

# Glossary

## A

**ability-to-pay principle** the idea that taxes should be levied on a person according to how well that person can shoulder the burden

**absolute advantage** the ability to produce a good using fewer inputs than another producer

**accounting profit** total revenue minus total explicit cost

**adverse selection** the tendency for the mix of unobserved attributes to become undesirable from the standpoint of an uninformed party

**agent** a person who is performing an act for another person, called the principal

**aggregate-demand curve** a curve that shows the quantity of goods and services that households, firms, the government, and customers abroad want to buy at each price level

**aggregate-supply curve** a curve that shows the quantity of goods and services that firms choose to produce and sell at each price level

**appreciation** an increase in the value of a currency as measured by the amount of foreign currency it can buy

**Arrow's impossibility theorem** a mathematical result showing that, under certain assumed conditions, there is no scheme for aggregating individual preferences into a valid set of social preferences

**automatic stabilizers** changes in fiscal policy that stimulate aggregate demand when the economy goes into a recession without policymakers having to take any deliberate action

**average fixed cost** fixed cost divided by the quantity of output

**average revenue** total revenue divided by the quantity sold

**average tax rate** total taxes paid divided by total income

**average total cost** total cost divided by the quantity of output

**average variable cost** variable cost divided by the quantity of output

## B

**balanced trade** a situation in which exports equal imports

**bank capital** the resources a bank's owners have put into the institution

**behavioral economics** the subfield of economics that integrates the insights of psychology

**benefits principle** the idea that people should pay taxes based on the benefits they receive from government services

**bond** a certificate of indebtedness

**budget constraint** the limit on the consumption bundles that a consumer can afford

**budget deficit** a shortfall of tax revenue from government spending

**budget surplus** an excess of tax revenue over government spending

**business cycle** fluctuations in economic activity, such as employment and production

## C

**capital** the equipment and structures used to produce goods and services

**capital flight** a large and sudden reduction in the demand for assets located in a country

**capital requirement** a government regulation specifying a minimum amount of bank capital

**cartel** a group of firms acting in unison

**catch-up effect** the property whereby countries that start off poor tend to grow more rapidly than countries that start off rich

**central bank** an institution designed to oversee the banking system and regulate the quantity of money in the economy

**circular-flow diagram** a visual model of the economy that shows how dollars flow through markets among households and firms

**classical dichotomy** the theoretical separation of nominal and real variables

**closed economy** an economy that does not interact with other economies in the world

**club goods** goods that are excludable but not rival in consumption

**Coase theorem** the proposition that if private parties can bargain without cost over the allocation of resources, they can solve the problem of externalities on their own

**collective bargaining** the process by which unions and firms agree on the terms of employment

**collusion** an agreement among firms in a market about quantities to produce or prices to charge

**commodity money** money that takes the form of a commodity with intrinsic value

**common resources** goods that are rival in consumption but not excludable

**comparative advantage** the ability to produce a good at a lower opportunity cost than another producer

**compensating differential** a difference in wages that arises to offset the non-monetary characteristics of different jobs

**competitive market** a market with many buyers and sellers trading identical products so that each buyer and seller is a price taker

**complements** two goods for which an increase in the price of one leads to a decrease in the demand for the other

**compounding** the accumulation of a sum of money in, say, a bank account, where the interest earned remains in the account to earn additional interest in the future

**Condorcet paradox** the failure of majority rule to produce transitive preferences for society

**constant returns to scale** the property whereby long-run average total cost stays the same as the quantity of output changes

**consumer price index (CPI)** a measure of the overall cost of the goods and services bought by a typical consumer

**consumer surplus** the amount a buyer is willing to pay for a good minus the amount the buyer actually pays for it

**consumption** spending by households on goods and services, with the exception of purchases of new housing

**corrective tax** a tax designed to induce private decision makers to take account of the social costs that arise from a negative externality

**cost** the value of everything a seller must give up to produce a good

**cost-benefit analysis** a study that compares the costs and benefits to society of providing a public good

**cross-price elasticity of demand** a measure of how much the quantity demanded of one good responds to a change in the price of another good, computed as the percentage change in quantity demanded of the first good divided by the percentage change in price of the second good

**crowding out** a decrease in investment that results from government borrowing

**crowding-out effect** the offset in aggregate demand that results when expansionary fiscal policy raises the interest rate and thereby reduces investment spending

