GLOSSARY

A B C D E F G H I L M N O P Q R S T U V

A

Absolute advantage	When a product is produced more efficiently (using less resources) in one country, that country has an absolute advantage in that product. It is measured by comparing relative output across countries. See also **comparative advantage**.
Aggregate demand (AD)	The demand for output (of all goods and services) at different price levels.
Aggregate economic activity	See **national economic activity**.
Aggregate expenditure function	Indicates total planned expenditure in an economy for different levels of income or output (denoted Y).
Aggregate supply (AS)	The amount of output firms are willing to supply at different price levels.
Anticipated inflation	Expected inflation that is taken into account in economic decision-making. See also **unanticipated inflation**.
Appreciation	The increase in value of an asset over time. An appreciation of Sterling occurs when £1 buys more foreign currency today than it did yesterday (when it costs more in terms of foreign currency to buy £1). See also **depreciation**.
Arbitrage	The possibility of buying an asset in one market and selling it at a higher price in another market.
Arc price elasticity of demand (arc PED)	A method for estimating elasticity of demand, based upon average price and average quantity demanded. It is calculated as follows: $\frac{\Delta Qd}{\Delta P} \times \frac{1/2[P1 + P2]}{1/2[Qd1 + Qd2]}$ It is most appropriately used for large price changes.
Arc price elasticity of supply (arc PES)	A method for estimating elasticity of supply, based upon average price and average quantity supplied. It is calculated as follows: $\frac{\Delta QS}{\Delta P} \times \frac{1/2[P1 + P2]}{1/2[QS1 + QS2]}$
Asymmetric shocks	Economic shocks that affect one economy or a part of one economy more than other economies or other parts of an economy.
Automatic stabilizers	Measures that automatically counter the business cycle without government action. They result in reducing the response of GDP to changes in autonomous spending.
Autonomous consumption	Consumption expenditure that is independent of the level of income. It occurs if people borrow to buy consumption goods or if they spend

	their savings (or borrow) when they have no income to pay for consumption goods.
Average cost (AC)	Total costs per unit of output. AC is computed as total costs divided by output (*TC*/*Q*).
Average product of labour	Total output divided by the number of workers: *Q*/*L*.
Average total cost (ATC)	Average variable cost (AVC) plus average fixed cost (AFC): ATC = AVC + AFC.

B

Balance of payments	A country's national account which includes transactions between domestic residents and the rest of the world over a specified period. It consists of a **current account** and a **capital account**.
Barriers to entry	Exist when new firms cannot freely enter and compete in a market. With no barriers, all firms competing in the same market would have access to similar technology allowing them to have similar cost structures.
Bond	Represents an agreement between two parties in a transaction where one party lends money to the other for an agreed rate of interest (usually) over a specified period and where the lender receives back the total value of their investment when the bond matures.
Business cycles	The tendency for real output to rise and fall over time in a reasonably regular pattern.

C

Capital	A factor of production that has been produced (e.g. machines, factories, tools) and is used with labour to produce and/or market more goods and services.
Capital account	A country's national account which tracks transactions relating to ownership of financial assets, including inward and outward direct investment. See also **current account**, **balance of payments**.
Capital deepening	Where the capital stock increases faster than the labour force so that the amount of capital per worker rises. See also **capital widening**.
Capital intensity	The amount of capital each worker in the economy (on average) has at their disposal.
Capital widening	Where the capital stock increases at the same rate as the labour force and covers depreciation. See also **capital deepening**.
Cartel	An agreement between firms to co-operate in restricting the amount of output they produce, for example, thereby influencing the price.
Cash markets	See **spot or cash markets**.
Central bank independence	Usually implies that a government has no direct input into the economic decisions taken by the central bank regarding money supply, interest rates and inflation.
***Ceteris paribus* assumption**	From the Latin, meaning all things being equal or unchanged. An assumption that allows economists to construct models that highlight the fundamental nature of a relationship they are trying to describe and understand. Subsequently they use their models to incorporate

