assets (e.g. shares, bonds).

Key Points

- Fiscal policy involves changes in government expenditure and/or taxation.
- Fiscal policy can be 'automatic', involving 'built-in stabilisers', or discretionary.
- Direct taxes tend to be more progressive than indirect taxes but a fuller comparison involves issues of macroeconomic management, economic incentives, economic welfare and administration.

- The UK government has a 'golden rule' whereby over the economic cycle the government will only borrow to invest and not to fund current expenditure.
- Monetary policy involves influencing the money supply and/or the rate of interest.
- As well as cash, there are a range of 'near money' assets of varying degrees of liquidity.
- Unemployment and inflation are important policy issues in their own right, but have been linked together in the Phillips curve.
- Various types of unemployment can be distinguished – frictional, structural, regional, technological, demand deficient, real wage and 'natural'.
- Inflation can be measured using various indices, such as RPI, RPIX, RPIY and now the Consumer Price Index (CPI).
- The balance of payments can be split into various components, including current and capital accounts, each of which can be broken down still further.
- The exchange rate has a key impact on the price of exports and imports.
- The euro has various advantages and disadvantages.

Assessment Practice

Multiple choice questions

1 Which two of the following are consistent with the idea of ' … ers'

(a) The fact that the tax of unleaded petrol is lower than t …
(b) The fact that as people's incomes increase the amount … also increases
(c) The fact that people sent to prison do not receive benefits
(d) The fact that government spending falls during 'boom' times as unemployment falls
(e) The fact that congestion charges reduce traffic in city centres

2 Which *three* of the following types of unemployment might be involved if the coal industry in the UK collapses as a result of individuals and firms switching over to oil, gas and other sources of energy?

(a) Frictional unemployment
(b) Demand deficient unemployment
(c) Regional unemployment
(d) Real wage unemployment
(e) Structural unemployment

3 Which two of the following situations are most likely to result in 'demand pull' inflation?

(a) Increases in the rate of savings and the rate of taxation
(b) A rise in investment of 5% with a rise of productivity of 5%

(c) A rise in the combined value of investment and government spending of 5% with no change in productivity
(d) A fall in the rate of savings and the rate of taxation for an economy already operating at full capacity

Definitions

Total revenue (*TR*) (per period) The total amount received by firms from the sale of a product, before the deduction of taxes or any other costs. The price multiplied by the quantity sold: $TR = P \times Q$.

Average revenue (*AR*) Total revenue per unit of output. When all output is sold at the same price, average revenue will be the same as price: $AR = TR/Q = P$.

Marginal revenue (*MR*) The extra revenue gained by selling one or more units per time period: $MR = \Delta TR/\Delta Q$.

... some of the implications that might follow from this ruling against Ryanair.

Key Terms

Externality Where economic decisions create costs or benefits for people other than the decision taker.

Information asymmetry Where one person or firm knows more than another person or firm.

Marginal social benefit Defined as marginal private benefit plus marginal external benefit.

Marginal social cost Defined as marginal private cost plus marginal external cost.

Merit goods Goods/services that add to the quality of life but are not, strictly, public goods. For example, education/healthcare can be withheld from consumers (i.e. they do not possess the public good quality of non-excludability), and so private markets can be established to provide them.

Mixed (quasi) public goods Involves some aspect of non-excludability or non-exhaustibility, but not both.

Negative externality Where marginal social cost exceeds marginal private cost.

Pareto optimality A situation is said to be Pareto optimal when it is no longer possible to reallocate resources in such a way that we can make one person better off, without at the same time making someone else worse off.

Pigouvian tax A tax exactly equal to the marginal external cost at each level of output.

Price gap Maximum price set by an industry regulator.

Public good A good (or service) that involves two key characteristics: non-excludability and non-exhaustibility. Non-excludability means that, once provided, it is difficult to exclude people from consuming the good/service. Non-exhaustibility means that consumption of an extra unit by one person does not diminish the amount available for consumption by others.

Public interest theory An approach that seeks to assess the impacts of regulation or deregulation in terms of whether or not it raises economic welfare in such a way that gainers can potentially compensat[illegible] losers. Usually involv[illegible] [illegible]er a[illegible] producer surplus.

Key Points

- Regulations are widely used in all economic sectors in order to protect consumers from 'market failure' and to prevent such failures actually occurring.
- There is considerable momentum behind removing regulations (i.e. deregulation) where this can be shown to be in the 'public interest'. However, evaluating the welfare change from deregulation is a complex exercise.
- Privatisation is the transfer of assets or economic activity from the public sector to the private sector.
- The term 'privatisation' is often used to cover many situations: the outright sale of state-owned assets, part-sale, joint public/private ventures, market testing, contracting out of central/local government services etc.
- The case for privatisation includes allegedly greater productive efficiency (lower costs) via the introduction of market pressures. These are seen as creating more flexibility in labour markets, higher productivity and reduced unit labour costs.
- The case against privatisation includes suggestions that state monopolies have often merely been replaced by private monopolies, with little benefit to consumers, especially in the case of the public utilities.
- Regulators have been appointed for a number of public utilities in an attempt to simulate the effects of competition (e.g. limits to price increases and to profits), when there is little competition in reality.

income that is entirely a surplus in the short run, but part of which is transfer earning in the long run. Taxing this will reduce the long-run supply of the factor of production.

Key Terms

Diminishing returns Usually refers to the short-run time period. The average/marginal product curves of a variable factor will eventually decline as more of the variable factor is applied to some fixed factor.

Economic rent A surplus payment to a factor of production in the sense of being over and above the minimum price at which that factor would be supplied.

Increasing returns Usually refers to the short-run time period. The average/marginal product curves of a variable factor may at first rise as more of the variable factor is applied.

Marginal physical product of labour The additional physical output contributed by the last unit of factor input.

Marginal revenue product of labour The additional value contributed by the last unit of factor input. Often refers to labour as factor input. In a perfectly competitive product market, MRP of labour is found by multiplying the MPP of labour by the price of the product.

