

GLOSSARY

*Terms included in online Appendix to Part 1

100 per cent reserve banking All bank deposits are kept in the form of cash reserves.

45-degree diagram A diagrammatic representation of the economy over the short run (the period in which prices do not adjust in response to demand), enabling the identification of the equilibrium level of GDP.

Accommodating policy A policy that allows the effects of a shock to occur.

Aggregate demand (AD) curve Shows the relationship between the short-run equilibrium output, y , and the rate of inflation, π ; the name of the curve reflects the fact that short-run equilibrium output is determined by, and equals, total planned spending in the economy; increases in inflation reduce planned spending and short-run equilibrium output, so the aggregate demand curve, AD, is downward sloping.

Aggregate supply shock Either an inflation shock or a shock to potential output; adverse aggregate supply shocks of both types reduce output and increase inflation.

Anchored inflationary expectations When people's expectations of future inflation do not change even if inflation rises temporarily.

Appreciation An increase in the value of a currency relative to other currencies.

Assets Anything of value that one owns.

Autarky A country whose economy is closed to the rest of the world.

Automatic stabilisers Provisions in the law that imply automatic increases in government spending or decreases in taxes when real output declines.

***Average benefit** The total benefit of undertaking n units of an activity divided by n .

***Average cost** The total cost of undertaking n units of any activity divided by n .

Balance of payments A record of all transactions between the residents of one country and the residents of all other countries.

Balance of payments deficit The net decline in a country's stock of international reserves over a year.

Balance of payments surplus The net increase in a country's stock of international reserves over a year.

Balance on merchandise trade The difference between exports and imports (same as net exports).

Balance on the capital account The difference between total credit items (sales of domestic assets/acquisition of a liability by

a domestic resident) and total debit items (purchase of a foreign asset/discharge of a liability by a domestic resident) in the capital account of the balance of payments.

Balance on the current account The difference between total credit and total debit items summed across all components of the current account.

Balanced budget multiplier The short-run effect on equilibrium GDP of an equal change in government expenditure and net taxes.

Bank reserves Reserve of cash kept by banks to meet their customers' demands to withdraw deposits.

Barter The direct trade of goods or services for other goods or services.

Base money The amount of currency in circulation plus the deposits that banks have with the Reserve Bank in exchange settlement accounts.

Bequest saving Saving done for the purpose of leaving an inheritance.

Bond A legal promise to repay a debt, usually including both the principal amount and regular interest, or coupon, payments.

Boom A particularly strong and protracted expansion.

***Buyer's reservation price** The largest dollar amount the buyer would be willing to pay for a good.

***Buyer's surplus** The difference between the buyer's reservation price and the price they actually pay.

Capital account That part of the balance of payments that records transactions leading to either the purchase or sale of domestic assets.

Capital gains Increases in the value of existing assets.

Capital inflows When financial capital flows into a country as the result of a sale of a domestic asset. This is equivalent to a domestic resident acquiring a liability to an overseas agent.

Capital intensive Describes an activity that requires a relatively large amount of capital compared to labour.

Capital losses Decreases in the value of existing assets.

Capital outflows When financial capital flows out of a country as the result of a purchase of a foreign asset. This is equivalent to a foreign resident acquiring a liability to a domestic agent.

Capital-labour ratio The amount of capital available per worker.

***Cash on the table** An economic metaphor for any unexploited gains from exchange.

Central bank independence When central bankers are insulated from short-term political considerations and are allowed to take a long-term view of the economy.

***Change in demand** A shift in the entire demand curve for a commodity.

***Change in supply** A shift in the entire supply curve.

***Change in the quantity demanded** Change in the quantity that people wish to buy that occurs in response to a change in prices.

***Change in the quantity supplied** A movement along the supply curve that occurs in response to a change in price.

Circular flow of income The economy's national income which can be equivalently measured using the production, expenditure or income approaches.

Classical cycle A view of the business cycle that relates to movements in the level of real GDP. Upswings in the level of real GDP are expansions; downswings are contractions.

Closed economy An economy that does not trade with the rest of the world.

Cobb–Douglas production function A specific type of production function given by the equation

Comparative advantage Everyone does best when each person concentrates on the activities for which his or her opportunity cost is lowest.

Comparative economic growth The name given to the study of different countries' growth experiences.

