Chapter 1 - Introducing Economic Development: A Global Perspective

- Absolute poverty
    - A situation of being unable to meet the minimum levels of income, food, clothing, healthcare, shelter and other essentials
- Subsistence economy
    - An economy in which production is mainly for personal consumption and the standard of living yields little more than basic necessities of life, food, shelter and clothing
- Development
    - The process of improving the quality of all human lives and capabilities by raising peoples levels of living, self-esteem and freedom
- Developing countries
    - Countries of Asia, the Middle East, Latin America, eastern Europe, and the former Soviet Union, that are presently characterized by low levels of living and other development deficits. Used in the development literature as a synonym for less developed countries
- Traditional economics
    - Concerned primarily with the efficient, least-cost allocation of scarce productive resources and with the optimal growth of these resources over time so as to produce an ever-expanding range of goods and services.
    - It is an approach to economics that emphasizes utility, profit-maximization, market efficiency, and determination of equilibrium
    - It assumes economic “rationality” and a purely materialistic, individualist, self-interested orientation toward economic decision making
- Political economy
    - The attempt to merge economic analysts with practical politics to view economic activity in its political context
    - It goes beyond traditional economics to study, among other things, the social and institutional processes through which certain groups of economic and political elites influence the allocation of scarce productive resources now and in the future
    - It is concerned with the relationship between politics and economics, with a special emphasis on the role of power in economic decision making
- Development economics
    - The study of how economies are transformed from stagnation to growth and from low-income to high-income status, and overcome problems of absolute poverty
    - In addition to being concerned with the efficient allocation of existing scarce productive resources and with their sustained growth over time, it must also deal with the economic, social, political and institutional mechanisms, both public and private that are necessary to bring about rapid and large-scale improvements
- More developed countries (MDCs)
    - The now economically advanced capitalist countries of western Europe, North America, Australia, New Zealand and Japan

- Less developed countries
    - A synonym for developing countries
    - Most commodity and resource markets are highly imperfect, consumers and producers have limited information, major structural changes taking place in both the society and the economy
    - It has potential for multiple equilibria rather than a single equilibrium
    - Disequilibrium situations often prevail (prices do not equate supply and demand)
- Globalization
    - The increasing integration of national economies into expanding international markets
- Income per capita
    - Total gross national income of a country divided by total population
- Gross national income (GNI)
    - The total domestic and foreign output claimed by residents of a country. It comprises gross domestic product (GDP) plus factor incomes accruing to residents from abroad, less the income earned in the domestic economy accruing to persons abroad
- Gross domestic product (GDP)
    - The total final output of goods and services produced by the country's economy, within the country's territory, by residents and nonresidents
- What were the Traditional Economics Measures?
    - Development has traditionally meant achieving sustained rates of growth of income per capita to enable a nation to expand its output at a rate faster than the growth rate of its population
    - Levels and rates of growth of real per capita gross national income (GNI) - monetary growth of GNI per capita minus the rate of inflation are then used to measure the overall economic well-being of a population
    - Economic development in the past has also been typically seen in terms of the planned alteration of the structure of production and employment so that agriculture's share of both declines and that of the manufacturing and service industries increases
    - Problems of poverty, discrimination, unemployment and income distribution were of secondary importance to getting the growth job done
- What is the New Economic View of Development
    - The experience of the 1950s and 1960s, when many developing nations did reach their economic growth targets but the levels of living of the masses of people remained for the most part unchanged, signaled that something was very wrong with the narrow definition of development that only relied on economic growth
    - Thus, during the 1970s, economic development came to be redefined in terms of the reduction or elimination of poverty, inequality, and unemployment within the context of a growing economy

- Scholars argued that development must be conceived of as a multidimensional process involving major changes in social structures, popular attitudes, and national institutions, as well as the acceleration of economic growth, the reduction of inequality and the eradication of poverty
    - Amartya Sen's Capability Approach
        - The view that income and wealth are not ends in themselves but instruments
        - Development has to be more concerned with enhancing the lives and the freedom people lead
        - In effect, Sen argues that poverty cannot be properly measured by income or even by utility as conventionally understood, what matters fundamentally is not the things a person has or the feelings these provide but what a person is or can be and does or can do
        - It is concerned with the concept of functionings - what people do or can do with the commodities given characteristics that they come to possess or control
        - Sen then defines capabilities as the freedom that a person has in terms of the choice of functionings, given his personal features and his command over commodities
        - Some important "Beings" and "Doings in Capability to Function:
            - Being able to live long
            - Being well-nourished
            - Being healthy
            - Being literate
            - Being well-clothed
            - Being mobile
            - Being able to take part in the life of the community
            - Being happy

- Three Core Values of Development
    a. Sustenance - the basic goods and services, such as food, clothing and shelter that are necessary to sustain an average human being at the bare minimum level of living
    b. Self-esteem - the feeling of worthiness that a society enjoys when its social, political, and economic systems and institutions promote human values such as respect, dignity, integrity and self-determination
    c. Freedom - a situation in which a society has at its disposal a variety of alternatives from which to satisfy its wants and individuals enjoy real choices according to their preferences

- The Millennium Development Goals
    - A set of eight goals adopted by the United Nations in 2000 - to eradicate extreme poverty and hunger, and achieve universal primary education, promote gender

equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, ensure environmental sustainability and develop a global partnership for development. The goals are designed a specific targets to be achieved by 2015

- The eight goals are
    1. Eradicate extreme poverty and hunger
    2. Achieve universal primary education
    3. Promote gender equality and empower women
    4. Reduce child mortality
    5. Improve maternal health
    6. Combat AIDS/HIV, malaria and other diseases
    7. Ensure environmental sustainability
    8. Develop a global partnership for development

Chapter 2 - Comparative Economic Development

- Defining the Developing Work
    a. The most common way to define the developing world is by per capita income
    - In the World Bank's classification system, 210 economies with a population of at least 30,000 are ranked by their levels of gross national income (GNI) per capita
        - These economies are then classified as low-income countries (LICs), lower-middle-income countries (LMCs), upper-middle-income countries (UMCs), high-income OECD countries, and other high-income countries
        - The developing countries are those with low, lower-middle, or upper-middle incomes
        - Sometimes there are high-income countries that have one or two highly developed export sectors but in which significant parts of the population remain relatively uneducated or in poor health for the country's income level may be viewed as still developing, such as Saudi Arabia, and the United Arab Emirates
        - The characterization of the developing world is notably in sub-Saharan Africa, North Africa, and the Middle East, Asia except for Japan and South Korea's, Latin America, and the Caribbean, and the "transition" countries of eastern Europe and Central Asia
        - The core of the high-income OECD is comprised of the countries of western Europe, North America, Japan, Australia, and New Zealand
        - A special distinction is made among upper-middle-income or newly high-income economies, designating some that have achieved relatively advanced manufacturing sectors as newly industrializing countries (NICs)

b. Another way to classify the nations of the developing world is through their degree of international indebtedness - The World Bank has classified countries as severely indebted, moderately indebted, and less indebted
c. The third common measurement is The United Nations Development Program (UNDP) classifies countries according to their level of human development, including health and education attainments as low, medium, high, and very high through the traditional and new UNDP Human Development Indexes

- Basic Indicators of Development - Real Income, Health, and Education
    - Real income per capita adjusted for purchasing power
    - Health as measured by life expectancy, undernourishment, and child mortality
    - Educational attainments measured by literacy and schooling

- Definition of Purchase Power Parity (PPP)
    - Per Capita GNI comparisons between developed and less developed countries are exaggerated by the use of official foreign-exchange rates to convert national currency figures into U.S. dollars. This conversion does not measure the relative domestic purchasing power of different currencies
        - In an attempt to rectify this problem, researchers have tried to compare relative GNIs and GDPs by using purchasing power parity (PPP) instead of exchange rates as conversion factors
    - PPP is calculated using a common set of international prices for all goods and services
    - Also defined as the number of units of a foreign country's currency required to purchase the identical quantity of goods and services in the local developing country market as $1 would buy in the United States

- Holistic Measures of Living Levels and Capabilities

a. The Traditional Human Development Index
    - The most widely used measure of the comparative status of socioeconomic development is presented by the United Nations Development Program (UNDP) in its annual series of Human Development Reports that uses the Human Development Index
        - An index measuring national socio economic development, based on combining measures of education, health and adjusted real-income per capita
    - The HDI attempts to rank all countries on a scale of 0 (lowest human development) to 1 (higher human development) based on three goals or end products of development:
        - Longevity as measured by life expectancy at birth
        - Knowledge as measured by a weighted average of adult literacy (two-thirds) and gross school enrollment ratio

        - Standard of living as measured by real per capita gross domestic product adjusted for the differing purchase power parity of each country's currency
    - Using these three measures of development and applying a formula to data for 177 countries, the HDI ranks countries into four groups: low human development (0.00 to 0.499), medium human development (0.6 to 0.799), high human development (0.8 to 0.9) and very high human development (0.9 to 1.0)

    - The calculation is as follows:

$$\text{HDI} = \frac{1}{3}(\text{income index}) + \frac{1}{3}(\text{life expectancy index}) + \frac{1}{3}(\text{education index}) \quad (2.6)$$

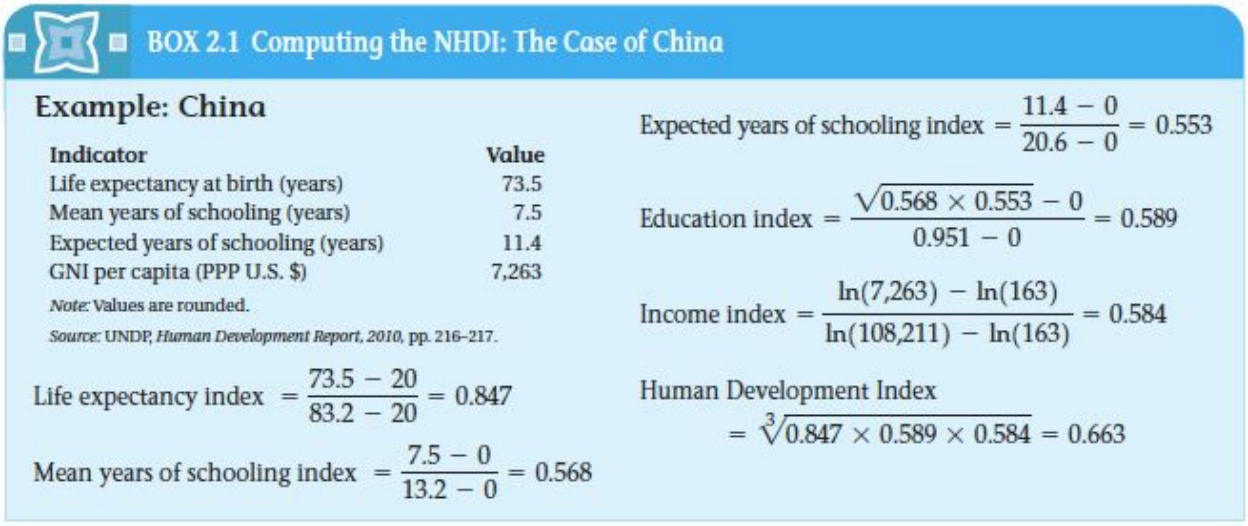
    - The HDI reminds us that by development, it means broad human development, not just higher income
        - Health and education are inputs into the national production function in their role as components of human capital - meaning productive investments embodied in persos
    - Calculation of the traditional HDI underwent a number of changes to adjust to the New Human Development Index

b. The New Human Development Index
    - In November 2010, the UNDP introduced its New Human Development Index (NHDI) intended to address some of the criticisms of the HDI. The index is still based on standard of living, education, and health
    - Characteristics
        - Gross national income (GNI) per capita replaces gross domestic product (GDP) per capita
        - The education index has been revamped, the new components have been added - the average actual education attainment of the whole population and the expected attainment of today's children
        - The NHDI is computed with a geometric mean
    - How NHDI is computed

        - Taking the difference between the country's actual achievement and the minimum goalpost value and then divide the result by the difference between the overall maximum goalpost and minimum goalpost values

$$\text{NHDI} = \text{H}^{1/3}\text{E}^{1/3}\text{I}^{1/3} \quad (2.8)$$

- Where H stands for health index, E stands for the education index, and I stands for the income index, taking the cube root of the product of these three indexes
- Example



BOX 2.1 Computing the NHDI: The Case of China

Example: China

Indicator	Value
Life expectancy at birth (years)	73.5
Mean years of schooling (years)	7.5
Expected years of schooling (years)	11.4
GNI per capita (PPP U.S. $)	7,263

Note: Values are rounded.

Source: UNDP, *Human Development Report, 2010*, pp. 216–217.

$$\text{Life expectancy index} = \frac{73.5 - 20}{83.2 - 20} = 0.847$$

$$\text{Mean years of schooling index} = \frac{7.5 - 0}{13.2 - 0} = 0.568$$

$$\text{Expected years of schooling index} = \frac{11.4 - 0}{20.6 - 0} = 0.553$$

$$\text{Education index} = \frac{\sqrt{0.568 \times 0.553} - 0}{0.951 - 0} = 0.589$$

$$\text{Income index} = \frac{\ln(7{,}263) - \ln(163)}{\ln(108{,}211) - \ln(163)} = 0.584$$

$$\text{Human Development Index} = \sqrt[3]{0.847 \times 0.589 \times 0.584} = 0.663$$

- In calculating the overall index, in place of the arithmetic mean, a geometric mean of the three indexes is used
- A geometric mean is also used to build up the overall education index from its two components
- The use of geometric mean in the NDHI is very important, because when using an arithmetic mean (adding up the component indexes and dividing by three) in the HDI, the effect is to assume perfect substitutability across income, health, and education
- In contrast, the use of geometric mean ensures that poor performance in any dimension directly affects the overall index - allowing for imperfect substitutability is a beneficial change

- Characteristics of the Developing World - Diversity within Commonality
  a. Lower Levels of Living and Productivity
     - Low income leads to low investment in education and health as well as plant and equipment and infrastructure, which in turn leads to low productivity and economic stagnation or commonly known as the poverty trap
  b. Lower Levels of Human Capital
  c. High Levels of Inequality and Absolute Poverty
  d. Higher Population Growth Rates
  e. Larger rural populations but rapid-rural to urban migration
  f. Greater Social Fractionalization

- Fractionalization
    - A significant ethnic, linguistic, and other social divisions within a country

g. Lower Levels of Industrialization and Manufactured Exports
h. Colonial Legacy and External Dependence
i. Adverse Geography
    - Example - Landlocked economies, common in Africa, often have lower incomes than coastal economies.
    - Developing countries are primarily tropical or subtropical, and this has meant that they suffer more from tropical pests and parasites, endemic diseases such as malaria, water resource constraints, and extremes of heat
j. Underdeveloped Markets
    - (1) a legal system that enforces contracts and validates property rights;
    - (2) a stable and trustworthy currency;
    - (3) an infrastructure of roads and utilities that results inlow transport and communication costs so as to facilitate interregional trade;
    - (4) a well-developed and efficiently regulated system of banking and insurance, with broad access and with formal credit markets that select projects and allocate loanable funds on the basis of relative economic profitability and enforce rules of repayment
    - (5) substantial market information for consumers and producers about prices, quantities, and qualities of products and resources as well as the creditworthiness of potential borrowers; and
    - (6) social norms that facilitate successful long-term business relationships

Chapter 3 - Classic Theories of Economic Growth and Development

- This chapter explores the historical and intellectual evolution in scholarly thinking about how and why development does or does not take place
- It examines four major economic development theories
- Classic Theories of Economic Development - Four Approaches
    - The classic post-World War 2 literature on economic development has been dominated by four major and sometimes competing strands of thought
        1. The Linear-Stages-Of-Growth-Model
            - Development as a series of stages that all countries must pass; with the right mixture of investment, saving and foreign aid developing countries will follow same path that had been followed by developed countries; development= rapid aggregate economic growth)
        2. Theories and Patterns of Structural Change

        - Developing countries must undergo an internal process of structural change to succeed in generating and sustaining rapid economic growth
    3. The International-Dependence Revolution
        - Views underdevelopment in terms of international and domestic power relationships; egalitarian objectives within context of growing economy but economic growth wasn't given exalted status as prior two theories
    4. The Neoclassical Free-Market Counterrevolution
        - Failure to develop due to too much government intervention; emphasis on free markets, open economies, privatization

- Development as Growth and the Linear-Stages Theories
    - At the time economists didn't know much about the developing world and so when interest in these countries grew, they jumped to the conclusion that just like how their economies (the west) transformed from poor agricultural societies to modern industrial giants, the backward countries could surely follow. So basically massive injections of capital and historical experience of western countries would lead to development.These theories were too simple.
    - Theme is capital accumulation (capital fundamentalism)
    - Basically agrarian societies to follow the footsteps of the development of Europe and America
    - **Rostow's Stages of Growth**
        - The most influential and outspoken advocate of the stages-of-growth-model of development was the American economic historian Walt W. Rostow
        - According to Rostow, the transition from underdevelopment to development can be described in terms of a series of steps or stages through which all countries must proceed. In his book, the Stages of Economic Growth are:
            - The Traditional Society
            - The Pre-conditions for Take-off into Self-Sustaining Growth
            - The Take-off
            - The Drive to Maturity
            - The Age of High Mass Consumption
        - He argued that the advanced countries had all passed the stage of "takeoff into self-sustaining growth" and the underdeveloped countries that were still in either the traditional society or the "preconditions" stage had only to follow a certain set of rules of development to take off in their turn into self-sustaining economic growth
        - One of the principal strategies of development necessary for any takeoff was the mobilization of domestic and foreign saving in order to generate sufficient investment to accelerate economic growth

    - This theory is linked to the **Harrod-Domar Growth Model**, in which argues that more investment leads to more growth
        - The model is referred to as AK model - based on a linear production function with output given by the capital stock K times a constant, often Labeled A
- **The Harrod-Domar Growth Model**
    - A rule or strategy that can be followed such that takeoff can take place is given by this model
    - Suggests that more investment leads to more growth
    - A functional economic relationship in which growth rate of gross domestic product (g) depends directly on the national net savings rate (s) and inversely on the national capital-output ratio (c)
    - The theory argues that every economy must save a certain proportion of its national income, if only to replace worn-out or impaired capital goods (buildings, equipment, and materials)
    - It focuses on take-off stage - they take off by the fact that they increase savings and investments of the local capital
    - If we assume that there is some direct economic relationship between the size of the total capital stock, K, and total GDP, Y —for example, if $3 of capital is always necessary to produce an annual $1 stream of GDP—it follows that any net additions to the capital stock in the form of new investment will bring about corresponding increases in the flow of national output, GDP
    - Suppose that this relationship, known in economics as the capital-output ratio , is roughly 3 to 1. If we define the capital-output ratio as k and assume further that the national net savings ratio , s, is a fixed proportion of national output (e.g., 6%) and that total new investment is determined by the level of total savings, we can construct the following simple model of economic growth

$$I = S$$

$$I = \Delta K \qquad S = sY$$

$$c = \frac{\Delta K}{\Delta Y} \rightarrow c\Delta Y = \Delta K$$

$$I = c\Delta Y$$

$$c\Delta Y = sY$$

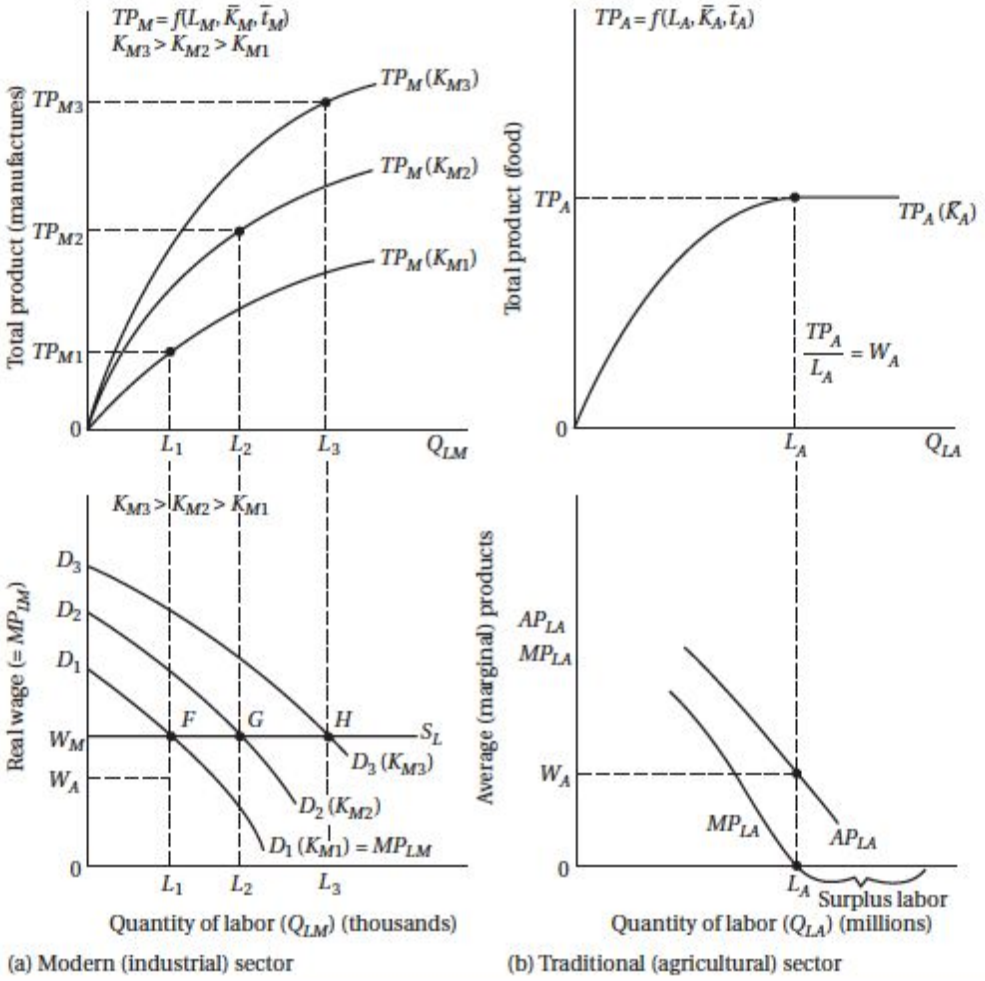
$$\frac{\Delta Y}{Y} = \frac{s}{c}$$

    - Hypothesis
- The mathematical assumptions:
    - Savings lead to investment
        - S=I
        - S= sY (some proportion from national income Y)
    - Investment leads to change in capital stock
        - I = ΔK
    - Constant capital ratio - a fixed ratio
        - C= ΔK/ΔY (capital over income)
        - ΔY x C = ΔK
        - Since ΔK equals I, that leads to ΔY x C = I
    - Ultimately,
        - S = sY = cΔY = ΔK = I
    - In terms of economic growth,
        - sY = c ΔY
        - ΔY/Y = s/c
- That means that the only way to increase GDP which is ΔY, you increase Savings (S) and decrease the capital ratio (C)
    - Results
        - The result is take-off stage that was explained by Rostow
        - The result is that the capital/input should be lower than the income or output in order for take-off (large growth rate), which means in equation, Y should be larger than K to get smaller c and eventually larger Y/ Y (growth rate)
        - And that saving should be large to get large growth rate

        - **Note that capital (technology) wears down over time so growth rate lower than expected: Incorporating capital depreciation**
    - Criticism to Linear Stages of Growth Model
        - More saving/investment is a necessary condition (need tools/capital to produce) but it is not sufficient condition.
        - Western countries able to develop because they had the institutions most developing countries don't have that. Social institutional attitudinal changes also need to take place

- Structural-Change Models
    - Focuses on the mechanism by which underdeveloped economies transform their domestic economic structures from a heavy emphasis on traditional subsistence agriculture to a more modern, more urbanized, and more industrially diverse manufacturing and service economy.
    - Two well-known representative examples of the structural-change approach are the "two-sector surplus labor" theoretical model of W. Arthur Lewis and the "patterns of development" empirical analysis of Hollis B. Chenery and his coauthors.
    - **The Lewis Theory of Development**
        - Became the general theory of development process in surplus-labor developing nations during the 1960s
        - In this model, the underdeveloped economy consists of two sectors
            - a traditional, overpopulated rural subsistence sector characterized by zero marginal labor productivity, a situation that is classified as surplus labor that can be withdrawn from the agricultural sector without any loss of output
            - A high productivity modern urban industrial sector into which labor from subsistence sector is gradually transferred
        - The primary focus of the model is on both the process of labor ransfer and the growth of output and employment in the modern sector
        - The speed with which this expansion occurs is determined by the rate of industrial investment and capital accumulation in the modern sector
        - Such investment is made possible by the excess of modern-sector profits over wages on the assumption that capitalists reinvent all their profits
        - To illustrate the Lewis model of modern-sector growth in a two sector economy below:

