kept them poor. Implementing a successful agrarian reform program is a most difficult process as it must satisfy such diverse goals as justice, equity, and growth. Often, key decisions in its implementation are made by inexperienced administrators who follow directives formulated on a hierarchical structure, without any consultation with those that the program is designed to help.

Another factor in limiting peasant options is that bureaucrats are not farmers and often interfere with the day-to-day decision making activities of the peasant. Since many peasants have lived a lifetime in their particular area, they are in a better position to know the soils, the irrigation potential, the cropping patterns, and the plant diseases and insect manifestations [Thiesenhusen: 497]. State technicians usually occupy a transitory position and cannot be counted on to offer the most rational and permanent solutions. For these reasons, peasants must be allowed to be their own advocates, and should not have modern methods or new crop varieties forced upon them that are unfamiliar and could prove to be unfitting or inadequate. It is only by integrating peasant cultures and utilizing locally time-proven agricultural methods that agrarian reform programs can succeed.

As for farming infrastructure, many peasants prefer group farming which heightens community solidarity and the sharing of resources; others are more partial to individual efforts. Reform policy should be flexible enough that it

can suit particular community preferences. There is no question that easier access to land titles would also bring greater order to the land market as well as form the basis of collateral for farm loans. A crop insurance scheme would also benefit peasant farmers during bad times. In sum, only a policy predicated on local self-management and democratic production, concerned with expanding employment opportunities for direct producers, will eventually provide for national food self-sufficiency and the upgrading of peasant incomes [Otera: 300].

Agricultural development can thus be defined as a process which increases the rural majority's influence over how the surplus it produces is generated and allocated [Fox & Gordillo: 135]. Current policies that favor exports and allocate most resources to the minority landowning elite only serve to reinforce social imbalances that currently exist. The decisions of which crops to grow in specific areas and how new policies should be administered is a subject for another thesis. The fact remains that agrarian reform is urgently needed, and eventually the government will have to address the problem.

Mobilizing the Labor Force

It was Karl Marx who distinguished between extensive and intensive forms of labor processes. In the extensive process, workers deploy a minimum number of tools and have low levels of technical training and competence. Profits are derived by paying these workers very low wages, as they generally work very long hours, and are often forced to speed up their rate of production. Few social benefits are available and unionization is either limited or prohibited. In the intensive labor process, technical change becomes manifested in

production procedures. As the workers develop better skills, wages rise and working conditions improve. National production facilities become more integrated as economic productivity becomes more efficient.

We have seen that extensive labor processes have been utilized in many of the Maquiladora firms, especially in textile operations employing women. In many of the new more technically innovative industries, the intensive process is being introduced as workers are learning new skills and are becoming better trained. National education levels have risen and will continue to rise, a national social policy that will result in Mexico developing a more sophisticated work-force.

Beyond the Maquiladora sector, there has been a build-up of Guadalajara, the country's second largest city situated 950 miles south of El Paso, as Mexico's version of California's Silicon Valley. Such American giant corporations as Wang Laboratories, IBM, and Hewlett-Packard, have set up facilities there. Other global giants such as RJR Nabisco, Goodyear, General Electric, Bayer, and Eastman Kodak, have located south of what was the originally designated Maquiladora area.

There are emerging automobile manufacturing centres such as Toluca, where Chrysler and General Motors have new plants, and in Hermosillo and Aguascalientes where Ford and Nissan have set up shop. Ford has already spent \$1 billion and will spend an additional \$700 million to double engine production, hoping to export 500,000 engines annually to North American markets within three years [Orme:15]. Nissan has also invested about \$1 billion, and hopes to ship a large portion of these automobiles back to Japan in view of favorable Mexican labor rates of \$ 2.50 per hour [Holstein]. In Puebla which

boasts the largest Volkswagen facility in the world, the company is preparing to supply all North America with automobiles manufactured there, in what is considered to be the most automated plant in the world.

There are some analysts that predict that once PEMEX receives new American capitalization, the American oil patch will stretch south from Texas, bringing about new development prosperity while at the same time, lessening American dependence on supplies from the Middle East. There are also events happening in reverse as Mexican corporations take over smaller U.S. companies. Monterrey-based Vitro and Cemex firms, the leading glass and cement companies in Mexico, have recently purchased their American competitors for the purpose of enlarging their share of the North American market [Orme: 18].

Unfortunately, most of the preceding examples involve large capital intensive firms that have highly automated operations. Although good exchange earners for the Mexican government, they are not the only solution to Mexico's major problem of finding work for its a large and abundant pool of unemployed and underemployed citizenry. More appropriate measures must be taken to integrate this idle capacity into the national work force.

Rebuilding the Rural Base

Two major problems that are raising concern in most Third World countries are mass unemployment and mass migration to large cities, symptoms of rural poverty and of urban overprivilege [P. Harrison: 140]. The emergence of a dual economy in which two different living patterns of rich and

poor have become as widely separated from each other as the North and South Poles.

Most development attention is presently focused on large urban centres, which ultimately destroys much of the economic structure of bypassed rural areas. These ignored regions deteriorate as mass unemployment and mass migration occurs, leaving only a shell of many communities that once were. The cities in turn, reach a point of stagnation under the impact of overcrowded conditions, growing poverty, inadequate public facilities, poor housing, and mounting social problems.

The beginning point of all developmental considerations is to relieve poverty and an enlightened approach would involve the entire population in alleviating that problem, rather than concentrating efforts on just the larger cities. The primary need becomes one of providing adequate income which can be best accomplished by establishing sufficient workplaces, thus maximizing work opportunities for the unemployed and underemployed. To some extent, the Maquiladoras tried to provide that opportunity but they were initially concentrated only along the United States border and there were not enough of them. Now that their locations have been extended, Mexico must now endeavor to create an accompanying extensive agro-industrial structure throughout rural and small town areas.

Workplaces should maximize employment opportunities for the many rather than concentrate on the greatest possible output per worker. It is more important to have everybody produce something, than having only a limited number of people producing a great deal [Schumacher: 164]. An

unemployed man can be a desperate one and when there is no alternative to the perpetuation of poverty, he is practically forced as a last resort to migrate to the city. Thus the provision of work opportunities in rural areas would have strong consequences in stemming migrant flow to the cities, thereby reducing urban social tensions in the process.

Primary production of raw materials is the origination of all economic life and most of this takes place in the countryside, as the cities are merely secondary producers [Schumacher: 192]. Employment becomes the prerequisite of all production, whether it be of an agricultural or industrial nature. The opportunity to work is one of the greatest of all human needs. Next to the family, it is work and the relationships established in the workplace that are the very foundation of any society. Even poorly paid work is better than idleness, because as a worker realizes that his time and labor are of value, he will be motivated to make it more valuable [Schumacher: 164]. Low paying jobs also attract inexperienced newcomers to industry, giving them the opportunity to acquire skills. Further education and vocational training thus become the primary instruments for furthering those goals which ultimately upgrade the quality of the work force.

For these reasons, there is a strong need to establish more small-scale, decentralized, labor intensive workplaces. Schumacher lists four propositions which can make them succeed: workplaces should be created in areas where people are currently living rather than in the cities which necessitates their migration; new workplaces should be economical enough to enable them to be created in large numbers without requiring large capital formation and inputs; production methods employed must be relatively simple,

lessening the demand for high skills in the production process and in matters of organization, financing, marketing, and raw materials supply; production should be composed of local materials for local use as much as possible [Schumacher: 165].

Schumacher explains that the regional or local approach to development should utilize what he calls an 'intermediate' technology. If we consider the pattern existing in many of the new manufacturing centres of Mexico, high-grade modern equipment in sparkling brand-new factories often operate below capacity because of a lack of organization, duplication of similar facilities found elsewhere, raw material supply shortages, and enough customers to fill demand. This dilemma originates in policy that determines the choice of industry, set by criteria such as raw materials availability, a plentiful labor pool, local market demand, and entrepreneurial interest. Conversely, the choice of technology to be used involves a completely different set of criteria once the choice of industry has been made [Schumacher: 168]. Thus the distinction between making a capital intensive or labor intensive choice does not treat the essence of the problem, as it can force decision makers to accept production-line systems that may be unalterable, inappropriate, or very costly.

For instance, a soap factory should not be designated to produce a luxury product for a limited national market using sophisticated manufacturing processes that require costly and highly refined imported constituents, while at the same time, similar local materials are being exported at low prices. A more simple manufacturing process can be built to accommodate workers who can be more easily trained and supervised within a less complex organization,

without having to resort to the purchase of expensive and complicated equipment.

In addition, it is much more economical to establish factories in rural areas than in large cities where land is less available and more expensive. Accompanying services are also easier to introduce and control in smaller areas, and provide needed infrastructure for growing communities. Each region or locality must develop an inner cohesion and identity possessing at least one town as its economic and cultural centre [Schumacher: 167].

The decision for establishing a new workplace should not be based on whether or not the products manufactured are suitable for export. Since the unemployed are not presently contributing to existing exports, the primary task becomes one of putting people to work to produce useful goods from local materials for local use. Simple products like brooms, mops, sandals, household cleaners, laundry detergents, and other large volume household products can be produced with relative ease. Much advanced technology can be simplified for lower scale production, as well as adapted to suit local circumstances such as the energy sources and raw materials available.

Most agricultural communities would be helped immensely if they could do much of the first stages of processing of their products. Freezing local produce and packaging it on the spot would save on expensive transportation costs and the higher wages paid for similar work done in the larger cities. Canning operations can also be successfully operated as well as dried fruit and nut roasting activities. The result would be more jobs for local regions and the development of a community pride in the end products produced.

Finally, public projects can help local communities energize themselves to build strong, cohesive, and thriving economic centres as new purchasing power and its multiplier effect spreads throughout the region. However, any new initiatives of this sort should be based on the indigenous production of additional wage goods or the new purchasing power acquired will flow into imports. By using local materials and local labor for manufacturing products for which there is local and even national demand, the need for expensive imports will be substantially reduced.

Encouraging Tertiary Activities

The significance of economic progress brought about by the increase in occupational distribution by those engaged in tertiary activities producing non-material output is significant. These activities include domestic services, transport, retail and wholesale distribution, entertainment, tourism, financial and government services, and education and vocational training activities.

As the rural economy expands, the increased activities of traders and shopkeepers will contribute to the growth of the economy and require considerable additional labor. Traders create new opportunities by providing new outlets for farm products, manufactures, and local handicrafts produced in small rural communities. At the same time, they acquaint their suppliers with new methods for improving efficiency as they encourage new wants, expand existing markets, and increase entrepreneurial opportunities for all concerned.

Traders set in motion and maintain the process by which participation in the exchange economy replaces subsistence production [Bauer: 3].

This participation in the economy involves capital formation and the increase of existing inventory, the creation of storage and workplace facilities, and the acquisition of new implements, tools, equipment, and transportation facilities. Bauer points out that this scenario is the exact opposite of that envisioned by the development literature of the 1950s and 1960s which considered new consumption as an obstruction to development since it was carried out at the expense of savings and investment. This view also ignored the fact that the acquisition of consumer goods required improved economic performance as farmers and others desiring these goods had to work longer and harder, often giving up much of their leisure time [Bauer: Note 5; 207].

Thus the maltreatment of traders and the suppression of trading activities of farmers who desired to expand production during the 1960s and 1970s in many of the developing countries of Africa, were contributory factors to economic stagnation and a reversion to subsistence production. Bauer [5] lists the examples of Ethiopia, Tanzania, Uganda, Zaire, and The Sahel as examples of countries who followed such policies.

Thus by encouraging trading activity by local cooperatives and helping them expand their horizons, the government can help propel and maintain the development of an exchange economy from a subsistence rural base. Trading activity advances the economy and is most important for the effective deployment of available resources, building distribution networks, and increasing employment opportunities.

Tourism is Mexico's second most important source of foreign currency after oil. In 1990, 6.4 million tourists visited the country, earning Mexico \$3.4 billion dollars [Mexican Agenda 1991: 45]. Mexican nationals spent some \$2 billion dollars abroad during the same year, resulting in a tourist balance surplus of \$1.4 billion dollars. Tourism also provided employment for close to two million people comprising about 9 percent of the total national labor force [ibid: 46]. The Salinas de Gortari administration plans to encourage construction of 50,000 new hotel rooms and increase the number of tourists to 10 million annually by 1994, expanding tourist earnings to \$5 billion dollars per year.

