The New Normative Macroeconomics

Chapter 17

Outline

- General principles of macro policy analysis
- Instruments, targets and uncertainty
- The benefits of full employment and price stability
- The policy trade-off between inflation and output fluctuations

Overview

- This chapter introduces the **new normative macroeconomics**
  - policy research that focuses on "what should be" rather than endeavors to explain the actual behavior of the Fed and other central banks.

17.1 GENERAL PRINCIPLES OF MACRO POLICY ANALYSIS

- 1. ***When making decisions, people think about the future, and their expectations of the future can be modeled by assuming that they have a sense of economic fluctuations and use their information to make unbiased (but not error-free) forecasts.***

17.1 GENERAL PRINCIPLES OF MACRO POLICY ANALYSIS

- **2. *Macroeconomic policy can be usefully described and evaluated as a policy rule, rather than by treating the instruments as exogenous and looking only at onetime changes in them.***

17.1 GENERAL PRINCIPLES OF MACRO POLICY ANALYSIS

- **3. *For a particular policy rule to work well, it is necessary to establish a commitment to that rule.***
  - **Activist policy rules**
    - ***Activist policy rules involve feedback from the state of the economy to the policy instruments, but the feedback is part of the rule.***
  - **Discretionary policy**
    - **Is formulated on a case-by-case and year-by-year basis, with no attempt to commit to or even talk about future policy decisions in advance.**

17.1 GENERAL PRINCIPLES OF MACRO POLICY ANALYSIS

- 4. ***The economy is basically stable; after a shock, it will eventually return to its normal trend paths of output and employment. However, because of rigidities in the economy, this return could be slow.***

17.1 GENERAL PRINCIPLES OF MACRO POLICY ANALYSIS

- **5.** ***The objective of macroeconomic policy is to keep inflation low and reduce the size (or the duration) of fluctuations in output, employment, and inflation after shocks hit the economy.***

17.2 INSTRUMENTS, TARGETS, AND UNCERTAINTY

- Generally stated, the macro policy problem is one of choosing policy rules that describe how the *instruments* of policy should respond to economic conditions in order to improve the performance of the *target* variables.
  - The instruments of macro policy are things like the monetary base and interest rates.
  - The targets of policy are the endogenous economic variables that we care about: inflation, unemployment, capital formation, and economic growth.

17.2 INSTRUMENTS, TARGETS, AND UNCERTAINTY

- To describe our objectives for the target variables, it is useful to define a **social welfare function** that summarizes the costs of having the target variables deviate from their desired levels.
- For example, if people do not like inflation, then deviations of inflation from zero should register as a loss of welfare in the social welfare function.

17.2 INSTRUMENTS, TARGETS, AND UNCERTAINTY

- We can view the macro policy problem much as any other economic problem: We want to choose policy rules for the instruments to maximize the social welfare function.
  - In most macro problems, we are faced with the typical economic problem of scarcity. Whenever there is scarcity in economics, we are faced with a *tradeoff* between competing goals.

Uncertainty and Timing Considerations

- When there are many instruments and uncertainty, the theory of economic policy tells us to use a mix of the instruments in a way that minimizes the risk.
  - Policy makers should diversify their instruments to reduce risk.

17.3 THE BENEFITS OF FULL EMPLOYMENT AND PRICE STABILITY

- The behavior of the economy, as described by the model of Chapter 16, gives the set of different combinations of employment and price stability that can be achieved
  - We call the curve showing those combinations the **policy frontier.**
  - The optimal policy is at the point of tangency of an indifference curve and the policy frontier.

17.3 THE BENEFITS OF FULL EMPLOYMENT AND PRICE STABILITY

- *The marginal cost of an inflation or deflation error rises with the magnitude of the error*
  - A simple measure of the loss associated with these properties is the **squared error.**
  - This suggests that a good general summary of the economic loss caused by inflation is the average of the squared deviation of the inflation rate from its target.
    - We will call this the **inflation loss.**

17.3 THE BENEFITS OF FULL EMPLOYMENT AND PRICE STABILITY

- Macro policy cannot influence the long run, or the average rate of unemployment, or the average GDP gap; it can influence only the fluctuations of unemployment around the natural rate and the GDP gap around zero.
  - macro policy makers should do what they can do: limit the fluctuations of output and employment.
  - Based on this logic, we define the **output loss** as the average squared GDP gap.

