LECTURE NOTES

## Chapter 11: New Classical Economics

- Keynesian and monetarist models are developed in the context of the Great Depression. Policy did have an effect on the short-run.
    - Monetarist: Monetary policy
    - Keynesians: Either fiscal or monetary policy
    - Keynes rejected the classical model because it could not explain large unemployment (because aggregate supply is vertical)
- New Classical economics appears during the 1970s.
    - Stagflation: If there's a monetary shock, why there is no increase in output?
    - New Classical economics argue that the classical model can explain large unemployment *if* we assume rational expectations (see below)

1. The New Classical Position

- Systematic (predictable) monetary and fiscal policy <u>have no effect</u> on output (and therefore on employment) <u>even</u> in the short-run
- The Rational Expectations concept and its implications
    - New classical economics disagree with both, monetarist and Keynesian short-run
    - The focus of the criticism is the assumption concerning price expectations
    - Why would rational economic agents rely on past prices and not *predict* the price level? Why would they persist on systematic errors?
    - New classical economics sustain that agents will form <u>rational expectations</u> such that there are no systematic errors
        - $E[P] = P_t$ [unbiased expectations]
        - There are errors, but errors <u>are not systematic</u>
        - Rational expectations: "Expectations formed on the basis of <u>all available relevant information</u> concerning the variable being predicted. Moreover, economic agents are assumed to use available information <u>intelligently</u>; that is, they <u>understand the relationships</u> between the variables they observe and the variables they are trying to predict."
    - Keynesian/monetarist expectations are <u>backward looking</u>
    - Rational expectations are <u>forward looking</u>

- o If expectations are rational and unbiased, then the short-run effects disappear. Expectations adjust immediately and the economy goes directly to the long-run
- o Recall: $N^S = g\left(\frac{W}{P^e}\right)$ where $P^e = P$. This is (almost) the classical model
- o Clarification 1: Expectations are model-dependent (which macroeconomic model are the agents living in?)
- o Clarification 2: Rational expectation are used to maximize utility/profits of the economic agents, not to maximize social welfare
- o The short-run aggregate supply is still upward sloping because it depends on the relationship between P and P^e
- o Assume a predictable monetary shock that increases money supply from M_0 to M_1
    - Expectations adjust immediately
    - Short-run aggregate supply shifts immediately
    - There is no short-run effect, the model is already in the long-run
    - The rational expectations assumption eliminates skips the short-run effect of Keynesian and monetarist models
- o Assume an unpredictable monetary shock that increase money supply from M_0 to M_1
    - Labor supply does not adjust price expectations
    - Then there is the short-run effect predicted by monetarist and Keynesian models (systematic errors)
    - Note: By construction, with *backward looking* expectations all shocks are unpredictable or unexpected

FIGURE 11-2 Effects of an Increase in the Money Supply: The New Classical View

a. Aggregate Supply and Demand

b. Labor Market
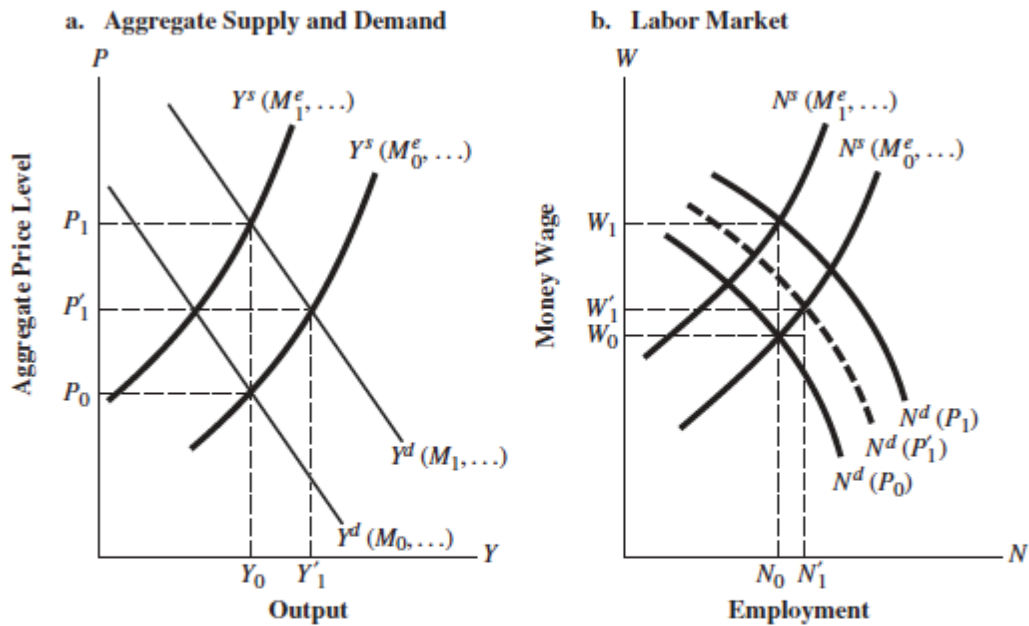
The increase in the money supply shifts the aggregate demand schedule from $Y^d(M_0, \ldots)$ to $Y^d(M_1, \ldots)$. By itself, this change would increase output to Y'_1 and the price level to P'_1. The increase in the price level would shift the labor demand schedule from $N^d(P_0)$ to $N^d(P'_1)$, and employment would rise to N'_1. However, because the increase in the money supply was anticipated, there is also an increase in the *expected* money supply. This increase shifts the aggregate supply schedule to the left from $Y^s(M^e_0, \ldots)$ to $Y^s(M^e_1, \ldots)$ and shifts the labor supply schedule to the left from $N^s(M^e_0, \ldots)$ to $N^s(M^e_1, \ldots)$. These shifts cause employment and output to fall back to their initial levels, N_0 and Y_0.

