

MACROECONOMICS

UNDERSTANDING THE WEALTH OF NATIONS



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of Nations

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Why study macroeconomics? Economics is a fascinating and useful subject, dealing with issues that affect the welfare of every one of us. Why is the standard of living higher in some countries than in others? Why does unemployment sometimes rise sharply, and what can governments do about it? Why do stock market prices sometimes increase by 50% in a year, and then crash in the space of a week? Does it matter if governments run large fiscal deficits? Are countries better off fixing their foreign exchange rates, or should they let market forces determine their value? Understanding the answers to these questions is not only intellectually rewarding, but it also helps us make better commercial and financial decisions and participate more fully in democratic life.

WHY ANOTHER MACROECONOMICS TEXTBOOK?

One measure of the importance of macroeconomics is the large number of textbooks available. Writing another textbook requires some justification. Like most other texts, ours tries to help students think about economic issues like economists. *However, we differ in that we do not see this text as one stepping stone towards training the reader to be a professional economist. Instead, our aim is to deal with important issues using sophisticated economic theory, but in a manner that is accessible to someone who wishes to do only one course in macroeconomics.* We believe the best way to do this is to take real world economic issues and first describe why they matter. As a result, one of the distinguishing features of this text is an exhaustive focus on the data and the detail of the world economy—we use these facts as our entry point into the world of theory.

We want people to have a good understanding of the global economy and the way economists think about it. This text will enable the reader to think more clearly about the economy and be better able to spot the difference between good and bad arguments.¹

Our target audience is the student who is enrolled in a self-contained one-semester course in macroeconomics and who wants to understand economic issues and debates. We assume no advanced level of maths or statistics, just a reasonable level of intelligence and an ability to follow the logic of arguments. Our teaching experience is mainly with MBA students, making the text particularly suited for such students. However, it is also suitable for undergraduates not majoring in economics but taking only a few courses in it. Our orientation recognizes how economic decisions impact the world of business.

¹P.J. O'Rourke is probably not often quoted in textbooks, but we want to avoid the situation he notes in his book about economics, *Eat The Rich*, in which he says, "they [business majors] took econ and forgot everything in the textbook so they could get a job from somebody else who took econ and forgot everything in the textbook."

FEATURES OF THIS BOOK

To help reach our goals, we have planned and incorporated several features that distinguish our book from others.

LINKS THE ECONOMY TO FINANCIAL MARKETS From our teaching experience we have found that students have a varied range of interests and are dissatisfied if they feel they do not understand the “big picture”; they want to see how different parts of the economy fit together. Therefore we deliberately tried to make this a comprehensive book about the world economy. We see it as particularly important to emphasize the links between financial markets and the rest of the economy. Understanding the links between fluctuations in bond, equity, and property markets and the wider economy is important and interesting. Often such links are neglected altogether. Macroeconomics courses sometimes avoid analyzing financial markets because students, particularly MBAs, also do another course called “Finance.” But understanding the links between the wider economy and financial market is hugely important and something that too often gets lost down the cracks between courses.

HISTORICAL DATA This text is a self-contained attempt to make students aware of how economists think, how the global economy operates, and which sets out to teach students the main results of established and recent economic theory. We do not want to train students to become professional economists, but instead enable them to understand and talk intelligently with one. To achieve this we examine lots of data and the experience of many different countries and many different time periods and utilize a variety of intellectual arguments—from formal logic to parables—which provide the intuition behind important results.

Understanding how the economy operates requires not only theory, but also knowledge about facts and data. Economic theories are not created in a vacuum but develop in response to events. As noted above, we examine data and the experience of many different countries and time periods. In fact, our textbook is packed with massive amounts of economic data covering a huge historical period (back to a million years B.C.!) and a huge range of countries (from the United States to Sierra Leone). This focus on international data from different eras is a unique feature of this text and one that reviewers have responded to very positively.