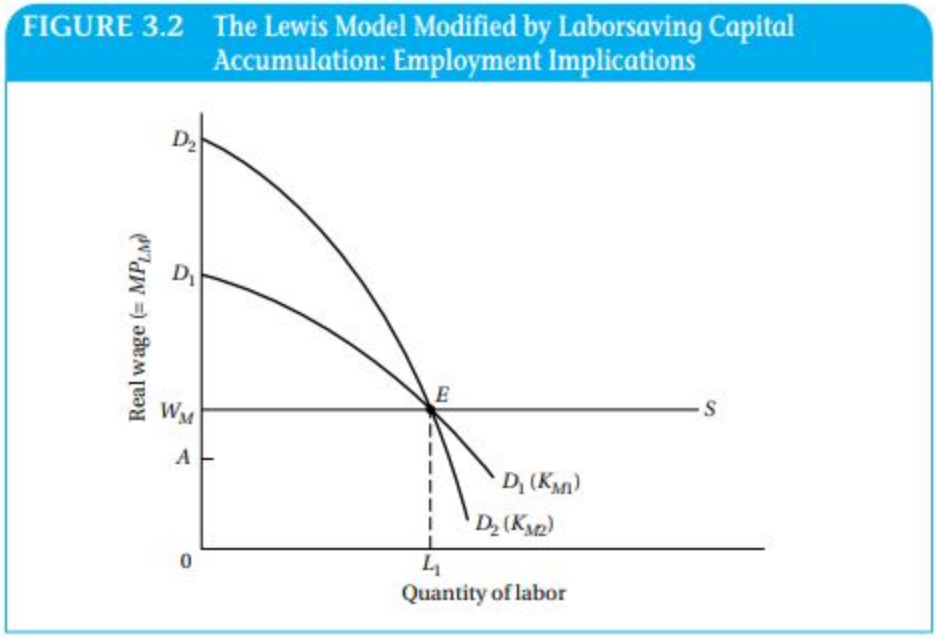
FIGURE 3.1 The Lewis Model of Modern-Sector Growth in a Two-Sector Surplus-Labor Economy



- Graph (a) represents the modern sector production funcion, capital re-invest their profits so the capital stock is allowed to increase, and that's why we have different curves representing three different capitals. In the graph, increasing the input (L1) increases the output, but overtime adding workers will decrease the efficiency rate of the output
- Graph (b) represents the agricultural sector production function where adding more workers will reach a maximum that does not produce anymore extra output (0 marginal change)
- Profit-maximization assumes to hire labourers up to the point where their marginal product is equal to the real wage. It is represented in the graph (a), Wm (F) in the horizontal line

- Criticisms of Lewis Model
  - Although simple, four assumptions made don't match reality

- Rate of labour transfer & employment in urban sector is proportional to capital accumulation according to lewis. But what if firms adapt labour-saving capital? Such that one demand curve is steeper and crosses another. Curves give same wages employment while extra profit made by labour saving curve is taken up by capitalists → reflects inequality
- And who says capitalists may not send profits abroad to Western banks “capital flight”
- Who says labour is in excess in rural communities? Research says otherwise
- Lewis says Wm is constant until point surplus labour is exhausted. However evidence suggests rise in modern wages even in presence of unemployment
- Assumption of decreasing marginal returns when proof that marginal returns increase in this sector



- The International-Dependence Revolution
  - **The Neocolonial Dependence Model**
    - It attributes the existence and continuance of underdevelopment primarily to the historical evolution of a highly unequal international capitalist system of rich country-poor country relationships
    - The coexistence of rich and poor nations in an international system dominated by such unequal power relationships between center (the developed) and the periphery (the underdeveloped) renders attempts by poor nations to be self-reliant and independent difficult and sometimes impossible

        - Certain groups in the developing countries who enjoy high incomes, social status and political power constitute a small elite ruling class whose principal interest is the perpetuation of the international capitalist system of inequality
    - **The False-Paradigm Model**
        - The proposition that developing countries have failed to develop because their development strategies have been based on an incorrect model of development, on that for example, overstressed capital accumulation or market liberalization without giving due consideration to needed social and institutional change
        - Attributes underdevelopment to faulty and inappropriate advice provided by well-meaning but often uninformed biased and ethnocentric international “expert” advisers from developed country assistance agencies

    - **The Dualistic-Development Thesis**
        - The coexistence of two situations or phenomena (one desirable and the other not) that are manually exclusive to different groups of society. For example, extreme poverty and affluence, modern and traditional economic sectors, growth and stagnation, and higher education among a few amid large-scale illiteracy
        - Argues that this world is divided into two: rich and poor, and within developing countries, there is pockets of wealth amidst broad areas of poverty
        - They don’t believe that developing countries because of the developed countries - they think there needs to be developing countries - a fact of life

- The Neoclassical Counterrevolution: Market Fundamentalism
    - Three approaches:
        - Free market approach - to get development, markets should be left alone, letting the natural process of supply and demand happen
        - Public choice approach - government should never get involved in the economy of the market, argues that government does nothing right
        - Market-friendly approach - argues for free-markets but there are market-failures and there should be limited government intervention
    - Main arguments
        - Denies efficiency of intervention - market price allocation is usually more efficient than intervention
        - Points up state owned enterprise failures - state-owned enterprises have not fulfilled their promise and have been inefficient
        - Stresses government failures - incentives must be stressed
        - Traditional neoclassical growth theory - with diminishing returns, cannot sustain growth by capital accumulation alone

- Conclusion
    - All these theories represent that
        - Governments do fail but so do markets - a balance is needed
        - Must attend to institutional and political realities in developing world
        - Development economics has no universally accepted paradigm
        - Insights and understandings are continually evolving
        - Each theory has some strengths and some weaknesses

Chapter 4 - Contemporary Models of Development and Underdevelopment

- Many new theories of economic development that became influential in the 1990s and the early years of the twenty-first century have emphasized complementaries between several conditions necessary for successful development
- Major themes is problems of coordination among economic agents, increasing returns to scale, learning by doing, externalities, monopolistic competition; departs from conventional neoclassical in its assumptions of perfect information, significance of externalities, uniqueness and optionality of equilibria

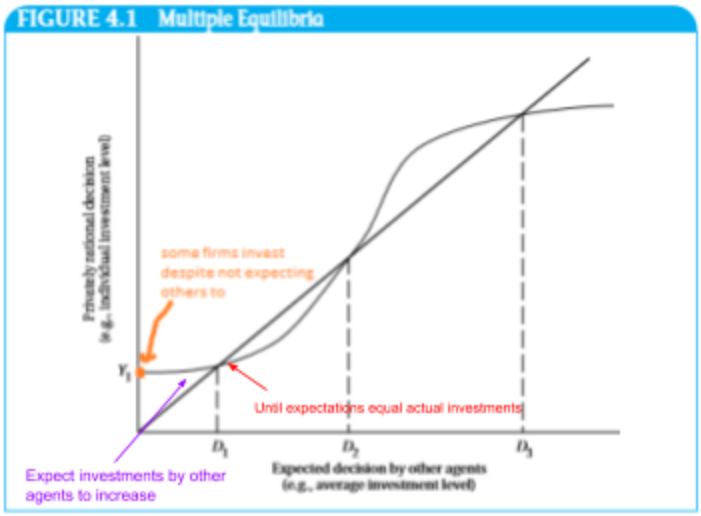
- **Complementaries**
    - An action taken by one firm, worker, or organization that increases the incentives for other agents to take similar action
    - Complementaries often involve investments whose return depends on other investments being made by other agens

- **Underdevelopment as Coordination Failure**
    - A state of affairs in which the inability of agents to coordinate their behaviour (choices) leads to an outcome (equilibrium) that leaves all agents worse off than in an alternative situation that is also an equilibrium
    - This may occur even when all agents are fully informed about the preferred alternative equilibrium
    - They simply cannot get there because of difficulties of coordination, sometimes because people hold different expectations and sometimes because everyone is better off waiting for someone else to make the first move

- **Examples of Coordination Failure**
    - Example #1 of complementarity is the presence of firms using specialized skills and the availability of workers who have acquired those skills
        - Firms will not enter a market or locate in an area if workers do not possess the skills the firms need, but workers will not acquire the skills if there are no firms to employ them
        - This coordination problem can leave an economy stuck in a bad equilibrium - that is, at a low average income or growth rate or with a class of citizens trapped in extreme poverty

- Example #2 specialization and a division of labor are features of an advanced economy. Producers will specialize if they can trade their good for other goods they need; do this by convincing distant buyers of the quality of their product via middlemen. It is difficult to be an expert in the quality of many products, so in order for a specialized agricultural market to emerge, there needs to be a sufficient number of concentrated producers with whom a middleman can work effectively
    - No middlemen→ no incentive for farmers to specialize → continue producing staple crop or a range of goods primarily for personal consumption or sale within the village→ underdevelopment (poverty) trap in which a region remains stuck in subsistence agriculture
- Example #3: a new or modernizing firm using new technologies may provide benefits to other firms that the adopting firm cannot capture; so each firm has an incentive to underinvest in the new technology unless a sufficient number of others invest. Some of these benefits may include raising demand for key industrial products such as steel, helping pay for the fixed costs of an essential infrastructure such as railroads or container ports, or learning from others' experiences.

- **Multiple Equilibria - A Diagrammatic Approach**



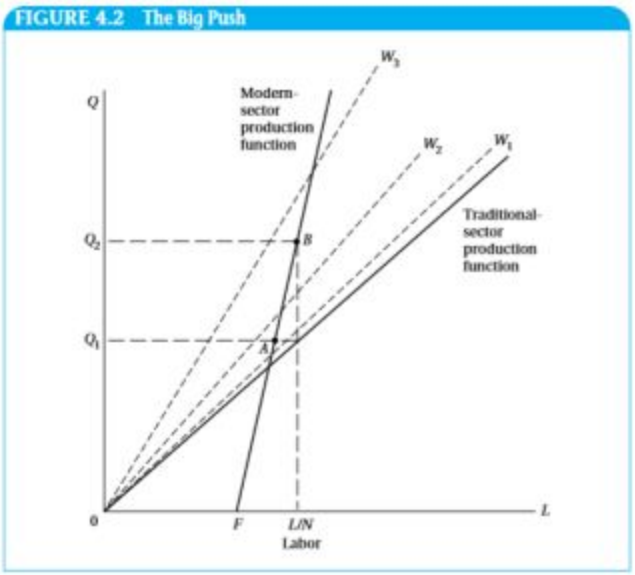
- Multiple equilibria-condition in which more than one equilibrium exists. These equilibria may sometimes be ranked, one is preferred to another, but the unaided market will not move the economy to the preferred outcome. (Different from supply and demand in single equilibrium analysis).

- Equilibrium is found where the “privately rational decision function” (the S-shaped curve) crosses the 45-degree line → agents observe what they expected to observe
- D1 and D3 are “stable” equilibria. They are stable because if expectations were slightly changed to a little above or below these levels, firms would adjust their behavior—increase or decrease their investment levels—in a way to bring us back to the original equilibrium. The S-shaped function cuts the 45-degree line from above. At the middle equilibrium at D2, the function cuts the 45-degree line from below, and so it is unstable. If a little less investment were expected, the equilibrium would be D1, and if a little more, the equilibrium would move to D3. D2 could therefore be an equilibrium only by chance. We think of an unstable equilibrium such as D2 as a way of dividing ranges of expectations
- Typically, the S-shaped “privately rational decision function” first increases at an increasing rate and then at a decreasing rate, as in the diagram. This shape reflects what is thought to be the typical nature of complementarities. In general, some agents may take the complementary action (such as investing) even if others in the economy do not.If only a few agents take the action, each agent may be isolated from the others, so gains may be minimal. Thus the curve does not rise quickly at first. But after enough invest, there may be a snowball effect, in which many agents begin to provide spillover benefits to neighboring agents, and the curve increases at a much faster rate. Finally, after most potential investors have been positively affected and the most important gains have been realized, the rate of increase starts to slow down. there could be a single equilibrium or multiple equilibria
- The S-Curve is amenable to different situations to explain different economic states, such as child labour and wages, private investments and etc. However, related to the economic growth in developing countries, the S-curve tries to show that everybody is better off if everybody takes the push step

- **Starting Economic Development - The Big Push**
  - The most famous coordination failures model in development is the “big push” pioneered by Paul Rosenstein-Rodan
  - It essentially says that if growth can be sustained for a substantial time, it is much more unusual for economic development to later get off track for long (though, of course, there will be setbacks over the business cycle as the economy is affected by temporary shocks). difficult to get modern economic growth under way in the first place, much easier to maintain it once a track record has been established.
  - The big push is a model of how the presence of market failures can lead to a need for concerted economy wide and public policy led effort to get the long process of economic development under way or accelerate it
  - **The difference between The Big Push and The Lewis Model**

        - The Lewis model assumed perfectly competitive conditions in the industrial sector. it is not clear why starting development would be so difficult, but development seems hard to initiate even when better technologies are available—they often go unused. Apparently, people do not have the incentives to put the new technology to work.
        - Beyond this, perfect competition does not hold under conditions of increasing returns to scale.
    - **The Big Push - The Premium Wage**
        - Six assumptions
        1. Instead of perfect competition in the Lewis Model, there is a monopolistic competition where there is increasing return to scale
        2. Factors - assume there is only fixed factor of production, that is labour, L
        3. Factor payments - The labor market has two sectors. We assume that workers in the traditional sector receive a wage of 1. Workers in the modern sector receive a wage W>1. As a stylized fact, this wage differential is found in every developing country. The underlying reason for this differential may be a compensation for disutility (harm/risks) of modern factory types of work. Moreover, if there is surplus labor in the economy or if modern wages are higher than opportunity costs of labor for some other reason, **the social benefits of industrialization are all the greater.**
        4. Technology - We assume that there are N types of products, where N is a large number. For each product in the traditional sector, one worker produces one unit of output This is a very simple example of constant-returns to-scale production. In the modern sector, there is an increasing return of scale, in which workers produce larger units of output than input due to the fact that they are have higher wages that are fixed cost, which makes workers productive and the economy as a whole would be efficient overtime since this average fixed cost decreases overtime (L/N).
        5. Domestic demand - We assume that each good receives a constant and equal share of consumption out of national income.
        6. Economy is closed

- **The Big Push - Diagrammatic Approach**



  - **At point A, we see the output that the modern firm will produce if it enters, provided there are traditional firms operating in the rest of the economy.** Whether the modern firm enters depends, of course, on whether it is profitable to do so. Using Figure 4.2, first consider a wage bill line like **W1 passing below point A.** With this relatively low modern wage**, revenues exceed costs, and the modern firm will pay the fixed cost F and enter the market.** In general, this outcome is more likely if the firm has lower fixed costs or lower marginal labor requirements as well as if it pays a lower wage. **By assumption, production functions are the same for each good, so if a modern firm finds it profitable to produce one good,** the same incentives will be present for producing all goods, and the whole economy will industrialize through market forces alone;
  - **Demand is now high enough that we end up at point B for each product.** This shows that a coordination failure need not always happen: It depends on the technology and prices (including wages) prevailing in the economy. **If a wage bill line like W2 holds, passing between points A and B, the firm would not enter if it were the only modern firm to do so in the economy because it would incur losses.** But if modern firms enter in each of the markets, then wages are increased to the modern wage in all markets, and income expands. We may assume that price remains 1 after industrialization. **Note that the traditional technique still exists** and would be profitable with a price higher than **1**.

- **So to prevent traditional firms from entering, modern firms cannot raise prices above 1.** The modern firm can now sell all of its expanded output (at point B), produced by using all of its available labor allocation (L/N), because it has sufficient demand from workers and entrepreneurs in the other industrializing product sectors. As can be seen in Figure 4.2, with prevailing wage W2, **point B is profitable after industrialization because it lies above the W2 line**. Workers are also at least as well off as when they worked in the traditional sector because they can afford to purchase an additional quantity of goods in proportion to their increased wage,25 and they have changed sectors voluntarily. All of the output is purchased because all of national income is spent on output; national income is equal to wages plus profits, the value of which is output of each product times the number of products N.26
- **Multiple equilibria: Thus with a prevailing wage like W2, there are two equilibria:** one in which **producers with modern techniques enter** in all markets, and profits, wages, and output are higher than before; and one in which no modern producer enters, and wages and output remain lower. The equilibrium with higher output is unambiguously better, **but in general, the market will not get there by itself.**
- A final possibility is found in **a wage bill line like W3, passing above point B** In this case, even if a modern producer entered in all product sectors, all of these firms would still lose money, **so again the traditional technique would continue to be used. In general, whenever the wage bill line passes below point A, the market will lead the economy to modernize, and whenever it passes above A, it will not. The steeper (i.e., more efficient) the modern-sector production technique or the lower the fixed costs**, the more likely it is that the wage bill will pass below the corresponding point A. **If the line passes above B, it makes no sense to industrialize**. But if the wage line passes **between points A and B, it is efficient to industrialize, but the market will not achieve this on its own.** Be sure to note that these are t**hree different wages that might exist depending on conditions in a particular economy at one point in time**, not three wages that occur successively. Again, t**he problematic cases occur when the wage bill line passes between A and B, thus creating two equilibria: one in which there is industrialization and the society is better off (point B) and one without industrialization (point A). In this case, there is a role for policy in starting economic development.** Note that in general, i**t is not necessary for all product sectors to industrialize** to get a sufficient push for some to do so. It is only necessary that a sufficient number industrialize in order to generate enough national income to make industrialization minimally profitable.

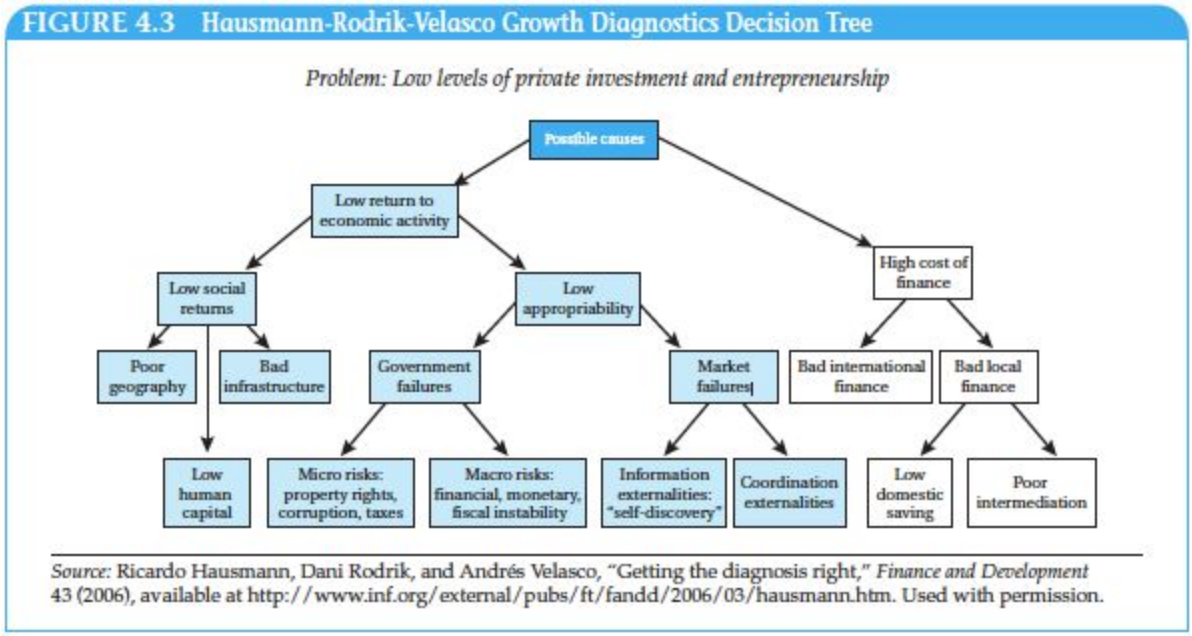
- Notice that this model has not assumed the existence of any type of technological externalities, in which the presence of one advanced firm can, through "**learning by watching" other firms'** production methods or some similar effect, generate spillovers to other firms that can raise their productivity as well as **lower their costs**. **This is another type of market failure that can also lead to inefficiently low investment**;

- **Other 4 Reasons for Big Push**
  - **Intertemporal effects**. Even if the industrial wage rate is 1 (i.e., the same as the traditional-sector wage), multiple equilibria can occur if investment must be undertaken in the current period to get a more efficient production process in the next period. Investment in the first period depresses aggregate demand in the first period but increases it in the second (or later) period. But investment will be undertaken only if it is profitable, that is, if demand is expected to be high enough in the second period, and this may require that many product sectors invest simultaneously.
  - **Urbanization effects.** If some of the traditional cottage industry is rural and the increasing-returns-to-scale manufacturing is urban, urban dwellers' demand may be more concentrated in manufactured goods (e.g., foods must be processed to prevent spoilage due to the time needed for transportation and distribution). If this is the case, one needs a big push to urbanization to achieve industrialization.
  - **Infrastructure effects.**The existence of the infrastructure helps investing firms lower their own costs. the problem investors do not know whether firms will develop to make use of the infrastructure. efficient industrialization may not take place, even if the infrastructure is built, if other coordination problems are present.
  - **Training effects.** There is underinvestment in training facilities because entrepreneurs know that the workers they train may be enticed away with higher wages offered by rival firms that do not have to pay these training costs.
    - **There is also too little demand by workers for training because they do not know what skills to acquire. people are not born with perfect information about their comparative advantage; basic education helps workers discover it.) This is part of the economic case for mandatory public education.** Note that in this case, openness to trade cannot resolve the coordination failure relying on expatriate skilled workers is hardly an adequate solution to a country's own underdevelopment

- **The O-ring**
  - Theme is strong complementarities among inputs
  - q= level of skill
  - Higher the skill higher the probability of successfully completing task
  - Suppose firm only hires two workers: F(qi,qj)=qiqj (B=multiplier=1 for simplicity)
  - The o ring production function is a function with strong complementarities among inputs based on the products of the input qualities
  - Probability of mistakes made by different workers is independent
    - **Assumptions**: competitive markets, risk-neutral firms (not affected by the degree of uncertainty in a set of outcomes; indifferent between choices with equal expected payoffs even if one choice is riskier)
  - **Positive assortment matching**- workers with high skills will work together and workers with low skill will worker together
  - Every1 wants to work with the more productive workers because your efforts are multiplied by working with them
  - A firm with higher-productivity workers can afford higher wages
  - There is greater value in output from two highly productive workers than one low+high productive worker
  - qL2+qH2> 2qLqH (value is higher with skill matching than skill mixing)
  - After high productive workers are matched they are out of picture leaving us with the less productive workers. Similar to the marriage market: most attractive men and women marry. The next most attractive marry and the process continues until least attractive marry. → inequality, some firms/workers/ or even an economy can fall into trap of low skill/low productivity while others escape into higher productivity
  - Suppose there are 6 workers: 3 with q=0.4 and grouped together in one firm and 3 with q=0.8 and grouped together in another firm. Suppose skills in first firm increased to 0.5 and in second firm, increased to 1. We have 25% increase in output quality in both cases. The more you upgrade overall the more value you obtain -> wages increase at increasing rate as skill is steadily increased
    - **Assumptions:** workers must be imperfect substitutes (can't sub quality for quantity- 2 mediocres chefs can replace a very good chef) otherwise won't learn anything about low skill level equilib traps, workers must have sufficient complementary of tasks
    - **Implications:**
      - Firms employ workers of similar skills
      - Workers performing same task in high skill firm earn higher wages (janitor in apple compared to janitor in school board)
      - Since wages increase at an increasing rate for steady increases in skill (q) you'd expect wages in developed countries to be proportionally higher
      - When those around you have higher average skills, you have incentive to acquire more skills (complementarity)

- You can get caught in low production quality traps!
    - O-ring effects: spread of impact of low production bottle necks due to multiplicative effects of production. If any one firm experiences low growth → viscious cycle → disaster (opposite would lead to growth)

- **The Hasmann-Rodrik-Velasco Growth Diagnostic Framework**
    - The idea of finding a "one size fits all" policy for economic development is generally now recognized as a myth
    - Different countries face different binding constraints on achieving faster rates of growth and economic development
    - Ricardo Hausmann, Deni Rodrik, and Andres Velasco (HRV) propose a growth diagnostics decision tree framework for zeroing in on a country's most binding constraints on economic growth
    - HRV explain that targeting the most binding constraint has important advantages over other approaches to policy selection
    - For example, if a developing nation experiences a relatively low level of private investment and entrepreneurship, what steps should it take? The basic decision tree for addressing this question is seen below:



    - Following the left row pointing to low return to economic activity, the tree demonstrates low returns to investors may be due to the fact that there are intrinsically low underlying social returns to economic activities, may be caused by poor geography and bad infrastructure, which ultimately affect low human capital
    - This growth diagnostics are applied this approach to countries in Africa, Asia and Latin America

Chapter 5 - Poverty, Inequality and Development

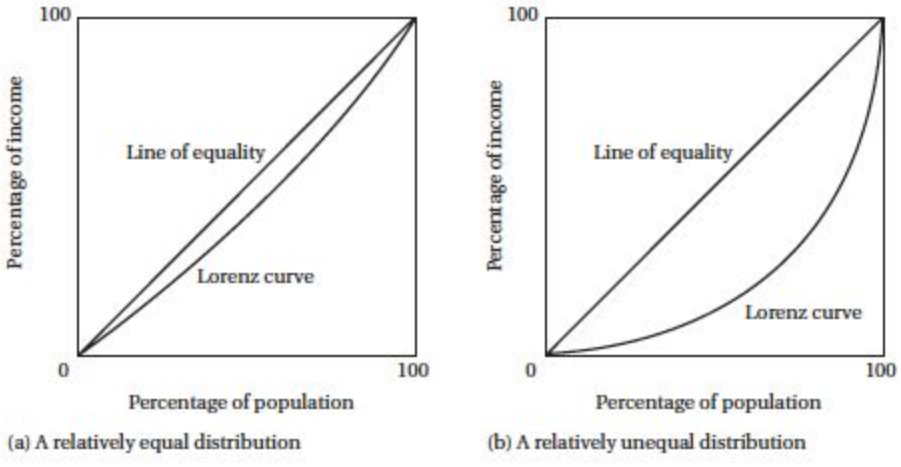
- This chapter examines the problem of poverty and of highly unequal distribution of income
- **Measuring Inequality and Poverty**
  - Measuring Inequality
    - Two principal measures of income distribution