***Complements** Two goods are complements in consumption if an increase in the price of one causes a leftward shift in the demand curve for the other (or if a decrease causes a rightward shift).

Compound interest The payment of interest not only on the original deposit but on all previously accumulated interest.

Conditional convergence Countries with similar economic fundamentals are more likely to converge since they will have a similar steady state. Therefore, convergence is conditional on countries having the same steady state.

***Constant (or parameter)** A quantity that is fixed in value.

Constant returns to scale A situation where a proportionate rise in both primary factors of production leads to the same proportionate rise in output.

Consumer price index (CPI) For any period, measures the cost in that period of a standard basket of goods and services relative to the cost of the same basket of goods and services in a fixed year, called the base year.

Consumption expenditure, or consumption Spending by households on goods and services such as food, clothing and entertainment.

Consumption function The relationship between consumption spending and its determinants, in particular disposable (after-tax) income.

Consumption possibilities The combination of goods and services that can feasibly be consumed.

Contraction A period in which the economy is moving from a peak to a trough.

Contractionary gap A negative output gap, which occurs when potential output exceeds actual output.

Contractionary policies Government policy actions designed to reduce planned spending and output.

Convergence hypothesis A prediction made by the Solow–Swan model whereby countries with relatively low per capita capital stocks grow faster than countries with high per capita capital stocks. Given a similar steady-state level of per capita capital, countries' per capita incomes eventually converge (attain the same level).

Coordination failure Occurs when there exists opportunity for improvement in economic outcomes if economic agents act together, but the incentive to do so is lacking.

***Core economic principles**

The cost–benefit principle: An individual (or a firm or a society) should take an action if, and only if, the extra benefits from taking the action are at least as great as the costs.

The efficiency principle: Efficiency achieved when all production and consumption in the economy is occurring at their respective socially optimal levels. Efficiency is an important social goal, because when the economic pie grows larger everyone can potentially have a larger slice.

The equilibrium principle: A market in equilibrium leaves no unexploited opportunities for individuals, but may not exploit all gains achievable through collective action.

The low-hanging-fruit principle (also called the principle of increasing opportunity cost): In expanding the production of any good or service, first employ those resources with the lowest opportunity cost, and only afterwards turn to resources with higher opportunity costs.

The scarcity principle: Although we have boundless needs and wants, the resources available to us are limited. So having more of one good thing usually means having less of another.

Coupon payments Regular interest payments made to the bondholder.

Coupon rate The interest rate promised when a bond is issued; the annual coupon payments are equal to the coupon rate times the principal amount of the bond.

Credibility of monetary policy The degree to which the public believes the central bank's promises to keep inflation low, even if doing so may impose short-run economic costs.

Crowding out The tendency of increased government deficits to reduce investment spending.

Current account deficit When the total of the debit items on the current account exceeds the total of the credit items on the current account.

Current account surplus When the total of the credit items on the current account exceeds the total of the debit items on the current account.

Current account That part of the balance of payments that records transactions leading to a change of ownership of commodities or a direct flow of income or similar payment.

Current transfers One-off transactions that are not recorded elsewhere in the current account.

Cyclical unemployment The extra unemployment that occurs during periods of economic contraction and especially recessions.

Deflation A situation in which the prices of most goods and services are falling over time so that inflation is negative.

***Demand curve** A representation of the amount of a particular good or service demanded by consumers at each possible price.

Demographic change Change to the structure of a population, such as an increase in longevity or a reduction in birth rates.

***Dependent variable** A variable in an equation whose value is determined by the value taken by another variable in the equation.

Depreciation A decrease in the value of a currency relative to other currencies.

Devaluation A reduction in the official value of a currency (in a fixed exchange rate system).

Diminishing marginal productivity The tendency for the marginal product of a factor to decline as the amount of that factor used in the production process increases. Note that this assumes that all other factors of production are held constant.

Diminishing returns to capital If the amount of labour and other inputs employed is held constant, then the greater the amount of capital already in use, the less an additional unit of capital adds to production.

Diminishing returns to labour If the amount of capital and other inputs in use is held constant, then the greater the quantity of labour already employed, the less each additional worker adds to production.

Disequilibrium When planned aggregate expenditure differs from output, or equivalently when planned injections differ from withdrawals.

Disinflation A substantial reduction in the rate of inflation.

