The Unemployment & Inflation Trade-off: Phillips Curve

GCE A-LEVEL & IB ECONOMICS

Phillips Curve (Unemployment & Inflation)

What do you think happens to inflation when there is low unemployment?

What type of relationship do they share?

Explain why.

Phillips Curve (Unemployment & Inflation)

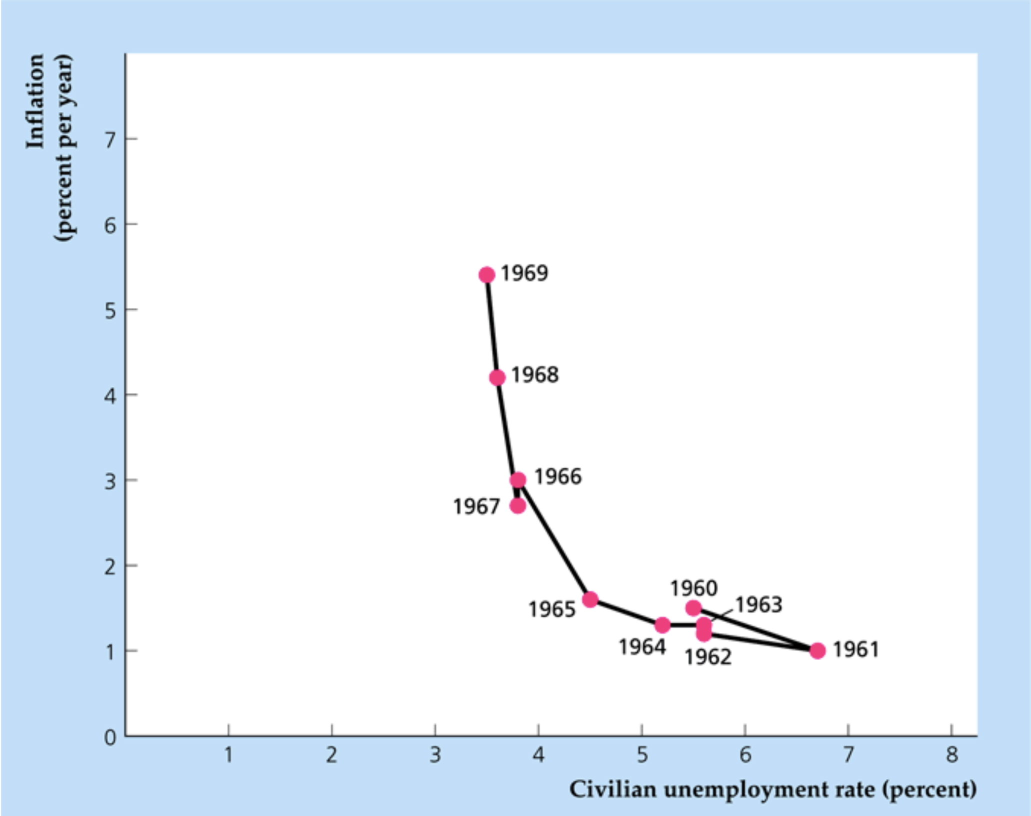
When unemployment is low, it is more difficult to hire employees. This means firms will increase wages in order to recruit someone.

Increase in wages generally leads to inflation, due to higher costs of production which is passed onto the consumer.

Phillips Curve (Unemployment & Inflation)

Hence, there is a trade-off between the two macroeconomic objectives of the government: Low Unemployment and Low/Stable Inflation.