1. The personal or size distribution of income
   - Deals with individual persons or households and the total incomes they receive
   - Economists arrange all individuals by ascending personal income and then divide the total population into distinct groups or sizes
   - Different measures:

a. To to divide the population into successive quintiles (fifths) or deciles (tenths) according to ascending income levels and then determine what proportion of the total national income is received by each income group and then compute them on a **Lorenz Curve**

- A graph depicting the variance of the size distribution of income from perfect inequality
- The Lorenz Curve shows the actual quantitative relationship between the percentage of income recipients and the percentage of the total income they receive
- The more the Lorenz Curves away from the diagonal, the greater the degree of inequality represented

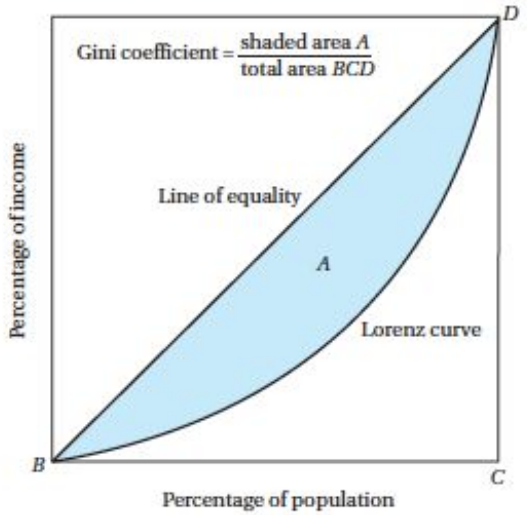
FIGURE 5.2 The Greater the Curvature of the Lorenz Line, the Greater the Relative Degree of Inequality



b. **A Kuznets ratio rate,** which was used as a measure of the degree of inequality between high, low-income groups in a country
    - Ratio of incomes received by the top 20% divided by the bottom 40% of the population

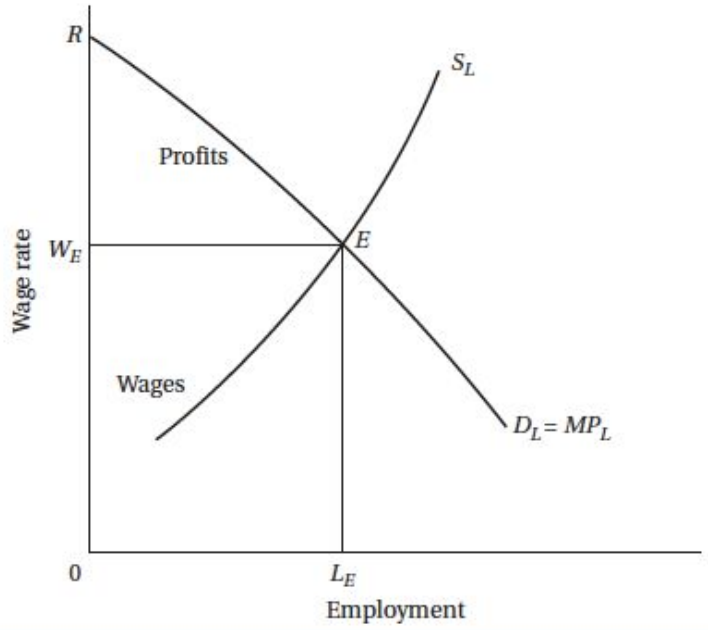
c. **Gini Coefficients and Aggregate Measures of Inequality**
    - Calculating the ratio of the area between the diagonal and the Lorenz Curve divided by the total area of the half square in which the curve lies
    - In the graph below, this ratio of the shaded area A to the total area of the triangle BCD, is called the Gini coefficient
    - An aggregate numerical measure of income inequality measuring from 0 (perfect equality) to 1 (perfect inequality). It is measured graphically by dividing the area between the perfect equality line and the Lorenz Curve by the total area lying to the right of the equality line in a Lorenz diagram. **The higher the value of the coefficient, the higher the inequality of income distribution; the lower it is, the more equal the distribution of income**

FIGURE 5.3 Estimating the Gini Coefficient



2. The functional or distributive factor share distribution of income
    - Attempts to explain the share of total national income that each of the factors of production (land, labor, and capital) receives
    - Instead of looking at individuals as separate entities, the theory of functional income distribution inquiries into the percentage that labor receives as a whole and compares this with the percentages of total income distributed in the form of rent, interest and profit
    - The illustration below provides a simple diagrammatic illustration of the traditional theory of functional income distribution
    - We assume that there are only two factors of production: capital, which is a fixed (given) factor, and labor, which is the only variable factor.
    - Under competitive market assumptions, the demand for labor will be determined by labor's marginal product (i.e., additional workers will be hired up to the point where the value of their marginal product equals their real wage)
    - But in accordance with the principle of diminishing marginal products, this demand for labor will be a declining function of the numbers employed.
    - Such a negatively sloped labor demand curve is shown by line DL
    - With a traditional neoclassical upward-sloping labor supply curve SL , the equilibrium wage will be equal to WE and the equilibrium level of employment will be LE .
    - Total national output (which equals total national income) will be represented by the area 0RELE .5 This national income will be distributed in two shares: 0WEELE going to workers in the form of wages and WERE remaining as capitalist profits (the return to owners of capital).
    - Hence in a competitive market economy with constant-returns-to-scale production functions (a doubling of all inputs doubles output), factor prices are determined by factor supply and demand curves, and factor shares always combine to exhaust the total national product.

FIGURE 5.5 Functional Income Distribution in a Market Economy: An Illustration

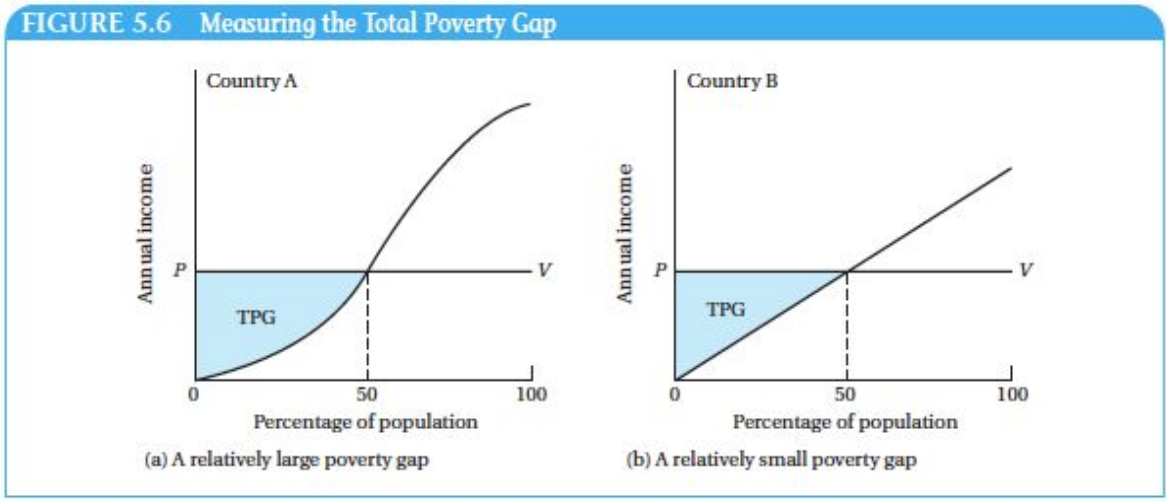


- **Measuring Absolute Poverty**
  - The situation of being unable or only barely able to meet the subsistence essentials of food, clothing and shelter
  - Absolute poverty measurement is anyone living on less than $1.25 a day or $2 per day in PPP dollars
  - Absolute poverty is measured by the number or “headcount”, H, of those whose incomes fall below the absolute poverty line, Yp.
  - **To calculate headcount index is to divide the number of people living in absolute poverty, H by the total population, N**
  - Another way to calculate is the attempt to calculate a total poverty gap (TPG) that measures the total amount of income necessary to raise everyone who is below the poverty line up to that line
  - The sum of the difference between the poverty line and actual income levels of all people living below that line

$$\text{TPG} = \sum_{i=1}^{H} (Y_p - Y_i)$$

    - **Where Yp represents the poverty line and the Yi represents the income of each individual person under the poverty line**
    - The weird symbol represents the total sum of each calculation
    - **Dividing further TPG by N is to calculate the average poverty gap (APG), where N is the total population**

        - **To compute, AIS (Average Income Shortfall) tells us the average amount by which the income of a poor person falls below the poverty line. To compute it, you a divide TPG by H, where TPG is the sum and H is the number of poor people specifically to find the average poverty gap SPECIFICALLY for poor people.**
    - The graph below illustrates how we could measure the total poverty gap as the shaded area between poverty line, PV and the annual income profile of the population

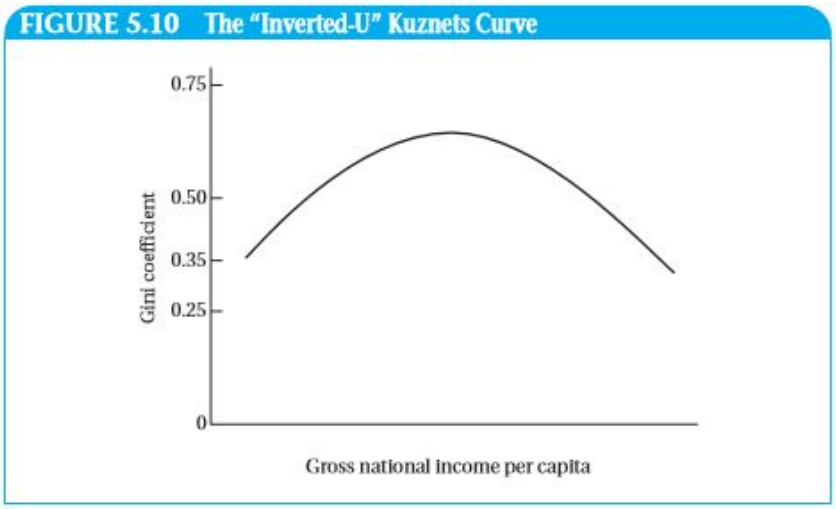


- **Multidimensional Approach to Poverty**
    - Poverty cannot be adequately measured by income
    - It identifies the poor using dual cutoffs for levels and number of deprivations, and then multiplies the percentage of people living in poverty times the percent of weighted indicators for which poor households are deprived on average
    - The multidimensional approach shows that the measurement of income as a single indicator is not sufficient whereas using other indicators is sufficient and that poverty needs to be conceptualized in a multidimensional way
    - To measure it, you take the indicators and you multiply them and divide them by 3, and then you multiply by the head count
- Measuring the Multidimensional Poverty Index (MPI)
    - Determine poverty status based on a dual cut off
        - The first cut off is with each dimension
        - If you fall below the poverty line, you are deemed poor in a specific aspect
        - The second cut off is in the number of dimension in which the person is deprived to be multidimensionally poor
        - It focuses on deprivations in health, education, and standard of living and each receives equal of overall weight
        - The first one is health

            - The first indicator is health has an indicator of whether any child has died in the family and the second any child or adult are malnourished
        - Education has two indicators with equal weight
            - The first indicator whether no household member completed years of schooling
            - The second indicator any child is out of school from grade 1 to 8
        - Standard of living has equal weight
            - The lack of electricity
            - Insufficiently safe drinking water
            - Inadequate sanitation
            - Inadequate flooring
            - Unimproved cooking fuel
            - Lack of assets such as telephone, TV etc
        - The MPI approach takes into account the multiplied harm done when multiple deprivations are experienced by the same individual
        - The indicators are treated as a substitute to a point but then become complementarity, an imperfect subtitability

- **Strategies of development in terms of the Lorenz Curve**
    - Traditional sector enrichment - it is improving the agricultural sector results in achieving more equality
    - The modern sector enrichment - the approach is that there is an improvement in the modern sector but that only benefits the few people in the urban areas which results in increasing inequality
    - Modern sector enlargement - in this situation the modern sector enlarges but the wages are kept constant, so the lorenz curve does not really shift

- **The Kuznet Curve**
    - The relationship between the country's income per capita and the gini coefficient, where the gini coefficient is the Y-axis and the Income per capita is the X-axis
    - Basically showing the process of development - in the early stages of economic growth, the distribution of income will tend to worsen but then at later stages it will improve which results in the inverted-U that is consistent with modern sector enlargement but not traditional or modern sector enrichment growth



Chapter 8 - Human Capital - Education and Health in Economic Development

- **Central Roles of Education and Health**
  - Distribution of health and education is as important as income distribution
  - **Human capital**
    - Productive investments in humans such as skills, abilities, health resulting from expenditures in education, medical care, on-the-job training programs

- **Education and Health as Joint Investments**
  - Greater health improves returns to investment in education
  - Ex. Greater school attendants when students are healthy and greater education improves returns to investment in health
    - Ex. basic skills learned at school → better hygiene, sanitation

- **Why Increasing Income is not sufficient**
  - Health and education also related to income
  - Higher income means people can afford to spend more on education and health and with greater health and education higher productivity and incomes are possible
  - However we can't also count on income being spent adequately in investments on education and health. Depending on household consumption choices there may be small link between income and health for example
  - Development policies that emphasize on increasing incomes among the poor without attention to the way these resources are being spent may not lead to improved health and successful development

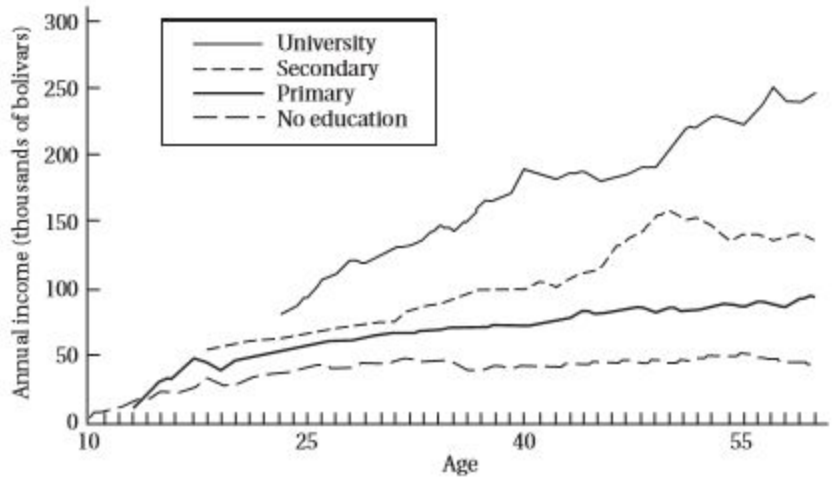
    - Or increase income → people to switch from consumption of nutritious foods to non nutritious (“empty calorie”) foods such as candy and soda (symbolic of modern age aka economic success) and parents may fail to put restrictions on children's consumption

    - Considerable evidence that improved education of mother leads to improved health of her children especially knowledge on health
    - Health status once attained affects school performance. Shorter malnourished people do more poorly on tests. Improved health leads to improved educational attainments lots of evidence for this especially for girls

- **Educated person benefits society**
    - Besides being less contagious an educated person can help people that a sick person cannot i.e. Helping to read for someone, coming up with innovations that benefit the community
    - The market cannot be counted on to deliver socially efficient levels of health and edu that leads to such spillover effects

- **The Human Capital Approach**
    - **Human capital** is the human capacities like education and health that when increased leads to increased productivity
    - Health and education contribute directly to wellbeing (increase empowerment, autonomy, confidence to make own decisions)
    - The human capital approach however focuses on the indirect ability to increase well being by increasing incomes
    - The points made will be generally about education investments but can be applied to health as well

FIGURE 8.1 Age-Earnings Profiles by Level of Education: Venezuela



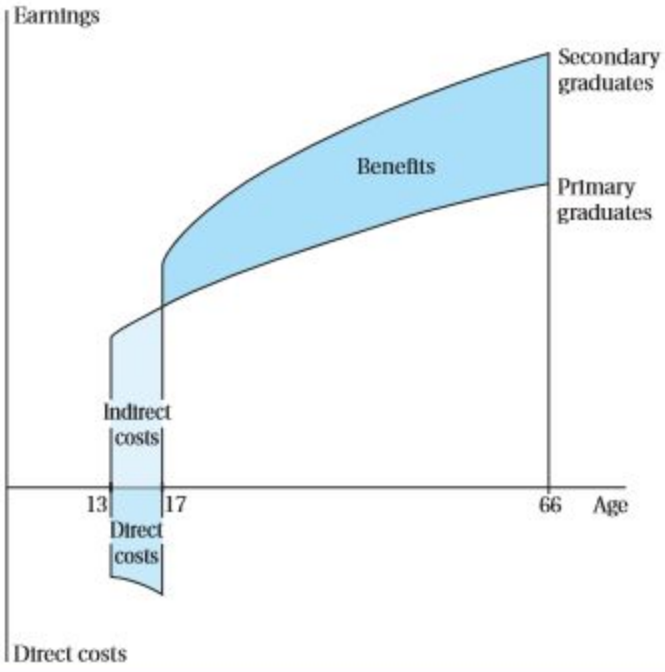
Source: International Bank for Reconstruction and Development / The World Bank: *The Profitability of Investment in Education: Concepts & Methods* by George Psacharopoulos, 1995. Reprinted with permission.

- Figure illustrates income over lifecycle of people with various levels of education
- Those with higher levels start work at later age and their incomes quickly outpace those who started working earlier
- **To understand the value of human capital as an investment must also include the total costs incurred**
- **Direct costs** (any direct tuition or expenditures on education) **vs indirect costs** (the income forgone because student couldnt work while in school)
- This figure simplifies things such that parttime work is not included
- To tell us the difference between income earned based on education level and years of school
- **E** is the income with extra education, **N** is the income without extra education, **t** is the year and

$$\sum \frac{E_t - N_t}{(1 + i)^t}$$

And **i** is the discount rate- in present value calculations, the annual rate at which future values are decreased to make them comparable with values of the present

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



-

- **A dollar today is worth more than in the future**
- It is assumed individual works from 13 (age they finish primary school) until age 66 (retire/die)
- Secondary graduates assumed at age 17
- Someone who commits to secondary education- thats four years of income forgone. They will have indirect cost labelled on figure
- There is also direct costs which of paying for school/ books etc which person couldve avoided if they left school at 13
- However over rest of life they make more money each year compared to if they just did primary education labelled as ‘benefits’
- Since dollar today is worth more than in future those future income gains are discounted according to aforementioned equation

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

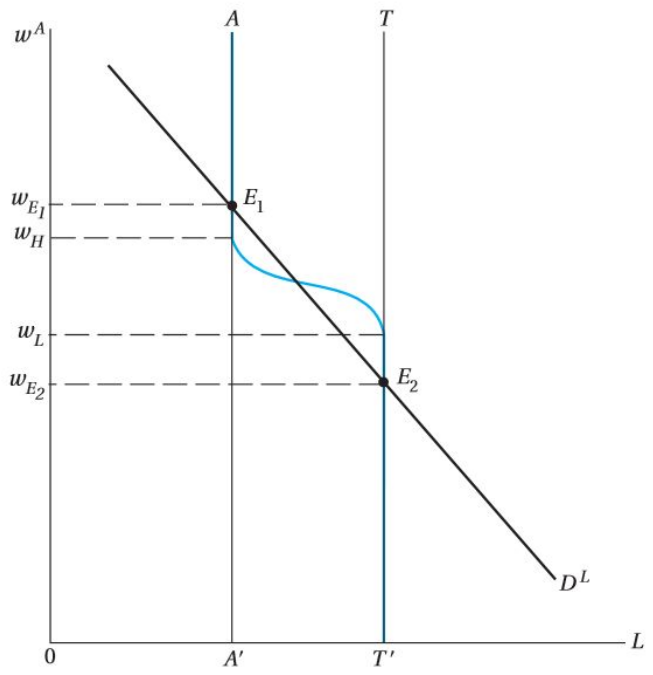
Country Type and Region	Social Rate of Return (%)			Private Rate of Return (%)		
	Primary	Secondary	Higher	Primary	Secondary	Higher
Developing						
Sub-Saharan Africa	24	18	11	41	27	28
Asia	20	13	12	39	19	20
Latin America	18	13	12	26	17	20
Developed	14	10	9	22	12	12

Source: "Returns to Investment in Education: A Global Update" by George Psacharopoulos. *World Development*, Vol. 22, Sept 1994. Reprinted with permission.
Note: How these rates of return were calculated is explained in detail note 20 at the end of this chapter.

- **Social returns** (benefits to society) **vs private returns** (benefits to individual)
- The private return is greater than social return and primary has more benefit to social return than higher return

- **Child Labour**
  - Child labour is an issue of underdevelopment, where most children labour at the age of 15, disrupt their and sometimes altogether skip school to work. Additionally, the health indicator of these children is significantly worse, due to the required physical labour put into the work and exploitative, and hazardous working conditions.
  - Nevertheless, it is not obvious that an immediate ban on all forms of child labor is always in the best interests of the child, because without work a child may come severely malnourished; with work, school fees as well as basic nutrition and health care may be available.
  - But there is one set of circumstances under which both the child laborer and the family as a whole may be better off with a ban on child labour - multiple equilibria
  - To model child labor, there are two important assumptions
    - A household with a sufficiently high income would not send its children to work
    - Child and adult labour are substitutes. In fact, children are not as productive as adults, and adults can do any work that children can do
  - The child labor model is graphed in Figure 8.3 below.

FIGURE 8.3 Child Labor as a Bad Equilibrium



Source: From *Journal of Economic Literature* by Kaushik Basu. Copyright 1999 by the American Economic Association. Reproduced with permission of the American Economic Association via Copyright Clearance Center.

- On the x-axis, there is supply of labor in adult equivalencies, and the unit is labour
- So if a child laborer is y times as productive as an adult worker, we consider one child the productive equivalent of y adult workers.
  - According to this assumption, y < 1. For example, if a child laborer is half as productive as an adult worker, y=0.5
- We start with the assumption that in the region in question, all (unskilled) adults work, regardless of the wage. This is demonstrated in vertical adult labor supply curve called, AA' in the diagram that represents the number of unskilled adults
- To understand the total labor supply curve, consider what happens if the wage falls. if the wage falls below Wh, then some families find they are poor enough that they have to send their children to work.
- At first wages are still high enough so that this only affects a few families and children, reflected in the S-shaped curve, just below WH is still quite steep.
- As the wage continued to fall, more families would do the same, and labor supply expands along the S-shaped curve, which becomes flatter as smaller drops in the wage lead many more families to send their children to work.
- If a wage of WL is reached, all of the children would work, at this point is reflected in the vertical line labeled TT', which is the aggregate labor supply of all the adults and all the children together.

    - This sum is the number of adults, plus the number of children, multiplied by their lower productivity, y<1.
    - To summarize,
        - As long as the wage is above Wh, the supply curve is along AA'
        - If the wage is below WL, the supply curve is along TT' and in between, it follows the S-shaped curve between the two vertical lines
    - Now consider the labor demand curve, DL, if demand is inelastic enough to cut the AA' line above WH, and also cut the TT' line below WL, there will be two stable equilibria, labeled E1 and E2, in the diagram.
    - **When there are two equilibria, if we start out at the bad equilibrium E2, an effective ban on child labor will move the region to the good equilibrium E1**.
    - Moreover, once the economy had moved to the new equilibrium, the child labor ban would be self-enforcing, because by assumption, the new wage is high enough for no family to have to send its children to work - if poor families coordinate with each other and refuse to send their children to work, each would be better off; but in general, with a large number of families, they will be unable to achieve this
    - Banning child labor when there is an alternative equilibrium in which all children go to school might seem like an irresistible policy, but note that while all families of labor laborers are better off, employers may be worse off because they have to pay a higher wage.
    - Thus, employers may use political pressure to prevent enactment of child labor laws - a pareto-optimal
        - Pareto-optimal; when you make everybody better off without making anyone worse off
    - There are four main approaches to child labor policy current in development policy
    - The first recognizes child labor as an expression of poverty and recommends an emphasis on eliminating poverty rather than directly addressing child labor
    - The second approach emphasizes strategies to get more children into school, including expanded school places, such as new village schools and conditional cash transfer incentives
    - The third approach considers child labor inevitable, at least in the short run, and stresses palliative measures such as regulating it to prevent abuse and to provide support services for working children
    - The fourth approach favors banning child labour in its most abusive forms

- **The Gender Gap - Discrimination in Education and Health**
    - Education and gender
        - Young females receive less education than young males in most low-income developing countries

