AD-AS Definitions

Fiscal Policy: The government's use of primarily expenditure and taxes to affect the economy.

1. Government Deficit Spending: determines G component of Y (real GDP) = C + I + G + NX
2. Income Taxing: method of government revenue, and affects C component of Y

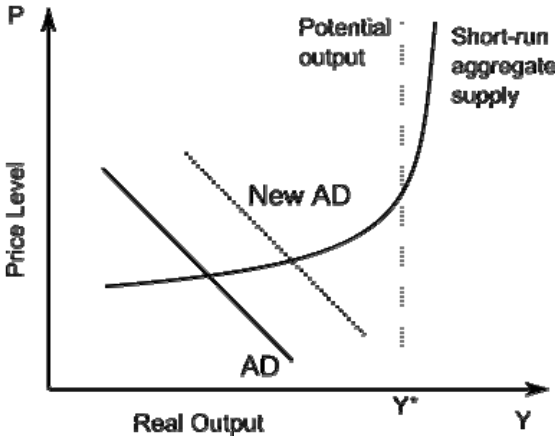
Discretionary v. Automatic

Discretionary Policy: macroeconomic policy based on *ad hoc* judgment of policymakers (e.g. changing tax rates)

Automatic Stabilizer: predetermined set of regulations (e.g. automatic unemployment benefits in face of recession)

AD-AS Model

Y-Axis: *aggregate price level (P)*
X-Axis: *real output/GDP (Y)*



Curves of AD-AS Model

Aggregate Demand: indicates relationship between P and the quantity of aggregate output demanded

Why is AD downward sloping?

Wealth Effect: increase in P → decrease in aggregate spending due to decreased purchasing power

Interest Rate Effect: increase in P → decrease in amt. of money available for loaning/investment (increase cost of borrowing), i.e. people hold more money

Net Export Effect: domestic P increases → domestic goods/services = more expensive → domestic consumers prefer foreign goods/services → imports increase, exports decrease → net exports decrease → decrease in aggregate quantity demanded

What shifts the AD curve? ("demand shocks")
Note: all processes described work the other way around.

For Y (real GDP) = C + I + G + NX:

Changes in Expectations: consumers' expectations for future income (confidence in economy) → affects C component
Changes in Wealth: real value of household assets
Size of Existing Stock of Physical Capital: incentive for firms to invest depends on current stock of physical capital (housing surplus = decreased incentive for residential investment)
Fiscal Policy: gov's spending/taxing (see above) → affects G component
Monetary Policy: Fed's management of money supply affects interest rate (you should know this, but see another study guide for details if needed) → affects consumer investment (changes in price of borrowing) → affects I component

---

Aggregate Supply: indicates relationship between P and aggregate output producers are willing to supply

Why is AS upward sloping?

Nominal Wages: inflexible production costs (worker income) → are "sticky": slow to change in response to changing macroeconomic conditions: changes in price level are slow to affect production costs → increase in price level without immediate increase in nominal wages causes decrease in revenue (and vice versa) → positive AS slope

Short-run Aggregate Supply (SRAS): positive linear AS curve that arises as a result of the explanation given above.

Long-run Aggregate Supply (LRAS): vertical linear AS curve that represents the potential output of the macroeconomy → SRAS curve on the AS-AD model gravitates towards this real output value in the long run.

What shifts the SRAS curve? ("supply shocks")

Changes in Commodity Prices: price of commodities (e.g. oil) that go into production (i.e. input costs) affect AS curve
Changes in Nominal Wages: renegotiation of wage contracts after a period of time or employment benefits → change production costs due to nominal wages → affect AS curve
Changes in Productivity: technology/innovation/intelligence contribute to decreasing production costs

What shifts the LRAS curve? (changes in potential output)

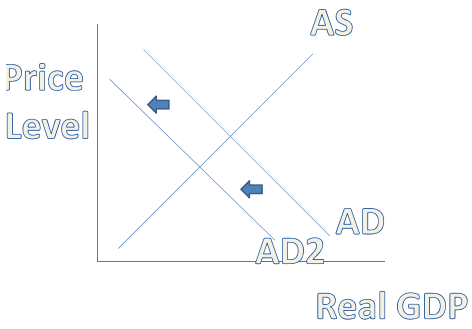
AD-AS Sample Problems

Note:
Recessionary Gap: occurs when true output is below potential output
Inflationary Gap: occurs when true output is above potential output

Use the AD/AS model to illustrate and explain how each of the following changes will affect the equilibrium price level and real GDP:

