GLOSSARY

Absolute advantage. An advantage that a country has in producing certain goods or services relative to all or many other countries due to specific factors of production at its disposal- such as rich farmland and a favourable climate for agricultural production or a highly educated labour force for high-tech manufacturing. A country's absolute advantage means that it can produce certain goods or services at a lower cost than would be possible for other countries. Thus it is clearly beneficial for this country to specialize in producing and exporting these goods and services. But even countries that do not have any absolute advantages can benefit from international trade; see comparative advantage.

Access to safe water. The percentage of the population with reasonable means of getting safe water- either treated surface water or clean untreated water from springs, wells, or protected boreholes.

Accumulation of capital. Using investment to build capital assets.

Adult illiteracy. The percentage of the population 15 and older who cannot, with understanding, read and write a simple statement about their everyday life.

Age dependency ratio. The ratio of the nonworking population- people under 15 or over 65-to the working population- people 15-64. In 1996 the average ratio for low-income countries was 0.7, for middle-income countries 0.6, and for high-income countries 0.5.

Agriculture. The sector of an economy that includes crop production, animal husbandry, hunting, fishing, and forestry.

Balance of payments. A statement of country's trade and financial transactions with the rest of the world over a particular period of time usually a year. The account is divided into two main parts: a) current account, b) investment and other capital transactions.

Birth rate. The number of live births in a year expressed as a percentage of the population or per 1,000 people.

Capital (capital assets). A stock of wealth used to produce goods and services. Modern economists divide capital into physical capital (also called produced assets), natural capital, and human capital.

Capital account the section of the national income accounts that records investment expenditure by government on infrastructure, such as roads, hospitals and schools; and investment expenditure by the private sector on plant and machinery.

Capital accumulation. The process of adding to the net physical *Capital Stock* of an economy in an attempt to achieve greater total output. Capital accumulation has been a weighty concern for economists throughout modern history. In general, economists have regarded capital formation in two ways: (I) expansion of the productive potential of society or (2) a process that transforms the technical and productive organisation of the economy. A great deal of economic theory has been devoted to examination of the social,

political, and economic conditions necessary to launch sustained economic growth. A branch of economics called *Development Economics* devotes much of its analysis to determining appropriate rates of capital accumulation, type of capital required, and types of investment projects to maximise development in underdeveloped countries.

Capital intensive company. A company or industry that produces its output of goods or services using proportionately large amount of capital equipment and relatively small amount of labour. The proportion of capital and labour a company uses in production depends mainly on the relative prices of labour and capital inputs and their relative productivities. This in turn depends on the degree of standardisation of the product.

Capital output ratio. A measure of how much additional *Capital* is required to produce each extra unit of *Output* or, put the other way around, the amount of extra output produced by each unit of added capital. The capital-output ratio indicates how efficient new *Investment* is in contributing to *Economic Growth*. Assuming, for example, a 4:1 capital-output ratio, four units of extra investment enable national output to grow by one unit. If the capital output ratio is 2:1, each two units of extra investment expand national income by one unit.

Capitalism. A method of organising an economy to produce goods and services. Under this economic system, individuals and firms privately hold the means of production. Economic decision-making are highly decentralised, and resources are allocated through a large number of goods and service markets. The market synchronises decisions of buyers and sellers and, by establishing an equilibrium price, determines how much of a good will be produced and sold and which factors will be employed.

Classical economics. A school of thought or a set of economic ideas based on the writings of Smith, Ricardo, Malthus, Mill, et al. That dominated economic thinking until about 1870, when the marginalist revolution occurred. Classical economists were concerned with economic programmes and economic justice. They inquired into the causes of increase in national wealth and the conditions that determined how income was divided among claimants. They wanted to show how the interplay of separate decisions by workers and capitalists could be harmonised through the market system to generate economic wealth. Their belief in the power of market forces led them to support *Laissez Faire* and they also supported the idea of *Free Trade* among nations. After about 1870 classical economic ideas were augmented as the emphasis shifted to what has become known as *Neoclassical Economics* embodying marginalist concepts.

Comparative advantage. The concept, formulated by British economist David Ricardo, according to which economic agents- people, firms, countries- are most efficient when they do the things that they are best at doing. Comparative advantage is particularly important in global markets, where countries benefit most by producing and exporting goods and services that they can produce more efficiently (at a lower cost, by using less physical, human, and

natural capital) than other goods and services. In particular, Ricardo showed that a country can benefit from international trade even if it has higher costs of production for all traded goods and services relative to the countries it trades with- that is, even if it has no absolute advantages whatsoever. This can be done by correctly choosing the country's international specialization in accordance with its comparative advantages. In this case, by using export earnings to import other goods and service at prices that are lower than the costs of their domestic production, the country will maximize the overall volume of national production and consumption.

This is illustrated in the following figure with respect to countries(A and B) and two goods (X and Y)

Country	*Output of good*		*Opportunity cost ratio*		
	X	Y	X		Y
A	100	100	1	:	1
B	180	120	1	:	2/3

The physical output of X and Y from a given factor input, and the opportunity cost of X in terms of Y. The opportunity cost of producing one more unit of X is 1Yin country A, and 2/3 Y in country B. The opportunity cost of producing one more unit of Y is 1X in country A and 1.5X in country B.

The same given resource input in both countries enable them to produce either the quantity of good X or Y indicated in the figure. It can be seen that the country B is absolutely more efficient than country A, since it can produce more of both goods. However, it is comparative advantage, not the absolute advantage, that determines whether trade is beneficial or not.

It can be seen that country B has a comparative advantage in the production of good X, for it is able to produce it at a lower factor cost than country A; the resource or opportunity cost of producing an additional unit of X is only 2/3 Y in country B, whereas in country A it is 1Y.

Constant returns to scale (in the short run). Constant returns to the variable factor input that occur when additional units of variable input added to a given quantity of fixed factor input generate equal increments of output. With an unchanged price for variable factor inputs, constant returns will cause the short run unit variable cost of output to stay the same over an output range. **(In the long run)** constant returns that occur when successive increases in all factor inputs generate equal increments of outputs.

