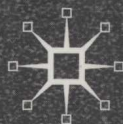


Edited by Axel Leijonhufvud

MONETARY THEORY
AS A BASIS FOR
MONETARY POLICY



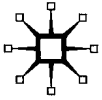
Monetary Theory as a Basis for Monetary Policy

Edited by

Axel Leijonhufvud
University of Trento

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The International Economic Association

A non-profit organization with purely scientific aims, the International Economic Association (IEA) was founded in 1950. It is a federation of some sixty national economic associations in all parts of the world. Its basic purpose is the development of economics as an intellectual discipline, recognizing a diversity of problems, systems and values in the world and taking note of methodological diversities.

The IEA has, since its creation, sought to fulfill that purpose by promoting mutual understanding among economists through the organization of scientific meetings and common research programmes, and by means of publications on problems of fundamental as well as current importance. Deriving from its long concern to assure professional contact between East and West, and North and South, the IEA pays special attention to issues of economies in systemic transition and in the course of development. During its nearly fifty years of existence, it has organized more than a hundred round-table conferences for specialists on topics ranging from fundamental theories to methods and tools of analysis and major problems of the present-day world. Participation in round tables is at the invitation of a specialist programme committee, but twelve triennial World Congresses have regularly attracted the participation of individual economists from all over the world.

The Association is governed by a Council, comprising representatives of all member associations, and by a fifteen-member Executive Committee which is elected by the Council. The Executive Committee (1995–98) at the time of the Trento Conference was:

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Sir Austin Robinson was an active Adviser on the publication of IEA Conference proceedings from 1954 until his final short illness in 1993.

The Association has also been fortunate in having secured many outstanding economists to serve as President:

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Acknowledgements

I thank the members of the Programme Committee, Daniel Heymann, Niels Thygesen, Thomas Sargent and Ignazio Visco, for their recommendations and advice. Regrettably, in the end, the two last mentioned were not able to attend. Discussions and correspondence with most of the participants, and with several people who would have liked to, but could not, attend also helped to shape the programme. Even if I have not listed them all, I have not forgotten their assistance.

Professor Michael Kaser, as General Editor of the International Economic Association, undertook the final editing of the manuscript – a hard job that I am infinitely grateful to have escaped.

The core funding for the conference was provided by the University of Trento, through the Department of Economics, and I am grateful to Rector Massimo Egidi, Chairman Geremia Gios and to my colleagues for their generosity in supporting the initiative. The foundation of the Cassa di Risparmio di Trento e Rovereto (CARITRO), through the mediation of its chairman, Professor Giovanni Pegoretti, and the European Financial Group, through its chairman, Dr Spiro Latsis, were major sponsors of the conference, as, thanks to Dr Ignazio Visco, was Banca d'Italia. Contributions were also received from Monte dei Paschi di Siena and Consiglio Nazionale delle Ricerche.

Finally, I come to a group of friends without whose ideas, initiatives and hard work, nothing would have worked as it should, and did! My colleagues Roberto Tamborini and especially Elisabetta de Antoni were of great help as members of the local organizing board. Although 'unlisted', Daniela Silvestri and Earlene Craver-Leijonhufvud also deserve credit as such. Morena Carli and Rosa Doneddu not only ran the secretariat with the faultless, cheerful efficiency that so many participants have remarked upon subsequently, but they also assisted for many months with the logistical planning, the correspondence and the accounting for the conference. I am deeply grateful to them all.

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List of Abbreviations and Acronyms

| | |
|----------|---|
| AEA | American Economic Association |
| AL | Alesina's central bank legal-independence index |
| CAPM | capital asset pricing model |
| CB | central bank |
| CBI | central bank independence |
| CD | certificate of deposit |
| CEPR | Centre for Economic Policy Research (London) |
| CIS | Commonwealth of Independent States |
| CORE | Center for Operations Research and Econometrics (Louvain-la-Neuve) |
| CNRS | Centre National de la Recherche Scientifique (France) |
| CREST | Centre de Recherche en Economie et Statistique (France) |
| CPI | consumer price index |
| DC | developed country |
| DM | Deutsche Mark |
| d.o.n.i. | degree of nominal indeterminacy |
| DP | Drèze-Polemarchakis |
| E15 | European Union (15 member states) |
| ECB | European Central Bank |
| ECU | European Currency Unit |
| EEC | European Economic Community |
| EMI | European Monetary Institute |
| EMS | European Monetary System |
| EMU | Economic and Monetary Union |
| ERM | Exchange Rate Mechanism |
| ES | Eiffinger and Schaling (central bank legal-independence index) |
| ESCB | European System of Central Bankers |
| EU | European Union |
| FMP | Federal Reserve–MIT–University of Pennsylvania econometric model |
| FOI | financial opposition to inflation |
| FOMC | Federal Open Market Committee |
| G-7(10) | Group of Seven (Ten) |
| GCB | group central bank |
| GDP | gross domestic product |

| | |
|----------|---|
| GMT | Grilli, Masciandaro and Tabellini (political and economic independence index) |
| GNP | gross national product |
| HKS | Heymann–Kaufman–Sanguinetti |
| i.i.d. | independently identically distributed |
| IGE | intertemporal general equilibrium |
| IMF | International Monetary Fund |
| IT | inflation targeting |
| LDC | less developed country |
| LVAU | unweighted legal-independence index |
| LVAW | weighted legal-independence index |
| MCI | monetary conditions indicator |
| Mercosur | Southern Cone Common Market |
| NAFTA | North American Free Trade Agreement |
| NAIRU | non-accelerating inflation rate of unemployment |
| NBER | National Bureau of Economic Research (Cambridge, Mass.) |
| OECD | Organisation for Economic Co-operation and Development |
| OLS | ordinary least squares |
| OPEC | Organization of Petroleum Exporting Countries |
| POI | public opposition to inflation |
| PPP | purchasing power parity |
| PSI | political system index |
| RPI | relative price inversion |
| REIT | real estate investment trust |
| SDR | Special Drawing Right |
| SUMLV | sum of legal-independence variables |
| TOR | turnover rate of central bank governors |
| TSLS | two-stage least squared regression |
| VAR | vector autoregression |
| VAT | value-added tax |

Introduction

Axel Leijonhufvud
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The present volume is one of two resulting from the conference on 'Monetary Theory as a Basis for Monetary Policy' held in Trento in September 1997. The second, entitled *Monetary Theory and Policy Experience*, is being published separately in the International Economic Association–Palgrave series.

The planning for the conference began in the summer of 1996, well before the Asian plunges into depression. But even if the theme did not adumbrate such dramatic developments or their further ramifications in Russia and elsewhere, it concerned related issues.

The conference was intended to start a debate over the relationship between current economic theory and central bank practice. Monetary neutrality has gained a stronger hold over theory since the inflationary 1970s, starting with the monetarist doctrines that the Philips curve is vertical and that inflation expectations explain nominal interest rates, later becoming embedded in more fully articulated models of intertemporal general equilibrium. The theory resulting from this development leaves central banks with nothing useful to do except to stabilize the price level. It is not an altogether unwelcome doctrine among central bankers, as it would make their lives easier: in giving them only a single goal variable, it frees them from responsibility for difficult trade-offs and, in addition, it has become the basis of the recent fashion for giving central banks independence from political authority.

All this takes for granted, however, that central banks can control only nominal magnitudes and have no useful powers to affect real variables such as output, growth and employment. Earlier theories of monetary policy, on the other hand, were based on the belief that they were able to affect the real interest rate and to regulate the real volume of credit. They also presumed a need on occasion for policy to dampen the credit cycle or, that having failed, to step in as a lender of last resort. Implicitly at least, both central banks and financial markets still pay some heed to these earlier theories, as the use of Bank Rate is back in fashion and the markets react to its use in the belief that real growth, and not only inflation, is at

stake. And, obviously, recent events have driven home the lesson that it is not altogether safe to relinquish all responsibility for the credit cycle.

These issues are spelt out at greater length in my introductory essay in Chapter 1, which also argues that, in the context of monetary regimes that give the authorities some leverage over real interest rates, the vertical Phillips curve is an oversimplified hypothesis that needs to be reassessed.

The three chapters in Part I are all written from a general equilibrium perspective. Jacques Drèze and Heracles Polemarchakis investigate the scope for monetary policy in a complete markets Arrow–Debreu model with inside money which is demanded for its convenience in making payments. The monetary authorities control the nominal interest rates that constitute the opportunity cost of holding this money. A state-contingent policy rule for setting these rates will not suffice to control the variability of inflation. The authors go on, therefore, to explore ‘empirically relevant departures from neutrality’ that would give more leverage for policy.

Ramon Marimon takes the ‘fiscal theory of money’ as his point of departure. In this theory, which is associated above all with the names Sims and Woodford, the price level will stay constant as long as the government obeys its intertemporal budget constraint in the sense that the present value of expenditures is covered by the present value of taxes. If expenditures were to exceed taxes, the price level must move so as to bring in an equivalent inflation tax. Marimon applies the same reasoning to the theory of the firm and shows that, in a model which allows for the possibility that the firm will not honour its intertemporal budget constraint, the Modigliani–Miller theorem will not hold.

Robert Lucas revives Milton Friedman’s optimum quantity of money idea and explores the possible welfare gains from deflating at a rate sufficient to push nominal interest rates to a level near zero.¹ The welfare gains are found to vary considerably, depending on how the necessary extrapolation of empirical demand curves into the near zero interest rate range is carried out.

Financial instability commands the attention of the first two chapters of Part II. Both have one thing in common: namely, that they see the dangers of financial instability as stemming from economic reforms, changes in regulations or rapid financial development which create an environment with which market participants and policymakers have not had sufficient experience. Albert Wojnilower reviews financial developments in the USA over the past twenty years. Although generalized credit crunches have been avoided during this period, he finds that the structural changes that have taken place in American financial markets

give little assurance that they will not recur in the future. Indeed, he concludes that, when they do, central banks may find them more difficult to deal with than in the past.

The chapter by Daniel Heymann, Martin Kaufman and Pablo Sanguinetti is motivated by a number of Latin-American boom-and-bust episodes that have followed a roughly similar pattern. The booms were initiated by comprehensive economic reforms, including inflation stabilization. For a period, increases in both investment and consumption could be sustained by trade deficits financed by capital inflows, but eventually a slowdown in growth would induce a cessation or reversal of capital flows and trigger sharp recessions. The authors focus on the difficulties of forming correct expectations of investment returns and wealth following an abrupt structural break such as that represented by the reforms. They go on to demonstrate how even fairly sophisticated expectations-formation schemes may easily produce the kind of overshooting and subsequent sharp setbacks that are the stylized facts of these historical episodes.

Jean-Paul Fitoussi reviews European macroeconomic developments and the policies of the E15 since the beginning of the 1980s, but focusing particularly on unemployment problems and the disappointingly 'soft' growth in the 1990s. The evidence, he finds, points to high real interest rates (and a negatively-sloped real term structure) as the proximate cause, and too restrictive monetary policies as the ultimate culprit. Alternative explanations are carefully considered but rejected. Fitoussi's conclusion: 'the battle against inflation must be terminated, because the phenomenon has disappeared'. Subsequent to the conference, of course, France and the other member countries of the European Monetary Union have come to enjoy the monetary conditions that Fitoussi pleaded for, and their growth rates have picked up, so far without inflation.

One of the aims of the conference was to restart a debate on the role of credit in monetary theory and on the role of central banks in the regulation of the (real) price and volume of credit. In this ambition, the conference did not quite succeed. But it did bring together a number of outstanding monetary economists from around the world, and the reader will find much stimulus from their contributions.

Note

- 1 This chapter is based on Lucas's Presidential Lecture to the Econometrics Society and is reprinted here with the permission of the editor of *Econometrica*.

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1

Monetary Theory and Central Banking

Axel Leijonhufvud

University of Trento, Italy

1 Policy doctrines: changing context, changing content

In the 1970s, in the waning days of the so-called Keynesian consensus, macropolicy was still stabilization policy. It was believed that the private sector was unstable, but that the discretionary policies of a benevolent, competent and consistent government could maintain high employment and reasonable price stability.

This pessimism about the private sector and optimism about government of that earlier time has turned into optimism about the market and pessimism about democratic government. This great, underlying shift in beliefs and attitudes has changed the context in which monetary policy is being debated – and therefore, also the content of the debate.

At the time of writing, policy theory has become the art of constraining governments, of fashioning institutions to prevent politicians from violating intertemporal budget constraints, and more generally from engaging in short-sighted, time-inconsistent policies that in the end produce only inflation. The current vogue for independent central banks pursuing low inflation targets is largely motivated by this view that governments must be restrained forcefully from mismanaging public finances. The arguments for independence meet with little dissent from within the central banks.

At the same time, in modern theory, the stability of the private sector is supposed to take care of itself. Stabilization policy, in the old sense, is regarded as a misguided ambition. This doctrine would relieve the monetary authorities of any responsibility for unemployment and the cycle. Yet, it is not one they would be wise to embrace.

This great change in the prevailing political economy did not occur without reason. It is in large part a response to the great worsening of the