

Section A: Basic Concepts

(a) Distinguish between aggregate expenditure and aggregate demand.

The AD function shows the level of total spending at various levels of prices while the AE function relates the level of total spending to the various levels of income.

AGGREGATE DEMAND

Definition

Aggregate Demand (AD) is defined as the *total demand* by households, businesses, government and the foreign sectors for final goods and services produced in the economy at alternative price levels.

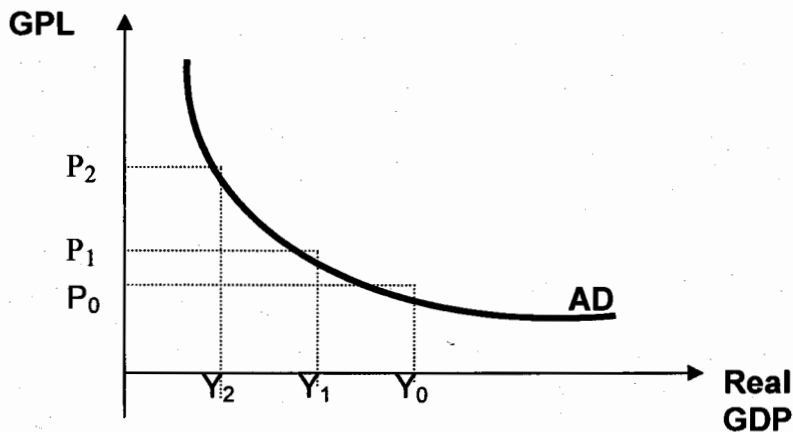
With the definition in mind, aggregate demand refers to the total level of spending on the domestically produced goods and services by the 4 sectors in the economy.

Therefore, aggregate demand can be expressed as the sum of consumer spending (C), private investment (I), government expenditure (G) and expenditure on exports (X) less expenditure on imports (M).

$$AD = C + I + G + (X - M)$$

The AD curve, as illustrated in Figure 2, gives the relationship between the aggregate output (real GDP) and the general price level.

Figure 2: The Aggregate Demand Curve



Other things being equal, the higher the price level, the smaller the desired aggregate demand and vice-versa. This gives rise to a downward sloping AD curve.

Aggregate demand sums demand of the four economic decision makers: households, firms, government and the rest of the world on the goods and services produced within the domestic economy. Hence, as average price level increases, other things constant, households will demand less housing and furniture, firms will demand fewer trucks and tools, governments will demand less computer software and military hardware, and the rest of the world will demand less goods and services produced by the domestic firms. Thus, **price level changes**, there will be a **movement** along the AD curve and the relationship is inverse.

AGGREGATE SUPPLY

Definition

Aggregate Supply (AS) is the total amount of goods and services that firms would be willing and able to produce and sell at each possible price level.

The AS reflects the ability of economy to produce final goods and services with the available factors of production.

There is yet to be an agreement over the slope of the AS curve. To capture the diversity of views over the shape of the AS curve, we can think of the AS curve as comprising 3 distinct segments as illustrated in Figure 3.

- the horizontal segment which is known as the Keynesian range;
- the intermediate range which is the positively sloped segment;
- the vertical segment which is known as the Classical range.

(b) What effect will the following have on aggregate demand and why?

(a) An increase in the expected rate of inflation
AD will increase.

(b) An improvement in business sentiments
AD will increase.

(c) A cut in taxes
AD will increase.

(c) What effect will the following have on aggregate supply and why?

(d) An increase in trade union bargaining power
AS will increase.

(e) A reduction in the price level
Aggregate quantity supplied will fall \Rightarrow A movement along the given AS curve

(f) An increase in the number of women available for work
AS will increase.

Section B: Application of AD and AS

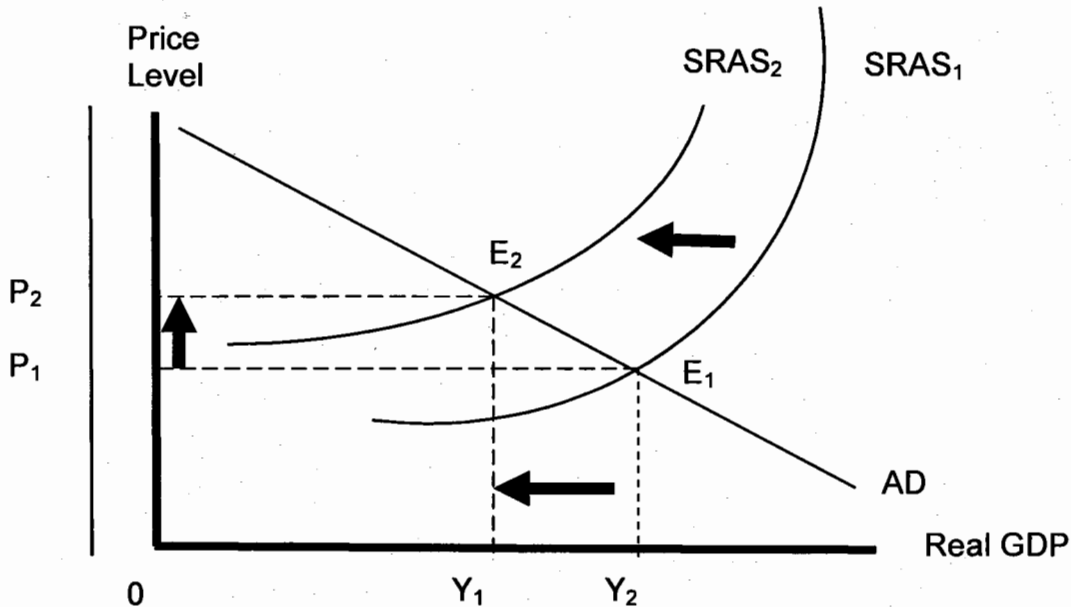
1. Suppose the Singapore dollar has depreciated steeply against major currencies of the world in 2007. What will be the impact on AD and AS in Singapore? What will be the net effect? Draw an AD-AS diagram to illustrate your results.

Suppose the Singapore dollar has depreciated from US \$ 1 = S\$1.00 to US \$1 = S\$2.00

Weaker Singapore Dollar Shifting Aggregate Supply Curve.

To the extent that Singapore companies import raw materials and partially processed goods from abroad, a weaker Singapore dollar would lead to higher input prices in Singapore. This would lead to a shift to the left of the short run AS as shown in Figure 1. In the simplified model, equilibrium real GDP would fall, and the price level would rise. Employment would also tend to decrease with lower GDP.

Figure 1: SRAS shifts to the left (Imports cost more in the domestic market)



Weaker Singapore Dollar Shifting Aggregate Demand Curve

Foreign residents will find that Singapore made goods are cheaper, expressed in their own currency. Suppose 1 CDs cost S\$1 in Singapore. 1 S'pore made CDs will cost a US resident US\$1 when the exchange rate is US \$ 1 = S\$1.00. After the Singapore dollar had become weaker and the exchange rate is changed to US \$1 = S\$2.00 that same 10 CDs would cost US\$0.50. So price of S'pore exports in terms of foreign currencies will fall. If DD_x is elastic, TR_x will rise.

Conversely, Singapore residents will find that the weaker Singapore dollar makes imported goods more expensive ie price of imports in terms of domestic currency (S\$) will rise. If DD for import is elastic, total expenditure on import will fall (TE_m will fall).

Net effect of $(X-M)$ will rise

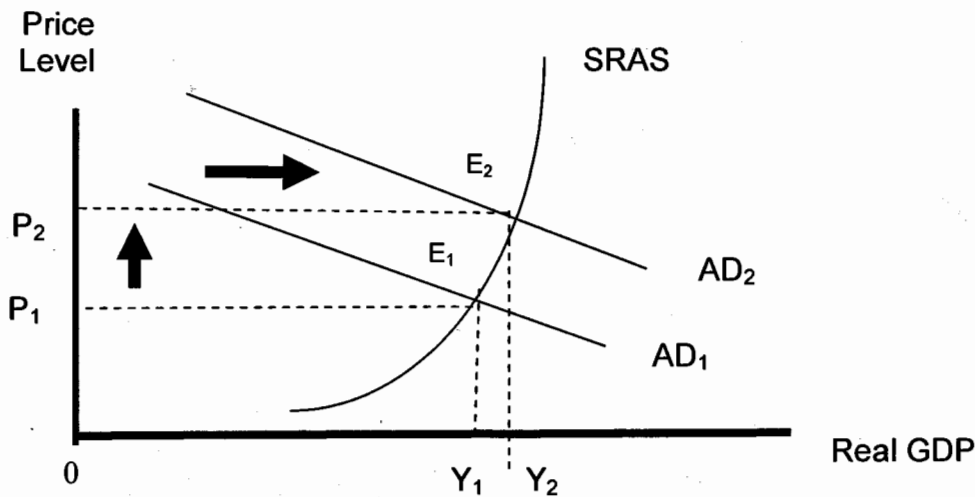
This would result in a shift in AD to the right. The result is a tendency for equilibrium real GDP and the price level to rise and unemployment to fall. (See Figure 2)

Note: Marshall Lerner condition is fulfilled (will elaborate in topic on international trade):

If the sum of the elasticity of demand for the goods for exports and imports are more than one ($E_x + E_m > 1$) – ie necessarily to have $E_x > 1$ & $E_m > 1$

Net exports value rise, employment in export industries will increase so AD shift right.

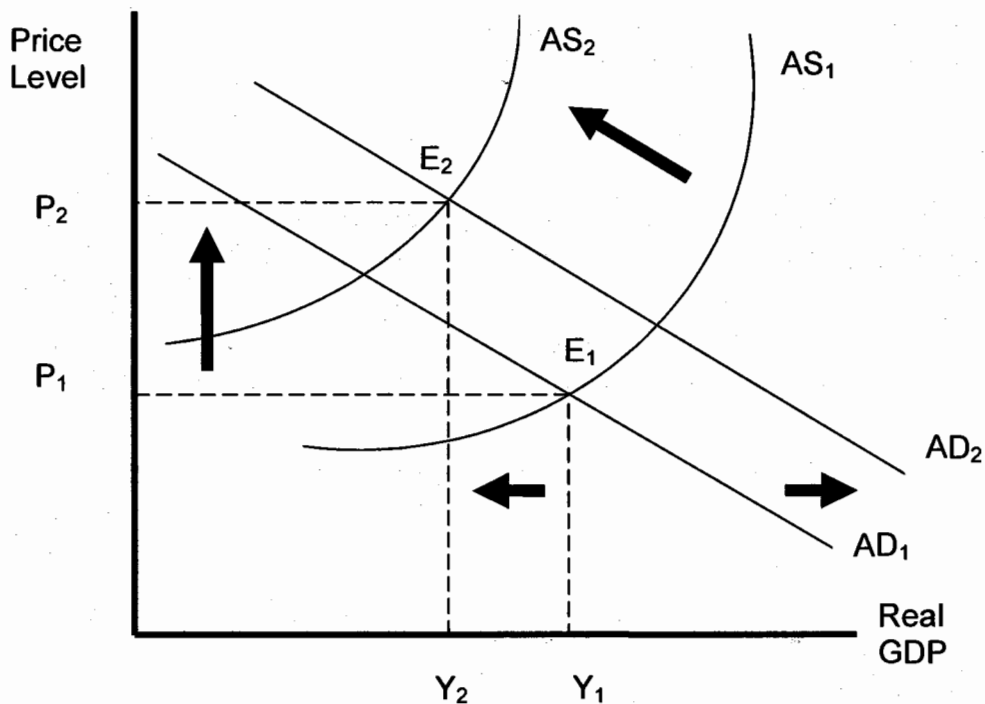
Figure 2: AD shifts to the right (Exports are cheaper in the International Market)



The Net Effect

A weaker Singapore dollar simultaneously leads to a leftward shift of SRAS and a rightward shift of AD. The net effect depends on the extent of the shift in AD and AS and the steepness of AS and AD. If the AD shifts more than the short-run AS curve, equilibrium real GDP will rise. Conversely, if the short-run AS shifts more than the AD curve, equilibrium real GDP will fall. (See Figure 3).

Figure 3: The Simultaneous Shifts Of AD and SRAS Where SRAS Shifts More Than AD



2. Research activity:

How has Singapore continually increased aggregate supply in the last ten years?

Suggest some Supply side policies: