Discussion Handout #7
Econ 102
Prof. Eudey

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UW Madison, Fall 2016
Date: 10/21/16

Goals for this session

- Understand the background behind how the AD/AS model is derived.
- Investigate short run dynamics of the AD/AS model

Vocabulary

- Short run vs. Long run In micro you should remember, discussing short run vs long run when discussing perfect competition. In the short run firms can vary labor input, while in the long run can vary number of factories, machines etc... as well as labor input.)
- Endogenous vs. Exogenous Endo = in. Exo=out For example think about a long string of dominoes that you have set out in the living room. Imagine that this path of dominoes is your 'model'. You kick off the dominoes and they start to fall, this is an exogenous effect! An outside force (you) caused the model to start to fall. Now, the dominoes fall in the path they were set up - an endogenous effect. Now imagine after starting the dominoes, you run to the middle of the course and remove a bunch of dominoes. This could be considered another exogenous shock to your dominoes model. Now the dominoes will stop short and not continue past the point where you removed some dominoes. In our Keynesian model, an increase in government spending would be exogenous, but then the reverberations of this spending through the ecoomy from the multiplier effect is considered endogenous
- Ceteris Paribus "With other conditions staying the same" - Hold everything else constant.

Foundations of the Keynesian Model

- Marginal Propensity to Consume (MPC) (or conversely Marginal Propensity to Save (MPS)) Imagine the government hands you $100 - no strings attached. How much of this $100 do you spend? How much do you save? The percentage you spend is considered you MPC. The percentage you save is your MPS. Conveniently this also means 1-MPC = MPS
- Aggregate Expenditure Multiplier (1/(1-MPC)) When you are given an amount of money X from the government, you spend MPC*X. Think of the circular flow. This money you spend goes directly into someone elses pocket. Then they are able to spend a portion of that money, equal to MPC*(MPC*X). Summing together the total effect of the original X dollars as it runs around the circular flow, we get X*(1/(1-MPC)). So the MULTIPLIER is just (1/(1-MPC)
  - Note: This is also referred to as the 'Keynesian Multiplier', or 'Fiscal Multiplier'

Compiled on 2016/10/21 at 14:18:00

  - The multiplier is about 1.5 in the US, what does that mean the implied MPC is? Multiplier = 1.5 = (1/(1-MPC)) implies MPC = 2/3. This naievely implies that people save 1/3 of the money they receive, however this is not exactly correct as the real multiplier also is affected by taxes and indirect effects through financial markets. These make the measured multiplier smaller than you might have originally guessed.

- Aggregate Demand (AD) Demand for GDP at a certain price level
  - What are the four components of AD? C, I, G, NX... the 4 components of GDP
  - Why does the AD curve slope downwards? Real Wage Effect (holding nominal wages constant, as prices fall, real wages rise, so employment rises and output/GDP rises), International Trade Effect (as prices fall, our goods are cheaper for foreigners, so they buy more, raising output/GDP), Interest Rate Effect (we will discuss this in later weeks)
  - Where do shifts come from? Anything that affects C, I, G, NX, other than PRICES. An example of a price shock would be oil prices.

- Aggregate Supply (AS) Willingness of firms to supply output at a certain price level
  - Note: For today we are NOT going to worry about long-run aggregate supply, or shifts to AS

- Sticky Prices/Wages When prices or wages take time to adjust to new economic conditions, we call them 'sticky'. Examples of not sticky prices would be the price of - Food (have you ever seen MP-Market Price on menus??) or Gasoline. Notice that these are raw goods. Good which exhibit sticky prices include more manufactured or processed goods, perhaps iphones. Wages are also usually stickty due to contracts. These contracts might only be renegotiated every year.

Problems

1. What might cause a person's MPC to be larger (or smaller)? Wealthy people tend to have low MPC (high MPS), while poorer people have high MPC (low MPS) - they need the money more to buy immediate necessities. This makes MPC really hard to measure!!!

2. Draw a graph to show how a bigger Aggregate Expenditure Multiplier makes the AD shifts larger. See attached. Notice GDP is on they X axis, so bigger multiplier means further shifts.

3. AD shifts in the Keynesian model.
   (a) Draw the Keynesian model as it appears without any shifts. see attached
   (b) A popular suggestion to balance the budget of state governments is through **austerity measures** (raise taxes, cut government spending). If a large number of states do this, it will affect aggregate demand at the national level. Use the Keynesian model to demonstrate graph what will happen to the aggregate demand curve at the national level. See attached. AD shifts in to the left, so ceteris paribus this means recession. However in practice there are many things occuring at once so it may or may not cause a recession, also depending on size of the shift.

- Keynes argued that these short run shifts to AD cause business cycles.

(c) Suppose sanctions against North Korea are dropped, and as a result they are allowed to trade with the US. They demand a lot of american made luxury goods. Illustrate the effects of this in the Keynesian model. See attached graph. AD shifts out to the right.

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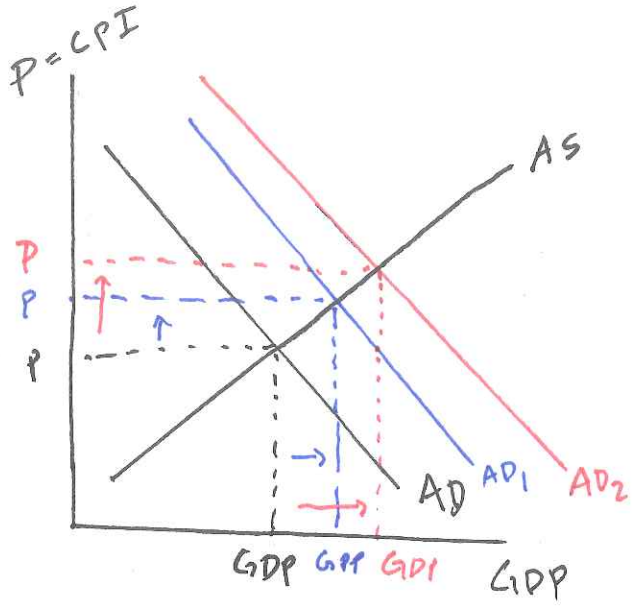
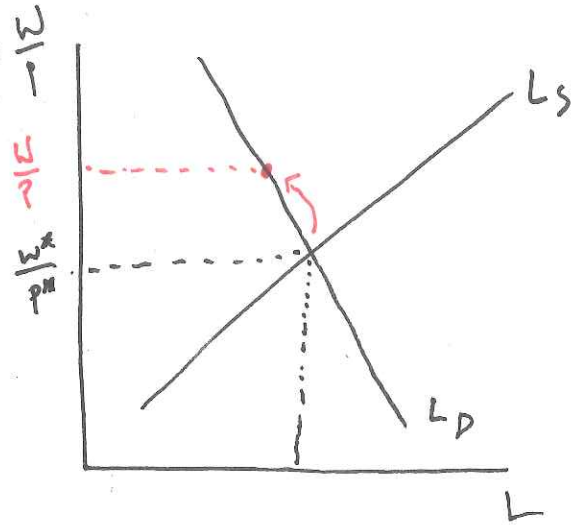
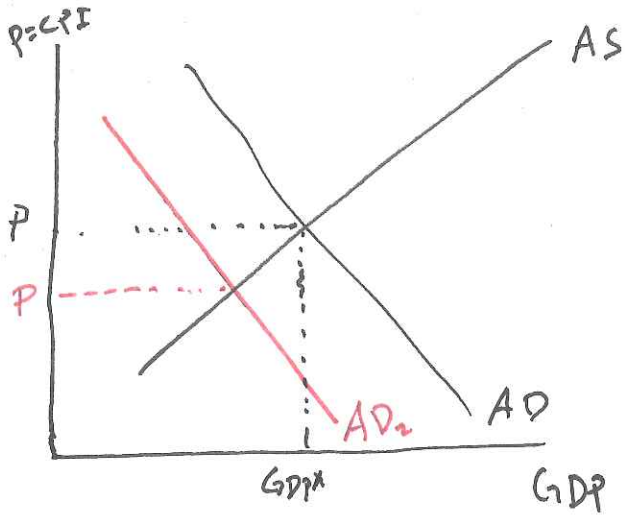


- We're assuming AS is not Vertical.
- We're looking at Short Run
- Blue = Smaller MPC
  i.e. Smaller Multiplier
- Red = Larger MPC
  i.e. Larger Multiplier

3 b)





G ↓

T ↑ ⇒ C ↓

- Negative Exogenous AD shock

NX ↑

positive AD Shock

c)