To do this, the government has deregulated the industry by permitting foreign investors to own more than 49 percent of an enterprise as was previously required. This has encouraged international hotel chains such as Marriott, Stouffer, Hyatt, Sheraton, Hilton, and others to develop tourist complexes throughout various areas of the country.

There should also be more vigorous efforts to create national preserves and protect natural and historic treasures, policies that would attract a greater diversity of tourists through their wider appeal. The Monarch Butterfly reserve near Morelia and the Duck Hunting preserves in the northeast in Tamaulipas and in the southwest at Lagos de Montebello are good examples of attractions which encourage groups with specific interests. The Grey Whale Reserve in the Sea of Cortés and the Giant Marine Turtle Reserve at Lázaro Cárdenas on the Pacific Coast are the beginning of other worthwhile measures that will attract vacationing ecology groups. More government efforts are required to preserve tropical rainforests and clean up Mexico's southeastern

coast where oil production has despoiled the area, devastating much of its shrimp fisheries in the process. PEMEX has destroyed the ecological reserve of some of the most important swamps in Mesoamerica, as the entire sensitive coastal lagoon system of the state of Tabasco has been despoiled.

Finally, increased tourism will heighten demand for local artisan crafts that are fashioned mostly by indigenous peoples. These would include jewelry manufactured with Mexican silver and decorated with local semi-precious stones such as opals, turquoise, and jade, along with other handcrafted products made with leather and clay. By also focusing development near areas which have historical significance and archaeological treasures, additional tourists would be attracted creating more jobs and bringing new revenues to these communities.

Maintaining the Environment

Preserving environment quality to assure safe and plentiful water supplies, clean air, and surroundings free from waste and pollution, is itself part of the improvement in general welfare that development attempts to achieve. There is no question that environmental damage can undermine a nation's future productivity. Soils and rivers that have been degraded, land that has been eroded or desertified, aquifers that have been depleted, and ecosystems that are destroyed to provide unsustainable jobs, can seriously jeopardize continuing future sustainable development.

Attacking poverty is essential for the success of any development strategy in order to bring lower income people into the economic life of the

nation. Environmental protection must become a strong priority of government as private companies have little incentive for curbing pollution as the future is compromised for today's profits. It is the poor who suffer most from the consequences of pollution and environmental degradation, as the large majority of them must depend on the land for their livelihood.

Sound development strategy would favor programs that empower and educate farmers and those living in small communities to act in their own long-term interests. By involving those at the local level, the people fulfill a participatory role in the improvement of their community. This focus would ameliorate the sustentation of soils and water supplies, increase the protection of forests and natural habitats, and improve air quality and reduce solid and hazardous wastes in their communities.

Controlling the growth of population through family planing programs has been a positive factor in the reduction of Mexico's birth rate. From a high of 3.1 percent during the 1960s and 1970s, the current rate is now 1.8 percent and still falling [World Development Report: Table 26; 269]. Thus the stress on natural resources, water supplies, and land use will eventually decline over the longer term.

The government in Mexico has already taken steps to decentralize economic activity away from the Capital, a policy that will invigorate many of the smaller centres and favor regional development at the state level. This represents a unique opportunity to diffuse growth and truly extend the participatory process of the regions within a strong national development strategy.

Eliminating subsidies for the use of oil and electricity, and ending policies that promote extensive use of fertilizers, pesticides, and irrigated water, will reduce harmful emissions and save water, putting everyone on an equal footing rather than benefitting vested interests and those who are politically influential. Logging and cattle ranching activities will also be affected and will hopefully encourage more effective management of pastures and forests.

Pesticide use has been actively encouraged in Mexico through the design of seed varieties and cultivation techniques that promoted export-oriented, large-scale production of such products as cotton and vegetables [Wright: 45]. In contrast, large scale commercial production of staple crops involves relatively little use of pesticides. There is widespread abuse of pesticides found among small peasant producers who accidentally poison themselves as they are eager for any promised solution that can increase production. Unfortunately, most of them lack the understanding needed to properly handle these hazardous chemicals [ibid: 45-6].

Mexican agrarian policy has created a strong dependence on chemical corporations, seed companies, agricultural lending institutions, and the agricultural and research establishment whose immediate interest is to promote the use of pesticides. Both private and governmental lending institutions in Mexico funded by international agencies, specify the kind and quantity of pesticides that must be applied to crops in order to qualify for production loans [Wright: 51]. This amounts to a pesticide and technology dependence that reinforces mono-crop systems, compelling the abandonment of traditional agricultural patterns. Pest species feed on single standing crops cultivated for most of the year which necessitates heavy pesticide use.

Government can also control environmental degradation by charging fees or taxes based on the abuse of emissions standards of vehicles, manufacturing plants, and other commercial activities such as mineral extraction and logging operations. Enforceable zoning laws should be introduced to preserve unique habitats such as tropical rainforests, wetlands, and ocean shorelines. This would recognize the polluter-pays principle adopted by the OECD in 1972 which states that the polluter should bear the cost of measures to reduce pollution decided upon by public authorities to ensure that the environment is in an acceptable state. Many businesses will argue that environmental measures will diminish competitiveness or lead to loss of jobs, but they have often overstated their case in the hope of minimizing government action. Preventative measures must be viewed as good business as it will eliminate the future cost of cleaning up.

Government will have to revise its traditional concepts of land use and cultivate a view of nature and the land similar to that of its indigenous peoples. These peoples see land ownership as vested in the community as a whole through its ancestral occupation and active production, and is thus embedded in the social relations that are fundamental to the understanding of their identity. The loss of much of the ecological expertise developed by indigenous farmers over thousands of years has been discarded by policy makers who have encouraged new methods without a proper assessment of this ancient knowledge which gave hundreds of corn varieties and other products to the world.

Grain crops like amaranth, which were once a staple food of the Aztecs, has only been recently cultivated experimentally [Tucker]. It is a plant which grows rapidly under conditions of bright sunlight, high temperatures, and

dry soil, making it an attractive crop that can survive in environments where other cereal crops fail. Amaranth's drought tolerance makes it ideal for much of Mexico's dry areas and is rich in protein and other important nutrients.

Guayule (pronounced wy-oo-lee), is a desert shrub native to north-central Mexico that will grow in arid regions. It produces a high-quality liquid latex almost identical to the latex sap of the rubber tree. These are but a few examples of crops that could be developed commercially which are unique and indigenous to Mexico, and could be of much greater benefit than cotton and other products that are widely available from many other parts of the world. There would be little competition in the market place and Mexico could exchange its technology for expertise in other areas.

There is also a realization that current policy of underpricing services and energy costs discourages investment on new and cleaner technologies. In agriculture, the practice of raising yields by increasing the use of chemicals and diverting more water for irrigation only compounds problems elsewhere. Conservation tillage and improved pest management programs are practical alternatives to subsidies for fertilizers and pesticides and will persuade farmers to act in their own interest to conserve the land. New techniques such as drip sprinkler systems use water more efficiently and will improve crop yields.

As for industrialization, developing countries like Mexico have a special advantage by being able to skip its most polluting stages. By drawing on advances in technology, they can favor the building of state-of-the-art plants that have low polluting practices with strict pollution controls. With adequate regulation, the government can make cleaner practices profitable and polluting

ones unprofitable, thus creating a strong commercial interest in safeguarding the environment.

Finally, village communities must regain the management responsibility over their own communal lands, as open-access resources usually benefit those who care little for their preservation and will abuse the resource until rendered useless. Thus group action rooted in the local community forms a more effective basis for rational resource management. In Mexico, the state has a responsibility to guarantee and more quickly issue land titles, giving farmers a incentive to invest and improve on their land when they are sure of its ownership.

Some communities have viewed ecological deterioration as a symptom of a much wider social crisis calling for drastic solutions. The municipality of San Juan Mixtepec in the southwestern state of Oaxaca was one in which the soil in the hillsides had been washed away, the volume of water in the rivers had decreased, and the forest cover was all but depleted. To increase maize and bean production for badly needed income, the peasants had abandoned traditional plot rotation, cut down the forest to expand their farming area, used chemical fertilizers and pesticides to increase crop yields and expanded their flocks of sheep and goats that grazed freely on communal land.

San Juan Mixtepec, which was a fertile area 40 years ago, became poor and dry with only 3.6 percent of its land left suitable for agriculture by the early 1980s [Blauert and Guidi: 284]. As a result, it led the country with one of the highest migration rates to the United States. Development policy had appeared to them as only increasing the structural inequalities between Indian peoples and the centres of decision making far away in Mexico City.

In September 1986, a group of concerned teachers and returned migrants were elected to the local municipal authority. Their purpose was to address environmental and production problems as well as regain those cultural aspects linked to their communal identity by combining traditional agriculture with simple, low-cost alternative technologies that could be adapted to local conditions [Blauert and Guidi: 284]. It was the farmers themselves who evaluated and chose the alternatives suitable to their particular situation. The project respected the Mixtepecos' own social organization, concentrating on indigenous concepts for reaching practical solutions. Native tree species were planted to reforest communal land but were combined with fruit trees to increase land productivity. The work was done through *tequio*, the traditional Indian form of collective labor.

Small nurseries were established as were other activities such as beekeeping and gardens for medicinal plants, tended mostly by women. This increased female participation in discussions and workshops, a process that seemed to enrich everyone's knowledge, strengthening the overall self-confidence of the community. An agricultural cooperative was set up successfully where previous efforts had failed, as duties had previously been assigned as individual responsibilities. Although the project's success was slow, it remained an independent entity with links to various governmental agencies, without being subordinate to any of them.

From the beginning, the project was evaluated and improved from the point of view of its appropriateness for the Mixtepecos themselves. The point to be made is that practical problems are sometimes better solved by increasing the opportunity for local people to make their own decisions in

matters that affect them directly. Control over local resources ensures not only environmental sustentation, but also puts political control and fashions economic development according to locally defined criteria [Blauert and Guidi: 287].

To ensure that development truly helps the poor, it must put them first not only as intended beneficiaries but as active participants, consultants, and leaders. True development must not just provide immediate relief for the needy but must enable them to fend for themselves by organizing to fight poverty and environmental decline, thus enabling them to generate income [Brown:149]. The traditional small-farm sector will have to transform itself to becoming a producer of agricultural surplus rather than a provider of surplus labor [Cockcroft:199].

VI.CONCLUSIONS

A strategy for modernization and development concerns people and those processes that improve quality of life. It must encompass the totality of human experience and not be simply limited to economic issues. True development strives to attain a more valued state for the general population whereas modernization implies an updating of institutions with little concern for traditional values as it seeks to impose Western methods and standards on less developed societies.

Industrialization has favored the capitalist market system to the great advantage of early industrializers. Later developers required more capital and often engaged in state intervention to build necessary infrastructure. Industrialization presupposed that development was an internal process whose primary goal was to increase national income. The state's role was to legitimize its political authority and direct necessary resources to that end, an operation made more difficult for Third World late developers who had to hurry their state building. Security often became the main focus of state attention and took precedence over secondary goals of development and participation.

Dependency theorists ignored internal structures affected by development, maintaining that it was the international capitalist system which exploited and subjugated Third World developing countries, making them economically dependent on the multinational corporations of the industrialized core countries. The Third World or periphery nations supplied the core with raw materials, furnishing them with the opportunity to extract economic

surplus. Many countries of the periphery responded by protecting their internal markets with high tariffs that favored import substitution. Ultimately, this strategy failed as it brought on a decrease in the value of agro-mineral exports relative to the value of imported manufactured goods. This culminated in an outflow of periphery capital to the core, which dependency theorists saw as subsidizing growth in the West. The low wages prevalent in the periphery distorted their domestic market, and led to the pauperization of rural areas and a corresponding mass migration to cities, perpetuating conditions of poverty, unemployment, and marginalization.

The consequences of this predicament epitomized a world system of unequal exchange as capital could cross international borders to capitalize on lower production costs, enabling the transfer of profits to increase the economic wealth of the core, further impoverishing the periphery where unemployment, social inequalities, and conditions of poverty became even more pronounced.

These two competing views of modernization and dependency are inadequate paradigms for analyzing the reality of Third World development. One paradigm blamed internal forces while the other attributed external factors for the lack of successful development outcomes. It eventually came to be questioned whether it was desirable to apply paradigms to development patterns at all, as the economic and social consequences were dissimilar among countries that had different cultures, histories, and values, and were often of different ethnic and racial origins. The emphasis of development strategy had been on economic growth, without considering traditional values or the material improvements and quality of life of the majority of citizens.

As the state developed, it had three main preoccupations that could be identified as security, development, and participation. Often, security became its major fixation, especially when it felt threatened by neighbors or viewed internal problems as the priority requiring most of its attention. In this case when the state's survival was at stake, it had to postpone developmental and participatory considerations, as it became fully occupied in extending and legitimizing its authority. By so doing, the state was often forced to expend the bulk of its disposable resources much to the detriment of satisfying other exigent national objectives.

In measuring the development success of certain Asian countries, some were able to harness their rural sectors through successful land reform programs that substantially increased national agricultural output. Their initial industrialization was concentrated in labor intensive production processes that utilized human resources for lack of a significant natural resource base. In time, political processes were democratized, inspiring a vitality and entrepreneurial spirit that permitted citizens to participate fully in their own destinies. Tax incentives and favorable interest rates encouraged indigenous capital formation and official policy that emphasized exports, measures that became the key to increasing national income, and were mostly dependent on the private market for investment rather than leaving all such efforts to state initiatives.

To achieve sustainable development, natural capital must be preserved and even increased to provide for growing populations. Natural resources are not free goods but consist of national inventories which constitute a national capital loss when liquidated and not replenished. The planet has only

a limited capacity to absorb wastes and the proliferation of abuses leads to land erosion, flooding, desertification, and other harmful environmental effects such as air and water pollution. Agricultural subsidies in the developed countries have encouraged such activities as large, mono-crop, mechanized farms, have displaced traditional labor intensive methods, and have led to despoliation of the land due to the lack of crop rotation and the excessive use of fertilizers and pesticides. The capitalist world market has responded with low commodity prices due to oversupply by Third World countries anxious to earn foreign exchange, a situation that increases their debt burdens and dependency by destroying local production incentives.

Mexico initiated early industrialization efforts by encouraging the organization of assembly operations along its northern border. These Maquiladora firms were primarily geared to export finished goods to the United States, and utilized the large pools of surplus labor available in those localities. By 1991, these plants provided Mexico with a half million jobs located in close to 2500 plants, and represented 40 percent of Mexico's export earnings.

During most of the post-revolutionary period, state policy served to keep wages low and the supply of labor plentiful. As many staple crops came to be subsidized, peasants were forced off the land and migrated to cities or to northern border areas. The number of parastate industries increased sharply after WWII, as the state involved itself in almost every major sector of the economy. The state favored import-substitution industrialization financed by foreign investment which precipitated excessive import growth and balance of payments deficits, widening internal social formations that accentuated unemployment and inequality. To help correct these inequities, several

presidential administrations encouraged and intensified the proliferation of the Maquiladoras. The program has recently been expanded to encompass the entire country with the exception of the Federal District where the decentralization of industry is now actively encouraged.

Looking at the Maquiladora program itself, it had a good beginning in mobilizing unemployed labor in areas where it was established. There has been a gradual improvement of working conditions and an upgrading of local personnel to better positions as the program has grown, with a corresponding distribution of benefits among local residents. The greater participation of women in the workplace has had positive effects by giving them a greater role in the national economy. In addition, the program has brought needed foreign exchange earnings which have indirectly contributed to national social programs and to the tax-base of many local communities.

On the negative side, the existence of the Maquiladoras has not resulted in any significant increase in the domestic consumption of raw materials and components, as internal mechanisms have not developed as desired. Toxic waste accumulation has become a serious problem which can only be solved by stricter government enforcement of existing standards. As for technology transfer, this has not been attained since the Maquiladoras rely primarily on labor intensive processes that employ technologically inferior production methods. However, this latter point should not be an issue, as high technology operations are found mainly in high wage, developed countries, rather than in low wage Maquiladora assembly plants.

Overall, the Maquiladora program should be judged as a moderate success since without it, little industrialization would have taken place in many of the areas that it did. Some are critical of the quality of the jobs established but recent data confirms that the level is rising as Mexico's labor force becomes better trained and more sophisticated. However by itself, the Maquiladora program is insufficient and falls short of realizing the nation's development goals of capitalizing on its large unemployed labor pool, which is expected to increase at the rate of one million new entrants annually over the next two decades. New regulations which reduce the limitations on foreign property ownership have contributed to new investments in manufacturing and assembling. However, the rural sector has been largely ignored and it is there that the government must now concentrate its efforts so as to invigorate its development strategy.

The fact that Mexico is not self-sufficient in food is evidence that the rural sector needs urgent attention. It was the mechanization of agriculture which forced many peasants off their small plots, leaving the country vulnerable to increased food imports. This resulted in enormous social and economic uprooting brought on by shortsighted government policy that favored the production of agricultural products related to livestock production and cash crop commodity exports, over those directly related to human consumption.

Environmental abuse caused by the effects of large mono-crop production over vast tracts of land has resulted in much ecological devastation. For this reason, existing subsidies that encourage such activity must be diverted to allow peasants to work their small traditional plots, a policy that would revive the rural economy and permit internal grain prices to rise. Mexico could put to

advantage the knowledge of its indigenous peoples by reverting to traditional crops and striving to develop varieties that were once part of its ecological heritage. New agrarian reform would break up large landholdings not being utilized or that are inefficiently operated. These measures would be rendered more effective if control over the management of distributed landholdings were left to the peasants themselves, allowing them to work the land more efficiently and with better ecologically sustainable methods. By allowing community preferences predicated by local self management to prevail over centralized directives from the Capital, much agricultural land use would be adapted to particular regional circumstances. Eventually, rural incomes would rise leading to some reduction in the social imbalances currently existing between rural and urban sectors.

The government could also substantially increase rural employment if it were to encourage the establishment of small scale workplaces that are labor intensive and which do not require sophisticated technology. This would stop the flow of migrants to the cities and ultimately stimulate local production with local materials for local markets. This policy would utilize 'intermediate' technology and would not require large capital outlays if production methods were kept simple and were adapted to labor intensive processes. Eventually, this policy would decrease reliance on many imports and reduce the country's balance of payments deficit.

Tourism is another activity which is being actively encouraged by new government policy that permits foreign investors to own more than 49 percent of an enterprise. The establishment of national preserves and the creation of vacation facilities near areas of historical and archaeological

significance would attract a greater number and variety of tourists. The promotion of artisan handicrafts by indigenous populations would be encouraged, creating additional employment and revenue opportunities in local regions.

Finally, the Mexican state has a responsibility to reinforce its efforts to safeguard the environment and not give in to quick and easy development by way of attracting dirty, polluting, industries. In this way, the sustentation of future generations can be accommodated. Taxes should be levied against polluters who abuse environmental standards, making it unprofitable for those who refuse to clean up their operations. Land ownership must be seen as being vested in the nation as a whole which implies a strong responsibility for the management and protection of national resources. By allowing greater community participation by those most affected by development, democratic processes will be strengthened leading to a more sensitive and responsible government.

In sum, development involves much more than economic considerations and must be concerned with improving the quality of life of citizens and in helping them realize their full potential as human beings. This can be best accomplished through the elimination of poverty, unemployment, and inequality. These goals must be achieved sustainably, leaving successive generations the same opportunity in achieving their well-being. Maintaining a clean environment thus becomes a primary concern for everyone and should be at the forefront of development policy. Whether attitudes among elites will change in their acceptance of better income redistribution to the poor is open to question. Failure to satisfy the democratic aspirations of the masses and measures to ease their income inequality led to massive civil disorders not so

long ago during the regime of Díaz Ordaz. Today, the gap in income disparities continues as the growth of shanty towns often exceeds the size of the cities they surround. It is ironic that today's elites must hide behind high fences and protect their lavish homes with guard dogs, symptoms of urban violence and decline that can be attributed to their own indifference to the plight of those around them. As they continue to ignore the plight of the more unfortunate, they should ask themselves one question: Does Mexico need another revolution?

This thesis will now end with a quotation from an old Cree Indian saying that sums up the station of peoples most affected by development policy or the lack of it:

" Only when the last tree has died,
and the last river been poisoned,
and the last fish been caught,
will we realize that we can not eat money."¹¹

¹¹ Quoted from Native American cards published by New Internationalist, 35 Rivera Drive, Bldg 17, Markham, Ont. L3R 8N4

VII. EPILOGUE

A new report *Mexico: A New Economic Profile* was released by the Ministry of Finance and Public Credit in January, 1993. This report has outlined many of the changes that have been initiated during the current administration of Carlos Salinas de Gortari.

Since 1982, the Mexican government has divested itself of over 900 public enterprises. One of the largest offerings was Teléfonos de México (TELMEX), whose shares were finally completely redistributed as of May, 1992. Other public companies which are in the process of being divested include Aseguradora Mexicana, the largest insurance company in the country.

The Mexican government also divested itself of its 18 commercial banks during 1991 and 1992, although it still has some stock in three of them which it will liquidate as market conditions permit.

The proceeds from sales of parastate companies between December 1988 and October 1992 amounted to U.S. \$21.2 billion dollars. Part of these revenues were used to cancel domestic debt which has now been reduced to U.S. \$ 76 billion. This outstanding balance of Mexico's total external debt (both public and private) which represented an average level of 63.0 percent of GDP during the 1983-88 period, declined to 31.8 percent by the end of 1992.

These measures have resulted in a greater financial solvency of the country since Mexico has been able to return to international capital markets

under increasingly better conditions of cost and maturity of borrowings. The inflation rate has declined substantially and the public sector has since registered its first financial surplus of the past 25 years.

In addition to NAFTA, the Mexican government signed an Economic Complementation Agreement with Chile on September 22, 1991, which will eliminate most customs duties between the two countries by 1998. Earlier in January 1991, the presidents of Mexico, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua established the "Acta de Tuxtla" which sets the stage for a Free Trade Agreement among these signatories. It is envisioned that free trade in Central America will be in effect by January 1, 1997. Similar Mexican efforts are also underway with Columbia and Venezuela. In addition, a Cooperation Framework Agreement was signed with the European Economic Community in April of 1991, and in the same year, Mexico joined the Economic Cooperation Conference of the Pacific Basin.

In reviewing the foregoing measures, there is little doubt that Mexico has been putting its financial house in order. The growth of the economy is currently almost twice the rate of population growth, and the government is committed to improving gains in real wages. The tax base has been broadened and there is stricter enforcement of collection mechanisms to prevent tax evasion. What remains is the resolution to decentralize the country's economic structure and redistribute it equitably throughout all regions of the country. The future will reveal if such ideals materialize.

APPENDIX I

Explanation of Items 806.30 and 807.00

Items 806.30 and 807.00 are included in Schedule 8, Part I, subpart B, of the Tariff Schedule of the United States.

Pursuant to the provisions of item 806.30, articles of metal (except precious metal) that have been manufactured or subjected to a process of manufacture in the United States, then exported for processing and then returned to the United States for further processing, are subject to duty only on the value of foreign processing.

Under item 807.00, imported articles assembled in foreign countries with fabricated components that have been manufactured in the United States, are subject to duty upon the full value of the imported product, less the value of the United States fabricated components contained therein. No further processing in the United States is required for articles imported under item 807.00.¹³

The 807.00 provision covers articles assembled abroad in whole or in part of fabricated components, the products of the United States which

- a) were exported in condition ready for assembly without further fabrication,
- b) have not lost their physical identity in such articles by change in form, shape, or otherwise,
- c) have not been advanced in value or improved in condition abroad except by operations incidental to the assembly process such as cleaning, lubricating, and painting.

¹³ Taken from ITC, *Imports under Items 806.30 and 807.00 of the United States, 1979-1982, Publication 1170* (ITC, 1984), pp 1-2

APPENDIX II

BIP 1971 Regulations

What is the processing plants program?

According to the respective Regulations, it is a promotional program granting assistance to investors to establish industrial units within a 20 kilometre strip parallel to the international border line or to the coast line. It authorizes tax free importations of raw materials, parts, components, machinery, tooling equipment, and everything else needed for the transformation or processing, assembly and finishing of products to be entirely exported.

Who may be interested in the program?

All those businessmen who wish to obtain a substantial reduction in their production costs, such as labor, transportation, financing, etc., as well as other comparative advantages arising from close location, which are promptness, time, ease of transportation of technicians and supervising of processing operations.

Why is it advantageous for businessmen to establish processing plants in Mexico?

It is a Country with political stability in the process of economic development. Its labor is inexpensive and easily adaptable to productive processes and with a high productive rate. Its proximity to the United States and the closeness to important cities permits the operation of twin plants. Its cities have all necessary services and are characterized by their pleasant way of life, great variety of tourist attractions, resorts, bull rings, race tracks, archaeological areas, restaurants with typical and international cuisine, etc.

