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**DICTIONARY OF  
ECONOMIC TERMS**

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This dictionary is a quality source of information concepts in economics. Here you will find thorough economic terms with its definition in English. Search is in alphabetical order. The Explanatory Dictionary will be targeted mainly for professors, graduate students of economic institutions, entrepreneurs, economists, and also for all those who study economic fundamentals and want to achieve success in this area.

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## FOREWORD

Today, Ukraine is committed to national, cultural and economic renaissance. Millions of compatriots understand the need of knowledge of economic development, which is actively forming new social and economic relations. In modern conditions of Ukrainian society there is an urgent need for deeper economic reforms, what in their essence and orientation would meet the objective requirements of national revival, the transition to civilized socially oriented economy.

Undeniable truth is that a highly efficient and competitive national economy can only create and develop competent professionals at all levels, especially business leaders with appropriate economic background.

The purpose of the proposed publication is to help form an idea about the basics of economics as a science that integrates knowledge of the current economy on a micro and macro level.

Material of dictionary covers basic terms and concepts of economics, the foundations of which are taught in institutions of higher education. Therefore, it can be a base for students who will receive detailed information about the features of the economy.

Terms and concepts presented in the dictionary in English, which will help you better understand the basics of economics diplomats, ambassadors, postgraduate and international students who study in Ukraine. The dictionary contains more than 1200 economic terms in English. The concepts of the dictionary are in alphabetical order.

During the selection and processing registry data of the dictionary Ukrainian and English universal and encyclopedic dictionaries were used. This is one of the first attempts to introduce vocabulary of this kind, because the authors do not claim to its completeness and gratefully accept comments and suggestions to the following publications. The authors hope the dictionary will give you better navigation in the current challenges of the economy and contribute into economic education, self-education, economic thinking.

***Ability-to-pay principle*** – the idea that those who have greater income (or wealth) should pay a greater proportion of it as taxes than those who have less income (or wealth).

***Absolute advantage*** – the theory that specialization in trade is beneficial whenever each party has an absolute cost advantage (uses fewer resources) in the production of some product.

***Abstraction*** – an elimination of irrelevant and noneconomic facts to obtain an economic principle.

***Accounting profit*** – a profit obtained by subtracting the firm's explicit costs from its total sales receipts.

***Actual investment*** – the amount which firms do invest; equal to planned investment plus unplanned investment.

***Advalorem tax*** – sales tax or excise tax calculated as a flat percentage of the sales price of a good.

***Adaptive expectations theory*** – the idea that people determine their expectations about future events (for example, inflation) on the basis of past and present events (rates of inflation) and only change their expectations as events unfold.

***Adjustable pegs*** – the device used in the Bretton Woods system to alter exchange rates in an orderly

way to eliminate persistent payments deficits and surpluses.

***Adverse selection*** – a situation in which “less desirable” traders are more likely to participate in exchange, causing the outcome to be less efficient than otherwise.

***Adverse selection problem*** – a problem arising when information known to one party to a contract is not known to the other party, causing the latter to incur major costs.

***Advertising*** – a seller's activities in communicating its message about its product to potential buyers.

***Affirmative action*** – policies and programs which establish targets of increased employment and promotion for women and minorities.

***Agency relationship*** – a relationship in which one hires an agent to perform a task that affects one's own welfare.

***Aggregate demand*** – a schedule or curve which shows the total quantity of goods and services demanded (purchased) at different price levels.

***Aggregate demand curve*** – a curve that relates the demand for real GNP to the general price level.

***Aggregate expenditures*** – the total amount spent for final goods and services in the economy.

***Aggregate expenditures***

**schedule** – a schedule or curve showing the total amount spent for final goods and services at different levels of GDP.

**Aggregate expenditures-domestic output approach** – determination of the equilibrium gross domestic product by finding the real GDP at which aggregate expenditures equal domestic output.

**Aggregate supply** – a schedule or curve showing the total quantity of goods and services supplied (produced) at different price levels.

**Aggregate supply curve** – curve that relates the supply of real GNP to the general price level.

**Aggregation** – the process of combining individual items into a group.

**Allocation of resources** – the distribution of either inputs or outputs among, respectively, either firms in an input market or consumers in an output market.

**Allocative efficiency** – the apportionment of resources among firms and industries to obtain the production of the products most wanted by society (consumers).

**Animal spirits** – a term that refers to investors' optimism or pessimism about the future and their willingness to commit to new investment projects.

**Annually balanced budget** – a budget in which government

expenditures and tax collections are equal each year.

**Anticipated inflation** – increases in the price level (inflation) which occur at the expected rate.

**Antidumping law** – law that sets a minimum price on an imported good such that if the import enters the country at a price below the minimum, the law triggers a government investigation of possible dumping.

**Antitrust laws** – legislation which prohibit anticompetitive business activities such as price fixing, bid rigging, monopolization, and tying contracts.

**Antitrust policy** – a government policy for curbing monopoly characteristics and business practices aimed at reducing competition.

**Arbitrage** – the practice of selling one asset and buying another while earning a risk-free profit.

**Arbitration** – process for settling labor-management disputes: an impartial third party, whose decision is binding on both parties, acts as a judge.

**Arc slope** – the slope of a straight line between two points on a curve.

**Asset** – anything of monetary value owned by a firm or individual.

**Asset demand for money** – the amount of money people want to hold as a store of value.

**Assumption** – a fact or

theoretical condition that is taken as given in an economics argument or discussion.

**Asymmetric information** – a situation in which some parties know more than others about relevant economic decision variables.

**Attainable set** – the set of all affordable combinations (bundles) of goods.

**Autarky** – the absence of trade.

**Authoritarian capitalism** – an economic system in which property resources are privately owned and government extensively directs and controls the economy.

**Automatic stabilizers** – government programs that increase spending and reduce revenue during cyclical contractions, and that reduce spending and raise revenue during cyclical expansions.

**Autonomous-expenditures multiplier** – the dollar change in GNP if autonomous expenditures change by \$1.

**Average cost** – total cost divided by output.

**Average fixed cost** – cost determined by dividing total fixed cost by the number of units of output.

**Average product** – the total output produced per unit of a resource employed (total product divided by the quantity of that

employed resource).

**Average product of labor** – a total output divided by total employment.

**Average propensity to consume** – fraction of disposable income which households plan to spend for consumer goods and services.

**Average propensity to save** – fraction of disposable income which households save.

**Average revenue** – a total revenue from the sale of a product divided by the quantity of the product sold (demanded).

**Average tax rate** – a total tax paid divided by total (taxable) income, as a percentage.

**Average total cost** – a firm's total cost divided by output (the quantity of product produced).

**Average variable cost** – cost determined by dividing total variable cost by the number of units of output.

**Backflows** – the return of workers to the countries from which they originally migrated.

**Balance of payments** – a nation's total payments to other nations must be equal to, or balanced by, the total payments received from other nations.

**Balance of payments account** – record of all the payments made by a nation to other nations, as well as all the payments that it receives from

other nations during the course of a year.

**Balance of payments deficit** – the excess of a nation's payments to other nations over the payments received from other nations, exclusive of government capital account transactions in official reserve assets.

**Balance of payments surplus** – excess of payments received from other nations over the payments made to them, exclusive of government capital account transactions in official reserves and liquid claims.

**Balance of trade** – the difference between merchandise exports and merchandise imports.

**Balance on current account** – the exports of goods and services of a nation less its imports of goods and services plus its net investment income and net transfers in a year.

**Balance on goods and services** – the exports of goods and services of a nation less its imports of goods and services in a year.

**Balance on the capital account** – the capital inflows of a nation less its capital outflows.

**Balance sheet** – a statement of the assets, liabilities, and net worth of a firm or individual at some given time.

**Balanced-budget multiplier** – the extent to which an equal change

in government spending and taxes changes equilibrium gross domestic product.

**Balance-of-payments accounts** – a list of sources and amounts received and paid for international transactions over some period of time, such as a year.

**Barrier to entry** – anything which artificially prevents the entry of firms into an industry.

**Barter** – the exchange of one good for another good without the use of money.

**Barter economy** – trading goods directly for goods.

**Base year** – the year with which other years are compared when an index is constructed.

**Benefit-cost analysis** – comparing the marginal benefits of a government project or program with the marginal costs to decide whether or not to employ resources in that project or program and to what extent.

**Benefit-reduction rate** – the percentage by which subsidy benefits in a public assistance program, are reduced as earned income rises.

**Benefits-received principle** – the idea that those who receive the benefits of goods and services provided by government should pay the taxes required to finance them.

**Beta of an asset** – a measure of

the risk of an asset relative to the market as a whole. It is computed by dividing the covariance of the asset's return with the market as a whole by the market variance.

**Bilateral monopoly** – a market structure in which there is monopoly power on both the buyer's and the seller's side of the market.

**Bilateral pure exchange** – a model consisting of two agents, each endowed with a bundle of two goods.

**Biomass relationship** – a quantitative relationship between the current stock and the natural growth in that stock.

**Bliss point** – the bundle in the model of individual consumer choice for which a consumer is satiated with respect to all goods simultaneously.

**Bond** – a financial device through which a borrower (a firm or government) is obligated to pay the principle and interest on a loan at a specific date in the future.

**Borrowing** – the reduction of future consumption in order to increase present consumption.

**Brain drain** – the emigration of highly educated, highly skilled workers from a country.

**Break-even income** – the level of disposable income at which households plan to consume (spend) all their income and to save none of it.

**Break-even output** – any output at which a (competitive) firm's total cost and total revenue are equal.

**Break-even point** – point at which the quantity of output produced by a firm is such that total revenue just equals total cost or, equivalently, where average revenue (price) equals average total cost.

**Bretton Woods system** – a system of fixed exchange rates in which only the dollar was directly convertible into gold at a fixed rate of exchange. All other currencies were indirectly convertible into gold by virtue of their convertibility into the dollar.

**Budget constraint** – a limitation that specifies the bundles of goods a consumer can afford in a time period, given the consumer's income and prices of goods in that period.

**Budget deficit** – expenditures are more than tax revenues.

**Budget line** – a line which shows the different combinations of two products a consumer can purchase with a specific money income, given the products' prices.

**Budget restraint** – the limit which the size of a consumer's income (and the prices which must be paid for goods and services) imposes on the ability of that consumer to obtain goods and services.

**Built-in stabilizer** – a mechanism which increases government's

budget deficit (or reduces its surplus) during a recession and increases government's budget surplus (or reduces its deficit) during inflation without any action by policymakers; the tax system is one such mechanism.

**Business cycles** – the somewhat irregular but recurrent pattern of fluctuations in economic activity.

**Business fluctuations** – recurring phenomena of increasing and decreasing unemployment associated with decreasing and increasing output.

**Business unionism** – a labor unionism which concerns itself with such practical and short-run objectives as higher wages, shorter hours, and improved working conditions.

**Business-cycle peak** – the point at which business expansion ends and contraction begins.

**Capital** – a productive resource consisting of land and other natural resources, such as mineral deposits, and reproducible capital, such as machinery and factory buildings.

**Capital account** – those items in the balance-of-payments accounts consisting of purchases and sales of investments across international boundaries.

**Capital deepening** – the result of a process in which capital is accumulated faster than the

population grows.

**Capital flight** – the transfer of savings from developing countries to industrially advanced countries to avoid government expropriation, taxation, and high rates of inflation or to realize better investment opportunities.

**Capital gain** – an increase in the value of a share. Capital gains are realized only when the share is sold and the increase in value is actually converted to cash.

**Capital inflow** – the expenditures made by the residents of foreign nations to purchase real and financial capital from the residents of a nation.

**Capital inputs** – inputs that are not used up upon first usage and have an economic life or period of viable use longer than one year.

**Capital outflow** – the expenditures made by the residents of a nation to purchase real and financial capital from the residents of foreign nations.

**Capital stock** – the total accumulation of investment goods still in service.

**Capital-intensive commodity** – a product which requires a relatively large amount of capital to produce.

**Capitalism** – form of economic organization in which the means of production are privately owned and operated for profit and where freely

operating markets coordinate the activities of consumers, businesses, and all suppliers of resources.

**Capital-saving technological advance** – an improvement in technology which permits a greater quantity of a product to be produced with a specific amount of capital.

**Cartel** – a formal agreement among firms in an industry to set the price of a product and the outputs of the individual firms or to divide the market for the product geographically.

**Cash** – a synonym for money.

**Causation** – a relationship in which the occurrence of one or more events brings about another event.

**Cease-and-desist order** – an order from a court or government agency to a corporation or individual to stop engaging in a specified practice.

**Central bank** – a country's government agency responsible for managing the country's monetary system.

**Central economic planning** – government determination of the objectives of the economy and how resources will be directed to attain those objectives.

**Certainty** – a situation without speculation and guesses.

**Certainty equivalent** – the amount of money whose utility is equal to the expected utility of a gamble.

**Change in demand** – a shift in the demand curve caused by changes in the determinants of demand other than the good's own price.

**Change in supply** – a shift in the supply curve caused by changes in the determinants of supply other than the good's own price.

**Checkable deposit** – any deposit in a commercial bank or thrift institution against which a check may be written.

**Checking account** – a checkable deposit in a commercial bank or thrift institution.

**Class-action suit** – a lawsuit in which one person or agency brings a court action on behalf of a class of people allegedly harmed by the actions of the party being sued.

**Closed economy** – an economy which neither exports nor imports goods and services.

**Closed shop** – a situation in which a firm may hire only workers who are union members, on terms negotiated with the union in the labor contract.

**Cobb-Douglas production function** – a commonly used production function to describe the way output varies with input use.

**Coefficient of elasticity** – number obtained by dividing the percentage change in quantity by the percentage change in price.

**Coefficient of variation** – a measure of risk equal to the standard deviation divided by the mean of a random variable.

**Coefficient of variation rule** – the decision rule that among risky alternatives, one should choose the alternative with the smallest coefficient of variation.

**Coincidence of wants** – a situation in which the good or service which one trader desires to obtain is the same as that which another trader desires to give up, and an item which the second trader wishes to acquire is the same as that which the first trader desires to surrender.

**Coincident indicator** – an economic variable that turns at the same time as the general business cycle.

**Co-insurance** – a mechanism for sharing risks between two or more parties so that the insurance company pays only a percentage of damages.

**Collateral** – a general term for property offered by a borrower to ensure repayment.

**Collective bargaining** – the process of negotiating a labor contract between an employer and employees collectively represented by a union.

**Collective choices** – choices made through the accepted political

institutions.

**Collective voice** – the function a labor union performs for its members as a group when it communicates their problems and grievances to management and presses management for a satisfactory resolution.

**Collusion** – a situation in which firms act together and in agreement (collude) to fix prices, divide a market, or otherwise restrict competition.

**Command economy** – an economic system in which property resources are publicly owned and government uses central economic planning to direct and coordinate economic activities.

**Commercial bank** – a financial firm, or a division of a larger firm, that accepts fixed-dollar deposits subject to withdrawal by check on demand, and invests those depositors' funds in interest-bearing loans and marketable investments.

**Commercial banking system** – all commercial banks and thrift institutions as a group.

**Common property resource** – a natural resource used collectively by the people, with no exclusion.

**Common stock** – the principal security representing ownership claims on corporations.

**Communism** – the form of economic organization in which the

means of production are publicly owned and decisions are primarily centralized.

**Comparative advantage** – a producer has a comparative advantage in producing a good if the producer could expand production of the good at a lower opportunity cost than could other producers; the theory that persons, firms, and nations should specialize in the production of goods for which their opportunity costs are lowest.

**Comparative static analysis** – uses logic to trace the effect of a change in economic conditions on equilibrium values of the variables that an economic model seeks to explain.

**Compensated demand curves** – those that reflect only substitution effects of price changes.

**Compensating wage differentials** – differences in money wages that make otherwise similar workers in different occupations or different locations equally well off.

**Compensation to employees** – wages and salaries plus wage and salary supplements paid by employers to workers.

**Competition** – the presence in a market of a large number of independent buyers and sellers competing with one another and the freedom of buyers and sellers to enter and leave the market.

**Competitive firm** – one that sells output in perfectly competitive markets.

**Competitive labor market** – a resource market in which a large number of firms demand a particular type of labor supplied by a large number of nonunion workers.

**Complementary factors** – factors of production, the use of which always increases (decreases) whenever the use of any one of them increases (decreases).

**Complementary good** – a good that tends to be used jointly with another good.

**Complements** – goods for which an increase (decrease) in the price of one decreases (increases) the quantity demanded of the other, all other things equal.

**Completeness and uniqueness** – in revealed preference, the assumption that there must be at least one set of prices and income at which each bundle is chosen and that except for proportional changes, there is only one set of prices and income at which each bundle is chosen.

**Complex multiplier** – the multiplier which exists when changes in the gross domestic product change net taxes and imports, as well as saving.

**Compound interest** – interest earned on the sum of an original

principal and accrued interest.

