Glossary for a Course in Basic Economics

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Absolute advantage. In international trade theory a country which has an absolute advantage in producing a good is able to produce that good more efficiently (more output per unit of input) than any other country. Also see "comparative advantage."

Accelerator principle. In macroeconomic models the accelerator principle relates changes in the rate of real output growth to the level of desired investment spending (investment demand) in the economy. A decline in the rate of real GDP growth, for example, will cause the amount of investment demand to decrease (the investment demand curve will shift to the left).

Aggregate demand curve. In macroeconomic theory the aggregate demand curve relates the level of real national income (GDP) demanded (the total quantity of goods and services demanded) to the price level (as measured by the GDP deflator).

Aggregate expenditure. In macroeconomic theory aggregate expenditure is the total amount of desired spending by consumers, governments, private investors and foreign buyers (net of spending on imports) at each level of real national income (GDP).

Aggregate supply curve. In macroeconomic theory the short run aggregate supply curve relates the total quantity of goods and services supplied and the price level (as measured by the GDP deflator) *ceteris paribus*. The long run aggregate supply curve is a vertical line at the full employment (capacity output) level of real national income (GDP).

Automatic stabilizer. Government spending programs which respond to changes in the level of national income in such a way as to offset those changes. For

example, unemployment insurance benefits typically rise when the economy enters a recession, and decline when prosperity returns.

Average fixed costs. In the theory of the firm fixed costs are costs of production which are constant whatever the level of output. Average fixed costs are total fixed costs divided by the number of units of output, that is, fixed cost per unit of output.

Average revenue product. In the theory of factor pricing, average revenue product is total revenue divided by the number of units of the factor employed.

Average variable costs. In the theory of the firm, total variable cost divided by the number of units of output.

Axes. The fixed lines on a graph which carry the scales against which the coordinates are plotted.

Balance of payments accounts. A record of all transactions involving a country's exports and imports of goods and services, borrowing and lending.

Balance of trade. A record of a country's exports and imports of goods and services.

Base year. In calculating price indexes, values in the current year are compared to values in some arbitrarily chosen earlier or base year.

Bentham, Jeremy (1748-1832)**.** Founder of the school of utilitarian philosophy, Bentham accepted much of Adam Smith's work on economics but believed Smith wrong in assuming that there was a necessary identity of private and social interests. Bentham spent much of his life designing social institutions which he thought would bring all such interests into harmony with one another. He developed the concepts of utility, pain and pleasure into what he called a "felicific calculus" by which it was possible to establish, for example, that the evil of a

crime is proportionate to the number of people harmed by it and that the punishment should be based not on motive, but the amount of social pain, or disutility, caused by the offense. His life was remarkable not only for his intellectual achievements in the fields of law, economics and social reform, but for his eccentricity which carried over even into death. In return for leaving his considerable estate to the University of London, Bentham induced the University to keep his embalmed remains on hand to attend meetings when utilitarian philosophy would be discussed.

Board of directors. Individuals chosen by shareholders in a corporation to administer the affairs of the business.

Boulding, Kenneth Ewart (1910-). An American economist whose work covers both mainstream and radical forms of economic theory. Boulding was born in Liverpool, England in 1910. He taught at the University of Michigan from 1949 to 1967,and subsequently at the University of Colorado, retiring in 1980. His publications reflect the broad range of his academic interests and contain frequent criticisms of orthodox economics. Boulding has advocated the integration of economic with biological concepts and he has urged that economic policy should be evaluated on the basis of a larger normative theory of evaluative judgement rather than on economic criteria alone.

Capital. Usually used in the "real" sense in economics to refer to machinery and equipment, structures and inventories, that is, produced goods for use in further production. Distinguished from "financial capital", meaning funds which are available to finance the production or acquisition of real capital.

Capital account. That part of the balance of payments accounts which records a country's lending and borrowing transactions.

Capital consumption allowance. In national income accounting the capital consumption allowance records the amount by which the capital stock has been

used up or depreciated during the accounting period. May also be called simply "depreciation."

Capital consumption. The using up of real capital by not maintaining or replacing it as it wears out.

Capital goods. Unlike goods intended to be consumed, capital goods are used to produce other goods. Machinery in a factory would be an example of capital goods.

Capitalism. A system of economic organization characterized by the private ownership of the means of production, private property, and largely market-based control over the production and distribution of goods and services.

Capitalist class. Those members of society who own the capital stock, often used in a pejorative sense by Marxists and other socialist critics of capitalism.

Central bank. An agency empowered by a government to manage a country's monetary and financial institutions, issue and maintain the domestic currency, and handle the official reserves of foreign exchange. Primarily a "bank for banks."

Ceteris paribus. The Latin for "other things being equal."

Chamberlin, Edward (1899-). An American economist who studied at Iowa and Michigan before graduating with a doctorate from Harvard in 1927, Chamberlin subsequently spent his academic career teaching at the latter university. His major interest was in the interaction of monopoly and competition, which he saw not as opposites, but as always-present elements in business situations which interact with one another. He is best known for his theory of monopolistic competition in which equilibrium is influenced by product differentiation and selling costs as well as by optimum output. Chamberlin's major book, *Monopolistic Competition,* was published in 1933, only a matter of months before

a similar analysis was published in Britain by Joan Robinson of Cambridge University. The language used in the two treatments of the subject was different, but the analysis and the conclusions reached are so similar that only specialists need worry about the difference between imperfect competition and monopolistic competition.

