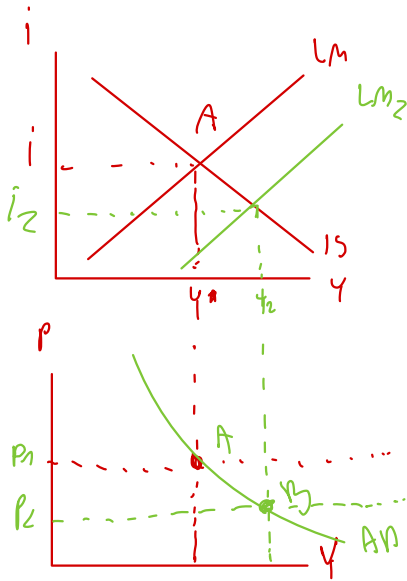


1. Explain why AD is downward-sloping (that is, how AD is derived), using the money market diagram and the IS-LM.



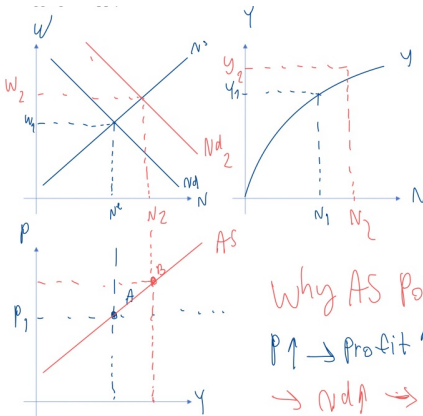
$P \downarrow \rightarrow M_p \uparrow \rightarrow LM \uparrow$ shift right

$\rightarrow i \downarrow \rightarrow I \uparrow \rightarrow Y \uparrow$

$\therefore P \downarrow \rightarrow Y \uparrow$

2. What is Sticky Wage Theory? Explain why SRAS is upward-sloping (that is, how SRAS is derived), using the sticky wage theory, labor demand diagram, and production function.

Sticky wage theory = in short run, nominal wage is sticky due to labor contracts, and there is unemployment



Why AS Positive slope.

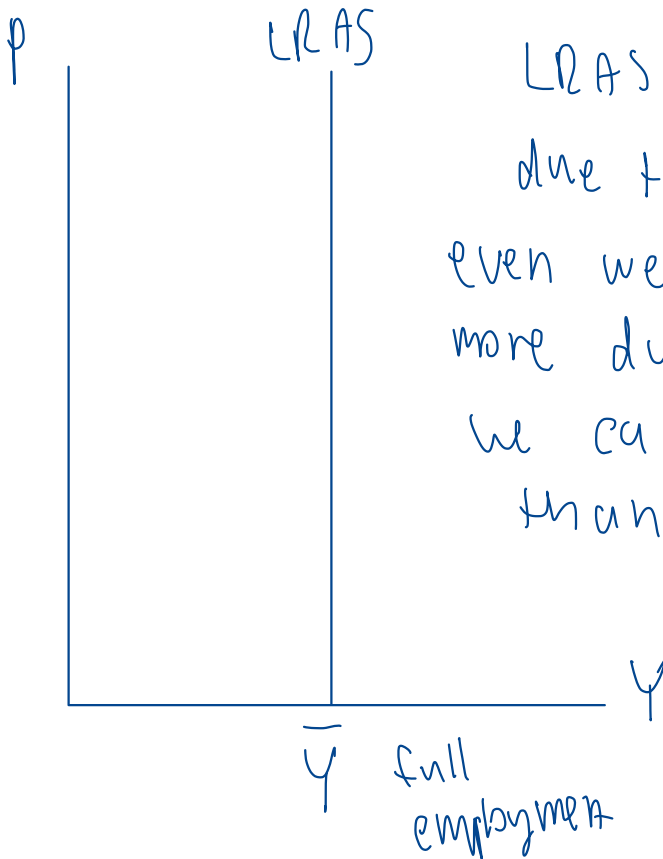
$P \uparrow \rightarrow \text{Profit} \uparrow \rightarrow \text{Profit} \uparrow$

$\rightarrow \text{Cost} \uparrow \rightarrow N^d \uparrow$

$N^d \uparrow \rightarrow Y \uparrow$

$P \uparrow \rightarrow Y \uparrow \rightarrow \text{AS} \uparrow$

3. Explain why LRAS is vertical.



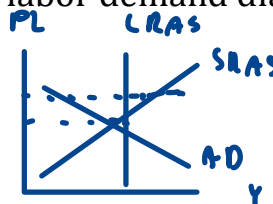
LRAS = vertical
due to limited resource
even we want to produce
more due to higher price
we can not produce more
than $\bar{Y}$

LRAS does not depend on
Price.