Disposable income Aggregate income less net taxes.

Diversification The practice of spreading one's wealth over a variety of different financial investments to reduce overall risk.

Dividend A regular payment received by stockholders for each share that they own.

***Economic efficiency, or efficiency** Occurs when all goods and services are produced and consumed at their respective socially optimal levels.

***Economic surplus** The gain that results from taking an action where the benefits outweigh the costs.

***Economics** The study of how people make choices under conditions of scarcity, and of the results of those choices for society.

Entrepreneurs People who create new economic enterprises.

Entrepreneurs' expectations Expectations held by decision makers in firms about the future profitability of proposed investment projects.

Environmental Kuznets curve The theory that environmental quality deteriorates in the initial stages of economic growth but then improves as economic growth matures.

***Equation** A mathematical expression that describes the relationship between two or more variables.

***Equilibrium** Any situation in which a system is at rest; for example, where neither price nor quantity of a good or service is changing.

***Equilibrium price and equilibrium quantity** The values of price and quantity for which quantity demanded and quantity supplied are equal.

***Excess demand** A situation in which price is below its equilibrium such that demand exceeds supply.

***Excess supply** The amount by which quantity supplied exceeds quantity demanded when the price of a good exceeds the equilibrium price.

Exchange settlement accounts Accounts kept by the commercial banks with the Reserve Bank of Australia which are used to manage the flow of funds between commercial banks generated by the commercial activities of their customers.

Exogenous expenditure The portion of planned aggregate expenditure that is independent of output.

Exogenous variables A variable whose value is determined from outside of the model.

Expansion A period in which the economy is moving from a trough to a peak.

Expansionary gap A positive output gap, which occurs when actual output is higher than potential output.

Expansionary policies Government policy actions intended to increase planned spending and output.

Final goods or services Goods or services consumed by the ultimate user—because they are the end products of the production process they are counted as part of GDP.

Financial deregulation The process of removing price and quantity controls from financial markets so that the allocation of financial products is predominantly based on the market forces of supply and demand.

Fixed exchange rate An exchange rate whose value is set by official government policy.

Flexible exchange rate An exchange rate whose value is not officially fixed, but varies according to the supply and demand for the currency in the foreign exchange market.

Flow A measure that is defined per unit of time.

Foreign debt The amount owed by the nation to other countries.

Foreign exchange market The market on which currencies of various nations are traded for one another.

Four-sector model A model of the economy in which there are households, firms, the government and the foreign sector.

Fractional-reserve banking system A banking system in which the reserve–deposit ratio is less than 100 per cent.

Frictional unemployment The short-term unemployment associated with the process of workers searching for the right job.

Fundamental value of the exchange rate (or equilibrium exchange rate) The exchange rate that equates the quantities of the currency supplied and demanded in the foreign exchange market.

Gini coefficient A summary measure of income inequality.

Global financial crisis The name given to the period from around 2007 to 2009 in which a variety of negative factors affecting financial markets led to the collapse of financial institutions, resulting in severe distress for the world's major economies and concerted efforts by national governments to intervene in an attempt to prevent the crisis from leading to a major economic contraction.

Government budget constraint The concept that government spending has to be financed either by raising taxes or by government borrowing.

Government budget deficit The excess of government spending over tax collections.

Government budget surplus The excess of government tax collections over government spending; the government budget surplus equals public saving.

Government purchases Purchases by federal, state and local governments of final goods and services. Government purchases do not include transfer payments, which are payments made by the government in return for which no current goods or services are received, nor do they include interest paid on the government debt.

Gross domestic product (GDP) The market value of the final goods and services produced in a country during a given period.

Growth accounting A method of dividing a country's historical growth experience between growth in primary and growth in secondary factors of production.

Growth cycle A view of the business cycle that relates to movements in the growth rate of real GDP. Expansions are associated with faster than normal real GDP growth; contractions with lower than normal real GDP growth.

Growth theory The study of the long-run growth performance of economies.

Human capital The skills and knowledge embodied in workers that are used in the process of producing goods and services.

Income effect The change in demand for a good or service, caused by a change in price, that is attributable to the effect of

that price change on the real purchasing power of consumers' incomes.

Income–expenditure multiplier The effect of a one-unit increase in exogenous expenditure on short-run equilibrium output; for example, a multiplier of 5 means that a 10-unit decrease in exogenous expenditure reduces short-run equilibrium output by 50 units.

