Mekelle University

College of Business and Economics

Department of Economics

Course Name: Development Economics II

Target group: 2nd year economics students

Course code: Econ 2072 **Credit hour/ECTs: 3/5** **Pre-requisite: Econ 2071** **Semester: II**

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April, 2020

Mekelle

Population Growth and Economic Development

Causes, Consequences, and Controversies

Objectives

- The chapter aims at examining the relationship between population growth and quality of Life
- Specifically, it includes,
  - assessing the trends in population growth
  - defining and understanding related concepts & processes such as
    - population growth and fertility rate
    - the hidden momentum of population growth
    - the demographic transition
  - discussing two model on the causes of high fertility in LDCs- the Malthusian and Household Models
  - examining the conflicting views on effects of population growth on economic development, and
  - identifying some policy options

1.1 The Basic Issue: Population Growth and the QoL

- The problem of population growth is not simply a problem of numbers.
- It is a problem of human welfare and development
- since development
  - entails the improvement in people's levels of living—their incomes, health, education, and general well-being, and
  - encompasses their capabilities, self-esteem, respect, dignity, and freedom to choose,
- then the really important question about population growth is this:
  - How does the contemporary population situation in many LDCs affect their chances of realizing the goal of development and its sustainability?
  - Conversely, the effect of dev't on population growth?

The Basic Issue: Population Growth and QoL

- Specifically, six major issues can be raised if there is a relationship between population growth and quality of life:
  - Will developing countries be able to **improve levels of living** given their anticipated population growth?
  - How will developing countries deal with the vast increases in their **labour forces**?
  - How will higher population growth rates affect **poverty**?
  - Will developing countries be able to extend the coverage and improve the quality of health care and education in the face of rapid population growth?
  - Is there relationship between poverty and family size?
  - Is affluence in developed countries more harmful to global environment and to the poor than the absolute increase in their numbers?

1.2 Trends in Population Growth

- Until 8000 BC, the growth rate of world population was only 0.002%/year or 20/million people with doubling period (DP) of 36,000 years.
- However, since about 8,000 BC, the growth rate has accelerated and, in the last 200 years, it has been explosive, as indicated below.
- 0.05% between 8000 B.C and 1650 (DP of1440 yrs)
- 0.43% between 1650 and 1900, with DP of 167
- 0.91% between 1900 and 1950, 79
- 1.93%between 1950 and 1980, 37
- 1.46%/year between 1980 and 2010 49
- 1.3% or less currently, and the expected 55
- 0.8% in 2025 and 0.4% in 2050 (90 &180resp)

Trends in Population Growth

- As the result of the absence or small growth, it reached one billion in 1804, millions of years after human appearance on earth.
- The second billion was added a century later, in 1930.
- The third billion came in only 30 years, in 1960;
- The fourth took only 15 years, in 1975;
- The fifth 11 years, in 1986;
- The sixth billion took 12 years, in 1998
- The seventh billion around 14 years, in 2012
- It is also expected to take more years in the future

Number of Years Taken (expected to take) for Population to Increase by 1 Billion

Trends in Population Growth

- **More than eighty percent** of the world's population lives In LDCs.
- There is **great variation in birth rates, death rates, and population growth** among nations.
- Countries can be roughly divided into **three groups**:
- (1) the DCs and transitional economies, consisting of countries in Europe, North America, Australia, New Zealand, Japan, etc.
  - these have population growth rates below 0.8 percent/ year;

Trends in Population Growth

- (2) several countries from East and Southeast Asia and Latin America
  - their annual growth rates is between 0.8 and 1.8 percent
- (3) the bulk of the LDCs – most of Africa, Asia, and Latin America,
  - population growth rates is at least 1.9 percent per year
- The DCs' and transitional countries' birth rate are no more than 16 per 1,000.
- Most developing countries have birth rates of at least 25 per 1,000.
- Countries in category 2 generally fall between these two figures.
-

Trends in Population Growth

- Most of the large increases in population between 1994 and 2025 are expected in the developing world: Asia, Africa, and Latin America.
  - Their share of the global population increased from 70% in 1950 to 81.5% in 2000, and is expected to reach 85.1% in 2025.
  - From 1950 to 2000, Asia, Africa, and Latin America grew at a rate of 2.1 percent yearly
- Africa is expected to have the most rapid growth between 2000 to 2025 (2.4% yearly) due to:

Trends in Population Growth

  - High birth rate (38 per 1,000) with only 26 percent of married women using contraceptives,
  - but a low death rate (14 per 1,000) which plummeted from 1930 to 1990 because of improvements in health, nutrition, medicine, and sanitation

- Generally,
  - the world population growth during the last 50 to 60 years was unprecedentedly faster, but
  - the rate has been decelerating since its peak rate of 2.3% yearly in 1960 to 1.3% in 2005 to an expected 0.8% in 2025 and 0.4% in 2050

Trends in Population Growth

- The contributing factors for decline in population growth include
  - Urbanization
  - greater economic aspirations,
  - increased female education and labour force participation, and
  - more accessibility to family planning
- However, every year, more than 75 million people are being added to the world's population.
  - Almost all of this net population increase—97%—is in developing countries.
  - Increases of such magnitude are unprecedented.

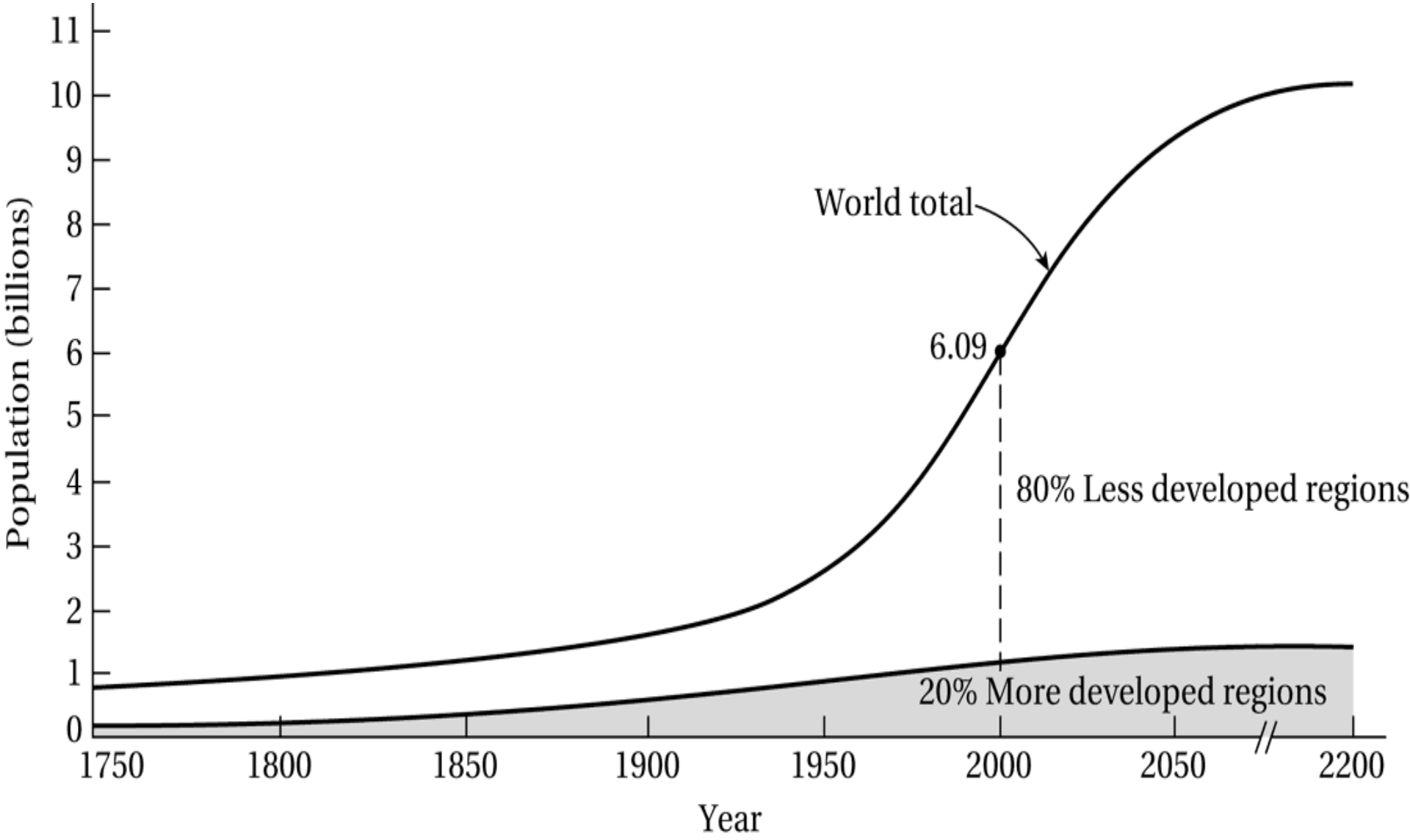
Trends in Population Growth

TABLE 6.1 Estimated World Population Growth through History

Year	Estimated Population (millions)	Estimated Annual Percentage Increase in the Intervening Period
10,000 B.C.	5	
A.D. 1	250	0.04
1650	545	0.04
1750	728	0.29
1800	906	0.45
1850	1,171	0.53
1900	1,608	0.65
1950	2,576	0.91
1970	3,698	2.09
1980	4,448	1.76
1990	5,292	1.73
2000	6,090	1.48
2050 (projected)	9,036	0.45

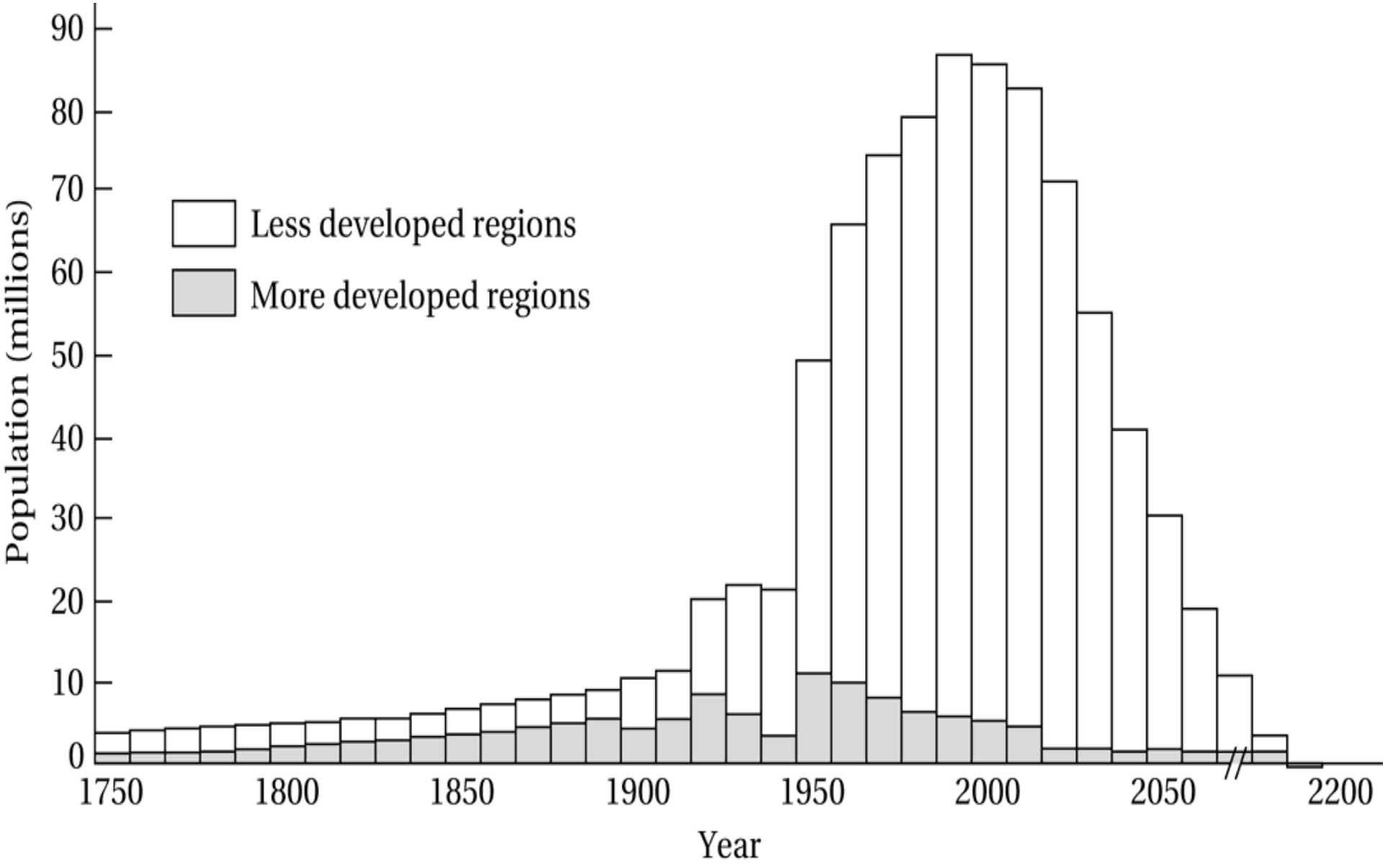
Sources: Warren S. Thompson and David T. Lewis, *Population Problems*, 5th ed. (New York: McGraw-Hill, 1965), p. 384: United Nations, *Demographic Yearbook for 1971* (New York: United Nations, 1971); United Nations, *Report on the World Social Situation, 1997* (New York: United Nations, 1997), p. 14; Population Reference Bureau, *World Population Data Sheet* (Washington, D.C.: Population Reference Bureau, 1998, 2001).

Population: Historical trends



(a) Absolute size

Population Growth, 1750-2200:



(b) Increase by decade

World Population Distribution by Region in 2010 and the Projected for 2050

	2010	2050
• Northern America	5%	5%
• Europe	11%	8%
• Latin America	8%	7%
• Africa	15%	22%
• Asia and the Pacific	61%	58%
• Total in billion	6.89	9.5

Population: Historical and geographical trends

TABLE 6.3 The Fifteen Largest Countries and Their Annual Population Increases

Country	Rank	Total Population, 1998 (millions)	Rate of Natural Increase, 1998 (%)	Annual Increase (millions)
China	1	1,243	1.0	12.4
India	2	989	1.9	18.8
United States	3	270	0.6	1.6
Indonesia	4	207	1.5	3.1
Brazil	5	162	1.4	2.3
Russia	6	147	–0.5	–0.7
Pakistan	7	142	2.8	4.0
Japan	8	126	0.2	0.3
Bangladesh	9	123	1.8	2.2
Nigeria	10	122	3.0	3.7
Mexico	11	98	2.2	2.2
Germany	12	82	–0.1	–0.1
Vietnam	13	79	1.2	0.9
Philippines	14	75	2.3	1.7
Turkey	15	65	1.6	1.0

Source:: Population Reference Bureau, *1998 World Population Data Sheet* (Washington, D.C.: Population Reference Bureau, 1998).

Concepts and definitions

- Rate of population growth is measured as the percentage yearly net relative change in population due to natural increase and net international migration.
  - Natural increase is the difference in the fertility rate and mortality rate.
  - Net international migration is the difference between immigration and emigration
- Total fertility rate (TFR) is the average number of children a woman would have, assuming that the current age-specific birth rates remain constant throughout her childbearing years.
- The child bearing years range between 15-49 years of age.

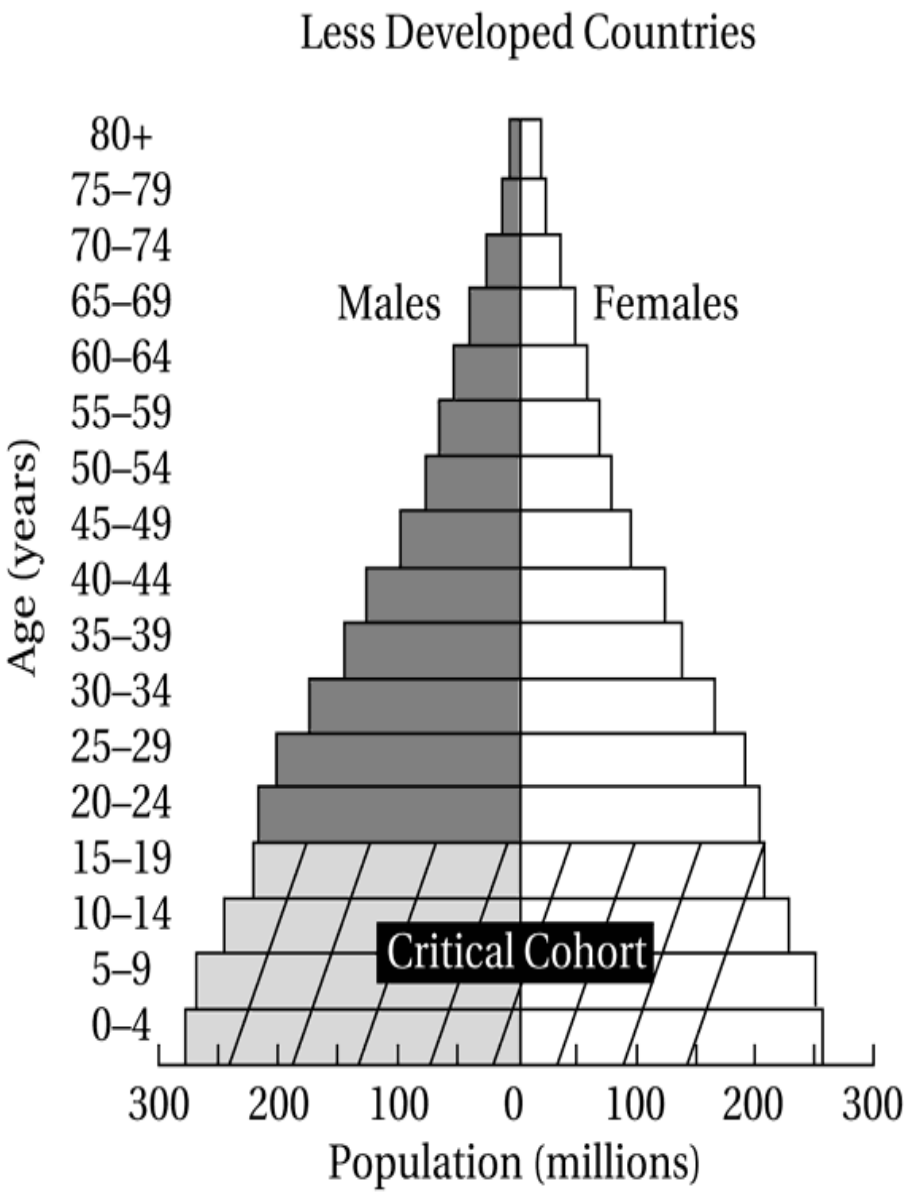
Concepts and definitions

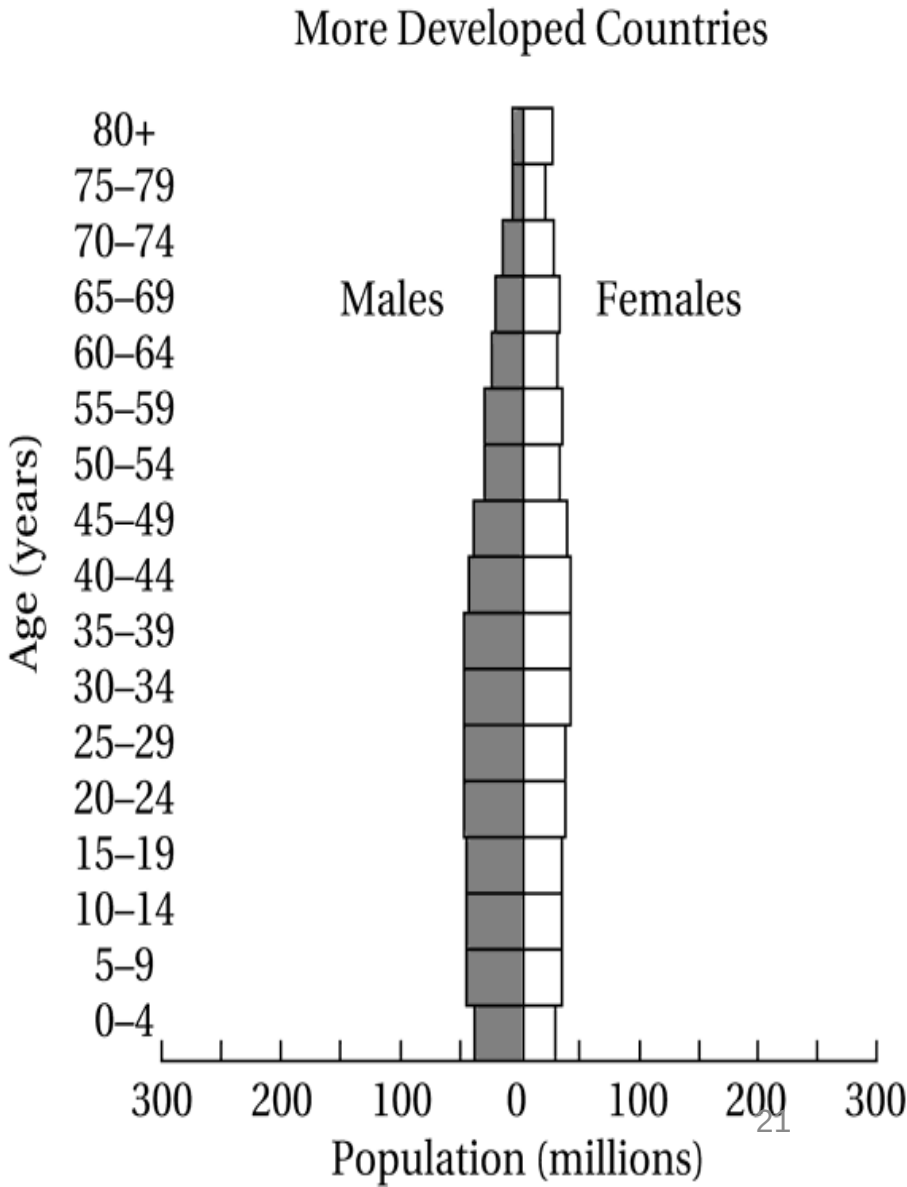
- Dependency burden:
  - Youth dependency ratio: the proportion of young people under age of 15 to the working population aged 15 to 64 in a country
  - Old age dependency ratio: the proportion of the elderly people over the age of 64 to the working population aged 16 to 64 in a country
- The youth dependency gives rise to the hidden momentum of population growth, discussed below.
  - It is a dynamic latent process of population growth where population continues to grow despite a fall in birth rate due to larger number of child bearing couples.

1.3 The Hidden Momentum of Population Growth (HMPG)

- The Hidden Momentum of Population Growth is
  - the tendency of growth to continue even after birth rates have declined substantially
  - in other words, like an inertia of a car, it tends to keep going for some time before coming to a stop
- There are two basic reasons for this
  - the social, economic, and institutional forces that have influenced fertility rates over the course of centuries
    - these do not simply evaporate overnight
  - the age structure of the population of many LDCs
    - The large existing youthful population expands the population's base of potential parents
    - young people greatly out number their parents
    - When the young reaches adulthood, the number of potential parents will inevitably be much larger than at present

Population Pyramids: Less Developed and More Developed Countries; 1998





1.4: The Demographic Transition

- The demographic transition explains about the period of rapid population growth happening between two periods of stable population
- Hence, there are three stages:
  - Stage 1: A preindustrial, stable population (zero growth rate) characterized by high birth and high death rates
  - Stage 2: fast growth rate because fertility remains high (especially, in its early period) but mortality is declining;
  - Stage 3: a later, modern, stable population marked by low fertility and mortality-nearly equal
- In stage 1: death rate was high because famine, disease, and war were potent checks to population in the ancient and medieval periods

The Demographic Transition

- In stage 2: though birth rates remain high, death rates fall rapidly
  - This leads to sharp increases in population growth compared to past centuries
  - The decline in death rate is because of the advances in health, medicine, nutrition, sanitation, transportation, communication, commerce, and production
- In stage 3: at its early period, birth rates fall rapidly,
  - reflecting not only more effective contraceptives and more vigorous family planning programs,
  - but also the increased cost of children, higher aspirations, and changing values and social structure associated with urbanization, education, and economic development
  - Finally, both death and birth rates are low & nearly equal

The Demographic Transition

- Contrasting contemporary LDCs with preindustrial period of western Europe
  - In the present LDCs, the decline in death rates is rapid and birth rate is considerably higher because of
    - the application of highly effective imported modern medical and public health technologies
    - early marriage which lead to both more families for a given population size and more years in which to have children
- However, there is variation among LDCs
  - while a few developing countries have reached stage 3
  - many of them are still in the early period of stage 2 having high birth rate,
  - the question is why birth rate is high in LDCs and why it falls down in stage 3 like in the DCs?
  - The following section discusses the explanations

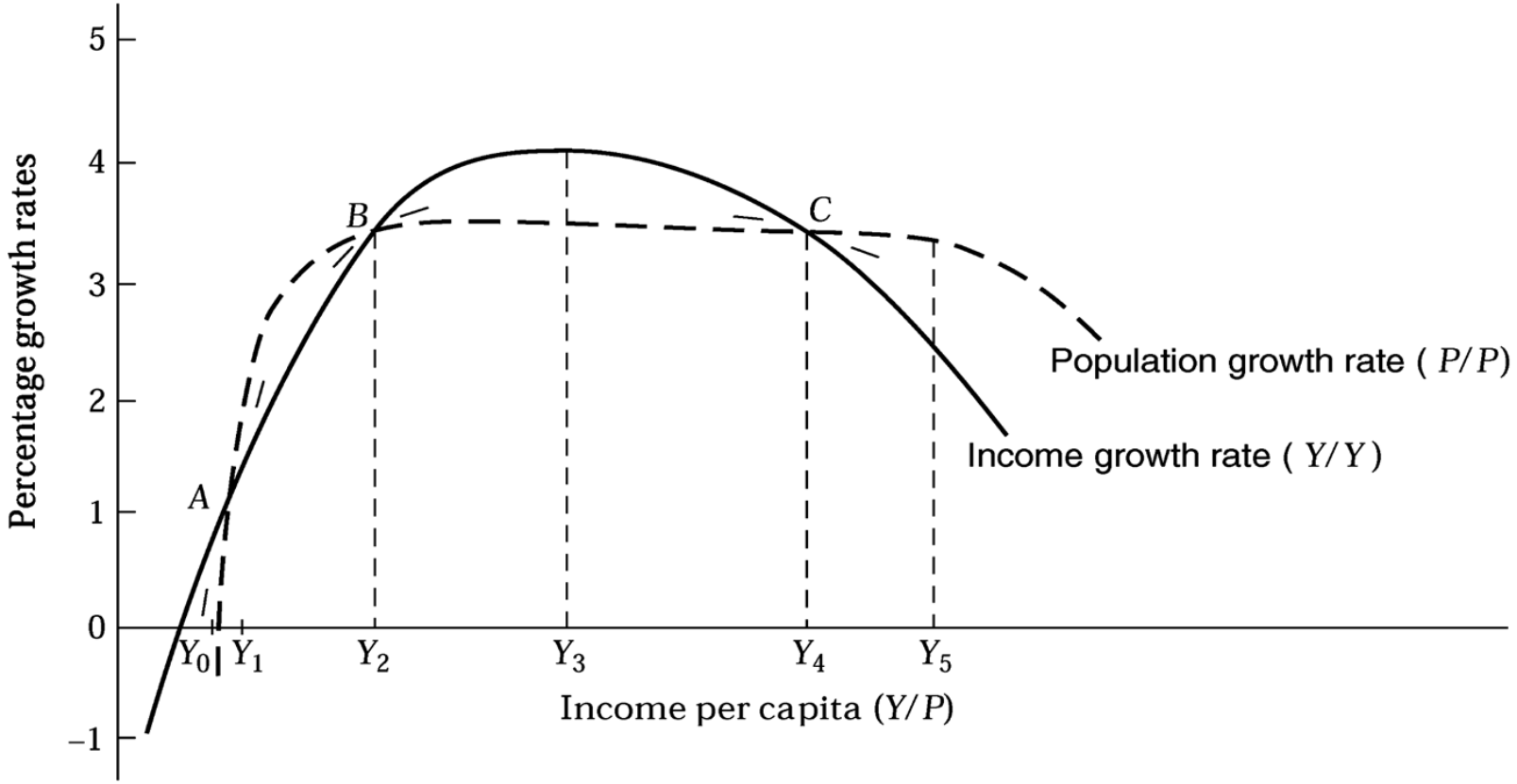
1.5: The Causes of High Fertility in Developing Countries: The Malthusian and Household Models

1.5.1The Malthusian Population Trap

- The theory developed by Thomas Malthus on the relationship between population growth and economic development is still influential today
- Malthus postulated a universal tendency for a population to grow at a geometric rate while food production grows at an arithmetic rate
- This is by taking the concept of diminishing returns because of the fixed land
  - each additional member of the population would have less land to work and
  - as the result, her/his marginal contribution to food production would actually start to decline

Causes of High Fertility: Malthusian Population Trap

Figure 6.8 The Malthusian Population Trap



The Malthusian Population Trap

- Since the growth in food supplies could not keep pace with the burgeoning population
  - there is a tendency for the population to be stable barely at or slightly above the subsistence level
  - The stable equilibrium is realized when the growth rate of population and growth rate of per capita income are equal
- This has been called by economists
  - the low-level equilibrium population trap or, simply, the Malthusian population trap
- According to neo-Malthusians, to rise their income above the subsistence levels, poor nations need
  - to initiate **preventive checks** (birth control)
  - otherwise, the restraining force will be the Malthusian **positive checks** (starvation, disease, wars)

Criticisms of the Malthusian Model

- The Malthusian Population Trap model is
  - based on a number of simplistic assumptions and hypotheses
  - which do not stand the test of empirical verification
- Hence, it is criticized on two major grounds
  - It ignores the enormous impact of technological progress
    - in enhancing economies of scale to escape the trap
    - in improving the quality of land and its productivity
  - Its focuses on direct relation of increase in population and level of national per capita income
    - does not stand up to empirical testing-no correlation b/n population growth rates & per capita income levels
    - its focus on aggregate level ignores the micro family level as the principal determinant of growth is wrong

Criticisms & the Need to Study the Malthusian Trap

- Even though the evidence is against its current relevance, we continue to study the Malthusian Trap for three main reasons,
  - firstly, to effectively engage the debate since many people still believe as if it holds in poor countries today,
  - second, because it seems clear that such traps have occurred in the historical past
  - third, the fact that this model no longer applies underlines the importance of factors that can prevent its emergence
  - These include efforts
    - to rise in agricultural productivity;
    - to increase women's empowerment and freedom to choose

1.5.2 The Microeconomic Household Theory of Fertility

- Recently, economists have begun to look more closely at the microeconomic household level
  - for the purpose of providing a better theoretical and empirical explanation for determinants of fertility
  - for e.g., explanations for the observed falling birth rates in stage 3 of the demographic transition
  - The basic analytical model they employed is the traditional neoclassical theory of household and consumer behaviour
- This theory assumes that an individual
  - with a given set of tastes or preferences for a range of goods (a "utility function")
  - tries to maximize the satisfaction derived from consuming these goods

- subject to the constraints of his or her own income and the relative prices of all goods

- In applying this theory to fertility analysis,
  - children are considered as special kind of consumption (and investment) good
  - hence, fertility becomes a rational economic response to the family's demand for children relative to other goods.
- Mathematically, this is expressed as follows:

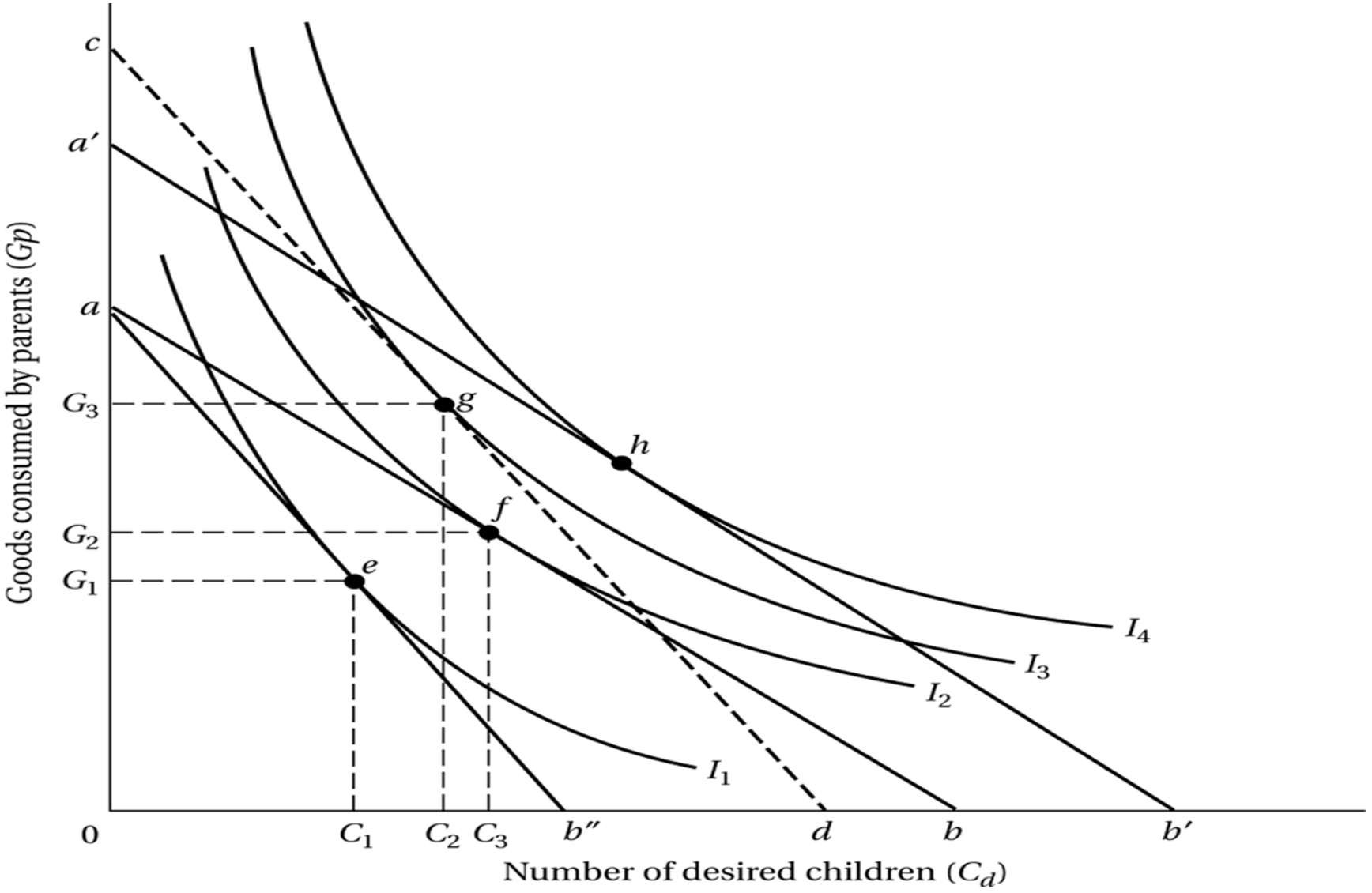
$$C_d = f(Y, P_c, P_x, t_x)\ x=1, 2, 3, \ldots.n$$

- Where Cd, the demand for surviving children, is a function of
  - the given level of household income (Y),
  - the "net" price of children (Pc),
  - the prices of all other goods (Px), and
  - the tastes for goods relative to children (tx)

The Microeconomic Household Theory of Fertility

- In this case demand for children
  - ∂Cd/∂Y>0: is directly related with the level of HH income
  - ∂Cd/∂Pc <0 is inversely related with price of children
  - ∂Cd/∂Px >0 is directly related with the price of the other goods
  - ∂Cd/∂tx < 0 is inversely related with the tastes families have to other goods relative to children
- The Figure in the text book provides a simplified diagrammatic presentation of the theory of fertility
  - Cd, is measured along the horizontal axis, and
  - Gp, the total quantity of goods consumed by the parents, is measured on the vertical axis
  - The indifference map shows the desires of household for children, higher IC represents higher level of satisfaction
  - The budget line shows the constraints

Microeconomic Theory of Fertility: An Illustration



The Microeconomic Household Theory of Fertility

- The budget line is the constraint showing the combinations of the goods the HH is able to buy
  - An increase in family income causes a parallel outward shift of the budget line-enabling to have more of both children and the other goods
  - an increase in the price of children relative to other goods will cause households to substitute commodities for children-leadinfg to less number of children
  - a simultaneous increase in household income and net child price leads to both an outward shift and downward rotation of the budget constraint line
    - The result of both changes leads to a fewer children per family than when income alone increases

The Demand for Children in Developing Countries

- In LDCs, the economic theory of fertility assumes that
  - household demand for a certain number of surviving (usually male) children
    - in the expectation that some will not survive, parents may produce more children than they actually desire
  - Children are seen partly as economic investment goods in that there is an expected return in the form of both
    - child labour and
    - the provision of financial support for parents at old age
  - there is a strong intrinsic psychological and cultural determinant of family size,
    - so demand is not responsive to relative prices for the first two or three children

The Demand for Children in Developing Countries

- In deciding whether or not to have additional children, parents are assumed to weigh
  - private economic benefits against private costs,
  - the principal benefits are
    - the expected income from child labour and
    - eventual financial support at old age
  - the two principal elements of cost:
    - the opportunity cost of the mother's time
    - the cost of rearing and educating children
  - Therefore, to induce families to desire fewer children, this means one has to take measures
    - that raise the price of child rearing such as expanding women's education & employment opportunity

Some Empirical Evidence

- Statistical studies have provided support for the economic theory of fertility.
- For example, it has been found that
  - high female employment opportunities outside the home and
  - greater female school attendance, are associated with significantly lower levels of fertility.
  - a strong association between declines in child mortality and decline in fertility
    - which is related with women's education
- There is recently a major change of this theory
- This is the development of non-unitary, bargaining-based models of household behaviour (refer text)

Implications for Development and Fertility

- Birth rates among the very poor are likely to fall when there is
  - an increase in the education of women and a consequent change in their role and status
  - an increase in female non-agricultural wage employment opportunities which increase the price of child rearing
  - a rise in family income levels from direct or indirect means
  - a reduction in infant mortality through expanded public health programs and better nutritional status and better medical care
  - development of old-age and other social security systems lessening the economic dependence of parents, especially women, on their offspring
  - expanded schooling opportunities for substituting child "quality" for quantity

1.6 The Consequences of High Fertility: Some Conflicting Perspectives

1.6.1 It's Not a Real Problem

- In this regard, there are three general lines of arguments:
  - A) The problem is not population growth but other issues.
  - B) Population growth is a false issue deliberately created by dominant rich country agencies and institutions to keep developing countries in their dependent condition.
  - C) For many developing countries and regions, population growth is in fact desirable.

