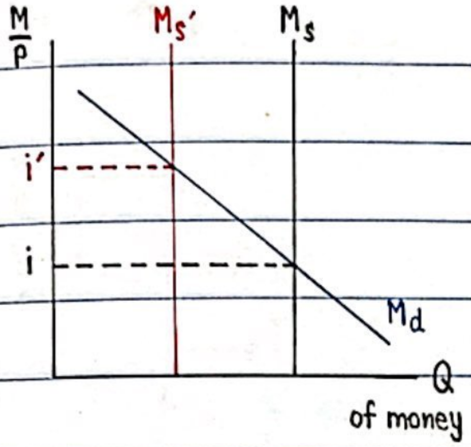
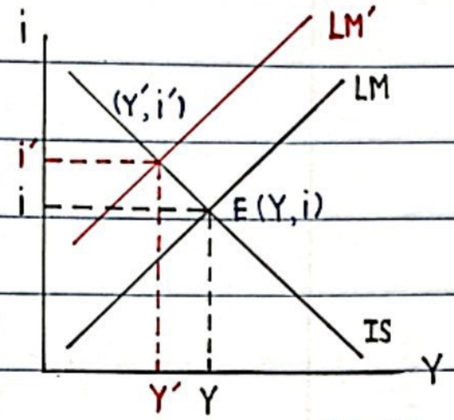
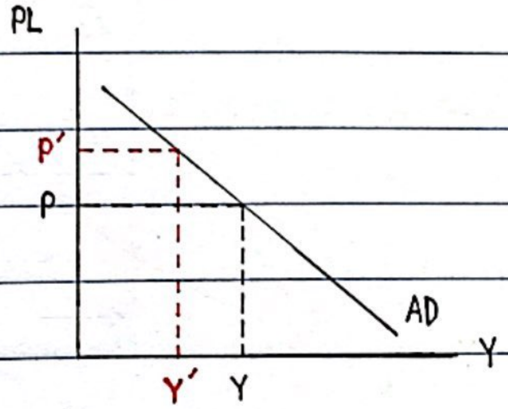
1)



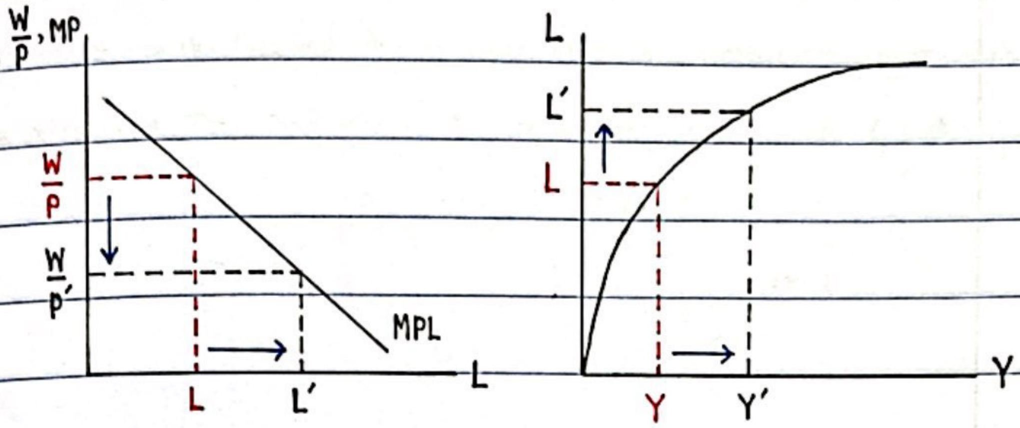


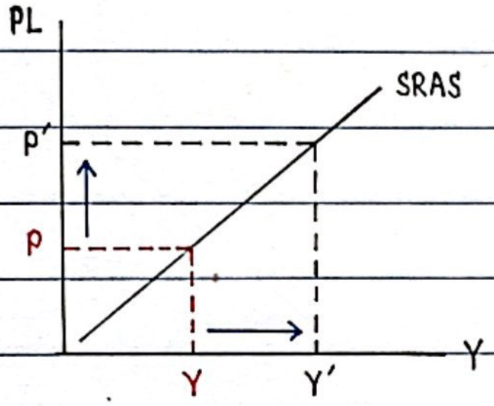
IS - LM



- AD curve shows the negative relationship between PL and Y
- When the price ↑, the money supply curve will ↓ and makes higher on interest rate
- There is movement along the curve on AD curve because of the shifting on LM curve (price)

2)



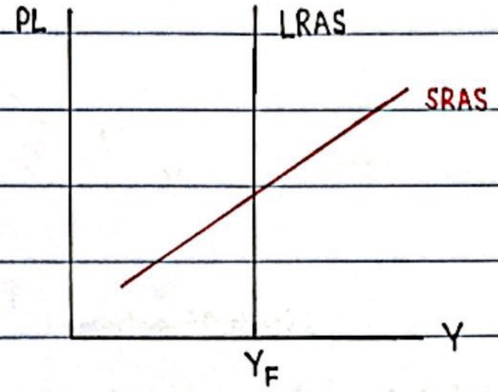


$P\uparrow \rightarrow \frac{W}{P}\downarrow \rightarrow L\uparrow \rightarrow Y\uparrow$

Sticky wage theory is an economic concept describing how wages adjust slowly to changes in labor market conditions. (When price of G & S ↑, the wage remains the same)

- Because of the sticky wage, the price ↑, the real wage will ↓ (less purchasing power)
- the firms want to hire more labor (Y will ↑)
- SRAS : the positive relationship between PL and Y → upward - sloping

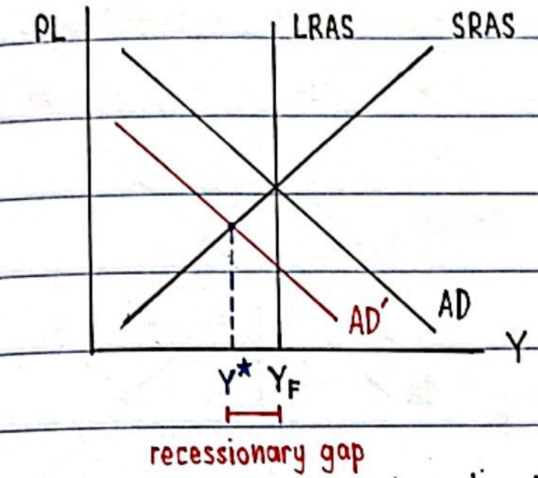
3) Because (in the long run) the potential output an economy can produce isn't related to the price level. The output always stay at full employment point (Y_F) at any price level.



4. **<u>Cetaris Paribus</u>** (other things equal), how will each variable/event affect each curve – shift (to which direction?) or movement?

Variable/Event	AD	SRAS	LRAS
P↑	movement	movement	movement
G↓	shift left	no effect	no effect
T↓	shift right	no effect	no effect
Autonomous C↑	shift right	no effect	no effect
Autonomous I↓	shift left	no effect	no effect
M↓	shift left	no effect	no effect
i↑	shift left	no effect	no effect
Temporary epidemic (assuming AD unchanged)	No effect	shift left	no effect
Permanent increase in population growth rate (assuming AD unchanged)	No effect	shift right	shift right
W↑	no effect	shift left	shift right
Bad seasonal weather	no effect	shift left	shift left
Permanent loss in agricultural land due to climate change	no effect	shift left	shift left
Discovery of new technology	no effect	shift right	shift right
Short-term worker training	no effect	shift right	shift right
Permanent education reform	no effect	shift right	shift right

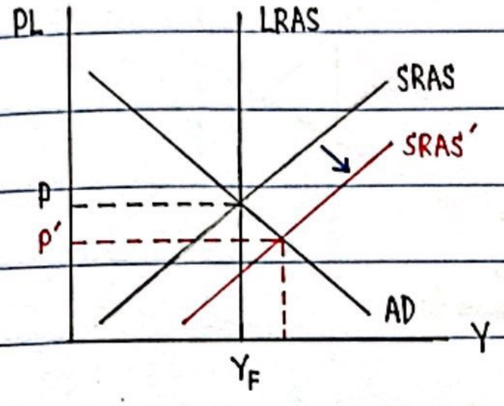
5)