How can one participate in the program?

Through the approval of the Mexican government after filling the initial (EF-14) and final (EF-15) application forms for approval of the program. Interested parties, based on their own interests, may choose the structure of the capital of the company and the productive processes to be carried out.

Where should the industrial unit be established?

There is the possibility of establishing it in any of the following cities in the northern border of Mexico. Tijuana, Tecate, Mexicali, San Luis Rio Colorado, Ojinaga, Ciudad Acuna, Piedras Negras, Nuevo Laredo, Ciudad Alemán, Reynosa and Matamoros.

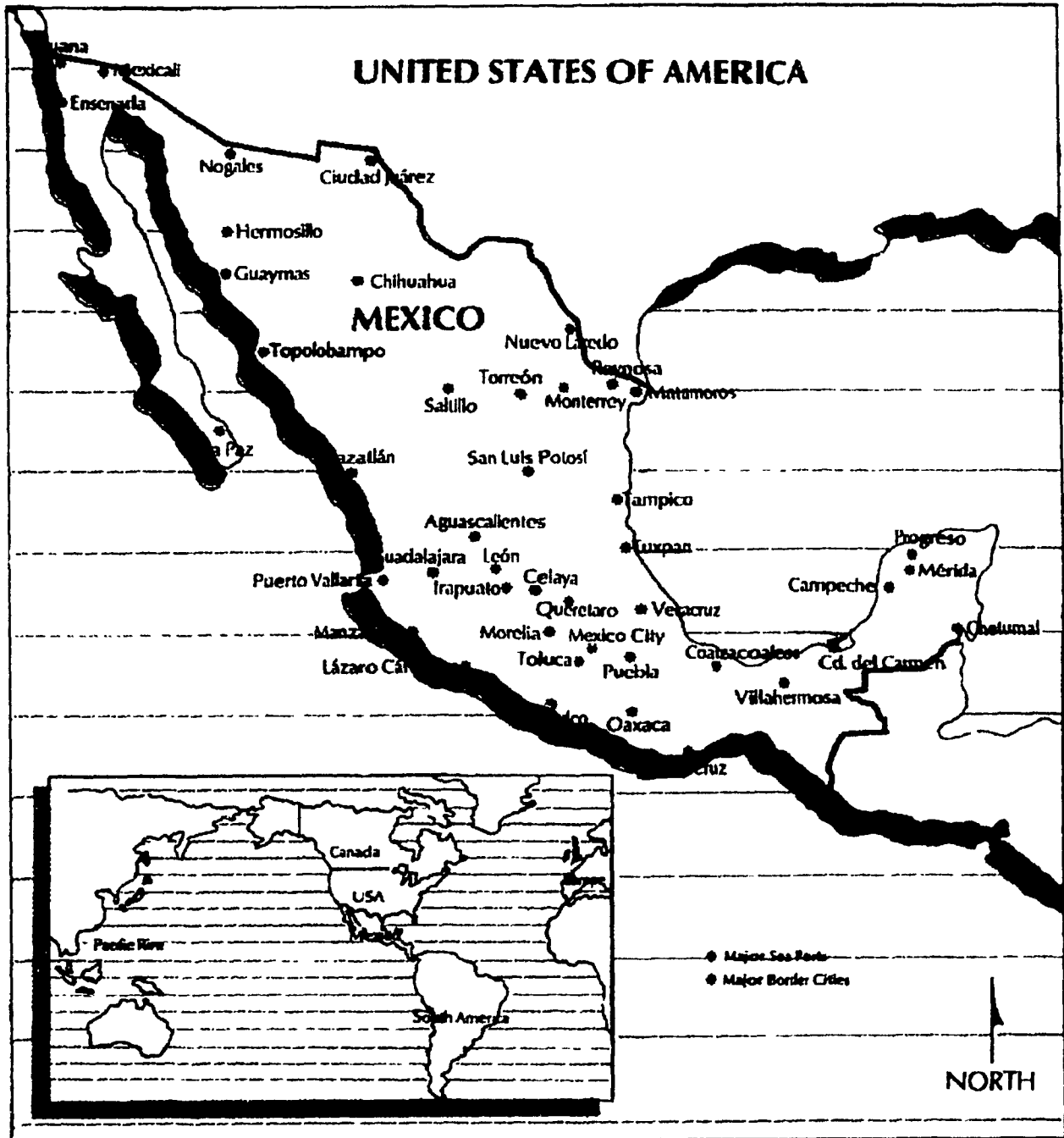
When is the operation of the industrial unit started and terminated?

It is started at the time the authorization from the Mexican Government is obtained: With regard to the termination, the operating term is indefinite.

Which items may be processed?

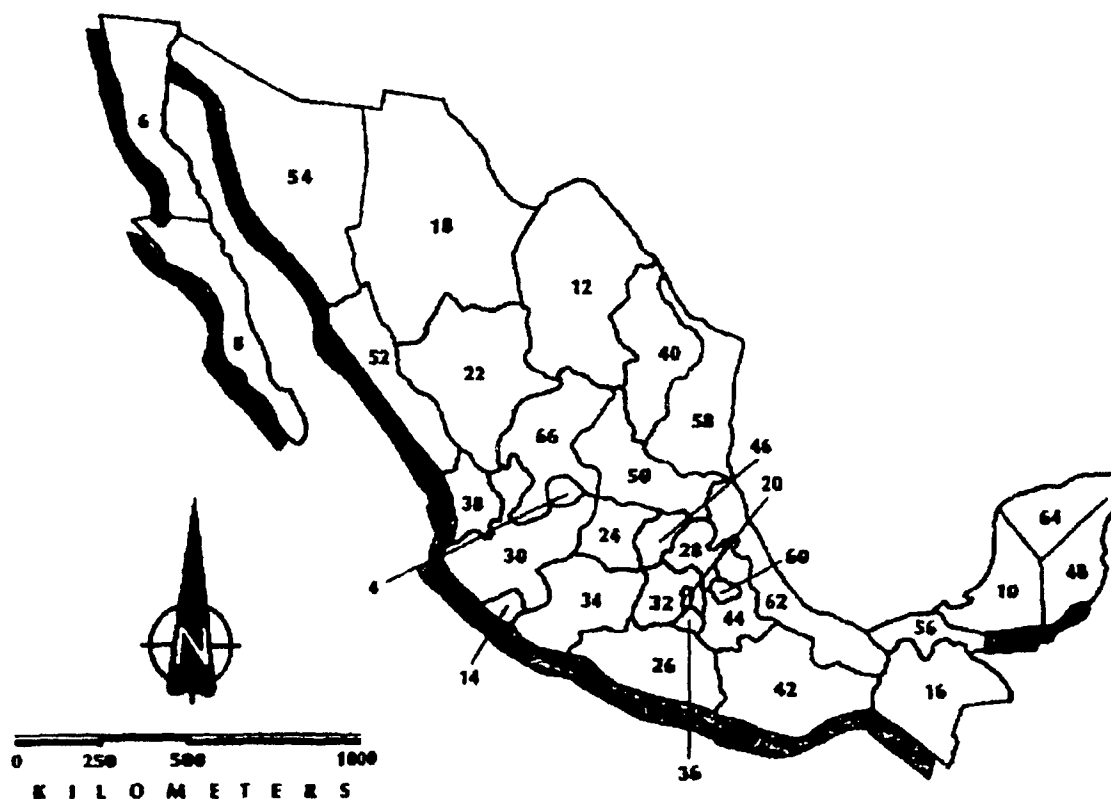
There is no limitation under the laws and government of Mexico, except for those items which may be dangerous to health [México, Secretaría de Industria y Comercio 1971:1-2].

MAPS



STATES OF MEXICO

STATE			STATE			STATE		
4	AGUASCALIENTES	22	DURANGO	42	OAXACA			
6	BAJA CALIFORNIA	24	GUANAJUATO	44	PUEBLA			
8	BAJA CALIFORNIA SUR	26	GUERRERO	46	QUERETARO			
10	CAMPECHE	28	HIDALGO	48	QUINTANA ROO			
12	COAHUILA	30	JALISCO	50	SAN LUIS POTOSI			
14	COLIMA	32	ESTADO DE MEXICO	52	SINALOA			
16	CHIAPAS	34	MICHOACAN	54	SONORA			
18	CHIHUAHUA	36	MORELOS	56	TABASCO			
20	DISTRITO FEDERAL	38	NAYARIT	58	TAMAULIPAS			
		40	NUEVO LEON	60	TLAXCALA			
				62	VERACRUZ			
				64	YUCATAN			
				66	ZACATECAS			



TABLES

TABLE 1.1

POPULATION GROWTH IN PRINCIPLE MEXICAN AND U.S. BORDER CITIES

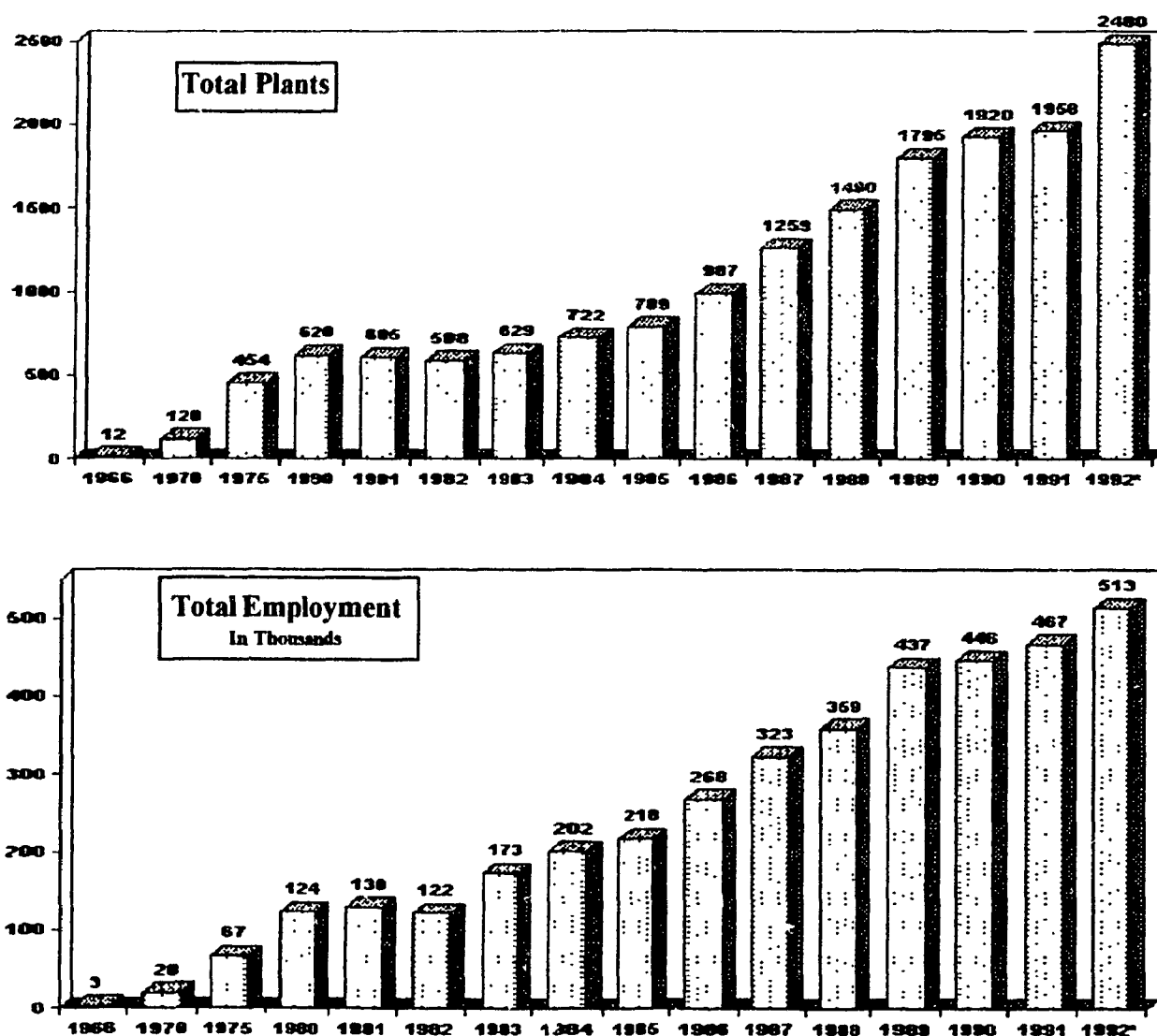
CITY	1940	1950	1960	1970	1980	1990
Tijuana	21,977	65,364	165,690	340,600	461,254	742,686
San Diego	203,000	334,000	573,000	697,000	876,000	1,110,549
Mexicali	44,399	124,362	281,333	396,324	510,664	602,390
Calexico	5,415	6,433	7,992	10,625	14,412	18,633
Juarez	55,024	131,308	276,995	424,135	567,565	797,679
El Paso	96,810	130,485	276,687	324,261	425,259	591,610
Reynosa	23,137	69,428	134,869	150,786	211,412	281,752
McAllen	11,877	20,067	32,728	37,636	68,569	84,021
Matamoros	54,133	128,347	143,043	186,146	238,840	303,392
Brownsville	22,083	36,066	48,040	52,522	84,997	98,962
Mexico*	19.8	26.6	34.0	48.2	66.8	88.1
U.S.A.*	131.7	150.7	178.5	203.3	226.5	249.6

* Figures in millions of persons

SOURCES: Mexican Census; Statistical Abstract of U.S., Various years; and annually road atlas 1992: 68th edition.