A) Other Issues

- There are many people who argue that the real problem is not population growth per se
- but one or all of the following four issues
- A.1) underdevelopment: is one argument as a real problem and for which development is the only solution, hence:
  - if correct strategies are pursued and that leads to higher levels of living, greater self-esteem, and expanded freedom,
    - population will take care of itself,
    - eventually, it will disappear as a problem,
- A.2) world resource depletion and environmental destruction:
  - population can only be a problem in relation to the availability and utilization of natural resources
  - however, the addition of another child in the DCs is as significant as the birth of many children in the LDCs

Other Issues

  - The high fertility in LDCs is due to their low levels of living, which are the result of the overconsumption of the scarce resources by the rich countries
  - Therefore, DCs should curtail their excessively high consumption standards instead of asking LDCs to restrict their population growth
- A.3) Population Distribution: According to this third argument, the problem is not the number of people per se but their distribution in space
  - While some areas are over populated, there are others underpopulated in terms of availability of resources
  - Rather than reducing growth rate, therefore, the effort should be to bring even spatial distribution of population
- A.4) Subordination of Women:
  - women often bear the disproportionate burdens of poverty, poor education, and limited social mobility, hence, the argument is that
  - Pop. growth is a natural outcome of women's lack of opportunities

B) It's a Deliberately Contrived False Issue

- The second argument is closely allied to the neo-colonial dependence theory of underdevelopment
- According to this argument, population growth is considered as a problem by the DCs for their own advantages
  - holding down the development of LDCs and maintain an international status quo that is favourable to them
  - this is though they themselves went through a period of sizable population increase bringing econ growth
  - for radical neo-Marxist version, the pressure from DCs and their agencies is racist or genocidal attempts to reduce the relative or absolute size of the poor (largely non-white)

C) It's a Desirable Phenomenon

- A more conventional economic argument considers population growth as an essential ingredient to stimulate economic development.
  - Larger population is helpful to
    - provide the needed consumer demand
    - generate favourable economies of scale in production to lower production costs, and
    - provide a sufficient and low-cost labor supply to achieve higher output levels
  - It is argued also that free markets will always adjust to any scarcities created by population pressures.
  - Such scarcities will drive up prices and signal the need for new cost-saving production technologies
- The argument from neo-Marxist is related to the prevalence of much unused arable land that could yield large increases in agricultural output

It Is a Real Problem

- Positions supporting the need to curtail population growth are based on the following three reasons
  - A) The Extremist Argument: attempts to attribute almost all of the world's economic and social evils to excessive population growth
    - it is regarded as the principal cause of poverty, low levels of living, malnutrition, ill health, environmental degradation, and a wide array of other social problems
    - value-laden terms such as "population bomb" and "population explosion" are tossed
    - some have asserted the urgency of population stabilization or decline by taking even coercive measures such as compulsory sterilization

It Is a Real Problem

- B) The Theoretical Argument: Population-poverty cycle theory -is a theory to explain
  - how poverty and high population growth become reinforcing
- The basic proposition is that population growth intensifies and exacerbates the economic, social, and psychological problems associated with the condition of underdevelopment.
- Population growth is believed to retard the prospects for a better life
  - by reducing savings rates
  - it also severely draws down limited government revenues to provide the basic economic and social services
  - hence, it transmit poverty to future generations

It Is a Real Problem: The Theoretical Argument

- The basic model is a simplification of the standard Solow-type neoclassical growth equation.
- Using the production function of

  $Y=f(K, L, R, T)$

  that is, output is a function of capital, labor, resources, and technology

  and holding the resource base fixed,

  we can derive the result that

  $y - l = \alpha(k - l) + t$

It Is a Real Problem: The Theoretical Argument

- where y, l, k are respectively, rate of growth of GNI, labour force, capital stock and α = capital elasticity of output, and t, the effect of technological change
- This means that the growth rate of per capita income (y - l) is directly proportional to the rate of growth of the capital-labor ratio (k - l) plus the residual effects of technological progress
- Therefore, in the absence of technological change, the higher the rate of population growth (l),
  - the more rapid the rate of capital stock growth (k) must be and thus the greater the savings and investment rate just to maintain constant levels of per capita income

It Is a Real Problem: The Theoretical Argument

- Moreover, the negative effect of population growth may be more than what is shown by this model,
  - If k and l are not independent as assumed traditionally because of the effects of dependency burden on saving
  - If low income induces poor families to have more children for child labour and security
- Hence, reducing population growth is needed through:
  - development which provides people with the incentives and motivations to limit their family size, and
  - family-planning programs which are needed to provide them with the information & technological means

Other Empirical Arguments

- Seven Negative Consequences of Population Growth
  - 1. Economic Growth: Evidence shows that rapid population growth lowers per capita income growth in most LDCs, especially those dependent on agriculture
  - 2. Poverty and inequality: though inconclusive at national level, the evidence on the correlation at the household level is strong and compelling
    - It is the poor who suffers first from cuts in government health and education programs, and bear the brunt of environmental damage
  - 3. Education: it is generally agreed that
    - large family size and low incomes restrict the opportunities of parents to educate all their children.
    - At the national level, rapid population growth causes educational expenditures to be spread more thinly, lowering quality for the sake of quantity.

Other Empirical Arguments

- 4. Health: High fertility harms the health of mothers and children.
  - it increases the health risks of pregnancy, and
  - closely spaced births have been shown to reduce birth weight and increase child mortality rates
- 5. Food: Feeding the world's population is made more difficult by rapid population growth
  - as the best land is already exhausted, new technology is required
- 6. Environment: Rapid population growth contributes to environmental degradation in the form of
  - forest encroachment, deforestation, fuel wood depletion, soil erosion, declining fish and animal stocks, inadequate and unsafe water, air pollution, and urban congestion

Other Empirical Arguments

- 7. International Migration: Many observers consider the increase in international migration, both legal and illegal, to be one of the major consequences of LDCs' population growth.

Conclusion and Policy Options

- It is not numbers per se or parental irrationality that is at the root of the "population problem."
  - Rather, it is absolute poverty and low levels of living that provides the economic rationale for large families and burgeoning populations.
  - And these private parental decisions generate negative externalities (e.g., in education, health, resource degradation, job creation, etc.)
  - in terms of "market failure" arguments, this provides the strictly economic justification for government intervention in population matters
  - there are also noneconomic justifications as well

Conclusions and Policy Measures by LDCs

- Therefore, developmental problems such as absolute poverty, gross inequality, widespread unemployment (especially among women), limited female access to education, malnutrition, and poor health facilities must be given high priority
- In addition, there are some specific policy measures to be taken by LDCs as well as DCs
- Policies to be employed by LDCs include:
  - 1) persuading people to have less children through media and education
  - 2) enhancing family-planning programs to provide health and contraceptive services
  - 3) deliberately manipulate economic incentives and disincentives for having children

Policy Measures by LDCs

- for example, through elimination or reduction of maternity leaves and benefits,
- reduction or elimination of financial incentives, or
- imposition of financial penalties for having children beyond a certain number;
- establishment of old-age social security provisions and
- minimum-age child labour laws;
- raising of school fees and the elimination of heavy public subsidies for higher education; and
- the subsidization of smaller families through direct money payments

– 4) use of the power of state legislation and penalties to coerce people into having smaller families

– 5) raising the social and economic status of women

- for delayed marriage and lower marital fertility

Policy Measures by DCs

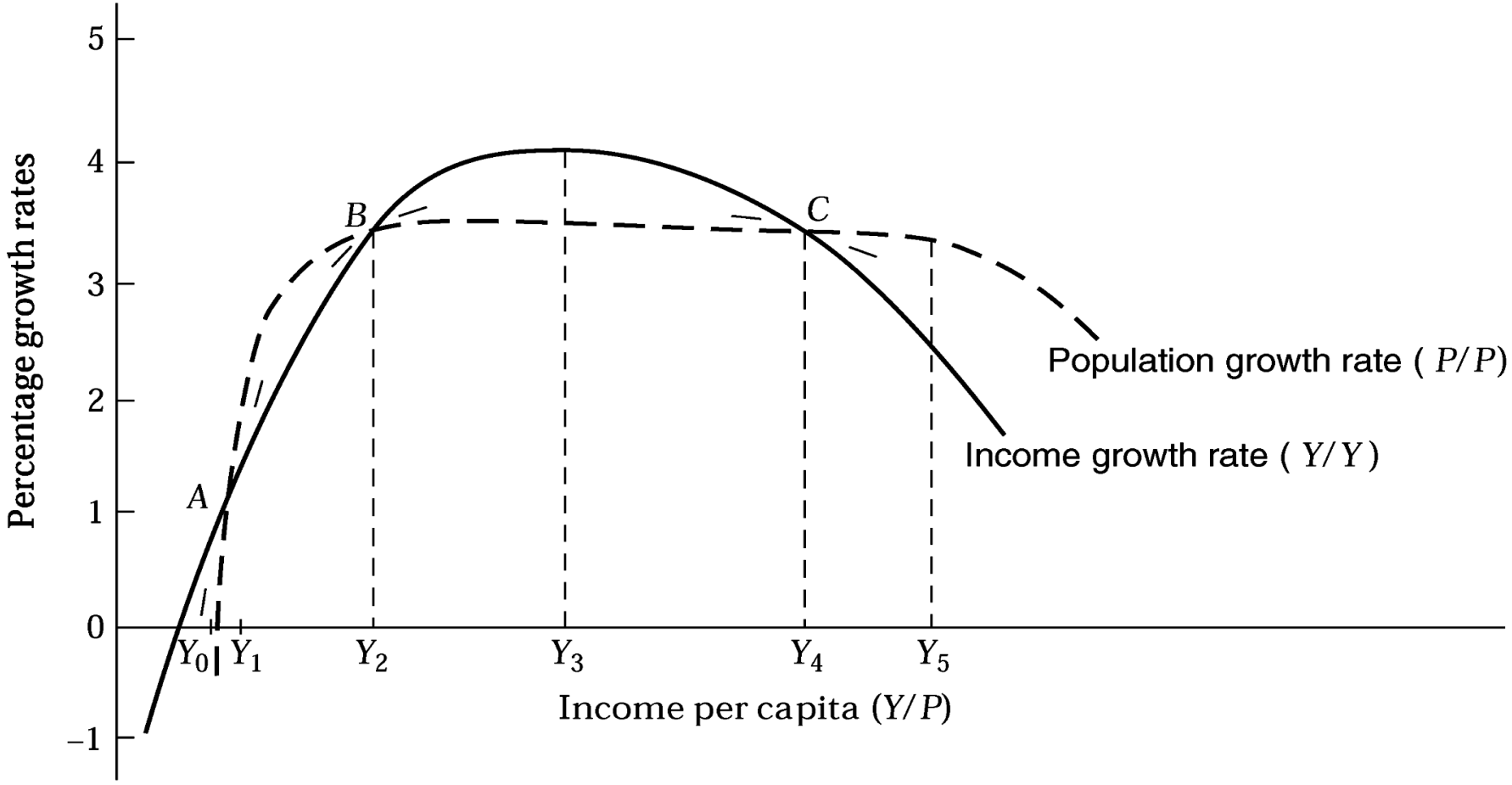
- The measures that should be taken by DCs include
  - simplifying their own consumption demands and lifestyles, which would
    - curtail their excessive depletion of non-renewable world resources
    - free resources that could then be used by poor nations to generate the social and economic development and slowing population growth
  - liberalizing the legal conditions for the international immigration of poor, unskilled workers from LDCs
  - their willingness to be of genuine assistance to LDCs
    - not only of expanded public and private financial assistance
    - but also of improved trade relations, such as tariff- and quota-free access to DCs markets,
    - more appropriate technology transfers,
    - assistance in developing indigenous scientific research capacities, better international commodity-pricing policies, and a more equitable sharing of the world's scarce natural resources.

Measures By DCs

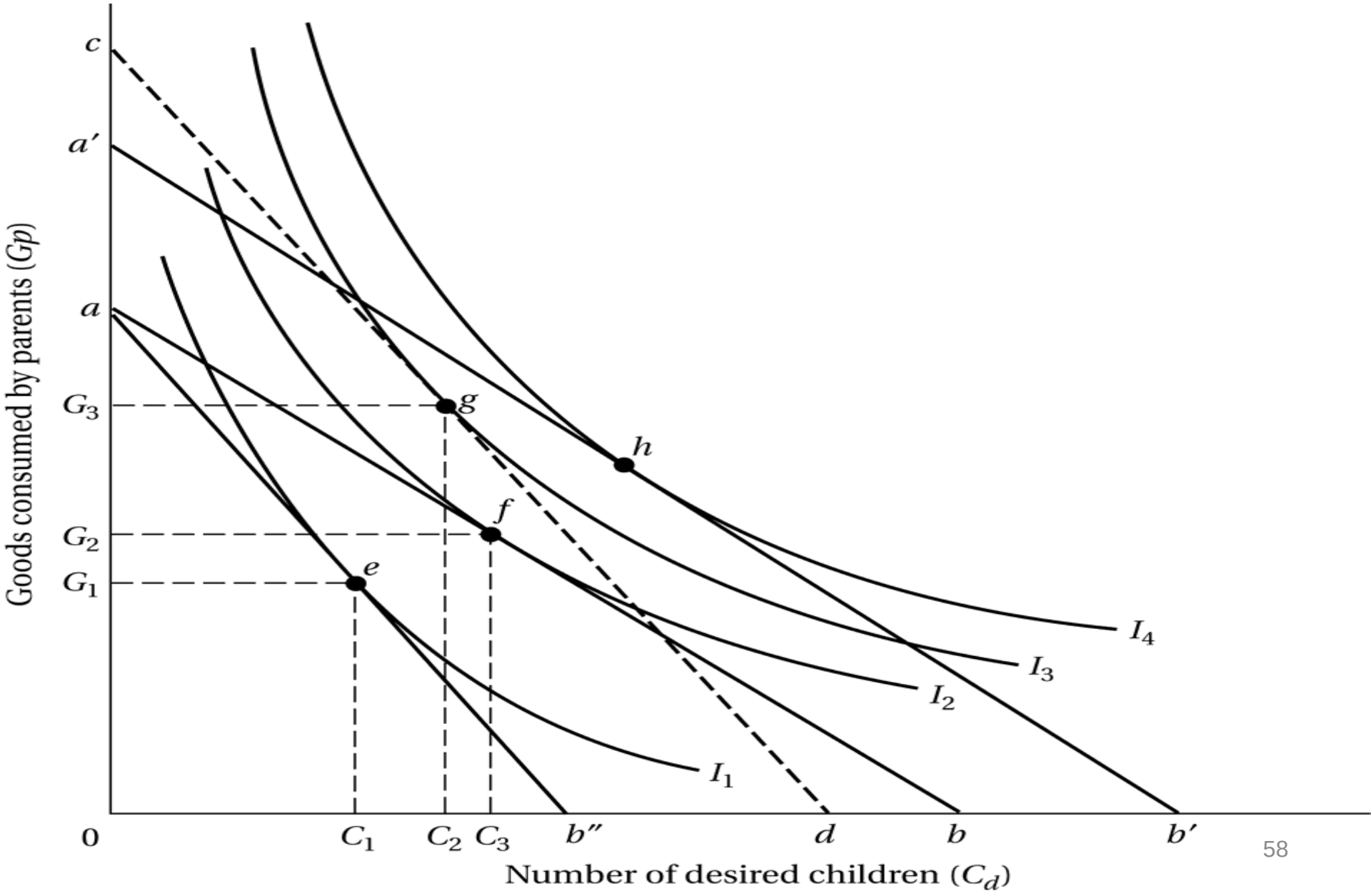
- Other more directly related to fertility moderation include
  - first, support the whole area of research into the technology of fertility control and contraceptives
  - Second, financial assistance from DCs
    - for family-planning programs,
    - public education, and
    - national population policy research activities

Causes of High Fertility: Malthusian Population Trap

Figure 6.8 The Malthusian Population Trap



Microeconomic Theory of Fertility: An Illustration



Review Chapter Questions

- What are the impacts of Covid-19 on population and population growth?
- to what extent is related the effect of Covid-19 on population growth with Malthusian Population trap? Why?
- what is the difference of Covid-19 impacts on developed and developing countries?
- how world leaders can minimize the effect of Covid-19 on population growth?
- do you think that an inter-temporal equilibrium will happen with the effect of Covid -19 on economic growth and population growth? Show using graph?

Chapter 2

- **Human Capital: Education and Health in Economic Development**

2.1 Education and Health in LDCs: The Central Roles of Education and Health

- Health and education are not only means but also important objectives of development
  - Health is central to well-being,
  - education is essential for a satisfying and rewarding life;
  - both are fundamental to the broader notion of expanded human capabilities
  - education plays a key role
    - in the ability of a country to absorb modern technology
    - to develop the capacity for self-sustaining growth and development
  - health is a prerequisite for
    - increases in productivity,
    - successful education relies on adequate health

The Central Roles of Education and Health

- Health and education are also important components of growth and development
  - i.e., inputs to the aggregate production function.
  - This dual role as both inputs and outputs gives health and education their central importance in development
- There are dramatic improvements in world health and education since a few decades.
  - For e.g., in 1950, under five mortality rate in LDCs was 280 of every 1,000 children
  - In 2008, this has declined to 118 per1000 children
    - 57 per 1000 in MICs, 7 per 1000, in DCs and 4/1000, in Europe

The Central Roles of Education and Health

- Some important killers have been completely or nearly eradicated
  - E.g., smallpox and polio
- There is also a historically unprecedented extension of literacy and other basic education
  - 82% of all people are literate today, compared to just 63% as recently as 1970
    - This is though, 780 million people aged 15 or older were illiterate in the world in 2004
    - Two-third of the illiterate are women

The Central Roles of Education and Health

- Despite such outstanding achievements, LDCs continue to face great challenges
  - In improving the health and education of their people.
  - The distribution of health and education within countries is as important as income distribution;
  - Life expectancy may be quite high for better-off people in LDCs but far lower for the poor.
  - Child mortality rates in LDCs remain more than ten times higher than those in the rich countries.
    - These deaths generally result from conditions that are easily treatable, such as dehydration caused by diarrhea

The Central Roles of Education and Health

- Many children who survive nonetheless suffer chronic problems of
  - malnutrition, debilitating parasitic infections, and other recurrent illnesses.
  - These are caused by lack of key micronutrients such as vitamins, iodine and protein
- In terms of education,
  - whereas a child in the DCs can expect to receive more than 12 years of schooling,
  - the average child in LDCs can expect to spend less than five years in school
    - this is taking no account of the pervasive teacher absenteeism, lack of books and other resources in schools of LDCs

The Central Roles of Education and Health

- The objective of this chapter is to examine the roles of education and health in economic development.
- These two human capital issues are treated together employing similar analytical treatment, because
  - both are forms of human capital that interact;
  - the dual effects of health spending on the effectiveness of the educational system and vice versa
  - investing in education and health are investing both on the same person
- The chapter considers also the relationships that income has with health and education .

The Central Roles of Education and Health

- Despite their close relationship between the three
  - you will see that higher household income is no guarantee for improved health and education
  - health and education may be distributed very unequally, just as income and wealth are
  - But improved health and education help families escape some of the vicious circles of poverty trap
  - For this reason, human capital must be given direct attention in its own right
- The chapter takes also a close look at educational and health systems in LDCs,

The Central Roles of Education and Health

- This is to identify the sources of the severe inequalities and inefficiencies that continue to plague the systems.
- The evidence reveals that investments in human capital have to be undertaken with both equity and efficiency
  - to have their potential positive effects on incomes

- Finally, to be discussed are the policy options for correcting the inefficiencies and inequities
  - Inefficiencies of the systems in resource allocation
  - Inequities in the systems among social groups (sex, income level, etc.)

2.2 Improving Health and Education: Why Increasing Income Is Not Sufficient?

- There are good reasons to believe that the causality runs in both directions:
  - With higher income, people and governments can afford to spend more on education and health, and
  - with greater health and education, higher productivity and incomes are possible.
  - Because of these relationships, development policy needs to focus on income, health, and education simultaneously-
    - a multipronged strategy to address the stubborn problems of absolute poverty

Improving Health and Education: Why Increasing Income Is Not Sufficient?

- Though people may spend more on human capital when income is higher, there is also a different evidence
  - If a policy is able to increase income of HHs, it may not lead to increase in health and education unless they are given due policy attention
  - In fact, the HHs whose income has increased may not invest in children's education and health.
    - The market will not solve this problem automatically,
    - in many cases, household consumption choices may have a small link between income and nutrition
    - For e.g., the income elasticity of the demand for calories among low-income people range from near zero to about 0.5,

Improving Health and Education: Why Increasing Income Is Not Sufficient?

- Even if income elasticities for calories are higher than the very low estimates imply—say, 0.3 to 0.5
  - calories are not the same as nutrition, and the nutrition of earners is not the same as the nutrition of their children
  - An increase in income frequently allows families in LDCs to switch consumption from nutritious foods to non-nutritious "empty calories" such as candy and soda
  - Findings show that
    - intake of vitamins A and C is not positively associated with income
    - morbidity did not necessarily decrease significantly with income
    - poor health (e.g., diarrheal) can negate the health advantages of better nutrition

Improving Health and Education: Why Increasing Income Is Not Sufficient?

- There is considerable evidence that
  - the better the education of the mother, the better the health of her children
  - especially, mother's health knowledge alone appears to be the crucial skill for raising child health
- Health status, once attained, also affects school performance, as evidenced in many LDCs
  - Better health and nutrition leads to
    - earlier and longer school enrolment,
    - better school attendance, and
    - more effective learning-better performance

Improving Health and Education: Why Increasing Income Is Not Sufficient?

- For example,
  - the probability of attending school of nutritionally stunted children in Nepal is found to be far lower than for non-stunted students.
  - undernourished children were found to lag 20% in test score
  - Children with low height for their age (under-nutrition) have been found to lag in school grade attainment
- Thus to improve the effectiveness of schooling, we must improve the health of children in LDCs

Improving Health and Education: Why Increasing Income Is Not Sufficient?

- There are also important spill-over benefits to investment in one's health or education
- As the result, the market cannot be expected
  - to deliver the socially efficient levels of health and education.
  - Thus, the ultimate responsibility lies with government.
  - Governments in LDCs are becoming aware of the interrelationships
    - among health, education, and incomes and
    - they are starting to devise integrated strategies

2.3 Investing in Education and Health: The Human Capital (HC) Approach

- The analysis of investments in health and education is unified in the human capital approach.
- Human capital is the term economists often use for education, health, and other human capacities that can raise productivity when increased.
- The analogy of the conventional investments in physical capital is taken in analysing this investment
- Hence, after an initial investment is made, a stream of future income can be generated
  - As a result, a rate of return can be calculated and compared with returns from alternative investments

Investing in Education and Health: The Human Capital Approach

- This is done by estimating the present (discounted) value of the increased income stream minus the direct and indirect costs
  - Direct costs include tuition and expense for books, uniforms, etc.
  - indirect costs include income that could be earned but forgone

- Of course, health and education also contribute directly to well-being.
  - For example, education increases empowerment and autonomy in major matters in life, such as
    - capacity for civic engagement,
    - making decisions concerning one's own health care
    - freedom to choose one's own spouse over arranged marriage

Investing in Education and Health: The Human Capital Approach

- But the basic human capital approach focuses on their indirect ability to increase well-being by increasing incomes.
  - In here, we will generally illustrate points with educational investments
  - but the same principles apply to health investments.
- Formally, the income gains can be calculated as follows,

$$\sum (E_t - N_t)/(1 + i)^t$$

  - where E is income with extra education,
  - N is income without extra education, t is year, i is the discount rate, and the summation is over expected years of working life

Investing in Education and Health: The Human Capital Approach

- An analogous formula applies to health
  - such as an investment in improving nutritional status,
  - considering the direct and indirect cost of resources devoted to its improvement
  - compared with the extra income to be gained in the future as a result of better health status.
- Before comparing costs with benefits, note that
  - a dollar today is worth more to an individual than a dollar in the future,
  - so those future incomes and costs must be discounted
    - Thus, the rate of return will depend on the size of the discount rate, the direct or indirect costs, or the size of the benefits/unit.

Investing in Education and Health: The Human Capital Approach

- Taking the analysis from the individual's point of view
  - in sub-Saharan Africa and Asia, the private rate of return to primary education is about 40%
    - Despite to this huge rate of return, investment in education is limited (due to lack of credit)
    - The high return indicates the greater income differential in LDCs between those with more and less schooling
- The social rate of return can also be calculated by considering
  - public subsidy as part of the direct costs
  - pre-tax rather than after-tax incomes
  - externalities- benefits flowing from the educated to society

Rate of Return to Investment in Education

Country Type and Region	Social Rate of Return (%)			Private Rate of Return (%)		
	Primary	Secondary	Higher	Primary	Secondary	Higher
Developing						
Sub-Saharan Africa	24	18	11	41	27	28
Asia	20	13	12	39	19	20
Latin America	18	13	12	26	17	20
Developed	14	10	9	22	12	12

Source: George Psacharopoulous. "Returns to investment in education: A global update," *World Development* 22 (1994): 1325–1343, tab. 1. Copyright © 1994. Reprinted with the permission of Elsevier.

Note: How these rates of return were calculated is explained in note 20 at the end of this chapter.

2.4 Educational Systems and Development

- The discussion about education and economic development in general revolves around two fundamental economic processes:
  - (1) the interaction between economically motivated demands and politically responsive supplies in determining
    - how many quality school places are provided,
    - who gets access to these places, and
    - what kind of instruction they receive and
  - (2) the important distinction between
    - social and private benefits and costs of different levels of education and its implications for educational investment strategy

The Political Economy of Educational Supply and Demand: The Relationship between Employment Opportunities and Educational Demands

- The amount of schooling received by an individual can be regarded as largely determined by
  - demand and supply
- On the demand side, the two principal influences on the amount of schooling desired are
  - (1) a more educated student's prospects of earning more income through future modern sector employment
  - (2) the educational costs, both direct and indirect, that a student or family must bear.
  - education demanded is thus a derived demand for high-wage employment opportunities in the modern sector.

The Relationship between Employment Opportunities and Educational Demands

- On the supply side, the quantity of school places is determined largely by political processes,
  - i.e., often unrelated to economic criteria
  - let us assume these places are fixed by the level of government educational expenditures.
  - these are in turn influenced by the level of aggregate private demand for education.
- Since demand largely determines the supply, lets see the determinants of demand - four variables
    - the wage or income differential (primary vs secondary education)
    - the probability of success in finding modern-sector employment,
    - the direct private costs of education, and
    - the indirect or opportunity costs of education

The Relationship between Employment Opportunities and Educational Demands

- suppose the following conditions prevail in LDCs
  - 1. The modern-traditional wage gap is about, say, 100% for secondary versus primary school graduates
  - 2. The rate of increase in modern-sector employment opportunities for primary school dropouts is slower than the rate at which such individuals enter the labour force.
  - The same may be true at the secondary level and even at the university level for some countries
  - 3. Employers tend to select by level of education and choose candidates with secondary rather than primary education even though satisfactory job performance may require no more than a primary education.

The Relationship between Employment Opportunities and Educational Demands

- 4. Governments tend to bind the going wage to the level of educational attainment of jobholders rather than to the minimum educational qualification required for the job.
- 5. School fees decline at the university level as the state bears a larger proportion of the college student's costs

- Under these conditions, we would expect the quantity of higher education demanded to be substantial.
  - This is because
    - the anticipated private benefits of more schooling would be large compared to the alternative of little schooling, while
    - direct and indirect private educational costs are relatively low.
    - and, hence, the demand spirals upward over time.

The Relationship between Employment Opportunities and Educational Demands

- The upshot is the chronic tendency for some LDCs to expand their higher-level educational facilities
  - This is at a rate extremely difficult to justify either socially or financially in terms of optimal resource allocations.
- Supply and demand are equated
  - not by a price-adjusting market mechanism but rather institutionally, largely by the state.
  - The social benefits (SB) of education for all levels of schooling fall short of the private benefits (PB)

The Relationship between Employment Opportunities and Educational Demands

- Governments and formal-sector private employers in many LDCs tend to reinforce this trend by educational certification
  - Excess educational qualification becomes formalized and may resist downward adjustment.
  - Wage rates increase to the extent that trade unions succeed in binding going wages to the educational attainments of jobholders
  - This is even when there is no productivity increase
- This political economy process pulls scarce public resources away from the limited basic education toward more advanced education

Social versus Private Benefits and Costs

- In LDCs, as students climb the educational ladder
  - the social costs (SC) of education increase rapidly.
  - the private costs (PC) of education increase more slowly or may even decline,
    - This is indicated in the figure that plots the returns and costs from the social and private point of view against years of schooling
  - This widening gap between SC and PC leads to
    - an even greater stimulus to the demand for higher education than it does at lower levels which means
      - a misallocation of resources
      - an optimal strategy for a student is to secure as much schooling as possible

Social versus Private Benefits and Costs

Social versus Private Benefits and Costs

- As can be seen in the figure,
  - The social benefits (SB) curve rises sharply at first, reflecting the improved levels of productivity
  - Then after, however,
    - social marginal benefit (SMB) of additional years of schooling rises more slowly,
    - the social returns (SR) curve begins to level off.
  - By contrast, the social cost (SC) curve shows
    - a slow rate of growth for early years of schooling
    - but a much more rapid growth for higher levels of education
  - Hence, the optimal strategy from a social viewpoint is
    - to continuing to offer until the level B when SMB=SMC

Social versus Private Benefits and Costs

- In other words, maximizing social rate of return (SRR) to educational investment means
  - providing all students with at least B years of schooling which is about nine years of schooling
  - beyond B years, social marginal costs (SMC) exceed social marginal benefits (SMB).
- This also illustrates the inherent conflict between optimal private and social investment strategies
  - created by inappropriate public and private policies
    - in terms of wage differentials,
    - educational selectivity, and
    - the pricing of educational services

Social versus Private Benefits and Costs

- Despite the substantial distortions just reviewed,
  - expansion of educational opportunities has contributed to aggregate economic growth by
    - (1) creating a more productive labour force, with skill and knowledge
    - (2) providing widespread employment and income-earning opportunities-e.g. teachers, book publishers, contractors, etc.
    - (3) creating a class of educated leaders to fill vacancies including those left by departing expatriates
    - (4) providing the kind of training and education that promote literacy and basic skills while encouraging “modern” attitudes
  - In general, though with distortions, the noneconomic as well as economic contributions cannot be denied

Distribution of Education

- Similar to distribution of income, we can develop Lorenz curves for the distribution of education
  - This is by writing the cumulative proportion of the population on the x-axis and
  - the cumulative proportion of years of schooling on the y-axis.
  - Along the 45-degree line, there is perfect equality,
    - everyone would have the same number of years of schooling
    - The closer the Lorenz curve is to the 45-degree line, the more equal the distribution of education
  - Similarly, it is possible to derive an education Gini coefficient

Distribution of Education

  - it is given by the area A above the education Lorenz curve, divided by the whole area A+B below the 45-degree line
- If the Gini coefficient for education is plotted against the average years of education, we see that
  - there is no inverted-U curve for education.
  - Instead, educational inequality tends to fall as average years of education in the population rises.
  - Nonetheless, for a given average years of schooling, some countries such as Sri Lanka have managed relatively equal access to education than others

Distribution of Education

- Certainly, educational quality is higher in high- than in low-income countries—
  - higher in Europe than in Africa, for example.
  - it is also likely that the variability of educational quality is higher in some countries (such as Mali),
    - where elite schools offer excellent college preparation than others
- research by Jere Behrman and Nancy Birdsall indicates that
  - it is the quality of education and not its quantity alone that best explains differential earnings and productivity
    - The implication is the need for upgrading existing schools rather than expanding the number of school places at higher level

Education, Inequality, and Poverty

- Studies have also demonstrated that the educational systems of many LDCs
  - sometimes act to increase rather than to decrease income inequalities
  - this is basically because of the positive correlation between level of education and level of lifetime earnings
    - E.g., the wage differential may range between 300% to 800%
  - these inequalities will be reinforced when
    - higher levels of education are disproportionately placed by students from the middle- and upper-income brackets
    - and the poor are effectively denied the access
  - Hence, the educational system not only perpetuates but also even increase inequality

Education, Inequality, and Poverty

- For instance, considering the opportunity cost of education
  - the private costs of primary education is higher for poor students than the rich
  - this is greatly compounded by the lower quality of schools attended by the poor
    - both making the expected benefits of primary education to be lower for poor students than the rich
  - this means poor family's rate of return from investment in a child's education is lower than the rich, therefore,
    - the poor are more likely to have poor attendance and performance
    - even more likely to drop out during the early years of schooling

Education, Inequality, and Poverty

- This financial process of eliminating the relatively poor will be worse at higher level of education
  - This is because of
    - the substantial tuition charged at the secondary level
    - while the poor family is unable to borrow funds to finance their children's education
    - Hence, child labour can be understood as a substitute for a loan as a way to bring money to the family now at later (too high) cost
  - In this case, the selection criteria employed by the educational system is not on merit basis but strictly family income levels.
  - thus, this is perpetuating the inequality of income

Education, Inequality, and Poverty

- This in-egalitarian nature of the system in many LDCs is compounded further at the university level
  - Since the government may
    - use public fund to cover full cost of tuition and fees
    - even provide students with income grants in the form of stipends
  - However, most university students already come from the upper-income brackets
  - In effect, therefore, this is a transfer payment from the poor to the wealthy in the name of “free” higher education

2.5 Health Systems and Development

- Do poor health conditions in LDCs harm the productivity of adults? The answer is yes.
- Different findings stress the policy priority of health in development because
  - health is not only a major goal in itself,
  - but it has a significant impact on income levels as well
- According to the studies,
  - health and nutrition do affect employment, productivity, and wages and very substantially so for the poorest
  - Thus, a health system is required to create a healthy population,
    - which is a prerequisite for successful development.

