Modern Economic Analysis

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Preface

Keynes once defined economics as a 'technique of thinking'. If the authors of this book are not all Keynesians in any other sense, we would all like to think that we are heirs to Keynes in this respect. In our view economics must be a problem-orientated subject, or else it is nothing at all. The art of an economist is to analyse problems by the use of a toolkit of basically simple devices. The power of elementary economics is greatly underestimated by students of the subject, in part because their teachers lack the confidence to expound the full power of the subject. The authors of this book have had a wide and varied experience in government, ranging from 10 Downing Street to the DHSS via the Treasury and the Bank of England. Others have worked as consultants for the European Commission, for City firms and for a wide range of other public and private bodies. It may surprise our readers to learn that this has left us basically very optimistic about our subject.

Criticism of economists is very common. Two hundred years ago Charles James Fox said that economics 'was the most useless of all sciences'. Almost two hundred years later James Callaghan, one of his successors as Chancellor of the Exchequer, said that if you get five economists together you have six opinions. There are many other similar witticisms about the profession so it is perhaps important to point out how and why economists disagree. Normally disagreement arises from one of two closely related sources. Economists make different assumptions which are then fed into the same model and produce dramatically different results. The New Cambridge School, outlined in Appendix D to Chapter 2, is a very good example of what can be done with the elementary Keynesian national income model. The Keynesian–monetarist controversy is another example of how different assumptions fed into the same model can produce radically different policy conclusions. Like many disputes the monetarist–Keynesian one can also be thought of as purely a dispute about empirical magnitudes. Whichever assumptions, monetarist or Keynesian, are the more valid it would normally be agreed they are dependent upon observation and estimation of real world phenomena. Thus one may say that the monetarist viewpoint consists of a special assumption about the interest elasticity of the demand-for-money and the substitutability of money for real assets. Alternatively one may say that the monetarist position is dependent upon the empirical estimation of these magnitudes.

It is perhaps important to stress how crucial the four basic concepts of economics are. They are all concerned with the analysis of choice. Under various titles this has always been accepted as the underlying rationale of economics, sometimes loosely described as the allocation of scarce resources to unlimited wants, at other times precisely described as a study of constrained maximization. The four basic concepts are opportunity cost, efficiency, marginality, and time preference. Opportunity cost is normally dealt with in the first chapter of an economics textbook and thereafter forgotten. This is very unfortunate since the concept has enormous power in the analysis of real world economic problems. The whole of cost-benefit analysis is built upon this. For example, it probably sounds like an exercise from *1984* to say that policy-makers must value life. Yet modern society is based upon decisions that involve a choice between life on the one hand and material goods or time on the other. The decision to use motor cars as a means of transport is an obvious example of this. The motor car costs 12,000 lives per annum, yet there is no political lobby demanding that it should be banned. It is even regarded as politically impossible to control drunken driving adequately despite the fact that this probably costs 4,000 lives per annum. Whether the advantages of speed and convenience and the pleasures of drink are worth 12,000 and 4,000 lives respectively is a decision which can only be analysed in terms of opportunity cost. There are many examples where choices are between seemingly intangible and immeasurable things like time, life and so on, on the one hand, and material goods on the other. By seeking to make these implicit choices explicit and by making them subject to public scrutiny the economist hopes to render decision-making consistent. It is absurd, from one point of view, to refuse to spend £50,000 on saving a life in one context, for example by building a footbridge near a school, and to spend twenty times this in another context, for example to minimize rail casualties. This search for consistency need not imply any overall view as to the value of life, but merely a view that as many lives as possible should be saved for any given expenditure. The economist normally seeks an efficient outcome to any problem.

However the 'efficiency expert' is very unpopular. By using the word 'efficiency' the economist incurs a share of the insults thrown at this expert. In fact the concept of efficiency is used in a very special sense by economists. It has two basic meanings. The first is that it is impossible to get more output of one good from given inputs without sacrificing the output of some other good. In an economy there are an infinite range of goods or combinations of output which satisfy this condition. Nevertheless, there is an even larger number which do not; if one can literally have something for nothing it seems foolish to sacrifice this opportunity. This does not mean that all economists believe that people should work harder, because in this case inputs are changed. Furthermore, it does not mean that they prefer mass-produced beakers or deplore the production of real ale; hand-thrown pottery and real ale are different products from mass-produced ones so to sacrifice these involves sacrificing one good in favour of another. The concept of efficiency says nothing about these, however in many contexts it is a very powerful tool of analysis, as we hope to make clear in Chapters 9, 10, 11 and 12. The other basic meaning of efficiency is that one cannot maintain the present level of output with less input. Strictly, one cannot reduce the input of any one factor of production without increasing the inputs of another. This again may seem trivially obvious, yet it is a very powerful tool of analysis.

The concept of efficiency is often defined in terms of marginal conditions. The word marginal is at the heart of any economic analysis. It is surprising how often economists contribute to public decision-making merely because of their ingrained habit of thinking in terms of marginal rather than average. For example it is obviously true that if all expenditure by the water industry were stopped there would be grave consequences for health. In particular it is likely that there would be a large-scale cholera epidemic. On the other hand this does not mean that all the present expenditure on water can be justified in terms of health. In fact it is probably true that one could reduce this expenditure by 10% or 20% with no cost in terms of health. Certainly if a small fraction of the saving were devoted to expenditure on the National Health Service then the overall gain in terms of the health of the community would be very large. The origins of this example can perhaps be seen by glancing at Alan Williams' biography.

The fourth basic concept is time preference. In fact this is really simply a special case of opportunity cost. In a community which is growing richer the postponement of expenditure is normally highly desirable. This may again seem trivially obvious yet many decisions are made on a basis that contravenes this – many people are happy in their public capacity to spend unjustifiably large sums now to avoid the expenditure of smaller ones in the future.

These four concepts run throughout this book together with many other simple economic tools. For example the chapter on 'Money and Banking' emphasizes how the application of simple supply and demand analysis enables one to solve many of the apparent mysteries of the subject. In fact the book frequently restates familiar topics so as to bring out problems with which the experienced are unfamiliar or have only seen treated superficially elsewhere. The section 5.1 on the quantity theory of money is a good example of this. Thus, we believe that the book will be of value to nearly all students and practitioners of economics, almost irrespective of their present level and experience. The book originated in a series of one-week courses for teachers of economics organized at the University of York.

Contributors

David Gowland is a lecturer in Economics at the University of York and is also Director of In-Service Training. He worked in the Economic section of the Bank of England from 1971–73. He was founder co-author of the Rothschild Intercontinental Bank Monthly Review in 1974. Between 1975 and 1979 he worked as a consultant on domestic and international monetary and financial policy to the 10 Downing Street Policy Unit. He has written various articles on aspects of monetary economics and securities markets and is the author of a recent book *Monetary Policy and Credit Control: the UK Experience.*

Mark Austin is a lecturer in Economics at the University of York. He is currently engaged in research into the influence of company financial behaviour on investment.

Gavyn Davies was a policy adviser in the 10 Downing Street Policy Unit, 1974–79. He previously did research in labour economics at Oxford.

Alan Maynard is a senior lecturer in Economics at the University of York. He has worked for the EEC Commission, the Organisation for Economic Cooperation and Development (OECD), the Royal Commission on the Distribution of Income and Wealth, and the Royal Commission on the National Health Service. He is the author of numerous articles on economic aspects of social policy and of the book *Health Care in the European Community.*

Michael G. Webb is a senior research fellow at the Institute of Social and Economic Research at the University of York. He was previously a lecturer at Leicester University, and is also a lecturer on project appraisal with the U.N. Asian Development Institute. He is the author of numerous articles on various aspects of economics as well as several books including *Pricing Policies for Public Enterprises, The Economics of Nationalised Industries* and *The Economics of Energy*.

Alan Williams is a professor in the Department of Economics at the University of York. He is author of several books and numerous articles on public expenditure appraisal. His most recent book is *The Principles of Practical Cost-Benefit Analysis*. Between 1966 and 1968 he was seconded to HM Treasury as a consultant on programme budgeting and cost-benefit analysis, and also served on various working parties concerned with the application of these techniques in local government. He has been a member of the Yorkshire Water Authority and of the Royal Commission on the National Health Service and is currently directing further empirical research on the economics of health and welfare services.

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Money and Banking

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1.1 INTRODUCTION

This chapter is essentially a study of the conduct of monetary policy in the UK in recent years. The subject seems to fill most students with dread since it tends to be regarded as a rather esoteric and complex subject whereas it is in fact very simple[1]. It is worth considering why the subject causes such response and in doing so to stress some of the basic problems and concepts which underlie the misunderstanding and the understanding of the subject.

It is difficult to approach the subject since it is swathed in the mystique of generations of central bankers and is often presented by both academic and journalistic commentators in a cocoon of unnecessary jargon[2]. Thus even the proposition that demand curves slope downwards can sound like high mysticism[3]. More important, many people are bemused by the seeming *legerdemain* when millions of pounds are created out of thin air[4]. Provided the 'balance sheet identities' are satisfied then such transactions are possible, even if they sound like something out of 'Alice in Wonderland'. To develop this point, gross assets and liabilities can be magnified or contracted at will. The only constraint is that an equal quantity of assets and liabilities must be created. This leads to a crucial point in monetary analysis; when considering an asset one must always remember the liability which has been created.

Another fundamental problem in the analysis of a monetary system is that the government controls a very few simple instruments, e.g. MLR, open market operations, and seeks to influence various ultimate targets: the price level, output, unemployment, the balance of payments and so on. A long chain links instrument and target. Monetary economics tends to analyse the intermediate links in the chain. This causes much confusion since most of the problems in monetary economics are about the appropriate point at which to analyse the process. In particular, there is much argument about what is a target and what is an indicator. Virtually every economist would agree that most definitions of the money supply (and many other financial aggregates) are closely linked to national income; at least in the absence of attempts to use them for policy purposes. The dispute is about whether the connection reflects an indicator or a target. To use a metaphor, everyone would agree that a thermometer reading is related to the heat of a room. But plunging a thermometer in a bucket of ice will not influence the temperature of a room. However, while a thermometer is an indicator but not a target, a thermostat is quite a good proximate target; adjusting (i.e. controlling) it will be a reasonable method of controlling the temperature of a room (provided the central heating system, the structure of the economy, is unaltered). Monetary economics is often like a debate about which is a thermostat and which a thermometer, but which ignores both the actual heat of the room and the central-heating boiler. This leads to the definition of both monetary policy and monetary economics. Monetary policy is the appropriate use of official instruments in order to influence financial flows with the aim of ensuring an optimal constellation of output, employment, inflation, balance of payments, etc. Monetary economics is thus essentially the study of proximate targets and indicators in an attempt to measure the effect of official instruments and the decisions of financial intermediaries on the ultimate targets.

1.2 MONETARY POLICY : A CONCEPTUAL FRAMEWORK

Economics as a subject only makes sense within an appropriate conceptual framework. It was argued above that one of the common mistakes of monetary analysis is to concentrate excessively on institutional detail rather than on the underlying conceptual problem. Thus, this section considers one such framework which is both the simplest and the one used by the UK authorities. It is in fact impossible to understand what the authorities have done, or tried to do, or may do, without an understanding of how they have analysed the situations they have faced.

Initially this model assumes a closed economy. One starts by defining the money supply:

$$\begin{aligned}\text{Money} = {} & \text{bank deposits} \\ & + \text{non-bank private sector holdings of currency}\end{aligned} \qquad (1.1)$$

(This definition is basically the UK M_3). However, deposits are a bank's