TABLE 1.2

GROWTH OF IN-BOND INDUSTRY



Source: Secretariat of Programming and Budget

TABLE 1.3

PRODUCTION TECHNICIANS AND ADMINISTRATIVE STAFF
IN THE MAQUILADORAS

YEAR	PRODUCTION TECHNICIANS	ADMINISTRATIVE STAFF	% OF TOTAL LABOR FORCE
1975	5,924	3,440	13.9
1976	6,165	3,661	13.2
1977	6,348	3,898	13.1
1978	7,543	4,591	13.4
1979	9,569	5,978	14.0
1980	10,828	6,698	14.7
1981	12,545	7,744	15.5
1982	13,377	8,288	17.0
1983	16,322	9,267	16.9
1984	22,381	11,798	17.1
1985	25,042	13,052	18.0
1986	30,367	15,572	18.4
1987	39,952	21,414	19.0
1988	40,449	21,837	18.9
1989	52,904	32,097	-
1990	54,813	33,859	-
1991	56,696	35,759	-
1992*	60,479	38,493	-

SOURCE: INSTITUTO NACIONAL DE ESTADISTICA, GEOGRAFIA E INFORMATICA (INEGI)

* As of August, 1992, the total number of people employed in the Maquiladoras was 513,342 of which 169,931 were men and 251,439 were women in the unskilled category.

TABLE 1.4MEXICO'S SHARE OF U.S. 806/807 IMPORTS

YEAR	806/807 TOTAL *	INPUTS MEXICO	MEXICAN % SHARE OF 806/807 IMPORTS	806/807 AS % OF MFG. INPUTS
1965	577	3	0.52	5.5
1968	1,432	73	5.10	7.4
1970	2,208	219	9.92	4.9
1976	5,722	1,135	19.84	9.5
1980	14,017	2,342	16.66	12.0
1984	28,573	4,808	16.83	13.8
1986	36,497	6,450	17.67	13.7
1987	68,549	8,689	12.68	20.0

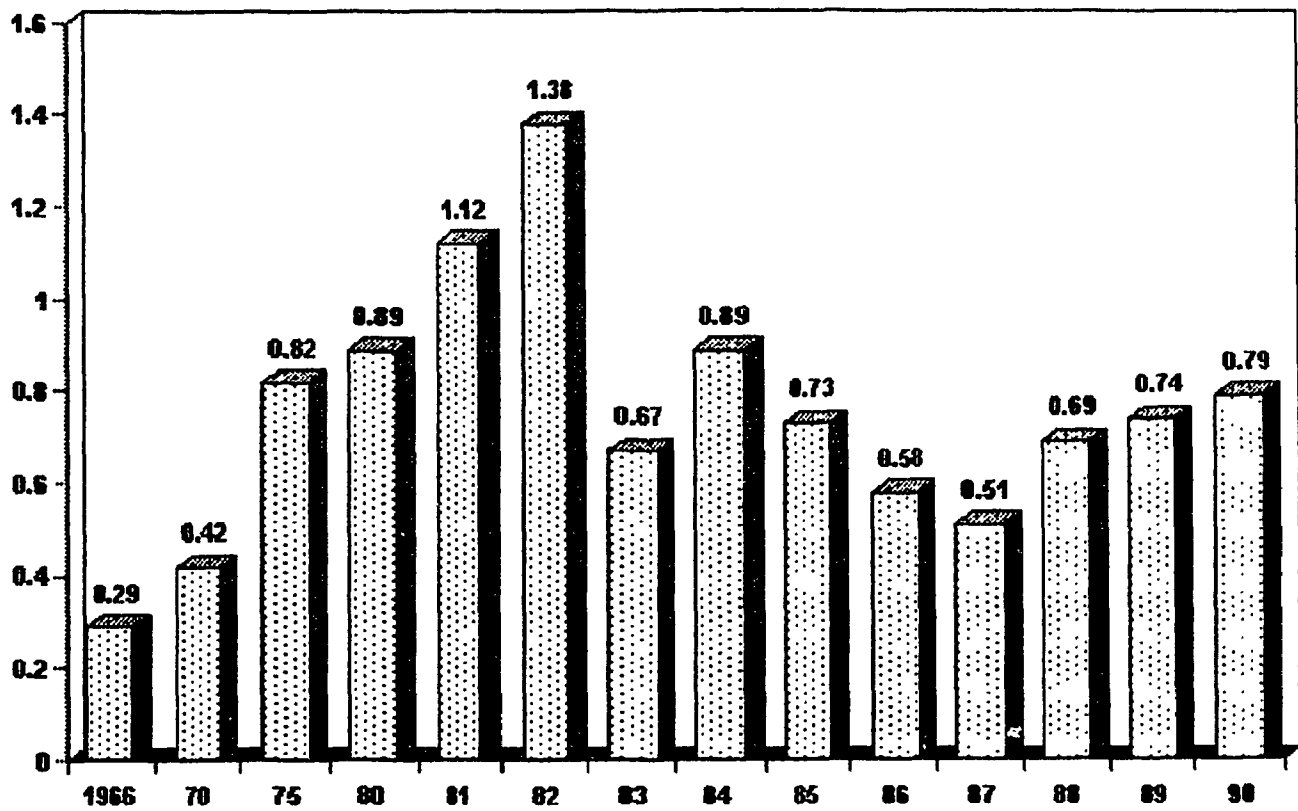
SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

* In Millions of Dollars

TABLE 1.5

MAQUILADORA WAGE RATES

(Converted To U.S. Dollars)

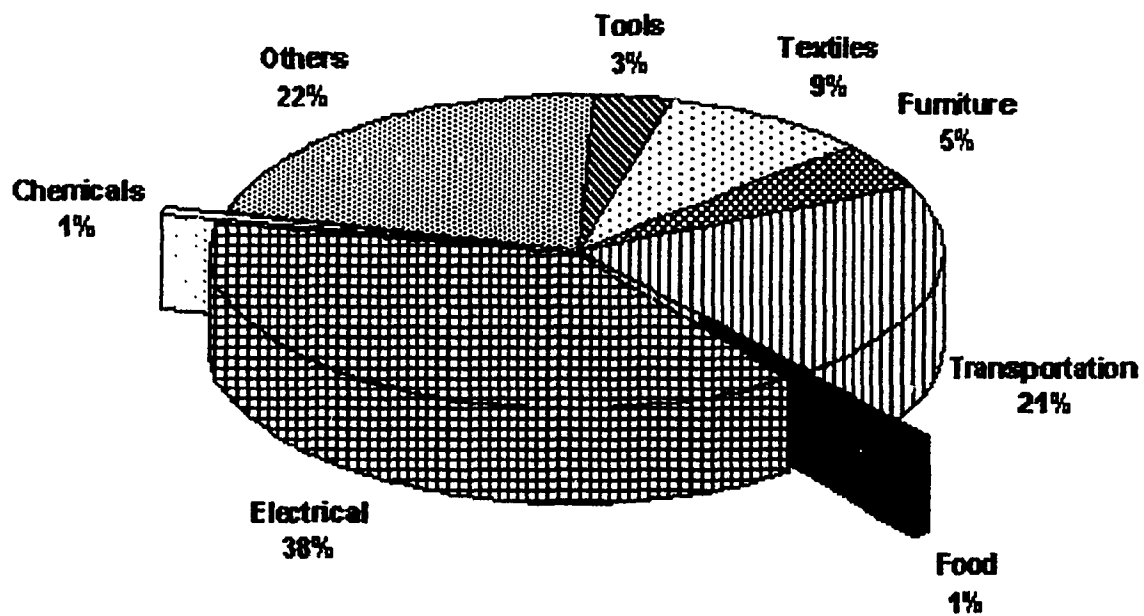


Source: Secretariat of Programming and Budget

TABLE 1.6

EMPLOYMENT

MAQUILADORA INDUSTRY BY ACTIVITY *



* Rounded to nearest percentile (1989).

Source: Banco de Mexico

TABLE 1.7**MEXICO: TOTAL EXPORT VALUE OF MAQUILADORA PROCESSED GOODS**

ACTIVITY	1986	1987	1988	1989	1990
FOOD PACKING & CANNING	43.4	44.0	56.6	70.4	153.6
TEXTILES	360.4	409.5	467.9	567.4	658.5
FOOTWEAR & LEATHER	66.6	77.6	101.5	160.3	128.5
FURNITURE	145.5	255.2	414.7	573.0	662.1
CHEMICALS	5.5	18.0	38.3	54.9	151.0
TRANSPORT EQUIPMENT	1621.8	2086.2	2819.8	3389.3	3897.5
TOOLS & NON-ELECTRIC EQUIPMENT	73.0	115.6	168.5	184.0	198.2
ELECTRICAL SUPPLIES	1265.1	1308.5	1694.4	2095.9	1936.9
ELECTRICAL APPLIANCES & EQUIPMENT	1397.2	1846.7	2876.6	3491.7	4196.5
TOYS & SPORTING GOODS	134.9	152.0	263.5	335.7	227.5
OTHER MANUFACTURED PRODUCTS	449.9	681.1	1086.7	1369.1	1585.3
SERVICES	82.6	110.7	127.4	203.5	249.3
TOTAL	5,645.9	7,105.0	10,145.7	12,495.2	14,095.3

All figures in millions of US dollars

SOURCE: SECRETARIA DE PROGRAMACION Y PRESUPUESTO

TABLE 1.8**MEXICO: VALUE ADDED BY THE MAQUILADORA INDUSTRY**

ACTIVITY	1986	1987	1988	1989	1990
FOOD PACKING & CANNING	10.9	15.7	23.3	31.7	97.8
TEXTILES	83.5	101.4	127.7	183.3	201.9
FOOTWEAR & LEATHER	16.8	19.5	28.2	46.3	44.4
FURNITURE	55.0	78.4	126.5	156.2	200.6
CHEMICALS	4.4	10.0	18.3	22.3	57.7
TRANSPORT EQUIPMENT	307.9	381.6	596.3	725.1	908.3
TOOLS & NON-ELECTRIC EQUIPMENT	24.9	28.2	37.3	46.6	44.3
ELECTRICAL SUPPLIES	269.5	283.4	382.1	476.9	422.0
ELECTRICAL APPLIANCES & EQUIPMENT	315.1	393.2	585.8	764.9	935.5
TOYS & SPORTING GOODS	40.7	44.3	66.4	99.6	90.5
OTHER MANUFACTURED PRODUCTS	117.0	191.5	282.9	406.6	500.3
SERVICES	48.8	50.9	52.7	88.1	103.3
TOTAL	1,294.5	1,598.1	2,337.4	3,047.3	3,606.5

All figures in millions of US dollars

SOURCE: SECRETARIA DE PROGRAMACION Y PRESUPUESTO Y BANCO DE MEXICO

TABLE 1.9

Distribution of Maquiladora workers in Juarez and Mexicali by manufacturing activity

	<u>ALL INDUSTRIES (%)</u>		<u>ELECTRONICS (%)</u>		<u>APPAREL (%)</u>	
	Juarez	Méicali	Juarez	Méicali	Juarez	Méicali
Ages:						
16-18	21		32		4	
19-21	25		38		14	
22-24	18		15		18	
25-27	20		12		27	
28-30	7		3		14	
Over 31	9		0		23	
	---		---		---	
	100		100		100	
Median Age	22.6	25.8	20.6	22.6	26.5	27.9
Marital Status:						
Single	57		61	65	54	52
Married	43		39	35	46	48
	---		---	---	---	---
	100		100	100	100	100
Education:						
Less Than 6	5		4		8	
6 years	55		38		59	
7-11	40		59		33	
	---		---		---	
	100		100		100	
Median Years in School		6.9		7.5		5.2
Household Types:						
2 parents	71		76		59	
1 parent	8		15		9	
Female headed	18		6		31	
Other	3		3		1	
	---		---		---	
	100		100		100	

TABLE 1.9 (continued)

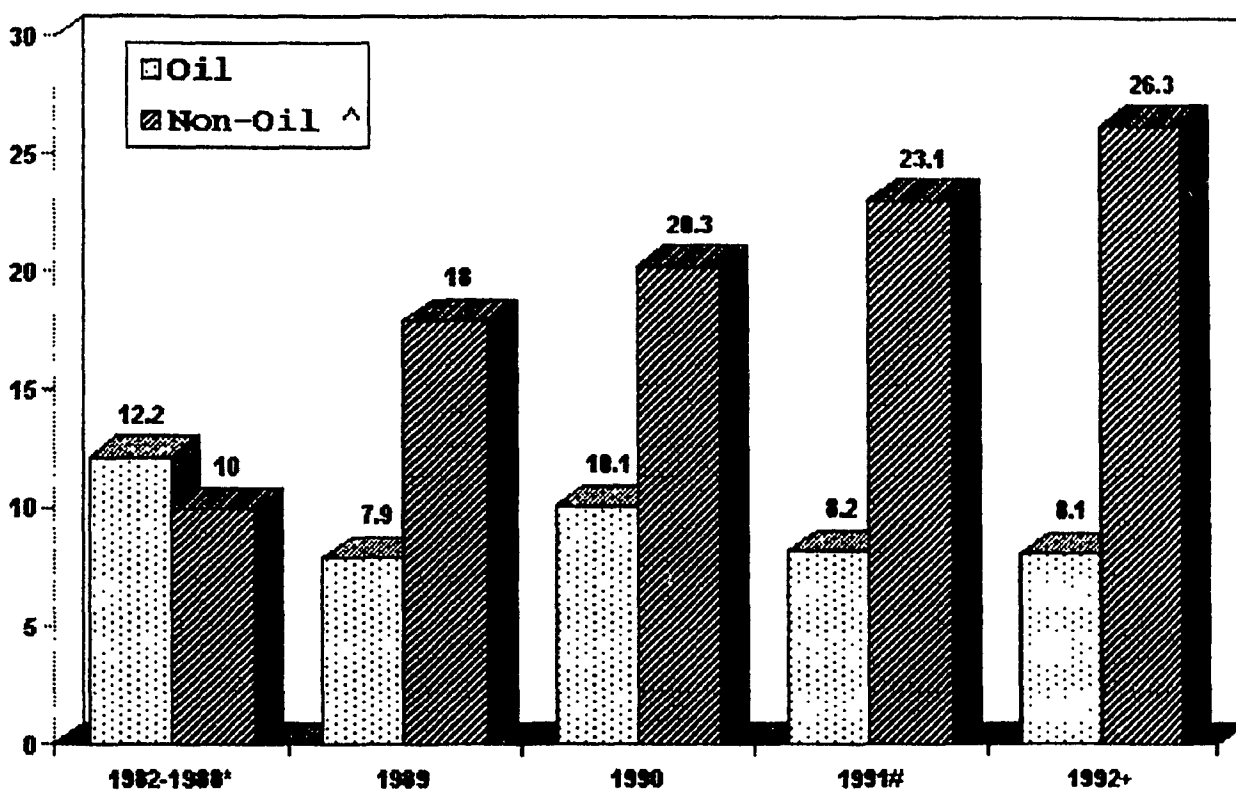
	<u>ALL INDUSTRIES (%)</u>		<u>ELECTRONICS (%)</u>		<u>APPAREL (%)</u>	
	Juarez	Méxicali	Juarez	Méxicali	Juarez	Méxicali
No of Children/Household:						
<i>1-3</i>	53		59		50	
<i>4-7</i>	20		15		23	
<i>8 or more</i>	2		0		4	
<i>none</i>	25		26		23	
	---		---		---	
	100		100		100	
FIRST EMPLOYMENT:						
			60	44	30	25
No of Providers:						
<i>only 1</i>	20		15		27	
<i>2,3 Maquiladora</i>						
<i>Workers..</i>	12		15		9	
<i>2 or more</i>						
<i>Mixed...</i>	68		70		64	
	---		---		---	
	100		100		100	
Birth Place:						
<i>Cuidad Juarez</i>	36		41		27	
<i>Other</i>	64		59		73	
	---		---		---	
	100		100		100	

SOURCE: FIGURES SUPPLIED BY FERNANDEZ-KELLY, AND RUIZ & TIANO.

TABLE 2.1

EXPORTS

(Billions of Dollars)



^ Includes in-bond industry exports.

* Average.

Preliminary.

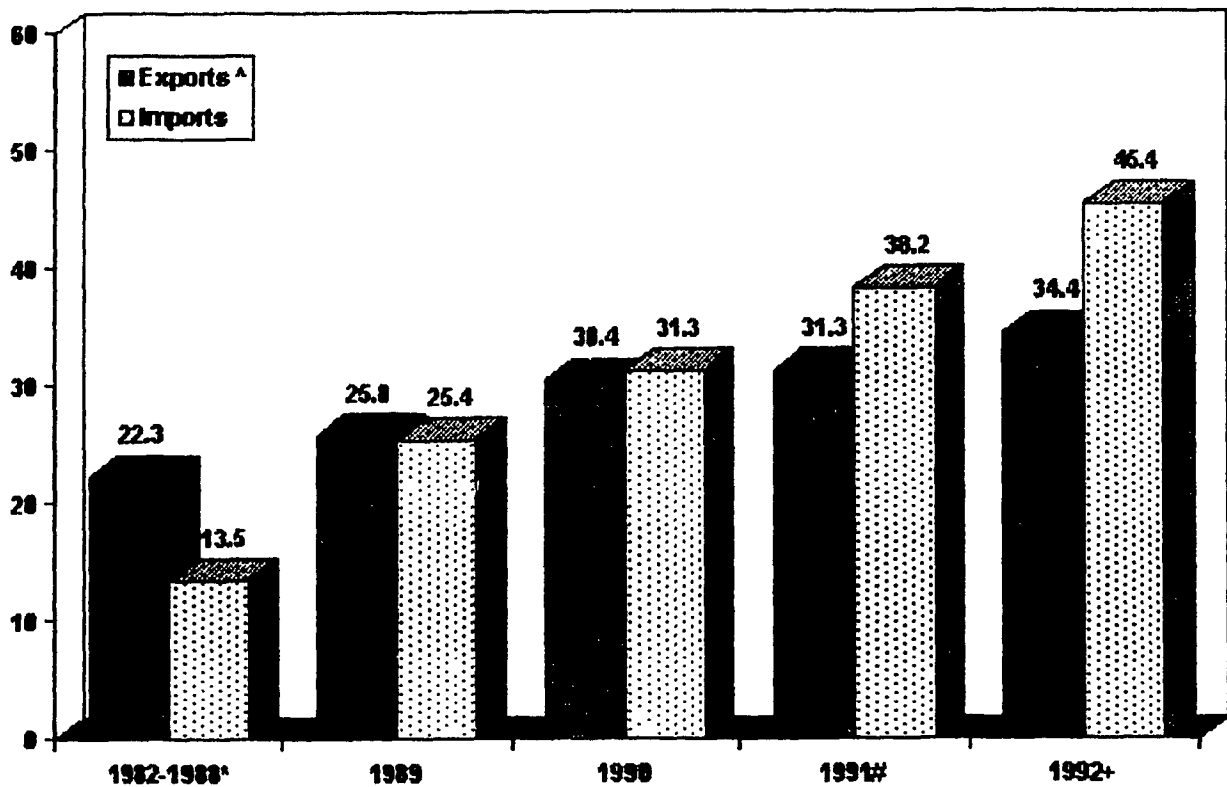
+ Estimated.

Source: Banco de Mexico

TABLE 2.2

FOREIGN TRADE

(Billions of Dollars)



^ Includes in-bond industry exports.

* Average.

Preliminary.

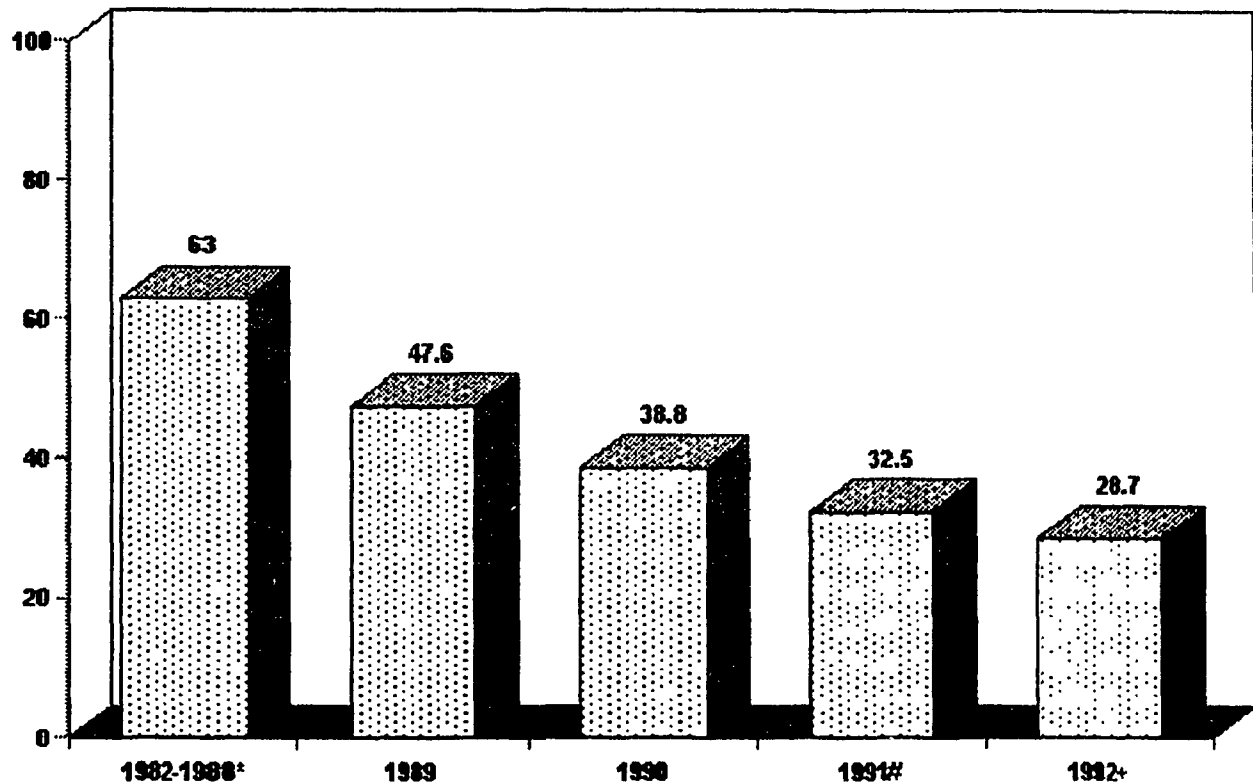
+ Estimated.

Source: Banco de Mexico

TABLE 2.3

TOTAL EXTERNAL DEBT

(As Percentage of GDP)



^ Includes in-bond industry exports.

* Average.

