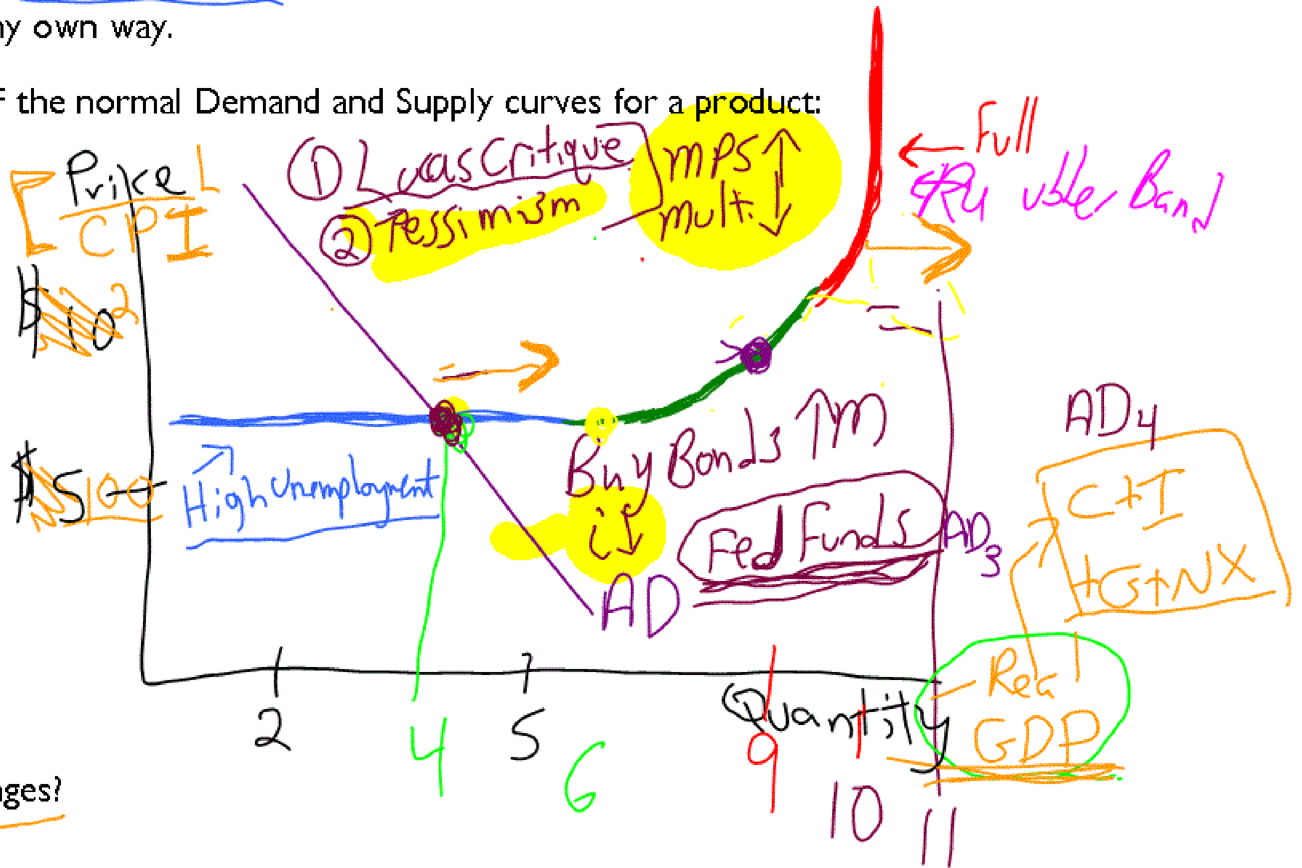
www.BurkeyAcademy.com Macroeconomics??

Introduction to Aggregate Supply and Aggregate Demand Model: Burkey Style

Note: Every textbook explains this model differently: I am giving a summary of the important points, in my own way.

Review OF the normal Demand and Supply curves for a product:



What Changes?

Macroeconomic Models and how to fix a broken economy:

Keynes taught us the following ideas about Macroeconomic Thinking:

Idea 1: The Circular Flow can break down because of Saving and Investment behavior by consumers and businesses.

Idea 2: **The Spending Multiplier Effect :**

Marginal Propensity to Save (MPS): The *proportion* of each additional dollar of income people save.

Example: The Government gives me an extra $1000 dollar raise: I spend $900 and save $100. **MPS=.10**

I spend $900 on a housepainter. He saves $90 and spends $810.

He spends 810 on tune-up. The mechanic saves $81 and spends $729.

He spends 729 on doctor bills. The doctor saves $72.90 and spends the rest…..

If this keeps going, that original $1000 the government gave me will eventually increase people's incomes by much more! How much more?

The Spending Multiplier $= \frac{1}{MPS} = \frac{1}{.10} = 10$, **So the original $1000 will turn into 10,000 in new spending in the economy.**

Idea 3: Prices go up fast, but go down slow! Classical economists thought that if people didn't buy enough goods, prices go down, and people will buy them.

Or, if people were unemployed, wages would go down, and people would get jobs.

This is true, but it usually happens too slowly to avoid a big, long recession.

*****So, when GDP falls, and people are out of work, what can we do? Keynes said that the government should just spend more to make up the difference: Replace C or I with G.**

This works sometimes, but not other times. Why not? OUR AD-AS Model will tell us!

I. We need an Aggregate Model to Explain the Macroeconomy

A. Single product supply and demand model does not explain some things.

1. Why prices rise or fall in general,
2. What determines level of aggregate output (GDP)
3. What determines changes in level of aggregate output.

