

# Introduction (Chapter - I)

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Q-1) Using the

A-1) The aggregate demand (AD) curve presents, for each given price level, the level of output at which the goods markets and money markets are simultaneously in equilibrium.

The aggregate supply (AS) curve depicts, for each given price level, the quantity of the output firms are willing to supply.

Using the AD-AS model, the output and price are determined by the intersection of AS and AD curves. However, the shape of the curves ~~is~~ different in different time frame. This is because the shape of the aggregate supply curve is horizontal in the short-run and vertical in the long run.

In the short-run, the AS curve is horizontal and the AD curve is downward sloping from left to right. The output is determined by the AD whereas the price remains fixed. Therefore, the price level is fixed where the AS hits the vertical axis and output level can change.

In the long run, the AS curve is vertical and AD curve is downward sloping. The output is determined by the aggregate supply curve hits the horizontal axis and prices can change.



In the medium run, the A.S. curve is upward sloping and the AD curve is downward sloping. The intersection of both curves after fluctuations determine the output and price level.

The very long run behaviour of the economy is the domain of growth theory. In studying growth theory, we ask how the accumulation of inputs - investments in machinery for example - and improvements in technology leads to increased standard of living. We ignore recessions and booms and related short-run fluctuations in employment of people and other resources. We assume that labour, capital, raw materials and so on are fully employed.

In the long run, the level of output is determined solely by supply-side consideration. Output is determined by the productive capacity of the economy. The price level is determined by the level of demand relative to the output the economy can supply. It follows that in the long-run output is determined by AS ~~alone~~ and prices are determined by both AS and A.D.

In the long run, when the A.S. curve shifts rightwards, there will be an increase in the potential output. Thus the output can vary in the long-run.

Suppose the AD curve is fixed but the AS curve can change. In such a case, with the change in supply, the price level will change. For instance, an increase in the supply will



reduce the price level. Therefore, the price level changes over time keeping AD fixed.

A.2)

The output gap measures the gap between actual output and the output the economy could produce at full employment given the existing resources. Full-employment output is also called potential output.

In the question the actual output is given is \$120 billion and the potential given is \$156 billion.

Output gap = actual output - potential output

Output gap =  $120 - 156$

Output gap =  $-36$

We can see that the output gap is of  $-\$36$  billion. This means that the actual output is less than potential output and the output gap is negative.

So the hypothetical economy here is in recession. During recession, unemployment increases and less output is produced than what could be produced with the existing resources and technology.

On my calculation of the output gap, i.e.  $-\$36$  billion, I expect the unemployment level to be higher than ~~an~~ usual.

A.3.)

Variable	Today's year (2020)	Birth year (2002)
Real GDP (in billion)	19041.662	13493.064
Population (in thousand)	330199	288051
Real GDP per capita =	57818.6548118962	46842.62161908829
Real GDP / population		