

Note: Terms set in *italic* type are defined separately in this glossary.

actual investment The amount that *firms* invest; equal to *planned investment* plus *unplanned investment*.

actual reserves The funds that a bank has on deposit at the *Federal Reserve Bank* of its district (plus its *vault cash*).

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. Each nation defined its monetary unit in terms of (pegged it to) gold or the dollar, kept the *rate of exchange* for its money stable in the short run, and adjusted its rate in the long run when faced with international payments disequilibrium.

aggregate A collection of specific economic units treated as if they were one. For example, all prices of individual goods and services are combined into a *price level*, or all units of output are aggregated into *gross domestic product*.

aggregate demand A schedule or curve that shows the total quantity of goods and services demanded (purchased) at different *price levels*.

aggregate demand–aggregate supply (AD-AS) model The macroeconomic model that uses *aggregate demand* and *aggregate supply* to determine and explain the *price level* and the *real domestic output*.

aggregate expenditures The total amount spent for final goods and services in an economy.

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

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

aggregate supply shocks Sudden, large changes in resource costs that shift an economy's aggregate supply curve.

allocative efficiency The apportionment of resources among firms and industries to obtain the production of the products most wanted by society (consumers); the output of each product at which its *marginal cost* and *price* or *marginal benefit* are equal.

anticipated inflation Increases in the price level (*inflation*) that occur at the expected rate.

appreciation (of the dollar) An increase in the value of the dollar relative to the currency of another nation, so a dollar buys a larger amount of the foreign currency and thus of foreign goods.

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*; this amount varies inversely with the *interest rate*.

average propensity to consume Fraction (or percentage) of *disposable income* that households plan to spend for consumer goods and services; consumption divided by *disposable income*.

average propensity to save (APS) Fraction (or percentage) of *disposable income* that households save; *saving* divided by *disposable income*.

average tax rate Total tax paid divided by total (taxable) income, as a percentage.

balance of payments (See *international balance of payments*.)

balance-of- payments deficit The amount by which *inpayments* from a nation's stock of *official reserves* are required to balance that nation's *capital and financial account* with its *current account* (in its *balance of payments*).

balance-of- payments surplus The amount by which *outpayments* to a nation's stock of *official reserves* are required to balance that nation's *capital and financial account* with its *current account* (in its *international balance of payments*).

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

bank deposits The deposits that individuals or firms have at banks (or thrifts) or that banks have at the *Federal Reserve Banks*.

bankers' bank A bank that accepts the deposits of and makes loans to *depository institutions*; in the United States, a *Federal Reserve Bank*.

bank reserves The deposits of commercial banks and thrifts at *Federal Reserve Banks* plus bank and thrift *vault cash*.

barter The exchange of one good or service for another good or service.

base year The year with which other years are compared when an index is constructed; for example, the base year for a *price index*.

Board of Governors The seven-member group that supervises and controls the money and banking system of the United States; the Board of Governors of the Federal Reserve System; the Federal Reserve Board.

bond A financial device through which a borrower (a firm or government) is obligated to pay the principal and interest on a loan at a specific date in the future.

break-even income The level of *disposable income* at which *households* plan to consume (spend) all their income and to save

none of it; also, in an income transfer program, the level of earned income at which subsidy payments become zero.

Bretton Woods system The international monetary system developed after the Second World War in which *adjustable pegs* were employed, the *International Monetary Fund* helped stabilize foreign exchange rates, and gold and the dollar were used as *international monetary reserves*.

budget deficit The amount by which the expenditures of the Federal government exceed its revenues in any year.

budget surplus The amount by which the revenues of the Federal government exceed its expenditures in any year.

built-in stabilizer A mechanism that increases government's budget deficit (or reduces its surplus) during a recession and increases government's budget surplus (or reduces its deficit) during an expansion without any action by policymakers. The tax system is one such mechanism.

Bureau of Economic Analysis (BEA) An agency of the U.S. Department of Commerce that compiles the national income and product accounts.

business cycle Recurring increases and decreases in the level of economic activity over periods of years; consists of peak, recession, trough, and expansion phases.

business firm (See *firm*.)

capital Human-made resources (buildings, machinery, and equipment) used to produce goods and services; goods that do not directly satisfy human wants; also called capital goods.

capital and financial account The section of a nation's *international balance of payments* that records (1) debt forgiveness by and to foreigners and (2) foreign purchases of assets in the United States and U.S. purchases of assets abroad.

capital and financial account deficit A negative balance on its *capital and financial account* in a country's *international balance of payments*.

capital and financial account surplus A positive balance on its *capital and financial account* in a country's *international balance of payments*.

capital gain The gain realized when securities or properties are sold for a price greater than the price paid for them.

capital goods (See *capital*.)

capital-intensive commodity A product that requires a relatively large amount of *capital* to be produced.

capitalism An economic system in which property resources are privately owned and markets and prices are used to direct and coordinate economic activities.

capital stock The total available *capital* in a nation.

cartel A formal agreement among firms (or countries) in an industry to set the price of a product and establish the outputs of the individual firms (or countries) or to divide the market for the product geographically.

causation A relationship in which the occurrence of one or more events brings about another event.

CEA (See *Council of Economic Advisers*.)

central bank A bank whose chief function is the control of the nation's *money supply*; in the United States, the Federal Reserve System.

central economic planning Government determination of the objectives of the economy and how resources will be directed to attain those goals.

ceteris paribus assumption (See *other-things-equal assumption*.)

change in demand A change in the *quantity demanded* of a good or service at every price; a shift of the *demand curve* to the left or right.

change in quantity demanded A change in the amount of a product that consumers are willing and able to purchase because of a change in the product's price.

change in quantity supplied A change in the amount of a product that producers offer for sale because of a change in the product's price.

change in supply A change in the *quantity supplied* of a good or service at every price; a shift of the *supply curve* to the left or right.

checkable deposit Any deposit in a *commercial bank* or *thrift institution* against which a check may be written.

checkable-deposit multiplier (See *monetary multiplier*.)

check clearing The process by which funds are transferred from the checking accounts of the writers of checks to the checking accounts of the recipients of the checks.

checking account A *checkable deposit* in a *commercial bank* or *thrift institution*.

circular flow diagram An illustration showing the flow of resources from *households* to *firms* and of products from firms to households. These flows are accompanied by reverse flows of money from firms to households and from households to firms.

classical economics The macroeconomic generalizations accepted by most economists before the 1930s that led to the conclusion that a capitalistic economy was self-regulating and therefore would usually employ its resources fully.

closed economy An economy that neither exports nor imports goods and services.

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

COLA (See *cost-of-living adjustment*.)

command system A method of organizing an economy in which property resources are publicly owned and government uses *central economic planning* to direct and coordinate economic activities; command economy; communism.

commercial bank A firm that engages in the business of banking (accepts deposits, offers checking accounts, and makes loans).

commercial banking system All *commercial banks* and *thrift institutions* as a group.

communism (See *command system*.)

comparative advantage A lower relative opportunity cost than that of another producer or country.

compensation to employees *Wages* and salaries plus wage and salary supplements paid by employers to workers.

competition The presence in a market of independent buyers and sellers competing with one another along with the freedom of buyers and sellers to enter and leave the market.

complementary goods Products and services that are used together. When the price of one falls, the demand for the other increases (and conversely).

conglomerates Firms that produce goods and services in two or more separate industries.

constant opportunity cost An *opportunity cost* that remains the same for each additional unit as a consumer (or society) shifts purchases (production) from one product to another along a straight-line *budget line* (*production possibilities curve*).

consumer goods Products and services that satisfy human wants directly.