…Health Systems and Development

- WHO defines a health system as
  - "all the activities whose primary purpose is to promote, restore, or maintain health."
- Health systems include
  - the components of public health departments, hospitals and clinics, and offices of doctors and paramedics.
  - and the informal network used by many poorer citizens, such as traditional healers,
- The health systems of some LDCs were far more effective than others in achieving health goals
  - E.g., countries such as China and Sri Lanka, and Kerala state in India, have life expectancies of more than 70 yrs

…Health Systems and Development

  - However, some middle-income countries
    - have lower years of life expectancy
    - E.g., Brazil, South Africa, and Gabon
  - All the latter countries have far more inequitable access to health care than the former
- WHO made a study that compared health systems around the world at each income level
  - the study reveals great variability in their performance
  - for example, Singapore was ranked 6th, Morocco 29th, Colombia 22nd, Chile 33rd, and Costa Rica 36th
  - these developing countries ranked higher than the USA
  - Showing much can be done with relatively modest income

…Health Systems and Development

- Five performance indicators are used by WHO to measure performance of the health systems:
  - (1) the overall level of health of the population,
    - e.g., child mortality rate, life expectancy, malnutrition
  - (2) health inequalities within the population,
    - e.g., difference in health among different social groups
  - (3) health-system responsiveness
    - a combination of patient satisfaction and system performance),
  - (4) the distribution of responsiveness within the population
    - how well people of varying economic status find that they are served by the health system, and
  - (5) the distribution, or fairness, of the health system's financial burden within the population.

…Health Systems and Development

- The conclusion of the study by WHO is that
  - In terms of dollar for dollar spent on health, many countries are falling short of their performance potential.
  - As the result
    - there are a large number of preventable deaths and disabilities.
    - the impact of this failure is born disproportionately by the poor.”
- At any given income level (whether poor or rich)
  - there was wide variation in country performance,
    - E.g., in terms of equity of financial contribution, Colombia was the top-rated country overall
    - the least fair financing of health systems are in several LDCs
  - This shows that a low-income country can achieve fairness in allocating the resources that it has

…Health Systems and Development

- Formal public health measures have played a very important role in developing countries
  - e.g., with NGOs, in extending vaccines to remote areas and reducing some important disease
- But like (ESs), public health operations favoured the wealthy and well connected.
  - Partly as a result, health systems often use public funds inefficiently.
  - In effect, subsidies turn out to be focused on expensive curative measures (heart disease and cancer)
  - the cost-effective preventive health campaigns and basic medical care are often ignored or at best underfunded

…Health Systems and Development

- Doctors though trained with public subsidies
  - often choose to practice a speciality in affluent areas of the cities or
  - emigrate to the well-paying developed countries
  - this is because of the focus of their training
  - which is not designed to serve the needs of the poor but the interest of the influential rich
- An effective government role in health systems is crucial for at least four important reasons.
  - 1) health is central to poverty alleviation, because people are often uninformed about health

…Health Systems and Development

- 2) households spend too little on health because they may neglect externalities (the benefits that are not reaped by the individual but flowing to the society)
- 3) the market would invest too little in health infrastructure and research and development (Market Failure)
- 4) public health programs in LDCs have many proven successes

- In general, the health of people is always a national priority
  - which should be the responsibility of a good government

2.6 The Gender Gap: Discrimination in Education and Health

- Education and Gender
- Young females receive less education than young males in most LDCs
  - girls still lag behind boys in education in most regions
  - majority of the people who are unable to attend school and illiterate are female
  - The educational gender gap is great in the LDCs, e.g.,
    - in Africa, females literates constitute less than half of that of men
  - School completion at different levels of education is also subject to gender inequalities,
    - the gap is large often at higher levels and particularly in rural areas

…The Gender Gap: Women and Education

- Empirical evidence shows that educational discrimination against women
  - hinders economic development
  - in addition to reinforcing social inequality.
- Closing the educational gender gap is economically desirable for at least three major reasons
  - 1) The rate of return on women's education is higher than that on men's in most developing countries.
  - 2. Increasing women's education not only increases their productivity in the workplace but also results
    - in greater labour force participation,
    - late marriage,

…The Gender Gap: Women and Education

  - lower fertility, and greatly improved child health and nutrition, thus benefiting the next generation as well.
- 3. Because women carry a disproportionate burden of poverty, any significant improvements in their role and status via education can have an important impact on breaking the vicious circle of poverty

- Health and Gender
  - Girls also face discrimination in health care in many LDCs, e.g., in South Asia,
    - families are far more likely to take an ill boy than an ill girl to a health center
    - health spending on men is higher than women

…The Gender Gap: Women and Education

- Another health tragedy is female genital mutilation/cutting (FGM/C)
  - this is most widely practiced in sub-Saharan Africa and the Middle East
    - believed to have affected about 130 million women.
  - it is dangerous and a violation of the most basic rights,
    - practiced even by mothers for fear of loss of "marriageability" for their daughters – a kind of coordination failure
- Presently, however, there is increasing "mass abandonment" of the practice of FGM/C,
  - families in an intermarrying group pledge that they will no longer follow the practice with their daughters
  - Leading to overcoming the coordination failures

Consequences of Gender Bias in Health and Education

- According to studies, basic education of girls
  - is among those investments with the highest rates of return
    - e.g., it is much larger than most public infrastructure projects
  - One estimate shows that the global cost of failing to educate girls is about $92 billion a year
  - hence, discrimination against girls in education
    - is not only socially unacceptable due to its inequity
    - but also very costly in terms of realizing development goals
- Education of girls is also
  - cost-effective means of improving local health standards
  - more than sufficient to cover its costs—even before considering the added earning power from education

…Consequences of Gender Bias in Health and Education

- However, evidence shows that education of girls does not increase automatically with increases in family income
  - This is because of the interlinked nature of economic incentives and the cultural setting, for e.g.,
    - a boy provides future support for parents in their old age and possible receipt of a dowry upon marriage
    - in contrast, a girl may require a dowry upon marriage and will move to the village of her husband's family,
    - she is responsible for the welfare of her husband's parents rather than her own
    - As the result, boys are preferred to girls (missing women)

Conclusion

- To conclude, health and education play pivotal roles in economic development, as
  - inputs into production enabling higher incomes and
  - outputs directly affecting human well-being.
- Education and health will not always automatically improve with higher incomes.
- There is market failure in education and health
  - Meaning, too few investments will be made from the social point of view.
- Moreover, the wrong kinds of government policies have sometimes led to distortions in the systems
  - which reinforced inequities (and inefficiencies)

…Conclusion

- Thus, since there is market failure in education and health, government plays an essential role
- However, in most LDCs, considerable improvements in policy are needed to correct the
  - Inequities among social groups
  - inefficiency in resource allocation

Education and Health as Joint Investments for Development

- Greater health capital may improve the returns to investments in education
- Greater education capital may improve the returns to investments in health

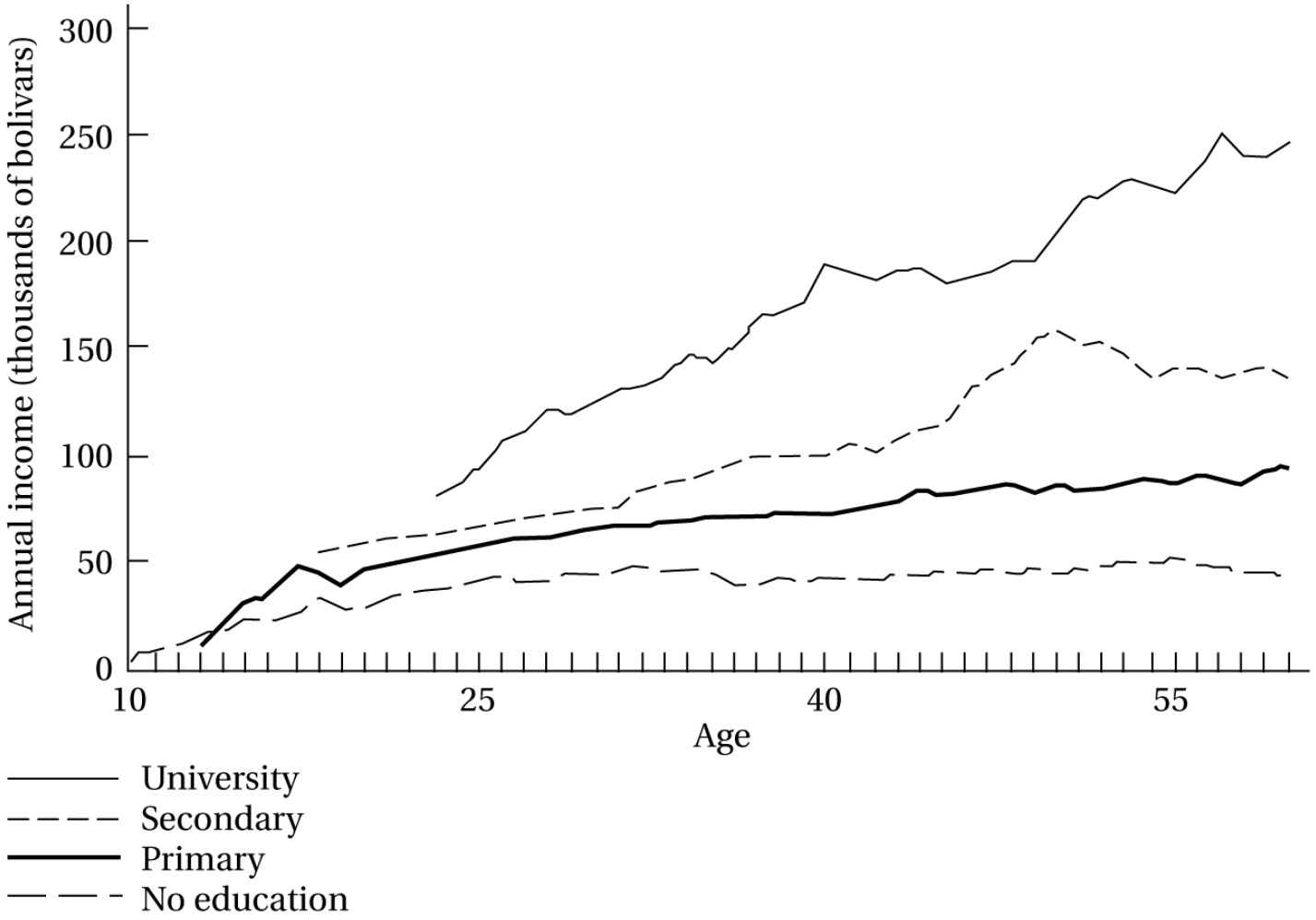
Improving Health and Education: Why Increasing Incomes Is Not Sufficient

- Increases in income often do not lead to substantial increases in investment in children's education and health
- Better educated mothers tend to have healthier children
- Significant market failures in education and health require policy action

Investing in Health and Education: The Human Capital Approach

- Initial investments in health or education lead to a stream of higher future income

FIGURE 8.1 Age-Earnings Profiles by Level of Education—Venezuela, 1989

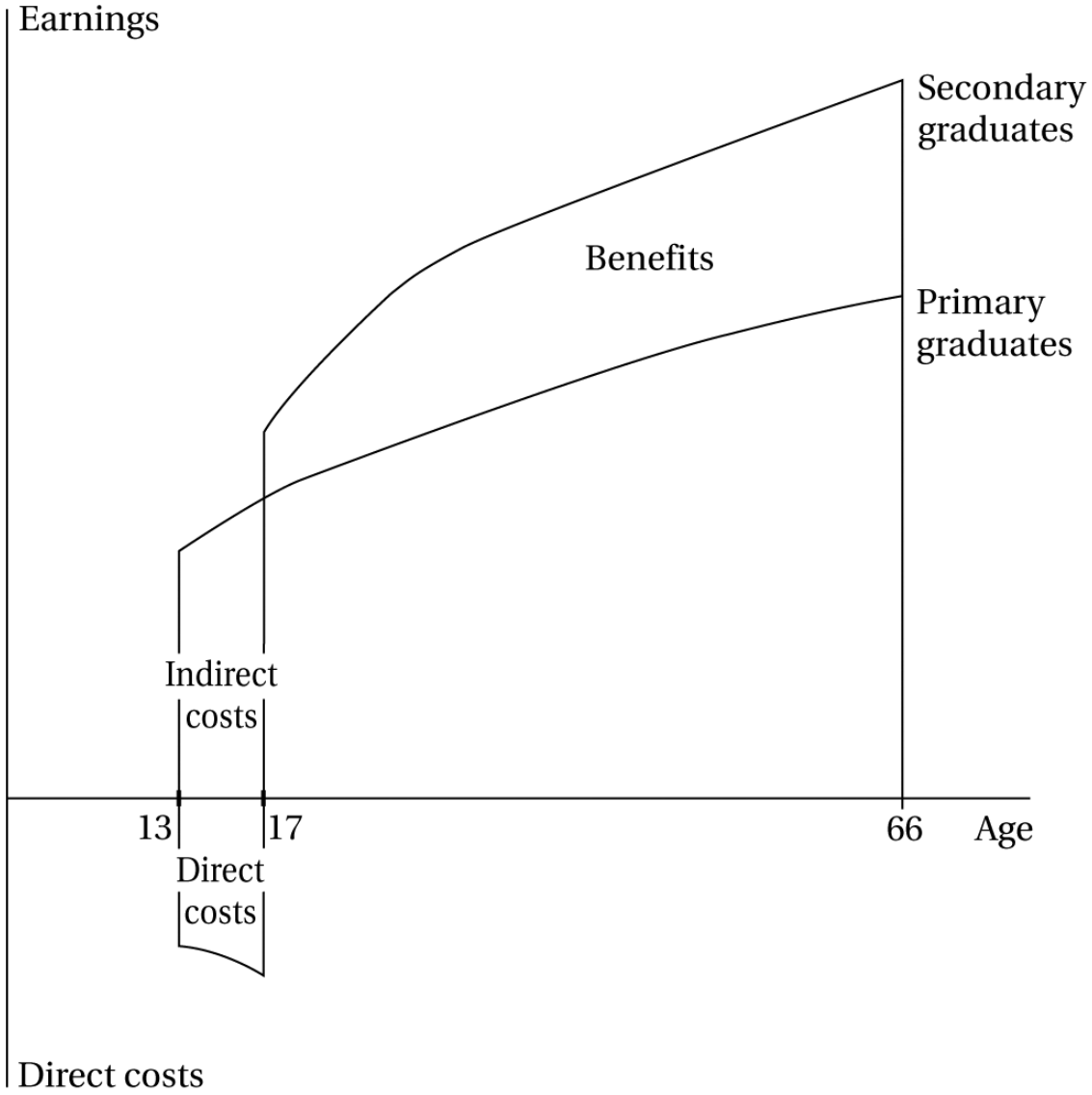


Source: George Psacharopoulos, *The Profitability of Investment in Education: Concepts and Methods* (Washington, D.C.: World Bank, 1995). Reprinted with permission.

Investing in Health and Education: The Human Capital Approach

- Initial investments in health or education lead to a stream of higher future income
- The present discounted value of this stream of future income is compared to the costs of the investment

FIGURE 8.2 **Financial Trade-Offs in the Decision to Continue in School**



Investing in Health and Education: The Human Capital Approach

- Initial investments in health or education lead to a stream of higher future income
- The present discounted value of this stream of future income is compared to the costs of the investment
- Private returns to education are high, and may be higher than social returns

Table 8.1

TABLE 8.1 Rates of Return to Investment in Education by Level of Education, Country, Type, and Region (percent)

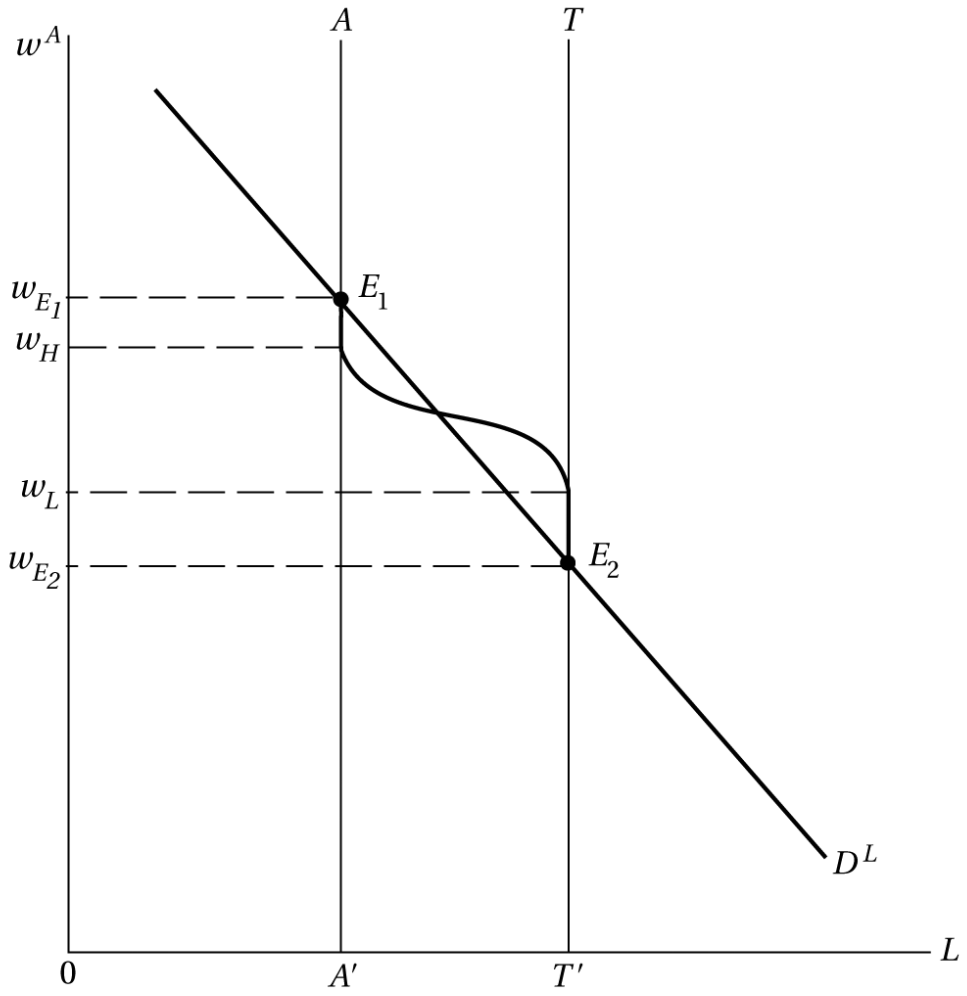
Country Type and Region	Social Rate of Return			Private Rate of Return		
	Primary	Secondary	Higher	Primary	Seondary	Higher
Developing						
Sub-Saharan Africa	24	18	11	41	27	28
Asia	20	13	12	39	19	20
Latin America	18	13	12	26	17	20
Developed	14	10	9	22	12	12

Source: George Psacharopoulous. "Returns to investment in education: A global update," *World Development* 22 (1994): 1325—1343, tab. 1. Copyright © 1994. Reprinted with the permission of Elsevier.
Note: How these rates of return are calculated is explained in note 19 at the end of this chapter.

Child Labor

- Child labor is a widespread phenomenon
- The problem may be modeled using the "multiple equilibria" approach
- Government intervention may be called for to move to a 'better' equilibrium

FIGURE 8.3 Child Labor as a Bad Equilibrium



Source: From Kaushik Basu, "Child labor: Cause, consequence, and cure, with remarks on international labor standards," *Journal of Economic Literature* 37 (1999): 1101. Reprinted with the permission of the American Economic Association.

The Gender Gap: Women and Education

- Young females receive less education than young males in nearly every LDC

Table 8.2

TABLE 8.2 The Educational Gender Gap: Female Rates as a Percentage of Male Rates

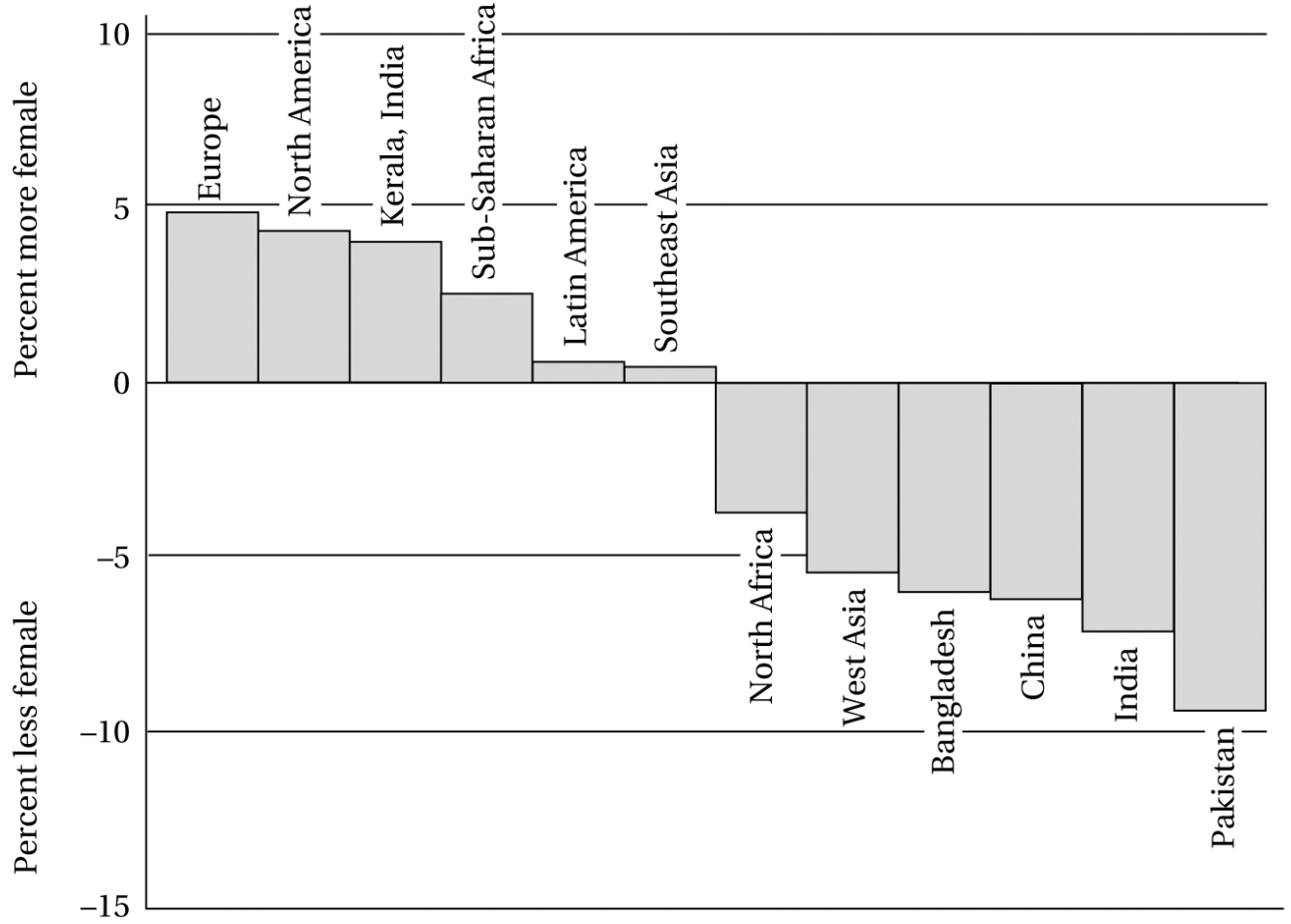
Country	Adult Literacy	Mean Years of Schooling	Primary Enrollment	Secondary Enrollment	Tertiary Enrollment
Algeria	76	18	97	106	—
Bangladesh	62	29	102	110	50
Egypt	65	41	96	95	—
Mexico	96	96	101	103	95
Morocco	61	37	93	83	80
Nigeria	80	28	—	—	—
South Korea	—	61	100	100	60
Sudan	69	45	83	—	92

Source: United Nations Development Program, *Human Development Report, 2004* (New York: Oxford University Press, 2004), tab. 9. Reprinted with permission.
Notes: All figures are expressed in relation to the male average, which is indexed to equal 100. The smaller the figure, the bigger the gap. Mean years of schooling are for 1994.

The Gender Gap: Women and Education

- Young females receive less education than young males in nearly every LDC
- Closing this educational gender gap is economically desirable
- Consequences of gender bias in health and education

FIGURE 8.4 Female-Male Ratios in Total Population in Selected Communities

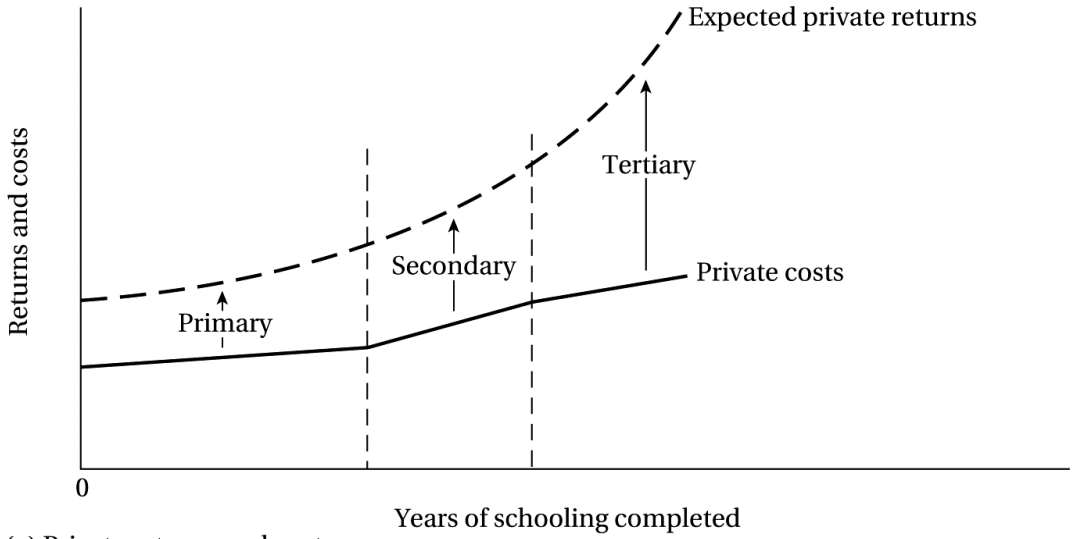


Source: Amartya Sen, *Development as Freedom* (New York: Knopf, 1999), p. 104. Copyright © 1999 by Amartya Sen. Reprinted with the permission of Alfred A. Knopf, a division of Random House, Inc..

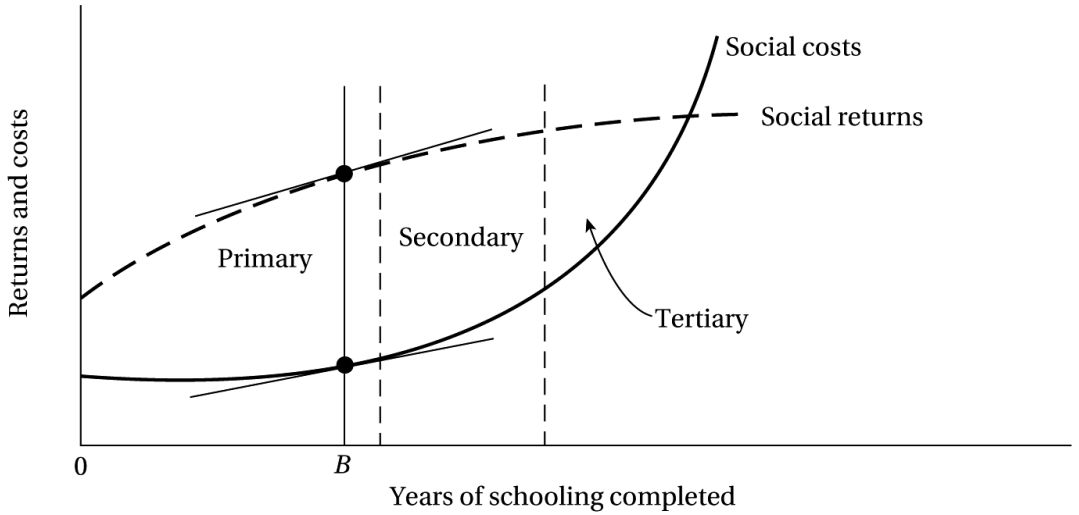
Educational Systems and Development

- Educational supply and demand: the relationship between employment opportunities and educational demands
- Social versus private benefits and costs

FIGURE 8.5 Private versus Social Benefits and Costs of Education: An Illustration



(a) Private returns and costs

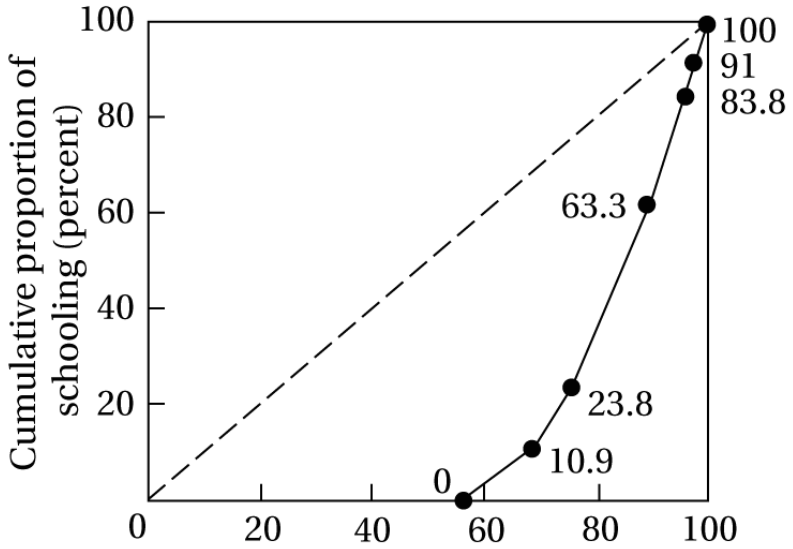


(b) Social returns and costs

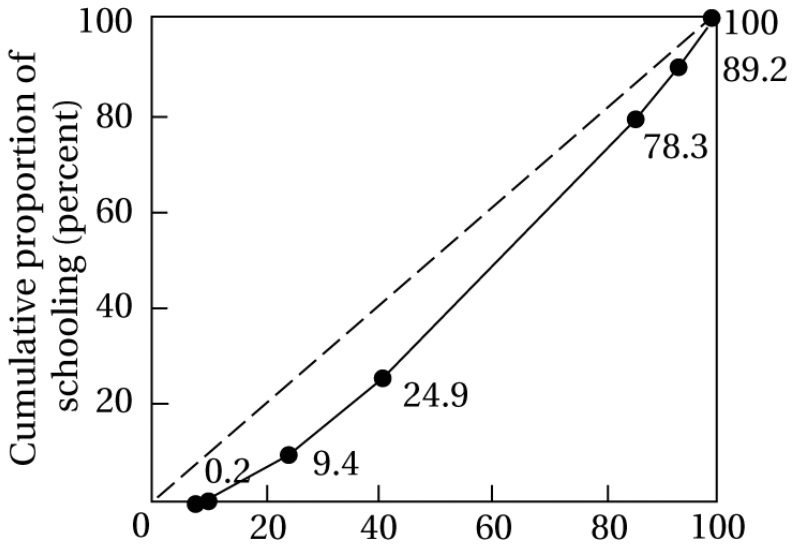
Educational Systems and Development

- Educational supply and demand: the relationship between employment opportunities and educational demands
- Social versus private benefits and costs
- Distribution of education

FIGURE 8.6 Lorenz Curves for Education in India and South Korea, 1990



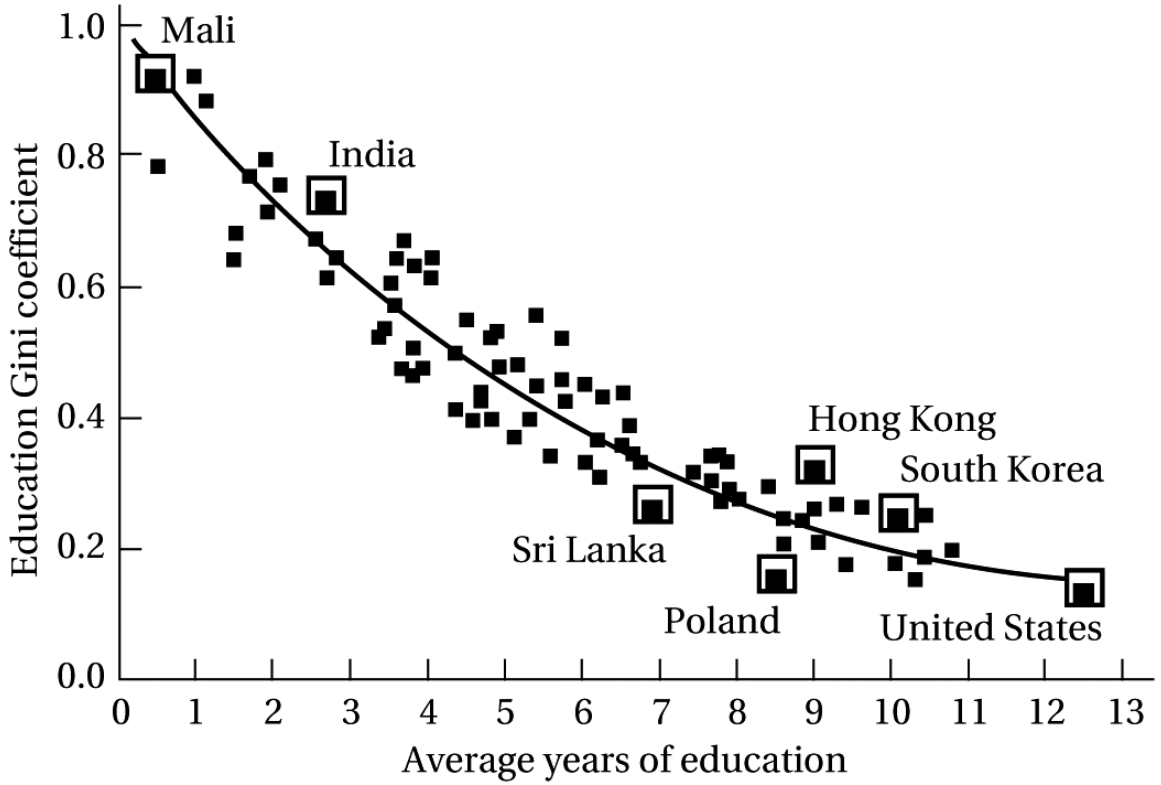
(a) Schooling in India



(b) Schooling in South Korea

Source: World Bank, *The Quality of Growth* (New York: Oxford University Press, 2000). Reprinted with permission.

FIGURE 8.7 Gini Coefficients for Education in 85 Countries, 1990



Source: World Bank, *The Quality of Growth* (New York: Oxford University Press, 2000). Reprinted with permission.

Educational Systems and Development

- Educational supply and demand: the relationship between employment opportunities and educational demands
- Social versus private benefits and costs
- Distribution of education
- Education, inequality, and poverty

Table 8.3

TABLE 8.3 Share of Public Resources for Education Appropriated by Different Socioeconomic Groups, by Region

Region	Percentage in the Population			Percentage of Public School Resources			Ratio between Percentage of Resources and of Population		
	Farmers	Manual Workers and Traders	White-Collar Workers	Farmers	Manual Workers and Traders	White-Collar Workers	Farmers	Manual Workers and Traders	White-Collar Workers
Africa									
Anglophone	76	18	6	56	21	23	0.73	1.19	3.78
Francophone	76	18	6	44	21	36	0.58	1.15	5.93
Asia	58	32	10	34	38	28	0.59	1.19	2.79
Latin America	36	49	15	18	51	31	0.49	1.04	2.03
Middle East and North Africa	42	48	10	25	46	29	0.60	0.35	2.87
Members of the Organization for Economic Cooperation and Development (OECD)	12	53	35	11	46	42	0.95	0.87	1.2

Source: Emmanuel Jimenez, "The public subsidization of education and health in developing countries: A review of equity and efficiency," *World Bank Research Observer* 1 (1986): 111–129, tab. 3. Reprinted with permission.