INTERNATIONAL PERSPECTIVE As the world becomes more integrated, “globalization” is a fact of business. In macroeconomics this process is so advanced that a modern text must focus on a wide range of international experience and analyze how different countries interact within this system. More than any other textbook this one is truly about the international economy. Obviously what happens in the United States, Japan, and Europe is very important for the global economy, and we emphasize these countries. But the global economy is more than just these large economic nations, so we also focus much more widely. To give just a few examples from many, we consider poor growth in Africa, currency crises in Asia, and hyperinflation in Latin America and Eastern Europe.

CUTTING EDGE RESEARCH Providing a good theoretical framework to help students understand the economic forces at work in the world is immensely valuable. Economists agree about many aspects of this framework. But this theoretical framework is evolving. And our understanding of the many complex issues that macroeconomists wrestle with is improving continuously as the result of active research. Conveying the results of this sophisticated, state of the art research is just as important as providing the basic building blocks that most textbooks focus on.

LEARNING TOOLS Our carefully planned pedagogical structure is simple and effective. We have incorporated the following learning tools:

- Extensive use of real world data helps to motivate the use of theory, and to help understand the related models. It is crucial to know what real economies look like.
- The development of the theory is made interesting by inextricably linking the interesting examples and the models used to understand economics within the narrative (not in boxed-off applications).
- *Conceptual Questions* at the end of each chapter enable students to extend their understanding of the key concepts by trying to apply them to the real world.
- *Analytical Questions* at the end of each chapter test understanding of theories and models by posing numerical problems for students to solve and give additional scenarios to explore with the models provided.
- Web site support. The macroeconomic environment is a fast-moving one. Through our associated Web site (<http://www.wiley.com/college/miles>) we offer continual updates of all the charts in this textbook as well as additional material on new events that crop up between this and future editions. This makes both the textbook and students' understanding of the world economy a truly dynamic experience. The Web site also contains many links to useful macroeconomic and finance sites for students to explore.

OUR APPROACH TO TEACHING ECONOMICS

Students come to economics with high expectations. Appreciating the subject as relevant, they hope they will find answers to important questions. But wanting answers can stand in the way of understanding. The most useful thing that any economics course can do is to help students work out *how to analyze* an issue rather than just give the answer to any one particular question.

LOGICAL FRAMEWORK Economists are good at thinking logically and consistently about real-world issues because they follow good rules. By adopting these rules of thinking we are more likely to understand the forces at work in the economy—and less likely to believe erroneous commonplaces that are often quoted in political or business discussions. It is worth investing in learning these rules.

But here we run into a problem between the expectations of students, particularly those who are not economics majors, and the goals of faculty. For very good reasons instructors often want to teach students the tools of the trade. This can mean setting up formal (often mathematical) models as the first and most natural way of analyzing any

economic issue. Formal models are very useful because they encourage the good rules of thinking that economists value—rules like “be consistent” and “make explicit the assumptions that underpin an argument.” But students—particularly MBA students—can be put off by what they see as abstract, mathematical reasoning that seems to take them away from the important issues rather than help them understand the world in which they live.

Our aim in this book is to teach the logical framework of macroeconomics—the rules of the game or the tools of the trade—but in a way that is accessible to a large number of students who want to understand the important, real-world forces that drew them to the subject.

Unfortunately, the teaching of these rules often becomes the foremost part of many textbooks and the important real-world questions get pushed to the background. A lot of time is spent developing models, and then a lot of time is spent doing exercises with models. This approach has two problems—first, it delays students grappling with real issues since they need to master the models first; second, sophisticated issues require complex and subtle models. The first set of models students are taught are not rich enough to deal with these complex issues. The second set of models, for example, those introduced in an intermediate text, can deal with these topics but only at the cost of rather incredible assumptions. It is often only at the graduate or doctoral level that the modeling framework students are given is rich enough to deal with demanding economic topics. But many students—and *most* MBA students—will do just one course in economics. They do not want to be fully trained as an economist before they can analyze intelligently economic issues.