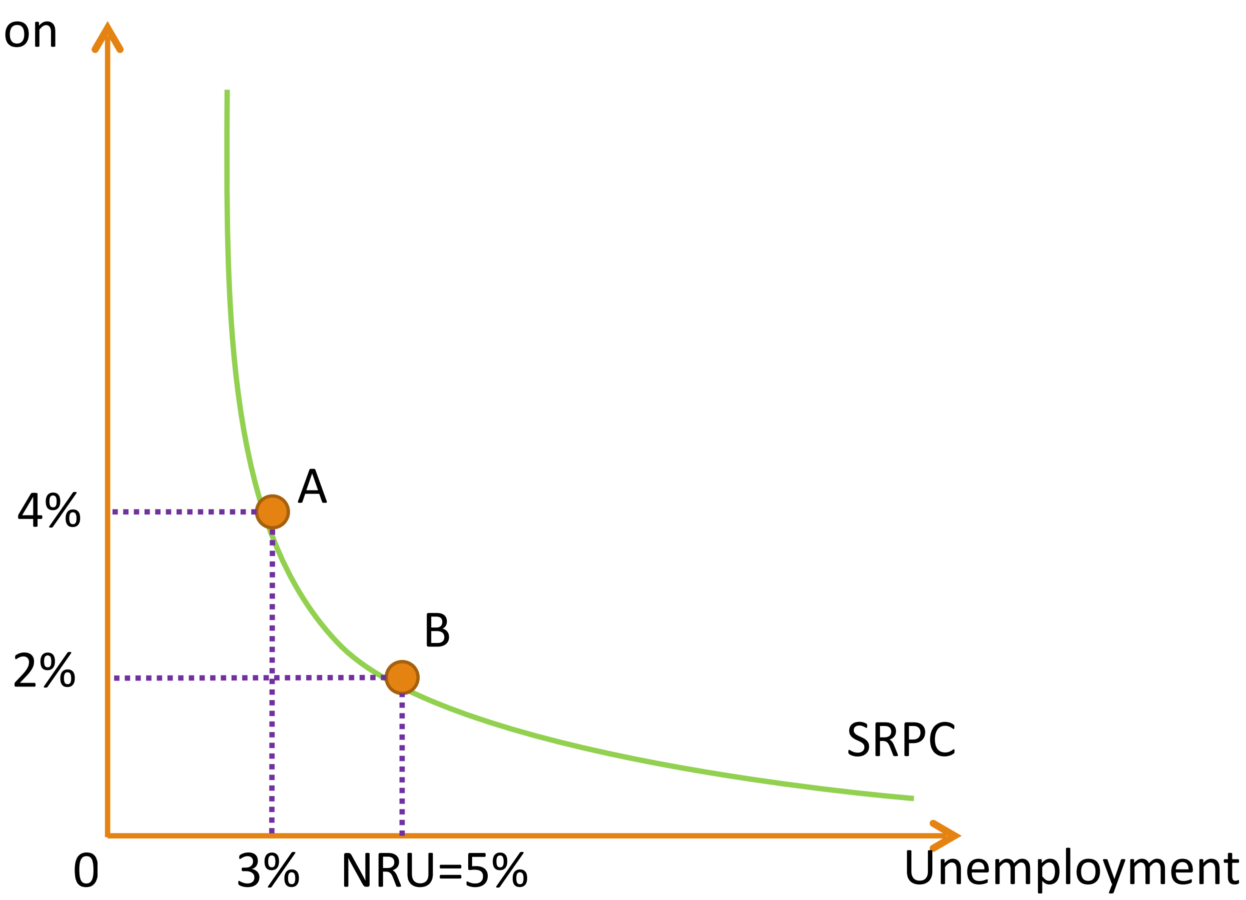
A.W. Phillips discovered the statistical relationship between unemployment and inflation in 1950s in the US, hence the name Phillip's Curve.



Phillips Curve (Unemployment & Inflation)

The Short-Run Phillips Curve (SRPC) shows the relationship between inflation rate and unemployment rate, when the natural rate of unemployment (and the expected inflation rate) remain constant.

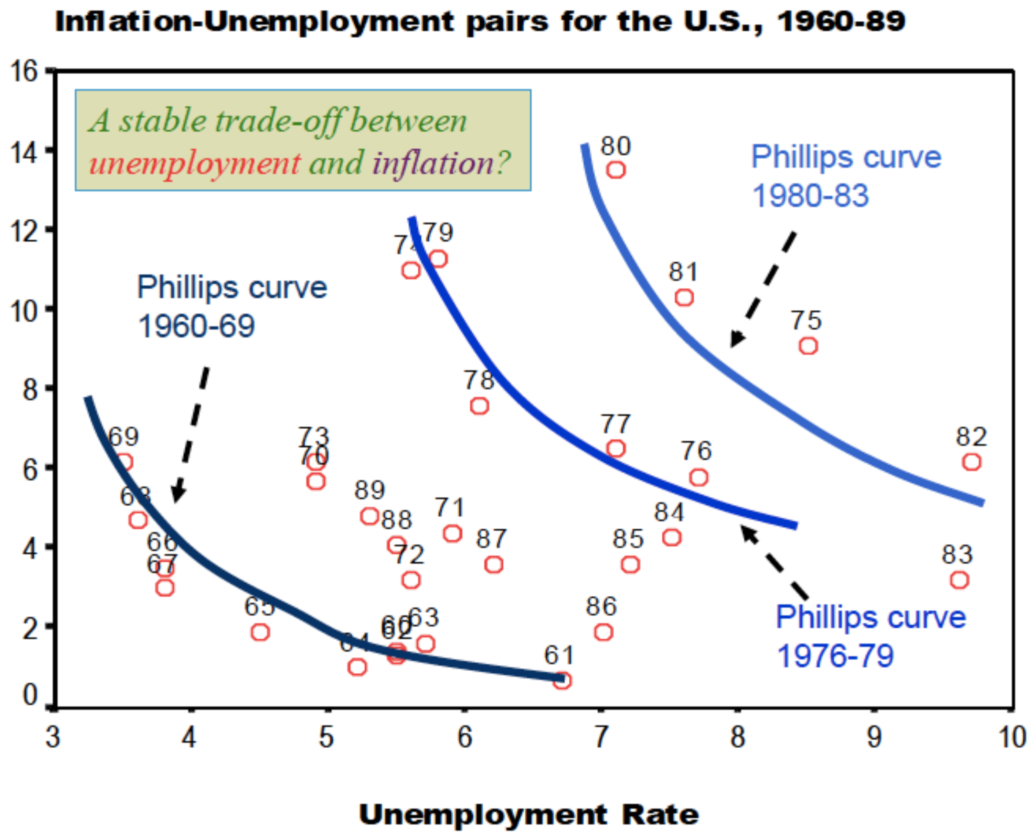
Assuming the natural rate of unemployment for the economy is 5% (i.e. frictional & structural unemployment when the economy is fully utilized), there will be an inflation rate of 2%. If there is an increase in AD leading to a higher demand for labour, unemployment will fall to 3% but inflation of the economy will also rise to 4% as depicted by the SRPC.