**Concentrated market** – a market in which just a few firms have a large share of the total market.

**Concentration ratio 1** – a measure of monopoly power computed as the percentage of total industry sales, output, employment, value added, or assets associated with the largest firms ranked in order of market shares.

**Concentration ratio 2** – measure of the extent to which a few firms dominate an industry, computed as the percentage of total industry sales accounted for by the four (or eight) largest (in terms of sales) firms in the industry; the percentage of the total sales of an industry made by the four largest sellers in the industry.

**Congestion externality** – the impact on others' current harvesting activity and costs of harvest when any harvester increases his or her effort and harvest, or when more harvesters enter the field.

**Conglomerate** – a firm that produces a wide variety of goods and services for a number of largely unrelated markets.

**Conglomerate combination** – a group of plants owned by a single firm and engaged at one or more stages in the production of different products.

**Conglomerate merger** – the

merger of a firm, in one industry with a firm in another industry or region (with a firm which is not a supplier, customer, or competitor).

**Consistent estimator** – an estimator whose probability distribution collapses on its true value as the sample size gets larger.

**Constant cost industry** – an industry in which firms' cost curves are not affected by changes in industry output.

**Constant returns to scale** – a production condition such that if all inputs increase by a certain proportion, output increases by the same proportion.

**Constant-cost industry** – an industry in which expansion by the entry of new firms has no effect on the prices firms in the industry must pay for resources and thus no effect on production costs.

**Constant-cost production** – a production condition of the firm in which all output levels have the same average total cost of production, under least-cost production.

**Consumer (buyer) surplus** – the total benefit, or value, that buyers receive beyond what they pay for a good.

**Consumer equilibrium** – represents the combination of goods purchased that maximizes utility subject to the budget constraint.

**Consumer goods** – products and services which satisfy human wants directly.

**Consumer sovereignty** – the condition that exists when the basic decisions about what to produce and how much to produce are dominated by consumers acting individually or as households.

**Consumer surplus** – the difference between what a consumer (or consumers) is willing to pay for an additional unit of a product or service and its market price.

**Consumption** – the eating up or using up of something of value, or the enjoyment of services from durable goods.

**Consumption capital** – residential real estate and consumer durables.

**Consumption function** – the relationship between consumption and income.

**Consumption of fixed capital** – estimate of the amount of capital worn out or used up (consumed) in producing the gross domestic product.

**Consumption schedule** – a schedule showing the amounts households plan to spend for consumer goods at different levels of disposable income.

**Contestable market** – a market that rival firms can enter and exit without prohibitive cost; the form of

market structure in which even a lone incumbent will behave as if it were perfectly competitive because of the absence of sunk costs and entry barriers as well as a lag in the ability of incumbents to react to pricing initiatives of potential entrants.

**Contingent consumption plan** – a specification of what would be consumed under each state of nature that could occur.

**Contract curve** – shows all the possible efficient allocations of two goods among two consumers.

**Contraction** – the phase of the business cycle during which real GNP is generally falling.

**Convexity of preference** – in consumer choice, the assumption that means are preferred to the lower ranked of two extremes and that means are preferred to equally ranked extremes.

**Coordination failure** – a situation in which people do not reach a mutually beneficial outcome because they lack some way to jointly coordinate their actions.

**Copayment** – the percentage of (say, health care) costs which an insured individual pays while the insurer pays the remainder.

**Copyright** – a legal protection provided to developers and publishers of books, computer software, videos, and musical

compositions against copying of their works by others.

**Corporate bond** – a kind of long-term debt incurred by a corporation which legally commits the corporation to pay the bond holder both a fixed amount of interest each year (the interest coupon) and the amount of the loan at the bond's maturity date.

**Corporate income tax** – a tax on the accounting profits of (only) incorporated businesses.

**Corporation** – a legal entity that can enter into contracts, sue and be sued, and own property without its owners incurring liability.

**Corrective tax** – a levy on the output of a good or service that increases its marginal private costs to a level equal to marginal social costs.

**Correlation** – a measure of the linear association between two random variables computed by dividing their covariance by the product of their standard deviations.

**Cost function** – describes the relationship between output produced and the minimum possible cost of that output.

**Cost-benefit analysis** – an examination of the benefits and costs associated with any government program; is based on the principle that any program should be carried on to the point at

which the last dollar spent on the program just yields a dollar's worth of benefit.

**Cost-plus pricing** – the pricing technique by which a firm estimates the average variable costs of producing and marketing a product, adds a charge for overhead, and then adds a markup for profits.

**Cost-push inflation** – increases in the price level (inflation) resulting from an increase in resource costs (for example, higher wage rates and raw material prices) and hence in per-unit production costs.

**Countercyclical variable** – a variable that generally moves opposite to the business cycle.

**Covariance** – the expected value of the product of the deviations of the two random variables about their means.

**Craft union** – a labor union which limits its membership to workers with a particular skill (craft); collective of workers in the same occupation who may work in different industries.

**Creative destruction** – the hypothesis that the creation of new products and production methods simultaneously destroys the market power of existing monopolies.

**Credit** – an accounting item which increases the value of an asset.

**Credit union** – an association of persons who have a common tie

(such as being employees of the same firm or members of the same labor union) which sells shares to (accepts deposits from) its members and makes loans to them.

**Creditor** – a person or organization to whom money is owed.

**Criminal conspiracy doctrine** – a doctrine from English common law that held that the organization of workers with the intent to raise wages constituted a criminal conspiracy and was therefore illegal.

**Cross elasticity of demand** – the ratio of the percentage change in quantity demanded of one good to the percentage change in the price of some other good.

**Cross-price elasticity** – the percentage change in the quantity demanded for one good divided by the percentage change in a second good's price.

**Cross-section data** – a data on certain selected characteristics of economic units for a certain time period, such as a year.

**Crowding in** – an economic outcome that arises when a reduction in government expenditures leads to an offsetting increase in private expenditures.

**Crowding out** – an economic outcome that arises when an increase in government expenditures leads to an offsetting decrease in

private expenditures.

**Crowding-out effect** – a rise in interest rates and a resulting decrease in planned investment caused by the government's increased borrowing in the money market.

**Currency appreciation** – a rise in the free-market value of a currency in terms of other currencies, with the result that fewer units of a currency will be required to buy a unit of a foreign currency.

**Currency depreciation** – a fall in the free-market value of a currency in terms of other currencies, meaning that more units of a currency will be required to buy a unit of a foreign currency.

**Currency devaluation** – a lowering of the level at which the price of a currency is fixed in relation to other currencies.

**Currency revaluation** – an increase in the level at which the price of a currency is fixed in relation to other currencies.

**Current account** – the section in a nation's international balance of payments which records its exports and imports of goods and services, its net investment income, and its net transfers.

**Customs union** – a group of countries that maintain free trade among themselves and a common policy toward international trade.

**Cyclical unemployment** – a type of unemployment caused by insufficient total spending (or by insufficient aggregate demand).

**Cyclically balanced budget** – the equality of government expenditures and net tax collections over the course of a business cycle.

**Deadweight loss** – the social loss, welfare loss, or efficiency loss caused by a departure from marginal cost pricing.

**Debit** – an accounting item which decreases the value of an asset.

**Debt financing** – funding provided by creditors who are not owners of the firm.

**Debt instrument** – written contract between borrower and lender specifying the terms of a loan.

**Decision lag** – the time it takes the government to act once it has recognized that action is necessary.

**Declining industry** – an industry in which economic profits are negative (losses are incurred) and which will, therefore, decrease its output as firms leave it.

**Decreasing returns to scale** – a situation in which output changes by a smaller scalar amount than the scalar change in all inputs.

**Decreasing-cost industry** – an industry in which expansion through the entry of firms decreases the prices firms in the industry must pay

for resources and therefore decreases their production costs.

**Decreasing-cost production** – a production condition of the firm in which the average total cost of production declines as output increases, under least-cost production.

**Deductible** – the dollar sum of costs which an insured individual must pay before the insurer begins to pay.

**Deduction** – reasoning from assumptions to conclusions; a method of reasoning which first develops a hypothesis and then tests the hypothesis with economic facts.

**Default risk** – the risk that a borrower will not make scheduled payments on its outstanding debt.

**Deflating** – finding the real gross domestic product by decreasing the dollar value of the GDP for a year in which prices were higher than in the base year.

**Demand** – a schedule showing the amounts of a good or service buyers (or a buyer) wish to purchase at various prices during some time period.

**Demand coefficients** – represent the amounts by which the quantity of a good that buyers will buy changes for each unit change of a demand variable.

**Demand curve** – a graphical representation of the information of

a demand schedule, with the price of the good on the vertical axis and the quantity of the good demanded per unit of time on the horizontal axis.

**Demand curve for a pure public good** – obtained by taking the sum of the individual marginal benefits of all consumers at each possible quantity.

**Demand deposit** – a deposit in a commercial bank or thrift against which checks may be written.

**Demand factor** – the increase in the level of aggregate demand which brings about the economic growth made possible by an increase in the production potential of the economy.

**Demand for a public good** – the vertical summation of all individuals' demand curves. The aggregate demand for a public good measures the total marginal benefit to society for each unit consumed.

**Demand function** – a relationship between the amounts purchased by consumers, price of an item, and all other influences on demand.

**Demand function for money** – the function showing the amount of money people want to hold as an asset, as determined by a specified list of economic variables such as their incomes and the cost of holding money.

**Demand management** – the use of fiscal policy and monetary policy

to increase or decrease aggregate demand.

**Demand price elasticity** – the percentage change in quantity demanded divided by the percentage change in price.

**Demand schedule** – a table that shows how the quantity of a good that consumers willingly purchase each month increases as the price of the good declines.

**Demand, law of** – a law that states that the lower the price of a good, the larger the quantity demanded, all other things equal.

**Demand-pull inflation** – increases in the price level (inflation) resulting from an excess of demand over output at the existing price level, caused by an increase in aggregate demand.

**Demographic transition** – the period of rapid population growth in a country between the drop in death rate and the drop in birth rate.

**Dependent variable** – a variable which changes as a consequence of a change in some other (independent) variable.

**Deposit money** – money held in bank accounts.

**Depository institutions** – firms which accept the deposits of money of the public (businesses and persons).

**Depreciation** – a decrease in the value of the dollar relative to another currency so that a dollar buys a

smaller amount of the foreign currency and therefore of foreign goods.

**Depression** – a large and protracted recession.

**Derivative** – the slope of a function at a point as measured by the slope of the tangent line at that point.

**Derived demand** – term used to characterize the demand for a productive factor because that demand is dependent upon, or derives from, the demand for the final product that the factor is used to produce; the demand for a resource which depends on the demand for the products it can be used to produce.

**Determinants of aggregate demand** – factors such as consumption spending, investment, government spending, and net exports which, if they change, shift the aggregate demand curve.

**Determinants of aggregate supply** – factors such as input prices, productivity, and the legal-institutional environment which, if they change, shift the aggregate supply curve.

**Determinants of demand** – factors other than its price which determine the quantities demanded of a good or service.

**Determinants of supply** – factors other than its price which determine

the quantities supplied of a good or service.

**Devaluation** – a decrease in the governmentally defined value of a currency.

**Differentiated oligopoly** – oligopoly in which each firm produces a product that is somewhat different from that produced by the other firms.

**Differentiated product** – a product which differs physically or in some other way from the similar products produced by other firms.

**Diffusion** – the spread of an innovation through its widespread imitation.

**Dilemma of regulation** – the tradeoff a regulatory agency faces in setting the maximum legal price a monopolist may charge: the socially optimal price is below average total cost, while the higher fair-return price does not produce allocative efficiency.

**Diminishing marginal returns, law of** – a law stating that the marginal product of any input will decline as the input increases beyond initial levels, with other inputs held constant.

**Diminishing returns** – the principle of an eventual diminishing productivity of a variable input in the short run.

**Direct foreign investment** – the building of new factories in a

particular nation by corporations of other nations.

**Direct relationship** – the relationship between two variables which change in the same direction, for example, product price and quantity supplied.

**Discharge of debt** – the final payment on a purchase of goods or repayment of a loan.

**Discouraged workers** – employees who have left the labor force because they have been unable to find employment.

**Discrimination** – according to individuals or groups inferior treatment in hiring, occupational access, education and training, promotion, wage rates, or working conditions, even though they have the same abilities, education and skills, and work experience as other workers.

**Discrimination coefficient** – a measure of the cost or disutility of prejudice.

**Discrimination in labor markets** – exists when employers engage in hiring practices that result in differing wages to equally productive workers.

**Diseconomies of scale** – a production condition in which a firm's output increases by a smaller proportion than its inputs; a situation in which average costs rise as the scale of production operation

increases.

**Disinflation** – a reduction in the rate of inflation.

**Disposable income** – personal income less personal taxes; income available for personal consumption expenditures and personal saving.

**Dissolution** – breaking a firm up into smaller firms.

**Distribution** – the division of a society's output among its members.

**Distributive justice** – the fair distribution of society's resources among its members.

**Diversified portfolio** – a group of many different stocks or other securities owned by an individual.

**Divestiture** – requiring a firm to sell some of its assets.

**Dividends** – payments by a corporation of all or part of its profit to its stockholders (the corporate owners); share of a firm's profits paid out to stockholders.

**Division of labor** – dividing the work required to produce a product into a number of different tasks which are performed by different workers.

**Domestic capital formation** – addition to a nation's stock of capital by saving and investing part of its own domestic output.

**Domestic output** – gross (or net) domestic product; the total output of final goods and services produced in the economy.

**Domestic price** – the price of a good or service within a country, determined by domestic demand and supply.

**Dominant strategy** – in game theory, a strategy that yields the best result no matter what an opponent does.

**Dominant voting outcome** – an outcome that cannot be beaten in a majority vote by any other proposed outcome.

**Double taxation** – the taxation of both corporate net income (profits) and the dividends paid from this net income when they become the personal income of households.

**Double-entry bookkeeping** – an accounting principle requiring funds that come in to be entered in an account that shows where they came from and also in an account that shows where they are put.

**Dummy variable** – a binary variable that equals unity when some characteristic is present and zero otherwise.

**Dumping** – the sale of products below cost in a foreign country or below the prices charged at home.

**Duopoly** – a market structure in which two sellers protected from entry of additional sellers are the sole producers of a standardized good with no close substitutes.

**Durable good** – a consumer good with an expected life (use) of 3

or more years.

**Dynamic efficiency** – the development over time of less costly production techniques, improved products, and new products; technological progress.

**Earnings** – the money income received by a worker.

**Economic analysis** – deriving economic principles from relevant economic facts.

**Economic capacity** – the output that is sustainable on a long-run basis, given physical capacity and the preferences people bring to the workplace.

**Economic concentration** – a description or measure of the degree to which an industry is monopolistic or competitive.

**Economic cost** – the alternative goods that must be forgone in order to produce a particular good.

**Economic efficiency** – an operating characteristic of a firm: the technologically efficient input combination is chosen so that it minimizes the total opportunity costs of producing a given output level.

**Economic growth** – an outward shift in the production possibilities curve which results from an increase in resource quantity or quality or an improvement in technology.

**Economic indicator** – any economic variable with peaks and troughs exhibiting a consistent

timing relationship with the peaks and troughs of the general business cycle.

***Economic integration*** – cooperation among and the complete or partial unification of the economies of different nations; the elimination of barriers to trade among these nations.

***Economic model*** – assumptions that serve to establish relationships among economic variables.

***Economic person*** – the economist's theoretical abstraction of a person behaving solely according to profit or benefit-maximizing goals.

***Economic perspective*** – a viewpoint which envisions individuals and institutions making rational decisions by comparing the marginal benefits and marginal costs associated with their actions.

***Economic policy*** – proposed method of dealing with a problem or problems posed by economic reality that is arrived at through the use of economic theory and analysis.

***Economic principle*** – a widely accepted generalization about the economic behavior of individuals and institutions.

***Economic problem*** – how to use scarce resources to best fulfill society's unlimited wants.

***Economic profit*** – difference between the total revenue obtained

for the firm's sales and the opportunity costs of all the resources used by the firm.

***Economic region of consumption*** – the region of positive marginal utilities for all goods.

***Economic rent*** – any amount of payment a factor or resource receives in excess of its supply price when there is market equilibrium; difference between the payments made for input services and the minimum amount that would be required to induce the suppliers to make those services available.

***Economic resources*** – all the natural, man-made, and human resources used in production of goods.

***Economic system*** – a particular set of institutional arrangements and a coordinating mechanism for solving the economizing problem; a method of organizing an economy.

***Economic theory*** – a statement about the behavior of economic phenomena, often referred to as a law, principle, or model.

***Economic variables*** – measurable quantities or sums of money that can take on a number of possible values.

***Economics*** – the social science dealing with the use of scarce resources to obtain the maximum satisfaction of society's virtually

unlimited material wants.

**Economies of scale 1** – a production condition in which a firm's output increases by a greater proportion than its inputs increase.