Change in demand. An increase or decrease in the quantity demanded over a range of prices. Shown by a shift of the demand curve.

Choice. Because wants are unlimited and resources are limited, all economies must choose which goods and services should be produced and in what quantities.

Circular flow. A stylized depiction of the circulation of spending in the economy and the corresponding flows of productive factors and output of produced goods and services.

Classical economics. The economics of Adam Smith, David Ricardo, Thomas Malthus, and later followers such as John Stuart Mill. The theory concentrated on the functioning of a market economy, spelling out a rudimentary explanation of consumer and producer behaviour in particular markets and postulating that in the long term the economy would tend to operate at full employment because increases in supply would create corresponding increases in demand.

Comparative advantage. The ability to produce a tradable good or service at a lower opportunity cost than it could be produced at in another country.

Competition. In the general sense, a contest among sellers or buyers for control over the use of productive resources. Sometimes used as a shorthand way of referring to perfect competition, a market condition in which no individual buyer or seller has any significant influence over price.

Competitive firm. A firm operating under conditions of perfect competition, a market condition in which no individual buyer or seller has any significant influence over price. A competitive firm is a price taker, responding to whatever price is established in the market for its output.

Constant dollars. Sometimes called "real dollars," to refer to price data which have been adjusted to remove the effect of changes in the general level of prices.

Consumer surplus. The net benefit realized by consumers when they are able to buy a good at the prevailing market price. It is equivalent to the difference between the maximum amount consumers would be willing to pay and the amount they actually do pay for the units of the good purchased. Graphically it is the triangle above the market price and below the demand curve.

Consumption function. Generally, the relationship between consumer expenditures and all the influences that determine them. More specifically, the relationship between consumers' disposable incomes (personal income less taxes) and the amount they wish to spend on consumer goods and services.

Consumption spending. Spending on consumer goods and services.

Consumption. Spending to acquire consumer goods and services, or using up those goods and services to satisfy wants.

Coordinates. Intersections of vertical and horizontal values plotted on a graph.

Corporation. A legal entity formed to conduct business and possessing certain privileges not available to single proprietorships or partnerships, notably limited liability which confines the shareholder's possible losses to the amount paid to purchase shares in the business.

Cross-elasticity of demand. The (percentage) change in the quantity demanded of a good consequent upon a (one percent) change in the price of an associated good.

Crowding out. The possible tendency for government spending on goods and services to put upward pressure on interest rates, thereby discouraging private investment spending.

Current account. That part of a country's balance of payments accounts which records the value of goods and services exported minus the value of goods and services imported.

Current dollar. Values which have not been adjusted to remove the influence of changes in the general price level. See "constant dollar."

Cyclical fluctuations. Short term variations in the level of national income such as those which occur from year to year. Contrasted with "secular" changes which occur over longer periods of time.

Deflation. A fall in the general level of all prices. The opposite of inflation.

Depreciation. The using up or wearing out of capital goods.

Deregulation. Reducing or eliminating government intervention to control particular market activities, especially of private firms. For example, removing price controls or monopoly privileges.

Development economics. A sub-discipline within economics specializing in the processes of long term growth and change, especially in the case of the less developed economies.

Diminishing returns. The tendency for additional units of a productive factor to add less and less to total output when combined with other inputs which are to

some degree fixed in quantity. Combining more of a variable input, such as labour, with a given amount of some other input, such as capital in the form of a machine, will eventually result in the marginal product for labour declining.

Disposable income. The income a person or household has left to dispose of after income tax has been deducted from personal income. Disposable income may either be spent on consumption or saved.

Dissaving. If individuals or households spend more than their current income they are said to be dissaving.

Domar, Evsey David (1914-). Born in Lodz (Poland, then Russia) in 1914, Domar graduated with a Ph.D. from Harvard in 1947. His initial work was in the field of taxation, but he went on to study the theory of growth and the construction of Keynesian growth models. The basic Keynesian analysis of saving and investing was static in that equilibrium was achieved apparently at given levels of income when intended savings and intended investing were equal. But investing, Domar pointed out, like Roy Harrod some years earlier, must increase the capacity to produce and the question is, will that increased productivity capacity be used or wasted? Domar developed an analysis which showed that full employment could be maintained through time only if investment exceeded saving and income always grew sufficiently to produce the necessary level of saving. The policy implication of this, in Domar's view, was that modern capitalist economies, probably because of their monopolistic elements, tend to allow increased capacity arising from new investment to be less than fully utilized, a deflationary tendency not necessarily offset by technological advance. His major publication is "*Essays in the Theory of Economic Growth*," 1957. His subsequent work has been on comparative economic systems, especially the economics of socialism.

Downs, Anthony (1930-). Born Evanston, Ill. USA 1930. Ph.D. Stanford University 1956. Downs is best known for his application of economic analysis to

political theory, especially with respect to democratic political parties and bureaucratic organizations. His two major books are in this area, *An Economic Theory of Democracy*, 1957, and *Inside Bureaucracy*, 1967. He has subsequently published work on American urban issues, including the causes and effects of racial segregation in US cities.

Economic rent. Any return a factor of production receives in excess of its opportunity cost (what it would have received in its next best use).

Economies of scale. If *all* the inputs in a production process are increased and the output increases by proportionately more than the inputs were increased, economies of scale are being realized. There may also be diseconomies of scale which occur when an increase in all inputs brings about a less than proportionate increase in output.