**currency** the paper bills and coins in the hands of the public

**cyclical unemployment** the deviation of unemployment from its natural rate

## D

**deadweight loss** the fall in total surplus that results from a market distortion, such as a tax

**demand curve** a graph of the relationship between the price of a good and the quantity demanded

**demand deposits** balances in bank accounts that depositors can access on demand by writing a check

**demand schedule** a table that shows the relationship between the price of a good and the quantity demanded

**depreciation** a decrease in the value of a currency as measured by the amount of foreign currency it can buy

**depression** a severe recession

**diminishing marginal product** the property whereby the marginal product of an input declines as the quantity of the input increases

**diminishing returns** the property whereby the benefit from an extra unit of an input declines as the quantity of the input increases

**discount rate** the interest rate on the loans that the Fed makes to banks

**discouraged workers** individuals who would like to work but have given up looking for a job

**discrimination** the offering of different opportunities to similar individuals who differ only by race, ethnic group, sex, age, or other personal characteristics

**diseconomies of scale** the property whereby long-run average total cost rises as the quantity of output increases

**diversification** the reduction of risk achieved by replacing a single risk with a large number of smaller, unrelated risks

**dominant strategy** a strategy that is best for a player in a game regardless of the strategies chosen by the other players

## E

**economic profit** total revenue minus total cost, including both explicit and implicit costs

**economics** the study of how society manages its scarce resources

**economies of scale** the property whereby long-run average total cost falls as the quantity of output increases

**efficiency** the property of society getting the most it can from its scarce resources

**efficiency wages** above-equilibrium wages paid by firms to increase worker productivity

**efficient markets hypothesis** the theory that asset prices reflect all publicly available information about the value of an asset

**efficient scale** the quantity of output that minimizes average total cost

**elasticity** a measure of the responsiveness of quantity demanded or quantity supplied to a change in one of its determinants

**equality** the property of distributing economic prosperity uniformly among the members of society

**equilibrium** a situation in which the market price has reached the level at which quantity supplied equals quantity demanded

**equilibrium price** the price that balances quantity supplied and quantity demanded

**equilibrium quantity** the quantity supplied and the quantity demanded at the equilibrium price

**excludability** the property of a good whereby a person can be prevented from using it

**explicit costs** input costs that require an outlay of money by the firm

**exports** goods produced domestically and sold abroad

**externality** the uncompensated impact of one person's actions on the well-being of a bystander

## F

**factors of production** the inputs used to produce goods and services

**federal funds rate** the interest rate at which banks make overnight loans to one another

**Federal Reserve (Fed)** the central bank of the United States

**fiat money** money without intrinsic value that is used as money because of government decree

**finance** the field that studies how people make decisions regarding the allocation of resources over time and the handling of risk

**financial intermediaries** financial institutions through which savers can indirectly provide funds to borrowers

**financial markets** financial institutions through which savers can directly provide funds to borrowers

**financial system** the group of institutions in the economy that help to match one person's saving with another person's investment

**firm-specific risk** risk that affects only a single company

**fiscal policy** the setting of the level of government spending and taxation by government policymakers

**Fisher effect** the one-for-one adjustment of the nominal interest rate to the inflation rate

**fixed costs** costs that do not vary with the quantity of output produced

**fractional-reserve banking** a banking system in which banks hold only a fraction of deposits as reserves

**free rider** a person who receives the benefit of a good but avoids paying for it

**frictional unemployment** unemployment that results because it takes time for workers to search for the jobs that best suit their tastes and skills

**fundamental analysis** the study of a company's accounting statements and future prospects to determine its value

**future value** the amount of money in the future that an amount of money today will yield, given prevailing interest rates

## G

**game theory** the study of how people behave in strategic situations

**GDP deflator** a measure of the price level calculated as the ratio of nominal GDP to real GDP times 100

**Giffen good** a good for which an increase in the price raises the quantity demanded

**government purchases** spending on goods and services by local, state, and federal governments

**gross domestic product (GDP)** the market value of all final goods and services produced within a country in a given period of time

## H

**horizontal equity** the idea that taxpayers with similar abilities to pay taxes should pay the same amount

**human capital** the knowledge and skills that workers acquire through education, training, and experience

## I

**implicit costs** input costs that do not require an outlay of money by the firm

**imports** goods produced abroad and sold domestically

**incentive** something that induces a person to act

**income effect** the change in consumption that results when a price change moves the consumer to a higher or lower indifference curve

