Chap 7, Chap 15

- key variable
  \[ \frac{w}{p} = \text{real wage} \]

- Is the real wage a market clearing wage?
  - Short run: quite possibly no
  - Long run: also possibly no

- key question
  why does \( \left( \frac{w}{p} \right) \) not approach the market clearing real wage?
  - job remaining

eff. wages: done
  search theory
 today

\( \frac{dw}{dp} \) is "sticky"

"fixed"

"not sufficiently flexible"

"rigid"

Why?

in fixed contractually
for long periods of time

in "virtually fixed" if 1

firms maximize expected
profits and if 2 firms
are price setters

2 strategies

AR 0 shifts left

Maintain 50

Change 50
- adverse demand shift
  - lower price  \( \rightarrow \) calculate change in profits
  - maintain price  \( \rightarrow \) change in profits

very small in short run

- additional difficulty
  - firms do not know their demand curve
  - firms do not know their supply curve

profit maximization is impossible realistically speaking
Cycle Patterns, Impulses, and Mechanisms

The AS-AD Model

All business cycle theories can be described in terms of the AS-AD model.

Business cycle theories can be divided into two types:

- Aggregate demand theories
- Real business cycle theory

- Supply side shocks
  - Structural
    - Shifts in productivity
  - Technological
  - Institutional
    - Shifts in preferences
  - Behavioral
Aggregate Demand Theories of the Business Cycle

Three types of aggregate demand theories have been proposed:

- Keynesian
- Monetarist
- Rational expectations

...formulation of the AS curve
Aggregate Demand Theories of the Business Cycle

Keynesian Theory

The Keynesian theory of the business cycle regards volatile expectations as the main source of business cycle fluctuations.
Aggregative Demand Theories of the Business Cycle

Keynesian Impulse

The impulse in the Keynesian theory is expected future sales and expected future profits.

A change in expected future sales and expected future profits changes investment.

Keynes described these expectations as "animal spirits," which means that because such expectations are hard to form, they may change radically in response to a small bit of new information.

\[ AD = C + I + G + X - M \]
Aggregate Demand Theories of the Business Cycle

Keynesian Cycle Mechanism

The mechanism of the business cycle is the initial change in investment, which affects aggregate demand, combined with a flat (or nearly so) SAS curve.

An increase in investment has multiplier effects that shift the AD curve rightward; a decrease has similar multiplier effects that shift the AD curve leftward.

\[ \Delta \text{GDP} = \frac{1}{1 - mpc} \cdot \Delta I \]

\[ \text{no "rational" expectations, so autonomous investment} \]
the commodity markets Chapter 10

- along SAS
  \[ \bar{w} = \bar{w} \]
  \[ \rho = \rho \]
  therefore
  \[ \frac{w}{p} \text{ fixed} \]

- chapter 7
  sticky real wage
  a downward inflexible

- full employment
Aggregate Demand Theories of the Business Cycle

The asymmetry of money wages means that leftward shifts of $AD$ lower real GDP but, without some other change, money wages do not fall and so the economy remains in a below full-employment equilibrium.
Figure 15.1 illustrates a Keynesian recession.

A fall in animal spirits decreases aggregate demand...

...and with sticky wages, brings recession.
Aggregate Demand Theories of the Business Cycle

Figure 15.2 illustrates a Keynesian expansion.