Current account. A statement of a country’s trade in goods (visible) and services (invisibles) with the rest of the world over a given period of time.

Death rate. The number of deaths in a year expressed as a percentage of the population or per 1,000 people.

Demography. The scientific study of human populations, including their size, composition, distribution, density, and growth as well as the causes and socio-economic consequences of changes in these factors.

Developed countries (industrial countries, industrially advanced countries). High-income countries, in which most people have a high standard of living. Sometimes also defined as countries with a large stock of physical capital, in which most people undertake highly specialized activities. According to the World Bank classification, these include all high-income economies except Hong Kong (China), Israel, Kuwait, Singapore, and the United Arab Emirates. Depending on who defines them, developed countries may also include middle-income countries with transition economies, because these countries are highly industrialized. Developed countries contain about 15 percent of the world's population. They are also sometimes referred to as "the North."

Developing countries. According to the World Bank classification, countries with low or middle levels of GNP per capita as well as five high-income developing economies -Hong Kong (China), Israel, Kuwait, Singapore, and the United Arab Emirates. These five economies are classified as developing despite their high per capita income because of their economic structure or the official opinion of their governments. Several countries with transition economies are sometimes grouped with developing countries based on their low or middle levels of per capita income, and sometimes with developed countries based on their high industrialization. More than 80 percent of the world's population lives in the more than 100 developing countries.

Diminishing returns. The law states that as equal quantities of one *variable factor input* are added into the production function, with the quantities of all other factor inputs remaining fixed, a point a point will be reached beyond which the resulting addition to output will begin to decrease as shown in the following figure.

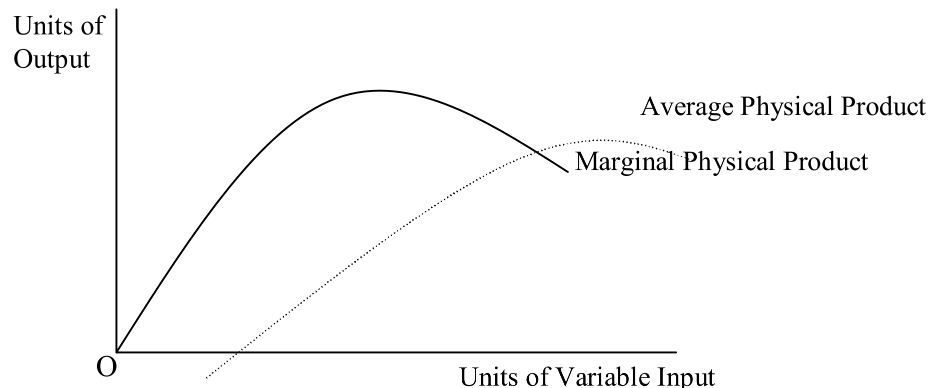

Figure: Diminishing returns, the rise and fall units of output as units of variable factor input are added to the production function.

As the marginal physical product declines, this will eventually cause the average physical product to decline as well. The marginal physical product changes because additional units of the variable factor input do not add equally readily to units of the fixed factor input. At low levels of output, marginal physical product rises with the addition of more variable inputs to the fixed input, the extra variable inputs bringing about a more intensive use of the fixed input. Eventually, as output is increased, an optimal factor combination is attained at which the variable and fixed inputs are mixed in the most appropriate proportions to maximise marginal physical product. Thereafter, additions of variable inputs to the fixed inputs leads to a less than proportionate increase in output so that marginal physical product declines.

Economic growth The physical ability of an economy to produce more goods and services depends on

- Increase in the quantity and quality of its physical goods
- Increase in the quantity and quality of its natural resources
- Efficient use of these factor inputs so as to maximise their contribution to the expansion of output through improved productivity.
- Development and introduction of innovative techniques and new products
- Level of aggregate demand. The level of demand needs to be high enough to ensure full utilisation of increased productive capabilities of the economy.

Achievement of a high rate of economic growth is one of the major objectives of *Macroeconomic Policy*. The significance of economic growth lies in its contribution to the general prosperity of the community. Growth is desirable because it enables the community to consume more private goods and services, and it contributes to the provision of a greater quantity of social goods and services (health, education, etc.), thereby improving real living standards. Economic growth is usually measured in terms of increase in *Gross Domestic Product* (GDP) over time or an increase in per capita GDP over time. The latter measures relates increase in total output to changes in the population. Therefore, if total output rises only a little faster than the increase in the population, there will be only a small improvement in average living standards.

Elasticity , price elasticity of demand is a measure of the degree of responsiveness of demand to given change in price:

Elasticity of demand = [% change in quantity demanded]/ [% change in prices]

If a change in prices results in a more than proportionate change in quantity demanded, then demand is price elastic.

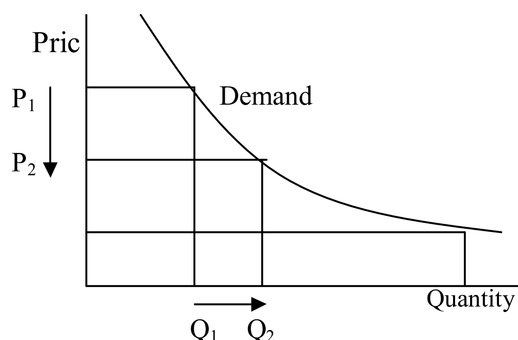

Figure: Elastic Demand

If a change in price produces a less than proportionate change in the quantity demanded, then demand is price inelastic.

