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Bringing people to the center stage: Structural disarticulation, the global debt crisis and Third World human development

Huang, Jie, Ph.D.
The Ohio State University, 1994

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Bringing People to the Center Stage: Structural Disarticulation, the Global Debt Crisis and Third World Human Development

Dissertation

Presented in Partial Fulfillment of the Requirements for
the degree of Doctor of Philosophy in the
Graduate School of the Ohio State University

by

Jie Huang, B.A., M.A

* * * * *

The Ohio State University
1994

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1994
DEDICATION

To my parents
ACKNOWLEDGEMENT

Upon the completion of a major piece of work,
   It is time to be grateful.
   My thanks go to the professors,
   who have served as my invaluable mentors.
   To Professor Slomczynski,
   who has constantly led me in the right direction,
   and has sensitized me to methodological issues.
   To Professor Jenkins,
   who has provided a source of encouragement
   at the darkest moments,
   and has broadened my theoretical perspectives.
   To Professor Namboodiri,
   who has taught me the skills of statistics, patience, endurance,
   and the habit of working 24 hours a day.
   To Professor Crenshaw,
   Who has given me valuable comments
   even just before his medical surgery.
   My gratitude goes to my friends,
   To Luying Wei, Xueping Yuan, and Morris Jackson.
   With these people's assistance and advice,
   I have completed my dissertation.
   With these experiences and inspirations,
   I shall carry on to face my new life challenges.
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Bradshaw, York, W., and Jie Huang. 1991. "Intensifying Global Dependency:
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FIELDS OF STUDY

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CHAPTER I
INTRODUCTION

"Wealth is evidently not the good we are seeking, for it is merely useful and for the sake of something else."
— Aristotle

"It is well known that, thus far, the problem of finding a social benefit or welfare function is unsolved."
— Oskar Morgenstern On the Accuracy of Economic Observations

Purpose of the Study

Two basic questions continue to challenge development thinking. First, what is the goal of real development? Second, what social and economic factors influence such a development process? Previous research has defined development in terms of economic growth measured by the rate of growth of total GNP and GNP per capita. The growth of the overall economy is believed to lead automatically to wealth trickling down to the broad masses of the population. No reference is made to the issues of distribution or poverty.

This study attempts to shift our attention from economic growth to the improvement of human lives. To better capture the complexity of development, we define development as enlarging people’s choices and increasing human capabilities. Specifically, we use the term, human development, defined as improvement in literacy,
longevity, and living standards. It is argued that people should be the means and ends of development.

Among the many social and economic forces behind the wheel of development, there is one overlooked factor, that is, structural disarticulation. We argue that structural disarticulation, that is, a distorted economic and social structure, accounts for the variations of human development among the developing countries. Structural disarticulation as an internal mechanism explains the inertia of human progress and the uneven development of the industrial sectors.

Another focus of this study is the impact of global debt crisis and structural adjustment policies on human development performance in the Third World. Previous studies have indicated that external indebtedness and the induced IMF adjustment policies have adversely affected economic growth (Bradshaw and Tshandu 1990), physical quality of life (Bradshaw and Huang 1991), and triggered social instability (Walton and Ragin 1990) in many developing countries. But no study has assessed the impact of the global debt crisis on human development. The current research shall fill this void and help to enrich our understanding of Third World development.

In this research, we also take a new look at the role of the developmental state and the effects of foreign investment on Third World human development. In the next few sections, we discuss in detail the importance of focusing on human development as a multidimensional concept, and the complex relationships among human development, structural disarticulation, external debt, foreign investment, and the role of the developmental states.
**Human Development as the Ultimate Goal of Development**

*The Goal of Development*

Given the abundant resources on planet earth and the remarkable technological breakthroughs in modern times, it is surprising that the eradication of poverty and the ending of hunger have remained among the central challenges before human society. Today there are probably more human beings suffering from chronic deprivation than ever before in history.

During the last century and half, the locus of world poverty and hunger has become concentrated in the Third World countries. After the independence of these countries in the decades after the World War II, attention focused on the search for ways to tackle these century-old problems. But the dominant view during most of this period was that poverty could be addressed through raising general economic standards and the "trickle-down" effect of economic growth.

Evidently economic growth creates the capacity to reduce poverty. However, the experience across many countries over the last forty years has raised doubt on the automatic linkage between economic growth and the reduction of poverty. The achievements as well as lessons from their experience have suggested that economic growth does not always lead to improvement in human conditions and therefore should not be viewed as the ultimate goal of development.

Traditionally, development has been measured by the indicator of GNP per capita. The goal of raising GNP per capita has guided domestic and international development programs. Such programs have been a major disappointment as the
affluence gap between the rich and poor countries has widened and absolute poverty has increased.

GNP per capita is simply not adequate to measure human progress. As Robert McNamara, former World Bank president pointed out, if GNP is the only measure of progress, "it's absolutely impossible — mathematically and economically — to significantly close the gap [for most countries] within the next 50 years." According to the World Bank estimates, if current rates of growth continue, closing the gap with the industrial countries would take Thailand 365 years, China 2,900 years, and Mauritania 3,224 years.

Yet the gap between poor and rich nations does not seem to be that wide if development is measured by other indicators. Many developing countries would score much higher on the scale of development if it is based upon other indicators such as infant mortality, life expectancy, literacy, nutrition, employment, and number of people living in poverty. On these dimensions of development, China, Sri Lanka, and the Indian states of Kerala have achieved remarkable progress even though GNP per capita is still low in monetary terms.

Another problem of the income measure is that it lacks the element of distribution. This may distort the overall picture of national development. In some countries, a large segment of the population live in poverty, where a small strata of people possess extravagant wealth. And yet these countries may have high GNP per capita. This is the pattern of development without equity. Few would endorse this model of development since the benefits of development went exclusively to the rich
and powerful. Hence, governments and international institutions have increasingly recognized the importance of equity as an important part of human development.

**Development and Ordinary Citizens**

What is it that ordinary people want from development? What does development mean to ordinary citizens? These questions have driven our interest on the real meaning of development. Over the last four decades, the objectives of development have been decided by politicians, bureaucrats, academians, bankers, and international loan officers. While most of them have good intentions, one can also see the biases and prejudices of these interest groups and the flaws of the development programs that they designed.

Over the years, development objectives have varied from the high income growth in the 1950s, to the increase of foreign exchange through exports in the 1960s and the 1970s, to debt reduction and structural adjustment in the 1980s and the 1990s. The outcome has been a bitter disappointment for the ordinary citizens in the developing countries. In striving for these goals of development, the living standards for some segments of the population have not been improved dramatically and the lives of the poor people in the rural areas have not even been touched. Under structural adjustment, the living standards in some countries have virtually been lowered.

While economic growth and adjustment are important for the overall economic production, lowering infant mortality, improving the living condition, and prolonging life expectancy are more significant to the ordinary men and women of a developing country. Many scholars have been busy with the rhetoric of development instead of pondering on its real meaning from the view of ordinary citizens. For millions of people
living in poverty, as Rodrigo Botero points out, growth of GNP per capita is an "absolutely abstract and mysterious concept." Hence, development objective should be viewed from the perspective of ordinary people. The real meaning of development lies in its direct linkages to the concerns of ordinary people.

**The Slippage between Economic Growth and Human Development**

From the 1950s to the 1980s, the guiding assumption in the quest for development was that if significant progress is made in economic development, human development definitely follows. Few have questioned the presumed close to automatic linkage between economic progress and human development until the phenomenal mismatch appeared in the 1980s. With a few exceptions, improvements in human welfare and the physical quality of life are seen as the inevitable by-product of economic progress. Yet, in reality, many rapidly growing countries in the Third World have discovered that their high GNP growth rates have failed to reduce poverty and human deprivation for the substantial segments of their population.

According to recent data from the Human Development Report published by the United Nations Development Programme (UNDP 1990), more than one billion people in the developing world are still living in absolute poverty. On the broad measures of human welfare, life expectancy in sub-Saharan Africa is only 50 years while in Japan it is almost 80. Mortality among children under 5 in South Asia exceeds 170 per thousand while in Sweden, it is less than 10. Furthermore, more than 100 million children of primary school age in the developing world are not attending schools. Nearly 900 million adults still cannot read and write. Given the rich resources and
remarkable economic achievements in many regions, it is beyond human comprehension that fighting against absolute poverty remains to be the daily routine for more than a billion people around the world.

Table 1.1. What National Averages Conceal: Unequal Distribution

<table>
<thead>
<tr>
<th>Country</th>
<th>GNP per capita (US$) 1987</th>
<th>Real GDP per capita (PPP$) 1987</th>
<th>Gini coefficients of inequality</th>
<th>Distribution-adjusted GDP per capita (PPP$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panama</td>
<td>2,240</td>
<td>4,010</td>
<td>.57</td>
<td>1,724</td>
</tr>
<tr>
<td>Brazil</td>
<td>2,020</td>
<td>4,310</td>
<td>.57</td>
<td>1,852</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1,810</td>
<td>3,850</td>
<td>.48</td>
<td>2,001</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1,610</td>
<td>3,760</td>
<td>.42</td>
<td>2,180</td>
</tr>
</tbody>
</table>


The fact that per capita income often obscures widespread human deprivation is demonstrated in the experiences of countries like Panama, Brazil, Malaysia and Costa Rica. In the Table 1.1, these four countries are ranked based on the value of GNP per capita. Panama has the highest rank followed by Brazil, Malaysia, and Costa Rica. If the GNP per capita figures are adjusted by variations in purchasing power in different countries, the relative positions of Brazil and Panama are changed. It is well-known that many countries have high economic growth accompanied by high-levels of income
inequality. Thus, if the distribution adjustments are made using each country’s Gini coefficients, the original rankings are completely reversed.

Development experiences in many Third World countries have offered a powerful testimony that economic growth does not necessarily bring improvement in human welfare. Conversely, human development does not always require economic development. Low-income countries such as Sri Lanka have been able to achieve high levels of human development relative to its economic position in the world.

These experiences in the Third World countries call for a new perspective on development, namely, bringing people to the center stage. Industrialization is an important building block for the economic architecture of a country. However, economic growth is the means but not the end in itself. Rather, the ultimate goal of development is to benefit the people. If rewards from economic development do not reach substantial sections of the population, if economic progress denies rural people, women, and children access to basic health services, education, food, and sanitation, and if economic growth is achieved at the expense of the welfare of majority of the population, development, then, has failed the people and lost its meaning.

This research intends to shift the focus of previous research from economic development to human development. It sets improvement of human choices as a more meaningful criterion for development. Using the definition given by the United Nation Development Program (UNDP), this research defines human development as "a process of enlarging people’s choices." Among the indefinite spectrum of human choices, the
three essential ones are "for people to lead a long and healthy life, to acquire knowledge and to have access to resources needed for a decent standard of living."

The concept of human development refers to both the "process of widening people's choices and the level of their achieved well-being." This definition of human development makes the distinction between two dimensions of human development, i.e., the formation of human capabilities such as improved health, knowledge and skill, and the use of the acquired human capabilities for productive purposes, leisure pursuits, and an active engagement in cultural, social, and political affairs.

**Contrast with Other Development Approaches**

This people-oriented perspective on development departs from conventional approaches to economic growth, human capital formation, human resource development, human welfare, and basic needs.

First of all, economic growth in GNP is regarded as a necessary but not sufficient condition for human development. Human progress may lag behind rapid GNP growth or high income per capita levels if no concerted efforts are made. Second, in theories of human capital formation and human resource development, human beings are treated primarily as means rather than as ends. These theories view human beings as the ultimate resources and instruments to carry out commodity production. Although human beings are the agents of all production, they are also the ultimate ends and beneficiaries of the process. The concepts of human capital formation and human resource development capture only one dimension of human development. Third, the human welfare approach treats humans mainly as the beneficiaries of the development
process. They emphasize distributive mechanisms and policies while ignoring human beings as the productive forces. Finally, human development perspective differs from the basic needs approach. The latter concentrates on goods and services to which many people are denied the access. It focuses on the provision of basic needs such as food, shelter, clothing, health care and safe water. The emphasis is on supplying goods and services to the deprived people rather than providing choices to the people.

By contrast, human development brings together the production, distribution of production, and the expansion and use of human capabilities. It focuses on choices, on what people ought to have, on what people are entitled to in order to live a decent life. Therefore, human development does not stop at the satisfaction of basic needs, it entails a more involved and more dynamic development process.

**Explaining Third World Human Development**

**A Theoretical Overview**

There have been tremendous variations in the performance of human development in the developing countries. It is extremely hard to arrive at a satisfactory explanation. Given the complexity of the issue, it is not surprising that no existing theory has the absolute superior explanatory capability. The theoretical debates on economic and human development, in our view, have been colored more by ideological differences and differences in fundamental assumptions. For this reason, we have decided not to join this chorus but to focus on specific issues which have a direct bearing on human development. Theoretical arguments driven mostly by ideologies may divert our interests and blur an objective understanding of Third World human development.
However, there is a way we can learn from the theoretical differences of various schools. We can derive some valuable insights from those theories and develop an integrated framework that synthesizes the competing theories. The modernization and neo-classical economic theories tend to emphasize the internal factors as explanations of Third World Development. This is opposed by the radical dependency theory which focuses almost exclusively on the external world economy and treats Third World countries as victims of the global capitalist and imperialist conspiracy. The right answer may lie somewhere in the middle of these two opposing views. Our integrated framework combines these theories by acknowledging the importance of both internal and external factors.

Specifically, the classical economic and modernization theories view economic and human development as largely an indigenous problem. The problem of development is conceived by these scholars to be a question of transforming traditional societies into modern ones in several stages of growth (Rostow 1960). Others have defined the problem as how to achieve growth with an unlimited supply of labor (Lewis 1954). Third World countries in need of this transition were considered as a homogeneous group. Each country was subject to a "vicious circle" of underdevelopment which could be broken by a "big push" coming from foreign capital and technology. Therefore, developing countries were expected to follow the same path of the developed nations irrespective of their initial conditions. Their resources, social structure and political orientations, their historical background, particularly their pre-colonial and colonial heritage, are thought to be irrelevant. Failure to follow this
"same-path-for-all" strategy was attributed largely to the lack of modernity, the malfunction of political and economic institutions, government mismanagement, the backwardness in technology, and excessive population.

The radical dependency theorists explain Third World underdevelopment in a different way. Third World countries are viewed as part of the core-peripheral system of international stratification. Because of their colonial experience and the Western domination, Third World countries cannot follow the same development path traveled by the western pioneers. The explanations of Third World development offered by dependency theorists are external. They explain the Third World backwardness as a natural condition created by the long history of colonial domination in these countries (Frank 1979). Underdevelopment in the Third World is the result of national transfer of economic surplus that also produced development in the Western countries (Amin 1976). The inflows of foreign capital and technology are not seen as contributing factors to Third World development but as factors which have forged three types of dependence, namely, colonial dependence, financial-industrial dependence, and technological dependence, which have perpetuated the Western domination at a new level and have suffocated the internal technical and cultural capacities, as well as the physical health of the people in the Third World (Dos Santos 1971).

Since the 1950s, students of development have generated a voluminous literature on the validity and relevance of these theories to development experiences. A survey of various quantitative cross-national research and case studies provides one basic insight. That is, an objective grasp of Third Word development requires the assessment
of both internal and external social and economic factors. Bias toward either side indicates the loss of touch with reality.

This insight is central to our integrated theoretical framework on Third World human development. To account for the variations in human development, we focus on the internal factors — structural disarticulation, technoeconomic heritage, developmental state, urbanization, fertility and population growth rate. We also examine the external factors — external indebtedness and IMF adjustment policies, foreign investment, and foreign trade. In the next few sections, we will discuss the impact of some of those internal and external factors on Third World human development.

**Structural Disarticulation: A Hindrance**

Despite the tremendous effort on human development in the past four decades, what accounts for the persistent poverty and the denial of basic health and education that continue to plague their mass population? Since the dawn of Third World industrialization, one major culprit might be structural disarticulation, a distorted social and economic structure that characterizes most of the developing countries.

In the Third World context, structural disarticulation has three salient aspects. First, it refers to the uneven sectoral development among economic sectors. In other words, it is the juxtaposition of economic sectors with different levels of development and productivity (Amin 1976; Stokes and Anderson 1990). The economic structure in a developing country typically has a very large agricultural sector and a small manufacturing sector. While most of the labor force is concentrated in the agricultural
sector, productivity in this sector is relatively low. As many countries become rapidly urbanized, the service sector, mostly the urban informal sector, becomes the fastest growing section of the economy. However, the enlargement of the service sector is often not an outgrowth of the reduction of labor force and rising productivity in the agricultural sector. This pattern of sectoral development is fundamentally different from that of the historical shift of labor allocation in the industrial countries observed by Collin Clark (1957). The cause of sectoral development is different, as is the speed. As Clark (1984) remarks, the pace for the decline of agricultural employment is much slower in the developing countries than in the industrial countries.

The second aspect of structural disarticulation has to do with the lack of correspondence between the patterns of consumption and production. In developing countries, the key sectors of manufacturing have been devoted in large proportion to the production of exclusively luxury items and durable goods. These commodities, by definition, are not consumed out of the wage income of the majority of the citizens (De Janvry and Sadoulet 1983). Only the thin upper strata of the population have the purchasing power for these luxury items in the domestic market. It is widely held that modern economic dynamism lies in the capitalist manufacturing sector as opposed to the traditional agricultural sector. Yet if the surplus of labor is not absorbed in the capitalist sector and the income of the wage-earners remain low, the growth and expansion of this key dynamic sector is limited and short-lived. The implication of this social aspect of structural disarticulation suggests a negative feedback between production and consumption, which explains the slow growth of the dynamic sector and
the lack of a rigorous development of all economic sectors. In Brazil and Mexico, for instance, the annual growth rate of electrical appliances and cars was more than double that of food and textile between 1968 and 1977 where in the United States, sectoral growth rates are much more homogeneous (De Janvry and Sadoulet 1983).

Missing or lack of linkages among industrial sectors marks the third aspect of structural disarticulation in the Third World countries. A viable development plan, according to Hirschman (1984:97), should take into account the backward and forward linkages, "investment in large-scale (capitalist-intensive) industry turns out to be just as employment-creating as investment in small-scale (labor-intensive) industry" for the developing countries. The idea of linkage is to measure employment creation rather than industrial expansion in terms of value added.

No one will dispute the importance of industrial linkages and its potential effect on productivity, but the question is why these linkages are missing in a developing economy. One explanation points to the overwhelming concentration on the production and exports of primary products and the specialization in a few commodities with the sole purpose of exports (Amin 1976). Such a pattern of production simply does not generate the kind of linkage to communication and transportation, to help create other light industries and provide stable employment in the tertiary sector (Bunker 1989).

The three aspects of structural disarticulation are closely related to each other. In most cases, they are not only interdependent but really coexistent. For this reason, one can safely argue that they are virtually the same issue with three kinds of negative manifestation. We specifically tease out these three aspects for a clear discussion of an
array of substantive issues. In the process of understanding many development problems, we have found their roots, to a large extent, in the deep-seated problem of structural disarticulation in Third World economies.

Structural disarticulation has a direct and profound impact on human development. The bulk of the Third World labor force is still concentrated in the agricultural sector. The low productivity and slow growth of this sector inevitably affect the livelihood of a large segment of Third World population. Although no one argues for a completely balanced development across industrial sectors, the gap in productivity per labor among sectors in a developing country is much larger than that in an industrial country. Table 1.2 shows that in 1965 the developing countries as a whole had an average of 71.5 percent of their labor force in the agricultural sector, compared with only 22.2 percent in the industrial countries. For the same time period, the developing countries had only 11.5 percent of their population in the industrial sectors and 17.1 percent in the service sector. In contrast, the industrial countries had 36.4 percent and 41.5 percent of their labor force in the sectors of industry and service, respectively.

The problem of structural disarticulation is also much more persistent in the developing countries. Almost a quarter century after the late-comers first embarked on the road of industrialization, the labor force structure in the Third World countries has not changed dramatically. As shown in Table 1.2, till 1987, developing countries as a whole still have 59 percent of their labor force in agriculture, 13 percent in industry, and 28 percent in services. In the least-developed and Sub-Saharan African countries,
a whopping 70 percent of their labor force is still concentrated in the rural areas. Consequently, most of the developing countries rely heavily on agricultural production. Yet the agricultural sector has the least number of linkages that can lead to potential employment. The low-level of technology in this sector does not support a high level of productivity, hence crippling the rapid improvement of human conditions.

Table 1.2 Labor Force Distribution Across Industrial Sectors

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</thead>
<tbody>
<tr>
<td>All Developing Countries</td>
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<td>59.0</td>
<td>11.5</td>
<td>13.0</td>
<td>17.1</td>
<td>28.0</td>
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<tr>
<td>Least Developed Countries</td>
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<td>71.1</td>
<td>5.8</td>
<td>7.6</td>
<td>11.3</td>
<td>21.2</td>
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<td>Sub-Saharan Africa</td>
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<td>70.3</td>
<td>8.6</td>
<td>9.8</td>
<td>13.7</td>
<td>20.0</td>
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<tr>
<td>Industrial Countries</td>
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<td>11.5</td>
<td>36.4</td>
<td>27.5</td>
<td>41.5</td>
<td>61.0</td>
</tr>
<tr>
<td>World</td>
<td>56.6</td>
<td>47.9</td>
<td>19.0</td>
<td>16.4</td>
<td>24.5</td>
<td>35.7</td>
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</table>


Structural disarticulation is a deep-seated problem in the developing economies. Daunted by such a formidable task, development theorists have not yet paid special attention to this problem. After decades of endeavor toward development, structural disarticulation has taken on a new look and entailed several new features as discussed in the previous sections. An understanding of its potential relationship with human development would make a valuable contribution to development thinking.
The new conceptualization and measurement of structural disarticulation represent the special contribution of this research to the sociological understanding of Third World development. Our quantitative analysis of structural disarticulation as an intermediate mechanism linking human development and a host of social and economic factors forms the central piece of this research. The results of our research have important theoretical and policy implications for human development still unfolding in the Third World.

**The Debt Crisis: An Ordeal of Stagnation**

It requires tremendous amount of resources, physical capital in particular, to furnish the large-scale improvement in Third World human development. Yet, considerable amount of such monetary resources has been drained toward debt payment, which could otherwise be directed to social services and expenditures on the welfare of the people. Table 1.3 shows the rapid accumulation of external debt in the less developed countries. Total Third World external debt rose from $67 billion in 1970 to $572.2 in 1980 to $1280.6 in 1990. External indebtedness has taken a big bite out of the gross national income in the Third World economies. As it is shown in Table 1.3, external debt as a percentage of GNP has risen from 14.5 percent in 1970 to 40.4 percent in 1985. What is more staggering is that total external debt has exceeded the total exports of goods and services in the past three decades. Again as is shown in Table 1.3, total external debt as a percentage of total exports (EDT/XGS) was 121.8 percent in 1970 and 201.4 percent in 1985.
The figures shown in Table 1.3 reveal the devastating picture of Third World indebtedness and the acuteness of this unprecedented problem. In light of these debt statistics, it is all the more evident that external indebtedness poses a large burden on the Third World countries, striving for economic and social progress. In fact, the global debt crisis forced Third World states to curtail poverty programs, wages, employment, and public services throughout the 1980s, even though few of these programs were funded from foreign borrowing (Nafziger 1993). The pressure of debt service led to economic stagnation indicated by the negative to zero growth in many of the developing countries in the 1980s.

The Third World debt crisis has become a dominant factor in the relations between the rich and poor countries since 1982. To facilitate debt payment owed to commercial banks and government in the developed world, international financial institutions have taken on an increasingly important role in the world economy. To ensure debt payment, the International Monetary Fund (IMF) requires the indebted countries to adopt a structural adjustment program which includes the adjustment of currency exchange rates, freezing of public sector wages, reduction or total removal of subsidies, privatization of public enterprises, and trade liberalization. Many developing countries have to comply with these conditions because they need to borrow more simply to continue debt payment. For instance, despite the low creditworthiness of Africa and the low percentage of its debt held by commercial lenders, Africa faced widespread debt rescheduling in the 1980s and the early 1990s, and it depended on the IMF as the lender of last resort. Since 1980, thirty out of forty-four sub-Saharan
countries resorted to rescheduling and adopted the structural adjustment program. (Adefulu 1991; Nafziger 1993).

Few analysts would disagree with the necessity to restructure Third World disarticulated economies. Yet many would dispute the supposedly beneficial impacts of the adjustment programmes on the standards of living, long-term growth and human development in Africa, Asia, and Latin America. A decade after the implementation of adjustment policies, the results have not been as desirable as expected. Besides continual stagnation of many Third World economies, the social costs of adjustment have been particularly appalling. UNICEF (1985:21) asserts that "the result [of economic adjustment measures] has often been an aggravation of the economic crisis and a parallel human crisis as unemployment rises, incomes of the most vulnerable groups fall, import-dependent industries cut production, public services are curtailed and public discontent and political instability grow."

The relationship between international debt crisis and Third World human development is of special sociological importance. Despite this fact, few quantitative studies have been devoted to the increasingly important impact of the global debt crisis (exceptions includes Bradshaw and Huang 1991, Bradshaw et al 1993, Walton and Ragin 1990). Third World indebtedness raises new issues regarding the impact of a new type of dependency versus the classical dependency of foreign investment and trade (Bradshaw and Huang 1991; Bradshaw et al 1993; IMF 1985). Since the early 1980s, the debt crisis has altered the development patterns in the Third World economies. In the years ahead, many indebted countries will go through "a decade of
rehabilitation." (Singer and Roy 1993) This study makes the first attempt to evaluate the effect of external debt and structural adjustment on Third World human development.

**Foreign Investment : Blessing or Curse?**

One major manifestation of international interdependence is the globalization of foreign direct investment. Foreign investment has created numerous linkages connecting the economies of the rich and poor countries. There are many incentives for all parties to establish such economic relationships. Foreign investors and multinational corporations (MNCs) intend to take advantage of the natural resources, cheap labor, and the huge market in the developing countries. On the other hand, the developing countries are interested in the potential benefits of physical capital and modern technology in the developed world. Table 1.4 indicates that foreign direct investment has started to pour into the developing countries in 1950. By 1975, total foreign direct investment (FDI) consisted of 35 percent of the total amount of foreign capital in the developing world. The peak of FDI was reached in 1985 when FDI attained almost 45 percent of total foreign lending. After the backlash of the debt crisis in 1982, foreign direct investment started to dwindle. Yet FDI remains on the scene of the global economy, and retains a 33 percent share of the total Third World foreign capital.

The impact of foreign investment on Third World development is the most controversial issue in development studies. World System and radical dependency theories have the most negative assessment of its role. Foreign direct investments by
multinational corporations are said to distort development in the Third World (Frank 1969; Wallerstein 1979; Amin 1979). According to this view, investment dependence has slowed economic growth by decapitalization and displacement of domestic industries. Several quantitative cross-national studies have shown that investment dependence or multinational penetration negatively affect Third World economic growth, physical quality of life, infant mortality and life expectancy (e.g., Bornschier and Chase-Dunn 1985; London and William 1988; Moon and Dixon, 1985; Wimberley, 1990). Other studies have found weak linkages between investment dependence and infant mortality or under 5 child mortality (e.g., Stokes and Anderson 1990; Bradshaw et al 1993).

The modernization perspective views foreign direct investment as the key to more rapid development in the Third World (Clauson 1985; Freeman 1981; Rostow, 1991). Sowell (1983:241) asserts that while multinational corporations may have some undesirable effects on Third World economies, their net effect is overwhelmingly beneficial in that "benefits have costs."

Recent development in the Third World has raised skepticism toward dependency and world system theories and research. The reasons are twofold. First, some argue that investment dependence has become less important compared with the size and intensity of external indebtedness (IMF 1985; Bradshaw et al 1993). Portes and Kincaid (1989) argue vigorously that the new research agenda should focus on the debt crisis which resulted in "the reversal of development" as countries were forced to repay debt and cope with the hardship of structural adjustment. Second, numerous case
studies have revealed that the effect of foreign investment is far from uniform in Third World countries. While MNCs have contributed to enclave industries and capital flight in some African countries (Nafziger 1993), the same negative effect might not be found in many middle-income countries in East Asia and Latin America.

The current study focuses on the specific effect of foreign investment on human development in the Third World. We argue that foreign direct investment should not be viewed as an isolated phenomenon. Its assessment should be situated in the midst of many social and economic factors in the Third World. The success or failure of foreign investment on the part of developing countries is contingent on the technoeconomic heritage, the human capital and capacity, and the development strategies in the receiving countries.

We believe that foreign direct investment will continue to play a very important role in the Third World economies. Even though coping with the debt crisis will perhaps attract more of the public spotlight, we argue that foreign investment will not disappear from the scene, but will become more focused and more concentrated in some developing countries, where the potential for mutual benefits is perceived to be greater. That is why most Third World states have been making an active effort to attract foreign investment, the most recent example is the Vietnam government. Meanwhile, multinational corporations are actively searching overseas for labor force and market-share as big American corporations are still going abroad. In the 1990s when the fast growth lies overseas, East Asia for example, the MNCs want to participate in the foreign business and want a big piece of the economic success in those promising areas.
For this reason, our test of the relationship between foreign investment and human development should contribute to a new understanding in development studies. Our empirical finding should have significant theoretical and policy implications for the corporation between the rich and poor countries.

*The Developmental State: A Basis For Hope*

One central argument in this research is that Third World human development requires the active participation and orchestration of developmental states. The positive role of states in promoting economic and human progress was evident in the history of many industrial countries (Gerschenkron 1962). In the past four decades, the developmental state is also a crucial factor that explains the failure of some African economies and the success of the Asian and Latin American countries (Bates 1981; Goldstone 1982; 1986; Stepan 1985).

Development in the contemporary context stresses even more the functional relationship between states and markets. As Evans (1988:750) rigorously argues, "If industrialization is the goal, then the performance of states like Korea and Brazil that have combined entrepreneurial state intervention and market orientation is clearly superior to that of regimes like those produced by the military in Chile and Argentina whose attempts at allowing the unfettered operation of the market produced deindustrialization." Johnson (1982) and Zysman (1983) have demonstrated the effectiveness of combining state intervention and market orientation in the postwar development of Japan and France.
The issue of the developmental state goes beyond the question of whether or not there should be state intervention. Instead, we should focus our attention on the quantity and quality of state intervention. In fact, effective government policies and the rational choice of development strategies are what explains the divergence of the East Asian and the Latin American experiences (Ranis 1990; Gereffi 1990).

Third World Development needs "strong" states. One explanation behind poverty and immiserization in sub-Saharan Africa is their so-called "soft states". As Nafziger points out, the authorities of the soft states are those who "decide policies rarely enforce them (if enacted into law) and only reluctantly place obligations on people" (1993:35). These states are dependent on buying political support through concessions to powerful interest groups (Bates 1981). As Nafziger (1993:35) clearly portrays,

African states overvalued domestic relative to foreign currency, set farm prices far below world prices, protected manufacturing at the expense of agriculture, used the surplus from these policies to expand inefficient import-substitution industry, and emphasized high-technology, capital-intensive, Western-type, consumer-goods production in the MNC-parastatal sector.

Another practical support for interaction between states and markets, which is often overlooked, has to do with the sheer size of the multinational corporations. The budget of many of MNCs is comparable to the total gross national income of many developing countries, especially the in sub-Saharan Africa. Because of this, many developing countries lack the financial strength and management skills in dealing with MNCs. As for the local industrialists, it is completely inconceivable for them to compete with the corporate giants coming from the developed world. MNCs definitely
have advantages such as patents, technical knowledge, superior managerial and marketing skills, better access to capital markets, and economies of large-scale production. Therefore, it takes a very sophisticated developmental state to strike a balance in the era of modern capitalism.

The current study examines the empirical relationships among the strength and size of the state, the degree of structural disarticulation, external indebtedness and the level of human development. It is argued that a strong state, oriented toward development, is capable of reducing structural disarticulation through rational allocation of resources and fiscal policies. Its active involvement in the national economy should also help to promote the overall well-being of the people.