Exercise 7

AD-AS Model

1. Explain why AD is downward-sloping (that is, how AD is derived), using the money market diagram and the IS-LM.
2. What is Sticky Wage Theory? Explain why SRAS is upward-sloping (that is, how SRAS is derived), using the sticky wage theory, labor demand diagram, and production function.
3. Explain why LRAS is vertical.
4. **Ceteris Paribus** (other things equal), how will each variable/event affect each curve – shift (to which direction?) or movement?



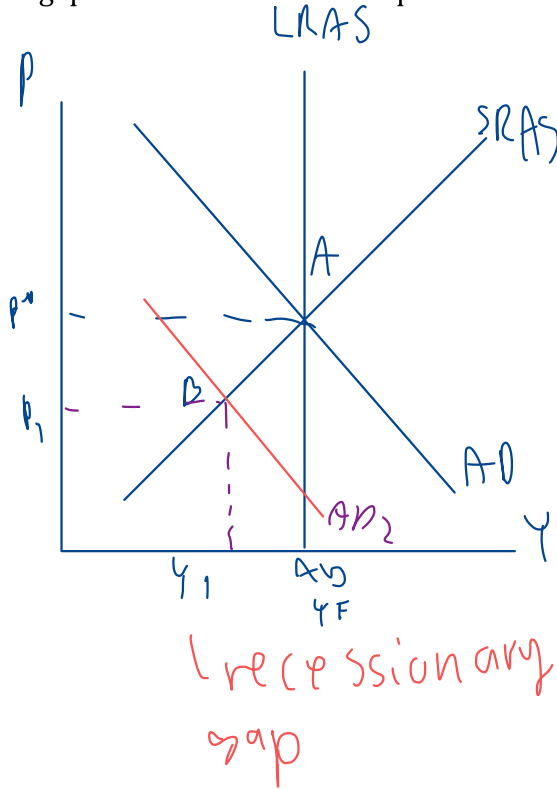
Variable/Event	AD	SRAS	LRAS
$P \uparrow$	movement	move right along	—
$G \downarrow$	left	—	—
$T \downarrow$	right	—	—
Autonomous $C \uparrow$	right	—	—
Autonomous $I \downarrow$	left	—	—
$M \downarrow$	left	—	—
$i \uparrow$	left	—	—
Temporary epidemic (assuming AD unchanged)	No effect	left	no effect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

tech? product ↑
product ↑

5. Suppose the economy faces a negative AD shock (e.g. loss in consumers' confidence).
 - What output gap do we have? Draw the AD-AS diagram to show the output gap at the new short-run equilibrium.

5. Suppose the economy faces a negative AD shock (e.g. loss in consumers' confidence).

- What output gap do we have? Draw the AD-AS diagram to show the output gap at the new short-run equilibrium.



- If the government wants to correct such output gap, what policies can it implement? Give examples.

the government should use expansionary fiscal policy.

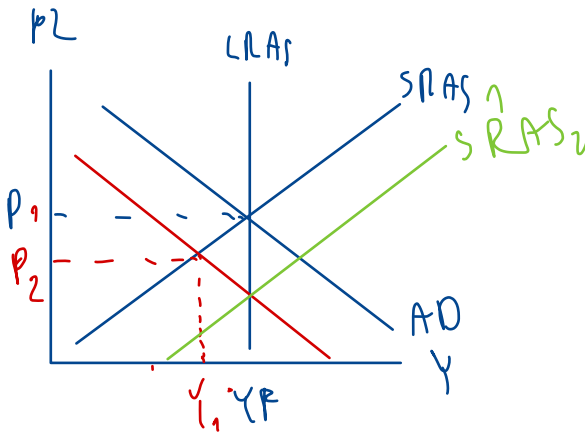
ex: increase G to raise spending and decrease T people will spend more so AD shift right back to the equilibrium

implement. Give examples.

If there is no government intervention, explain with the AD-AS diagram how the economy will return to the long-run equilibrium.