Consumer Price Index (CPI) An index that measures the prices of a fixed "market basket" of some 300 goods and services bought by a "typical" consumer.

consumer sovereignty Determination by consumers of the types and quantities of goods and services that will be produced with the scarce resources of the economy; consumers' direction of production through their dollar votes.

consumer surplus The difference between the maximum price a consumer is (or consumers are) willing to pay for an additional unit of a product and its market price; the triangular area below the demand curve and above the market price.

consumption of fixed capital An estimate of the amount of *capital* worn out or used up (consumed) in producing the *gross domestic product*; also called depreciation.

consumption schedule A schedule showing the amounts *households* plan to spend for *consumer goods* at different levels of *disposable income*.

contractionary fiscal policy A decrease in *government purchases* for goods and services, an increase in *net taxes*, or some combination of the two, for the purpose of decreasing *aggregate demand* and thus controlling inflation.

coordination failure A situation in which people do not reach a mutually beneficial outcome because they lack some way to jointly coordinate their actions; a possible cause of macroeconomic instability.

corporate income tax A tax levied on the net income (accounting profit) of corporations.

corporation A legal entity ("person") chartered by a state or the Federal government that is distinct and separate from the individuals who own it.

correlation A systematic and dependable association between two sets of data (two kinds of events); does not necessarily indicate causation.

cost-of-living adjustment (COLA) An automatic increase in the incomes (wages) of workers when inflation occurs; guaranteed by a collective bargaining contract between firms and workers.

cost-push inflation Increases in the price level (inflation) resulting from an increase in resource costs (for example, raw-material prices) and hence in *per-unit production costs*; inflation caused by reductions in *aggregate supply*.

Council of Economic Advisers (CEA) A group of three persons that advises and assists the president of the United States on economic matters (including the preparation of the annual *Economic Report of the President*).

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 that increases the value of an asset (such as the foreign money owned by the residents of a nation).

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) that sells shares to (accepts deposits from) its members and makes loans to them.

crowding-out effect A rise in interest rates and a resulting decrease in *planned investment* caused by the Federal government's increased borrowing to finance budget deficits and refinance debt.

currency Coins and paper money.

currency appreciation (See *exchange-rate appreciation*.)

currency depreciation (See *exchange-rate depreciation*.)

currency intervention A government's buying and selling of its own currency or foreign currencies to alter international exchange rates.

current account The section in a nation's *international balance of payments* that records its exports and imports of goods and services, its net *investment income*, and its *net transfers*.

cyclical asymmetry The idea that *monetary policy* may be more successful in slowing expansions and controlling *inflation* than in extracting the economy from severe recession.

cyclical deficit A Federal *budget deficit* that is caused by a recession and the consequent decline in tax revenues.

cyclical unemployment A type of *unemployment* caused by insufficient total spending (or by insufficient *aggregate demand*).

debit An accounting item that decreases the value of an asset (such as the foreign money owned by the residents of a nation).

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*.

deflation A decline in the economy's *price level*.

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

demand curve A curve illustrating *demand*.

demand factor (in growth) The increase in the level of *aggregate demand* that brings about the *economic growth* made possible by an increase in the production potential of the economy.

demand management The use of *fiscal policy* and *monetary policy* to increase or decrease *aggregate demand*.

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*.

demand schedule (See *demand*.)

dependent variable A variable that changes as a consequence of a change in some other (independent) variable; the “effect” or outcome.

depository institutions Firms that accept deposits of *money* from the public (businesses and persons); *commercial banks*, *savings and loan associations*, *mutual savings banks*, and *credit unions*.

depreciation (See *consumption of fixed capital*.)

depreciation (of the dollar) A decrease in the value of the dollar relative to another currency, so a dollar buys a smaller amount of the foreign currency and therefore of foreign goods.

derived demand The demand for a resource that depends on the demand for the products it helps to produce.

determinants of aggregate demand Factors such as consumption spending, *investment*, government spending, and *net exports* that, if they change, shift the aggregate demand curve.

determinants of aggregate supply Factors such as input prices, *productivity*, and the legal-institutional environment that, if they change, shift the aggregate supply curve.

determinants of demand Factors other than price that determine the quantities demanded of a good or service.

determinants of supply Factors other than price that determine the quantities supplied of a good or service.

devaluation A decrease in the governmentally defined value of a currency.

developing countries Many countries of Africa, Asia, and Latin America that are characterized by lack of capital goods, use of nonadvanced technologies, low literacy rates, high unemployment, rapid population growth, and labor forces heavily committed to agriculture.

direct foreign investment The building of new factories (or the purchase of existing capital) in a particular nation by corporations of other nations.

direct relationship The relationship between two variables that change in the same direction, for example, product price and quantity supplied; positive relationship.

discount rate The interest rate that the *Federal Reserve Banks* charge on the loans they make to *commercial banks* and *thrift institutions*.

discouraged workers Employees who have left the *labor force* because they have not been able to find employment.

discretionary fiscal policy Deliberate changes in taxes (tax rates) and government spending by Congress to promote full employment, price stability, and economic growth.

discrimination The practice of according 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, skills, and work experience as other workers.

disinflation A reduction in the rate of *inflation*.

disposable income (DI) *Personal income* less personal taxes; income available for *personal consumption expenditures* and *personal saving*.

dissaving Spending for consumer goods and services in excess of *disposable income*; the amount by which *personal consumption expenditures* exceed disposable income.

dividends Payments by a corporation of all or part of its profit to its stockholders (the corporate owners).

division of labor The separation of the work required to produce a product into a number of different tasks that are performed by different workers; *specialization* of workers.

Doha Round The latest, uncompleted (as of fall 2006) sequence of trade negotiations by members of the *World Trade Organization*; named after Doha, Qatar, where the set of negotiations began.

dollar votes The “votes” that consumers and entrepreneurs cast for the production of consumer and capital goods, respectively, when they purchase those goods in product and resource markets.

domestic capital formation The process of adding 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.

dumping The sale of a product in a foreign country at prices either below cost or below the prices commonly charged at home.

durable good A consumer good with an expected life (use) of 3 or more years.

earnings The money income received by a worker; equal to the *wage* (rate) multiplied by the amount of time worked.

economic cost A payment that must be made to obtain and retain the services of a *resource*; the income a firm must provide to a resource supplier to attract the resource away from an alternative use; equal to the quantity of other products that cannot be produced when resources are instead used to make a particular product.

economic efficiency The use of the minimum necessary resources to obtain the socially optimal amounts of goods and services; entails both *productive efficiency* and *allocative efficiency*.

economic growth (1) An outward shift in the *production possibilities curve* that results from an increase in resource supplies or quality or an improvement in *technology*; (2) an increase of real output (*gross domestic product*) or real output per capita.

economic law An *economic principle* that has been tested and retested and has stood the test of time.

economic model A simplified picture of economic reality; an abstract generalization.

economic perspective A viewpoint that envisions individuals and institutions making rational decisions by comparing the marginal benefits and marginal costs associated with their actions.

economic policy A course of action intended to correct or avoid a problem.

economic principle A widely accepted generalization about the economic behavior of individuals or institutions.

economic profit The *total revenue* of a firm less its *economic costs* (which include both *explicit costs* and *implicit costs*); also called “pure profit” and “above-normal profit.”

economic resources The *land, labor, capital, and entrepreneurial ability* that are used in the production of goods and services; productive agents; factors of production.

economics The social science concerned with how individuals, institutions, and society make optimal (best) choices under conditions of scarcity.

economic system A particular set of institutional arrangements and a coordinating mechanism for solving the economizing problem; a method of organizing an economy, of which the *market system* and the *command system* are the two general types.

economic theory A statement of a cause-effect relationship; when accepted by all or nearly all economists, an *economic principle*.

economies of scale Reductions in the *average total cost* of producing a product as the firm expands the size of plant (its output) in the *long run*; the economies of mass production.

economizing problem The choices necessitated because society’s economic wants for goods and services are unlimited but the resources available to satisfy these wants are limited (scarce).

efficiency factors (in growth) The capacity of an economy to combine resources effectively to achieve growth of real output that the *supply factors* (of growth) make possible.