- New Classical policy conclusions
    - Assume a predictable shock (i.e. a fall in investment) [Figure 11-3]
        - Because expectations are rational labor supply adjust automatically when a shock is predictable
        - Therefore there is <u>no need</u> for a stabilizing policy
    - Assume an unpredictable shock (i.e. a fall in investment) [Figure 11-3]
        - Labor supply fails to immediately adjust to the shock
        - Fiscal/monetary policy <u>is desirable but not feasible</u>
        - By definition, an unpredictable shock is unpredictable; therefore the policy makers could not have foreseen it. If they would, so would economic agents and therefore the shock would be predictable
    - There is no useful role for policy that aims to stabilize aggregate demand
    - New classical economics is non-interventionist like the classical and monetarist models
    - Monetary policy: New classical economics tend to favor a monetary rule for monetary policy because it reduces the number and size of unexpected shocks [Chapter 17]
    - Fiscal policy: New classical economics tend to avoid excessive and inflationary stimuli. Such policies increase uncertainty
        - Some Unpleasant Monetarist Arithmetic (Sargent and Wallace, 1981)
            - Deficit can be financed either with bonds or by issuing money
            - If growth rate is less than the interest rates on debt, then the situation is unstable because there is a point where deficit (which includes the debt service) cannot be financed with bonds
            - Either: (1) fiscal reform, (2) high inflation (issue money to finance the deficit), or (3) default the debt

FIGURE 11-3   Effects of an Autonomous Decline in Investment: A New Classical View

a. **Aggregate Supply and Demand**

b. **Labor Market**
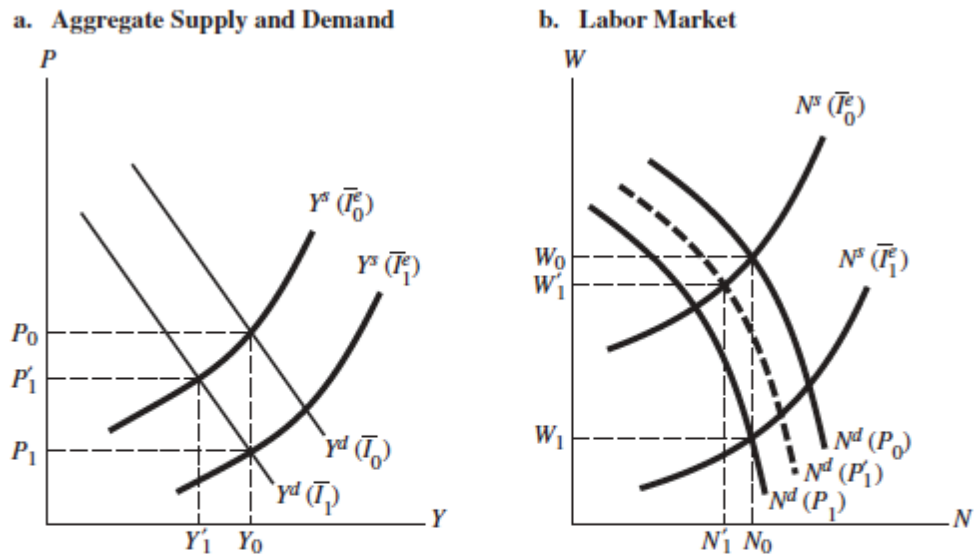
An autonomous decline in investment shifts the aggregate demand schedule from $Y^d(\bar{I}_0)$ to $Y^d(\bar{I}_1)$. This shift would reduce output from Y_0 to Y_1' and lower the price level from P_0 to P_1'. The fall in the price level shifts the labor demand schedule from $N^d(P_0)$ to $N^d(P_1')$, and as a result employment falls from N_0 to N_1'. These are the only effects if the decline in investment was not anticipated. If the decline in investment was anticipated, the expected level of autonomous investment ($\bar{I}^e$) will also fall (from $\bar{I}_0^e$ to $\bar{I}_1^e$). The aggregate supply schedule will shift from $Y^s(\bar{I}_0^e)$ to $Y^s(\bar{I}_1^e)$, and the labor supply schedule will shift from $N^s(\bar{I}_0^e)$ to $N^s(\bar{I}_1^e)$. Those shifts cause output and employment to return to their initial levels.

