

From Economic Development
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Theories of Development: A Comparative Analysis

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 a partial success.

—PAUL P. STREETEN, Director, World Development Institute

Development theory by itself has little value unless it is applied, unless it translates into results, and unless it improves people's lives.

—LEWIS T. PRESTON, Former President, World Bank

Every nation strives after development. Economic progress is an essential component, but it is not the only component. As we discovered in Chapter 1, development is not purely an economic phenomenon. In an ultimate sense, it must encompass more than the material and financial side of people's lives. Development should therefore be perceived as a multidimensional process involving the reorganization and reorientation of entire economic and social systems. In addition to improvements in incomes and output, it typically involves radical changes in institutional, social, and administrative structures as well as in popular attitudes and, in many cases, even customs and beliefs. Finally, although development is usually defined in a national context, its widespread realization may necessitate fundamental modification of the international economic and social system as well.

In this chapter we explore the recent historical and intellectual evolution in scholarly thinking about how and why development does or does not take place. We do this by examining five major and often competing development theories. In addition to presenting these differing approaches, we will discover how each offers valuable insight and a useful perspective on the nature of the development

process. Cuba provides an interesting case study of one of the approaches. A description and analysis can be found at the end of the chapter.

Leading Theories of Economic Development: Five Approaches

The post-World War II literature on economic development has been dominated by four major and sometimes competing strands of thought: (1) the linear-stages-of-growth model, (2) theories and patterns of structural change, (3) the international dependence revolution, and (4) the neoclassical, free-market counterrevolution. In addition, the past few years have witnessed the emergence of a fifth approach that has been called the new or endogenous theory of economic growth.

Theorists of the 1950s and early 1960s viewed the process of development as a series of successive stages of economic growth through which all countries must pass. It was primarily an economic theory of development in which the right quantity and mixture of saving, investment, and foreign aid were all that was necessary to enable Third World nations to proceed along an economic growth path that historically had been followed by the more developed countries. Development thus became synonymous with rapid, aggregate economic growth.

This linear-stages approach was largely replaced in the 1970s by two competing economic (and indeed ideological) schools of thought. The first, which focused on theories and patterns of structural change, used modern economic theory and statistical analysis in an attempt to portray the internal process of structural change that a "typical" developing country must undergo if it is to succeed in generating and sustaining a process of rapid economic growth. The second, the international dependence revolution, was more radical and political in orientation. It viewed underdevelopment in terms of international and domestic power relationships, institutional and structural economic rigidities, and the resulting proliferation of dual economies and dual societies both within and among the nations of the world. Dependence theories tended to emphasize external and internal institutional and political constraints on economic development. Emphasis was placed on the need for major new policies to eradicate poverty, to provide more diversified employment opportunities, and to reduce income inequalities. These and other egalitarian objectives were to be achieved within the context of a growing economy, but economic growth per se was not given the exalted status accorded to it by the linear stages and the structural-change models.

Throughout much of the 1980s, a fourth approach prevailed. This neoclassical (sometimes called neoliberal) counterrevolution in economic thought emphasized the beneficial role of free markets, open economies, and the privatization of inefficient and wasteful public enterprises. Failure to develop, according to this theory, is not due to exploitive external and internal forces as expounded by dependence theorists. Rather, it is primarily the result of too much government intervention and regulation of the economy.

Finally, in the late 1980s and the 1990s, a few neoclassical and institutional economists began to develop the new growth theory. It attempts to modify and extend traditional growth theory in a way that helps explain why some countries develop rapidly while others stagnate and why, even in a neoclassical world of private markets, governments may still have an important role to play in the development process.

We now look at each of these alternative approaches in greater detail.

The Linear-Stages Theory

When interest in the poor nations of the world really began to materialize following the Second World War, economists in the industrialized nations were caught off guard. They had no readily available conceptual apparatus with which to analyze the process of economic growth in largely agrarian societies characterized by the virtual absence of modern economic structures. But they did have the recent experience of the Marshall Plan, under which massive amounts of U.S. financial and technical assistance enabled the war-torn countries of Europe to rebuild and modernize their economies in a matter of a few years. Moreover, was it not true that all modern industrial nations were once undeveloped agrarian societies? Surely their historical experience in transforming their economies from poor agricultural subsistence societies to modern industrial giants had important lessons for the "backward" countries of Asia, Africa, and Latin America. The logic and simplicity of these two strands of thought—the utility of massive injections of capital and the historical pattern of the now developed countries—was too irresistible to be refuted by scholars, politicians, and administrators in rich countries to whom people and ways of life in the Third World were often no more real than U.N. statistics or scattered chapters in anthropology books.

Rostow's Stages of Growth

Out of this somewhat sterile intellectual environment, fueled by the cold war politics of the 1950s and 1960s and the resulting competition for the allegiance of newly independent nations, came the stages-of-growth model of development. Its most influential and outspoken advocate was the American economic historian Walt W. Rostow. According to the Rostow doctrine, the transition from underdevelopment to development can be described in terms of a series of steps or stages through which all countries must proceed. As Rostow wrote in the opening chapter of *The Stages of Economic Growth*:

This book presents an economic historian's way of generalizing 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 pre-conditions for take-off into self-sustaining growth, the take-off, the drive to maturity, and the age of high mass consumption. . . . These stages are not merely descriptive. They are not merely a way of gen-

eralizing 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.¹

The advanced countries, it was argued, had all passed the stage of "take-off into self-sustaining growth," and the underdeveloped countries that were still in either the traditional society or the "preconditions" stage had only to follow a certain set of rules of development to take off in their turn into self-sustaining economic growth.

One of the principal tricks of development necessary for any takeoff was the mobilization of domestic and foreign saving in order to generate sufficient investment to accelerate economic growth. The economic mechanism by which more investment leads to more growth can be described in terms of the **Harrod-Domar growth model**.

The Harrod-Domar Growth Model

Every economy must save a certain proportion of its national income, if only to replace worn-out or impaired capital goods (buildings, equipment, and materials). However, in order to grow, new investments representing net additions to the **capital stock** are necessary. If we assume that there is some direct economic relationship between the size of the total capital stock, K , and total GNP, Y —for example, if \$3 of capital is always necessary to produce a \$1 stream of GNP—it follows that any net additions to the capital stock in the form of new investment will bring about corresponding increases in the flow of national output, GNP.

Suppose that this relationship, known in economics as the **capital-output ratio**, is roughly 3 to 1. If we define the capital-output ratio as k and assume further that the national **savings ratio**, s , is a fixed proportion of national output (e.g., 6%) and that total new investment is determined by the level of total savings, we can construct the following simple model of economic growth:

1. Saving (S) is some proportion, s , of national income (Y) such that we have the simple equation

$$S = sY. \quad (3.1)$$

2. Investment (I) is defined as the change in the capital stock, K , and can be represented by ΔK such that

$$I = \Delta K. \quad (3.2)$$

But because the total capital stock, K , bears a direct relationship to total national income or output, Y , as expressed by the capital-output ratio, k , it follows that

$$\frac{K}{Y} = k$$

or

$$\frac{\Delta K}{\Delta Y} = k$$

or, finally,

$$\Delta K = k\Delta Y. \quad (3.3)$$

3. Finally, because total national savings, S , must equal total investment, I , we can write this equality as

$$S = I. \quad (3.4)$$

But from Equation 3.1 we know that $S = sY$ and from Equations 3.2 and 3.3 we know that

$$I = \Delta K = k\Delta Y.$$

It therefore follows that we can write the "identity" of saving equaling investment shown by Equation 3.4 as

$$S = sY = k\Delta Y = \Delta K = I \quad (3.5)$$

or simply as

$$sY = k\Delta Y. \quad (3.6)$$

Dividing both sides of Equation 3.6 first by Y and then by k , we obtain the following expression:

$$\frac{\Delta Y}{Y} = \frac{s}{k}. \quad (3.7)$$

Note that the left-hand side of Equation 3.7, $\Delta Y/Y$, represents the rate of change or rate of growth of GNP (i.e., it is the percentage change in GNP).

