



Macro economics

Charles I. Jones

Charles I. Jones (Ph.D. MIT, 1993) is a Professor of Economics at the University of California, Berkeley, and a Research Associate of the National Bureau of Economic Research. Professor Jones's main research contributions are to the study of long-run economic growth. In particular, he has examined theoretically and empirically the fundamental sources of growth in per capita income over time and the reasons underlying the enormous differences in standards of living across countries. In recent years, he has used his expertise in macroeconomic methods to study the economic causes behind the rise in health spending and longevity. He is the author of *Introduction to Economic Growth*, Second Edition, also published by W. W. Norton & Company.

An accessible—and modern— treatment of macroeconomics.

“The best treatment of long-run economic growth that I’ve seen of any intermediate-level text out there.”

—WILLIAM HAUK, University of South Carolina

“My overall impression of the Jones manuscript is that it makes for very easy reading, and that the mix of theory with empirical support is handled in a thoroughly reader-friendly fashion.”

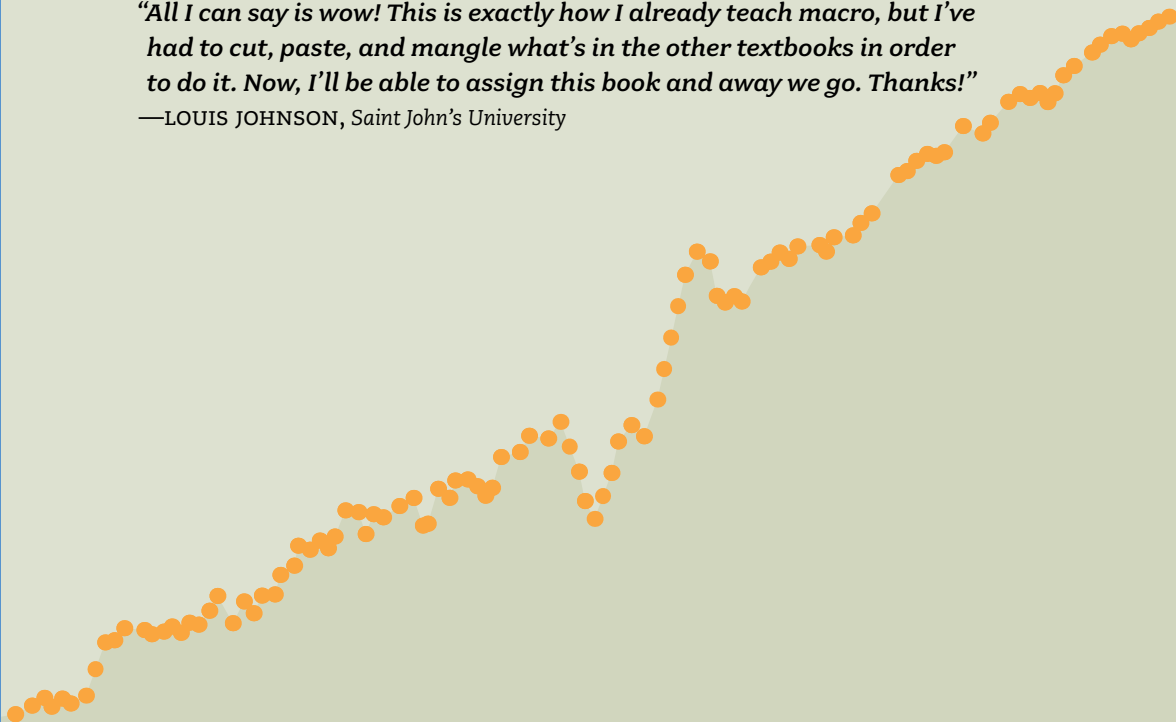
—RON BRITTO, State University of New York, Binghamton

“Among the undergraduate macro books, these are the best chapters written on growth and development.”