Educational Systems and Development

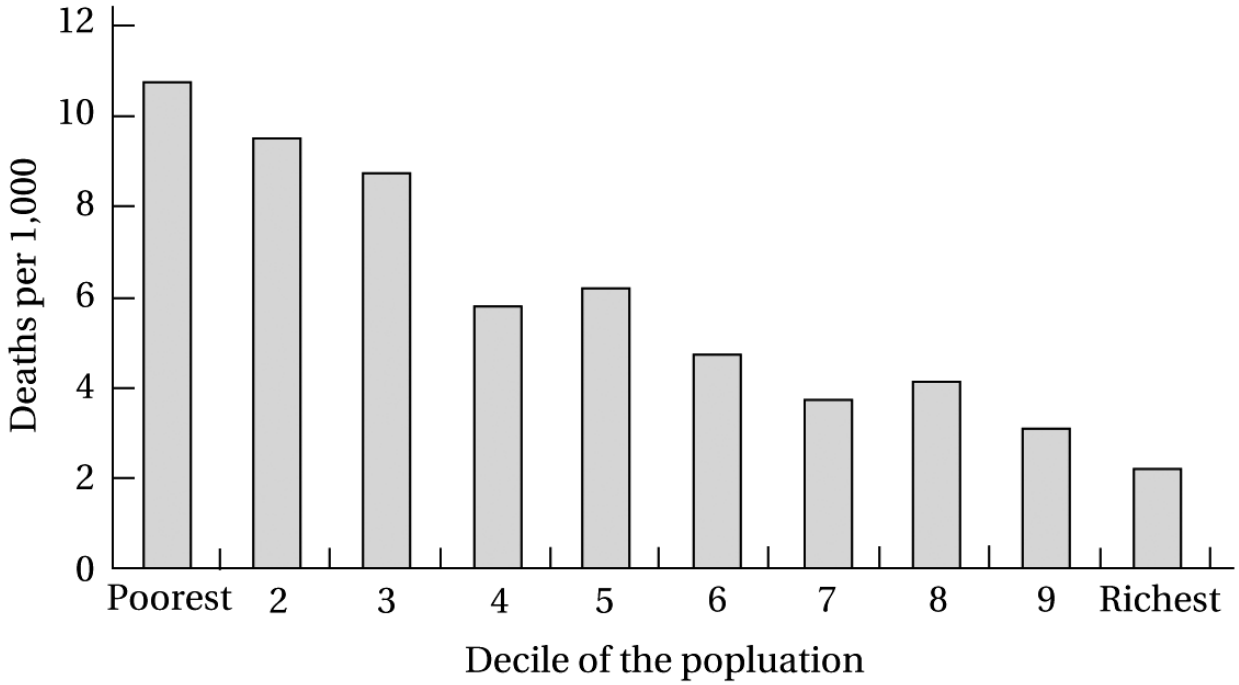
- Educational supply and demand: the relationship between employment opportunities and educational demands
- Social versus private benefits and costs
- Distribution of education
- Education, inequality, and poverty
- Education, internal migration, and the brain drain

Health Systems and Development

- Measurement and distribution

Figure 8.8

FIGURE 8.8 Mortality of Children Two Years Old and Younger by Wealth, Brazil, 1996

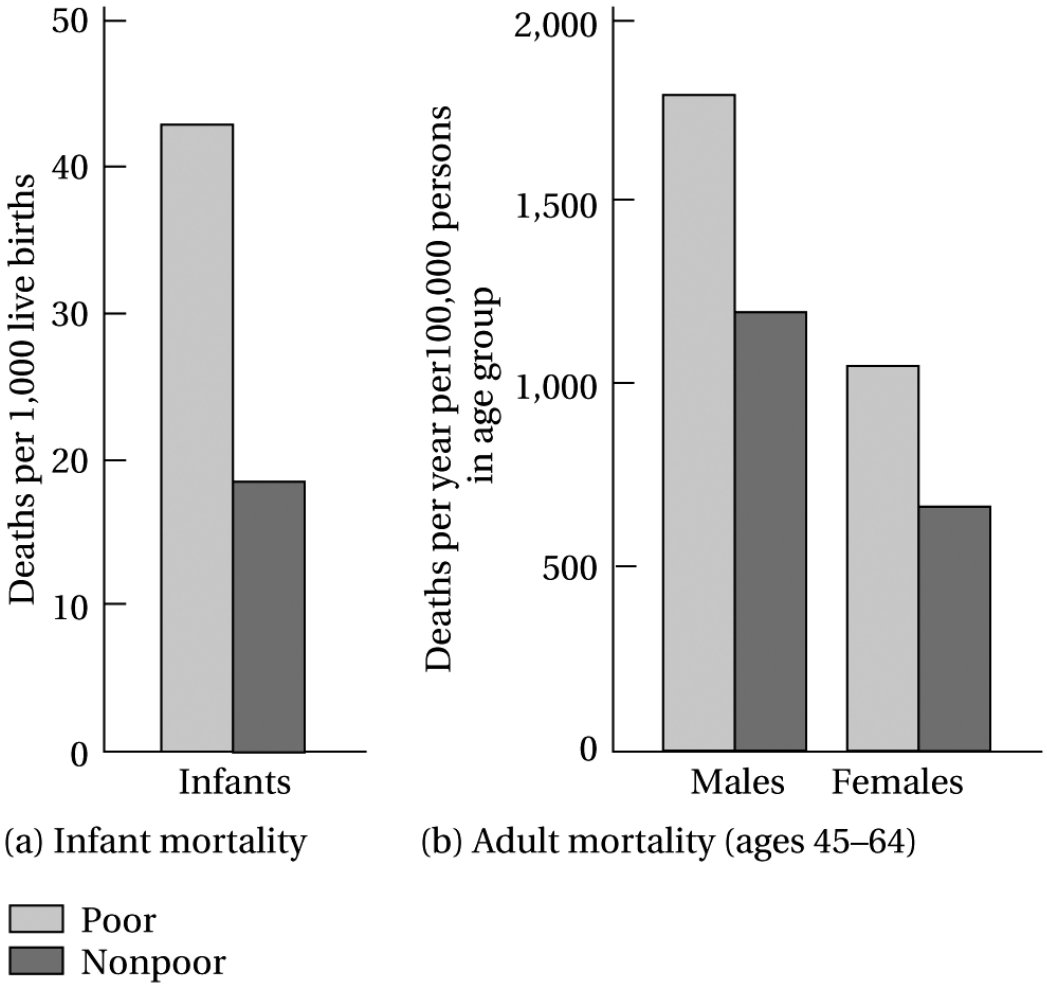


Source: World Bank, *The Quality of Growth* (New York: Oxford University Press, 2000), p. 61. Reprinted with permission.

Health Systems and Development

- Measurement and distribution
- Disease burden

FIGURE 8.9 Infant and Adult Mortality in Poor and Nonpoor Neighborhoods of Porto Alegre, Brazil, 1980



Source: World Bank, *World Development Report, 1993* (New York: Oxford University Press, 1993), fig. 3. Reprinted with permission.

Health Systems and Development

- Measurement and distribution
- Disease burden
- Malaria and parasitic worms
- HIV and AIDS

Table 8.4

TABLE 8.4 Regional HIV/AIDS Statistics and Features, 2003

Region	Epidemic Started	Adults and Children Living with HIV/AIDS	Adults and Children Newly Infected with HIV	Adult Prevalence Rate[a]	Adult and Child Deaths due to AIDS	Main Modes of Transmission for Adults Living with HIV/AIDS[b]
Sub-Saharan Africa	Late '70s–early '80s	25.0–28.2 million	3.0–3.4 million	7.5–8.5%	2.2–2.4 million	Hetero
North Africa and Middle East	Late '80s	470,000–730,000	43,000–67,000	0.2–0.4%	35,000–50,000	Hetero, IDU
South and Southeast Asia	Late '80s	4.6–8.2 million	610,000–1.1 million	0.4–0.8%	330,000–590,000	Hetero, IDU
East Asia and Pacific	Late '80s	700,000–1.3 million	150,000–270,000	0.1%	32,000–58,000	IDU, hetero, MSM
Latin America	Late '70s-early '80s	1.3–1.9 million	120,000–180,000	0.5–0.7%	49,000–70,000	MSM, IDU, hetero
Caribbean	Late '70s-early '80s	350,000–590,000	45,000–80,000	1.9–3.1%	30,000–50,000	Hetero, MSM
Eastern Europe and Central Asia	Early '90s	1.2–1.8 million	180,000–280,000	0.5–0.9%	23,000–37,000	IDU
Western Europe	Late '70s- Early '80s	520,000—680,000	30,000–40,000	0.3%	2,600–3,400	MSM, IDU
North America	Late '70s-early '80s	790,000–1.2 million	36,000–54,000	0.5–0.7%	12,000–18,000	MSM, IDU, hetero
Australia and New Zealand	Late '70s-early '80s	12,000–18,000	700–1,000	0.1%	<100	MSM
Totals		40 million	5 million	1.1%	3 million	

Source: World Health Organization, http://www.WHO.int/hiv/pub/epidemiology/en/epi 2003_2_full.jpg. Reprinted with permission.

[a]Proportion of adults (15 to 49 years of age) living with HIV/AIDS in 2003, using 2003 population numbers.

[b]Hetero (heterosexual transmission), IDU (transmission through injecting drug use), MSM (sexual transmission among men who have sex with men).

Table 8.5

TABLE 8.5 Percentage of Adult Population with HIV or AIDS, Selected Developing Countries, end 2001

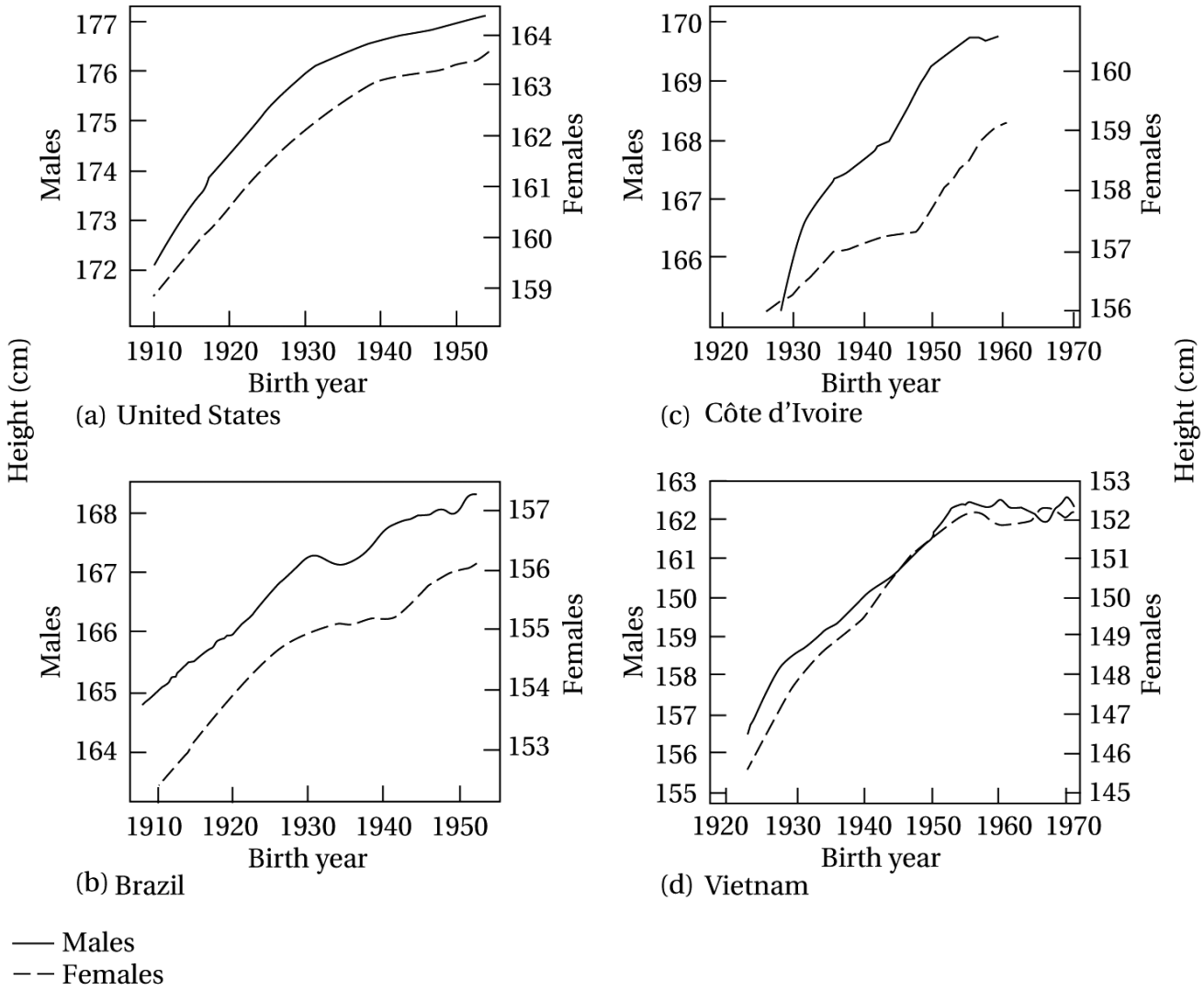
Botswana:	38.8	Kenya:	15.0	Democratic Republic of Congo:	7.2	Argentina:	0.7
Zimbabwe:	33.7	Mozambique:	13.0	Haiti:	6.1	Brazil:	0.7
Namibia:	22.5	Central African Republic:	12.9	Uganda:	5.0	Mexico:	0.3
Zambia:	21.5	Côte d'Ivoire:	9.7	Thailand:	1.8	Vietnam:	0.3
South Africa:	20.1	Rwanda:	8.9	India:	0.8	China:	0.1
Malawi:	15.0					Indonesia:	0.1

Source: WHO data; UNAIDS data, http//www.unaids.org/hivaidsinfo/statistics/june00/fact_sheets/index.html
Note: For comparative purposes, the infection rate in the United States is about 0.6, in Canada,0.3, in the United Kingdom 0.1, and in Japan < 0.1.

Health Systems and Development

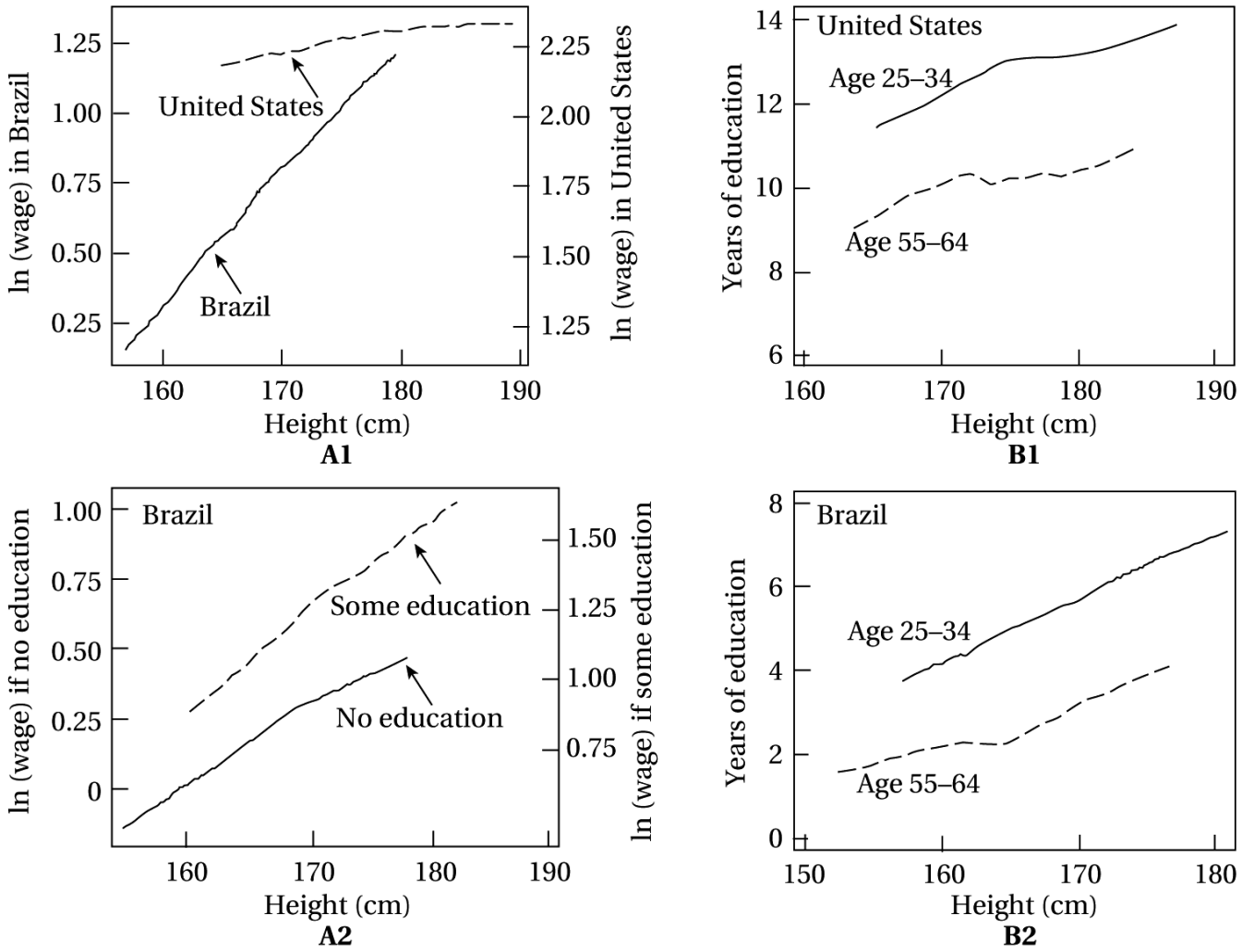
- Measurement and distribution
- Disease burden
- Malaria and parasitic worms
- HIV and AIDS
- Health and Productivity

FIGURE 8.10 Adult Stature by Birth Cohort



Source: John Strauss and Duncan Thomas, "Health, nutrition, and economic development," *Journal of Economic Literature* 36 (1998): 766–817; see also Strauss and Thomas, "Health and wages: Evidence on men and women in urban Brazil," *Journal of Econometrics* 77 (1997): 159–185. Reprinted with the permission of the American Economic Association.

FIGURE 8.11 Wages, Education, and Height of Males in Brazil and the United States

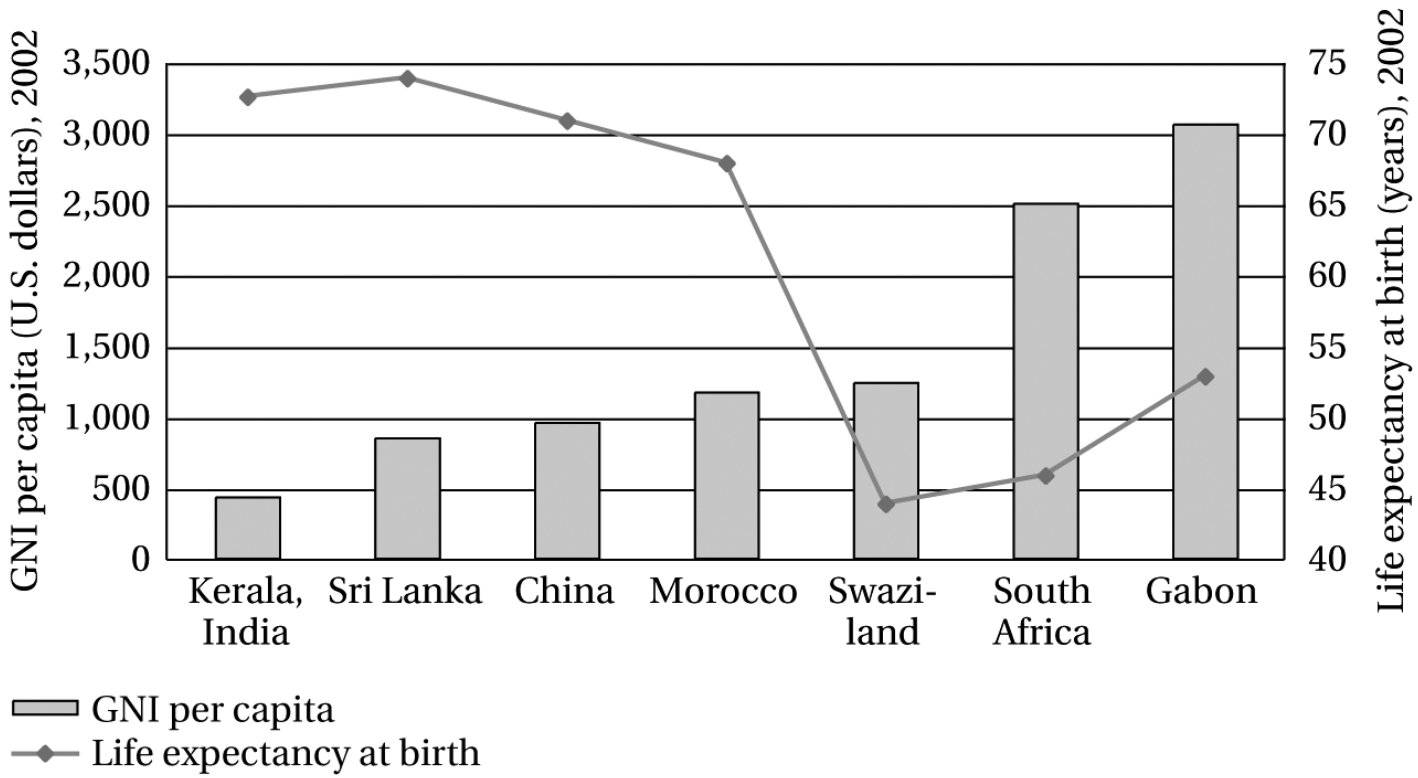


Source: John Strauss and Duncan Thomas, "Health, nutrition, and economic development," *Journal of Economic Literature* 36 (1998): 766–817; see also Strauss and Thomas, "Health and wages: Evidence on men and women in urban Brazil," *Journal of Econometrics* 77 (1997): 159–185. Reprinted with the permission of the American Economic Association.

Health Systems and Development

- Measurement and distribution
- Disease burden
- Malaria and parasitic worms
- HIV and AIDS
- Health and Productivity
- Health systems policy

FIGURE 8.12 GNI Per Capita and Life Expectancy at Birth, 2002



Source: World Bank, *World Development Indicators, 2004* (Washington, D.C.: World Bank, 2004), tabs. 1.1 and 2.19. Copyright © 2004 by the World Bank. Reprinted with the permission of the World Bank via the Copyright Clearance Center.

Policies for Health, Education, and Income Generation

- Integrated programs for the promotion of health, education, and nutrition status in poor families
- Links between health and education programs and microcredit programs

Review Questions

- Why is important the government investment on health and education?
- What are the effects of education and health on a macro-economy of a given country/
- What is the Effect of Covid-19 on human capital?
- Analyze the short run and long run impacts of Covid-19 on education and health as well as government policies.

Chapter IV

Agriculture and Economic Development

Introduction

If the migration of people with and without school certificates to the cities of Africa, Asia, and Latin America is proceeding at historically unprecedented rates, a large part of the explanation can be found in the economic stagnation of the out-lying rural areas. That is where the people are. Over 2.5 billion people in the Third World grind out a meager and often inadequate existence in agricultural pursuits. Over 3 billion people lived in rural areas in 1997. This figure will rise to almost 3.3 billion by the year 2010.

People living in the countryside comprise considerably more than half the population of such diverse Latin American and Asian nations as Bolivia, Guatemala, India, Indonesia, Myanmar, Ecuador, Sri Lanka, Pakistan, the Philippines, and China. In Africa, the ratios are much higher, with almost every country having rural dwellers in excess of three-quarters of the total population. In spite of the massive migration to the cities, the absolute population increase in rural areas of most Third World nations will continue to be greater than that of urban areas for at least the next decade.

Of greater importance than sheer numbers is the fact that the vast majority (almost 70%) of the world's poorest people are also located in rural areas and engaged primarily in subsistence agriculture. Their basic concern is survival. Many hundreds of millions of people have been bypassed by whatever economic progress has been attained. It is estimated that more than 800 million of these people do not have enough food to meet their basic nutritional needs. In their daily struggle to subsist, their behavior may have often seem irrational to many Western economists who, until recently, had little comprehension of the precarious nature of subsistence living and the importance of avoiding risks. If development is to take place and become self-sustaining, it will have to start in the rural areas in general and the agricultural sector in particular. The core problems of widespread poverty, growing inequality, rapid population growth, and rising unemployment all find their origins in the stagnation and often retrogression of economic life in

rural areas.

Traditionally, the role of agriculture in economic development has been viewed as passive and supportive. Based on the historical experience of Western countries, economic development was seen as requiring a rapid structural transformation of the economy from one predominantly focused on agricultural activities to a more complex modern industrial and service society. As a result, agriculture's primary role was to provide sufficient low-priced food and manpower to the expanding industrial economy, which was thought to be the dynamic "leading sector" in any overall strategy of economic development. Lewis's famous two sector model discussed in PART I of Development Economics is an outstanding example of a theory of development that places heavy emphasis on rapid industrial growth with an agricultural sector fueling this industrial expansion by means of its cheap food and surplus labor.

Today, as we have seen, development economists are less sanguine about the desirability of placing such heavy emphasis on rapid industrialization. They have come to realize that far from playing a passive, supporting role in the process of economic development, the agricultural sector in particular and the rural economy in general must play an indispensable part in any overall strategy of economic progress, especially for the 61 low income developing countries.

An agriculture- and employment-based strategy of economic development requires at a minimum three basic complementary elements:

- accelerated output growth through technological, institutional, and price incentive changes designed to raise the productivity of small farmers;
- rising domestic demand for agricultural output derived from an employment-oriented urban development strategy; and
- diversified, nonagricultural, labor-intensive rural development activities that directly and indirectly support and are supported by the farming community.

To a large extent, therefore, the past two decades witnessed a remarkable transition in development thinking in which agricultural and rural development came to be seen by many as the sine qua non of national development. Without

such integrated rural development, industrial growth either would be stultified or, if it succeeded, would create such severe internal imbalances in the economy that the problems of widespread poverty, inequality, and unemployment would become even more pronounced.

Five main questions, therefore, need to be asked about Third World agriculture and rural development as these relate to overall national development:

1. How can total agricultural output and productivity per capita be substantially increased in a manner that will directly benefit the average small farmer and the landless rural dweller while providing a sufficient food surplus to support a growing urban, industrial sector?
2. What is the process by which traditional low-productivity peasant farms are transformed into high-productivity commercial enterprises?
3. When traditional family farmers and peasant cultivators resist change, is their behavior stubborn and irrational, or are they acting rationally within the context of their particular economic environment?
4. Are economic and price incentives sufficient to elicit output increases among peasant agriculturalists, or are institutional and structural changes in rural farming systems also required?
5. Is raising agricultural productivity sufficient to improve rural life, or must there be concomitant off-farm employment creation along with improvements in educational, medical, and other social services? In other words, what do we mean by rural development, and how can it be achieved?

Learning Objectives

After studying this chapter the student is expected to be able to

- give factual account of growth and stagnation of the agricultural sector over the past half century.
- understand the description and analysis of the basic characteristics of agrarian systems in developing countries and identify some important similarities and differences.

- describe the economics of peasant subsistence agriculture and discuss the stages of transition from subsistence to commercial farming in developing nations. Moreover, the will be able the importance of not only economic factors but also the social, institutional, and structural requirements of small-farm modernization.
- explore the meaning of rural development and review alternative policies designed to raise levels of living in Third World rural areas.

4.1 Agricultural Stagnation and Growth since 1950.

Many developing countries experienced respectable rates of GNP growth during the past few decades. The greatest proportionate share of this over all-growth occurred in the manufacturing and commerce sectors, where recorded rates of annual output growth often exceeded 10%. In contrast, agricultural output growth for most developing regions was much less robust during these decades, and the share of agricultural output in total GNP declined.

In spite of the fact that the agricultural sector accounts for most of the employment in developing countries, it accounts for a much lower share of the output. In fact, in most developing regions, agricultural production constitutes no more than 30% of the total national product. This is in marked contrast to the historical experience of advanced countries, where agricultural output in their early stages of growth always contributed at least as much to total output as the share of the labor force engaged in these activities. The fact that contemporary Third World agricultural employment is typically two to three times as large in proportion to the total as is agricultural output simply reflects the relatively low levels of labor productivity compared with those in manufacturing and commerce.

The data in Table 4.1 strongly suggest that a direct attack on rural poverty through accelerated agricultural development is necessary to raise living standards. Mere concern with maximizing GNP growth may not be enough. Unfortunately, the record of the past five decades offers only limited hope, as can be seen from Table

TABLE 4.1 **Outputs and Employment in Third World Agriculture, 1995**

Region	Percentage of the Labor Force in Agriculture	Output of Agriculture as a Percentage of Gross Domestic Product
South Asia	64	30
East Asia (including China)	70	18
Latin America	25	10
Africa	68	20

Between 1950 and 1970, per capita food production and per capita agricultural production (which includes not only food but also non edible agricultural products like cotton, sisal, wool, and rubber) each increased by less than 1 % per year in the Third World as a whole. Moreover, as Table 5.2 shows, the rates of growth of both these measures of agricultural performance were much slower in the 1960s than in the 1950s.

In fact, the agricultural sector in many developing countries completely stagnated in the 1960s. People on the whole were little or no better off in terms of the per capita availability of food at the end of the decade than they were at the beginning. The situation improved somewhat during the 1970s as developing countries increasingly turned their attention to raising agricultural productivity. As a result, from 1970 to 1980, per capita food production grew at an annual rate of 0.5%. These positive trends continued and even accelerated into the 1990s, with most of the gains occurring toward the end of that decade.

From Table 4.2 we can also see that these same broad tendencies were at work within each of the major regions of the developing world. In Latin America, there was some increase in the growth of per capita food production in the 1970s especially and in the 1980s, but agricultural production in the 1960s as a whole showed no such increase. The picture for Africa is more dismal. Per capita food production has declined steadily since the 1970s. Although the data reflect changes in per capita food production, which may differ from food consumption

due to foreign trade, it is clear that the average African has suffered a fall in the level of food consumption over the past decades. Because food consumption constitutes by far the largest component in a typical African's standard of living, the sharp decline in per capita food production and consumption means that the region as a whole was becoming even more underdeveloped during the period 1970-1994.

Some reasons for the disappointing negative growth of African per capita food production include insufficient and inappropriate innovation, cultivation of marginal and sensitive lands, severe deforestation and erosion, sporadic civil wars, and misguided (incentive-reducing) pricing and marketing policies-all of which were exacerbated by the highest rate of population growth in the world.

The agricultural performance in Asia was varied. In the Near East, there was a decline in the rate of growth compared to the pre-1960 period. During the 1960s, both per capita food production and agricultural production tended to stagnate. Whereas in the 1970s and especially in the late 1980s and early 1990s food production rose sufficiently to provide growing increases in per capita output. Only in the Far East region of Asia (and to a much lesser extent in Latin America) has per capita production expanded steadily. Nevertheless, India's great drought of

TABLE 4.2 Annual Change in Per Capita Food and Agricultural Output in Third World Regions and Developed Countries, 1950-1994

	Change in Per Capita Food Production (%)				Change in Per Capita Agricultural Production (%)			
Region	1948/1952- 1960	1960-1970	1970-1980	1980-1994	1948/1952 1960	1960-1970	1970-1980	1980-1994
Latin America	0.4	0.6	0.9	0.8	0.2	0.0	0.7	0.5
Far East (excluding Japan)	0.8	0.3	0.7	1.7	0.7	0.3	0.6	1.7
Near East (excluding Israel)	0.7	0.0	0.7	1.3	0.8	0.0	0.4	1.1
Africa (excluding South Africa)	0.0 .	-0.7	-1.2	0.0	0.3	-0.5	-1.4	0.0
All developing countries	0.6	0.1	0.5	0.9	0.6	0.0	0.8	0.8
Developed countries	1.1	0.9	1.3	0.3	1.0	0.6	1.2	0.5

1987 demonstrated the still precarious nature of Third World food production in Asia.

We may conclude that in spite of some impressive rates of per capita GNP growth recorded in LDC regions during the past few decades, per capita growth in the agricultural sector improved substantially only in parts of Asia (notably China) while showing spotty progress in Latin America and significant declines in Africa. Because the vast majority of people in developing countries seek their livelihoods in this sector.

The magnitude and extent of Third World poverty has improved at best only marginally in Asia and Latin America and has steadily worsened in Africa. This becomes especially apparent when we realize that per capita aggregates for food production mask the inherently unequal distribution of that production and consumption, just as per capita GNP figures often mask the magnitude of absolute poverty.

The situation in sub-Saharan Africa is particularly acute. The United Nations Food and Agriculture Organization (FAO) has repeatedly warned of catastrophic food shortages. In a majority of African countries, the average per capita calorie intake has now fallen below minimal nutritional standards. The FAO estimates that of Africa's 750 million people, more than 270 million suffer from some form of malnutrition associated with inadequate food supplies.

Whereas the severe famine of 1973-1974 took the lives of hundreds of thousands and left many more with permanent damage from malnutrition, its geographic impact was limited to the Senegal belt that stretches below the Sahara from Cape Verde, off the coast of Senegal in the west, across the continent to Ethiopia. By contrast, in 1982-1984 and again in 1987-1988, 1991-1992, and 1993-1994, the food crisis became much more widespread, with more than 22 nations threatened by severe famine, including, in addition to the Senegal nations, Zambia, Tanzania, Malawi, Uganda, Botswana, Mozambique, Zimbabwe, and Angola.

A major reason for the relatively poor performance of Third World agriculture has been the neglect of this sector in the development priorities of their governments. This neglect of agriculture and the accompanying bias toward investment in the urban industrial economy can in turn be traced largely to the misplaced emphasis on rapid industrialization via import substitution and exchange-rate over valuation that permeated development thinking and strategy during the postwar decades.

For example, during the 1950s and throughout most of the 1960s, the share of total national

investment allocated toward the agricultural sector in a sample of 18 LDCs was approximately 12%. This is despite to the fact that agriculture in these countries accounted for almost 30% of GNP and more than 60% of total employment. One significant manifestation of this rural neglect and the corresponding emphasis on urban growth has been the massive migration of rural peasants into the teeming cities of developing nations.

As a result of this disappointing experience and the realization that the future of most underdeveloped countries will depend to a large extent on what happens to their agriculture, there has been a marked shift in development thinking and policymaking. This shift, which began in the late 1970s and has continued into the 1990s, has been away from the almost exclusive emphasis on rapid industrialization toward a more realistic appreciation of the overwhelming importance of agricultural and rural development for national development. A first step toward understanding what is needed for agricultural and rural development, however, must be a comprehension of the nature of agricultural systems in diverse developing regions and, in particular, of the economic aspects of the transition from subsistence to commercial agriculture.

4.2 The Structure of Third World Agrarian Systems

When we look at the state of contemporary agriculture in most poor countries, we realize the enormity of the task that lies ahead. A brief comparison between agricultural productivity in the developed nations and the underdeveloped nations makes this clear. World agriculture, in fact, comprises two distinct types of farming:

1. the highly efficient agriculture of the developed countries, where substantial productive capacity and high output per worker permit a very small number of farmers to feed entire nations, and
2. the inefficient and low-productivity agriculture of developing countries, where in many instances the agricultural sector can barely sustain the farm population, let alone the burgeoning urban population, even at a minimum level of subsistence

The gap between the two kinds of agriculture is immense. This is best illustrated by the disparities in labor productivity. In 1960, the agricultural population of the developed nations came to about 115 million people. They produced a total output amounting to $78 billion, or about $680 per capita. In contrast, the per capita product of the agricultural population in the underdeveloped countries in 1960 was only $52. In other words, agricultural labor productivity

in developed countries was more than 13 times that in the less developed countries.

By 1995, this productivity gap had widened to more than 50 to 1. For example, in LDCs the value added per agricultural worker in 1995 was $459, while in countries like Norway, Sweden, and Japan it was $34,809, $28,590, and $16,712, respectively. Another manifestation of the productivity gap relates to land productivity. Table 4.3 shows variations in land productivity (measured as kilograms of grain harvested per hectare of agricultural land) between Japan and the United States on the one hand and six heavily populated countries in Asia, Africa, and Latin America on the other.