        - The educational gender gap is especially great in the least developed countries in Africa, where female literacy rates can be less than half that of men in countries
        - Empirical studies show that educational discrimination against women hinders economic development in addition to reinforcing social inequality
    - Health and Gender
        - Girls also face discrimination in health care in many developing countries
        - Studies show that women are often denied reproductive rights, whether legally or illegally
        - Health spending on men is substantially higher than that of women
        - Female genital mutilation/cutting is a health and gender tragedy affecting millions of women
    - Consequences of Gender Bias in Health and Education
        - Studies from around the developing world consistently show that expansion of basic education of girls earns among the very highest rates of return of any investment, much larger
        - One estimate is that the global cost of failing to educate girls is about $92 billion a year, that shows that the consequences aren't only inequitable but very costly
        - Greater mother's education generally improves prospects for both health and education, because a mother plays a decisive role in raising nutritional levels in rural areas - there is a direct link between children undernutrition and mother's education attainment
    - All together, evidence show that increases in family income do not automatically result in improved health status or educational attainment. If higher income cannot be expected to necessarily lead to higher health and education, there are no guarantees that higher health or education will lead to higher productivities and incomes

- **Educational Systems and Development**

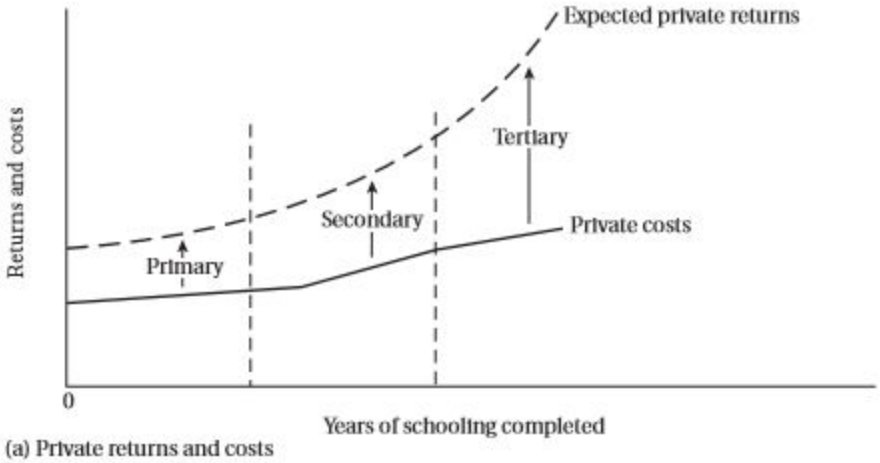
1. The political economy of educational **supply and demand**

- The amount of schooling received by a person, although can be influenced by non market factors, is largely determined by demand and supply like any other commodity/service
- **Demand side**- influenced by **two** main things: high wage employment opportunities in the modern sector and educational costs (indirect/direct) that family can bear
- **Supply side- #** of schools placed is largely fixed and determined by government educational expenditures and in turn determined by level of aggregate demand for education
- Consider **following example** of a situation in a developing country where the following conditions prevail:

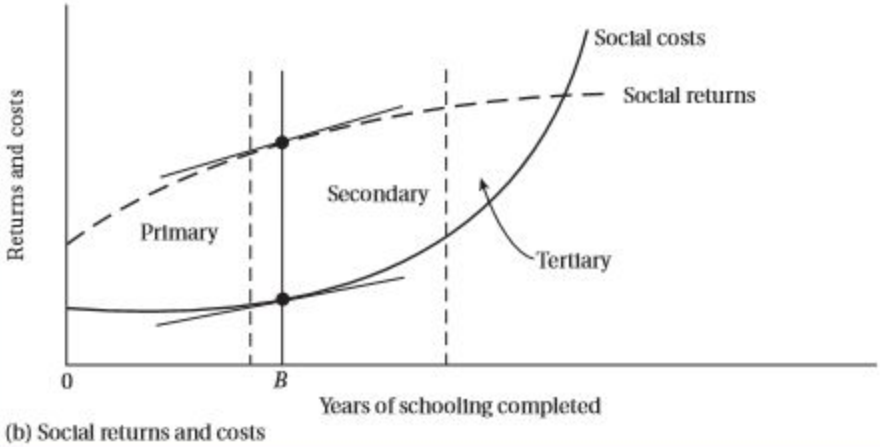
- Modern← → traditional wage gap of the level of 100% for primary vs secondary school graduates
- Rate of increase in modern sector employment opportunities for primary school dropouts is slower than rate these individuals enter labour force (more labour than opportunities available)
- Employers (faced with too many applicants) will choose candidates with secondary rather than primary education even if job requirements could be satisfied with just primary edu
- Governments under political pressure by the educated tend to bind wages (minimum wage laws)
- School fees decline at uni level as the state bears larger portion of college students costs
- Under these conditions ^ easy to see that quantity of higher education demanded would be substantial due to anticipated private benefits of more schooling which would be larger than little schooling and also the educational costs being lower. Since job opportunities for uneducated are less , individuals must safeguard their position by acquiring more education. Seeing this, there is tendency for developing countries to increase their higher level education facilities

2. **Social and Private Benefits and Costs**
    - In developing countries the **social costs** of education (the need to finance costly education expansion at higher levels when these limited funds could be used in other sectors of the economy more productively) **increases rapidly as one climbs the education ladder.** The **private costs** increase more slowly and may even decline
    - This widening gap increases demand for higher education
    - As a student completes more years of schooling, expected private returns grow at much faster rate than the costs→ optimal strategy is to secure as much schooling as possible

FIGURE 8.6 Private versus Social Benefits and Costs of Education: An Illustration



(a) Private returns and costs



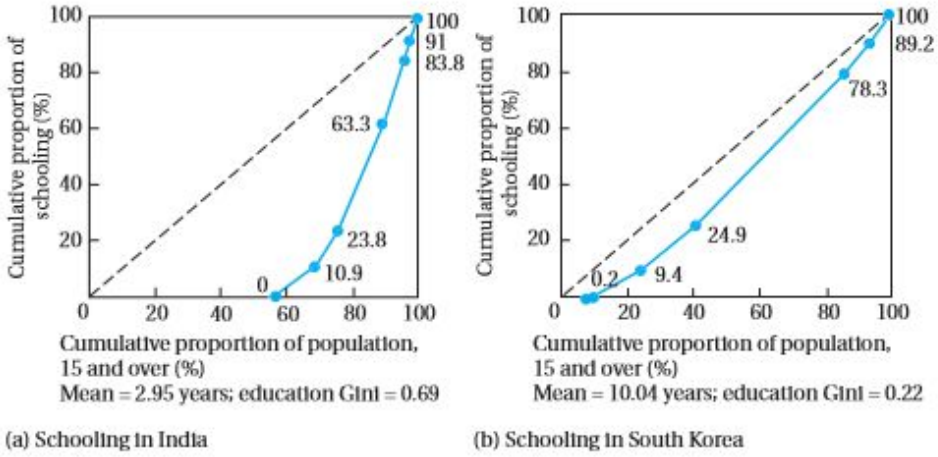
(b) Social returns and costs

-

- <u>The social benefits curve</u> **rises** sharply **at first** (for example because productivity of some farmers is improved due to basic education). **After** that however the marginal social benefits of more years of schooling **rise more slowly**→ curve levels off. <u>The social cost curve</u> shows slow growth at beginning than increases more rapidly at higher edu levels due to increased costs of equipment buildings and also because **higher education in developing countries is highly subsidized** (paid by government, or in other words whole society pays for it)
- Optimal strategy from social view is to focus on providing students with B years of schooling ~9years after that marginal social costs exceed marginal social benefits → negative net social rate of return
- Why? This has been created by inappropriate public and private polices related to wage differentials, educational selectivities, pricing of services, unemployment
- Basic education improvement has made greater contributions to development
- Higher education despite some of the negatives mentiooned has also contributed to growth to a lesser degree

- **Distribution of education**
  - Doesn't mean we don't want to promote higher education.
  - Lets look at distribution of edu benefits in developing countries

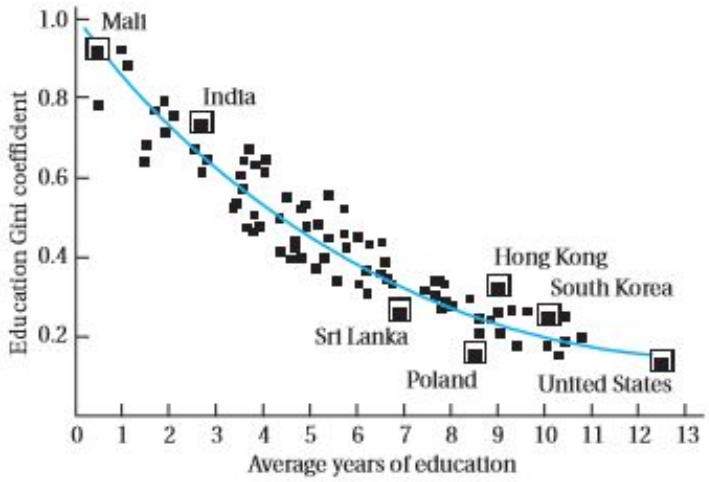
FIGURE 8.7 Lorenz Curves for Education in India and South Korea



Source: From *The Quality of Growth*. Copyright © 2000 by World Bank. Reprinted with permission.

  - Lorenz curves: india vs South korea
  - Like income lorenz curve, we write cumulative proportion of population on x axis and cumulative proportion of years of schooling on y axis
  - 45 degree line= perfect equality= every1 has same number of years of schooling i.e. every1 has basic 8 years of schooling but no one completed phd
  - In a very unequal society, many have no basic education but some have phD etc.
  - South korea clearly much more equal; gini india= 0.69, gini SK= 0.22
  - For example in india, more than half the population received no schooling at all compared to less than 10% in south korea yet both countries were producing significant numbers of phd diplomats
  - Educational inequality decreases with increased years of schooling i.e avg years of edu vs gini coefficient

FIGURE 8.8 Gini Coefficients for Education in 85 Countries



Source: From *The Quality of Growth.* Copyright © 2000 by World Bank. Reprinted with permission.

- This is based on “quantitative” way education is measured
- Really what is important is quality. Quality is better in developed countires
- Should aim to upgrade existing schools rather than build more and more of them

- **Education, Inequality, and Poverty**
  - Contrary to beliefs, educational systems in developing countries act to **increase** rather than decrease **income inequalities**
  - If the poor are denied access to secondary and higher edu opportunities, for financial or other reasons, than the inequality of income can perpetuate across and within generations indeveloping countries
  - The private costs fpr edu are higher for the poor (especially in terms of opportunity cost of child working for the family) and thee expected benefits are lower (since education quality is low). Makes it more likely that poor will drop out during early years of schooling
  - The unequal nature of developing country education systems is evident when u see subsidized uni education using public funds (like transferring payment from poor to wealthy in the name of “free” higher education)

- **Education, Internal Migration, and the Brain Drain**
  - Trend of increased demand for Higher level of education to obtain urban sector jobs → increased rural/urban migration
  - **Brain Drain** - the emigration of highly educated and skilled professionals and technicians from developing to developed countries. Trained in home country institutions only to reap benefits and contribute to economic growth of already affluent nations

- Numerous physicians specializing in heart diseases etc while neglecting tropical diseases that are prevalent in developing nations, architects concerned with national monuments rather than housing/schools, engineers/scientists concentrate on newest and modern technology while simple machines/tools/equipment that could benefit developing countries are neglected

Chapter 12: Economic Globalization

- **Introduction**
  - Globalization is all about world being interconnected → 'increasing integration of national economies into expanding international markets'
  - There are benefits (learn from other economies) and risks (inequalities, dependence) both of which affect developing countries more
- **International trade- Key Issues**

1. Primary product export dependence

- Carries with it risks and uncertainty- when the market becomes unfair other countries can take advantage of them. For example , Cope D'avoir primarily exports cocoa. A researcher in some developed country can make something similar to cocoa and start selling it. This puts Cope D'avoir's economy at risk
- Many developing countries rely heavily on exports^
- No diverse export-based products
- Many developing countries rely heavily on imports to a greater extent.