	other factors of most relevance to that relationship.
Circular flow	The way in which products, services, resources and money flow around the economic system.
Commodity	An undifferentiated product such as wheat or oil or computer memory chips. Commodities are usually of uniform quality, often produced by many different producers where each producer's output is considered equivalent or interchangeable. **Futures markets** exist for many commodity products.
Comparative advantage	When output is produced at a lower **opportunity cost** in one country, that country has a comparative advantage in production. It is measured by comparing relative opportunity costs between countries. See also **absolute advantage**.
Competitiveness	A range of factors from measures of income and prosperity to economic creativity and innovative ability that describe the performance of one economy relative to others.
Concentration ratio	Measures the market share of the biggest firms in the market. For example a CR4 calculates the market share of the leading four firms.
Concepts, theories and models	Simplified representations of phenomena, which are intended to serve as tools to aid thinking about complex entities or processes.
Consumer confidence	The degree of optimism that consumers express (in surveys, for example) about the state of their economy through their saving and spending patterns and plans.
Consumer surplus	The benefit to consumers due to the difference between what consumers actually pay to consume a good and what they would have been willing to pay.
Contestable markets	Markets where entry costs and exit costs from markets are low.
Contractionary fiscal policy	A fiscal policy that results in lower activity and a reduction in the circular flow of income. See also **expansionary fiscal policy**.
Convergence	The tendency for poorer countries to grow faster than richer countries for a given increase in capital stock. Hence, poorer countries would be expected to catch up with richer countries if the countries share similar steady states.
Cost-push inflation	Caused by firms reacting to increased costs by reducing their output.
Costs of inflation	These are: loss of purchasing power, **shoe-leather costs, menu costs**, effects on income distribution, **fiscal drag**, effects on international competitiveness, effects on **balance of payments** and business uncertainty and lack of stability.
Countercyclical fiscal policy	Policies which have the opposite effect on economic activity to that caused by the business cycle, reducing income flows during booms, increasing income flows in recessions.
Cross price elasticity	Indicates the responsiveness of the quantity demanded of one good (good *A*) when the price of another good (good *B*) changes. It is computed as $\% \Delta Qd_A / \% \Delta P_B$.
Current account	A country's national account which includes all trade transactions where the balance of trade might be in surplus or deficit. It also includes all income and current transfers. See also **capital account**, **balance of payments**.
Cyclical unemployment	Unemployment associated with the recessionary phase of the business cycle.

Cyclically adjusted budget	Provides information about the discretionary fiscal polices a government has followed to deliberately achieve specific macroeconomic goals. These might include trying to achieve a particular level of inflation, or employment or government deficit, for example.

D

Deadweight loss	The welfare lost to society from relatively inefficient production.
Deflation	A fall in the average price level. See also **inflation**.
Demand	The quantity of output buyers are willing to buy over a range of possible prices
Demand for active balances	The transactions and precautionary demands for money are known as the demand for active balances because the money is actively used to buy goods and services.
Demand for idle balances	The speculative demand for money is also called the demand for idle balances since it relates to the desire to demand money to avoid potential losses from holding interest-bearing financial assets.
Demand-pull inflation	An increase in the price level of an economy caused by rising aggregate demand.
Dependency ratio	The portion of a country's population not in employment (including the unemployed, those who have retired and children) relative to the total population in employment. Dependents are also often classified as 'non-economically active' as they are considered to consume but not produce economic outputs.
Depreciation	The decline in value of an asset over time attributable to deterioration due to use and obsolescence. See also **appreciation**.
Differentiated products	Products for which several different varieties are provided (e.g. cars). Differentiation between varieties depends on producers' choices of the product attributes for which consumers are willing to pay. See also **standardized products**.
Direct taxes	Taxes paid on income. See **indirect taxes**.
Discouraged workers	Those who have tried to find work in the past and are willing to take on a job but have given up on looking for work because they feel, or know, that nothing suitable is available. They are excluded from calculations of the labour force, together with groups such as retired people or people who choose to take on home or childcare duties.
Diseconomies of scale	Inefficiencies that are associated with a firm's scale of output which varies over the long run; diseconomies of scale are experienced when average costs of output rise as output increases. See also **economies of scale**.
Dominant strategy	A strategy that provides one firm with the best outcome, irrespective of the strategy another firm (or firms) chooses.
Dynamic efficiency (economic growth)	The outward expansion of the **PPF**.