Summary

This study sets out to investigate the complex relationships among structural disarticulation, external indebtedness, foreign investment, the developmental state, and human development in the Third World countries. In previous sections, we have provided an overview of the theoretical thrusts of this research, and presented a brief discussion on the relationships between human development and its correlates. In this research, these potential relationships are subject to empirical testing from a quantitative cross-national approach. Results of the analysis provide partial support for arguments derived from various schools of thoughts.

Several novelties stand out from this research. First and foremost, this study makes the attempt to conceptualize structural disarticulation in a way that reflects three kinds of structural problems in the Third World economy, namely, uneven sectoral
development, lack of correspondence between patterns of consumption and production, and the missing linkages among industrial sectors. In doing so, we have enriched its theoretical meaning and contributed to a clearer understanding of its relevance to many social and economic factors central to Third World development.

Moreover, unlike previous research, we carefully conceptualize structural disarticulation so that it becomes a neutral concept that does not carry any biases stemming from a particular theoretical perspective. With this feature, we aim at a more objective understanding of structural disarticulation and its impact on Third World social and economic development. Empirical findings based on such a conceptualization should have valid implications for further development research as well as for policy-making.

In this research, we also make an effort to construct a new measure of structural disarticulation. Our measurement is reflective of the theoretical meaning of this concept, and intuitively interpretable. The construction of this measure based on the idea of a multiplicative model is also mathematically sound. Our measure has proved to be meaningful as indicated by its significant correlation with a set of important development indicators. Therefore, it becomes useful not only in the current research, but also in future research. The measurement of structural disarticulation marks a significant contribution of this study.

The second novelty is theoretical. Rather than relying on a single theoretical perspective, we have decided to develop an integrated framework that synthesizes and combines the valid insights from various development theories. We have synthesized
ideas from modernization theory, evolutionary and ecological theory, classical economic
theory, world system and dependency theory, and dependent development perspective.
We have found that these seemingly competing theories do have common concerns and
some shared insights, which lay the groundwork for theoretical integration.

Our integrated framework has proved to be beneficial and constructive as it
provides a more objective understanding of the problems at issue and frees us from
being limited by the basic assumptions of a particular school of thoughts. This is
manifested by our ability to emphasize both the internal factors such as structural
disarticulation and the external forces such as the global debt crisis and IMF structural
adjustment programmes.

Finally, this research focuses its attention on some of the most important issues
in the context of contemporary Third World development. In doing so, we intend to
break away from the endless and often fruitless theoretical debates among those who
take the extreme positions. We have made a choice of focusing on the understanding
of particular issues of development and performing empirical analysis of relationships
among development indicators. Pursuant to this, we did not design this study as mainly
an exercise to test competing theoretical arguments.

The focal point of this research is on the impact of persistent structural
disarticulation, the unfolding global debt crisis, the continual importance of foreign
investment, and the increasingly important role played by the developmental states in
Third World human development process. These issues are contemporary and
important precisely because we believe they will exert a stronger influence on future
Third World development and constitute the center point of North-South relationships. Moreover, these issues will keep many scholars of development busy for their entire careers.

**Organization of Chapters**

In this chapter, we have stated the research problem and some of the major theoretical themes that will be tested in this dissertation. The rest of the chapters are organized as follow:

Chapter 2 is devoted to a historical review of postwar political and economic conditions. The purpose of this chapter is to provide a historical background for cross-references made in the other chapters. It provides an overview of the sequence of development thinking and development strategies adopted by the developing countries in different regions. Major historical events of the postwar world economy are also presented in this chapter. This chapter tells stories of both the successes and failures in the great economic experiments. The main intention is to ground our research problem firmly in the historical context and to prevent our theoretical and substantive discussions from losing touch with reality.

Chapter 3 surveys the relevant theories and perspectives on human development. First we review the changing meaning of development. This review leads to a new definition of human development that emphasizes benefiting the people as the priority. Then we review various development theories toward human development such as the linear stage theory, the modernization and ecological-evolutionary theory, the Latin-American structuralist perspective, the radical dependency theory, and the dependent
development theory. We critically assess the limitations of these theories and conclude that there is a need for a theoretical synthesis.

Chapter 4 is the central piece of the theoretical contribution from this dissertation. The importance and the feasibility of the theoretical synthesis are discussed. The integrated framework is delineated with emphasis on both the internal and external factors that account for Third World human development. This integrated framework focuses on factors of structural disarticulation, external indebtedness and IMF adjustment policies, foreign investment and trade, and the role of developmental state. Hypotheses derived from the integrated theoretical framework are formulated.

Chapter 5 discusses the measurement of all variables used in the empirical analysis. Special attention goes to the construction of indices, that is, the human development index, the structural disarticulation index, and the index of IMF involvement. Along with the measurement discussion, we also discuss empirical findings based on some of the commonly-used variables and their relevance to the current research problem. The methodology for hypothesis-testing is also discussed. The research design consists of two parts: first, various hypotheses are tested in the regression models using ordinary least-square estimation; second, path analysis with the aid of LISREL is performed to test the hypothesis that structural disarticulation is a central mechanism, mediating the effect of many social and economic factors on human development and other social and economic factors.
Chapter 6 reports the empirical results based on the regression models and the path analysis. Results from various models are compared. Support or disconfirmation of the hypotheses is discussed.

Finally, Chapter 7 discusses the overall results of this empirical exercise. In light of the empirical findings, the validity of various theoretical arguments is evaluated and the theoretical implications of these findings are presented. In the end, the dissertation makes a note on the policy implications of this research.
Table 1.3 External Debt, GNP, and Exports of 109 Reporting Less-Developed Countries, 1970-1990 ($ billions and percent)

<table>
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<td>Total External debt (EDT)</td>
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<td>572.2</td>
<td>936.9</td>
<td>1280.6</td>
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<td>Long-term Public debt (DOD)</td>
<td>47.2</td>
<td>126.8</td>
<td>365.1</td>
<td>767.8</td>
<td>1047.0</td>
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<tr>
<td>Gross national product (GNP)</td>
<td>461.4</td>
<td>1024.1</td>
<td>2059.5</td>
<td>2054.5</td>
<td>3060.6</td>
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<td>Exports of Goods &amp; Services (XGS)</td>
<td>55.0</td>
<td>171.5</td>
<td>432.7</td>
<td>438.4</td>
<td>724.3</td>
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<td>DOD/GNP (%)</td>
<td>10.2</td>
<td>12.4</td>
<td>17.7</td>
<td>37.3</td>
<td>34.2</td>
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<tr>
<td>DOD/XGS (%)</td>
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<td>73.8</td>
<td>84.4</td>
<td>175.1</td>
<td>144.6</td>
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<td>EDT/GNP (%)</td>
<td>14.5</td>
<td>16.3</td>
<td>27.8</td>
<td>40.4</td>
<td>34.2</td>
</tr>
<tr>
<td>EDT/XGS (%)</td>
<td>121.8</td>
<td>97.0</td>
<td>132.2</td>
<td>201.4</td>
<td>176.8</td>
</tr>
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<td>EDT annual growth rate (%)</td>
<td>20.0</td>
<td>21.9</td>
<td>11.1</td>
<td>11.7</td>
<td></td>
</tr>
<tr>
<td>DOD annual growth rate (%)</td>
<td>21.9</td>
<td>23.6</td>
<td>13.8</td>
<td>9.2</td>
<td></td>
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<tr>
<td>GNP annual growth rate (%)</td>
<td>17.3</td>
<td>15.0</td>
<td>1.5</td>
<td>11.4</td>
<td></td>
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<tr>
<td>XGS annual growth rate (%)</td>
<td>25.6</td>
<td>20.3</td>
<td>-1.9</td>
<td>17.8</td>
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1Long-term debt is debt with an original maturity of more than one year; short-term debt is debt with an original maturity of one year or less.
<table>
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<tr>
<th>Year</th>
<th>Bilateral (percent)</th>
<th>Multilateral (percent)</th>
<th>Banks (percent)</th>
<th>DFI (percent)</th>
<th>Total Amount ($ million)</th>
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<td>1950*</td>
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<td>9.7</td>
<td>2.7</td>
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<td>1955*</td>
<td>51.8</td>
<td>8.3</td>
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<td>1961</td>
<td>31.0</td>
<td>12.2</td>
<td>14.2</td>
<td>42.6</td>
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<td>1965</td>
<td>35.3</td>
<td>11.3</td>
<td>11.2</td>
<td>42.2</td>
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<td>1970</td>
<td>30.3</td>
<td>9.0</td>
<td>21.7</td>
<td>39.0</td>
<td>9,463</td>
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<tr>
<td>1975</td>
<td>23.8</td>
<td>10.6</td>
<td>35.9</td>
<td>29.7</td>
<td>34,806</td>
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<td>1980</td>
<td>19.3</td>
<td>15.9</td>
<td>47.7</td>
<td>17.0</td>
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<td>1985</td>
<td>13.1</td>
<td>32.0</td>
<td>33.4</td>
<td>21.5</td>
<td>35,748</td>
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*Figures for United States and World Bank only.
CHAPTER II

DEVELOPMENT IN TRANSITION: TRENDS AND LESSONS

The Sociological Importance of the Study

The central issue in this dissertation is the complex relationships among foreign debt, sectoral disarticulation, and human development in Third world countries. These complex relationships are of special sociological importance for several reasons. First, they suggest that national development process is the result of the interplay between external and internal forces. Since the dawn of world capitalist expansion, there has evolved a hierarchical world economy with a rich center, a poor periphery, and an emerging middle-class, the semi-periphery. The winds of capitalism and industrialization have swept away national boundaries, and countries have engaged in voluntary and non-voluntary trading, money and capital have crossed oceans and continents, resources have shifted between the North and the South. To be in debt is not a new phenomenon, but the accumulation of debt to form an international debt crisis brought attention to its role and impact. At first, lending and borrowing reflected the political and economic relations between the debtors and creditors, it also inscribed the then idealistic goals, motivations, and high hopes of the debtors and creditors for mutual benefits. The accumulation of debt is related to the stories of international trading and other foreign direct or portfolio investment. Favorable terms of trade and investment do not necessarily ensure the full capacity of debt payment. Some middle-
income countries who adopted relatively successful development strategies also carry a sizable debt (e.g., South Korea and Indonesia), since increment or deduction of debt is subject to the fluctuation of interest rates and the political and economic changes in the oil-exporting countries. On the other hand, the experience of trade of foreign investment that failed to be beneficial gave rise to an almost uniform pattern of debt explosion.

Foreign debt is also related to sectoral disarticulation. The economic burden of debt reinforces the already distorted economic structure. The pressure of debt repayment forces a country to concentrate in export-oriented industries, thus diverting resources from developing other industries. The neo-classical monetarist strategy of debt solvency insures that creditors will get repayment but jeopardizes the long-term development strategy toward a more healthy economic alignment. The interaction between external and internal forces provides us the clue for understanding the complex relationships among foreign debt, sectoral disarticulation, and human development. Foreign debt and structural disarticulation, representing the external and internal forces respectively, have considerable impacts on human development. Furthermore, foreign debt has an indirect effect on human development mediated by structural disarticulation.

Our understanding of these complex relationships is centered on human development as the newly-defined development goal which embraces strong sociological concerns. The sociological perspective recognizes rising economic productivity and ascending economic growth rate as promising signs of development. Yet, the sociological concern does not stop at productivity and growth, per se. From a
sociological perspective, a country does not increase productivity or growth rate for its own sake, rather, the larger goal or ultimate purpose of development is to enlarge people's choices and opportunities, improving people's livelihood, and lifting the mass population out of poverty.

At the aftermath of World War II, economists and policy-makers were largely occupied with the industrialization of developing countries through boosting productivity and growth rate. A few decades later, countries that have achieved impressive growth rates are still bedeviled by increasing income inequality and problems of distribution, while those countries that have not obtained higher growth rates are continually plagued by decreasing living standards and growing poverty. There are only a handful of countries who have somewhat succeeded in striking a balance between growth and equity. It thus becomes clear that development should not be measured purely by economic standard; development needs to address sociological concerns.

While some economic aspects of structural disarticulation have been dealt with by economists, its role and impact on growth and productivity were also debated which resulted in the polarization of theoretical perspectives. In this dissertation, we revisit the issue of structural disarticulation due to its growing impact on economic and social development. Uneven sectoral development favors the dynamic industrial sectors and ignores, for example, the agricultural sector that houses most of the Third World population. Uneven sectoral development entails a tendency of urban bias and discriminations against the sizable population of rural poor (Todaro, 1981). Uneven
sectoral development also finds its expression in the current overexpansion or "hypertrophy" of the service industry in many developing countries (Portes and Walton 1981). This seemingly premature expansion of the service sector indicates social inequality between the privileged and the disadvantaged. It reflects the misery of the rural-to-urban immigrants. The missing linkages among the industrial sectors have profound implications for the assessment of current development strategies and for the prospects of significantly improving the performance of human development in Third World countries. No matter what discipline we are coming from, we are still in tremendous doubt whether uneven sectoral development with missing linkages will bless or doom, the long-range economic and social progress in the Third World.

We approach the issue of structural disarticulation from the sociological perspective in the sense that (1) we situate this problem in the context of the power relationships between the rich and the poor countries; (2) we look at its costs and implications on not only the economic, but more importantly, the social aspects of development; (3) we trace its roots in the web of indigenous technological and human capacities and exogenous forces; (4) we consider its formation as intertwined with population compositions and growth rates; and (5) unlike some of the economic perspectives, we do not treat sectoral disarticulation as either a temporary or permanent feature of economic growth, leaving that debate to the concerned economists. Instead, we want to focus on its direct, and less than favorable impact on human lives in the developing world. From the sociological viewpoint, structural disarticulation, as a distorted economic and social structure, transcends this petty debate as it has already
had an enduring effect on the current and future prospects of human progress in the developing world. The sociological significance of analyzing structural disarticulation is that it embodies many development issues that are related to the relationships between the North and South, the accord and discord among countries, the successes and failures of the multilateral institutions, the interplay between national and international governance on the Third World human development process.

So much for the sociological importance of this study. Next we shall turn to the historical review of postwar development experiences that involve various debates often generating more confusion than illumination. To enlighten our view and judgement, it is essential to spare some space for such a review. By tracing the history of the postwar world economy, we can also draw lessons that may inspire new thinking on development. For the current research, it will illuminate our understanding of the complex relationships among foreign debt, structural disarticulation, and human development in the developing countries. Moreover, it is useful to check perspectives with realities, arguments with facts, and to reveal biases embedded in the existing theoretical debates. In short, the tedious and bulky debates and controversies warrant a brief review of postwar world economic history.

The History of the Postwar World Political Economy 1948-1987

On the ups and downs of the 40 years of world development, Singer and Roy (1993:8) made the following account:

The development story is clearly a mixture of good and bad, of progress and regress, of success and failure. Indeed, it is this very mixture which leads to much confusion. Some people, institutions or schools of thought tend to pick out the failures and draw from them lessons of what should be done to redeem
them or avoid them in the future. Others will be more inclined to point out successes, and base their conclusions on what should be done to extend and support them. Obviously both approaches are justified: we should learn both from success and failure.

Scenarios of this sort often result in a polarized approach to development studies which, in turn, leads to futile debates with arguments based on "selective anecdotal evidence" (Singer and Roy 1993). It simply amounts to inconclusive controversies such as whether foreign investment or aid is beneficial or harmful for the developing countries; whether the causes of the barriers for development is internal or external; whether developing countries should adopt inward or outward strategies; whether developing countries should use modern capital-intensive technology or traditional labor-intensive technology; whether population explosion is a deadly hindrance or ultimate resource for developing countries, etc.

To pose such questions and answer them in the fashion of "either/or" has proven to be unhelpful. It is not so much a search for the middle ground to say that there are elements of truth contained in either of the contending doctrines (Nafziger 1990; Singer and Roy 1993). Looking back at the 40 years of world development, one sees that a mixture or blend of things works best. As Singer and Roy (1993:9) nicely put it:

The truth broadly is that the right kind of aid is good and the wrong kind bad; that inward orientation is right for certain countries, certain sectors and in certain conditions and outward orientation for other countries, sectors and conditions, while usually a selective and phased mixture of inward-oriented and outward-oriented measures is best; a selective mixture or 'blending' of modern and traditional technology is best; in the present debt crisis internal factors play a role and interact with external factors, etc.

These scenarios are reflected in the postwar history of world political economy from 1948 to 1987. This part of history can be summarized and broken down into three
sequential but distinctive periods: the twenty-five "gold years" of 1948 -1970s, the "debt-led growth" of the 1970s, and the "lost decade" of the 1980s. The brief historical review is guided by our need to identify the international context of national development and to untangle the intricate connections among international trade, the accumulation of debt, and the outcomes of various development strategies. History of the world political economy is an unfolding process, and it shall help us to obtain a comprehensive and coherent picture of the past.

**The Golden Era: 1948 - 1970s**

The aftermath of World War II created a unique opportunity to reshape the international political and economic system. The desire to achieve long-term peace and avert the causes of another world war is reflected in the creation of Bretton Woods system and the United Nations. Traditional and classical doctrines of reliance on market mechanisms met with heavy deflation, rising unemployment, and protectionism. The classical doctrine was swept away by the Keynesian consensus on an active macroeconomic management by the government. At the global scale, an accord was reached that nationalist policies must be replaced by international rules of conduct, enforced by international institutions.

In the 1930s the price of primary commodities dropped dramatically. The falling prices prompted Keynes and others to realize the need to stabilize the prices of primary products. For that purpose, it was decided at the Bretton Woods that in addition to the IMF and World Bank, a third international organization – the International Trade
Organization needed to be created with the dual purpose of stabilizing primary commodity prices and promoting international trade.

Yet the International Trade Organization, which Keynes considered the "indispensable third pillar" of the Bretton Woods system never came into being. Although it was negotiated and agreed at Havana, the "Havana Charter" was not ratified by the United States Congress. The change of political climate stifled the opportunity of establishing the organization. The Roosevelt/Truman era that embraced the notion of "freedom from the want" was replaced by the McCarthy era which regarded the UN and its works as "an evil empire."

Another even further-reaching Keynesian proposal for commodity stabilization was to create a world currency based on neither gold nor sterling, neither US dollars nor SDRs, but on 30 primary commodities including oil and gold. The situation at the end of the war seemed ripe for a Brave New World, but the Ultra-New World proposed by Keynes proved to be too radical, and enthusiasm for a Brave New World evaporated at the Bretton Woods.

The success of the Marshall Plan (1948-1952) had a lot to do with creating over two decades of an international milieu favorable for the industrial countries to achieve steady growth at a rate of 5 percent or more, with full employment and little inflation. The disequilibrium in their balance of payment was first solved by the Marshal Plan, then by US investment, and later by a strong recovery of exports and the emerging surplus of Europe and Japan.
The Marshall Plan has demonstrated the effectiveness of large-scale international income transfer, and the possibility of constructive recipient policies and collaboration between donors and recipients. The same idea in terms of large-scale aid was proposed to help the developing countries.

The idea of "soft aid" for the developing countries encountered longtime opposition from the World Bank, and opposition to the principle of soft aid also prevented the idea from materializing. In the more liberal Keynesian era, the chances for soft, multilateral aid became better, and the World Bank dropped its opposition. But then it is clear that the Western donor countries were unwilling to channel it through the UN where the developing countries had a major say, instead they preferred the World Bank which the donors controlled.

Although the Bretton Woods systems lasted 25 'golden years', the system remained largely incomplete and distorted. In Keynes' original proposal that placed a high priority for avoiding deflation and recession, he suggested that the IMF put the pressure of adjustment on balance of payment on the surplus countries rather than the deficit countries. This was to be achieved by making it mandatory for surpluses to be deposited in a World Central Bank and for these deposits to carry a negative interest rate. Although the vision was modified in the constitution of the IMF by the intention to put equal pressure on both the surplus and deficit countries, the IMF has proven to be utterly incapable of exerting pressures on the surplus countries (Gill and Law 1988; Nafziger 1993). Now the pressure is placed entirely on the deficit countries which are urged to "put their house in order."
The 1950s and the 1960s were accompanied by the global expansion of production and trade. This period was viewed as "one of the longest and most pronounced booms in world history." (Bairoch 1990; Singer and Roy 1993) During this period, the industrial countries experienced full employment and little inflation, and the developing countries were favored by independence, increase in output, trade, technological capacity, and acquisition of planning experience. The approach to development was largely based upon the prewar and war experience and reflection on the progress of industrial countries. However, as Singer and Roy (1993) pointed out the lessons learnt from yesteryear "came too late to be appropriate to newly changed circumstances."

The approach to development was dominated by the neo-Keynesian development model embodied in the Harrod-Domar model with almost exclusive emphasis on capital accumulation as the engine of growth. This emphasis was most pronounced in Maurice Dobb's lecture at the Delhi School of Economics in 1951:

The largest single factor governing productivity in a country is its richness or poorness in capital instruments of production. And I think that we shall not go far wrong if we treat capital accumulation, in the sense of a growth in the stock of capital instruments—a growth that is simultaneously qualitative and quantitative—as the crux of the process of economic development.

In light of development experience, the "capital/output" ratio was found largely to be governed by "human factors" such as education, skill, training, health, and nutrition that are not explicitly denoted in the Harrod-Domar model (Adelman and Morris 1973; Hunter 1989). Moreover, much of the physical capital accumulation was in the form of infrastructure with high capital/output ratios and long maturity periods
needed for a full return. Also, contrary to the optimism based on external economies and balanced-growth theory that capital/output ratio would rapidly decline as investment expands, many other factors intervened; for instance, increased investment outran the technical and administrative capacity of a country to design, implement and operate efficient development projects. The small size and lack of economies of scale were also problematic for the developing countries. Consequently, the development model with heavy emphasis on physical capital accumulation was increasingly questioned as development thinking unfolded.

While the Marshal-Plan type of financial aid failed to materialize, private capital flooded into the developing regions in the forms of direct investment by multinational corporations. Some of the growth in the golden years "acquired an exogenous, and often enclave, character rather than representing truly national capacity." (Singer and Roy 1993) Toward the end of the period, debates developed around whether the transfer of technology connected with such direct foreign investment was a valuable bonus of such investment and had national demonstration effects; or whether, on the contrary, it introduced inappropriate technology, stifled local enterprise and technology and encouraged a brain drain from developing countries.

During this period, development strategies first favored export-oriented industrialization. However, much of the exports came from the foreign subsidiaries of multinational corporations, and the degree of retention of the foreign exchange earned from exports was clearly reduced. At the end of the golden years, the share of the NICs' export by foreign subsidiaries was estimated at 15-30 per cent for Korea, 40-50
per cent for Brazil, 25-3- per cent for Mexico, and 70-80 per cent for Singapore (Singer & Roy 1993:20).

Pessimism developed on the falling of primary commodity prices, which gave rise to the new thinking of import-substitution strategy. In spite of the unprecedented expansion in the industrial countries, "the terms of trade for primary commodities fell by over 25 per cent between 1951 and 1965 and the volume also expanded much less than might have been expected." (Singer and Roy 1993: 20) The new development thinking was partly justified by the belief that exports of manufactures were largely beyond the reach of developing countries. Much of the infrastructures needed for export industries was not present.

A decade later, the import-substitution strategy proved to be not very successful. Among many factors, it is said that developing countries did not try hard enough to make the import-substituting industries efficient so that their export industries could develop rapidly. Another factor is that "rent-seeking" rather than efficiency became the basis of profits in the protected import-substituting industries. Moreover, encouragement of foreign investment penetration led to the elimination of local producers and prevented indigenous learning process. Furthermore, a tendency to adopt capital-intensive technologies and the luxurious consumption for the elites accounted for the failure to develop local capital goods industries.

Toward the end of the golden era, the neo-classical "new orthodoxy" has revived the myth of the passive state. The active interventions of the developmental state were supposed to just retard growth by creating widespread inefficiencies, stifling enterprise
and preventing market signals from functioning. The role of the government was limited to just ensuring "sound money" and "getting the prices right." Yet the successes of the development states in the East Asian countries belittle such narrow interpretation. For instance, South Korea and Taiwan have had extensive state intervention throughout their development in industrial planning, infrastructure construction, training, finance and labor relations, land reform, subsidization of some industries and protection of others. The strategic role of the state in promoting effectiveness was later widely accepted by many neo-classical economists and evolutionary sociologists.

**The 1970s: the Illusion of Debt-led Growth**

The decade of the 1970s marked the breakdown and disintegration of the Bretton Woods system. On August 15, 1971, President Nixon suspended the free convertability of US dollars into gold at the fixed rate agreed at Bretton Woods. The breakdown of the system created immediate problems of payment imbalances among the industrial countries. It also prompted the industrial countries to deal with their "overheating" economies and the consequent displacement of full employment by control of inflation. Thus the engine of growth which had supported the developing countries in the golden years began to stutter and violence was done to the economies of the developing countries.

The even more significant events which marked the 1970s were the two oil shocks. The foundation of the international system was shaken by the OPEC powers in 1973-74 and in 1979-1980. It is argued that the two oil shocks provided an opportunity
for broader assertion of commodity power and for fundamental shift in international economic relations" yet this was another opportunity missed (Singer & Roy 1993).

In the face of slow growth and serious recessions in the industrial countries, the developing countries as a whole were still growing. Unlike the previous two decades, the gap in per capita income between the developing countries and industrial countries was, in relative terms, narrowed during 1970-80.

However, maintenance of the growth rate during this period was limited to only a portion of developing countries. The 1970s marked the divergence within the developing countries. The growth rate for all developing countries, except the high-income oil exporters, receded from the high rate of 6 percent during 1965-70 to 5.2 percent in 1971-1980. The significant exception was sub-Saharan Africa, where the growth rates fell much more heavily, from 4.8 to 2.3 percent, reaching a record low for the past 20 years. In terms of per capita income, growth in sub-Saharan Africa was virtually reduced to zero, and 16 out of 41 African countries suffered absolute declines. This phenomenal development reversal was confined to half of the sub-Saharan Africa in the 1970s but became more widespread in the 1980s. Latin America and South Asia shared the African decline, to a less degree. Growth rates in these regions, which account for most of the world population outside China, returned to the levels of the early years of the golden era.

At the other end of the growth continuum, the Middle East and North Africa benefited from the high oil prices and achieved a new record high of growth rates. East
Asia and the Pacific region maintained the very high growth rate of 8 percent which they had achieved in the preceding five years.

During the 1970s, developing countries also became more competitive in exporting manufacturing products. While the demand for manufacturing imports declined in the developed world, partly due to their slower growth, and increasing protectionism, the share of developing countries in their total market and in their total imports rose, albeit slightly, from 1.7 percent in 1970 to 3.4 percent in 1979. Globally, the total share of developing countries in total trade of manufactured goods increased from 13.5 percent in 1970 to 16.5 percent in 1979, yet this increase was entirely concentrated in the Far Eastern countries. Latin American and countries in other regions failed to participate in this increase.

Regional divergences also became evident in securing financial aid and capital, and mobilizing domestic resources. From the mid-1970s on, aid from western countries continued to stagnate and dwindle, well below the modest UN target, while private inflow continued to pour into the developing region. In fact, private capital constituted 50-60 per cent of the total external inflows in the mid-1970s. Private lending was never stronger, maintained by the "creditworthiness" of the recipient countries, bolstered by commercial banks' recycling of OPEC surpluses, and facilitated by the revolution of communication which made globalization of operations much easier. This boom in private lending had two consequences. First, private capital tended to be concentrated in the middle-income countries. In fact, eighty percent of the total foreign direct investment was concentrated in eight developing countries (Nafziger 1990). It is in this
sense that growths in some countries were said to be debt-driven. Second, with the large share of foreign firms in economies of the developing world, industrialization strengthened international integration rather than national independence. By the mid-1970s, 40-50 percent of the manufacturing industry in Latin America and Africa was controlled by foreign firms. In Asia, this share was as low as 10-15 percent for India and Korea, but as high as 40-50 percent in other countries. Another interesting observation was made by Singer and Roy (1993:30):

...the conventional warning against an 'enclave' character of foreign investment appears ironical; it was domestic manufacturing control which was beginning to look like an enclave. It was equally ironic that industrialization had been recommended as a way of 'de-linking' from an unequal world economy; in fact, it was leading to firmer integration."

In the 1970s, the multinational corporations (MNCs) were the biggest winners. The sales value of the large MNCs had become equal or larger than the combined gross national product of many developing countries. MNCs investment in many developing countries was small and often marginal. Yet, it is important in terms of the capital flow, technology and manufacturing capacity in the developing countries. Due to these reasons, alliance with foreign capital also reduced the bargaining powers for local capital (Evans 1979; Gill and Law 1988).

Development thinking at the end of the decade became disillusioned with growth without equity. Domestic capacity got a second look. While growths in many countries were accompanied by unemployment, serious income inequality, persistent poverty, neglect of agriculture, and lack of indigenous technological capacity, development theorists were searching for internal dynamism in the East Asian "tigers."
Consensus was built behind the East Asian experiences: their successes were nurtured by a high degree of literacy, education, skill and a willingness to train the labor force, and a rapid development of general technological capacity, rather than a specific "appropriate technology", which enabled them to acquire and maintain competitiveness in labor-intensive lines of exports even with rising real wages, and to achieve growth with an equal income distribution. To put in a different way, it was "dependent development" that prevailed over "self-reliance."

**The Lost Decade of the 1980s**

The 1980s proved to be a "lost decade" since it was full of sad stories. Yet, as Dr. Johnson said, "Seldom any splendid story is wholly true." In a geographical sense, the decade was lost mostly for Latin America and Africa, maybe South Asia, but not so much for East Asia. The performance of the low-income countries as a whole was held up mainly by the remarkable progress in China and India, where lived one third of world population.

The idea of the lost decade could be perceived as development in reverse. The 1980s proved to be a "rude awakening" from the "illusionary" growth in the 1970s. During 1982-86, the cumulative percentage fall in per capita income amounted to 16.5 per cent for sub-Saharan Africa, 9.7 per cent for the highly-indebted countries, and 11.5 per cent for oil exporters. Many countries in Africa and Latin America experienced zero to negative growth. Sub-Saharan Africa was hit the hardest. The 1980s proved to be a disastrous time for the sub-continent, and it increasingly acquired the character
of a marginalized "Fourth World" and was recognized as requiring special attention, special action, and special criteria.

The event that marked the 1980s was the global debt crisis. In August, 1982, oil-exporting Mexico, swelled by loans from major international banks seeking short-term profits, declared its bankruptcy. Suddenly, it became clear that not only the borrowers but also the creditors were caught in a "debt trap" (Lombardi 1985). The debt crisis went global since it affected not only the developing countries but threatened the world monetary and financial system. Concerted efforts were underway by private banks, governments, IMF, and BIS (Bank for International Settlements) to restore the major creditors' ability to service their debt in short terms. In line with this global operation rescue, the decade of 1980s was lost to development in that it was given away to debt settlement, stabilization, structural adjustment, liberalizations, and so on. Often, all these were pursued at the expense of growth, employment, redistribution, basic needs, and reduction of poverty, which were the development ideals of yesteryear.

In the "lost decade," Latin America and Africa experienced very low, or negative, per capita growth, with both living standards and investment running at an alarmingly low level. Table 2.1 shows that most of the severely indebted countries had negative growth rates during the 1980-85 period. The average growth rates for the low-income and middle-income countries were -4.6 and -2.2 respectively. For the severely indebted countries as a whole, the growth rate picture was definitely gloomier than in the earlier period.
Table 2.1 Average Annual Growth Rate of Severely Indebted Countries in Real GNP per capita by Income Category (percent per year)

<table>
<thead>
<tr>
<th>Income Category</th>
<th>1965-80</th>
<th>1980-85</th>
<th>1985-88</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severely indebted countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-income</td>
<td>2.5</td>
<td>-4.6</td>
<td>-1.6</td>
</tr>
<tr>
<td>Middle-income</td>
<td>3.8</td>
<td>-2.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>3.5</td>
<td>-2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>High income OECD countries</td>
<td>2.7</td>
<td>1.7</td>
<td>2.7</td>
</tr>
</tbody>
</table>


Note: Low-income countries consist of Ethiopia, Ghana, Kenya, Liberia, Malawi, Niger, Sierra Leone, Sudan, Tanzania, Zaire, Zambia, Indonesia, India, Pakistan, and Sri Lanka. Middle income countries refer to the "Baker Seventeen": Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Côte d'Ivoire, Ecuador, Jamaica, Mexico, Morocco, Nigeria, Peru, Philippines, Uruguay, Venezuela, and Yugoslavia.

The terms of trade of developing countries as a whole deteriorated during 1981-86 by a cumulative percentage of 13.9. The only thing that was increasing for many countries was their outstanding foreign debt, with debt service reaching 4.3 percent of GNP and absorbing 19.7 percent of exports. To service its debt, Latin America sent to the banks in industrial countries, $159.1 billion net terms during 1981-1986. By the end of 1987, this figure reached $180 billion which was larger than the total cost to the U.S. Treasury of the Vietnam War (Brandford and Kucinski 1988). For sub-Saharan Africa and the 15 most indebted countries, external debts in 1987 exceeded three years of their total exports (Singer and Roy 1993).

Just when the international environment became unfavorable and even hostile to development, the financial powers in industrial countries and the multilateral
institutions upheld the neo-classical or neo-liberal doctrines that preached a full-scale "outward orientation" and "market orientation" as the secret for development success. To facilitate debt payments, the IMF had designed the debt-negotiation and debt-rescheduling scenarios. The new loans and aid to developing countries were attached with high conditionality toward adjustment and restructuring of the Third World economies. It could be seriously debated whether the austerity policies under the name of outward orientation were intended to lay foundations for subsequent sustainable growth or to permit the payment of debts.

The policy of structural adjustment as the preconditions for new development was challenged on the grounds that it neglected the question of symmetrical adjustment required from both industrial and developing countries and it disregarded the early development insights on the vicious circle of poverty. Moreover, after a decade of structural adjustment, physical and human deprivation, and the reversal of development became rampant. The belt-tightening austerity policy was accused of lacking a "human face" (Comia et al. 1987).

Lessons From the Past

The past four decades witnessed a global process of setting development objectives, launching massive aid and investment, implementing inward and outward development strategies, and reaching a worldwide debt crisis. This lengthy process was mixed with successes and failures, and was largely a process of trials and errors with a series of shifts in development paradigms. Theories and strategies were under constant scrutiny and were frequently altered and modified. In the middle of a global
debt crisis, we are driven to another crossroad and ponder over the direction of a new journey toward development. Reflection on the past trials and errors may provide invaluable clues for identifying misspecified goals and outdated mechanisms that thwart human advancement.

Development experiences have taught us that economic growth is not sufficient to guarantee development. Growth should be accompanied with relative equality of income distribution. Development should aim at improvement of the life of the whole population, which means provision of basic needs, reduction of poverty, elimination of urban bias, and adjustment with a human face. This is especially necessary when the benefits of economic growth have failed to trickle down to the poor.

The debt crisis did not come overnight. The accumulation of debt prompts us to rethink the impact of foreign loans since it will have an enduring impact on the economic and social life of the Third World population. Foreign loans have always been "two-edged" instruments for the debtor countries, as was argued by Rosa Luxemburg on the contradictory nature of the international system. Foreign debt, she wrote, was

indispensable for the emancipation of rising capitalist states and at the same time the surest means for the old capitalist states to patronize the young ones to control their fiances and to exert pressure on their foreign customs and trade policies.

It is time to assess the ways debt promotes or impedes economic and social development in the Third World. In fact, if the 1980s was a decade of debt augmentation, the 1990s will be a decade of "debt rehabilitation" (Singer and Roy 1993). Detailed analysis of the role played by external debt should illuminate new
ways of debt recovery and of facilitating simultaneous human development. Finally, the development stories of the past four decades are interwoven different paths toward development. Roughly speaking, there were differences in the regional paths. For instance, the seed of the debt crisis is planted deeply in Latin America and sub-Saharan Africa, but to a much lesser degree in Asia, especially East Asia. Development also diverges within the Third World countries, with a widening gap between the middle-income countries and the low-income, and the least-developed Fourth World.

Lessons from the past serve the purpose of defining the new research agenda in the development field. After this lengthy review of postwar world political economy, it has become evident that the new research agenda should center on human development, the debt crisis, and indigenous development capacities.

In the next chapter, we discuss in detail the changing definition of development and elaborate on the meaning of human development which has a direct bearing on the lives of the ordinary people. We will also review various theoretical perspectives on the correlates of human development in the Third World.
CHAPTER III

THEORIES AND PERSPECTIVES ON HUMAN DEVELOPMENT

*It matters little how much information we possess about development if we have not grasped its inner meaning.*

— Denis Goulet, *The Cruel Choice*

*Development must be redefined as an attack on the chief evils of the world today: malnutrition, disease, illiteracy, slums, unemployment and inequality. Measured in terms of aggregate growth rates, development has been a great success. But measured in terms of jobs, justice and the elimination of poverty, it has been a failure or only partial success.*

— Paul P. Streeter, Director, World Development Institute

Meanings of Development

Shortly after World War II, development became the buzzword around the globe. Every country strives for development. Every endeavor is dashed in the name of development. Over the past forty years, the development field has amassed a rich and voluminous literature on its theories and strategies, and has created the inspired the most daring thinkers, and the most prolific writers. Interestingly, one of the oldest, unsolved problems that theorists and policy-makers are still wrestling with, is, the meaning of development.

In fact, the meaning of development changes together with the shifts in development thinking. Historically, development has been perceived as a pure economic object, as economic growth with redistribution, and as the fulfillment of basic
needs. Experiences of the past four decades have enlightened us that development is a multidimensional concept. Economic progress is an essential component of development but not the only or the most important component. As a broad concept, development encompasses the financial and material well-being of the population, and contains both the economic and noneconomic components. Development should be perceived as a "multidimensional process involving the reorganization and reorientation of entire economic and social system" (Todaro 1985:61).

In this research, development is identified with human development. Before we define the meaning of human development, it is necessary to recall the historical meanings of development.

**Traditional Economic Measures: Development As Economic Growth**

Development has traditionally been confined to the subject of economists. As a strict economic term, it refers to the "capacity of national economy, whose initial economic condition has been more or less static for a long time, to generate and sustain an annual increase in its gross national product at rates of perhaps 5–7% or more" (Todaro 1985:83). Development is equated with growth rates of GNP per capita, which takes into account the nation's ability to achieve output growth rates that outpace the growth of its population. The level and growth rates of GNP per capita which indicate the total value and availability of all goods and services produced in an economy, are widely used as the broad measures of the economic well-being of a population.

Economic development has been viewed in terms of the planned alteration of the structure of production and employment so that agriculture's share of both declines,
whereas that of the manufacturing and service industries increases. Economic development simply means increases in output and higher growth rates. Such objectives were the focus of development economics in the 1960s and the 1970s. This perspective was clearly expressed by Arthur Lewis in his opening sentences of *The Theory of Economic Growth*:

> The subject matter of this book is the growth of output per head of population . . . First it should be noted that our subject matter is growth, and not distribution. It is possible that output maybe growing, yet that the mass of people may be becoming poorer. We shall have to consider the relationship between the growth and the distribution of output, but our primary interest is in analyzing not distribution but growth. (Arthur Lewis 1956:1)

Development was thought to be achieved through industrialization. In retrospect, it is often at the expense of agriculture and rural development. Since development was seen as an economic phenomenon, rapid gains in output would either "trickle down" to the masses in form of employment and other economic opportunities or create necessary conditions for the wider distribution of the economic and social benefits of growth. Problems of poverty, unemployment, inequalities of income distribution were left to the secondary front in order to "get the growth job down."

**The New Economic View of Development: "Redistribution from Growth" and "Redistribution with Growth"**

In the 1950s and 1960s, the growth rates of many Third World countries did meet the overall UN target, but the living standards of the mass population did not change significantly. The flaws in the prevailing narrow definition of development were revealed by increasing unemployment and underemployment, which exacerbated political and social tensions, thereby undermining the foundations of continued growth.
A growing concern emerged among economists and policy-makers with respect to the apparent absence of the trickle-down effect from economic growth. More of them called for the "dethronement of GNP" and unleashing direct attacks on the rising unemployment, prevailing absolute poverty, and growing income inequality. During the 1970s, economic development was redefined in terms of the reduction or elimination of poverty, inequality, and unemployment. This new development strategy was featured in the slogan "Redistribution from Growth." This concern was voiced by Professor Dudley Seers in his 1969 Presidential Address to the Society for International Development and again in a much quoted article in 1972:

The questions to ask about a country's development are therefore: What has been happening to poverty? What has been happening to unemployment? What has been happening to inequality? If all three of these have declined from high levels then beyond doubt this has been a period of development for the country concerned. If one or two of these central problems have been growing worse, especially if all three have, it would be strange to call the result "development" even if per capita income doubled.

In such assertions, Professor Dudley Seers was not making a fuss about an imaginary situation, rather he based his provocative questions on the actual experiences of a number of developing countries that achieved high growth rates of per capita income in the 1960s and 1970s and showed little improvement, if not decline, in employment, equality, and the share of income of the bottom 40 per cent of their populations. By the old standard of growth, these countries were "developing"; but by the new criteria of poverty, equality, and employment, these countries were not developing. The situations in the early 1980s were even worse as GNP growth rates
turned zero and negative for many developing countries and governments were forced to squeeze their already tight budgets for social and economic programs.

During the 1970s, development strategies had another shift from "Redistribution from Growth" to "Redistribution with Growth." This subtle change in strategy added an element of greater concern on income distribution. Redistribution from growth places growth as the primary goal and then suggests the use of resources created by growth by deliberate distributive measures, rather than waiting for "trickle down." This policy which was described as "incremental income distribution" was put forward as having the greater advantage of making distribution political acceptable (Chenery et al 1974). However, the weakness is reflected in its disregard for the possibility that policies of promoting growth and redistribution may be incompatible and may undermine each other.

The shift to redistribution with growth highlighted the "simultaneity and complementarily" of redistribution and growth. It involves a greater emphasis on human capital and a denial of the tradeoff between distribution and growth.

**Development as the Fulfillment of Basic Needs**

The relatively rapid growth in per capita income of developing countries since the 1950s has had only a little effect on reducing poverty. There has been widespread disillusionment with the emphasis on per capita GNP growth in the 1970s and 1980s. Strategies that rely on raising productivity are thought to be inadequate without programs that directly focus on the basic needs of the poorest 40-50 percent of the population. The frustration over the enduring poverty was vented by Barber B.
Conable, President of the World Bank, in his 1988 annual address to the board of
governors. "The central goal of the Bank," he wrote, was

the reduction of poverty. Poverty on today's scale prevents a billion people
from having even minimally acceptable standards of living. To allow every fifth
human being on our planet to suffer such an existence is a moral outrage. It is
more: it is bad economics, a terrible waste of precious development resources.
Poverty destroys lives, human dignity, and economic potential.

The basic needs approach shifts attention from maximizing output to minimizing
poverty. It emphasizes not only how much is produced, but also on what is being
produced. This approach is built on the proposition that the purpose of development
is to provide every individual with the opportunity for a full life, and its essential
prerequisite is meeting basic needs. It is also based on the consensus that certain
physical, intellectual, and psychological needs are human universals, and their
fulfillment constitutes the precondition for a full life. The most important basic needs
include adequate nutrition, primary education, health, sanitation, water supply, and
housing (Streeten 1984).

**Human Development: A Synthesis**

A redefinition of the meaning of development was prompted by the "widening
gap" between the developed and developing countries and by the persistent poverty of
the mass population in the South. Since 1950, the relative economic gap, i.e., GNP per
capita of the developed countries as a multiple of the developing countries, has declined
in China, East Asia, and the Middle East. But not a single developing country
narrowed the absolute income gap between 1950-1986 (Nafziger 1990). To illustrate,
a 1.6 percent growth of GNP per capita in United States, which is equivalent to a $280
annual increase, is more than the total per capita income of very poor countries, such as Bangladesh or Ethiopia. Even the absolute gap between United States and Taiwan and South Korea more than doubled during the period and the gap continues to widen.

Poverty is a chronic state of mind for over 2 billion people in the world every day. Development without a human face can no longer be tolerated. As Denis Goulet has so vividly portrayed,

Underdevelopment is shocking: the squalor, disease, unnecessary deaths, and hopelessness of it all! No man understands if underdevelopment remains for him a mere statistic reflecting low income, poor housing, premature mortality or underemployment. The most empathic observer can speak objectively about underdevelopment only after undergoing, personally or vicariously, the "shock of underdevelopment." This unique culture shock comes to one as he is initiated to the emotions which prevail in the "culture of poverty." The reverse shock is felt by those living in destitution when a new self-understanding reveals to them that their life is neither human nor inevitable . . . The prevalent emotion of underdevelopment is a sense of personal and societal impotence in the face of disease and death, of confusion and ignorance as one gropes to understand change, of servility toward men whose decisions govern the course of events, of hopelessness before hunger and natural catastrophe. Chronic poverty is a cruel kind of hell, and one cannot understand how cruel that hell is merely by gazing upon poverty as an object." (Denis Goulet 1971: 23)

Development, thus, has to be perceived as a multidimensional process that will ultimately benefit the people and put people on the center stage. Human development involves acceleration of economic growth, reduction of inequality, and eradication of absolute poverty, and it should also aim at enlarging people's choices. The definition of human development entails three core values proposed by Professor Goulet as guidelines for understanding the "inner" meaning of development. These core values are life-substance, self-esteem, and freedom, representing fundamentals of human needs sought by people in almost all societies. The life-sustaining basic needs include food
and shelter, nutrition and health. For almost all individuals, self-esteem is the most valuable asset of worth and self-respect. Freedom is not used here in a political or ideological sense, rather it should be understood as "the more fundamental sense of freedom or emancipation from alienating material conditions of life and from social servitude to nature, ignorance, other people, misery, institutions, and dogmatic beliefs." (Todaro 1985:87) Human development puts people first and regards enlarging people’s choices as a more humane goal of economic and social progress. In discussing the tradeoff between economic growth and freedom, Lewis (1956:420) concluded that "the advantage of economic growth is not that wealth increases happiness, but that it increases the range of human choice."

Putting people first does not suggest that economic growth is not desirable. In fact, the human development approach recognizes economic growth as the essential condition for development. Economic growth is desirable since it can provide goods and services which will in turn contribute to the improvement of human freedom and the enlargement of human choice.

On the other hand, the human development approach also realizes that linkage between growth and development is less automatic than it was thought to be. This is not an argument out of a hypothetical situation, rather it is proven by the experiences of many developing countries whose level of per capita income does not match the level of overall well-being of their population. The shift to human development mirrors the change of paradigms for economic development. By the mid-1970s, it was a widely-shared belief that Third World countries could not replicate the growth path of
the now industrialized countries since they did not have the kind of access either to the
external investment outlet or the global markets that were available to the latter
(Lefeber 1974; Adelman 1975). Unlike the developed countries, Third World countries
do not find the outlets of migration which helped the developed countries to increase
per capita income at home, as their labor supply contracted, and the marginal product
of the labors was high; and they do not have access to the new export markets in
resource-rich areas. Consequently new strategies and new approaches to development
need to focus on benefiting the people through improving their living standards and
enhancing their freedom and self-worth so that a strong human base is constructed for
rapid economic development.

In the next section, we shall discuss theories on economic growth and
development. In this research, development is identified with human development.
Therefore, from now on, we will refer to human development as development for
convenience of discussion. Since it is acknowledged that economic growth remains to
be an important condition for development, theories on economic growth are thus still
relevant and useful, and should be dealt with seriously. A survey of various theoretical
ideas serves the purpose of providing answers to the question of what promotes or
inhibits human development. This question is one of the central issues of our time.
What Promotes or Inhibits Growth and Development: A Review of Theories

The literature on growth and development can be divided into five major and sometimes competing approaches: (1) the linear stages of growth theory; (2) the modernization and ecological-evolutionary theory; (3) theories and patterns of structural change; (4) analysis of international dependency; and (5) the dependent development perspective. The first emphasizes the quantity and mixture of savings, investment, and foreign aid to bring about development, seen in terms of economic growth. The second emphasizes the importance of technoeconomic heritage in the evolutionary process of development. The third delineates the internal process of structural change that a "typical" developing country must undergo if it is to succeed in generating and sustaining rapid economic growth. The fourth views poverty and underdevelopment in terms of international and domestic power relationships, and institutional and structural economic rigidities. The fifth reevaluates the setup of the world economy and believes that international connections could promote development. These theories appear to oppose each other, yet a detailed discussion that centers around the role of major factors on growth and development will reveal their constructive insights. It is based on this accumulated knowledge that an integrated theoretical framework will emerge.

The Linear Stage Theory

As Professor Rostow wrote in the opening chapter of his *The Stages of Economic growth*:

This book presents an economic historian's way of generating the sweep of modern history . . . It is possible to identify all societies, in their economic dimensions, as lying within one of five categories: the traditional society, the preconditions for takeoff into self-sustaining growth, the drive to maturity, and
the age of high mass consumption . . . These stages are not merely descriptive. They are not merely a way of generalizing certain factual observations about the sequence of development of modern societies. They have an inner logic and continuity . . . They constitute, in the end, both a theory about economic growth and a more general, if still highly partial, theory about modern history as a whole. (Rostow 1960: 1,3,4,12)

According to Rostow, development is a linear path in which every country travels. The advanced countries are said to have passed the stage of "takeoff," and the developing countries that are still in either the traditional society or the "preconditions" stage are following the advanced countries to take off into self-sustaining economic growth. At the beginning, these countries were at the traditional stage with little social change. With the emergence of new entrepreneurs, the expansion of market and free trade, and the establishment of new industries, the Third World countries have entered a new stage. However, this new stage is only a "precondition for takeoff" since economic growth at this time is accompanied by a decrease of mortality and an expansion of population size. Thus, development "was seen primarily as a matter of economic growth," and secondarily as a problem of social changes necessary to generate growth. It was taken for granted that governments should assume leadership in organizing the massive effort toward development.

The linear theory tends to focus on constraints and obstacles, and the removal of these constraints and obstacles, which would set free the "natural" forces making for the steady move toward higher national income. One of the principal factors that serves to lift the economy out of stagnation is the mobilization of domestic and foreign savings in order to generate sufficient investment to facilitate economic growth. To achieve sustained economic growth, Rostow holds that a Third World country should mobilize
capital and resources and raise the productive investment to 10% of gross national income. Below this rate, economic growth cannot exceed the rate of population expansion.

Furthermore, Rostow points out four ways of obtaining the needed capital and resources for productive investment. First, productive investment can be collected through confiscatory and taxation devices. This has been documented in the economic history of Japan and Russia as well as socialist China. During the Meiji period, the Japanese government imposed heavy taxation of the peasantry so that economic resources could be transferred from the countryside to the city. In socialist Russia and China, productive investments were gathered by confiscating the landlord's property and channeling it into urban development. Second, productive investment can be generated by establishing financial institutions such as banks, capital markets, government bonds, and the stock market, which serves to direct monetary resources into the economy. Former and current socialist countries such as Hungary, Czechoslovakia, and China have taken such advice and opened their own stock markets. Third, productive investment can be generated by free trade. Earnings of foreign exchange can be used to finance importation of foreign technology and equipment. Finally, foreign direct capital investment can facilitate the building of infrastructure and extract raw materials from mines which will provide productive investments for the Third World economies.

Rostow's doctrine provides a rationale for international aid, technical assistance, trade, and private foreign investment. Rich countries were called upon to supply the
"missing components" to the developing countries to break bottlenecks and remove obstacles. These components could be capital, foreign exchange, skills or management.

With the needed capital and resources for productive investment, the Third World countries will achieve high rates of economic growth which will overtake the rate of population growth. Thus, the stage theory anticipates that the development patterns of the First World and the Third World will converge eventually.

From the beginning, the linear or stage theory was under heavy fire. It was criticized on logical, moral, political, historical, and economic grounds. Logically, the coexistence of poor and rich countries is bound to make a difference to development efforts and the prospects for the developing countries, compared with a situation in which no other country was ahead and the gaps between them were not very large. Morally and politically, the linear view ruled out the possibility for an alternative path toward development. It has become clear that different regions exhibit quite different traits of success and failure in their development process. Historically, this theory was criticized as excessively deterministic, as it shared the deterministic nature of Karl Marx's economic theory. With his work, Rostow aspired to provide "an alternative to Karl Marx's theory of modern history" (1960:2). Ironically, he fell into the same trap and made the same mistakes as Karl Marx. Economically, this theory ignores the fact that problems and opportunities facing the developing countries are essentially different from those that developed countries faced in the phase of pre-industrialization.

Rostow's stage theory was criticized by many other prominent economists such as Kuznets, and Gerschenkron. The heavy emphasis on physical capital was criticized
by Cairncross, Hirschman and the human capital school of T. W. Schultz. There are many other nonlinear theories, from Schumpeter to Rosenstein-Rodan and Nurkse. The debate over balanced versus unbalanced theory does not fit into the linear perception. However, it remains true that Rostow's ideas have had a powerful influence on the imagination of policy-makers, planners, and government officials.

*Modernization and Ecological-Evolutionary Theory*

The aftermath of the Industrial Revolution and the French Revolution in the early nineteenth century gave impetus to the logic of the modernization or evolutionary theory. These two great historical events permanently changed the old order of society and lay the foundation for a new era when society became more reliant on science and technology. Assumptions for the new societal development were made based on the sweeping changes brought by these two revolutions. First, the modernization or evolutionary theory assumes that social change is unidirectional. Human society evolves from a primitive to an advanced state. Second, it assumes that modernization or development is a homogeneous process. Therefore, societies with different levels of development will eventually reach a point of convergence. As Levy (1967: 207) asserts, "As time goes on, they and we will increasingly resemble one another . . . because the patterns of modernization are such that the more highly modernized societies become, the more they resemble one another." Third, the development path of the industrial countries is considered as the model to be imitated and followed by the Third World countries. Modernization theorists by and large expect that the developing nations will follow the same path of development as the industrial countries, and their
income gaps will eventually be narrowed. More importantly, people in the Third World countries shall enjoy the same kinds of benefits of modernity as they strive for industrialization.

One variant of modernization theory is, the ecological-evolutionary theory. This theory shares the basic assumptions of the modernization theory discussed above, yet it has elaborated on the original theory and specified some concrete mechanisms behind the engines of development. According to the ecological-evolutionary theory, the current state of development cannot be understood without making reference to the initial state at the onset of modernization (Lenski and Nolan 1984; Kasarda and Crenshaw 1991). The initial status refers mainly to the complexity of the institutional system and the infrastructural pattern in a given country. Traditional societies with a higher level of agricultural production are thought to be able to generate the surpluses to create a variety of social systems such as government bureaucracy, monetary economies, town and city development, and education systems (Kasarda and Crenshaw 1991). Therefore, the "Old agrarian" societies that have a larger social and technological capacity would develop faster than the new agrarian societies (Lenski and Nolan 1984; Nolan and Lenski 1985).

Central to the ecological-evolutionary theory is the concept of technoeconomic heritage. Among many forces, it posits that the indigenous technological and economic heritage has a strong effect on the current level and rate of development. This theory attaches great importance to the indigenous innovations and the application of technologies to economic production. Specifically, Lenski and Nolan note the adoption
of plow agriculture as the primary technology that shapes the patterns of past development and sets constraints for future rate and direction of development. The application of plow has given the old agrarian societies an advantage in generating more economic surpluses which further gave impetus to the establishment of sophisticated social organizations and urban systems (Lenski and Nolan 1984; Crenshaw and Ameen 1994; Crenshaw 1994). By contrast, the horticultural societies and the "new agrarian" societies lack the social, political, and economic resources at the onset of modernization. This lack of technoeconomic heritage tends to put these societies at a relatively weaker position to expedite their modernization processes.

Technology is thus redeemed as the most powerful engine of social change. Since most of the developing countries are lagging behind in technological innovation, scholars of ecological-evolutionary theory advocate that the Third World countries aim at industrialization by mobilizing their internal human and natural resources (Kerr et al 1960; Kasarda and Crenshaw 1991).

Finally, the ecological-evolutionary theorists emphasize the effect of cultural and technological diffusion on the Third World development. The lagging behind of Third World countries in economic and social development is viewed as a fact of life. Scholars with this line of thought pay more attention to certain cultural universals across countries. Western political and economic institutions that uphold freedom, individual rights, and the protection of private property are considered to have universal value. The diffusion of western ideals of rationalization and democracy will replace the older forms of social organization still existing in the developing world.
There is not much dispute that modern technologies which developed largely in the industrial world will help to advance the economic and social development in the Third World countries. Ecological-evolutionary theorists also foresee the transfer of modern technology from the rich to the poor countries. As cultural and technological diffusion proceeds, the Third World countries will be able to establish the kinds of political and economic institutions suitable for development (Kerr 1960; Hawley 1981). Although it may a slow process, eventually, the level of development in the poor and rich countries will converge.

*The Latin American Structuralists*

The economic stagnation in Latin America and the world economic crisis prompted the Latin American economists to question their neoclassical beliefs and to search for a new paradigm in understanding development issues. Disenchanted by neoclassical theories, the structuralists point out that inequality between the poor and rich countries was embedded in the international division of labor which disproportionately benefited the latter. In his inspiring works, Raul Prebisch divided the world economic system into two categories, the center and the periphery. Countries of Latin American and other less developed countries formed the peripheral part of international economic relations. In discussing the nature, causes, and dynamics of the "center-periphery" system, Prebisch (1984:176-77) wrote,

> At first I gave it a cyclical character, considering that it reflected the active role of the industrial centers and the passivity of the periphery, where the consequences of the economic fluctuations of the centers were intensified. There was in effect an "economic constellation," at the center of which were the industrialized countries. Favored by this position and by their early technical progress, the industrialized countries organized the system as a whole to serve
their own interests. The countries producing and exporting raw materials were thus linked with the center as a function of their natural resources, thereby forming a vast and heterogeneous periphery incorporated in the system in different ways and to different extents.

In interpreting the lagging economic development and income disparity in the developing world, Prebisch formulated his views explicitly in the context of the international economic framework. He attributed underdevelopment to market failure: private calculations and market incentives did not succeed in directing resources where the long-term social returns would be greatest. In asserting the unfair operation of the international economy, Prebisch relied upon "market imperfections that caused the terms of trade inadequately to favor the periphery: monopoly in the center and/or segmented capital markets in the periphery. These led to excessively high prices of manufactures and excessive production of low-priced primary exports." (Fishlow 1984:192)

Like Prebisch, Celso Furtado attributes the lack of capital in the developing countries to their reliance on exports of food and raw materials and the deterioration of terms of trade.

Technological progress is also of central concern among the structuralists. Technological diffusion did not seem to occur in the way suggested by early classical and modernization theorists. Again, as Prebisch (1984:184) observed,

Technological progress started at the centers and its fruits remained basically there. For better or worse, they did not spread to the periphery through a general fall in prices in relation to increases in productivity. Historically, the role of the periphery had been mainly restricted to the supply of primary products.

The structuralists are among the earliest scholars who recognize the need to redefine development and call upon structural changes in the development process.
Furtado (1965:47) had abandoned the emphasis on the growth of productivity and asserted,

Economic development, being fundamentally a process of incorporating and diffusing new techniques, implies changes of a structural nature in both the systems of production and distribution of income. The way in which these changes take place depends, to a large extent, on the degree of flexibility of the institutional framework within which the economy operates.

In fact, one of the distinctive thoughts of the Latin American structuralist was the "ethical" distinction between "economic growth" and "economic development." According to their perspective, development did not occur if growth was accompanied by increased income inequality, a failure to improve social welfare, a failure to create more employment for the surplus labor, and the growing loss of national control over economic, political, social and cultural life. Hence, economic development consists not only of rising per capita income but also of structural transformation, that is, the transformation of the economic structures of developing countries so that they acquire the internal capacity to initiate and sustain economic growth, and the transformation of the power relationship in the international arena so that interdependence can give rise to mutual cooperation and benefits.

The understanding and insights of the structuralists were also translated into new economic policy in developing countries. Protectionism, planning, and most importantly, import-substitution dominated development policies in the 1950s and the 1960s. Yet, the import substitution policy was "not an unmixed blessing." It turned out to be a "second-best policy imposed to tax agriculture and reallocate resources toward industry that was eventually brought down by the very circumstance it was to
avert: a shortage of foreign exchange. Import substitution's bias against exports and its own voracious appetite for imports of intermediate and capital goods created a fundamental disequilibrium." (Fishlow 1984:194) Other problems associated with this policy were state budget deficit and inflationary pressure. The transfer of resources from agriculture to industry failed to meet the expectation of massive absorption of labor into industry and the hope for a more equitable income distribution was confronted by the evidence of enlarging disparities.

The failure of import-substitution policy marked the "heyday" of the structuralist school, but it did not mark the end of structuralism as an intellectual approach to the analysis of development issues. Through self-criticism and new exploration, the structuralist paradigm continues to generate new theoretical and methodological ideas in development literature. In the 1970s, the structuralists were drawn to take account of the role and the impact of foreign private investment and the worsening inequality and growing absolute poverty in the developing world. Their theoretical thinking was shifted to Seer's redefinition of development.

Dependency as Underdevelopment Perspective

The central tenet of the dependency perspective was that the international system of the rich-poor relationships produced and maintained the underdevelopment of the poor countries. The father of this approach was Paul Baran. Along the lines of Marxist thought on the contradictory nature of the needs of imperialism and the process of industrialization, Baran (1957:28) asserts that "economic development in the
underdeveloped countries is profoundly inimical to the dominant interests in the advanced capitalist countries."

Dependency as a model of underdevelopment was popularized later by Andre Gunder Frank who has proposed an anatomy of the core-periphery structure. According to Frank, Latin American and other peripheral countries have been incorporated into the world economic system since their early colonial periods. Such incorporation has transformed these countries into capitalist economies but with a subsidiary status. The advanced and less advanced countries were linked with the metropolis-satellite chain. On account of such relationships, Frank (1967:11) developed one of his important theses,

If it is satellite status which generates underdevelopment, then a weaker or lesser degrees of metropolis-satellite relations may generate less deep structural underdevelopment and/or allow for more possibility of local development.

The conclusion drawn from this perception is that developing countries should put up barriers between themselves and the destructive intrusions of trade, technology, transnational corporations, and educational and ideological influences, and should aim at "delinking" and "decoupling," at pulling down a bamboo or poverty curtain, at insulating and isolating themselves from the world system. Along a more radical line of dependency thought, international aid was not a transitional phenomenon to be ended after "takeoff," but a permanent feature. Moreover, such aid in itself is part of the international system of exploitation, and only independent development can get rid of it.
Not just the Marxists accept the ideas that coexistence of poor and rich countries makes it difficult, if not impossible, for the poor countries to choose their own style of development, that the action and policies in rich countries together with self-serving domestic elite class help to perpetuate the international system of inequality and conformity. A growing number of non-Marxists have come to attribute a large part of underdevelopment and of obstacles encountered in the process of development to the existence and policies of the industrial countries of the West, including Japan and the former Soviet Union.

This new understanding is shared by President Nyerere in his address to the Royal Commonwealth Society in November 1975:

In one word, as in one state, when I am rich because you are poor, and I am poor because you are rich, the transfer of wealth from the rich to the poor is a matter of right: it is not an appropriate matter for charity ... If the rich nations go on getting richer and richer at the expense of the poor, the poor of the world must demand a change, in the same way as the proletariat demanded change in the past. And we do demand change. As far as we are concerned, the only question at issue is whether the change comes by dialogue or confrontation.

