



P R E F A C E

This book follows a modern approach to macroeconomics by building macroeconomic models from microeconomic principles. As such, it is consistent with the way that macroeconomic research is conducted today.

This approach has three advantages. First, it allows deeper insights into economic growth processes and business cycles, the key topics in macroeconomics. Second, an emphasis on microeconomic foundations better integrates the study of macroeconomics with approaches that students learn in courses in microeconomics and in field courses in economics. Learning in macroeconomics and microeconomics thus becomes mutually reinforcing, and students learn more. Third, in following an approach to macroeconomics that is consistent with current macroeconomic research, students will be better prepared for advanced study in economics.

Structure

The text begins in Part I with an introduction and study of measurement issues. Chapter 1 describes the approach taken in the book and the key ideas that students should take away. It previews the important issues that will be addressed throughout the book, along with some recent issues in macroeconomics, and the highlights of how these will be studied. Measurement is discussed in Chapters 2 and 3, first with regard to gross domestic product, prices, savings, and wealth, and then with regard to business cycles. In Chapter 3, we develop a set of key business cycle facts that will be used throughout the book, particularly in Chapters 11 and 12 where we investigate how alternative business cycle theories fit the facts.

Our study of macroeconomic theory begins in Part II. In Chapter 4, we study the behavior of consumers and firms in detail. In the one-period model developed in Chapter 5, we use the approach of capturing the behavior of all consumers and all firms in the economy with a single representative consumer and a single representative firm. The one-period model is used to show how changes in government spending and total factor productivity affect aggregate output, employment, consumption, and the real wage.

With a basic knowledge of static macroeconomic theory from Part II, we proceed in Part III to the study of economic growth. In Chapter 6 we discuss a set of economic growth facts which are then used to organize our thinking in the context of models of economic growth. The first growth model we examine is a Malthusian growth model, consistent with the late-18th century ideas of Thomas Malthus. The Malthusian model predicts well the features of economic growth in the world before the Industrial

Revolution, but it does not predict the sustained growth in per capita incomes that occurred in advanced countries after 1800. The Solow growth model, which we examine next, does a good job of explaining some important observations concerning modern economic growth. Finally, Chapter 6 explains growth accounting, which is an approach to disentangling the sources of growth. In Chapter 7 we discuss income disparities across countries in light of the predictions of the Solow model, and introduce a model of endogenous growth.

In Part IV, we first use the theory of consumer and firm behavior developed in Part II to construct (in Chapter 8) a two-period model that can be used to study consumption–savings decisions and the effects of government deficits on the economy. The two-period model is then extended to include investment behavior in the real intertemporal model of Chapter 9. This model will then serve as the basis for much of what is done in the remainder of the book.

In Part V, we include monetary phenomena in the real intertemporal model of Chapter 9, so as to construct a monetary intertemporal model. This model is used in Chapter 10 to examine the effects of changes in the money supply on the economy. Then, in Chapters 11 and 12, we study equilibrium theories of the business cycles as well as traditional Keynesian business cycle theory. These theories are compared and contrasted, and we examine how alternative business cycle theories fit the data and how they help us to understand recent business cycle behavior in the United States.

Part VI is devoted to international macroeconomics. In Chapter 13, the models of Chapters 5 and 9 are used to show what benefits accrue from international trade, how changes in the relative prices of imports and exports affect the economy, and what determines the current account surplus. Then, in Chapter 14, we show how exchange rates are determined, and we investigate the roles of fiscal and monetary policy in an open economy that trades goods and assets with the rest of the world.

Finally, Part VII examines some important topics in macroeconomics. In Chapter 15, we study in more depth the role of money in the economy, the effects of money growth on inflation and aggregate economic activity, banking, and deposit insurance. Then, in Chapter 16, we study the determinants of unemployment and two models of unemployment: the search model and the efficiency wage model. In Chapter 17, we see how central banks can cause inflation, either because they do not correctly understand the relationship between real macroeconomic activity and inflation, or because they cannot commit themselves to a low-inflation policy. We also demonstrate in this chapter how inflation has been reduced over the last twenty years in the United States, New Zealand, and Hong Kong.

Features

Several key features enhance the learning process and illuminate critical ideas for the student. The intent is to make macroeconomic theory transparent, accessible, and relevant.