E

Economic efficiency	Optimum production given the quantity and quality of available factors of production and their cost.

Economic fundamentals	A very broad term which includes such economic measures as interest rates, the government's budget deficit, the country's balance of trade account (relating to exports and imports), the level of domestic business confidence, the inflation rate, the state of (and confidence in) the banking and wider financial sector and consumer confidence.
Economic growth	An expansion in the quantity of goods/services produced and sold.
Economic profit	An economic profit is made if a producer earns enough from supplying their product (or service) to the market to cover all their costs and pay themselves for the cost of the time and effort put into the business.
Economic shock	An unexpected event that affects the economy.
Economies of scale	Efficiencies that are associated with a firm's scale of output which varies over the long run; economies of scale are enjoyed when average costs of output decline as output increases. See also **diseconomies of scale**.
Economies of scope	These exist when a firm produces many products and can share resources across them such that the unit costs of each product is lower than if they were produced by separate firms. Shared marketing or distribution costs may be sources of economies of scope.
Efficiency wage	An efficiency wage rate lies above the market clearing wage rate to provide motivation for workers, to keep worker turnover low (avoiding costs of hiring) and to act as a signal to attract appropriately skilled workers.
Efficient production	All available resources are used to produce a maximum combination of goods/services with no resources unemployed.
Elastic PED	See **price elasticity of demand**.
Entrepreneurship	Entrepreneurs exploit knowledge by converting knowledge discovered into profitable gain. Entrepreneurship is about being alert to a set of opportunities, having a subjective expectation as to the value of such opportunities in the market and having the resources (or ability to generate them) to realize this value.
Equity financing	Selling a share of the business ('shares') in exchange for finance where no specific future payment is defined.
Ex-ante real interest rate	$r = i - \pi^e$ where π^e is expected inflation. Rearranging this equation gives the **Fisher equation**. See also **ex-post real interest rate**.
Exchange rate	The price of one currency in terms of another.
Expansionary fiscal policy	A policy whereby the government manages to increase activity by injecting extra income into the circular flow by changing government expenditure or the tax rate. See also **contractionary fiscal policy**.
Expectations-augmented Phillips curve	The expectations-augmented Phillips curve explains inflation in terms of a negative relationship between inflation and unemployment and a positive relationship between actual inflation and expected inflation. The formula for the expectations-augmented Phillips curve is actual inflation rate = expected rate of inflation + *X (*natural unemployment rate - actual unemployment rate*)* where *X* denotes a

	positive number, which is different for different economies. See also **Phillips curve**.
Experience goods	Goods where their quality attributes can only be assessed through trial (or experience). See also **search goods**.
Ex-post real interest rate	$r = i - \pi$ where π is actual inflation. See also **ex-ante real interest rate**.
Externalities	Either positive or negative effects of a transaction by one set of parties on others who did not have a choice and whose interests were not taken into account.