Elasticity of supply. The (price) elasticity of supply is the percentage change in the quantity supplied of a good or service divided by the percentage change in its (own) price.

Elasticity. When used without a modifier (such as "cross", or "income"), elasticity usually refers to price elasticity which is the percentage change in quantity demanded of a good or service divided by the percentage change in its (own) price.

Entrepreneurship. The ability and willingness to undertake the organization and management of production. As well as making the usual business decisions, entrepreneurship is often associated with the functions of innovating and bearing risks.

Envelope curve. A curve enclosing, by just touching, a number of other curves

Equilibrium condition. A condition which must be satisfied for equilibrium to exist, equilibrium being defined as a situation in which there is no tendency for change.

For example, in the Keynesian expenditure model, the equilibrium condition is that planned spending just equal the current level of national income. Once that condition is satisfied, there is no tendency for the level of national income to change.

Equilibrium price. A price at which the quantity supplied equals the quantity demanded. At this price there is no excess of quantity demanded or supplied, nor is their any deficiency of either and consequently the price will remain at this level.

Equilibrium quantity. The quantity of a good demanded and supplied at the equilibrium price.

Equity. May be used in either of two unrelated senses. In the context of income distribution theory, refers to an objective, goal or principle implying "fairness". In a financial context may refer to a share or portion of ownership.

Excess reserves. The difference between the amount of cash a bank wishes or is required to hold in relation to its deposit liabilities and the amount it actually holds.

Exchange rate. The price of one country's currency in terms of another's.

Explicit cost. The amount spent to obtain or produce something.

Externalities. A benefit or cost associated with an economic transaction which is not taken into account by those directly involved in making it. A beneficial or adverse side effect of production or consumption.

Fiat money. A type of money which has little or no intrinsic value in itself, but which is decreed to be money by the government and is generally accepted in exchange. Modern paper currencies are all fiat money, as are most coins in active circulation.

Firms. Economic entities which buy or employ factors of production and organize them to create goods and services for sale.

Fiscal policy. The use by a government of its expenditures on goods and services and/or tax collections to influence the level of national income.

Fixed capital formation. Investment, the creation of capital goods such as structures, machinery and equipment.

Free rider problem. The undersupplying of a public good caused by the fact that individuals can consume or benefit from the good without paying for it.

Frictional unemployment. Unemployment caused by the loss of jobs due to technological change, the entry of new participants into a labour market, or other normal labour market adjustments.

Friedman, Milton (1912-). Born New York City in 1912. Degrees from Rutgers, Chicago, and Columbia. Associated with the University of Chicago since 1946. Best known for his advocacy of monetary explanations of the course of economic events and fierce opposition to Keynesian economics, Friedman is usually credited with (or blamed for) establishing the "monetarist school" of economics which gained great influence on government policy in both the US and the UK in the 1970s.

Functional distribution of income. The division of total income in an economy into shares according to the kind of service provided-usually labour or property (land and capital).

General equilibrium. The condition reached when all markets (for products and productive factors) have cleared, that is, established equilibrium prices and quantities.

Gini coefficient. The ratio of the area between the 45 degree line depicting complete equality and a Lorenz curve to the entire area of the triangle below the 45 degree line.

Government spending. The total outlays by government on goods and services during some accounting period, usually a year. Government outlays such as welfare benefits to households, for example, are normally excluded from this amount on the grounds that they are merely transfers of income from taxpayers to the beneficiaries of such programs.

Graph. A visual representation of a relationship between two variables, usually drawn to some specified scale.

Gross Domestic Product (GDP). The value of all the goods and services produced in an economy during some accounting period, usually a year.

Gross Domestic Product (GDP) deflator. Nominal GDP divided by real (constant dollar GDP) multiplied by 100. Nominal GDP is the value of output measured in terms of the prices prevailing in the accounting period in question. Real GDP is that output measured in terms of the prices prevailing in some base period. The value of the deflator in the base period is always 100.

Gross investment. Total investment during the accounting period. It includes both additions to the capital stock (net investment) and investment to replace worn out capital (to make up for depreciation).

Gross National Expenditure (GNE). The sum of all spending on consumption and investment plus government spending on goods and services and net exports (total exports minus imports). It is equivalent in value to GDP.

Harrod, Sir Roy F. (1900-78). Born in Norfolk, England. An influential British economist, educated at Oxford, who was an early proponent of Keynesian economics, a prominent adviser to the British government during the years of

World War II, and subsequently Keyne's official biographer. Harrod wrote extensively on a number of topics such as business cycles, monetary problems, international trade, and the theory of economic growth. In the latter field, he pointed out as early as 1939 that in the Keynesian model investment played the role of an offset to saving-a way of getting spending withdrawn from the income stream by savers back into it. But investment also increases the productive capacity of the economy. Could the rate of growth in income be sufficient to ensure that an ever growing stock of capital would be kept fully utilized? If not, the implication was that some continuous external stimulation of the economy would be needed to maintain long-term growth on a steady path.

