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THE PENGUIN DICTIONARY OF
ECONOMICS

GRAHAM BANNOCK, R. E. BAXTER
AND EVAN DAVIS

Fifth Edition



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THE PENGUIN DICTIONARY OF ECONOMICS

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Ron Baxter graduated from the London School of Economics with a degree in economics. He worked first with the International Nickel Company and Hoover and, subsequently, at the Electricity Council, London. He was the Director of Economics and Statistics at the National Ports Council for many years, where he was engaged on port planning, forecasting international trade and the appraisal of investments, as well as the development of port statistics. Ron Baxter is now a director in the firm of economic consultants Baxter Eadie Ltd, and is closely involved with advising clients on a wide range of practical economic problems.

Evan Davis graduated from St John's College, Oxford, in 1984 with a degree in economics and philosophy. He then joined the research team at the Institute for Fiscal Studies in London, where he was involved in applied microeconomic policy analysis. In 1986 he moved to Harvard University to continue his studies, and since 1988 has been a Research Fellow at the centre for Business Strategy at London Business School. He also acts as a general consultant to clients in both Britain and the United States.

Foreword to the Fifth Edition

'... no dictionary of a living tongue can ever be perfect, since while it is hastening to publication, some words are budding, and some falling away'

SAMUEL JOHNSON, *The Dictionary of English* (1755)

'In the case of economics there are no important propositions that cannot, in fact, be stated in plain language'

J. K. GALBRAITH, *Annals of an Abiding Liberal* (1979)

Our labours in regularly improving and updating this book have been rewarded, to date, by total sales, world-wide, in excess of 500,000 copies. For this fifth edition we have continued the process of revision. Some seventy entries have been deleted and many others abbreviated to make space for over 150 new entries taking account of new developments in economic theory and practical affairs.

Both the intended readership and the scope and method of the book are unaltered. The dictionary is planned as a companion to two kinds of users of economics. First, for the general reader who wants to follow economic discussion in the press or elsewhere and for the increasing number of people who need some knowledge of economics in their daily work, in teaching, business, the civil service, representative bodies and the professions. Secondly, it is aimed at students, especially those up to the second-year university courses in the subject, but also others, for example those at business schools for whom economics is part of the curriculum.

Our distinctive approach remains unique. This approach consists of a micro-encyclopedic treatment with extensive cross-referencing, up-to-date institutional material and a level of exposition that attempts to combine a reasonable degree of academic rigour with brevity and practical relevance.

Our subject is large and growing continuously and we have had to be highly selective. Words in common usage are not normally included unless they have a specialized meaning in economics. Economic theory, including international, monetary and welfare economics, has been treated fairly comprehensively. We have also given considerable emphasis to the history of economics in keeping with our view of the subject as a developing one. Individual economists are included only where they have made an important and definable contribution to the body of economic thought as it exists today. We have been particularly sparing in our inclusion of contemporary economists (other than Nobel prize-winners), so that many distinguished living members of the profession

Foreword

are left out. We have tried to include all the key terms used by econometricians and statisticians that are in general use. Our treatment of financial and business economics, public finance, international trade and development and payments has been more selective still but, institutions apart, we hope that nothing important has been omitted.

We have been helped and encouraged by the response we have received from our readers. We hope that they will continue to point out to us any errors or omissions.

G.B.
R.E.B.
E.D.

May 1991

Single and double arrows (\diamond $\diamond\diamond$) in the text indicate, respectively *see* and *see also*, where a point is either amplified or complemented in another entry.

THE DICTIONARY

A

'A' shares. \diamond SHARE.

Above the line. \diamond BELOW THE LINE.

Absolute cost advantage. \diamond BARRIERS TO ENTRY.

Absorption. Total expenditure on final goods and services. Domestic absorption in an economy is equal to CONSUMPTION plus INVESTMENT plus GOVERNMENT EXPENDITURE (or $C + I + G$), and is equivalent to NATIONAL INCOME minus net exports.