On the other hand, the model of underdevelopment known as the radical dependency approach also started to lose ground. The radical school of dependency was accused of focusing exclusively on the so-called "external factors," treating underdevelopment as a mere reflection of the interests of the industrial countries. Such an extreme stance has proven to be unhelpful in solving the problems faced by the developing countries. Moreover, it was not applicable to some of the newly-industrializing countries in East Asia. The critique of the pessimistic radical dependency
approach and new reflection on the development process gave rise to the more moderate perspective of "dependent development."

**Dependent Development Perspective**

The new perspective of dependent development started with a direct attack on the simplicity of the radical dependency approach. In studying the Brazilian experience, Fernando Henrique Cardoso challenged beliefs that dependency meant capitalist development was impossible on the periphery and that local industrialists were no longer an important social force in dependent capitalist economies. The main thrust of this theory and its distinctiveness was summarized succinctly by Peter Evans (1984:204):

Unlike orthodox Marxist approach or modernization theory, the dependency [dependent development] approach has assumed that development in peripheral countries must follow a trajectory that is distinctive compared to that of the original industrializers, because development always entails the interaction of métropole and periphery. It has further assumed that certain contradictions exist between the interests of international capital and the full development of the economic potentials of the periphery. Links with the international economy did not make development impossible, nor was foreign capital always and everywhere opposed to industrialization, but there were substantial contradictions to be overcome if a country enmeshed in the capitalist world system was to change its position in the international division of labor.

Cardoso deliberately uses the phrase "associated-dependent development" to combine dependency and development, the two notions that were thought to be opposing and contradictory. As Palmer (1978) pointed out, Cardoso has successfully incorporated into Latin American development the transformations which were occurring and have occurred in the world economy, such as the rise of multinational corporations, the immersion of industrial capital into peripheral economies, and a new
international division of labor. As foreign capital was increasingly directed towards manufacturing industry, Cardoso (1973:149) argued that "to some extent, the interests of the foreign corporations become compatible with the internal prosperity of the dependent countries. In this sense, they help to promote development." From this angle, development and dependency ceased to be contradictory and dependent development became possible with technological, organizational, and market connections with international forces.

In another study of Brazil, Evans proposed another version of dependent development in his model of "triple alliance." He attributed the Brazilian development to the formation of a triple alliance among transnational capital, local capital, and the entrepreneurial fraction of state capitalism. Although all three partners found this alliance mutually beneficial, in the Brazil case, it was foreign capital that dominated this partnership.

Although convinced by the possibility of dependent development, both Cardoso and Evans stressed the cost of dependent development and the internal contradictions of triple alliance. Cardoso pointed out that the Brazilian economic boom was based on a high profile of income inequality, a high level of consumption of luxurious consumer durable goods rather than the basic essentials, generating foreign indebtedness, and contributing to social marginality and relative deprivation. Evans also remarked that the side-effect of the triple alliance was the sacrifice of large portion of the Brazilian population. In other words, economic growth was achieved based on the long-term misery of the mass population.
A Critical Assessment

The complexity of the global political economy and Third World development, in particular, has attracted the keen interest of many scholars. The diversity of theoretical perspectives has also furnished an environment favorable to the rigorous understanding of the problems and issues related to Third World human development. After a review of the contributions and the limitations of each development paradigm, we come to the conclusion that no theory is inherently better than the other.

The reason is twofold. First, each development theory arose from a particular historical context. The modernization school rose up in the 1950s when the United States became a superpower in the postwar world system. American social scientists were inspired by the success of the United States and desired to draw a blueprint for the promotion of modernization in the newly independent Third World countries. The dependency/world system school emerges in the early 1960s out of frustration over the failure of the ECLA program and the crisis of orthodox Marxism in the Latin American countries (So, 1990). By the late 1970s and early 1980s, the dependent development perspective emerges more as a revision of the classical dependency theory. This new school of thought surfaces mainly as a response to the extremely pessimistic and unrealistic outlook of the dependency theorists for the prospects of the Third World development. Thus, ideas from these schools of thoughts were reflections of their particular historical context, and each of them contains many elements of truth. As the Chinese saying goes, "If there is no wind, there will be no waves." (Wu Feng Bu Qi
Lang) If a theory cannot make, at least, some sense of our world, it will not be
accepted at its inception.

Second, it is difficult to establish a fair judgement on these theories because they
simply make different assumptions and are influenced by different theoretical traditions.
Influenced by evolutionary theory, the modernization school views development as
largely an indigenous process and recognizes foreign aid, capital, and technology may
offer extra help to the developing countries. With the United States and other industrial
countries as models, these theories point out the dichotomy between modernity and
tradition, and consider the latter to be a main obstacle on the road of development.
They propose that traditional values, institutions, and social arrangements be replaced
by western values and institutions through modernization. After being criticized for its
ethnocentric orientation, the new branches of the modernization school such as the
ecological-evolutionary theory direct more attention on the indigenous factors of both
human and natural endowment. The dependency/world system school draws insights
from the Marxist tradition and emphasizes the conflict of interests and tension between
the industrial and developing countries which are incompatible to Third World
development. They characterize the North-South relationship as externally imposed,
exploitative, dependent, and posing structural constraints beyond the control of the
Third World countries. The new school of dependency theory, that is, the dependent
development perspective, points out that dependency is not just an economic
relationship but a political and social process, and it is not just an externally imposed,
but also a historical internally-sustained relationship (Cardoso 1973, 1977; Cardoso and
Moreover, dependency does not have to be broken by a new wave of socialist revolution; rather it is conceived that development can occur in the context of dependency (Cardoso and Faletto 1979; Evans 1979).

Development thinking has gone through several shifts in paradigms in the last four decades. While each theory has been dominant or popular for some time, the interesting phenomenon is that no theory has ever been able to outright defeat the other. The modernization theory was dominant in the 1950s but started to lose ground in the 1960s. The dependency/world system theory succeeded in the 1960s but suffered from increasing attack in the 1980s. Recent research has indicated that the dependency arguments have lost touch with reality (Portes and Kincaid 1989; Bradshaw et al 1993). The other side of the story is that the domination or popularity of one theory does not necessarily lead to the demise of the other. This phenomenon directly contradicts Kuhn’s theory of scientific revolution. According to Kuhn (1962), a scientific discipline goes through a series of revolutionary transformations with the birth of a new theoretical paradigm signifying the demise of the old one. However, Kuhn’s model fails to explain the competitive activities in the development field. It overlooks the tenacity of the early paradigms (So, 1990). Although the onslaught of criticism caused the modernization school to retreat in the late 1960s, the new paradigm of the dependency and world-system theory was never strong enough to bring about the death of the modernization perspective. In fact, there has been an attempt to revive the modernization ideas in face of the disintegration of the former Soviet Union and Eastern
Europe and the increasing democratization of the Latin American countries. The reality of development paradigms has always been the coexistence of competing theories.

Given the current pluralism in development paradigms and continual changes unfolding in the developing world, we believe that development thinking is moving toward the direction of theoretical synthesis. This trend is also caught by many other researchers in the field. For instance, Portes (1980:224) points to a possible convergence between the "culturalist" modernization theory and the "structuralist" dependency and world-system perspectives. Evans and Stephen (1988:759) also proposed a synthesis referred to as "a new comparative political economy." Kasarda and Crenshaw (1991:485) acknowledge that "synthesis is possible," but caution "such marriages of theoretical families may not be particularly happy unions."

Happy or not happy, scholars from different theoretical camps have to engage in more dialogues to have a thorough understanding of their positions. Ultimately, more research is needed to reveal the intrinsic values of all theories. This study makes such an attempt. In the next chapter, we synthesize valid insights from various schools of thoughts and develop an integrated framework to understand the research problem at issue. Within this integrated framework, we pay special attention to those ideas that relate to the complex relationships among structural disarticulation, external indebtedness, foreign investment, the developmental state, and human development.
CHAPTER IV

AN INTEGRATED FRAMEWORK

An Attempt at an Integrated Framework

Many attempts have been made to classify the literature on development, either by ideology, or economic doctrines, or political and social motivations. These classifications sometimes serve as useful tools, while other times they merely reflect political and intellectual biases. However, the nature of various classifications sheds light on what has been known as the rise and decline of development economics, or development theories in general.

One stimulating division was offered by Albert Hirschman. He used two criteria for classifying development theories: whether they asserted or rejected the claim of mutual benefits in North-South relations; and whether they asserted or rejected the claim of monoeconomics that a single economic theory, i.e., traditional economics, applies to all countries at all times. Four types of theories were derived in Hirschman's topology. Orthodox or neo-classical economics asserts both claims, whereas neo-Marxist and dependency theories reject both claims. Hirschman (1981) believes that development economics rejects monoeconomics but accepts the claim of mutual benefits, unlike Marxists who accept monoeconomics but reject the claim of mutual benefits.
Hirschman's classification scheme has been challenged by many. Paul Streeten argues that there are development scholars who would "reject the mutual-benefits claim without regarding themselves as neo-Marxists or dependency theorists" and others who "analyze interests and conflicts" yet still are neo-classical. To illustrate his points, Streeten quotes Joan Robinson that "The misery of being exploited by capitalists is nothing compared to the misery of not being exploited at all." Therefore, there can be a mutual benefit even when capitalist countries exploit "backward" countries.

Among others, Albert Hirschman attributes the decline of development economics to a combined onslaught from both neo-classical economics and neo-Marxist economics. The former carries a grudge against misallocation resulting from deviation from neo-classical principles, the latter was unhappy about the justification of dependence and exploitation. He attributed this decline also to the political disasters that have struck many Third World countries.

Development theories seem to be at a crossroad, if not in crisis. Yet as reflected in the Chinese character thousands of years ago, the meanings of crisis embody both danger and opportunity. As early as the 1960s, Dudley Seers called for a quest for a new development paradigm. Echoed by others, Dudley Seers argued that the economics of the North do not apply to the different societies in the South. By the same token, Gunnar Myrdal and Paul Streeten showed in Asian Drama that "many of the criticisms originally developed for South Asia also apply to Western Europe and the United States." This view was further elaborated by Dudley Seers (1979:714) in his
provocative essay entitled "The Birth, Life, and Death of Development Economics." He writes,

Virtually all countries are suffering now from structural rather than global problems. For very few would an acceleration of growth per se be a solution to social problems such as unemployment. All countries face powerful external force, especially the policies of the transnational corporations, and experience the strains of absorbing modern technology. So insights from the development field could usefully be imported into the social sciences in the so-called developed countries, too, which include several where neo-classical analysis and prescription did not once seem obviously implausible. I refer to appropriate technology and concepts familiar in Latin America writings, such as self-reliance, marginalization and cultural dependence.

At the juncture of "the demise of development economics," to use Deepak Lal’s phrase, and the quest for a new paradigm, a new perspective could be developed by combining the useful insights originated from previous theories. In light of the development experiences of many Third world countries, a close scrutiny of various theories reveals that they are not, as was thought before, antagonistic at all times. Neo-classicalism and structuralism alike, have useful ideas to be borrowed to the integrated perspective. This view is also reflected in David Henderson’s new way to classify development theorists. He distinguished "constructivists" from "sceptics." He asserted that the constructivists "while recognizing that orthodox economic analysis is far from all-embracing, choose nonetheless to emphasize its usefulness in relation to issues of policies, and the danger of ignoring or going against it. By contrast, the sceptics acknowledge that the orthodox approach is both elegant and helpful within its limits, but prefer to stress the narrowness of these limits, and the inadequacy of the theory both as a guide to social reality and as a basis for deciding policies." (Streeten 1984:344)
Henderson's remarks are provocative for they demonstrate the close relations between theorists from different schools. In fact, their very survival relies on the tensions and conflicts between accepting and rejecting the other theory or paradigm, and most of them have been working simultaneously toward constructive models or theories.

An integrated framework is plausible for it exposes the limitations of the other theories, then offers remedies and begets new constructions, rather than plotting a new story of the reality. The function of an integrated framework is more "therapeutic" than "didactic." The classical emphasis on social and economic institutions such as land reform, balancing the growth between industry and agriculture, and labor relations showed up the limitations of neo-Marxist and dependency analysis. The introduction of the anatomy of the world economic power structure and its bearings on developing societies revealed the blindness of the neo-classical analysis. For these reasons, it is most effective to integrate helpful insights of various theories when analyzing particular development issues. It is not enough to just keep them alive or keep the "dialogue" between them. This passive approach will lead to more useless debates and meaningless arguments. Many people have been trying to rely on selective facts and empirical evidence to support their favorite theory, not realizing that these are "not powerful enough to replace ideology" (Wiseman, 1986) or any other strongly-held beliefs.

An integrated framework is necessary to analyze the complex relationships among structural disarticulation, external debt and human development. Most of the development theories were developed prior to the 1970s. The world has undergone a
sea change since then. The global debt crisis surfaced in the 1980s, followed by debt rescheduling, and the IMF stabilization program to facilitate debt repayment. Sectoral balance was not a major concern. Development thinking was dominated by the drive for a "big push." Yet the overgrown service sectors, the failure of industry to absorb a large proportion of the "unlimited supply of labor," together with the population explosion, have brought our attention to the issue of uneven sectoral development. Early theories set economic growth as the priority and assumed the close to automatic linkage between growth and other dimensions of development. However, the maldistribution of income and the persistence of absolute poverty shift our focus on human development as the new objective. In addressing these, and many related issues and problems, we found previous theories inadequate to offer a satisfactory explanation.

Our dissatisfaction also has to do with the absence of development diversity in previous theories. It has become clear that there are regional paths toward development. Among many factors, the industrial origin or development level makes a difference in the aid-receiving and debt-borrowing consequences. Yet none of the previous approaches, be it the linear stage theory, dependency, or structuralism, has directly made such distinction. It is next to second nature for theorists to generalize their models to all societies and all regions to show their power. In reality, development patterns diverge in different regions. Export-oriented strategy found its success in some of the East Asian countries, but failed to a large extent in Latin America and sub-Saharan Africa. Import-substitution strategy was also close to a failure in Latin America but had earlier success in Taiwan and Korea. In like manner,
foreign investment and private capital seem to operate or function differently in the middle-income countries than in the low-income countries.

The External and International Forces in Work

The principle of the integrated framework is to unite the external and internal forces in understanding and explaining human development. One obstacle to accepting linear stage theory and extreme dependency theory is their exclusive emphasis on either internal or external factors. Their simplistic approach was proven to be unrealistic since development is a complex process with domestic and international forces intertwined with each other. Failure to see such entangled forces leads to a poor understanding of development and close to utopian expectations. This simplistic approach was also thought to be irrelevant since the arguments developed were based on a few Western models or Latin American experiments. Therefore, the application of these models to all developing countries becomes awkward.

An integrated framework aims at generating a perspective with special application to the developing countries. This integrated framework addresses directly new development issues such as external debt, capital flight, and IMF adjustment policies. Besides interpreting the new meanings of foreign trade and investment, it also incorporates new factors such as uneven sectoral development. Another important factor is the rate of population growth and the problems or potentials generated by it.

As a prelude to the integrated framework, we situate our research problem in the postwar context of world economy. Earlier analysis and policies were heavily influenced by the experience of rapid recovery from the war in Western Europe with
the aid of the Marshall Plan. The point made here is that the problem of Third World development is fundamentally different from that of reconstructing the war-wounded industrial countries. At minimum, the development problems of the former are more strenuous and longer term than the reconstruction of Europe and Japan (Singer and Roy 1993).

An effective way to use the integrated perspective is to focus on the most important factors that influence human development. In the following sections, we will discuss the key external and internal factors and the interplay among them. The discussion will be followed by the hypotheses and some theoretical models on human development. The internal factors include (1) structural disarticulation; (2) developmental state; (3) population and agricultural density; and (4) population growth rate. The external factors involve (1) foreign debt and IMF adjustment policies; (2) foreign trade and investment. Since structural disarticulation is an intermediate mechanism, the cause and effect are closely related to other factors. Therefore we shall discuss it in a separate section in this chapter.

**What is Structural Disarticulation?**

Structural disarticulation is a less familiar concept in development research. Its appearance is sporadic; and its meaning is vague and murky; its place in the passage of development is almost invisible. In fact, there is no uniform definition on the meaning of the concept. The concept itself is not widely used or accepted in the development field. Yet a deep reading through pages and pages of writing on development obstacles, various thoughts were pulled together and the meaning of the
concept surfaced above the sea. In general, structural disarticulation refers to a distorted economic and social structure, characterized by an unevenness of productivity within industries, a lack of correspondence between the production of consumption and capital goods, and missing linkages between the modern and traditional sectors.

In earlier development writings, structural disarticulation was portrayed as an issue related to inter-industry relationships. Although the term was not used, the issues of inter-industry relationships and its implication for growth were the central concerns in the "big Push" and the "balanced-growth" theories. While many claims and analysis from these theories were discredited to a certain extent, their primary concern, in our judgement, is still warranted after four decades of developmental experiments. When Albert Hirschman (1958) rejected "balanced-growth" as a development strategy and replaced it with his strategy of "unbalanced-growth." He merely shifted the attention on the linkage problem among industries or industrial sectors. When Amin (1974) used the term of disarticulation, he actually refers to a type of production which is not sustained by local market demands, although Amin saw the close relationship between such form of disarticulation and uneven development across industrial sectors.

To disentangle the intriguing meanings of disarticulation and its implication for economic growth and human development, it is helpful to trace its historical origins and process by which it evolved into a powerful concept in development thinking. Below, we review several theories that have made reference to the problem of structural disarticulation.
**Big Push and Balanced Growth**

The most famous exponent of the need for a "big push" to ignite the industrialization process was Paul Rosenstein-Rodan. In his 1943 article, as part of the wartime study of how to bring about development in Eastern and Southern Europe, Rodan emphasized the importance of industrialization with the help of foreign aid and investment, and argued the "big push" strategy was most appropriate for developing countries with "excess agrarian population" or "disguised unemployment," and lack of "social overhead capital" of massive infrastructure. To mobilize domestic and international resources, Rodan (1943) proposed that government engage in a large-scale planned industrialization comprising simultaneous planning of several complementary industries.

Underlying the need for a big push was Rodan's deep concern about the excessive reservoir of rural labor. Given that mass migration and resettlement were not feasible, Rodan (1944:161, quoted again in 1984:211) stated that "The movement of machinery and capital towards labor, instead of moving labor towards capital, is the process of industrialization which, together with agrarian improvement, is the most important aspect of economic development of the depressed areas." This statement also revealed that Rodan's development was industrialization without the neglect of other complementary sectors especially agriculture.

In retrospect, Rodan (1984) admits that he was overly optimistic about the ability of industry to quickly absorb rural labor. However, the questions he proposed, and the concerns he held, are still unsolved problems in contemporary development studies.
In 1953, Ragnar Nurkse elaborated on Rodan’s theme of the "vicious circle of poverty," and further developed the strategy of "balanced growth." Poverty was thought to be circled around lower income level, to lack of capital and back to lower productivity and low incomes. To break the vicious circle of poverty, Nurkse (1953) argued against reliance on exports for he believed that the demands for exports in the world market were very limited. Instead, he proposed a synchronized and simultaneous application of capital to a wide range of industry in order to bring about a generalized expansion of market, hence the "balanced-growth" strategy.

One criticism of Nurkse’s strategy was his failure to see the promising prospects of exports expansion. Several developing countries have successfully adopted the exported-oriented strategy. Another systematic critique was launched by Hirschman in his discussion of "unbalanced growth." Before we move to Hirschman, it is important to point out that the criticism on export-neglect is rather one-sided. Given the success of a few developing countries, the strategy of commodity specialization and raw material exports also crippled development in many other developing countries.

It is also worthwhile to note that Nurkse’s approach differed sharply from that of Rostow. Unlike Rostow, Nurkse (1952:577) incorporated into his analysis the importance of the relations between the two groups of countries. He wrote,

It seems to be a common view that the capacity for domestic saving in underdeveloped countries depends on an initial increase in productivity and real income . . . and that some form of outside help—say, foreign investment - is required to bring about this initial improvement and so break the vicious circle. This theory begins to look a bit shaky as soon as we realize that it is not only the absolute but also the relative level of real income that determines the capacity to save. Although the absolute level of even the poorest countries has risen, it is doubtful whether saving has become any easier; on the contrary, it
may have become more difficult for them, because there has occurred at the same time a decline in their relative income levels in comparison with those of the economically advanced countries.

Nurkse pointed out that despite the disparity of purchasing power between the developed and developing countries, consumers in the latter often seek to emulate consumption patterns in the rich countries. The result was likely to undermine saving capacities in the latter. Nurkse therefore negated the notion that prosperity tends to spread from the rich to the poor countries.

**Unbalanced Growth**

In 1958, Albert Hirschman launched his attack against the "big push" and balanced growth theories. He developed the idea that deliberate creation of *disequilibrium* is the best way of achieving development. He argued that the big push thesis may make interesting reading for economists, but it is gloomy news for the developing countries. The latter do not have the needed investment or skills to launch such a massive effort. Hirschman further argues that investment priority should be given to industries or sectors that have the greatest linkages. He thought the best candidates to be those in the middle of the production process, whose products serve as inputs to other industries (i.e., *forward linkages*) and whose needs for inputs create demand for the products of other industries (i.e., *backward linkage*). Whereas the balanced growth theory embraced the notion that the less than dynamic sectors would restrain the potentially dynamic sectors, Hirschman’s unbalanced growth reflected the notion that through creating linkages, the more dynamic sectors would push or pull the more static sectors forward.
The debate between balanced and unbalanced growth also had policy implications. First, Nurkse's balanced-growth approach implied the need for investment in agriculture along with industry. Hirschman's approach recommended concentration of capital on key large-scale industrial projects that are likely to generate the largest number of linkages. The doctrine of unbalanced-growth downplayed the significance of agriculture since it was thought to have relatively few linkages with the rest of the economy. The second point was concerned with the role of the state. According to Nurkse, balanced growth was conceivable under both private and public coordination, although greater importance was attributed to government planning. Similarly, Hirschman turned to the state to induce and repair disequilibria and for effective policy implementation.

Hirschman's unbalanced-growth doctrines had a major impact in development policies in the 1950s and 1960s. In retrospect, the ideas of unbalanced growth colored with the various linkages were proven to be another illusion in development policies. Although ideas of balanced-growth were not thought to be feasible, the concerns and issues dealt by Rodan and Nurkse have reappeared in contemporary economic situations. The problems resulting from the neglect of balanced-growth are now reflected in almost every dimension of development. These problems have shown their new face in urban bias, rural neglect, hypertrophy of the service sector, persistent poverty of rural population, and the "disguised unemployment" in the agricultural labor pool.
Hirschman's scheme pointed only to possibilities and presupposes a "ceilingless economy." He invited our attention to the importance of linkages. In his comment on Hirschman's ideas, Streiten (1984:117) wrote "Hirschman says that there has been a proliferation of linkages. Indeed, there have been production, consumption, and employment linkages; horizontal and vertical linkages; forward, backward, and lateral linkages; fiscal, foreign trade, and investment/saving linkages; and informational, technical, financial, procurement, locational, managerial, pricing, and other linkages." But how illuminating is this?

In our view, the desirability of generated linkages is indisputable. However, a more interesting and more important question is why are the linkages missing? Hirschman attributed the missing linkages to the scarcity of entrepreneurial and managerial decision-making capabilities in the underdeveloped region. He further asserts that it is the lack of decision-making not resources that constitute the bottleneck in development. Again these ideas were summarized by Streiten, "a Bias for Despair could argue that whenever the will is there, there is no way, whenever the way is there, there is no will, as in the case of the leaky roof that never gets repaired." Hirschman's attributions are possible, albeit one-sided if not superficial. Others will have a lot to disagree with him on this issue.
**Delinking**

Samir Amin is regarded as the single most important contributor to dependency thinking in Africa. Drawing heavily from Latin American structuralist and dependency writers, Amin developed a more elaborated form of the interpretation of backwardness as the development of underdevelopment and the interpretation of global accumulation as a pattern of growth in the center and stagnation in the periphery. Amin saw the economies of the industrial countries as characterized by an "articulated" pattern of growth and gains in labor productivity translated into wage increases.

Amin (1976) viewed underdevelopment as demonstrating three structural features: (1) unevenness of productivity between sectors; (2) disarticulation of the production system; and (3) "extroversion" toward the outside. For Amin, the peripheries were fulfilling multiple functions in the global capital accumulation based on their cheap labor. They provided cheap exports and high rates of return on expatriated capital. The production system was "disarticulated" or "dualistic" in that growth tended to be concentrated in the capitalist production of the exportable which were luxury consumer goods by the local standards. The production of mass consumer goods were remained outside the capitalist sectors and the production of capital goods remained basically nonexistent. However, it is in the non-capitalist sectors where lives the impoverished mass population who bears the social costs of unequal global development.

According to Amin's model, the periphery was functionally integrated into the self-producing world system of accumulation that blocked capitalist development in the
periphery. In order to achieve development, he proposed to break with the system, "delinking" the ties with advanced capitalism.

Criticisms of Amin’s analysis have come from both Marxist and non-Marxist perspectives. Especially his extreme stance of "delinking" received little applause from development scholars and policy-makers. The constructive approach would be the call for more and improved international cooperation which has the potential to create mutual benefits. Yet Amin’s insights on the missing link between the development of production and consumption capacities in the periphery were consistent with concerns expressed in many development writings. It is on the roots of disarticulation and underdevelopment that he clashed with mainstream development thinking.

**Structural Disarticulation, Growth and Development**

The integrated framework draws on insights from previous theories regarding the effect of structural disarticulation on economic growth and human development. It is argued that structural disarticulation has a detrimental effect on both economic growth and human development in the contemporary context of Third World economies. This view of the relative balance among industrial sectors was formulated at the early stage of development strategies. In a sense, structural disarticulation was viewed as sectoral balance between industrial and agriculture sectors. The important role of the agricultural sector was embedded in W. Arthur Lewis’ model of economic growth. Lewis (1954:433) states,

Now if the capitalist sector produces no food, its expansion increases the demand for food, raises the prices of food in terms of capitalist products, and so reduces profits. This is one of the senses in which industrialization is dependent upon agricultural improvement; it is not profitable to produce a
growing volume of manufactures unless agricultural production is growing simultaneously. This is also why industrial and agrarian revolutions always go together, and why economies in which agriculture is stagnant do not show industrial development.

The historical records of market-oriented economies in many developed countries supported the strong link between agriculture and industrial growth. The survey of the less-developed countries also suggests a strong association between the growth of agriculture and the economy as a whole.

Yet the mainstream paradigm in the 1950s did not incorporate this view into practice. Advocates of both balanced and unbalanced growth emphasized a varied package of industrial investment at the expense of investment in agricultural (Nafziger 1990). Instead, they preached that agriculture should be and could be squeezed for the interests of the more dynamic sectors of the economy. This strategy has proven to be especially inappropriate for the developing countries where agricultural was not growing rapidly at all.

Another way to argue the detrimental effect of agricultural neglect on growth and development is to sort out the positive roles of agriculture. The major roles of agriculture in the process of development are "to provide increased food supplies and higher rural incomes to enlarge markets for urban output, as well as to provide resources to expand that urban output." (Timmer, 1988; Johnston and Mellor, 1961) Yet it is a static view that transfer of resources from agriculture to the non-agricultural sectors was channeled though surplus labor, food output, and saving capacities. The more dynamic view is to achieve agricultural development so that the resources are abundant and available to be transferred (Reynolds 1975:14-15). These roles indicate
the interdependence between a country's agriculture and its industry. Recent experiences reveal that agricultural investment can no longer be ignored if it provides food for the population and supplies for industry. Therefore, structural disarticulation manifested by a stagnated agricultural sector depresses industrial growth.

An important part of human development entails improvement of the living standards of the mass population. In the developing world, most of the population is in the agricultural sector. However, government policies tend to focus on industrialization, often at the expense of agriculture. The reasons for this lie in the attitudes of the policymakers towards the rural population. Timmer (1988:289) sharply pointed out that "It is the home of traditional people, ways, and living standards - the antithesis of what nation builders in developing countries envisioned for their societies." The negative role of structural disarticulation is thus demonstrated in the bias toward urban growth and the neglect of agriculture, which perpetuate the widespread rural poverty (Jazairy et al 1992).

Structural disarticulation also found its expressions in augmenting overurbanization, and immature expansion of the service sector in the developing world. Structural disarticulation in the form of sectoral imbalance has already resulted in limited employment in the industrial sectors and has shown tremendous weakness in dealing with the rural reservoir of "disguised unemployment." Lamenting on its negative impact, Todaro (1981:5) released this thoughtful warning, "If the countryside does not prosper, the migration flows will continue and the cities will deteriorate. This
is the paradox of the urban dilemma in developing countries: to help the cities, development must be focused on the rural areas."

**Foreign Debt and Structural Disarticulation**

Total external debt in the Third World accumulated from $70 billion in 1970 to $570 billion in 1980 to $1.28 trillion in 1990. Indeed, in the 1980s, the debt crisis constituted the core of dialogues between developed and developing countries. The issue of the debt crisis will still be a dominant factor in the North-South economic interaction in the 1990s. Multinational institutions and governments in the advanced countries feared the possible effect of LDC default on western commercial-bank insolvency. The governments in LDCs were frustrated over the dramatic fall of foreign capital inflow.

Latin America, Nigeria, and Cote D'Ivories owed substantial commercial debt, whereas low-income Africa was much troubled by the official debt. In the face of rising debt, the United States proposed the 1985 Baker Plan to encourage expanded lending to the highly-indebted countries, especially those in Latin America. But the debt overhang in Latin America and sub-Saharan Africa continued to increase during the 1980s and the early 1990s. The overall effect on growth and development was indicated in the reduction of output, imports, and expenditure in social programs. The debt crisis forced many heavily-indebted countries to borrow more from the World Bank and the IMF. To facilitate debt payment, the multinational institutions have attached high-conditionality to the loans and required the debtor countries to comply with the structural adjustment program. From the early 1980s, many developing
countries were forced to adopt the IMF austerity policies which entailed devaluation of local currencies, reduction of inflation, curtailment in government spending, restriction in domestic credit, and cuts in subsidies of public goods (Killick 1982, 1984).

After more than ten years of adjustment and stabilization, the IMF austerity policies encountered criticisms from many different sources. Its most severe impact was the contraction of economies in many developing countries. With the presence of austerity policies and the reduced capital inflow, economic contraction was almost inevitable. As Selowsky and Tak (1986:1107) pointed out,

The high-debt countries have been servicing their debt largely by austerity measures. They have squeezed imports and investments to generate the trade surplus (and equivalent savings surpluses) necessary to finance the debt service, but at a high cost in terms of foregone consumption and output. Without access to significant new lending to provide time for expanding exports and savings, they had little choice but to contract."

External debt and the related austerity measures also have profound implications for disarticulation. Debt-service would push the debtor countries to expedite industrialization even more at the expense of the agricultural sector. Production would focus even more on expatriation of raw materials, industrial and agricultural exportables in order to obtain the needed foreign currencies to service debt. The debt crisis and the austerity policies are likely to reinforce structural disarticulation. The reasons are two-folded. First, it is argued that the IMF stabilization programs leans heavily toward creditors' interests in rapidly restoring the debtor countries' repayment capacities. With such narrowed interests, the fund policies would not do justice to the structural problems in the developing countries. Its strong emphasis on exports and foreign
earnings would not help to correct the already distorted production system and the imbalance between consumption goods and capital goods. Consequently, it would be harder for the capitalist sector to sustain its dynamism, yet the static sectors would be even more stagnated. Second, under the pressure of debt-service and compliance to the IMF prescriptions, the missing linkages among industries are unlikely to be filled. Many countries rely on revenues from the export of a few primary product to find their state budgets. Such an undiversified export structure is vulnerable to the world economic market due to swings in the prices of raw materials. Specialization on a few products is unable to generate forward or backward linkages. However, with short-term pressure or needs, many countries have no choice but to rely on the foreign earnings out of a few exportables. In this sense, debt-service would constitute another obstacle to creating economic diversity.