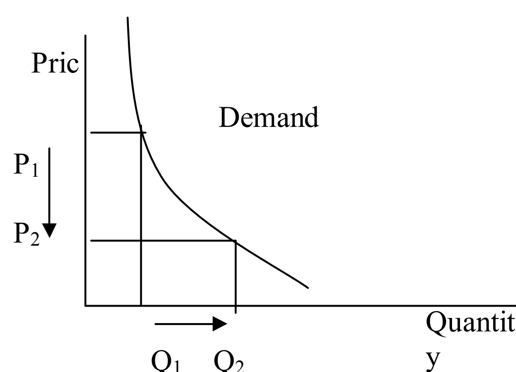

Figure: Inelastic Demand

At the extremes, demand can be perfectly price inelastic, that is, price changes have no effect on quantity demanded, which shows up a straight line vertical demand curve; or demand can be perfectly elastic, that is, any amount will be demanded at the prevailing price, which shows up as a straight line horizontal demand curve

Energy use per capita. The amount of energy a country consumes in a certain period- usually one year- divided by the population of that country. This includes fossil fuels burned by machines (such as cars), as well as electricity generated from nuclear power, geothermal power, hydropower, and fossil fuels. No matter what its source, energy use per capita is measured in equivalent amounts of oil. Though substantial in some developing countries, energy from biomass- fuelwood, charcoal, dung- not considered in this statistic because reliable data are not available.

Entrepreneur. A person who assembles and organises *Factors of Production* to undertake a venture with a view to *Profit*. The entrepreneur may supply one or more of the other factors of production *(Natural Resources, Labour, Capital)* or may hire or buy any or all factors in the expectation of future profits. The entrepreneurial function is usually called a fourth factor of production. The entrepreneur was seen in the nineteenth century as an individual proprietor who supplied most or all of the factors of production but especially managerial skill. The advent of the

corporation led to division of management and supply of capital, so that entrepreneur became a more hypothetical abstract term attached to any individual or group that performs the risk-bearing and organising functions above. The traditional *Theory of The Firm* suggests that entrepreneurs attempt to maximise profit, but since the 1930s there has been growing awareness that the *divorce of ownership from control* in large companies influences behavioural attitudes of groups of individuals within organisations, which may lead to companies following objectives other than *Profit Maximisation.*

European Union (EU). A regional international organization with most developed countries of Europe among its members. In 1995 it succeeded the European Economic Community (EEC), established in 1957 to promote economic integration among its member countries.

Externalities. Effects of a person's or firm's activities on others which are not compensated. Externalities can either hurt or benefit others- they can be negative or positive. One negative externality arises when a company pollutes the local environment to produce its goods and does not compensate the negatively affected local residents. Positive externalities can be produced through primary education- which benefits not only primary students but also society at large. Governments can reduce negative externalities by regulating and taxing goods with negative externalities. Governments can increase positive externalities by subsidizing goods with positive externalities or by directly providing those goods.

Foreign direct investment. Foreign investment that establishes a lasting interest in or effective management control over an enterprise. Foreign direct investment can include buying shares of an enterprise in another country, reinvesting earnings of a foreign- owned enterprise in the country where it is located, and parent firms extending loans to their foreign affiliates. International Monetary Fund (IMF) guidelines consider an investment to be a foreign direct investment if it accounts for at least 10 percent of the foreign firm's voting stock of shares. However, many countries set a higher threshold because 10 percent is often not enough to establish effective management control of a company or demonstrate an investor's lasting interest.

Foreign investment. Investment in an enterprise that operates outside the investor's country. See also foreign direct investment and portfolio investment.

Fossil fuels. Coal, natural gas, and petroleum products (such as oil) formed from the decayed bodies of animals and plants that died millions of years ago. A nonrenewable source of energy.

Full Employment the full utilisation of all available labour and capital resources the economy is able to produce at the limits of its *Potential Gross National Product*. Full employment is one of the main objectives of *Macroeconomic Policy.*In practice 100% employment cannot be achieved. There always will be some unemployment due to labour turnover and people searching for and selecting new jobs, and because of structural changes in the

economy-job losses in declining trades, which require people to transfer to new jobs created in expanding sectors. Accordingly, a more realistic interpretation of full employment suggests itself. Full employment is achieved when the number of unemployed people equals the number of job vacancies. Even this measure does not give an accurate estimate, however, because many groups, such as housewives and older workers, are too discouraged to seek work when job prospects are bleak, even though they wish to work (*Disguised Unemployment*).

General Agreement on Tariffs and Trade (GATT). From 1947 until 1995, an international organization with a mandate to reduce protection and promote free trade among nations. Many barriers to trade- import tariffs, import quotas, and others- were reduced during its eight rounds of international negotiations. Issues discussed during the last round of GATT negotiations, in Uruguay (1986-94), included reducing government restrictions on foreign investment and on trade in services such as banking, insurance, transport, tourism, and telecommunications. In 1995 GATT was succeeded by the World Trade Organization (WTO).

GNP per capita. A country's gross national product (GNP) divided by its population. Shows the income each person would have if GNP were divided equally. Also called income per capita. GNP per capita is a useful measure of economic productivity, but by itself it does not measure people's well-being or a country's success in development. It does not show how equally or unequally a country's income is distributed among its citizens. It does not reflect damage made by production processes to natural resources and the environment. It does not take into account any unpaid work done within households or communities or production taking place in the grey (shadow) economy. It attributes value to anything being produced whether it harms or contributes to general welfare (for example, medicines and chemical weapons). And it ignores the value of such elements of people's well-being as leisure or freedom.

Grey economy (shadow economy). Consists of business activities that are not accounted for by official statistics. It includes illegal activities (or the so-called black market) and activities that are in themselves legal but go unreported or under-reported for purposes of tax evasion.

Gross domestic investment rate. All the outlays made to replace and increase a country's physical capital, plus changes in inventories of goods, expressed as a percentage of GDP. Gross domestic investment, along with foreign direct investment, is critical for economic growth and economic development.

Gross domestic product (GDP). The value of all goods and services provided in a country by residents and non-residents without regard to their allocation among domestic and foreign claims. This contrasts with *Gross National Product,* which is sum of the domestic and foreign output of all residents of a country, including income received from abroad by residents for factor services rendered overseas, and after subtracting transfer to countries abroad of income by residents of other countries. Among other problems is the

difficulty of defining who is resident. International economic organisation tends to prefer to continue GDP rather than GNP.