Real-World Applications. Applications to current and historical problems are emphasized throughout in two running features. The first is a set of “Theory Confronts the Data” sections, which show how macroeconomic theory comes to life in matching

xx Preface

(or sometimes falling short of matching) the characteristics of real-world economic data. A sampling of some of these sections includes the effects of the increase in government spending during World War II, the impact of the tax-withholding reductions implemented by President Bush in 1992, the macroeconomic impact of increases in energy prices, and the macroeconomic effects of the events of September 11, 2001. The second running feature is a series of “Macroeconomics in Action” boxes. These real-world applications relating directly to the theory encapsulate ideas from front-line research in macroeconomics and the history of economic thought, and they aid students in understanding the core material. For example, some of the subjects examined in these boxes are the pitfalls of macroeconomic forecasting, Henry Ford and technological change, East Asian growth miracles, and the financing of social security.

Art Program. Graphs and charts are plentiful in this book, as visual representations of macroeconomic models that can be manipulated to derive important results, and for showing the key features of important macro data in applications. To aid the student, graphs and charts use a consistent two-color system that encodes the meaning of particular elements in graphs and of shifts in curves.

End-of-Chapter Summary and List of Key Terms. Each chapter wraps up with a bullet-point summary of the key ideas contained in the chapter, followed by a glossary of the chapter’s key terms. The key terms are listed in the order in which they appear in the chapter, and they are highlighted in bold typeface where they first appear.

Questions for Review. These questions are intended as self-tests for students after they have finished reading the chapter material. The questions relate directly to ideas and facts covered in the chapter, and answering them will be straightforward if the student has read and comprehended the chapter material.

Problems. The end-of-chapter problems will help the student in learning the material and applying the macroeconomic models developed in the chapter. These problems are intended to be challenging and thought-provoking.

“Working with the Data” Problems. These problems guide the student in making use of the database that can be accessed on-line from the web site accompanying this text at www.aw-bc.com/williamson. The database is a comprehensive set of macroeconomic data, which can be used to understand the chapter material and to gain a deeper knowledge of macroeconomic data and phenomena.

Notation. For easy reference, definitions of all variables used in the text are contained on the end papers.

Mathematics and Mathematical Appendix. In the body of the text, the analysis is mainly graphical, with some knowledge of basic algebra required; calculus is not used. However, for students and instructors who desire a more rigorous treatment of the material in the text, a mathematical appendix develops the key models and results more formally, assuming a basic knowledge of calculus and the fundamentals of

mathematical economics. The Mathematical Appendix also contains problems on this more advanced material.

Flexibility

This book was written to be user-friendly for instructors with different preferences and with different time allocations. The core material that is recommended for all instructors is the following:

- Chapter 1.** Introduction
- Chapter 2.** Measurement
- Chapter 3.** Business Cycle Measurement
- Chapter 4.** Consumer and Firm Behavior: The Work–Leisure Decision and Profit Maximization
- Chapter 5.** A Closed-Economy One-Period Macroeconomic Model
- Chapter 8.** A Two-Period Model: The Consumption–Savings Decision and Ricardian Equivalence
- Chapter 9.** A Real Intertemporal Model with Investment

Some instructors find measurement issues uninteresting, and may choose to omit parts of Chapter 2, though at the minimum instructors should cover the key national income accounting identities. Parts of Chapter 3 can be omitted if the instructor chooses not to emphasize business cycles, but there are some important concepts introduced here that are generally useful in later chapters, such as the meaning of correlation and how to read scatter plots and time series plots.

Chapters 6 and 7 introduce economic growth at an early stage, in line with a modern emphasis in macroeconomics on growth over business cycles. However, Chapters 6 and 7 are essentially self-contained, and nothing is lost from leaving growth until later in the sequence—for example, after the business cycle material in Chapters 11 and 12. Though the text has an emphasis on microfoundations, Keynesian analysis receives a balanced treatment. For example, we study a Keynesian sticky wage business cycle model in Chapter 10, and also examine a Keynesian coordination failure model in Chapter 11. Chapter 15 also looks at the efficiency wage model. Those instructors who choose to ignore Keynesian analysis can do so without any difficulty. Instructors can choose to emphasize economic growth or business cycle analysis, or they can give their course an international focus. As well, it is possible to deemphasize monetary factors. As a guide, the text can be adapted as follows:

Focus on Equilibrium Models. Omit Chapter 12 (Keynesian Business Cycle Theory: The Sticky Wage Model).

Focus on Economic Growth. Include Chapters 6 and 7, and consider dropping Chapters 11 and 12, depending on time available.