(negative AD shock)

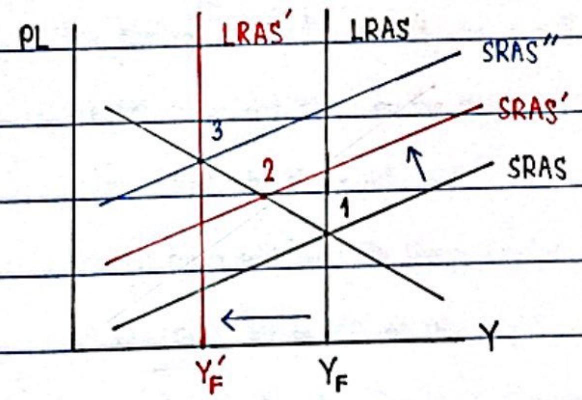
- the expansionary fiscal policy (high unemployment & have deflation)
  - people don't use money → less consumption in the economy
  - use that policy will make G spending ↑ → consumption in the economy will ↑
- shift SRAS to the right
  - AD curve shifts to the left (PL ↓ , cost of production will ↓)
  - the firms want to hire more labor (Y ↑)
  - turn back to the long-run equilibrium at lower price

6) - good weather, short-term regulations change



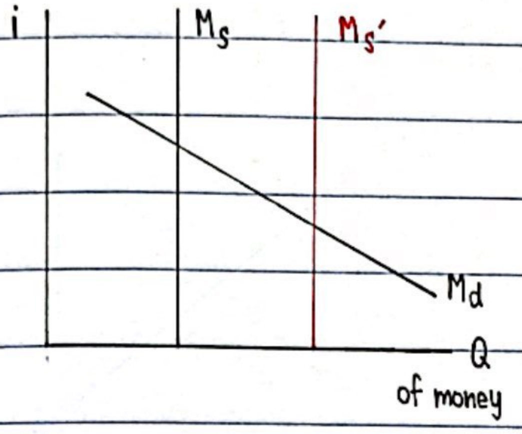
- the SRAS curve shifts to the right at lower PL and higher Y
  - the shock is gone, everything will return to the original point

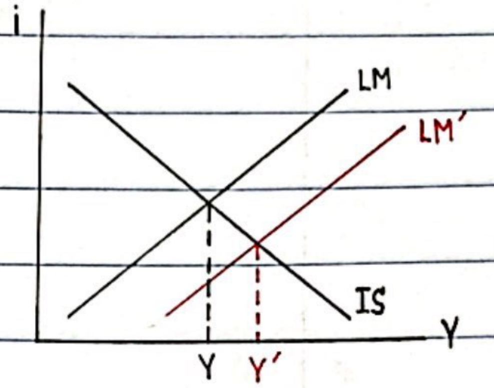
7) - change in amount of population

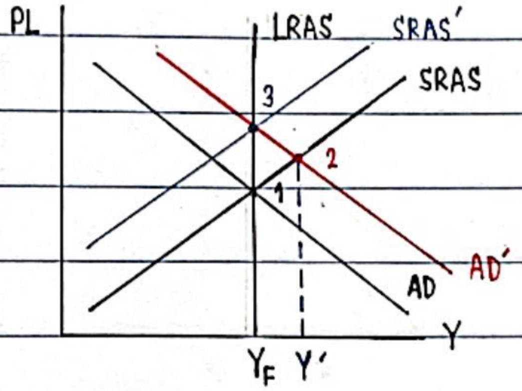


- the LRAS and SRAS curve shift to the left (have SR equilibrium at 2)
  - Y will be permanently lower (negative as shock)
  - the LR get into equilibrium at 3 at lower Y and higher PL (inflation)

8)

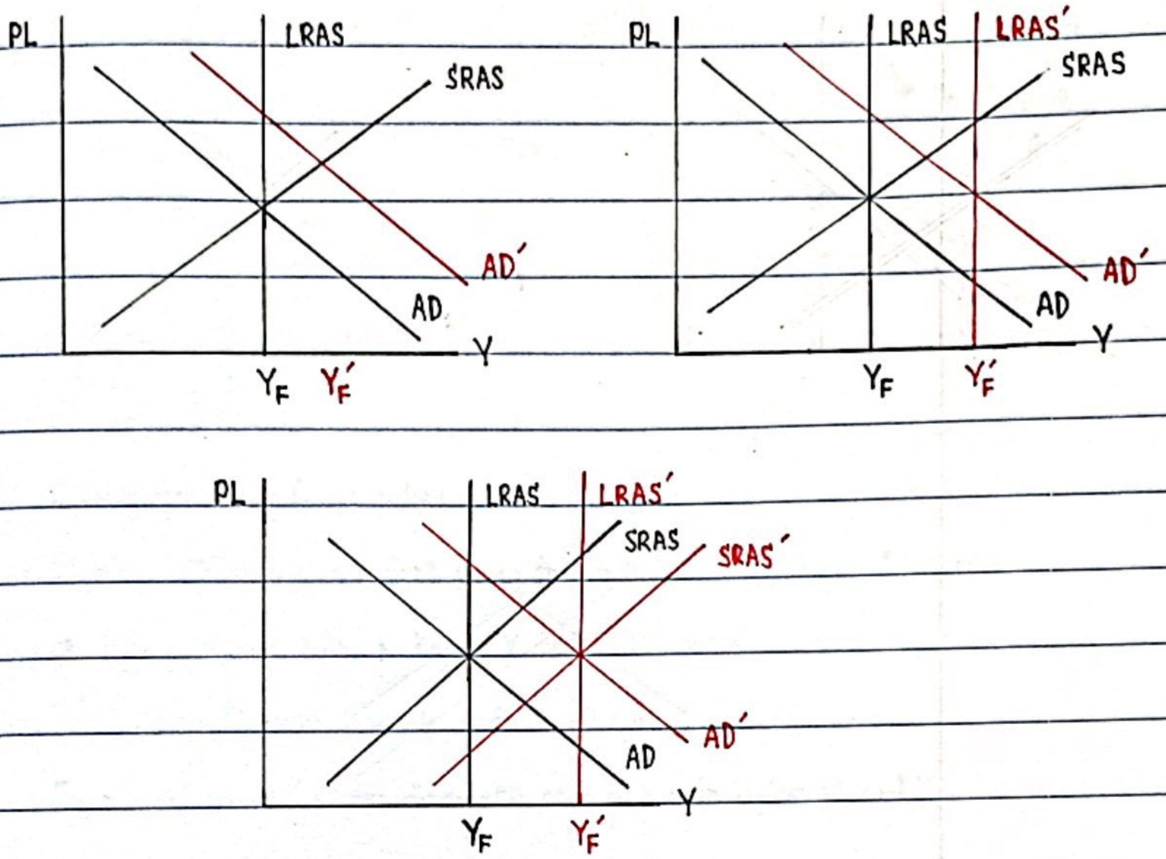






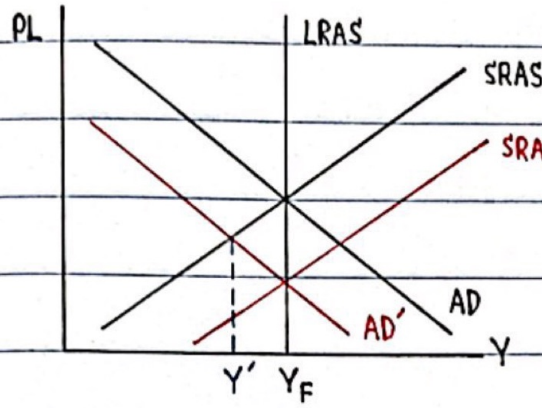
- the central bank ↑, the M_s curve will shift to the right at lower interest rate
- the LM curve will shift to the right in the money market owing to the money supply curve shifts to the right and has lower interest rate
- the AD curve will shift to the right because LM curve shifts to the right by non-price
- AD will shift AD to AD' at the short-run equilibrium
- At 2, the PL ↑, the firms will hire more labor (sells more Y)
- SRAS will shift to the left (↓ labor → ↓ supply)
- return to the new LR equilibrium at 3 with higher PL
- Y will turn back to Y_F (change in money supply does not affect the Y_F)

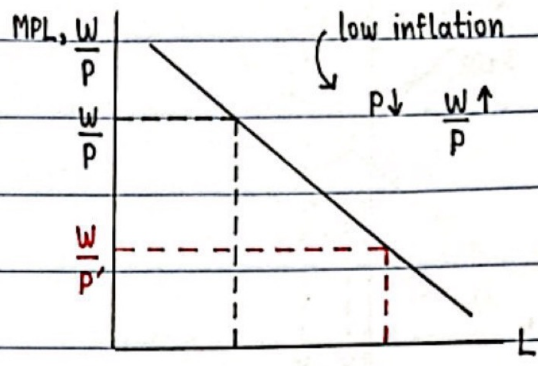
9)



expansionary fiscal policy

- AD curve will shift AD to AD' to the right by increasing G spending in IS curve
  the demand - side policy
- use supply - side policy to change in productivity of labor
  better technology / education
- shifts LRAS to LRAS' to the right (SRAS increases as LRAS)
- SRAS curve will shift SRAS to SRAS' to the right
- return back to the new long-run equilibrium at higher Y_F

10) 



low employment & low inflation

- lower PL, the wage is more higher (the firms don't want to hire anymore)
- the AD curve shifts AD to AD' to the left with lower PL and Y

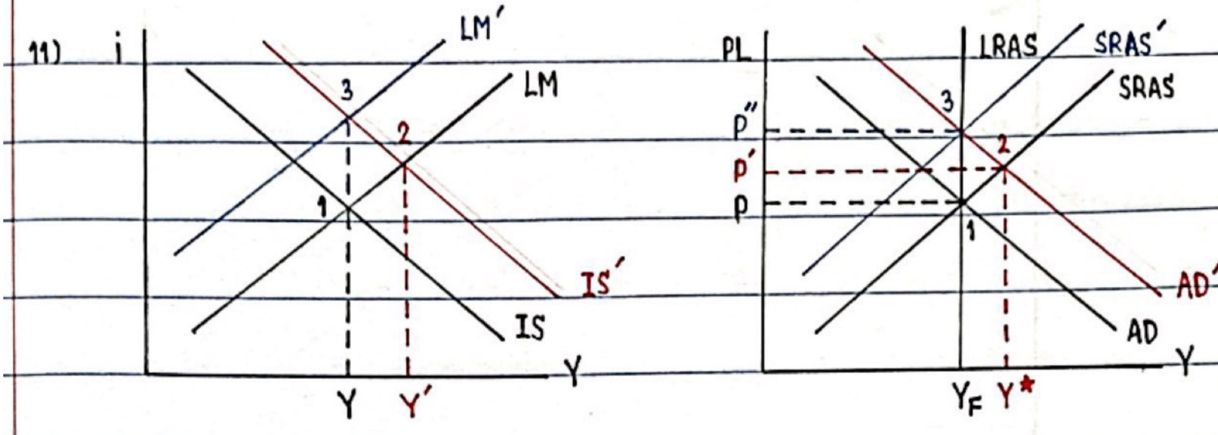
In LR, the wage is flexible

- lower in real wage, the firms return to hire more labor (higher in Y)
- SRAS shifts SRAS to SRAS' to the right

(return back to the new LR equilibrium at 3 with lower PL)

⇒ the trade-off is no longer exists in long-run

11)



Use expansionary fiscal policy

- IS curve will shift to the right owing to the higher G spending / lower tax
  ⇒ higher interest rate & higher Y in IS-LM model
  (shift in IS curve leads to shift in AD curve)
- In AD-AS model, moving from LRE at 1 to 2 with higher PL and Y
  (higher wage, the firms hire less labor)
- Y↓ (SRAS shifts SRAS to SRAS′ to the left & Y return back to Y_F)
- At 3, PL is higher, M_s will ↓
- LM curve shifts LM to LM′ to the left with same amount of Y
  (return back from 2 to 3 in IS-LM model)