**Economies of scale 2** – increases in input productivities that result from division of labor and savings in materials when a firm increases the scale of its operations.

**Economies of scope** – a situation in which the cost of producing two products jointly is less than the total cost of producing each product separately

**Economizing problem** – the choices necessitated because society's material wants for goods and services are unlimited but the resources available to satisfy these wants are limited (scarce).

**Economy** – a particular system of organization for the production, distribution, and consumption of all things people use to obtain a standard of living.

**Effective competition** – a situation in which buyers and sellers act independently even though the market is not pure or perfect. The competitive process needs to be open and free and the competitors must be comparable.

**Effects lag** – the time it takes for changed government policy to affect employment, output, inflation, and other aspects of economic

performance that the policy is designed to change.

**Efficiency curve** – the set of all Pareto-efficient allocations of inputs in the two-input case.

**Efficiency factors (in growth)** – the capacity of an economy to combine resources effectively to achieve growth of real output which the supply factors (of growth) make possible.

**Efficiency loss of a tax** – the loss of net benefits to society because a tax reduces the production and consumption of a taxed good below the level of allocative efficiency.

**Efficiency wage** – a wage which minimizes wage costs per unit of output.

**Efficient allocation of resources** – that allocation of the resources of an economy among the production of different products which leads to the maximum satisfaction of the wants of consumers.

**Efficient market hypothesis** – the theory that the stock market adjusts so quickly to news that no technique of selecting a portfolio of stocks can outperform a strategy of holding a diversified portfolio.

**Efficient output** – output at which it is not possible to increase the net benefit from enjoyment of the item by making either more or less of the good available.

**Elastic** – demand is elastic if the

amount spent on a good rises when its price goes down.

**Elastic demand** – a product or resource demand whose price elasticity is greater than 1; means the resulting change in quantity demanded is greater than the percentage change in price.

**Elastic supply** – product or resource supply whose price elasticity is greater than 1; means the resulting change in quantity supplied is greater than the percentage change in price.

**Elasticity** – the percentage change in one variable divided by the percentage change in another variable.

**Elasticity coefficient** – the number obtained when the percentage change in quantity demanded (or supplied) is divided by the percentage change in the price of the commodity.

**Elasticity of (input) substitution** – the percentage change in the input ratio divided by the percentage change, in the marginal rate of technical substitution.

**Emissions standards** – limits established by governing authorities on the annual amount and kinds of pollutants that can be emitted.

**Employment discrimination** – inferior treatment in hiring, promotions, work assignments, and such for a particular group of

employees.

**Employment rate** – the percentage of the labor force employed at any time.

**Endogenous variable** – a variable that has its value determined by the solution of a model.

**Enforceable contract** – a contract with which the courts can force each of the parties to comply.

**Engineering efficiency** – a standard of performance based on some specified physical standard, such as maximizing the physical flow of items emerging from a machine per hour.

**Entrepreneurs** – individuals who bear the financial risks of developing new products and technologies, engaging in production, and marketing their products.

**Entrepreneurship** – the innovating, organizing, and risk-taking activities of individuals and firms that create new products and new markets.

**Entry-limit price** – price low enough to prevent new entrants from entering the market as sellers.

**Equality of opportunity** – a social condition that assures that, apart from innate abilities, each of us has the same starting point, the same chance to succeed in life.

**Equality versus efficiency tradeoff** – the decrease in economic

efficiency which may accompany a decrease in income inequality.

**Equilibrium** – state of balance of forces such that the economic variables a model seeks to explain neither increase nor decrease.

**Equilibrium price 1** – price at which market equilibrium is achieved.

**Equilibrium price 2** – the prevailing market price at which demanders can buy the quantities they want and suppliers can sell the quantities they want.

**Equilibrium price level** – the price level at which the aggregate demand curve intersects the aggregate supply curve.

**Equilibrium quantity** – the quantity demanded and supplied at the equilibrium price in a competitive market.

**Equilibrium real domestic output** – the gross domestic product at which the total quantity of final goods and services purchased (aggregate expenditures) is equal to the total quantity of final goods and services produced (the real domestic output).

**Equity financing** – funding provided by a firm's owners through purchase of shares in the firm, which entitles them to a share of dividends and to proceeds from any sale or liquidation of the firm.

**Ex post real rate of interest** – the

nominal rate of interest minus the actual rate of inflation observed after the fact.

**Excess burden of a tax** – difference between the dollar value of consumer surplus lost as a result of the tax and the tax revenue collected.

**Excess capacity** – plant resources which are underused when imperfectly competitive firms produce less output than that associated with achieving minimum average total cost.

**Excess capacity theorem** – a theorem stating that existing capacities are underutilized in monopolistic competition.

**Excess demand** – the amount by which the quantity demanded exceeds the quantity supplied at a price below the equilibrium price.

**Excess reserves** – the amount by which a bank or thrift's actual reserves exceed its required reserves.

**Excess supply** – the amount by which the quantity supplied exceeds the quantity demanded at a price above the equilibrium price.

**Exchange rate** – the price of foreign currency, or the amount of one currency that must be paid to obtain 1 unit of another currency.

**Exchange-rate appreciation** – an increase in the value of a nation's currency in foreign exchange markets.

**Exchange-rate depreciation** – a decrease in the value of a nation's currency in foreign exchange markets.

**Exchange-rate determinant** – any factor other than the rate of exchange which determines a currency's demand and supply in the foreign exchange market.

**Excise tax** – a tax levied on the production of a specific product or on the quantity of the product purchased.

**Excludable public goods** – goods for which the transaction costs of excluding additional consumers are quite low.

**Exclusion principle** – distinguishing characteristic of private goods, the benefits of which, unlike those of public goods, accrue only to those who purchase them.

**Exclusive dealing** – a contractual agreement between two firms that limits which outside firms one or both firms can do business with.

**Exclusive dealing agreement** – manufacturer's agreement with dealers and distributors that restricts the latter's purchase, sale, or use of competing products.

**Exclusive unionism** – the practice of a labor union of restricting the supply of skilled union labor to increase the wages received by union members.

**Exhaustive expenditures** –

government expenditures of society's resources so that they are unavailable to private producers or consumers.

**Exit mechanism** – the process of leaving a job and searching for another one as a means of improving one's working conditions.

**Exogenous variable** – a variable that has its value determined outside a system of equations.

**Expanding industry** – an industry whose firms earn economic profits and which experience an increase in output as new firms enter the industry.

**Expansion** – the phase of the business cycle during which real GNP is generally rising.

**Expansion path** – the set of input bundles in which the isoquants are tangent to isocost lines.

**Expansionary fiscal policy** – an increase in government expenditures for goods and services, a decrease in net taxes, or some combination of the two for the purpose of increasing aggregate demand and expanding real output.

**Expectations** – the anticipations of consumers, firms, and others about future economic conditions.

**Expected real rate of interest** – the known nominal rate of interest minus the expected rate of inflation.

**Expected utility** – in a chance at random payoffs, the sum of the

utilities of the payoffs weighted by their probabilities.

**Expected value** – average of what you might expect to gain from a gamble if you played it over and over.

**Expected value of income** – the weighted sum of all possible incomes in an uncertain situation in which the weights are the probabilities associated with each possible income.

**Expected value rule** – the decision rule that when a decision will be replicated many times, one should choose the action with the greatest expected value in order to maximize the expected payoff from the action.

**Expenditures approach** – the method which adds all expenditures made for final goods and services to measure the gross domestic product.

**Explicit costs** – direct monetary payments made by a firm to purchase or hire resources from outside the firm.

**Export controls** – the limitation or prohibition of the export of certain products on the basis of foreign policy or national security objectives.

**Export promotion** – a strategy in economic development to focus the nation's scarce resources on investment in manufacturing export industries for sales in the

world market.

**Export subsidy** – government payments to an export industry designed to cover part of the industry's costs of production.

**Export transactions** – a sale of a good or service which increases the amount of foreign currency flowing to the citizens, firms, and governments of a nation.

**Exports** – goods and services produced in a nation and sold to customers in other nations.

**External costs** – the costs borne by others because a good is produced or consumed.

**External debt** – private or public debt owed to foreign citizens, firms, and institutions.

**External diseconomies** – a situation in which the cost curves for each firm shift upward as industry production increases.

**External economies** – a situation in which the cost curves for each firm shift downward as industry production increases.

**External economies of scale** – the increased efficiencies experienced by firms as a result of increased industry size, independent of the size of individual firms.

**Externalities** – costs or benefits related to a good or service that fall on others besides buyers and sellers of that particular good or service.

**Externality** – a state in which the

actions of one economic agent affect the welfare of others directly so that social costs or benefits diverge from private costs or benefits.

**Factor markets** – the markets in which firms hire or procure the services of different factors of production that are needed to produce goods and services.

**Factor price** – the price that a factor of production receives in offering or renting its services for specified time periods, for use in production.

**Factor substitution** – the principle that a firm will substitute among factors, choosing their levels so as to minimize the total production costs of a chosen output level.

**Factors of production** – economic resources: land, capital, labor, and entrepreneurial ability.

**Fair return** – pricing rule under which the price of a good is determined by the intersection of the average total cost curve with the demand curve.

**Fair-return price** – the price of a product which enables its producer to obtain a normal profit and which is equal to the average total cost of producing it.

**Fair-trade laws** – laws that sanction resale-price maintenance agreements.

**Fallacy of composition** –

incorrectly reasoning that what is true for the individual (or part) is necessarily true for the group (or whole).

**Fallacy of division** – an error in reasoning that assumes that what is true for the whole is true for its individual parts.

**Fallacy of false cause** – an error in reasoning that assumes one event is the cause of another event simply because it precedes the second event in time.

**Fallacy of limited decisions** – the false notion that there are a limited number of economic decisions to be made so that, if government makes more decisions, there will be fewer private decisions to render.

**Farm problem** – technological advance, coupled with a price-inelastic and relatively constant demand, have made agriculture a declining industry.

**Fascism** – the form of economic organization in which the means of production are primarily privately owned, but decisions are centralized.

**Favorable balance of trade** – a situation in which exports exceed imports.

**Featherbedding 1** – a work condition in which a redundant number of workers are assigned to a job.

**Featherbedding 2** – the practice

of requiring an employer to hire more workers than are necessary or to continue to employ workers for jobs that are obsolete.

**Federal funds** – reserve balances that one bank lends to another.

**Federal-funds rate** – the interest rate at which banks borrow and lend federal funds.

**Feedback effects** – further changes in prices and quantities in a market in response to changes in prices in related markets.

**Feedbacks** – secondary economic effects that may reinforce primary effects.

**Fiat money** – anything which is money because government has decreed it to be money.

**Final goods and services** – goods and services which have been purchased for final use and not for resale or further processing or manufacturing.

**Financial capital** – the money raised to purchase physical capital.

**Financial intermediaries** – financial firms such as banks that stand between ultimate lenders and ultimate borrowers.

**Financial market structure** – market in which lending and borrowing take place through the exchange of debt instruments at interest rates mutually determined by lenders and borrowers.

**Financial markets** – markets

that take the funds of savers and lend them to borrowers.

**Firm** – a business organization that owns, rents, and operates equipment, hires labor, and buys materials and energy inputs. The firm organizes and coordinates the use of all these factors of production for the purpose of producing and marketing goods and services.

**Firm's demand curve** – the curve that coincides with a firm's average revenue curve.

**Fiscal federalism** – a system of dividing public fiscal responsibilities for revenues and expenditures among various levels in a federal system of government.

**Fiscal policy** – changes in government spending and tax collections designed to achieve a full-employment and non-inflationary domestic output.

**Fixed cost** – any cost which in total does not change when the firm changes its output.

**Fixed exchange rate** – a rate of exchange which is set in some way and hence prevented from rising or falling with changes in currency supply and demand.

**Fixed factor** – factor of production that cannot be changed in the short run.

**Fixed inputs** – inputs that are expensive for the firm to quickly alter or take in and out of use.

**Fixed resource** – any resource whose quantity cannot be changed by a firm in the short run.

**Fixed-income assets** – assets for which the borrower contracts to make specified dollar payments at specified times.

**Flexible exchange rate** – a rate of exchange determined by the international demand for and supply of a nation's money.

**Flexible exchange rate** – exchange rate freely determined by supply and demand in the foreign exchange market without government intervention.

**Flow of capital** – an investment in new machines and structures, less the depreciation of existing machines and structures.

**Food stamp program** – a program permitting low-income persons to purchase for less than their retail value, or to obtain without cost, coupons that can be exchanged for food items at retail stores.

**Foreign exchange** – a synonym for foreign currency. In this context, it usually refers to deposits in foreign banks denominated in foreign currency, although the tourist trade requires a certain amount of trading in hand-to-hand currency as well.

**Foreign exchange control** – the control a government may exercise

over the quantity of foreign currency demanded by its citizens and firms and over the rates of exchange in order to limit its out payments to its in payments (to eliminate a payments deficit).

**Foreign exchange market** – a market in which the money (currency) of one nation can be used to purchase (can be exchanged for) the money of another nation.

**Foreign purchase effect** – the inverse relationship between the net exports of an economy and its price level relative to foreign price levels.

**Foreign-exchange market** – a highly decentralized market in cities all over the world in which most national currencies are bought and sold.

**Fractional-reserve banking** – a system in which a bank holds on reserve only a fraction of the deposits placed with it, and lends out the rest.

**Free entry** – exists when any investor can begin an enterprise in an industry with no restrictions.

**Free exit** – exists when owners of a firm in an industry can cease operating at any time they wish.

**Free goods** – goods that require no productive resources and are available in unlimited supply to anyone who wants them.

**Free rider** – someone, part of a group, who enjoys the benefits of a

good, service, or agreement, but pays nothing for it.

**Free trade** – the absence of artificial (government-imposed) barriers to trade among individuals and firms in different nations.

**Freedom of choice** – the freedom of owners of property resources to employ or dispose of them as they see fit, of workers to enter any line of work for which they are qualified, and of consumers to spend their incomes in a manner which they think is appropriate.

**Freedom of enterprise** – the freedom of firms to obtain economic resources, to use these resources to produce products of the firm's own choosing, and to sell their products in markets of their choice.

**Free-rider** – a person who enjoys a benefit without paying any share of its cost.

**Free-rider problem** – a problem that results when consumers understate the worth of the public good in the hope of obtaining the benefits of others' contributions and efforts at a cost below their own marginal benefit.

**Frictional unemployment** – the transitional or temporary unemployment that arises because unemployed persons may take a few weeks to find a new job after losing or quitting a job, or after entering or reentering the labor force following

illness, schooling, childbearing or some other reason for being out of the labor force.

**Fringe benefits** – the rewards other than wages which employees receive from their employers.

**Full employment** – use of all available resources to produce want-satisfying goods and services. The situation when the unemployment rate is equal to the full-employment unemployment rate and there is frictional and structural but no cyclical unemployment (and the real output of the economy equals its potential real output).

**Full production** – employment of available resources so that the maximum amount of (or total value of) goods and services is produced.

**Full-employment budget** – a comparison of the government expenditures and tax collections which would occur if the economy operated at full employment throughout the year.

**Full-income budget constraint** – gives the sum of money income and the value of time retained as leisure.

**Function** – a mathematical relationship in which the value of a dependent variable is determined from the values of one or more independent variables.

**Functional distribution of income** – a method of characterizing the way income is distributed

according to the function performed by the income receiver.

**Functional finance** – the use of fiscal policy to achieve a noninflationary full employment gross domestic product without regard to the effect on the public debt.

**Fundamental theorem of consumer choice** – the theory that any good (simple or composite) that is known always to increase in demand when money income alone rises must definitely shrink in demand when its price alone rises.

**Future value** – the computed value of an amount of money after compounding at an interest rate over a fixed period of time.

**Futures contract** – in international trade it is a promise to exchange a set number of units of one currency (such as dollars) per unit of another currency (such as Japanese yen) on a stipulated date.

**Futures market** – a commodities market in which buyers agree to buy a specified quantity and quality of a product at a price fixed today, for delivery at a specified date in the future.

**Future-value formula** – a formula that shows how much a given amount of money will be worth after a given number of years, if invested at interest.

**Gains from trade** – the extra

output which trading partners obtain through specialization of production and exchange of goods and services.

**Game theory** – a means of analyzing the pricing behavior of oligopolists using the theory of strategy associated with games such as chess and bridge.

**General equilibrium** – a state in which the entire economy is in equilibrium.

**General equilibrium analysis** – traces the effects of a change in demand or supply in one market on equilibrium prices and quantities in all markets; explicitly considers economic interdependence among all prices and decisions.

**General price level** – an average of the prices of all of the goods and services in an economy.

**General theory of second best** – states that it is better to depart from efficiency in one sector of an economy to balance the distortion prevailing in other sectors when those distortions cannot otherwise be eliminated.