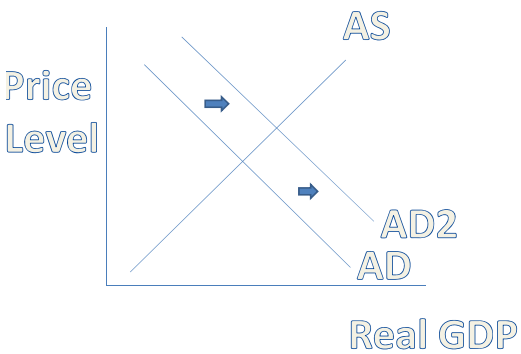
1. *Consumers expect a recession*

   Demand now decreases because they consumers expect a lower price later



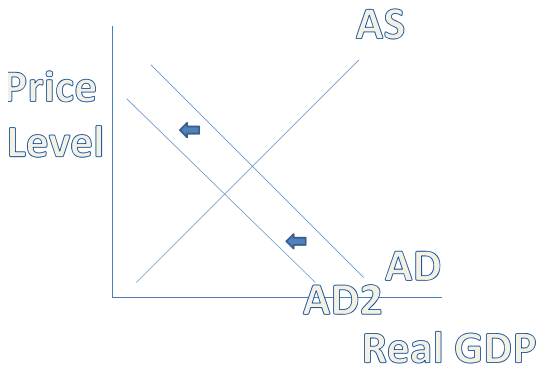
2. *Foreign income rises*

   Foreign income rises→ demand for domestic good increases→ AD shifts right



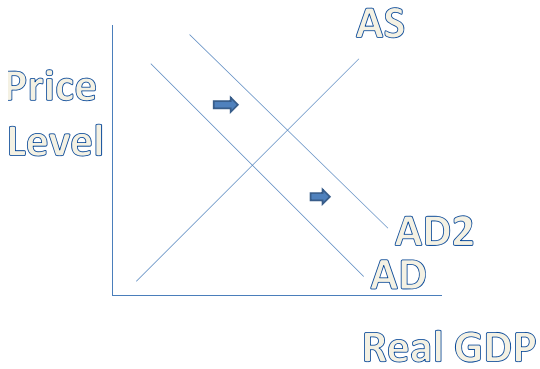
3. *Foreign price levels fall*

Foreign price levels fall→ cheaper to buy foreign product→ imports increases→ AD shifts left



4. *Government spending increases*

Government spending increases→ government purchase more goods→ AD shifts right



Shifts of the long-run aggregate supply curve can be brought about by such things as technology or changes in resource quantities. While changes in aggregate supply determinants and resulting shifts of the long-run aggregate supply curve are less dramatic than changes affecting aggregate demand, they DO change. In most cases the changes are slow and steady, for example, the natural growth of the population.

Keynesian (AE) Model

Marginal Propensity to Consume (MPC): the increase in consumer spending when disposable income rises by $1.

Formula:

$$MPC = \frac{\Delta\ Consumer\ spending}{\Delta\ Disposable\ income}$$

Marginal Propensity to Save (MPS): the fraction of an additional dollar of disposable income that is saved.

$$MPS = 1 - MPC$$

Change in GDP given MPC:

$$\Delta real\ GDP = \frac{1}{1 - MPC} \times income_{initial}$$

$\frac{1}{1 - MPC}$ is known as the ***multiplier*** (for consumption, investment and government)

Tax multiplier = $-\frac{MPS}{MPC}$

Autonomous Change in Aggregate Spending (AAS): the initial change in aggregate spending at a given level of real GDP.

(Y = real GDP)

$$\Delta Y = \frac{1}{1 - MPC} \times \Delta AAS$$

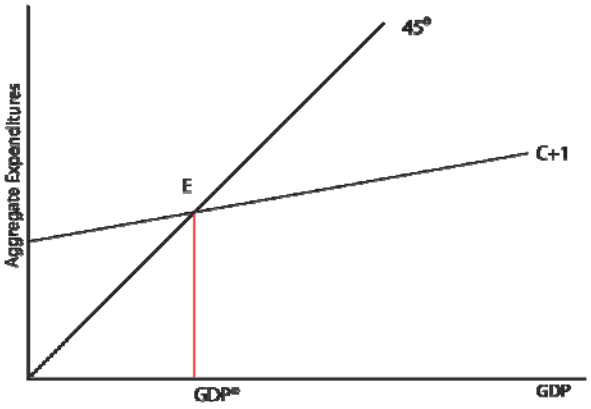
Consumption Function:

$$c = a + MPC \times y_d$$

c = consumer spending
a = autonomous consumer spending
y_d = consumer income

This formula in its aggregate form is used to sketch a graph of consumer spending v. current disposable income.

Y-Axis: Aggregate Expenditure
X-Axis: real GDP
Y-Intercept: AAS
Slope: MPC



Aggregate Consumer Spending (ACS)

$C = A + MPC \times Y_D$

ACS's intersection with $45°$ line indicates point at which aggregate expenditure equals real GDP.

What shifts the ACS?

<u>Changes in Expected Future Disposable Income:</u>

- e.g. possibility of lost job → cut back on spending
- e.g. expected salary raise → more spending

<u>Changes in Aggregate Wealth:</u>

- more savings in bank → more spending
- *smooth* consumption over lifetime (i.e. *life-cycle hypothesis*)