***Independent variable** A variable in an equation whose value determines the value taken by another variable in the equation.

Induced expenditure The portion of planned aggregate expenditure that depends on output.

Inflation and deflation The tendency for the general level of prices in an economy to change over time. Inflation occurs when prices rise over time. Deflation is a situation in which prices fall over time.

Inflation dove Someone who is not strongly committed to achieving and maintaining low inflation.

Inflation hawk Someone who is committed to achieving and maintaining low inflation, even at some short-run cost in reduced output and employment.

Inflation rate The rate of increase in the general level of prices across the economy.

Inflation shock A sudden change in the normal behaviour of inflation, unrelated to the nation's output gap.

Injections All sources of exogenous expenditure in the economy.

Inside lag (of macroeconomic policy) The delay between the date a policy change is needed and the date it is implemented.

Intergenerational equity The concept that the current generation should not impose an unfair burden on future generations.

Intermediate goods or services Goods or services used up in the production of final goods and services and therefore not counted as part of GDP.

International capital flows Flows of financial capital between countries as a result of the sale or purchase of one country's assets by other countries.

International reserves Foreign currency assets held by a government for the purpose of purchasing the domestic currency in the foreign exchange market.

Investment Spending by firms on final goods and services, primarily capital goods and housing.

Labour force The total number of people available for work. This comprises the employed and the unemployed.

Law of one price If transport costs are relatively small, the price of an internationally traded commodity must be the same in all locations.

Liabilities The debts one owes.

Lifecycle saving Saving to meet long-term objectives, such as retirement, university attendance or the purchase of a home.

Lorenz curve A graphical representation of income inequality.

***Marginal benefit** The increase in benefits associated with a small increase in the level of some activity.

***Marginal cost** The increase in costs associated with a small increase in the level of some activity.

Marginal product of capital (MP_k) The increment to output from a one-unit increase in the capital stock, holding all other factors of production constant.

Marginal productivity of labour The extra output derived from the employment of an additional worker.

Marginal propensity to consume (MPC) The parameter c , the amount by which consumption rises when disposable income rises by one dollar. We assume that $0 < c < 1$.

Marginal revenue product of capital (MRP_k) The extra revenue received by a firm from selling the output obtained from an extra unit of capital.

Marginal revenue product of labour (MRP_l) The extra revenue received by a firm from selling the output obtained from an extra unit of labour.

Marginal tax rate The amount by which taxes rise when before-tax income rises by one dollar.

***Market equilibrium** Occurs in a market when all buyers and sellers are satisfied with their respective quantities at the market price.

***Market** The bringing together of buyers and sellers of a commodity for the purpose of mutually beneficial exchange.

Maturation date The date at which the principal of a bond will be repaid.

Medium of exchange An asset used in purchasing goods and services.

Menu costs The costs of changing prices.

Money Any asset that can be used in making purchases.

National income accounting identity A mathematical relation that shows how GDP is equal to the sum of expenditure on consumption, investment, government purchases and net exports.

National saving Total saving in the economy undertaken by households, firms and the government.

Natural level of output Another term for the economy's potential level of output.

Natural rate of employment The part of the total unemployment rate that is attributable to frictional and structural unemployment; equivalently, the unemployment rate that prevails when cyclical unemployment is zero, so that the economy has neither a contractionary nor an expansionary output gap.

Neo-classical growth model A model that focuses on the role of capital accumulation to explain countries' growth experiences.

Net exports Exports minus imports.

Net income The difference between total credit and total debit items on the net income account.

Net investment Investment that adds to the size of the per capita capital stock. A positive rate of net investment means that each worker has available a larger amount of capital than was previously the case.

Net services The difference between total credit and total debit items on the net services account.

Nominal exchange rate The rate at which two currencies can be traded for each other.

Nominal GDP A measure of GDP in which the quantities produced are valued at current-year prices; nominal GDP measures the current dollar value of production.

Nominal interest rate The percentage increase in the nominal, or dollar, value of a financial asset.

Normal good A commodity for which the demand increases as real income increases.

Okun's law Each extra percentage point of cyclical unemployment is associated with approximately a 1.8 percentage point (for Australia) increase in the output gap, measured in relation to potential output.