**Geographic mobility** – the movement of workers from one place to another in response to job opportunities.

**Gold standard** – a historical system of fixed exchange rates in which nations defined their currency in terms of gold, maintained a fixed relationship between their stock of

gold and their money supplies, and allowed gold to be freely exported and imported.

**Good** – any item or service of value.

**Government capital** – a land, structures, and equipment owned by the government.

**Government purchases** – disbursements of money by government for which government receives a currently produced good or service in return.

**Government transfer payment** – the disbursement of money (or goods and services) by government for which government receives no currently produced good or service in return.

**Government transfers** – the total value of payments from the government sector to households and business firms to provide income supplements and subsidies.

**Grievance procedure** – the methods used by a labor union and a firm to settle disputes which arise during the life of the collective bargaining agreement between them.

**Gross national product (GNP)** – the market value of all final goods and services produced by the economy during a year; the total value, measured in the country's currency, of the final goods and services produced during a certain period, such as a year, or a calendar

quarter of a year.

**Gross private domestic investment** – expenditures for newly produced capital goods (such as machinery, equipment, tools, and buildings) and for additions to inventories.

**Guiding function of prices** – the ability of price changes to bring about changes in the quantities of products and resources demanded and supplied.

**Health maintenance organization** – health care providers which contract with employers, insurance companies, labor unions, or governmental units to provide health care for their workers or others who are insured.

**Hedge** – a situation in which an individual simultaneously sells in the futures market and buys in the spot market in order to reduce the risk associated with an uncertain transaction.

**Hedging** – the act of minimizing or protecting against risk, by buying products today to be delivered in the future at a price fixed today.

**Hoarding** – the practice of buying a product today, storing it, and then selling it at a later date. Hoarding by speculators can smooth out price fluctuations over time.

**Homogeneous oligopoly** – an oligopoly in which the firms produce a standardized product.

**Horizontal combination** – a group of plants in the same stage of production which are owned by a single firm.

**Horizontal equity** – the principle of fairness in the tax structure across the board: theoretically, those with the same ability to pay should pay the same taxes.

**Horizontal integration** – the merger of firms that produce the same product.

**Horizontal merger** – the merger into a single firm of two firms producing the same product and selling it in the same geographical market.

**Horizontal range** – the horizontal segment of the aggregate-supply curve along which the price level is constant as real domestic output changes.

**Horizontally integrated** – term used to describe a firm that owns several plants, each of which performs the same functions.

**Household** – an economic unit (of one or more persons) which provides the economy with resources and uses the income received to purchase goods and services that satisfy material wants.

**Human capital** – the set of workers' skills that generates services that can be "rented out" to employers; investments in people's skills, knowledge, or health that

directly affect their productivity.

**Human-capital discrimination** – the denial to members of particular groups of equal access to productivity-enhancing education and training.

**Human-capital investment** – any expenditure undertaken to improve the education, skills, health, or mobility of workers, with an expectation of greater productivity and thus a positive return on the investment.

**Identification of a demand curve** – requires that the variation in observed prices and quantities actually trace a demand curve.

**Ideology** – doctrine, opinion, or way of thinking.

**Immobility** – the inability or unwillingness of a worker to move from one geographic area or occupation to another or from a lower-paying job to a higher-paying job.

**Imperfect competition** – all market structures except pure competition; includes monopoly, monopolistic competition, and oligopoly.

**Implicit costs** – costs of resources actually owned by the firm itself. These costs are the payments such resources could have received were they employed in their next best alternative.

**Implicit GNP price deflator** – a

comprehensive measure of the general price level that includes the prices of all goods included in GNP.

**Import competition** – the competition which domestic firms encounter from the products and services of foreign producers.

**Import demand curve** – a downward sloping curve showing the amount of a product which an economy will import at each world price below the domestic price.

**Import duty** – synonym for tariff.

**Import quotas** – limitation on imports that specifies the maximum amount of a foreign-produced good that will be permitted into the country over a specified period of time.

**Import substitution** – a strategy in economic development that restricts imports of manufactured products, in order to create a domestic market that will in turn encourage the development of domestic manufacturing of these products.

**Import transaction** – the purchase of a good or service which decreases the amount of foreign money held by citizens, firms, and governments of a nation.

**Imports** – spending by individuals, firms, and governments for goods and services produced in foreign nations.

**Incentive function of price** – the

inducement which an increase in the price of a commodity gives to sellers to make more of it available (and conversely for a decrease in price).

**Incentive pay plan** – a compensation structure which ties worker pay directly to performance. Such plans include piece rates, bonuses, commissions, and profit sharing.

**Inclusive unionism** – the practice of a labor union of including as members all workers employed in an industry.

**Income approach** – the method that adds all the income generated by the production of final goods and services to measure the gross domestic product.

**Income effect** – the change in quantity demanded when price increases because consumers' purchasing power falls. A pure income effect is the change in quantity demanded due to the change in money income.

**Income effect of a price change** – the change in demand for a good caused by the change in the utility, or in the indifference curve of the consumer due to the price change.

**Income elasticity** – the percentage change in quantity divided by the percentage change in income.

**Income elasticity of demand** – measures the percentage change in quantity purchased in response to

each 1 % change in income.

***Income expansion path*** – the path of bundles chosen as income changes alone and relative prices remain constant.

***Income inequality*** – the unequal distribution of an economy's total income among persons or families.

***Income velocity of money*** – the number of times in a year that the money stock circulates or turns over.

***Income-consumption curve*** – one that connects all equilibrium points on a consumer's indifference map as income changes.

***Income-maintenance system*** – government programs designed to eliminate poverty and reduce inequality in the distribution of income.

***Incomes policies*** – policies designed to suppress upward shifts in the aggregate supply curve through wage and price controls and/or exhortation, so that outward shifts in aggregate demand caused by fiscal and monetary stimuli will show up in larger GNP rather than in a higher price level.

***Increase in demand*** – an increase in the quantity demanded of a good or service at every price.

***Increase in supply*** – an increase in the quantity supplied of a good or service at every price.

***Increasing marginal returns*** – an increase in the marginal product

of a resource as successive units of the resource are employed.

***Increasing returns to scale*** – prevail when output increases by a proportion that exceeds the proportion by which all inputs increase.

***Increasing-cost industry*** – an industry in which expansion through the entry of new firms increases the prices firms in the industry must pay for resources and therefore increases their production costs.

***Increasing-cost production*** – a production condition of a firm in which average total cost of production increases as output increases, under least-cost production.

***Independent goods*** – products or services for which there is no relationship between the price of one and the demand for the other.

***Independent variable*** – the variable causing a change in some other (dependent) variable.

***Indifference curve*** – a curve showing the different combinations of two products which give a consumer the same satisfaction or utility.

***Indifference map*** – a set of indifference curves, each representing a different level of utility, and which together show the preferences of the consumer.

***Indifference schedule*** – a listing

of all possible combinations of goods that give a consumer the same level of satisfaction.

**Indirect business taxes** – such taxes as sales, excise, and business property taxes, license fees, and tariffs which firms treat as costs of producing a product and pass on (in whole or in part) to buyers by charging higher prices.

**Individual demand** – the demand schedule or demand curve of a single buyer.

**Individual supply** – the supply schedule or supply curve of a single seller.

**Induction** – a method of reasoning which proceeds from facts to generalization.

**Industrial concentration** – a situation in which a single firm or a small number of firms produces the major portion of an industry's output.

**Industrial policy** – any policy by which government takes a direct and active role in promoting specific firms or industries for purposes of expanding their output and achieving economic growth.

**Industrial regulation** – the older and more traditional type of regulation in which government is concerned with the prices charged and the services provided the public in specific industries: in contrast to social regulation.

**Industrial union** – a labor union which accepts as members all workers employed in a particular industry (or by a particular firm).

**Industry** – a group of (one or more) firms which produces identical or similar products.

**Industry demand for an input** – sum of the amounts of input services demanded by individual firms in the industry at any price.

**Industry equilibrium** – prevails when there is no tendency for firms to enter or leave the industry or to expand or reduce the scale of their operations.

**Industry supply, long-run** – a graph of the long-run equilibrium price-quantity pairs after all demand-induced adjustments have occurred.

**Inelastic** – demand is inelastic if the amount spent on a good falls when its price goes down.

**Inelastic demand** – product or resource demand for which the price elasticity coefficient is less than 1; means the resulting percentage change in quantity demanded is less than the percentage change in price.

**Inelastic supply** – product or resource supply for which the price elasticity coefficient is less than 1; the percentage change in quantity supplied is less than the percentage change in price.

**Inferior good** – a good for which

an increase in income leads to a decrease in the amount demanded, other things being equal.

**Inflating** – determining real gross domestic product by increasing the dollar value of the nominal gross domestic product produced in a year in which prices are lower than in a base year.

**Inflation** – a continual increase in the general price level.

**Inflation premium** – the component of the nominal interest rate which reflects anticipated inflation.

**Inflationary equilibrium** – a situation in which the economy grows along its full-employment growth path with the price level rising.

**Inflationary expectations** – the belief of workers, firms, and consumers that substantial inflation will occur in the future.

**Inflationary gap** – the amount by which the aggregate expenditures schedule must shift downward to decrease the nominal GDP to its full-employment noninflationary level.

**Information economics** – a part of the field of economics that analyzes consumer and producer decision making under uncertainty.

**Infrastructure** – the capital goods usually provided by the public sector for the use of its citizens and firms.

**Injection** – an addition of spending to the income-expenditure stream: investment, government purchases, and net exports.

**Injunction** – a court order directing a person or organization not to perform a certain act because the act would do irreparable damage to some other person or persons; a restraining order.

**In-kind compensation** – payment in the form of goods and services rather than money income.

**In-kind transfer** – the distribution by government of goods and services to individuals and for which the government receives no currently produced good or service in return.

**Innovation** – the first commercially successful introduction of a new product, the use of a new method of production, or the creation of a new form of business organization.

**Input demand curve** – curve showing how the quantity of input services demanded varies with the price of input services given all other influences on the demand for inputs.

**Input requirement curve** – a graph of the minimum amount of a variable input required as a function of output when other inputs remain constant.

**Input-output table** – a table that

specifies, on average, what inputs are required to produce each unit of an item and how the item is to be distributed after production.

**Inputs** – productive resources an economy uses to produce its outputs.

**Insurable risk** – an event which would result in a loss but whose frequency of occurrence can be estimated with considerable accuracy.

**Intangible capital** – a factor of production that is durable but has no physical dimension and cannot generally be bought and sold (such as knowledge).

**Intensive growth** – growth that results from improvements in factor quality, technology, and efficiency of markets and institutions.

**Interest** – the payment made for the use of money (of borrowed funds).

**Interest income** – payments of income to those who supply the economy with capital.

**Interest rate** – the price of credit in financial markets, usually expressed as a percentage of the total amount borrowed that is to be paid each year.

**Interest-rate risk** – the change in the value of a bond that will occur should the general level of market interest rates change.

**Interindustry competition** – the competition for sales between the

products of one industry and the products of another industry.

**Interlocking directorate** – a situation in which one or more members of the board of directors of a corporation are also on the board of directors of a competing corporation.

**Interloper firm** – one that quickly enters a market when it can earn economic profits and leaves when profits are no longer possible.

**Intermediaries** – firms that facilitate the search process in certain markets by directly or indirectly bringing buyers and sellers together.

**Intermediate goods** – goods such as materials, parts, and computer repair services used in the production of other goods.

**Intermediate target** – a variable that is not precisely and directly controlled by the policymakers.

**Internal costs** – the opportunity costs a firm or consumer incurs by producing or consuming a good.

**Internal rate of return** – the discounting interest rate that makes an investment's net present value equal to zero.

**Internalization of an externality** – results when marginal private costs or benefits associated with market exchange of the good are adjusted to reflect actual marginal social cost or benefits of choices.

**Internalization of production activities** – the practice of carrying out activities within the firm rather than contracting to purchase them in the market.

**Internally held public debt** – public debt owed to citizens, firms, and institutions of the same nation issuing the debt.

**International balance of payments** – a summary of all the transactions which took place between the individuals, firms, and government unit of one nation and those in all other nations during a year.

**International monetary reserves** – the foreign currencies and such assets as gold a nation may use to settle a payments deficit.

**Intrinsic value** – the market value of the metal within a coin.

**Invention** – the first discovery of a product or process through the use of imagination, ingenious thinking, and experimentation and the first proof that it will work.

**Inventories** – goods which have been produced but are still unsold.

**Inverse relationship** – the relationship between two variables which change in opposite directions, for example, product price and quantity demanded.

**Inverse supply curve** – the supply curve inverted, yielding price as a function of quantity supplied.

**Investment** – process of replenishing or adding to capital stock; represents a flow of new capital in a given year.

**Investment accelerator** – the principle that the change in investment depends on the change in the change in sales.

**Investment schedule** – a curve or schedule which shows the amounts firms plan to invest at various possible values of real gross domestic product.

**Investment-demand curve** – a curve which shows the amount of investment demanded by an economy at a series of real interest rates.

**Invisible hand** – the tendency of firms and resource suppliers seeking to further their own self-interests in competitive markets to also promote the interest of society as a whole.

**Isocost** – a line showing the input combinations that yield equal total cost.

**Isocost line** – gives all combinations of labor and capital of equal total cost.

**Isoquant** – curve showing all combinations of variable inputs that can be used to produce a given quantity of output.

**Isoquant map** – a set of isoquants that shows the maximum attainable output from any given combination of inputs.

**Job-training programs** – government-subsidized efforts aimed at improving work skills among the poor.

**Joint monopoly** – a situation in which all the firms in the market taken together produce the output that a single (monopoly) firm would.

**Jurisdictional dispute** – disagreement among unions over which has the right to organize a particular group of workers.

**Keynesian economics** – the macroeconomic generalizations which lead to the conclusion that a capitalistic economy is characterized by macroeconomic instability and that fiscal policy and monetary policy can be used to promote full employment, price-level stability, and economic growth.

**Keynesianism** – the philosophical, ideological, and analytical views pertaining to Keynesian economics.

**Labor 1** – capabilities and skills possessed by humans that can be used to produce goods and services.

**Labor 2** – the physical and mental talents and efforts of people which are used to produce goods and services.

**Labor contract** – the outcome of collective bargaining. The contract sets wages, benefits, hiring conditions, and working conditions for a specified time period.

**Labor force** – the sum of those employed and those unemployed.

**Labor force participation rate** – the percentage of the working-age population which is actually in the labor force.

**Labor market monopoly** – a situation in which firms in the labor market face only one agent through which they can hire labor.

**Labor productivity** – a total output divided by the quantity of labor employed to produce it; the average product of labor or output per worker per hour.

**Labor theory of value** – the Marxian idea that the economic value of any commodity is determined solely by the amount of labor required to produce it.

**Labor unions** – organizations formed to represent the interests of workers in bargaining for contracts concerning wages, fringe benefits, and working conditions.

**Labor-intensive commodity** – a product requiring a relatively large amount of labor to produce.

**Lagging indicator** – an economic variable that turns behind the general business cycle.

**Laissez-faire** – the belief that people should be allowed to conduct their economic affairs without any interference from the government.

**Land** – all natural resources used in production.

**Land-intensive commodity** – a product requiring a relatively large amount of land to produce.

**Large-number externality** – those for which too many parties are involved to render transaction costs of bargaining to internalize the externality negligible.

**Latent poor** – people who would fall below the poverty line in the absence of cash payments from the government.

**Law of demand** – theory that the lower is the price of a good, the greater will be the demand for it and, conversely, the higher is the price, the smaller will be the demand.

**Law of diminishing marginal returns** – maintains that as more of a variable input is used while other inputs and technology are fixed the marginal product of the variable input will eventually decline.

**Law of diminishing marginal utility 1** – as a consumer increases the consumption of a good or service, the marginal utility obtained from each additional unit of the good or service decreases.

**Law of diminishing marginal utility 2** – given the consumer's tastes, the marginal utility associated with the consumption of any good over a given period of time eventually begins to fall as more and more of the good is consumed.

**Law of diminishing returns** – as

more and more of a variable factor of production is used together with a fixed factor of production, beyond some point the marginal product attributable to each additional unit of the variable factor begins to decrease.

**Law of increasing costs** – the cost per additional good obtained, measured in terms of the good sacrificed, rises due to the different productivity of resources when used in different production processes.

**Law of increasing opportunity costs** – as the production of a good increases, the opportunity cost of producing an additional unit rises.

**Law of supply** – the principle that, other things equal, an increase in the price of a product will increase the quantity of it supplied.

**Law of variable proportions** – the theory that diminishing productivity of variable inputs will occur eventually as successive increases in variable inputs are combined with fixed inputs.

**Leading indicator** – an economic variable that turns ahead of the general business cycle.

**Leakage** – a withdrawal of potential spending from the income-expenditures stream via saving, tax payments, or imports.