**income elasticity of demand** a measure of how much the quantity demanded of a good responds to a

change in consumers' income, computed as the percentage change in quantity demanded divided by the percentage change in income

**indexation** the automatic correction by law or contract of a dollar amount for the effects of inflation

**indifference curve** a curve that shows consumption bundles that give the consumer the same level of satisfaction

**inferior good** a good for which, other things being equal, an increase in income leads to a decrease in demand

**inflation** an increase in the overall level of prices in the economy

**inflation rate** the percentage change in the price index from the preceding period

**inflation tax** the revenue the government raises by creating money

**informational efficiency** the description of asset prices that rationally reflect all available information

**in-kind transfers** transfers to the poor given in the form of goods and services rather than cash

**internalizing the externality** altering incentives so that people take account of the external effects of their actions

**investment** spending on capital equipment, inventories, and structures, including household purchases of new housing

## J

**job search** the process by which workers find appropriate jobs given their tastes and skills

## L

**labor force** the total number of workers, including both the employed and the unemployed

**labor-force participation rate** the percentage of the adult population that is in the labor force

**law of demand** the claim that, other things being equal, the quantity demanded of a good falls when the price of the good rises

**law of supply** the claim that, other things being equal, the quantity supplied of a good rises when the price of the good rises

**law of supply and demand** the claim that the price of any good adjusts to bring the quantity supplied and the quantity demanded for that good into balance

**leverage** the use of borrowed money to supplement existing funds for purposes of investment

**leverage ratio** the ratio of assets to bank capital

**liberalism** the political philosophy according to which the government should choose policies deemed just, as evaluated by an impartial observer behind a “veil of ignorance”

**libertarianism** the political philosophy according to which the government should punish crimes and enforce voluntary agreements but not redistribute income

**life cycle** the regular pattern of income variation over a person’s life

**liquidity** the ease with which an asset can be converted into the economy’s medium of exchange

**lump-sum tax** a tax that is the same amount for every person

## M

**macroeconomics** the study of economy-wide phenomena, including inflation, unemployment, and economic growth

**marginal change** a small incremental adjustment to a plan of action

**marginal cost** the increase in total cost that arises from an extra unit of production

**marginal product** the increase in output that arises from an additional unit of input

**marginal product of labor** the increase in the amount of output from an additional unit of labor

**marginal rate of substitution** the rate at which a consumer is willing to trade one good for another

**marginal revenue** the change in total revenue from an additional unit sold

**marginal tax rate** the amount that taxes increase from an additional dollar of income

**market** a group of buyers and sellers of a particular good or service

**market economy** an economy that allocates resources through the decentralized decisions of many firms and households as they interact in markets for goods and services

**market failure** a situation in which a market left on its own fails to allocate resources efficiently

**market for loanable funds** the market in which those who want to save supply funds and those who want to borrow to invest demand funds

**market power** the ability of a single economic actor (or small group of actors) to have a substantial influence on market prices

**market risk** risk that affects all companies in the stock market

**maximin criterion** the claim that the government should aim to maximize the well-being of the worst-off person in society

**median voter theorem** a mathematical result showing that if voters are choosing a point along a line and each voter wants the point closest to his most preferred point, then majority rule will pick the most preferred point of the median voter

**medium of exchange** an item that buyers give to sellers when they want to purchase goods and services

**menu costs** the costs of changing prices

**microeconomics** the study of how households and firms make decisions and how they interact in markets

**model of aggregate demand and aggregate supply** the model that most economists use to explain short-run fluctuations in economic activity around its long-run trend

**monetary neutrality** the proposition that changes in the money supply do not affect real variables

**monetary policy** the setting of the money supply by policymakers in the central bank

**money** the set of assets in an economy that people regularly use to buy goods and services from other people

**money multiplier** the amount of money the banking system generates with each dollar of reserves

**money supply** the quantity of money available in the economy

**monopolistic competition** a market structure in which many firms sell products that are similar but not identical

**monopoly** a firm that is the sole seller of a product without close substitutes

**moral hazard** the tendency of a person who is imperfectly monitored to engage in dishonest or otherwise undesirable behavior

**multiplier effect** the additional shifts in aggregate demand that result when expansionary fiscal policy increases income and thereby increases consumer spending

**mutual fund** an institution that sells shares to the public and uses the proceeds to buy a portfolio of stocks and bonds

