

MACROECONOMICS FALL SEMESTER STUDY GUIDE

- **Real GDP** is the variable most commonly used to monitor short-run changes in the economy because it is the most comprehensive measure of economic activity. It measures the value of all final goods and services produced within a given time as well as total income, adjusted for inflation.
- When real GDP falls, the rate of unemployment rises.
- When studying the year-to-year changes in the economy, monetary neutrality is no longer appropriate. Real and nominal variables are highly intertwined and changes in the money supply can temporarily push real GDP away from its long run trend.

- **Model of aggregate demand and aggregate supply**- the model that most economists use to explain short-run fluctuations in economic activity around its long-run trend.
- **Aggregate-demand curve** - a curve that shows the quantity of goods and services that households, firms, the government, and customers abroad want to buy at each price level.
- **Aggregate supply-curve** - a curve that shows the quantity of goods and services that firms choose to produce at each price level.
- The demand curve is downward sloping because of
 - The wealth effect → if price level falls, then the dollars you are holding rise in value, which increases your real wealth and your ability to buy goods and services. A decrease in the price value encourages people to spend more.
 - **The interest rate effect** → As price level falls, households try to reduce their holdings by lending money out. Might use excess money to buy interest-bearing bonds or deposit excess money into an interest-bearing savings accounts. *As households convert money into interest-bearing assets, they drive down interest rates. Lower interest rates make borrowing less expensive, it encourages firms to borrow more to invest in new plants & equipment, and households to borrow more to invest in new housing. A lower interest rate increases the quantity of goods and services demanded.* A lower price level reduces the interest rate, encouraging greater spending on investment goods, thereby increases the quantity of goods and services demanded.
 - **The Exchange-Rate effect** → when a fall in the U.S. price level causes U.S. interest rates to fall, the real value of the dollar declines in foreign exchange markets. This

depreciation stimulates U.S. net exports and thereby increases the quantity of goods and services demanded.

- Why the Aggregate-Demand curve might shift
 - o Shifts arising from changes in consumption - if people become more concerned about saving for retirement, they might reduce their current consumption. Then, goods and services demanded at any price level would be lower and shift to the left. If the economy booms, people will become less concerned about saving and the quantity demanded at a given price will be higher, so the curve will shift to the right. When government cuts taxes, it encourages people to spend, so the curve will shift to the right. When taxes are raised, people cut back on spending so the curve will shift to the left.
 - o Shifts arising from changes in investment - if the computer industry comes out with a new line of fast computers, firms will invest and the quantity demanded will be higher and the curve will shift to the right. If firms become pessimistic about the future, they will cut back on investing and shift the curve to the left. An investment tax credit increases the quantity of investment goods that firms demand at any given interest rate, and will shift the curve to the right. The repeal of an investment tax credit will shift the curve to the left. An increase in the money supply lowers the interest rate in the short-run. This decrease in the interest rate makes borrowing less costly, which stimulates investment spending and shifts the curve to the right. A decrease in the money supply will raise the interest rate and discourage spending, and move the curve to the left.
 - o Shifts arising from changes in government purchases - If Congress decided to reduce purchases of new weapons systems, the quantity demanded at the given price level is lower, and would shift the curve to the left. If state governments build more highways, there is a greater quantity of goods demanded and the curve will shift to the right.
 - o Shifts arising from changes in net exports - If Europe experiences a recession, they will buy less American goods and reduce U.S. net exports at every price level and shift the curve to the left. When Europe's economy gets better, they will buy more goods and shift the curve to the right. If other countries bid up the value of the U.S. dollar in the foreign exchange market, the dollar will appreciate and U.S. goods become more expensive compared to foreign

goods and the curve will shift to the left. If the U.S. dollar depreciates, the curve will shift to the left.

- **The Aggregate-Supply Curve** - tells us the total quantity of goods and services that firms produce and sell at any given price. In the long run, the aggregate supply curve is vertical, whereas in the short run, the aggregate supply curve is upward sloping.
- **Why the aggregate supply curve is vertical in the long run.**
In the long run, an economy's production of goods and services (its real GDP) depends on its supplies of labor, capital, and natural resources and on the available technology used to turn these factors of production into goods and services. Price level does not affect the long run determinants of real GDP, so the curve is vertical. In the long run, labor, capital, resources, etc determine the total quantity of goods and services supplied and the quantity supplied is the same regardless of what the price level happens to be.
- **Why the long run aggregate supply curve might shift.**
 - o The long run level of production is sometimes called potential output or full employment output. The natural rate of output shows what the economy produces when unemployment is at its natural or normal rate.
 - o Shifts arising from changes in labor - increase in immigration leads to more workers which leads to an increase in goods and services supplied, so the curve would shift to the right. If American workers left to go abroad, there would be a decrease in quantity supplied and the curve would shift to the left. If Congress raised minimum wage, the natural rate of unemployment would rise and the curve would shift to the left. If government reformed the unemployment insurance system to encourage people to find jobs faster, then unemployment would fall and the curve would shift to the right.
 - o Shifts arising from changes in capital - increase in capital stock would increase productivity and then increase the quantity of goods supplied (the curve would shift to the right). A decrease in capital stock decreases productivity and shifts the curve to the left. (Applies to human and physical capital).
 - o Shifts arising from changes in natural resources - The discovery of new mineral deposits shift the curve to the right. A change in weather that hurts farming would shift the curve to the left.