Unit 15
Inflation, Unemployment and Monetary Policy

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Introduction

Introduction

Textbook Age of Easy Money

- Stable economy is desirable, and the stabilizing price level is the key
- Inflation as the result of price level rises
- Phillips curve: the trade-off between inflation and unemployment
- Central bank use monetary policy in response to inflation
- Yet, there's some consequences regarding Quantitative Easing:
  - 2008 Great Recession $\rightarrow$ QE policy $\rightarrow$ Money goes to financial mkt
  - Moral Hazard: profit goes to my pocket, loss bailed out by Fed
  - $\Rightarrow$ Too much money facilitates speculation: fragile financial system
  - $\Rightarrow$ crypto hype & crash (FTX); Silicon Valley Bank bank run

Inflation

Key Concepts

- **Inflation**: an increase in the general price level
- **Zero inflation**: A constant price level from year to year
- **Deflation**: A decrease in the general price level
- **Disinflation**: A decrease in the rate of inflation

$$r = i - \pi, \qquad \text{(The Fisher Equation)}$$

where r is real interest rate, i is nominal interest rate, and π is inflation rate

What's wrong with inflation?

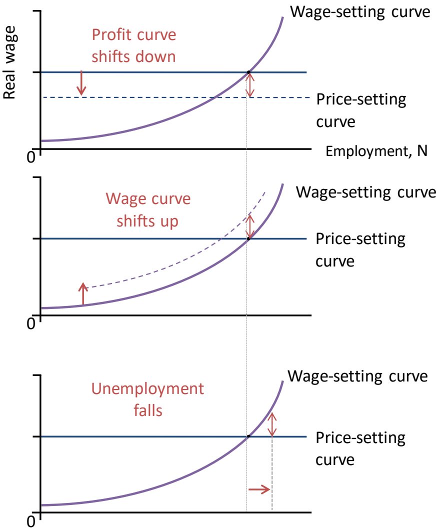
- Workers paid with fixed nominal income, $\pi \uparrow \Rightarrow$ real income $\downarrow$.
- Inflation reduces the real value of debt: borrowers ☺ yet creditors ☹.
- High rate of inflation makes the economy work less well:
  - High inflation is often volatile $\rightarrow$ uncertainty
  - Harder for producers: changes in **relative prices** or inflation?
  - **menu costs** as firms have to update their prices more frequently

What's wrong with deflation?

- Deflation could cause worse consequences than high inflation.
- When price $\downarrow$, HH postpone consumption
  - $\because$ expect goods to be cheaper in the future
  - Increase real debt burden, cut consumption for target wealth
- $\Rightarrow$ negative shock to aggregate demand

Causes of inflation

Figure 15.2. Three causes of inflation.



1. Owners' power rises relative to consumers (e.g. lower competition) – medium to long run

2. Employees' power rises relative to owners (e.g. stronger unions) – medium to long run

3. Employees' power rises relative to owners in a business cycle upswing – short to medium run

Phillips Curve

Inflation and unemployment

Unemployment $\uparrow \approx$ inflation $\downarrow$

- increases workers' bargaining position $\rightarrow$ higher wages $\rightarrow$ higher cost of production $\rightarrow$ higher prices

Inflation and Aggregate Demand

upswing in business cycle is often associated with rising inflation.

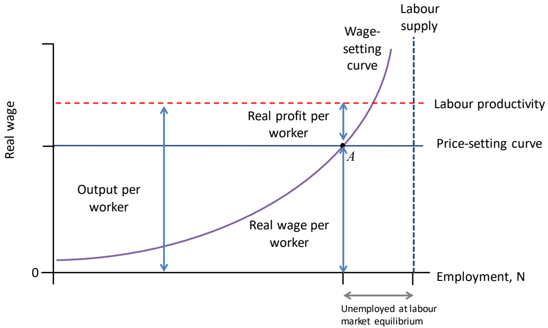
- higher aggregate demand $\rightarrow$ higher employment $\rightarrow$ higher wages $\rightarrow$ higher cost of production $\rightarrow$ higher prices
- the economy experiences (nominal) price and wage inflation, but the real wage (W/P) has not increased
- constant real wage means that employment stays high
- . . . and the wage-price spiral continues

Stable price level

Prices are stable ($\pi = 0$) when the labor market is in equilibrium.