## N

**Nash equilibrium** a situation in which economic actors interacting with one another each choose their best strategy given the strategies that all the other actors have chosen

**national saving** the total income in the economy that remains after paying for consumption and government purchases

**natural level of output** the production of goods and services that an economy achieves in the long run when unemployment is at its normal rate

**natural monopoly** a monopoly that arises because a single firm can supply a good or service to an entire market at a smaller cost than could two or more firms

**natural rate of unemployment** the normal rate of unemployment around which the unemployment rate fluctuates

**natural resources** the inputs into the production of goods and services that are provided by nature, such as land, rivers, and mineral deposits

**natural-rate hypothesis** the claim that unemployment eventually returns to its normal, or natural, rate, regardless of the rate of inflation

**negative income tax** a tax system that collects revenue from high-income households and gives subsidies to low-income households

**net capital outflow** the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners

**net exports** spending on domestically produced goods by foreigners (exports) minus spending on foreign goods by domestic residents (imports)

**nominal exchange rate** the rate at which a person can trade the currency of one country for the currency of another

**nominal GDP** the production of goods and services valued at current prices

**nominal interest rate** the interest rate as usually reported without a correction for the effects of inflation

**nominal variables** variables measured in monetary units

**normal good** a good for which, other things being equal, an increase in income leads to an increase in demand

**normative statements** claims that attempt to prescribe how the world should be

## O

**oligopoly** a market structure in which only a few sellers offer similar or identical products

**open economy** an economy that interacts freely with other economies around the world

**open-market operations** the purchase and sale of U.S. government bonds by the Fed

**opportunity cost** whatever must be given up to obtain some item

## P

**perfect complements** two goods with right-angle indifference curves

**perfect substitutes** two goods with straight-line indifference curves

**permanent income** a person's normal income

**Phillips curve** a curve that shows the short-run trade-off between inflation and unemployment

**physical capital** the stock of equipment and structures that are used to produce goods and services

**political economy** the study of government using the analytic methods of economics

**positive statements** claims that attempt to describe the world as it is

**poverty line** an absolute level of income set by the federal government for each family size below which a family is deemed to be in poverty

**poverty rate** the percentage of the population whose family income falls below an absolute level called the poverty line

**present value** the amount of money today that would be needed, using prevailing interest rates, to produce a given future amount of money

**price ceiling** a legal maximum on the price at which a good can be sold

**price discrimination** the business practice of selling the same good at different prices to different customers

**price elasticity of demand** a measure of how much the quantity demanded of a good responds to a change in the price of that good, computed as the percentage change in quantity demanded divided by the percentage change in price

**price elasticity of supply** a measure of how much the quantity supplied of a good responds to a change in the price of that good, computed as the percentage change in quantity supplied divided by the percentage change in price

**price floor** a legal minimum on the price at which a good can be sold

**principal** a person for whom another person, called the agent, is performing some act

**prisoners' dilemma** a particular "game" between two captured prisoners that illustrates why cooperation is difficult to maintain even when it is mutually beneficial

**private goods** goods that are both excludable and rival in consumption

**private saving** the income that households have left after paying for taxes and consumption

**producer price index** a measure of the cost of a basket of goods and services bought by firms

**producer surplus** the amount a seller is paid for a good minus the seller's cost of providing it

**production function** the relationship between quantity of inputs used to make a good and the quantity of output of that good

**production possibilities frontier** a graph that shows the combinations of output that the economy can possibly produce given the available factors of production and the available production technology

**productivity** the quantity of goods and services produced from each unit of labor input

**profit** total revenue minus total cost

**progressive tax** a tax for which high-income taxpayers pay a larger fraction of their income than do low-income taxpayers

**property rights** the ability of an individual to own and exercise control over scarce resources

**proportional tax** a tax for which high-income and low-income taxpayers pay the same fraction of income

**public goods** goods that are neither excludable nor rival in consumption

**public saving** the tax revenue that the government has left after paying for its spending

**purchasing-power parity** a theory of exchange rates whereby a unit of any given currency should be able to buy the same quantity of goods in all countries

## Q

**quantity demanded** the amount of a good that buyers are willing and able to purchase

**quantity equation** the equation  $M \times V = P \times Y$ , which relates the quantity of money, the velocity of money, and the dollar value of the economy's output of goods and services

**quantity supplied** the amount of a good that sellers are willing and able to sell

**quantity theory of money** a theory asserting that the quantity of money available determines the price level and that the growth rate in the quantity of money available determines the inflation rate

