ECON 3010
Intermediate Macroeconomics

Chapter 14

Aggregate Supply and the Short-Run
Tradeoff Between Inflation and Unemployment

Introduction

- In previous chapters, we assumed the price level ***P*** was "stuck" in the short run.
  - This implies a horizontal SRAS curve.
- Now, we consider a prominent model of aggregate supply in the short run:
  - "Sticky-price" model

Introduction

- Both models imply:

$$Y = \bar{Y} + \alpha(P - EP)$$

agg. output

natural rate of output

a positive parameter

actual price level

expected price level

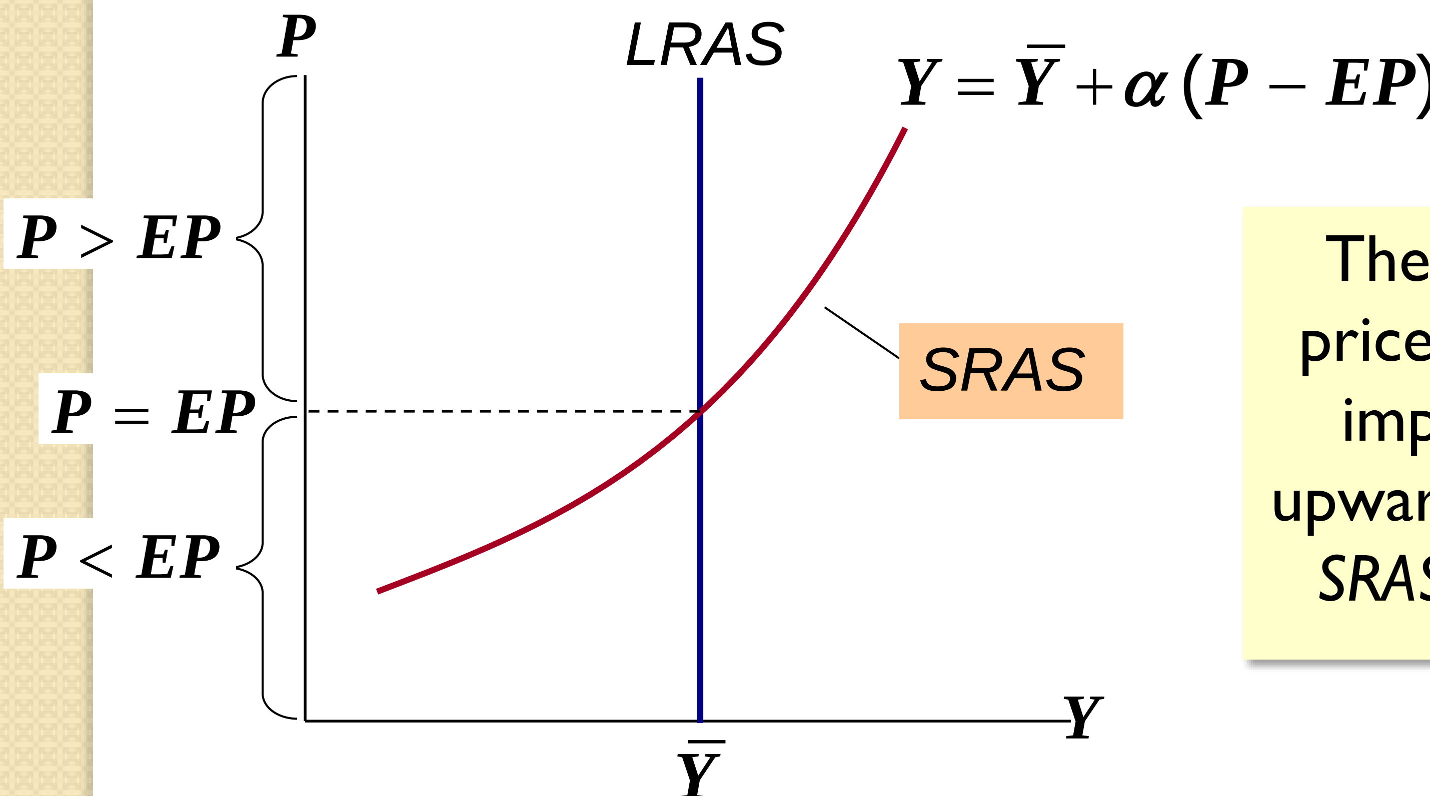
- Other things equal, ***Y*** and ***P*** are positively related, so the SRAS curve is upward sloping.