THEORY MATTERS Our strategy in this book is to use whatever tools of reasoning best help understand an economic issue. Sometimes the best tool is a graph; sometimes it is an analogy; sometimes it is a few simple equations. Often a good strategy is the *reductio ad absurdum*: we take what sounds like a perfectly sensible explanation of some phenomenon and show that if it were valid its consistent application in similar circumstances would generate outcomes that are obviously absurd.

In explaining why certain economic events occurred in the past, or in analyzing contemporary economic issues, we utilize logical economic thinking and modeling. Using this approach helps teach the reader how economists develop and test an idea. By taking real-world factual examples we also offer a detailed analysis of how actual economies operate. In other words, we use data and facts to provide the flesh and blood of our textbook but the skeleton of the book is constructed around economic theories. The real-world examples we focus on are chosen to illustrate an important idea—such as the diminishing marginal product of capital or the possibility of self-fulfilling banking panics.

Models are often introduced at first implicitly and only after the real-world problem of interest has been discussed. A combination of verbal, graphical and sometimes algebraic development of the model is then used to make sense of the issue and the data.

As an example, consider a very powerful idea in economics: the fallacy of composition. This is the idea that what is true at the individual level is no longer valid once everyone else’s response is taken account of. The idea is easy to get across—standing on one’s seat at the football game gets you a better view so long as no-one else does.

But once everyone is standing on his or her seat the outcome is much worse. No one sees any better and everyone is uncomfortable. But such a situation might persist because once everyone is standing up no one has an incentive to sit down. Through simple examples like this we can introduce the notion of an equilibrium and also show that we can have equilibria where everyone loses out; standing up can be a bad equilibrium. (Some people will recognize that standing up at the football game is a Nash equilibrium.)

THE ROLE OF MODELS While modeling is not at the forefront of our approach, we do not avoid formal modeling. In fact we introduce more models—and more modeling concepts and tools—than is usual in a book suitable for MBA students. What we frequently do is to introduce some subtle concepts that have been developed by economists over the past few decades and which we believe are essential to a real understanding of macroeconomic and financial issues. So in this book we will often use the concept of rational expectations; we will illustrate important ideas in dynamic programming; we explain and illustrate the law of iterated expectations; we explore notions of time consistency and of incentive compatibility; we show how multiple equilibria can arise in many markets; we analyze unstable equilibria and show how small initial shocks can sometimes generate huge long-run effects.

Often the key ideas can be explained with relatively simple examples. “Backward induction applied to solving dynamic programs” could be a chapter heading from a graduate textbook on mathematical techniques of optimization. For us it a useful idea in working out how stock markets might work or in explaining the level of saving or consumption or in working out the impact of a government borrowing money to finance a tax cut. And it is an idea that can be explained in an intuitive way.

Consider the paradox of the surprise test . . .

The Surprise Test . . .

In the first lecture of “Macroeconomics and Finance,” a course that lasts 13 weeks, the professor announces that he will spring a surprise test in one of the remaining 12 lectures before the end of the semester. The students look suitably depressed until one announces that no such test is possible. The lecturer is annoyed by such arrogance and asks the student to justify her assertion. Here is what she said:

Suppose you had not sprung the test by the end of the penultimate lecture (in week 12); then the test would have to come in week 13. But the test would then not be a surprise when it was announced at the start of the last lecture. So if it is to be a surprise the test has to come before the end of the penultimate lecture. But if the test has to come before the end of lecture 12, then in order for it be a surprise it cannot be left until lecture 12. If it were, then by the end of lecture 11 it would be no surprise when the test was coming. So now the test has to be before the end of lecture 11. But then the same argument applies again and the test has to come before the end of lecture 10. But then. . . . So you see that it is already too late to have a surprise test.

The professor immediately wrote a reference to his ex-colleague who had defected from the academic world to an investment bank some years earlier and the smart

student was offered a job at an illustrious Wall Street firm. The student went on to become chief executive and lived in unimaginable splendor, thus illustrating the advantages of solving dynamic programming problems from the end backwards using inductive arguments.