efficiency loss Reductions in combined consumer and producer surplus caused by an underallocation or overallocation of resources to the production of a good or service. Also called dead-weight loss.

efficiency wage A wage that minimizes wage costs per unit of output by encouraging greater effort or reducing turnover.

efficient allocation of resources That allocation of an economy’s resources among the production of different products that leads to the maximum satisfaction of consumers’ wants, thus producing the socially optimal mix of output with society’s scarce resources.

electronic payments Purchases made by transferring funds electronically. Examples: Fedwire transfers, automated clearing-house transactions (ACHs), payments via the PayPal system, and payments made through stored-value cards.

employment rate The percentage of the *labor force* employed at any time.

entrepreneurial ability The human resource that combines the other resources to produce a product, makes nonroutine decisions, innovates, and bears risks.

equation of exchange $MV = PQ$, in which M is the supply of money, V is the *velocity* of money, P is the *price level*, and Q is the physical volume of *final goods and services* produced.

equilibrium GDP (See *equilibrium real domestic output*.)

equilibrium price The *price* in a competitive market at which the *quantity demanded* and the *quantity supplied* are equal, there is neither a shortage nor a surplus, and there is no tendency for price to rise or fall.

equilibrium price level The price level at which the aggregate demand curve intersects the aggregate supply curve.

equilibrium quantity (1) The quantity demanded and supplied at the equilibrium price in a competitive market; (2) the profit-maximizing output of a firm.

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); the real domestic output at which the aggregate demand curve intersects the aggregate supply curve.

equilibrium real output (See *equilibrium real domestic output*.)

euro The common currency unit used by 12 European nations (as of 2006) in the Euro zone, which consists of Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain.

European Union (EU) An association of 25 European nations that has eliminated tariffs and quotas among them, established common tariffs for imported goods from outside the member nations, eliminated barriers to the free movement of capital, and created other common economic policies.

excess reserves The amount by which a bank’s or thrift’s *actual reserves* exceed its *required reserves*; actual reserves minus required reserves.

exchange control (See *foreign exchange control*.)

exchange rate The *rate of exchange* of one nation’s currency for another nation’s currency.

exchange-rate appreciation An increase in the value of a nation’s currency in foreign exchange markets; an increase in the *rate of exchange* for foreign currencies.

exchange-rate depreciation A decrease in the value of a nation’s currency in foreign exchange markets; a decrease in the *rate of exchange* for foreign currencies.

exchange-rate determinant Any factor other than the *rate of exchange* that 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.

exhaustive expenditure An expenditure by government resulting directly in the employment of *economic resources* and in the

absorption by government of the goods and services those resources produce; a *government purchase*.

expansion A phase of the *business cycle* in which *real GDP*, *income*, and employment rise.

expansionary fiscal policy An increase in *government purchases* of 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.

expansionary monetary policy Federal Reserve system actions to increase the *money supply*, lower *interest rates*, and expand *real GDP*; an easy money policy.

expectations The anticipations of consumers, firms, and others about future economic conditions.

expected rate of return The increase in profit a firm anticipates it will obtain by purchasing capital (or engaging in research and development); expressed as a percentage of the total cost of the investment (or R&D) activity.

expenditures approach The method that adds all expenditures made for *final goods and services* to measure the *gross domestic product*.

expenditures-output approach (See *aggregate expenditures-domestic output approach*.)

exports Goods and services produced in a nation and sold to buyers in other nations.

export subsidies Government payments to domestic producers to enable them to reduce the *price* of a good or service to foreign buyers.

export supply curve An upward-sloping curve that shows the amount of a product that domestic firms will export at each *world price* that is above the *domestic price*.

export transaction A sale of a good or service that increases the amount of foreign currency flowing to a nation's citizens, firms, and government.

external benefit (See *positive externality*.)

external cost (See *negative externality*.)

external debt Private or public debt owed to foreign citizens, firms, and institutions.

externality A cost or benefit from production or consumption, accruing without compensation to someone other than the buyers and sellers of the product (see *negative externality* and *positive externality*).

external public debt The portion of the public debt owed to foreign citizens, firms, and institutions.

face value The dollar or cents value placed on a U.S. coin or piece of paper money.

factors of production *Economic resources: land, capital, labor, and entrepreneurial ability.*

fallacy of composition The false notion that what is true for the individual (or part) is necessarily true for the group (or whole).

FDIC (See *Federal Deposit Insurance Corporation*.)

Federal Deposit Insurance Corporation (FDIC) The federally chartered corporation that insures deposit liabilities (up to \$100,000 per account) of *commercial banks* and *thrift institutions* (excluding *credit unions*, whose deposits are insured by the *National Credit Union Administration*).

Federal funds rate The interest rate banks and other depository institutions charge one another on overnight loans made out of their *excess reserves*.

Federal government The government of the United States, as distinct from the state and local governments.

Federal Open Market Committee (FOMC) The 12-member group that determines the purchase and sale policies of the *Federal Reserve Banks* in the market for U.S. government securities.

Federal Reserve Banks The 12 banks chartered by the U.S. government to control the *money supply* and perform other functions. (See *central bank*, *quasi-public bank*, and *bankers' bank*.)

Federal Reserve Note Paper money issued by the *Federal Reserve Banks*.

Federal Reserve System The U.S. central bank, consisting of the *Board of Governors* of the Federal Reserve and the 12 *Federal Reserve Banks*, which controls the lending activity of the nation's banks and thrifts and thus the *money supply*; commonly referred to as the "Fed."

fiat money Anything that is *money* because government has decreed it to be money.

final goods and services Goods and services that have been purchased for final use and not for resale or further processing or manufacturing.

financial capital (See *money capital*.)

financial services industry The broad category of firms that provide financial products and services to help households and businesses earn *interest*, receive *dividends*, obtain *capital gains*, insure against losses, and plan for retirement. The industry includes *commercial banks*, *thrift institutions*, insurance companies, mutual fund companies, pension funds, and securities firms.

firm An organization that employs resources to produce a good or service for profit and owns and operates one or more *plants*.

fiscal policy Changes in government spending and tax collections designed to achieve a full-employment and noninflationary domestic output; also called *discretionary fiscal policy*.

fixed exchange rate A *rate of exchange* that is set in some way and therefore prevented from rising or falling with changes in currency supply and demand.

flexible exchange rate A *rate of exchange* determined by the international demand for and supply of a nation's money; a rate free to rise or fall (to float).

floating exchange rate (See *flexible exchange rate*.)

foreign competition (See *import competition*.)

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 *outpayments* to its *inpayments* (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; currency market.

foreign exchange rate (See *rate of exchange*.)

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

45° line A line along which the value of *GDP* (measured horizontally) is equal to the value of *aggregate expenditures* (measured vertically).

fractional reserve banking system A *reserve requirement* that is less than 100 percent of the checkable-deposit liabilities of a *commercial bank* or *thrift institution*.

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 that they think is appropriate.

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

free-rider problem The inability of potential providers of an economically desirable good or service to obtain payment from those who benefit, because of *nonexcludability*.

free trade The absence of artificial (government-imposed) barriers to trade among individuals and firms in different nations.

frictional unemployment A type of unemployment caused by workers voluntarily changing jobs and by temporary layoffs; unemployed workers between jobs.

full employment (1) The use of all available resources to produce want-satisfying goods and services; (2) the situation in which the *unemployment rate* is equal to the *full-employment unemployment rate* and there is *frictional* and *structural* but no *cyclical unemployment* (and the *real GDP* of the economy equals *potential output*).

full-employment unemployment rate The *unemployment rate* at which there is no *cyclical unemployment* of the *labor force*; equal to between 4 and 5 percent in the United States because some *frictional* and *structural unemployment* is unavoidable.

functional distribution of income The manner in which *national income* is divided among the functions performed to earn it (or the kinds of resources provided to earn it); the division of national income into wages and salaries, proprietors' income, corporate profits, interest, and rent.

gains from trade The extra output that trading partners obtain through specialization of production and exchange of goods and services.

GDP (See *gross domestic product*.)

GDP gap Actual *gross domestic product* minus potential output; may be either a positive amount (a *positive GDP gap*) or a negative amount (a *negative GDP gap*).

GDP price index A *price index* for all the goods and services that make up the *gross domestic product*; the price index used to adjust *nominal gross domestic product* to *real gross domestic product*.

G8 nations A group of eight major nations (Canada, France, Germany, Italy, Japan, Russia, United Kingdom, and United States) whose leaders meet regularly to discuss common economic problems and try to coordinate economic policies.

General Agreement on Tariffs and Trade (GATT) The international agreement reached in 1947 in which 23 nations agreed to give equal and nondiscriminatory treatment to one another, to reduce tariff rates by multinational negotiations, and to eliminate *import quotas*. It now includes most nations and has become the *World Trade Organization*.

generalization Statement of the nature of the relationship between two or more sets of facts.

gold standard A historical system of fixed exchange rates in which nations defined their currencies in terms of gold, maintained a fixed relationship between their stocks of gold and their money supplies, and allowed gold to be freely exported and imported.

government purchases (G) Expenditures by government for goods and services that government consumes in providing public goods and for public (or social) capital that has a long lifetime; the expenditures of all governments in the economy for those *final goods and services*.

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.

gross domestic product (GDP) The total market value of all *final goods and services* produced annually within the boundaries of the United States, whether by U.S.- or foreign-supplied resources.

gross private domestic investment (Ig) Expenditures for newly produced *capital goods* (such as machinery, equipment, tools, and buildings) and for additions to inventories.

growth accounting The bookkeeping of the supply-side elements such as productivity and labor inputs that contribute to changes in *real GDP* over some specific time period.

guiding function of prices The ability of price changes to bring about changes in the quantities of products and resources demanded and supplied.

horizontal axis The "left-right" or "west-east" measurement line on graph or grid.

household An economic unit (of one or more persons) that provides the economy with resources and uses the income received to purchase goods and services that satisfy economic wants.

human capital The knowledge and skills that make a person productive.

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.

hyperinflation A very rapid rise in the price level; an extremely high rate of inflation.

hypothesis A tentative explanation of cause and effect that requires testing.

IMF (See *International Monetary Fund*.)

import competition The competition that domestic firms encounter from the products and services of foreign producers.

import demand curve A downsloping curve showing the amount of a product that an economy will import at each *world price* below the *domestic price*.

import quota A limit imposed by a nation on the quantity (or total value) of a good that may be imported during some period of time.

imports Spending by individuals, *firms*, and governments for goods and services produced in foreign nations.

import transaction The purchase of a good or service that decreases the amount of foreign money held by citizens, firms, and governments of a nation.

income A flow of dollars (or purchasing power) per unit of time derived from the use of human or property resources.

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 A change in the quantity demanded of a product that results from the change in *real income (purchasing power)* caused by a change in the product's price.

income inequality The unequal distribution of an economy's total income among households or families.

increase in demand An increase in the *quantity demanded* of a good or service at every price; a shift of the *demand curve* to the right.

increase in supply An increase in the *quantity supplied* of a good or service at every price; a shift of the *supply curve* to the right.

increasing returns An increase in a firm's output by a larger percentage than the percentage increase in its inputs.

independent goods Products or services for which there is little or no relationship between the price of one and the demand for the other. When the price of one rises or falls, the demand for the other tends to remain constant.

independent variable The variable causing a change in some other (dependent) variable.

individual demand The demand schedule or *demand curve* of a single buyer.

individual supply The supply schedule or *supply curve* of a single seller.

industrially advanced countries High-income countries such as the United States, Canada, Japan, and the nations of western

Europe that have highly developed *market economies* based on large stocks of technologically advanced capital goods and skilled labor forces.

industry A group of (one or more) *firms* that produce identical or similar products.

inferior good A good or service whose consumption declines as income rises (and conversely), price remaining constant.

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 those in a *base year*.

inflation A rise in the general level of prices in an economy.

inflationary expectations The belief of workers, firms, and consumers that substantial inflation will occur in the future.

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

inflation premium The component of the *nominal interest rate* that reflects anticipated inflation.

inflation targeting The annual statement by a *central bank* of a goal for a specific range of inflation in a future year, coupled with monetary policy designed to achieve the goal.

information technology New and more efficient methods of delivering and receiving information through use of computers, fax machines, wireless phones, and the Internet.

infrastructure The capital goods usually provided by the *public sector* for the use of its citizens and firms (for example, highways, bridges, transit systems, wastewater treatment facilities, municipal water systems, and airports).

injection An addition of spending to the income-expenditure stream: *investment*, *government purchases*, and *net exports*.

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.

inpayments The receipts of domestic or foreign money that individuals, firms, and governments of one nation obtain from the sale of goods and services abroad, as investment income and remittances, and from foreign purchases of its assets.

insider-outsider theory The hypothesis that nominal wages are inflexible downward because firms are aware that workers ("insiders") who retain employment during recession may refuse to work cooperatively with previously unemployed workers ("outsiders") who offer to work for less than the current wage.

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 annual rate at which interest is paid; a percentage of the borrowed amount.

interest-rate effect The tendency for increases in the *price level* to increase the demand for money, raise interest rates, and, as a result, reduce total spending and real output in the economy (and the reverse for price-level decreases).

intermediate goods Products that are purchased for resale or further processing or manufacturing.

internally held public debt *Public debt* owed to citizens, firms, and institutions of the same nation that issued the debt.

international balance of payments A summary of all the transactions that took place between the individuals, firms, and government units of one nation and those of all other nations during a year.

international balance-of-payments deficit (See *balance-of-payments deficit*.)

international balance-of-payments surplus (See *balance-of-payments surplus*.)

international gold standard (See *gold standard*.)

International Monetary Fund (IMF) The international association of nations that was formed after the Second World War to make loans of foreign monies to nations with temporary *payments deficits* and, until the early 1970s, to administer the *adjustable pegs*. It now mainly makes loans to nations facing possible defaults on private and government loans.

international monetary reserves The foreign currencies and other assets such as gold that a nation can use to settle a *balance-of-payments deficit*.

international value of the dollar The price that must be paid in foreign currency (money) to obtain one U.S. dollar.

intrinsic value The market value of the metal within a coin.

inventories Goods that have been produced but remain unsold.

inverse relationship The relationship between two variables that change in opposite directions, for example, product price and quantity demanded; negative relationship.

investment Spending for the production and accumulation of *capital* and additions to inventories.

investment demand curve A curve that shows the amounts of *investment* demanded by an economy at a series of *real interest rates*.

investment goods Same as *capital* or capital goods.

investment in human capital (See *human capital investment*.)

investment schedule A curve or schedule that shows the amounts firms plan to invest at various possible values of *real gross domestic product*.

"invisible hand" The tendency of firms and resource suppliers that seek to further their own self-interests in competitive markets to also promote the interest of society.

Joint Economic Committee (JEC) Committee of senators and representatives that investigates economic problems of national interest.

Keynesian economics The macroeconomic generalizations that 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 People's physical and mental talents and efforts that are used to help produce goods and services.

labor force Persons 16 years of age and older who are not in institutions and who are employed or are unemployed and seeking work.

labor-force participation rate The percentage of the working-age population that is actually in the *labor force*.

labor-intensive commodity A product requiring a relatively large amount of *labor* to be produced.

labor market discrimination (See *discrimination*.)

labor productivity Total output divided by the quantity of labor employed to produce it; the *average product* of labor or output per hour of work.

labor union A group of workers organized to advance the interests of the group (to increase wages, shorten the hours worked, improve working conditions, and so on).

Laffer Curve A curve relating government tax rates and tax revenues and on which a particular tax rate (between zero and 100 percent) maximizes tax revenues.

laissez-faire capitalism (See *capitalism*.)

land Natural resources ("free gifts of nature") used to produce goods and services.

land-intensive commodity A product requiring a relatively large amount of *land* to be produced.

law of demand The principle that, other things equal, an increase in a product's price will reduce the quantity of it demanded, and conversely for a decrease in price.

law of increasing opportunity costs The principle that 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, and conversely for a price decrease.

leakage (1) A withdrawal of potential spending from the income-expenditures stream via *saving*, tax payments, or *imports*; (2) a withdrawal that reduces the lending potential of the banking system.

learning by doing Achieving greater *productivity* and lower *average total cost* through gains in knowledge and skill that accompany repetition of a task; a source of *economies of scale*.

legal tender A legal designation of a nation's official currency (bills and coins). Payment of debts must be accepted in this monetary unit, but creditors can specify the form of payment, for example, "cash only" or "check or credit card only."

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; equal to the bank's excess reserves.

lending potential of the banking system The amount by which the banking system can increase the *money supply* by making new loans to (or buying securities from) the public; equal to the *excess reserves* of the banking system multiplied by the *monetary multiplier*.

liability A debt with a monetary value; an amount owed by a firm or an individual.

limited liability Restriction of the maximum loss to a predetermined amount for the owners (stockholders) of a *corporation*. The maximum loss is the amount they paid for their shares of stock.

liquidity The ease with which an asset can be converted quickly into cash with little or no loss of purchasing power. Money is said to be perfectly liquid, whereas other assets have a lesser degree of liquidity.

long run (1) 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. (2) In *macroeconomics*, a period sufficiently long for *nominal wages* and other input prices to change in response to a change in the nation's *price level*.

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 vertical Phillips Curve The *Phillips Curve* after all nominal wages have adjusted to changes in the rate of inflation; a line emanating straight upward at the economy's *natural rate of unemployment*.

lump-sum tax A tax that is a constant amount (the tax revenue of government is the same) at all levels of GDP.

M1 The most narrowly defined *money supply*, equal to *currency* in the hands of the public and the *checkable deposits* of commercial banks and thrift institutions.

M2 A more broadly defined *money supply*, equal to M1 plus *non-checkable savings accounts* (including *money market deposit accounts*), small *time deposits* (deposits of less than \$100,000), and individual *money market mutual fund* balances.

macroeconomics The part of economics concerned with the economy as a whole; with such major aggregates as the household, business, and government sectors; and with measures of the total economy.

managed floating exchange rate An *exchange rate* that 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.

marginal analysis The comparison of marginal ("extra" or "additional") benefits and marginal costs, usually for decision making.

marginal benefit The extra (additional) benefit of consuming 1 more unit of some good or service; the change in total benefit when 1 more unit is consumed.

marginal cost (MC) The extra (additional) cost of producing 1 more unit of output; equal to the change in *total cost* divided by

the change in output (and, in the short run, to the change in total *variable cost* divided by the change in output).

marginal propensity to consume (MPC) The fraction of any change in *disposable income* spent for *consumer goods*; equal to the change in consumption divided by the change in disposable income.

marginal propensity to save (MPS) The fraction of any change in *disposable income* that households save; equal to the change in *saving* divided by the change in disposable income.

marginal tax rate The tax rate paid on each additional dollar of income.

marginal utility The extra *utility* a consumer obtains from the consumption of 1 additional unit of a good or service; equal to the change in total utility divided by the change in the quantity consumed.

market Any institution or mechanism that brings together buyers (demanders) and sellers (suppliers) of a particular good or service.

market demand (See *total demand*.)

market economy An economy in which the private decisions of consumers, resource suppliers, and firms determine how resources are allocated; the *market system*.

market failure The inability of a market to bring about the allocation of resources that best satisfies the wants of society; in particular, the overallocation or underallocation of resources to the production of a particular good or service because of *externalities* or informational problems or because markets do not provide desired *public goods*.

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

Medicaid A Federal program that helps finance the medical expenses of individuals covered by the *Supplemental Security Income (SSI)* and *Temporary Assistance for Needy Families (TANF)* programs.

Medicare A Federal program that is financed by *payroll taxes* and provides for (1) compulsory hospital insurance for senior citizens, (2) low-cost voluntary insurance to help older Americans pay physicians' fees, and (3) subsidized insurance to buy prescription drugs.

medium of exchange Any item sellers generally accept and buyers generally use to pay for a good or service; *money*; a convenient means of exchanging goods and services without engaging in *barter*.

menu costs The reluctance of firms to cut prices during recessions (that they think will be short lived) because of the costs of altering and communicating their price reductions; named after the cost associated with printing new menus at restaurants.

microeconomics The part of economics concerned with decision making by individual units such as a *household*, a *firm*, or an *industry* and with individual markets, specific goods and services, and product and resource prices.

minimum wage The lowest *wage* that employers may legally pay for an hour of work.

monetarism The macroeconomic view that the main cause of changes in aggregate output and price level is fluctuations in the *money supply*; espoused by advocates of a *monetary rule*.

monetary multiplier The multiple of its *excess reserves* by which the banking system can expand *checkable deposits* and thus the *money supply* by making new loans (or buying securities); equal to 1 divided by the *reserve requirement*.

monetary policy A central bank's changing of the *money supply* to influence interest rates and assist the economy in achieving price stability, full employment, and economic growth.

monetary rule The rule suggested by *monetarism*. As traditionally formulated, the rule says that 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*; the supply of money should be increased steadily between 3 and 5 percent per year. (Also see *Taylor rule*.)

money Any item that is generally acceptable to sellers in exchange for goods and services.

money capital Money available to purchase *capital*; simply *money*, as defined by economists.

money income (See *nominal income*.)

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 deposit accounts (MMDAs) Bank- and thrift-provided interest-bearing accounts that contain a variety of short-term securities; such accounts have minimum balance requirements and limits on the frequency of withdrawals.

money market mutual funds (MMMFs) Interest-bearing accounts offered by investment companies, which pool depositors' funds for the purchase of short-term securities. Depositors can write checks in minimum amounts or more against their accounts.

money supply Narrowly defined, *M1*; more broadly defined, *M2* and *MZM*. (See each.)

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. (Also see *pure monopoly*.)

most-favored-nation (MFN) status An agreement by the United States to allow some other nation's *exports* into the United States at the lowest tariff level levied by the United States.

multinational corporations Firms that own production facilities in two or more countries and produce and sell their products globally.

multiple counting Wrongly including the value of *intermediate goods* in the *gross domestic product*; counting the same good or service more than once.

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*; the number by which a change in

any such component must be multiplied to find the resulting change in the equilibrium *GDP*.

multiplier effect The effect on equilibrium *GDP* of a change in *aggregate expenditures* or *aggregate demand* (caused by a change in the *consumption schedule*, *investment*, government expenditures, or *net exports*).

MZM A definition of the *money supply* that includes monetary balances immediately available at zero cost to households and businesses for making transactions. *MZM* (money zero maturity) equals *M2* minus small *time deposits* plus *money market mutual fund* balances owned by businesses.

national bank A *commercial bank* authorized to operate by the U.S. government.

National Credit Union Administration (NCUA) The federally chartered agency that insures deposit liabilities (up to \$100,000 per account) in *credit unions*.

national income Total income earned by resource suppliers for their contributions to *gross domestic product* plus *taxes on production and imports*; the sum of wages and salaries, *rent*, *interest*, *profit*, *proprietors' income*, and such taxes.

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

natural monopoly An industry in which *economies of scale* are so great that a single firm can produce the product at a lower average total cost than would be possible if more than one firm produced the product.

natural rate of unemployment (NRU) The *full-employment unemployment rate*; the unemployment rate occurring when there is no cyclical unemployment and the economy is achieving its potential output; the unemployment rate at which actual inflation equals expected inflation.

near-money Financial assets, the most important of which are *noncheckable savings accounts*, *time deposits*, and U.S. short-term securities and savings bonds, which are not a medium of exchange but can be readily converted into money.

negative externality A cost imposed without compensation on third parties by the production or consumption of sellers or buyers. Example: A manufacturer dumps toxic chemicals into a river, killing the fish sought by sports fishers; an external cost or a spillover cost.

negative GDP gap A situation in which actual *gross domestic product* is less than *potential output*.

negative relationship (See *inverse relationship*.)

net domestic product *Gross domestic product* less the part of the year's output that is needed to replace the *capital goods* worn out in producing the output; the nation's total output available for consumption or additions to the *capital stock*.

net exports (X_n) *Exports* minus *imports*.

net foreign factor income Receipts of resource income from the rest of the world minus payments of resource income to 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 private domestic investment *Gross private domestic investment less consumption of fixed capital*; the addition to the nation's stock of *capital* during a year.

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.

network effects Increases in the value of a product to each user, including existing users, as the total number of users rises.

net worth The total *assets* less the total *liabilities* of a firm or an individual; for a firm, the claims of the owners against the firm's total assets; for an individual, his or her wealth.

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.

New Economy The label attached by some economists and the popular press to the U.S. economy since 1995. The main characteristics are accelerated *productivity growth* and *economic growth*, caused by rapid technological advance and the emergence of the global economy.

nominal gross domestic product (GDP) 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.

nominal wage The amount of money received by a worker per unit of time (hour, day, etc.); money wage.

nondiscretionary fiscal policy (See *built-in stabilizer*.)

nondurable good A *consumer good* with an expected life (use) of less than 3 years.

nonexcludability The inability to keep nonpayers (free riders) from obtaining benefits from a certain good; a *public good* characteristic.

nonexhaustive expenditure An expenditure by government that does not result directly in the employment of economic resources or the production of goods and services; see *government transfer payment*.

nonincome determinants of consumption and saving All influences on consumption and saving other than the level of *GDP*.

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 secondhand *capital goods*.

nonmarket transactions The production of goods and services excluded in the measurement of the *gross domestic product* because they are not bought and sold.

nonproduction transaction The purchase and sale of any item that is not a currently produced good or service.

nonrivalry The idea that one person's benefit from a certain good does not reduce the benefit available to others; a *public good* characteristic.

nontariff barriers (NTBs) All barriers other than *protective tariffs* that nations erect to impede international trade, including *import quotas*, licensing requirements, unreasonable product-quality standards, unnecessary bureaucratic detail in customs procedures, and so on.

normal good A good or service whose consumption increases when income increases and falls when income decreases, price remaining constant.

normal profit The payment made by a firm to obtain and retain *entrepreneurial ability*; the minimum income entrepreneurial ability must receive to induce it to perform entrepreneurial functions for a firm.

normative economics The part of economics involving value judgments about what the economy should be like; focused on which economic goals and policies should be implemented; policy economics.

North American Free Trade Agreement (NAFTA) A 1993 agreement establishing, over a 15-year period, a free-trade zone composed of Canada, Mexico, and the United States.

official reserves Foreign currencies owned by the central bank of a nation.

offshoring The practice of shifting work previously done by American workers to workers located abroad.

Okun's law The generalization that any 1-percentage-point rise in the *unemployment rate* above the *full-employment unemployment rate* will increase the *GDP* gap by 2 percent of the *potential output (GDP)* of the economy.

OPEC (See *Organization of Petroleum Exporting Countries*.)

open economy An economy that exports and imports goods and services.

open-market operations The buying and selling of U.S. government securities by the *Federal Reserve Banks* for purposes of carrying out *monetary policy*.

opportunity cost The amount of other products that must be forgone or sacrificed to produce a unit of a product.

opportunity-cost ratio An equivalency showing the number of units of two products that can be produced with the same resources; the cost 1 corn \equiv 3 olives show that the resources required to produce 3 units of olives must be shifted to corn production to produce 1 unit of corn.

Organization of Petroleum Exporting Countries (OPEC) A cartel of 11 oil-producing countries (Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, Venezuela, and the UAE) that controls the quantity and price of crude oil exported by its members and that accounts for a large percentage of the world's export of oil.

other-things-equal assumption The assumption that factors other than those being considered are held constant; *ceteris paribus* assumption.

outpayments The expenditures of domestic or foreign currency that the individuals, firms, and governments of one nation make to purchase goods and services, for remittances, to pay investment income, and for purchases of foreign assets.

paper money Pieces of paper used as a *medium of exchange*; in the United States, *Federal Reserve Notes*.

partnership An unincorporated firm owned and operated by two or more persons.

patent An exclusive right given to inventors to produce and sell a new product or machine for 20 years from the time of patent application.

payments deficit (See *balance-of-payments deficit*.)

payments surplus (See *balance-of-payments surplus*.)

payroll tax A tax levied on employers of labor equal to a percentage of all or part of the wages and salaries paid by them and on employees equal to a percentage of all or part of the wages and salaries received by them.

peak The point in a business cycle at which business activity has reached a temporary maximum; the economy is near or at full employment and the level of real output is at or very close to the economy's capacity.

per capita GDP *Gross domestic product (GDP)* per person; the average GDP of a population.

per capita income A nation's total income per person; the average income of a population.

personal consumption expenditures The expenditures of *households* for *durable* and *nondurable consumer goods* and *services*.

personal distribution of income The manner in which the economy's *personal* or *disposable income* is divided among different income classes or different households or families.

personal income (PI) 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*; *disposable income* not spent for *consumer goods*.

per-unit production cost The average production cost of a particular level of output; total input cost divided by units of output.

Phillips Curve A curve showing the relationship between the *unemployment rate* (on the horizontal axis) and the annual rate of increase in the *price level* (on the vertical axis).

planned investment The amount that *firms* plan or intend to invest.

plant A physical establishment that performs one or more functions in the production, fabrication, and distribution of goods and services.

policy economics The formulation of courses of action to bring about desired economic outcomes or to prevent undesired occurrences.

political business cycle The alleged tendency of Congress to destabilize the economy by reducing taxes and increasing government expenditures before elections and to raise taxes and lower expenditures after elections.

positive economics The analysis of facts or data to establish scientific generalizations about economic behavior.

positive externality A benefit obtained without compensation by third parties from the production or consumption of sellers or buyers. Example: A beekeeper benefits when a neighboring farmer plants clover. An *external benefit* or a *spillover benefit*.

positive GDP gap A situation in which actual *gross domestic product* exceeds *potential output*.

positive relationship (See *direct relationship*.)

post hoc, ergo propter hoc fallacy The false belief that when one event precedes another, the first event must have caused the second event.

potential output The real output (*GDP*) an economy can produce when it fully employs its available resources.

poverty A situation in which the basic needs of an individual or family exceed the means to satisfy them.

poverty rate The percentage of the population with incomes below the official poverty income levels that are established by the Federal government.

price The amount of money needed to buy a particular good, service, or resource.

price index An index number that shows how the weighted-average price of a "market basket" of goods changes over time.

price level The weighted average of the prices of all the final goods and services produced in an economy.

price-level stability A steadiness of the price level from one period to the next; zero or low annual inflation; also called "price stability."

price-level surprises Unanticipated changes in the price level.

price war Successive and continued decreases in the prices charged by firms in an oligopolistic industry. Each firm lowers its price below rivals' prices, hoping to increase its sales and revenues at its rivals' expense.

prime interest rate The benchmark *interest rate* that banks use as a reference point for a wide range of loans to businesses and individuals.

principal-agent problem A conflict of interest that occurs when agents (workers or managers) pursue their own objectives to the detriment of the principals' (stockholders') goals.

private good A good or service that is individually consumed and that can be profitably provided by privately owned firms because they can exclude nonpayers from receiving the benefits.