Open-market operations Open-market purchases and open-market sales.

Open-market purchase The purchase of government bonds from the public by the Reserve Bank for the purpose of increasing the balances in banks' exchange settlement accounts.

Open-market sale The sale by the Reserve Bank of government bonds to the public for the purpose of reducing the balances in banks' exchange settlement accounts.

Opportunity cost The value of the next-best alternative to taking a particular action.

Optimal capital stock The capital stock at which the benefits from adding another unit of capital are exactly offset by the costs of adding another unit of capital.

Output gap The difference between the economy's potential output and its actual output at a point in time.

Outside lag (of macroeconomic policy) The delay between the date a policy change is implemented and the date by which most of its effects on the economy have occurred.

Overnight cash interest rate The interest rate that clears the overnight cash market.

Overnight cash market A specialised segment of the financial system where commercial banks borrow and lend money for very short periods of time in order to manage their exchange settlement balances.

Overnight cash rate The rate of interest applied to loans in the overnight cash market.

Overvalued exchange rate An exchange rate that has an officially fixed value greater than its fundamental value

Participation rate The ratio of the labour force to the population of working age.

Peak The beginning of a contraction; the high point of economic activity prior to a downturn.

Per capita income The ratio of total income to the population. In the Solow–Swan model it is usual to assume that all people are workers so that per capita income could equivalently be called per worker income.

Physical capital The plant, equipment and buildings used by firms in the production of goods and services.

Planned aggregate expenditure (PAE) Total planned spending on final goods and services.

Policy reaction function A simple mathematical representation of how a central bank adjusts interest rates in light of the state of the economy.

Pollution haven hypothesis The prediction that high-polluting industries will be established in countries having the least stringent environmental regulations.

Potential output, y^* (or potential GDP or full-employment output) The amount of output (real GDP) that an economy can produce when using its resources, such as capital and labour, at normal rates.

Precautionary saving Saving for protection against unexpected setbacks, such as the loss of a job or a medical emergency.

Present value Given a benefit received now is more valuable to people than the promise of a benefit in the future, benefits expected to be received in the future need to be discounted in order to ascertain their present value.

***Price ceiling** A maximum allowable price, specified by law.

Private saving The saving of the private sector of the economy is equal to the after-tax income of the private sector minus consumption expenditures ($Y - T - C$); private saving can be further broken down into household saving and business saving.

Production function A representation of the relationship between primary and secondary factors of production and output.

Production possibilities curve (PPC) A graph that describes the maximum amount of one good that can be produced for every possible level of production of the other good.

Progressive income taxes A system of taxation that levies higher tax rates on additional dollars earned as income increases.

Protectionism The view that domestic activities should be protected from foreign competition.

Public debt The amount owed by the government to the non-government sector.

Public saving The saving of the government sector is equal to net tax payments minus government purchases ($T - G$).

Purchasing power parity (PPP) The theory that nominal exchange rates are determined as necessary for the law of one price to hold.

Quality adjustment bias The bias that causes measured inflation to overstate changes in the cost of living caused by the failure to adjust adequately for improvements in the quality of goods and services.

Quantity equation An identity that states the nominal value of expenditure in the economy must be equivalent to the stock of money multiplied by its velocity of circulation.

Quota A legal restriction on the volume of imports that can enter a country.

Rate of inflation The annual percentage rate of change in the price level, as measured, for example, by the CPI.

Rational expectations The assumption that economic agents are fully informed about the structure of the economy and so understand all the implications of shifts in the aggregate demand curve.

***Rational person** Someone with well-defined goals who tries to fulfil those goals as best they can.

Real exchange rate The price of the average domestic good or service relative to the price of the average foreign good or service, when prices are expressed in terms of a common currency.

Real GDP A measure of GDP in which the quantities produced are valued at the prices in a base year rather than at current prices; real GDP measures the actual physical volume of production.

Real interest rate The percentage increase in the real purchasing power of a financial asset.

Regional trade agreements Agreements signed by two or more countries usually guaranteeing free trade between those countries.

Relative price The price of one good relative to other goods.

Replacement investment Investment that is either to replace worn-out, depreciated capital or to provide capital to new workers. Replacement investment does not change the size of the per capita capital stock.

Reserve Bank of Australia Australia's central bank.

Reserve–deposit ratio The ratio of reserves to total deposits held by a bank.

Revaluation An increase in the official value of a currency (in a fixed exchange rate system).

Risk premium The rate of return that financial investors require to hold risky assets minus the rate of return on safe assets.

Saving Current income minus spending on current needs.

Saving function A graph showing how per capita saving varies as the per capita capital stock varies.

Saving rate The proportion of total income devoted to saving. In a closed economy this is equivalent to the investment rate.

Self-correcting property The fact that output gaps will not last indefinitely, but will be closed by rising or falling inflation.

***Seller's reservation price** The smallest dollar amount for which a seller would be willing to sell an additional unit, generally equal to marginal cost.

***Seller's surplus** The difference between the price received by the seller and their reservation price.

Short-run business cycle The name given by economists to the tendency for economies to pass through periods of economic expansion followed by economic contraction.

Short-run equilibrium output The level of output that prevails during the period in which prices are predetermined.

Skill-biased technological change Technological change that affects the marginal products of higher-skilled workers differently from those of lower-skilled workers.

***Slope** In a straight line, the ratio of the vertical distance the straight line travels between any two points (rise) to the corresponding horizontal distance (run).

***Socially optimal quantity** The quantity of a good or service that results in the maximum possible economic surplus from producing and consuming that good.

Solow–Swan model Another name given to the neo-classical growth model in honour of the two economists who first developed the model.

Speculative attack A massive selling of domestic currency assets by financial investors.

Stabilisation policies Government policies that are used to affect planned aggregate expenditure, with the objective of eliminating output gaps.

Steady state A situation in which the per capita capital stock is neither growing nor shrinking and per capita income is unchanging.

Stock (or equity) A claim to partial ownership of a firm.

Stock A measure that is defined at a point in time.

Store of value An asset that serves as a means of holding wealth.

Structural unemployment The long-term and chronic unemployment that exists when the skills or aspirations of workers are not matched to the jobs available in the economy.

***Substitutes** Two goods are substitutes in consumption if an increase in the price of one causes a rightward shift in the demand curve of the other (or if a decrease causes a leftward shift).

Substitution bias The bias that causes measured inflation to overstate changes in the cost of living caused by the failure to take

into account people's substitution towards relatively less expensive goods and services.

***Substitution effect** The change in demand for a good or service, caused by a change in price, that is attributable to the good or service being more or less expensive than other commodities.

***Sunk cost** A cost that, once incurred, cannot be recouped, even if the proposed action no longer takes place.

***Supply curve** A representation of the amount of a particular good or service supplied by firms at each possible price.

Supply-side policy A policy that affects potential output.

Supply-siders People who support the need for tax cuts to encourage people to work harder, save more and innovate.

Tariff A tax levied on imports designed to make domestically produced goods and services appear competitive.

Tax smoothing A theory that states that the government should run a budget surplus now if it anticipates higher government spending in the future.

***The equilibrium principle** A market in equilibrium leaves no unexploited opportunities for individuals, but may not exploit all gains achievable through collective action.

Total factor productivity (TFP) Another name for the secondary factors of production. These are factors other than the amounts of capital and labour that affect the amount of output that is produced.

***Total surplus** The difference between the buyer's reservation price and the seller's reservation price.

Transfer payments Payments the government makes to the public for which it receives no current goods or services in return.

Trough The end of a contraction; the low point of economic activity prior to a recovery.

Two-sector model A simplified model of the economy in which there are only households and firms.

Unattainable point Any combination of goods that cannot be produced using currently available resources.

Undervalued exchange rate An exchange rate that has an officially fixed value less than its fundamental value.

Unemployment rate The total number of people unemployed as a ratio of the total labour force.

Unit of account A basic measure of economic value.

Value added For any firm, the market value of its product or service minus the cost of inputs purchased from other firms.

***Variable** A quantity that is free to take a range of different values.

Velocity A measure of the amount of expenditure that can be financed from a given amount of money over a particular time period.

***Vertical intercept** In a straight line, the value taken by the dependent variable when the independent variable equals zero.

Withdrawals That part of income not used for consumption purposes.

Wealth The value of assets minus liabilities.

Wealth effect The tendency of changes in asset prices to affect households' wealth and thus their spending on consumption goods.

Worker mobility The movement of workers between jobs, firms and industries.

World price The price at which goods are traded in the world market.