Gross domestic saving rate. Gross domestic product (GDP) minus consumption by government and the private sector, expressed as a percentage of GDP. A high gross domestic saving rate usually indicates a country's high potential to invest. See also savings.

Gross enrollment ratio. The number of students enrolled at a certain level of education as a percentage of the population of the age group that officially corresponds to that level. Can be above 100 percent if some enrolled students are older or younger than the age group that officially corresponds to that level of education.

Gross national product (GNP) the market value of final goods and services produced in a year. To utilise GNP as a welfare indicator, GNP should be expressed in dollars of constant purchasing power and on a per capita basis. Recently, there have been attempts to qualify gross national product by calculating the social costs and social benefits associated with producing the GNP, for example, the social cost of pollution.

Gross primary school enrollment ratio. The ratio of primary school enrollment to the number of primary school-aged children (usually children 6-11). The gross secondary school enrollment ratio is calculated in the same way, except that the corresponding age group is 12-17. For the gross tertiary education enrollment ratio, calculations are based on the number of young people in the five-year age group following the secondary school leaving age. Gross enrollment ratios can be higher than 100 percent because some students are younger or older than the corresponding age group.

High-income countries. Classified by the World Bank in 1997 as countries whose GNP per capita was $9,386 or more in 1995. The group includes both developed countries and high-income developing economies.

High-income developing economies. Economies that the United Nations classifies as developing even though their per capita incomes would place them with developed countries. This classification may be based on their economic structure or the official opinion of their governments. In 1995 this group included Hong Kong (China), Israel, Kuwait, Singapore, and the United Arab Emirates.

Human capital. The knowledge, skills, and experience of people that make them economically productive. Human capital can be increased by investing in education, health care, and job training.

Human development index (HDI). A composite of several social indicators that is useful for broad cross-country comparisons even though it yields little specific information about each country. First used in the United Nations Development Programme's Human Development Report 1990.

Human resources. The total quantity and quality of human effort available to produce goods and services. The muscle power and brain power of human beings. Human resources can be viewed as

consisting of raw labour- determined mostly by the number of people in a country's labour force- combined with human capital.

Import quotas. Government-imposed limits on the quantities of certain goods and services allowed to be imported. Like import tariffs, import quotas are used by governments to protect domestic industries from foreign competition. See protection.

Import tariffs. Taxes imposed on certain imported goods or services. May be levied as a percentage of the value of imports or as a fixed amount per unit. Used to increase government revenue and protect domestic industries from foreign competition. See protection.

In addition to the current account transactions, there are also currency flows into and out of the country related capital items- investment money spent by companies on new plants and the purchase of asset aboard, plus official reserves and other government and foreign asset.

Income per capita. Another term for GNP per capita.

Industrialisation. The phase of a country's economic development in which industry grows faster than agriculture and gradually comes to play the leading role in the economy.

Industry. The sector of an economy that includes mining, construction, manufacturing, electricity, gas, and water.

Infant mortality rate. Of every 1,000 infants born, the number that die before reaching their first birthday.

Insurance, which allows a lump sum to be enjoyed at some unspecified future time in exchange for a series of savings made both now and in the future. The problematic that needs to be addressed in order to provide each of these services is different. For savings services, the concerns are about the costs and legality of deposit mobilisation and about deposit protection. For credit and insurance services, the issues are about how to address adverse selection and moral hazard problems while minimising client transaction costs.

International Monetary Fund (IMF). An international institution founded in 1944- together with the World Bank- to promote international monetary cooperation and facilitate balanced growth of trade by encouraging the removal of foreign exchange restrictions, promoting exchange rate stability, and expediting payments among member countries.

International poverty line. An income level established by the World Bank to determine which people in the world are poor- set at $1 a day per person in 1985 international purchasing power parity (PPP) prices. A person is considered poor if he or she lives in a household whose daily income or consumption is less than $1 per person. Although this poverty line is useful for international comparisons, it is impossible to create an indicator of poverty that is strictly comparable across countries. The level of $1 a day per person is close to national poverty lines in low-income countries but considerably lower than those in high-income countries.

Investment. Outlays made by individuals, firms, or governments to add to their capital. From the viewpoint of individual economic agents, buying property rights for existing capital is also an investment. But from the viewpoint of an economy as a whole, only creating new capital is counted as an investment. Investment is a necessary condition for economic growth. See savings, gross domestic saving rate, and gross domestic investment rate.

Labour force. All the economically active people in a country between 15 and 65. Includes all employed persons, the unemployed, and members of the armed services, but excludes students and unpaid caregivers such as homemakers.

Labour theories of value. A doctrine developed by the classical economists, particularly Adam Smith and David Ricardo. This theory endeavoured to explain exchange value on the basis of labour time needed to create products. In trying to explain exchange value and the determinants of income for the factors of production, Ricardo advanced a labour theory of value. His version of the theory made labour units a numeraire was universally exploited by capitalists. Karl Marx took this suggestion of a labour theory of value to the point where he considered that labour is the source of all value. Employers buy labour power and pay it a subsistence rate. Suppose 8 hours of work are required to produce a product. Once the employer owns the worker's labour power, he can use it for more than 8 hours. If the worker puts in 10 hour, for example, he creates for the employer 2 hours of surplus value. It is not the capitalist that is the cause of exploitation, but the capitalist system. The worker is paid his proper exchange value, a subsistence wage. The capitalist sells the product for the proper exchange value (its price, 10 hours) and has 2 hours of truly unearned income.

Least developed countries. Low-income countries where, according to the United Nations, economic growth faces long-term impediments- such as structural weaknesses and low human resources development. A category used to guide donors and countries in allocating foreign assistance.

Life expectancy at birth. The number of years a newborn baby would live if, at each age it passes through, the chances of his/her survival were the same as they were for that age group in the year of his/her birth. The change in this indicator reflects changes in the overall health of a country's population, in people's living conditions, and in the quality of health care.

Loans which allow a lump sum to be enjoyed now in exchange for a series of savings to be made in the future (in the form of repayment instalments).