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.

producer surplus The difference between the actual price a producer receives (or producers receive) and the minimum acceptable price; the triangular area above the supply curve and below the market price.

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 where the available supplies of resources and technology are fixed.

productive efficiency The production of a good in the least costly way; occurs when production takes place at the output at which *average total cost* is a minimum and *marginal product* per dollar's worth of input is the same for all inputs.

productivity A measure of average output or real output per unit of input. For example, the productivity of labor is determined by dividing real output by hours of work.

productivity growth The percentage increase in *productivity* from one period to another.

product market A market in which products are sold by *firms* and bought by *households*.

profit The return to the resource *entrepreneurial ability* (see *normal profit*); *total revenue* minus *total cost* (see *economic profit*).

progressive tax A tax whose *average tax rate* increases as the taxpayer's income increases and decreases as the taxpayer's income decreases.

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.

protective tariff A *tariff* designed to shield domestic producers of a good or service from the competition of foreign producers.

public debt The total amount owed by the Federal government to the owners of government securities; equal to the sum of past government *budget deficits* less government *budget surpluses*.

public good A good or service that is characterized by *nonrivalry* and *nonexcludability*; a good or service with these characteristics provided by government.

public investments Government expenditures on public capital (such as roads, highways, bridges, mass-transit systems, and electric power facilities) and on *human capital* (such as education, training, and health).

public sector The part of the economy that contains all government entities; government.

purchasing power The amount of goods and services that a monetary unit of income can buy.

purchasing power parity The idea that exchange rates between nations equate the purchasing power of various currencies. Exchange rates between any two nations adjust to reflect the price-level differences between the countries.

pure rate of interest An essentially risk-free, long-term interest rate that is free of the influence of market imperfections.

quantity demanded The amount of a good or service that buyers (or a buyer) desire to purchase at a particular price during some period.

quantity supplied The amount of a good or service that producers (or a producer) offer to sell at a particular price during some period.

quasi-public bank A bank that is privately owned but governmentally (publicly) controlled; each of the U.S. *Federal Reserve Banks*.

quasi-public good A good or service to which excludability could apply but that has such a large *positive externality* that government sponsors its production to prevent an underallocation of resources.

R&D Research and development activities undertaken to bring about *technological advance*.

rate of exchange The price paid in one's own money to acquire 1 unit of a foreign currency; the rate at which the money of one nation is exchanged for the money of another nation.

rate of return The gain in net revenue divided by the cost of an investment or an *R&D* expenditure; expressed as a percentage.

rational behavior Human behavior based on comparison of marginal costs and marginal benefits; behavior designed to maximize total utility.

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 that make these policies ineffective.

rationing function of prices The ability of market forces in competitive markets to equalize *quantity demanded* and *quantity supplied* and to eliminate shortages and surpluses via changes in prices.

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 and real output, and conversely for decreases in the price level.

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 capital (See *capital*.)

real GDP (See *real gross domestic product*.)

real GDP per capita *Inflation*-adjusted output per person; *real GDP*/population.

real gross domestic product (GDP) *Gross domestic product* adjusted for inflation; gross domestic product in a year divided by the *GDP price index* for that year, the index expressed as a decimal.

real income The amount of goods and services that can be purchased with *nominal income* during some period of time; nominal income adjusted for inflation.

real interest rate The interest rate expressed in dollars of constant value (adjusted for *inflation*) and equal to the *nominal interest rate* less the expected rate of inflation.

real wage The amount of goods and services a worker can purchase with his or her *nominal wage*; the purchasing power of the nominal wage.

recession A period of declining real GDP, accompanied by lower real income and higher unemployment.

recessionary expenditure gap The amount by which the *aggregate expenditures schedule* must shift upward to increase the real GDP to its full-employment, noninflationary level.

Reciprocal Trade Agreements Act A 1934 Federal law that authorized the president to negotiate up to 50 percent lower tariffs with foreign nations that agreed to reduce their tariffs on U.S. goods. (Such agreements incorporated the *most-favored-nation* clause.)

refinancing the public debt Paying owners of maturing government securities with money obtained by selling new securities or with new securities.

regressive tax A tax whose *average tax rate* decreases as the taxpayer's income increases and increases as the taxpayer's income decreases.

rental income The payments (income) received by those who supply *land* to the economy.

required reserves The funds that banks and thrifts must deposit with the *Federal Reserve Bank* (or hold as *vault cash*) to meet the legal *reserve requirement*; a fixed percentage of the bank's or thrift's checkable deposits.

reserve requirement The specified minimum percentage of its checkable deposits that a bank or thrift must keep on deposit at the Federal Reserve Bank in its district or hold as *vault cash*.

resource A natural, human, or manufactured item that helps produce goods and services; a productive agent or factor of production.

resource market A market in which *households* sell and *firms* buy resources or the services of resources.

restrictive monetary policy Federal Reserve system actions to reduce the *money supply*, increase *interest rates*, and reduce *inflation*; a tight money policy.

revenue tariff A *tariff* designed to produce income for the Federal government.

rule of 70 A method for determining the number of years it will take for some measure to double, given its annual percentage increase. Example: To determine the number of years it will take for the *price level* to double, divide 70 by the annual rate of *inflation*.

sales tax A tax levied on the cost (at retail) of a broad group of products.

saving Disposable income not spent for consumer goods; equal to *disposable income* minus *personal consumption expenditures*.

savings account A deposit in a *commercial bank* or *thrift institution* on which interest payments are received; generally used for saving rather than daily transactions; a component of the *M2* money supply.

savings and loan association (S&L) A firm that accepts deposits primarily from small individual savers and lends primarily to individuals to finance purchases such as autos and homes; now nearly indistinguishable from a *commercial bank*.

saving schedule A schedule that shows the amounts *households* plan to save (plan not to spend for *consumer goods*), at different levels of *disposable income*.

savings deposit A deposit that is interest-bearing and that the depositor can normally withdraw at any time.

savings institution (See *thrift institution*.)

Say's law The largely discredited macroeconomic generalization that the production of goods and services (supply) creates an equal *demand* for those goods and services.

scarce resources The limited quantities of *land*, *capital*, *labor*, and *entrepreneurial ability* that are never sufficient to satisfy people's virtually unlimited economic wants.

scientific method The procedure for the systematic pursuit of knowledge involving the observation of facts and the formulation and testing of hypotheses to obtain theories, principles, and laws.

seasonal variations Increases and decreases in the level of economic activity within a single year, caused by a change in the season.

secular trend A long-term tendency; a change in some variable over a very long period of years.

self-interest That which each firm, property owner, worker, and consumer believes is best for itself and seeks to obtain.

seniority The length of time a worker has been employed absolutely or relative to other workers; may be used to determine which workers will be laid off when there is insufficient work for them all and who will be rehired when more work becomes available.

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.

shirking Workers' neglecting or evading work to increase their *utility* or well-being.

shortage The amount by which the *quantity demanded* of a product exceeds the *quantity supplied* at a particular (below-equilibrium) price.

short run (1) In microeconomics, a period of time in which producers are able to change the quantities of some but not all of

the resources they employ; a period in which some resources (usually plant) are fixed and some are variable. (2) In macroeconomics, a period in which nominal wages and other input prices do not change in response to a change in the price level.

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*.

simple multiplier The *multiplier* in any economy in which government collects no *net taxes*, there are no *imports*, and *investment* is independent of the level of income; equal to 1 divided by the *marginal propensity to save*.

simultaneous consumption The same-time derivation of *utility* from some product by a large number of consumers.

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; the slope of a downward-sloping line is negative, reflecting an inverse relationship between two variables.

Smoot-Hawley Tariff Act Legislation passed in 1930 that established very high tariffs. Its objective was to reduce imports and stimulate the domestic economy, but it resulted only in retaliatory tariffs by other nations.

Social Security The social insurance program in the United States financed by Federal payroll taxes on employers and employees and designed to replace a portion of the earnings lost when workers become disabled, retire, or die.

Social Security trust fund A Federal fund that saves excessive Social Security tax revenues received in one year to meet Social Security benefit obligations that exceed Social Security tax revenues in some subsequent year.

sole proprietorship An unincorporated *firm* owned and operated by one person.

specialization The use of the resources of an individual, a firm, a region, or a nation to concentrate production on one or a small number of goods and services.

speculation The activity of buying or selling with the motive of later reselling or rebuying for profit.

SSI (See *Supplemental Security Income*.)

stagflation Inflation accompanied by stagnation in the rate of growth of output and an increase in unemployment in the economy; simultaneous increases in the *inflation rate* and the *unemployment rate*.

standardized budget A comparison of the government expenditures and tax collections that would occur if the economy operated at *full employment* throughout the year; the full-employment budget.

start-up (firm) A new firm focused on creating and introducing a particular new product or employing a specific new production or distribution method.

stock (corporate) An ownership share in a corporation.

store of value An *asset* set aside for future use; one of the three functions of *money*.

strategic trade policy The use of trade barriers to reduce the risk inherent in product development by domestic firms, particularly that involving advanced technology.

structural unemployment Unemployment of workers whose skills are not demanded by employers, who lack sufficient skill to obtain employment, or who 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. When made by a government, it is a *government transfer payment*.

substitute goods Products or services that can be used in place of each other. When the price of one falls, the demand for the other product falls; conversely, when the price of one product rises, the demand for the other product rises.

substitution effect (1) A change in the quantity demanded of a *consumer good* that results from a change in its relative expensiveness caused by a change in the product's price; (2) 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.

supply A schedule showing the amounts of a good or service that sellers (or a seller) will offer at various prices during some period.

supply curve A curve illustrating *supply*.

supply factor (in growth) An increase in the availability of a resource, an improvement in its quality, or an expansion of technological knowledge that makes it possible for an economy to produce a greater output of goods and services.

supply schedule (See *supply*.)

supply-side economics A view of macroeconomics that emphasizes the role of costs and *aggregate supply* in explaining *inflation*, *unemployment*, and *economic growth*.

surplus The amount by which the *quantity supplied* of a product exceeds the *quantity demanded* at a specific (above-equilibrium) price.

tariff A tax imposed by a nation on an imported good.

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.

taxes on production and imports A *national income accounting* category that includes such taxes as *sales*, *excise*, business property taxes, and *tariffs* which firms treat as costs of producing a product and pass on (in whole or in part) to buyers by charging a higher price.

tax incidence The person or group that ends up paying a tax.

tax-transfer disincentives Decreases in the incentives to work, save, invest, innovate, and take risks that allegedly result from high *marginal tax rates* and *transfer payments*.

Taylor rule A modern monetary rule proposed by economist John Taylor that would stipulate exactly how much the Federal

Reserve should change interest rates in response to divergences of real GDP from potential GDP and divergences of actual rates of inflation from a target rate of inflation.

technological advance New and better goods and services and new and better ways of producing or distributing them.

technology The body of knowledge and techniques that can be used to combine *economic resources* to produce goods and services.

terms of trade The rate at which units of one product can be exchanged for units of another product; the price of a good or service; the amount of one good or service that must be given up to obtain 1 unit of another good or service.

theoretical economics The process of deriving and applying economic theories and principles.

thrift institution A *savings and loan association*, *mutual savings bank*, or *credit union*.

till money (See *vault cash*.)

time deposit An interest-earning deposit in a *commercial bank* or *thrift institution* that the depositor can withdraw without penalty after the end of a specified period.

total demand The demand schedule or the *demand curve* of all buyers of a good or service; also called market demand.

total demand for money The sum of the *transactions demand for money* and the *asset demand for money*.

total product (TP) The total output of a particular good or service produced by a firm (or a group of firms or the entire economy).

total revenue (TR) 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); equal to the quantity sold (demanded) multiplied by the price at which it is sold.

total spending The total amount that 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; also called market supply.

Trade Adjustment Assistance Act A U.S. law passed in 2002 that provides cash assistance, education and training benefits, health care subsidies, and wage subsidies (for persons age 50 or older) to workers displaced by imports or relocations of U.S. plants to other countries.

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 that lower or abolish trade barriers among members. Examples include the *European Union* and the nations of the *North American Free Trade Agreement*.

trade controls *Tariffs*, *export subsidies*, *import quotas*, and other means a nation may employ 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).

tradeoff The sacrifice of some or all of one economic goal, good, or service to achieve some other goal, good, or service.

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).

trading possibilities line A line that shows the different combinations of two products that 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.

transactions demand for money The amount of money people want to hold for use as a *medium of exchange* (to make payments); varies directly with the *nominal GDP*.

transfer payment A payment of *money* (or goods and services) by a government to a *household* or *firm* for which the payer receives no good or service directly in return.

unanticipated inflation Increases in the price level (*inflation*) at a rate greater than expected.

underemployment A situation in which workers are employed in positions requiring less education and skill than they have.

undistributed corporate profits After-tax corporate profits not distributed as dividends to stockholders; corporate or business saving; also called retained earnings.

unemployment The failure to use all available *economic resources* to produce desired goods and services; the failure of the economy to fully employ its *labor force*.

unemployment compensation (See *unemployment insurance*).

unemployment insurance The social insurance program that in the United States is financed by state *payroll taxes* on employers and makes income available to workers who become unemployed and are unable to find jobs.

unemployment rate The percentage of the *labor force* unemployed at any time.

unit labor cost Labor cost 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; one of the three functions of *money*.

unlimited liability Absence of any limits on the maximum amount that an individual (usually a business owner) may become legally required to pay.

unlimited wants The insatiable desire of consumers for goods and services that will give them satisfaction or *utility*.

unplanned changes in inventories Changes in inventories that firms did not anticipate; changes in inventories that occur because of unexpected increases or decreases of aggregate spending (of *aggregate expenditures*).

unplanned investment Actual investment less *planned investment*; increases or decreases in the *inventories* of firms resulting from production greater than sales.

Uruguay Round A 1995 trade agreement (fully implemented in 2005) that established the *World Trade Organization (WTO)*, liberalized trade in goods and services, provided added protection

to intellectual property (for example, *patents* and *copyrights*), and reduced farm subsidies.

U.S. securities U.S. Treasury bills, notes, and bonds used to finance *budget deficits*; the components of the *public debt*.

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 (or from the consumption of a collection of goods and services).

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 money The quantity of goods and services for which a unit of money (a dollar) can be exchanged; the purchasing power of a unit of money; the reciprocal of the *price index*.

vault cash The *currency* a bank has in its vault and cash drawers.

velocity The number of times per year that the average dollar in the *money supply* is spent for *final goods and services*; nominal GDP divided by the money supply.

vertical axis The “up-down” or “north-south” measurement line on a graph or grid.

vertical intercept The point at which a line meets the vertical axis of a graph.

very long run A period in which *technology* can change and in which *firms* can introduce new products.

voluntary export restrictions (VER) Voluntary limitations by countries or firms of their exports to a particular foreign nation to avoid enactment of formal trade barriers by that nation.

wage The price paid for the use or services of *labor* per unit of time (per hour, per day, and so on).

wage rate (See *wage*.)

wages The income of those who supply the economy with *labor*.

wealth Anything that has value because it produces income or could produce income. Wealth is a stock; income is a flow. Assets less liabilities; net worth.

wealth effect The tendency for people to increase their consumption spending when the value of their financial and real assets rises and to decrease their consumption spending when the value of those assets falls.

world price The international market price of a good or service, determined by world demand and supply.

World Trade Organization (WTO) An organization of 149 nations (as of fall 2006) that oversees the provisions of the current world trade agreement, resolves trade disputes stemming from it, and holds forums for further rounds of trade negotiations.

WTO (See *World Trade Organization*.)