Abstinence theory of interest. \diamond INTEREST, ABSTINENCE THEORY OF.

Acceleration principle. The hypothesis that the level of INVESTMENT varies directly with the rate of change of output. Given technological conditions and the relative prices of CAPITAL and LABOUR, a certain size of capital stock will be chosen to produce a particular rate of output. If this rate of output changes, then, other things being equal, the desired size of capital stock will also change. Since net investment is, by definition, the amount by which the capital stock changes, it follows that the amount of investment depends on the size of the change in output. At its simplest, the hypothesis asserts that investment will be *proportional* to the rate of change of output, at all levels of output. However, under more realistic assumptions the relationship may cease to be a simple proportional one. There may, for example, be spare capacity over some range of increasing output, so that the capital stock does not have to be increased until full capacity is reached; or the capital intensity (\diamond CAPITAL-INTENSIVE) of production may vary as the level of output varies. In addition, the relation will be influenced by EXPECTATIONS, time lags, etc. As well as being very important in explaining the determination of investment expenditure in the economy, the acceleration principle also plays an important part in theories of the TRADE CYCLE, e.g. the ACCELERATOR-MULTIPLIER MODEL, and the theory of ECONOMIC GROWTH, e.g. in the HARROD-DOMAR MODEL. (\diamond ACCELERATOR COEFFICIENT; CLARKE, J. M.)

Accelerator coefficient. The factor which determines how much INVESTMENT is induced by a change in output (\diamond ACCELERATION PRINCIPLE). Its value is influenced by the availability of spare capacity, the productivity of capital, the rate of INTEREST, the price of labour, etc. (\diamond CAPITAL-OUTPUT RATIO; PRODUCTIVITY).

Accelerator-multiplier model. A model of economic growth, incorporating the effects of the ACCELERATION PRINCIPLE and the MULTIPLIER. An increase in government expenditure, say, raises consumers' incomes

which through the multiplier leads to an increase in output which in turn, through the accelerator, raises investment. The increase in expenditure, in the latter, itself raises incomes and the process is repeated. The model reveals that the multiplier and the accelerator interrelate in a way that produces a cyclical pattern to economic growth. (⇔ HARROD-DOMAR MODEL; SAMUELSON, P. A.)

Accelerator theory of investment. ⇔ ACCELERATION PRINCIPLE; TRADE CYCLE.

Acceptance. The act of accepting, i.e. agreeing to honour a PROMISSORY NOTE such as a BILL OF EXCHANGE. By extension, the document itself.

Accepting house. An institution specializing in accepting or guaranteeing BILLS OF EXCHANGE. All accepting houses have taken on other functions as the use of bills of exchange has declined, returning to their original, wider, function of merchant banking (⇔ MERCHANT BANKS). The Accepting Houses Committee is a body that ensures policy coordination between them, the TREASURY and the BANK OF ENGLAND. Members of this committee are eligible for finer DISCOUNTS on bills bought by the Bank of England, though this privilege has recently been extended to other banks, including foreign banks, and the term accepting house is now an indication of status rather than function.

Account. 1. A record of financial transactions in the form of STOCKS or flows. (⇔ BALANCE OF PAYMENTS; BALANCE SHEET; CURRENT ACCOUNT; SOCIAL ACCOUNTING.) **2.** An arrangement between a seller and a buyer under which a period of CREDIT is allowed before payment; for example the period in which STOCK EXCHANGE transactions take place and after the end of which settlement must be made. Up to the end of an account, transactions are made without payment and account dates are thus of vital importance to speculators.

Account day. The day on which all transactions made during the previous ACCOUNT at the STOCK EXCHANGE must be settled. It is normally a Monday, ten days after the last day of dealings on the account, and is also known as *settlement day*, and more rarely as *pay day*.

Accounting equation, basic. ⇔ BALANCE SHEET.

Accruals. ⇔ ACCRUED EXPENSES.