Monopoly In the labour market context this usually refers to the presence of trade unions who seek to regulate the supply of labour in one way or another.

Monopsony Occurs when a firm is a significant purchaser of labour. Any additional hiring of labour potentially forces up the price of labour against itself.

Quasi rent That part of the earnings of a factor of production that is economic rent in the short run but transfer earnings in the long run.

Transfer earnings A necessary payment to a factor of production in that it is the minimum payment required for the factor to be supplied.

Union bargaining power The ability of unions to influence the bargaining process. Can be represented by the following ratio:

$$\frac{\text{Management costs of disagreeing (to union terms)}}{\text{Management costs of agreeing (to union terms)}}$$

Union density The proportion of the workforce who are members of a trade union.

Key Points

- Demand for and supply of labour will determine wage rates and levels of employment in competitive labour markets.
- Unions can usually secure higher wages only at the 'cost' of less employment unless their bargaining power is strong. If this is the case, they may be able to force employers off their labour demand curves, securing higher wages with no loss of employment.
- Chamberlain defined union 'bargaining power' as the ratio between the management costs of disagreeing and of agreeing to union terms. The larger the ratio, the greater the union bargaining power.
- A given rise in wages will usually reduce employment by less: (a) the less elastic the demand for the final product, (b) the less easy it is to substitute labour by other factors of production, (c) the lower the proportion of labour costs in total production costs.
- The government has legislated to reduce union power in various ways, e.g. removing the closed shop, imposing conditions on strikes and other union activities, deregulating the setting of wages and other working conditions and promoting trade union democracy. It has also legislated to introduce a national minimum wage.
- Where buyers of labour have market power, we refer to *monopsony* in the labour market. Monopsony can be expected to reduce both wages and employment.
- Governments may intervene in labour markets to prevent 'market failure'. For example, a national minimum wage may be introduced to protect the low paid. Both theory and evidence suggest that a higher minimum wage in monopsony labour markets might raise both wages and employment.
- The EU Social Chapter seeks to create *minimum standards* for working conditions in all member states.

Assessment Practice

Multiple choice questions

1 **In a competitive labour market, the *demand curve for labour* is given by which *one* of the following?**

(a) Total physical product
(b) Total revenue product
(c) Marginal physical product
(d) Marginal revenue product
(e) Marginal cost

2 **A *monopsony* type of market failure is said to occur for which *one* of the following?**

(a) Suppliers of labour have market power.
(b) Suppliers of products have market power.
(c) Buyers of labour have market power.

Definitions

Consumer durable A consumer good that lasts a period of time, during which the consumer can continue gaining utility from it.

Risk This is when an outcome may or may not occur, but where the probability of its occurring is known.

Uncertainty This is when an outcome may or may not occur and where the probability of its occurring is not known.

free and thus have no incentive to pay themselves. This is known as the *free-rider problem* and it is considered in more detail in Box 9.1.

Definitions

Public good A good or service which has the features of non-rivalry and non-excludability and as a result would not be provided by the free market.

Non-rivalry Where the consumption of a good or service by one person will not prevent others from enjoying it.

Non-excludability Where it is not possible to provide a good or service to one person without it thereby being available for others to enjoy.

Free-rider problem When it is not possible to exclude other people from consuming a good that someone has bought.

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JECTIVES

in section 10.6. It poses many costs for different groups cross society, which is why it is such an important objecve and we consider these costs in more detail in Box 10.4.

iflation. This refers to a general rise in prices throughout ie economy. The ***rate of inflation*** is the percentage increase ı the level of prices over a 12-month period.

Definitions

Rate of economic growth The percentage increase in output over a 12-month period.

Rate of inflation The percentage increase in prices over a 12-month period.

:- Also, if the exchange rate fluctuates, this can caus
a uncertainty for traders and can damage interna
d trade and economic growth.

Definitions

Nationalised industries State-owned industries that produce goods or services that are sold in the market.

Privatisation Selling nationalised industries to the private sector. This may be through the public issue of shares, by a management buyout or by selling it to a private company.

Price-cap regulation Where the regulator puts a ceiling on the amount by which a firm can raise its price.

and simply cannot go on yielding more and more output ndefinitely. After a point, the additions to total output from each extra worker will begin to diminish.

We can now state the ***law of diminishing (marginal) returns.***

KEY IDEA 14

The law of diminishing marginal returns. **When increasing amounts of a variable input are used with a given amount of a fixed input, there will come a point when each extra unit of the variable input will produce less extra output than the previous unit.**

Definitions

Fixed input An input that cannot be increased in supply within a given time period.

Variable input An input that can be increased in supply within a given time period.

Short run The period of time over which at least one input is fixed.

Long run The period of time long enough for all inputs to be varied.

Law of diminishing (marginal) returns When one or more inputs are held fixed, there will come a point beyond which the extra output from additional units of the variable input will diminish.

Key Terms

Allocative efficiency Where price is set equal to marginal cost and resources are allocated so no one can be made better off without making someone else worse off (i.e. a 'Pareto optimal' resource allocation).

Alternative Investment Market (AIM) Low-cost and accessible market for SMEs seeking to raise share capital.

Backward vertical integration Towards the raw material supplier.

Conglomerate integration Involving firms in a totally unrelated business.

Demergers Where a company breaks itself up into smaller units.

Economies of scale Achieving lower long-run average cost by growth in size.

Forward vertical integration Towards the final consumer.

Gearing ratio Reflects the financial risk to which the company is exposed via external borrowing. Ratio of external borrowing to total capital employed.

Horizontal integration Involves firms in the same business and at the same stage of production.

Large firm Over 250 employees.

Lateral integration Involves firms in different product areas, but with some common elements (e.g. factor inputs, product outlets).

Liquidity ratios Give an indication of the company short-term financial position in terms of the availability of cash or marketable assets with which to meet current liabilities.

Medium sized firm 50–249 employees.

Micro firm 0–9 employees, includes sole traders.

Organic growth Where the firm uses its own resources (e.g. 'ploughed-back profits').

Productive efficiency Producing at the level of output where average total cost is a minimum.

Small firm 10–49 employees.

SME Small and medium-sized enterprises, include micro, small and medium-sized firms.

Valuation ratio The ratio of market value/asset value.

Value discrepancy hypothesis Suggests that one firm will only bid for another if it places a greater value on the firm than that placed on the firm by its current owners.

Key Points

- Across all sectors in the UK, firms with fewer than five employees account for around 90% of the total number of firms. However, such firms account for only around 19% of total employment and 15% of total turnover.
- The small firm is increasingly seen by governments as a focus of new growth and employment opportunities, therefore justifying government support. Such small firm support has focused on three main areas: easier access to equity and loan capital, increased tax allowances and grants, and less government interference.
- Banks provide the main source (59%) of external finance for small firms (via overdraft) in the UK, increasingly in the form of medium- to longer-term loans, though high exposure to such overdraft finance remains a problem in the UK.

- Small firms in the UK see interest rate policy, general macroeconomic policy and taxation policy as the governmental policies with most impact on themselves.
- Low turnover is by far the most important single problem identified by small firms in the UK.
- Types of merger activity include horizontal, vertical, conglomerate and lateral.
- Suggested reasons for merger include at least one company believing it can add value beyond the costs of merger (value discrepancy hypothesis), a low valuation of share price relative to assets (valuation ratio) and the desire for greater market power.
- Other reasons include the securing of substantial economies of scale at plant and/or enterprise level. The former would be mainly technical economies by rationalisation of production into larger plants and the latter mainly non-technical economies related to functional areas such as administration, finance, marketing, distribution, purchasing, etc.
- There is little evidence to suggest that merger activity increases shareholder value but considerable evidence to suggest that merger activity may diminish profitability and shareholder value.

Assessment Practice

Multiple choice questions

1 **Which two types of situation are most favourable to the small firm's survival?**

(a) Serve 'niche' markets, often too small for large firms to service profitably
(b) Allow 'outsourcing' of functions which can more efficiently be conducted within larger firms
(c) Large economies of scale
(d) Few economies of scale
(e) Large 'bulk purchase' economies available

2 **Which two of the following are accurate statements about the small firm in the UK?**

(a) Over 99% of all UK firms have fewer than 50 employees

Fig 1.21 The market mechanism

Answers to Checkpoints and Activities can be found on pp. 705–35.

Exam hints!

Wherever appropriate, using demand/supply diagrams can help to clarify your answer to many assignments and exam questions on the topic areas of this chapter. However, do make sure that you draw the diagram neatly (use a ruler), label the diagram fully and, most important of all, write about the diagram in the text of your answer.

Key Terms

Complements in consumption Where consuming more of one product results in consuming more of some other product.

Complements in production Where producing more of one product automatically results in producing more of some other product (by-product). Sometimes called 'jointly supplied' products.

Conditions of demand The variables which result in the demand curve shifting to the right (increase) or left (decrease).

Conditions of supply The variables which result in the supply curve shifting to the right (increase) or left (decrease).

Demand curve Maps the relationship between the quantity demanded of some product and changes in its own price.

Demand function Expresses the rel... between the quantity demande... and the main variables that inf...

Equilibrium A state of balance o... Equilibrium price is that price for which demand and supply are equal and there is no tendency for the price to change.

Inferior goods Cheap but poor quality substitutes for other goods. As real incomes rise above a certain 'threshold', consumers tend to substitute more

expensive but better-quality alternatives for certain products. In other words, inferior goods have negative income elasticities of demand over certain ranges of income.

Market failure Where one or more conditions prevent the market, via the price mechanism, from allocating resources in the best possible way.

Normal good One for which a rise in real income will always lead to an increase in demand.

Opportunity cost The next best alternative foregone, in a situation characterised by scarcity and choice.

Production possibility curve (or frontier) Maps the different output combinations from fully using all the resources available.

Scarcity The central 'economic problem', arising from the fact that wants are unlimited but the means to satisfy those wants are limited.

Substitutes in consumption Where the products are alternative purchases for consumers.

Substitutes in production Where the factors of production could produce either product.

Supply curve Maps the relationship between the quantity supplied of some product and changes in its own price.

Supply function Expresses the relationship between the quantity supplied of some product and the main variables that influence supply.

Key Points

- In a free market system, price co-ordinates the decisions of buyers and sellers to bring them into balance (equilibrium).
- Prices act as 'signals' to consumers – e.g. a higher price for X means that substitutes in consumption are now relatively more attractive, so that demand for X contracts.
- Prices act as 'signals' to producers – e.g. a higher price for X means that substitutes in production are now relatively less attractive, so that supply of X expands.
- Excess demand at any price can be expected to raise market price.
- Excess supply at any price can be expected to reduce market price.
- A change in the product's own price (other things equal) will result in a movement along the demand or supply curve (expansion or contraction).
- A change in the conditions of demand or supply will cause the respective curves to shift (increase or decrease).
- 'Market failures', such as maximum or minimum prices, may prevent the price mechanism from allocating resources, so that 'non-price' mechanisms for resource allocation are needed.
- In a 'mixed economy' both markets and governments play a role in the allocation of scarce resources (e.g. land, labour and capital).

Assessment Practice

The following questions will help to check your understanding of some of the key points raised throughout the chapter.

Multiple choice questions

Definitions

Supernormal profit The excess of total profit above normal profit.

Short run under perfect competition The period during which there is too little time for new firms to enter the industry.

Profit-maximising rule Profit is maximised where marginal revenue equals marginal cost.

Definitions

Open-market operations The sale (or purchase) by the authorities of government securities in the open market in order to reduce (or increase) money supply.

Quantitative easing A deliberate attempt by the central bank to increase the money supply by buying large quantities of securities through open-market operations.

Sale and repurchase agreement (repo) An agreement between two financial institutions whereby one in effect borrows from another by selling some of its assets, agreeing to buy them back (repurchase them) at a fixed price and on a fixed date.

Lender of last resort The role of the central bank as the guarantor of sufficient liquidity in the monetary system.

Definitions

Demand-pull inflation Inflation caused by persistent rises in aggregate demand.

Cost-push inflation Inflation caused by persistent rises in costs of production (independently of demand).

Definitions

Observations of market behaviour Information gathered about consumers from the day-to-day activities of the business within the market.

Market surveys Information gathered about consumers, usually via a questionnaire, that attempts to enhance the business's understanding of consumer behaviour.

Market experiments Information gathered about consumers under artificial or simulated conditions. A method used widely in assessing the effects of advertising on consumers.

Definitions

Command-and-control (CAC) systems The use of laws or regulations backed up by inspections and penalties (such as fines) for non-compliance.

Tradable permits Each firm is given a permit to produce a given level of pollution. If less than the permitted amount is produced, the firm is given a credit. This can then be sold to another firm, allowing it to exceed its original limit. This is known as a ‘cap and trade’ scheme.

Definitions

Tariffs Taxes (customs duties) on imports. These could be a percentage of the value of the good (an 'ad valorem' tariff), or a fixed amount per unit (a 'specific' tariff).

Dumping Where exports are sold at prices below marginal cost – often as a result of government subsidies.

Infant industry An industry which has a potential comparative advantage, but which is, as yet, too underdeveloped to be able to realise this potential.

ity. But as you buy more, your marginal utility from consuming each extra unit will get less and less. How many extra units do you buy? You will stop when the marginal utility has fallen to the new lower price of the good: when $MU = P$. Beyond that point it is not worth buying any more. This represents the optimal consumption point, as *rational* consumers will aim to maximise their consumer surplus. Many factors will affect an individual's utility, as is discussed in the blog from the Sloman Economics News Site: 'Peak stuff'.

Definitions

Consumer surplus The difference between how much a consumer is willing to pay for a good and how much they actually pay for it.

Rational consumer behaviour When consumers weigh up the marginal utility they expect to gain from a product they are considering purchasing against the product's price (i.e. the marginal cost to them). By buying more of a product whose marginal utility exceeds the price and buying less of a product whose price exceeds marginal utility, the consumer will maximise consumer surplus.

s. Petrol consumption *in total* may be only slightly r and hence the *MU* of petrol only slightly lower.

in the demand curve. How do *shifts* in demand relate to

throu
help t
Bu

Key Terms

'Baby-boomers' A term often used to refer to those born in the 'bulge' period after the Second World War.

'Black economy' The percentage of national income which is not officially declared, and which therefore does not appear in the national income statistics.

'Demographic time-bomb' A term usually linked to an ageing population, showing a fall in the support ratio involving the economically active to pensioner ratio.

'Grey market' Refers to the (often increasing) market segment involving older people (beyond a specified age).

Cohabitation Living together as partners rather than married.

Culture The set of beliefs, values and perceptions that prevail in society or are attributed to a specific grouping of people.

Gender Male and female issues.

Net migration The difference between immigration and emigration. If positive, then more people come into the country than leave it.

Over-employed Those who want to work fewer hours and are willing to take an equivalent pay cut.

Participation rate The percentage of any given group which is economically active.

Population change Given by the equation 'Births − Deaths + Net migration'.

Socio-economic class A grouping of individuals or households, usually using occupational data (Categories A–E).

Support ratio Strictly the ratio of economically active people to dependents (under 16 and over 65). Often used as a measure of ageing population, using the more specific ratio of economically active people to pensions.

Total fertility rate (TFR) The average number of children born to one woman at current fertility levels.

Key Points

- Most advanced industrialised economies are experiencing demographic change involving progressively fewer young people and greater numbers of old people.
- Population change will depend on births, deaths and net migration.
- In the UK as in many other countries, the ageing population is due in part to a decrease in birth rate and decline in death rate.
- The sustainability of pensions when there is a decline in the 'support ratio' is a pressing issue.
- Various government policy responses can help defuse this 'demographic time-bomb', including increases in the participation rates, later retirement, greater productivity and a reduction in the 'black economy'.
- Socio-economic characteristics of the population are changing, with important implications for households, businesses and governments.
- Cultural and lifestyle changes are also occurring at historically rapid rates, as in the case of marriage and divorce, later motherhood, longer working hours, less healthy lifestyles, family ties and stress levels.

Assessment Practice

Multiple choice questions

1 The 'demographic time-bomb' is used to describe the situation where:

(a) There is a trend towards larger families.
(b) There is a trend towards more women going out to work.
(c) Immigration is increasing.
(d) People are living longer and the birth rate is declining.
(e) People are living longer and the birth rate is increasing.

2 'Total fertility rate' means:

(a) The average number of pregnancies a woman may be expected to have during her lifetime, based on current trends.
(b) The average number of children a woman may be expected to have during her lifetime, based on current trends.
(c) The actual number of children a woman has had during her lifetime.
(d) The actual number of pregnancies a woman has had during her lifetime.
(e) The total number of children born into a population in a particular year.

3 The 'support ratio' can be defined as:

Definition

Economic and monetary union (EMU) Where countries adopt a single currency and a single monetary policy. It might also involve other common policies, such as fiscal and supply-side policies.

racts exist between the firm and any supplier, legal fee vill not be an issue and nor will the problem of monitorin nd enforcing any contract. We return to this in sectio .2, where we will take a closer look at some other reason vhy firms may vertically integrate, as well as the disadvan ages of it.

Definitions

Vertically integrated firm A firm that produces at more than one stage in the production and distribution of a product.

Supply chain The flow of inputs into a finished product, from the raw materials stage, through manufacturing and distribution, right through to the sale to the final consumer.

Backward integration Where a firm expands backwards down the supply chain to earlier stages of production.

Forward integration Where a firm expands forward up the supply chain towards the sale of the finished product.

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contractors, etc. all normally operate under monopoli: competition – as does busking, which is discussed on Freakonomics blog.[1] As a result of the high degree of com tition, firms' profits are kept down. However, competitio not perfect, as the firms are all trying to differentiate tl product or service from their rivals'. They have *some* pov over prices: their demand curve, while relatively elastic not horizontal.

Definitions

Monopoly A market structure where there is only one firm in the industry.

Imperfect competition The collective name for monopolistic competition and oligopoly.

Monopolistic competition A market structure where, like perfect competition, there are many firms and freedom of entry into the industry, but where each firm produces a differentiated product and thus has some control over its price. (Not to be confused with a monopoly or monopolist!)

[1] Daniel Hamermesh, 'The Economics of Busking', *Freakonomics* (21 May 2(

Definition

The multiplier The number of times a rise in GDP (ΔGDP) is bigger than the initial rise in aggregate expenditure (ΔE) that caused it. Using the letter k to stand for the multiplier, the multiplier is defined as $k = \Delta GDP/\Delta \mathrm{E}$.

Key Terms

Articles of Association Sets out the rules by which the company will be administered (e.g. voting rights of directors).

Behavioural objectives Objectives influenced by the dynamics of firm behaviour; often non-maximising.

Coalitions Groups which have a consensus on a particular objective/goal.

Constrained sales revenue maximisation Firm seeks to maximise sales revenue (turnover) but subject to meeting some minimum profit target.

Corporate governance The various rules and procedures used to direct and control the running of the company.

Growth This can be expressed in various forms: e.g. the rate of increase of output per annum, or rate of increase of the firms capitalised value per annum, and so on.

Managerial objectives Objectives set by managers (agents) rather than shareholders (principals). Profit will tend to be less important; sales revenue, market share, growth will tend to be more important.

Memorandum of Association Document which forms the basis of registration of a company. Lists the subscribers to the capital of the company and the number of shares they hold. May also list company objectives etc.

Partnership Unincorporated business of between 2 and 20 people who share risks and profits. Partnerships usually have unlimited liability for debts of other partners (though limited partnerships can be formed).

Penetration pricing A low-price strategy in the introduction stage of the product life cycle.

Price skimming A high-price strategy in the introduction stage of the product life cycle.

Principal–agent problem Where agents (managers) pursue different objectives from principals (shareholders).

Private limited company (Ltd) A limited number of shareholders (2–50) with limited liability. Cannot offer shares to general public.

Product life cycle The stages a typical product will go through during its 'life cycle', namely introduction, growth, maturity and decline stages.

Public corporations Government owned; sometimes called nationalised industries.

Public limited company (PLC) Unlimited number of shareholders (with limited liability). Can offer shares to general public.

Sales revenue maximisation Firm seeks to maximise sales revenue (turnover).

Satisficing A theory which suggests that objectives constantly change, depending on whether previous aspirations have (or have not) been met.

Sole trader One-person business.

Key Points

- Separation between ownership by shareholders (principals) and control by managers (agents) makes profit maximisation less likely.
- Maximisation of sales revenue or asset growth (as well as profit) must be considered in manager-led firms.

- The objectives pursued by the firm will influence the firm's price and output decisions.
- Different groupings (coalitions) may be dominant within a firm at different points of time. Firm objectives may therefore change as the coalitions in effective control change.
- Organisational structure may result in non-maximising behaviour; e.g. the presence of diverse stakeholders may induce the firm to set minimum targets for a range of variables as a means of reducing conflict.
- Shipley's seminal work (supported by later studies) found less than 16% of the firms studied to be 'true' profit maximisers. However, Shipley found that 88% of firms included profit as part of their 'goal set'.
- Separation between ownership and control receives empirical support, though small 'threshold' levels of shareholdings may still secure effective control in modern PLCs.
- Profit remains a useful predictor of long-term firm behaviour, though sales revenue may be better in predicting short-term firm behaviour.
- Profit maximisation may not be acknowledged as a goal by many firms, yet in setting 'hurdle rates' senior managers may implicitly be following such an objective.
- Profitability and executive pay appear to be largely unrelated, suggesting that other managerial objectives might be given priority (sales revenue, growth, etc.). However, total remuneration 'packages' for top executives may be linked to profitability, helping to align the interests of managers more closely to the interests of shareholders.
- Businesses may be able to raise revenue and profit by adopting ethical and environmentally sustainable policies.
- Business behaviour, both price and non-price, may depend on the stage the product has reached in its life cycle.
- Portfolio planning points to a variety of ever-changing objectives guiding firm activity rather than any single objective.

Assessment Practice

Multiple choice

1 *Limited liability* describes a situation where:

We return to these issues of inflation and unemployment in more detail in Chapter 10, using a more realistic aggregate demand-aggregate supply model to examine their causes and consequences.

Key Terms

Circular flow of income A model to show how the 'equilibrium' level of national income is determined in an economy.

Consumption expenditure Where domestic households purchase the output of domestic firms.

Deflationary gap Shortfall of injections below withdrawals at the 'full capacity' level of national income.

Demand-pull inflation Inflation seen mainly by an increase in the components of aggregate demand (i.e. C, I, G or X).

Endogenous variable One which is determined *inside* the model or system.

Exogenous variable One which influences the system or model but which is determined *outside* that system or model.

Expenditure method Where national income is measured by expenditures on the final output of goods and services.

Factor cost The various measures of national output/income *exclude* indirect taxes and subsidies.

Full capacity That level of national income/output at which resources (land, labour, capital) are fully utilised.

Gross domestic product (GDP) Value of output produced (and incomes received) by firms and households using resources located within that country.

Gross national product (GNP) Value of output produced (and incomes received) by residents of that country from the ownership of resources, wherever those resources are located. The ownership of resources causes some UK residents to receive income from abroad (e.g. interest, dividends) or pay income abroad. In other words: GNP = GDP + *net* property income from abroad.

Income method Where national income is measured by adding incomes which correspond to productive activities.

Inflationary gap Excess of injections over withdrawals at the 'full capacity' level of national income.

Injections Additions to the circular flow of income (e.g. I, G, X).

Market prices The various measures of national output/income *include* indirect taxes and subsidies.

Multiplier The change in total national income as a multiple of the initial change in injections (or withdrawals) which brought it about. For a rise in national income the term 'expansionary multiplier' is often used, and 'deflationary multiplier' for a fall in national income.

National income Total value of income (output or expenditure) generated within the economy in a particular year.

National output *see* 'National income'.

Net national product (NNP) NNP takes into account the fact that some capital equipment will have depreciated over the year via wear and tear or because technological change has made it obsolescent. In other words: NNP = GNP − depreciation.

Net property income ...me received by resident... overseas resources n... ...s ma... by residents to the overseas owners of resources located in the domestic economy.

Output method Where national income is measured by taking the value added at each stage of production.

Transfer payments Payments received out of tax revenue without production taking place (e.g. pensions).

Withdrawals Leakages from the circular flow of income (e.g. S, T, M).

Key Points

- National income can be measured using income, output, expenditure approaches.
- In the 'circular flow of income', *injections* (J) consist of investment (I), government expenditure (G) and exports (X), whilst *withdrawals* (W) consist of savings (S), imports (M) and taxes (T).
- 'Equilibrium' or balance in the circular flow occurs where injections into the flow (J) are exactly matched by withdrawals from the flow (W).
- 'Equilibrium' national income can be shown using *either* the withdrawals/injections diagram or the aggregate expenditure (45° diagram).
- We define aggregate expenditure (E) as consumer expenditure (C) *plus* injection expenditure (J).
- Any given change in withdrawals (W) or injections (J) will change national income by some *multiple* of the initial change in W or J.
- The national income multiplier is given by the reciprocal of (one divided by) the marginal propensity to withdraw.
- Inflationary or deflationary gaps are defined, respectively, in relation to the 'full capacity' level of national income.

Government macroeconomic policy

From the above four issues we can identify six macroeconomic policy objectives that governments typically pursue:

- High and stable economic growth.
- Low unemployment.

Definitions

Balance of payments account A record of the country's transactions with the rest of the world. It shows the country's payments to or deposits in other countries (debits) and its receipts (credits) from other countries. It also shows the balance between these debits and credits under various headings.

Exchange rate The rate at which one national currency exchanges for another. The rate is expressed as the amount of one currency that is necessary to purchase *one unit* of another currency (e.g. $1.20 = £1).

ıfortunately, these policy objectives may conflict. For

Definitions

Recession A period of falling GDP, i.e. of negative economic growth. Officially, a recession is where this occurs for two quarters or more.

Business cycle or trade cycle The periodic fluctuations of national output around its long-term trend.

Key Terms

Aggregate demand The total demand in the economy, usually expressed as C + I + G + (X − M).

Aggregate supply The total output in the economy. In the short run a rise in the average price level is usually assumed to exceed rises in input costs, raising profitability and providing an incentive for an expansion in aggregate supply.

Appreciation A rise in the exchange rate of one currency against another. Often used in the context of floating exchange rates.

Balance on goods Net value of trade in tangible goods (exports +, imports −). Previously known as the 'visible trade balance'.

Balance on services Net value of trade in services (exports +, imports −). Previously known as the 'invisible trade balance'.

Balanced budget When tax revenue equals public expenditure.

Budget deficit When tax revenue falls short of public expenditure.

Budget surplus When tax revenue is greater than public expenditure.

Built-in stabilisers Result in a *net* increase in withdrawals in 'boom' conditions and a *net* increase in injections during recession.

Business cycle The tendency for economies to move from economic boom into economic recession and vice versa.

Capital account Records the flows of money into the country (positive sign) and out of the country (negative sign) resulting from the purchase or sale of fixed assets (e.g. land) and selected capital transfers.

Consumer Price Index (CPI) Since December 2003 this has replaced RPIX as the official measure of inflation in the UK.

Cost-push inflation Inflation seen as being caused mainly by an increase in the costs of production, which firms pass on as higher prices.

Current account Consists of two main sub-accounts, the 'balance on goods' (formerly 'visible trade balance') and the 'balance on services' (formerly 'invisible trade balance').

Depreciation A fall in the exchange rate of one currency against another. Often used in the context of floating exchange rates.

Direct investment Involves physical assets of a company (e.g. plant and equipment).

Eurozone The grouping of countries with the euro as their common currency.

Financial account Records the flows of money into the country (+) and out of the country (−) from investment-related (direct and portfolio) or other financial activity (e.g. movement of deposits between countries).

Fiscal drag The tendency for the tax-take to rise as a result of a rise in money incomes.

Frictional unemployment Due to the time it takes workers to change jobs.

'Golden rule' Over the economic cycle the government will only borrow to invest and not to fund current expenditure.

HICP (Harmonised Index of Consumer Prices) Uses a different 'basket' of goods to the RPI. Now the UK as well as the EU 'official' inflation measure.

Inflation Average level of prices in the economy rises. Different measures exist (RPI, RPIX, RPIY etc.).

Natural rate of unemployment The rate of unemployment at which there is no excess or deficiency of demand for labour.

Other financial flows Records the movement of deposits between countries. Part of the 'financial account' of the balance of payments.

Phillips curve A curve showing the relationship between (price) inflation and unemployment. The original Phillips curve plotted wage inflation against unemployment in the UK over the years 1861–1957.

Portfolio investment Involves investment paper assets (e.g. shares, bonds).

Public sector net cash requirements (PSNCR) Now used instead of the 'Public Sector Borrowing Requirement' (PSBR).

Real wage unemployment Rigidities in the labour market are seen as pre[illegible] wage to prices falling [illegible] market.