Focus on Business Cycles. Drop Chapter 6 and 7, and include Chapters 10, 11, and 12.

xxii Preface

International Focus. Chapters 13 and 14 can be moved up in the sequence. Chapter 13 can follow Chapter 9, and Chapter 14 can follow Chapter 10.

Advanced Mathematical Treatment. Add material as desired from the Mathematical Appendix.

What's New in the Second Edition

The first edition of *Macroeconomics* had an excellent reception in the market. In the second edition, I build on the strengths of the first while modifying the sequencing of chapters, streamlining some topics, and adding material, in line with the interests of students and instructors. As well, applications have been added to help students understand macroeconomic events that have occurred since the first edition was written, and the end-of-chapter problems have been expanded. In more detail, here are the highlights of the revision.

- There are now two chapters on economic growth—Chapters 6 and 7. Growth is now treated earlier in the sequence than is the case in most intermediate macroeconomics texts. Our sequencing conforms to the modern emphasis in macroeconomics on growth relative to business cycles, and allows the instructor to engage the students early in topics that they will find exciting. Chapter 6 opens with a discussion of the important facts concerning economic growth, which are used to frame the study of economic growth models and their predictions. Chapter 6 then moves on to a treatment of a Malthusian growth model, which to my knowledge is unique in the intermediate macro textbook market. The Malthusian model is an important step in the history of economic thought, and it fits well with world growth experience before the Industrial Revolution. Further, it provides a good warmup in dynamic macroeconomics before students see the more complicated Solow model, the primary workhorse of modern macroeconomic growth theory. Chapter 7 is devoted to the study of income disparity among countries and modern endogenous growth theory.
- The discussion of the Ricardian equivalence theorem in Chapter 8 has been streamlined, and a broader discussion of fiscal policy issues has been added. In particular, the financing of social security is studied in detail.
- The treatment of monetary issues has been streamlined and improved. Chapter 10 contains a more straightforward exposition of the monetary intertemporal model, with more advanced material on the role of money, money growth, banking, banking panics, and deposit insurance in Chapter 15.
- New features help the student understand how to apply macroeconomics to events that have occurred since the first edition was published. New “Theory Confronts the Data” features include “The New Economy Becomes Old Again,” and “9/11 As a Sectoral Shock,” and new “Macroeconomics in Action” boxes include “The Transition from Pay-As-You-Go to Fully-Funded Social Security” and “Bank Failures and Banking Panics in the United States and Canada.”

- New end-of-chapter problems have been added, and there are now problems in the Mathematical Appendix.
- “Working with the Data” sections at the end of each chapter allow students to work with our comprehensive online database. By working through these problems, students will learn more about economic data and how to use them, and will deepen their knowledge of macroeconomic theory and issues.

Supplements

The following materials that accompany the main text will enrich the intermediate macroeconomics course for instructors and students alike.

Instructor’s Manual/Test Bank. Written by Stephen McCafferty of Ohio State University, the Instructor’s Manual/Test Bank provides strong instructor support. The Instructor’s Manual portion contains sections on Teaching Goals, which give an aerial view of the chapters; classroom discussion topics, which explore lecture-launching ideas and questions; chapter outlines; and solutions to all Questions for Review and Problems found in the text. The Test Bank portion contains multiple-choice questions and answers. The Test Bank is also available in Test Generator Software (TestGen-EQ with QuizMaster-EQ). Fully networkable, this software is available for Windows and Macintosh. Test-Gen-EQ’s friendly graphical interface enables instructors to easily view, edit, and add questions; export questions to create tests; and print tests in a variety of fonts and forms. Search and sort features let the instructor quickly locate questions and arrange them in a preferred order. QuizMaster-EQ automatically grades the exams, stores results on a disk, and allows the instructor to view or print a variety of reports. The Instructor’s Manual and Test Bank can be found on the instructor’s portion of the Web site accompanying this book at www.aw-be.com/williamson.

Study Guide. Prepared by John Stinespring of Colorado College and Paul Zak of Claremont Graduate University, the Study Guide contains true/false questions, short-answer questions, and multiple-choice questions, with complete answers—many presented as worked solutions. The Study Guide can be found on the Web site accompanying this text at www.aw-be.com/williamson.

Instructor’s Resource Disk. The Instructor’s Resource Disk includes Microsoft PowerPoint files of key figures from the text, the Computerized Test Bank files, the Instructor’s Manual, and the Test Bank Microsoft Word files.

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xxiv Preface

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