Accrued expenses. The cost of services utilized in advance of payment and written into a company's accounts as LIABILITIES.

ACP. Africa, the Caribbean and the Pacific.

Acquisition. ⇔ TAKE-OVER.

ACT. Advance corporation tax (⇔ CORPORATION TAX).

Activity analysis. ⇔ LINEAR PROGRAMMING.

Activity rate. ⇔ PARTICIPATION RATE.

Actuary. Someone trained in the calculation of RISK and PREMIUMS for ASSURANCE purposes.

Ad valorem tax. ⇔ TAX, AD VALOREM.

Adaptive expectations. The formulation of beliefs about the future value of variables based on their past value and direction of movement. If economic agents wanted to predict inflation next year, using adaptive expectations they would take last year's rate and adjust it. The adjustment would depend on how wrong they had been last year when predicting inflation this year – if they had underestimated inflation, they would upwardly revise their prediction for next year. Adaptive expectation will respectively always under- or overestimate a variable which is consistently rising or falling. (♣ EXPECTATIONS; RATIONAL EXPECTATIONS.)

ADB. AFRICAN DEVELOPMENT BANK; ASIAN DEVELOPMENT BANK.

Administered prices. Strictly, prices which are set by management decision rather than by negotiation between buyer and seller. True MARKET prices are to be found only in the STOCK EXCHANGE and other places where prices change constantly. Most retail and industrial prices are set by management, though they will be altered in response to competition. The term administered prices is often used to refer to price-fixing by a MONOPOLY firm, a CARTEL or a government body. Some economists have argued that inflexible administered prices have been an important contributory cause of INFLATION.

ADR. AMERICAN DEPOSITORY RECEIPT.

Advance corporation tax (ACT). ♣ CORPORATION TAX.

Advanced countries. States with the highest levels of NATIONAL INCOME per head, such as the member countries of the ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD). Unlike the DEVELOPING COUNTRIES they have become industrially advanced.

Advances. Loans (♣ BANK LOAN).

Adverse selection. The problem that, in certain markets, the inability of one trader to assess the quality of the other makes it likely that poor-quality traders will predominate. Noted by Akerlof in 1970, adverse selection is sometimes referred to as *the lemon problem*. A popular example of the phenomenon is in the second-hand-car market, where *sellers* know whether or not their car is a lemon (i.e. performs badly), but where *buyers* cannot make that judgement without running the car. Given that buyers can't tell the quality of any car, all cars of the same type will sell at the same price, regardless of whether they are lemons or not. The risk of purchasing a lemon will lower the price buyers are prepared to pay for a car, and because second-hand prices are low, people with non-lemon cars will be little inclined to put them on the market.

There are three ingredients in this problem. Firstly, a random variation in product quality in the market; secondly, ASYMMETRIC INFORMATION about product quality between traders in the market; and thirdly, a greater willingness for poor-quality traders to trade at low prices than

for high-quality ones to. (Lemon car owners will still put their cars on the market when the prices drop; other car owners will not.) There are many important markets where adverse selection is held to be significant – notably insurance and the market for credit. (⇔ MARKET FAILURE.)

Advertising. Paid announcements to persuade or inform members of the public. Outside the theoretical world of PERFECT COMPETITION, advertising of goods and services is necessary to ensure that potential buyers are informed and helps to make markets function efficiently. However, advertising can create or increase BARRIERS TO ENTRY into an industry and enhance PRODUCT DIFFERENTIATION and, it has been argued, promote CONCENTRATION. Proponents of heavy advertising expenditure argue that it provides a SIGNALLING mechanism whereby high-quality producers publicly demonstrate their commitment to their product, something they would do only if they genuinely believed that it had a long-term future; while others point out that consumers may have little choice in a concentrated industry but to bear the cost of unnecessary advertising which serves only to keep out new entrants. Although 'own brand' products in supermarkets (which are not advertised) have not replaced advertised brands, this could be explained by the power of advertisers to manipulate consumer psychology.

African Development Bank (ADB). A regional international bank (⇔ BANKING) established in 1964 for assisting in the economic growth of the independent African states. In 1972 an affiliated organization, the African Development Fund, was set up with a membership open, unlike that of the Bank, to non-African states. It is through this Fund that loans are made to African member states at low RATES OF INTEREST (⇔ SOFT LOAN). Affiliation to the Fund has enabled the Bank to broaden its sources of funds for investment. In 1982, the African members of the Bank agreed to open its membership to non-African states. In 1989, the Bank had fifty African member states and twenty-five other member states, and its loans were totalling about \$2.0 billion per year. (⇔ ASIAN DEVELOPMENT BANK; CARIBBEAN DEVELOPMENT BANK; COLOMBO PLAN; FOREIGN AID; INTER-AMERICAN DEVELOPMENT BANK.)

African Development Fund. ⇔ AFRICAN DEVELOPMENT BANK.

Aggregate concentration. ⇔ CONCENTRATION.

Aggregate demand. The sum of all DEMAND within an economy, making up NATIONAL INCOME and expenditure. The main categories are consumers' expenditure on goods and services, INVESTMENT in capital goods and stocks (⇔ INVENTORIES), EXPORTS of goods and services, less expenditure on IMPORTS of goods and services. Since KEYNES, it has been believed that the level of, and changes in, aggregate demand are important influences in the determination of economic output and

growth. More recently, however, attention has been paid to the factors affecting the supply of goods and services in the economy (◇ SUPPLY-SIDE ECONOMICS (◇ SOCIAL ACCOUNTING). (◇ IS-LM MODEL; NATIONAL INCOME.)

Aggregate supply. The total of all goods and services produced in an economy, less EXPORTS, plus IMPORTS. Prior to KEYNES, it was believed that NATIONAL INCOME was determined by aggregate supply. Keynes shifted the emphasis on to AGGREGATE DEMAND, with supply meeting whatever demand existed up to a point. More recently, supply factors have gained prominence as determinants of total output. (◇ SUPPLY-SIDE ECONOMICS.)

Aggregated rebate. ◇ DEFERRED REBATE.

Aggregation problem. ◇ CAMBRIDGE SCHOOL.

Aid. ◇ DEVELOPING COUNTRY; FOREIGN INVESTMENT; INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT; INTERNATIONAL MONETARY FUND; UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT.

Allais, Maurice (b. 1911). Educated at the École Polytechnique and the École Nationale Supérieure des Mines in Paris, in 1944 Maurice Allais became director of the Centre d'Analyse Économique at the École Nationale Supérieure, where he taught notable economists like Malinvaud and DEBREU. He became the first French citizen to win the NOBEL PRIZE in Economics in 1988. His main work is his book *À la recherche d'une discipline économique* (1943), a report on GENERAL EQUILIBRIUM and ECONOMIC EFFICIENCY without any assumption of CONVEXITY. His name is best known for the Allais paradox, an attempt to show the impact of psychological factors on consumer decision-making in conditions of RISK. The paradox is as follows: if you offer people either a certain £500 or a lottery ticket that gives them a 10 per cent chance of winning £2,500, an 89 per cent chance of winning £500 and a 1 per cent chance of winning nothing, they often take the certain £500. But, if you offer them a choice between two lottery tickets, one which gives them an 11 per cent chance of winning £500 and an 89 per cent chance of winning nothing, or another one which offers them a 10 per cent chance of winning £2,500 and a 90 per cent chance of winning nothing, they often take the second one. Interestingly, however, the effective choice being made is the same in both cases, and consistent consumers should pick either the first option both times or the second option both times.

Allais paradox. ◇ ALLAIS, M.