Equation 3.7, which is a simplified version of the famous equation in the Harrod-Domar theory of economic growth,² states simply that the rate of growth

of GNP ($\Delta Y/Y$) is determined jointly by the national savings ratio, s , and the national capital-output ratio, k . More specifically, it says that in the absence of government, the growth rate of national income will be directly or positively related to the savings ratio (i.e., the more an economy is able to save—and invest—out of a given GNP, the greater the growth of that GNP) will be and inversely or negatively related to the economy's capital-output ratio (i.e., the higher k is, the lower the rate of GNP growth will be).

The economic logic of Equation 3.7 is very simple. In order to grow, economies must save and invest a certain proportion of their GNP. The more they can save and invest, the faster they can grow. But the actual rate at which they can grow for any level of saving and investment—how much additional output can be had from an additional unit of investment—can be measured by the inverse of the capital-output ratio, k , because this inverse, $1/k$, is simply the output-capital or output-investment ratio. It follows that multiplying the rate of new investment, $s = I/Y$, by its productivity, $1/k$, will give the rate by which national income or GNP will increase.

$$k = \frac{K}{Q}$$

$$\frac{1}{k} = \frac{Q}{K}$$

= productivity of K

$$g = \text{savings rate} \times \text{productivity of K}$$

Obstacles and Constraints

Returning to the stages-of-growth theories and using Equation 3.7 of our simple Harrod-Domar growth model, we learn that one of the most fundamental "tricks" of economic growth is simply to increase the proportion of national income saved (i.e., not consumed). If we can raise s in Equation 3.7, we can increase $\Delta Y/Y$, the rate of GNP growth. For example, if we assume that the national capital-output ratio in some less developed country is, say, 3 and the aggregate saving ratio is 6% of GNP, it follows from Equation 3.7 that this country can grow at a rate of 2% per year because

$$\frac{\Delta Y}{Y} = \frac{s}{k} = \frac{6\%}{3} = 2\%. \quad (3.8)$$

Now if the national savings rate can somehow be increased from 6% to, say, 15%—through increased taxes, foreign aid, and/or general consumption sacrifices—GNP growth can be increased from 2% to 5% because now

$$\frac{\Delta Y}{Y} = \frac{s}{k} = \frac{15\%}{3} = 5\%. \quad (3.9)$$

In fact, Rostow and others defined the takeoff stage in precisely this way. Countries that were able to save 15% to 20% of GNP could grow ("develop") at a much faster rate than those that saved less. Moreover, this growth would then be self-sustaining. The tricks of economic growth and development, therefore, are simply a matter of increasing national savings and investment.

The main obstacle to or constraint on development, according to this theory, was the relatively low level of new capital formation in most poor countries. But if

a country wanted to grow at, say, a rate of 7% per year and if it could not generate savings and investment at a rate of 21% of national income (assuming that k , the final aggregate capital-output ratio, is 3) but could only manage to save 15%, it could seek to fill this "savings gap" of 6% through either foreign aid or private foreign investment.

Thus the "capital constraint" stages approach to growth and development became a rationale and (in terms of cold war politics) an opportunistic tool for justifying massive transfers of capital and technical assistance from the developed to the less developed nations. It was to be the Marshall Plan all over again, but this time for the underdeveloped nations of the Third World!

Necessary versus Sufficient Conditions: Some Criticisms of the Stages Model

Unfortunately, the tricks of development embodied in the theory of stages of growth did not always work. And the basic reason they didn't work was not because more saving and investment isn't a **necessary condition** for accelerated rates of economic growth—it is—but rather because it is not a **sufficient condition**. Once again we have an example of what we discussed in Chapter 1: the inappropriateness of some of the implicit assumptions of Western economic theory for the actual conditions in developing nations. The Marshall Plan worked for Europe because the European countries receiving aid possessed the necessary structural, institutional, and attitudinal conditions (e.g., well-integrated commodity and money markets, highly developed transport facilities, a well-trained and educated workforce, the motivation to succeed, an efficient government bureaucracy) to convert new capital effectively into higher levels of output. The Rostow and Harrod-Domar models implicitly assume the existence of these same attitudes and arrangements in underdeveloped nations. Yet in many cases they are lacking, as are complementary factors such as managerial competence, skilled labor, and the ability to plan and administer a wide assortment of development projects.

But at an even more fundamental level, the stages theory failed to take into account the crucial fact that contemporary developing nations are part of a highly integrated and complex international system in which even the best and most intelligent development strategies can be nullified by external forces beyond the countries' control. One simply cannot claim, as many economists did in the 1950s, and 1960s, that development is merely a matter of removing obstacles and supplying various missing components like capital, foreign-exchange, skills, and management—tasks in which the developed countries could theoretically play a major role.³ It was because of numerous failures and growing disenchantment with this strictly economic theory of development that a radically different approach was championed primarily by Third World intellectuals, one that attempted to combine economic and institutional factors into a social systems model of international development and underdevelopment. This is the international dependence paradigm, which we will review shortly. But first we examine

two prominent examples of what emerged as mainstream Western theories of development during the 1970s: the theoretical and empirical models of structural change.

Structural-Change Models

Structural-change theory focuses on the mechanism by which underdeveloped economies transform their domestic economic structures from a heavy emphasis on traditional subsistence agriculture to a more modern, more urbanized, and more industrially diverse manufacturing and service economy. It employs the tools of neoclassical price and resource allocation theory and modern econometrics to describe how this transformation process takes place. Two well-known representative examples of the structural-change approach are the “two-sector surplus labor” theoretical model of W. Arthur Lewis and the “patterns of development” empirical analysis of Hollis B. Chenery.

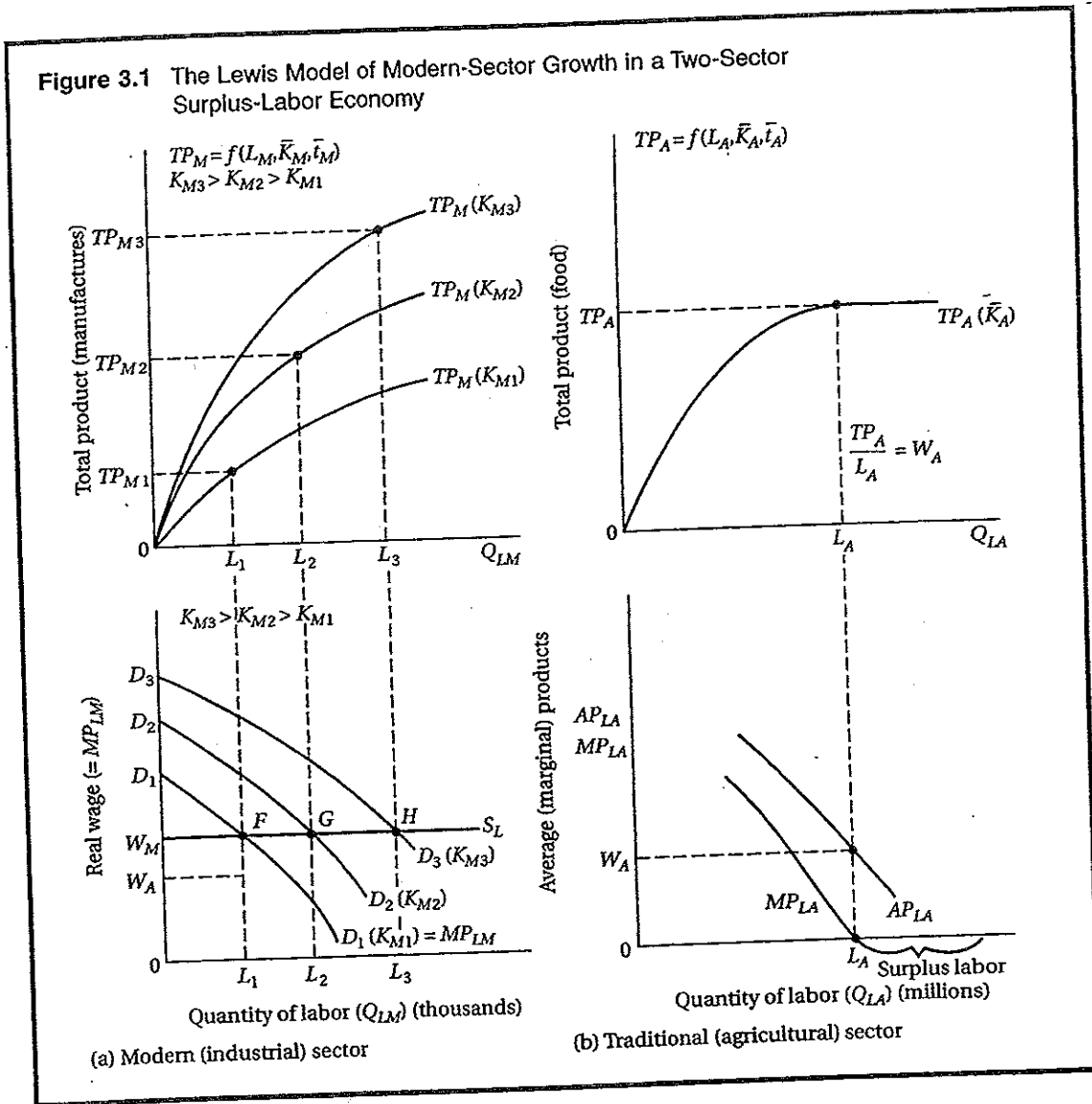
The Lewis Theory of Development

Basic Model

One of the best-known early theoretical models of development that focused on the **structural transformation** of a primarily subsistence economy was that formulated by Nobel laureate W. Arthur Lewis in the mid-1950s and later modified, formalized, and extended by John Fei and Gustav Ranis.⁴ The **Lewis two-sector model** became the general theory of the development process in surplus-labor Third World nations during most of the 1960s and early 1970s. It still has many adherents today, especially among American development economists.

In the Lewis model, the underdeveloped economy consists of two sectors: a traditional, overpopulated rural subsistence sector characterized by zero marginal labor productivity—a situation that permits Lewis to classify this as **surplus labor** in the sense that it can be withdrawn from the agricultural sector without any loss of output—and a high-productivity modern urban industrial sector into which labor from the subsistence sector is gradually transferred. The primary focus of the model is on both the process of labor transfer and the growth of output and employment in the modern sector. Both labor transfer and modern-sector employment growth are brought about by output expansion in that sector. The speed with which this expansion occurs is determined by the rate of industrial investment and capital accumulation in the modern sector. Such investment is made possible by the excess of modern-sector profits over wages on the assumption that capitalists reinvest all their profits. Finally, the level of wages in the urban industrial sector is assumed to be constant and determined as a given premium over a fixed average subsistence level of wages in the traditional agricultural sector. (Lewis assumed that urban wages would have to be at least 30% higher than average rural income to induce workers to migrate from their home areas.) At the constant urban wage, the supply curve of rural labor to the modern sector is considered to be perfectly elastic.

Figure 3.1 The Lewis Model of Modern-Sector Growth in a Two-Sector Surplus-Labor Economy



We can illustrate the Lewis model of modern-sector growth in a two-sector economy by using Figure 3.1. Consider first the traditional agricultural sector portrayed in the two right-side diagrams of Figure 3.1b. The upper diagram shows how subsistence food production varies with increases in labor inputs. It is a typical agricultural production function where the total output or product (TP_A) of food is determined by changes in the amount of the only variable input, labor (L_A), given a fixed quantity of capital, \bar{K}_A , and unchanging traditional technology, \bar{t}_A . In the lower right diagram, we have the average and marginal product curves shown, AP_{LA} and MP_{LA} , which are derived from the total product curve shown

immediately above. The quantity of agricultural labor (Q_{LA}) available is the same on both horizontal axes and is expressed in millions of workers, as Lewis is describing an underdeveloped economy where 80% to 90% of the population lives and works in rural areas.

Lewis makes two assumptions about the traditional sector. First, there is surplus labor in the sense that MP_{LA} is zero, and second, all rural workers share *equally* in the output so that the rural real wage is determined by the average and not the marginal product of labor (as will be the case in the modern sector). Assume that there are L_A agricultural workers producing TP_A food, which is shared equally as W_A food per person (this is the average product, which is equal to TP_A/L_A). The marginal product of these L_A workers is zero, as shown in the bottom diagram of Figure 3.1b; hence the surplus-labor assumption applies to all workers in excess of L_A (note the horizontal TP_A curve beyond L_A workers in the upper right diagram).

The upper-left diagram of Figure 3.1a portrays the total product (production function) curves for the modern, industrial sector. Once again, output of, say, manufactured goods (TP_M) is a function of a variable labor input, L_M , for a given capital stock \bar{K}_M and technology \bar{t}_M . On the horizontal axes, the quantity of labor employed to produce an output of, say, TP_M , with capital stock K_M , is expressed in thousands of urban workers, L_1 . In the Lewis model, the modern-sector capital stock is allowed to increase from K_{M1} to K_{M2} to K_{M3} as a result of the reinvestment of profits by capitalist industrialists. This will cause the total product curves in Figure 3.1a to shift upward from $TP_M(K_{M1})$ to $TP_M(K_{M2})$ to $TP_M(K_{M3})$. The process that will generate these capitalist profits for reinvestment and growth is illustrated in the lower-left diagram of Figure 3.1a. Here we have modern-sector marginal labor product curves derived from the TP_M curves of the upper diagram. Under the assumption of perfectly competitive labor markets in the modern sector, these marginal product of labor curves are in fact the actual demand curves for labor. Here is how the system works.

W_A in the lower diagrams of Figures 3.1a and 3.1b represents the average level of real subsistence income in the traditional rural sector. W_M in Figure 3.1a is therefore the real wage in the modern capitalist sector. At this wage, the supply of rural labor is assumed to be unlimited or perfectly elastic, as shown by the horizontal labor supply curve $W_M S_L$. In other words, Lewis assumes that at urban wage W_M above rural average income W_A , modern-sector employers can hire as many surplus rural workers as they want without fear of rising wages. (Note again that the quantity of labor in the rural sector, Figure 3.1b, is expressed in millions whereas in the modern urban sector, Figure 3.1a, units of labor are expressed in thousands.) Given a fixed supply of capital K_{M1} in the initial stage of modern-sector growth, the demand curve for labor is determined by labor's declining marginal product and is shown by the negatively sloped curve $D_1(K_{M1})$ in the lower-left diagram. Because profit-maximizing modern-sector employers are assumed to hire laborers to the point where their marginal physical product is equal to the real wage (i.e., the point F of intersection between the labor demand and supply curves), total modern-sector employment will be equal to L_1 . Total modern-sector output, TP_{M1} , would be given by the area bounded by points OD_1FL_1 . The share of this total output paid to workers in the form of wages would be equal, therefore,

to the area of the rectangle OW_MFL_1 . The balance of the output shown by the area $W_M D_1 F$ would be the total profits that accrue to the capitalists. Because Lewis assumes that all of these profits are reinvested, the total capital stock in the modern sector will rise from K_{M1} to K_{M2} . This larger capital stock causes the total product curve of the modern sector to rise to $TP_M(K_{M2})$, which in turn induces a rise in the marginal product demand curve for labor. This outward shift in the labor demand curve is shown by line $D_2(K_{M2})$ in the bottom half of Figure 3.1a. A new equilibrium modern-sector employment level will be established at point G with L_2 workers now employed. Total output rises to TP_{M2} or OD_2GL_2 while total wages and profits increase to OW_MGL_2 and $W_M D_2 G$, respectively. Once again, these larger ($W_M D_2 G$) profits are reinvested, increasing the total capital stock to K_{M3} , shifting the total product and labor demand curves to $TP_M(K_{M3})$ and to $D_3(K_{M3})$, respectively, and raising the level of modern-sector employment to L_3 .

This process of modern-sector self-sustaining growth and employment expansion is assumed to continue until all surplus rural labor is absorbed in the new industrial sector. Thereafter, additional workers can be withdrawn from the agricultural sector only at a higher cost of lost food production because the declining labor-to-land ratio means that the marginal product of rural labor is no longer zero. Thus the labor supply curve becomes positively sloped as modern-sector wages and employment continue to grow. The structural transformation of the economy will have taken place, with the balance of economic activity shifting from traditional rural agriculture to modern urban industry.

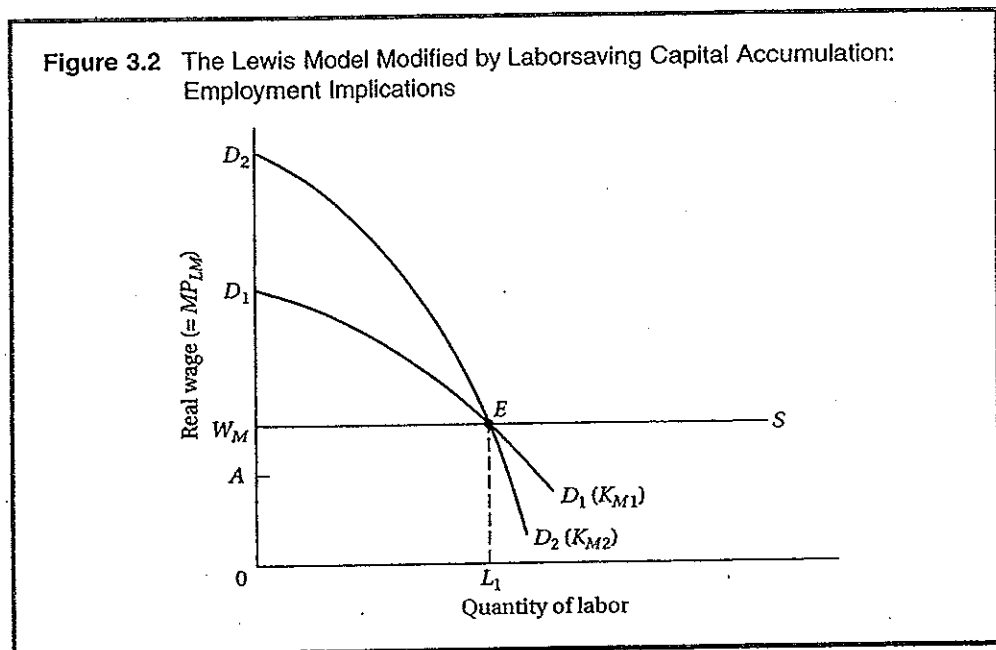
Criticisms of the Lewis Model

Although the Lewis two-sector development model is simple and roughly reflects the historical experience of economic growth in the West, three of its key assumptions do not fit the institutional and economic realities of most contemporary developing countries.

First the model implicitly assumes that the rate of labor transfer and employment creation in the modern sector is proportional to the rate of modern-sector capital accumulation. The faster the rate of capital accumulation, the higher the growth rate of the modern sector and the faster the rate of new job creation. But what if capitalist profits are reinvested in more sophisticated labor-saving capital equipment rather than just duplicating the existing capital as is implicitly assumed in the Lewis model? (We are, of course, here accepting the debatable assumption that capitalist profits are in fact reinvested in the local economy and not sent abroad as a form of "capital flight" to be added to the deposits of Western banks!) Figure 3.2 reproduces the lower, modern-sector diagram of Figure 3.1a, only this time the labor demand curves do not shift uniformly outward but in fact cross. Demand curve $D_2(K_{M2})$ has a greater negative slope than $D_2(K_{M1})$ to reflect the fact that additions to the capital stock embody labor-saving technical progress—that is, K_{M2} technology requires much less labor per unit of output than K_{M1} technology does.

We see that even though total output has grown substantially (i.e., OD_2EL_2 is significantly greater than OD_1EL_1), total wages (OW_MEL_2) and employment (L_2) remain unchanged. All of the extra output accrues to capitalists in the form of

or moved
out of the
country



excess profits. Figure 3.2 therefore provides an illustration of what some might call “antidevelopmental” economic growth—all the extra income and output growth are distributed to the few owners of capital, while income and employment levels for the masses of workers remain largely unchanged. Although total GNP would rise, there would be little or no improvement in aggregate social welfare measured, say, in terms of more widely distributed gains in income and employment.

The second questionable assumption of the Lewis model is the notion that surplus labor exists in rural areas while there is full employment in the urban areas. As we will discover in Chapters 7 and 8, most contemporary research indicates that the reverse is more likely true in many developing countries—there is substantial unemployment in urban areas but little general surplus labor in rural locations. True, there are both seasonal and geographic exceptions to this rule (e.g., parts of the Asian subcontinent and isolated regions of Latin America where land ownership is very unequal), but by and large, development economists today agree that the assumption of urban surplus labor is empirically more valid than Lewis's assumption of rural surplus labor.

The (third) unreal assumption is the notion of a competitive modern-sector labor market that guarantees the continued existence of constant real urban wages up to the point where the supply of rural surplus labor is exhausted. It will be demonstrated in Chapter 8 that prior to the 1980s, a striking feature of urban labor markets and wage determination in almost all developing countries was the tendency for these wages to rise substantially over time, both in absolute terms and relative to average rural incomes, even in the presence of rising levels of open

modern-sector unemployment and low or zero marginal productivity in agriculture. Institutional factors such as union bargaining power, civil service wage scales, and multinational corporations' hiring practices tend to negate whatever competitive forces might exist in LDC modern-sector labor markets.

We conclude, therefore, that when one takes into account the laborsaving bias of most modern technological transfer, the existence of substantial capital flight, the widespread nonexistence of rural surplus labor, the growing prevalence of urban surplus labor, and the tendency for modern-sector wages to rise rapidly even where substantial open unemployment exists, the Lewis two-sector model—though extremely valuable as an early conceptual portrayal of the development process of sectoral interaction and structural change—requires considerable modification in assumptions and analysis to fit the reality of contemporary developing nations.

Structural Change and Patterns of Development

Like the earlier Lewis model, the patterns-of-development analysis of structural change focuses on the sequential process through which the economic, industrial, and institutional structure of an underdeveloped economy is transformed over time to permit new industries to replace traditional agriculture as the engine of economic growth. However, in contrast to the Lewis model and the original stages view of development, increased savings and investment are perceived by patterns-of-development analysts as necessary but not sufficient conditions for economic growth. In addition to the accumulation of capital, both physical and human, a set of interrelated changes in the economic structure of a country are required for the transition from a traditional economic system to a modern one. These structural changes involve virtually all economic functions, including the transformation of production and changes in the composition of consumer demand, international trade, and resource use as well as changes in socioeconomic factors such as urbanization and the growth and distribution of a country's population.

Empirical structural-change analysts emphasize both domestic and international constraints on development. The domestic ones include economic constraints such as a country's resource endowment and its physical and population size as well as institutional constraints such as government policies and objectives. International constraints on development include access to external capital, technology, and international trade. Differences in development level among developing countries are largely ascribed to these domestic and international constraints. However, it is the international constraints that make the transition of currently developing countries differ from that of now industrialized countries. To the extent that developing countries have access to the opportunities presented by the industrial countries as sources of capital, technology, and manufactured imports as well as markets for exports, they can make the transition at an even faster rate than that achieved by the industrial countries during the early periods of their economic development. Thus, unlike the earlier stages model, the structural-change model recognizes the fact that developing countries are part of a

highly integrated international system that can promote (as well as hinder) their development.

The best-known model of structural change is the one based largely on the empirical work of Harvard economist Hollis B. Chenery, who examined patterns of development for numerous Third World countries during the postwar period.⁵ His empirical studies, both cross-sectional (among countries at a given point in time) and time-series (over long periods of time), of countries at different levels of per capita income led to the identification of several characteristic features of the development process. These included the shift from agricultural to industrial production, the steady accumulation of physical and human capital, the change in consumer demands from emphasis on food and basic necessities to desires for diverse manufactured goods and services, the growth of cities and urban industries as people migrate from farms and small towns, and the decline in family size and overall population growth as children lose their economic value and parents substitute child quality (education) for quantity (see Chapter 6).

Conclusions and Implications

The structural changes that we have described are the "average" patterns of development Chenery and colleagues observed among countries in time-series and cross-sectional analyses. The major hypothesis of the structural-change model is that development is an identifiable process of growth and change whose main features are similar in all countries. However, as mentioned earlier, the model does recognize that differences can arise among countries in pace and pattern of development, depending on their particular set of circumstances. Factors influencing the development process include a country's resource endowment and size, its government's policies and objectives, the availability of external capital and technology, and the international trade environment.

In short, empirical studies on the process of structural change lead to the conclusion that the pace and pattern of development can vary according to both domestic and international factors, many of which lie beyond the control of an individual developing nation. Yet despite this variation, structural-change economists argue that one can identify certain patterns occurring in almost all countries during the development process. And these patterns, they argue, may be affected by the choice of development policies pursued by LDC governments as well as the international trade and foreign-assistance policies of developed nations. Hence structural-change analysts are basically optimistic that the "correct" mix of economic policies will generate beneficial patterns of self-sustaining growth. The international-dependence school, in contrast, is much less sanguine and is in many cases downright pessimistic. Proponents argue that not only are the statistical averages that structural-change economists calculate from a diverse range of rich and poor countries of limited practical value in identifying the critical factors in a particular nation's development process, but more important, they divert attention from the real factors in the global economy that maintain and perpetuate the poverty of developing nations. Let us now see what this dependence theory is all about.

The International-Dependence Revolution

■ During the 1970s, international-dependence models gained increasing support, especially among Third World intellectuals, as a result of growing disenchantment with both the stages and structural-change models. Essentially, international-dependence models view developing countries as beset by institutional, political, and economic rigidities, both domestic and international, and caught up in a **dependence and dominance** relationship with rich countries. Within this general approach are three major streams of thought: the neocolonial dependence model, the false-paradigm model, and the dualistic-development thesis.

The Neocolonial Dependence Model

The first major stream, which we call the **neocolonial dependence model**, is an indirect outgrowth of Marxist thinking. It attributes the existence and continuance of underdevelopment primarily to the historical evolution of a highly unequal international capitalist system of rich country-poor country relationships. Whether because rich nations are intentionally exploitative or unintentionally neglectful, the coexistence of rich and poor nations in an international system dominated by such unequal power relationships between the **center** (the developed countries) and the **periphery** (the LDCs) renders attempts by poor nations to be self-reliant and independent difficult and sometimes even impossible.⁶ Certain groups in the developing countries (including landlords, entrepreneurs, military rulers, merchants, salaried public officials, and trade union leaders) who enjoy high incomes, social status, and political power constitute a small elite ruling class whose principal interest, knowingly or not, is in the perpetuation of the international capitalist system of inequality and conformity by which they are rewarded. Directly and indirectly, they serve (are dominated by) and are rewarded by (are dependent on) international special-interest power groups including multinational corporations, national bilateral-aid agencies, and multilateral assistance organizations like the World Bank or the International Monetary Fund (IMF), which are tied by allegiance or funding to the wealthy capitalist countries. The elites' activities and viewpoints often serve to inhibit any genuine reform efforts that might benefit the wider population and in some cases actually lead to even lower levels of living and to the perpetuation of **underdevelopment**. In short, the neo-Marxist, neocolonial view of underdevelopment attributes a large part of the Third World's continuing and worsening poverty to the existence and policies of the industrial capitalist countries of the Northern Hemisphere and their extensions in the form of small but powerful elite or **comprador groups** in the less developed countries.⁷ Underdevelopment is thus seen as an **externally induced phenomenon**, in contrast to the linear-stages and structural-change theories' stress on **internal** constraints such as insufficient savings and investment or lack of education and skills. Revolutionary struggles or at least major restructuring of the world capitalist system are therefore required to free dependent Third World nations from the direct and indirect economic control of their First World and domestic oppressors.

One of the most forceful statements of the international-dependence school of thought was made by Theotonio Dos Santos:

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Underdevelopment, far from constituting a state of backwardness prior to capitalism, is rather a consequence and a particular form of capitalist development known as dependent capitalism. . . . Dependence is a conditioning situation in which the economies of one group of countries are conditioned by the development and expansion of others. A relationship of interdependence between two or more economies or between such economies and the world trading system becomes a dependent relationship when some countries can expand through self-impulsion while others, being in a dependent position, can only expand as a reflection of the expansion of the dominant countries, which may have positive or negative effects on their immediate development. In either case, the basic situation of dependence causes these countries to be both backward and exploited. Dominant countries are endowed with technological, commercial, capital and socio-political predominance over dependent countries—the form of this predominance varying according to the particular historical moment—and can therefore exploit them, and extract part of the locally produced surplus. Dependence, then, is based upon an international division of labor which allows industrial development to take place in some countries while restricting it in others, whose growth is conditioned by and subjected to the power centers of the world.⁸

Curiously, a very similar but obviously non-Marxist perspective was expounded by Pope John Paul II in his widely quoted 1988 encyclical letter (a formal, elaborate expression of papal teaching) *Sollicitudo rei socialis* (The Social Concerns of the Church), in which he declared:

One must denounce the existence of economic, financial, and social mechanisms which, although they are manipulated by people, often function almost automatically, thus accentuating the situation of wealth for some and poverty for the rest. These mechanisms, which are maneuvered directly or indirectly by the more developed countries, by their very functioning, favor the interests of the people manipulating them. But in the end they suffocate or condition the economies of the less developed countries.

Various components of the neocolonial dependence argument will be explored in greater detail when we discuss problems of poverty, income distribution, unemployment, international trade, and foreign assistance in Parts Two and Three.

The False-Paradigm Model

A second and a less radical international-dependence approach to development, which we might call the **false-paradigm model**, attributes underdevelopment to faulty and inappropriate advice provided by well-meaning but often uninformed, biased, and ethnocentric international "expert" advisers from developed-country assistance agencies and multinational donor organizations. These experts offer sophisticated concepts, elegant theoretical structures, and complex economic models of development that often lead to inappropriate or incorrect policies. Because of institutional factors such as the central and remarkably resilient role of traditional social structures (tribe, caste, class, etc.), the highly unequal ownership of land and other property rights, the disproportionate control by local

elites over domestic and international financial assets, and the very unequal access to credit, these policies, based as they often are on mainstream, Lewis-type surplus labor or Chenery-type structural-change models, in many cases merely serve the vested interests of existing power groups, both domestic and international.

In addition, according to this argument, leading university intellectuals, trade unionists, future high-level government economists, and other civil servants all get their training in developed-country institutions where they are unwittingly served an unhealthy dose of alien concepts and elegant but inapplicable theoretical models. Having little or no really useful knowledge to enable them to come to grips in an effective way with real development problems, they often tend to become unknowing or reluctant apologists for the existing system of elitist policies and institutional structures. In university economics courses, for example, this typically entails the perpetuation of the teaching of many irrelevant Western concepts and models, while in government policy discussions too much emphasis is placed on attempts to measure capital-output ratios, to increase savings and investment ratios, or to maximize GNP growth rates. As a result, desirable institutional and structural reforms, many of which we have discussed, are neglected or given only cursory attention.

The Dualistic-Development Thesis

Implicit in structural-change theories and explicit in international-dependence theories is the notion of a world of dual societies, of rich nations and poor nations and, in the developing countries, pockets of wealth within broad areas of poverty. Dualism is a concept widely discussed in development economics. It represents the existence and persistence of increasing divergences between rich and poor nations and rich and poor peoples on various levels. Specifically, the concept of dualism embraces four key elements:⁹

1. Different sets of conditions, of which some are "superior" and others "inferior," can coexist in a given space. Examples of this element of dualism include Lewis's notion of the coexistence of modern and traditional methods of production in urban and rural sectors; the coexistence of wealthy, highly educated elites with masses of illiterate poor people; and the dependence notion of the coexistence of powerful and wealthy industrialized nations with weak, impoverished peasant societies in the international economy.
2. This coexistence is chronic and not merely transitional. It is not due to a temporary phenomenon, in which case time could eliminate the discrepancy between superior and inferior elements. In other words, the international coexistence of wealth and poverty is not simply a historical phenomenon that will be rectified in time. Although both the stages-of-growth theory and the structural-change models implicitly make such an assumption, the facts of growing international inequalities seem to refute it.
3. Not only do the degrees of superiority or inferiority fail to show any signs of diminishing, but they even have an inherent tendency to increase. For exam-

ple, the productivity gap between workers in developed countries and their counterparts in most LDCs seems to widen with each passing year.