TABLE 4.3: Land Productivity in Developed and Developing Countries, 1995

Country	Average Grain Yield (kilograms per hectare)	Population (million)
Japan	6,119	125
United States	5,136	263 120
Bangladesh	2,602	92 159
Mexico	2,506	929
Brazil	2,383	130
India	2,136	111
Pakistan	1,943	
Nigeria	1,172	

We see that in 1995 Japanese and U.S. land productivity varied from as high as 522% and 438%, respectively, of Nigerian productivity to 235% and 244%, respectively, of productivity in Bangladesh and Mexico.

In the developed countries, there has been a steady growth of agricultural output since the mid-eighteenth century. This growth has been spurred by technological and biological improvements, which have resulted in ever higher levels of labor and land productivity. The growth rate accelerated after the First World War and particularly after the Second World War. The end result is that fewer farmers are able to produce more food.

This is especially the case in the United States, where in 1998 only 2% of the total workforce was agricultural, compared with more than 70% in the early nineteenth century. For example, in 1820, the American farmer could produce only four times his own consumption. A century later, in 1920, his productivity had doubled, and he could provide enough for eight persons. It took only another 32 years for this productivity to double again, and then only 12 more years

for it to double once more. By 1987, a single American farmer could provide enough food to feed almost 80 people. Moreover, during the entire period, average farm incomes in North America rose steadily.

The picture is entirely different when we turn to the agricultural production experience of developing nations. In many poor countries, agricultural production methods have changed relatively slowly over time. Later in this chapter we will discover that much of this technological stagnation can be traced to the special circumstances of peasant agriculture, with its high risks and uncertain rewards.

Rapid rural population growth has compounded the problem by causing great pressure to be exerted on existing resources. Where fertile land is scarce, especially throughout South and Southeast Asia but also in many parts of Latin America and Africa, rapid population growth has led to an increase in the number of people living on each unit of land. Given the same farming technology and the use of traditional non labor inputs (e.g., simple tools, animal power, traditional seeds), we know from the principle of diminishing returns that as more and more people are forced to work on a given piece of land, their marginal (and average) productivity will decline. The net result is a continuous deterioration in real living standards for rural peasants.

To avert massive starvation and raise levels of living for the average rural dweller, agricultural production and the productivity of both labor and land must be rapidly increased throughout Asia, Africa, and Latin America. Most developing nations need to become more self-sufficient in their food production others can rely on their successful nonagricultural exports to secure the necessary foreign exchange to import their food requirements. But for the majority of debt-ridden, inefficient, and unsuccessful exporters, unless major economic, institutional, and structural changes are made in their farming systems, their food dependence, especially on North American supplies, will increase in the coming years.

4.3 Peasant Agriculture in Developing Countries

In many developing countries, various historical circumstances have led to a concentration of large areas of land in the hands of a small class of powerful landowners. This is especially true in Latin America and parts of the Asian subcontinent. In Africa, both historical circumstances and the availability of relatively more unused land have resulted in a different pattern and structure of agricultural activity. However, in terms of levels of farm productivity, there is little to distinguish

among the three regions.

A common characteristic of agriculture in all three regions, and for that matter in many developed countries, is the position of the family farm as the basic unit of production. As Raanan Weitz points out:

For the vast number of farm families, whose members constitute the main agricultural work force, agriculture is not merely an occupation or a source of income; it is a way of life. This is particularly evident in traditional societies, where farmers are closely attached to their land and devote long, arduous days to its cultivation. Any change in farming methods perforce brings with it changes in the farmer's way of life. The introduction of biological and technical innovations must therefore be adapted not only to the natural and economic conditions, but perhaps even more to the attitudes, values, and abilities of the mass of producers, who must understand the suggested changes, must be willing to accept them, and must be capable of carrying them out.

Thus in spite of the obvious differences between agricultural systems in Asia, Latin America, and Africa and among individual nations within each region, certain broad similarities enables us to make some generalizations and comparisons. In particular, **agrarian** systems in many parts of Asia and Latin America show more structural and institutional similarities than differences, and subsistence farmers in all three regions exhibit many of the same economic behavior patterns. We examine first the major features of agricultural systems in Latin America and Asia.

4.3.1 Latin America and Asia: Similarities and Differences

Although Latin America and Asia have very different heritages and cultures, peasant life in these two regions is in many ways similar. Francis Foland has succinct1y described these similar features:

Both the Latin American and Asian peasant is a rural cultivator whose prime concern is survival. Subsistence defines his concept of life. He may strive to obtain his and his family's minimal needs by tilling an inadequate piece of land which is his own or, more often, which is rented from or pawned to a landlord or moneylender, or by selling his labour for substandard wages to a commercial agricultural enterprise. Profits which might come to him through the fortunes of weather or market are windfalls, not preconceived goals. Debt rather than profit is his normal fate, and therefore, his farming techniques are rationally scaled to his level of disposable capital: human and animal power rather than mechanized equipment; excrement rather than chemical fertilizers; traditional crops and seeds rather than experimental

cultivations.

No effective social security, unemployment insurance, or minimum wage law ease his plight. His every decision and act impinges directly upon his struggle for physical survival. In countries with a high proportion of peasantry, traditional food crops which a rural family can itself convert readily into the daily fare for its grain- or tuber-based diet dominate the agriculture; corn in Mexico, rice in Indonesia, Mandioca in Brazil, soy beans in China. India's is typical of peasant agriculture with seventy-five percent of the cropped land devoted to food grains such as rice, wheat, millets, barley and lentils. When these fail, as in Maharashtra in 1972, a peasant is reduced to trading his bullocks for a few bananas.

Although the day- to-day struggle for survival permeates the lives and attitudes of peasants in both Latin America and Asia (and also Africa, although the rural structure and institutions are considerably different), the nature of their agrarian existence differs markedly. In Latin America, the peasant's plight is rooted in the latifundio (large tracts of land owned by few land lords) minifundio (very small sizes land holding) system. In Asia, it lies primarily in fragmented and heavily congested dwarf parcels of land.

4.3.2 Subsistence Agriculture and Extensive Cultivation in Africa

As in Asia and Latin America, subsistence farming on small plots of land is the way of life for the vast majority of African people. However, the organization and structure of African agricultural systems differ markedly from those found in contemporary Asia or Latin America. Except in former colonial settlement areas like White Highlands of Kenya and some of the large sugar, cocoa, and coffee plantations of East and West Africa, the great majority of farm families in tropical Africa still plan their output primarily for their own subsistence. Since the basic variable input in African agriculture is farm family and village labor, African agriculture systems are dominated by three major characteristics:

1. the importance of subsistence farming in the village community;
2. the existence of some (though rapidly diminishing) land in excess of immediate requirements, which permits a general practice of shifting cultivation and reduces the value of land ownership as an instrument of economic and political power;
3. the rights of each family (both nuclear and extended) in a village to have access to land and water in the immediate territorial vicinity, excluding from such access use by families that do not belong to the community even though they may be of the same tribe.

The low-productivity subsistence farming characteristic of most traditional African agriculture results from a combination of three historical forces restricting the growth of output:

1. In spite of the existence of some unused and potentially cultivable land, only small areas can be planted and weeded by the farm family at a time when it uses only traditional tools such as the short-handled hoe, the ax, and the long handled knife or panga. In some countries, use of animals is impossible because of the notorious tsetse fly or a lack of fodder in the long dry seasons, and traditional farming practices must rely primarily on the application of human labor to small parcels of land.
2. Given the limited amount of land that a farm family can cultivate in the context of a traditional technology and the use of primitive tools, these small areas tend to be intensively cultivated. As a result, they are subject to rapidly diminishing returns to increased labor inputs. In such conditions, shifting cultivation is the most economic method of using limited supplies of labor on extensive tracts of land. Under shifting cultivation, once the minerals are drawn out of the soil as a result of numerous croppings, new land is cleared, and the process of planting and weeding is repeated. In the meantime, formerly cropped land is allowed to recover fertility until it can be used again. Under such a process, manure and chemical fertilizers are unnecessary, although in most African villages some form of manure (mostly animal waste) is applied to nearby plots that are intensively cultivated in order to extend their period of fertility.
3. Labor is scarce during the busiest part of the growing season, planting and weeding times. At other times, much of the labor is underemployed. Because the time of planting is determined by the onset of the rains and because much of Africa experiences only one extended rainy season, the' demand for workers during the early weeks of this rainy season usually exceeds all available rural labor supplies.

The net result of these three forces had been a relatively constant level of agricultural total output and labor productivity throughout much of Africa. As long as population size remained relatively stable, this historical pattern of low productivity and shifting cultivation enabled most African tribes to meet their subsistence food requirements. But the feasibility of shifting cultivation has now broken down as population densities increase. It has largely been replaced by sedentary cultivation on small owner-occupied plots. As a result, the need for other nonhuman productive

inputs and new technologies grows, especially in the more densely populated agricultural regions of Kenya, Nigeria, Ghana, and Uganda. Moreover, with the growth of towns, the penetration of the monetary economy, soil erosion and deforestation of marginal lands, and the introduction of land taxes, pure subsistence-agricultural practices are no longer viable. Mixed and modern commercial farming must appear, as indeed they have in parts of sub-Saharan Africa.

Of all the major regions of the world, Africa has suffered the most from its inability to expand food production at a sufficient pace to keep up with its rapid population growth. As a result of declining production, African per capita food consumption fell dramatically during the 1980s, and early 1990s, while dependence on imports-particularly wheat and rice-increased.

4.4 The Economics of Agricultural Development: Transition from Peasant Subsistence to Specialized Commercial Farming

For expository convenience, we can identify three broad stages in the evolution of agricultural production:

1. The first and most primitive is the pure, low-productivity, mostly subsistence-level, peasant farm.
2. The second stage is what might be called diversified or mixed\family agriculture, where part of the produce is grown for consumption and part for sale to the commercial sector.
3. The third stage represents the modern farm, exclusively engaged in high-productivity specialized agriculture geared to the commercial market.

Agricultural modernization in mixed-market developing economies may be described in terms of the gradual but sustained transition from subsistence to diversified and specialized production. But such a transition involves much more than reorganizing the structure of the farm economy or applying new agricultural technologies. We have seen that in most traditional societies, agriculture is not just an economic activity; it is a way of life. Any government attempting to transform its traditional agriculture must recognize that in addition to adapting the farm structure to meet the demand for increased production, profound changes affecting the entire social, political, and institutional structure of rural societies will often be necessary. Without such changes, agricultural development will either never get started or, more likely, simply widen the already sizable gap between the few wealthy large landholders and the masses of impoverished tenant farmers, smallholders, and landless laborers.

Before analyzing the economics of agricultural and rural development, therefore, we need to

understand how the agricultural system of a developing nation tends to evolve over time from a predominately subsistence-level and small-scale peasant orientation to more diversified and larger extended family operations and eventually to the dominance in total production of large-scale commercial enterprises.

4.4.1 Subsistence Farming: Risk Aversion, Uncertainty, and Survival

On the classic peasant subsistence farm:

1. Most output is produced for family consumption (although some may be sold or traded in local markets), and a few **staple food** crops are the chief sources of food intake.
2. Output and productivity are low, and only the simplest traditional methods and tools are used.
3. Capital investment is minimal; land and labor are the principal factors of production.
4. The law of diminishing returns is in operation as more labor is applied to shrinking (or shifting) parcels of land.
5. The failure of the rains, the appropriation of his land, and the appearance of the moneylender to collect outstanding debts are the banes of the peasant's existence and cause him to fear for his survival.

Labor is underemployed for most of the year, although workers may be fully occupied at seasonal peak periods such as planting and harvest. The peasant usually cultivates only as much land as his family can manage without the need for hired labor, although many peasant farmers intermittently employ one or two landless laborers. The environment is harsh and static. Technological limitations, rigid social institutions, and fragmented markets and communication networks between rural areas and urban centers tend to discourage higher levels of production. Any cash income that is generated comes mostly from non-farm wage labor.

Throughout much of the developing world, agriculture is still in this subsistence stage. But in spite of the relative backwardness of production technologies and the misguided convictions of some foreigners who attribute the peasants' resistance to change as a sign of incompetence or irrationality, the fact remains that given

- the static nature of the peasants' environment,
- the uncertainties that surround them, the need to meet minimum survival levels of output, and
- the rigid social institutions into which they are locked, most peasants behave in an eco-

nomically rational manner when confronted with alternative opportunities.

As one informed observer of peasant agricultural systems has noted:

> Despite the almost infinite variety of village-level institutions and processes to be found around the world, they have three common characteristics which are pertinent to change: 1, they have historically proven to be successful; the members have survived; 2, they are relatively static, at least the general pace of change is below that which is considered desirable today; and 3, attempts at change are frequently resisted, both because these institutions and processes have proven dependable and because the various elements constitute something akin to an ecological unity in the human realm.

The traditional two-factor neoclassical theory of production where land (and perhaps capital) is fixed and labor is the only variable input provides some insight into the economics of subsistence agriculture. Specifically, it provides an economic rationale for the observed low productivity of traditional agriculture in the form of the law of diminishing marginal productivity.

Unfortunately, this theory does not satisfactorily explain why peasant agriculturalists are often resistant to technological innovation in farming techniques or to the introduction of new seeds or different cash crops. According to the standard theory, a rational income or profit-maximizing farm or firm will always choose a method of production that will increase output for a given cost (in this case, the available labor time) or lower costs for a given output level.

But the theory is based on the crucial assumption that farmers possess **"perfect knowledge"** of all technological input-output relationships as well as current information about prevailing factor and product prices. This is the point at which the theory loses a good deal of its validity when applied to the environment of subsistence agriculture in much of Asia, Africa, and Latin America. Furthermore, when access to information is highly imperfect, the transaction costs of obtaining this information are usually high. As a result, peasant farmers often face **price** bands (a wide range) rather than a single input price. Along with limited access to credit and insurance, such an environment is not conducive to the type of behavior posited by neoclassical theory and goes a long way to explain the actual day- to-day behavior of peasant farmers.

Subsistence agriculture is thus a highly risky and uncertain venture. It is made even more so by the fact that human lives are at stake. In regions where farms are extremely small and cultivation is dependent on the uncertainties of variable rainfall, average output will be low, and in poor years the peasant and his family will be exposed to the very real danger of starvation. In such

circumstances, the main motivating force in the peasant's life may be the maximization not of income but rather of his family's chances of survival.

Accordingly, when risk and uncertainty are high, a small farmer may be very reluctant to shift from a traditional technology and crop pattern that over the years he has come to know and understand to a new one that promises higher yields but may entail greater risks of crop failure. When sheer survival is at stake, it is more important to avoid a bad year (total crop failure) than to maximize the output in better years. In the jargon of economic statistics, risk-avoiding peasant farmers are likely to prefer a technology of food production that combines a low mean per-hectare yield with low variance (less fluctuations around the average) to alternative technologies and crops that may promise a higher mean yield but also present the risk of a greater variance.

Figure 2.1 provides a simple illustration of how attitudes toward risk among small farmers may militate against apparently economically justified innovations. In the figure, levels of output and consumption are measured on the vertical axis and different points in time on the horizontal axis, and two straight lines are drawn. The lower horizontal line measures the Minimum Consumption Requirements (MCR) necessary for the farm family's physical survival. This may be taken as the starvation minimum fixed by nature. Any output below this level would be catastrophic for the peasant and his family. The upper, positively sloped straight line represents the minimum level of food consumption that would be desirable given the prevailing cultural factors affecting village consumption standards. It is assumed that the Minimum Desirable Consumption Level (MDCL) rises over time to reflect rising expectations as traditional societies are opened up to external influences. The producer's attitude toward risk will be largely conditioned by his historical output performance relative to these two standards of reference.

Looking at Figure 4.1, we see that at time X, farmer A's output levels have been very close to MCR. He is barely getting by and cannot take a chance of any crop failure. He will have a greater incentive to minimize risk than farmer B, whose out put performance has been well above the minimum subsistence level and is close to the culturally determined MDCL. Farmer B will therefore be more likely to innovate and change than farmer A

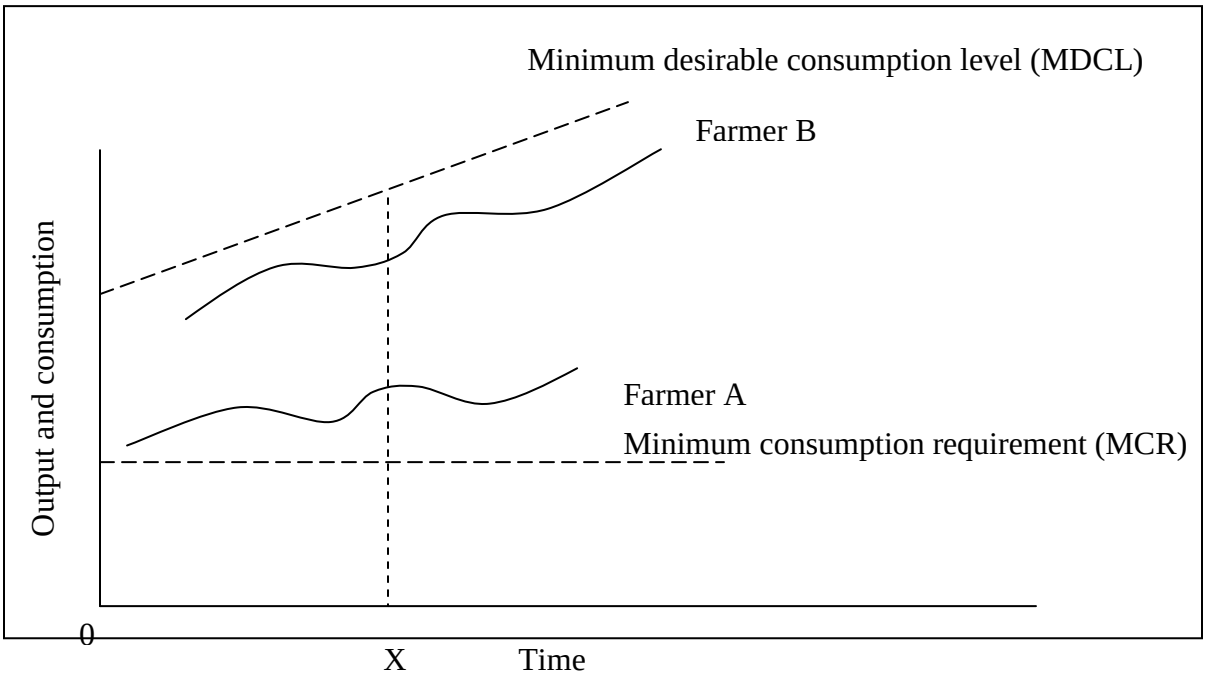


Figure 4.1 Small-Farmer Attitudes toward Risk: Why It Is Sometimes Rational to Resist Innovation and Change.

For the more statistically minded, there is an alternative way to look at risk aversion decisions of peasant farmers. In Figure 4.2, two graphs portraying hypothetical probabilities for crop yields are depicted. The higher graph (technique A) shows a production technology with a lower mean crop yield (10) than that of technique B (12), shown by the lower graph. But it also has a lower variance around that mean yield than technique B. Clearly, the chances of starving are much greater with technique B, so risk-averse peasant farmers would naturally choose technique A: the one with the lower mean yield.

Many programs to raise agricultural productivity among small farmers have suffered because of failure to provide adequate insurance (both financial credit and physical "buffer" stocks) against the risks of crop shortfalls, whether these risks are real or imagined. An understanding of the major role that risk and uncertainty play in the economics of subsistence agriculture would have prevented early and unfortunate characterizations of subsistence or traditional farmers as technologically backward, irrational producers with limited aspirations or just plain "lazy natives" as in the colonial stereotype. Moreover, in many parts of Asia and Latin America, a closer examination of why peasant farmers have apparently not responded to an "obvious" economic opportunity will often reveal that:

1. the landlord secured all the gain,
2. the moneylender captured all the profits,
3. the government's "guaranteed" price was never paid, or
4. complementary inputs (fertilizers, pesticides, assured supplies of water, adequate non-usurious credit, etc.) were never made available.

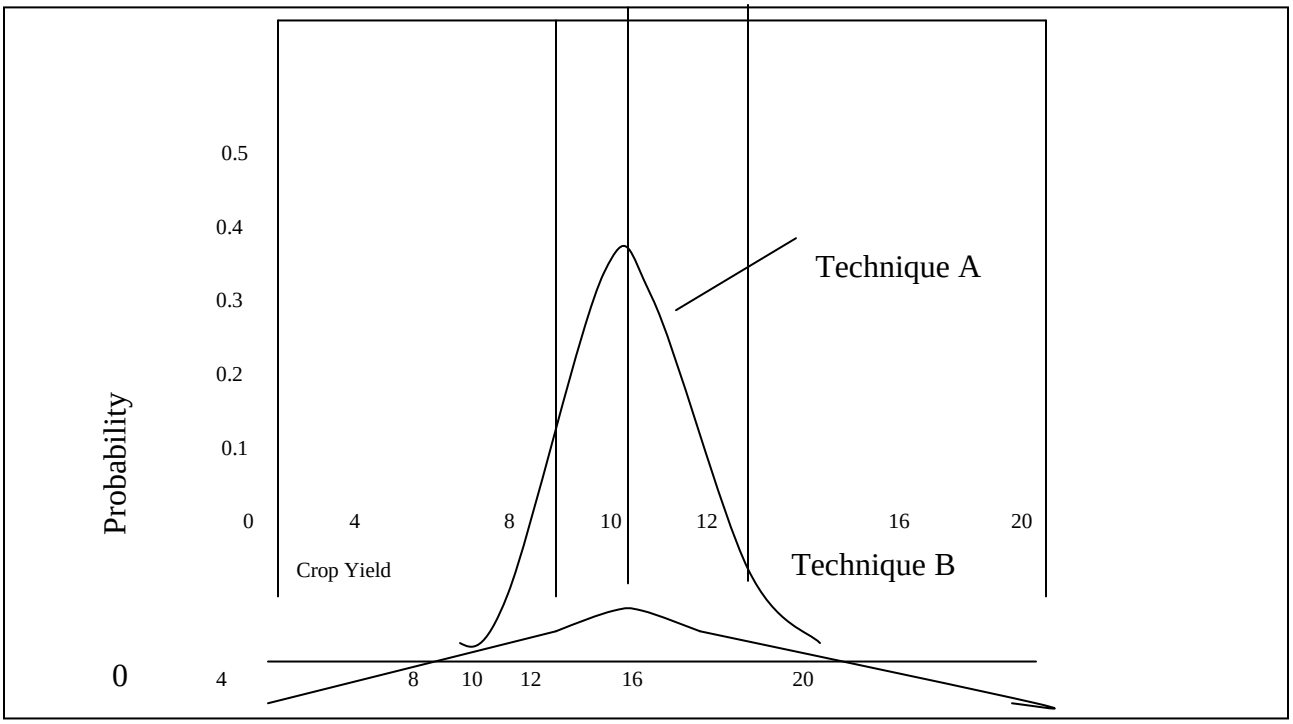


Figure 4.2 Crop Yield Probability Densities of Two Different Farming Techniques

We may conclude that peasant farmers do act rationally and are responsive to economic incentives and opportunities. Where innovation and change fail to occur, we should not assume that peasants are stupid, irrational, or conservative; instead, we should examine carefully the environment in which the small farmer operates to search for the particular institutional or commercial obstacles that may be blocking or frustrating constructive change. As Keith Griffin has pointed out:

If peasants sometimes appear to be unresponsive or hostile to proposed technical changes, it is probably because the risks are high, the returns to the cultivator are low- for example, because of local custom or land tenure conditions, or because credit facilities and marketing outlets are inadequate and the necessary inputs-including knowledge-are missing.

Efforts to minimize risk and remove commercial and institutional obstacles to small-farmer

innovation are therefore essential requirements of agricultural and rural development.

4.4.2 The Transition to Mixed and Diversified Farming

It is neither realistic nor necessarily desirable to think of instantly transforming a traditional agrarian system that has prevailed for many generations into a highly specialized commercial farming system. Attempts to introduce cash crops indiscriminately in subsistence farms have more often than not resulted in the peasants' loss of land to moneylenders or landlords. Subsistence living is merely substituted for subsistence production. For small farmers, exclusive reliance on cash crops can be even more precarious than pure subsistence agriculture because the risks of price fluctuations are added to the uncertainty of nature.

Diversified or mixed farming therefore represents a logical intermediate step in the transition from subsistence to specialized production. In this stage, the staple crop no longer dominates farm output, and new cash crops such as fruits, vegetables, coffee, and tea are established, together with simple animal husbandry. These new activities can take up the normal slack in farm workloads during times of the year when disguised unemployment is prevalent. This is especially desirable in many developing nations where rural labor is abundantly available for better and more efficient use. For example,

- if the staple crop occupies the land during only parts of the year, new crops can be introduced in the slack season to take advantage of both idle land and family labor.
- where labor is in short supply during peak planting seasons, as in many parts of Africa, simple laborsaving devices (such as small tractors, mechanical seeders, or animal-operated steel plows) can be introduced to free labor for other farm activities.
- Finally, the use of better seeds, fertilizer, and simple...irrigation to increase the yields of staple crops like wheat, maize, and rice can free part of the land for cash crop cultivation while ensuring an adequate supply of the staple food.

The farm operator can thus have a marketable surplus, which he can sell to raise his family's consumption standards or invest in farm improvements. Diversified farming can also minimize the impact of staple crop failure and provide a security of income previously unavailable.

The success or failure of such efforts to transform traditional agriculture will depend not only on the farmer's ability and skill in raising his productivity but, even more important, on the social, commercial, and institutional conditions under which he must function. Specifically, if he can have a reasonable and reliable access to credit, fertilizer, water, crop information, and marketing

facilities; if he receives a fair market price for his output; and if he can feel secure that he and his family will be the primary beneficiaries of any improvements, there is no reason to assume that the traditional farmer will not respond to economic incentives and new opportunities to improve his standard of living. Evidence from such diverse countries as Colombia, Mexico, Nigeria, Ghana, Kenya, India, Pakistan, Thailand, and the Philippines shows that under proper conditions, small farmers are responsive to price incentives and economic opportunities and will make radical changes in what they produce and how they produce it. Lack of innovation in agriculture, as we have seen, is usually due not to poor motivation or fear of change per se but to inadequate or unprofitable opportunities.

4.4.3 From Divergence to Specialization: Modern Commercial Farming

The specialized farm represents the final and most advanced stage of individual holding in a mixed market economy. It is the most prevalent type of farming in advanced industrial nations. It has evolved in response to and parallel with development in other areas of the national economy. General rises in living standards, biological and technical progress, and the expansion of national and international markets have provided the main impetus for its emergence and growth.

In specialized farming, the provision of food for the family with some marketable surplus is no longer the basic goal. Instead, pure commercial profit becomes the criterion of success, and maximum per-hectare yields derived from synthetic (irrigation, fertilizer, pesticides, hybrid seeds, etc.) and natural resources become the object of farm activity. Production, in short, is entirely for the market. Economic concepts such as fixed and variable costs, saving, investment and rates of return, optimal factor combinations, maximum production possibilities, market prices, and price supports take on quantitative and qualitative significance. The emphasis in resource utilization is no longer on land, water, and labor as in subsistence and often mixed farming. Instead, capital formation, technological progress, and scientific research and development play major roles in stimulating higher levels of output and productivity.

Specialized farms vary in both size and function. They range from .intensively cultivated fruit and vegetable farms to the vast wheat and corn fields of North America. In most cases, sophisticated laborsaving mechanical equipment, ranging from huge tractors and combine harvesters to airborne spraying techniques, permits a single family to cultivate many thousands of hectares of land.

The common features of all specialized farms, therefore, are their emphasis on the cultivation of

one particular crop; their use of capital-intensive and, in many cases, laborsaving techniques of production; and their reliance on economies of scale to reduce unit costs and maximize profits. For all practical purposes, specialized farming is no different in concept or operation from large industrial enterprises. In fact, some of the largest specialized farming operations in both the developed and especially the less developed nations are owned and managed by large agribusiness multinational corporate enterprises.

4.5 Toward a Strategy of Agricultural and Rural Development: Some Main Requirements.

If the major objective of agricultural and rural development in Third World nations is the progressive improvement in rural levels of living achieved primarily through increases in small-farm incomes, output, and productivity, it is important to identify the principal sources of agricultural progress and the basic conditions essential to its achievement. These are necessarily interrelated, but for purposes of description we may separate them and further divide each into three components:

Sources of Small-Scale Agricultural Progress

1. Technological change and innovation
2. Appropriate government economic policies
3. Supportive social institutions

Conditions for General Rural Advancement

1. Modernizing farm structures to meet rising food demands
2. Creating an effective supporting system
3. Changing the rural environment to improve levels of living

Let us look at each of these six interrelated components.

4.5.1 Improving Small-Scale Agriculture

Technology and Innovation

In most developing countries, new agricultural technologies and innovations in farm practices are preconditions for sustained improvements in levels of output and productivity. In many parts of Africa and Latin America, however, increased output in earlier years was achieved without the need for new technology simply by extending cultivation into unused but potentially productive lands. Almost all of these opportunities have by now been exploited, however, and there is not much scope for further significant improvement.

Two major_sources of technological innovation can increase farm yields. Unfortunately, both

have somewhat problematic implications for LDC agricultural development. The first is the introduction of mechanized agriculture to replace human labor. The introduction of laborsaving machinery can have a dramatic effect on the volume of output per worker, especially where land is extensively cultivated and labor is scarce. For example, one man operating a huge combine harvester can accomplish in a single hour what would require hundreds of workers using traditional methods.

But in the rural areas of most developing nations where land parcels are small, capital is scarce, and labor is abundant, the introduction of heavily mechanized techniques is not only often ill suited to the physical environment but, more important, often has the effect of creating more rural unemployment without necessarily lowering per-unit costs of food production. Importation of such machinery can therefore be antidevelopment in that its efficient deployment requires large tracts of land (and thus the expropriation of small holdings by landlords and moneylenders) and tends to exacerbate the already serious problems of rural poverty and unemployment. And if mechanized techniques exclude women, the male-female productivity gap could widen further, with serious repercussions.

By contrast, biological (hybrid seeds), water control (irrigation), and chemical (fertilizer, pesticides, insecticides, etc.) innovations-the major source are not without their own problems. They are land-augmenting; that is, they improve the quality of existing land by raising yields per hectare. Only indirectly do they increase output per worker. Improved seeds, advanced techniques of irrigation and crop rotation; the increasing use of fertilizers, pesticides, and herbicides; and new developments in veterinary medicine and animal nutrition represent major scientific advances in modern agriculture. These measures are technologically **scale-neutral;** theoretically, they can be applied equally effectively on large and small farms. They do not necessarily require large capital inputs or mechanized equipment. They are therefore particularly well suited for tropical and subtropical regions and offer enormous potential for raising agricultural output in Third World nations.

Institutional and Pricing Policies: Providing the Necessary Economic Incentives

Unfortunately, although the new hybrid "**miracle seed**s" varieties of wheat, corn, and rice, together with needed irrigation and chemicals (often collectively referred to as the **green revolution)** are scale-neutral and thus offer the potential for small farm progress, the social institutions and government economic policies that accompany their introduction into the rural

economy often are not scale-neutral. On the contrary, they often merely serve the needs and vested interests of the wealthy landowners. Because the new hybrid seeds require access to complementary inputs such as irrigation, fertilizer, insecticides, credit, and agricultural extension services, if these are provided only to a small minority of large landowners' the effective impact of the green revolution can be (and has been in parts of South Asia and Mexico) the further impoverishment of the masses of rural peasants.

Large landowners, with their disproportionate access to these complementary inputs and support services, are able to gain a competitive advantage over smallholders and eventually drive them out of the market. Large-scale farmers obtain access to low-interest government credit, while smallholders are forced to turn to moneylenders. The inevitable result is the further widening of the gap between rich and poor and the increased consolidation of agricultural land in the hands of a very few so-called progressive farmers. A developmental innovation with great potential for alleviating rural poverty and raising agricultural output can thus turn out to be antidevelopment if public policies and social institutions militate against the active participation of the small farmer in the evolving agrarian structure.

Another critical area calling for major improvements in government policies relates to the pricing of agricultural commodities, especially food grains and other staples produced for local markets. Many LDC governments, in their headlong pursuit of rapid industrial and urban development, have maintained low agricultural prices in an attempt to provide cheap food for the urban modern sector. Farmers have been paid prices below either world competitive or free-market internal prices. The relative internal price ratio between food and manufactured goods (the domestic terms of trade) thus turned against farmers and in favor of urban manufacturers.

With farm prices so low-in some cases below the costs of production-there was no incentive for farmers to expand output or invest in new productivity-raising technology. As a result, local food supplies continually fell short of demand, and many developing nations, especially in sub-Saharan Africa, that were once self-sufficient in food production had to import the balance of their food needs. This caused further strains on their international balance of payments situation and contributed to the worsening foreign-exchange and international debt crisis of the 1980s.

Economists therefore argue that if LDC governments are to promote increases in agricultural production through new green revolution technologies, they must not only make the appropriate

institutional and credit market adjustments but must also provide incentives for small-and medium-sized farmers by implementing pricing policies that truly reflect internal market conditions. This often means less government intervention (especially in Africa) in the form of public agricultural marketing boards, which monopolize the purchase and distribution of farm output and set producer prices that are typically well below world market prices.

4.5.2 Conditions for Rural Development

Let us now collect what has already been said to formulate three propositions that in essence constitute the necessary conditions for the realization of a people-oriented agricultural and rural development strategy.

Land Reform

> ***Proposition 1: Farm structures and land tenure patterns must be adapted to the dual objectives of increasing food production and promoting a wider distribution of the benefits of agrarian progress.***

Agricultural and rural development that benefits the masses of people can succeed only through a joint effort by the government and all farmers, not just the large farmers. A first step in any such effort, especially in Latin America and Asia, is the provision of secured tenure rights to the individual farmer. A small farmer's attachment to his land is profound. It is closely bound up with his innermost sense of self-esteem and freedom from coercion. When he is driven off his land or is gradually impoverished through accumulated debts, not only is his material well-being damaged, but more important, his sense of self-worth and his desire for self- and family improvement can be permanently destroyed.

It is for these humane reasons as well as for reasons of higher agricultural output and the simultaneous achievement of both greater efficiency and more equity that **land reform** is often proposed as a necessary first condition for agricultural development in many LDCs. In most countries, the highly unequal structure of land ownership is probably the single most important determinant of the existing highly inequitable distribution of rural income and wealth. It is also the basis for the character of agricultural development. When land is very unevenly distributed, rural peasants can have little hope for economic advancement.

Land reform usually entails a redistribution of the rights of ownership or use of land away from large landowners in favor of cultivators with very limited or no landholdings. It can take many forms: the transfer of ownership to tenants who already work the land to create family farms

(Japan, South Korea, Taiwan); transfer of land from large estates to small farms (Mexico), rural cooperatives (Cuba), or state farms (Peru); or the appropriation of large estates for new settlement (Kenya). All go under the heading of land reform and are designed to fulfill one central function: the transfer of land ownership or control directly or indirectly to the people who actually work the land.

There is widespread agreement among economists and other development specialists on the need for land reform. To Myrdal, land reform holds the key to agricultural development in Asia. The Economic Commission for Latin America (ECLA) has repeatedly identified land reform as a necessary precondition for agricultural and rural progress. According to reports in many Third World regions, land reform remains a prerequisite for development. The report argued that such reform was more urgent today than ever before, primarily because

(1) income inequalities and unemployment in rural areas have worsened,

(2) rapid population growth threatens further to worsen existing inequalities, and

(3) Recent and potential technological breakthroughs in agriculture (the green revolution) can be exploited primarily by large and powerful rural landholders and hence can result in an increase in their power, wealth, and capacity to resist future reform.

(4) Finally, as noted earlier, from a strict view of economic efficiency and growth, there is ample empirical evidence that land redistribution not only increases rural employment and raises rural incomes but also leads to greater agricultural production and more efficient resource utilization.

If programs of land reform can be legislated and effectively implemented by the government, the basis for improved output levels and higher standards of living for rural peasants will be established. Unfortunately, many land reform efforts have failed because LDC governments (especially those in Latin America) bowed to political pressures from powerful landowning groups and failed to implement the intended reforms. But, even an egalitarian land reform program alone is no guarantee of successful agricultural and rural development. This leads to our second proposition.

Supportive Policies

Proposition 2*: The full benefits of small-scale agricultural development cannot be realized unless government support systems are created that provide the necessary*

incentives, economic opportunities, and access to needed credit and inputs to enable small cultivators to expand their output and raise their productivity.

Though land reform is essential in many parts of Asia and Latin America, it is likely to be ineffective and perhaps even counterproductive unless there are corresponding changes

1. in rural institutions that control production (e.g., banks, moneylenders, seed and fertilizer distributors),
2. in supporting government aid services (e.g., technical and educational extension services, public credit agencies, storage and marketing facilities, rural transport and feeder roads), and
3. in government pricing policies with regard to both inputs (e.g., removing factor-price distortions) and outputs (paying market-value prices to farmers).

Even where land reform is not necessary but where productivity and incomes are low (as in the whole of Africa and much of Southeast Asia), this broad network of external support services, along with appropriate governmental pricing policies related to both farm inputs and outputs, is an essential condition for sustained agricultural progress.

Integrated Development Objectives

Proposition 3: *Rural development, though dependent primarily on small-farmer agricultural progress, implies much more. It encompasses:*

(a) efforts to raise both farm and non-farm rural real incomes through job creation, rural industrialization, and the increased provision of education, health and nutrition, housing, and a variety of related social and welfare services;

(b) a decreasing inequality in the distribution of rural incomes and a lessening of urban- rural imbalances in incomes and economic opportunities; and

(c) the capacity of the rural sector to sustain and accelerate the pace of these improvements over time.

This proposition is self-explanatory. We need only add that the achievement of its three objectives is vital to national development. This is not only because the majority of Third World populations are located in rural areas but also because the burgeoning problems of urban unemployment and population congestion must find their ultimate solution in the improvement of the rural environment. By restoring a proper balance between urban and rural economic opportunities and by creating the conditions for broad popular participation in national develop-

ment efforts and rewards, developing nations will have taken a giant step toward the realization of the true meaning of development.

Review Questions

- ✓ What are the stages of economic development?
- ✓ What are the implications of agriculture for economic development?

3.State the characteristics of developed and developing countries in agricultural development.

- ✓ Depict the views of Lewis and Harris on agriculture for economic development.
- ✓ How Corona virus disease 2019 affects the relationship between agriculture and economic development?
- ✓ What are the observable and expected Corona virus disease 2019 effect on the agricultural development and its transformation?
- ✓ Do you think that Corona virus disease 2019 will continue its effect on agriculture especially in developing countries? If so, how? Why?

CHAPTER V

INTERNATIONAL TRADE AND ECONOMIC DEVELOPMENT: THE TRADE POLICY DEBATE AND INDUSTRIALIZATION

Introduction

In this chapter we move to trade policy issues by examining a wide range of LDC commercial policies. These include import tariffs, physical quotas, export promotion versus import substitution, exchange-rate adjustments, international commodity agreements, and economic integration. Our objective is to ascertain the conditions under which these policies might help or harm developing countries in their dealings with the industrial world and with one another.

We then summarize the various positions in the ongoing debate between the "trade optimists" (free traders) and "trade pessimists" (protectionists), between outward and inward-looking strategies of development. Finally, we look at the trade policies of developed countries to see in what ways they directly and indirectly affect the economies of the Third World.

Learning Objectives

After studying this chapter, you will be able to

- discuss the arguments for and against export promotion vis-à-vis import substitution trade strategies of development.
- explain the impacts of trade policies such as tariffs, foreign exchange rates, foreign exchange controls, and the devaluation.

- explain why developing countries need to have South-South Trade and Economic Integration
- explain why regional trade organizations are demanded in today's globalization of the world

5.1 Trade Strategies for Development: Export Promotion versus Import Substitution

A convenient and instructive way to approach the complex issues of appropriate trade policies for development is to set these specific policies in the context of a broader LDC strategy of looking outward or looking inward. In the words of Paul P. Streeten, **outward-looking development policies** "encourage not only free trade but also the free movement of capital, workers, enterprises and students. . . , the multinational enterprise, and an open system of communications.

By contrast, **inward-looking development policies** stress the need for LDCs to evolve their own styles of development and to control their own destiny. This means policies to encourage indigenous "learning by doing" in manufacturing and the development of indigenous technologies appropriate to a country's resource endowments. According to proponents of inward-looking trade policies, greater self-reliance can be accomplished only if you restrict trade, the movement of people and communications, and if you keep out the multinational enterprise, with its wrong products and wrong want -stimulation and hence its wrong technology.

Within these two broad philosophical approaches to development, a lively debate has been carried on in the development literature since the early 1950s. This is the debate between the free traders, who advocate outward-looking export promotion strategies of industrialization, and the protectionists, who are proponents of inward-looking import substitution strategies. The balance of the debate has swung back and forth, with the import substitutors predominating in the 1950s and 1960s and the export promoters gaining the upper hand in the late 1970s and, especially among western and World Bank economists, in the 1980s and 1990s. Among many Third World economists and certain developed-country advocates of the "new" or "strategic" trade theories, however, the philosophical foundations of import substitution and collective self-reliance remained almost as strong in the 1990s as they were in prior decades.

Basically, the distinction between these two trade-related development strategies is that advocates of **import substitution** (IS) believe that LDCs should initially substitute domestic production of previously imported simple consumer goods (first -stage IS) and then substitute through domestic production for a wider range of more sophisticated manufactured items (second - stage IS)-all behind the protection of high tariffs and quotas on these imports. In the long run, IS advocates cite the benefits of greater domestic industrial diversification ("balanced growth") and the ultimate ability to export previously protected manufactured goods as economies of scale, low labor costs, and the positive externalities of learning by doing cause domestic prices to become more competitive with world prices.

By contrast, advocates of **export promotion** (EP) of both primary and manufactured goods cite the efficiency and growth benefits of free trade and competition, the importance of substituting large world markets for narrow domestic markets, the distorting price and cost effects of protection, and the tremendous

successes of the East Asian export-oriented economies of South Korea, Taiwan, Singapore, and Hong Kong.

In practice, the distinction between IS and EP strategies is much less pronounced than many advocates would imply. Most LDCs have employed both strategies with different degrees of emphasis at one time or another. For example, in the 1950s and 1960s, the inward-looking industrialization strategies of the larger Latin American and Asian countries such as Chile, Peru, Argentina, India, Pakistan, the Philippines, and Bangladesh were heavily IS-oriented. By the end of the 1960s, some of the key sub-Saharan African countries like Nigeria, Ethiopia, Ghana, and Zambia began to pursue IS strategies, and some smaller Latin American and Asian countries also joined in.

However, since the mid-1970s, the EP strategy has been increasingly adopted by a growing number of countries. The early EP adherents-South Korea, Taiwan, Singapore, and Hong Kong-were thus joined by the likes of Brazil, Chile, Thailand, and Turkey, which switched from an earlier IS strategy. It must be stressed, however, that even the four most successful East Asian export promoters have pursued protectionist IS strategies sequentially and simultaneously in certain industries. So it is inaccurate to call them free traders, although they are definitely outward-oriented. Against this background, we can now examine the issue of outward-looking export promotion versus inward-looking import substitution in more detail by applying the following fourfold categorization:

1. Primary outward-looking policies (encouragement of agricultural and raw material exports)
2. Secondary outward-looking policies (promotion of manufactured exports)
3. Primary inward-looking policies (mainly agricultural self-sufficiency)
4. Secondary inward-looking policies (manufactured commodity self sufficiency through import substitution)

5.1.1 Export Promotion: Looking Outward and Seeing Trade Barriers

The promotion of LDC primary or secondary exports has long been considered a major ingredient in any viable long-run development strategy. The colonial territories of Africa and Asia, with their foreign-owned mines and plantations, were classic examples of primary outward-looking regions. It was partly in reaction to this enclave economic structure and partly as a consequence of the industrialization bias of the 1950s and 1960s that newly independent states, as well as older LDCs, put great emphasis on the production of manufactured goods initially for the home market (secondary inward) and then for export (secondary outward). Let us therefore look briefly at the scope and limitations of LDC export expansion, first with respect to primary products and then with respect to manufactured exports.

Primary-Commodity Export Expansion: Limited Demand, Shrinking Markets

Many low-income LDCs still rely on primary products for most of their export earnings. Nevertheless,

with the notable exception of petroleum exports and a few needed minerals, primary-product exports have grown more slowly than total world trade. Moreover, the LDC share of these exports has been falling over the past few decades. Because food, nonfood agricultural products, and raw materials make up almost 40% of all LDC exports and for many Poor countries constitute their principal source of foreign-exchange earnings, we need to examine the factors affecting the demand for and supply of primary-product exports.

Demand Side

On the demand side, there appear to be at least five factors working against the rapid expansion of Third World primary-product and especially agricultural exports to the developed nations (their major markets). First, the income elasticity of demand for agricultural foodstuffs and raw materials are relatively low compared with those for fuels, certain minerals, and manufactures. For example, the income elasticity of demand for sugar, cacao, tea, coffee, and bananas have all been estimated at less than one, with most in the range of 0.30-0.56. This not only contributes to problems of export earnings instability but also means that only a sustained high rate of per capita income growth in the developed countries can lead to even modest export expansion of these particular commodities from the LDCs. Such high growth rates prevailed in the 1960s but have not been matched since.

Second, developed-country population growth rates are now at or near the replacement level. So, little expansion can be expected from this source. Third, the price elasticity of demand for most primary commodities is relatively low. When relative agricultural prices are falling, as they have been during most of the past three decades, such low elasticities mean less total revenue for exporting nations. For example, between June 1980 and June 1982, the price of sugar fell by 78%, rubber by 37%, and copper by 35%. Between 1989 and 1991, commodity prices fell by about 20%. Tin prices were so low that melting was no longer profitable. And the real prices of coffee and tea were lower than at any time since 1950. With the exception of the mid -1970s, non-oil real commodity prices fell by almost 40% between 1957 and 1998. Such a decline, especially in the 1980s and 1990s when prices fell by over 35% has hurt the least developed countries the most. They reached a l3-year low in 1999.

A device that is widely used to attempt to modify the tendency for primary product prices to decline relative to other traded goods is that of establishing International Commodity Agreements. Such agreements are intended to set overall output levels, to stabilize world prices, and to assign quota shares to various producing nations for such items as coffee, tea, copper, lead, and sugar. To work effectively, they require cooperation and compromise among participants. Commodity agreements can also provide greater protection to individual exporting nations against excessive competition and the overexpansion of world production. Such over-expansion of supply tends to drive down prices and curtail the growth of earnings for all countries.

In short, commodity agreements attempt to guarantee participating nations a relatively fixed share of world export earnings and a more stable world price for their commodity. It is for this reason that at its fourth

world conference, held in Nairobi, Kenya, in May 1976, the United Nations Conference on Trade and Development (UNCTAD) advocated the establishment of an $11 billion common fund to finance "buffer stocks" to support the prices of some 19 primary commodities (including sugar, coffee, tea, bauxite, jute, cotton, tin, and vegetable oil) produced by various Third World nations. Unfortunately for LDC exporters, there has been little progress on the UNCTAD proposal, and most existing non-oil commodity agreements have either failed (tin) or been largely ignored by producers (coffee and sugar).

The fourth and fifth factors working against the long-run expansion of LDC primary-product export earnings - the development of synthetic substitutes and the growth of agricultural protection in the developed countries-are perhaps the most important. Synthetic substitutes for commodities like cotton, rubber, sisal, jute, hide, skins, and recently even copper (with glass fibers for communication networks) act both as a brake against higher commodity prices and as a direct source of competition in world export markets. The synthetic share of world market export earnings has steadily risen over time while the share of natural products has fallen.

In the case of agricultural protection, which usually takes the form of tariffs, quotas, and non-tariff barriers such as sanitary laws regulating food and fiber imports, the effects can be devastating to Third World export earnings. The common agricultural policy of the European Union, for example, is much more discriminatory against LDC food exports than the policies that had formerly prevailed in the individual member nations.

Supply Side

On the supply side, a number of factors also work against the rapid expansion of primary-product export earnings. The most important is the structural rigidity of many Third World rural production systems. These rigidities include limited resources; poor climate; bad soils; antiquated rural institutional, social, and economic structures; and nonproductive patterns of land tenure. Whatever the international demand situation for particular commodities (and these will certainly differ from commodity to commodity), little export expansion can be expected when rural economic and social structures militate against positive supply responses from peasant farmers who are averse to risk.

Furthermore, in developing nations with markedly dualistic farming structures (i.e., large corporate capital-intensive farms existing side by side with thousands of fragmented, low-productivity peasant holdings), any growth in export earnings is likely to be distributed very unevenly among the rural population. Small farmers are further, disadvantaged in countries (mostly in Africa) in which agricultural marketing boards act as middlemen between the farmers and export markets. Marketing boards often constrain export expansion by forcing cultivators to sell their goods at a fixed price-usually well below world market prices. They thereby remove the incentive to increase output.

Finally, we should mention here the pernicious effects of developed-country trade policies (such as the

United States' sugar quota) and foreign aid policies that depress agricultural prices in LDCs and discourage production. For example, the European Union's policy of selling subsidized beef to the nations of West Africa in the guise of foreign assistance has devastated cattle prices in those countries.

We may conclude, therefore, that the successful promotion of primary-product exports cannot occur unless there is a reorganization of rural social and economic structures to raise total agricultural productivity and distribute the benefits more widely. The primary objective of any Third World rural development strategy must be to provide sufficient food to feed the indigenous people first and only then be concerned about export expansion.

But having accomplished this most difficult internal development task, LDCs may be able to realize the potential benefits of their comparative advantage in world primary commodity markets only if they can

- cooperate with one another,
- be assisted by developed nations in formulating and carrying out workable international commodity agreements, and
- secure greater access to developed country markets.

Unfortunately, given the structure of world demands for primary products, the threat of local food shortages and thus the desire for agricultural self-sufficiency, the inevitability of the development of further synthetic substitutes, and the unlikelihood of significantly lower levels of agricultural protection among developed nations, the real scope for primary-product export expansion in individual LDCs seems limited.

Expanding Exports of Manufactured Goods: Some Successes, Many Barriers

The expansion of LDC manufactured exports has been given great stimulus by the spectacular export performances of countries like South Korea, Singapore, Hong Kong, Taiwan, Mexico, and Brazil over the past four decades. For example, Taiwan's total exports grew at an annual rate of over 20%, and exports from South Korea grew even faster. In both cases, this export growth was led by manufactured goods, which contributed over 80% of both nations' foreign exchange earnings. For the Third World as a whole, manufactured exports grew from 6% of total merchandise exports in 1950 to almost 45% by 1990. How-ever, in 1990 South Korea, Taiwan, Singapore, and Hong Kong accounted for 82.8% of these exports. Despite this growth, therefore, the LDC share of total world trade in manufactures has remained relatively small, even though it did grow from 7% in 1965 to 18% in 1990.

The export successes of recent decades, especially among the Four Asian Tigers have provided the primary impetus for arguments by neoclassical counterrevolutionaries -particularly those at the World Bank and the IMF. According to them, LDC economic growth is best served by allowing market forces, free enterprise, and open economies to prevail while minimizing government intervention. Unfortunately, the reality of the East Asian cases does not support this view of how their export success was achieved. In South Korea, Taiwan, and Singapore (as in Japan earlier), the production and composition of exports was not left to

the market but resulted as much from carefully planned intervention by the government.

The demand problems for LDC export expansion of manufactured goods, though different in basic economic content from those for primary products, are nonetheless similar. Although income and price elasticities of international demand for manufactured goods in the aggregate are higher than for primary commodities, they afforded little relief to many developing nations bent on expanding their exports. For many years there was widespread protection in developed nations against the manufactured exports of LDCs-which was in part the direct result of the successful penetration of low-cost labor-intensive manufactures from countries like Taiwan, Hong Kong, and South Korea during the 1960s and 1970s.

Different sources indicate that industrial-nation trade barriers have been pervasive. During the 1980s, for example, 20 of the 24 industrial countries increased their protection against LDC manufactured or processed products. Moreover, their rates of protection were considerably higher against LDC exports than against those of other industrial nations. Making matters worse, MDC protection often increased with the level of processing. Example, the tariff on processed cacao, is twice that of raw cacao, so chocolate imports are discouraged; raw sugar faces tariffs below 2% while processed sugar products are blocked by 20% tariffs.

Then there are the non-tariff barriers, which now form the main protection against Third World manufactured exports, affecting at least one-third of them. The most significant is the Multi-Fiber Arrangement (MFA), a complex system of mostly bilateral quotas against LDC exports of cotton, wool, and synthetic fiber products. The United Nation Development Program estimates that the MFA costs the Third World $24 billion a year is lost textile and clothing export earnings. All in all trade restrictions by developed countries cost LDCs at least $40 billion a year in foreign exports and lowers their GNP by more than 3%. If these barriers were dropped-for example, if the 1995 Uruguay Round of multilateral GATT negotiations can effectively be implemented-developing-country manufactured exports could grow by $30 to $40 billion annually.

As in the case of agricultural and other primary production, the uncertain export outlook should be no cause for curtailing the needed expansion of manufacturing production to serve local LDC markets. There is great scope for mutually beneficial trade in manufactures among developing countries themselves within the context of the gradual economic integration of their national economies. Too much emphasis has been placed on the analysis of trade prospects of individual LDCs with the developed nations (North-South trade) and not enough on the prospects for mutually beneficial trade with one another (South-South trade).

5.2 Import Substitution Industrialization Strategy

During the 1950s and 1960s, developing countries experienced a decline in world markets for their primary products and growing balance of payments deficits on their current accounts. Given a general belief in the magic of industrialization as well as the terms of trade arguments of the Prebisch-Singer hypothesis, they turned to an import substitution strategy of urban industrial development.

Some countries still follow this strategy for both economic and political reasons, although pressure from the IMF and the World Bank lay heavy opportunity costs on such endeavors. As we noted earlier, import substitution entails an attempt to replace commodities that are being imported, usually manufactured consumer goods, with domestic sources of production and supply.

The typical strategy is first to erect tariff barriers or quotas on certain imported commodities, then to try to set up a local industry to produce these goods-items such as radios, bicycles, or household electrical appliances. Typically, this involves joint ventures with foreign companies, which are encouraged to set up their plants behind the wall of tariff protection and given all kinds of tax and investment incentives.

Although initial costs of production may be higher than former import prices, the economic rationale put forward for the establishment of import-substituting manufacturing operations is either that the industry will eventually be able to reap the benefits of large-scale production and lower costs (the so-called infant industry argument for tariff protection) or that the balance of payments will be improved as fewer consumer goods are imported. Often a combination of both arguments is advanced. Eventually, it is hoped that infant industry will grow up and be able to compete in world markets. It will then be able to generate net foreign-exchange earnings once it has lowered its average costs of production. Let us see how the theory of protection can be used to demonstrate this process.

5.2.1 Tariffs, Infant Industries, and the Theory of Protection

A principal mechanism of the import substitution strategy is the erection of protective **tariffs** (taxes on imports) or **quotas** (limits on the quantity of imports) behind which IS industries are permitted to operate. The basic economic rationale, for such protection is the infant industry argument mentioned earlier. Tariff protection against the imported commodity is needed so the argument goes, in order to allow the now higher-priced domestic producers enough time to learn the business and to achieve the economies of scale in production and the external economies of learning by doing that are necessary to lower unit costs and prices.

With enough time and sufficient protection, the infant will eventually grow up, be directly competitive with developed country producers, and no longer need this protection.

Ultimately, as in the case of many formerly protected IS industries in South Korea and Taiwan, domestic LDC producers will be able to produce not only for the domestic market without a tariff wall or government subsidies but also to export their now lower-cost manufactured goods to the rest of the world. Thus for many Third World industries, in theory, an IS strategy becomes the prerequisite for an EP strategy. It is for this reason, among others (including the desire to reduce dependence and attain greater self-reliance, the need to build a domestic industrial base, and the ease of raising substantial tax revenue from tariff collections), that import substitution appealed to so many LDC governments.

The basic theory of protection is an old and controversial issue in the field of international trade. It is relatively simple to demonstrate. Consider Figure 4.1 The top portion of the figure shows standard domestic

supply and demand curves for the industry in question (say, shoes) if there were no international trade-that is, in a closed economy. The equilibrium home price and quantity would be P_1 and Q_1.

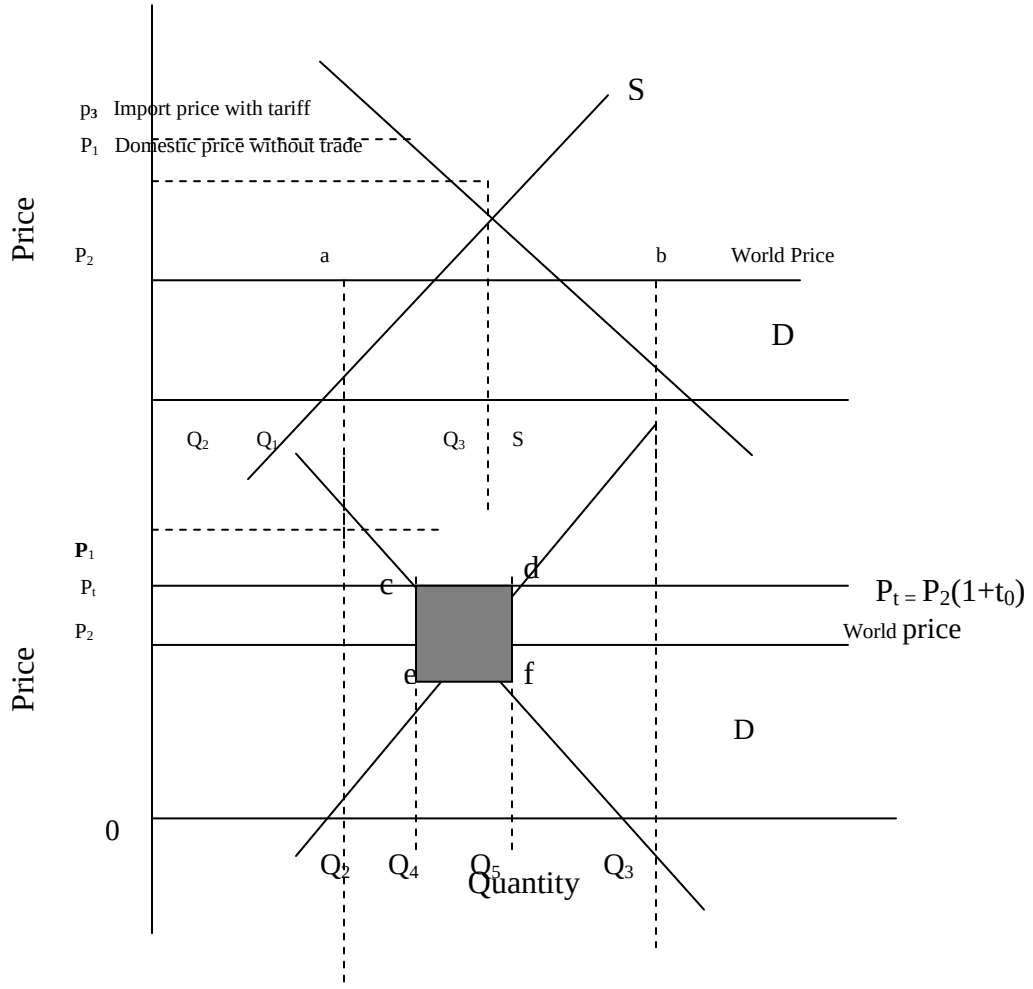
If this LDC then were to open its economy to world trade, its small size in relation to the world market would mean that it would face a horizontal, perfectly elastic demand curve. In other words, it could sell (or buy) all it wanted at a lower world price, P_2. Domestic consumers would benefit from the lower price of imports and the resultant greater quantity purchased, while domestic producers and their employees would clearly suffer as they lose business to lower-cost foreign suppliers. Thus at the lower world price, P_2, quantity demanded rises from Q_1 to Q_3 whereas the quantity supplied by domestic producers falls from Q_1 to Q_2. The difference between what domestic producers are willing to supply at the lower P_2 world price (Q_2) and what consumers want to buy (Q_3) is the amount that will be imported-shown as line ab in Figure 5.1

Facing the potential loss of domestic production and jobs as a result of free trade and desiring to obtain infant industry protection, local LDC producers will seek tariff relief from the government. The effects of a tariff (equal to t_0) are shown in the lower half of Figure 5.1. The tariff causes the domestic price of shoes to rise from P_2 to P_t that is, $P_t = P_2 (1 + t_o)$. Local consumers now have to pay the higher price and will reduce their quantity demanded from Q_3 to Q_5. Domestic producers can now expand production (and employment) up to quantity Q_4 from Q_2. The rectangular area cdef measures the amount of the tariff revenue collected by the government on imported shoes.

Clearly, the higher the tariff, the closer to the domestic price will be the sum of the world price plus the import tax. In the classic infant-industry IS scenario, the tariff may be so high that it raises the price of the imported produce above P_1 to, say, P_3 in the upper diagram of Figure 5.1, so that imports are effectively prohibited and the local industry is allowed to operate behind a fully protective tariff wall, once again selling Q_1 output at P_1 price.

In the short run, it is clear that the impact of such a prohibitive tariff is to penalize consumers, who are in effect subsidizing domestic producers and their employees through higher prices and lower consumption. Alternatively, we can say that a tariff redistributes income from consumers to producers. However, in the longer run, advocates of IS protection for LDC infant industries argue that everyone will benefit as domestic and other shoe manufacturers reap the benefits of economies of scale and learning by doing so that ultimately the domestic price falls below P_2 (the world price). Production will then occur for both the domestic and the world market, domestic consumers as well as domestic producers and their employees will benefit, protective tariffs can be removed, and the government will be able to replace any lost tariff revenue with taxes on the now very much higher incomes of domestic manufactures. It all sounds logical and persuasive in theory. But how has it performed in practice?

Figure 5.1 Import Substitution and the Theory of Protection



5.2.2 The IS Industrialization Strategy and Results

Most observers agree that the import-substituting strategy of industrialization has been largely unsuccessful. Specifically, there have been five undesirable outcomes. First, secured behind protective tariff walls and immune from competitive pressures, many IS industries (both publicly and privately owned) remain inefficient and costly to operate.

Second, the main beneficiaries of the import substitution process have been the foreign firms that were able to locate behind tariff walls and take advantage of liberal tax and investment incentives. After deducting interest, profits, and royalty and management fees, most of which are remitted abroad, the little that may be left over usually accrues to the wealthy local industrialists with whom foreign manufacturers cooperate and who provide their political and economic cover.

Third, most import substitution has been made possible by the heavy and often government-subsidized importation of capital goods and intermediate products by foreign and domestic companies. In the case of foreign companies, much of this is purchased from parent and sister companies abroad. There

are two immediate results. First, capital-intensive industries are set up, usually catering to the consumption habits of the rich while having a minimal employment effect. Second, far from improving the LDCs' balance of payments situation and alleviating the debt problem, indiscriminate import substitution often worsens the situation by increasing a need for imported capital-good inputs and intermediate products while, as we have just seen, a good part of the profits is remitted abroad in the form of private transfer payments.

A fourth detrimental effect of many import substitution strategies has been their impact on traditional primary-product exports. To encourage local manufacturing through the importation of cheap capital and intermediate goods, exchange rates (the rate at which the central bank of a nation is prepared to purchase foreign currencies) are often artificially overvalued. This has the effect of raising the price of exports and lowering the price of imports in terms of the local currency. For example, if the free market exchange rate between Pakistani rupees and U.S. dollars was 20 to 1 but the official exchange rate was 10 to 1, an item that cost $10 in the United States could be imported into Pakistan for 100 rupees (excluding transport costs and other

Table 5.1 Degree of Currency Overvaluation in Selected LDCs, 1980-1989 (median values of annual end-of-year premium)

Country	Overvaluation Premium 1980-1989a	Premium during the Period
Low premium		
Indonesia	3.4	15.5
Mexico	17.7	66.0
Venezuela	75.2	213.0
Moderate premium		
Kenya	15.2	44.9
Brazil	43.1	173.0
Bolivia	17.6	293.1
High premium		
Peru	27.0	278.9
Tanzania	214.3	809.1
Ghana	142.0	4,263.7

service charges). If the **free-market exchange rate** (the exchange rate determined by the supply and demand for Pakistani rupees in terms of dollars) prevailed, that item would cost 200 rupees. Thus by means of an **overvalued exchange rate,** LDC governments are able effectively to lower the domestic currency price of their imports. At the same time, their export prices are increased-for example, at an exchange rate of 10 to 1, U.S. importers would have to pay 10 cents for every 1-rupee item rather than the 5 cents they would pay if the hypothetical free-market ratio of 20 to 1 were in effect. Table 4.1 provides rough estimates of the extent of currency overvaluation in nine developing countries during the 1980s.

The net effect of overvaluing exchange rates in the context of import substitution policies is to encourage capital-intensive production methods still further (because the price of imported capital goods is artificially lowered) and to penalize the traditional primary-product export sector - by artificially raising the price of exports in terms of foreign currencies. This overvaluation, then, causes local farmers to be less competitive in world markets.

In terms of its income distribution effects, the outcome of such government policies may be to penalize the small farmer and the self-employed while improving the profits of the owners of capital, both foreign and domestic. Industrial protection thus has the effect of taxing agricultural goods in the home market as well as discouraging agricultural exports. Import substitution policies have in practice often worsened the local distribution of income by favoring the urban sector and higher-income groups while discriminating against the rural sector and lower-income groups.

Fifth, and finally, import substitution, which may have been conceived with the idea of stimulating infant industry growth and self-sustained industrialization by creating "forward" and "backward" linkages with the rest of the economy, has often inhibited that industrialization. Many infants never grow up content to hide behind protective tariffs, and governments loath to force them to be more competitive by lowering tariffs. In fact, LDC governments themselves often operate protected industries as state-owned enterprises.

Moreover, by increasing the costs of inputs to potentially forward-linked industries (those that purchase the output of the protected firm as inputs or intermediate products in their own productive process, such as a printer's purchase of paper from a locally protected paper mill) and by purchasing their own inputs from overseas sources of supply rather than through backward linkages to domestic suppliers, inefficient import-substituting firms may in fact block the hoped-for process of self-reliant integrated industrialization.

A consideration of patterns of import substitution leads to conclusions such as those of Gerald Helleiner, whose views seem to reflect a consensus among development economists:

It is difficult to find any rationale for the pattern of import substituting industrialization which has, whether consciously or not, actually been promoted. It has given undue emphasis to consumer goods in most countries; it has given insufficient attention to potential long-run comparative advantages, i.e., resource endowments and learning possibilities; and it has employed alien and unsuitable, i.e., capital-intensive technologies to an extraordinary and unnecessary degree. If a selective approach to import substitution is to be pursued at all, and there is a strong case to be made for a more generalized approach, the selection actually employed in recent years has left a great deal to be desired. The consequence has too frequently been the creation of an inefficient industrial sector operating far below capacity, and creating very little employment, very little foreign exchange saving, and little prospect of further productivity growth. The object of policy must now be gradually to bring incentive structures and thus the relative efficiencies of various industrial activities into some sort of balance, thereby encouraging domestic manufacture of intermediate and capital

goods at the expense of importable consumer goods and the development eventually of manufacture for export.

5.2.3 Tariff Structures and Effective Protection

Because import substitution programs are based on the protection of local industries against competing imports primarily through the use of tariffs and physical quotas, we need to analyze the role and limitations of these commercial policy instruments in developing nations. As we have already discussed, governments impose tariffs and physical quotas on imports for a variety of reasons. For example, tariff barriers may be erected to raise public revenue. In fact, given the administrative and political difficulties of collecting local income taxes, fixed percentage taxes on imports collected at a relatively few ports or border posts often constitute one of the cheapest and most efficient ways to raise government revenue. In many LDCs, these foreign trade taxes are thus a central feature of the overall fiscal system.

Physical quotas on imports like automobiles and other luxury consumer goods, though more difficult to administer and more subject to delay, inefficiency, and rent-seeking corruption (e.g., with regard to the granting of import licenses), provide an effective means of restricting the entry of particularly troublesome commodities. Tariffs, too, may serve to restrict the importation of non-necessity products (usually expensive consumer goods). By restricting imports, both quotas and tariffs can improve the balance of payments. And like overvaluing the official rate of foreign exchange, tariffs may be used to improve a nation's terms of trade.

$$t = \frac{p' - P}{p}$$

However, in a small country unable to influence world prices of its exports or imports (in other words, most LDCs), this argument for tariffs (or devaluation) has little validity. Finally, as we have just seen, tariffs may form an integral component of an import substitution policy of industrialization.

Whatever the means used to restrict imports, such restriction always protects domestic firms from competition with producers from other countries. To measure the degree of protection, we need to ask by how much these restrictions cause the domestic prices of imports to exceed what their prices would be if there were no protection. There are two basic measures of protection: the nominal rate and the effective rate.The nominal rate of protection shows the extent, in percentages, to which the domestic price of imported goods exceeds what their price would be in the absence of protection. Thus the nominal (ad valorem) tariff rate (t) refers to the final prices of commodities and can be defined simply as where p' and p are the unit prices of industry's output with and without tariffs, respectively.

For example, if the domestic price (p') of an imported automobile is $5,000 whereas the CIF (cost plus insurance and freight) price (p) when the automobile arrives at the port of entry is $4,000, the nominal rate of tariff protection (t) would be 25%.

$$g = \frac{v' - v}{v}$$

By contrast, the effective rate of protection shows the percentage by which the value added at a particular stage of processing in a domestic industry can exceed what it would be without protection. In other words, it shows by what percentage the sum of wages, interest, profits, and depreciation allowances payable by local firms can, as a result of protection, exceed what this sum would be if-these same firms had to face unrestricted competition (no tariff protection) from foreign producers.

The effective rate (g) can therefore be defined as the difference between value added (percent of output) in domestic prices and value added in world prices, expressed as a percentage of the latter, so that where v' and v are the value added per unit of output with and without protection, respectively. The result can be either positive or negative, depending on whether v' is greater or less than v. For most LDCs, it is highly positive. Table 4.2 provides some estimates of effective protection in selected Third World countries. In general, IS countries like Pakistan and Uruguay by definition have much higher rates of protection than EP countries like South Korea and Singapore.

The important difference between nominal and effective rates of protection can be illustrated by means of an example. Consider a nation without tariffs in which automobiles are produced and sold at the international or world price of $10,000. The value added by labor in the final assembly process is assumed to be $2,000, and the total value of the remaining inputs is $8,000. Assume for simplicity that the prices of these non-labor inputs are equal to their world prices.

Suppose that a nominal tariff of 10% is now imposed on imported automobiles, which raises the domestic price of cars to $11,000 but leaves the prices of all the other importable intermediate units unchanged. The domestic process of automobile production can now spend $3,000 per unit of output on labor inputs, as contrasted with $2,000 per unit before the tariff. The theory of effective protection therefore implies that under these conditions, the nominal tariff of 10% on the final product (automobiles) has resulted in an effective rate of protection of 50% for the local assembly process in terms of its value added per unit of output. It follows that for any given nominal tariff rate, the effective rate is greater the smaller the value added of the process; that is, g= t/(1- a), where t is the nominal rate on final product and a is the proportionate value of the importable inputs in a free market where these inputs are assumed to enter the country duty-free.

Table 5.2 Effective Protection Rate in Selected Third World Countries

Country	**Average Effective Protection Rate (%)**
Uruguay	384
Pakistan	356
India	69
Brazil	63
Ivory Coast	41
Thailand	27
Singapore	22
Colombia	19
South Korea	-1

Most economists argue that the effective rate is the more useful concept (even though the nominal or ad valorem rate is simpler to measure) for ascertaining the degree of protection and encouragement afforded to local manufacturers by a given country's tariff structure. This is because effective rates of protection show the net effect on a firm or industry of restrictions on the imports of both its outputs and its inputs.

For most countries, developing and developed, the effective rate normally exceeds the nominal rate, sometimes by as much as 200%. For example, Little, Scitovsky, and Scott found that average levels of effective protection during the early 1960s exceeded 200% for India and Pakistan, 100% for Argentina and Brazil, 50% for the Philippines, 33% for Taiwan, and 25% for Mexico.

Among the many implications of analyzing effective versus nominal tariff structures with regard to developing countries, two stand out as particularly noteworthy. First, most developing countries, as we have seen, have pursued import substituting programs of industrialization with emphasis on the local production of final consumer goods for which a ready market was presumed to exist. Moreover, final goods production is generally less technically sophisticated than intermediate capital-goods production. The expectation was that in time, rising demand and economies of scale in finished-goods production would create strong backward linkages leading to the creation of domestic intermediate-goods industries. The record of performance, as we have also seen, has been disappointing for most developing countries.

Part of the reason for this lack of success has been that developing-country tariff structures have afforded exceedingly high rates of effective protection to final-goods industries while intermediate and capital goods have received considerably less effective protection. The net result is an attraction of scarce resources away from intermediate-goods production and toward the often inefficient production of highly protected final consumer goods. Backward linkages do not develop, intermediate-good import costs rise, and, perhaps most important in the long run, the development of an indigenous capital goods industry focusing on efficient, low-cost, labor-intensive techniques is severely impeded.

Second, even though nominal rates of protection in developed countries on imports from the developing countries may seem relatively low, effective protection rates can be quite substantial. As we saw earlier in the cases of cacao and sugar, raw materials are usually imported duty-free whereas processed products such as roasted and powdered coffee, coconut oil, and cocoa butter appear to have low nominal tariffs.

The theory of effective protection suggests that in combination with zero tariffs on imported raw materials, low nominal tariffs on processed products can represent substantially higher effective rates of protection. For example, if a tariff of 10% is levied on processed coconut oil, whereas copra (dried coconut) can be imported duty-free, and if the value added making oil from copra is 5% of the total value of coconut oil, the process is actually being protected at 200%. This greatly inhibits the development of food and other raw-material-processing industries in developing nations and ultimately cuts back on their potential earnings of foreign exchange.

Effective rates of protection are considerably higher than nominal rates in the developed countries. For example, the effective rate on thread and yarn, textile fabrics, clothing, wood products, leather, and rubber goods averages more than twice the nominal rate on these same items in the United States and the members of the European Union. In the EU, effective rates on coconut oil are 10 times the nominal rate (150% compared with 15%), and those on processed soybeans are 16 times the nominal rate (160% as opposed to 10%).

To sum up, the standard argument for tariff protection in developing countries has four major components:

- Duties on trade are the major source of government revenue in most LDCs because they are a relatively easy form of taxation to impose and even easier to collect.
- Import restrictions represent an obvious response to chronic balance of payments and debt problems.
- Protection against imports is one of the most appropriate means for fostering economies of scale, positive externalities, and industrial self-reliance as well as overcoming the pervasive state of economic dependence in which most Third World countries find themselves.
- By pursuing policies of import restriction, developing countries can gain greater control over their economic destinies while encouraging foreign business interests to invest in local import-substituting industries, generating high profits and thus the potential for greater saving and future growth. They can also obtain imported equipment at relatively favorable prices and reserve an already established domestic market for local or locally controlled producers. Eventually, they may even become competitive enough to export to the world market.

Although these arguments can sound convincing and some protective policies have proved highly beneficial to the developing world, as we discovered, many have failed to bring about their desired results. Protection can have an important role to play in the development of the Third World, for both economic and non economic reasons, but it is a tool of economic policy that must be employed selectively and wisely, not as a panacea to be applied indiscriminately and without reference to both short- and long-term ramifications.

5.2.4 Foreign-Exchange Rates, Exchange Controls, and the Devaluation Decision

We have already briefly discussed the question of foreign-exchange rates. Remember that a country's **official exchange rate** is the rate at which its central bank is prepared to transact exchanges of its local currency for other currencies in approved foreign-exchange markets. Official exchange rates are usually quoted in terms of U.S. dollars-so many pesos, reals, pounds, shillings, rupees, bhat, or yen per dollar.

For example, the official exchange rate of the South African rand for U.S. dollars in 1998 was approximately 5 rand per dollar, and the Indian rupee was officially valued at approximately 40 rupees per dollar. If a South African manufacturer wished to import fabrics from an Indian textile exporter at a cost of

40,000 rupees, he would need 5000 rand to make the purchase. However, since almost all foreign-exchange transactions are conducted in U.S. dollars, the South African importer would need to purchase $1,000 worth of foreign exchange from the central bank of South Africa for his 5000 rand and then transmit these dollars through official channels to the Indian exporter.

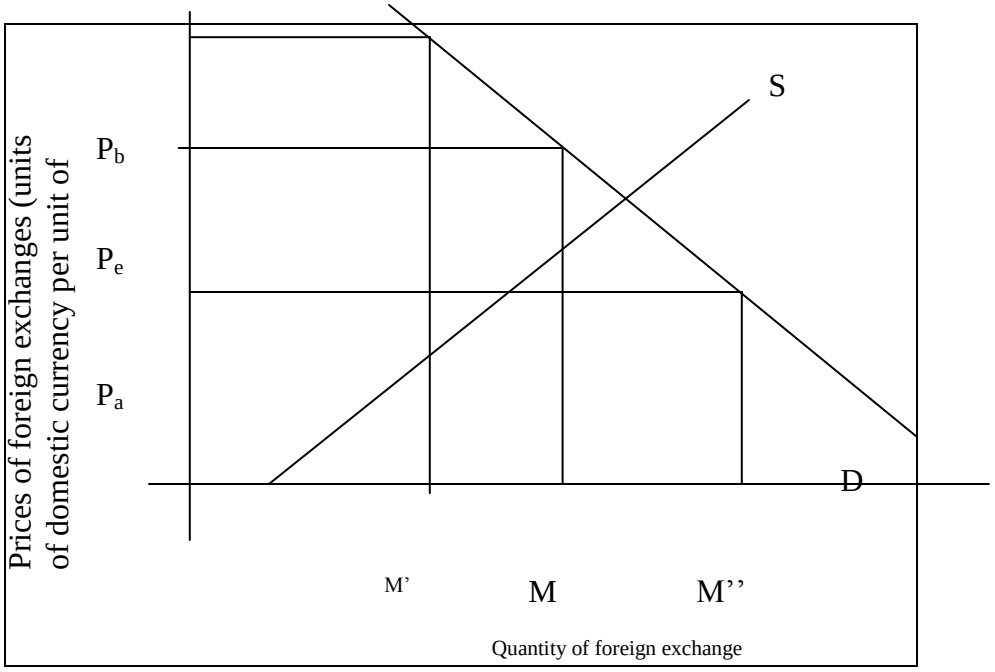
Official foreign-exchange rates are not necessarily set at or near the economic equilibrium price for foreign exchange-that is, the rate at which the domestic demand for a foreign currency such as dollars would just equal its supply in the absence of governmental regulation or intervention. In fact, as we saw in Table 5.2, the currencies of most developing countries are usually overvalued by the exchange rate. Whenever the official price of foreign exchange is established at a level that, in the absence of any governmental restrictions or controls, would result in an excess of local demand over the available supply of foreign exchange, the domestic currency in question is said to be overvalued.

In situations of excess demand, LDC central banks have three basic policy options to maintain the official rate of exchange. First, they can attempt to accommodate the excess demand by running down their reserves of foreign exchange (as Mexico did from 1991 to 1994 and Thailand, Malaysia, Indonesia and the Philippines did from 1995 to 1997) or by borrowing additional foreign exchange abroad and thereby incurring further debts (as many African countries did in the 1980s and Indonesia and South Korea did in the 1990s).

Second, they can attempt to curtail the excess demand for foreign exchange by pursuing commercial policies and tax measures designed to lessen the demand for imports (e.g., tariffs, physical quotas, licensing). Third, they can regulate and intervene in the foreign exchange market by rationing the limited supply of available foreign exchange to "preferred" customers. Such rationing is more commonly known as exchange control. The policy is in wide use throughout the Third World and is probably the major financial mechanism for preserving the level of foreign-exchange reserves at the prevailing official exchange rate.

The mechanism and operation of exchange control can be illustrated diagrammatically with the aid of Figure 5.2. Under free-market conditions, the equilibrium price of foreign exchange would be Pe, with a total of M units of foreign exchange demanded and supplied. If, however, the government maintains an artificially low price of foreign exchange (ie., an overvaluation of its domestic currency) at Pa, the supply of foreign exchange will amount to only M' units because exports are overpriced. But at price Pa the demand for foreign exchange will be M" units, with the result that there is an "excess demand" equal to M" - M' units. Some mechanism will therefore have to be devised to ration the available supply of M'. If the government were to auction this supply, importers would be

Figure 5.2 Free-Market and Controlled Rates of Foreign Exchange



willing to pay a price-of Pb for the foreign exchange. In such a case, the government would make a profit of Pb - Pa per unit. However, such open auctions are rarely carried out, and limited supplies of foreign exchange are allocated through some administrative quota or licensing device. Opportunities for corruption, evasion, and the emergence of black markets are thus made possible because importers are willing to pay as much as Pb per unit of foreign exchange

Why have most LDC governments opted for an overvalued official exchange rate? Basically, as we have seen, they have done so as part of widespread programs of rapid industrialization and import substitution. Overvalued exchange rates reduce the domestic currency price of imports below the level that would exist in a .free market for foreign exchange (i.e., by the forces of supply and demand). Cheaper imports, especially capital and intermediate producer goods, are needed to fuel the industrialization process.

But overvalued exchange rates also lower the domestic currency price of imported consumer goods, especially expensive luxury products. Third World nations wishing to limit such unnecessary and costly imports often need to establish import controls (mostly physical quotas) or to set up a **dual or parallel** exchange **rate** system with one rate, usually highly overvalued and legally fixed, applied to capital and intermediate-good imports and the other, much lower and illegal (or freely floating), for luxury consumption-good imports. Such dual exchange-rate systems make the domestic price of imported luxury goods very high while maintaining the artificially low and thus subsidized price of producer-good imports. Needless to say, dual exchange-rate systems, like exchange controls and import licenses, present serious problems of administration and can promote black-markets, corruption, evasion, and **rent seeking**.

However, overvalued currencies reduce the return to local exporters and to import-competing industries that are not protected by heavy tariffs or physical quotas. Exporters receive less domestic currency for their products than would be forthcoming if the free-market exchange rate prevailed. Moreover, in the absence of export subsidies to reduce the foreign-currency price of an LDC's exports, exporters, mostly farmers, become less competitive in world markets because the price of their produce has been artificially elevated by the overvalued exchange rate. In the case of import-competing but unprotected local industries, the overvalued rate artificially lowers the domestic currency price of foreign imports of the same product (e.g., radios, tires, bicycles, or household utensils).

Hence in the absence of effective government intervention and regulation of the foreign-exchange dealings of its nationals, overvalued exchange rates have a tendency to exacerbate balance of payments and foreign-debt problems simply because they cheapen imports while making exports more costly. Chronic payments deficits resulting primarily from current account transactions (exports and imports) can possibly be ameliorated by a currency **devaluation.** Simply defined, a country's currency is devalued when the official rate at which its central bank is prepared to exchange the local currency for dollars is abruptly increased. Currency **depreciation,** by contrast, refers to a gradual decrease in the purchasing power of a domestic currency in foreign markets relative to domestic markets; appreciation refers to a gradual increase.

For example, a devaluation of the South African rand and the Indian rupee would occur if their official exchange rates of approximately 5 rand and 40 rupees to the dollar were changed to, say, 8 rand and 50 rupees per dollar. Following these devaluations, U.S. importers of South African and Indian goods would pay fewer dollars to obtain the same products. But U.S. exports to South Africa and India would become more expensive, requiring more rand or rupees to purchase than before.

In short, by lowering the foreign currency price of its exports (and thereby generating more foreign demand) while raising the domestic-currency price of its imports (and thereby lowering domestic demand), Third World nations that devalue their currency hope to improve their trade balance vis-à-vis the rest of the world. This is a principal reason why devaluation is always a key component of IMF stabilization policies.

An alternative to a currency devaluation would be to allow foreign-exchange rates to fluctuate freely in accordance with changing conditions of international demand and supply. Freely fluctuating or flexible exchange rates in the past were not thought to be desirable, especially in developing nations heavily dependent on exports and imports, because they are extremely unpredictable, subject to Wide and uncontrollable fluctuations, and susceptible to foreign and domestic currency speculation. Such unpredictable fluctuations can wreak havoc with both shorter and long-range development plans.

Nevertheless, during the global balance of payments and debt crises of the 1980s, a number of developing countries, including Mexico, Argentina, Chile, and the Philippines, were forced by the IMF to let their exchange rates float freely in order to correct sizable payments imbalances and to prevent continued capital

flight. The same phenomenon occurred again for Mexico in 1994 and for Thailand, the Philippines, South Korea, Malaysia, and Indonesia in 1997 and 1998 during the Asian currency crisis. In a matter of several months during 1997, the Thai baht lost one-third of its value against the dollar and the Philippine peso, South Korean won, Malaysian ringgit, and Indonesian rupiah fell by almost 30%.

The present international system of floating exchange rates, formally legalized at the 1976 Jamaica IMF meeting, represents a compromise between a fixed (artificially "pegged") and a fully flexible exchange rate system. Under this "managed" floating system, major international currencies are permitted to fluctuate freely, but erratic swings are limited through central bank intervention. Most developing countries, however, have decided to continue to peg their currencies to those of developed countries. Some, like Kenya, have gone further and decided to tie their currencies to the movements of a weighted index of the world's major currencies rather than to tie them to a particular currency, like the U.S. dollar or the pound sterling.

One final point that should be made about Third World currency devaluations, particularly in the light of previous discussions, concerns their probable effect on domestic prices. Devaluation has the immediate effect of raising prices of imported goods in terms of the local currency. Imported shirts, shoes, radios, records, foodstuffs, and bicycles that formerly cost x rupees now cost (1 + d)x rupees, depending on the percentage magnitude of the devaluation, d. If, as a result of these higher prices, domestic workers seek to preserve the real value of their purchasing power, they are likely to initiate increased wage and salary demands. Such increases, if granted, will raise production costs and tend to push local prices up even higher.

A wage-price spiral of domestic inflation is thereby set in motion. In fact, a vicious cycle of devaluation-domestic could result wage and price increases, higher export prices, and worsened balance of trade. Thus the devaluation decision could simply exacerbate the external balance of payments problem while generating increased inflation domestically. For example, following the widespread IMF-induced currency devaluations during the 1997 Asian crisis, rates of inflation shot up in 1998 from 11% to 35% in Indonesia, from 6% to 12% in Thailand, and from 5% to 10% in the Philippines. Unemployment rates doubled, and workers took to the streets, demanding an end to the layoffs and a rise in wages to offset their lost purchasing power.

As for the distributional effects of devaluation, it is clear that by altering the domestic price and returns of "tradable" goods (exports and imports) and creating incentives for the production of exports as opposed to domestic goods, devaluation will benefit certain groups at the expense of others. In general, urban wage earners, people with fixed incomes, the unemployed, and the small farmers and rural and urban small-scale producers and suppliers of services who do not participate in the export sector stand to be financially hurt by the domestic inflation that typically follows devaluation.

Conversely, large exporters (usually large landowners and foreign-owned corporations) and medium-sized local businesses engaged in foreign trade stand to benefit the most. Although we cannot categorically

assert that (devaluation tends to worsen income distribution, we may conclude that the more that ownership of and control over the export sector is concentrated in private rather than public hands, the greater is the likelihood that devaluation will have an adverse effect on income distribution. For this reason, among others, international commercial and financial problems (e.g., chronic balance of payments deficits) cannot be divorced from domestic problems (e.g., poverty and inequality) in Third World nations. Policy responses to alleviate one problem can either improve or worsen others.

5.3 Summary and Conclusions: Trade Optimists and Trade Pessimists

We are now in a position to summarize the major issues and arguments in the great ongoing debate between advocates of free-trade, outward -looking development and export promotion policies-the trade optimists-and advocates of greater protection, more inward-looking strategies, and greater import substitution-the trade pessimists. Let us begin with the latter school of thought.

5.3.1 Trade Pessimist Arguments

Trade pessimists tend to focus on three basic themes:

1. the limited growth of world demand for primary exports,
2. the secular deterioration in the terms of trade for primary producing nations, and
3. the rise of "new protectionism," against the exports of LDC manufactured and processed agricultural goods.

LDC exports grow slowly because of

1. a shift in developed countries from low technology, material-intensive goods to high-technology, skill-intensive products, which decreases the demand for Third World raw materials;
2. increased efficiency in industrial uses of raw materials;
3. the substitution of synthetics for natural raw materials like rubber, copper, and cotton;
4. the low income elasticity of demand for primary products and light manufactured goods;
5. the rising productivity of agriculture in developed countries; and
6. the rising tide of protectionism for both agriculture and labor-intensive developed-country industries.

The terms of trade deteriorate because of

1. oligopolistic control of factor and commodity markets in developed countries combined with increasing competitive sources of supply of LDC export tables and
2. a generally lower level of the income elasticity of demand for LDC exports.

The rise of new protectionism in the developed world results from the very success of a growing number of LDCs in producing a wider range of both primary and secondary products at competitive world market prices, combined with the quite natural fears of workers in higher-cost developed- country industries that their

jobs will be lost. They pressure their governments in North America, Europe, and Japan to curtail or prohibit competitive imports from the developing world.

The trade pessimists therefore conclude that trade hurts Third World development because

1. the slow growth in demand for their traditional exports means that export expansion results in lower export prices and a transfer of income from poor to rich nations;

2. without import restrictions, the high elasticity of LDC demand for imports combined with the low elasticity for their exports means that developing countries must grow slowly to avoid chronic balance of payments and foreign-exchange crises; and

3. because developing nations have their "static" comparative advantage in primary products, export-promoting free-trade policies tend to inhibit industrialization, which is in turn the major vehicle for the accumulation of technical skills and entrepreneurial talents.

5.3.2 Trade Optimist Arguments

Trade optimists tend to underplay the role of international demand in determining the gains' from trade. Instead, they focus on the relationship between LDC trade policy, export performance, and economic growth. They argue that trade liberalization (including export promotion, currency devaluation, removal of trade restrictions, and generally "getting prices right") generates rapid export and economic growth because free trade provides a number of benefits:

1. It promotes competition, improved resource allocation, and economies of scale in areas where LDCs have comparative advantage. Costs of production are consequently lowered.

2. It generates pressures for increased efficiencies, product improvement, and technical change, thus raising factor productivity and further lowering costs of production.

3. It accelerates overall economic growth, which raises profits and promotes greater saving and investment and thus furthers growth.

4. It attracts foreign capital and expertise, which are in scarce supply in LDCs.

5. It generates needed foreign exchange that can be used to import food if the agricultural sector lags behind or suffers droughts or other natural catastrophes.

6. It eliminates costly economic distortions caused by government interventions in both the export and foreign-exchange markets and substitutes market allocation for the corruption and rent-seeking activities that usually result from an overactive government sector.

7. It promotes more equal access to scarce resources, which improves overall resource allocation

Trade optimists argue, finally, that even though export promotion may at first be difficult with limited gains-especially in comparison with the easy gains of first -stage import substitution-over the longer run the economic benefits tend to build up momentum, whereas import substitution faces rapidly diminishing returns.

5.3.3 Reconciling the Arguments: The Data and the Consensus

We can evaluate the debate on two levels, the empirical and the philosophical. In his study of the experience of developing countries over the past three decades, Rostam M. Kavopssi argues that the empirical evidence demonstrates quite clearly that neither the trade optimists nor the trade pessimists are correct at all times. It all depends on fluctuations in the world economy. Thus when the world economy was expanding rapidly during the period from 1960 to 1973, the more open economy LDCs clearly outperformed (in terms of aggregate export and economic growth) the more closed-economy nations. The trade optimists' arguments appear validated during this period of rapid world growth. But when the world economy slowed down between 1973 and 1977, the more open economies (with the notable exception of the four Asian NICs) had a more difficult time and the trade pessimists fared better. A follow-up 1988 study by Hans W Singer and Patricia Gray, which extended Kavoussi's empirical analysis for the period 1977-1983, when world economic conditions were even more unfavorable, supports the finding that high growth rates of export earnings occur only when external demand is strong. Changes in trade policy appear to have little or no effect.

Furthermore, low-income countries were found to fare worse across all time periods. Singer and Gray argue that contrary to the position of the World Bank and other trade optimists, an outward-oriented policy is not necessarily valid for all LDCs. To conclude, therefore, that either export promotion or import substitution is always an unambiguously better strategy-even for promoting economic growth narrowly conceived, let alone our broader definition of development-is to miss a key conceptual and empirical insight that a growing number of development economists are beginning to recognize.

In the final analysis, it is not a developing country's inward- or outward-looking stance vis-à-vis the rest of the world that will determine whether or not it develops along the lines described in different parts of this course. Inward-looking, protectionist policies such as tariffs, quotas, and exchange-rate adjustments do not necessarily guarantee more jobs, higher incomes that are more equitably distributed, adequate nutrition and health, clean water, or relevant education any more than outward-looking, noninterventionist policies do.

Policies of export promotion appear to have contributed more to GNP growth than import substitution did during the 1960s and 1970s. Similar results were not forthcoming in the slow-growth 1980s. Moreover, the success of export promotion in the 1990s globalization era varied widely from region to region and country to country. Some prospered, others stagnated, and some Asian economies that had prospered earlier through more open trade and financial liberalization policies (e.g., Thailand, Indonesia, Malaysia, and South Korea) found themselves in serious trouble when their currencies collapsed and foreign investors and speculators quickly withdrew their funds.

In terms of our broadened definition of development, therefore, the results of the past four decades are largely ambiguous. Much depended on the structure of both the domestic LDC economy and the world economy. In fact, as Paul Streeten skillfully pointed out:

A curious paradox came out of the discussion [of the effects of trade on LDC inequalities]. It seemed that both inward-looking, import-substituting, protectionist, interventionist policies and outward-looking; market-orientated, noninterventionist policies) tend to increase market imperfections and monopolies and reduce the demand for labour-intensive processes, the latter because the market rewards most those factors that are relatively scarce (capital, management, professional skills) and penalizes those in abundant supply and because the market strengthens the ability to accumulate of those who have against those who have not. But though it is paradoxical that both a protectionist "distorted" system of prices, interest rates, wages and exchange rates and a market-determined one should increase inequalities, there is no contradiction. It is plausible that within a certain social and political framework, both export-orientated market policies and import-substitution-orientated, interventionist, "distorting" policies should aggravate inequalities, though one set may do this somewhat more than the other. Perhaps economists have been barking up the wrong tree when disputing which set of price policies contributes more to equality. In an egalitarian power structure, both make for inequality; in an egalitarian power structure, both may make for equality.

In short, the current consensus leans toward an eclectic view that attempts to fit the relevant arguments of both the free-trade and protectionist models to the specific economic, institutional, and political realities of diverse nations at different stages of development. What works for one may not work for another. For example, the pre-1997 East Asian success stories may have little relevance for other developing nations beyond the important conclusion reached by Colin L Bradford:

What seems to distinguish the East Asian development experiences is not the dominance of market forces, free enterprise, and internal liberalization, but effective, highly interactive relationships between the public and private sectors characterized by shared goals and commitments embodied in the development strategy and economic policy of the government. The dichotomy between market forces and government intervention is not only overdrawn: it misconceives the fundamental dynamic at work. It is the degree of consistency between the two sectors-rather than the extent of implicit or explicit conflict-that has been important in the successful development cases. A coherent development strategy was not only formulated but followed by both the government and the private sector in providing an unusual degree of common direction to national energies in these cases.

Finally, all of the foregoing discussion has left out perhaps one of the most viable long-run trade policies for small and medium-sized developing economies, one that is oriented simultaneously outward and inward in an area that has shown slow but steady growth over the past few decades. This is the expansion of trade among the developing countries-South-South rather than North-South trade and the possibilities of economic integration in Third World regions.

5.4 South-South Trade and Economic Integration: Looking Outward and Inward

5.4.1 The Growth of Trade among Developing Countries

Although trade among the LDCs still represents a meager 7% of total world trade, twice its share in 70s, it grew rapidly during the 1980s. By 1990, South-South trade represented almost 33% of all Third World exports. Trade in manufactures has risen from only 5% in 1960 to almost 35% of all exports in the 1990s. Much of the growth of these inter-LDC exports helped to compensate for weak demand and growing protectionism in the developed world.

Many development economists have argued that Third World countries should therefore orient their trade more toward one another. Their arguments usually entail four basic points:

1. There are relative comparative-advantage changes to South-South as opposed to North-South trade.

2. There are greater dynamic gains to be realized from such trade.

3. Export instability resulting from fluctuations in developed-country economic activity can be reduced.

4. Greater collective self-reliance will be fostered.

5.4.2 Economic Integration: Theory and Practice

One strong variant of the South-South trade hypothesis is that LDCs should go beyond greater trade with one another and move in the direction of economic integration. Economic integration occurs whenever a group of nations in the same region, ideally of relatively equal size and at equal stages of development, join together to form an economic union or regional trading bloc by raising a common tariff wall against the products of nonmember countries while freeing internal trade among members.

In the terminology of integration literature, nations that levy common external tariffs while freeing internal trade are said to have formed a customs union. If external tariffs against outside countries differ among member nations while internal trade is free, the nations are said to have formed a free-trade area. Finally, a common market possesses all the attributes of a customs union (common external tariffs and free internal trade) plus the free movement of labor and capital among the partner states.

The theory of customs unions and economic integration is associated primarily with the work of Jacob Viner of Princeton University in the 1940s. The traditional core idea of this theory, which focuses on the static resource and production reallocation effects within highly integrated and flexible industrialized nations, is of limited value to contemporary developing nations intent on building up their industrial base. Yet many concepts of the theory of integration provide valid criteria on which to evaluate the probable short-run success or failure of economic cooperation among Third World countries.

The basic economic rationale for the gradual integration of less developed economies is a long-term

dynamic one: Integration provides the opportunity for industries that have not yet been established as well as for those that have to take advantage of economies of large-scale production made possible by expanded markets. Integration therefore needs to be viewed as a mechanism to encourage a rational division of labor among a group of countries, each of which is too small to benefit from such a division by itself. In the absence of integration, each separate country may not provide a sufficiently large domestic market to enable local industries to lower their production costs through economies of scale.

In such cases, import-substituting industrialization will typically result, as we have seen, in the establishment of high-cost, inefficient local industries. Moreover, in the absence of integration, the same industry (e.g., textiles or shoes) may be set up in two or more adjoining small nations. Each will be operating at less than optimal capacity but will be protected against the imports of the other by high tariff or quota barriers. Not only does such duplication result in wasted scarce resources, but it also means that consumers are forced to pay a higher price for the product than if the market were large enough for high - volume, low-cost production to take place at a single location.

This leads to a second dynamic rationale for LDC economic integration. By removing barriers to trade among member states, the possibility of coordinated industrial planning is created, especially in industries where economies of scale are likely to exist. Examples include fertilizer and petrochemical plants, heavy industry like iron and steel, capital goods and machine tool industries, and small farm mechanical equipment. But the coordinated planning of industrial expansion that enables all member states to accelerate their rates of industrial growth by assigning given industries to different members takes the partners that much closer to full economic and eventual political union.

Problems of sovereignty and national self-interest impinge at this stage. To date they have overwhelmed the economic logic of a close and coordinated union. However, as Third World nations, especially small ones, continue to experience the futility of either development in isolation (autarchy) or full participation in the highly unequal world economy, it is likely that interest will increase in the coming decades in the long run benefits of some form of economic (and perhaps political) cooperation. In addition to these two long-term dynamic arguments for integration, there are also the standard static evaluative criteria known as **trade creation** and **trade diversion**.

Trade creation is said to occur when common external barriers and internal free trade lead to a shift in production from high- to low-cost member states. For example, before integration, both country A and country B may produce textiles for their respective local markets. Country A may be a lower-cost producer, but its exports to country B are blocked by the latter's high tariffs. If A and B form a customs union by eliminating all barriers to internal trade, country A's more efficient low-cost textile industry will service both markets. Trade will have been created in the sense that the removal of barriers has led to a shift in country B's consumption from its own relatively high cost textiles to the lower-cost textiles of country A.

Similarly, **trade diversion** is said to occur when the erection of external tariff barriers causes production and consumption of one or more member states to shift from lower-cost nonmember sources of supply (e.g., a developed country) to higher-cost member producers. Trade diversion is normally considered undesirable because both the world and member states are perceived to be worse off as a result of diversion of production from more efficient foreign suppliers to the less efficient domestic industries of member states.

But this static argument against economic integration ignores two basic facts. First, because of potential economies of scale, the creation of local jobs, and the circular flow of income within the integrated region, static trade diversion may turn out to be dynamic trade creation. This is simply a variant of the standard infant industry argument for protection, but with the more likely possibility that the infant will grow up as a result of the larger market in which it now operates.

Second, if in the absence of integration, each member state were to protect its local import-substituting industry against all lower-cost foreign suppliers, the common external tariff of member states would cause no more trade diversion than would have happened anyway. But as we just saw, if there are scale _economies, the possibility of dynamic trade creation can emerge. Hence we conclude that static concepts like trade creation and trade diversion are useful. However, it is important that they be analyzed in the dynamic context of growth and development and based on the realities of current commercial policies of developing nations, rather than in the theoretical vacuum of traditional free- trade models.

5.5 Regional Trading Blocs and Trade Globalization

We may conclude, therefore, that developing countries at relatively equal stages of industrial development with similar market sizes and with a strong interest in coordinating and rationalizing their joint industrial growth patterns stand to benefit most from the combined inward- and outward-looking trade policies represented by economic integration. In particular, regional groupings of small nations like those of Central America and Southern and Western Africa can create the economic conditions (mainly in the form of large internal markets) for accelerating their joint development efforts.

Such groupings can also promote long-run development by enabling nations to block certain forms of trade with the more powerful developed nations and perhaps also to restrict or prohibit the deep penetration of multinational corporations into their industrial sectors. In any event, integration is crucial: Without cooperation and integration, the prospects for sustained economic progress by most low- and middle-income LDCs will be greatly diminished.

But even if such an integration strategy may seem economically logical and persuasive on paper (and may in fact be the only long-run solution to the economic problems of small nations), in practice it requires a degree of statesmanship and a regional rather than nationalistic orientation that is often lacking in many countries. The unfortunate demise of the East African Community in the 1970s demonstrates how political and ideological conflict-in this case among Kenya, Tanzania, and Uganda-can more than offset the economic logic of regional cooperation.

But prospects for the future are much more positive. As trade becomes increasingly globalized, even the largest industrialized nations now realize that they cannot go alone. In Europe, a single economic market became a reality at the end of 1992 as all internal trade barriers were removed. Now the European Union has a single currency, requiring close monetary coordination and in effect creating the largest economic entity in the world. Similar efforts are under way in North America, where the North American Free Trade Agreement (NAFTA) represents a unique arrangement in that a developing country, Mexico, has joined a developed-country trading bloc, Canada and the United States. (Chile, a NIC is also seeking membership.)

Two major trading blocs now exist in Latin America. Argentina, Brazil, Paraguay, and Uruguay in 1994 finalized arrangements for a free-trade area called the Southern Cone Common Market, also known as Mercosur. In the six years after the original treaty was signed in 1990, regional trade in Mercosur more than quadrupled to $17.1 billion, and Brazil replaced the United States as Argentina's largest trading partner (once Brazil and Argentina were bitter rivals). Mercosur is taking advantage of sizable economies of scale and a new expanded market of 180 million people and $800 billion of economic activity. The other Latin American bloc, the Andeah Group (consisting of Bolivia, Colombia, Ecuador, Peru, and Venezuela), established a full-fledged common market in 1995. Its intra-union trade expanded by 370% between 1990 and 1996. In Africa, moves are under way. To promote regional economic integration, the most promising is the newly formed South African Development Community (SADC). Thanks to well-developed railroad and air links, the 10 members of SADC-Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe-anticipate new and much greater trading opportunities. In SADC's intra-union trade grew by 450% in the 1990s.

The critical question about all these new regional trading blocs is not whether they will promote greater internal growth (which they likely will) but whether such regional groupings will fragment the world economy and run counter to the recent globalization of trade. Most economists believe that globalization is here to stay, particularly as multinational corporations set up subsidiaries throughout the world. For LDCs, effective regional blocs can provide a buffer against the negative effects of globalization while still permitting the dynamic benefits of intra-union specialization and greater equality among members to take place.

5.6 Trade Policies of Developed Countries: The Need for Reform

We have seen that a major obstacle to LDC export expansion, whether in the area of primary products or manufactures, has been the various trade barriers erected by developed nations against the principal commodity exports of developing countries. In the absence of economic integration or even in support of that effort, the prospects for future LDC trade and foreign-exchange expansion depend largely on the domestic and international economic policies of developed nations. Although internal structural and economic reform may be essential to economic and social progress, an improvement in the competitive position of industries in which LDCs do have a dynamic comparative advantage will be of little benefit to them or the world as a whole

so long as their access to major world markets is restricted by rich-country commercial policies.

Developed countries' economic and commercial policies are most important from the perspective of future Third World foreign-exchange earnings in three major areas:

1. Tariff and non tariff barriers to LDC exports
2. Adjustment assistance for displaced workers in developed-country industries hurt by freer access of labor-intensive, low-cost LDC exports
3. The general impact of rich-country domestic economic policies on developing economies

Rich-Nations Tariff and Non-tariff Trade Barriers and the 1995 Uruguay Round GATT Agreement

Until 1995, the new-protectionist tariff and non-tariff trade barriers (e.g, excise taxes, quotas, "voluntary" export restraints, sanitary regulations) imposed by rich nations on the commodity exports of poor ones were the most significant obstacle to the expansion of the 'latter's export-earning capacities. Moreover, as we have seen, many of these tariffs increased with the degree of product processing. This means these tariffs were higher for processed foodstuffs than for basic foodstuffs, higher for, say, shirts than for raw cotton. These high effective tariffs inhibited LDCs from developing and diversifying their own secondary-export industries and thus acted to restrain their industrial expansion.

The overall effect of developed-country tariffs, quotas, and non-tariff barriers had been to lower the effective price received by LDCs for their exports, reduce the quantity exported, and diminish foreign-exchange earnings. Although the burdens that developed-country tariffs imposed on LDC primary- and secondary product exports varied from commodity to commodity, it has been estimated that the net impact of trade barriers on all products has reduced Third World foreign exchange earnings by more than $40 billion per year.

However, the final act of the **Uruguay Round** agreement that was signed in April 1994 and became effective in 1995 after passage by 124 national legislatures substantially reduced tariff and non-tariff trade barriers in many sectors. It also established the **World Trade Organization** (WTO) to replace the 47-year-old **General Agreement on Tariffs and Trade** (GATT). The Geneva-based WTO is intended to oversee the trade agreements and settle trade disputes. The three major provisions of the accord, from the perspective of Third World nations, are the following:

1. Developed countries will cut tariffs on manufactures by an average of 40% in five equal annual reductions. Tariffs will be eliminated in 10 major sectors (beer, construction equipment, distilled spirits, farm machinery, furniture, medical equipment, paper, pharmaceuticals, steel, and toys). Developing countries in turn agreed to not raise tariffs by "binding" in recent trade reforms. Despite these reductions, developing countries still face tariffs that are 10% higher than the global average while the least developed countries face tariffs that are 30% higher.

2. Trade in agricultural products will come under the authority of the WTO and be progressively liberalized. Developed-country non-tariff barriers were to be converted into tariffs and reduced to 36% of the 1986-1988 level by the year 2000. Agricultural subsidies will also be reduced, but only by 21 % in the volume of subsidized exports.

3. For textiles and apparel, the Multi-Fiber Arrangement (MFA) quotas, which have long penalized exports of developing countries, will be phased out by 2005, with most of the reductions taking effect toward the end of the period. But tariffs on textile imports will be reduced only to an average of 12%- three times the average level of tariffs on other MDC imports.

One optimistic study that attempted to assess the quantitative impact of the agreement on developing-country economies concluded that the Third World's real income could grow by as much as $78 billion (in 1992 dollars). But even if this is correct, the gains would be very unevenly distributed. Many of the poorest LDCs-especially those that are net food importers and will face higher import prices as MDC agriculture subsidies are removed-are likely to lose. LDCs in Africa currently enjoying trade preferences may also be harmed.