External indebtedness also poses tremendous social cost to ordinary people in the developing world. IMF austerity policies chose specifically to sacrifice social welfare (Kuczynski 1988; Nafziger 1993). The IMF realizes that its policies of adjustment involve hardships, but it regards them as inevitable if economic health is to be restored (Nashashibi 1983). The result was more than just a temporary sacrifice, it brought immiserization and stark poverty to ordinary citizens. As the UNICEF (1985:21) contends,

the common aim of these measures is to improve the balance of payments, repay debts and reduce inflation. Important national objectives - such as expanding and protecting employment, ensuring a minimum income for households and providing basic public services - have become secondary. Ironically, the result has often been an aggravation of the economic crisis and a parallel human crisis as unemployment rises, income of the most vulnerable groups falls, import-
dependent industries cut production, public services are curtailed and public discontent and political instability grow.

Another UNICEF study has shown that during a period of negative growth and limited social spending resulting from external debt, child welfare from 1980 to 1985 deteriorated in most of the sub-Saharan countries. That is, infant mortality, child death rate, child malnutrition, and non-immunization have all gone up. It is increasingly recognized that many developing countries have paid heavy prices for the belt-tightening austerity policies, and that belt-tightening alone is not an acceptable solution economically, politically, and socially (Selowsky et al 1986). It is further argued that the asymmetry of IMF pressure on the deficit nations to contract, without the obligation for surplus countries to expand, exacerbates the deficit problem in many debtor countries. The stabilization programs are viewed to have been based on flawed premises, and have failed to bring growth and human development.

Developmental State and Structural Disarticulation

Out of the mist of fire and gunpowder of multi-disciplinary debates arises a widespread consensus that the state has an important role to play in the development process. Recent development literature suggests that an active state is crucial in developmental orchestration. The new question to be pursued is how the state can best interact with the societal interests and market forces, rather than whether there should be state intervention or not.

State intervention in neoclassical theory was placed in the context of market failure and the operation of interest group politics. The state role was limited to ensuring property rights, removing obstacles for market operation, and providing
infrastructure for the economy. Moreover, state intervention in productive activities would lead to regression toward a less differentiated society. For both approaches, society is at its best when the economy is left to the "invisible hand."

The other extreme view was the pessimistic version of Marxist analysis, which regarded the state as merely an instrument of a virtually monolithic group of capitalists. Although the power of nation states may be attenuated by the internationalization of capital or class struggle, competition between capital and labor continues to be primarily nationally based. Therefore, the nation state still plays an essential role in the reproduction of capitalist relations of production.

The image of the developmental state was originally sketched by Gerschenkron (1962). In analyzing the industrialization experience of the European countries (Germany and Russia, in particular) in the last century, he argued that the more backward the economy, the greater was the role played by the state and other institutions in initiating and promoting industrial development. This view of the state as the main initiator of modern economic growth differs sharply from that of neoclassical and Marxist perspectives. Gerschenkron's analysis became an inspiration for many recent works on comparative political economy. The dependent development literature has argued forcefully that development requires the state to form alliances with local and multinational capital to ensure local capital accumulation (O'Donnell 1978; Evans 1979, 1985). Case studies in Latin America indicate that the state is a crucial actor in the triple alliance although the interests of private capital predominate. Research on East Asian NICs suggests that the state played the dominate role while
complementing the interests of private capital. Studies on Japan, South Korea, and Taiwan provided convincing evidence for a positive state role (Gold 1981, 1986; Haggard 1986; Deyo 1987). Lim (1982:139) asserts bluntly that "it is the distinctive feature of South Korea's dependent development that the state has the upper hand over both local capital and the multinationals." Thomas Gold (1981:313) also asserts that "Taiwan's triple alliance is dominated by the state."

In analyzing the Indian state, Bardhan (1984) developed a formulation with wider applicability for many other developing countries. He argued that the state elite, with a sufficiently unified sense of ideological purpose about the desirability of national development, is the main instigator of development policies. In many cases of state-directed industrialization, the leadership genuinely considers itself as the holder of the nation's deeply held normative aspirations. In a world of international military and economic competition, these aspirations often take the form of striving for industrialization and rapid economic growth.

State capacity in many developing countries goes far beyond providing basic infrastructure and institutional framework. The state has substantial power over the control and the ownership in circulation (banking, transport, distribution, and foreign trade) and the overproduction (directing manufacturing much of the basic and consumer commodities output). The state also regulates the pattern of private investment, direction of resource allocation, choice of technology, and import control. Therefore, it is conceivable to see the state using its power to establish articulated accumulation. The state can pursue policies which strike a balance between development of production
and consumption capacities and eliminate the cheap-labor and cheap-food logic of disarticulated accumulation.

**Foreign Trade and Structural Disarticulation**

The role of foreign trade in the process of economic development and its implications for an articulated economy constitute another realm of controversy and confusion. Is foreign trade beneficial for a developing economy? Adam Smith and David Ricardo gave a resounding "yes." From the classical point of view, a trade-induced division of labor is the main underlying condition for modern economic growth. Myint (1958) suggest that the opening of trade may lead to two irreversible changes: the realization of scale economies and the utilization of previously underutilized resources. The Ricardian view of comparative advantage provided the basis for developing countries to engage in primary products exports and specialization on a few commodities. The essence of the classical argument asserts "trade as the engine of growth" par excellence.

Yet from the dependency/world-system position, underdevelopment in the periphery is as much the cause of capitalist development in the center as is capitalist development the cause of underdevelopment. It is argued that a more contemporary form of dependency is manifested in neo-colonialism and the domination of the manufacturing sector in the periphery by the multinational corporations, and through dependence on the center for technology and the means of production. Consequently, peripheral countries are not capable of autonomous self-sustained growth and hence capitalist development is impossible in developing countries. Trade as the engine of
growth was reversed 180 degrees and was viewed as the culprit of global inequality and uneven development.

An alternative perspective is needed since the two extreme stances do not correspond to reality completely, yet their views contribute to our knowledge on the advantages and disadvantages of foreign trade. An alternative viewpoint would regard foreign trade as the "handmaiden" of economic growth. It dismisses the misconception of trade as the all-powerful force for rapid industrialization and growth. Meanwhile, it relinquishes the pessimistic view that trade inevitably leads to development in the center and underdevelopment in the periphery. Reflecting on the role of trade, Lewis (1978:74-75) expressed his opinion,

International trade became an engine of growth in the nineteenth century, but this is not its proper role. The engine of growth should be technological change, with international trade as lubricating oil and not as fuel. The gateway to technological change is through agricultural and industrial revolutions, which are mutually dependent. International trade cannot substitute for technological change, so those who depend on it as their major hope are doomed to frustration.

This passage indicates that developing countries should not rely heavily on trade. Yet it is not to dispute the amount of strategic and relative trading might boost the process of industrialization. A survey of the trade literature reveals a widespread belief that exports of raw materials and specialization on a handful of commodities have done more damage than good to the developing economic structure. Primary products and commodity concentration lack the kind of linkages envisioned by Albert Hirschman. In his case-study of Brazilian extractive industry, Bunker (1985) refutes the generalized sectoral linkages as the rational for the exploitation of extractive regions. According
to Bunker, the extension of transportation networks and other support activities surrounding the extractive process would gradually foment sustained local growth. However, the high costs of infrastructure development and the vagaries of export market have failed to generate the linkages to other industries, and also lead to considerable waste and immiserization of the local population. Trade is also very much affected by the floating exchange rate in the world market. Sandbrook (1986) points out that overvalued exchange rates further lessened the beneficial impact of manufacturing firms in developing countries, for it encourages firms to import equipment and intermediate products and discourages them from developing local linkages to ancillary industries. For this reason, it does not configure the basis for dynamic capitalist development.

The developing countries supply 45 percent of the world’s exports of primary products, but only 17 percent of manufactured exports (Nafziger 1990). With its known weakness in generating linkages, trade dominated by raw material exports would only reinforce structural disarticulation. The most recent work on commodity-chains provides another angle for such an argument. The opening of international trade since World War II has led to the emergence of "a global manufacturing system" in which production capacity is dispersed to the developing as well as industrialized countries (Harris 1987; Gereffi 1993). The novelty of today’s global manufacturing system, according to Gereffi (1993:1), "is not the spread of economic activities across national boundaries per se, but rather the fact that international production and trade are globally organized by core corporations that represent both industrial and commercial capital."
One of the implications is that initial production was implemented in the developing countries and the finished product fled back to the core, hence there are no forward linkages. Inputs were often allocated from other parts of the world, which suffocated the chances for backward linkages.

**Technoeconomic Heritage, Human Development, and Disarticulation**

From the ecological-evolutionary perspective, technoeconomic heritage is the primary factor that accounts for the varying levels of development across nations. This perspective stresses the roles of social carrying capacity and social structure in bringing out industrialization and development. Countries rich in technoeconomic heritage are capable of producing agricultural surpluses directed toward the creation of complex social organizations and infrastructures (Lenski and Nolan 1984; Kasarda and Crenshaw 1991).

Scholars of ecological-evolutionary theory observe that high-level of technoeconomic heritage tends to be concentrated in densely-populated regions. The densely-populated areas have more pressure to create monetary economic systems, to build more extensive infrastructures, government bureaucracy, and education system in order to sustain the livelihood of the people in these communities and regions. Consequently, technoeconomic heritage provides the foundations for advanced economic and social systems that are most appropriate for modern industrialization. The existence and development of advanced social organizations will translate into innovation, adaptation, and social evolution (Crenshaw and Ameen 1994).
In this view, technoeconomic heritage promotes a high level of human development. As indicated by high population and agricultural density, technoeconomic heritage encourages a finer division of labor and creates a more elaborate agricultural productive system, which translates into more agriculture surpluses and in general better life conditions. Boserup (1981) identified the three most important factors that determine population density and technological advancement. They are (1) subsistence technology, (2) climate and soil quality, and (3) disease regime. Favorable conditions in these three aspects of social and ecological system would attract human settlement and lead to flourishing technological innovations and prosperous social and economic activities.

One can also relate technoeconomic heritage to a longer history of agrarian production and civilization. As Nolan and Lenski (1985) pointed out industrializing agrarian societies have a lot in common, but they differ tremendously in the length of time since they made the transition from horticulture to agriculture. Horticulture is a more primitive technique of farming than agriculture and it relies on the hoe and digging stick as the basic tools in cultivation. In contrast, the use of the plow in agriculture has greatly increased effectiveness "in combating weeds and in maintaining the fertility of soil." (Nolan and Lenski 1985:342) Thus, the shift from horticulture to agriculture has resulted in a substantial increase in agricultural productivity, in food production, and in generating economies of scale. All these have sent feedbacks in creating a diversity of occupations, the growth of town and cities, and the growth of government and state bureaucracies. Such macro-structural changes have meant a
substantial improvement in the living standards of densely-populated regions. Thus, the technoeconomic heritage may explain the mismatch between the level of gross national income (GNP) and the level of social development as indicated by life expectancy and literacy in many developing countries. The more densely-populated countries like China and India have higher levels of human development by a range of social indicators. By the standard of life expectancy, literacy, and infant mortality rate, these countries are ranked as having achieved middle-level human development (UNDP 1990). But by the standard of GNP per capita, they are listed under the category of low-income countries (World Bank 1990). These instances suggest that technoeconomic heritage may have a stronger and more direct effect on human development. For this to translate into large-scale economic activities in modern terms, it may take a longer time for the old agrarian societies to apply modern technologies to economic production, and to reform the traditional social and economic institutions and to meet the demands of today's global world system.

Since technoeconomic heritage entails the use of modern tools in cultivation and higher level of carrying capacity, the ecological-evolutionary theory would argue that economies rich in such heritage are more articulated than those lacking it. In other words, technoeconomic heritage should reduce the degree of disarticulation in the old and new agrarian societies. In more densely-populated countries, social organizations and infrastructural patterns appear more articulated, and their governments, and monetary economies are more developed. As a result, productivity in agriculture is greater, which may generate linkages to other commerce and services industries. The
technoeconomic perspective seems to disagree with Hirschman’s notion that the traditional agricultural sector, often poorly organized, has little prospect to create industrial linkages (Hirschman 1984). The technoeconomic perspective would broaden the spectrum of technoeconomic heritage and consider it as having the great potential to create articulated urban/village market system (Crenshaw and Ameen 1994) and to generate the linkages to other industries.

Countries rich in technoeconomic heritage are also in a better position to reduce the unevenness of sectoral development. High level of social carrying capacity would enable these countries to apply modern technologies to increase economic production. Complex social organization would make it easier for these countries to make another transition from the agriculture-dominated economies to the industry-dominated economies. For these reasons, technoeconomic heritage should curb structural disarticulation in the Third World countries.

Population Growth and Disarticulation

Since 1950 population growth in the developing world has reached historically unprecedented rates. Driven by falling mortality and continued high fertility, the average rate of population growth was about 2 percent a year. Has population growth prevented any improvement in human development? Has it contributed to the disarticulated economic structure? There are no easy answers to these questions.

Regarding the effect of population growth on economic growth, the Malthusian pessimistic view that population growth would exhaust the earth’s resources and condemn most of humankind to poverty and recurring high death rates was proven
wrong. Except sub-Saharan Africa, income growth rate since 1950 has exceeded population growth rate. Thus, per capita income has been increasing. Population growth, resulting from declining mortality rates and increasing life expectancy, has been a major achievement. Against this background, Kuznets (1966) expressed his optimistic vision by defining modern economic growth as a sustained increase in population attained without any lowering of per capita income, and by viewing population growth as a positive contributor to economic growth. For developing countries as a whole, the inverse relationship between fertility and per capita income seems to hold, yet there were many exceptions. Given their income level, low fertility has been found in countries like China, Colombia, Indonesia, Thailand, and Korea; high fertility in Algeria, Jordan, Venezuela, and the Arab oil-rich countries. Their experiences suggest that high per capita income and its related high levels of industrialization and urbanization are not necessary for low fertility and high life expectancy. It thus suggests other factors need to be incorporated. Population size or population growth rate alone is insufficient to gauge the so-called population factor.

Despite criticism, the pessimists continue to utter their concern over the negative impact of the population factors on development. They make population growth rates or size, or age structure, an important issue for Latin America, and Africa as well as the densely-populated countries of Asia. The optimists challenged such views by arguing population growth contributes to a healthier economic structure. The reasons are two-fold. First, a larger population increases the economies of scale in production and consumption. As early as the eighteenth century, Adam Smith observed that a growing
population has the potential to widen the market and foster creativity and innovation, facilitate the division of labor and lead to higher productivity. As a rebuttal to the Malthusian viewpoint, Marshall asserts that "while the part which nature plays in production shows a tendency to diminishing returns, the part which man plays shows a tendency to increasing returns."

Second, with increasing population pressure and economies of scale, a larger population is likely to encourage technological innovation, organizational and institutional change, especially in agriculture (Kuznets 1966; Hirschman 1958; Simon 1977). This argument is also forcefully put forth by Boserup (1981) for the agriculture sector. She argues that increasing population density induces a shift to more labor-intensive farming systems, and it challenges the farmers to generate more innovations. Yet only a rising population necessitates such a shift. Boserup's argument, to a certain extent, has already been refuted by historical and contemporary county experience. Nineteenth century China, twentieth century Bangladesh, and parts of Africa have shown that population growth contribute to declining returns. In countries with high population density, rural labor has already been used intensively, thus, it is hard to envision new technology that permits both labor-intensity and high labor-productivity (Birdsall 1984).

Has population growth contributed to structural disarticulation? Neither the pessimists nor the optimists offers a satisfactory answer. Given the lower productivity in the agriculture sector with the highest concentration of labor, a larger population seemed to exacerbate the unevenness of sectoral productivity. Yet, it is hard to see,
in and out of the agriculture sector, how the sheer size of population would induce technological innovation. In our view, the early growth models treated population growth and labor force growth as equivalent, but ignored the quality of labor and human capital. The enlargement of population with low-skill and low-level of education is unlikely to be a source of technological innovation. Only when the population provides a skilled and educated pool of labor, can it become a valuable source for technological innovation and sophisticated organization. Therefore, the effect of population growth has to be gauged in conjunction with its quality. This line of thought posits that population growth accompanied by a higher level of education would reduce the degree of disarticulation. On the other hand, population growth accompanied by a low-level of education would exacerbate the degree of disarticulation.

Research Hypotheses

This research sets out to unravel the complex relationships among external debt, structural disarticulation, and human development in the Third World countries. Drawing inspiring and useful insights from various theories, a formal model is developed to better gauge the complex relationships at issue. All too often, competing theories have created controversies that seemed too polarized to be resolved. At the abstract level, bridging the gap between competing theories seems impossible. Yet when applying them to concrete social issues such as that of human development, the differences between various schools of thoughts are often narrower than perceived, and they all contribute to the theme of human development from different angles. The ultimate subject in this research is human development, and the integrated framework
brings together both the external and internal forces, which are often overemphasized and deemphasized in various theories. An integrated framework is preferable since it frees the researcher from the bondage of ideological loyalty and political bias. It allows the researcher to choose and ask freely questions that have direct bearings on the reality as well as the immediate sufferings of the Third World population. In pursuit of more satisfactory answers, it enables the researcher to focus on important factors that are either excluded or ignored in mainstream literature.

This research focuses on internal structural disarticulation and external indebtedness as two main factors associated with human development in the developing world. Structural disarticulation also serves as the intermediate factor that channels the influence of other social and economic factors on human development. Those effects have been elaborated extensively in the previous section. To summarize arguments from the integrated framework, we have developed a theoretical model that explains the complex relationships among human development, structural disarticulation, external indebtedness, and other social and economic factors, and derived the following hypotheses for empirical testing:

(1) Economic growth rate has a direct positive effect on human development.

(2) Structural disarticulation has a direct negative impact on human development.

(3) External debts in forms of multilateral and bilateral debt have a direct negative impact on human development.
(4) External debts in forms of multilateral and bilateral debt have an indirect negative impact on human development mediated through their positive effects on structural disarticulation.

(5) IMF austerity policies have an indirect negative effect on human development mediated by its positive effect on structural disarticulation.

(6) Foreign trade in the form of primary product exports and commodity concentration has a positive effect on structural disarticulation and negative impact on human development.

(7) The Developmental state has a direct positive impact on human development and an indirect negative impact on sectoral disarticulation.

(8) Foreign investment and private debt should have a regional impact on human development and structural disarticulation.

(9) Technoeconomic heritage has a direct positive effect on economic growth and human development.

(10) Technoeconomic heritage has a direct negative effect on structural disarticulation.
Summary

In this chapter we intend to develop a new, integrated conceptualization of structural disarticulation by drawing upon ideas from various theories of development economics and the sociological theories of development. With this effort, we define structural disarticulation as a distorted social and economic structure with three main features. They are (1) the unevenness of productivity across industrial sectors; (2) the lack of correspondence between the pattern of production and the pattern of consumption; and (3) the missing linkages among industrial sectors. We argue that structural disarticulation is one of the far-reaching structural problems endured in the developing economies and has profound implications on many facets of Third World development.

To understand the complex relationships centered around structural disarticulation, we have attempted to develop an integrated framework that synthesizes relevant ideas from various theories. One consensus points to the direct adverse effect of structural disarticulation on human development in the developing world. Regardless of his or her theoretical background, few analysts would disagree that structural disarticulation hampers economic growth and the standard of living in the Third World countries (e.g., Stokes and Anderson 1990; Crenshaw 1992).

It is on the causes of this structural problem that theoretical opinions diverge. Theorists of classical economics and modernization tend to focus on the internal factors as contributing to the problem of structural disarticulation. They also treat this structural problem as a temporary slippage between demographics and economics.
Yet new schools of development economics and dependency/world system theories view structural disarticulation as a persistent condition, imposed by external factors in a stratified system of global political economy (Amin 1976). Given the opposing points of views that cannot simultaneously reflect the Third World reality, we consider a synthetic model that integrates these theories a better approach to gauge the problem of structural disarticulation and its status in the Third World development process.

The integrated framework allows us to incorporate both the internal and external factors determining human development and structural disarticulation. Guided by this framework, this research makes the first attempt to model structural disarticulation as a major mechanism mediating between human development and a host of social and economic factors. In our view, this approach has both theoretical and methodological advantages. For example, the traditional approach tends to argue the direct linkage between economic dependency and economic or social development. Such an argument appears superficial and falls short of complete persuasiveness. The problem has to do with the lack of recognition that even if the dependency effect exists, this effect might be indirect, working through the intervening mechanism of structural disarticulation. Thus, the advantage of our approach lies at its grasp of the theoretical complexity of the problem at issue.

In the previous section of this chapter, we have delineated an array of research hypotheses on the relationships among structural disarticulation, human development, and a set of other explanatory factors. These hypotheses involve both the direct and
indirect effect of various exogenous factors on human development. To test these hypotheses, we have made an effort to create new measures of several important theoretical concepts such as structural disarticulation and the IMF's involvement. In the next chapter, we discuss in detail the measurement of all variables used in the analysis and the research design appropriate to our hypotheses-testing.
CHAPTER V
MEASUREMENT AND METHODOLOGY

Population of Observations

Kohn (1989:20) defines cross-national research as "studies that are explicitly comparative" or "studies that utilize systematically comparable data from two or more nations." Within the comparative arena, the differences between various types of cross-national studies are expressed by Ragin (1989:58) as follows:

Those who do large-N studies try to provide answers to these questions that are extensively correct, embracing many observations, those who do small-N studies try to provide answers that are intensively correct, embracing one or small number of observations in a detailed and holistic way.

The current research is a comparative cross-national study of the "large-N" variety, using countries as the unit of analysis. It aims at testing the impact of structural disarticulation and the debt crisis on the level of human development at a global scale. The virtue of a large-N study is that it demonstrates the generality and visibility of its findings (Ragin 1989).

The identification and selection of cases are based on several criteria. It includes countries broadly defined as the less-developed countries (LDCs). These countries share several characteristics in their intrinsic structure and position in the world economy. All of them have an economic structure with a sizable agriculture sector and
all participate in world trade. These countries carry varying amount of external debt from foreign governments, private banks, and multilateral financial institutions. Some of these countries have engaged in renegotiation and rescheduling of debt payment with private banks and multilateral organizations. It includes countries that have complied to IMF conditionalities attached to the IMF loans. These conditionalities or "pressure" are assumed under the following circumstances: (1) countries that were involved in the "extended-fund" arrangement with the IMF at some point in the 1975-1985 period; (2) countries that negotiated and renegotiate their debt-payment with the IMF at some point during 1975 to 1985; (3) countries that signed agreements to restructure their economy to facilitate debt payment with the IMF at some time during 1975-85 period; and (4) countries that repurchased currencies from their IMF quotas.

Applying these criteria to all Third World countries produced a set of 76 countries that satisfy one or more of those conditions. Case number varies due to different combinations of variables in the regression models. Data are collected for all countries classified as low- and middle-income countries as of 1985. Because of incomplete data for some small countries, nations with less than one million population were excluded from the analysis. Also excluded were the former and current planned economies because data for these countries are either incomplete or incompatible with those of the market and mixed economies. The OPEC oil exporters were eliminated from the analysis primarily because of their unique resource structure incomparable with those of other countries.
Measurement

Many cross-national studies have used single indicators to explain variation in economic and social development. Among the most widely accepted measures are level of development (GNP per capita), level of urbanization (percent living in urban areas), and the size of the tertiary sector (percent employed in the service sector). Although these indicators are important measures of Third World economic and social performance, there are reasons to be skeptical about the utility of the use of single indicators. First, the use of single indicators is often based on a narrow definition of development. It taps only one aspect of the complex development process. This practice creates difficulties in making generalizations regarding the causes or correlates of development. Second, a single indicator becomes inadequate to measure the overall level of development. Thus, it fails to do justice to a developing country in terms of its relative position among other countries.

The current research uses the human development index (HDI) to capture the multidimensionalities of development. This measure, which is relatively new, requires special attention. The other two indices created in this study, one of structural disarticulation, the other of IMF involvement, also must be explained and justified.

Measuring Human Development: A Dependent Variable

In chapter III, we discussed the shift of development thinking from an emphasis on the growth of per capita income to that of socioeconomic development. Now the new shift is to human development which emphasizes the development of human choices and a return to the centrality of people. Parallels to these shifts are a series
of statistical measures of development. Dissatisfaction with measures based exclusively on economic and monetary indicators resulted in efforts to construct several synthetic indices tapping the social and economic dimensions of development. One of the most widely used indices is the Physical Quality of Life Index (PQLI) constructed by M. D. Morris (1979). He intended to measure development as "achieved well-being" and chose three indicators – infant mortality, life expectancy at age one, and literacy. These indicators were combined in a simple unweighted index to give the PQLI. Critics have pointed out there is considerable overlap between infant mortality and life expectancy, particularly for developing countries. Another major flaw, in our view, is its unidimensionality that does not accord with the complexity of Third World development.

Since our goal is to capture the multidimensionalities of development, we favor the index of human development. We chose to use the human development index (HDI) developed by UNDP. HDI was published in a landmark study of Human Development Report 1990 by the United Nations Development Program (UNDP). It reveals that there is no automatic linkage between per capita income and human development. In other words, the ranking of countries by per capita income does not always correspond to the ranking by human development.

The measure of human development focuses on three essential elements of human life: longevity (approximated by life expectancy), knowledge (approximated by the literacy rate), and living standard (approximated by the "log" of real GDP per capita based on purchasing power parities). The construction of the human development
index proceeds in three steps. The first step is to construct a measure of deprivation that a country suffers in each of the three basic indicators: life expectancy \((X_1)\), literacy \((X_2)\), and the logged real GDP per capita \((X_3)\). Thus \(I_{ij}\) becomes the deprivation indicator for the \(j\)th country with respect to the \(i\)th variable and is defined as follows:

\[
I_{ij} = \frac{(\max X_{ij} - X_{ij})}{(\max X_{ij} - \min X_{ij})}.
\]

The second step is to construct a composite measure of deprivation \((I_j)\). This is done by taking an average of the three indicators of deprivation:

\[
I_j = \frac{1}{3} \sum_{i=1}^{3} I_{ij}.
\]

The third step is to measure human development index (HDI) as one minus the average deprivation index:

\[
(HDI)_j = (1 - I_j).
\]

HDI with a value of 1 represents perfect human development, and the value of zero represents minimum level of human development. Scores of relative deprivation are first calculated, therefore, a value of zero in relative deprivation \((I_j)\) refers to the most desirable level of human development. Based on this computation, human development indices were calculated for 130 countries. According to the UNDP classification, there were 44 countries with a low HDI (Niger 0.11 to Morocco 0.49), 40 countries with medium human development (Egypt 0.50 to Albania 0.79), and 46 countries with high human development (Malaysia 0.80 to Japan 0.996).
illustration of the computation of HDI is shown in Table 5.1. Human development indices of selected countries included in this research are presented in Table 5.2.

**Measuring Disarticulation: An Intermediate Variable**

In quantitative cross-national research, only one attempt has been made to measure the concept of disarticulation. Stokes and Anderson (1990) developed an index of disarticulation by taking the sum of the absolute differences between the percentage of distribution in the labor force \( L_i \) and the percentage of distribution of national income \( G_i \) over all sectors of the economy. Stokes and Anderson's disarticulation index \( D \) is then expressed as follows:

\[
D = \sum_{i=1}^{n} |G_i - L_i|
\]

or

\[
D = \sum_{i=1}^{n} L_i \left| \frac{G_i - 1}{L_i} \right|
\]

There are two major problems in their measurement. First, substantively, their measure is hard to interpret. The percentage of labor force in an economic sector and sectoral output as a percentage of gross domestic product have different meanings. Their measure is actually the weighted deviation of each sector from one. There is no reason to assume that an articulated economic structure means a perfect correspondence between the percentage of labor force in each sector and the percentage of GDP in that sector. Hence, the underlying assumption embedded in their measurement is problematic and unwarranted.
Second, the idea of disarticulation is to recognize a distorted economic structure with uneven development of different industrial sectors in terms of their productivity per labor. A measurement of this structure should not be confounded with the level of development in various economic sectors. Therefore, any proper measurement of disarticulation mandates the exclusion of the influence from the average level of productivity per labor in the given economy. The index of Stokes and Anderson does not meet this fundamental requirement.

These problems constitute serious drawbacks of their measurement. An alternative way of measurement must then be developed. To do so, one needs to first clearly specify the theoretical meaning of structural disarticulation and to operationalize it accordingly.

Structural disarticulation refers to the juxtaposition of economic sectors with different levels of development. In other words, disarticulation can be conceptualized as uneven development of various economic sectors in terms of productivity per worker. To measure the unevenness of various economic sectors, one is naturally led to the totality of deviations of productivity per worker of each economic sector from the average productivity per worker in the overall economy.

More specifically, let $G_i$ and $L_i$ be the percentage of GDP and labor force respectively in sector $i$, and assume that there are $N$ sectors. Using the linear feature of log-ratios, the average productivity across all sectors is then given by the formula:

$$\frac{1}{N} \sum_{i=1}^{N} \ln \left( \frac{G_i}{L_i} \right),$$
where the ratio $G_i/L_i$ is the productivity per labor. Let $D_i$ be the deviation of the productivity per labor of sector $i$ from the average level across all sectors. It is given by the difference

$$D_i = \ln \left( \frac{G_i}{L_i} \right) - \frac{1}{N} \sum_{j=1}^{N} \ln \left( \frac{G_j}{L_j} \right).$$

The structural disarticulation index is then given by

$$D = \sum_{i=1}^{N} |D_i| = \sum_{i=1}^{N} \left| \ln \left( \frac{G_i}{L_i} \right) - \frac{1}{N} \sum_{j=1}^{N} \ln \left( \frac{G_j}{L_j} \right) \right|.$$  

An important feature of this measure is its insensitivity to size and overall average level of development in the given economy. It is an index reflecting the structure of the economy, rather than the level of development.

Another feature or advantage of this index is that it can be decomposed into several indices. In other words, if we do not take the summation of all deviation scores, we get a disarticulation score ($D_i$) for each particular economic sector:

$$D_i = \ln \left( \frac{G_i}{L_i} \right) - \frac{1}{N} \sum_{j=1}^{N} \ln \left( \frac{G_j}{L_j} \right).$$

Decomposing the index enables one to examine differential effects of different economic sectors on economic development and physical quality of life.
Data for this measure were collected for all less developed countries. Due to missing values on various variables, an index of disarticulation was constructed based on data in 1978 since the largest number of cases were retained for this year.

The information on productivity by sector was obtained from World Bank reports (World Tables 1983). Gross domestic product is reported for nine sectors: (1) agriculture, (2) mining (including petroleum and natural gas production), (3) manufacturing, (4) construction, (5) utilities (electricity, gas, and water), (6) transportation and communication, (7) trade and finance, (8) public administration and defense, and (9) "other". To match the categories of labor force distribution, categories 6, 7, and 8 were collapsed into a single "service" category. Data for the 1978 labor force distribution were drawn from the Yearbook of International Labor Statistics (1987) supplemented by other volumes.

Measuring the Independent Variables

Measuring IMF's Involvement

Many countries have had increasing contact with the International Monetary Fund (IMF) with regard to getting loans and making arrangements for payment. Various conditionalities are often attached to these long-term or short-term loans. Countries that have difficulties in servicing debt have experienced more renegotiations and restructuring. There is considerable variation in the extent of IMF’s involvement with the developing countries. A measure of the extent of IMF’s involvement or conditionality is needed to test its impact on human development and structural disarticulation in the developing countries. To measure the IMF’s involvement, four
indicators are chosen: (1) number of multilateral debt renegotiations with the IMF during 1975-85 period; (2) number of rescheduling of debt payment with the IMF during the 1975-85 period; (3) number of times of using the IMF's extend fund facilities during the 1975-1985 period; and (4) IMF loans as the percentage of quota during the 1975-1985 period. For instance, since 1975, Zaire and Togo have engaged in seven reschedulings, and Peru and Madagascar each have participated in six.