Low-income countries. Classified by the World Bank in 1997 as countries whose GNP per capita was $765 or less in 1995.

Manufactured goods. Goods produced using primary goods. Include petroleum, steel, textiles, and baked goods.

Market failures. Cases when a market economy fails to provide people with a desirable supply of certain kinds of goods and services.

Market failures can occur in a market economy when it does not produce enough public goods and goods with positive externalities, when it produces too many goods with negative externalities, when goods are overpriced by natural monopolies, and when market agents do not have access to sufficient information, such as information about the quality of some consumer goods. These market failures usually justify economic intervention by the government. But there is always the risk of government failure- in which faulty political processes or institutional structures prevent government measures from improving social welfare.

Market liberalization. Removing and abstaining from using state controls that impede the normal functioning of a market economy- for example, lifting price and wage controls and import quotas or lowering taxes and import tariffs. Market liberalization usually does not mean that a government completely abstains from interfering with market processes.

Marginal physical product the quantity of output produced by each extra unit of variable factor input in conjunction with a given amount of *fixed factor input*. The marginal physical product curve, as shown in the following figure rises steeply at first, reflecting increasing returns to the variable factor input, but then falls as diminishing returns to the variable factor input set in.

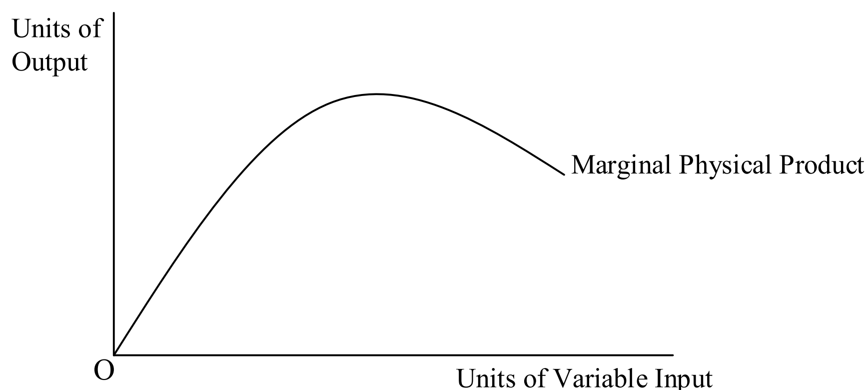

Figure: Marginal Physical Productivity

Middle-income countries. Classified by the World Bank in 1997 as countries whose GNP per capita was between \$766 and \$9,385 in 1995. These countries are further divided into lower-middle-income countries (\$766- \$3,035) and upper-middle-income countries (\$3,036-\$9,385).

Natural capital. A stock of natural resources- such as land, water, and minerals- used for production. Can be either renewable or nonrenewable.

National income accounts. The most important global record for one year of the activity of an economy. These figures are computed in two ways. The *expenditure view point* explains flow of product and the *income viewpoint explains* flow of cost.

The differences between the two approaches can be presented in tabular form:

Income view point **(Flow of Costs)**	***Expenditure view point*** **(Flow of product)**
National income (at factor cost)	
wages	Household sector
Rent	Personal consumption expenditure
Interest	+
Profit	Government sector
+	Purchases of goods and services
Nonincome items(expense items)	+
Indirect business taxes	Business sector
Capital consumption(depreciation)	Gross private domestic investment
	+
	Foreign sector
	Net exports of goods and services
= Total Gross National Income	= Total Gross National Product.

In practice and to avoid double counting in using the expenditure approach, the value added method is used, that is, counting only what each stage of production has added to the final value of goods and services. For example, a farmer sells some wheat to a miller for Tk.20. The miller sells the flour he makes from it to a baker for Tk.90; the baker sells the bread he bakes format for Tk.100. The contribution to gross national product is Tk.100. Not Tk.20. Plus Tk.90. Plus Tk.100. The value added is Tk.20 plus Tk.70. Plus Tk.10 = Tk.100.

Natural monopoly. A situation that occurs when one firm in an industry can serve the entire market at a lower cost than would be possible if the industry were composed of many smaller firms. Gas and water utilities are two classic examples of natural monopolies. These monopolies must not be left to operate freely; if they are, they can increase prices and profits by restricting their output. Governments prevent such a scenario by regulating utility monopolies or providing utility services themselves.

Natural population increase. The difference between the birth rate and the death rate over a period of time. See also population growth rate.

Natural resources. All "gifts of nature"- air, land, water, forests, wildlife, topsoil, minerals- used by people for production or for direct consumption. Can be either renewable or nonrenewable. Natural resources include natural capital plus those gifts of nature that cannot be stocked (such as sunlight) or cannot be used in production (such as picturesque landscapes).

Neoclassical Economics. A school economics ideas based on the writings of Marshall et al. that superseded Classical Economic doctrines toward the end of the 20th century. Frequently referred to as the marginal revolution, neoclassical economics involved a shift in

emphasis away from classical economic concern with the source of wealth and its division between labour, landowners, and capitalists toward study of the principles governing optimal allocation of scarce resources to given wants. The principles of *Diminishing Marginal Utility* were founded in this new school of economic thought.

Net official assistance. The sum of grants and concessional loans from donor country governments to recipient countries, minus any repayment of loan principal during the period of the loans.

Net private flows. Privately financed capital flows that enter a country on market terms, minus such flows that leave the country. An example of a net private flow is net portfolio investment- the value of stocks and bonds bought by foreign investors minus the value of stocks and bonds sold by them. See also portfolio investment.

Nominal indicator. An indicator measured using the prices prevailing at the time of measurement. A change in a nominal indicator sometimes reflects changing market prices more than any other changes (changes in the real indicator). For example, during periods of inflation, nominal wages can increase while their real value decreases. In making cross-country comparisons, this term also applies to the conversion of indicators calculated in local currency units into some common currency, most often US dollars. Nominal indicators are those converted into US dollars using current exchange rates, while real indicators are calculated based on purchasing power parity (PPP) conversion factors.

Nonrenewable natural resources. Natural resources that cannot be replaced or replenished. See renewable natural resources.

Oligopoly a type of market structure characterised by: few firms and many buyers, homogeneous or differentiated products and difficult market entry

Organisation for Economic Cooperation and Development (OECD). An organization that coordinates policy among developed countries. OECD member countries exchange economic data and create unified policies to maximize their countries' economic growth and help nonmember countries develop more rapidly. The OECD arose from the Organisation for European Economic Cooperation (OEEC), which was created in 1948 to administer the Marshall Plan in Europe. In 1960, when the Marshall Plan was completed, Canada, Spain, and the United States joined OEEC members to form the OECD.

Output. A method that is technically the most efficient is the one that may use only small amounts of labour, while another method may employ large quantities of labour and little capital. In physical terms, the method that is technically the most efficient is the one that uses the fewest inputs. Economists, however, are more concerned with the cost aspects of the input-output relationship, specifically the least costly way of producing a given output.

Ozone. A gas that pollutes the air at low altitudes, but that high in the atmosphere forms a thin shield protecting life on earth from harmful

solar radiation. Chlorofluorocarbons (CFCs) destroy this high-level ozone layer.

Perfect competition. A type of *Market Structure* characterised by: (a) many firms and buyers, that is, a large number of independently acting firms and buyers, each firm and buyer being sufficiently small to be unable to influence the price of the product bought or sold; (b) homogeneous products, that is, products offered by competing firms are identical not only in physical attributes but also are regarded as identical by buyers, who have no preference between the products of various producers; (c) free market entry and exit, that is, there are no *Barriers To Entry*- hindrances to entry of new firms-or impediments to exit of existing sellers: (d) *perfect knowledge* of the market by buyers and sellers; and mobility with access of all buyers to sellers.

Physical capital (produced assets). Buildings, machines, and technical equipment used in production plus inventories of raw materials, half-finished goods, and finished goods.

Population growth rate. The increase in a country's population during a certain period- usually one year- expressed as a percentage of the population when the period began. The population growth rate is the sum of the difference between the birth rate and the death rate- the natural population increase- and the difference between the population entering and leaving the country- the net migration rate.

Portfolio investment. Stock and bond purchases that, unlike direct investment, do not create a lasting interest in or effective management control over an enterprise. See foreign direct investment.

Postindustrialization. The phase in a country's economic development that follows industrialization and is characterized by the leading role of service sector in the national economy.

Poverty line. The income level people require to buy life's basic necessities- food, clothing, housing- and satisfy their most important sociocultural needs. The poverty line changes over time and varies by region. Also called subsistence minimum.

Primary goods. Goods that are sold (for consumption or production) just as they were found in nature. Include oil, coal, iron, and agricultural products like wheat or cotton. Also called commodities.

Production function. A function showing for a given state of technological knowledge the relationship between physical quantities of factor inputs and physical quantities of output involved in producing a good or service. Since the amount of output depends on the quantities of inputs used, the relationship can be depicted thus in functional notation: $Q = f(I_1, I_2 \ldots\ldots\ldots I_n)$ where Q = output of a product and I_1, 1_2, etc., are quantities of the various factor inputs 1,2, etc. used in producing that output, It is important to emphasise that factor inputs can be combined in a number of different ways to produce the same amount.

Production resources. The main inputs for any production. Traditionally, economists identified three factors of production:

labor, land, and capital. More recently, economists came to use the concept of three types of capital: physical (or produced) capital, human capital, and natural capital.

Productivity. The relationship between the output of an economic unit and the factor inputs (i.e. labour) that have gone into producing the output. Productivity is usually measured in terms of output per worker. Productivity increases when output per worker is raised. The main source of productivity increases is the use of more efficient workers and more and better capital stock.

The important insights can be illustrated in the following three stages:

1. Suppose that the assembly of a car is a labour intensive operation; it takes a team 10 men working with a minimal amount of capital- wrenches and screwdrivers only- one whole day to assemble one car.

2. The firm now invests in hydraulic lifting gear (*capital deepening),* and this cuts down considerably the amount of time needed for aligning parts for assembly, reducing the time it takes to complete operation to a tenth of a day. The same team of men can now assemble ten cars a day-- their productivity has gone up ten fold

3. The firm introduces a continuous flow assembly line with automatically controlled machines that one man can operate. Output increases to, say, 50 cars per day and productivity of the remaining man has increased from 1 car a day to 50.

Just as importantly, nine men have been released from the team. Either they can be put to work on a similar automated assembly line (*capital widening),* in which case total output of the 10 men would be 500 cars per day. Increased productivity thus makes an important contribution to the achievement of higher rates of economic growth.

Profit. The difference arising when a firm's total revenue exceeds its total cost. This definition of economic profit differs from that used conventionally by business people (accounting profit) in that accounting profit only takes into account explicit costs. Economic profit can be viewed in terms of the return accruing to the entrepreneurs after payment of all explicit costs-payments such as wages to outside factor input suppliers- and all implicit costs-payment for use of factor inputs-that is, capital and labour supplied by the owners themselves.

Propensity to Save the proportion of *disposable personal income* saved by households. The average propensity to save (APS) is given by:

$$\frac{\text{total saving}}{\text{total income}}$$

The marginal propensity to save (MPS) is the fraction of any change in income that is saved:

$$\text{marginal propensity to save (MPS)} = \frac{\text{change in saving}}{\text{change in income}}$$

Public goods. Goods that are nonrival- consumption by one person does not reduce the supply available for others- and nonexcludable- people cannot be prevented from consuming them. These characteristics make it impossible to charge consumers for public goods, so the private sector is not interested in supplying them. Instead, they are often supplied by government. Public goods are usually national or local. Defense is a national public good- benefiting the entire population of a country. Rural roads are local public goods, benefiting a smaller group of people. There can also be global public goods, benefiting most of the world's population, for example global peace and security, or information needed to prevent global climate change. Providing such goods (and services) is a function of international organizations.