4. The interrelations between the superior and inferior elements are such that the existence of the superior elements does little or nothing to pull up the inferior element; let alone "trickle down" to it. In fact, it may actually serve to push it down—to "develop its underdevelopment."

Conclusions and Implications

Whatever their ideological differences, the advocates of the neocolonial-dependence, false-paradigm, and dualism models reject the exclusive emphasis on traditional Western economic theories designed to accelerate the growth of GNP as the principal index of development. They question the validity of Lewis-type two-sector models of modernization and industrialization in light of their questionable assumptions and recent Third World history. They further reject the claims made by Chenery and others that there exist well-defined empirical patterns of development that should be pursued by most poor countries on the periphery of the world economy. Instead, dependence, false-paradigm, and dualism theorists place more emphasis on international power imbalances and on needed fundamental economic, political, and institutional reforms, both domestic and worldwide. In extreme cases, they call for the outright expropriation of privately owned assets in the expectation that public asset ownership and control will be a more effective means to help eradicate absolute poverty, provide expanded employment opportunities, lessen income inequalities, and raise the levels of living (including health, education, and cultural enrichment) of the masses. Although a few radical neo-Marxists would even go so far as to say that economic growth and structural change do not matter, the majority of thoughtful observers recognize that the most effective way to deal with these diverse social problems is to accelerate the pace of economic growth through domestic and international reforms accompanied by a judicious mixture of both public and private economic activity.

Dependence theories have two major weaknesses. First although they offer an appealing explanation of why many poor countries remain underdeveloped, they offer little formal or informal explanation of how countries initiate and sustain development. Second and perhaps more important, the actual economic experience of LDCs that have pursued revolutionary campaigns of industrial nationalization and state-run production has been mostly negative. As we shall discover in later chapters, governments can fail as well as markets; the key to successful development performance is achieving a careful balance among what government can successfully accomplish, what the private market system can do, and what both can best do together.

At the same time in the 1970s that the international dependence revolution in development theory was capturing the imagination of many Western and LDC scholars, a neoclassical free-market counterrevolution was beginning to emerge, ultimately to dominate Western (and, to a lesser extent, LDC) development writings during the 1980s and 1990s.

The Neoclassical Counterrevolution

■ Challenging the Statist Model: Free Markets, Public Choice, and Market-Friendly Approaches

In the 1980s, the political ascendancy of conservative governments in the United States, Canada, Britain, and West Germany brought a neoclassical counterrevolution in economic theory and policy. In developed nations, this counterrevolution favored supply-side macroeconomic policies, rational expectations theories, and the privatization of public corporations. In developing countries it called for freer markets and the dismantling of public ownership, statist planning, and government regulation of economic activities. Neoclassicists obtained controlling votes on the boards of the world's two most powerful international financial agencies—the World Bank and the International Monetary Fund. In conjunction and with the simultaneous erosion of influence of organizations such as the International Labor Organization (ILO), the United Nations Development Program (UNDP), and the United Nations Conference on Trade and Development (UNCTAD), which more fully represent the views of LDC delegates, it was inevitable that the neoconservative, free-market challenge to the interventionist arguments of dependence theorists would gather momentum.

The central argument of the neoclassical counterrevolution is that underdevelopment results from poor resource allocation due to incorrect pricing policies and too much state intervention by overly active Third World governments. Rather, the leading writers of the counterrevolution school, including Lord Peter Bauer, Deepak Lal, Ian Little, Harry Johnson, Bela Balassa, Julian Simon, Jagdish Bhagwati, and Anne Krueger, argue that it is this very state intervention in economic activity that slows the pace of economic growth. The neoliberals argue that by permitting competitive free markets to flourish, privatizing state-owned enterprises, promoting free trade and export expansion, welcoming investors from developed countries, and eliminating the plethora of government regulations and price distortions in factor, product, and financial markets, both economic efficiency and economic growth will be stimulated. Contrary to the claims of the dependence theorists, the neoclassical counterrevolutionaries argue that the Third World (many don't even accept this terminology) is underdeveloped not because of the predatory activities of the First World and the international agencies that it controls but rather because of the heavy hand of the state and the corruption, inefficiency, and lack of economic incentives that permeate the economies of developing nations. What is needed, therefore, is not a reform of the international economic system, a restructuring of dualistic developing economies, an increase in foreign aid, attempts to control population growth, or a more effective central planning system. Rather, it is simply a matter of promoting free markets and laissez-faire economics within the context of permissive governments that allow the "magic of the marketplace" and the "invisible hand" of market prices to guide resource allocation and stimulate economic development. They point both to the success of countries like South Korea, Taiwan, and Singapore as "free market" examples (although, as we shall see

later, these Asian Tigers are far from the laissez-faire neoconservative prototype) and to the failures of the public-interventionist economies of Africa and Latin America.¹⁰

The neoclassical challenge to the prevailing development orthodoxy can be divided into three component approaches: the free-market approach, the public-choice (or "new political economy") approach, and the "market-friendly" approach. Free-market analysis argues that markets alone are efficient—product markets provide the best signals for investments in new activities; labor markets respond to these new industries in appropriate ways; producers know best what to produce and how to produce it efficiently; and product and factor prices reflect accurate scarcity values of goods and resources now and in the future. Competition is effective, if not perfect; technology is freely available and costless to absorb; information is also perfect and costless to obtain. Under these circumstances, any government intervention in the economy is by definition distortionary and counterproductive. Free-market development economists have tended to assume that Third World markets are efficient and that whatever imperfections exist are of little consequence.

Public-choice theory, also known as the new political economy approach, goes even further to argue that governments can do nothing right. This is because public-choice theory assumes that politicians, bureaucrats, citizens, and states act solely from a self-interested perspective, using their power and the authority of government for their own selfish ends. Citizens use political influence to obtain special benefits (called "rents") from government policies (e.g., import licenses or rationed foreign exchange) that restrict access to important resources. Politicians use government resources to consolidate and maintain positions of power and authority. Bureaucrats and public officials use their positions to extract bribes from rent-seeking citizens and to operate protected businesses on the side. Finally, states use their power to confiscate private property from individuals. The net result is not only a misallocation of resources but also a general reduction in individual freedoms. The conclusion, therefore, is that minimal government is the best government.¹¹

The market-friendly approach is the most recent variant on the neoclassical counterrevolution. It is associated principally with the writings of the World Bank and its economists, many of whom were more in the free-market and public-choice camps during the 1980s.¹² This approach recognizes that there are many imperfections in LDC product and factor markets and that governments do have a key role to play in facilitating the operation of markets through "nonselective" (market-friendly) interventions—for example, by investing in physical and social infrastructure, health care facilities, and educational institutions and by providing a suitable climate for private enterprise. The market-friendly approach also differs from the free-market and public-choice schools of thought by accepting the notion that market failures are more widespread in developing countries in areas such as investment coordination and environmental outcomes. Moreover, phenomena such as missing and incomplete information, externalities in skill creation and learning, and economies of scale in production are also endemic to LDC markets. In fact it is the recognition of these last three phenomena that gives rise

to the newest school of development theory, the *new* or *endogenous growth* school of thought, to which we turn shortly.

Traditional ("Old") Neoclassical Growth Theory

Another cornerstone of the neoclassical free-market argument is the assertion that liberalization (opening up) of national markets draws additional domestic and foreign investment and thus increases the rate of capital accumulation. In terms of GNP growth, this is equivalent to raising domestic savings rates, which enhances **capital-labor ratios** and per capita incomes in capital-poor developing countries. Traditional neoclassical models of growth are a direct outgrowth of the Harrod-Domar and Solow models, which both stress the importance of savings.¹³

The **Solow neoclassical growth model** in particular represented the seminal contribution to the neoclassical theory of growth and later earned Solow the Nobel Prize in economics. It expanded on the Harrod-Domar formulation by adding a second factor, labor, and introducing a third independent variable, technology, to the growth equation. Unlike the fixed-coefficient, constant-returns-to-scale assumption of the Harrod-Domar model, Solow's neoclassical growth model exhibited diminishing returns to labor and capital separately and constant returns to both factors jointly. Technological progress became the residual factor explaining long-term growth, and its level was assumed by Solow and other growth theorists to be determined exogenously, that is, independently of all other factors.

More formally, the Solow neoclassical growth model used the standard aggregate production function (similar to the Lewis modern-sector equation) in which $Y = Ae^{t\mu}K^\alpha L^{1-\alpha}$, where Y is gross domestic product, K is the stock of human and physical capital, L is unskilled labor, A is a constant that reflects the base level of technology, and $e^{t\mu}$ reflects the constant exogenous rate at which technology grows over time t . Thus α represents the elasticity of output with respect to capital (the percentage increase in GDP resulting from a 1% increase in human and physical capital). It is usually measured statistically as the share of capital in a country's national income accounts. Since α is assumed to be less than 1 and private capital is assumed to be paid its marginal product so that there are no external economies, this formulation of neoclassical growth theory yields diminishing returns to capital and labor.

According to **traditional (old) neoclassical growth theory**, output growth results from one or more of three factors: increases in labor quantity and quality (through population growth and education), increases in capital (through saving and investment), and improvements in technology (see Chapter 4). **Closed economies** (those with no external activities) with lower savings' rates (other things being equal) grow more slowly in the short run than those with high savings' rates and tend to converge to lower per capita income levels. **Open economies** (those with trade, foreign investment, etc.), however, experience income convergence at higher levels as capital flows from rich countries to poor countries where capital-labor ratios are lower and thus returns on investments are higher. Consequently, by impeding the inflow of foreign investment, the heavy-

handedness of LDC governments, according to neoclassical growth theory, will retard growth in the economies of the Third World.

Conclusions and Implications

Like the dependence revolution of the 1970s, the neoclassical counterrevolution of the 1980s had its origin in an economics-cum-ideological view of the Third World and its problems. Whereas dependence theorists (many, but certainly not all, of whom were LDC economists) saw underdevelopment as an externally induced phenomenon, neoclassical revisionists (most, but certainly not all, of whom were Western economists) saw the problem as an internally induced LDC phenomenon, one of too much government intervention and bad economic policies. Such finger-pointing on both sides is not uncommon in issues so contentious as those that divide rich and poor nations.

But what of the neoclassical counterrevolution's contention that free markets and less government provide the basic ingredients for Third World development? On strictly efficiency (as opposed to equity) criteria, there can be little doubt that market price allocation usually does a better job than state intervention. The problem is that many LDC economies are so different in structure and organization from their Western counterparts that the behavioral assumptions and policy precepts of traditional neoclassical theory are sometimes questionable and often incorrect. Competitive markets simply do not exist, nor, given the institutional, cultural, and historical context of many LDCs, would they necessarily be desirable from a long-term economic and social perspective (see Chapter 16). Consumers as a whole are rarely sovereign about anything, let alone about what goods and services are to be produced, in what quantities, and for whom. Information is limited, markets are fragmented, and much of the economy is still nonmonetized.¹⁴ There are widespread externalities of both production and consumption as well as discontinuities in production and indivisibilities (i.e., economies of scale) in technology. Producers, private or public, have great power in determining market prices and quantities sold. The ideal of competition is typically just that—an ideal with little relation to reality. Instead of the equilibrium, automatic-adjustment framework of neoclassical theory, many LDC markets are better analyzed through disequilibrium, structural-adjustment models in which responses to price and wage movements can be "perverse" (not in the direction predicted by traditional free-market models; see Chapters 8, 9, and 13). Although monopolies of resource purchase and product sale are a pervasive Third World phenomenon, the traditional neoclassical theory of monopoly also offers little insight into the day-to-day activities of public and private corporations. Decision rules can vary widely with the social setting, so that profit maximization may be a low-priority objective in comparison with, say, the creation of jobs or the replacement of foreign managers with local personnel (see Chapter 17). Finally, the invisible hand often acts not to promote the general welfare but rather to lift up those who are already well-off while pushing down the vast majority.

Much can be learned from neoclassical theory with regard to the importance of elementary supply-and-demand analysis in arriving at "correct" product, factor,

and foreign-exchange prices for efficient production and resource allocation. However, do not confuse free markets with price allocation. Enlightened governments can also make effective use of prices as signals and incentives for influencing socially optimal resource allocations. Indeed, we will often demonstrate the usefulness of various tools of neoclassical theory in our later analysis of problems such as population growth, agricultural stagnation, unemployment and underemployment, the environment, educational demands, export promotion versus import substitution, devaluation, project planning, monetary policy, and economic privatization. Nevertheless, the reality of the institutional and political structure of many Third World economies—not to mention their differing value systems and ideologies—often makes the attainment of appropriate economic policies based either on markets or enlightened public intervention an exceedingly difficult endeavor. In an environment of widespread institutional rigidity and severe socioeconomic inequality, both markets and governments will typically fail. It is not simply an either-or question based on ideological leaning; rather it is a matter of assessing each individual country's situation on a case-by-case basis. Development economists must therefore be able to distinguish between textbook neoclassical theory and the institutional and political reality of contemporary LDCs.¹⁵ They can then choose the neoclassical concepts and models that can best illuminate issues and dilemmas of development and discard those that cannot. This will be our task in Parts Two, Three, and Four.

Let us now turn to our final topic in this chapter, the recent emergence of a fifth approach to analyzing development.

The New Growth Theory

■ Motivation for the New Growth Theory

■ The poor performance of neoclassical theories in illuminating the sources of long-term economic growth has led to a general dissatisfaction with traditional theory. In fact, according to traditional theory, there is no intrinsic characteristic of economies that causes them to grow over extended periods of time. The literature is instead concerned with the dynamic process through which capital-labor ratios approach long-run equilibrium levels. In the absence of external "shocks" or technological change, all economies will converge to zero growth. Hence rising per capita GNP is considered a temporary phenomenon resulting from a change in technology or a short-term equilibrating process in which an economy approaches its long-run equilibrium. Unsurprisingly, this body of theory fails to provide a satisfactory explanation for the remarkably consistent pace of historical growth in economies around the globe (see Chapter 4).

Any increases in GNP that cannot be attributed to short-term adjustments in stocks of either labor or capital are ascribed to a third category, commonly referred to as the **Solow residual**. This residual, despite its name, is responsible for roughly 50% of historical growth in the industrialized nations.¹⁶ In a rather ad hoc manner, neoclassical theory credits the bulk of economic growth to an exogenous or

completely independent process of technological progress. Though intuitively plausible, this approach has at least two insurmountable drawbacks. First, using the neoclassical framework, it is impossible to analyze the determinants of technological advance because it is completely independent of the decisions of economic agents. And second, the theory fails to explain large differences in residuals across countries with similar technologies. In other words, a great deal of faith has been placed in a poorly understood external process for which there is little theoretical or empirical support.

Disenchantment with traditional neoclassical models of economic growth intensified during the late 1980s and early 1990s as the Third World debt crisis escalated and it became increasingly clear that traditional theory was at a loss to explain the dramatic disparities in economic performance across countries. According to neoclassical theory, the low capital-labor ratios of developing countries promise exceptionally high rates of return on investment. The free-market reforms imposed on highly indebted countries by the World Bank and the International Monetary Fund should thus have prompted higher investment, rising productivity, and improved standards of living. Yet even after the prescribed liberalization of trade and domestic markets, many LDCs experienced little or no growth and failed to attract new foreign investment or to halt the flight of domestic capital. The anomalous behavior of Third World capital flows (from poor to rich nations) helped provide the impetus for the development of the newest approach to the economics of growth and development: the concept of **endogenous growth** or, more simply, the **new growth theory**. Though still eclectic and not quite as fully developed as the four earlier approaches, the new growth theory represents a key component of the emerging development theory.¹⁷

Endogenous Growth

The new growth theory provides a theoretical framework for analyzing endogenous growth, persistent GNP growth that is determined by the system governing the production process rather than by forces outside that system. In contrast to traditional neoclassical theory, these models hold GNP growth to be a natural consequence of long-run equilibrium. The principal motivations of the new growth theory are to explain both growth rate differentials across countries and a greater proportion of the growth observed. More succinctly, endogenous growth theorists seek to explain the factors that determine the size of μ , the rate of growth of GDP that is left unexplained and exogenously determined in the Solow neoclassical growth equation (i.e., the Solow residual).

Models of endogenous growth bear some structural resemblance to their neoclassical counterparts, but they differ considerably in their underlying assumptions and the conclusions drawn. The most significant theoretical differences stem from three factors: Models of endogenous growth discard the neoclassical assumption of diminishing marginal returns to capital investments, permit increasing returns to scale in aggregate production, and frequently focus on the role of externalities in determining the rate of return on capital investments.¹⁸ By assuming that public and private investments in human capital generate external

Parallel
to "New
Growth
Economics"

economies and productivity improvements that offset the natural tendency for diminishing returns, endogenous growth theory seeks to explain the existence of increasing returns to scale and the divergent long-term growth patterns among countries. And whereas technology still plays an important role in these models, it is no longer necessary to explain long-run growth.

A useful way to contrast the new (endogenous) growth theory with traditional (old) neoclassical theory is to recognize that many endogenous growth theories can be expressed by the simple equation $Y = AK$. In this formulation, A is intended to represent any factor that affects technology, and K again includes both physical and human capital. But notice that there are no diminishing returns to capital in this formula; so the possibility exists that investments in physical and human capital can generate external economies and productivity improvements that exceed private gains by an amount sufficient to offset diminishing returns. This in turn creates the further possibility that investments that generate these external economies cause α in the Solow equation to equal unity so that the neoclassical growth equation $Y = Ae^{\mu t} K^{\alpha} L^{1-\alpha}$ reduces to the endogenous growth equation $Y = Ae^{\mu t} K$. The net result is sustained long-term growth resulting from increasing returns to scale—an outcome prohibited by traditional neoclassical growth theory. Thus even though the new growth theory reemphasizes the importance of savings and human capital investments for achieving rapid growth, it also leads to several implications for growth that are in direct conflict with traditional theory. First, there is no force leading to the equilibration of growth rates across closed economies; national growth rates remain constant and differ across countries depending on national savings rates and technology levels. Furthermore, there is no tendency for per capita income levels in capital-poor countries to catch up with those in rich countries with similar savings rates. A serious consequence of these facts is that a temporary or prolonged recession in one country leads to a permanent increase in the income gap between itself and wealthier countries. ✓

But perhaps the most interesting aspect of endogenous growth models is that they help explain anomalous international flows of capital that exacerbate wealth disparities between the First World and Third World. The potentially high rates of return on investment offered by developing economies with low capital-labor ratios are greatly eroded by lower levels of complementary investments in human capital (education), infrastructure, or research and development (R&D).¹⁹ In turn, poor countries benefit less from the broader social gains associated with each of these alternative forms of capital expenditure.²⁰ Because individuals receive no personal gain from the positive externalities created by their own investments, the free market leads to the accumulation of less than the optimal level of complementary capital.

Where complementary investments produce social as well as private benefits, governments may improve the efficiency of resource allocation. They can do this by providing public goods (infrastructure) or encouraging private investment in knowledge-intensive industries where human capital can be accumulated and subsequent increasing returns to scale generated. Unlike the Solow model, new growth theory models explain technological change as an endogenous outcome of public and private investments in human capital and knowledge-intensive indus-

tries. Thus in contrast to neoclassical counterrevolution theories, models of endogenous growth suggest an active role for public policy in promoting economic development through direct and indirect investments in human capital formation and the encouragement of foreign private investment in knowledge-intensive industries such as computer software and telecommunications. Though in many ways endogenous growth theory remains strongly rooted in the neoclassical tradition, it represents a departure from strict adherence to the dogma of free markets and passive governments.

Criticisms of the New Growth Theory

An important shortcoming of the new growth theory is that it remains dependent on a number of traditional neoclassical assumptions that are often inappropriate for LDC economies. For example, it assumes that there is but a single sector of production or that all sectors are symmetrical. This does not permit the crucial growth-generating reallocation of labor and capital among the sectors that are transformed during the process of structural change.²¹ Moreover, economic growth in developing countries is frequently impeded by inefficiencies arising from poor infrastructure, inadequate institutional structures, and imperfect capital and goods markets. Because endogenous growth theory overlooks these very influential factors, its applicability for the study of economic development is limited, especially when country-to-country comparisons are involved. For example, existing theory fails to explain low rates of factory capacity utilization in low-income countries where capital is scarce. In fact, poor incentive structures may be as responsible for sluggish GNP growth as low rates of saving and human capital accumulation. Allocational inefficiencies are common in economies undergoing the transition from traditional to commercialized markets. However, their impact on short- and medium-term growth has been neglected due to the new theory's overemphasis on the determinants of long-term growth rates. Finally, empirical studies of the predictive value of endogenous growth theories have to date offered only limited support.²²

Theories of Development: Reconciling the Differences

In this chapter we have reviewed a range of competing theories and approaches to the study of economic development. Each approach has its strengths and weaknesses. The fact that there exists such controversy—be it ideological, theoretical, or empirical—is what makes the study of economic development both challenging and exciting. Even more than other fields of economics, development economics has no universally accepted doctrine or paradigm. Instead, we have a continually evolving pattern of insights and understandings that together provide the basis for examining the possibilities of contemporary development of the diverse nations of Africa, Asia, and Latin America.

You may wonder how consensus could emerge from so much disagreement. Although it is not implied here that such a consensus exists today or can indeed

ever exist when such sharply conflicting values and ideologies prevail, we do suggest that something of significance can be gleaned from each of the five approaches that we have described. For example, the linear-stages model emphasizes the crucial role that saving and investment plays in promoting sustainable long-run growth. The Lewis two-sector model of structural change underlines the importance of attempting to analyze the many linkages between traditional agriculture and modern industry, and the empirical research of Chenery and his associates attempts to document precisely how economies undergo structural change while identifying the numeric values of key economic parameters involved in that process. The thoughts of international-dependence theorists alert us to the importance of the structure and workings of the world economy and the many ways in which decisions made in the developed world can affect the lives of millions of people in the developing world. Whether or not these activities are deliberately designed to maintain the Third World in a state of dependence is often beside the point. The fact of their very dependence and their vulnerability to key economic decisions made in the capitals of North America, Western Europe, or Japan (not to mention those made by the IMF and the World Bank) forces us to recognize the validity of many of the propositions of the international-dependence school. The same applies to arguments regarding the dualistic structures and the role of ruling elites in the domestic economies of the developing world.

Although a good deal of conventional neoclassical economic theory needs to be modified to fit the unique social, institutional, and structural circumstances of developing nations, there is no doubt that promoting efficient production and distribution through a proper, functioning price system is an integral part of any successful development process. Many of the arguments of the neoclassical counter-revolutionaries, especially those related to the inefficiency of state-owned enterprises and the failures of development planning (see Chapter 16) and the harmful effects of government-induced domestic and international price distortions (see Chapters 8, 13, and 15) are as well taken as those of the dependence and structuralist schools. By contrast, the unquestioning exaltation of free markets and open economies along with the universal disparagement of public-sector leadership in promoting growth with equity in the Third World is open to serious challenge. As we shall discover all too often in Parts Two, Three, and Four, successful development requires a skillful and judicious balancing of market pricing and promotion where markets can indeed exist and operate efficiently, along with intelligent and equity-oriented government intervention in areas where unfettered market forces would lead to undesirable economic and social outcomes.

Finally, although still in its formative stage, the new growth theory is contributing to a better theoretical understanding of the divergent long-run growth experiences of the developed and developing worlds by focusing on the principal sources of endogenous economic growth. Though steeped in the neoclassical tradition, these new models modify and expand the assumptions of traditional growth theory to help explain the observed patterns of growth among nations. Perhaps most important, they restore a significant role for government policy in

promoting long-run growth and development. We will examine the many lessons of this historical growth experience in Chapter 4.

In summary, each of these approaches to understanding development has something to offer. Their respective contributions will become more clear later in the book when we explore in detail both the origins of and possible solutions to a wide range of problems such as poverty, population growth, unemployment, rural development, international trade, and the environment.