Finally, environmental groups have been critical of the agreement for its exclusive focus on growth and its lack of attention to the preservation of sensitive and threatened environmental resources. In short, while many analysts are optimistic that the new GATT accord represents a major transition to a more liberal world trading system that will inevitable help the majority of developing countries, it remains to be seen whether the least developed countries will in fact benefit or whether the Uruguay Round Agreement will further widen the gap between rich and poor nations. To date, the gap appears to be widening for most LDCs. An evaluation by the UNDP in its 1997 Human Development Report led its authors to the following conclusion:

Poor countries often lose out because the rules of the game are biased against them particularly those relating to international trade. The Uruguay Round hardly changed the picture. Developing countries, with three-quarters of the world's people, will get only a quarter to a third of the income gains generated-and most of that will go to a few powerful exporters in Asia and Latin America.

The Problem of Adjustment Assistance

One of the major obstacles to lowering tariff barriers of rich countries against the manufactured exports of poorer nations is the political pressure exerted by traditional light manufacturing industries that find their products under-priced by low-cost, labor-intensive foreign goods. Not only can this cause economic disruption for these higher-cost domestic industries, but it can also lead to a loss of employment for their workers. In classical trade theory, the answer to this dilemma would be simple: Merely shift these rich-country workers with their complementary resources to the other more capital-intensive industries where a comparative advantage still exists. Everybody will be better off as a result.

Unfortunately, even in the most industrialized and economically integrated societies of the world, the process of adjustment is not so simple. More important, the political power of many of these older industries is

such that whenever they feel threatened by low-cost foreign imports, they are able to muster enough support effectively to block competition from the LDCs.

Unless some scheme of adjustment assistance is established whereby the governments of developed nations assist industries and their workers financially in the transition to alternative and more profitable activities, trade barriers against competitive Third World exports will be difficult to remove. Many such schemes have been proposed. To date, none has been really effective in persuading threatened industries and industrial workers to forgo their private interests in the interest of maximum world welfare. This is not surprising. In fact, the typical response of developed-country governments has been to subsidize new investment in threatened industries to keep them afloat.

Nevertheless, continuous efforts must be made to search for an acceptable program of adjustment assistance that will not unduly penalize displaced workers, who themselves often come from the lower income bracket. Without the introduction of such programs in developed nations, the world market for Third World manufactured exports will always remain restricted, both for new entrants and for the growth of existing suppliers.

Although it is beyond the scope of this chapter to examine the myriad ways in which the economic welfare of many export -oriented poor nations is tied to the domestic fiscal and monetary macroeconomic policies of rich nations, the importance of this link must not be overlooked. The major factor determining the level and growth of Third World export earnings has been the ability of rich nations to sustain high rates of economic growth without inflation. This was clearly confirmed by their relatively good performance in the 1960s and 1990s and their sharp decline during the recessions of the 1970s and 1980s. Even a low income elasticity of demand for LDC exports can be compensated for by a high rate of income growth in a developed country. It follows that under present international economic relationships, Third World export performance is directly related to the growth and price stability of developed-country economies.

But just as the poor are often said to be the last to be hired and the first to be fired, so too, when international economic disruptions occur, the world's poor nations feel the effects much sooner and more substantially than the rich nations do. The worldwide inflationary spiral of the 1970s caused by a combination of Keynesian-type excess aggregate demand pull and natural resource, especially petroleum, cost push factors provide a classic example of this phenomenon. Facing rampant inflation at home, developed countries were able to call on traditional macroeconomic policies designed to restrict aggregate demand (e.g., lower government expenditure, higher taxes, higher interest rates, a slower-growing money supply) while attempting to control wage and price rises.

When rapid inflation is accompanied by growing balance of payments deficits and rising domestic unemployment as in the 1970s, these deflationary domestic fiscal and monetary policies tend to be reinforced by specific government actions to curtail imports and control the outflow of foreign exchange. The nations hit the hardest by these belt-tightening measures are usually the weakest, most vulnerable, and most dependent of

the world, the 40 or so poorest LDCs. Although they are not the intended victims of such domestic economic policies, the fact remains that they are the main victims.

Clearly, we cannot blame the developed nations for looking first after their own domestic economic interests. Nevertheless, it would not seem unreasonable to ask them to try to ease the burden of their spending cutbacks on the poorest nations by giving the exports of these nations some form of preferential treatment. But the lesson is clear. As long as developing nations, either individually or as a group, whether willingly or unwillingly, permit their economies to be linked too closely to the economic policies of rich nations, they will remain the chief, albeit innocent victims in times of stress and but minimally rewarded in times of prosperity. Even more disturbing is the loss of their capacity to control their own economic and social destinies.

The lessons of the past 40 years thus revealed to developing nations, as no economic model could, their need to make every effort to reduce their individual and joint economic vulnerabilities. One method of achieving this goal is to pursue policies of greater collective self-reliance within the context of mutual economic cooperation. Though not denying their interdependence with developed nations and their need for growing export markets, many developing countries now realize that in the absence of major reforms of the international economic order, a concerted effort at reducing their current economic dependence and vulnerability is essential to any successful development strategy.

Review Questions

1. Compare and contrast
   a. the meanings of outward looking and inward looking development policies
   b. overvaluation and under valuation in their effect on export promotion
2. List and discuss the reasons that make the developing countries to introduce the Import Substitution Strategy especially in the 1950s and 1960s
3. Explain the factors on the demand side working against the rapid expansion of Third World primary-product exports to the developed nations (their major markets).
4. Could you list the internal factors of developing countries that inhibit the rapid expansion of primary-product export earnings.
5. Could you elaborate the advantages of commodity agreements by taking a typical example in the world today.
6. What policy measures on manufactured good exports of developing countries taken by the developed countries are encountered by the poor nations?
7. What are the basic arguments for Import Substitution Strategy and the outcomes from the experience of many developing countries which implement this strategy?
8. Distinguish between nominal and effective rates of protection
9. Why do developing countries need to form regional integration? Explain shortly.
10. What do the trade pessimists and trade optimists argue
11. How affects Covid-19 to international trade, trade balance and balance of payments?
12. State some remedies for covid-19 effect on international trade of countries.

13. What are the possible trade scenario effects of Covid-2019?
14. How international trade could be possibly happened with the challenge of Covid-19?
15. Write an essay with the impact of covid-19 on international trade, trade balance, balance of payments and inter-temporal equilibrium.

Chapter VI

Foreign Aid, Debt, financial Reform and Development

Looking in to the sources of finance is compulsory in dealing with development. Economic development can be financed from domestic sources as well as external sources.

Learning Objectives

After completing this chapter, the student is expected to be able to

- to understand how economic development is financed from domestic sources non-inflationary and inflationary finance
- explain external sources of capital formation mainly made up of debt flows and equity flows

6.1 Financing Development from Domestic Resources

Financing development from domestic sources has two major aspects. The first concerns the ways in which savings can be encouraged, because only if society is willing to save can resources be devoted to the production of capital goods. Saving is necessary to fund investment. In a primitive subsistence economy, saving and investment are the same in the sense that saving and investment will be done by the same people. Saving will be invested in the sector in which the saving takes place.

In a more sophisticated monetary exchange, however, there is no guarantee that saving will be automatically converted into investment. Those who want to do the saving may be different from those who want to do the investing, and the process of capital accumulation is likely to require financial and credit mechanisms to redistribute resources from savers to investors. The second aspect of financing development from domestic resources, therefore, has to do with the role of the banking and financial system in promoting and financing investment. The financial system is important for encouraging saving, financing investment and allocating savings in the most productive manner.

6.1.1 Non-inflationary Finance

Saving

There are three broad groups in a society that saves: the house hold sector, the business sector, and the government.

1. The house hold sector saves out of personal disposable income (personal saving),

2. the business sector saves out of profits, and

3. the government can save out of tax revenues if it spends less than it receives on current expenditure (i.e., runs a budget surplus on current account)

The basic approach for non-inflationary finance is a prior saving approach. It stresses the importance of prior saving for investment and the need for policies to raise the level of saving either voluntarily or involuntarily. As far as the nature of saving is concerned, three broad types may be distinguished.

- **Voluntary saving:** are savings that arise from voluntary reductions in consumption out of disposable income. Both household and business sector may be a source of voluntary savings.
- **Involuntary savings**: are savings brought about through involuntary reductions in consumption. All firms of taxation and schemes for compulsory lending to governments are traditional measures involving involuntary reductions in consumption.
- **Forced savings**: consumption may be reduced because of rising prices. People may spend the same amount in money terms, but because prices have risen they spend less in real terms. Inflation may redistribute income to those with a higher propensity to save, such as profit earners.

Savings depends on the level of income. The dependence of saving on income suggests that development and rising living standards is a cumulative phenomenon. Growth depends on saving and capital formation, but saving in turn depends on growth & the level of per capital income (PCY). In this way, virtuous circle can be created. A virtuous circle can be started once the growth of income rises above the growth of population, allowing per capital income to rise. The virtuous circle of growth must be initiated by directly raising the low level of per capital income of the vast majority of people by making their labour more productive. This is the first task of financing capital formation by domestic voluntary means within the prior savings approach.

The second task is to encourage and exhort those with the ability to save to curtail extravagant consumption and to invest productively the surplus of income over whatever consumption is decided up on. The encouragement to save and invest must come from the government and government agencies concerned with economic development. This is where monetary and fiscal polices become important. At the practical level, this is what the prior savings approach to development is concerned with designing monetary and fiscal policies that raise the level of saving directly and also indirectly by allocating resources in the most productive way possible.

6.1.2 Financial systems (or monetary policy) and Economic development

In modern times savers themselves may not be investors. Households and companies could be savers, but investors could be other individuals or companies. There is a gap in between these two groups. Financial intermediaries are required to bridge the gap. This is the basic aspect of monetary policy. There are two types of financial sectors.

a. informal financial sector.

b. formal financial sector.

The informal financial sector refers to all institutions and transactions that take place outside a country's authorized banking system. The sector is characterized by a high degree of spontaneity and flexibility, with

demand creating its own supply. The major participants are moneylenders, merchants, loan brokers, saving groups, etc.

The informal financial sector plays important roles in UDCs, by meeting needs that are not met elsewhere. First, many rural areas have no ready access to financial institutions either because they are non-existence or because they are not within the immediate vicinity. The formal financial sector is predominantly urban based.

Second, where banks do exist, there are a number of institutional barriers to their use, in the form of rules of procedure for obtaining financial assistance. The conditions to get loans can be stringent and hard to satisfy for a number of people. It is difficult, for instance, for the poor and illiterate to provide collateral for loans which is usually required by the formal sector. In practice the formal financial sector tends to be out of reach of peasant farmers, small-scale entrepreneurs & ordinary households, so the informal financial sector fills the gap.

However, in order to mobilize enough resources to finance development, we need to develop the formal financial sector. A well-developed financial system serving the whole community has five main requisites, each of which can contribute to the process of financial deepening, as well as to raising the level of saving and investment, the productivity of capital and the growth of output.

Full-monetization of the economy: The replacement of barters system by money enables people to generate a real investible surplus in several ways.

Integration of informal and formal money markets: The high interest rates charged in the informal sector add to costs and households debt. These could be reduced if the informal sector was opened to greater competition from the formal sector. This could be done by transforming informal institutions into more formal ones, or using the informal sector as a conduit for formal funds.

Development of commercial banking system with central bank supervision: The creation of development banks and micro credit facilities for small-scale borrowing.

Development of financial markets and financial intermediaries, issuing and dealing in financial assets: Financial intermediates offer four major roles.

i. In general, savers wish to lend for only a short period of time, while investors wish to borrow for a longer period of time. Financial intermediaries facilitate the communication between savers and investors, because they are able to pool risks and can borrow short and lend long, thus suiting both savers & investors.

ii. The use of financial intermediaries reduces transaction cost,

iii. Financial intermediaries can specialize particular areas of business, which reduces information costs by accumulating knowledge of various markets

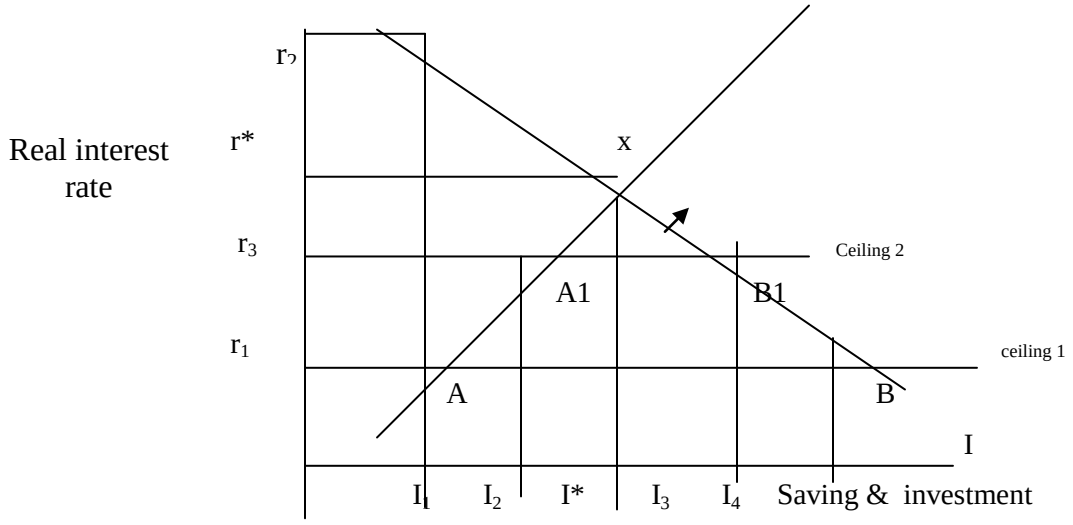
iv. Investment projects are invariably larger than the savings of any one individual or group of individuals. The existence of financial intermediaries overcomes the problem of indivisibilities.

Financial Liberalization: The formal financial sector, consisting of a central bank, a commercial banking system and various other financial intermediaries, typically suffers from various forms of financial repression, which may thwart the development process. For example, the government may have a monopoly over the banking system and restrict the growth of financial institutions. Private sector banks may have to keep to high reserve requirement and lend compulsorily to the government to finance its deficits. The central bank may impose credit rationing on the commercial banks, or insist that the banks lend to certain priority sectors nominal interest rates may be kept artificially low, so that with inflation the real rate of interest is negative, discouraging the acquisition of interest bearing financial assets. These are all examples of financial repression.

The argument of financial liberalization is that the various forms of financial repression impede the development of financial markets. The consequences it is argued are a reduction of the flow of funds to the formal financial sector and distortion of the allocation of resources, leading to lower levels of saving, investment and output growth than otherwise would be the case.

McKinnon and Shaw highlighted the dangers of financial repression in a rigorous way, and argued the case for maximum financial liberalization. Their views became highly influential in the thinking of the IMF & the World Bank in the design of programmes for financial r s ucturing of countries as part of structure adjustment programmes.

The following diagram illustrates the McKinnon Shaw argument.



The above diagram is standard classical savings and investment diagram showing saving as a positive function of the real interest rate, and investment as a negative function of the real interest rate. With no interest rate controls, the equilibrium rate of interest would be r* and the level of saving & investment would be I*.

Now suppose that the government imposes a ceiling on the nominal deposit rate for savers, giving a real rate of interest r_1. This would mean that saving is I, and on the classical assumption that prior saving is

necessary for investment, this also constrains investment to I_1. If there was no ceiling on the loan rate of interest, the banks could charge interest rate r_2 to investors and the gap between r_1 & r_2 would give substantial profit to banks, which they could use for various forms of non-price competition. At r_2 there is no unsatisfied demand for investment funds.

Suppose, however, that the interest rate ceiling applies to loans as well as deposits. This means that saving is still I_1, but investment demand is now I_4 and there is an unsatisfied demand for investment funds equal to AB. credit will have to be rationed. There will be a tendency for banks to favour less risky projects with lower rates of return. This will lower the overall productivity of investment.

If the interest rate ceiling is raised so that real interest rates rise to r_3, this encourages saving from I_1 to I_2. This leads to more investment, credit rationing is reduced and the productivity of investment rises.

From this argument, it would seems to follow that saving & investment would be optimal and Credit rationing will disappear when the market is fully liberalized and the rate of interest is left to its market clearing level at r*.

Criticism on Financial Liberalization

Financial liberalization is criticized on a number of grounds. Some of the criticisms are.

- The argument refers to financial saving, but financial saving is one type of saving. Financial saving may increase as interest rates are liberalized, but there may simply be a substitution between financial assets and other assets, leaving total saving unchanged. It is also well known that any price change (in this case the interest rate) has income as well as substation effects. The substitution effect promotes saving by making current consumption more expensive, but the income effect deters saving because at higher interest rates the same income can be obtained with less saving, and the two savings may cancel each other out. This being so, it is perhaps surprising to find so strong a belief in the ability of higher interest rates to mobilize saving.
- The model seems to treat banks simply as saving depositories, with the presumption that the supply of loans from the banking system depends on the deposits held by the bank, and if deposits increase, loans will automatically increase. In short, the supply of credit is treated as exogenously determined. However, if banks have the power to create credit (which they do), backed by a central bank acting as lender of last resort, the supply of loans will depend on the demand for loans, not on the supply of deposits. The supply of loans becomes endogenous. Within this framework, what is important is not so much incentives for saving, but incentives for investment, which may require lower interest rates.
- It ignores the adverse effect that high real interest rates can have on costs and the level of demand in an economy, which may lead to stagflation. High interest rates not only discourage investment, but may also lead to currency overvaluation by attracting capital from overseas, which leads to a fall in exports, and also increases the cost of serving government debt, which leads to cuts in government expenditure.
- Diversion of capital from the formal sector to the informal sector

- Even if markets are fully liberalized, this may not eliminate credit rationing because banks have problem of adverse selection due to asymmetric information between borrowers & lenders. Borrowers know more about the risk of the investment than lenders.

6.1.3 Inflationary Finance

If voluntary and involuntary saving are inadequate, inflationary policies that force saving by taxing money and redistributing income between classes within the private sector are alternative possibilities. The inflationary finance approach to development finance embraces:

- Keynesian Approach
- Quantity theory Approach

a. Keynesian Approach to the financing of development

This approach is based on budgetary deficit i.e. total expenditure exceeds the sum of balance from current revenue + household savings + borrowing. The source of financing the budgetary expenditure is by borrowing from the central bank. The central bank makes the money available by printing new currencies and running down balances.

Whether this type of financing is good or bad depends on what type of expenditure the government is making. If the expenditure is of investment type, output will grow up and it may not result in inflation. However, if expenditure is for consumption, output will not increase and prices rise up.

Implications

The Keynesian approach to inflationary finance stresses that

1. Investment can generate its own saving by raising the level of income when the economy is operating below capacity and by redistributing income from wage earners with a low propensity to save to profit earners with a high propensity to save when the economy is looking at full capacity.
2. Inflation itself can encourage investment by raising the nominal rate of return on investment and reducing the real rate of interest.
3. Inflationary finance is important for the utilization of unemployed and underemployed resources.
4. Inflationary finance is self-defeating i.e. whatever method of deficit finance is used should turn itself out as the supply of goods rises to meet the additional purchasing power created.

In the agriculture sector of developing countries, and in the production of consumer goods in the industrial sector, there are many opportunities for investment that can yield outputs several times the money value of capital invested in a very short space of times. In agriculture the use of fertilizers and the provision of transport facilities are good examples. Credit expansion for these activities can soon generate sufficient output to absorb the demand creating effects of the new money in circulation.

b. The Quantity Theory Approach to the Financing of Economic Development

The quantity theory approach stresses the effect of inflation as a tax on real money balances. Suppose a government wishes to divert more of a country's resources to investment, one of the ways it can do so is to invest on society's behalf, financing the investment by expanding the money supply. In conditions where capital is already fully employed, monetary expansion will be inflationary.

Inflation is the means by which resources are effectively transferred to government. Inflation imposes a tax on money holdings and consists of a reduction in the real purchasing power of money and of the real resources that the holders of money must forgo to restore the real value of their money holding. Inflation as a tax on money redistributes resources from the private sector to the government as the issuer of money resources that are just as real as those obtained by more conventional means of taxation.

The Dangers of Inflation

Inflation although has some advantages, is not with out dangers. First the effect of inflation depends on the type of inflation. Inflation could be demand inflation, cost inflation or structural inflation. The argument for inflationary finance is an argument for demand inflation. Cost inflation, by reducing profits, will not be conducive to development. There is nothing in process of structural inflation that facilitate the development process. There are certain dangers & costs involved in deliberately persuing an inflationary policy to stimulate development. These include:

Its Effect on Balance of payments: If one country inflates at a faster rate than others its Balance of Payment (BOP) may suffer severely, leading to import substitution polices, and exchange controls and hence inefficiency in resource allocation.

Its effect on investment: If inflation becomes excessive, investment in physical plant and equipment may become unattractive relative to speculative investment in inventories, overseas assets, property and artifacts that absorb a society's real resources

Its effect on saving: Inflation clearly reduces the purchasing power of money. If inflation becomes excessive, not only may voluntary saving be discouraged but the use of money as a medium of exchange may be discouraged, involving society in real resource costs and welfare losses.

Its effect on distribution of income: There are also the distributional consequences of inflation to consider some of the distributional effects include.

- debtors benefit at the expense of creditors
- profit earners gain at the expense of wage earner in times of demands inflation and lose at the expense of wage earners in times of wage inflation
- real asset holders probably gain relative to money asset holders.
- the strong (in a bargaining sense) probably gain relative to the weak and the young gain relative to the old, who tend to live on fixed contractual incomes.

Inflation and Growth, the Empirical Evidence

Whether inflation leads to growth or not depends on the extent or degree of inflation. If the degree of inflation is low, it is good for growth. The relationship between inflation and growth is likely to be non-linear. Growth is positively related to inflation up to a certain rate of inflation and then negatively related as the disadvantages of inflation outweigh the advantages. This is in line with recent empirical evidence from large data sets across developing and developed countries.

i. A study by Bruno (1995) at the World Bank taking pooled annual observations for 127 countries over the years 1960-92 found that inflation and growth are positively related up to 5% inflation, and then diminishing returns to inflation set in. Inflation and growth are strongly negative once inflation rises above 30%

ii. A study by Sarel (1996) at the IMF has produced a similar result. He takes 87 countries over the period 1970-90 and divides the observations in to twelve inflation groupings using the inflation rate of group 6 as the standard of reference. According to this study inflation has a generally positive effect on growth up to group 7 with inflation averaging 8%. Thereafter inflation and growth are negatively related.

iii. Evidence of non-linearity between inflation and growth is also found by Stanners (1993) in a study of nine countries over the period 1948-86 and 44 countries over the period 1980-88. First he divided the 44 countries into four groups according to the rate of inflation and shows that the highest growth occurred in the second group of countries, with an average rate of inflation of 8.2%

6.2 External Source of Capital Formation

The external sources of capital formation are divided into two. These are:

- Debt flows
- Equity flows

Debt flows- resources come in the form of loans.

Equity flows- capital comes in the form of equity shares which can take the form of foreign direct investment (FDI) or foreign institutional investment (FII) i.e., portfolio investment

104. Debt Flows

Loans usually come in the form of official development assistance (ODA) from bilateral sources and multilateral sources (such as the World Bank and its two affiliates, the IDA and IFC) on concessional and non-concessional terms. Most official flows are given on concessionary terms and are referred to as official development assistance (ODA). It is also known as foreign aid. A loan to LDC is considered as foreign aid if it meets two criteria.

i. Its objective should be non-commercial from the point of view of donors and, It should be characterized by concessional terms; that is, the interest rate and repayment period for the loan should be softer (less stringent) than commercial terms.

The concept of foreign aid that is most widely used is one that encompasses all official grants and concessional loans, in currency or in kind, that are broadly aimed at transferring resources from the developed to less developed nations on development or income distribution grounds.

In giving aid certain conditions are attached which is known as aid tying. Roughly one-half of the bilateral aid is tied to the purchase of the donors' goods. In this senses, capital inflows are not worth as much as they might be as the recipients have to pay higher prices for goods and services bought with aid money than the prices prevailing in the free market. Tying tends to be of two kinds.

- ❖ Spending restrictions take the form of tying assistance to purchases in the donor so called procurement tying.

- ❖ Use restrictions normally mean that the aid must be used to cover the foreign exchange cost of a defined project.

Tying can be expensive. The price of tied goods can be 20% or more above the price of the same goods in the free market.

Motives of foreign aid

There are several motives that inspire financial assistance from bilateral and multilateral sources on concessionary terms. These can be grouped in to three.

1. **Humanitarian (moral) motive**: Aid could be given for humanitarian purposes to assist poor countries, and particularly poor people in poor countries. The same arguments that provide the basis for income redistribution within nations can also be applied at the global level, namely that absolute poverty is intolerable and that if the marginal utility of income diminishes, total welfare will be increased by a redistribution of income from rich to poor. From a moral and welfare point of view, national boundaries are quite artificial constructions.

2. **Political motives**: Political motives have been by far more important for aid granting nations, especially for the major donor country, the United States starting from the Marshal Plan, which aimed at reconstructing the war torn economies of Europe, the U.S. viewed aid as a means of containing the international spread of communism. In the 1950's & 60's the policy of containment embodied in the U.S. aid program dictated a shift in emphasis toward political, economic and military support for friendly less developed nations, especially those considered geographically strategic example Israel, Egypt, Pakistan etc.

Most aid programs to developing countries were, therefore oriented more towards purchasing their security and propping up their sometimes-shaky regimes than promoting long term social & economic development. British and French assistance tends to be concentrated on ex-colonial territories, reflecting strong historical ties and perhaps some recompense for former colonial neglect.

3. Economic motives: Within the broad context of political and strategic priorities foreign aid programs of the DCs have had a strong economic rationale. These can be grouped in to two aspects.

a. Economic motives from the point of view of recipients

b. Economic motives from the point of view of donors

a. Economic motives from the point of view of recipients:

- **Foreign exchange constraints:** External finance (both grants & loans) can play a critical role in supplementing domestic resources in order to relieve savings or foreign exchange bottlenecks. This is the so-called two-gap analysis of foreign assistance. Therefore, the LDCs require foreign aid to meet the deficits in their external balance and to supplement domestic savings.

- **Technological transfer**

- **Provision of economic and social infrastructure** e.g. health, education, railways, roads, communication etc.

b. Motives from the point of view of donors

DCs invest in LDC, not only to raise the growth rate of the LDCs, but also to improve their own welfare.

Rate of interest: If the rate of interest on loans is higher than the productivity of capital in developed donor country and lower than the productivity of capital in the developing recipient country, both parties will gain.

Tied loans: most of the bilateral loans from DCs are tied loans. The recipient country purchases the goods from the donor country at a higher price, higher than the competitive market price.

Market: When an aid recipient country improves its economic conditions, its per capita income improves and this creates a market for the products of DCs.

Criticism

The critics of official assistance opose the alleged advantages of international assistance. These include:

1) Assistance is mal-distributed and does not reach the poorest people in the poorest countries. However, this is not a criticism of aid as such, but of its administration

2) Assistance has not helped economic development. Many countries are still desperately poor after 50 years of assistance, and that many parts of the third world: South East Asia, W. Africa & Latin America made rapid progress long before the advent of official assistance.

3) Due to foreign aid some government may take undue advantage of it and may suppress oppositions. Assistance breeds corruption, inefficiency & tensions in societies, which retards development.

4) Assistance may also encourage irresponsible financial policies, and if the assistance is free (pure aid) there may be no incentive to use resources productively.

Program aid as compared to project aid is much more open to abuse than supervised project aid. Whatever problems are associated with foreign aid, these are the problems of faulty implementation. A study of seven countries (including Kenya, Bangladesh, India, Colombia, Korea, Malawi, and Mali) shows that most aid achieves its development objectives. The provision of aid also played a major part in the green revolution in Southeast Asia, in building up infrastructure in S.Africa.

6.2.2 Equity Flows

Portfolio investment (Foreign institutional invest): In addition to FDI, the most significant and fastest growing component of private capital flows in the 1990s was in the area of portfolio investment. With the increased liberalization of LDC domestic financial markets and the opening up of these markets to foreign investors, private portfolio investment now accounts for one-third of overall net resource flows to developing countries. Basically, portfolio investment consists of foreign purchases of the stocks (equity), bonds, certificates of deposit, and commercial paper for LDCs.

Between 1989 to 1997, portfolio investment, both in equity shares and bonds has increased significantly in LDCs.

Portfolio investment in LDCs (billions of $)

Type of flow	1989	1994	1995	1997
Equity shares	3.5	32.2	32.5	32.5
Bonds	4.0	27.5	23.8	53.8

Till late 1980's foreign institutional investment (FII) at global level were restricted to developed markets only and UDCs were not attractive for foreign investment because their capital market were offering lower rate of return and there was lack of liquidity, debt, information, stability and transparency in their markets. Since late 1980's, there has been remarkable change in the directions of FII, at global level.

In the 1990's developed countries markets become slavish markets. As a result, most investors started to invest in emerging countries like china, Indonesia Malaysia, Thailand, S.Korea, Tailuan, Hong Kong, India Mexico, Brazil etc.

After the collapse of the Mexican stock market (after the 35% peso devaluation) in 1995, much of the money invested in emerging markets in early 1990s was rapidly repatriated. The same phenomenon occurred in late 1997 and 1998 during the Asian Economic crisis. There was a sharp decline in the stock and bond markets in S Korea, Thailand, Indonesia, Malaysia, Hong kong & the Philippines. In 1996, these countries received net capital in flow (both FDI & portfolio) of $93 billion in 1997, they suffered a net outflow of $12bill mostly portfolio.

Limitations of Foreign Institutional Investment (FII)

1. FII are not in the development business. Most of the shares are bought and sold in the secondary market and this does not guarantee investment.

2. Volatility

3. Fluctuations in amount

4. Fluctuations in foreign exchange rate: when a large amount of foreign capital flows in, the exchange rate declines. But when there exists capital flight, it negatively affects the exchange rate.

5. Fluctuations in share prices: When capital flows in, the share price goes up and vice versa when there is capital flight.

6. Reversibility: If DCs interest rates increase and perceived LDC profit rates decline, foreign speculators will withdraw their investment as quickly as they brought them in.

7. Inflationary: FIIs create inflation in the country, when a foreign capital flows in, it is exchanged to new money at the central bank and this leads to inflation.

8. FIIs are guided by interest rate differentials and investor perceptions of political and economic stability. This makes them a very tenuous foundation on which to base medium-or long-term development strategies.

Foreign Direct Investment

Apart from official development finance, another major source of development finance is private capital flows. These are of two types: foreign direct investment (FDI) and portfolio investment.

There has been a vast increase in the amount of FDI going to developing countries in recent years fuelled by three major sources.

- The rise of Multi-National Corporations (MNCs) and the search for global-profits
- The liberalization of capital markets and
- Economic liberalization within LDCs.

Companies (i.e. MNCs) wishing to invest overseas look for:

- a favorable trade & investment regime
- good infrastructure
- property rights
- political stability
- macro economic stability and
- educated and committed workforce.

FDI brings many advantages to recipient countries, but there are also many potential dangers and disadvantages from a development points of view.

Advantages of MNCs

1. Gap filling role: This takes many aspects.

Saving's gap: FDI raises the investment ratio above the domestic savings ratio. For example, in the Harrod-Domar growth model

g=s/c

If the desired rate of national output growth, g, is targeted at 6% and the capital output ratio c= 4%, then the needed rate of annual saving income ratio is 24%. If the saving that can be raised domestically is say 16%of GDP, a "saving-gap" equal to 8% is said to exist which can be filled up by FDIs or private capital flows.

Foreign Exchange Gap: A second contribution of FDI is its contribution to filling the gap between targeted foreign exchange requirements and those derived from net export earnings plus net public foreign aid. This is the so-called foreign exchange gap. A great deal of FDI goes in to the tradable goods sector of the recipient country which improves the export performance of these countries and earns valuable foreign exchange.

In the East Asian countries, foreign corporations have been the major force in the department of exports specially on manufactures. In the early 1990's the share of foreign affiliates in export was as high as 57% in Malaysia, 91% in Singapore and 25% in China.

Tax Revenue: The third gap said to be filled by foreign investment is the gap between target Government Tax Revenues and locally raised taxes. By taxing MNC profits and participating financially in their local operations, LDC governments are thought to be better able to mobilize public financial resources for development projects.

Management skills, entrepreneurship, technology, innovation: Not only do Multinationals provide financial resources and new factories to poor countries, but they also supply a package of needed resources including management experience, entrepreneurial abilities, marketing skills and technological skills that can then be transferred to their local counterparts by means of training programs and the process of learning by doing.

Other arguments

Growth in GDP: In many studies on the relation between FDI and the growth of GDP have revealed that a positive relation exists. It has been estimated by Bernstein, de Gregorio and Lee that a one percentage point increase in the ratio of FDI to GDP in developing countries over the period 1971-89 was associated with 0.4 - 0.7 Percentage point increase in the growth of per capita GDP. Another study made by the World Bank found that FDI is strongly associated with higher GDP growth in many developing countries. Total income increases in Multiplied amount as Multiplier works in different directions.

Employment Generations: FDI also creates employment opportunities. It is estimated that some 20 million workers are employed directly or indirectly by MNC, in LDCs.

Catalyst for Domestic Investment: Foreign investment can often be a catalyst for domestic investment in the same or related fields it will have both backward and forward linkages which encourages investment in different areas.

Arguments against Foreign Direct investment

The activities of MNC, come under attack on several grounds.

They spread consumerism in the country: Multinationals typically produce inappropriate products (those demanded by a small, rich minority of the local population) and stimulate inappropriate consumption patterns through advertising and their monopolistic market power. These tendencies are not only wasteful but they encourage acquisitiveness, reduce domestic saving and can worsen Balance of Payments difficulties by encouraging expensive tastes.

Inequality and Dualism: the impact of MNC, on development is very uneven and in many situations MNC activities reinforce dualistic economic structures and exacerbate income inequalities. They tend to worsen the imbalance between rural and urban economic opportunities by locating primarily in urban export enclaves and contributing to the rural-urban migration. They divert resources away from needed food production of the manufacture of sophisticated products catering primarily to the demands of local elites and foreign consumers.

Threat to local entrepreneurs: MNCs may damage host economies by suppressing domestic entrepreneurship and using their superior knowledge, world wide network, advertising skills and range of essential support services to drive out local competitors & inhibit the emergence of small scale local entrepreneurs

Inappropriate technologies: They may introduce inappropriate technologies and retard the development of indigenous capital-goods industry. Besides, local resources tend to be allocated for socially undesirable projects.

Adverse effects on Balance of Payment: There is caution of foreign exchange mainly in the form of repatriation of profits. FDI has a potential disadvantages even as compared to loan finance, that there may be outflow of profits that lasts much longer than the outflow of debt-service payments on a loan of equivalent amount. While a loan creates obligations for a definite number of years, FDI may involve an unending commitment.

MNCs Use their economic power to influence government policies in directions unfavorable to development . They are able to extract sizeable of economic and political concessions from competing LDCs governments in the form of excessive protection, tax rebates, investment allowance and the cheap provision of factory sites and essential social service,

Low Transfer: The management entrepreneurial skills and technology provided by MNC, may have little impact on developing local sources of these scarce skills & resources and may in fact inhibit their development by stilling the growth of indigenous entrepreneurship as a result of the MNC dominance of local markers.

FDI is an integral part of economic development of a country. They are an integral part of globalization which is necessary for technological development of an economy. The question is how to avoid the adverse effects of FDIs or MNCs.

Review Questions

1. Explain the difference between saving and investment in the primitive subsistence economy and in the sophisticated monetary exchange economy
2. Distinguish between voluntary saving, involuntary saving and forced saving
3. Explain the advantages and disadvantages of the informal financial sector
4. Describe the roles of financial markets and financial intermediaries in economic progress
5. The formal financial sector suffers from various forms of financial repression, which may thwart the development process. What are these repressions?
6. What are the major criticisms against financial liberalization?
7. Discuss the Keynesian approach to inflationary finance stresses
8. Explain the disadvantages of inflationary finance
9. Why do countries provide aid?
10. What are the external sources of foreign finance?