F

Factors of production	These are the resources necessary for production. They include **land**, **labour**, **capital**, **entrepreneurship** in business organization and willingness to take business risks.
Fertility rate	The number of children born in a year, usually expressed per 1000 women in the reproductive age group.
Fiat money	Paper with no intrinsic value itself which fulfils the functions of money; government legislation ensures that it is accepted for transactions.
Final goods	Goods that are not purchased for further processing or resale but for final use.
Fiscal drag	A cost of inflation whereby people are pushed into higher tax brackets in a progressive income tax system because tax rates are not fully inflation adjusted.
Fiscal policy	Governments use fiscal policy whenever they affect government spending or tax rates (which affect **aggregate demand**). See also **contractionary fiscal policy**, **expansionary fiscal policy**, **countercyclical fiscal policy**.
Fisher equation	The nominal interest rate $\mathrm{i} = \mathrm{r} + \pi^{\mathrm{e}}$. Rearranging this equation gives the **ex-ante real interest rate**.
Fixed costs	Costs, such as rent and rates, that must be paid even if the firm produces no output. See also **variable costs**.
Fixed exchange rate	An exchange rate that is tied to another country's rate.
Floating exchange rate	An exchange rate that is set by currency demand and supply.
Fractional reserve system	Describes the requirement of the banking system, that banks must hold a fraction of their deposits in the form of reserves. See also **required reserve ratio**.
Free-rider problem	Exists due to the non-rival and non-excludable nature of public goods. There is no incentive to supply or pay privately for goods with public-good characteristics. Such goods, if desired, are provided by governments and paid for collectively through taxes. The free-rider problem is one example of market failure, a reason why the market requires government intervention to change what would otherwise be produced.
Frictional unemployment	Unemployment that arises because of changes or friction in particular markets.
Functions of money	These are:

- medium of exchange;
- unit of account;
- store of value.

Futures markets Markets in which agreements are made relating to a payment that will be made for delivery of goods in the future.

G

Game theory A microeconomic approach or tool of analysis applied to understand the behaviour of individuals and firms. Pay-offs generated by following different strategies can be compared.

Gross domestic product (GDP) A location-based measure of economic activity which measures the value of real output produced in an economy.

Gross investment The value of new capital created by investment plus depreciation. See **net investment**.

Gross national income (GNI) **GNP** is also called gross national income (GNI), since national economic activity is the same whether measured in terms of output (the product in GNP) or income that is generated by citizens providing their factor resources to markets for payment.

Gross national product (GNP) The value of real output that is retained by the citizens in a country after all inflows and outflows are allowed for.

Growth accounting A method of identifying the proximate causes of changes in output and its rate of growth.

H

Herfindahl Index Measures the market share of all firms in an industry by summing the squares of each individual firm's market share:

$$H = \sum_{1}^{N} S_i^2$$

where S_i denotes each firm's market share and summation is from firm 1 to N, the total number of firms in the market. The squared term indicates that industries consisting of firms with large market shares will have high indices. See **market concentration.**

Horizontal equity Treating identical people in an identical manner (i.e. not discriminating based on gender or race between individuals who are economically identical and can perform similar tasks). See also **vertical equity**.

Human capital Includes all the skills, knowledge and expertise that people accumulate over time that allow them to increase their productive capacity as individuals, members of firms and within society more broadly.

I

Import tariffs Rates imposed by governments on imported goods, which raise the price paid by consumers, thereby making the goods less attractive to

	buy.
Income effect	The adjustment in quantity demanded due to the change in real income alone caused by a price change.
Income elasticity of demand	Measures the responsiveness of the quantity demanded of a good to changes in consumers' income (Y). It is computed as $\% \Delta Qd / \% \Delta Y$.
Indirect competition	Arises when the strategic choice of one firm affects the performance of another due to strategic reaction by a third firm.
Indirect taxes	Indirect taxes are paid on expenditure whereas **direct taxes** are paid on income.
Inelastic PED	See **price elasticity of demand**.
Inferior good	A good for which demand rises if real income falls or for which demand falls if real income rises.
Inflation	A rise in the average price level. Inflation = rate of money supply growth – rate of real output growth. See also **deflation**.
Inflationary gap	The difference between equilibrium output and actual output when an economy is producing above its potential long-run level.
Information asymmetries	Exist when one party has more information than another party in an exchange agreement.
Injections	Injections into the circular flow of income include: • investment expenditure by firms; • government expenditure; • income earned as payment for exports. See also **leakages**.
Intermediate goods	Goods sold by firms to other firms and used in making final goods.
Investment function	This describes the macroeconomic or aggregate investment behaviour in an economy.