Purchasing power parity (PPP) conversion factor. The PPP conversion factor shows how much of a country's currency is needed in that country to buy what $1 would buy in the United States. By using the PPP conversion factor instead of the currency exchange rate, we can convert a country's GNP per capita calculated in national currency units into GNP per capita in U.S. dollars while taking into account the difference in domestic prices for the same goods. Thus PPP helps us compare GNPs of different countries more accurately. Because prices are usually lower in developing countries, their GNP per capita expressed in PPP dollars is higher than their GNP per capita expressed in U.S. dollars. In developed countries the opposite is true.

Quality of life. People's overall well-being. Quality of life is difficult to measure (whether for an individual, group, or nation) because in addition to material well-being (see standard of living) it includes such intangible components as the quality of the environment, national security, personal safety, and political and economic freedoms.

Real indicator. An economic indicator that uses the prices from some base year. This approach controls for fluctuating market prices so that other economic changes can be seen more clearly. In cross-country comparisons, this term also applies to the conversion of indicators calculated in local currency units into some common currency, most often US dollars. Real indicators are calculated with the help of purchasing power parity (PPP) conversion factors, while nominal indicators are those converted into US dollars using current exchange rates.

Renewable natural resources. Natural resources that can be replaced or replenished by natural processes or human action. Fish and forests are renewable natural resources. Minerals and fossil fuels are nonrenewable natural resources because they are regenerated on a geological, rather than human, time scale. Some aspects of the environment- soil quality, assimilative capacity, ecological support

systems- are called semi renewable because they are regenerated very slowly on a human time scale.

Rent. The periodic payments made to the owners of the assets for use of their land or other assets as factors of production. In aggregate terms, rents are a source of income that is included as a part of *national income*.

Saving. The proportion of income not spent on current consumption. In real terms, savings is important in that it may finance physical investment. Saving, that is, forgoing current consumption, release resources that can be devoted to increasing a country's capital stock and hence its capacity to produce a greater quantity of goods over time.

Savings deposit, which allow a lump sum to be enjoyed in future in exchange for a series of savings made now.

Services. Intangible goods that are often produced and consumed at the same time. An example is education: students consume a lesson- an educational service- at the same time a teacher produces it. The service sector of the economy includes hotels, restaurants, and wholesale and retail trade; transport, storage, and communications; financing, insurance, real estate, and business services; community and social services (such as education and health care); and personal services.

Stabilisation Policy the application by government and central bank authorities of available macro-economic tools to regulate the level of aggregate demand in order to counter cyclical fluctuations in economic activity. Left to its own devices, the economy may go through periods of boom and depression known as business cycles.

Standard of living. The level of well-being (of an individual, group or the population of a country) as measured by the level of income (for example, GNP per capita) or by the quantity of various goods and services consumed (for example, the number of cars per 1,000 people or the number of television sets per capita).

Subsistence wage rate is the *natural wage rate.* In the short term it is possible for wage earners to be paid in excess of their natural wage rate due to short term fluctuations in demand. However in the longer term, the natural wage rate can only be increased if capital increases or labour decreases.

Substitute factors any factor considered to be economically interchangeable by producers. The cross elasticity between the two factors serves as measure of degree of substitutability. Factors that are close substitutes have high cross elasticity, while products that are poor substitutes have low cross elasticity.

Surplus value. An excess of the receipts of a factor input over its supply price. Ricardo took the example of rental payments to landlords in possession of superior land. Alfred Marshall noted that all factor receipts access of factor costs are in the quasi-rent in the short run, so where there are no alternative opportunities for a factor, all of its reward is a surplus Marx viewed surplus value in terms of

labour, whereby workers produce more than their own costs, defined as subsistence wage. Marx attempted to show that the exchange value of product was due solely to labour, while other suggests that it is the entire production process that produces the exchange value. According to Marx exploitation ca only be eradicated by paying workers the value of their output rather than a subsistence wage.

Sustainable development. According to the United Nations World Commission on Environment and Development (1987), sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." According to the more operational (practice-oriented) definition used by the World Bank, sustainable development is "a process of managing a portfolio of assets to preserve and enhance the opportunities people face." Sustainable development includes economic, environmental, and social sustainability, which can be achieved by rationally managing physical, natural, and human capital (see Chapters 1 and 16).

Technical efficiency an aspect of production that seeks to identify the physical terms the best possible combination of *factor inputs* to produce a given level of *output.*

Technical progress an aspect of *Market Performance* that denotes the extent to which firms develop and introduce new and improved products, production, and distribution techniques. Radical *inventions* and *innovations* may make it possible to reduce manufacturing and distribution costs, thereby allowing a lowering of the supply price to the consumer.

Terms of trade. The ratio of export prices to import prices. A high ratio benefits an economy, because then the country can pay for many imports by selling a small amount of exports. If terms of trade worsen, the country needs to sell more exports to buy the same amount of imports.

The current accounts shows the country's profit and loss in day to day dealings. It is made up under two headings. The visible trade balance indicates the difference between the value of exports and imports of goods. The second group of transactions make up the invisible balance. These transactions include earnings from and payments for such services as banking, insurance and tourism. It also includes interest and profits on investments and loans, government receipts, and spending on defence.

Total fertility rate. The average number of children a woman will have during her lifetime, by country or region. Between 1980 and 1995 the average fertility rate in low-income countries and middle-income countries fell from 4.1 to 3.1, while in high-income countries it fell from 1.9 to 1.7.

Total physical product The total quantity of *output* produced by utilysing various amounts of the *variable factor input* in conjunction with a given amount of *fixed factor input*. The total physical product curve as shown in the following figure rises steeply at first, reflecting increasing returns to the variable factor input, but then rises more slowly as *diminishing returns to the variable input* set in.