2. A Broader View on the New Classical Position

- New classical economics also reject the idea of sticky wages

- New classical economics is critical of the Keynesian approach:

    o Naïve theory of expectations

    o Theory should focus on economic agents behavior, not in consumption aggregates

- For new classical economics, a consistent model should adhere to the following assumptions:

    o Agents optimize in their own self-interest (versus macroeconomic aggregates)

    o Markets clear (otherwise there is a market intervention or an implicit assumption of irrationality)

    o These are called *microfoundations of macroeconomics* [micro and macro should be consistent with each other]

3. The Keynesian Countercritique

- Keynesians: There are some valid points, especially the criticism to the expectations theory.

- But some issues remain

- (1) The Question of Persistence

    o Keynesians:

        ▪ If the new classical model is correct, how does the model explain large periods of unemployment?

            - Great Depression (UK and US)

            - Crisis of 1970s, 1980s, and the 2008 subprime crisis

    o New Classical:

        ▪ The unexpected shock may have a short life, but the effect might persist in time

        ▪ Great Depression: A combination of a big shock (money supply fell by 1/3) plus massive government intervention in the economy (the "New Deal")

- (2) The Extreme Informational Assumption of Rational Expectations

    o Keynesians:

        ▪ Rational expectations err in assuming that economic agents are unrealistically sophisticated forecasters (especially in the labor market)

        ▪ To use *all* available information, the cost of acquiring said information should be zero. This is unrealistic

        ▪ Rational expectations seem more plausible in the long-run, once economic agents *learn* and therefore can *predict* the behavior of policy makers in a constant economic environment (i.e. no business cycles). But this is not the case in the short-run with an economic crisis

        ▪ If expectations are not rational, then there is room for aggregate demand policy stabilization

        ▪ New classical models *skip* the short-run and reach non-surprising conclusions (in the long-run policy effects go away)

    o New Classical:

        ▪ Yes, rational expectations is unreal, but so are all models

        ▪ Which unreal (simplified) expectation theory is better:

            - Backward looking expectations

            - Forward looking expectations

- (3) Auction Market versus Contractual Views of the Labor Market
    - Auction market: When prices adjust quickly, like in an auction
    - Contractual market: When prices are set by a contract and an adjustment needs to wait for the contract to expire
    - Keynesians:
        - Because of contracts, wages are sticky even in the presence of rational expectations
        - Social conventions as well: reduce wages to avoid layoffs (or, what is the same, replace an expensive employee with a cheaper one)
    - New Classical:
        - Yes, labor market is at least in part characterized by long-term contracts
        - They doubt these effect is too significant
            - Non-price (wage) variables can adjust [benefits provided by the employee]
- Digression
    - Expectations can be:
        - (1) Irrational (backwards looking)
        - (2) Rational (forward looking)
        - (3) *a*rational
    - *a*rational expectations
        - The economic agent that forms expectations is not just a calculator
        - Each economic agent *subjectively* process the received information and therefore expectations may differ
        - Subjective differences is not irrationality
            - Example: What would the phsychology of the president of a Big Player like a central bank dictate him to do? There's no rational prediction of such problem
            - Big Player: A simple economic agent that its capable of changing markets conditions with his own behavior