Supplemental Slides: Mechanics of AD-AS

Expands on Lectures 15 & 16

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All Possibilities

- Start in a long run equilibrium, then the economy experiences a shock, which is:
  - Either to *demand* or *supply*
  - Either *temporary* or *permanent*
  - Either an *increase* or a *decrease*

- For temporary shocks, we then looked at how the government can intervene with fiscal/monetary policy

- We also looked at how the Phillips curve can be affected

- We’ll go through all cases here
Always start out like this.

Long run equilibrium is defined as where Price = Price expectations, which implies that GDP is equal to the natural rate of output.
Temporary Decrease in Demand

- In the short run, prices and output decrease
- In the long run, AD returns to where it started, and prices and output return to where they started
Temporary Increase in Demand

- In the short run, prices and output increase
- In the long run, AD returns to where it started, and prices and output return to where they started
Temporary Decrease in Supply

- In the short run, prices increase and output decreases.
- In the long run, both supply curves return to where they started, and prices and output return to where they started.
Temporary Increase in Supply

- In the short run, prices decrease and output increases.
- In the long run, both supply curves return to where they started, and prices and output return to where they started.
In the short run, prices and output decrease.

In the long run, SRAS shifts to the right as price expectations decrease. Then the new long run equilibrium is where the new AD curve intersects LRAS. Output is the same as at the initial equilibrium, and prices are lower.
Permanent Increase in Demand

- In the short run, prices and output increase.
- In the long run, SRAS shifts to the left as price expectations increase. Then the new long run equilibrium is where the new AD curve intersects LRAS. Output is the same as at the initial equilibrium, and prices are higher.
In the short run, prices increase and output decreases.

Notice that anywhere that all three curves intersect is a long run equilibrium. Therefore, the short run equilibrium is a long run equilibrium. So the economy remains there, with higher prices and lower output, permanently.
In the short run, prices decrease and output increases.

Notice that anywhere that all three curves intersect is a long run equilibrium. Therefore, the short run equilibrium is a long run equilibrium. So the economy remains there, with lower prices and higher output, permanently.
Government Intervention

- Next we look at the case where the government intervenes in the economy to try to always keep real GDP the same.

- The government (using fiscal or monetary policy) can only move AD. So their rule is:
  - When $Y < Y_N$, increase AD
  - When $Y > Y_N$, decrease AD

- We will just look at the case when the government responds to temporary shocks.
Temporary Decrease in Demand

- Since the shock causes GDP to decrease, the government increases AD
- This returns AD to its original position, and restores the economy to its original equilibrium
- Therefore, the effect of government intervention is to *shorten* the recession
Temporary Increase in Demand

Since the shock causes GDP to increase, the government decreases AD.

This returns AD to its original position, and restores the economy to its original equilibrium.

Therefore, the effect of government intervention is to shorten the boom.
Temporary Decrease in Supply

- Now the economy is at a new equilibrium with the original GDP and higher prices. This is a long run equilibrium, because as the supply shock subsides, LRAS returns to its original position.
- Therefore, the effect of government intervention is to *shorten* the recession, but permanently increase prices.
Temporary Increase in Supply

- Now the economy is at a new equilibrium with the original GDP and lower prices. This is a long run equilibrium, because as the supply shock subsides, LRAS returns to its original position.
- Therefore, the effect of government intervention is to *shorten* the boom, but permanently decrease prices.

Since the shock causes GDP to increase, the government decreases AD.
Phillips Curve

- Remember the basic rule:
  - When AD shifts, move along the SR Phillips Curve
  - When SRAS shifts, shift the SR Phillips Curve
  - LR Phillips Curve does not shift
Permanent Increase in AD

- See the part above on what happens in the AD-AS diagram
- When AD shifts, you move to the left along the SR Phillips Curve
- When SRAS shifts, you shift the SR Phillips Curve
Permanent Increase in AS

- When SRAS shifts, shift the SR Phillips Curve