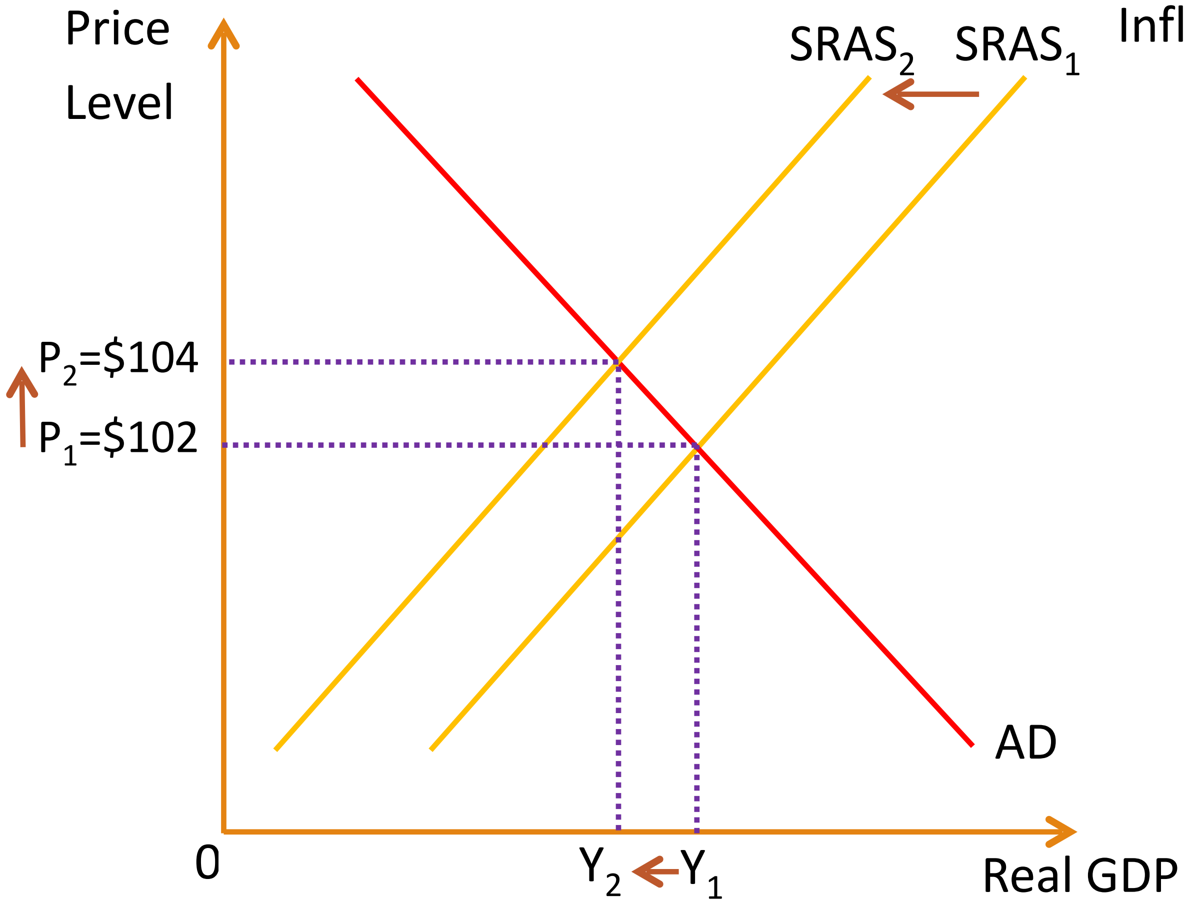
Phillips Curve (Unemployment & Inflation)