To create an index of IMF involvement, we factor analyzed the four indicators of IMF conditionality. The result shows clear unidimensionality with strong factor loadings of all four variables on a single factor. These four variables were then transformed into z-scores and were summed to give an index of IMF involvement.

A similar index was created by Walton and Ragin (1989,1990) who found that IMF pressure was a primary factor triggering the austerity protests in some less developed countries. Bradshaw and Huang (1991) found that IMF structural adjustment failed to stimulate economic growth in the less developed countries.

External Indebtedness

The greatest irony in the 1980s was that international financial assistance turned into a global debt crisis. The Third World debt started to accumulate in the early 1970s. While experiencing high growth rate during the 1965-1980 period, many developing countries have lost income in the past decade. Compared with where they would have been had they continued to have the GDP growth rate of 1965-1980, according to Singer and Roy (1993), the low-income countries excluding China and India have lost 35 percent of their GDP; lower middle-income countries 39 percent,
upper middle-income countries 23 percent; sub-Saharan Africa 40 percent; Latin America and the Caribbean 45 percent; the severely indebted countries 45 percent. Debt thus has posed a big setback on economic growth in the developing countries. Hence, it is necessary to test its impact on human development and disarticulation in the Third World countries. Many previous studies have used total debt service as percentage of GDP or GNP, or exports, to measure external indebtedness (e.g., Bradshaw 1990; Jenkins and Kposowa 1990; Walton and Ragin 1990). This research intends to differentiate various types of external debt. In the early 1970s, most of the external debt was either directly from governments or from multilateral financial institutions such as the IMF and the World Bank. Since the mid-1970s, debt from private banks started to take precedence. By the 1980s, more than half of the Third World debt are in the form of private debt. To reflect this historical pattern of debt accumulation, we use three variables to measure external indebtedness: (1) multilateral debt as a percentage of GDP; (2) bilateral debt as a percentage of GDP; and (3) private debt as a percentage of GDP. The burden of total debt is then calculated by taking a summation of these three types of debt. All these variables are measured for the year of 1975.

**Foreign Investment**

Foreign investment was first perceived as "Multinational Corporation Penetration" (MNC) by Bornschier and Chase-Dunn (1985) in cross-national studies. They developed the so-called "PEN" measure using the stock of foreign direct investment in a developing country adjusted for the country's total capital stock and the
size of its labor force. This measure has been used extensively by them and other researchers in the studies of economic growth and income inequality. A simpler measure of foreign direct investment is taking a country's total stock of foreign investment divided by its GDP. Both measures have been widely used. There is no significant difference between these two measures. The correlation between the PEN measure and our measure of foreign investment is .42. Bradshaw and Huang (1991) used both measures of foreign investment. Results produced by the two measures were almost identical. This research prefers the second measure for its simplicity and intuitive interpretation. Moreover, our measure of foreign investment is based on data for 1978. Bornschier and Chase-Dunn's PEN measure is from 1967, a much earlier time point. We prefer a measure at a later time point since all other independent variables in this study are measured around the mid-1970s.

It is worth noting that the use of foreign investment measure has generated the most empirical controversies driven by different theoretical arguments. Bornschier and Chase-Dunn (1985) found that the new flows of foreign investment have positive short-term effects on economic growth, while accumulated stock of foreign investment have negative long-term effects. Similarly, London and William (1988) found that stock of MNC investment tend to inhibit improvement in life expectancy at birth and infant mortality, but the new flows of MNC investment exhibit just the opposite effect. Stock of foreign investment as a percentage of GDP 1978 is used in this analysis to test its impact on human development and structural disarticulation.
Primary Product Export and Commodity Concentration

Dependency and World System theories claim that Third World participation in the world trade has a detrimental effect on their economies. This is because they tend to rely on exports of raw materials and/or specialize in the production of a handful of products. For example, Tanzania and Uganda specialize in producing and exporting coffee, Côte d'Ivoire in cocoa, Senegal in ground nuts, Dominique Republic and Mauritius in sugar cane, and Guatemala and Honduras in bananas. Previous studies have suggested that primary product exports and commodity concentration impede both economic growth and physical quality of life (Delacroix and Ragin 1981; Bradshaw 1985). Yet no attempt has been made to examine their relationships with structural disarticulation and/or human development. To test these relationships, we use two measures of participation in world trade: (1) primary product export, calculated as the value of primary products exports (excluding petroleum) as a percent of total exports, 1975; and (2) the commodity concentration index, based on the top three export commodities as a percent of total exports, 1975.

The Developmental State

The ongoing development process in the developing countries has galvanized the debate on the proper role of the state. Dependency theorists contend that the role of peripheral states was to increase access to domestic resources for metropole capital by mobilizing public funds for infrastructure investment, and by reforming the social and economic structure so that increased labor is available to produce export goods (Marini 1977; Frank 1979; Amin 1980). "Indeed," as Frank (1979:5) pointed out, "this
dependent, and in this sense, weak, character of the state in the Third Word--dependent financially, technologically, institutionally, ideologically, militarily, in a word politically, on the international bourgeoisie(s) and their metropolitan states — may be regarded as the fundamental characteristics of the Third World state." For dependency theorists, state actions in policy-making and allocation of national resources are doomed to fail to achieve the goal of development. On the other hand, liberal economic theorists hold that the state role should be restricted to the building of infrastructure and protection of property for local industrialists. The burgeoning developmental state argument that development requires the strengthening of the state goes against both the dependency and the liberal preconceptions. The argument for active state intervention has been vindicated by the classical example of the rise of the west, and by recent experiences of the newly-industrializing countries (NICs) in East Asia. States in Asian NICs have pursued systematic economic management, selective import liberalization, and exchange rate and tax reform (Haggard 1986; Evans 1984).

Therefore, one can argue that the developmental state would have the capacity to design policies conducive to the improvement of human conditions, and have the power and resources to reform the distorted economic structure into an integrated, more productive economic structure. To test the hypotheses that the developmental state is favorable to human development and able to effect change in disarticulation, it is necessary to construct a measure of the developmental state. Since it is not feasible to measure state policies across nations, we choose to use state strength and state size as proxies for the developmental state. State size is defined as total government revenue
as a percent of total GDP. It measures the degree to which financial resources are available to the state. A measure of state strength was defined by Delacroix and Ragin (1981) as government direct taxation as a percentage of GDP. This variable serves as the proxy for the state capacity to control economic and social activities in the nation. Both variables were calculated for the year 1975.

**Population Growth Rate and Fertility**

Demographic processes are linked with socio-economic development in a complex manner. Rapid population growth is the consequence of the so-called "demographic transition". In fact, the reduction in mortality in the rural areas has often been the factor explaining the increase in population size. Sometimes an important decline in mortality has been a linear process independent of improvements in the standard of living of the rural poor. Based on this line of thinking, a decline in population growth will not necessarily improve people's lives in the poor countries. To test this hypothesis, population growth rate is included in the analysis. It is calculated as a change score in population size from 1975 to 1985. Data for this variable were drawn from the World Development Report.

The movement of fertility is another complex issue. The survival strategy of the poor leads them to strive for a relatively large family because, traditionally, the flow of wealth is from children to parents. In the past two decades, fertility rates start to decline due to strong population policies and increased expenditures on education and other related costs. Yet, this decline has slowed down or leveled off in many regions. One of the explanations is that traditional survival strategies are still dominant. Thus,
it is reasonable to argue that high fertility rates, which result in skewed age structure and migration, have obstructed improvement of human development through increased pressure on land and other resources, social services and employment. They have also disrupted national labor structures through the oversupply of labor in manufacturing and service industries and a shortage of labor in agricultural sector due to outmigration. Birdsall (1980) observed that high population growth can make land scarcity more acute in developing countries. For example, in Egypt, more than 500 million people crowd into the narrow strip of the Nile valley and delta which covers only some 3.5 percent of the total land area (Birdsall, 1980). Fertility rates from 1975 are used to test their impact on the improvement of human development and the elimination of structural disarticulation.

**Population and Agricultural Density**

Developmental and ecological-evolutionary theories draw our attention to the effect of the indigenous technological and economic heritage of the societies on their current level and rate of development. Nolan and Lenski (1984) indicate that Old agrarian societies have substantially higher population density and agrarian density than the New Agrarian societies. To measure the technoeconomic heritage, previous studies have use population density and agrarian density as proxies (Nolan and Lenski 1984; Lenski and Nolan 1985; Crenshaw 1992). According to this theory, countries with high population and agricultural densities should lessen the degree of structural disarticulation through a heritage of more sophisticated social organizations and more advanced agrarian technologies. To follow previous research, this research also uses
population density and agricultural density as proxies of technoeconomic heritage to test its effect on human development and structural disarticulation. If this theory is right, one should expect that population density and agricultural density should both have negative impact on structural disarticulation and positive impact on improvement of human development.

**Intervening and Control Variables**

*Economic Growth and Urbanization*

Although there is no automatic linkage between human development and an increase in per capita income, economic growth rate still serves as a stimulant for social development. This research uses economic growth rate as an intervening variable mediating between human development and other socio-economic forces. Economic growth rate is calculated as the change score of per capita gross domestic product from 1975 to 1985.

Per capita income growth is also closely related to structural disarticulation. Previous level of economic development in terms of per capita income influences the overall industrial structure. Thus, in explaining structural disarticulation, it is necessary to control the effect of per capita income. To avoid the potential confounding effect of GDP per capita on the disarticulation index, it is better to control the level of urbanization since it is highly correlated with GDP per capita in the developing countries. Thus, in various models, the level of urbanization defined as urban population as the percentage of total population is used as a control variable. Data for
Level of urbanization in 1975 were taken from the *World Handbook of Political and Social Indicators* edited by Taylor and Jodice (1983).

**The Initial Level of Development**

One of the principal failures of development theories formulated in the 1950s and the 1960s was their inability to recognize and take into account the different and less than favorable initial conditions of today’s developing countries. The initial economic, social, and political conditions have profound implications for the direction and pace of later development. Therefore, we believe that the initial level of development needs to be considered in predicting future levels of human development. One may argue that the initial development has many facets such as natural resource endowments, human capital, climate, the historical role of international migration, international trade benefits, stability and flexibility of political institutions, per capital incomes and levels of GNP, population distribution and growth, and basic scientific and technological research and development capabilities (Todaro 1985). To measure the concept of initial development, it is practically impossible and unrealistic to capture all these dimensions in a single model. Besides, most of these dimensions are highly correlated with each other. For instance, low levels of incomes are accompanied by high levels of population growth, lack of human capital and technological capacity in the context of the developing world. Hence, it is sufficient to capture a few aspects of the initial level of development.

In this study, three variables are used as proxies for the initial level of development: the level of urbanization, the level of energy consumption, and fertility
rate. All these variables are measured in 1975. In our models, we include the level of urbanization to control the effect of the initial level of economic development since urbanization is highly correlated with GNP per capita. We choose the level of energy consumption per capita as a measure of the technological aspect of the initial development. By including fertility in the model, we control the effect of population growth on human development. With these three variables, we have covered the most important aspects of the initial development.

Moreover, controlling the initial level of development means that we intend to carry out a very conservative analysis of Third World human development, since all three measures of the initial development are correlated with the human development index. Results from such a conservative test should offer us very strong empirical findings on the determinants of human development.

**Research Design**

**Regression Analysis (OLS)**

To evaluate various theoretical arguments on the determinants of human development and structural disarticulation, we first proceed with the analysis using ordinary least square regression. The regression analysis is cross-sectional. In this type of design, the dependent variable is measured at later time points and all independent variables are measured at five to ten years prior to the time points of the dependent variable. The time lag is taken into consideration since many factors influencing development normally take five to ten years to show their effects. For example, it takes
about ten years for the effect of foreign investment to trickle down on economic development and improvement of human conditions.

The ultimate dependent variable is human development based on data for 1987. Structural disarticulation is measured in 1978 as an intervening variable in the path model and an independent variable in the regression analysis. Other independent variables are measured in 1975 or at a time close to 1975. The reason for these measures at different times points is that we want to account for the time lag among indicators of development. As a general rule of thumb, we allow roughly a decade between the predicted and the explanatory variables. Most of our independent variables are based on data for 1975. This choice is based on two reasons. First, the mid-1970s marked the major shift of development strategies. During this period, many developing countries made the transition from import-substitution strategy to either export-oriented strategy (e.g., Taiwan and South Korea) or the secondary stage of import-substitution (e.g., Mexico and Brazil). Therefore, to account for the level of human development a decade later, it is possible to measure the indicators after the change of strategy. The old development strategy either became obsolete or its effect on later development became more or less irrelevant. Second, it was in the mid-1970s that financial dependence took precedence over the classical trade dependence in many developing countries. The seed of the global debt crisis was planted during this period of time. In terms of the financial inflows, multilateral and private loans replaced bilateral aid as the major sources of foreign capital. Hence, many major events in the mid-1970s had a
profound impact on the political and economic situation in the late 1980s. This makes it essential for us to focus on this particular historical time.

Ideally, we would have measured the human development index in 1988 and foreign direct investment in 1975. However, complete data for these preferred time points are not available. Therefore, we examine the human development index in 1987 and foreign direct investment in 1978, which are very close to the ideal time points.
Path Analysis (LISREL)

Based on the results of the regression analysis, the second step is to perform a path analysis modeling the complex relationships among human development, disarticulation, and other socio-economic factors. To conduct path analysis, we use the LISREL program and the maximum likelihood method to estimate path coefficients. In this case, using LISREL program has the following advantages. First, it gives one the flexibility to free or fix certain paths in the path diagram. This might not be easy to do in ordinary regression analysis. Second, it estimates each path coefficient while controlling the effect of other variables in the path model. Again, this task might be a tedious one in regression analysis. Moreover, maximum likelihood estimation can better deal with any non-normality if it exists in the data. although when the residuals are normally distributed, ML estimators are identical to least-square estimators (Pedhazur 1982). Thirdly, estimating path coefficients using LISREL makes it easier to obtain the direct and indirect effects of various variables since LISREL program calculates them automatically. Finally, it is a common practice in cross-national research that cases in difference models vary, sometimes considerably. This makes comparisons of the importance and size of the effects among variables very unreliable, since regression coefficients are obtained based on different sample sizes. Path analysis using LISREL eliminates this problem. All paths in the model are estimated simultaneously. Hence, the analysis is more robust and the results are more reliable.
Regression Diagnostics

In the analysis reported in the following chapter, we have constantly checked for outliers and influential cases that may violate the assumptions of ordinary least square method. Outliers and influential cases are identified using standardized residual, hat matrix, and DFITS regression diagnostics (Belsley et al 1980; Bollen and Jackman 1985). We have used spearman rank-order correlation and the Breusch-Pagen global test to check for heteroscedasticity. Variance inflation factors and beta correlations are used to detect potential problem of multicollinearity (Johnson, Johnson and Buse 1987). Although regression diagnostic has detected a few outliers, removing them did not change the substantive findings of this study. In some equations, removing the "outliers" has improved the overall significance indicated by the increased R-square. This result supports Bollen and Jackman's (1985, 1990) argument that outliers are not necessarily influential cases.

In the path analysis, we have constantly checked the standardized residual for outliers and influential cases. The standardized residuals are less than one, hence outliers or influential cases are found. To assess the goodness-of-fit, we have examined the Q-plot of normalized residuals for our models and found no significant problem of non-linearity or non-normality. The slope of the normalized residual is less than one indicating a good fit of our models and the absence of outliers. Therefore, the findings based on our path models do not appear to be influenced by deviant cases.
Table 5.1  Computation of the Human Development Index (HDI)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Desirable Levels of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1. Life expectancy as in Japan</td>
<td>78.4 years</td>
</tr>
<tr>
<td>D2. Highest possible literacy rate</td>
<td>100%</td>
</tr>
<tr>
<td>D3. Log of adequate income (official poverty line in nine industrial countries)</td>
<td>log($4,861)=3.68</td>
</tr>
</tbody>
</table>

Minimum values of development indicators:
M1. Lowest life expectancy (observed in Ethiopia, Afghanistan and Sierra Leone) | 41.8 years |
M2. Lowest adult literacy (as in Somalia) | 12.3% |
M3. Log of lowest real GDP per capita (as in Zaire) | log($220)=2.34 |

Indicators for Kenya:
K1. Life expectancy | 59.4 years |
K2. Adult literacy rate | 60% |
K3. Log of real GDP per capita | log($790)=2.90 |

Kenya's deprivation:
1. Life expectancy deprivation \(\frac{(D1-K1)}{(D1-M1)}\) =0.519
2. Literacy deprivation \(\frac{(D2-K2)}{(D2-M2)}\) =0.456
3. Income deprivation \(\frac{(D3-K3)}{(D3-M3)}\) =0.582

Kenya's HDI:
Average deprivation (of the three above) 0.519
HDI \((1-0.519)=0.481\)

Table 5.2 Human Development and Structural Disarticulation Indices

<table>
<thead>
<tr>
<th>Country</th>
<th>Human Development</th>
<th>Disarticulation</th>
</tr>
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Table 5.2  Human Development and Structural Disarticulation Indices (Cont’d)

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CHAPTER VI
ANALYSIS AND RESULT

Regression Analysis

The Determinants of Human Development

Table 6.3 presents a regression analysis of variation in human development performance. We begin the analysis by examining major determinants of human development in equation 1. Economic growth has a strong positive effect on human development. This finding supports the common-sense notion that faster economic growth provides a good foundation for improvement of human conditions. Structural disarticulation demonstrates a strong negative effect on human development. This result is consistent with Stokes and Anderson's finding that disarticulation negatively affects child mortality and crude death rate (Stokes and Anderson 1990). It supports the major argument in this research that indigenous uneven sectoral development and/or economic distortion hampers the improvement of human development. In equation 1, state size, measured by government revenue/GDP, demonstrates a significant, positive relationship with human development index. This result supports the argument that the developmental state can play a crucial role in the development process especially in light of Third World experiences. Equation 1 also examines the effect of technoeconomic heritage on human development. Population density as one measure
of technoeconomic heritage shows a positive and significant effect on human development. Here, the ecological-evolutionary thesis stands the test. Densely-populated countries have a strong edge in modern national development.

Equation 2 retains all the variables in equation 1 while adding another variable: commodity concentration. Interesting results surface. Population density, that is significant in equation one, becomes insignificant in equation two. And commodity concentration, a measure of classical dependency, shows a significant negative effect on human development. Population density is reduced to nonsignificance with the presence of commodity concentration in the regression model. One is tempted to declare that trade dependency accounts for the effect of technoeconomic heritage. We are inclined to argue that commodity concentration makes it harder to achieve a high level of human development even if complex social organizations are conducive to human development.

The impact of technoeconomic heritage and classical dependency on human development is further examined in equation 3, 4 and 5. In equation 3, agricultural density, another measure of technoeconomic heritage, fails to show a significant effect on human development, whereas, commodity concentration continues to be significant. We also regress agricultural density on human development excluding commodity concentration. The result (not reported here) fails to show any significant effect of agricultural density on human development. Equation 4 gives foreign investment an opportunity to explain variation in human development. However, foreign investment fails to achieve statistical significance. In equation 5, primary product export as a
percentage of GDP shows a significant negative effect on human development. Therefore, trade dependency exhibits a consistent negative impact on human development. Equation 5 also tests the effect of state strength while controlling economic growth, structural disarticulation, and primary product export/GDP. State strength, measured by government direct taxation as a percentage of revenue, has a strong positive association with human development.

It is noted that all regression equations of human development include economic growth, structural disarticulation, and a measure of the developmental state. These variables have remained stable and significant while other variables are entered into the equations.

The last three equations in Table 6.3 test the effect of debt dependency and IMF pressure on human development. Equation 6 examines the effect of IMF pressure while controlling economic growth, structural disarticulation, and direct taxation/revenue. However, IMF pressure fails to show any significance. Equation 7 and 8 test the multilateral and bilateral debt effect respectively. Both variables display a significant negative association with human development. This result supports the notion that external indebtedness poses severe hardships on human lives in the Third World. In a previous analysis (not shown here), we also regressed private debt/GDP on human development while controlling other independent variables. Private debt/GDP fails to achieve statistical significance with or without the control variables. These results reveal a very important fact that external debts from different sources with different conditionalities differ in their influence on national economic and social
development. Unlike previous cross-national studies that look at only total debt, we choose to differentiate private debt from multilateral and bilateral debt. This practice is well justified by the results of the analysis. While private debt fails to show significant impact, multilateral and bilateral debt show a significant negative effect on human development. Adding them up might obscures the fact that debt from different sources bears different associations with human development. It might also lead to a misleading result that external debt in terms of total debt has no impact on human development, while in fact, multilateral and bilateral debts do put significant constraints on the improvement of human development.

Thus far, the ecological-evolutionary arguments have not received strong support. Population density attains significance in only one equation, and agricultural density does not have any significant effect on human development. Investment dependency, private debt dependency and IMF pressure also fail to achieve statistical significance. It is possible that technoeconomic heritage and dependency have indirect effects on human development. These indirect effects might be mediated by structural disarticulation and economic growth. Each of these possibilities are examined in Table 6.7 and Table 6.8.

The Initial Level of Development as a Control Variable

Results in Table 6.3 reveal that structural disarticulation, state strength, and commodity concentration are strong predictors of human development. To further examine these relationships, we carry out more tests while controlling the initial level of development. The models reported in Table 6.4 – Table 6.6 are very conservative
tests given the assumption that the levels of human development at a later time are often partially determined by the initial level of development. In these tests, we are most interested in whether the effect of structural disarticulation still holds given the strong showing of the effect of the initial level of development on human development.

All models in Table 6.4 control the level of urbanization as an important indicator for the initial level of development. Results in all four equations of Table 6.4 have shown that urbanization has a strong effect on human development. This finding throws doubts on various arguments on overurbanization. Despite the many problems in cities of the developing world, the overall direction of urbanization seems to point to higher levels of human development for the Third World population.

The more important results are those of the other independent variables. In all four equations of Table 6.4, structural disarticulation shows a significant effect on human development across the board. Given the strong effect of urbanization, we replicate the results of structural disarticulation presented in Table 6.3. These results provide another piece of strong evidence in support of our central thesis on the role of structural disarticulation.

Other independent variables also retain their significance in Table 6.4. Most notably, government direct taxation/GDP shows a significant positive effect on human development in three regression equations. Technoeconomic heritage measured by population density has a positive effect on human development in equation 1. It is not significant in other models and therefore is removed from the rest of the equations. Agricultural density fails to achieve statistical significance in equation 2, and is
therefore not included in other equations. As expected, foreign investment fails to show direct significant impact on human development as seen in equation 2. However, results in equation 3 and 4 indicate that commodity concentration exhibits a significant negative effect on the dependent variable. Moreover, multilateral and bilateral debt/GDP show a significant negative effect on human development in equation 4 of Table 6.4.

Table 6.5 presents regression results of human development controlling energy consumption per capita as a proxy of the initial level of development. It is not surprising that energy consumption per capita shows a significant positive effect on human development across all models in Table 6.5. This finding confirms the widely-held view that high levels of energy consumption are the hardcore of industrialization. If one takes energy consumption per capita as a proxy for technological capacity, our finding provides empirical testimony that technological progress is an important source of human development. This view is of paramount importance as modern societies rely more and more on the application of technology.

Does the effect of energy consumption per capita wash away the effect of structural disarticulation? Results in Table 6.5 show that structural disarticulation has a significant negative effect on human development in all equations containing energy consumption per capita. Not only is structural disarticulation significant in all models, it also continues to exhibit a strong effect on the dependent variable. When comparing the size of the standardized regression coefficients, structural disarticulation is almost as strong as energy consumption per capita in its influence on human development.
These findings reveal the importance of structural disarticulation in the human development process, more importantly, they also display the subtleties and complexities of this process. Although it is crucial to increase the levels of energy consumption and improve measures of energy efficiency, full-fledged development also requires a relatively balanced social and economic structure.

Results of other independent variables in Table 6.5 are similar to those in Table 6.4. Government direct taxation/GDP continues to show significant positive effect on human development in the first three equations. Population density also exhibits a significant positive effect. On the other hand, economic dependency measured by commodity concentration and primary product exports exert a significant negative effect on human development in equation 3 and 4 respectively. In equation 4 of Table 6.5, foreign investment and IMF pressure fail to show significant effect on human development.

Similar tests are done to control fertility as the population aspect of the initial level of development. Results are reported in Table 6.6. Nor surprisingly, we have found that low fertility rates are associated with higher levels of human development. Regardless of the long-term effect of high fertility rate on development, our findings show consistently that high fertility rates register low levels of human development at least for the short-term. High fertility rates bear a complicated relationship with long-term social and economic development. An extensive discussion of such relationships falls beyond the scope of the current study. Reflecting on the historical experiences of a slow rise in population growth in the Western nations, Todaro (1985) observes
that such growth rates are mainly the results of falling death rates and the slowly rising birthrates. Todaro (1985: 121) further remarks that "However, at no time during their modern growth epoch did European and North American countries have natural population growth rates in excess of 2% per annum." The findings of this research are inconclusive on the long-term effects of high fertility rates in the developing world. We can only acknowledge the uniqueness of the unprecedented population growth rates and the absolute size of the Third World population and watch closely their impacts on the development process.

While controlling the effect of fertility rates, structural disarticulation again stands the tests. In all equations of Table 6.6, structural disarticulation shows a significant negative effect on human development. Government direct taxation/GDP retains its significance in equation 1 but is reduced to nonsignificance in the other three equations. This may be due to the strong showing of fertility rates in the equations. Population density and commodity concentration fail to show statistical significance. Foreign direct investment again fails to exhibit a direct effect on human development as seen in equation 3. However, equations 3 and 4 show that bilateral debt alone, and multilateral and bilateral debt have significant negative effect on human development. These results support our argument that Third World human development has to cope with the hardships incurred by the current global debt crisis.
The Determinants of Structural Disarticulation

Table 6.7 examines the determinants of structural disarticulation. All equations control the level of urbanization. In the first four regression equations, urbanization shows consistently a significant negative effect on structural disarticulation. In predicting structural disarticulation, we choose to control the level of urbanization rather than the level of economic development. This is done to avoid any potential collinearity problem, since the levels of economic development are components of the index of structural disarticulation. Previous research finds that overurbanization has a detrimental effect on economic growth and child mortality (Timberlake and Kentor 1983; Bradshaw 1987; Bradshaw et al 1993), it also constitutes a primary cause of Third World protest against IMF austerity measures (Walton and Ragin 1990). Earlier analysis (not reported here) also indicates that overurbanization bears a positive relation with structural disarticulation.

The first equation tests the argument that dependency contributes to the distortion of internal economic structure. Controlling the level of urbanization, the first equation examines the effects of debt, foreign investment, and trade dependency on structural disarticulation. Multilateral and bilateral debt has a combined positive effect on structural disarticulation. This result supports the argument that external debt poses a big obstacle in economic reconstruction in the developing countries. It is also consistent with previous research findings that Third World indebtedness inhibits economic growth (Bradshaw and Huang 1991) and contributes to child mortality (Bradshaw et al 1993) and provokes austerity protests (Walton and Ragin 1990). Yet,
primary products export fails to achieve statistical significance. This finding casts doubts on the dependency argument that export of raw materials seriously distorts internal economic structure (Amin 1979). Another blow to the dependency theory is that foreign investment shows a significant, albeit, negative effect on structural disarticulation. This finding supports the notion that foreign investment contributes to some aspect of economic development (Firebaugh 1992). Here, foreign investment is shown to reduce the degree of disarticulation. One explanation is that foreign investment, being capital-intensive and advanced in technology, may contribute to the development of manufacturing sector in Third World economies. Findings in equation 1 reveal a very interesting pattern of the relationships among different forms of dependency. In an earlier confirmatory factor analysis of economic dependency, we have found that economic dependency clearly has three distinct dimensions: trade dependency, foreign investment dependency and debt dependency. There seems to be a time sequence in the changing face of economic dependency. Previous cross-national studies found trade dependency, or the classical dependency, hindered economic development and physical quality of life (Bornschier and Chase-Dunn 1985). Before the global debt crisis surfaced in the early 1980s, the negative impact of trade dependency on development was most pronounced. In the 1990s, debt dependency, the new type of dependency, take precedence over trade dependency in its effect and severity. It is interesting that foreign investment continues to have significant impact on national economies. Previous studies have generated contradictory findings on its positive versus negative effect on various development indicators. For example,
Wimberley (1990) has found that foreign investment contributes to Third World mortality; Timberlake and Kentor (1983) found foreign investment contributes to overurbanization and the hypertrophy of the service sector; whereas, Bornschier and Chase-Dunn (1985) found that the stock of foreign investment has a negative effect on economic growth, but the flow of foreign investment has a positive effect. Firebaugh (1992) argues otherwise that foreign investment is not vice but good medicine for Third World development. In earlier analysis (not shown here), foreign investment in the form of stock has a strong and consistent negative effect on disarticulation regardless of what variables are entered in the equation; whereas, the flow of foreign investment shows no sign of significance on its effect on disarticulation. Our explanation for this negative effect accords with the fact that increasingly, foreign investment is concentrated in the middle-income countries. It is possible that foreign investment works its best in more articulated economies where the state is able to strike a balance between national and foreign interests through implementation of various policies and regulations.

The second equation in Table 6.7 examines the role of the development state and assesses the effect of IMF austerity measures. State size, measured as government revenue/GDP has shown a strong negative effect on structural disarticulation. This result supports our argument that the developmental state has the capacity and resources to shape and reshape national economic structure. Also included in the equation are foreign investment, total debt/GDP, primary product export, and IMF pressure. Foreign investment retains its significance in this equation with the presence of state
size. The combined effect of state size and foreign investment supports my earlier argument that the coordination between state and foreign capital is crucial to Third World development. The so-called "backward advantage" will not work unless the state is actively involved in the development process (see Nolan and Lenski 1985). This finding also supports the dependent-development notion that the state is an important actor in the "triple alliance" (Evans 1979). Recent work on state role also points to the increasing importance of state intervention as compared with the role played by foreign capital and local industrialists (Grieco 1982; Evans 1986). IMF pressure demonstrates a strong and significant positive effect on structural disarticulation. IMF austerity policies that require cuts in government spending and narrowly-defined economic policies reinforce the distorted economic structure in the developing countries. This equation also substitutes multilateral and bilateral debt with total debt, although the former variable does retain its statistical significance. This result is not shown here to avoid redundancy. Total debt/GDP shows a strong positive effect on disarticulation. Primary product export also indicates a significant effect on disarticulation, albeit the effect is rather weak. Overall, results from equation 2 show total debt/GDP, foreign investment, IMF pressure, state size, and primary product export all have a significant effect on disarticulation. These results suggest that IMF pressure and foreign investment, and total debt/GDP have indirect effects on human development. Besides their direct effects, multilateral and bilateral debt, state size, and primary product export also have indirect effects on human development.
The third equation in Table 6.7 tests the effect of commodity concentration on disarticulation while controlling multilateral and bilateral debt/GDP, foreign investment, and urbanization. The control variables in this equation all have significant effects on disarticulation. But commodity concentration, another measure of classical trade dependency, fails to achieve statistical significance. While trade dependency shows a significant negative effect on human development, it does not necessarily lead to structural disarticulation. The fourth equation further examines the effect of state strength. This equation includes direct taxation/government revenue, multilateral debt, foreign investment, and urbanization. Direct taxation/government revenue does not achieve statistical significance in this equation. Multilateral and bilateral debt, foreign investment, and urbanization retain their significance.

The impact of technoeconomic heritage is tested in equations 5 and 6. While controlling the level of urbanization, neither population density nor agricultural density achieve statistical significance. These findings throw doubts on the importance of density. One may argue that it is not density per se but the absolute population size or the total arable land that is really associated with structural disarticulation.