The sticky-price model

- Reasons for sticky prices:
  - long-term contracts between firms & customers
  - menu costs
  - firms not wishing to annoy customers with frequent price changes

- Assumption:
  - Firms set their own prices (e.g., as in monopolistic competition).

Summary & implications



The "sticky price" model implies an upward sloping *SRAS* curve.

Inflation, Unemployment, & Phillips curve

The **Phillips curve** states that π depends on

- expected inflation, $E\pi$
- **cyclical unemployment**: the deviation of the actual rate of unemployment from the natural rate
- supply shocks, ν

$$\boxed{\pi = E\pi - \beta(u - u^n) + \nu}$$

where $\beta > 0$ is an exogenous constant.

Comparing *SRAS* and the Phillips curve

SRAS: $Y = \bar{Y} + \alpha(P - EP)$

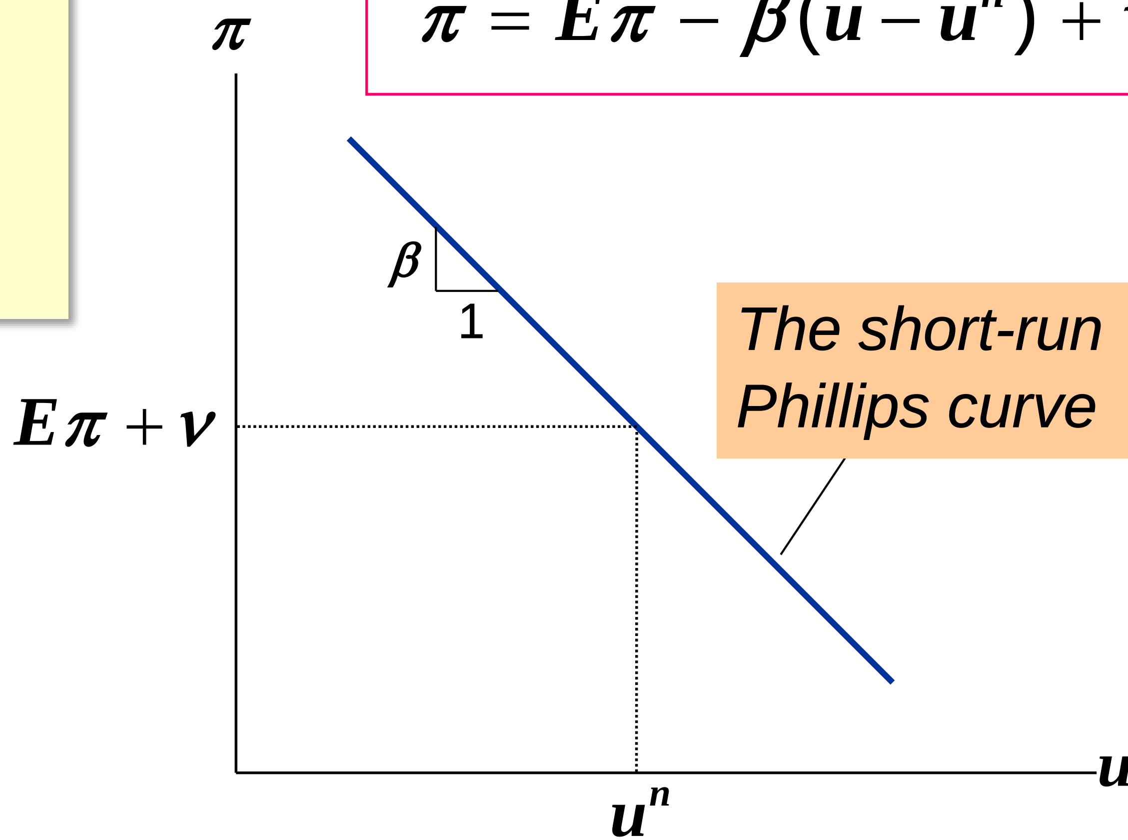
Phillips curve: $\pi = E\pi - \beta(u - u^n) + v$

- *SRAS* curve:
  Output is related to unexpected movements in the price level.
- Phillips curve:
  Unemployment is related to unexpected movements in the inflation rate.