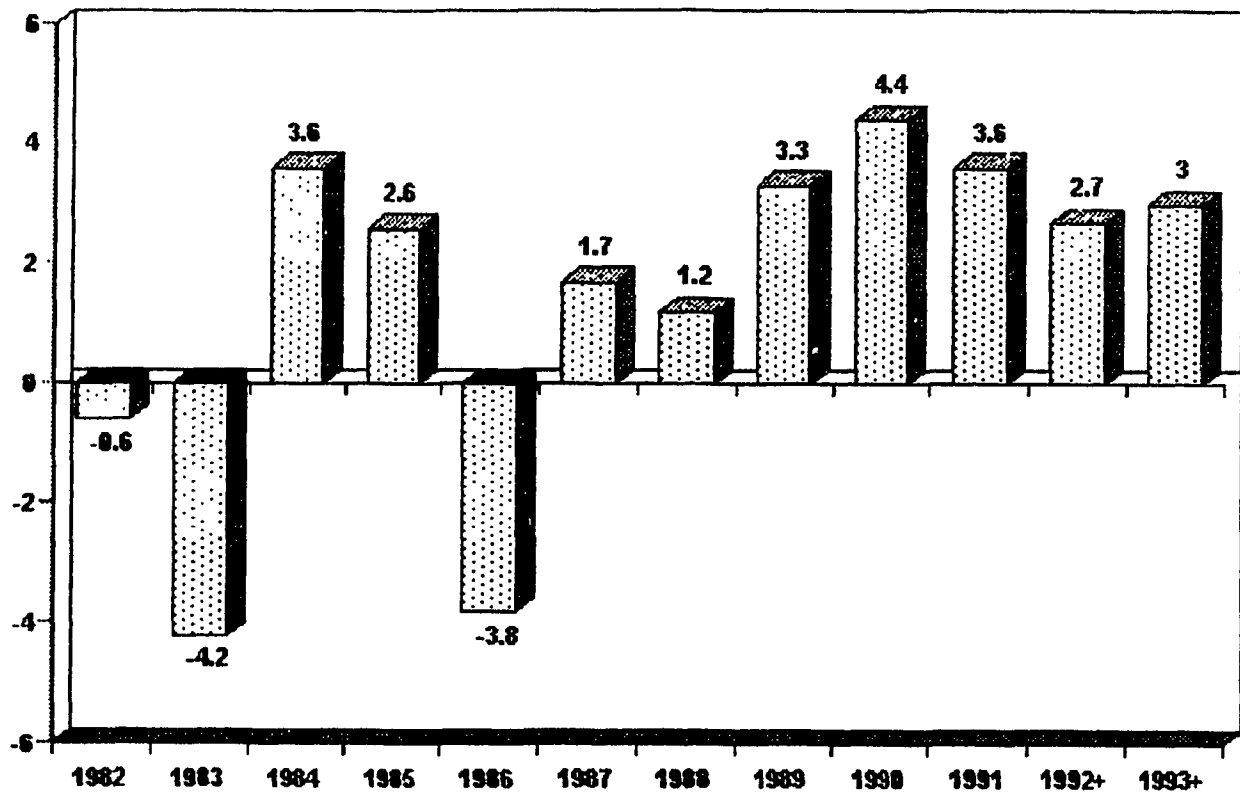
Preliminary.

Source: Ministry of Finance (SHCP)

TABLE 2.4

GROSS DOMESTIC PRODUCT *

(Annual Variation)



* GDP at 1980 prices.

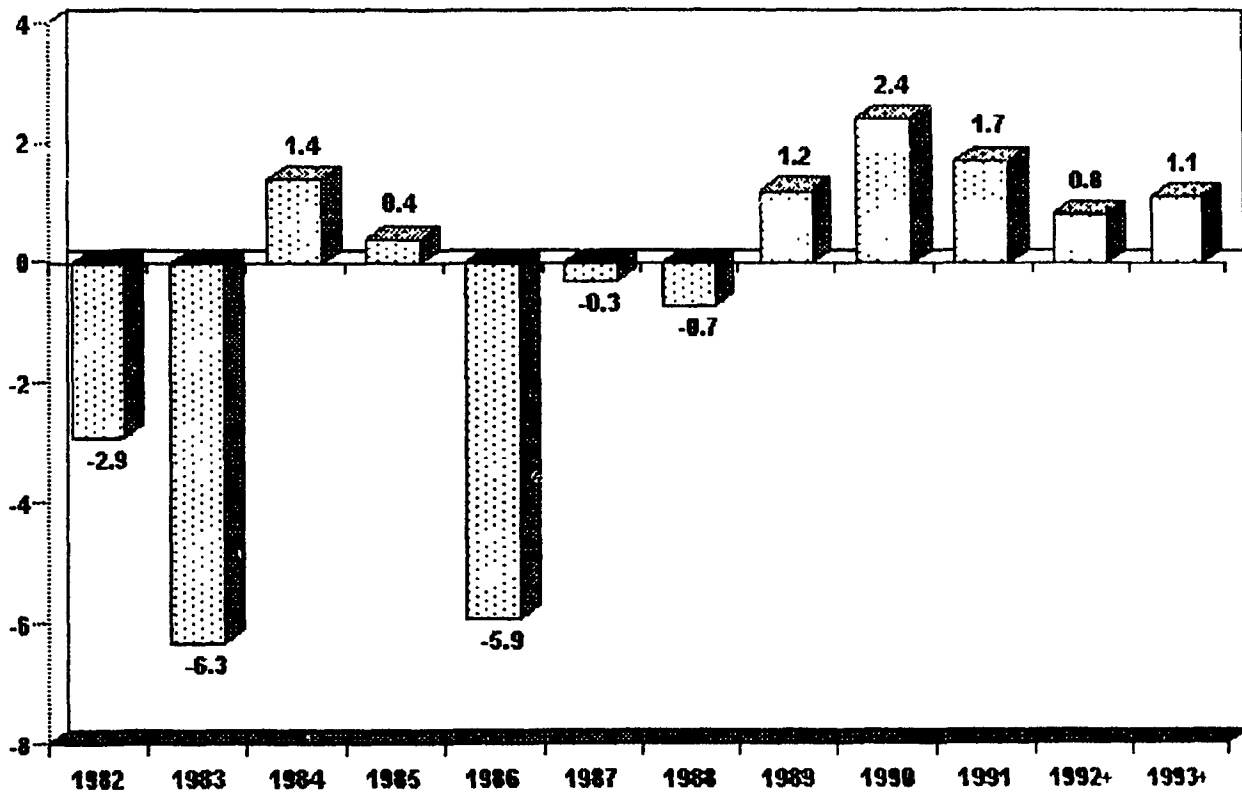
+ Estimated.

Source: Ministry of Finance (SHCP)

TABLE 2.5

PER-CAPITA GDP*

(Annual Variation)



* GDP at 1980 prices.

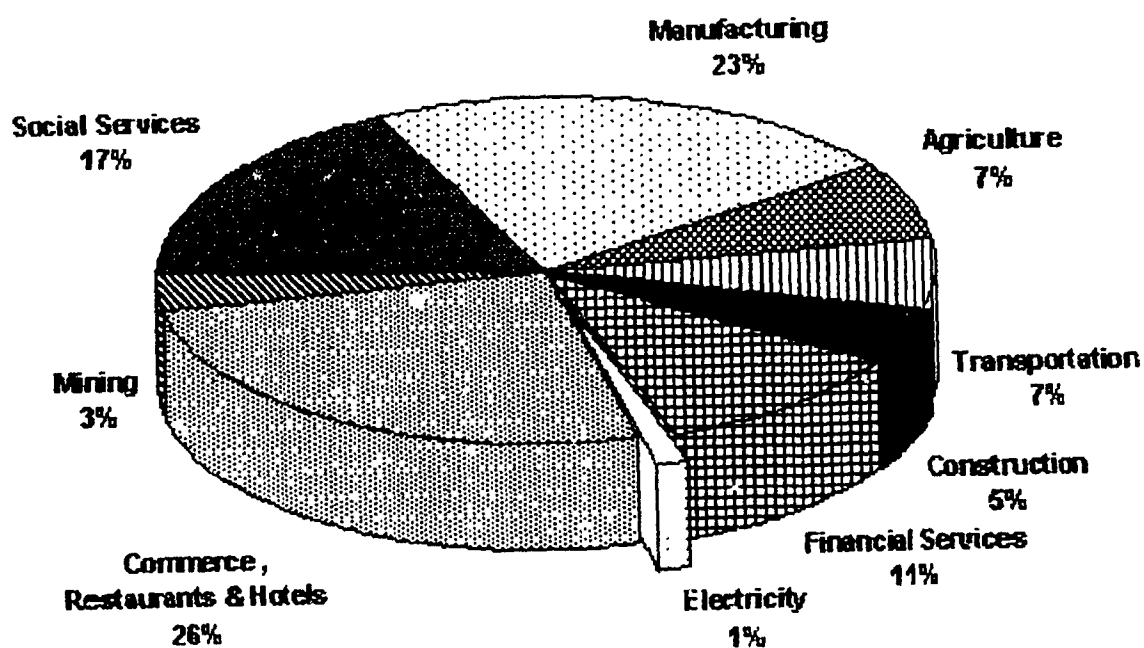
+ Estimated.

Source: Ministry of Finance (SHCP)

TABLE 2.6

STRUCTURE OF GROSS DOMESTIC PRODUCT

(1991 PRELIMINARY IN PERCENTAGE)

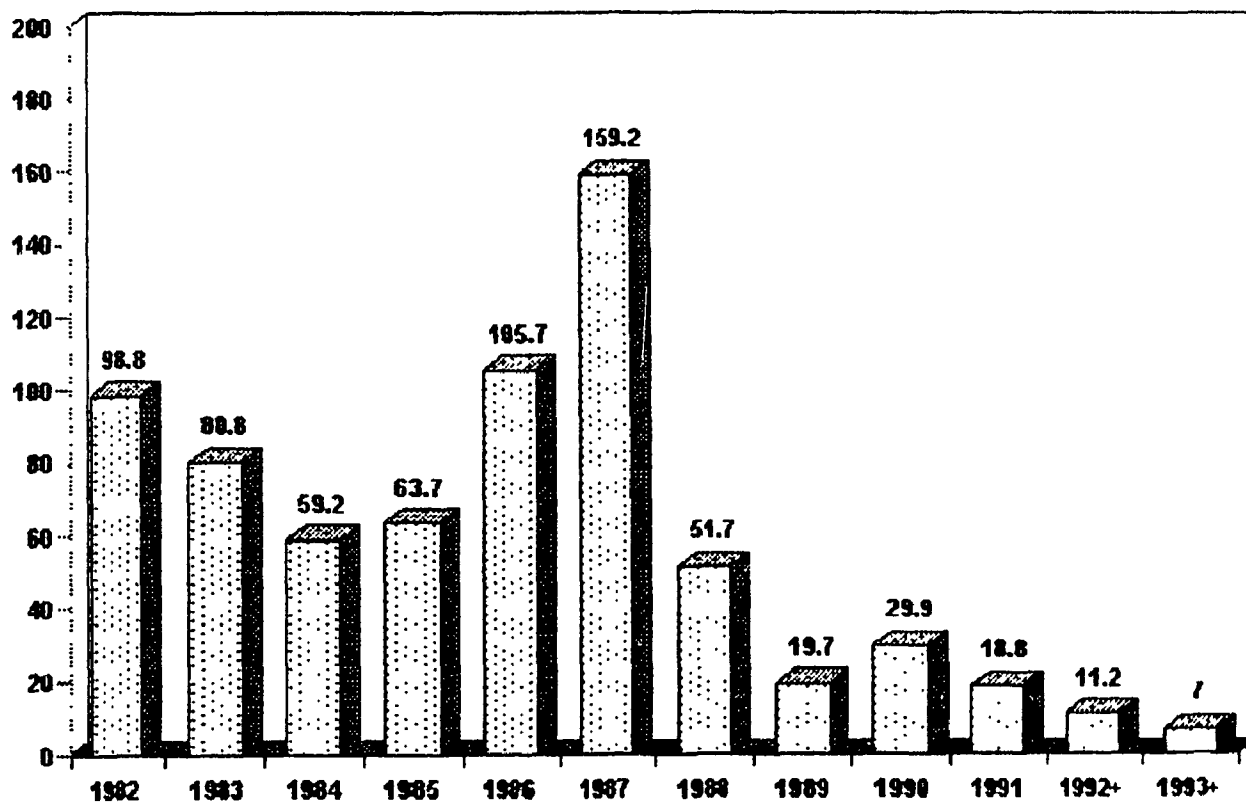


Source: Banco de Mexico
Table 10, Statistical Appendix

TABLE 2.7

INFLATION

(December / December)



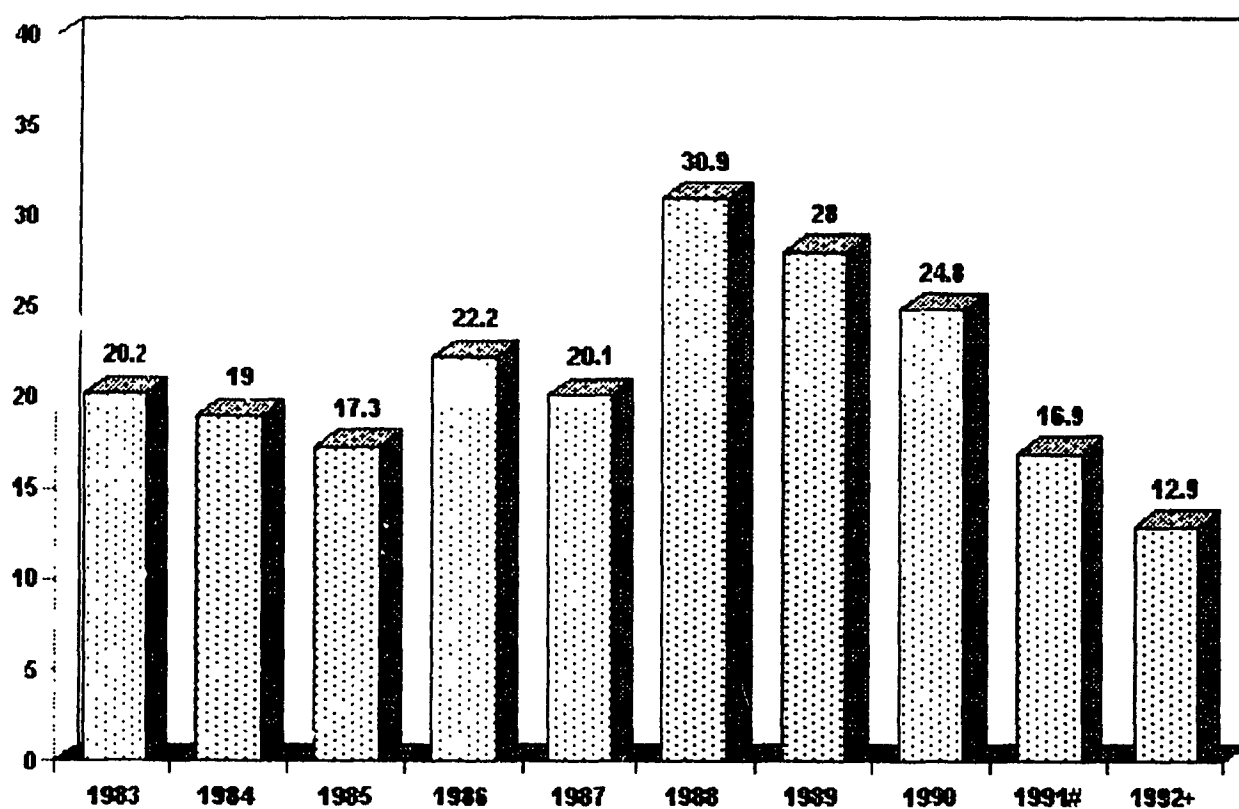
+ Estimated.

Source: Banco de Mexico

TABLE 2.8

TOTAL PUBLIC DOMESTIC DEBT

(As Percentage of GDP)



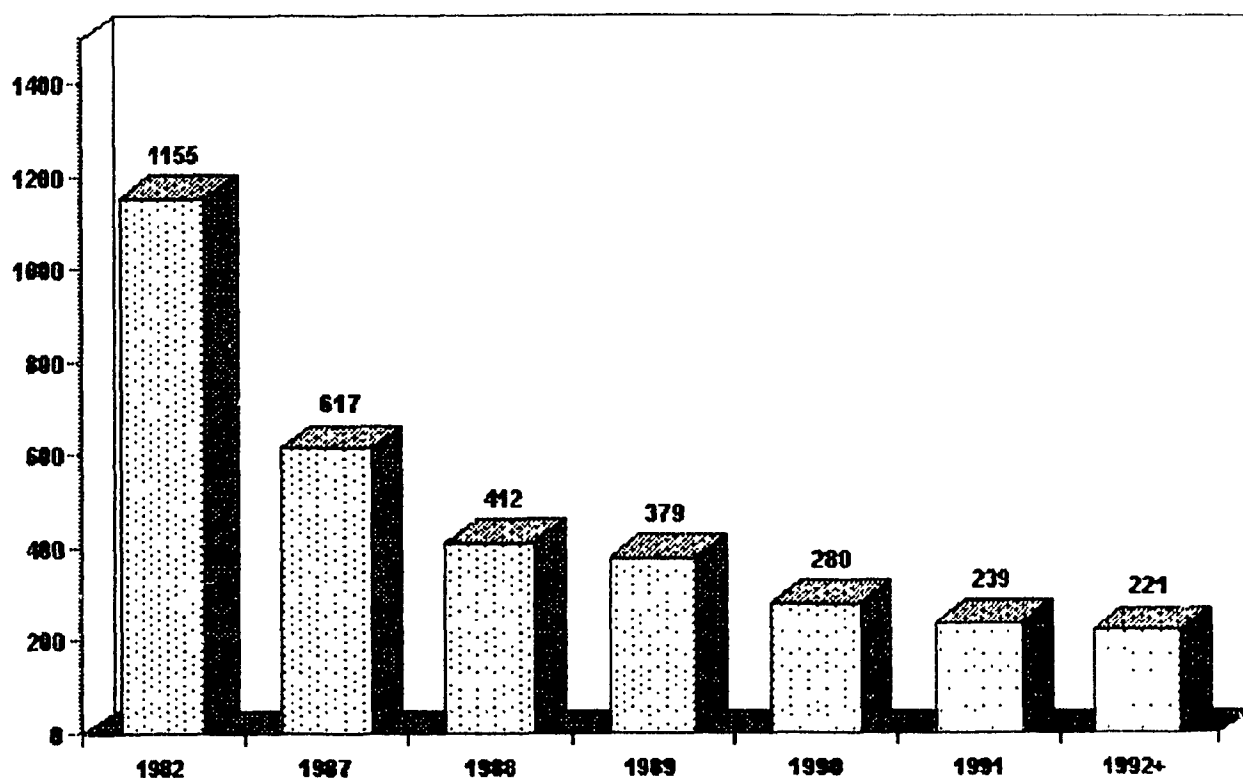
Preliminary

+ Estimated

Source: Ministry of Finance (SHCP)

TABLE 2.9

NUMBER OF PUBLIC ENTERPRISES



+ As of October

Source: Ministry of Finance (SHCP)

TABLE 2.10**LAND DISTRIBUTION SINCE CARRANZA DECREE OF 1915**

PRESIDENT	NO. OF RECIPIENTS	CUMULATIVE NO. OF RECIPIENTS	TOTAL HECTARES DISTRIBUTED	CUMULATIVE TOTAL OF HECTARES	PERCENT OF MEXICO'S SURFACE DISTRIBUTED
CARRANZA	46,398	46,398	167,936	167,936	0.1
DE LA HUERTA	6,330	52,728	33,696	201,632	0.1
OBREGON	28,468	181,196	1,110,117	1,301,749	0.7
CALLES	297,428	478,624	2,972,876	4,274,625	2.02
PORTES GIL	171,577	650,201	1,707,750	5,982,375	3.0
ORTIZ RUBIO	64,573	714,774	944,538	6,926,913	3.5
ROD- RIGUEZ	68,556	783,330	790,694	7,717,607	3.9
CARDENAS	811,157	1,594,487	17,906,429	25,624,036	13.0
AVILA CAMOCHO	157,536	1,752,023	5,944,449	31,568,485	16.1
ALEMAN	97 391	1,849,414	4,844,123	36,412,608	18.5
RUIZ CORTINES	231,888	2,081,302	4,936,668	41,349,276	21.0
LOPEZ MATEOS	304,498	2,385,800	11,361,370	52,710,646	26.8

SOURCE: James W. Wilkie, (1967) *The Mexican Revolution: Federal Expenditure and Social Change Since 1910*. Berkeley and Los Angeles: University of California Press, as revised for Second Edition. Although these statistics are somewhat dated, the information compiled is of significant interest to include in these tables.

TABLE 2.11**ECONOMICALLY ACTIVE POPULATION BY SECTOR**

	1960	1970	1980	1990
Total Population	34,923,129	48,225,238	66,845,833	81,249,645
Economically Active Population	11,332,016	12,955,057	22,066,084	24,063,283
Agriculture, Livestock and Hunting	6,144,930	5,103,519	5,700,860	5,300,114
Mining	141,801	180,175	400,911	99,233
Manufacturing	1,556,315	2,169,074	2,692,627	4,493,279
Electricity, Gas and Water	41,445	53,285	116,197	154,469
Construction	408,402	571,006	1,307,767	1,594,961
Wholesale and Retail Trade	1,074,593	1,196,978	1,471,578	3,108,128
Transportation and Communications	357,057	368,813	1,050,640	1,045,392
Financial Services	n.a.	n.a.	412,056	360,417
Community Services	1,525,682	2,158,175	2,132,574	2,017,585
Others	81,791	1,154,032	6,780,874	5,889,705

SOURCE: CENSO DE POBLACION Y VIVIENDA. 1960, 1970, 1980 AND 1990.
INEGI.

TABLE 2.12GDP BY SECTOR

(Millions of pesos at 1980 prices)

	1960	1970	1980	1990
TOTAL	1,252.3	2,340.8	4,470.1	5,255.8
Agriculture, Forestry and Fisheries	195.6	262.5	368.0	403.0
Mining	41.8	61.6	144.0	188.0
Manufacturing	254.8	539.1	968.9	1,201.2
Construction	65.5	145.6	287.8	267.9
Electricity, Gas, and Water	5.5	18.5	44.3	77.6
Commerce Restaurants, and Hotels	283.6	566.4	1,249.6	1,359.3
Transportation and Communications	63.3	115.5	285.6	347.8
Financial services	140.0	233.4	383.8	558.8
Social and Community Services *	209.0	421.7	768.8	926.2
Banking Services +	(6.7)	(23.7)	(48.2)	(73.7)

* Includes professional, medical and other services.

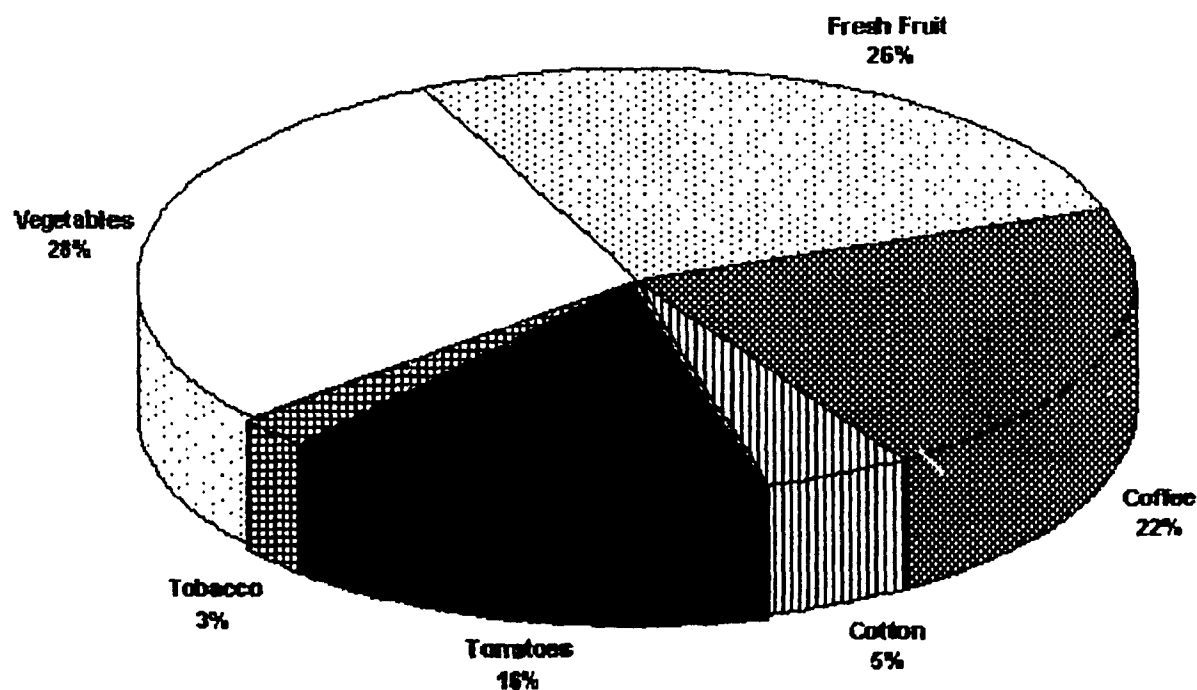
+ Banking services have a negative figure as they are an imputed value.

SOURCE: INEGI.

TABLE 2.13

MAIN AGRICULTURAL EXPORTS

(1991 PRELIMINARY IN PERCENTAGE)



Source: Banco de Mexico

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