Why Is Inflation Undesirable?

- *1. "Shoe-Leather Costs" of Holding Money.*
- *2. Tax Distortions.*
  - much of the tax system is not indexed
- *3. Unfair Gains and Losses.*
  - losses suffered by holders of dollar claims
- *4. Nonadapting Economic Institutions.*
  - failure of retirement plans

Costs of Output Loss and Unemployment

- *In a typical recession, GDP falls below potential by around 5 percent for about two years.*
  - Total lost GDP is about 10 percent of one year's GDP, or almost $1,100 billion at 2003 levels.

- The marginal social costs of unemployment are higher at higher rates of unemployment.

17.4 THE POLICY TRADE-OFF BETWEEN INFLATION AND OUTPUT FLUCTUATIONS

- Recall the price adjustment equation from Chapter 15

$$\pi = f\hat{Y}_{-1} + \pi_{-1} + Z \qquad (17.1)$$

  - We can characterize the policy alternatives in terms of the slope of the macroeconomic policy (MP) curve.

$$\hat{Y} = -g(\pi - \pi^{*}) \qquad (17.2)$$

17.4 THE POLICY TRADE-OFF BETWEEN INFLATION AND OUTPUT FLUCTUATIONS

- Substitute the MP curve, into the price adjustment equation:

$$\pi - \pi^{*} = (1 - fg)(\pi_{-1} - \pi^{*}) + Z \qquad (17.3)$$

17.4 THE POLICY TRADE-OFF BETWEEN INFLATION AND OUTPUT FLUCTUATIONS

- When *g* is large, past inflation affects future inflation less and the effects of a single price shock disappear more quickly.

- If *g* is zero (a fully accommodative policy), then the price shock permanently raises the inflation rate by *Z*.

The Message for Policy Makers

- If the shock affects only aggregate demand, then a compensating change in aggregate demand policy (monetary or fiscal) eliminates both the inflation loss and the output loss.

- If the shock affects the price adjustment schedule, then the best policy divides its effects between reducing inflation and unemployment according to the rule that the amount of inflation in excess of the target declines by a fraction *k* each year.

The Taylor Rule and Optimal Policy

- Recall the Taylor rule from Chapter 16:

$$r = (1+\delta)\pi + B\hat{Y} + R^* - \delta\pi^* \qquad (17.4)$$

  - The Taylor rule is stabilizing, because when inflation rises above the target inflation rate, the Fed raises the nominal interest rate by more than inflation rises, increasing the real interest rate.

    - It is important to understand that, for the Taylor rule to be stabilizing, the coefficient δ must be positive.

17.5 CHANGING THE POLICY FRONTIER

- The policy described in the previous section is optimal in the sense that it tells policy makers how to make the best of a given situation. But the policy does not make the situation better.
- There are many proposals for improving the policy frontier.

Implement Monetary Policy Rules

- Starting in the mid-1980s, the Fed has raised the nominal interest rate by more than inflation, and monetary policy has been stabilizing.
  - What are the normative implications of this change in policy?
  - **T**he Fed has moved the policy frontier closer to the origin, lowering both inflation loss and output loss and enabling the economy to be on a better indifference curve.

Streamline the Labor Market

- Wages do not respond quickly and vigorously to the situation in the labor market. Some proposals to speed up wage adjustment include the following:
  - 1. *Facilitate Job Matching.*
  - 2. *Eliminate Government Price and Wage Fixing.*
  - 3. *Reform Unemployment Compensation.*

Improve Indexation

- Indexation is harmful to the economy when wages rise in response to oil or other outside price shocks.
- The ideal method would omit price increases that arise from imports and other materials costs.
- It is not clear that the government can or should try to accomplish this.

Avoid Government Price Shocks

- Sometimes the government itself creates a shock in the price adjustment process.
  - If self-inflicted government price shocks can be kept to a minimum, the policy frontier will be closer to the origin.
  - Avoiding government price shocks need not prevent tax reform or other useful changes in the government's influence on the economy.

Use Trade Policy

- One of the ways the government affects the variability of inflation is through trade policy.
- Policies that restrict imports raise inflation when they are imposed and lower inflation when they are removed.
- Different protectionist policies can have very different effects on U.S. prices.
- Quotas have a strong and immediate effect on prices.
- Tariffs have a strong effect if they are not absorbed by foreign sellers.