STRUCTURE OF THE BOOK

We think the text is comprehensive and organized in a way that makes it flexible for a range of different courses.

INTRODUCTION (CHAPTERS 1–3) This introductory part describes what macroeconomics is about and why students should study it. It introduces key concepts—equilibrium, aggregate output, total demand, national income identities, and the production function—and explains why they are important and how they are measured in the real world. The final chapter of this section provides a condensed theoretical overview of the entire book.

ECONOMIC GROWTH AND THE SUPPLY SIDE (CHAPTERS 4–9) In this part of the book we focus on the long-run forces that shape the evolution of economies over decades. We seek to understand why most countries have become wealthier over time and also why some countries are richer than others. Here we focus on the ability of society to produce output—the *supply* side of the economy. As well as considering long-run growth, we also consider what type of output a society produces through examining international trade.

MONEY AND TAXES (CHAPTERS 10–12) This part considers the long-run framework through which governments affect the economy. We consider the reasons for government involvement in the economy and examine how governments work in practice. We examine the long-run relationships that determine the evolution of public finances and examine how taxes and expenditure should be set. We also consider the nominal side of the economy—the part of the economy that determines the level of prices—and how this is influenced by government policy.

BUSINESS CYCLES AND ECONOMIC POLICY (CHAPTERS 13–17) Having examined the long-run determinants of economic behavior we change our focus in this part by analyzing medium-term business cycle fluctuations. We document the nature of these fluctuations, what causes them, and whether they are costly for society. We examine how business cycles are influenced by fluctuations in consumption and investment and consider in detail what drives these important variables. Finally, we consider in detail whether the government can help stabilize business cycles and review current practice in fiscal and monetary policy.

EXCHANGE RATES AND GLOBAL CAPITAL MARKETS (CHAPTERS 18–20) The increasingly integrated nature of the world economy makes exchange rates crucial. Changes in exchange rates can severely affect the profitability of firms and can completely derail government policy. We provide in extensive detail a comprehensive analysis of what

determines exchange rates and how exchange rates affect the economy. This analysis also involves examining how global capital markets work and whether the vast flows of finance from one country to another are a good or a bad thing.

ASSET MARKETS AND THE FINANCIAL SECTOR (CHAPTERS 21–24) One of the main media interests in macroeconomics is in understanding why financial markets show such pronounced fluctuations and why in turn these shifts cause business cycle fluctuations. In the final part of the book we consider the operation of real estate, equities, bonds, and banking markets and their importance in influencing macroeconomic behavior.

TEACHING FROM THIS BOOK

Different schools tend to teach rather different types of macroeconomics course. We think this is a flexible and comprehensive book and that it can be used to teach a range of different courses. Instructors can choose whatever sequence of topics they prefer, but below we outline 3 different 10-topic courses that could be taught.

MACROECONOMICS—UNDERSTANDING THE GLOBAL ECONOMY A comprehensive course covering growth, business cycles, exchange rates, stabilization policy, and trade.

- Lecture 1—Data and Definitions, Chapters 1–3
- Lecture 2—Capital Accumulation and Endogenous Growth, Chapters 4, 5, and 7
- Lecture 3—Technological Progress, Chapter 6
- Lecture 4—Labor Markets, Chapter 8
- Lecture 5—Trade, Chapter 9
- Lecture 6—Fiscal Policy, Chapter 11
- Lecture 7—Money and Inflation, Chapter 12
- Lecture 8—Exchange Rates, Chapters 18–20
- Lecture 9—Business Cycles, Chapter 15
- Lecture 10—Stabilization Policy, Chapters 16–17

MACROECONOMICS: BUSINESS CYCLES AND INTERNATIONAL MACROECONOMICS A course focusing on business cycles and the international economy but excluding the supply side issues of growth, labor markets, and trade