Graphing the Phillips curve

In the short run, policymakers face a tradeoff between π and u.

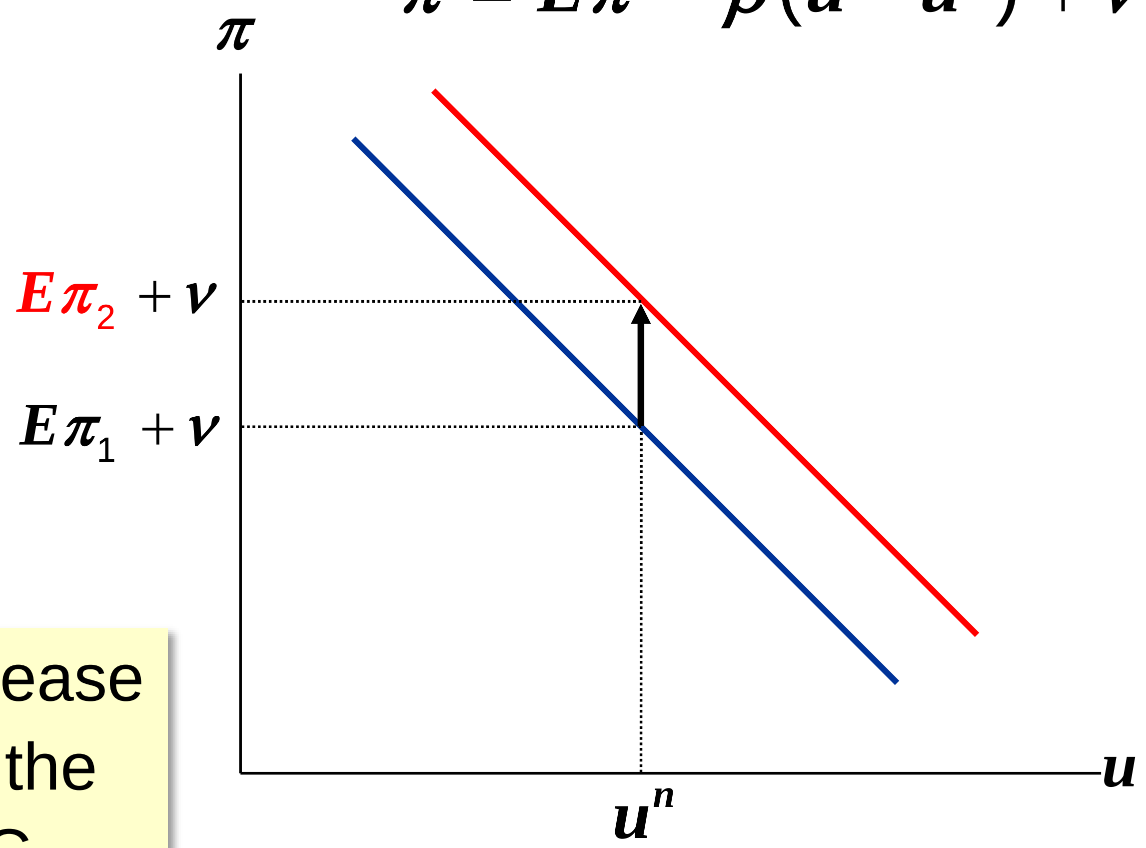
$$\pi = E\pi - \beta(u - u^n) + v$$



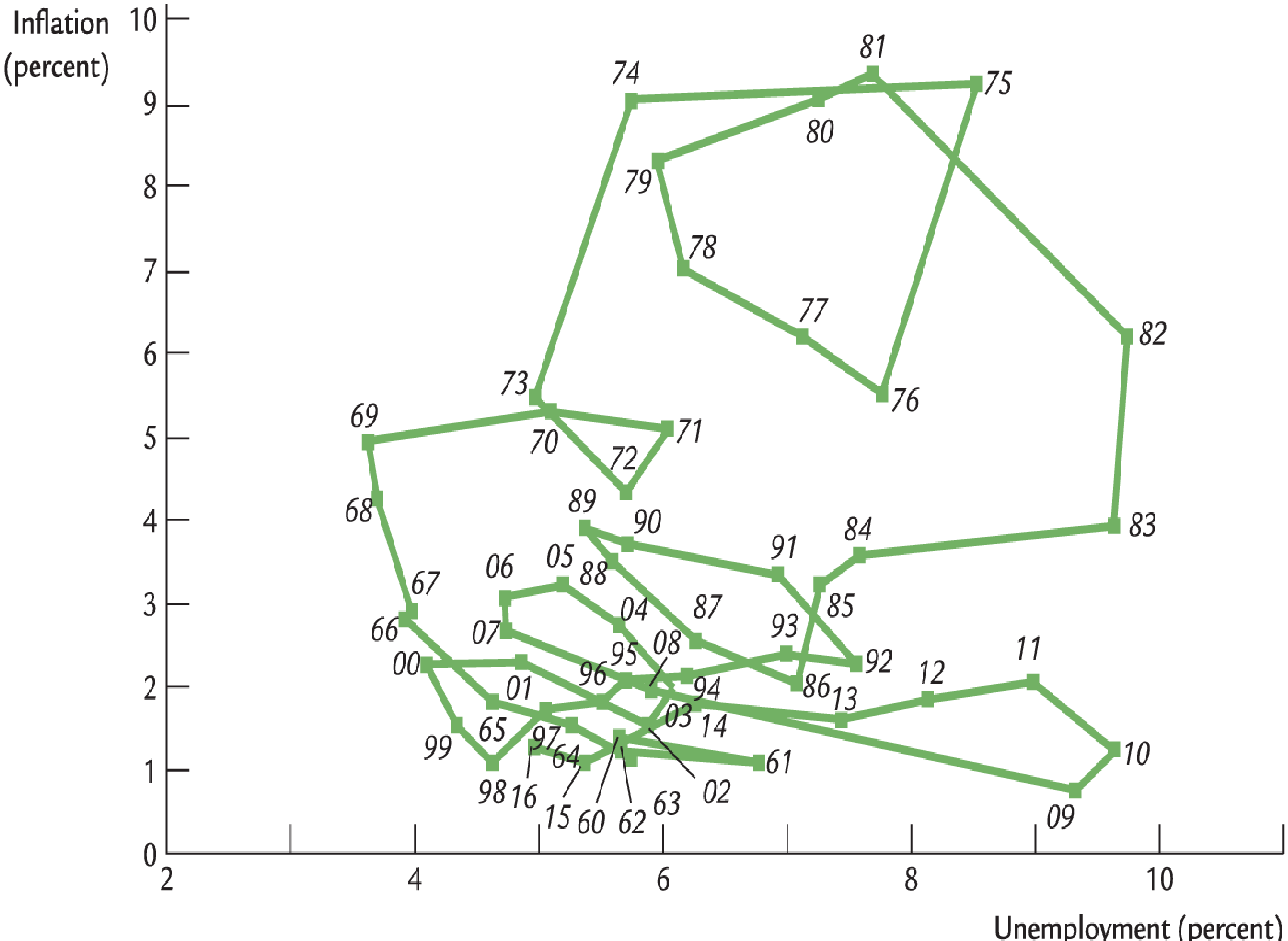
Shifting the Phillips curve

People adjust their expectations over time, so the tradeoff only holds in the short run.

$$\pi = E\pi - \beta(u - u^n) + v$$



E.g., an increase in $E\pi$ shifts the short-run P.C. upward.



Mankiw, *Macroeconomics*, 10e, © 2019 Worth Publishers

The natural-rate hypothesis

Changes in aggregate demand affect output and employment only in the short run (Chaps. 10-12).

In the long run, the economy returns to the levels of output, employment, and unemployment described by the classical model (Chaps. 3–9).