2. Current accounts

- Deficits means excess import payments to export receipts (export-import)
- You pay more than what you get

3. Capital accounts surplus

- Means excess receipt of foreign private and public lending to repayment of principal and interest on former loans and investment. Basically loans flowing into and out of country
- Receiving fundings and loans from foreign countries
- Developing countries face chronic deficits on current and capital accounts(paying back loans)
- Many developing countries sought to promote exports and accumulate foreign exchange reserves to cushion against these crises

4. Reserve

- Any asset central bank can have (money). Depletion of international monetary reserves leads to country's currency depreciating

- When you become interconnected, you have foreign assets, foreign countries put the money in your banks

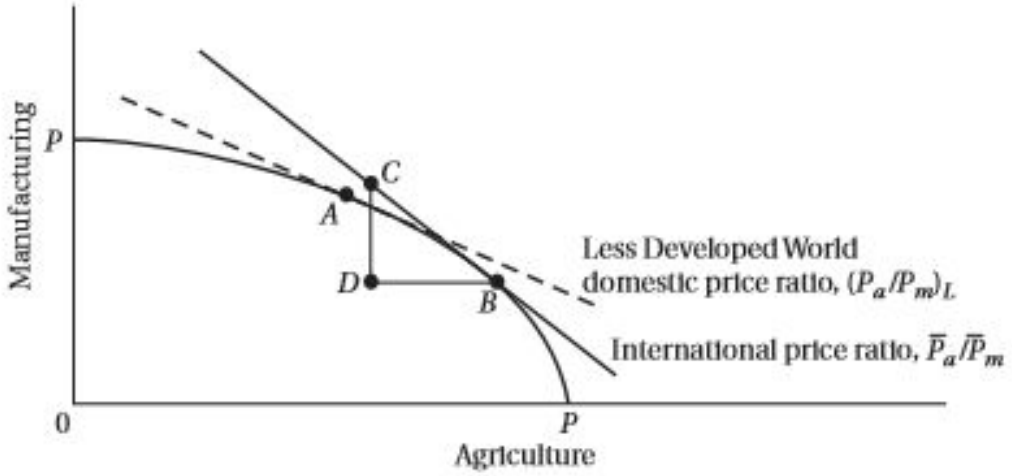
- **5 basic questions:**
    - How does international trade affect economic growth
    - How does it change distribution of income
    - How can it promote development
    - Can developing countries determine how much they trade
    - Is an **inwardlooking** (copy-paste→ self-sufficiency) trade policy or **outwardlooking** trade policy (specialization; export what you are efficient in, import what your not, assumes other countries will do same)
  - Developing countries depend more on trade than developed countries- devote a larger share of their outputs as merchandise exports (*offering retail goods for sale in a foreign consumer market*), exports less diversified

- **Demand elasticities and Export Earning Instability**
  - **Income elasticity of demand** (for primary products)**-** measures responsiveness to demand of a commodity with respect to changes in consumers income i.e. proportionate change in quantity/ proportionate change in income; is low. The percentage **increase in quantity of primary agricultural products** and raw materials demanded by importers **will rise by less than percentage increase** in their GNIs. For manufactured goods it is high. Developed countries will demand more manufactures than food/raw materials from developing countries
  - **Price elasticity of demand** (for primary products is low)**-** measures responsiveness to demand of a commodity wrt changes in commodity's price i.e. proportionate (%) change in quantity/ proportionate (%) change in price
  - These phenomenon have led to **export earning instability** where wide fluctuations in developing country earnings on commodity exports due to low PED and IED leading to unpredictable movement in export prices
  - Supply shocks and demand shocks → shifts in demand/ supply can lead to volatile price fluctuations
- **The Terms of The Prebisch-Singer Hypothesis**
  - Total export earnings depend on total volume of exports sold price paid for exports
  - Argue that prices of commodity exports fall over time leading to developing country losing revenue ; need to increase export volume to increase earning

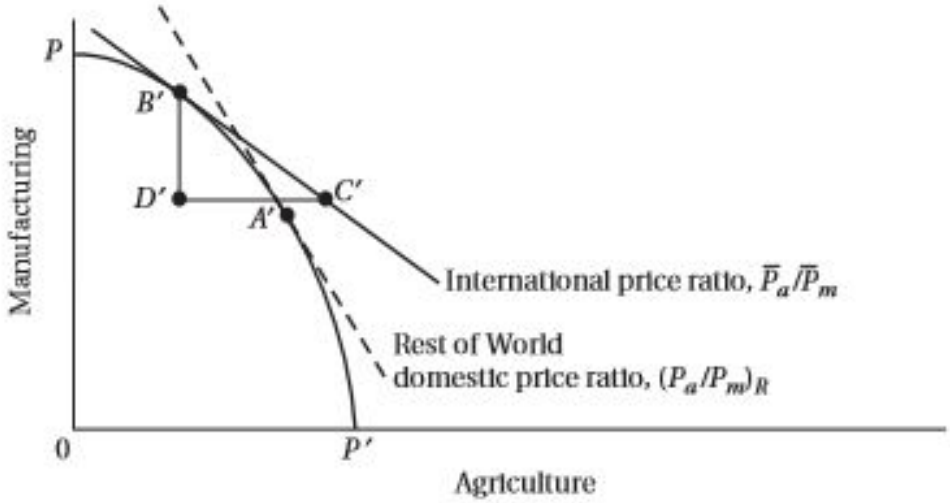
- Conclusion: developing countries need to avoid dependence on primary exports

- **The Traditional Theory of International Trade**
  - Can't produce everything- it's impossible!
  - Should engage in activities you are well-suited for/ have comparative advantage in terms of natural abilities or resource endowments
  - Then any surpluses of these activities they can exchange for things others may be more suited to produce
  - **Static Model** (Ricardo and Mill)
    - The classical comparative advantage theory of free trade is static
    - Based on one variable: labour cost
    - Claim trade arises due to differences in labour productivities for commodities in different countries.
    - Assumes differences are inherent
  - **Factor endowment Theory** (Heckscher and Ohlin)
  - Assumes all countries have access to same technological possibilities for all commodities
  - Differences lie in factor supplies (capital, labour, land)
  - Labour will be cheap for labour abundant countries- so these countries should focus on production of labour-intensive products and export the surplus in exchange for imports of capital intensive goods
  - Capital cheap for countries rich in capital- they should export surplus capital-intensive goods in return for imports of labour intensive goods from labour abundant countries
    - So factor endowment theory based on **two propositions:**
      - Different products require productive factors in different ratios (every product requires different ratio of the productive ratio, some need more land, some need more labour)
      - Countries have different endowments of factors of production

FIGURE 12.1 Trade with Variable Factor Proportions and Different Factor Endowments



(a) Less Developed World (without trade, production and consumption occur at *A*; with trade, production is at *B*, consumption is at *C*; exports = *BD*; imports = *DC*)



(b) Rest of World (without trade, production and consumption occur at *A′*; with trade, production is at *B′*, consumption is at *C′*; exports = *B′D′*; imports = *D′C′*)

- **Nations are assumed to be operating initially at some point on their** concave (or increasing opportunity cost) **production possibility frontier** Let the two countries be “Less Developed World” and “Rest of World” and the two commodities be agricultural goods and manufactured goods. Less Developed World’s domestic (no-trade) production possibility frontier shown in Figure 12.1a and Rest of World’s frontier in Figure 12.1b. With full employment of all resources and under perfectly competitive assumptions, **Less Developed World** will be

producing and consuming **at point A**, where the relative price ratio, **Pa/Pm**, will be given by the slope of the dotted line, **(Pa/Pm)L**, at point A.14 Similarly, **Rest of World may be producing and consuming at point in Figure 12.1b, with a domestic price ratio**, (Pa/Pm)R, **that differs (agricultural goods are relatively more costly, or conversely, manufactured goods are relatively cheaper) from that of Less Developed World**. **Note that with a closed economy, both countries will be producing both commodities**.**Less Developed World, being poorer, will produce a greater proportion of food products** in its (smaller) total output. The relative **difference in costs** of production and prices at points A and A'(i.e., their different slopes) gives rise once again to the **possibilities of profitable trade**. As in t**he classical labor cost model (static model), the international free-trade price ratio, a/ m will settle somewhere between (Pa/Pm)L and (Pa/Pm)R**, the domestic price ratios of Less Developed World and Rest of World, respectively. T**he lines a/ m in both graphs** in Figure 12.1 **denote the common world price ratio. For Less Developed World**, this steeper slope of a/ m means that it can get more manufactured goods for a unit of agriculture than in the absence of trade; that is, the world price of agricultural goods in terms of manufactures is higher than Less Developed World's domestic price ratio. **It will therefore reallocate resources away from its costly capital-intensive manufacturing sector and specialize more in labor-intensive agricultural production**. Under perfectly competitive assumptions, it will produce at point B on its production frontier, where its relative production (opportunity) costs are just equal to relative world prices. **It can then trade along a/ m, the prevailing international price line**, **exporting BD agricultural products in return for DC manufactured imports and arrive at a final consumption point C with more of both goods than before trade. Similarly, for Rest of World,** the new international price ratio means more agricultural products in exchange for manufactured goods than at domestic prices. Graphically, the international price ratio has a lesser slope than Rest of World's domestic price ratio (see Figure 12.1b). **Rest of World will therefore reallocate its abundant capital resources so as to produce more manufactured goods and less agriculture, as at point B** , where its relative domestic production costs are just equal to relative world prices. **It can then trade BD (DC) of these manufactures for DC (BD) of Less Developed World's agricultural products. Rest of World can therefore also move outside the confines of its production frontier and end up consuming at a**

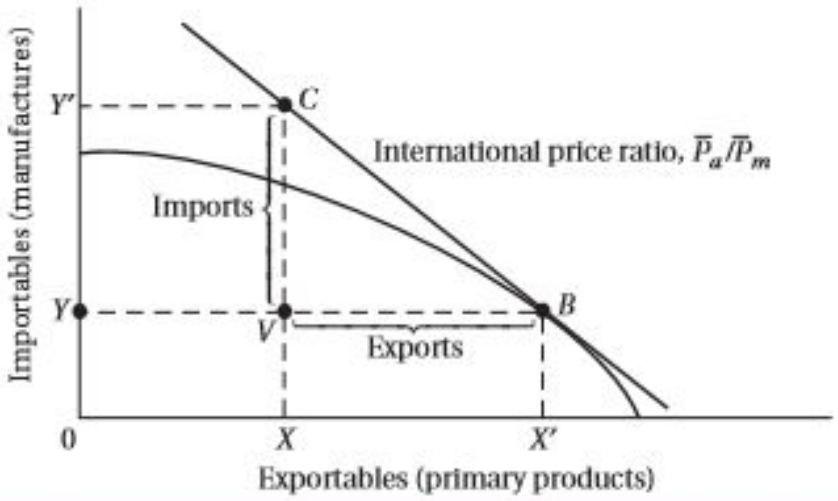
point like C in Figure 12.1b. i**t has resulted in increased consumption of both goods for both regions**.

- **Main conclusions:**
    - All countries gain from trade
    - World output increases with trade
    - Countries specialize in products that use their abundant resources intensively
    - Labour (international wage rates) and capital costs will move towards equalization
    - Returns to owners for abundant resources will rise quickly
    - Trade → economic growth
- **Again major arguments:**
    - Trade stimulates economic growth
    - Trade promotes international and domestic equality
    - Trade promotes and rewards sectors of comparative advantage
    - International prices and costs of production determine trading volumes
    - Outward looking policies (so all about comparative advantage) are superior to isolation

- **The Critique of Traditional Free-Trade Theory in Context of Developing CountrY**
    - Factor endowments and comparative costs are constantly changin
    - Government may interfere with trade distrupting natural forces of S/D

- **The Vent for Surplus Theory of Trade**
    - Underutilized resources create opportunity to expand productive capacity and GNI can do it at minimal costs by producing for export foreign markets product
    - Opening of world markets to remote agrarian societies creates opportunities **to make use of** formally **underemployed land and labour resources** to produce greater output **to export to foreign markets**

FIGURE 12.2 The Vent-for-Surplus Theory of Trade



- **Traditional Trade Strategies and Policy Mechanisms for Development**
- **Looking outward, seeing trade barriers (export promotion)**
    - **Problems with demand**- maybe country wants to increase produce but faces problem with decreased demand
    - **Low income elasticity of demand**- even if we observe growth in developing countries (increased incomes) may not mean developed countries will buy from them
    - Decreasing prices means low revenue
    - **Problems with supply**- maybe country wants to increase produce but faces problem with supply (poor climate, bad soil, outdated rural structures i.e. structural rigidity)
    - Need to expand exports of manufactured goods example- China

- **Looking inward, still paying outward (import substitution)**
    - Attempt **to replace imported commoditie**s (usually manufactured consumer goods) **with domestic sources of production**
    - Strategy is to put tariff barriers or quotas on certain imported commodities and then try to set up a local industry to produce these goods
    - Tariffs (taxes on imports), infant industries

    - **Infant industries**- protected by tariff barrier as part of policy of import substitution. Eventually will grow up be direectly competitive with developed country producers
- **Trade Pessimists**
    - They say trade is deteriorating
    - Limited growth of world demand of primary exports (foreigners dont wanna buy poor countries primary goods)
    - They believe in “protectionism”
        - Means of promoting selfreliance in developing country
        - Prevent dependence
        - Policies of import restriction, so developing countries can gain control over their economic destinies while encouraging foreigners to invest in the import-substituting industries (the infant industries)
    - **Even though protective policies sound convincing and have proved beneficial But remember protection is a tool of economic policy that must be employed selectively and wisely**
- **Optimists**
    - Trade promotes competition and efficiency
    - Accelerates growth
    - Generates pressure for product improvement
    - Attracts foreign capital and investment