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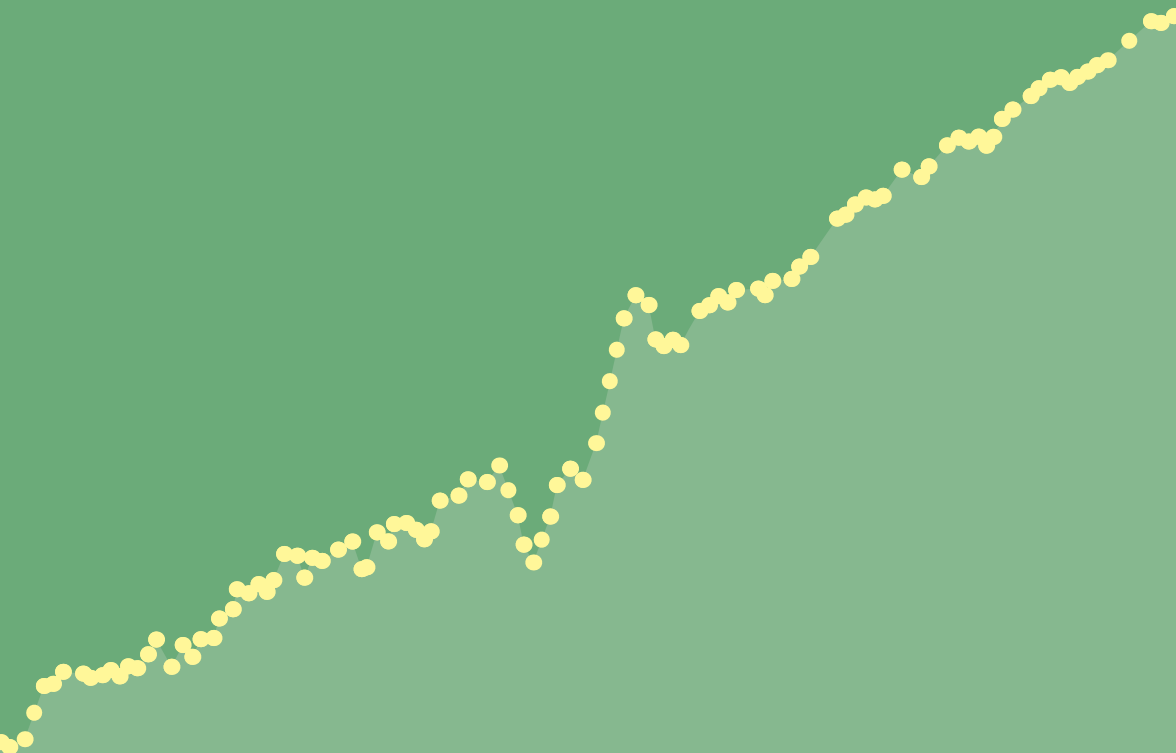
“All I can say is wow! This is exactly how I already teach macro, but I’ve had to cut, paste, and mangle what’s in the other textbooks in order to do it. Now, I’ll be able to assign this book and away we go. Thanks!”

—LOUIS JOHNSON, Saint John’s University



“Jones speaks to economists who feel frustrated that our textbooks can’t help us convey to our undergraduates how the study of economics really works.”

—DENISE HAZLETT, *Whitman College*



Highlights

Accessible and student friendly. Jones writes clearly and simply, with an engaging conversational style that puts students at ease. When introducing math, he presents it in a careful, patient manner.

Modern treatment of growth theory. *Macroeconomics* is the only undergraduate textbook to present substantial coverage of the Romer model. Jones draws on his experience as a teacher and textbook author to convey modern growth theory in a way that is accessible to undergraduates.

Unique worked exercises reflect a focus on problem-solving. Each chapter of *Macroeconomics* includes two complete worked exercises that walk students step-by-step through the process. These worked exercises prepare students for the extensive end-of-chapter problems.