L

Labour	All human resources used in production.
Labour market flexibility	The ability of the labour market to adjust to economic shocks.
Labour productivity	The average output of each worker in the economy. It is generally measured as the value of a country's production per worker, e.g. UK national output divided by the employed workforce of the UK for a particular period of time.
Land	All natural resources including minerals and other raw materials.
Law of diminishing marginal returns	When a firm adds workers to a given amount of capital – machinery, equipment, etc. – it eventually leads to a less efficient match between labour and capital to the extent that, if all capital is used by workers, hiring an additional worker will only lead to workers getting in each other's way and the marginal product of labour declining.

Leakages	Leakages of income out of the circular flow include: • savings; • taxes; • income paid for imported goods. See also **injections**.
Living standards	The level of material well-being of a citizen. It is generally measured as the value of a country's production per person, e.g. UK national output divided by the population of the UK for a particular period of time.
Long-run aggregate supply (LRAS) curve	A vertical line drawn at potential output.

M

Macroeconomics	The study of: • The relationships between aggregate or combined elements in the economic system such as national production and employment. • Causes of changes in aggregate economic performance including economic structure and economic institutions.
Marginal analysis	The process of considering the effect of small changes in one factor relevant to an economic decision (e.g. on output levels or pricing) and identifying whether an economic objective will be met. The objective may relate to profit maximization, benefit maximization, cost minimization or revenue maximization as examples. The logic of marginal analysis is that a small incremental change should be made once an economic objective is met – there is economic rationale to increasing price only if profits rise, if that is the economic bjective. If no change enhances the economic objective (if it is already maximized/minimized) the decision variable should be changed no further. It is a method for optimizing decision-making within a reasonably well-defined setting.
Marginal cost (MC)	The change in total costs as output changes $(\Delta TC/\Delta Q)$
Marginal physical product of labour (MPPL)	The change in the quantity of output produced by each additional worker: $\Delta Q/\Delta L.$
Marginal propensity to consume (MPC)	The relationship between a change in income and the resulting change in aggregate consumption expenditure.
Marginal rate of substitution	At different points on the indifference curve, the consumer is willing to trade different amounts of one good for another good. This is also reflected in the slope of the indifference curve at any point.
Marginal revenue	The change in total revenue associated with a change in quantity demanded.
Marginal revenue	Shows the amount of additional revenue generated for a firm at

function	different levels of quantity demanded. It is computed as the change in **total revenue** divided by the change in output: $\Delta TR/\Delta Q$
Marginal revenue product of labour (MRPL)	The change in **total revenue** (price of output × number of units sold) generated by each additional worker. It is computed by multiplying the product price by the **marginal physical product of labour**.
Marginal utility	The change in **total utility** for each additional good/service consumed. It is estimated as $\Delta TU/\Delta Q$
Market concentration	The number of firms in a specific market and their relative market share. See also **Herfindahl index**.
Market failure	Occurs when economic resources are not allocated efficiently caused by the price system working imperfectly.
Market liberalization	The reduction of barriers to the free movement of goods and services to encourage entry by new competitors.
Market power	Exists when firms in a market hold a sufficiently large market share that their actions can change the price of their product – producing more results in a falling equilibrium price, producing less leads to a rise in equilibrium price, *ceteris paribus*.
Market structure	This describes the main characteristics of an industry, such as the level of concentration, the extent of entry barriers and the extent of product differentiation. Examples of market structures are **monopoly, perfect competition, monopolistic competition** and **oligopoly**.
Markets	Situations where exchange occurs between buyers and sellers or where a potential for exchange exists. Markets cover the full spectrum from physical locations where buyers and sellers meet to electronic markets (such as auction websites) facilitated by the Internet.
Menu costs	A cost of inflation to firms and shops, which have to reprint price lists during periods of inflation because of frequent price changes.
Microeconomics	The study of the causes and effects of the behaviour of individual economic units within the economic system (or groups with broadly similar interests and goals) such as consumers, producers, trades unions, firms and their impact on the markets in which they interact.
Minimum efficient scale (MES)	The size/scale of plant required if a firm wishes to produce sufficient output to allow it to produce at its minimum long-run average cost.
Minimum wage	Wage rate set by the government below which employers are not legally permitted to pay workers. Employers are free to pay workers above this wage rate if they choose.
Monetary policy	The means by which the supply of money is regulated in an economy, including how inflation is controlled and how the stability of the currency is maintained.
Money multiplier	How a change in money supply leads to an ultimate change in money supply by a multiple of the initial change. The size of the money multiplier depends on the required reserve ratio according to the formula:

$$Money\ Multiplier = \frac{1}{required\ reserve\ ratio}$$

Monopolistic competition	A market structure where there are many firms, each with some power to set the price of their product because they supply a particular brand of product – they differentiate their product–but where many imperfect substitutes are available.
Monopoly	A market structure where there is just one profit-maximizing firm in a market.
Motives for holding money	We hold money or demand money (in more liquid forms) for different purposes – for transactions, as a precautionary measure and for speculative purposes. These are known as the motives for holding money.
Multiplier	Indicates how much income/output changes after a change in autonomous expenditure. It is calculated according to the following formula: $\frac{1}{(1 - MPC^*)}$

N

Nash equilibrium	Exists when each player in a game chooses their best strategy given the strategies followed by other players.
National economic activity	National economic activity is the sum of activity by all of the economic decision-makers including households, producers and government. For this reason it is also called **aggregate economic activity**.
National output or income	National output or income, denoted **Y**, is calculated as the value of • all the goods bought for consumption purposes; **C** plus • all the investment expenditures by firms; **I** plus • all government expenditures; **G** plus • the net value of all goods traded by the economy, exports minus imports: **X - M**.
Natural monopoly	Where scale economies imply that only one firm could supply efficiently, i.e. at low cost to the market.
Natural rate of unemployment	The rate of unemployment that would prevail when the labour market is in long-run equilibrium – some people choose to change jobs and even in boom periods it can take a worker time to find a job best suited to their skills.
Net investment	Investment which creates new capital assets, whereas **gross investment** includes the value of capital depreciation plus new capital investment.
Net property income from abroad	The difference between **GDP** and **GNP**.

Normal (economic) profit	The minimum profit a firm is willing to make rather than go out of business. Any level of profit beyond this is called **supernormal profit**.
Normal good	A good for which demand falls if real income falls or for which demand rises if income rises.

O

Offshore outsourcing	Offshore outsourcing (known as **offshoring** in the United States) involves relocation of elements of the supply chain to a foreign location for more efficient production. Both production and services may be outsourced.
Offshoring	See **offshore outsourcing**.
Oligopoly	A market structure where there are a few firms of large size relative to the total market, so each firm has some degree of market power.
Open-market operation	When the central bank buys or sells government bonds.
Opportunity cost	The cost of what is given up in following one course of action such that other choices are no longer possible. It is subjective and can be estimated in terms of the cost of the next-best preferred alternative but only when the choice made cannot be reversed.
Optimal currency area (OCA) theory	This identifies the factors that determine whether a single currency maximizes single-currency benefits for members given the costs generated.
Output gap	The difference between **potential output** (also known as full employment output) and actual output.

P

Perfect competition	A **market structure** where there are many firms, each small relative to the overall size of the market.
Phillips curve	The relationship between unemployment and inflation, which is negative, meaning that high unemployment is associated with low inflation and vice versa. See also **expectations-augmented Phillips curve**.
Political economy	The term given to the study of how the rules, regulations, laws, institutions and practices of a country (or a state, region, province) have an influence on the economic system and its features.
Potential output	A country's output level if all resources were fully employed.
Poverty trap	A poverty trap (also sometimes known as an **unemployment trap**) exists when the **opportunity cost** of moving from unemployment benefits to paid employment is too high. Unemployed workers are often entitled to various benefits in addition to unemployment payments. These may include housing or rent allowances, reduced medical costs, food vouchers, etc. On taking up paid employment, especially of a low-paid nature, the benefits foregone may be less than the wages earned. A vicious circle of poverty can be created which is difficult to break.

Present value (PV) determination	A method for comparing benefits in different time periods in order to compare the future receipt with a current receipt of the same value. The standard formula used to determine present value is $$PV = \frac{£X}{(1+r)^T}$$ where *PV* denotes present value; £*X* is the amount to be received in the future; *r* is the market interest rate; *T* is the number of years before the investment is repaid.
Price cap	See **price ceiling.**
Price ceiling	A price that puts an upper limit on the price that suppliers can charge.
Price elasticity of demand (PED)	The responsiveness of quantity demanded to a change in price. It is calculated as: $\mathrm{PED} = \%\Delta Qd/\%\Delta P$ PED differs at different points on the demand curve. In absolute terms (ignoring the minus sign) PED is greater than one when the percentage change in quantity demanded is greater than the percentage change in price. This is elastic PED. PED is less than one when the percentage change in quantity demanded is less than the percentage change in price. This is inelastic PED.
Price elasticity of supply (PES)	The responsiveness of quantity supplied to changes in price. It may be elastic, inelastic or unit elastic. It is computed as the proportional change in quantity supplied divided by the proportional change in price: $\%\Delta QS/\%\Delta P$
Price floor	A price that suppliers can be sure to receive for their output.
Price leadership	Where either a dominant firm in the industry sets price and all others follow or a well-established firm becomes the ‘leader’ and is trusted with setting the price that all firms will charge.
Price-cost margin	See **profit margin**.
Prisoner’s Dilemma	Exists when the equilibrium from a game generates a sub-optimal outcome for all parties involved. With commitment (or a binding contract) between the firms, higher payoffs could be achieved to the benefit of all players.
Privatization	The sale of government-owned businesses (and associated assets) in whole or in part to the private sector. Examples include electricity, gas and telecommunications industries.
Producer surplus	The benefit to producers due to the difference between the price suppliers are willing to receive for their output and what they actually receive.
Product differentiation	The features or attributes that explain consumers’ decisions to buy one variety or brand instead of another are the basis for product differentiation.

Production function	A relationship describing how economic activity, specifically output, depends on the factors of production and technology. It describes a technically efficient use of the factors of production and technology necessary to produce output, i.e. no resources are unemployed.
Profit margin	The mark-up over costs that a firm makes or wishes to make. Some firms will be happy to earn low mark-ups, other firms wish to earn high mark-ups. Also called the **price-cost margin**.
Progressive income tax system	A tax system in which individuals pay a higher percentage of their income in tax, the more they earn.
Public goods	Goods that would not be provided in a free-market system. They are goods that • if consumed by one person can still be consumed by others; non-rival in consumption. Private goods once consumed are not available to others. • if provided, cannot be excluded from the consumption of anyone who desires the good, even if they do not wish to pay for it. Public goods are non-excludable in consumption.
Purchasing power parity (PPP)	A measure of the relative purchasing power of different currencies. PPP is the exchange rate that equates the price of a basket of identical traded goods and services in two countries. It is often very different from the market exchange rate.

Q

Quantity equation	$M \times V = P \times Y$ where M denotes the nominal money supply in an economy, V denotes velocity of money, P denotes the average price level, Y denotes the level of real economic activity and hence $P \times Y$ is the nominal value of economic activity (i.e. income or output).
Quotas	Quantitative restrictions set by governments on the amount of imports permitted from another customs area. Because quotas limit the supply of a good, they drive the price of the good up.

R

Real business cycle (RBC) theory	This theory is based on the view that changes in technology explain **business cycles**.
Real interest rate (r)	This is computed as the difference between the nominal interest rate and the rate of inflation. $r = i - \pi$ where i denotes the nominal rate and π is the rate of inflation.
Realignments	Simultaneous and coordinated devaluation or revaluation of currencies.
Recessionary gap	In a recession, the difference between the level of potential output and the lower actual output.
Regulatory capture	Where regulations set up to protect consumers – to lead to greater competition and lower prices – become captured by the industry for

	the benefit of producers in that industry. This happens where producers can convince the regulator to introduce rules favouring producers.
Required reserve ratio	The percentage of all deposits received by banks that must be held in the bank and not used for loans or other purposes.
Reservation wage	The lowest wage a worker will accept to take a job.

S

Search goods	Goods where their quality attributes can be assessed before purchase. See also **experience goods**.
Services	Non-material or intangible items of consumption that are consumed as they are created.
Shoe-leather costs	The effect of people holding less currency during periods of inflation, thereby needing to make more trips to the bank to withdraw cash.
Short run	The period of time it takes for a firm to change its scale of production and this depends on its fixed factor of production – usually capital.
Speculative demand for money	See **demand for idle balances**.
Spot or cash markets	Markets where money changes hands today for goods or services received today.
Standardized products	Products for which many substitutes are available and which use readily available technology in their production. See also **differentiated products**.
Standardized unemployment rate	The standardized unemployment rate measures those unemployed as people of working age without work who are available to start work within two weeks and who are actively seeking employment.
Steady state	The term used by Solow to describe the equilibrium state of output and capital stock in the long run. (The term is also used in physics.) An economy that reaches a steady-state level of capital stock and level of output has no tendency to change from these levels, *ceteris paribus*.
Structural unemployment	Unemployment arising from a permanent decline in employment in industries located in a particular region or area.
Subsidy	A payment or a tax concession from the government that reduces producers' average production costs.
Substitution effect	The adjustment in quantity demanded due to the change in relative prices alone, i.e as the price of one good increases, people buy less of it preferring its relatively cheaper substitutes.
Supernormal profit	See **normal profit**.
Supply	The activities of firms that organize the factors of production to produce output and make it available to buyers.
Supply chain	The resources and processes that are involved in acquiring components and raw materials and includes delivery of end products to final consumers. It includes the activities of sellers, distributors, manufacturers, wholesalers and any other service providers and contributors to the buyer's decision to buy.

T

Tacit knowledge	Knowledge that is highly personal, not easily visible or expressible and cannot easily be copied. It usually requires joint, shared activities in order to transmit it. Examples of tacit knowledge include subjective insights, intuitions and hunches.
Tariffs	See **import tariffs**.
Tax wedge	The difference between the real wage paid by an employee and the real wage received by an employee. Differences are accounted for by payroll taxes (usually related to social insurance/security contributions), income taxes, consumer price taxes.
Total costs (TC)	The sum of **variable costs** and **fixed costs** incurred by a firm.
Total factor productivity (TFP)	A measure of the efficiency with which inputs are employed to produce output. TFP is a catch-all term that measures the effect on output not only of any changes in technology, but also in the social and political systems that affect the quantity and quality of output that an economy can produce from its labour and capital resources. TFP is effectively that portion of output change that cannot be accounted for by changes in the quantity and quality of labour and capital.
Total revenue (TR)	Price times the quantity of goods sold: $TR = P \times Q$.
Total utility (TU)	The total benefit perceived by the consumer from consumption of a good/service.
Trade barriers	Policies or practices that reduce the amount of imports into a country. Examples include **import tariffs** and **quotas**.
Transactions costs	The complete price plus non-price costs of a transaction, including search, information, bargaining and policing costs.

U

Unanticipated inflation	Inflation that takes people by surprise and therefore has not been taken into account in economic decision-making. See also **anticipated inflation**.
Unemployment trap	See **poverty trap**.

V

Variable costs (VC)	Costs that depend directly on the amount of output a firm produces, such as the costs for production inputs and workers. The higher the quantity produced the higher the variable costs. See also **fixed costs**.
Vertical equity	Treating people with intrinsically different characteristics (education, experience, abilities) differently in order to reduce the income disparity resulting from their differences. See also **horizontal equity**.