Classical Business Cycles

Chapter 10 (continued)
1. Rational Expectations

2. Classical Misperceptions Model

3. Government Policy in Classical models
1 Rational Expectations

- Definition - A rational expectation of a future variable is a forecast of that variable which uses all available information. This includes information on current and past values of variables as well as information on economic models. With a rational expectation, the agent does his best job at forecasting, given the information he has.
• Implications

– The expectation will be *correct on average*. Why?

  * If the agent is always too low, then he can make a better forecast by adjusting future forecasts upward to eliminate this systematic error.

– The expectation will *not necessarily be correct at any point in time*. Randomness in the economy as well as imperfect knowledge about how the economy functions means that any forecaster will make errors. The rational expectation would be correct only if there were perfect information about how the economy functions and no randomness in the economy.
2 Classical Misperceptions Model

In contrast to RBC model, monetary policy can cause business cycles.

2.1 Assumptions

- Each individual is a consumer and a producer.

- Each individual consumes many different goods and produces only a single good.
• Each individual is a price-taker in all markets.

• Each individual wants to work harder and produce and sell more of his good in periods when the price of his good is high relative to the price of all other goods he consumes. This relative price is like a real wage.

• Each individual has imperfect information. Each one has perfect knowledge about the price of his own good and imperfect knowledge about the price of other goods in the economy. Agents know their own price and all past prices.

• In any period, the agent receives information on his own price. He must determine make an expectation about whether the relative price of his good has increased or decreased. If it increased, he supplies more, and if it decreased, he supplies less. His expectation is rational.
2.2 Rational Expectation

- Available information
  - Current price of own good
  - Past prices of all other goods

- Forms expectation of aggregate price - $P^e$

- As $P - P^e$ increases, he increases production - SRAS curve is upward sloping.
2.3 **Aggregate Demand Shock**

- Money supply unexpectedly increases and no one knows about it
  - Money supply highly volatile
  - Money supply very stable
  - Agent regrets his decision because his relative price did not really increase. He has been fooled.

- Money supply increases and everyone knows - transparency
2.4 Model and Data

- Volker disinflation in early 1980's
  - Announced, and not a surprise
  - Model says no recession
  - Data shows a recession
3 Government Policy in Classical Models

3.1 RBC model

Since the economy is in equilibrium, it is responding optimally to the shocks that affect it. Output is low when productivity is low, implying low wages which induce workers to take time off. The government cannot undo the negative productivity shock and would not benefit workers by trying to create policies in which they would work more when wages and productivity are low. Money is neutral, so monetary policy is useless.
3.2 Classical misperceptions model

- Monetary policy works only if it is a surprise.

- Since people would learn to expect monetary expansion when output is low, will not work.

- Only policy that would work is completely random money shocks, and this would not benefit anyone.

- Why should government use policy to fool workers into working more than they want to work?