B. Determination of aggregate model:

1. It combines prices of all individual goods and services into a single aggregate price level.
2. It combines equilibrium quantities of all individual goods and services into a single entity called "real domestic output".

II. AGGREGATE DEMAND is a schedule (TABLE) that shows the various amounts of real GDP which domestic and foreign buyers will desire to purchase at each possible price level.

A. The aggregate demand curve:

1. Shows an inverse relationship between price level and domestic output.
2. Why does it slope downward? NOT the same as for a single product demand curve!
   a. **Substitution effect doesn't apply** in the aggregate case, since there is no substitute for "everything."
   b. **Income effect also doesn't apply** in the aggregate case, since income now varies with aggregate output (GDP = Income).
3. SO what does apply? What explains **movements ALONG the AD curve?**
   a. **Wealth or "real balances effect":** When price level falls, purchasing power of existing financial assets rises, which can increase spending.
   b. **Interest-rate effect**: A decline in price level means lower interest rates, increasing spending.
   c. **Foreign purchases effect**: Ceteris Paribus, when prices here fall, foreigners will buy more of our cheaper goods! Also, Americans will favor domestic over foreign.
4. **OK, what causes the AD curve to SHIFT?**

Answer: ***Anything that causes a change in purchases by C + I + G + X (other than Prices) !!!***

These determinants are the "other things" (besides price level) that can cause a shift or change in aggregate demand (see Figure 11-3 in text).

1. **C** Changes in consumer spending, which can be caused by changes in several factors.
   a. Consumer wealth,
   b. Consumer expectations,
   c. Consumer indebtedness (the opposite of wealth) , and
   d. Taxes.
2. **I** Changes in investment spending, which can be caused by changes in several factors.
   a. Interest rates,
   b. Profit expectations,
   c. Business taxes,
   d. Technology, and
   e. Amount of excess capacity.
3. **G** A change in government spending (determined by Congress/President).
4. **X** Changes in net export spending unrelated to price level, which may be caused by changes in other factors such as:
   a. Income abroad, and
   b. Exchange rates: Depreciation of the dollar encourages U.S. exports since U.S. products become less expensive when foreign buyers can obtain more dollars for their currency. Conversely, dollar depreciation discourages import buying in the U.S. because our dollars can't be exchanged for as much foreign currency.

III. AGGREGATE SUPPLY is a schedule showing level of real domestic output available at each possible price level.

A. Aggregate supply curve may be viewed as having **three distinct segments.**

1. Horizontal range: where the price level remains constant with substantial output variation. **VERY HIGH unemployment and excess capacity** exist in this range, below full-employment output level.
2. Vertical range: where absolute full capacity is assumed, and any attempt to increase output will bid up resource and product prices.
3. Intermediate (upsloping) range: where the expansion of real output is accompanied by rising price level, in a region where unemployment is not extremely high, but not quite at full employment levels. Per unit production costs rise in

this stage because as we try to produce more in this range, since we are close to full employment their prices will be bid up and, therefore, **producer costs rise**, driving up the price level.

B. **What causes AS to increase or decrease?** Determinants are the "other things" besides price level that cause changes or shifts in aggregate supply.

1. A change in input prices, which can be caused by changes in several factors.
   a. Availability of resources (land, labor, capital, entrepreneurial ability),
   b. Prices of imported resources, and
   c. Market power in certain industries (monopolies, or competitive?).

2. Changes in productivity (productivity = real output / input) can cause changes in per-unit production cost (production cost per unit = total input cost / units of output). If productivity rises, production costs will fall. This can shift aggregate supply to the right and lower prices. The reverse is true when productivity falls!

3. Changes in legal environment, which can be caused by changes in other factors.
   a. Business taxes and/or subsidies,
   b. Government regulation.
   c. Less protection of property rights = fewer businesses will be in the market, lower AS

IV. Equilibrium: Real Output and the Price Level

A. Equilibrium price and quantity are found where the aggregate demand and supply curves intersect.

B. Shifting aggregate demand when a determinant changes will change the equilibrium.
1. Shifts in the horizontal range cause quantity changes but not price level.
2. Shifts in the intermediate and vertical ranges will cause demand-pull inflation with an increase in aggregate demand
3. Shifts AT the vertical (full employment range) can cause short-term increases in production beyond potential GDP—but like a rubber-band, real GDP will snap back to potential GDP, and prices will increase eventually.

C. The multiplier effect is weakened with price level changes in intermediate and vertical ranges of aggregate supply. The more price level increases, the less effect any increase in aggregate demand will have in increasing real GDP.

D. **Ratchet Effect:** Remember Keynes: Prices go up Fast, but go down slowly, if ever.
1. Reasons for the ratchet effect:
   a. Workers resist wage cuts.
   b. Employers risk losing workers whom they have trained.
   c. Employee morale and productivity may be damaged by lower wages.
   d. Minimum-wage laws set a floor under low wages.

2. Note: Some economists deny that the ratchet effect exists. However, evidence seems to support the ratchet effect because the price level has fallen only once since 1950 and we have experienced eight recessions.

E. Shifting aggregate supply when a determinant changes.
1. Leftward shift in curve is an example of cost-push inflation.
2. Rightward shift in curve will cause a decline in price level.

Monetary Policy Effect:
When the Federal Reserve Increases the Money Supply, **AD increases because...**

- Direct effect:
  - People have more money, so are willing to buy more at each price level
- Indirect effect:
  - More money means more deposits in banks.
  - More deposits means more excess reserves
  - So interest rates may go down, increasing AD

Fiscal Policy is More direct: The government Spends more money, Increasing G, which increases AD.
We have to be VERY careful, because Inflation tends to create even more inflation through shifts in the **Phillips Curve**.
Also keep in mind: