

MACROECONOMICS

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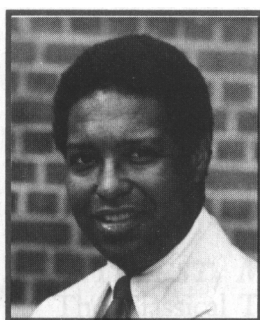
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Jamie Galbraith and William (Sandy) Darity met as Marshall Scholars in England in the fall of 1974, and have been fast friends ever since.

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PREFACE

In the late 1990s, the United States achieved an economist's dream. Unemployment was below four percent of the labor force for three years in a row. Jobs were plentiful, and job markets were tight. Growth was strong, the stock market was extremely high. And yet there was no increase in the rate of inflation. Moreover the federal budget went into surplus, with tax revenues exceeding public expenditure for the first time in thirty years.

Since that happy moment, dark times have come again, with a recession in 2001, accompanied by lost jobs and rising unemployment and punctuated – though not caused – by terrorist attacks on New York and Washington on September 11, 2001. There followed two years of near-stagnation, with recovery resuming only in mid-2003. But now, as we write in the fall of 2005, the U.S. economy is again growing, and the unemployment rate is stable near five percent. Still the economy has problems that worry many. Budget deficits have returned. Trade deficits are exceptionally high. Interest rates are rising. The dollar has been sliding against the new mega-currency across the Atlantic, the euro.

Meanwhile in Europe, a debate rages over the future of the great project of European Union. Europe is racked by high rates of joblessness, especially among the young. Many European leaders – fortified by the advice of many economists – are determined to make their labor markets more “flexible,” to better follow what they believe to be the “American model.” In most cases, this means adjusting wages so that workers with low skills receive less pay and enjoy fewer social protections.

In this way, Europe's leaders claim to hope to make such workers more attractive to hire, and so reduce unemployment. But European electorates are unhappy and distrustful. The French and the Dutch have even voted to reject the European Constitution, largely from fear that the new Europe would weaken the role of national governments in the social sphere. Globalization, privatization, deregulation and competition are turbulent and troublesome forces, and it is perhaps not surprising that many would prefer to keep them

at bay. But beyond this, it appears that many ordinary Europeans simply do not believe that the solution to unemployment lies in cutting wages.

None of this is new. Ever since the 1930s, the question of whether and how the government should take an active role to fight unemployment, to promote economic expansion, and to protect the living standards of working people has been hotly debated. The lines of argument are broadly the same now, though with variations and innovations, as they were then. The divisions and disagreements are broadly the same.. It is mainly the circumstances, the facts, and the personalities that have changed.

Employment, growth, inflation, interest rates, deficits, exchange rates and globalization are the substance of modern macroeconomics. You have no doubt encountered all of these words before. But what do they mean? How do they interact? What are the chains of cause and effect between policy instruments, like the interest rate, and policy outcomes, such as unemployment? If you are new to this subject, very likely you have no clear idea. That is about to change. We believe – anyway we hope – that you won't regret it.

THE AIM OF THIS BOOK

This book aims to provide a broad exposure to issues in macroeconomic theory and in the conduct of monetary and fiscal policies. Our emphasis is, above all, on thinking clearly, and in presenting macroeconomics as it is, rather than as we, or anyone else, might like it to be.

For this reason, we do not plan to present a single body of doctrine (or “mainstream model”). In our view macroeconomics contains no such single coherent doctrine. Indeed, we believe that the attempt to patch together such a single view, so characteristic of the “textbook approach,” leads to more confusion than it resolves.

We hope instead to teach students that the many current controversies in macroeconomics, including some of the most important policy issues of our time, are deeply rooted in disputes over points of theory. These disputes are between schools of economics that are opposed in very important and basic ways; they are longstanding. Macroeconomics originated in an intellectual revolution that was never definitively settled; and like the history of France for a century after 1789, the history of macroeconomics has been a history of conflict between revolutionary and counter-revolutionary traditions. It is not the case that macroeconomists agree on all of the major issues of theory and disagree only on secondary questions, such as of fact and of measurement. Instead, we believe, the disagreements extend through every root and branch of the theory and its practice, which is to say that disagreements over theory have profound consequences for the policy decisions that economists and those in authority must make in the real world.

THEORY AND POLICY

Many students seem to believe that there exists a kind of intellectual wall that separates questions of theory from decisions of policy. The theorists sit in their ivory towers, or so it seems, spinning abstract tales, while policymakers toil with the facts and figures, guided by the “common sense” of “practical men.”

John Maynard Keynes, the man at the origin of our subject, provided the most famous refutation of this view:

... the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back ... soon or late, it is ideas, not vested interests, which are dangerous for good or evil.¹

We, the authors, have experience both with the development of economic theory and with its application to policy questions. On this point, we believe that almost all economists (there are exceptions, even to this!) would agree with Keynes. It is not true, as some suppose, that policy issues are decided by an engineering process, in which economists sharing a common perspective argue only about the interpretation of new information. Quite to the contrary: the most critical policy choices depend on the theoretical perspective one takes as a point of departure. The critical policy changes occur, as with the arrival of the Reagan Administration in 1981, when the controlling theoretical perspective changes.