The last two equation of Table 6.7 test the effect of population factor on structural disarticulation. Equation 7 tests the effect of both population growth rate and fertility rate while controlling total debt/GDP, foreign direct investment, and state size. Results indicate that fertility rate has a significant positive effect on structural disarticulation, but population growth rate fails to attain statistical significance. Meanwhile, total debt/GDP, foreign direct investment, and the state size all retain their
statistical significant effects on the dependent variable. In equation 8, we test the effect of population growth rate again by removing fertility. This is to check that the nonsignificance of population growth rate is not caused by the strong effect of fertility. As shown in equation 8 of Table 6.7, population growth rate again fails to achieve statistical significance. However, the rest of the independent variables in equations are all significant. To a certain extent, our results reflect the current debates on the effect of population growth rate. Up till now, theories and empirical analysis have been unable to resolve such a controversy.

*The Determinants of Economic Growth*

We further examine the indirect effects of external debt, foreign investment, IMF pressure, and technoeconomic heritage by examining the determinants of economic growth in Table 6.8. Before doing this, we first look at the link between structural disarticulation and economic growth. After controlling for urbanization, structural disarticulation does not show any significance. Yet urbanization is strongly related to economic growth. To be conservative, we include urbanization in all equations of economic growth. Equation 1 also includes government revenue/GDP. The equation shows that state size has a strong positive effect on economic growth. The second equation tests the effect of state strength. Direct taxation/government revenue shows a strong positive effect on economic growth. In accord with our theoretical and substantive argument, it is clear that the developmental state plays a very important role in Third World development.
Equation 2 tests the indirect effect of IMF pressure on human development through economic growth. Previous research has studied the relationships between IMF pressure and economic growth (Bradshaw and Huang 1993) and austerity protests (Walton and Ragin 1990). Walton and Ragin found that IMF pressure is one of the primary causes of Third World protests against austerity measures. However, no research has examined the relationships between IMF pressure and human development. Equation 2 assesses the linkage between IMF pressure and economic growth. It reveals that IMF pressure has a strong negative effect on economic growth. This finding supports the argument that IMF austerity policies are not conducive to economic growth in the developing countries. This empirical result accords with the findings of numerous case studies of IMF austerity policies (e.g., Meller 1991 on Chile, Lambert and Schneider 1991 on Cote d'Ivoire, Demery and Demery 1991 on Malaysia, and Morrison 1991 on Morocco).

Equation 3 and 4 further test the effects of external debt and foreign investment on economic growth. Since disarticulation is not significant, it is dropped out of the rest of the equations in Table 6.8. We keep all the significant variables from the previous equation. Equation 3 shows that urbanization, government revenue/GDP, IMF pressure continue to have a strong impact on economic growth. In this equation, total debt/GDP as the summation of multilateral, bilateral, and private debt as a percentage of GDP shows a strong negative effect on economic growth. Based on the model of equation 3, Equation 4 adds foreign investment/GDP. This variable is logged to correct for skewness. After controlling for urbanization, government revenue/GDP, IMF
pressure, and total debt/GDP, foreign investment shows a significant positive effect on economic growth. This finding does not support the dependency thesis that foreign investment is not beneficial to the Third World countries.

The effect of trade dependency is examined in equation 5 and 6 of Table 6.8. Since primary product export and commodity concentration are correlated with each other ($r=0.43$), they are examined in separate equations to avoid the problem of multicollinearity. Equation 5 includes urbanization, IMF pressure, total debt/GDP, foreign investment, and primary product export. Primary product export shows a strong negative effect on economic growth. IMF pressure and foreign investment still show a strong and significant effect on economic growth. Total debt/GDP is the only variable which loses its significance. In equation 6, the effect of commodity concentration is tested along with urbanization, IMF pressure, total debt/GDP, and foreign investment. Like primary product exports, commodity concentration also shows a strong negative effect on economic growth. IMF pressure and total debt/GDP demonstrate a significant negative effect on economic growth, while urbanization and foreign investment have significant positive effects. These findings provide partial support for the dependency arguments that revolve around the inferior trade positions of the less developed countries in the world economy. It supports partially the modernization argument that foreign investment brings the needed capital and technology to expedite the industrialization process in the less developed countries.

Finally, we examine the effect of technoeconomic heritage on economic growth. In fact, the last two equations in Table 6.8 tests simultaneously the dependency and the
ecological-evolutionary theories. Previous research often separate the dependency and technoeconomic effects on economic growth. This simultaneous testing is a rather conservative one so that it will do justice to arguments from both theoretical schools. Equation 7 includes urbanization, IMF pressure, foreign investment, primary product export, and population density. Total debt/GDP is dropped out of the equation because of insignificance. Equation 7 shows that population density in the logged form has a strong positive effect on economic growth. Foreign investment still shows a significant positive effect on economic growth. On the other hand, IMF pressure and primary product exports show strong negative effects on the dependent variable. Equation 8 includes urbanization, IMF pressure, foreign investment, primary product export, and agricultural density. Logged agricultural density shows a strong positive effect on the dependent variable. All other independent variables are also significant in equation 8. It is noted that IMF pressure, foreign investment, and primary product export have very stable effects on the dependent variables regardless of what variables are entered into the equation. These findings provide strong support for both dependency and ecological-evolutionary theories. After controlling the export dependency effect, technoeconomic heritage still shows a strong and significant effect on economic growth; the same is true for the dependency-oriented variables. These results clearly suggest that both internal and external forces are at work in the Third World development process. While successful development efforts hinge on the complex social organizations within a society, they are also subject to the pressures and cooperations from the international community.
To summarize, this regression analysis examines a rich array of social and economic indicators with their relationships to human development. It uncovers many direct as well as indirect effects of those variables on human development. Most notably, structural disarticulation consistently shows a strong negative impact on the human development index. This finding supports my central argument that distorted economic and social structure is a significant obstacle to the improvement of human conditions. Moreover, indicators of development state also demonstrate strong effects on human development, structural disarticulation, and human development. The regression analysis produces strong evidence for the notion that Third World development requires the active involvement of strong and effective political states.

Several variables display indirect effects on human development. For examples, IMF pressure and foreign investment have no direct effect on human development, but exert their indirect effects through structural disarticulation and economic growth. Multilateral and bilateral debt also shows direct and indirect effects on human development. In the next section, we formalize the direct and indirect effects in the path analysis using the LISREL program.
Path Analysis

This research sets out to evaluate various theoretical arguments regarding the relationships between external indebtedness, state intervention, IMF pressure, and human development. Following previous quantitative cross-national studies, we use the multiple regression method to test the competing theories. In addition, this research takes a step further and argues that several important factors serve as intermediate mechanisms linking human development and other social and economic forces. The most important mechanism is structural disarticulation, characterized by the unevenness of sectoral development, missing linkages among industrial sectors, and the lack of correspondence between production and consumption patterns in the less developed countries. With the exception of Stokes and Anderson (1991), structural disarticulation has not been studied extensively. Previous studies have also neglected structural disarticulation as an important intermediate mechanism weaving together many important factors that influence human development. Among those frequently discussed determinants are internal population attributes and technoeconomic heritage, classical and new dependency, and the developmental state. Two other intermediate mechanisms identified in this research are economic growth and level of urbanization. Previous studies, devoted to the study of economic growth, have treated it as either an endogenous or exogenous variable. It is rarely treated as an intermediate mechanism with the exception of Bradshaw et al (1993). Results of my regression analysis confirm at a very basic level the existence of intermediate factors. Yet, to formally test this argument, in our view, it is necessary to perform a path analysis.
The existence of intermediate mechanism means precisely the existence of both direct and indirect effects of some of the exogenous variables on human development. Path analysis is designed to study these indirect and direct effects of variables. Inclusion of variables in the path models is based on the theoretical arguments in this research.

We choose to use the LISREL program since it is by far the best available tool to perform path analysis. It has many advantages over the traditional ways of doing path analysis that rely on separate regression analyses. The most significant merit of LISREL is that it gives robust and consistent results of path modeling. All paths are specified according to theoretical considerations and the path coefficients are estimated simultaneously. Simultaneous estimation using LISREL also controls sample fluctuation, which is often the problem in cross-national studies. Regression coefficients generated from equations with different sample sizes can make any comparison invalid. Furthermore, the path coefficients are estimated using the maximum likelihood method in LISREL. This method is appropriate since path models in this research are not the so-called full models due to theoretical considerations (for more references on maximum likelihood method, see Mulaik 1972; Jöreskog & Sörbom 1979, 1989, and Hayduk 1988).

Figure 6.1 presents a series of direct and indirect links to human development. This model represents an integrated test of major theoretical arguments regarding human development. Structural disarticulation and economic growth are the two intermediate variables linking human development and other independent variables of interests. This
model allows state size, foreign investment, primary product export, external debt, and IMF pressure to explain variations in human development. All path coefficients are standardized scores with their t-values in parentheses. Interestingly, only structural disarticulation, economic growth, and primary product export have direct effects on human development. Structural disarticulation shows a strong negative effect on human development, while economic growth displays a positive effect. State size, foreign investment, external debt, IMF pressure, and primary product export demonstrate an indirect effect on human development, working through structural disarticulation and economic growth. State size exhibits two indirect effects on human development, one through economic growth, and the other through structural disarticulation. Primary products export has a direct effect on human development, plus an indirect effect through economic growth. Its path toward structural disarticulation is not significant. Foreign investment also has a significant indirect effect on human development, working though both economic growth and disarticulation. Contrary to the dependency argument, foreign investment has a positive effect on economic growth and a negative effect on structural disarticulation. External debt\(^1\) has paths leading to both economic growth and structural disarticulation. It has a strong and significant positive effect on structural disarticulation; yet its negative effect on economic growth is not significant. Finally, IMF pressure also has two indirect effects on human development. Figure 6.1

\[^1\text{External debt here refers to multilateral and bilateral debt. Private debt is not excluded since it does not correlated with economic growth, structural disarticulation, and human development.}\]
shows IMF pressure has a significant negative effect on economic growth and a positive effect on structural disarticulation.

Table 6.1 Summary of the Indirect and Direct Effect in Figure 1

<table>
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<th></th>
<th>GGCR</th>
<th>LFORIN</th>
<th>PPEXP</th>
<th>DEBT</th>
<th>IMF</th>
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<td></td>
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<td>-.162</td>
<td>.312</td>
<td>.248</td>
<td></td>
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<tr>
<td>HDI</td>
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<td>.208</td>
<td>-.257</td>
<td>-.033</td>
<td>-.167</td>
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</table>

The cumulative direct and indirect effects of each exogenous variable are formally presented in Table 6.1. Standardized path coefficients for each path leading to human development (see Figure 6.1) are multiplied and these values are added together. The results reveal several interesting findings. First, primary product export has the largest accumulative effect on human development, followed by foreign investment and state size. In fact, state size and foreign investment have almost the same size of total effect on human development. IMF pressure also demonstrates a sizable negative effect on human development. Interestingly, external debt has a relatively weak effect on human development. Second, Table 6.1 reveals that state size is the single most important factor influencing structural disarticulation. State size demonstrates a strong negative impact on structural disarticulation. Foreign investment also shows a sizable effect on disarticulation, followed by external debt and IMF pressure. Although external debt has a weak linkage to human development, it exhibits a strong positive effect on structural disarticulation. Thirdly, in explaining variation in
economic growth, primary product export and IMF pressure show the largest impact, followed by foreign investment. State size and external debt have less explanatory power on economic growth.

Finally, Table 6.2 summarizes the total effect of economic growth and structural disarticulation on human development. It presents a new finding. Table 6.2 reveals that structural disarticulation actually has a larger effect on human development than economic growth. This empirical finding is strong testimony that structural disarticulation is a central mechanism in the development process; previous neglect of this important factor is not justified.

Table 6.2  Total Effects of Economic Growth, Structural Disarticulation on Human Development

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<thead>
<tr>
<th></th>
<th>GROWTH</th>
<th>DSART</th>
<th>HDI</th>
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<td>GROWTH</td>
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<tr>
<td>HDI</td>
<td>.294</td>
<td>-.405</td>
<td>.000</td>
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</table>

Figure 6.2 presents the path analysis of human development controlling the level of urbanization. Since urbanization has the largest correlation with human development ($r=.807$) as well as with economic growth ($r=.526$) and structural disarticulation ($r=-.502$), one would like to see whether the exogenous variables in the model can still explain variation in human development (For other correlations, see Table 4). Thus, the path model diagramed in Figure 6.2 is a very conservative test of the effects of state intervention, foreign investment, and economic dependency on human development.
This model includes the human development index, economic growth rates, the disarticulation index, urbanization, state size, primary product export, foreign investment, external debt and IMF pressure. The standardized path coefficients with their t-values (in parentheses) are presented in Figure 6.2. Not surprisingly, urbanization has a strong effect on all three endogenous variable—human development, economic growth, and disarticulation. It has a significant positive effect on human development and economic growth. Moreover, it significantly reduces disarticulation. On the other hand, adding urbanization as a strong control variables does not significantly alter relationships among the other variables. Almost all the variables have stand the test. First and foremost, structural disarticulation still exhibits a strong negative effect on human development. As usual, economic growth shows a significant positive effect on human development. Second, state size demonstrates again its negative effect on structural disarticulation. Yet, the path between state size and economic growth is not significant. Primary product export and IMF pressure both exert their significant negative effects on economic growth. IMF pressure also shows a significant negative effect on disarticulation. Consistent with findings in Figure 6.1, foreign investment shows a significant positive effect on economic growth, and a negative effect on structural disarticulation. Finally, external debt has a strong positive effect on structural disarticulation, but the path coefficients between external debt and economic growth fail to achieve statistical significance. The overall result in Figure 6.2 indicates that controlling urbanization does not change the relationships among human development and its other social and economic determinants.
In terms of total effects, after controlling urbanization, external debt and foreign investment have the largest effects on human development, followed by state size and primary product export.

Since urbanization demonstrates a strong effect on human development, we choose to perform another path analysis by replacing economic growth with urbanization. In the new model diagramed in Figure 6.3, we also add a new variable—fertility rate representing an internal population attribute. Fertility also has very high correlations with human development, urbanization, and a moderate correlation with structural disarticulation. The purpose of this model is to see whether disarticulation would retain its effect on human development. Again, this is another very conservative test. The results are presented in Figure 6.3 with standardized path coefficients and t-values. This model has a chi-square of 4.69 with 8 degrees of freedom (p=.790). The goodness of fit index is .982 with a root mean square residual of .023. Needless to say, this model fits the data very well.

First of all, Figure 6.3 shows that high fertility rates have a significant negative impact on both human development and urbanization. Previous analysis (not shown here) indicates that it does significantly affect structural disarticulation. With the presence of both urbanization and fertility rate, structural disarticulation shows a strong negative effect on human development. This third test of path analysis provides strong support for the association between structural disarticulation and human development. Among the determinants, state size stands out to have the strongest effect on structural
disarticulation. External debt also shows a strong and significant positive effect on
disarticulation. IMF pressure retains its significant positive effect on disarticulation.

The three path analyses with LISREL provide strong and coherent tests of the
determinants of human development. Results suggest that structural disarticulation is
the primary factor that retards human development. It is also shown that external
indebtedness and IMF pressure reinforce structural disarticulation, and the state has the
most of power and resources to reduce disarticulation. Foreign investment and primary
product export show diverging effects on human development. Many of these factors
show an indirect effect on human development, working through the intermediate
variables. These indirect effects are clearly depicted in the path diagrams in Figure 6.1
through Figure 6.3. These results demonstrate that the relationships between human
development and various social and economic factors are more complex and indirect
than often thought. Hence, a good understanding of the development process requires
the identification of important intermediate mechanisms.
### Table 6.3. Determinants of Human Development 1987: Standardized Regression Coefficients and T-Values

<table>
<thead>
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<th>Independent Variables</th>
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<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
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<td>-.364</td>
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<td>/GDP 1975</td>
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<td>1970</td>
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<td>-.413</td>
<td>-.283</td>
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<td>Foreign Investment/GDP</td>
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<td>--</td>
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<td>-.093</td>
</tr>
<tr>
<td>(logged) 1978</td>
<td></td>
<td></td>
<td></td>
<td>(-.968)</td>
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<td>.537</td>
<td>.560</td>
<td>.559</td>
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<td>Adjusted R-Square</td>
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<td>.522</td>
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Table 6.3. Determinants of Human Development 1987: Standardized Regression Coefficients and T-Values (Cont’d)

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<td>Economic Growth</td>
<td>0.204 (.1770)</td>
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<td>1975-1985</td>
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<td>0.253 (.2716)</td>
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<tr>
<td>0.260 (.2736)</td>
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<tr>
<td>0.248 (-2.295)</td>
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<td>-0.316 (-3.210)</td>
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</tr>
<tr>
<td>Government Revenue</td>
<td>0.296 (2.571)</td>
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<tr>
<td>/GDP 1975</td>
<td>0.372 (3.614)</td>
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<tr>
<td>0.252 (2.525)</td>
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</tr>
<tr>
<td>0.181 (1.806)</td>
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<tr>
<td>Government Direct</td>
<td>0.296 (2.571)</td>
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<tr>
<td>Taxation/GDP 1975</td>
<td>0.372 (3.614)</td>
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<td>0.252 (2.525)</td>
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<td>0.181 (1.806)</td>
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<td>/1975</td>
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<td>Adjusted R-Square</td>
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p<.1 (t >1.96)  p<.05 (t > 1.68)
Table 6.4. Regression Models of Human Development 1987 Controlling the level of Urbanization with Standardized Coefficients and T-values

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<td>Government Direct Taxation/GDP 1975</td>
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<td></td>
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<td>Population Density (logged) 1975</td>
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<tr>
<td>Foreign Investment/GDP (logged) 1978</td>
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<tr>
<td>Multilateral, and Bilateral Debt/GDP 1975</td>
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*p<.1 (t >1.96)  p<.05 (t > 1.68)*
Table 6.5. Regression Models of Human Development 1987 Controlling Energy Consumption Per Capita with Standardized Coefficients and T-values

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<td>Government Direct Taxation/GDP 1975</td>
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<tr>
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<td>(3.366)</td>
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<td>Population Density (logged) 1975</td>
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<td>(2.817)</td>
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<td>Agricultural Density 1970</td>
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<td>Commodity Concentration Export/GDP 1975</td>
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<tr>
<td>Primary Product Export/GDP 1975</td>
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<tr>
<td>Foreign Investment/GDP (logged) 1978</td>
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p<.1 (t > 1.96)  p<.05 (t > 1.68)
Table 6.6. Regression Models of Human Development 1987 Controlling Fertility Rate with Standardized Coefficients and T-Values

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<td>Population Density 1975</td>
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<td>(.303)</td>
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<td>Commodity Concentration 1975</td>
<td>--</td>
</tr>
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<td></td>
</tr>
<tr>
<td>Primary Product Export/GDP 1975</td>
<td>--</td>
</tr>
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<td>Foreign Investment/GDP (logged) 1978</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Bilateral Debt/GDP 1975</td>
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</tr>
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<tr>
<td>Multilateral Debt/GDP 1975</td>
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| R-Square                           | .712       | .732       | .669       | .663       |
| Adjusted R-Square                  | .697       | .717       | .629       | .630       |
| N                                  | 81         | 78         | 56         | 56         |

p<.1 (t > 1.96)  p<.05 (t > 1.68)
Table 6.7. Determinants of Structural Disarticulation 1978: Standardized Regression Coefficients and T-Values

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<td>Disarticulation</td>
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<td></td>
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<td></td>
<td>(2.869)</td>
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<td></td>
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<td>(-2.584)</td>
<td>(-3.524)</td>
<td>(-2.402)</td>
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<td>Primary Product Export/GDP 1975</td>
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<td>0.039</td>
<td>-0.765</td>
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<td></td>
<td>(0.337)</td>
<td>(-1.858)</td>
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Table 6.7. Determinants of Structural Disarticulation 1978: Standardized Regression Coefficients and T-Values (Cont'd)

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<td>(5)</td>
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<td>Multilateral and Bilateral Debt/GDP 1975</td>
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<td>--</td>
<td>--</td>
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<td>-.278 (-2.475)</td>
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<tr>
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<td>--</td>
<td>--</td>
<td>-.424 (-3.384)</td>
<td>-.276 (-2.475)</td>
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<td>-.298 (-2.440)</td>
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p<.1 (t >1.96)  p<.05 (t > 1.68)
Table 6.8. Determinants of Economic Growth 1975-85: Standardized Regression Coefficients and T-Values

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Table 6.8. Determinants of Economic Growth 1975-85: Standardized Regression Coefficients and T-Values (Cont’d)

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<th>(7)</th>
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<td>-0.282</td>
<td>-0.268</td>
</tr>
<tr>
<td>1975-1985</td>
<td>(-2.388)</td>
<td>(-3.779)</td>
<td>(-2.762)</td>
<td>(-2.662)</td>
</tr>
<tr>
<td>Multilateral, Bilateral, and Private Debt/GDP, 1975</td>
<td>-0.110</td>
<td>-0.175</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>(-1.100)</td>
<td>(-1.692)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign Investment/GDP (logged) 1978</td>
<td>0.176</td>
<td>0.228</td>
<td>0.213</td>
<td>0.183</td>
</tr>
<tr>
<td></td>
<td>(1.760)</td>
<td>(2.128)</td>
<td>(2.230)</td>
<td>(1.920)</td>
</tr>
<tr>
<td>Primary Product Export/GDP 1975</td>
<td>-0.369</td>
<td>--</td>
<td>-0.324</td>
<td>-0.325</td>
</tr>
<tr>
<td></td>
<td>(-3.360)</td>
<td></td>
<td>(-2.963)</td>
<td>(-3.021)</td>
</tr>
<tr>
<td>Commodity Concentration 1975</td>
<td>--</td>
<td>-0.199</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.766)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Density (logged) 1975</td>
<td>--</td>
<td>--</td>
<td>0.209</td>
<td>--</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(2.168)</td>
<td></td>
</tr>
<tr>
<td>Agricultural Density (logged) 1975</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>0.232</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2.432)</td>
</tr>
<tr>
<td>R-Square</td>
<td>0.437</td>
<td>0.371</td>
<td>0.470</td>
<td>0.480</td>
</tr>
<tr>
<td>Adjusted R-Square</td>
<td>0.390</td>
<td>0.319</td>
<td>0.428</td>
<td>0.438</td>
</tr>
<tr>
<td>N</td>
<td>66</td>
<td>66</td>
<td>69</td>
<td>69</td>
</tr>
</tbody>
</table>

p<.1 (t > 1.96) p<.05 (t > 1.68)
Figure 6.1 Recursive Path Model of Human Development, Economic Growth, and Structural Disarticulation
Figure 6.2 Path Model of Human Development, Economic Growth, Structural Disarticulation Controlling Urbanization
Figure 6.3 Recursive Path Model of Human Development with Standardized Coefficients and T-values (in parentheses)
Support for a Theoretical Synthesis

Gerhard Lenski (1966:17) asked, "Can there not be a synthesis of the valid insights of both the conservative and radical traditions, of modern functionalist and conflict theories, and the development of a single integrated theory of social inequality?" Not only did he give a resounding yes to this question, his effort produced a well-regarded book, *Power and Privilege*, which combines the insights of both functionalist and conflict ideas.

Lenski was not the first person who had a vision and passion for theoretical synthesis. Stanislaw Ossowski, a Polish sociologist, when confronted with issues dividing the functionalist and Marxists, sought to demonstrate how both perspectives were fundamentally correct. This fruitful endeavor resulted in his seminal book, *Class Structure and the Social Consciousness*. Stanislaw (1963) believed that no one theory can be as complex as human society itself; theoretical perspectives have been able to only partially capture the reality. The same idea was expressed by Pierre van den Berghe. In "Dialectic and Functionalist: Toward a Synthesis," van den Berghe (1963:695) asserted that Marxist and functionalist theories, are the "two major
approaches which have dominated much of social science, present partial but complementary views of reality."

Working in the development field which is filled with competing theories, this study of human development also attempted a theoretical synthesis. That is, rather than pick and choose one existing stand, we believe it necessary and constructive to establish an integrated framework. To create this integrated framework, we synthesize valid insights from a variety of theories, ranging from modernization theory to dependency theory.

The extreme voices are always louder. Assertions from extreme positions capture more attention. Yet, when extreme views fail to match reality, people search for the middle ground — the synthesis. In fact, those who take extreme positions tend to have one eye open and other closed, so that they only see some issues and ignore others. In the area of Third World development, radical dependency theorists see the unequal distribution of power in the context of world stratification. They emphasize the so-called external factors such as foreign trade and investment penetration. The modernization/ecological theory focuses more on the internal factor such as the level of technology and the force of entrepreneurship seen as crucial for the spirit of capitalism.

In studying human development in the less developed countries, our integrated framework simply combines the internal and external factors and addresses issues that concern scholars from both schools. The internal factors addressed in this study are structural disarticulation, the state, urbanization, and technoeconomic heritage. The
external factors discussed are foreign investment, foreign trade, and the on-going global debt crisis and the involvement of the IMF.

While considering both the internal and external factors, we develop a synthetic model to test the impact of those factors on human development in the less developed countries. The synthetic model enables one to test simultaneously the derived hypotheses from competing theories; it also gives a fair chance for each factor to speak for itself.

As expected, our findings provide partial support for both modernization, ecological-evolutionary theories and theories with the dependency orientation. Human development is determined by structural disarticulation, technoeconomic heritage, as well as foreign investment, trade, and debt dependency. In our judgement, such "mixed results" make the most convincing case for the necessity of theoretical integration. The current study is just one attempt in this direction. Future research may produce an even more sophisticated theoretical synthesis. One way of doing this is to identify other important intermediate mechanisms between human development and the well-known social and economic forces. Below, we discuss specific findings on the effect of various social and economic factors on human development, and evaluate their theoretical implications.

**The Effect of Structural Disarticulation**

Structural disarticulation, its impact and determinants, is the central focus of this study. Conventional economic theory foresees development as a transition from agrarianism to modern growth as described by Simon Kuznets (1966). The so-called
"normal" economic structure is one with a relatively shrinking agricultural sector, a relatively expanding manufacturing sector, and a fairly stable service sector. The pattern of development has been observed in the developed countries in western Europe and North America. This model of economic structure has been taken for granted as a natural outcome of industrialization. As a result, deviations from such an expected pattern of structural change were trivialized as largely due to differences in nature, that is, in the objective initial environment. Needless to say, not much study has been devoted to this issue.

In reality, many less developed countries have not been able to follow this "natural pattern" of economic structure. Establishing and enlarging the manufacturing sector have been a very slow process in LDCs. On average, the proportion of the labor force employed in the manufacturing sector has increased slightly from 11.5 percent in 1965 to 13 percent in 1985 (UNDP 1990). There has been tremendous inertia in the quest to modernize the agricultural sector. The agricultural sector still holds the largest segment of the labor force in the LDCs with an average of 59 percent during the period of 1985-1987. The least developed and the sub-Saharan African countries have a proportion of agricultural labor force of 71.1 and 70.3 percent, respectively, during the period of 1985-1987. By contrast, the service industry has been booming in many LDCs. On average, the size of employment in the service sector has surpassed that in the manufacturing sector in the LDCs. This pattern has lasted for at least twenty-two years. According to UNDP statistics, in 1965, the proportion of the labor force in the manufacturing sector was 11.5 percent, compared to 17.1 percent in the service sector.
In 1987, the equivalent number was 13 percent in manufacturing and 28 percent in the service sector. For the least developed and sub-Saharan African countries, the gaps were bigger. Yet, it is interesting to note that in the course of Third World development (for the past two decades), at no time did we observe that the size of the manufacturing sector became larger than the service sector given the level of overall economic development. And the unusual swelling of the tertiary sector in the LDCs is largely attributed to tourism in modern times. This prompts us to question whether the LDCs are striving for industrialization, or some other prototype of modernization. For example, the service sector employed more than 60 percent of total labor force in countries like Colombia (77.6), Jamaica (63.2), and Trinidad and Tobago (76.6) for the year of 1985.

Does this kind of distorted economic structure affect human development? This is the first question we ask before discussing its causes and correlates. Stokes and Anderson (1990) found that disarticulation does increase child mortality and crude death rate in the LDCs. Yet one can be skeptical of their results for two reasons. First, their measurement of disarticulation is based on an unjustified assumption that percentage of GDP in each industrial sector should be the same as the percentage of the labor force in that sector. There has been no economic theory to support such an assumption of perfect correspondence. For this reason, their measurement may not capture the essence of structural disarticulation. The assumption for our measurement is that industrial sectors in a disarticulated economy deviate more from the average productivity per worker in the given economy. In this sense, a disarticulated economy has more
variations in terms of productivity per worker across all industrial sectors. Our choice of the average productivity per labor in a given economy over the perfect correspondence in percentages as the reference point is more reflective of the reality in most economies of the developing world.

Second, Stokes and Anderson (1990) tested these relationships in a rather simple model. They only controlled the level of development and foreign capital penetration. Earlier, we critiqued their use of development level as a control variable because of its confounding effect on the disarticulation index. Does the negative effect of disarticulation on social development stand even while economic growth or urbanization is controlled? Our results indicate clearly that structural disarticulation has a consistent negative effect on human development. In eight equations in Table 1, structural disarticulation remains significant across the board. No matter what control variables were entered, structural disarticulation has shown strong and significant negative effect on human development. This is definitely the most important finding in the study. Our analysis reveals that structural disarticulation is undoubtedly the single most important factor that slows down human development in the less developed countries.

**Technoeconomic Heritage**

Since structural disarticulation has demonstrated such a stable effect on human development in LDCs, it leads us to examine its causes. The ecological evolutionary theorists would attribute deviation from the expected pattern of economic structure to the resourcefulness in technoeconomic heritage. More densely-populated countries are likely to establish more complex social organizations, which, in turn, are conducive to
the development of technology. Moreover, these countries would have, at least, the capacity to apply the available machineries and technology. High agricultural density is also viewed as a natural basis for the growth of entrepreneurship and commerce. Hence, it helps the gradual diversification of economic activities as they spread evenly, in a relative sense, toward the expected economic structure.

According to the evolutionary/ecological theory, population density and agricultural density should reduce disarticulation. Yet, our analysis did not find support for their arguments. The distributions of these two variables are very skewed. In its original form, they do not have significant correlations with our index of structural disarticulation. After the logarithm transformation, they exhibit very small correlation with the disarticulation index. In the simplest model, neither population density nor agricultural density has significant negative effect on structural disarticulation. The relationship between technoeconomic heritage and disarticulation is not as clear-cut as thought. Some of the most densely-population countries are also turned out to be very disarticulated. Pakistan and Nepal are examples of this.

**Economic Dependency**

Next we test the dependency argument that economic dependency increases structural disarticulation in the LDCs (Amin 1976; Frank 1979). Stokes and Anderson (1990) also suspect a negative relationship between dependency and disarticulation. But they did not carry out an empirical test. According to the dependency arguments, economic dependency in the form of trade, foreign investment, and debt elevates structural disarticulation. The results are rather mixed. Dependency theorists would
argue that trade dependency in terms of primary product exports and commodity concentration would generate a narrow spectrum of economic activities and cripple economic diversification, hence, leading to distorted economic structures in the less developed countries. Our analysis provides limited support for this idea. Primary products export shows a significant positive effect on disarticulation while controlling urbanization and other independent variables. However, commodity concentration fails to show a significant effect on structural disarticulation.

The role of foreign investment and capital is the most controversial subject in development studies. Dependency theorists have always argued that foreign investment penetration has a negative effect on Third World development and reinforces structural disarticulation (Amin 1976; Frank 1978). In their widely-cited study, Bornschier and Chase-Dunn (1985) found that foreign investment penetration has a negative impact on economic growth (see also Timberlake and Kentor 1983, Delacroix and Ragin 1981). Modernization theory, on the other hand, tends to emphasize the positive role of foreign investment in Third World development. According to this theory, foreign investment brings to LDCs the much-needed capital and technology to establish new industries and business services. It also helps to utilize the local pool of labor force through employment and training. The positive effect of foreign investment on economic growth has been found in some quantitative cross-national studies (see Kaufman et al 1975; McGowana and Smith 1978; Szymanski 1976, and Jackman 1982). One study has attempted to examine the linkage between foreign investment penetration and structural disarticulation in the LDCs. Stokes and Anderson (1990) found that foreign
investment has a significant negative effect on secondary school enrollment, but did not find any significant effect on child mortality and crude death rates in the less developed countries. In both regression and path models, we have found that foreign investment has a strong negative effect on structural disarticulation. Contrary to the dependency argument, foreign investment is found to reduce structural disarticulation. One explanation is that foreign direct foreign investment tends to be concentrated in the middle-income countries which have better potential for industrial development.

Another explanation for the controversial role of foreign investment is seen in more recent works in development. Gary Gereffi (1989) and Barbara Stallings (1989) pointed out that dependency theorists’ negative assessment of the role of foreign investment was based largely on a few Latin American countries. Critical analysis of foreign investment dependency focussed on profit outflow exceeding new capital inflows, elimination of jobs through the use of capital-intensive technology, and the marginalization of poorer regions and income groups. Based upon a few Latin American cases, it was claimed that dependency and development were incompatible, and this idea was generalized to all less developed countries. By contrast, the modernization approach has cited the success of the East Asian countries to elaborate on the positive aspects of foreign direct investment as well as foreign capital in general. These positive features include foreign investment and capital as new resource flows, employment generation, access to technology, and entry to foreign markets, which help to promote development. International openness to foreign investment and trade was accepted as the optimal policy stance.
In the face of the modernization-dependency debate regarding the proper role of foreign investment in LDCs, it is beneficial for both sides to look at various cases in support of their argument. Our integrated framework leads us to the conclusion that there is no absolute answer to the question of whether foreign investment is good or bad. Foreign investment can be beneficial or detrimental depending on a combination of factors. We think the proper way to assess the effect of foreign investment is to examine it in conjunction with the role of the developmental state. Dependency-oriented arguments have posited the inability of Third World governments to avoid the negative effect of foreign investment. Governments in the LDCs were portrayed as extremely weak compared with multinational corporations, international banks, and foreign governments. It has been argued that they are unable to establish rules for investment or profit remittance and they are compelled to provide incentives to foreign investors. In the recent debt crisis, it has been claimed that local governments were forced by international bankers to borrow money during the lending wave of the 1970s and the early 1980s. The major flaw of the dependency thesis is its exclusive emphasis on foreign actors. The role of government and local capital are relegated to virtual impotence.

The Developmental State

Our analysis has shown consistently that state strength and state size reduce structural disarticulation. With foreign investment and state size or state strength in the same model, both foreign investment and the developmental state have shown a significant negative effect on structural disarticulation. Based on this finding, one can
argue that the positive or negative role of foreign investment is largely determined by the effectiveness of the local government. A weak state is unable to channel the resources of foreign investment into productive economic activities. By contrast, a strong state, which is actively involved in designing and implementing development policies, has the capacity to take advantage of foreign investment. The positive role of the developmental state involves providing credit, channeling investment into particular industries, subsidizing export products, protecting domestic markets, and attracting new technology. The development experiences of the East Asian countries provide living examples of the power of developmental states. These cases have demonstrated that local governments are capable of using foreign investment. Hence, the positive functioning of foreign investment requires a strong state, or the developmental state, in the receiving country. To go one step further, one can argue that the role of the developmental state is far more important than that of foreign investment in Third World development. Unattended foreign investment brings frustration for both foreign investors and local governments or entrepreneurs. Foreign investment subject to rational regulations may be beneficial for both domestic and foreign parties in today's increasingly competitive global economic environment.

Is there only an indirect role for the state to play in national government? That is, should governments focus only on taxation, the provision of overheads, and organizational and institutional construction? Our results suggest otherwise. The strong effect of state size on structural disarticulation indicates that the state plays an active role in labor force allocation and is responsible for the shift of the labor force from
agricultural to nonagricultural pursuits. Our empirical finding leads to the argument that government policy-making makes a big difference in economic structuring and restructuring. Findings based on this cross-national study is of congruence to the evidence from several case studies (e.g., Gold 1986; Deyo 1987, 1989; Stallings 1990; Ranis 1990). Ranis (1990) found that the right government policy and the choice of appropriate industrial strategy explained the success of the East Asian countries when compared with their Latin American counterparts. In the 1960s, the East Asian countries chose not to maintain the import substitution strategy, or resort to the domestic production of previously imported producers' and durable consumer goods. Instead, they decided to move toward the exportation of the same nondurable consumer goods previously produced for domestic markets. Ranis (1990) observed that by the end of the 1960s, South Korea and Taiwan have completely reversed their trade patterns, from 90 percent land-based to 80 percent labor-based exports. Export as a percentage of GDP increased markedly as a consequence of prodigious increases in labor-intensive industrial exports. The land reform policy also accelerated the shift of labor force from agricultural to nonagricultural sectors. The development of labor-intensive export industries offered an opportunity to absorb the system's underemployed at an unprecedented scale. The state's direct involvement in economic structuring is well documented in the East Asian case studies. As Ranis (1990:214) records, "This labor-based 'vent for surplus' led to a pronounced increase in the rate of domestic intersectoral labor reallocation, culminating in not only a relative but an absolute decrease in the agricultural labor force, and in the course of little more than a decade,
the exhaustion of the labor surplus condition, as indexed by nearly constant unskilled wages giving way to rapidly rising wages in both South Korea and Taiwan." The transition to export substitution in East Asia was further expedited by such direct government actions as the allocation of infrastructure to the rural sector, and the establishment of export processing zones and the rebating of import duties on raw materials destined for exports as transitional devices. On the other hand, the Latin American governments' decision to continue the import substitution policy up to the early 1960s resulted in severe economic adversities. One important consequence, that is significant to structural disarticulation, was the great neglect of the food producing agricultural subsector, reinforcing colonial policy antecedents which concentrated attention on the lucrative export-oriented enclaves. The experience of the East Asian and Latin American countries thus provide testimony for the important role of governments and their capacity to either make or break the momentum of successful development.

External Debt and Structural Adjustment

Few would disagree with the view that Third World's "disarticulated" economies are overdue for fundamental restructuring. But do external credits and the IMF structural adjustment help? The recent debt crisis and uneasy interaction between the bulk of the less developed countries and the Bretton Woods financial institutions, backed by the Group of Seven (G7) industrialized countries have spawned interesting debates over the linkage between the G7-dominated capitalist world economy and the development process in the less developed countries.
First of all, the monetarists and world system/dependency theorists differ in their analysis over the causes of Third World debt. The former attributes the accumulation of debt to the blunders of the post-colonial state and their public sectors. Monetarists argue that the current debt problems are a direct consequence of inflexible state intervention in economic management. In order to solve these problems and revive the ailing economies in the LDCs especially in Africa and Latin America, they have prescribed rigorous adjustment policies aimed at minimizing the state role and balancing the national budget. The Marxian and neo-Marxian scholars have an alternative diagnosis on the origin of the Third World debt (Amin 1976; Emmanuel 1972; Ake 1981; Sweezy and Magdoff 1984; Chinweizu 1985; MacEwan 1986). From their perspective, the organizational goal of a coherent development strategy for the indebted countries is conceived in terms of "equality," and the structural arrangements for achieving such a goal must be based on the "reconstitution of the economic base of the society" (McKINLAY and Little 1986:57). Thus, the root of the Third World debt crisis has been traced to the malfunctioning capitalist world economic system (George 1988). Most of the less developed countries are in the peripheries of this system, and they are crippled by an unequal trade exchange, unregulated operations of monopoly capital and the expropriation of their economic surplus by the metropolitan capitalist countries. It is thus not surprising that these peripheral countries are riddled with debt problems "traceable to the international economic system" (Adefulu 1991:41). Other critics have also attributed the debt crisis to the overzealous lending of large commercial banks in Europe and North America. According to critical analysis, Western commercial banks
encouraged sub-Saharan oil exporters (Nigeria, Gabon, Cameroon) to borrow in spite of declining commodity exports and usually at variable rates. These banks helped to sow the seed for the African, and indeed, the Third World debt crisis (Kuczynski 1988; Adefulu, 1991).

In fact, the debt crisis at an international scale is not a new problem. It is the strategy of paying back debt without obstructing the local production base that has fascinated policy-makers and the loan-lenders (Pfister and Suter 1987; Adefulu 1991). When many LDCs have already been saddled with mounting debt, would the belt-tightening strategy of structural adjustment help to overcome their adversities? Our analysis indicates that external debt and IMF structural adjustment have reinforced disarticulation rather than restructured the economies to a more balanced pattern. External debt has surely posed a severe burden to the Third World economy. Debt payment has swallowed a significant proportion of export earnings and has depleted the national reserves of foreign exchange in some African countries (Nafziger 1990; Adefulu 1991). The diversion of debt payment not only will not channel resources to economic restructuring, in some cases, it could drive the LDCs deeper into debt, for they have to borrow more loans in order to sustain the debt service (Branford and Kucinski 1988).

Our analysis also generates a strong and significant finding on the positive effect of IMF structural adjustment and disarticulation. This is one of the most strong and stable findings in this analysis. IMF adjustment policies are not likely to reduce structural disarticulation in the LDCs. The IMF policies pressure the LDCs to
concentrate their productive resources more on the export sectors. They ignore the fact that many of the indebted countries especially African states rely on only one or two export products whose prices are often unstable in the international market for their foreign exchange earnings. Faced with unpredictable export earnings, many indebted countries find it difficult to service debt and at the same time pay for desirable imports to cushion the effects of structural adjustment programs. As Killick and Martin (1989:7) have keenly observed, Third World indebtedness is in a "vicious circle" because

Import strangulation holds back export growth, thus perpetuating import shortages. The uncertainties created by the debt situation - and the rescheduling process - further depress investment which, in turn, hold back the restructuring necessary if the economies are to recover. Depressed export earnings and import capacities reduce government revenues, increasing budget deficit and weakening government’s abilities to improve the balance of the economy. It will take a huge effort if these vicious circles are to be broken.

Furthermore, endless debt payment has worsened the problem of foreign exchange shortage. The scarcity of foreign exchange in turn has meant few indigenous manufacturing industries can afford to meet the cost of indispensable imported raw materials (Adefulu 1991). Specialization in a few cash crops for the sake of export earnings has deteriorated the agricultural sector and caused a shortage of food production. A report in *West Africa* (22 October 1984: 2119) has revealed that a substantial decline in major economic sectors was recorded in 1984. Besides the rise of import costs, and the rise of inflation from 32.5 percent in January to 174.1 percent in June, agricultural and industrial production also declined sharply.
The structural adjustment programs with their focus on export promotion and wage restraints have caused the unemployment rate to rise. High unemployment is one of the consequences of capacity underutilization in the manufacturing sector. A case study of Nigeria documented evidence that "unemployment rates since the Adjustment Programme was launched have risen generally. The average national unemployment rate between 1983 and 1985 was 4.9 percent, while it increased to 5.7 percent between 1986 and 1988." (Ojo 1989:48) Case studies of Zambia and Ghana also suggest that the IMF structural adjustment programs have held back the development of crucial economic sectors such as the manufacturing and agricultural sectors (Adefulu 1991).

While the economic situations in many African and Latin American countries continue to deteriorate, the social costs have proven to be another aspect of the negative consequences of the IMF adjustment programs. The standard structural adjustment program with its emphasis on devaluation and domestic credit squeeze ignores the inflationary effect of the former and underestimates the social costs of the latter in terms of its effect on living standards in the indebted countries. Even the World Bank (1988:88) has admitted that:

Increases in consumer prices, reforms in the public sector that lead to reduction in public employment and expenditures in the social sectors, and reforms in trade and exchange rates that change the relative prices can all cause transitory unemployment and declines in real income for some. While the costs of not adjusting are heavy, the hardships that groups adversely affected by adjustment undergo are very real.

Our analysis reveals indeed that IMF's structural adjustment policies negatively affected improvement of human development, even though its impact is indirect, with structural disarticulation as the intermediate mechanism. The structural adjustment
programs have attracted widespread criticism largely because of its negative effect on the most vulnerable section of society. A survey in the Nigerian Sunday Times (12 February 1989:10, also cited in Adefulu 1991:48) reports that "With regard to the young ones, many of them suffer from kwashiorkor [malnutrition] while the adults are getting leaner by the day. In terms of nutritional and medical well-being, the people are worse off." The IMF riots in many Third World countries confirm the unpopularity of the IMF stabilization programs in Africa and Latin America, particularly among the "various influential sectors of the population (notably the urban groups) whose discontent can lead to political instability" (Haynes et al, 1987:344). Moreover, the structural adjustment has incurred adversities for the rural poor. As Ojo (1989:49) has narrated

Since 1981, only few transportation, water supply, health and educational facilities have been provided due to the cutbacks in government revenue. A new situation developed in 1986 when the prohibitive costs of providing such facilities restrained the installation of many new facilities. . . The rural areas have traditionally lacked social services and other amenities when compared with urban areas.

Based on such accounts, there has been an urgent call for the adjustment "with a human face" (Cornia et al 1987; Singer and Ray 1993). One of the implications of the undesirable effects of foreign debt and IMF adjustment policies is that Third World indebted countries should not rely heavily on external financial flows; moreover, they should mobilize more efficiently the domestic human and material resources in the process of implementing any sort of structural adjustment. Finally, the structural adjustment programs should take the social costs into consideration and aim at improving the lives of ordinary people, especially, women, children, and the rural poor.
Conclusion

This study has uncovered several important findings on many controversial issues of Third World Development. First of all, in contrast to most quantitative cross-national studies, we have focused attention on a broader spectrum of development, namely, human development. Previous research has narrowly defined development as either per capita income growth, or physical quality of life. Dissatisfaction with this narrow focus has prompted the search for a new "yardstick" which can embody both the economic and social aspects of development. Economic growth without equality has led to a resurgent interest in the social dimension of development. The focus of this study has captured three aspects of development: per capita income as the economic dimension, living standards as the social dimensions, and the distributive aspect of development. This new understanding is crucial in light of the current debt crisis and structural adjustment and the continual plight of the most vulnerable segments of the population — women, children, and the rural poor. Overall, our analysis suggests that the priority of development should be given to the improvement of human lives and their living conditions rather than a mere pursuit of economic growth.

Our finding also indicates that there is no automatic linkage between economic growth and human development. We have identified structural disarticulation as a more important factor which accounts for the level of human development. Structural disarticulation is broadly defined as a distorted economic and social structure, characterized by the unevenness of productivity within industrial sectors, the lack of correspondence between the production of consumption and capital goods, and the
missing linkages between the modern and traditional sectors. Unsatisfied with the
disarticulation index developed by Stokes and Anderson, we have constructed a new
index based on an enriched conceptualization of disarticulation. Conceptually, Stokes
and Anderson (1990) have relied exclusively on Samir Amin’s interpretation which
carries a bias toward radical dependency theory. Our conceptualization has embraced
the insights of Paul Rosenstein-Rodan, Arthur Lewis, Albert Hirschman, Raúl Prebisch,
Hans Singer and Samir Amin.

This study marks the first attempt to theorize structural disarticulation as an
important mechanism mediating between human development, and a complex set of
social and economic factors such as foreign investment, external debt, and development
state. The theoretical and empirical linkage between human development and structural
disarticulation is the strongest and most stable finding in this study. Human
development is likely to be improved when efforts are made to reduce structural
disarticulation. To put it differently, disarticulation is a strong reason for the bitterness
of ordinary people’s lives. This evidence reveals that the quality of human lives is
contingent on the fundamental economic and social structure in a society.

On the correlates of structural disarticulation, our findings have shown clearly
that it is largely determined by trade structure, foreign investment pattern, external
financial inflows, and the effectiveness of the developmental state.

Dependency theorists have argued that foreign investment does more harm than
good in the less developed countries. Based on such understanding, it would be
expected that foreign investment should have perpetuated disarticulation and obstructed
progress in human development. Nevertheless, in our analysis, foreign investment consistently has a positive effect on human development, and it also appears to reduce disarticulation. Moreover, compared with multilateral and bilateral debt, foreign investment has a comparable size of an effect on structural disarticulation and a stronger effect on economic growth. Earlier contentions about the negative effect (Bornschier and Chase-Dunn 1985; Wimberley 1990) and the negligible effect of foreign investment (Nafziger 1991) on Third World development seem erroneous. One explanation is that foreign investment in the 1950s and early 1960s was concentrated in the primary sector of mining. However, since the beginning of the 1970s, it has been increasingly directed to the manufacturing sector (Stallings 1987). Although it is true, foreign investors have been favorably inclined to countries in a better position for development, these investments did help some LDCs to undergo industrial transformation. For instance, direct foreign investment has favored Mexico and Brazil because of historical tradition as well as their geographical proximity to the United States. Mexico, in particular, has been the main site of U.S. direct foreign investment. The main change in the 1960s was a sectoral shift from mining/petroleum and public utilities to manufacturing industries (Díaz-Alejandro 1970). Brazil attracted U.S. foreign investment for its size and natural resources. An important advance was made with the Kubitschek government in the 1950s, which offered many incentives to foreign investors (Skidmore 1967; Baer 1983). Today, governments and national capitalists are still competing for foreign investment. This is an indication that the influence of foreign investment is not
diminishing. Today, with inflows of foreign capital dwindling, attracting foreign investment has become more competitive among the LDCs than ever before.

The idea that states should stay away from national development is as old as the writings of Adam Smith and Herbert Spencer. Spencer's ultimate hope was that the state would cease to exist (Hall and Ikenberry 1989). Strangely enough, the dependency/world system theories echo the same negative message on the weakness of the dependent state. Our evidence, however, is consistently positive. Third World states have proven to be one of the most important players in the international political economy. The positive and powerful role of the states in development is seen in many developing countries, most notably, the East-Asian countries. Mobilizing foreign and domestic resources has posed the biggest challenge to the Third World states. The argument that Third World development requires the strengthening of the state goes against all liberal preconceptions. This idea does not surprise us, not only because it has been tested in the great experiments of the LDCs; it was also confirmed by the European experiences. As Hall and Ikenberry (1989:71) put it, "the rise of the west was not, as we have seen, by any means stateless."

One of our strongest and most consistent findings is that state strength and state size help to promote human development and economic growth. Several other studies have found similar positive evidence (Dalecroix and Ragin 1981; Bradshaw and Tshandu 1990; Bradshaw and Huang 1991). A unique finding in this study is that state strength and state size contribute to the reduction of structural disarticulation. In fact, among other social and economic forces, state size appears to have the strongest impact
on minimizing structural disarticulation. The ideas of the laissez-faire state and the dependent state should give way to that of the developmental state. The observation that strong states can facilitate development challenges both liberal orthodox economic theory and dependency theory. In today's interdependent world system, very few states can withdraw from the world market due to lack of resources and limited market size. The increasing dynamism of the global market economy presents a rational choice to the Third World states for active participation and cooperation. Moreover, recent studies of dependent development pointed out that Third World countries can find niches in the global economy within which successful development strategies can be sustained (Amsden 1979 1985; Haggard 1986; Gold 1986).

Besides many cases studies, a few quantitative cross-national studies (Ragin and Charles 1989; Bradshaw and Huang 1991; Bradshaw et al 1993) have started to focus on the impact of external debt and IMF adjustment polices on Third World development. In contrast to other empirical studies, our analysis has demonstrated that multilateral and bilateral debt pose a severe burden to Third World human development. IMF structural adjustment has a direct negative effect on economic growth and perpetuates disarticulation. It also has an indirect negative effect on human development, working through both economic growth and structural disarticulation. The immediate task of any structural adjustment program is to create the conditions for viable growth, but they are tied through cross-conditionality to IMF stabilization programs which aim at the restoration of external balance. The conditionalities require expenditure-reduction which involves the use of fiscal and monetary policies to reduce
all elements of government and private expenditures. Experiments of these stabilization programs have failed to facilitate economic growth and incurred massive social and human costs. More studies should be devoted to the search for an economically-sound adjustment program "with a human face."

Finally, we include a note on the merits of the integrated framework that has guided this study. The integrated framework is a synthesis of valid insights from both modernization and dependency theories, and everything in between. One important implication that came out of this study is that Third World states should rely increasingly heavily on internal resources to navigate successfully in the direction of modern growth. This finding provides justification for the emphasis on internal factors favored by modernization theory. It is equally justifiable that dependency theorists tend to emphasize the external factors in the globalization of the world economy. Our finding that foreign debt and IMF adjustment policies reinforce structural disarticulation indicates the significance of external factors. The recognition of the validity of both schools of thoughts permits a convergence or a synthesis.

Using this integrated framework, this study has demonstrated the utility and necessity of examining both internal and external determinants of human development. In many cases, the effects of external factors are achieved through the intermediate mechanism of internal factors. For example, external debt has a direct effect on human development, together with IMF pressure, it also has an indirect effect mediated through the internal mechanism of structural disarticulation. Future research should focus more on the interplay between the internal and external forces precisely because they each
have their independent impact. More importantly, external factors are likely to be
influenced by internal economic and social structure and the interests of state and local
capitalists and entrepreneurs. By the same token, internal factors are influenced by the
global debt crisis and the competitive interests of the world political and economic
powers. With the disintegration of the former Soviet Union and the end of the cold
war, economic competitions among nation-states are likely to be intensified. Conflicts
will tend to center on access to information and technology, and trade imbalances. In
light of such an interdependent world, extreme theoretical stances should be laid to rest
as a byproduct of utopianism. There will be an increasing need for an integrated
theoretical framework to give a more objective account for social and economic forces
behind Third World development.

Policy Implications

By focusing on contemporary development issues such as human development,
external debt, and structural disarticulation, this research intends to provide important
policy implications. On the goal and direction of development, our research findings
suggest that domestic and international policy-makers should aim for balanced and
equitable development. Its meanings are two-fold. First, a balanced and equitable
development means human development since it emphasizes both economic growth and
the improvement of the living conditions of the mass population. Achieving a high
growth rate of GNP is an important objective, however, growth has to be balanced and
benefits evenly distributed to improve the welfare of the people, namely, to reduce
infant mortality rate, to provide immunization for children, to improve the literacy rate, and to prolong people’s lives.

A balanced and equitable development also refers to the balance between and within economic sectors and between social segments characterized by income, assets and occupation. The strong negative association between structural disarticulation and human development found in this research is indicative of the above point. Intersectoral balance does not mean equal growth of all industrial sectors since the growth process itself will bring about a shift in sectoral composition of the national product and of the total labor force (Fisher 1939; Clark 1957; Syrquin 1988). A balanced development here refers to a growth pattern in which intersectoral and intrasectoral complementarities and linkages are duly recognized. Development strategies should not carry a bias for industrialization only, but put more emphasis on creating linkages and allowing feedbacks among major industrial sectors. Specifically, sustainable growth should pay more attention to the imbalance between agriculture and industry, precisely because the former is the most sluggish of economic sectors. More investment whether it is domestic or foreign should be directed toward feeding the mass population and boosting agricultural productivity in general. Policy-makers need also to devote more effort on the application of technology in agriculture. In fact, many developing countries have already benefited from the Green Revolution. Asia (e.g., India, Indonesia, Pakistan and the Philippines) has been the major beneficiary with the aid of "technological miracle" — improved seeds, chemical fertilizers and controlled irrigations, and agricultural machineries (Jazairy 1992).
While the developing countries are moving toward the market economy and are lured toward high levels of consumption, the distribution of economic benefits has become even more important than ever before. When the economic benefits are relatively equally distributed to all strata of the population, the purchasing power in the society as a whole is increased. Nowadays, there is a strange phenomenon of multinational corporations pouring into the developing countries commodities produced by joint-ventures with a price tag even higher than that in their home countries. Given the average income level, it is apparent that the majority of the population in the host countries cannot afford such exorbitant prices. Only a small segment of the population at the top income-level are buying those expensive products. This mismatch between production and consumption will perpetuate income inequality, encourage further capital flight, obstruct the improvement of human welfare, and more importantly prevent consumption from being a catalyst for continual economic growth. For this reason, development strategies need to take into account the correspondence between the pattern of production and the pattern of consumption. Such a consideration will have long-term benefits for sustaining economic growth and improving social welfare in the developing countries.

The impact of the global debt crisis and the role of multilateral institution are among the central concerns of this research. We have found that multilateral and bilateral debt imposes a large burden on the shoulders of the Third World population. Our research has also shown consistently that IMF austerity measures with their narrow focus have failed to bring about economic growth and to improve the living standards
in the indebted countries. The implication of this empirical evidence suggests that resolving the debt crisis requires genuine international cooperation. In promoting foreign investment and foreign trade, many have emphasized the reality of interdependence among the rich and poor countries (Keohane and Nye 1977; Krasner 1983; Keohane 1984). Although interdependence is an important aspect of international relations, it is nonetheless insufficient to forge a mutually beneficial North-South relationship. As Streeten (1988:1163) sharply puts it, "For interdependence can exist when one country by unilateral action can inflict harm on other countries." Our world has no shortage of such instances as seen in competitive protectionism, devaluation, deflation, floating interest rates, oil price shocks, or global pollution of the air and oceans beyond national boundaries.

As we have emphasized fervently throughout this dissertation that development theories need to be integrated, we further argue that world economies need to be integrated for a well-functioning and well-balanced global system. This means that policy-makers at all levels (domestically and internationally) consider all economies, rich or poor, as members of one single system. Specifically, it refers to a situation in which all countries in the integrated system have relatively equal opportunities, access to capital flows, trade, and goods and services essential to the welfare of their populations. It means that there will be fewer imposed "international" standards such as the gold standard, fixed exchange rates that favor the surplus countries (Streeten 1988; Nafziger 1993).
International integration should be distinguished from international interdependence and the notion of common interests. Yet the idea for an integrated system certainly implies mutual interests and benefits. In the current world economic system, there are many instances of the prisoner’s dilemma. Prisoners’ dilemma arises when each country is only trying to promote its own national interests rationally and consequently the situations in all countries become worse off. An example of this is the IMF imposed austerity measures on given indebted countries in order to bring about debt-servicing capacity. To follow the IMF austerity policies, the indebted country has to cut imports from the developed countries as well as the developing countries. As a result, the growth rates in both the developed and the developing countries may be reduced. Moreover, the debt-servicing capacity in other indebted countries whose exports have been cut are also reduced. Such a scenario contributes to the aggravation of the global debt crisis. In fact, Brazil has relied heavily on the revenue of exports to Mexico, Chile, Venezuela, and Argentina. Yet all these countries have complied with the IMF austerity measures by cutting their imports from Brazil (Streeten 1988).

The best solution to the prisoners’ dilemma, in our judgement, is for the world economies to move toward a global integration. Sustaining development is the challenge faced by both the rich and poor countries. Given the massive scale of the current debt crisis and the dangerous effect of debt default on the international system, it is time to develop policies that will take into account the interests of both the creditor and the indebted countries. Sir Arthur Lewis (1970) asked us to imagine what would happen if all the developed countries were to sink under the sea, meaning that after
some adjustment, it would not make any difference for the developing countries. Paul Streeten (1984:1165) responded, "The same might be said to the developed countries, if the developing countries were to sink under the sea." Yet both of them recognize the increasing interdependence among countries as indicated by the rapid growth of trade, the enlarging volume of trade, as well as the benefits and damages from trade. Accompanied by such increasing interdependence, it makes it all the more urgent and necessary to build an integrated system. In our view, the current debt crisis only precipitates the upcoming process of global integration.

**Agenda for Future Research**

The current research has attempted to explain human development as a broad measure encompassing the economic, social, and distributional aspects of societal advancement. In our explanatory model, we focused on the effects of structural disarticulation, external indebtedness, foreign investment and trade, and the developmental state on the levels of Third World human development. The empirical results have not only supported most of our hypotheses but also offered promising prospects for future research.

Our research interests will be extended to the specific dimensions of human development such as the alleviation of poverty, the reduction of maternal and child mortality. In our view, these issues are very much urgent and vital as they have direct bearings on the plight of the most vulnerable segments of the Third World population, namely, the rural poor, women, and children. These issues are important since building
a healthy, educated, and stable population is a chief component of sustainable human development.

Based on the findings of this research, we argue that structural disarticulation may be a major factor contributing to the persistence of poverty and the high rates of maternal and child mortality. There are several reasons for these relationships. First, structural disarticulation denotes a gap between agriculture and industry. Such a gap is a major impediment to poverty alleviation in the developing countries. With a high percentage of the population concentrated in the agricultural sector, structural disarticulation augments poverty and at the same time encourages high fertility. Agriculture, often unproductive and labor-intensive in the developing world, compels the rural people to rely on subsistence activities and their children as laborers as well as sources of income in the future.

Second, disarticulated economic structure poses a severe problem of creating employment opportunities for the population. A modern industrial sector that is capital-intensive often encounters difficulties in generating a large quantity of jobs. A shortage of land in many poor Asian countries means that farming and other agricultural activities are not able to absorb the growing population. Lack of employment opportunities as a symptom of disarticulation thus accounts for the high concentration of the population in the rural areas, especially the rural poor. It also restricts women's productive work in the labor force. Besides the fact that women's work at home is largely unaccounted for in monetary terms, lack of employment means lack of primary health care for women which is an important factor contributing to maternal mortality.
and child mortality. Moreover, it will confine women to the realms of homemaking and drive up reproductive activities. In many developing countries, women make significant contributions to food production. Yet they often suffer greater deprivation than men (Jacobson 1993). Poverty has a gender difference since societal distribution of foods and other entitlements within the family and in the labor force are gender-based. Women directly endure the hardships incurred by disarticulated structure since they are heavily involved in small scale agriculture, the informal sector and household activities, where financial yield is often the lowest (Jazairy et al 1992). They have also shouldered a large proportion of the adjustment burdens in the 1980s. Women have paid the price for shrinking family income by working longer hours, sleeping less, and eating less (UNDP 1990). The stark reality of the era of global debt crisis requires women to pay a higher price, which sometimes includes even their lives. Maternal mortality rate as high as 1,000 per 100,000 live births in low-income countries compared with 10 or fewer in developed countries is a dramatic evidence of the neglect of women’s health.

Finally, the spiral of poverty that characterizes many poor countries is frequently aggravated by structural disarticulation, caused by policies that favor industry over agriculture, and encourage waste and resource degradation, particularly in the sectors of agriculture, forestry, and energy (Jazairy 1992; Brown 1993). Holding agricultural prices artificially down benefits the urban minorities and discourages investment in raising agricultural productivity as well as soil and tree conservation. These social and
environmental degradations reinforce disarticulation which, in turn, obstructs the improvement of women and children's health.

Therefore, future research can explore the relationships among structural disarticulation and rampant poverty with special attention to maternal and child mortality. Other factors such as government policies, external indebtedness, and environmental degradation could be incorporated into the explanatory model of Third World poverty.
### APPENDIX: Data Sources

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
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<tr>
<td>Human Development Index, 1987</td>
<td>UNDP (1990)</td>
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<tr>
<td>Structural Disarticulation Index 1978</td>
<td>ILO (1987)</td>
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<tr>
<td>GDP per capita, 1975</td>
<td>World Bank (1983)</td>
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<tr>
<td>Fertility Rate, 1975</td>
<td>Taylor and Jodice (1983)</td>
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<td>Energy Consumption per capita, 1975</td>
<td>Taylor and Jodice (1983)</td>
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<td>Primary Product Export, 1975</td>
<td>UNCTAD (1986)</td>
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<td>Bilateral Debt, 1975</td>
<td>World Bank (1986)</td>
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<tr>
<td>Use of Extended Fund, 1975-1985</td>
<td>IMF (1985c)</td>
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<tr>
<td>Loans/IMF Quota, 1985</td>
<td>IMF (1985c)</td>
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<tr>
<td>Agricultural Density, 1975</td>
<td>Taylor and Jodice (1983)</td>
</tr>
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</table>
REFERENCE


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Kuznets, Simon. 1989. "Driving Forces of Economic Growth: What can we learn from history?" in the above book, and "Modern economic growth and the less developed countries." and "Recent population trends in less developed countries and implications for internal income inequality."