**Least-cost combination of resources** – the quantity of each resource a firm must employ in

order to produce a particular output at the lowest total cost; the combination at which the ratio of the marginal product of a resource to its marginal resource cost (to its price if the resource is employed in a competitive market) is the same for the last dollar spent on each resource employed.

**Least-cost production** – the practice of minimizing the total production costs of a chosen output level.

**Least-squares regression** – the method of fitting a linear equation by minimizing the sum of squares of the residual errors for all observations.

**Legal cartel theory of regulation** – the hypothesis that some industries seek regulation or want to maintain regulation so they may form or maintain a legal cartel.

**Legal immigrant** – a person who lawfully enters a country for the purpose of residing there.

**Legal tender** – anything which government says must be accepted in payment of a debt.

**Legislated monopoly** – a monopoly created by the laws and regulations of government.

**Lending potential of an individual commercial bank** – the amount by which a single bank can safely increase the money supply by making new loans to (or buying

securities from) the public.

**Level of significance** – in inferential statistics, the probability of wrongly rejecting a true null hypothesis.

**License** – right granted, usually by a state, to practice certain professions.

**Limit price** – the lowest price at which a new firm can enter an industry and just cover average total cost.

**Limited liability** – a characteristic of a corporation that makes it attractive to investors (the owners) in that financial liability extends only to the assets of the corporation, not to personal assets of the investors.

**Limited partner** – a member of a partnership who does not participate in the management of the firm or engage in business on behalf of the partners.

**Limited-liability company** – an unincorporated business whose owners are protected by limited liability.

**Linear programming** – a practical technique for solving optimization problems that can be described in terms of a linear objective function and linear constraints.

**Line-item veto** – the presidential power to delete specific expenditure items from spending legislation passed by Congress.

**Liquid asset** – an asset that can be quickly and cheaply converted into cash, with minimal risk that its value will have changed from the time of purchase to the time of sale.

**Liquidity** – money or things which can be quickly and easily converted into money with little or no loss of purchasing power.

**Loan length** – the duration of time until a loan must be repaid.

**Loans** – a debt obligations that differ from other forms of debt only in that they are not traded in markets.

**Lockout** – closing down of operations by an employer in an attempt to force workers to accept employers' wage offer and terms of employment.

**Logrolling** – vote trading, by which a representative gets others who are mildly opposed to a specific proposal to vote for it by agreeing to support their proposals, even if the representative is somewhat opposed to those proposals.

**Long run** – in microeconomics, a period of time long enough to enable producers of a product to change the quantities of all the resources they employ; period in which all resources and costs are variable and no resources or costs are fixed.

**Long-run aggregate supply curve** – the aggregate supply curve

associated with a time period in which input prices (especially nominal wages) are fully responsive to changes in the price level.

**Long-run average cost** – the average cost of production when both fixed and variable inputs are allowed to vary in the long run so as to satisfy the principle of factor substitution.

**Long-run competitive equilibrium** – the price at which firms in pure competition neither obtain economic profit nor suffer losses in the long run and the total quantity demanded and supplied at that price are equal.

**Long-run cost** – a minimum cost of producing any given output when all inputs are variable.

**Long-run demand curve** – a curve that shows the effect of price on quantity demanded, after enough time has elapsed for all delayed adjustments to occur.

**Long-run economic growth** – the increase of output and other measures of material progress over a period of many years.

**Long-run farm problem** – the tendency for agriculture to be a declining industry as technological progress increases supply relative to an inelastic and slowly increasing demand.

**Long-run marginal cost** – the long-run supply curve of a firm.

Long-run marginal cost is the cost of an additional unit of output in the long run, if inputs that are fixed in the short run are varied to satisfy the principle of factor substitution and to take advantage of economies of scale in firm production.

**Long-run market supply curve** – shows the relationship between price and quantity supplied for points at which the industry is in equilibrium.

**Long-run supply** – a schedule or curve showing the prices at which a purely competitive industry will make various quantities of the product available in the long run.

**Long-run total cost** – a graph of minimum cost as a function of output in the long run.

**Long-run total product** – a graph of output as a function of all inputs given fixed input proportions.

**Lorenz curve** – a curve showing the distribution of income in an economy; the cumulated percentage of families (income receivers) is measured along the horizontal axis and cumulated percentage of income is measured along the vertical axis.

**Lorenz diagram** – method of illustrating the extent to which actual income distribution deviates from a perfectly equal distribution of income.

**Lottery** – a gamble undertaken by buying a ticket.

**Lump-sum tax** – tax whose amount is not associated with any

controllable economic activity; a tax that only has income effects.

**Macroeconomics** – a branch of economic analysis that focuses on the workings of the whole economy or large sectors of it.

**Managed float** – exchange rates subject to free-market forces modified by government intervention, but without any formal commitment to fix rates at specified levels.

**Managed floating exchange rate** – an exchange rate which is allowed to change (float) as a result of changes in currency supply and demand but at times is altered (managed) by governments via their buying and selling of particular currencies.

**Managerial prerogatives** – the decisions which management of the firm has the sole right to make.

**Marginal analysis** – technique of analyzing the way persons who seek to maximize net gains make decisions.

**Marginal benefit** – the extra (additional) benefit of consuming one more unit of some good or service.

**Marginal conditions for the efficient output of a good** – achieved when marginal benefit of a good equals its marginal cost.

**Marginal cost** – the increase in the total costs or, equivalently, the increase in the total variable costs,

per unit increase in output.

**Marginal cost pricing** – a situation in which price is equal to marginal cost.

**Marginal external benefit** – marginal benefit received by third parties other than buyers or sellers of the good.

**Marginal external cost** – extra cost imposed on third parties for which producers are not charged resulting from each extra unit of output.

**Marginal factor cost** – the change in cost divided by the incremental change in a variable input, holding other inputs constant.

**Marginal input cost** – extra cost incurred to hire an extra unit of input after a certain amount has already been employed.

**Marginal input cost for a monopsony** – extra cost incurred when hiring another unit of input when a firm has monopsony power.

**Marginal labor cost** – the amount total labor cost increases when a firm employs one additional unit of labor (the quantity of other resources employed remaining constant).

**Marginal net benefit** – difference between the marginal benefit and marginal cost of another unit of a good.

**Marginal physical product** – increase in total output associated

with each one-unit increase in a variable productive factor.

**Marginal private benefit** – extra benefit obtained by purchasers of a good.

**Marginal private cost** – extra cost incurred by business firms in producing one more unit of output.

**Marginal product** – the additional output produced when one additional unit of a resource is employed (the quantity of all other resources employed remaining constant).

**Marginal product of a variable input** – change in the total product of that input corresponding to a change in its use, other things being equal.

**Marginal product of labor** – the change in total product when one more unit of labor is employed, with the amounts of other inputs remaining the same.

**Marginal productivity theory of factor demand** – theory that states that a profit-maximizing firm will increase its use of a productive factor up to the point where the factor's marginal revenue product equals the factor's price.

**Marginal productivity theory of income distribution** – the contention that the distribution of income is equitable when each unit of each resource receives a money payment equal to its marginal contribution to

the firm's revenue.

**Marginal profit** – extra profit obtained by selling and additional unit of output.

**Marginal propensity to consume** – the fraction of any change in disposable income spent for consumer goods.

**Marginal propensity to save** – the fraction of any change in disposable income which households save.

**Marginal rate of return on the investment** – net increase in revenue resulting from the investment expressed as a percentage of each extra dollar invested.

**Marginal rate of substitution** – the rate at which a consumer is prepared to substitute one good for another (from a given combination of goods) and remain equally satisfied (have the same total utility).

**Marginal rate of technical substitution of labor for capital** – measure of the amount of capital each unit of labor can replace without increasing or decreasing production.

**Marginal rate of time preference** – dollar value of additional future consumption required to compensate a person for giving each up \$1 of current consumption without making the person better or worse off.

**Marginal rate of transformation**

– amount of one good that must be sacrificed to obtain each extra unit of an alternative good along the production possibility curve.

**Marginal resource cost** – the amount the total cost of employing a resource increases when a firm employs one additional unit of the resource (the quantity of all other resource employed remaining constant).

**Marginal retention ratio** – the fraction of an additional dollar of earnings that ends up as additional after-tax income.

**Marginal revenue** – the change in total revenue which results from the sale of one additional unit of a firm's product.

**Marginal revenue product** – the change in a firm's total revenue when it employs one additional unit of a resource (the quantity of all other resources employed remaining constant).

**Marginal revenue product of an input** – marginal product of the input multiplied by the marginal revenue of that additional output.

**Marginal social benefit** – extra benefit obtained by purchasers and any third parties to market exchange when another unit is produced.

**Marginal social cost** – the extra cost per unit to society for each extra unit produced, where social cost is measured as an opportunity cost of

the next best foregone alternative.

**Marginal tax rate** – the tax rate paid on each additional dollar of income.

**Marginal utility** – the change in total utility caused by changing consumption of a good by one unit, holding consumption of all other goods fixed.

**Market** – an area within which buyers and sellers of a particular good are in such close communication that the price of the good tends to be the same everywhere in the area.

**Market basket** – combination of goods for weekly consumption.

**Market complement** – a good whose demand is inversely related to the price of another good.

**Market demand** – at a given price, the sum of quantities demanded by all individual consumers at that price.

**Market demand curve** – derived from individual demand curves for a given product by adding the quantity demanded by all consumers at each possible price.

**Market demand for an input** – a sum of the quantities demanded by all industries using that input at any given price.

**Market economy** – an economy in which the interaction of demand and supply on prices the market mechanism provides the information

upon which firms and households make resource allocation decisions.

**Market equilibrium** – a situation in which demanders can buy the quantities they want and suppliers can sell the quantities (equilibrium quantities) they want at the prevailing price (equilibrium price).

**Market failure** – the failure of the price system and existing markets to generate socially optimal levels of all outputs.

**Market for externality rights** – a market in which firms can buy rights to pollute the environment; the price of such rights is determined by the demand for the right to pollute and a perfectly inelastic supply of such rights (the latter determined by the quantity of pollution which the environment can assimilate).

**Market game** – an interaction between firms or people that mimics a game like chess.

**Market period** – a period in which producers of a product are unable to change the quantity produced in response to a change in its price.

**Market share** – a firm's percentage of gross national sales in a market in which it participates.

**Market socialism** – an economic system (method of organization) in which property resources are publicly owned and markets and prices are used to direct and

coordinate economic activities.

**Market structure** – indicates the number of buyers and sellers, their shares of total output purchased or sold, the degree of standardization of the product, and the ease of entry and exit in a market.

**Market supply** – the aggregation of all firms' supplies at every price.

**Market system** – all the product and resource markets of a market economy and the relationships among them; a method which allows the prices determined in these markets to allocate the economy's scarce resources and to communicate and coordinate the decisions made by consumers, firms, and resource suppliers.

**Marketability** – ease with which a lender may sell a debt instrument to someone else before the loan must be repaid in full.

**Materials balance** – a requirement that the total quantity of any item allocated as an input at all stages of production or allocated for consumption equals the quantity of the item produced by suppliers, as set in an economic plan.

**Median most-preferred outcome** – outcome for which half of the voters prefer more and the other half prefer less of an item.

**Median voter** – the voter who demands the middle ranking of public services, when all voters are

ranked from low to high by service levels demanded.

**Median-voter model** – the view that under majority rule the median (middle) voter will be in the dominant position to determine the outcome of an election.

**Medium of exchange** – items sellers generally accept and buyers generally use to pay for a good or service.

**Mercantilism** – national policy designed to increase exports and decrease imports.

**Merger** – the combination of two (or more) firms into a single firm.

**Microeconomics** – the part of economics concerned with such individual units as industries, firms, and households.

**Midpoints formula variation** – method of calculating the coefficient of elasticity in which the averages of the two quantities and the two prices are used as base points when computing the percentage changes in quantity and price.

**Minimum-wage law** – law that makes it illegal for employers to pay workers a wage below a certain statutory level that is often called the minimum wage.

**Misallocation of resources** – the use of productive resources in such a way that the economy has less total output than it is capable of producing and less total

consumption than it is capable of enjoying.

**Mixed capitalism** – an economy in which both government and private decisions determine how resources are allocated.

**Mixed economy** – an economy in which what, how, and for whom to produce goods are determined partly by the operation of free markets and partly by government intervention.

**Mixed-strategy** – in game theory, the assignment of probabilities to choosing pure strategies so that the choice of any strategy cannot be predicted with certainty.

**Monetarism** – the macroeconomic view that the main cause of changes in aggregate output and the price level are fluctuations in the money supply.

**Monetary base** – the sum of currency in circulation outside the banking system and in bank reserves.

**Monetary multiplier** – the multiple of its excess reserves by which the banking system can expand demand deposits and thus the money supply by making new loans (or buying securities).

**Monetary rule** – the rule suggested by monetarism; the money supply should be expanded each year at the same annual rate as the potential rate of growth of the

real gross domestic product.

**Monetary-policy instrument** – a variable or activity under the direct control of the central bank.

**Money** – money is defined by the four functions it serves. Money serves as: a generally accepted means of payment; a means to discharge debts; a store of value, ordinarily a temporary store of value; and the unit of account.

**Money capital** – money available to purchase capital.

**Money market** – the market in which the demand for and the supply of money determine the interest rate (or the level of interest rates) in the economy.

**Money market instruments** – fixed-income assets of high liquidity, very low risk, and short maturity.

**Money wage** – price per unit of labor services measured in dollars and cents.

**Monopolistic competition** – a market structure in which many firms sell a differentiated product, into which entry is relatively easy, in which the firm has some control over its product price, and in which there is considerable nonprice competition; industry or market structure where there is easy entry and exit, and in which there are many firms, each of which produces a product that is slightly different

from that of the others.

**Monopolization** – a practice in which a firm attempts to eliminate rivals by predatory pricing, by horizontal mergers that substantially increase market share, or by contracts limiting buyers in their choice of sellers.

**Monopoly** – a market structure in which the number of sellers is so small that each seller is able to influence the total supply and the price of the good or service.

**Monopoly power** – the power of a firm to affect market price by its output decisions. If the firm restricts output, market price rises.

**Monopsony** – a market situation in which the product or service of several sellers is sought by only one buyer, as, for example, in the factor market, if there is only one demander of labor services.

**Monopsony index** – a measure of monopsony power computed by subtracting an input's price from its marginal factor cost and dividing by the input price.

**Monopsony power** – ability of a single buyer to influence the price of some of the input services that it purchases.

**Moral hazard** – a situation in which a probability distribution is affected by one agent's action and is not observed by another.

**Moral hazard problem** – the

possibility that individuals or institutions will change their behavior as the result of a contract or agreement.

**Mortgages** – a debt obligations secured or backed by particular pieces of property.

**Moving average model** – a representation of a time series of a variable expressed as a linear function of a series of  $q$  shocks to the series.

**Multinational corporation** – a firm which owns production facilities in other countries and produces and sells its product abroad.

**Multinational firm** – a firm that maintains production facilities in many countries and has employees from many countries, some working in their own countries and some in other countries.

**Multiple counting** – wrongly including the value of intermediate goods in the gross domestic product.

**Multiplier** – the ratio of a change in the equilibrium GDP to the change in investment or in any other component of aggregate expenditures or aggregate demand.

**Mutual interdependence** – a situation in which a change in price strategy (or in some other strategy) by one firm will affect the sales and profits of another firm (or other firms).

**Mutual savings bank** – a firm without stockholders which accepts deposits primarily from small individual savers and lends primarily to individuals to finance the purchases of autos and residences.

**Mutually exclusive goals** – two or more goals which conflict and cannot be achieved simultaneously.

**National income** – a total income earned by resource suppliers for their contributions to gross national product.

**National income accounting** – the techniques used to measure the overall production of the economy and other related variables for the nation as a whole.

**Nationalization** – a government takeover of a private firm so that it is owned and operated by the government.

**Nationalized industry** – an industry owned by the government.

**Natural law** – a principle of income distribution that states that people are entitled only to the fruits of their own effort. In competitive-equilibrium models, these fruits equal the value of the marginal products of the factors they own.

**Natural monopoly** – the form of market structure in which there are economies of scale over a substantial range of market demand so that a single firm can supply the entire market at a price lower than

the minimum short-run average cost of smaller firms.

**Natural oligopoly** – exists when a few firms can supply the entire market output at lower long-run average costs than can many firms.

**Natural rate hypothesis** – the idea that the economy is stable in the long run at the natural rate of unemployment.

**Natural rate of unemployment** – the rate toward which unemployment gravitates in the long run, given the structure of the economy, the labor markets, and laws and regulations that affect how markets function.

**Near-public good** – a good that is consumed jointly, though it is possible to exclude nonpaying customers a movie is an example.

**Negative externality** – cost of resource use not reflected in the price of a product; negative externalities can result from either the production or consumption of a good exchanged in markets.

**Negative income tax** – a proposed tax structure to replace the welfare system with a comprehensive scheme of taxation in which poorer families would receive transfers (negative taxes) and richer ones pay taxes.

**Net domestic product** – gross domestic product less the part of the year's output which is needed to

replace the capital goods worn out in producing the output.

**Net export effect** – the idea that the impact of a change in monetary policy or fiscal policy will be strengthened or weakened by the consequent change in net exports.

**Net exports** – the excess of exports over imports, or the difference in value between exports and imports.

**Net foreign factor income** – payments by a nation of resource income to the rest of the world minus receipts of resource income from the rest of the world.

**Net investment income** – the interest and dividend income received by the residents of a nation from residents of other nations less the interest and dividend payments made by the residents of that nation to the residents of other nations.

**Net productivity of capital** – the annual percentage rate of return that can be earned by investing in capital.

**Net taxes** – the taxes collected by government less government transfer payments.

**Net transfers** – the personal and government transfer payments made by one nation to residents of foreign nations, less the personal and government transfer payments received from residents of foreign nations.

**Net worth** – the difference

between assets and liabilities. A balance sheet states assets, liabilities, and net worth as of a particular time, such as at the close of business at the end of the day.

**Neutral taxation** – taxation that does not induce consumers (or producers) to substitute one commodity for another.

**New classical economics** – the theory that, although unanticipated price level changes may create macroeconomic instability in the short run, the economy is stable at the full-employment level of domestic output in the long run because prices and wages adjust automatically to correct movements away from the full employment, noninflationary output.

**Nominal gross domestic product** – the *GDP* measured in terms of the price level at the time of measurement (unadjusted for inflation).

**Nominal income** – the number of dollars received by an individual or group for its resources during some period of time.

**Nominal interest rate** – the interest rate expressed in terms of annual amounts currently charged for interest and not adjusted for inflation.

**Noncash transfer** – a government transfer payment in the form of goods and services rather

than money, for example, housing assistance and job training.

**Noncompeting groups** – groups of workers in the economy who do not compete with each other for employment because the skill and training of the workers in one group are substantially different from those in other groups.

**Nonexclusive good** – a good that a person cannot be excluded from or charged for consuming.

**Nonexclusive in consumption** – property of a good which implies that it cannot be withheld from consumers who do not pay.

**Nonfinancial investment** – an investment which does not require households to save a part of their money incomes.

**Noninterest determinants of investment** – all influences on the level of investment spending other than the interest rate.

**Noninvestment transaction** – an expenditure for stocks, bonds, or second-hand capital goods.

**Nonmarket activities** – those whose costs are not financed from the sale of a good or service in a market.

**Nonmarket transactions** – the production of goods and services excluded in the measurement of the gross domestic product because they are not bought and sold.

**Nonprice competition** –

distinguishing one's product by means of product differentiation and then advertising the distinguished product to consumers.

**Nonprice rationing** – devices to distribute available amounts of goods and services in short supply on a basis other than willingness or ability to pay.

**Nonproduction transaction** – the purchase and sale of any item which is not a currently produced good or service.

**Normal good** – a good for which an increase in income leads to an increase in the quantity demanded, other things equal.

**Normal profit** – payments to financial capital and entrepreneurial skill that are just sufficient to keep them employed in a particular productive activity that is, to keep them from leaving and going into some other productive activity.

**Normative analysis** – analysis based on value judgments of whether an outcome or policy is desirable or undesirable, and how to change things to achieve the "best" possible outcome.

**Normative economics** – that part of economics involving value judgments about what the economy should be like.

**Normative statement** – a statement of what should or ought to be that cannot be supported or

refuted by facts alone; a value judgment or opinion.

**Null hypothesis** – a statement about a value or a range of values that could occur if the researcher's theory is not correct.

**Occupational discrimination** – arbitrary restriction of particular groups from entering the more desirable higher-paying occupations.

**Occupational licensure** – the laws of state or local governments which require a worker to satisfy certain specified requirements and obtain a license from a licensing board before engaging in a particular occupation.

**Occupational mobility** – the movement of workers from one occupation to another.

**Occupational segregation** – crowding women or minorities into less desirable, lower-paying occupations.

**Offsets** – an economic effects that counteract other effects.

**Oligopoly** – a market structure in which a few sellers dominate the sales of a product and where entry of new sellers is difficult or impossible.

**One price, law of** – the economic principle that a good will sell at the same price in all markets that are open to it.

**On-the-job training** – a human capital formation on the job.

**Open economy** – an economy

which exports and imports goods and services.

**Open shop** – a place of employment in which the employer may hire nonunion workers and in which the workers need not become members of a labor union.

**Open-market operations** – central bank purchases and sales of government securities in the open (public) market.

**Opportunity cost** – the cost of a unit of a good measured in terms of the other goods that must be forgone in order to obtain it.

**Opportunity cost of a choice** – next best alternative use of resources that is sacrificed.

**Opportunity cost of an input** – the value of the best alternative forgone because the money was spent on that input rather than on the alternative.

**Opportunity cost of holding money** – the difference between the interest rate on securities and the interest rate on deposits.

**Opportunity cost of using inputs** – a value of those inputs in their next best use.

**Optimal distribution of income** – a distribution achieved by redistributing monies from richer to poorer members of society until the gains from increasing the degree of equality equal the efficiency losses of a shrinking national output.

**Ordinally measurable** – ordering that shows rankings (for example, first, second, third) but does not attach a number to alternatives.

**Ordinary price discrimination** – a price discrimination in which the monopolist divides its overall market into sub-markets, each containing a different type of purchaser with a different shape of demand curve.

**Other things being equal** – an important qualifying clause in statements of economic relations. To isolate the effect of one economic variable on a second one, we consider the effects of changing the first variable when all other possible influences on the second variable are held equal, or constant.

**Other things equal assumption** – the assumption that factors other than those being considered are held constant.

**Output effect** – when the price of a factor falls (rises), the costs of production fall (rise), leading to a rise (fall) in the output of final product and a consequent increase (decrease) in the use of all factors.

**Output effect of a factor price change** – the change in factor usage derived from the change in the quantity of a firm's output demanded in response to the factor price change.

**Outputs** – goods or services a

firm produces for sale.

**Paradox of profits** – positive economic profits set in motion a process of resource reallocation that ultimately serves to reduce them to zero.

**Parity** – price of an agricultural good that gives the good a purchasing power, in terms of the goods that farmers buy, equivalent to that which it had in a base period.

**Parity concept** – the idea that year after year a specific output of a farm product should enable a farmer to acquire a constant amount of nonagricultural goods and services.

**Parity ratio** – the ratio of the price received by farmers from the sale of an agricultural commodity to the prices of other goods paid by them.

**Partial analysis** – analysis in which economists assume that all economic conditions remain fixed except those being studied in a particular market.

**Partial derivative** – the slope of a multivariate function with respect to one variable when all other variables are held constant.

**Partial equilibrium analysis** – determines the equilibrium price and quantities traded in one market.

**Partial monopoly** – exists in a market when a price leader sets a monopoly price based on its marginal revenue and marginal cost

and other firms are price takers at that price.

**Participation rate** – the fraction of any population group in the labor force that participates in the labor force.

**Partnership** – an unincorporated firm with more than one owner. The owners share responsibility for financing and managing the firm, and are personally liable for firm debts.

**Patent** – an exclusive right to inventors to produce and sell a new product or machine for a set period of time.

**Payoff matrix** – shows the gain or loss to each possible strategy for each possible reaction by the rival player of the game.

**Payoff table** – a list of alternative actions and an array of their payoffs, which depend on different states of nature, along with their probabilities.

**Payroll tax** – a fixed-rate tax on earnings (up to a specified level) with no deductions or exemptions, where the money is earmarked (set aside) as contributions to particular social insurance programs.

**Peak-load pricing** – the practice of charging higher prices during peak demand periods.

**Pecuniary economies or diseconomies** – states in which the cost curves shift because input prices change as production increases.

**Penetration pricing** – a situation in which price is set relatively low with the intent to establish a broad market base for a new product.

**Per capita income** – a nation's total income per person.

**Per se violations** – collusive actions, such as attempts by firms to fix prices or divide a market, which are violations of the antitrust laws even if the actions are unsuccessful.

**Perfect competition** – a market situation in which there are many buyers and sellers, so that firms perceive their actions as independent of each other, and each is a price taker.

**Perfect input mobility** – means that suppliers of input services can immediately react to differences in prices for input services at different locations or in different uses.

**Perfect price discrimination** – a situation in which the price of each unit sold to each customer is set equal to each customer's marginal value of each unit; two-part pricing in which the monopoly sets the unit price equal to the marginal cost of output and the fee for right-of-purchase equal to the entire consumer surplus for a customer.

**Perfectly competitive industry** – an industry in which there are no barriers to entry or exit and resources can move freely into or out of the industry.

**Perfectly contestable market** – a market in which an entrant can duplicate the cost curves of the existing firm(s), and any capital costs of setting up operations can be fully recovered. This means there are no sunk costs, so entry and exit are costless.

**Perfectly elastic** – a quantity of good demanded changes by an unlimited amount in response to a change in price.

**Perfectly elastic demand** – a product or resource demand in which quantity demanded can be of any amount at a particular price.

**Perfectly elastic supply** – a product or resource supply in which quantity supplied can be of any amount at a particular price.

**Perfectly inelastic** – a quantity of good demanded does not change at all in response to change in price.

**Perfectly inelastic demand** – a product or resource demand in which price can be of any amount at a particular quantity of the product or resource demanded.

**Perfectly inelastic supply** – a product or resource supply in which price can be of any amount at a particular quantity of the product or resource demanded.

**Permanent income** – the level of long-run average income, or normal income abstracting from temporary disturbances, that a family or

individual expects to receive.

**Persistent poverty** – poverty that continues to keep people below the poverty line year after year or keep generation after generation within the same family below the poverty standard.

**Personal consumption expenditures** – the expenditures of households for durable and nondurable consumer goods and services.

**Personal distribution of income** – the pattern describing how a nation's income is divided among its families or households.

**Personal income** – the earned and unearned income available to resource suppliers and others before the payment of personal taxes.

**Personal income tax** – a tax levied on the taxable income of individuals, households, and unincorporated firms.

**Personal saving** – the personal income of households less personal taxes and personal consumption expenditures.

**Persuasive advertising** – a form of product differentiation used to gain some degree of monopoly power.

**Per-unit production cost** – the average production cost of a particular level of output.

**Phillips curve** – the relationship between the unemployment rate and

the inflation rate.

**Physical capacity** – the maximum output the economy can produce on a sustainable basis, given the physical and biological characteristics of its capital and labor resources.

**Physical capital** – the equipment, machines, and buildings used to operate a firm.

**Physical depreciation** – rate at which capital wears out.

**Planned economy** – an economy in which an economic plan, designed by a central planning board, is used to inform, direct, and coordinate the activities of subunits such as firms.

**Planned investment** – the amount which firms plan or intend to invest.

**Planned socialism** – an economic system in which resources are allocated according to a state plan created by the national and/or local government.

**Plant** – a physical establishment which performs one or more functions in the production, fabrication, and distribution of goods and services.

**Point elasticity of demand** – the absolute value of the slope of the demand curve at a point multiplied by the ratio of price divided by quantity at that point.

**Point elasticity of supply** – the

slope of the supply curve at a point multiplied by the ratio of price divided by quantity at that point.

**Point of congestion** – number of consumers that just raises the marginal cost of accommodating more consumers above zero.

**Point of diminishing marginal returns** – the level of usage of a variable input at which its marginal product just begins to decline.

**Policy economics** – the formulation of courses of action to bring about desired economic outcomes or to prevent un-desired occurrences.

**Political equilibrium** – an agreement on the quantity of a public service supplied by government given the cost-sharing arrangement, the collective choice rule, and the cost of the good.

**Political institutions** – rules and procedures that have evolved in a society for translating individual desires into government action.

**Positive analysis** – description of the economy and scientific study of what causes what.

**Positive economic analysis** – seeks to predict the impact of changes in economic policy or conditions on observable phenomena such as production, purchases, prices, or personal income.

**Positive economics** – the

analysis of facts or data to establish scientific generalizations about economic behavior.

**Positive externality** – a benefit not reflected in prices.

**Positive relationship** – a direct relationship between two variables.

**Positive statement** – a statement of what is, was, or will be that can be verified or refuted by looking at the facts.

**Potential competition** – new competitors which may be induced to enter an industry if firms now in that industry are receiving large economic profits.

**Potential output** – the real output an economy can produce when it fully employs its available resources.

**Poverty** – state in which an individual's or family's income and other means of support are insufficient to provide for basic needs.

**Poverty line** – the absolute poverty standard.

**Precautionary demand for money** – the component of the total demand for money that arises because of uncertainty over future needs for money.

**Predatory behavior** – actions by one firm directly intended to eliminate a rival firm.

**Predatory pricing** – practice whereby a large firm, operating in many markets, can afford to sell at

prices below costs in some markets until smaller competitors in those markets are driven out of business.

**Preferences** – likes and dislikes representing the rankings consumers give to alternative opportunities available to them.

**Preferred provider organization** – the doctors and hospitals that agree to provide health care to insured individuals at rates negotiated with an insurer.

**Premature inflation** – a type of inflation which sometimes occurs before the economy has reached full employment.

**Present value** – the current value of an amount of money that will be received some time in the future.

**Present-value formula** – a formula that tells how much a given future payment is worth today.

**Price** – the exchange value of a good in terms of other goods, most often expressed as the amount of money people will pay for a unit of the good.

**Price ceilings** – establish a maximum price that can be legally charged for an item.

**Price discrimination** – the practice of either charging different customers different prices for the same product or charging the same customer different prices for different units of the product in a given time period.

**Price elasticity of supply** – the ratio of the percentage change in quantity supplied of a product or resource to the percentage change in its price.

**Price expansion path** – the path of bundles chosen as one price changes alone.

**Price fixing** – the conspiring by two or more firms to set the price of their products.

**Price floor** – a legally determined price above the equilibrium price.

**Price index** – an index number which shows how the weighted average price of a “market basket” of goods changes through time.

**Price leader** – firm in an oligopolistic market that sets a price to maximize its own profits while other firms follow its lead.

**Price leadership** – the position of a dominant firm in the market that sets the market price that is then accepted by other firms.

**Price level** – the weighted average of the prices of all the final goods and services produced in an economy.

**Price maker** – a seller (or buyer) of a product or resource which is able to affect the product or resource price by changing the amount it sells (or buys).

**Price support** – a government guarantee to suppliers that they will

receive a specific price for a good even if the market will not pay this price.

**Price taker** – a seller (or buyer) of a product or resource who is unable to affect the price at which a product or resource sells by changing the amount it sells (or buys).

**Price war** – continual price cutting by rival firms in an oligopolistic market; one of many possible consequences of oligopolistic rivalry.

**Price-consumption curve** – curve connecting all the points of consumer equilibrium as prices change.

**Price-induced income effect** – that part of the change in quantity demanded due to the change in real income as price changes.

**Price-level stability** – a steadiness of the price level from one period to the next.

**Price-level surprises** – unanticipated changes in the price level.

**Price-wage flexibility** – changes in the prices of products and in the wages paid to workers.

**Prime interest rate** – the interest rate banks charge their most creditworthy borrowers, for example, large corporations with excellent financing credentials.

**Principal** – either the owners or

the managers of a firm, who possess the technology, own the means of production, or are responsible for the organization of production.

**Principal-agent problem** – a conflict of interest which occurs when agents (workers or managers) pursue their own objectives to the detriment of the principals' (stockholders) goals.

**Private good** – a good or service which is subject to the exclusion principle and which is provided by privately owned firms to consumers who are willing to pay for it.

**Private property** – the right of private persons and firms to obtain, own, control, employ, dispose of, and bequeath land, capital, and other property.

**Private sector** – the households and business firms of the economy.

**Privatization** – the sale of production rights for a product in the public domain, returning it to the private sector.

**Probability distribution** – a function that assigns a probability to each possible value of a random variable.

**Process innovation** – the development and use of a new or improved production or distribution method.

**Producer surplus** – difference between the market price of a unit of output and the minimum price

required to make that extra unit available.

**Producer surplus** – the total value that sellers receive beyond the amount required to supply the good.

**Producers' fixed investment** – the total value of expenditures on new plant and equipment by the business sector.

**Product attributes** – characteristics of goods and services that are desirable to consumers.

**Product differentiation** – a strategy in which one firm's product is distinguished from competing products by means of its design, related services, quality, location, or other attributes (except price).

**Product group** – represents several closely related, but not identical, items that serve the same general purpose for consumers.

**Product innovation** – the development and sale of a new or improved product (or service).

**Product market** – a market in which products are sold by firms and bought by households.

**Production** – using the services of labor and equipment together with natural resources and materials to make goods and services available.

**Production activity** – a technological relationship between output and input levels, where all inputs remain in fixed proportion to

one another.