Hicks, John R. (1904-1989). One of the leading British economic theorists of the 20th century, Hicks was educated at Oxford to which he returned to teach after holding positions at the London School of Economics, Cambridge, and Manchester. Hicks made important contributions on a variety of topics, but is best known for his work on consumer behaviour as published in his major work, *Value and Capital*. In it Hicks utilized the indifference curve concept first developed by Vilfredo Pareto to construct a theory of demand which was independent of any cardinal measure of utility such as was implicit in the traditional approach perpetuated by Alfred Marshall in his famous *Principles*. Hicks also provided a way of incorporating the interest rate in the Keynesian model which has become a standard feature of intermediate level text-book treatments of the Keynesian model. He was joint winner (with the American economist Kenneth Arrow) of the Nobel prize in economics in 1972.

High-powered money. The monetary base, or the total of currency in circulation and commercial bank deposits with the central bank.

Hirsch, Fred (1931-1978). Born in Vienna, Fred Hirsch graduated from the London School of Economics in 1952. After working as an economic journalist and with the International Monetary Fund he became a professor of economics at

the University of Warwick in 1975. He published a large amount of work on international monetary issues and the subject of inflation, but he became more widely known only at the end of his tragically short life when he published his book, *The Social Limits to Growth*. Its broad theme, as he put it in an interview reported in the *New York Times*, was that material growth can "no longer deliver what has long been promised for it-to make everyone middle-class."

Human capital. The stock of knowledge and acquired skills embodied in individuals.

Imperfect competition. A market situation in which one or more buyers or sellers are important enough to have an influence on price.

Income effect. The effect of a change in income on the quantity of a good or service consumed.

Income elasticity of demand. The percentage change in quantity demanded divided by the percentage change in income.

Indifference curve. A curve showing all possible combinations of two goods among which the consumer is indifferent.

Indifference theory. The analysis of consumer demand using indifference curves and an income constraint to demonstrate the reason for the inverse relationship between price and quantity demand. An alternative to the older marginal utility explanation of this phenomenon.

Indirect taxes. Taxes levied on a producer which the producer then passes on to the consumer as part of the price of a good. Distinguished from direct taxes, such as sales taxes which are visible to the person who pays them.

Industry. A group of firms producing similar products. Hence, the auto industry or the steel industry.

Inferior good. A good for which the demand decreases when income increases. When a household's income goes up, it will buy a smaller quantity of such a good.

Inflation. A general rise in the average level of *all* prices.

Interest rate. The percentage rate which must be paid for the use of investable funds.

Interest. The payment made for the use of funds to create capital goods with.

Inventories. Stocks of goods in the hands of producers. These stocks are included in the definition of capital and an increase in inventories is considered to be investment.

Investing. Creating capital goods. Acquiring or producing structures, machinery and equipment or inventories.

Investment spending. The total amount of spending during some period of time on capital goods.

Involuntary unemployment. Unemployment caused by a deficiency in aggregate demand.

Jevons, William Stanley (1835-1882). An English philosopher and scientist instrumental in developing the marginal utility theory of consumer choice. He demonstrated that consumers will purchase increasing quantities of goods until the marginal utility derived from the last penny's worth of one good is equal to the marginal worth of every other good. His major work was *The Theory of Political Economy* published in 1871.

Keynes, John Maynard (1883-1946). The most important economist of the 20th century. Keynes first came to prominence with his attack on the 1919 treaty with

Germany (*The Economic Consequences of the Peace*, 1919). During the 1920s he became dissatisfied with the mainstream economics based on the tradition established by Alfred Marshall. The conventional analysis of individual markets appeared inadequate to explain the economic problems then being experienced in England. Keynes became convinced that deflationary policies were the cause of the difficulties and published several works on money, notably a two volume work, *The Treatise on Money*. From this he went on to develop the analysis subsequently elaborated in *The General Theory of Employment, Interest and Money*, 1936. Within ten years of its publication, Keynes had, as he expected to do, brought about a revolution in the discipline of economics. Keynes' lifetime achievements went beyond his theoretical work. He played a prominent role in the intellectual and cultural life of his time and was a very influential adviser to the British government up to the time of his death.

Keynesian growth models. Models in which a long run growth path for an economy is traced out by the relations between saving, investing and the level of output.

Keynesian macroeconomics. The theory that shows how a market-based capitalist economy may reach equilibrium with large scale unemployment and how government spending may be used to raise it out of this to a new equilibrium at the full-employment level of output.

Labour. The economically productive capabilities of humans, their physical and mental talents as applied to the production of goods and services.

Laissez-faire. A doctrine advocating a minimum role for government in the economy, such as providing for defence against external enemies, a system of law to protect individuals and their property, and production of such goods and services which for some reason are needed, but would not be produced by private firms.

Land. All natural resources. The "gifts of nature" which are economically useful.

Law of demand. The inverse relationship between price and quantity of a good or service demanded.

Leibenstein, Harvey (1922-). An American economist, born in 1922. Leibenstein taught at the University of California Berkeley in the 1950s and 60s, and subsequently at Harvard. He has published widely in area of economic growth and development, but remains best known for his theory of X-efficiency, which postulates that individuals are non-maximizers when there is little pressure on them and that convention plays a large part in determining the amount of effort they put into their work. See his *General X-efficiency Theory and Economic Development*, 1978 and *Inflation, Income Distribution and X-efficiency Theory*, 1980.

Lender of last resort. The function whereby central banks stand ready to make cash advances to commercial banks in the event they misjudge their cash reserve requirements.

Lenin (Vladimir Il'ich Ul'ianov) (1870-1924). A Russian-born intellectual who masterminded the formation of the Russian Communist Party and successfully seized power with the revolutionary uprising of November 7, 1917. Although he produced a considerable volume of writing, ranging from polemical tracts to serious scholarly works (notably a history of capitalism in Russia), Lenin (the name he began using while living in exile in Germany) was above all else a master politician who succeeded in welding the disputatious radical factions in Russia together to create a well-disciplined political machine. His adaptation of the principles of Karl Marx to the situation in Russia was built on the idea of using the Party as the instrument for forging a revolutionary working class.

Lerner, Abba P. (1903-1982). An American academic economist, born in Russia, and educated largely in England, Lerner was one of the first and most

enthusiastic converts to Keynesian economics. He subsequently taught at a number of different universities in the US including Michigan State and UCLA Berkeley. His major publication was *The Economics of Control* (1944) which combined Keynesian principles with welfare economics to produce a complete system of economic management equally applicable to capitalist or socialist economies.

Liabilities. In general, debts owed by individuals or firms. In the case of commercial banks, their liabilities are largely in the form of what they owe their customers, that is, the total amount of deposits held.

Long run average costs. Total costs divided by the number of units of output. The long run average cost curve plots the relationship between output and the lowest possible average total cost when all inputs can be varied.

Long run costs. Production costs when the firm is using its economically most efficient size of plant.

Long run. In the context of the theory of the firm, the long run is a period of time long enough for the firm to vary the quantities of all the inputs it is using, including its physical plant.

Lorenz curve. A curve showing the cumulative percentage of income plotted against the cumulative percentage of population.

Macroeconomics. The branch of economic theory concerned with the economy as a whole. It deals with large aggregates such as total output, rather than with the behaviour of individual consumers and firms.

Majority goods. Goods which are generally available to consumers because they can be mass produced in whatever quantities there is a demand for. Fast food and consumer electronics are good examples.

Malthus, Thomas (1766-1834). Born the son of an eccentric country gentleman-scholar, Malthus was educated at Cambridge, studying mainly social studies and mathematics in preparation for his intended career as a cleric. He wrote widely on economic issues of his day, maintaining a close correspondence with David Ricardo. His most famous work, however, was on the subject of population. His recognition of what subsequently came to be called the "principle of diminishing returns" underlay his famous proposition that production of the means of subsistence increases as an arithmetic progression (1,2,3,4, etc.) whereas human population has a tendency to increase geometrically (2,4,16, etc.). Malthus argued that it was useless to try to solve this problem by producing more food. The only cure could be to prevent population from increasing at its biological potential. Unless people learned to control their rate of increase (by postponing marriage until children could be adequately supported), nature would control population through the instruments of what Malthus referred to as "misery" and "vice" (which as far as he was concerned included the use of contraceptive measures).The success of his writings enabled Malthus to escape the life of a country cleric and led him to an appointment in 1805 as professor of history and political economy at a small college operated by the East India Company, Haileybury College, in the south of England. Malthus is often called the first professional economist. He spent the rest of his life teaching and writing. He published a general treatise on economic principles, *Political Economy*, in 1820, although it attracted less attention than his first book, *An Essay on the Principle of Population as it Affects the Future Improvement of Society*.

Marginal analysis. An analytical technique which focuses attention on incremental changes in total values, such as the *last* unit of a good consumed, or the *increase* in total cost.

Marginal benefit. The increase in total benefit consequent upon a one unit increase in the production of a good.

Marginal cost. The increase in total cost consequent upon a one unit increase in the production of a good.

Marginal physical product. The change in total product measured in physical terms caused by a one unit increase in a variable input.

Marginal propensity to consume. The part of the last dollar of disposable income that would be spent on additional consumption.

Marginal propensity to save. The part of the last dollar of disposable income that would be saved.

Marginal revenue. The addition to total revenue resulting from the sale of one additional unit of output.

Marginal revenue product. The change in total revenue that results from employing one more unit of a factor.

Market demand. The relationship between the total quantity of a good demanded and its price.

Market failure. Instances of a free market being unable to achieve an optimum allocation of resources.

Markets. Any coming together of buyers and sellers of produced goods and services or the services of productive factors.

Marshall, Alfred (1842-1924). One of the great synthesizers of economic theory who also developed and refined many of the most useful analytical tools of the discipline. His famous student at Cambridge, John Maynard Keynes, called him the greatest economist of the 19th century. His influential textbook, *Principles of Economics*, first published in 1890, served for more than a quarter of a century as the standard reference on the subject. In it he set out clearly such basic

concepts as price elasticity of demand, competitive short-run and long-run equilibrium of the firm, consumer surplus, increasing and decreasing cost industries, and economies of scale. Trained in mathematics, Marshall relegated the mathematical expression of his principles to footnotes.

Marx, Karl (1818-83). One of the most influential social philosophers in history, Marx lived a life of almost constant conflict and adversity. Despite a Ph.D. in philosophy from the University of Jena he was unable to secure a university teaching position and his involvement in revolutionary political activity led to his expulsion from Germany. He was also subsequently forced to leave Belgium and France before finally settling in London where he made a meager living by journalism (serving as a correspondent for the *New York Herald-Tribune*). While continuing to involve himself in radical political affairs he devoted as much time as he could to an extraordinary scholarly undertaking, which was nothing less than an attempt to synthesize all human knowledge since the time of Aristotle. The fruits of this labour, much of it pursued in the Reading Room of the British Museum, was eventually published in his massive work, *Das Kapital* which established the intellectual foundation of the Marxist interpretation of history and which posited the coming of a new world order following the inevitable collapse of capitalism. Key elements of his analysis were embodied in an easily-understood pamphlet written with his benefactor Frederick Engels, *The Communist Manifesto,* published in London in 1848.

Median voter theorem. The proposition that political parties will tend to adopt moderate policies to appeal to voters near the middle of the political spectrum.

Mercantilism. A body of policy recommendations designed to promote the development of the early nation states of western Europe in the 17th and 18th centuries. The emphasis was on utilizing trade to increase national wealth at the expense of the countries being traded with through fostering a "favourable balance of trade", by which was meant an excess of exports over imports.

Minority goods. Goods which have a very low elasticity of supply. That is, even large increases in their price can call forth little, if any, additional supply, which means that only the very wealthy can afford them. Large, secluded waterfront properties might be an example.

Mishan, Ezra Joshua (1917-). Born in Manchester England, Mishan taught at the London School of Economics from 1956 to 1977. He published a large number of articles in professional journals and several books, the best known of which is *The Costs of Economic Growth*, 1967. In later years he has been a frequent contributor to more popular journals writing on variety of issues, including what he has refereed to as "the pretensions of economists."

Monetarism. A view that market economies are inherently self-stabilizing and that variations in the quantity of money are the main cause of fluctuations in the level of aggregate demand.

Monetary base. The same as "high-powered money": cash in commercial banks, plus cash in circulation and deposits of the commercial bank at the central bank.

Monetary policy. The use of the central bank's power to control the domestic money supply to influence the supply of credit, interest rates and ultimately the level of real economic activity.

Money. Anything generally acceptable in exchange. Money serves a number of functions: it is a medium of exchange, it is used as a unit of account, and it can be used as a store of value. In its latter use, it is an alternative to holding value in the form of goods or other types of financial assets such as stocks or bonds.

Monopolistic competition. Essentially the same as imperfect competition: a market situation in which one or more firms may be capable of influencing the price of the product. It is characterized by product differentiation, often established through advertising.

Monopoly. Strictly defined as a market situation in which there is a single supplier of a good or service, but often used to suggest any situation in which a firm has considerable power over market price.

Monopsonistic firm. A firm which is the sole buyer of a good or service, most likely of labour in a particular market.

Multiplier effect. The tendency for a change in aggregate spending to cause a more than proportionate change in the level of real national income.

Mun, Thomas. A British mercantilist writer of the 17th Century.

National income (GDP) deflator. A general way of referring to the price index which measures the average level of the prices of all the goods and services comprising the national income or GDP.

National income. The general term used to refer to the total value of a country's output of goods and services in some accounting period without specifying the formal accounting concept such as Gross Domestic Product.

Natural increase. Growth of the population due to an excess of births over deaths.

Natural monopoly. A market situation in which economies of scale are such that a single firm of efficient size is able to supply the entire market demand.

Natural rate of unemployment. The rate of unemployment that would exist when the economy is operating at full capacity. It would be equal to the amount of frictional unemployment in the system.

Net exports. The total value of goods and services exported during the accounting period minus the total value of goods and services imported.

Net immigration. The total number of people leaving the country to take up permanent residence abroad minus the number of people entering the country for the purpose of taking up permanent residence.

Net investment. Total investment during some accounting period minus the amount of depreciation during the same period.

Niskanen, William Arthur (1933-). An American economist born in Oregon who studied economics at both Harvard and Chicago. Niskanen has held various posts in government (US Department of Defense) and business (Ford Motor Co.) He was a pioneer in the economic theory of bureaucracy. His best-known book is *Bureaucracy and Representative Government*, 1971.

Normal good. Any good for which the demand increases as incomes increase.

Official settlements account. A record of the net increase or decrease in a country's official foreign exchange reserves.

Open market operations. Central bank purchases or sales of securities in the securities market.

Opportunity cost. The best alternative sacrificed to have or to do something else.

Pareto, Vilfredo (1848-1923). Born in Paris of French and Italian parents, Pareto was educated in Italy where he was trained in mathematics and engineering. After working as an engineer for some years, he inherited a fortune and devoted himself to his broad-ranging interests in mathematics, sociology and religion. He was active in the turbulent politics of turn-of-the-century Europe. He also held an academic appointment at Lausanne where he lectured in economics and sociology. In 1906 he retired to his estate near Celigny on Lake Geneva and occupied himself developing a rather peculiar system of sociology. When the fascists came to power in Italy Mussolini appointed him a Senator, presumably because of his professed hatred of democrats. His major contributions to

economics were the indifference curve analysis which he had adapted from the work of Francis Edgeworth, a British economist, and which was in turn picked up and developed by J.R. Hicks; various elements of general equilibrium theory, most notably the concept of what has come to be known as "Pareto optimality" and a theory of income distribution which held that the pattern of income distribution was essentially the same in all economies and at all times.

Pareto optimality. The condition which exists when it is impossible to make any individual better off without making any other individual worse off.

Partnership. An unincorporated business owned by two or more people.

Per capita income. Total income divided by the size of the population.

Perfect competition. A market situation in which there are so many sellers (and buyers) that no one seller (or buyer) can exert any influence on the price. All participants in such markets are "price takers".

Personal distribution. The distribution of income on the basis of income groups. For example, by dividing all income recipients into ten groups (deciles) and showing the share each of these groups had of the total income.

Planning curve. The long run average cost curve.

Portfolio theory. The analysis of how an investor can maximize the expected return from a "portfolio" of various kinds of financial assets having given degrees of risk and uncertainty associated with them (or minimize the risk involved in realizing some given expected return).

Positional goods. Goods which are at least in part demanded because their possession or consumption implies social or other status of those acquiring them.

Posner, Richard A. (1939-). An American lawyer, economist and jurist, educated at Yale and Harvard. Posner lectured at the University of Chicago Law School in the 1980s, and was appointed to the US Court of Appeals during the Reagan administration. His major work in economics has been concerned with the economic analysis of law. He has published several important articles and three major books, *Economic Analysis of Law*, 1973; *Antitrust Law: An Economic Perspective*, 1976; and *The Economics of Justice*, 1981.

Price discrimination. The selling of a good or service at different prices to different buyers or classes of buyers in the absence of any differences in the costs of supplying it.

Price elasticity of demand. The percentage change in the quantity of a good demanded by the percentage change in its own price.

Price. What must be paid to acquire the right to possess and use a good or service.

Principle of diminishing marginal utility. The proposition that the satisfaction derived from consuming an additional unit of a good or service declines as additional units are acquired.

Principle of Diminishing Returns. The proposition that the marginal product of the last unit of labour employed declines as additional units of labour are employed.

Private goods. A good which cannot be consumed without paying for it and the supply of which is reduced when it is consumed by a particular user of it.

Privatization. The selling-off of publicly owned enterprises to private owners.

Product differentiation. Causing buyers to believe that a particular version of a product is superior to that being offered by competitors.

Production possibilities. Levels of output which are within the range of possibilities for a particular economy.

Production possibility curve. A graphical representation of the boundary between possible and unattainable levels of production in a particular economy.

Profit. When a firm's revenues exceed its costs, profit is the difference between the two.

Public goods. A good which can only be supplied to all if it is supplied to one and the availability of which is not diminished by any one consumer's use of it.

Public interest. The notion that there is some kind of general interest of the community as a whole which can be affected by the actions of governments or private agents.

Quantity theory of money. The idea that there is a direct link between the quantity of money in the economy and the price level.

Quota. A limitation on the amount of a good that can be produced or offered for sale domestically or internationally.

Rational behaviour. Behaviour that is consistent with the attainment of an individual's perception of his or her own best interest.

Real balance effect. The influence a change the quantity of real money has on the quantity of real national income demanded.

Redistribution policy. Measures taken by government to transfer income from some individuals to others.

Relative prices. The relationship between the prices of different goods and services. May be thought of in terms of the amount of one good which can be

had for a certain expenditure compared to the amount of another good which can be had for the same expenditure.

Rent-seeking. The activities of individuals or firms to obtain special privileges, such as monopoly power, which will enable them to increase their incomes. Using up resources to win such privileges from governments or their agencies.

Resources. All those things which can be used to produce economic satisfaction.

Ricardo, David (1772-1823). Born in London, Ricardo had a successful financial career in the City. He developed a strong interest in the work of Adam Smith and other early contributors to economics such as Jeremy Bentham and Thomas Malthus. He had a life-long friendship with the latter, although their ideas were usually sharply conflicting. Ricardo wrote several influential pamphlets on economic issues of his day, particularly on taxation and commercial policy. In 1817 he published his major work, *Principles of Political Economy and Taxation*. Smith, Malthus and Ricardo are generally regarded as the main members of the classical school of economics.

Risk. Those undertaking investments or the production of goods and services for sale cannot know with certainty whether they will recover the outlays needed to conduct these activities. Although some risks can be insured against (the risk of fire losses for example) there is no way of insuring against the possibility of business losses due to the uncertainty of the market place.

Robinson, Joan (1903-83). Born in Surrey, England. A prominent Cambridge economist, Joan Robinson first attracted attention with her work on imperfect competition which became the basis of standard expositions in university textbooks on economic theory, but which she subsequently repudiated. She was a powerful advocate of Keynesian economics in the 1930s and 40s. After World War II she sought to develop a dynamic version of the Keynesian model and her work was the basis for what is sometimes called "neo-Keynesianism", a radical

form of Keynesianism associated with a small group of economists at Cambridge. She was one of the few mainstream academic economists to take Marxian economics seriously and incorporated elements of it into her own work. In the 1960s and 1970s she engaged in a vigorous intellectual controversy with Paul Samuelson and other dominant American theorists (based at the Massachusetts Institute of Technology) over the theory of capital and the marginal productivity theory of income distribution.

Saving function. The relationship between saving and national income.

Saving. The act of abstaining from consumption. In terms of the national accounts, the difference between personal income less taxes and total consumption spending.

Scarcity. The fact that human wants exceed the means of satisfying them.

Schedule. A table or list of values.

Schumpeter, Joseph (1883-1950). An Austrian-born economist who had a broadly-based career as a lawyer, banker, teacher and senior civil servant in Austria before migrating to the US where he became a professor economics at Harvard in 1932. His scholarly writing ranges over topics as diverse as business cycles and the historical evolution of capitalism. He is perhaps best known today for his defence of monopoly, which he developed in conjunction with his view that the success of capitalism was largely attributable to the freedom it allowed for innovation and entrepreneurial activity.

Seasonal unemployment. Unemployment which occurs regularly because of seasonal changes in the demand for certain kinds of labour.

Secular change. Change over a long period of time, such as a decade or more. Distinguished from cyclical change which occurs in shorter time periods such as a year.

Shareholder. Owner of some fraction of the stock issued by a corporation.

Short run. In the theory of the firm, a period of time which is too short for changes to be made in all inputs. For example, a period not long enough to permit the size of the physical plant to be altered.

Simple money multiplier. The amount by which a change in the monetary base is multiplied to bring about the eventual change in the total money supply. It is called the simple money multiplier because it does not take into account possible offsets to the process, such as a rise in the amount of money individuals or households may choose to hold as cash when the money supply increases.

Single proprietorship. A form of unincorporated business in which there is only one owner.

Size distribution of income. The distribution of income among groups of income recipients defined on the basis of the size of their incomes.

Smith, Adam (1723-90). Generally regarded as the founder of modern economics, Adam Smith was born in 1723 in Kirkaldy, Scotland. Educated at Glasgow College and at Oxford, he eventually gained the chair of moral philosophy at the University of Edinburgh. He published his *Theory of Moral Sentiments* in 1759 and his great work, *An Inquiry into the Nature and Causes of the Wealth of Nations* in 1776. The latter was an immediate success and its influence is still felt today. Perhaps its most famous passage is that in which Smith elaborated on his notion that individuals are motivated not by altruism, but by self-interest. In pursing their own interests, however, they inadvertently advance the interest of society as a whole, led as it were by "an invisible hand."

Social cost. The real cost to society of having a good or service produced, which may be greater than the private costs incorporated by the producer in its market price.

Social Darwinists. A disparate group of turn-of-the-century commentators on social issues who sought to utilize the Darwinian law of natural selection ("survival of the fittest") as a basis for social policy. The best-known of the social Darwinists was Herbert Spencer.

Spencer, Herbert (1820-1903). A British philosopher and early sociologist. Spencer was trained mainly in engineering, but he developed an early interest in social science. He became involved with several radical social movements and tried to develop an ambitious, but never fully coherent philosophical system he called "Synthetic Philosophy." He published three major books: *Social Statics*, 1850; *The Man versus the State*, 1884; and *The Principles of Ethics*, 1892-3. His social theories were founded on the conviction that the evolution of society from a state of brutal barbarism to modern industrial civilization had depended on the subordination of the less capable members of society to their superiors. Any interventions which alleviated the circumstances of the less fit, Spencer contended, disrupted the operation of the benign natural processes which ensured progress by eliminating the idle, incompetent and unproductive members of society.

Stalin, Joseph Vissarianovich (born J.V. Dzhugashvili) (1879-1953). Lenin's disciple and successor as leader of the Soviet Union. Stalin reinforced the system of centralized state control after gaining power when Lenin died in 1924. Through systematic purging of dissenters from the Party apparatus, Stalin achieved supreme control and drove forward a massive program of industrial development and forced collectivization of agriculture. As he once put it, "We lag behind the advanced countries by 50 to 100 years. We must make good this distance in ten years." Despite enormous losses due to famine in the 1930s and the devastation of World War II, by the time of his death Stalin had made the Soviet Union into a modern, industrial state capable of challenging the United States for international economic, political and technological leadership.

Stationary state. The economic condition envisioned by the classical writers once the growth of population had reached the point where output per capita was reduced to the subsistence level and the accumulation of capital had reduced the return to investment to zero. The economy would remain in equilibrium with no possibility of future increases in population or per capita incomes.

Stigler, George (1911-). Stigler was born and grew up in the western US and studied at the University of Washington, at Northwestern, and Chicago. He subsequently taught at several universities in the American mid-west and at Columbia before settling down at the University of Chicago where he remained from 1958 until retirement in 1981. His published work covers a variety of topics in economic theory, including oligopoly, economies of scale and other aspects of industrial organization. Some of his most original contributions have to do with the economics of information, which he treated as a standard commodity subject to the usual influences of demand and supply, and the economic theory of regulation.

Substitute goods. Goods which may be used in place of other goods.

Substitution effect. The change in the quantity of a good demanded resulting from a change in its relative price, leaving aside any change in quantity demanded that can be attributable to the associated change in the consumer's real income. It may also be thought of as a a change in the quantity demanded as a result of a movement along a single indifference curve.

Tariff. A tax imposed on an imported good.

Tastes. The preferences of consumers.

Technology. Knowledge which permits or facilitates the transformation of resources into goods and services.

Tort. In law, a private or civil wrong.

Total factor productivity. The growth of real output beyond what can be attributed to increases in the quantities of labour and capital employed.

Transfer payments. Social benefits paid to individuals or households by government.

Unemployment. The non-utilization of labour resources; the condition in which members of the labour force are without jobs. Sometimes used more broadly to refer to the waste of resources when the economy is operating at less than its full potential.

Utilitarian. Refers to a school of philosophy based on the ideas of Jeremy Bentham (1748-1832). The main principle involved was that private morality and government policy should be based on the concept of "general utility,"-the greatest good for the greatest number.

Voluntary export restraint. A restriction placed by an exporting country on the volume of exports it sends to a particular country.

Wages. The general term applied to the earnings of the factor of production, labour.

Wants. The apparently limitless desires or wishes people have for particular goods or services.

X-inefficiency. The failure to minimize costs or maximize returns. (Sometimes referred to as X-efficiency, but carrying the same meaning.)