So how does theory get translated to policy? We believe that the design of good policy in this complex and difficult field is a craft. It is a skilled craft, one that requires the blunt and rigorous evaluation of evidence within a coherent framework of theory. There are rules, and it is important to know and to use them. The macroeconomic artisan is ever alert to assure consistency between assumptions and results, and always looking at the facts, to seek out the guidance they offer and the problems they pose.

Many who participate in policymaking, or attempt to, do not possess these skills, or perhaps have motives or special interests that would in any event preclude their use. The policy arena is crowded with aspirants to power and influence, from politicians to journalists to business and union leaders, who lack training in economic theory and have a tin ear for relevance in their use of economic fact. We expect students will learn from this book how to

¹ John Maynard Keynes, *The General Theory of Employment Interest and Money*, London: MacMillan, 1983, p. 384-5.

distinguish the amateurish, the imprecise, and the dogmatic, from those who have mastered the craft and who abide by its rules.

The devilish thing is that mastering the craft is not the same thing as arriving at a single “right” answer. For within the basic framework of scientific macroeconomics, competing theoretical traditions flourish, and these interpret the same facts through opposing theoretical lenses, to arrive at opposing policy conclusions. To take the most fundamental point of difference, which we have already mentioned, some economists believe that the role of government in ending recessions and stabilizing growth is necessarily large; others believe that it must be ideally small. And this disagreement, unlike the views that we spoke of in the previous paragraph, does not stem from logical error nor from blatant disregard of the facts on either side.

Disagreements between well-trained and careful economists flow from the co-existence of competing theoretical traditions. Each of these competing traditions is honestly arrived at and carefully developed. Each has fervent partisans. Neither accounts for all the facts, but each has adherents who believe that the broad mass of facts fits better under their theory than under any other. We stress again, these are honest disagreements. And the job of this textbook is to provide a road map to the sources of the argument, so that students can decide for themselves.

Our approach to the “roadmap problem” is to present models in roughly chronological order and include some of the historical context in which they actually appeared. This too is a departure from much standard practice and from the many textbooks that emphasize the integration of strictly modern facts with modern theory. Our own primary interest is not, in fact, historical. But our teaching experience convinces us that presenting the context and development of theory helps students to grasp, order, and retain a complex presentation. On the other hand, we have built some flexibility into this text. Those instructors who do not share our view of the framesetting importance of the Great Depression and its dispute between Keynes and Classical economics are welcome to plunge in at Chapter 4, which is where the modern models make their appearance.

The roadmap is necessarily complex. For while the broad theoretical division in macroeconomics is between conservatives and liberals, classicals and Keynesians, each tradition has its own subdivisions. Each has a program of research and interpretation of the facts, which has over the years forced it to evolve and change as changing evidence and new situations present new puzzles for theory. And this has led to a diversity of schools and sub-schools, so that among “conservative” economists we have Classicals, Monetarists and New Classicals (not to mention Austrians and some other groups), while among the liberals we have Keynesians, New Keynesians and Post Keynesians (as well as institutionalists, new institutionalists and some self-described “eclectics”).

We hope that this course will help students, to learn how to understand the basis for opposing points of view that exist between economists in the real world. It should also help them to recognize and expose inconsistent arguments that draw (often unwittingly) on opposing analytical frameworks. It cannot teach students how to make choices of their own between theories that are in conflict, but it can help them to recognize what the precise choices are. This process may not lead to simple and clear-cut solutions to the policy questions of the day. But it will, we hope, help them to understand the complex and fascinating world of macroeconomic policy debate. For there is nothing so alive, so vibrant, and so important, as a subject whose biggest questions remain unsettled.

HOW TO USE THIS BOOK

The most important thing about any book is readability. We have tried to make this an interesting book to read. To do that, we have tried very hard to tell a story about macroeconomics, to convey some of the history and context, at the same time that we teach the basic and the advanced concepts.

You will find the main elements of the story in the body of the text itself, along with all the essentials of the theory. At the beginning of each chapter, a box entitled Looking Forward gives a brief outline of where we are going, and structured learning objectives for this chapter. As you go along, boxes entitled Taking a Closer Look explore particular extensions of the theory, or provide a window onto illustrative data, including macroeconomic data from Europe and Japan as well as the United States. At the end of every chapter, an extended Special Section provides an opportunity to read about additional theoretical, historical or policy matters related to the main body of the chapter. Each chapter closes with a few essentials: a *Summary*, *Review Questions* to think about and discuss, and *Problems* to work on.