SmartWork online homework extends the problem-solving approach. Easy-to-use and customizable, SmartWork combines a robust homework-management system with extensive answer feedback that coaches students through solving problems.

Modern treatment of economic fluctuations and applications. Short-run chapters emphasize central banks that set interest rates in forming monetary policy. A simple open economy model is considered from the start, and globalization (international trade and international finance) is a key theme of the applications chapters.

SAMPLE WORKED EXERCISES

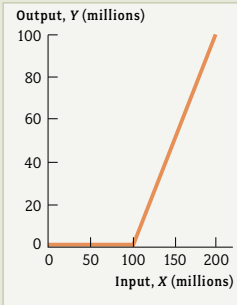
5. Increasing returns and imperfect competition:

(a) The production function for the word processor is

$$Y = X - 100 \text{ million}$$

if X is larger than 100 million, and zero otherwise. By spending \$100 million, you create the first copy, and then \$1 must be spent distributing it (say for the DVD it comes on). For each dollar spent over this amount, you can create another copy of the software.

Figure 6.5



(b) The production function is plotted in Figure 6.5. Output is zero whenever X is less than 100 million. Does this production function exhibit increasing returns? Yes. We spend \$100 million (plus \$1) to get the first copy, but doubling our spending will lead to 100 million copies (plus 2). So there is a huge degree of increasing returns here. Graphically, this can be seen by noting that the production function “curves up” starting from an input of zero, a common characteristic of production functions exhibiting increasing returns. (Constant returns would be a straight line starting from zero; decreasing returns would curve down more sharply than a straight line.)

(c) If the firm charges a price equal to marginal cost (i.e., equal to \$1) and sells a million copies, then revenues are \$1 million, while costs are \$101 million. Profits are therefore negative \$100 million. That is, if the firm charges marginal cost, it loses an amount equal to the fixed cost of developing the software.

(d) Selling at price p , revenue is pX , and cost is 100 million + X . To break even so that revenue is equal to cost, the firm must sell X copies, where

$$pX = 100 \text{ million} + X.$$

Solving this equation yields

$$X = \frac{100 \text{ million}}{p - 1}.$$

At $p = 20$, this gives $X = 5.26$ million copies. At $p = 100$, this gives $X = 1.01$ million copies. Notice that the answer is approximately 100 million divided by the price, since the marginal cost is small.

(e) The fact that this production function exhibits increasing returns to scale is a key hint that “scale matters.” Increasing returns to scale means that larger firms are more productive. In this case, everything is about covering the fixed cost of creating the software. If the software can be sold all over the world, it will be much easier to cover the large fixed cost than if the software can only be sold to a few people. If the firm could sell 100 million copies of the software at \$2 each, it would break even. If it could sell 200 million copies at that price, it would make lots of money.

6. Numbers in the Romer model (I):

(a) The growth rate of output per person in the Romer economy is equal to the growth rate of ideas, given by the formula in equation (6.7):

$$\frac{\Delta A_t}{A_t} = \bar{z}L_{at} = \bar{z}\bar{\ell}\bar{N}.$$

With the given parameter values, this growth rate is $.10 \times 1/500 \times 100 = .02$, so the economy grows at 2% per year.

(b) The level of output per person is given by equation (6.9):

$$y_t = \bar{A}_0(1 - \bar{\ell})(1 + \bar{g})^t,$$

where $\bar{g} \equiv \bar{z}\bar{\ell}\bar{N} = .02$. Substituting in the relevant parameter values, we find that

$$y_0 = 100 \times (1 - .10) = 90,$$

and

$$y_{100} = 100 \times (1 - .10) \times (1.02)^{100} = 652.$$

(c) If the research share doubles to 20%, the economy behaves as follows. The growth rate doubles to 4% per year, and the income levels are given by