Regional unemployment The geographical location of particular industries and changes in long-term demand play a key role here.

Reserves Part of the 'financial account' of the balance of payments. Reserves may be run down in times of overall deficit, and added to in time of surplus. They help to preserve the balance of payments accounting identity (i.e. defined so that they must balance overall).

Retail Price Index (RPI) Shows the change from month to month in the cost of a representative 'basket' of goods and services bought by a typical household.

RPIX Retail Price Index (RPI) excluding mortgage interest payments.

Stagflation Where real GDP falls but the price level rises.

Structural unemployment Arises from longer-term changes in the demand for, and supply of, labour in specific industries.

Technological unemployment Leads to significant changes in labour and capital productivity, resulting in job losses.

Trade cycle *see* 'Business cycle'.

Unemployment The number of people actively looking for work who are currently out of a job.

ıis problem is particularly severe in holiday areas such
ɔrnwall, where unemployment can reach very high leve
the winter months.

Definitions

Frictional (search) unemployment Unemployment that occurs as a result of imperfect information in the labour market. It often takes time for workers to find jobs (even though there are vacancies) and in the meantime they are unemployed.

Structural unemployment Unemployment that arises from changes in the pattern of demand or supply in the economy. People made redundant in one part of the economy cannot immediately take up jobs in other parts (even though there are vacancies).

Technological unemployment Structural unemployment that occurs as a result of the introduction of labour-saving technology.

Regional unemployment Structural unemployment occurring in specific regions of the country.

Seasonal unemployment Unemployment associated with industries or regions where the demand for labour is lower at certain times of the year.

5 At any given price P_1 the more inelastic the upward sloping supply curve is for all prices below P_1:
(a) the smaller will be producer surplus
(b) the smaller will be consumer surplus
(c) the greater will be producer surplus
(d) the greater will be consumer surplus
(e) will not affect either producer or consumer surplus.

Answers to Checkpoints and Activities can be found on pp. 705–35.

Key Terms

Cost gradient Represents the increase in costs as a result of the production (enterprise) unit being only a specified percentage of the optimum size.

Diminishing returns Usually refers to the short-run time period. The average/marginal product curves of a variable factor will eventually decline as more of the variable factor is applied to some fixed factor.

Diseconomies of scale The suggestion that, in the long run, long run average costs rise as output rises beyond a certain level (MES).

Economies of experience Where increases in *cumulative output* reduce the average costs of the firm. Even smaller firms in business for many years can gain from economies of experience.

Economies of scale Changes in (long-run) average cost as a result of proportionate changes in all the factors of production. It describes the downward sloping segment of the LRAC curve.

Economies of scope Changes in average costs of production as a result of changes in the mix of output.

Increasing returns Usually refers to the short-run time period. The average/marginal product curves of a variable factor may at first rise as more of the variable factor is applied.

Long run The period of time in which all factors of production can be varied.

Minimum efficient scale (MES) That level of output which results in the lowest attainable average cost. Usually refers to the long run time period.

Price elasticity of supply (PES) A measure of the responsiveness of supply of a product to changes in its own price.

$$PES = \frac{\%\text{ change in quantity supplied of X}}{\%\text{ change in price of X}}$$

Short run That period of time in which at least one factor of production is fixed.

Sunk cost A cost of acquiring an asset, whether tangible (e.g. plant) or intangible (e.g. reputation), which cannot be recouped by selling that asset or redeploying it to some other use.

Key Points

- The 'law of variable proportions' involves situations in which extra units of a variable factor of production are added to one or more fixed factors.
- Diminishing average and marginal returns to the variable factor will occur in the short-run time period, when at least one factor of production is fixed.
- In the long run, when all factors are variable, average cost may fall significantly with increased output for both technical and non-technical reasons.
- As well as such 'internal' economies of scale, costs may fall because of economies of scope and experience, or because 'external' economies of scale are available.
- Costs may also fall where multinationals take advantage of 'outsourcing' opportunities.
- The more mobile the factors of production are, the greater will tend to be the responsiveness of supply to a change in product price (i.e. price elasticity of supply).

Assessment Practice

Multiple choice questions

1 The long run is a period of time in which:

(a) the firm is able to maximise total profit
(b) the firm may want to build a bigger plant, but cannot do so
(c) the firm can hire all the workers that it wants to employ, but it does not have sufficient time to buy more equipment
(d) economic efficiency is achieved
(e) the quantities of all inputs can be varied.

2 The 'law of diminishing marginal returns' refers to the general tendency for __________ to eventually diminish as more of the variable input is employed, given the quantity of fixed inputs.

(a) average product
(b) marginal product
(c) capital
(d) marginal cost
(e) average total cost

Definitions

Floating exchange rate When the government does not intervene in the foreign exchange markets, but simply allows the exchange rate to be freely determined by demand and supply.

Key Terms

Arc elasticity of demand A measure of price elasticity of demand which uses the average of the initial and final values for price and quantity. It is the elasticity at the mid point of the chord connecting the two points on the demand curve corresponding to the initial and final price levels.

Cardinal utility The cardinalist school supposed that utility could be measured, either in terms of some abstract quantity (e.g. utils) or in terms of money. In the latter case, utility is expressed in terms of the amount of money a consumer is willing to sacrifice for an additional unit of a commodity.

Cross-elasticity of demand (CED) Indicates the responsiveness of demand for a product to changes in the price of some other product.

$$\text{CED} = \frac{\text{\% change in quantity demanded of X}}{\text{\% change in price of Y}}$$

The CED for *substitutes in consumption* is positive (+/+). The CED for *complements in consumption* is negative (+/−). CED involves shifts in demand.

Income elasticity of demand (IED) The responsiveness of demand for a product to changes in consumer (national) income. Here, as for CED, we are considering shifts in the demand curve of the product.

$$\text{IED} = \frac{\text{\% change in quantity demanded of X}}{\text{\% change in real income}}$$

Marginal utility The addition to total utility from consuming the last unit of a product.

Ordinal utility The ordinalist approach does not assume that consumer utility be measurable, merely that consumer preferences can be ranked in order of importance.

Price elasticity of demand (PED) A measure of the responsiveness of demand for a product to changes in its own price.

PED indicates the extent of movement along the demand curve for X in response to a change in price of X.

$$\text{PED} = \frac{\text{\% change in quantity demanded of X}}{\text{\% change in price of X}}$$

Relatively elastic demand Where a given % change in own-price of a product leads to a larger % change in quantity demanded of that product.

Relatively inelastic demand Where a given % change in own-price of a product leads to a smaller % change in quantity demanded of that product.

Tax incidence This involves measuring the proportion of any tax increase that is paid for by the consumer (in higher prices) or by the producer. For example, the tax incidence would be 100% on the consumer and 0% on the producer should the whole of the tax increase be passed on to the consumer (e.g. perfectly inelastic demand).

Turnover A term which refers to the total sales revenue of a business.

Unit elastic demand Where a given % change in own-price of a product leads to exactly the same % change in the quantity demanded of that product.

Veblen effect The psychological association of price with quality.

Key Points

- The numerical value of price elasticity of demand (PED) indicates to the business the likely impact of a change in the price of its product on total revenue.
- 'Arc elasticity of demand' is an *average* measure of PED over a range of the demand curve. 'Point elasticity of demand' is a measure of PED at a particular point on a demand curve.

- The incidence of a tax on a product will fall more on the consumer (and less on the producer) the less elastic is the demand for the product.
- The sign and size of cross elasticity of demand (CED) indicates the closeness of substitutes or complements in consumption for product X. It tells us the direction and magnitude of shift in the demand curve for product X when some other product Y changes its price.
- The sign and size of income elasticity of demand (IED) tells us the direction and magnitude of shift in the demand curve for product X when real incomes rise.
- The law of 'diminishing marginal utility' can be used to help explain why the demand curve is negatively sloped (i.e. the 'law of demand').

Assessment Practice

Multiple choice questions

1 A university decides to raise tuition fees to increase the total revenue it receives from students. This strategy will work if the demand for education at that university is:

(a) Unit elastic
(b) Elastic
(c) Inelastic
(d) Inversely related to price
(e) Perfectly elastic.

2 As you move down a straight-line downward-sloping demand curve, the price elasticity of demand:

(a) becomes more elastic
(b) may become more or less elastic depending on the slope of the demand curve
(c) remains constant because the slope is constant

Answers to Checkpoints and Activities can be found on pp. 705–35.

Key Terms

Barometric-firm leadership Here the price leader is a small firm, recognised by others as having a close knowledge of prevailing market conditions.

Barriers to entry Various deterrents to new firm entry into a market.

Contestable markets Markets in which the threat of new firm entry causes incumbents to act as though such potential competition actually existed.

Dominant strategy One in which the respective firms seek to do the best they can in terms of the objectives set, irrespective of the possible actions/reactions of any rival(s).

Long-run Period of time in which all factors of production can be varied.

Maxi-min An approach in game theory whereby the firm selects from the best of the worst possible outcomes identified in a pay-off matrix.

Mini-max An approach in game theory whereby each firm selects the worst of the best possible outcomes identified in a pay-off matrix.

Monopolistic competition A market structure which contains elements of both monopoly and competitive market forms. Differentiated (or non-homogeneous) products give firms an element of market power, but the existence of large numbers of relatively small firms, with freedom of entry/exit, provides an element of competition.

Monopoly Where over 25% of the output of a product is in the hands of a single firm or group of linked firms.

Nash equilibrium Occurs when each firm is doing the best that it can in terms of its own objectives, given the strategies chosen by the other firms in the market.

Natural monopoly Situation where the minimum efficient size of the productive unit or enterprise is so large that the industry can sustain only a single operator.

Normal profit That profit just sufficient to keep the firm in the industry in the long run.

Pareto optimal A resource allocation for which it is no longer possible to make anyone better off without making someone else worse off.

Perfectly contestable market Situation in which no barriers to entry exist so that incumbent firms are constrained by the threat of new firm entry to keep prices at levels that, in relation to costs, earn only normal profits. Incumbents in perfectly contestable markets earn no super-normal profits, are cost efficient, and cannot cross-subsidise between products or set prices below costs in order to deter new entrants.

Price discrimination Situation in which different prices are charged for identical units of a product.

Pure monopoly A single supplier of the product.

Short-run Period of time in which at least one factor of production is fixed.

Stable equilibrium Situation in which any movement away from an equilibrium initiates changes that move the situation back towards that equilibrium.

Zero-sum game A game in which any gain for one or more players is offset by an equivalent loss for some other players.

Key Points

- Concentration ratios for both product and industry groups have risen over time, implying a more oligopolistic market structure.
- 'Recognised interdependence between the few' is a key feature of oligopoly markets.
- Where firms develop their own strategies independently we speak of 'non-collusive behaviour'.
- Even in this case firms will seek to anticipate how their rivals might react to any strategy they might adopt.
- Past experience might be a guide to rival reactions, as in the 'kinked demand' model. Firms learn that rivals match price cuts but not price rises. The model predicts price stability.
- Even where there is little price competition, there may be extensive non-price competition.
- 'Game' simulations may be used to predict the outcomes of different combinations of action/reaction. Games may or may not have stable equilibriums depending on the strategies each firm adopts.
- To avoid uncertainty, collusion may occur, whether formal (cartels) or informal (tacit).
- To be successful firms must abide by the rules of a cartel, e.g. producing no more than their allocated quotas.
- Informal collusion may include various types of price leadership models as well as agreements of various kinds.

Assessment Practice

Multiple choice questions

1 **Perfect competition occurs in a market where there are many firms each selling:**

(a) an identical product
(b) a similar product
(c) a unique product
(d) a capital intensive product
(e) a competitive product