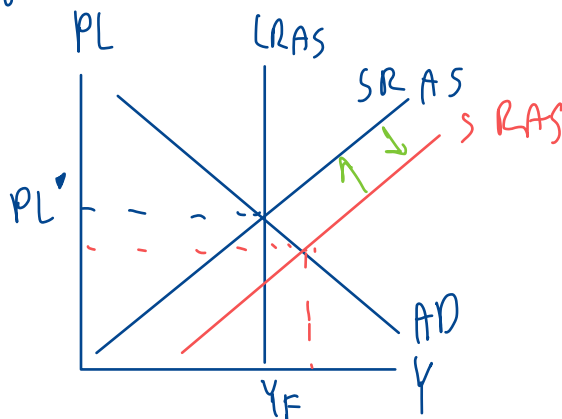
Self - Correcting Mechanism

- 3) In the long run, nominal wage is flexible
Unemployed workers are willing to accept lower nominal wage. As a result, cost of production decreases, firms want to produce more, SRAS shift to the right back to LRE



6. Suppose the economy faces a temporary, positive AS shock.
- Give one example of a temporary, positive AS shock.
 - If there is no government intervention, explain with the AD-AS diagram how the economy will return to the long-run equilibrium.

- Ex = good weather

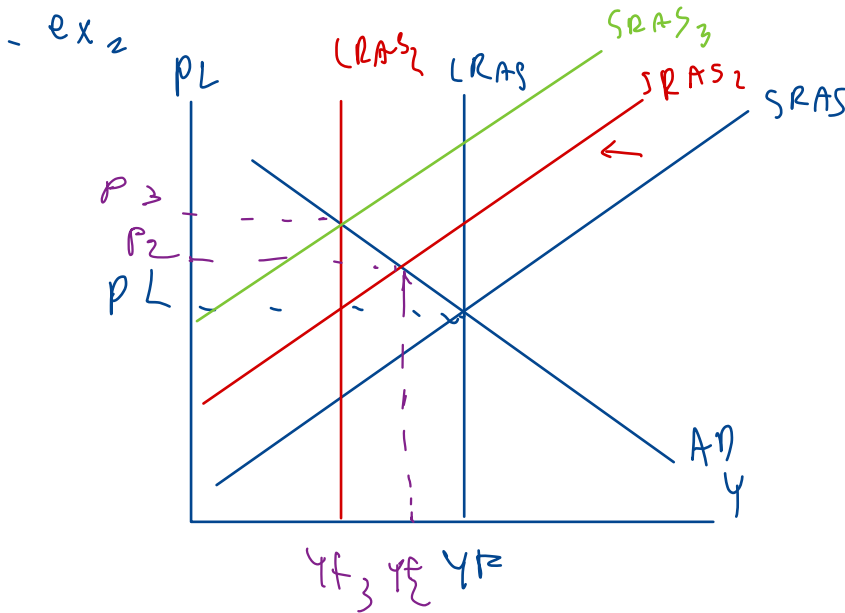


good weather shifts SRAS to the right, Afterwards, the positive shocks will disappear, the weather is the same before the AS shock.

As a result, SRAS moves back to its original position

7. Suppose the economy faces a permanent, negative AS shock.

- Give one example of a permanent, negative AS shock.
- If there is no government intervention, explain with the AD-AS diagram how the economy will return to the long-run equilibrium.



ex₂ stricter regulation on production,
the capacity of the economy has
decreased, cost of production higher,
LRAS shifts to the left, SRAS will
also decrease until output has returned
to the full employment output.

Therefore, output is permanently lower and price
level permanently higher

8. In macroeconomics, **Money Neutrality** is the idea that a change in the stock of money (M) does not affect real variables, like employment and real GDP. Is this true in the AD-AS model?
(**Hint:** When the central bank changes money supply, M , does this affect output in the long run, i.e. full-employment Y ?)

Money supply will not affect output in the long run, because the economy always goes up and down, so central bank adjusts money supply regularly so it's not permanent shock, which means not gonna affect long run

$M \uparrow \quad i \downarrow \quad I \uparrow \quad Y \uparrow \quad AE \uparrow$

$Y \uparrow \quad M_d \uparrow \quad i \uparrow \quad I \text{ decrease}$

$Y \downarrow \quad \geq \text{True}$

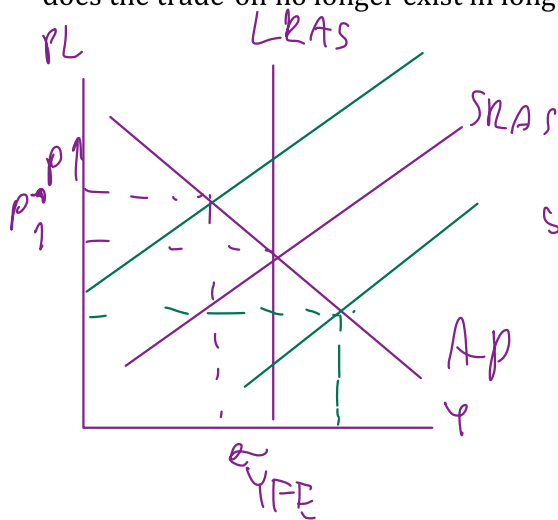
9. Based on Question 8 above, what can the government do to change output in the long run?

(Hint: Monetary and Fiscal Policies are demand-side policies, but do we have other alternatives?)

Alternative policies such as supply-side policy ex= improve education, production and training

OTHER alternatives: j

10. Economists usually have macroeconomic goals of low employment and low inflation. It is also believed that economists face the trade-off between these goals, especially in short run. Use relevant diagrams to explain the trade-off. Why does the trade-off no longer exist in long run?

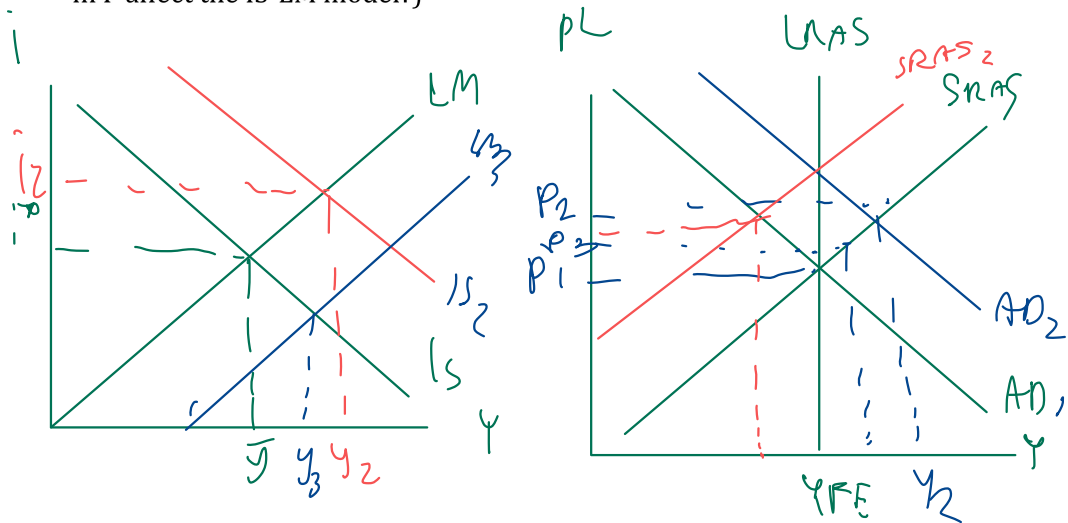


As you can see on the diagram in short run, if full employment decrease, there will be an inflation

If Y_{FE} is higher, there is an deflation

In long run it is constant, It does not affect by price.

11. *** The IS-LM is for short-run analysis, while the AD-AS is for long-run analysis. Now, let's link them together. Suppose the government implements expansionary fiscal policy. Use the IS-LM and AD-AS models to show the policy effect in both short run and long run.
(Hint: In long run, what happens to P in the AD-AS model? How will this change in P affect the IS-LM model?)



expansionary fiscal policy

$T \downarrow$

it will increase $AE \uparrow Y \uparrow IS \uparrow i \uparrow$

2) $T \downarrow Y \uparrow IS \uparrow AD \uparrow P \uparrow Y \uparrow$

long run

from SR $Y \uparrow \text{un.} \uparrow \text{Unrate} \downarrow \text{wage} \uparrow$

(cost of production $\uparrow \rightarrow$ produce less $\downarrow \Rightarrow AS \text{ shifts}$)

4) Price $\downarrow$ $M/p \uparrow \rightarrow LM \text{ shifts}$

PL 4 អ្នករៀន