$$y_0 = 100 \times (1 - .20) = 80,$$

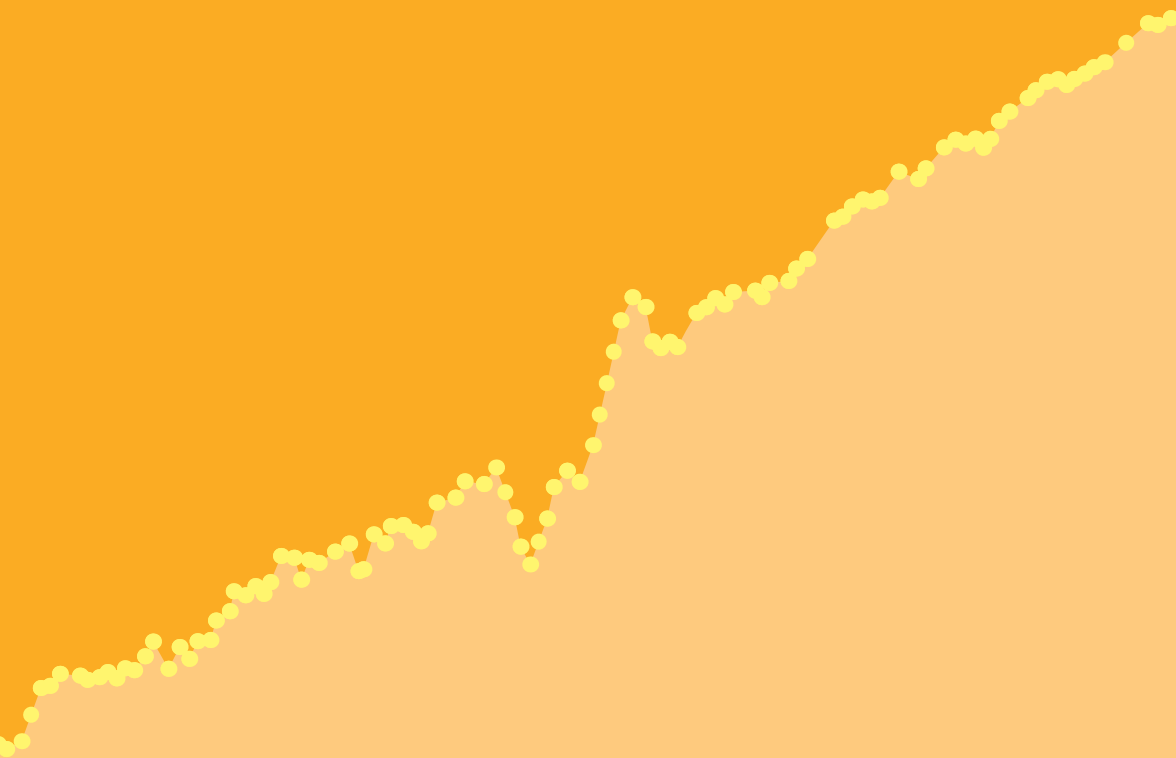
and

$$y_{100} = 100 \times (1 - .20) \times (1.04)^{100} = 4040.$$

The output of the consumption good is lower in the short run because more people are engaged in research. The economy grows faster as a result, however, and incomes in the future are much higher.

Contents

Macroeconomics is arranged in three key sections: the long run, the short run, and applications. The long-run section includes a modern presentation of economic growth. The short-run section emphasizes central banks that set interest rates and develops an intuitive Aggregate Supply/Aggregate Demand framework with inflation rather than the price level on the vertical axis. The applications section explores key policy topics such as the continuing rapid rise in health expenditures and globalization.



Part 1: Preliminaries

1. Introduction to Macroeconomics
2. Measuring the Macroeconomy

Part 2: The Long Run

3. An Overview of Long-Run Economic Growth
4. A Model of Production
5. The Solow Growth Model
6. Growth and Ideas
7. The Labor Market, Wages, and Unemployment
8. Inflation

Part 3: The Short Run

9. An Overview of the Short-Run Model
10. The IS Curve
11. Monetary Policy and the Phillips Curve
12. Stabilization Policy and the AS/AD Framework

Part 4: Applications

13. The Government and the Macroeconomy
14. International Trade
15. Exchange Rates and International Finance

16. Parting Thoughts

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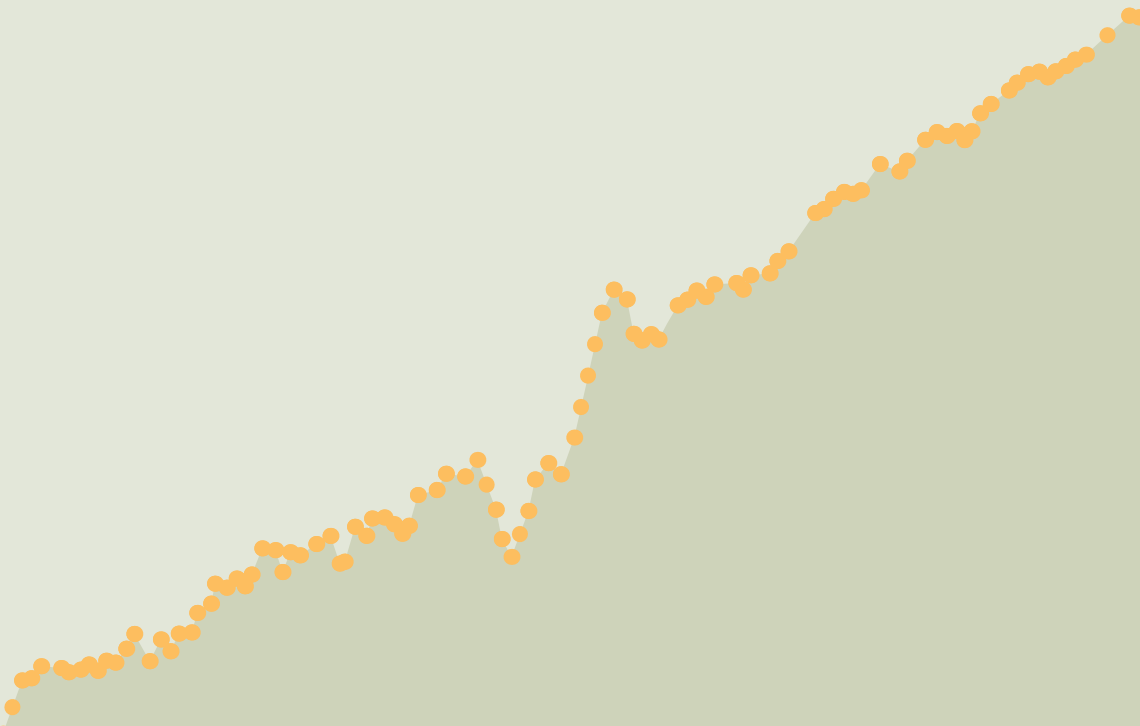
Also available: The **Study Guide** by David Gillette (Truman University) features Chapter Learning Objectives, Key Concepts, True/False Questions, Multiple-Choice Questions, Worked and Unworked Exercises, and a math review section.

Instructor Resources

Test Bank (Robert Sonora, *Fort Lewis College*) Available on CD-ROM or for download in rich-text, BlackBoard Learning System, and ExamView® Assessment Suite formats, the test bank includes over 1,400 questions.

Lecture PowerPoints include graphs, tables, and drawn art from the text.

Instructor's Manual (Garett Jones, *George Mason University*) This valuable instructor's resource includes "excursions" that expand on case studies in the text, additional case studies not in the text, as well as articles and data that can be used as handouts in class.



Ordering Information

Macroeconomics

- ISBN 978-0-393-92638-5
- HARDCOVER
- 550 PAGES



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