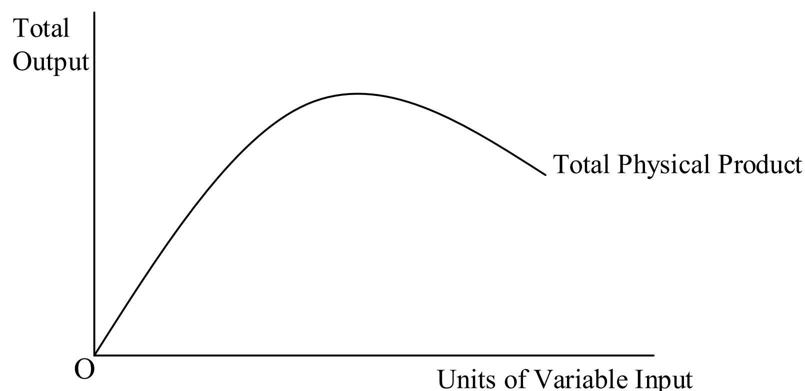

Figure: Total Product

Transfer payments. Payments from the government to individuals used to redistribute a country's wealth. Examples are pensions, welfare, and unemployment

Wage Rate the price of labour. In a competitive market the wage rate is determined by the demand for and supply of labour. In the short run, the demand curve for labour as a factor input slopes downward, reflecting a fall in the marginal productivity of labour as more labour is used. The supply curve for labour slopes upward: the higher the wage rate, the greater the number of hours of work offered. The equilibrium wage rate is w_e *where the two lines intersect.*

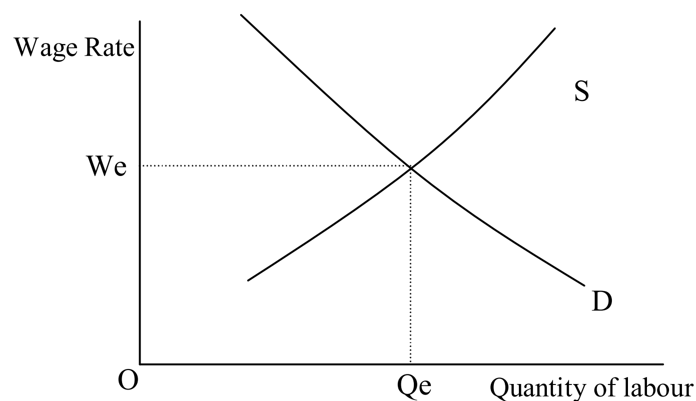

Figure: Wage Rate

Welfare economics a normative branch of economics concerned with the way of economic activity ought to be arranged so as to maximise economics output and social justice. Welfare economics employs value judgements about what ought to be produced, and how production should be organised, and the way income and wealth ought to be distributed now and in the future. Unfortunately, every person in a community may have a unique set of value judgements

that depend on his attitudes, religion, philosophy, and politics, and the economist has difficulty in aggregating these value judgements in advising policy-makers about decisions affecting the allocation of resources, which involves making interpersonal comparisons of utility. Economists have tried for many years to develop criteria for judging economic efficiency to use as a guide in evaluating actual resource deployments. The classical economists treated utility as if it were a measurable scale of consumer satisfaction, and the early welfare economists, such as Pigou, continued in their vein. Thus, they were able to talk in terms of changes in the pattern of economic activity either increasing or decreasing economic well-being. Once economists rejected the idea that utility was measurable, however, they felt impelled to accept the idea that economic welfare is immeasurable, and any statement about welfare is a value judgement influenced by preferences and priorities of those making the judgement. This led to a search for welfare criteria that avoided making interpersonal comparisons of utility by introducing explicit value judgements as to whether or not welfare has increased. The simplest criterion was developed by Vilfredo Pareto, who argued that any reallocation of resources involving a change in goods produced and/or their distribution among consumers could be considered an improvement if it made some people believe they were better off without making anyone else feel worse off. The Pareto criterion avoids making interpersonal comparisons by dealing only with cases in which no one is harmed. Unfortunately, this makes the criterion inapplicable to most policy proposals, which benefit some and harm others without compensation. Nicholas Kaldor and John Hicks suggested an alternative criterion, the compensation principle, proposing that any economic change or reorganisation should be considered beneficial if, after the change, gainers could hypothetically compensate the losers and still be better off than they were before the change. In effect, this criterion divides the effects of any change in two: (a) efficiency gains/losses, and (b) income-distribution consequences. As long as gainers evaluate their gains at a higher figure than the value that losers set on their losses, the efficiency gain justifies the change, even though in the absence of actual compensation payments income redistribution has occurred. When gainers from a change fully compensate losers and still show a net gain, this would rate as an improvement under the Pareto criterion. In addition to developing welfare criteria, economists such as Paul Samuelson have attempted to construct a social-welfare function that can offer guidance as to whether one economic configuration is better or worse than another. The social-welfare function can be regarded as a function of the welfare of each consumer. In order to construct a social-welfare function, however, it is necessary to aggregate preferences of all consumers into a community-preference ordering and some economists, such as Kenneth Arrow, have questioned whether consistent and non-contradictory community orderings are possible. For example, consider a community of three people, 1, 2, and 3, choosing among three alternative policies, A, B, and C. Individual I prefers A to B and B to C, hence A to c. Individual 2 prefers B to C and C to A, hence B to A. Individual 3 prefers C to A and A to B, hence C to B. If we now try to aggregate these individually consistent prefer ences on the basis of majority rule, we find that 2 out of 3 prefer A to B, and 2 out

of 3 prefer B to C. Logically, there should be a social preference for A over C, yet 2 out of 3 prefer C to A.

World Bank: An international lending institution that aims to reduce poverty and improve people's lives by strengthening economies and promoting sustainable development. Owned by the governments of its 181 member countries, the Bank lends about $20 billion a year to development projects, provides technical assistance and policy advice, and acts as a catalyst for investment and lending from other sources. The World Bank's poorest members receive loans for up to 50 years without interest. Other needy members receive loans for 15-20 years at lower interest rates than are charged by commercial banks.

World Trade Organization (WTO): An international organization established on January 1, 1995, to succeed the General Agreement on Tariffs and Trade (GATT). Serves as a forum for multilateral trade negotiations and helps resolve its members' trade disputes.