Allen, Sir Roy George Douglas (b. 1906). Educated at Sidney Sussex College, Cambridge, England. Sir R. G. D. Allen began lecturing at the London School of Economics in 1928. During the Second World

War he moved from the UK TREASURY to Washington as Director of Records and Statistics of the British Supply Council and of the combined Production and Resources Board. In 1944 he was appointed Professor of Statistics at London University, a position he held until 1973. His publications include *Mathematical Analysis for Economists* (1938), *Statistics for Economists* (1949), *Mathematical Economics* (1956) and *Macro-Economic Theory - A Mathematical Treatment* (1967). In 1934 he published an article in *Economica* with HICKS which demonstrated the use of the INDIFFERENCE CURVE based on ORDINAL UTILITY as an analytical tool in the theory of consumer behaviour. (♣ SLUTSKY, E.)

Allotment letter. A letter addressed to a subscriber to an issue of SHARES informing him of the number of shares that he has been allotted and - where payment was not made with the application - the amount due.

American Depository Receipt (ADR). A document issued by a US bank against SHARES deposited with it or a bank overseas. The ADR circulates as a bearer document, in effect giving title to the underlying shares.

American loan. ♠ WASHINGTON AGREEMENT.

American selling price. ♠ GENERAL AGREEMENT ON TARIFFS AND TRADE.

Amortization. Provision for the repayment of DEBT by means of accumulating a 'sinking fund' through regular payments which, with accumulated INTEREST, may be used to settle the debt in instalments over time, or in a lump sum. The term is also used as a synonym for DEPRECIATION.

Andean Pact. A CUSTOMS UNION established by the Cartagena Agreement in 1969 between Chile, Peru, Colombia, Bolivia and Ecuador. Venezuela joined the Pact in 1973, but Chile terminated her agreements in 1976. The aims of the group include the setting-up of a common external TARIFF, the freeing of trade between member countries and a policy of development and rationalization for specific industries on a regional basis. Tariffs on manufactured goods have been virtually eliminated between all member countries. (♣ CENTRAL AMERICAN COMMON MARKET; LATIN AMERICAN INTEGRATION ASSOCIATION.)

Annual allowances. ♠ CAPITAL ALLOWANCES.

Annual Percentage Rate (APR). A legally standardized form for presenting the RATE OF INTEREST and all the associated costs of a loan in the UK. The idea behind the APR, which was introduced under the CONSUMER CREDIT ACT, was to prevent lenders quoting low interest rates while in effect making the loan expensive by charging arrangement fees and demanding frequent payments. The APR is the COMPOUND INTEREST you would pay if all costs associated with the loan were collected as interest. It is calculated subject to a complex formula issued by the Office of Fair Trading (♠ FAIR TRADING ACT).

Annuity. 1. A constant annual payment. 2. A guaranteed series of payments in the future purchased immediately for a lump sum. Annuities are described as 'certain' where payment is specified for a fixed number of years. A 'life' annuity payment continues until the death of the person for whom it was purchased. Annuities may be 'immediate', where payment commences on purchase, or 'deferred', where payment starts at a future specified date. The British government sold annuities until 1962, but they are now available only from INSURANCE companies, whose pension schemes (◇ PENSION FUNDS) are often annuities purchased with accumulated contributions and INTEREST. The price of an annuity is based on the PRESENT VALUE of the stream of income payments it provides, and it varies with RATES OF INTEREST and, in the case of life annuities, the age and sex of the person who will draw the annuity.

Anti-trust (US). Legislation to control MONOPOLY and restrictive practices in favour of COMPETITION. It applies not only to amalgamations of firms (◇ TRUST) but also to single companies. The *Sherman Act* (1890) made monopoly or the restraint of trade illegal. The *Clayton Act* (1914) clarified earlier legislation and prohibited specific activities, notably PRICE DISCRIMINATION, EXCLUSIVE DEALING, and INTERLOCKING DIRECTORATES and shareholdings among competitors. The *Celler-Kefauver Act* (1950) amended the Clayton Act by prohibiting mergers which might lessen competition. The *Robinson-Patman Act* (1936) strengthened the provisions in the Clayton Act against price discrimination and made it illegal to sell goods to retailers or wholesalers at different prices unless justified by differences in the cost of supply. Anti-trust policy is overseen by the *Federal Trade Commission (FTC)*, a federal government agency created in 1914 which cooperates with, but is independent of, the Anti-Trust Division of the Department of Justice. US anti-trust law is intended to be non-discretionary, in contrast to the UK approach which is more pragmatic. (◇◇ COMPETITION POLICY; MONOPOLIES COMMISSION; RESTRICTIVE TRADE PRACTICES ACTS.)

APC. AVERAGE PROPENSITY TO CONSUME.

Appreciation. Increase in the value of an ASSET; the antonym of DEPRECIATION. Appreciation may occur through rising PRICES as a result of INFLATION, increased scarcity or increases in earning power. (◇◇ CURRENCY APPRECIATION.)

Appropriation account. A business account showing how net PROFIT is distributed between DIVIDENDS, reserves, PENSION FUNDS, etc.

Appropriation accounts. ◇ PUBLIC EXPENDITURE.

APR. ANNUAL PERCENTAGE RATE.

APS. AVERAGE PROPENSITY TO SAVE.

Arbitrage. The exploitation of differences between the prices of financial

ASSETS or CURRENCY or a COMMODITY within or between markets by buying where prices are low and selling where they are higher. If wheat is cheaper in Chicago than in London after allowing for transport and dealing costs, it will pay to buy in Chicago and sell in London. If interest rates are higher on a Deutschmark deposit in London than in Frankfurt, a higher return will be obtained by switching funds from one centre to the other. It will also pay to switch funds from a Deutschmark deposit in Frankfurt to a sterling deposit in London if the interest rate differential is greater than the cost of covering against the risk of a fall in the exchange rate of the pound against the Deutschmark (⇨ FORWARD EXCHANGE MARKET). Unlike SPECULATION, arbitrage does not normally involve significant risks, since the buying and selling operations are carried out more or less simultaneously and the profit made does not depend upon taking a view on future price changes. By eliminating price differentials, arbitrage contributes to the achievement of EQUILIBRIUM. PRICE DISCRIMINATION between markets is difficult or impossible where possibilities for arbitrage exist. (⇨ EFFICIENT MARKETS HYPOTHESIS.)

Arbitration. The process in which parties to a dispute allow a third party, who has no other direct involvement, to suggest or impose a solution. Each party will be more inclined to go to arbitration the better they think their chance is of winning, and the higher the cost of resolving the dispute by other means. The logic behind arbitration is that disputants find it easier to agree on a third party than they do to resolve their argument themselves. Arbitration can be binding, in which case each party agrees in advance that they will do whatever the arbiter decides, or non-binding, in which case the parties are free to reject the arbiter's advice. *Pendular arbitration* is that in which the arbiter can only accept the point of view of one side or the other, but is not allowed to advocate a compromise solution. The idea behind this is to encourage the disputants to make reasonable offers to each other before the arbiter makes a decision. (⇨ BARGAINING THEORY OF WAGES; GAME THEORY.)

Arithmetic progression. A sequence of numbers in which the differences between all adjacent numbers in the sequence are the same, e.g. 2, 4, 6, 8, 10 . . . (⇨ GEOMETRIC PROGRESSION.)

Arrow, Kenneth Joseph (b. 1921). After graduation at Columbia University and a period at the Cowles Commission, Professor Arrow went to Stanford University in 1949, where he became a professor in 1953. In 1968, he accepted a Chair at Harvard University, but returned to Stanford University in 1979. He was awarded the NOBEL PRIZE for Economics in 1972 (with HICKS). His publications include *Social Choice and Individual Values* (1951), *Existence of an Equilibrium for a Competitive Economy* (1954) with DEBREU, *Studies in Mathematical*