## R

**random walk** the path of a variable whose changes are impossible to predict

**rational expectations** the theory that people optimally use all the information they have, including information about government policies, when forecasting the future

**rational people** people who systematically and purposefully do the best they can to achieve their objectives

**real exchange rate** the rate at which a person can trade the goods and services of one country for the goods and services of another

**real GDP** the production of goods and services valued at constant prices

**real interest rate** the interest rate corrected for the effects of inflation

**real variables** variables measured in physical units

**recession** a period of declining real incomes and rising unemployment

**regressive tax** a tax for which high-income taxpayers pay a smaller fraction of their income than do low-income taxpayers

**reserve ratio** the fraction of deposits that banks hold as reserves

**reserve requirements** regulations on the minimum amount of reserves that banks must hold against deposits

**reserves** deposits that banks have received but have not loaned out

**risk aversion** a dislike of uncertainty

**rivalry in consumption** the property of a good whereby one person's use diminishes other people's use

## S

**sacrifice ratio** the number of percentage points of annual output lost in the process of reducing inflation by 1 percentage point

**scarcity** the limited nature of society's resources

**screening** an action taken by an uninformed party to induce an informed party to reveal information

**shoe-leather cost** the resources wasted when inflation encourages people to reduce their money holdings

**shortage** a situation in which quantity demanded is greater than quantity supplied

**signaling** an action taken by an informed party to reveal private information to an uninformed party

**social insurance** government policy aimed at protecting people against the risk of adverse events

**stagflation** a period of falling output and rising prices

**stock** a claim to partial ownership in a firm

**store of value** an item that people can use to transfer purchasing power from the present to the future

**strike** the organized withdrawal of labor from a firm by a union

**structural unemployment** unemployment that results because the number of jobs available in some labor markets is insufficient to provide a job for everyone who wants one

**substitutes** two goods for which an increase in the price of one leads to an increase in the demand for the other

**substitution effect** the change in consumption that results when a price change moves the consumer along a given indifference curve to a point with a new marginal rate of substitution

**sunk cost** a cost that has already been committed and cannot be recovered

**supply curve** a graph of the relationship between the price of a good and the quantity supplied

**supply schedule** a table that shows the relationship between the price of a good and the quantity supplied

**supply shock** an event that directly alters firms' costs and prices, shifting the economy's aggregate supply curve and thus the Phillips curve

**surplus** a situation in which quantity supplied is greater than quantity demanded

## T

**tariff** tax on goods produced abroad and sold domestically

**tax incidence** the manner in which the burden of a tax is shared among participants in a market

**technological knowledge** society's understanding of the best ways to produce goods and services

**theory of liquidity preference**

Keynes's theory that the interest rate adjusts to bring money supply and money demand into balance

**total cost** the market value of the inputs a firm uses in production

**total revenue (for a firm)** the amount a firm receives for the sale of its output

**total revenue (in a market)** the amount paid by buyers and received by sellers of a good, computed as the price of the good times the quantity sold

**trade balance** the value of a nation's exports minus the value of its imports; also called net exports

**trade deficit** an excess of imports over exports

**trade policy** a government policy that directly influences the quantity of goods and services that a country imports or exports

**trade surplus** an excess of exports over imports

**Tragedy of the Commons** a parable that illustrates why common resources

are used more than is desirable from the standpoint of society as a whole

**transaction costs** the costs that parties incur in the process of agreeing to and following through on a bargain

## U

**unemployment insurance** a government program that partially protects workers' incomes when they become unemployed

**unemployment rate** the percentage of the labor force that is unemployed

**union** a worker association that bargains with employers over wages, benefits, and working conditions

**unit of account** the yardstick people use to post prices and record debts

**utilitarianism** the political philosophy according to which the government should choose policies to maximize the total utility of everyone in society

**utility** a measure of happiness or satisfaction

## V

**value of the marginal product** the marginal product of an input times the price of the output

**variable costs** costs that vary with the quantity of output produced

**velocity of money** the rate at which money changes hands

**vertical equity** the idea that taxpayers with a greater ability to pay taxes should pay larger amounts

## W

**welfare** government programs that supplement the incomes of the needy

**welfare economics** the study of how the allocation of resources affects economic well-being

**willingness to pay** the maximum amount that a buyer will pay for a good

**world price** the price of a good that prevails in the world market for that good