- Lecture 1—Data and Definitions, Chapters 1–3
- Lecture 2—Fiscal Policy, Chapter 11
- Lecture 3—Money and Inflation, Chapter 12
- Lecture 4—Consumption and Investment, Chapters 13 and 14
- Lecture 5—Business Cycles, Chapter 15
- Lecture 6—Stabilization Policy, Chapter 16
- Lecture 7—Monetary Policy, Chapter 17
- Lecture 8—Exchange Rates: Prices and Real Exchange Rates, Chapter 18
- Lecture 9—Exchange Rates: Asset Markets, Chapter 19
- Lecture 10—Global Capital Markets, Chapter 20

MACROECONOMICS AND FINANCE A course designed to help students understand relationships between financial markets and the wider economy.

- Lecture 1—Data and Definitions, Chapters 1–3
- Lecture 2—Fiscal Policy and Debt, Chapter 11
- Lecture 3—Money and Inflation, Chapter 12
- Lecture 4—Business Cycles and Stabilization Policy, Chapters 16–17
- Lecture 5—Exchange Rates, Chapters 18–19
- Lecture 6—Equity Markets, Chapter 21
- Lecture 7—Bond Markets, Chapter 22
- Lecture 8—Real Estate, Chapter 23
- Lecture 9—Banking Sector, Chapter 24
- Lecture 10—Global Capital Markets, Chapter 20

(A 12-lecture course could be taught by adding Economic Growth and teaching Chapters 4–7.)

SUPPLEMENTARY MATERIALS

- **STUDY GUIDE** Includes some modeling questions based around the models developed in each chapter. But unlike the Study Guides for other texts, this one includes more about manipulating existing data and it discusses real-world issues as they apply to the content of the text. The modeling questions are supplemented with various data (and Web links), and students are asked to calculate or analyze various things that relate to the text using this data.

- **INSTRUCTORS MANUAL** Provides guidance to instructors on how best to use the textbook, through its chapter summaries, learning objectives, teaching suggestions, additional examples, answers to end-of-chapter exercises, and additional problems and solutions.

- **TESTBANK** An extensive set of multiple choice questions relating to the practice topics and concepts within the text.

- **ELECTRONIC POWERPOINT SLIDES** A set of over a 1,000 PowerPoint slides is available for use by instructors, containing all charts, figures, and tables in this textbook as well as some additional material, such as key topics and concepts for each chapter. These slides are updated frequently so that the instructor and student always have access to the most recent data.

- **WEB SITE** (<http://www.wiley.com/college/miles>) A robust Web site provides support for students and instructors. Students are able to take practice tests on-line and assess their understanding of core concepts within the text. Articles with discussion questions are also available from several of the most widely read financial news sources. And all of the instructor's teaching aids are provided by chapter electronically within a password-protected environment.

ACKNOWLEDGMENTS

When we embarked on writing this textbook we envisaged a lonely task with many hours spent in front of a computer screen. We were wrong on both counts—we didn't spend many hours but many, many, many hours writing the book and we were not lonely but had the input and wisdom of a huge range of talented individuals who offered much support, advice, and encouragement. A very large number of people at John Wiley deserve our thanks. We are much indebted to Steve Hardman, who originated discussions with us about producing the book and who stood by and helped us through a very long development process. Leslie Kraham and Cindy Rhoads politely reminded us of the importance of deadlines and provided us with an insight into the U.S. market and coordinated a large and demanding manuscript. Gerald Lombardi edited the text, patiently amended our Queen's English, and improved beyond measure the flow of the text. Johnna Barto was a source of advice and wisdom on many development matters. Susan Elbe and Joe Heider combined great enthusiasm for the project with their great experience of making books that work.

We owe a particular debt to our colleagues at Imperial College and the London Business School who have helped us develop our ideas of how to teach macroeconomics and finance to non-economists. We thank in particular Jean Imbs, Morten Ravn and Oren Sussman who instigated some of the themes and figures that appear in this text. We have also been fortunate to benefit within our institutions from first-rate administrative support—to Bernadette Courtney and Roma van Dam, we offer heartfelt thanks.

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