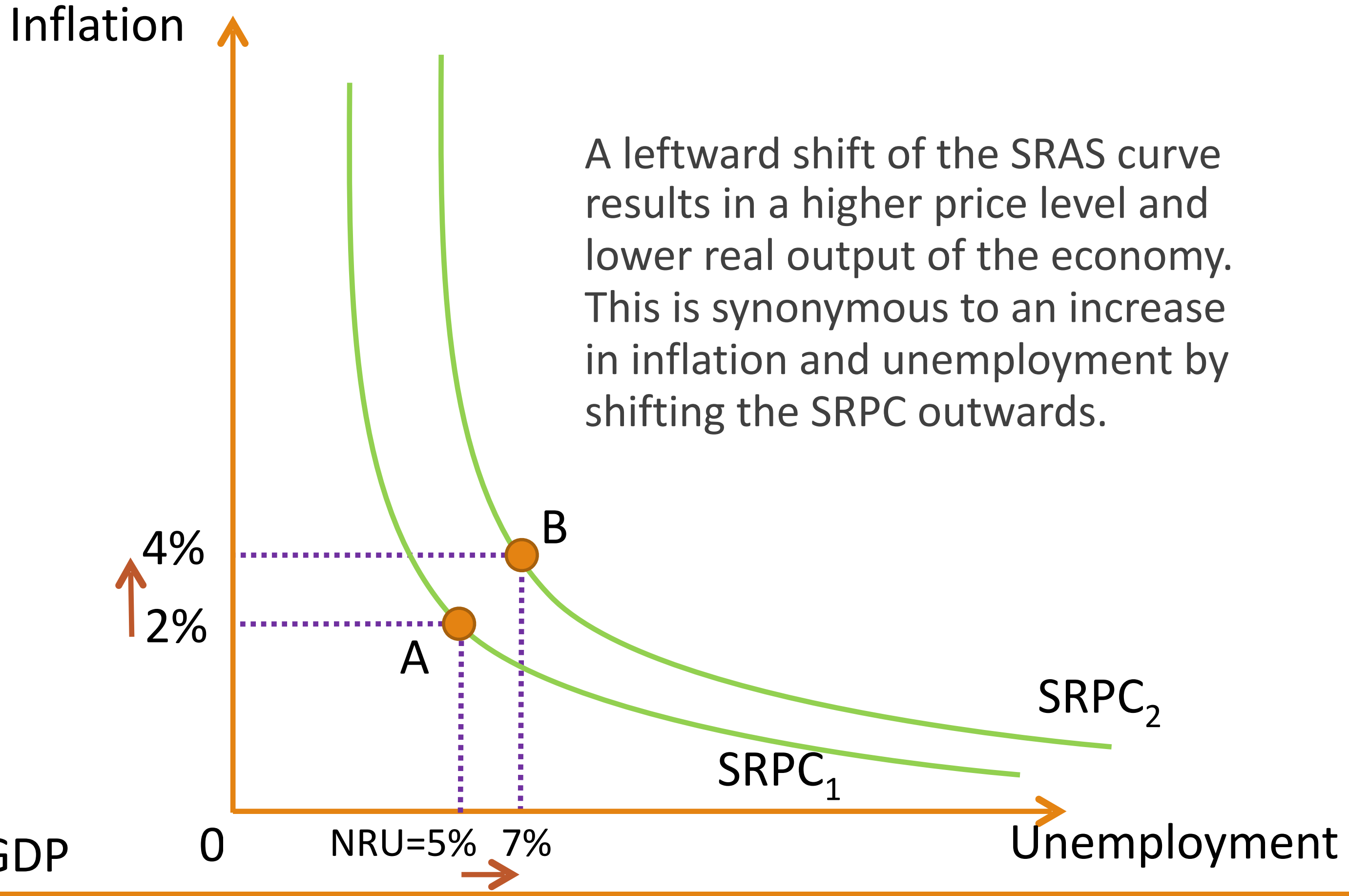
However, the Phillips Curve relationship broke down in 1970s where there was high stagflation (i.e. low/negative economic growth, combined with high inflation and unemployment). This was due to short-run supply shocks (e.g. from crude oil) and change in inflation expectations.

As in the statistical data plotted on the right, it seems that instead of having one Phillips Curve, there are multiple SRPCs being shifted outwards. The shifts are actually caused by the decrease in SRAS due to the supply shocks.



Phillips Curve (Unemployment & Inflation)



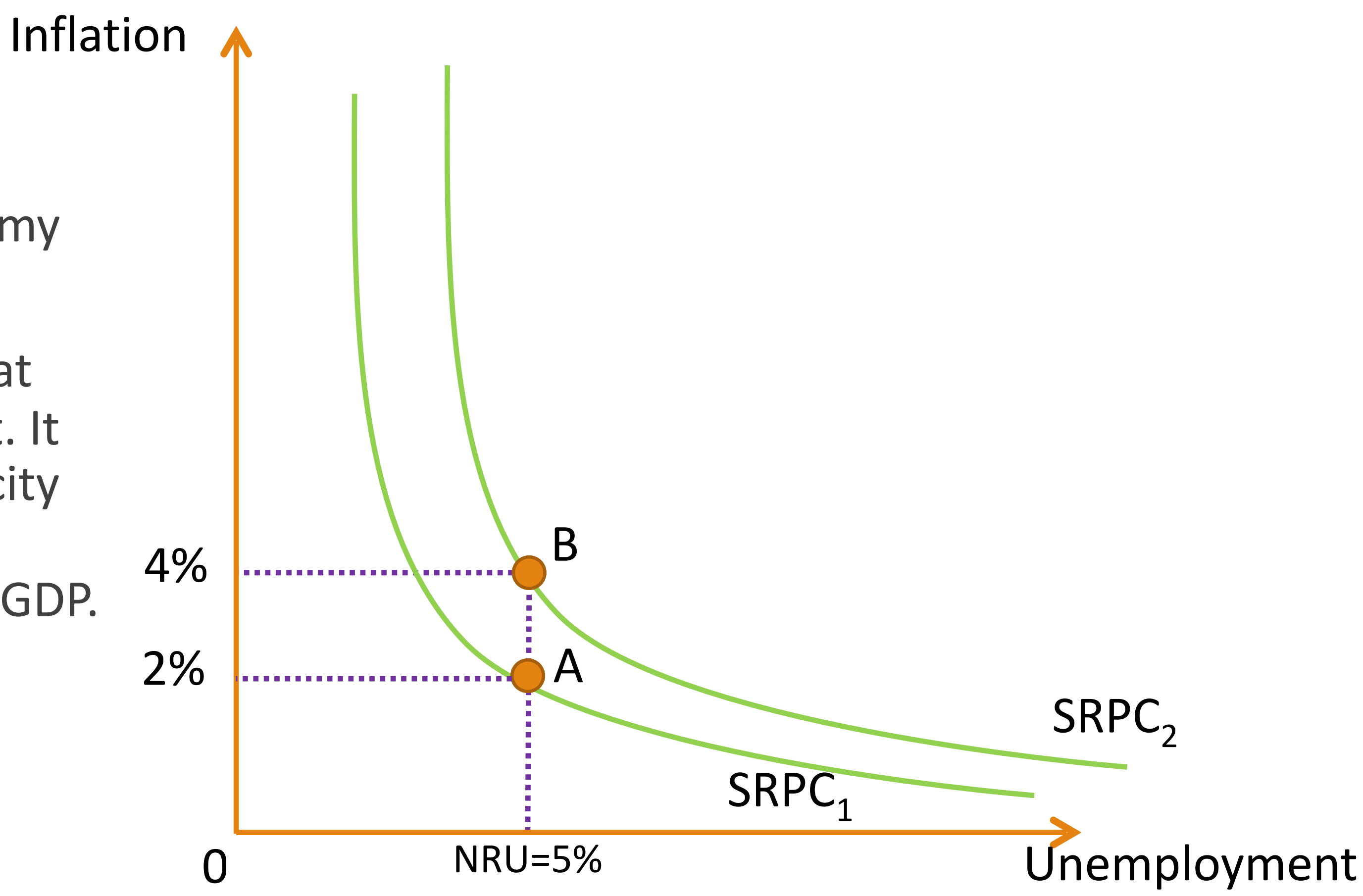


A leftward shift of the SRAS curve results in a higher price level and lower real output of the economy. This is synonymous to an increase in inflation and unemployment by shifting the SRPC outwards.

Phillips Curve (Unemployment & Inflation)

An outward SRPC shift indicates higher inflation and unemployment of the economy (i.e. stagflation).

There is now higher inflationary pressure at the original natural rate of unemployment. It also shows a larger amount of spare capacity is not being utilized in the economy from higher unemployment, leading to a lower GDP.

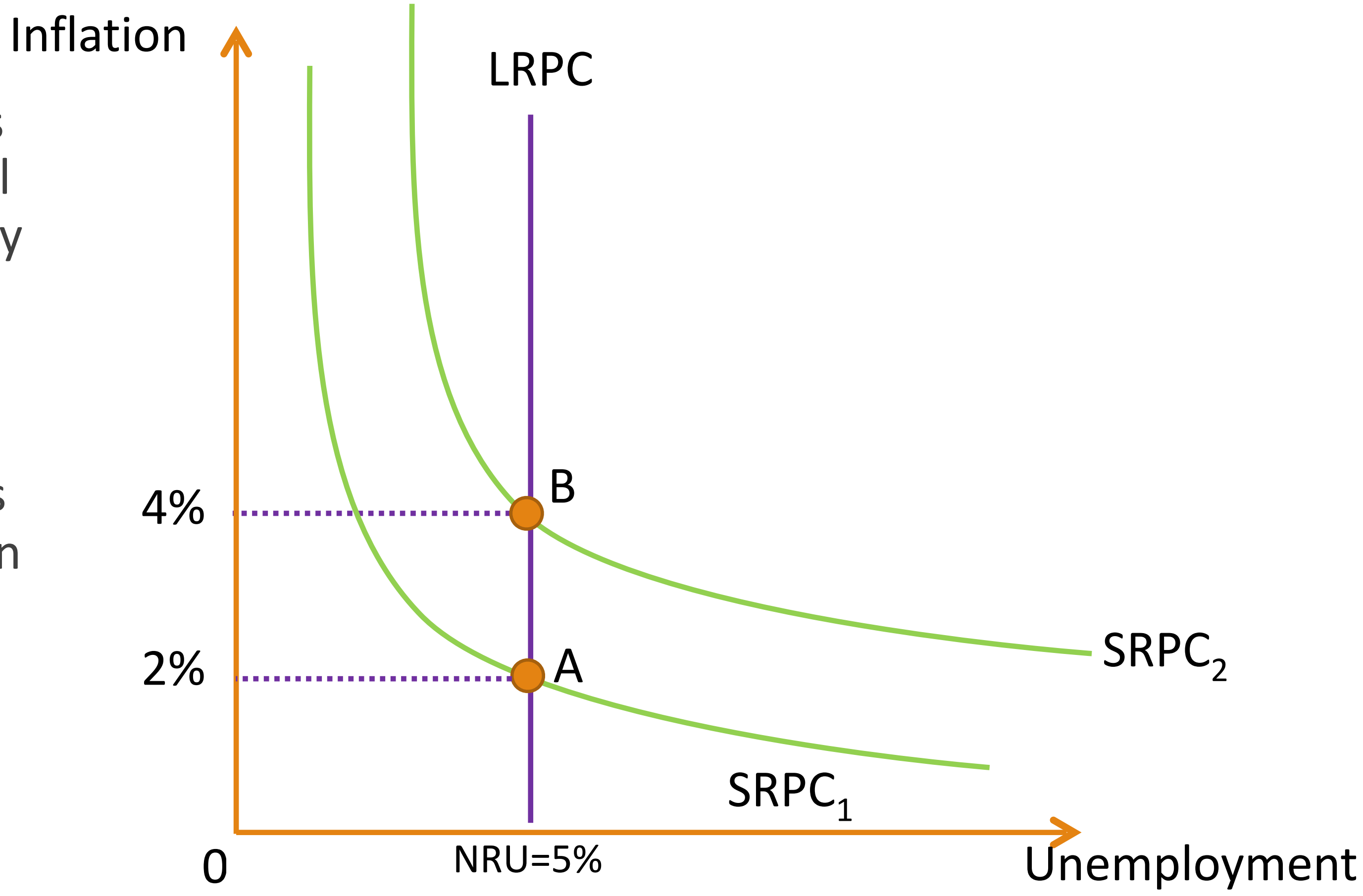


Phillips Curve (Unemployment & Inflation)

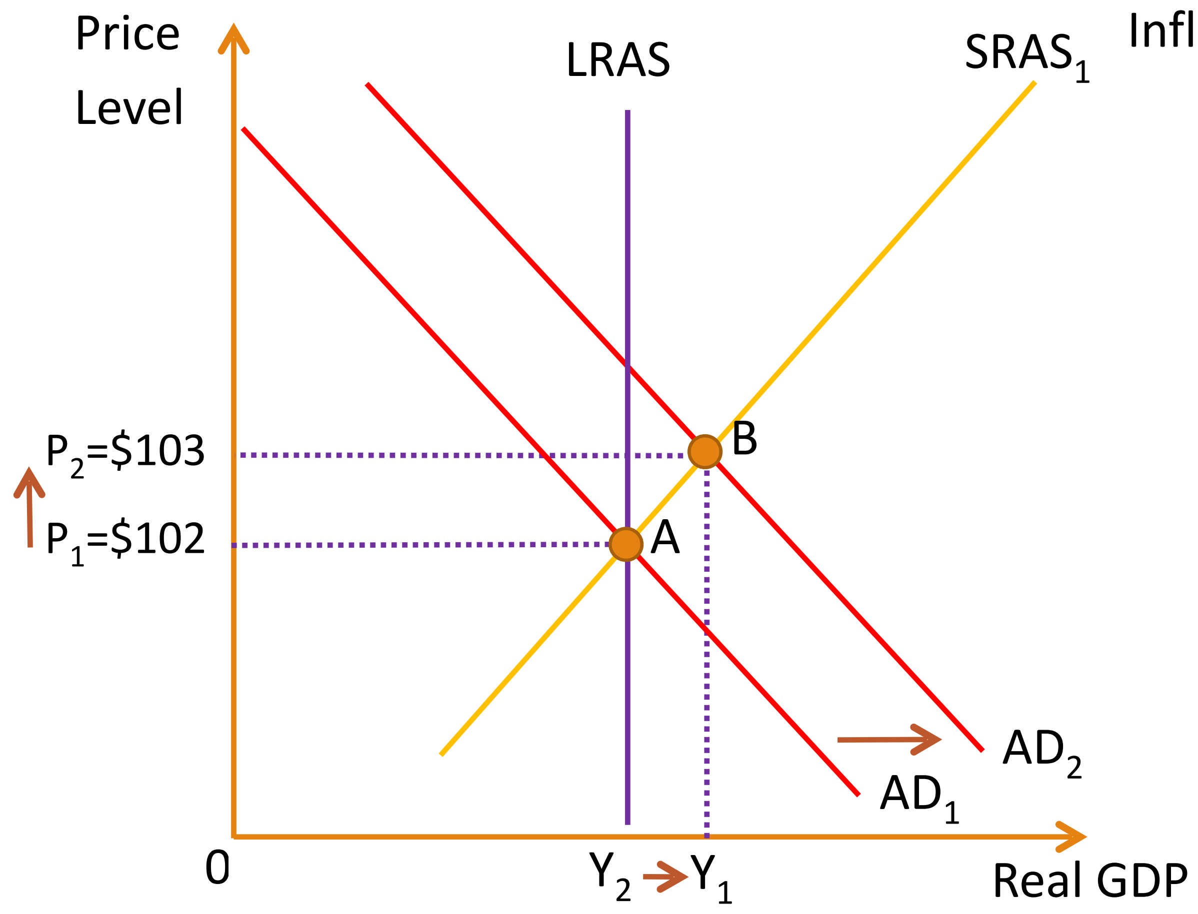
In the long run, it is theorised that there is only one unemployment rate – the natural rate of unemployment where the economy works at full capacity (potential output). Whereas inflation can be at any level depending on money supply.