**Production frontier** – production possibilities curve.

**Production function** – the relationship between inputs and outputs in the production process. The production function describes the maximum level of output associated with every possible combination of inputs in the production process, for a given technology.

**Production grid** – table that describes a production function by indicating the maximum output that can be produced by given combinations of input.

**Production possibilities curve** – a curve showing the different combinations of two goods or services that can be produced in a full-employment, full-production economy in which the available supplies of resources and technology are fixed.

**Production possibilities frontier** – a curve representing the maximum possible output combinations of goods for a fully employed economy.

**Production possibilities set** – the possible combinations of production possibilities using limited resources under a given technology.

**Productive capital** – an equipment, land, and structures used by businesses.

**Productive efficiency** – exists when it is impossible to rearrange the use of available input services to increase output of one good without decreasing the output of any other goods.

**Productivity** – a measure of average output or real output per unit of input.

**Profit maximization** – the firm's objective to make as much profit as possible, which guides its decisions about all aspects of production and sales.

**Profit sharing plan** – a compensation device through which workers receive part of their pay in the form of a share of their employer's profit (if any).

**Profit-maximizing combination of resources** – the quantity of each resource a firm must employ to maximize its profit or minimize its loss.

**Progressive income tax** – an income tax rates set such that the larger a household's income, the greater the percentage of that income that is taken away by income taxes.

**Progressive tax** – a tax whose average tax rate increases as the taxpayer's income increases and decreases as the taxpayer's income decreases.

**Property rights** – legal conditions of ownership, that is, the

right to own, use, and sell.

**Property rule** – a court ruling that entitles a property owner to be free of an externality.

**Property tax** – a tax on the value of property (capital, land, stocks and bonds, and other assets) owned by firms and households.

**Proportional tax** – a tax whose average tax rate remains constant as the taxpayer's income increases or decreases.

**Proportional taxation** – a method of setting tax rates so that the taxes paid as a fraction of income remain constant as actual income rises.

**Proprietor's income** – the net income of the owners of unincorporated firms (proprietorships and partnerships).

**Proprietorship** – a firm with a single owner who makes all decisions, bears full responsibility for everything the firm does, and is personally liable for all the firm's debts.

**Protective tariff** – a tariff designed to shield domestic producers of a good or service from the competition of foreign producers.

**Public assistance programs** – a government programs which pay benefits to those who are unable to earn income (because of permanent handicaps or because they have very low income and

dependent children).

**Public choice theory** – the economic analysis of collective and government decision making, politics, and the democratic process.

**Public finance** – the branch of economics which analyzes government revenues and expenditures.

**Public finance** – the study of government revenues and expenditures at all levels of government.

**Public goods** – goods that will not be produced in private markets because there is no way for the producer to keep those who don't pay for the goods from using them for example, a lighthouse beacon.

**Public interest theory of regulation** – the presumption that the purpose of the regulation of an industry is to protect the public (consumers) from abuse of the power possessed by natural monopolies.

**Public sector** – the part of the economy which contains all government entities; government.

**Public sector failure** – inefficiencies in resource allocation caused by problems in the operation of the public sector (government).

**Public utility** – a firm which produces an essential good or service, has obtained from a government the right to be the sole

supplier of the good or service in the area, and is regulated by that government to prevent the abuse of its monopoly power.

**Purchasing power** – the amount of goods and services which a monetary unit of income can buy.

**Purchasing power of money** – the inverse of the general price level. The purchasing power of money indicates how many market baskets of goods, or what fraction of a market basket, can be purchased with one unit of money.

**Purchasing power parity** – the idea that exchange rates between nations equate the purchasing power of various currencies.

**Pure capitalism** – an economic system in which property resources are privately owned and markets and prices are used to direct and coordinate economic activities.

**Pure competition** – the form of market structure in which there are many small buyers and sellers trading a homogeneous product.

**Pure economic rent** – the income accruing to a factor that is in perfectly inelastic, permanently unchanging supply.

**Pure market economy** – an economy in which what, how, and for whom to produce goods are determined entirely by the operation of markets.

**Pure monopoly** – a market

structure in which one firm sells a unique product, into which entry is blocked, in which the single firm has considerable control over product price, and in which nonprice competition may or may not be found.

**Pure public good** – a good for which the consumption by one consumer does not reduce the existing supply available to other consumers and when other consumers may not be excluded from the consumption of the good.

**Pure rate of interest** – an essentially risk-free, long-term interest rate which is free of the influence of market imperfections.

**Quantity demanded** – the amount of a good or service buyers (or a buyer) desire to purchase at a particular price during some period.

**Quantity supplied** – the amount of a good or service producers (or a producer) offer to sell at a particular price during some period.

**Quasi rents** – incomes earned by factors whose supplies are fixed in the short run only.

**Random variable** – a function whose value is determined by a probability.

**Ratchet effect** – an effect whereby increases occur in steps, as if up by a notch each time. If a firm exceeds its output target when planning is based on achieved levels

of output, a ratchet effect may be induced.

**Rate base** – allowable capital cost used in determining the prices that may be charged by a public utility.

**Rate of exchange** – the price paid in one's own money to acquire one unit of a foreign currency.

**Rate of return** – a ratio of the dollar measure of a capital good's net productivity to the cost of the capital good expressed as a percentage per year.

**Rate structure** – the set of prices for different classes of services provided by a firm.

**Ration coupon** – coupon issued by government entitling an individual or household to buy a certain number of units of a good.

**Rational expectation** – the best possible estimate about the future value of a variable, given the available information.

**Rational expectations theory** – the hypothesis that firms and households expect monetary and fiscal policies to have certain effects on the economy and (in pursuit of their own self-interests) take actions which make those policies ineffective.

**Rational ignorance** – a condition in which it is efficient for a person to remain ignorant about something because the costs of obtaining

information exceed the benefits of the information.

**Rationing function of prices** – the ability of market forces in a competitive market to equalize quantity demanded and quantity supplied and to eliminate shortages and surpluses via changes in prices.

**Reaction curves** – show the profit-maximizing output produced by one firm, given the output of the rival firm.

**Real business cycle theory** – a theory that business cycles result from changes in technology and resource availability, which affect productivity and thus increase or decrease long-run aggregate supply.

**Real GNP** – the sum of the values of all the final goods produced in a particular year, where the values are calculated by multiplying the year's quantities by the prices of the goods in a base year.

**Real gross domestic product** – gross domestic product adjusted for inflation.

**Real income** – the amount of goods and services which can be purchased with nominal income during some period of time.

**Real interest rate** – the annual percentage rate of increase in the lender's purchasing power on money loaned, or in other words, the interest rate calculated in terms of its purchasing power over goods

and services.

**Real rate of interest** – the rate of interest measured in terms of goods. The real rate of interest measures the percentage increase or decrease in the number of units of goods that can be purchased by delaying purchase.

**Real wage** – price per unit of labor services measured in terms of the quantity of goods that can be purchased often measured as the money wage divided by an index of the general price level.

**Real-balances effect** – the tendency for increases in the price level to lower the real value (or purchasing power) of financial assets with fixed money value and, as a result, to reduce total spending.

**Recession** – a period of declining real GDP, accompanied by lower real income and higher unemployment.

**Recessionary gap** – the amount by which the aggregate expenditures schedule must shift upward to increase the real GDP to its full-employment, noninflationary level.

**Reciprocal externality** – an externality in which two people impose comparable externalities on each other.

**Recognition lag** – the time it takes the government to realize that a problem has developed that requires policy action.

**Recyclable resources** – resources (such as gold) that, despite current usage, can be reprocessed at some cost to be reused by future generations.

**Refinancing the public debt** – paying owners of maturing government securities with money obtained by selling new securities or with new securities.

**Regression analysis** – a statistical technique that attempts to “explain” movements in a dependent variable as a function of movements in explanatory variables.

**Regressive tax** – a tax whose average tax rate decreases as the taxpayer’s income increases, and increases as the taxpayer’s income decreases.

**Regressive taxation** – a method of setting tax rates so that the fraction of income paid in taxes falls as income rises.

**Relative poverty standard** – a specified standard of living below which a certain percentage of the population lives.

**Rent control** – government-imposed price ceiling on the rent a tenant may be charged.

**Rent seeking** – the behavior of individuals attempting to earn payments in excess of opportunity costs.

**Rental income** – the payments (income) received by those who

supply land to the economy.

**Rent-seeking behavior** – the actions by persons, firms, or unions to gain special benefits from government at the taxpayers' or someone else's expense.

**Required reserves** – those reserves a bank holds to satisfy a reserve requirement.

**Resale price maintenance** – the setting of the retail price by a manufacturing firm, in return for allowing the retailers to buy the product.

**Resale-price maintenance contract** – agreement whereby a retailer is bound not to sell a product below a stated price fixed by the manufacturer.

**Reserve requirement** – a law or regulation requiring that a bank hold a certain percentage of its deposits in the form of reserves.

**Resource market** – a market in which households sell and firms buy resources or the services of resources.

**Restraint of trade** – a practice in which firms in the same industry collude to fix prices or divide up a market.

**Retained earnings** – money saved by businesses out of sales revenue.

**Retained earnings financing** – a method of financing in which the corporation does not pay out all profits as dividends but instead uses

some retained profits, or earnings, to finance physical capital purchases.

**Revaluation** – an increase in the governmentally defined value of its currency relative to other nations' currencies.

**Reverse discrimination** – the view that the preferential treatment associated with affirmative action efforts constitutes discrimination against other groups.

**Right-to-work laws** – state laws guaranteeing an individual the right to work in a unionized shop without becoming a member of the union, effectively banning the union shop.

**Risk** – prevails for an investment when the person undertaking the investment knows that of a number of possible outcomes each has a certain probability of occurrence.

**Risk averse** – describes an attitude that prevails if, given equal expected returns, a person would choose an investment with lower risk.

**Risk averse** – preferring to receive the expected value of a gamble with certainty, as opposed to engaging in the gamble.

**Roundabout process** – taking time and effort away from the direct production of goods for current consumption and using that time to produce capital goods that will ultimately make possible a larger subsequent production of goods than

otherwise possible.

**Roundabout production** – the construction and use of capital to aid in the production of consumer goods.

**Rule of reason** – holds that acts beyond normal business practice that unduly restrain competition for the purpose of excluding rivals can be used to infer intent to monopolize an industry.

**Rule of reason** – the legal view that market conduct rather than share of market control should determine guilt or innocence under the Sherman Act.

**Sales tax** – a tax levied on the sale of any of a broad classification of goods.

**Saving** – the decision to postpone consumption in the present period in order to increase future consumption.

**Saving schedule** – a schedule which shows the amounts households plan to save (plan not to spend for consumer goods), at different levels of disposable income.

**Savings deposit** – an interest-bearing deposit which normally can be withdrawn by the depositor at any time.

**Say's law** – the largely discredited macroeconomic generalization that the production of goods and service (supply) creates

an equal demand for these goods and service.

**Scarce** – existing in a limited amount.

**Scarce goods** – goods that require valuable resources for their production.

**Scarce resources** – the limited quantities of land, capital, labor, and entrepreneurial ability which are never sufficient to satisfy the virtually unlimited material wants of humans.

**Scarcity** – imbalance between the desires for goods and services and the means of satisfying those desires.

**Scientific method** – ongoing cycle of induction from observation to theory, followed by deduction from theory to prediction, and explanation and checking of predictions and explanations against new facts to see if theory is verified, refuted, or needs to be modified.

**Search** – the process of gathering information about prices and qualities of items for sale in a market.

**Search costs** – costs that arise as buyers investigate various sellers to find the best combination of low prices and high quality.

**Seasonal unemployment** – unemployment that arises as employment conditions change over the seasons of the year.

**Seasonal variations** – increases and decreases in the level of economic activity within a single year, caused by a change in the season.

**Second derivative** – the derivative of the first derivative of a function.

**Secondary labor force** – the people who participate irregularly in a labor market.

**Secular trend** – a long-term tendency; change in some variable over a very long period of years.

**Segmented market** – one in which two or more classes of buyers with differing responsiveness to price changes can be identified by certain characteristics.

**Self-interest** – that which each firm, property owner, worker, and consumer believes is best for itself and seeks to obtain.

**Selling costs** – all costs incurred by a firm to influence the sales of its product.

**Seniority** – the length of time a worker has been employed absolutely or relative to other workers.

**Separating equilibrium** – a situation in which a market for an item is separated into high-quality and low-quality segments, when such quality differences are not directly observable by the buyer.

**Separation of ownership and**

**control** – the fact that different groups of people own a corporation (the stockholders) and manage it (the directors and officers).

**Service** – an (intangible) act or use for which a consumer, firm, or government is willing to pay.

**Shared monopoly** – an oligopolistic industry in which all the firms attempt to collude to coordinate price and output decisions so that the industry effectively behaves like one giant monopoly firm.

**Short run** – a period of time short enough so that the quantity of one or more factors of production used to produce a particular good cannot be changed.

**Shortage** – difference between quantity demanded and quantity supplied when quantity demanded exceeds quantity supplied at a given price.

**Short-run aggregate supply curve** – an aggregate supply curve relevant to a time period in which input prices (particularly nominal wages) do not change in response to changes in the price level.

**Short-run competitive equilibrium** – the price at which the total quantity of a product supplied in the short run in a purely competitive industry equals the total quantity of the product demanded and which is equal to or greater than

average variable cost.

**Short-run demand for a factor** – a firm's demand for a factor, or input, to use in production, given that use of all other factors is held constant.

**Short-run farm problem** – the sharp year-to-year changes in the prices of agricultural products and in the incomes of farmers.

**Short-run market supply** – the horizontal sum of all marginal cost curves of firms producing in the short run.

**Short-run production function** – a relationship between the amount of a variable factor of production used and the total quantity of output produced.

**Short-run profits** – a total revenue minus total variable costs. Alternatively, short-run profits are output times per-unit short-run profit where per-unit short-run profit is price minus average variable cost.

**Short-run supply** – that portion of a firm's marginal cost curve above its average variable cost curve, or that portion of the marginal cost curve for which short-run profits equal or exceed zero.

**Short-run supply curve** – a supply curve which shows the quantity of a product a firm in a purely competitive industry will offer to sell at various prices in the short run.

**Shut-down case** – the circumstance in which a firm would experience a loss greater than its total fixed cost if it were to produce any output greater than zero.

**Shut-down rule** – the theory that in the short run, a firm should shut down to minimize loss and incur fixed cost only if price is below average variable cost.

**Signaling** – indirect but costly conveying of information about the relative quality of a product.

**Simple multiplier** – the multiplier in an economy in which government collects no net taxes, there are no imports, and investment is independent of the level of income.

**Single-peaked preferences** – those preferences for which utility declines continuously as consumption moves further away in any direction from the desired level.

**Size distribution of income** – the ranking of all families in the economy according to the size of the income received by each, lowest to highest, regardless of the source of their income.

**Slope** – the change in the dependent variable of a function caused by an incremental change in an independent variable.

**Slope of a line** – the ratio of the vertical change (the rise or fall) to the horizontal change (the run)

between any two points on a line. The slope of an upward sloping line is positive, reflecting a direct relationship between two variables.

**Slope of the demand curve** – change in price over some range of the curve divided by the change in quantity demanded over that same range.

**Small-number externalities** – those for which transaction costs of bargaining to internalize the externality are low.

**Social benefits** – benefits of consumption comprising private benefits plus external benefits.

**Social cost of monopoly** – measure of the loss in net benefits resulting from the reduced availability of a good when a monopoly maximizes profit.

**Social costs** – costs of production comprising private costs plus external costs.

**Social discount rate** – the public cost of capital; the discount rate used to calculate the net present value of a public project.

**Social insurance programs** – the programs which replace some of the earnings lost when people retire or are temporarily unemployed, which are financed by payroll taxes, and which are viewed as earned rights (rather than charity).

**Social marginal cost** – the cost of an increase in the amount

harvested consisting of the private marginal cost borne by the harvester plus costs of the congestion externality and the intergenerational externality.

**Social regulation** – the regulation by which government is concerned with the conditions under which goods and services are produced, their physical characteristics, and the impact of their production on society.

**Social Security system** – a form of social insurance and public assistance to aid the old, the disabled, the sick, the unemployed, and families financially crippled by the death of the breadwinner.

**Social Security tax** – tax on wages and salaries (shared equally by employee and employer) used to finance Social Security benefits.

**Socialism** – the form of economic organization in which the means of production are publicly owned but decisions are primarily decentralized.

**Socially optimal price** – the price of a product which results in the most efficient allocation of an economy's resources and is equal to the marginal cost of the product.

**Sole proprietorship** – a firm owned and managed by a single individual, who usually makes all decisions about running the business.

**Special-interest effect** – any result of government promotion of the interests (goals) of a small groups at the expense of a much larger group.

**Specialization** – the use of the resources of an individual, a firm, a region, or a nation to produce one or a few goods and services.

**Specialization of labor** – a system of production in which each worker performs only one task for which he or she is specifically trained.

**Specific tax** – sales tax or excise tax calculated as a fixed amount of money per unit of good sold.

**Speculation** – in international trade, buying a currency (such as British pounds) with another currency (such as dollars), anticipating that the price of the first currency in terms of the second will eventually rise.

**Speculative demand for money** – the component of the total demand for money that arises because people are uncertain about the safety of and yield on nonmonetary investments.

**Speculators** – people who try to profit from their expectations about fluctuations in market prices.

**Spot price** – the price of a good or asset in the current period.

**Stagflation** – an inflation accompanied by stagnation in the rate of growth of output and an

increase in unemployment in the economy.

**Standard deviation** – the positive square root of the variance of a random variable.

**Standardized product** – a product for which buyers are indifferent to the seller from whom they purchase it so long as the price charged by all sellers is the same.

**Startup** – new firm focused on creating and introducing a particular new product or employing a specific new production or distribution method.

**State bank** – a commercial bank authorized by a state government to engage in the business of banking.

**Statistical discrimination** – judging an individual on the basis of the average characteristic of the group to which the person belongs rather than on personal characteristics.

**Stock** – an ownership share in a corporation.

**Stock of capital** – the collection of all machines and structures in place and in production on a given day.

**Stockholders** – the owners of a corporation. In return for the money they invest by buying shares they generally receive dividends and have a vote in the corporation's decisions.

**Stop-go policy** – a policy that alternates between extreme restraint and extreme stimulus.

**Store of value** – an item that can be held for a period of time and at the end of the period can be exchanged for goods and services.

**Strategic trade policy** – the use of trade barriers to reduce the risk inherent in product development by domestic firms, particularly that involving advanced technology.

**Strategy** – a plan, method, or series of maneuvers for the purpose of obtaining a specific goal or result.

**Strike** – labor’s refusal to work for an employer until the employer agrees to the demand for higher wages or changes in other terms and conditions of employment.

**Strike fund** – money set aside by a union to tide workers over during a strike period.

**Strikebreakers** – workers willing to work on jobs currently vacated by workers on strike.

**Structural unemployment** – unemployment of workers whose skills are not demanded by employers, they lack sufficient skill to obtain employment, or they cannot easily move to locations where jobs are available.

**Subsidy** – a payment of funds (or goods and services) by a government, firm, or household for which it receives no good or service in return.

**Substitute goods** – products or services which can be used in place

of each other. When the price of one falls the demand for the other falls, and conversely with an increase of price.

**Substitutes** – goods for which an increase (decrease) in the price of one increases (decreases) the quantity demanded of the other, all other things equal.

**Substitution effect** – a change in the price of a consumer good changes the relative expensiveness of that good and hence changes the consumer’s willingness to buy it rather than other goods. The effect of a change in the price of a resource on the quantity of the resource employed by a firm, assuming no change in its output.

**Substitution effect of a factor price change** – the substitution of one factor for others when the relative price of that factor changes, so as to minimize total costs of any given level of output.

**Sunk costs** – the costs of capital purchases by the firm that are irretrievable if the capital is taken out of production.

**Supply** – a schedule showing the amounts of a good or service sellers (or a seller) will offer at various prices during some period.

**Supply curve** – a graphical representation of information of a supply schedule, with the price of the good on the vertical axis and the

quantity of the good supplied on the horizontal axis.

**Supply factor (in growth)** – an increase in the availability of a resource, an improvement in its quality, or an expansion of technological knowledge which makes it possible for an economy to produce a greater output of goods and services.

**Supply price elasticity** – the percentage change in quantity supplied divided by the percentage change in price.

**Supply schedule** – table expressing the relationship between price and the amounts sellers are willing to sell over a certain period.

**Supply-side economics** – a view of macroeconomics which emphasizes the role of costs and aggregate supply in explaining inflation, unemployment, and economic growth.

**Surplus** – difference between quantity supplied and quantity demanded at a given price when quantity supplied exceeds quantity demanded.

**Surplus payment** – a payment to a resource which is not required to ensure the availability of the resource, for example, land rent.

**Surplus value** – the excess of labor's actual production over the amount that would be generated if workers produced only enough to

meet their subsistence needs.

**Sustainable yield** – a situation in which the harvest equals the natural growth in the stock and the stock remains the same from year to year.

**Tacit collusion** – any method by an oligopolist to set prices and outputs which does not involve outright (or overt) collusion; price leadership is an example.

**Tangible capital** – a factor of production that is manufactured, that lasts more than one year, that is concrete, and that can be bought and sold.

**Tariff** – a tax on imports, most often calculated as a percent of the price charged for the good by the foreign supplier.

**Taste-for-discrimination model** – a theory of discrimination which views discrimination as a preference for which an employer is willing to pay.

**Tax** – an involuntary payment of money (or goods and services) to a government by a household or firm, for which the household or firm receives no good or service directly in return.

**Tax base** – the value of everything subject to taxation. The base varies with the items defined as taxable and the valuation, or assessment, of those items.

**Tax distortion** – the change in the quantity of an item consumed,

supplied, or produced because of a tax on the item.

**Tax indexation** – a system in which exemptions, deductions, bracket points, and other features of the tax system are adjusted when inflation occurs, so that inflation does not increase taxes in real terms.

**Tax price** – the price to a voter of an additional unit of public services, or the amount by which that voter's taxes will rise if public service.

**Taxable income** – income defined to be subject to the personal income tax. It is actual income less exemptions and deductions.

**Tax-transfer disincentives** – decreases in the incentives to work, save, invest, innovate, and take risks which allegedly result from high marginal tax rates and transfer-payments.

**Technical progress** – a technological change that leaves inputs more productive because of the development of better production techniques.

**Technological advance** – new and better goods and services and new and better ways of producing or distributing them.

**Technological efficiency** – an operating characteristic of a firm: for any combination of inputs, maximal output results.

**Technological improvement** – a change in the technical

sophistication of the production process that results in greater output for the same level of inputs.

**Technology** – the production methods used to combine resources of all kinds, including labor, to produce goods and services.

**Terms of trade** – the rate at which units of one product can be exchanged for units of another product.

**Theory** – establishes relationships between cause and effect that explain an observed result.

**Theory of games** – analyzes the behavior of persons or organizations with conflicting interests.

**Thrift institution** – a savings and loan association, mutual savings bank, or credit union.

**Tied sales** – sales in which a firm bundles products together and sets a single price for the bundle.

**Time deposit** – an interest-earning deposit in a commercial bank or thrift institution which the depositor can withdraw without penalty after the end of a specified period.

**Tit-for-tat** – in a repeated game, a strategy to induce cooperation by punishing an opponent for deviating from a jointly optimal series of moves but then returning to cooperation (forgiving and forgetting) until the opponent cheats

once more.

**Token money** – coins having a face value greater than their intrinsic value.

**Total cost** – the sum of the firm's total variable cost and total fixed cost at a given output level; the sum of the opportunity costs of the inputs used to produce that output.

**Total demand** – the demand schedule or the demand curve of all buyers of a good or service.

**Total demand for money** – the sum of the transactions demand for money and the asset demand for money.

**Total fixed costs** – the opportunity costs of fixed inputs, such as structures and machines.

**Total money stock** – the sum of an economy's currency and its deposit money.

**Total product** – the total output of a particular good or service produced by a firm (or a group of firms or the entire economy).

**Total product curve** – a graph of maximum output as a function of a variable input when other inputs remain constant.

**Total product of a variable input** – amount of output produced when a certain amount of that input is used along with fixed inputs.

**Total revenue** – the total number of dollars received by a firm (or firms) from the sale of a product;

equal to the total expenditures for the product produced by the firm (or firms).

**Total spending** – the total amount buyers of goods and services spend or plan to spend; also called aggregate expenditures.

**Total supply** – the supply schedule or the supply curve of all sellers of a good or service.

**Total units supplied total external cost** – total damage to the third parties of a given output.

**Total utility** – a measure of the total satisfaction obtained from the consumption of a good or bundle of goods in a given time period.

**Total variable cost** – costs that the firm can vary in the short run by changing the quantity of the variable factors of production and, hence, the quantity of output produced.

**Trade balance** – the export of goods (or goods and services) of a nation less its imports of goods (or goods and services).

**Trade bloc** – a group of nations which lowers or abolishes trade barriers among members.

**Trade controls** – tariffs, export subsidies, import quotas, and other means a nation may use to reduce imports and expand exports.

**Trade deficit** – the amount by which a nation's imports of goods (or goods and services) exceed its exports of goods (or goods and services).

**Trade surplus** – the amount by which a nation's exports of goods (or goods and services) exceed its imports of goods (or goods and services).

**Trademark** – a legal protection which gives the originators of a product an exclusive right to use the brand name.

**Tradeoffs** – the sacrifice of some or all of one economic goal, good, or service to achieve some other goal, good, or service.

**Trading possibilities frontier** – graphical representation of the choices that a nation has by specializing in the product in which it has a comparative advantage and trading (exporting) its specialty for the product in which it has a comparative disadvantage.

**Trading possibilities line** – a line which shows the different combinations of two products an economy is able to obtain (consume) when it specializes in the production of one product and trades (exports) it to obtain the other product.

**Trading set** – a region of mutual advantage.

**Traditional economy** – an economic system in which traditions and customs determine how the economy will use its scarce resources.

**Transaction costs** – value of inputs used in locating trading

partners, negotiating terms of trade, drawing up contracts, and enforcing the property rights acquired by the transaction.

**Transactions demand for money** – the amount of money people want to hold for use as a medium of exchange (to make payments), and which varies directly with the nominal GDP.

**Transfer payments** – the government transfer of funds from specific and general tax revenues to targeted groups of individuals who qualify under specific programs.

**Transfer pricing** – the practice of determining the price of an intermediate good transferred from one division of a firm to another division of the same firm.

**Transitory income** – the difference between income receipts and permanent income.

**Treble damages** – practice under which firms found guilty of violating antitrust laws are required to pay the complaining firm three times the total damages sustained.

**Turnover tax** – a tax on the total value of production of all enterprises at different stages of production.

**Two-part pricing** – a price structure that consists of a fee for right of purchase in a given time period, plus a fixed price per unit of output.

**Two-part tariff** – a pricing

scheme in which an initial “entry” fee or tariff must be paid as well as a price per unit in order to purchase the good.

**Tying contract** – a contractual agreement that forces buyers of one (usually noncompetitive) product to buy other items (usually competitive) from a seller.

**Unanticipated disturbances** – changes in economic conditions that people did not foresee.

**Unanticipated inflation** – increases in the price level (inflation) at a rate greater than expected.

**Unbalanced growth** – a strategy in economic development to focus the investment of a nation’s scarce resources in only one or two sectors of the economy.

**Unbiased parameter estimate** – an estimate for which the expected value of the estimator is equal to its true value.

**Uncertainty** – a state in which outcomes cannot be described or probabilities cannot be assigned.

**Underemployment** – a condition in which available resources are employed in tasks for which other resources are better suited or in which the best available technology is not used in a production process.

**Underground economy** – the sector of the economy consisting of activities not reported to the

government, either because the activity is illegal or the firm is avoiding taxation or regulation.

**Undifferentiated oligopoly** – an oligopoly in which each firm produces the same product.

**Undistributed corporate profits** – after-tax corporate profits not distributed as dividends to stockholders; corporate or business saving; also called retained earnings.

**Undistributed profits** – profits not paid out to shareholders (but still belonging to them).

**Unemployed** – those who are without a job but are actively searching for work.

**Unemployment** – a condition in which available factors of production are idle; in reference to labor, unemployment is said to exist whenever workers are actively looking for a job but are unable to find one.

**Unemployment rate** – the percentage of the labor force unemployed at any time.

**Unfavorable balance of trade** – a situation in which imports exceed exports.

**Uninsurable risk** – an event which would result in a loss and whose occurrence is uncontrollable and unpredictable.

**Union** – an organization of workers that represents them collectively in bargaining with

employers over wages and other terms of employment.

**Union shop** – a place of employment where the employer may hire either labor union members or nonmembers but where nonmembers must become members within a specified period of time or lose their jobs.

**Unit elastic** – demand is unit elastic if the amount spent on a good stays the same when its price changes.

**Unit elasticity** – demand or supply for which the elasticity coefficient is equal to 1; means the percentage change in the quantity demanded or supplied is equal to the percentage change in price.

**Unit labor cost** – labor costs per unit of output; total labor cost divided by total output; also equal to the nominal wage rate divided by the average product of labor.

**Unit of account** – a standard unit in which prices can be stated and the value of goods and services can be compared.

**Unlimited liability** – absence of any limits on the maximum amount which an individual (usually a business owner) may become legally required to pay.

**Unlimited wants** – the insatiable desire of consumers for goods and services which will give them satisfaction or utility.

**Unplanned investment** – actual investment less planned investment; increases or decreases in the inventories of firms resulting from production greater than sales.

**Useful life of a capital asset** – number of years over which the newly acquired asset will contribute to a firm's revenues or reduce its costs.

**Utilitarianism** – the philosophy that society should seek to maximize the total economic well-being of all members, without regard for distribution among them.

**Utility** – the want-satisfying power of a good or service; the satisfaction or pleasure a consumer obtains from the consumption of a good or service.

**Utility function** – a numerical assignment made to every bundle once bundles have been ranked in accordance with a consumer's preferences.

**Utility of perfect information** – the difference between the expected utility of a perfect prediction based on information and the expected utility without the information.

**Utility possibility curve** – shows how utility varies among persons for all possible efficient allocations of inputs and outputs.

**Value added** – the value of the product sold by a firm, less the value of the products (materials)

purchased and used by the firm to produce the product.

**Value judgment** – opinion of what is desirable or undesirable; belief regarding what ought or ought not to be (regarding what is right or just and wrong or unjust).

**Value of marginal product** – relative to a particular factor (such as labor), the change in the firm's total sales revenue when that factor (such as labor employment) changes by one, holding other factors fixed.

**Value of money** – the quantity of goods and services for which a unit of money (a dollar) can be exchanged.

**Value of perfect information** – the maximum amount of money that will be paid for a perfect prediction.

**Value of the marginal product of an input** – a marginal product multiplied by the price at which the additional output can be sold.

**Value-added tax** – a tax imposed on the difference between the value of the products sold by a firm and the value of the goods purchased from other firms to produce the product.

**Variable cost** – a cost which in total increases when the firm increases its output and decreases when it reduces its output.

**Variable factor** – a factor of production that can be changed in the short run.

**Variable inputs** – inputs that are easily increased or decreased in a short time, or inputs consumed upon first use.

**Variance** – the expected value of the squared deviations of a random variable about its mean.

**Vault cash** – the currency a bank has in its vault and cash drawers.

**Velocity** – the number of times per year the average dollar in the money supply is spent for final goods and services; nominal GDP divided by the money supply.

**Venture capital** – that part of household saving used to finance high-risk business ventures in exchange for shares of the profit if the business endeavors succeed.

**Vertical combination** – a group of plants engaged in different stages of the production of a final product and owned by a single firm.

**Vertical equity** – the principle of fairness in the tax structure up and down income levels: theoretically, those with greater ability to pay should face higher taxes.

**Vertical integration** – a situation in which a firm that produces an intermediate good or supplies raw material is merged with another firm that uses that input.

**Vertical intercept** – the point at which a line meets the vertical axis of a graph.

**Vertical merger** – the merger of

one or more firms engaged in different stages of the production of a final product.

**Vertical range** – the vertical segment of the aggregate supply curve along which the economy is at full capacity.

**Vertically integrated** – term used to describe a firm that owns several plants, each of which handles a different stage in the production process.

**Very long run** – a period in which technology can change and in which firms can introduce new products.

**Vicious circle of poverty** – a problem common in some developing countries in which their low per capita incomes are an obstacle to realizing the levels of saving and investment requisite to acceptable rates of economic growth.

**Voice mechanism** – communication by workers through their union to resolve grievances with an employer.

**Voluntary economic exchange** – an exchange in which none of the parties to the exchange is physically compelled to enter into it.

**Voluntary export restrictions** – voluntary limitations by countries or firms of their exports to a particular

foreign nation to avoid enactment of formal trade barriers by that nation.

**Voting paradox** – a voting situation in which no platform, or proposal, can be chosen that cannot be beaten by another proposal, by majority vote.

**Wage** – the price paid for the use or services of labor per unit of time (per hour, per day, and so on).

**Wage differential** – the difference between the wage received by one worker or group of workers and that received by another worker or group of workers.

**Wage discrimination** – the payment of a lower wage to members of particular groups than to preferred workers for the same work.

**Workable competition** – vigorous price and nonprice competition accompanied by the significant potential for the entry of new firms into an industry may exist even in industries where there are few firms.

**World price** – the international market price of a good or service, determined by world demand and supply.

**Yellow-dog contract** – signed statement whereby a worker, as a condition of employment, agrees not to join a union.

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Instructional edition

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