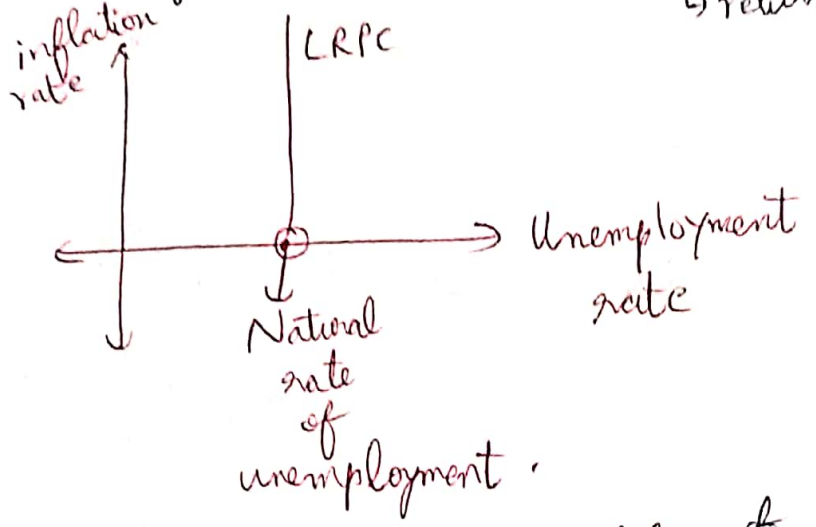
Phillips Curve in the long-run : (LRPC)

→ IR & u-rate are un-related.

→ As money growth ↑ ⇒ inflation rate alone ↑ set. No influence on unemployment rate.

↳ returns to it's natural rate in the long-run.



→ Expected inflation → a measure of by how much people expect pricelevel to change.

→ Phillips Curve Equation:

(★) $\left\{\text{Unemployment rate}\right\} = \left[\text{Natural unemp. rate}\right] - a(\text{Actual inflation} - \text{Expected inflation})$

(a: some constant)

① Long run ⟹ Unemp. rate = Natural unemp. rate.

$0 = -a(\text{Actual} - \text{expected})$

→ Actual = expected inflation. → expectations catch up with reality.

② Short run → Central Bank of the country can ↓ unemploy. rate < natural u-rate ⇒ Actual > expected inflation. ↑ set inflation

③ When expected inflation rate ↑ set,

actual < expected inflation

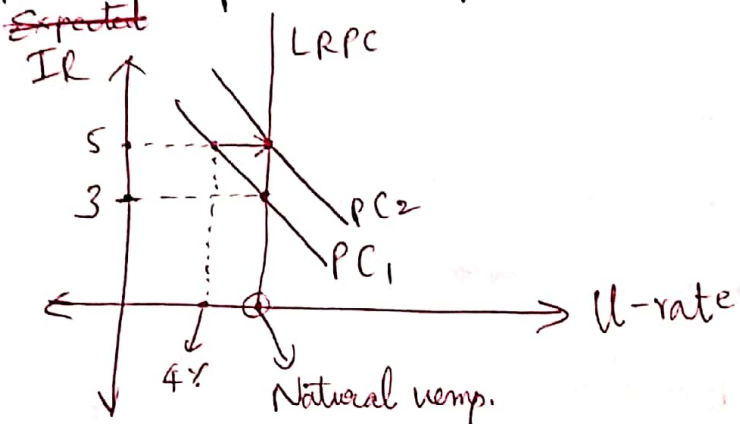
⇒ Actual - expected → negative

−a(-ve) = +a(+ve)

∴ Unemp. rate = natural unemp. rate + a (+ve value)

⇒ Unemployment rate ↑ set

How expected inflation shifts the PC?

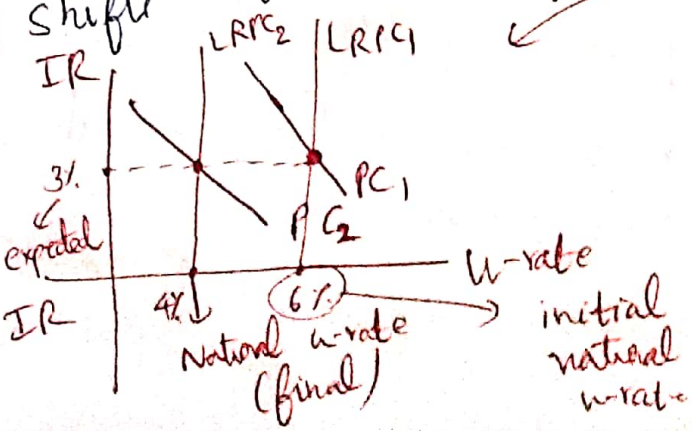


expected inflation rate = 3%.

Fed ↑ set IR by 2% ⇒ new IR = 3+2 = 5%

⇒ unemp. rate ↓ set to 4% but in the long-run, it return to its natural u-rate = 6%.

∴ PC curve shifts from PC_1 to PC_2 towards right. When natural u-rate ↓ set ⇒ LRPC curve shifts towards left & PC curve also shifts towards left.

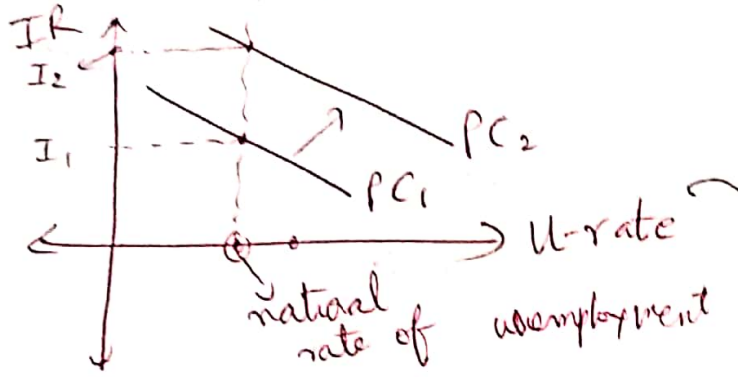


→ Plot PC curves using Actual IR values. At the same natural u-rate, expected inflation rate.

Supply shock: An event that directly alters firms' costs & prices, shifting AS and PC. (Phillips Curve) (aggregate supply)

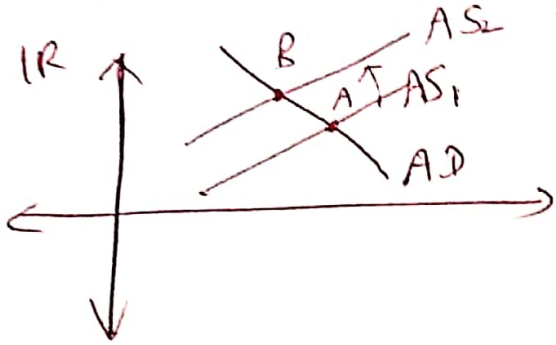
Eg: Sudden ↑ in price of oil.

How an adverse supply shock shifts PC and supply curve?



PC shifts up.

AS also shifts up.



When IR ↑sel & u-rate also ↑sel.

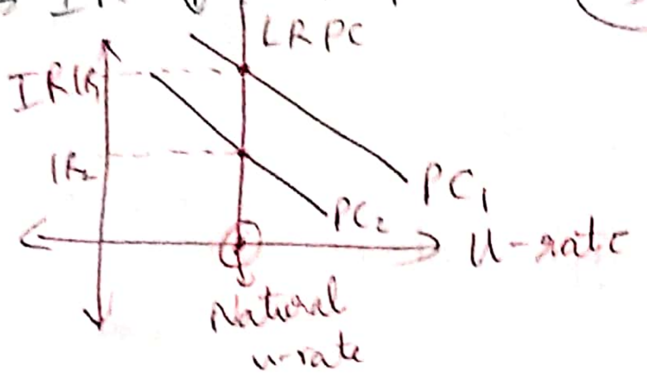
Due to supply shock, expected IR increases.

Disinflation → reduction in IR (↓ in price)

- Short-run: ⇓ reduction in AD ⇒ unemployment rate ↑sel, output ↓sel.
- Long-run: u-rate returns to its natural rate. Same with o/p qty also.

Disinflationary Monetary policy:

→ IR ↓ses (expected IR) → decreases IR: c1, → Phillips curve shifts downward.



Sacrifice ratio := No. of % pts. of annual o/p lost in the process of reducing IR by 1% point. To reduce IR by 1%, 5% of o/p qty must be reduced (sacrificed).

It spreads over time.

→ It calculates the cost of ↓ing IR.

→ Calculates cost of disinflation.

Rational expectations:

A theory acc. to which ppl optimally use all the info they have, incl. info abt Govt. policies, when forecasting the future