Review of Principles of Economics

This informally "reviews" the topics from your Principles classes that you need to remember and be able to apply in EC 250.

Microeconomics

Supply and Demand Basics

We use supply and demand analysis to predict what is going to happen to the price and quantity of a good (or service). We also use it "in reverse" to determine what must have happened in order to drive prices and quantities in a given direction. Lastly, it is very useful in analyzing the effects of one market on another.

Don't forget!! An "increase" in S or D moves the curve to the right while a "decrease" moves it to the left.

Factors of Demand

1) Tastes & Preferences
   a) Increasing tastes and preferences for a good increases demand for it.
2) Income
   a) Increasing consumers' incomes increases demand
3) Number of Buyers
   a) More buyers, higher demand
4) Price of Related Goods: Substitutes vs. Complements
   a) Higher price of a substitute good Y increases demand for good X
   b) Higher price of a complementary good Y decreases demand for good X
5) Expected Price
   a) Higher expected (future) price of good X, increases demand for good X today.

Factors of Supply

1) Price of Inputs
   a) Higher cost of production (price of inputs) decreases supply
2) Number of Sellers
   a) More sellers, higher supply
3) Price of Related Production Goods: Substitutes vs. Complements
   a) Higher price of a production substitute good Y, lowers supply of X
   b) Higher price of a production complement good Y, increases the supply of X
4) Technology
   a) Better production technology increases supply
5) Expected Price
   a) Higher expected (future) price of good X, decreases the supply of good X today.

Elasticity

Price elasticity of demand tells us how responsive consumers in a given market are when the price of the good in that market changes. Very elastic means the consumers respond a lot to the change in price. Inelastic means they don't respond much to the change in price.

$$\varepsilon_p \equiv \frac{\partial Q_d}{\partial P}\frac{P}{Q_d} \quad or \qquad \varepsilon_p \equiv \frac{\%\Delta Q_d}{\%\Delta P}$$

$$\left|\varepsilon_p\right| > 1 \Rightarrow Elastic \qquad \uparrow P \rightarrow \%\Delta \text{Re}v < 0$$

$$\left|\varepsilon_p\right| = 1 \Rightarrow Unit\ Elastic \qquad \uparrow P \rightarrow \%\Delta \text{Re}v = 0$$

$$\left|\varepsilon_p\right| < 1 \Rightarrow Inelastic \qquad \uparrow P \rightarrow \%\Delta \text{Re}v > 0$$

Factors Determining Elasticity

1) Number of substitute goods
   a) More and closer substitutes, higher elasticity
2) Time period under consideration
   a) Demand becomes more elastic over a longer time
3) Percent of consumer's income spent on the good
   a) The larger share of the consumer's budget, the more elastic

Macroeconomics

Money Neutrality

Changing the nominal money supply has a neutral effect on real variables (i.e., no effect) in the long run. It only affects nominal variables.

Quantity Equation of Money

Relates the price level to the quantity of money in the economy (and how that money changes hands).

$$MV = Py$$

where M is the nominal money supply, V is the velocity of money, P is the price level, and y is real GDP.

Its percentage change over time tells us how the growth rate of the money supply is related to inflation.

$$\%\Delta M + \%\Delta V = \%\Delta P + \%\Delta y \quad \Rightarrow \quad \mu + \%\Delta V = \Pi + \%\Delta y$$

where μ is the growth rate of the money supply and Π is the economy's inflation rate (percentage change in the price level over time).

Aggregate Supply and Demand

Used to determine the impact of some shock to the economy on the price level, output and unemployment. Like micro S&D analysis, we can use AS-AD analysis in reverse to look at data and guess what must have been happening to cause the price level, output and unemployment to move in a give direction.

Factors of Long-Run Aggregate Supply (LRAS): $LRAS = f(\overset{+}{A}, \overset{+}{L}, \overset{+}{K})$

1. Technology (A)
   An improvement in technology increases the long run production of the economy.
2. Labor (L)
   Sustainably employing more workers in aggregate increases the long run production of the economy.
3. Capital (K)
   Increasing the economy's capital stock increases the long run production of the economy.

Factors of Short-Run Aggregate Supply (SRAS): $SRAS = f(\overset{+}{LRAS}, \overset{-}{P^e})$

1. LRAS
   Anything increasing the long-run aggregate supply, increases the short run supply too.
2. Price Expectations (P^e)
   Firms' and workers' expectations about the price level influence currently contracted prices of the inputs to production. Higher expected price level increases input prices today, raising production costs and lowering SRAS.

Factors of Aggregate Demand (AD): $AD = f(\overset{+}{C}, \overset{+}{I}, \overset{+}{G}, \overset{+}{NX}, \overset{+}{M})$

1. C, I, G, NX
   Increasing any of these factors increases aggregate demand for domestic resources and thus increases aggregate demand.
2. Money Supply (M)
   Increasing the supply of money in an economy will increase aggregate demand. Actually, the change in M affects C, I and NX (generally through the interest rate), but here we're including it as a separate variable because it's easier to remember that it's a factor.

General steps:

Short run: Shock hits and AS, AD or LRAS moves.
Medium run: policy makers do something
    Fiscal policy can change G or taxes.
    Monetary policy can change M.
Long run: prices and expected prices finish adjusting

The LRAS usually acts like the anchor around which all the other curves move. They generally begin and end on the same LRAS (unless there was a shock to the LRAS itself).

Generally, something hits AD, policymakers do something (moving AD) or not, and then SRAS moves to cross AD on the LRAS curve again.