Figure 15.4a. Inflation and conflict over the pie: Stable price level at labour market equilibrium.

- Recall the labor productivity & share of pie between worker and firm
- Point A is labor market equilibrium

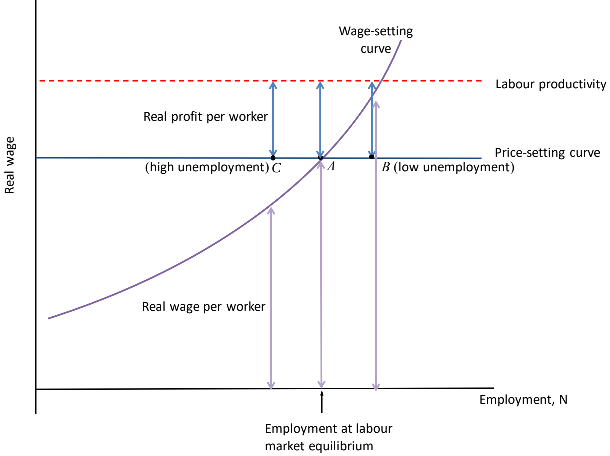


Stable price level

Prices are stable ($\pi = 0$) when the labor market is in equilibrium.

- Point B is unemployment too low $\Rightarrow$ employment rent too low
- Point C is unemployment too high $\Rightarrow$ firms hold too high bargaining power

Figure 15.4b. Inflation and conflict over the pie at low and high unemployment.

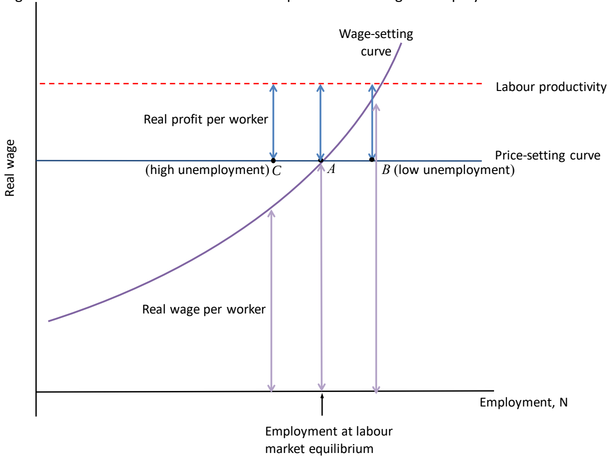


Stable price level

Prices are stable ($\pi = 0$) when the labor market is in equilibrium.

- Pt B: workers' claims to real wages + firms' claims to real profits > total productivity → upward pressure on wages and prices

Figure 15.4b. Inflation and conflict over the pie at low and high unemployment.

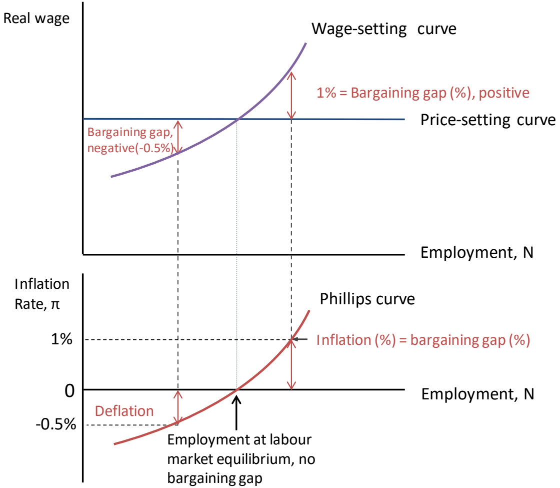


The bargaining gap

- **Bargaining gap**: The difference between the real wage required to incentivize effort, and the real wage that gives firms enough profits to stay in business.
- Unemployment is below equilibrium: a positive bargaining gap and inflation.
- Unemployment is above equilibrium: a negative bargaining gap and deflation.
- Labour market equilibrium: the bargaining gap is zero and the price level is constant.