ACKNOWLEDGMENTS

This book first appeared in 1994. The idea of preparing a new version has been pressed on us over the years by readers of that book as it became increasingly hard to find, and was eventually taken up by José Enrique Garcilazo, then a Ph.D. student at the University of Texas at Austin, who reassembled the text from our electronic files. For the present reprint, we acknowledge gratefully the initiative and highly efficient labors of Jacques Schievink of VSSD. As ever, we thank Kirsten Mullen and Ying Tang, with love.

J. K. G.

W. D., Jr.

TO THE STUDENT

A NOTE ON NOTATION

In this text we have tried to develop a consistent and logical way of identifying our economic variables, so that you, the student, can tell at a glance what type of variable each symbol refers to.

The simplest kind of economic variable is the plain dollars-and-cents expression, which may be a wage rate, the price of a good or service, or the dollar value of all goods and services sold in the economy (gross national product and its components: consumption, investment, government spending, exports and imports). We call these nominal variables and use capital letters – W (wages), Y (national product or income), C (consumption), I (investment), G (government spending), X (exports), M (imports) – to express them in symbolic notation. We also use the block capital P to indicate the aggregate price level – an index number that tells you how much inflation there has been between any one time period and any other. And we use capital letters for the volume of employment (N) and the rate of unemployment (U), which are not dollars-and-cents expressions to begin with.

Often in macroeconomics our interest lies not so much in dollars-and-cents expressions, but in the underlying physical quantities, such as the volume of goods and services produced, or the amount of physical machinery purchased (investment). The measurement of these variables starts out in dollars-and-cents terms, but then an adjustment is applied to remove the effect of changing prices and so arrive at a measure of the underlying quantities. We call these derived expressions real variables, and say that they have been “deflated,” which means that the effect of price inflation has been taken out. In this text, we will denote deflated variables with small letters. Thus, if

nominal national income is “ Y ”, real notation income is “ y ”.

We calculate real national income by dividing the nominal value for a given year by the index value of the price level ($P/100$)¹ in that year.

The price index is measured from an arbitrarily chosen base, a year whose value in that index is set to 100. (For most of the deflated series in this book, the index base year will be 1982, or 1987.) This gives us the value of real national income in terms of what the dollar was worth in the base year.

$$y_t = \frac{Y_t}{P_t / 100}$$

Thus, if we are using a price index that uses 1982 for the base year, and the current value is 160, this would indicate $160/100 = 1.6$ or 60% inflation since 1982, which tells us that we must “deflate” nominal or “current” dollar national income by 1.6 in order to find real national income as expressed in “constant” 1982 dollars.

We use a dot on top to indicate the *rate of change* of economic variables, and we sometimes use a subscript to indicate the year in which a variable holds a certain value. Thus, if Y_t is nominal national income in year t , then

$$\dot{Y}_t = \left(\frac{Y_t - Y_{t-1}}{Y_{t-1}} \times 100\% \right)$$

is the percentage change of Y since the last period, and y_t indicates the corresponding percentage change of real national income.

Next, we frequently will make reference to the *equilibrium* values of a variable, usually in the “Walrasian” sense of the values at which markets clear (quantities supplied equals quantities demanded), sometimes in the “Marshallian” sense of a stable value that does not normally change. We will use asterisks to denote equilibrium values in either sense. Thus N^* denotes the equilibrium value of employment. When we need to denote different values of a variable that are not necessarily equilibrium values, for example in a figure, we will use a prime mark (N' , not to be confused with the functional notation such as $N'(w)$, described below). If we need more than one such value, we will use numbered subscripts: y_1, y_2 and so on.

Finally, from time to time we need to express variables as *functions* of other variables – meaning simply that one variable depends on another. For

¹ By convention, we divide the index number by 100. Thus, if 1982 is the base year, so that the price level in 1982 equals 100, the real or deflated value of any economic variable in that year is equal to the nominal value.

example, we may wish to say that labor supply (N^s) is a function of the real wage (w), so that when real wages go up, more people seek employment. We do this with parentheses, as follows:

$$N^s = N^s(w)$$

When we wish to show how a function changes with respect to one of its variables (a variable in a function is known as an argument of that function), we will use a prime (') to indicate the direction of change. Thus

$$N^{s'}(w) > 0 \text{ is the same as} \\ d[N^s(w)]/dw > 0$$

in the routine notation of derivatives, meaning (in this case) that labor supply rises when the real wage rises.²

By arranging our notation in this way we hope to help clear the often critical distinction between nominal and real values, and to help keep them clear as you work your way through theoretical models that sometimes use one, sometimes the other. We also hope to provide a ready key that will help you distinguish equilibrium from dis-equilibrium values and rates of change from level measures. Finally, we hope that this system can clearly indicate the functional dependence of one variable on another.³

² If we need to show a second derivative (rate of change of the rate of change), we will use a double prime ("). Thus: $y'(N) > 0$ and $y''(N) < 0$

would indicate that real production increases with employment but at a diminishing rate.

³ In particular, we try to show functions without resort either to formal calculus notation or to restricting ourselves to linear equations. Linear equations are simpler, but they would not be consistent with the curves with which we frequently illustrate such relations.