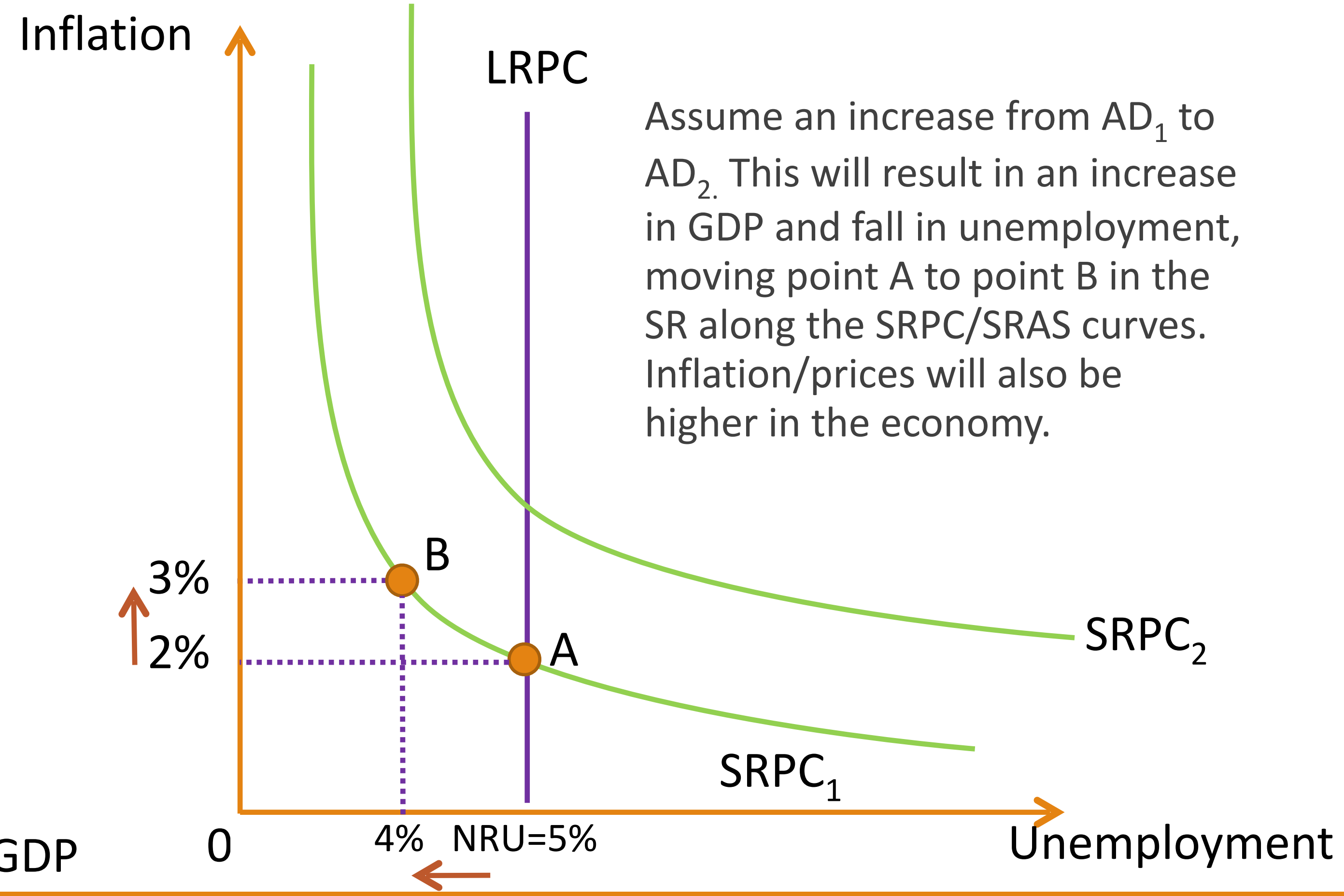
The Long Run Phillips Curve (LRPC) implies that there is no trade-off between inflation and unemployment in the long run.

The LRPC is synonymous to the classical LRAS curve.



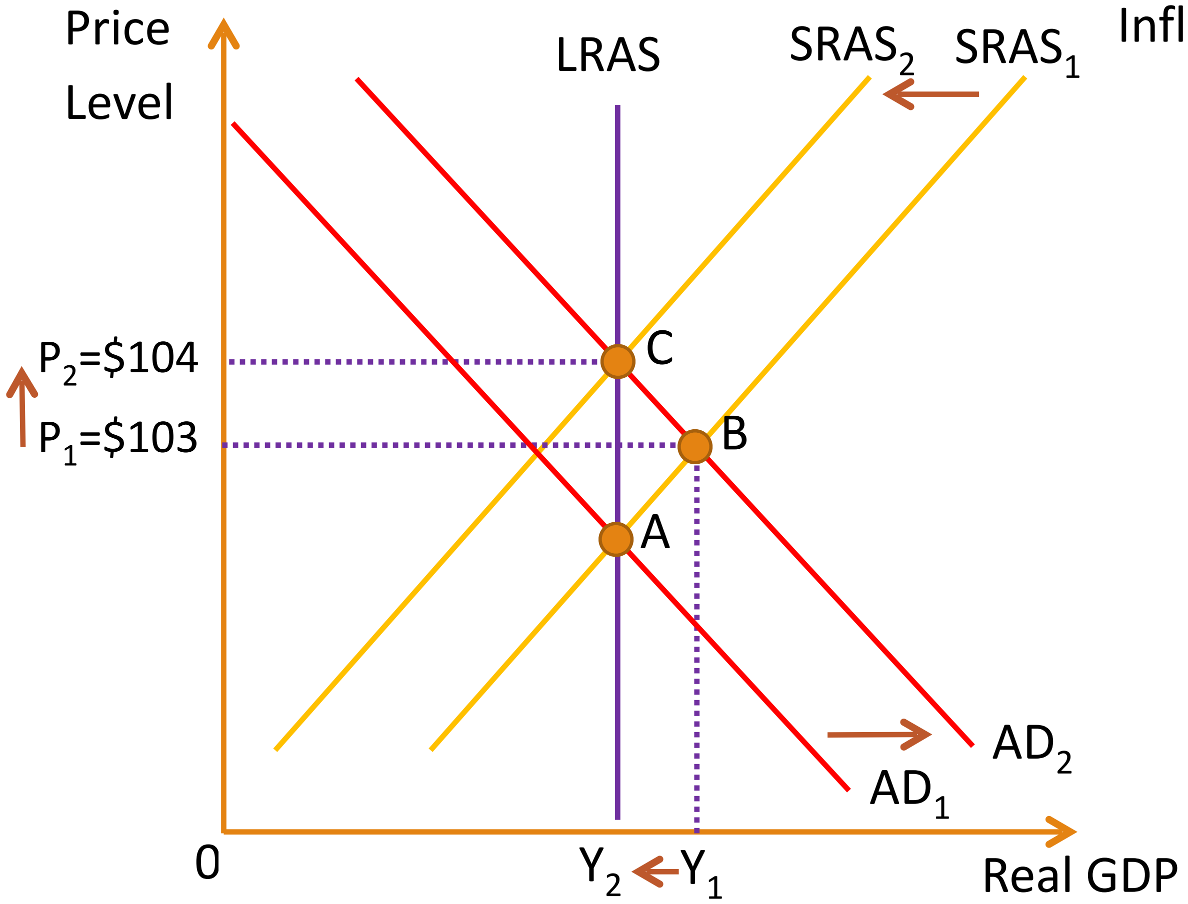
Phillips Curve (Unemployment & Inflation)

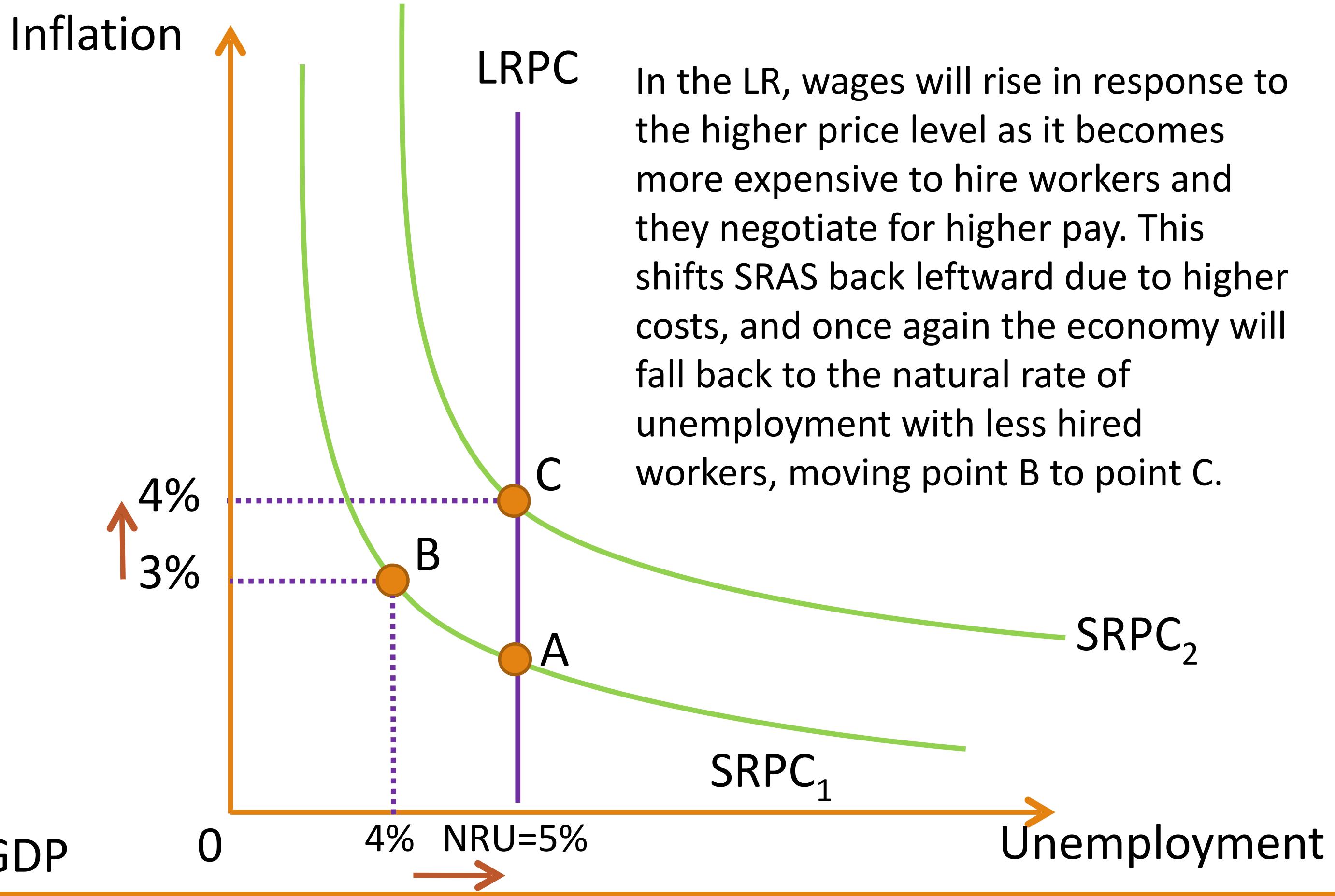




Assume an increase from AD_1 to AD_2. This will result in an increase in GDP and fall in unemployment, moving point A to point B in the SR along the SRPC/SRAS curves. Inflation/prices will also be higher in the economy.

Phillips Curve (Unemployment & Inflation)





In the LR, wages will rise in response to the higher price level as it becomes more expensive to hire workers and they negotiate for higher pay. This shifts SRAS back leftward due to higher costs, and once again the economy will fall back to the natural rate of unemployment with less hired workers, moving point B to point C.

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