

CHAPTER 1

Introduction

KEY IDEAS IN THIS CHAPTER

1. The primary questions of interest in macroeconomics involve the causes of long-run growth and business cycles and the appropriate role for government policy in influencing the economic performance of a nation.
2. Modern macroeconomics analyzes issues associated with long-run growth and business cycles, using models that are based on microeconomic principles.
3. Macroeconomists rely primarily on abstract models to draw conclusions about how the macroeconomy works because it is usually very costly or impossible to experiment with the real world economy.
4. There is relatively little disagreement among macroeconomists concerning approaches to modeling economic growth, but there are contentious issues in modeling business cycles.

NEW IN THE SIXTH EDITION

1. Chapters 13 and 14 of the fifth edition have been merged into a new Chapter 13.
2. Chapter 18 in the fifth edition has been split into two new Chapters, 17 and 18, and expanded.
3. All data and graphs have been updated.
4. The revised discussion on recent and current macroeconomic events incorporates information contained in newly available data.

TEACHING GOALS

Macroeconomics is a field of economics which primarily studies economic growth and business cycles. Over time, there is a prevailing upward trend in the standard of living. However, such growth can be erratic. There are some periods of rapid growth, some periods of rather anemic growth, and also some periods of temporary economic decline. Explanations for the overall upward trend in standards of living are the subject of economic growth analysis. Explanations of variations in growth over shorter time horizons are the subject of business cycle analysis. Students should be able to distinguish

between microeconomic topics and macroeconomic topics. Students should understand the distinction between growth analysis and business cycle analysis.

Although microeconomics and macroeconomics are separate branches of study, both branches are guided by the same set of economic principles. Standard economic theory is guided by the assumption of maximizing behaviour. As a first approximation, we therefore view the macroeconomy as a collection of markets with maximizing participants. These participants are price-taking agents and the economy is closely approximated by a competitive equilibrium.

Because the economy as a whole is extremely complex, macroeconomists must rely on abstract models. Although the structure of such models does not correspond to all the details of life in a complex society, these models offer the best hope of providing simple, yet accurate, descriptions of how the macroeconomy works, and how government policies may affect macroeconomic outcomes.

Economists are in broad consensus about the mechanisms of economic growth. There is less agreement about the causes and consequences of business cycles. Careful study concludes that most business cycles are very similar in many ways. Therefore, macroeconomists are in search of a logically consistent paradigm for the typical business cycle. Currently popular explanations of the “typical” business cycle include New Keynesian sticky-price models, and real business cycle models.

CLASSROOM DISCUSSION TOPICS

One good way to get the ball rolling is to list some macroeconomic concerns like stagnant economic growth, unemployment, inflation, government budget deficits, tax burdens, trade deficits, financing of government entitlement programs, and the like. Ask students whether they are personally concerned about such problems and what ideas they might have about causes and effects. Sometimes students express concerns about topics such as inequality in the distribution of income and environmental concerns. Emphasize that the purpose of the course is to develop a set of basic macroeconomic models and tools, and that we can adapt these models to deal with a wide array of problems.

It would be worthwhile to take a little time to review the definition of macroeconomics and review the distinction between microeconomics and macroeconomics. Take care to point out that their understanding of how the demand and supply model of microeconomics works is the key to the understanding how markets in macroeconomics work. This approach should help retain students' motivation as they switch from microeconomics to macroeconomics.

Students often have conflicting ideas about the current state of the economy. Sometimes their perspectives may be governed by their individual circumstances and what they read in the media. Ask them whether they believe that times are currently good or bad. Ask them why they think the way they do. Ask them how they can more objectively back up or check out their casual impressions about the current state of the economy.

Students are interested in economic growth, unemployment, inflation, government budget deficits, and trade deficits. An effective way to motivate this chapter and attract students' attention would be to cast these topics in terms of what the economy will be like when they graduate. The quantity of goods and services produced per capita has expanded more than a factor of 16 since 1870. Ask them whether they expect this to continue. Ask them if they think the economy will be booming or in a recession when they graduate. Will jobs be plentiful or scarce when they graduate? Ask them what observations led them to their forecasts. Present a selection of published forecasts to show students the range of what economists are forecasting for the upcoming years. Emphasize that economists forecast the path of the economy but they cannot do so with certainty.

Students may be particularly interested in the post-financial crisis period, and how to explain it. Growth has on average been lower over that period than was the case before the financial crisis. Why? Is there an impending recession? Why or why not? Emphasize that there is plenty of off-the-shelf theory that can be brought to bear to organize our thinking about these issues.

OUTLINE

- 1. What Is Macroeconomics?**
- 2. Gross Domestic Product, Economic Growth, and Business Cycles**
 - a) Adjustments for Inflation and Population Growth
 - b) Historical Per Capita Real GDP Growth Perspectives
 - c) The Great Depression and World War II: Business Cycles
 - d) Growth Measurement
 - e) Trend and Cyclical Components
- 3. Macroeconomic Models**
 - a) Modelling in General
 - b) Rational Behaviour
 - c) Competitive Equilibrium
- 4. Microeconomic Principles**
 - a) When Do Microeconomic Reactions Affect Macroeconomic Outcomes?
 - b) Rational Expectations and the Lucas Critique
- 5. Disagreement in Macroeconomics**
 - a) Solow Growth Model and Endogenous Growth Models
 - b) Keynesian and non-Keynesian Models
 - c) Real Business Cycle Theory
 - d) Sticky price model

6. What Do We Learn from Macroeconomic Analysis?

- a) Fundamentals: Preferences and Productive Capacity
- b) The Efficiency of Economic Outcomes
- c) The Role of Unemployment
- d) Technological Progress and the Standard of Living
- e) Tax Policy
- f) Expectations
- g) Inflation: Phillips curves and Fisher relations
- h) Causes of Business Cycles
- i) Gains from International Trade and Effects on Business Cycles
- j) Inflation and Money Growth

7. Understanding Recent and Current Macroeconomic Events

- a) The Productivity Slowdown
- b) Government Income, Government Outlays, and the Government Deficit
- c) Unemployment
- d) Inflation
- e) Interest Rates
- f) Trade and the Current Account Surplus
- h) Business Cycles

TEXTBOOK PROBLEM SOLUTIONS

1. Calculating Growth Rates Data:

- a) Actual Percentage Growth Rates, 2015–2017

2015	-0.161152891
2016	-0.103898032
2017	1.742102037

- b) Approximate Percentage Growth Rates, 2015–2017

2015	-0.161282882
2016	-0.103952043
2017	1.727101407

The approximation is close. The approximation works well for small growth rates.

c) Actual Percentage Growth Rates for Decades, 1950–2010

1960	21.00068711
1970	37.112178
1980	29.17545181
1990	14.90279518
2000	19.48404444
2010	8.432583912

Approximate Percentage Growth Rates, 1950–2010

1960	19.06260382
1970	31.56292223
1980	25.60013858
1990	13.89163257
2000	17.80126572
2010	8.095844744

The approximation errors are larger because the growth rates are larger. Note that the approximation formula actually calculates the continuously compounded growth rate.

- d) Growth is highest in the 1970s. Growth is lowest for 2000–2010.
- The variability of real GDP per capita was larger before World War II than after, even if we ignore the Great Depression and World War II. This could just be a measurement issue, as the national income accounts data were not collected in a systematic way until the 1920s. Also, it is possible that the lower variability after World War II was due to the sound judgment of macroeconomic policymakers, who took appropriate action at the right times. Finally, it is possible that the lower variability in post-World War II times was just a happy accident.
 - A problem with controlled experiments in economics is that we may cause irreparable harm. However, it would be hard to imagine a policy change that would make the Great Depression any worse than it actually was. Some obvious possibilities include Bank of Canada making open market purchases to keep the money supply from shrinking, instituting bank reforms before the depression started, and avoiding high tariff rates.
 - Newton's model of falling bodies:
 - Ignores air resistance.
 - Works well for most dense objects and does not work well for feathers.

Diagrams of plays in football and basketball:

- Ignore the characteristics of individual players and the reactions of opponents.
- Work well for evenly matched teams.

Scale models of new aircraft designs:

Ignore working engines and interior contents.

Wind tunnel testing approximates aerodynamics of actual aircraft.

5. During a recession, there are automatic effects on spending and taxes. Transfers such as employment insurance benefits increase, while taxes decrease because private incomes and spending fall. As well, there were increases in discretionary spending and reductions in taxes, particularly by the federal government.
6. This may have been due to the fact that Canada is more dependent on natural resources, for example oil and gas production, than is the United States, and world oil prices fell significantly beginning in mid-2014, depressing natural resource extraction industries. As well, the recession had a more severe effect on the U.S. labor market, and in normal times the unemployment rate tends to be higher in Canada than in the United States.
7. Inflation and nominal interest rates certainly move together – they are positively correlated. But do movements in the nominal interest rate cause movements in the inflation rate, or vice versa? This is hard to determine just from looking at the data, but there appears to be a pattern of increases (decreases) in the nominal interest rate leading increases (decreases) in the inflation rate, perhaps indicating that the former is causing the latter.
8. If the average nominal interest rate consistent with 2% inflation falls, and if the Bank of Canada pursues a policy of cutting nominal interest rates when a recession occurs, this can lead to a problem, in that the nominal interest rate cannot go below zero. That is, the Bank of Canada could more frequently be setting interest rates to zero, and not be able to decrease interest rates further.
9. As one possibility, fundamental changes in the supply and demand for lending may explain changes in the real rate of interest. Alternatively, the mid-1970s was a period of rising inflation. Borrowers' willingness to pay interest depends on their expectations of future inflation. If higher inflation were expected to be temporary, the low observed real interest rates of the period would be consistent with somewhat higher expected real interest rates. During the 2008–2009 recession, a likely cause of low real interest rates was intervention by the Bank of Canada. Monetary policy can act to reduce or increase real interest rates in the short run.
10. Exports grew in excess of imports at the time, but during the 2008–2009 recession, a dramatic drop in exports sent the current account into deficit.