Phillips Curve

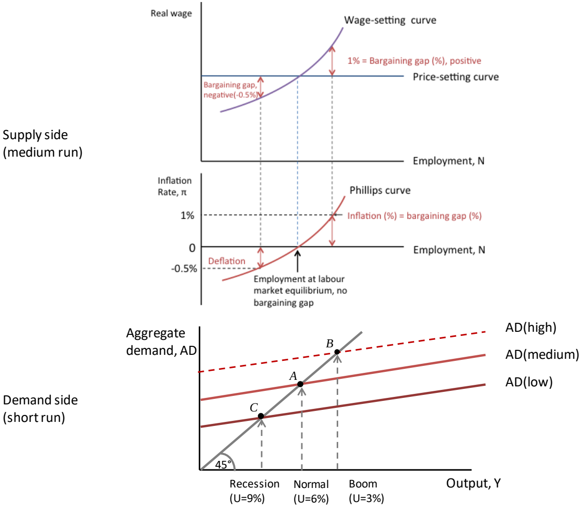
Figure 15.4c. Bargaining gaps, inflation, and the Phillips curve.



Phillips Curve and the Business Cycle

A positive bargaining gap in boom → inflation

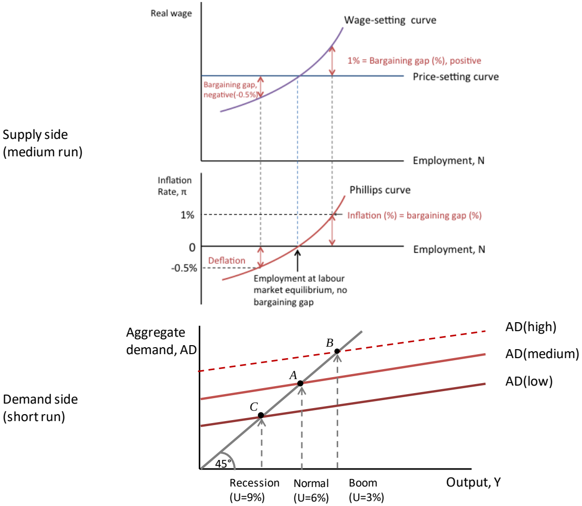
Figure 15.4d. The short-and medium-run models: Aggregate demand, employment, and inflatior



Phillips Curve and the Business Cycle

A negative bargaining gap in recession → deflation

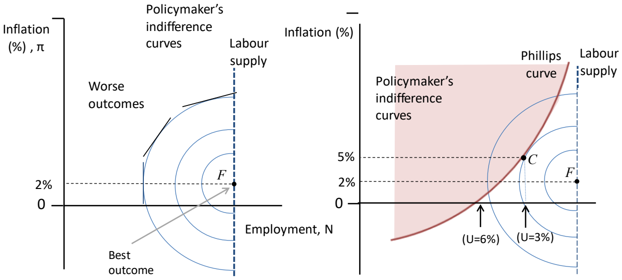
Figure 15.4d. The short-and medium-run models: Aggregate demand, employment, and inflatior



Central Bank's Decision

- Phillips Curve determines the feasible trade-offs between inflation and unemployment. (**MRT**)

Figure 15.5. The Phillips curve and the policymaker's preferences.



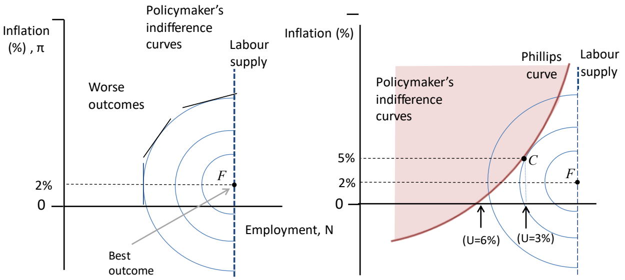
a. The policymakers' preferences

b. The policymakers' preferences and the Phillips curve tradeoff

Central Bank's Decision

- Indifference curves show policymaker's preferred tradeoffs between inflation and unemployment. (**MRS**)
- Target at 0% unemployment ✓
- Target at 2% inflation rate???

Figure 15.5. The Phillips curve and the policymaker's preferences.



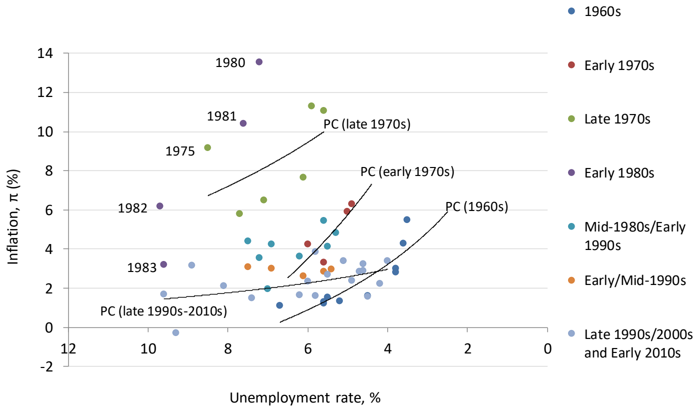
a. The policymakers' preferences

b. The policymakers' preferences and the Phillips curve tradeoff

What's So Special About 2% Inflation?

Phillips Curve Over Time

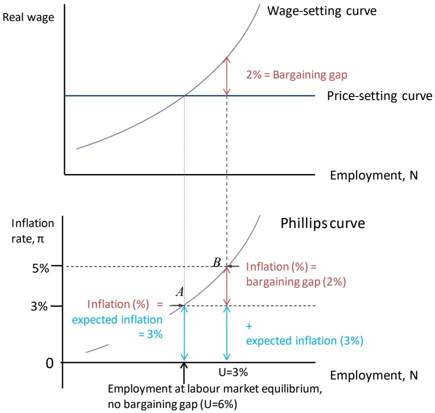
- Phillips Curve shifts over time
- Keeping unemployment "too low" leads to higher prices & rising inflation



The role of expectations

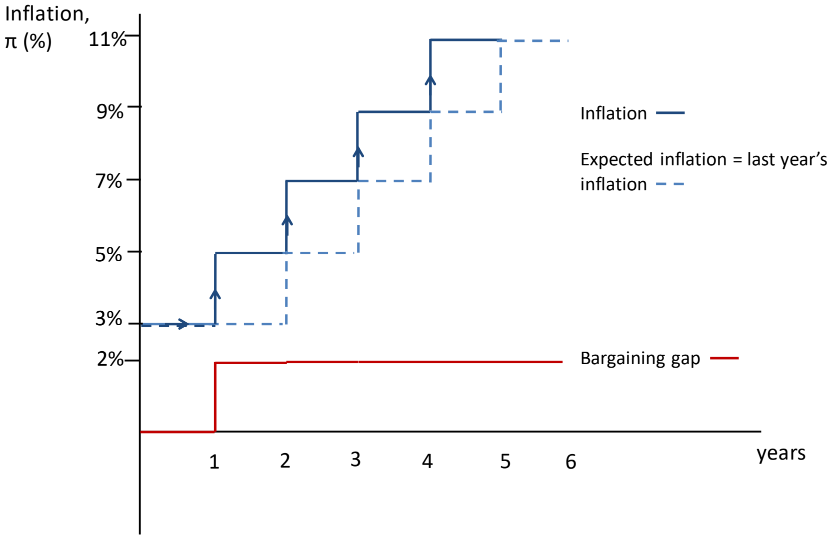
- Inflation $=$ expected inflation $+$ bargaining gap
- If bargaining gap $= 0$, i.e., labor market in equilibrium, then inflation is constant

Figure 15.7. Bargaining gaps, expected inflation, and the Phillips curve.



Expected Inflation Evolves with Positive Bargaining Gap

Figure 15.10. Inflation, expected inflation, and the bargaining gap.



Appendix

References I