AD-AS Model Part 3

Revision – Aggregate Supply

- AS is the total output that firms in an economy plan to sell during a specific time period. It specifies the amounts of output that will be supplied at all possible price levels.

- Why is SRAS upward-sloping?
- In SR, wage is sticky because of employment contracts.
- P↑ >> W/P↓ >> Labor Demand↑ >> L↑ >> Y↑

- Why is LRAS vertical? >> Y does not depend on P.
- In LR, wage is flexible because workers can negotiate.
- P↑ >> W↑ >> W/P, Labor Demand, L and Y **unchanged**

Revision – Aggregate Supply

The following events would shift SRAS to the right:

- An exogenous decrease in the wage rate
- An increase in capital stock and natural resource
- Technological progress

The following events would shift LRAS to the right:

- An increase in population
- An increase in capital stock and natural resource
- Technological progress

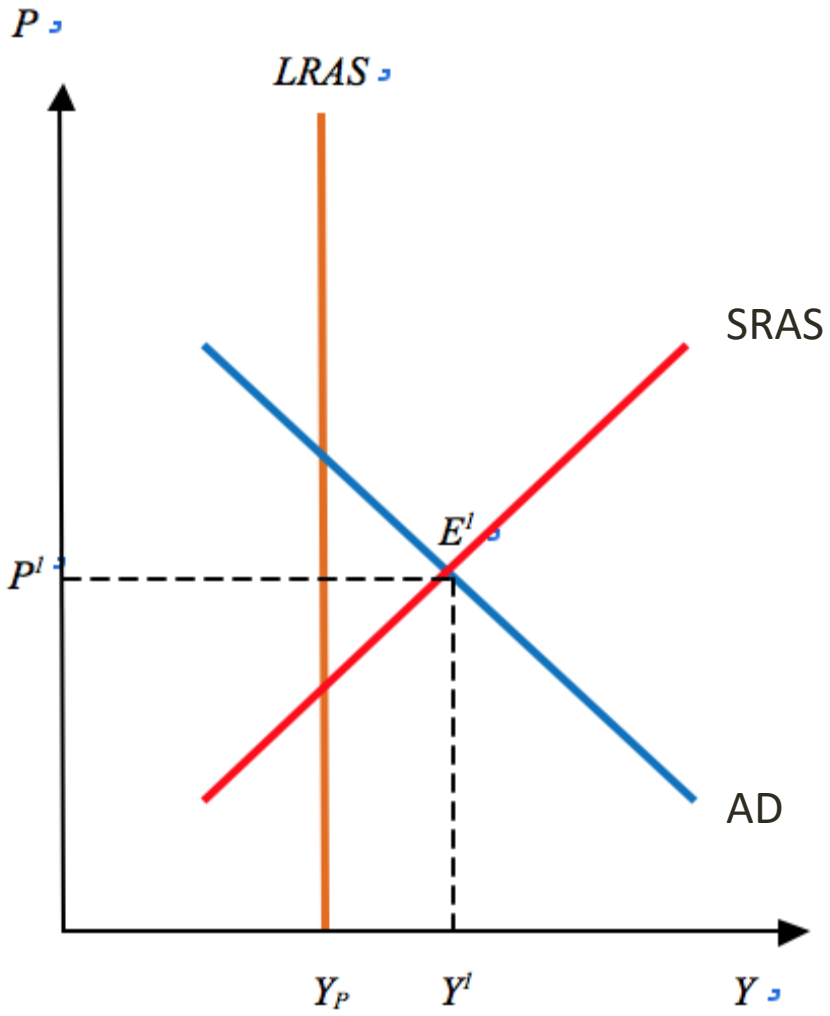
Equilibrium of AS-AD Model

There are two types of equilibrium in the AS-AD Model:

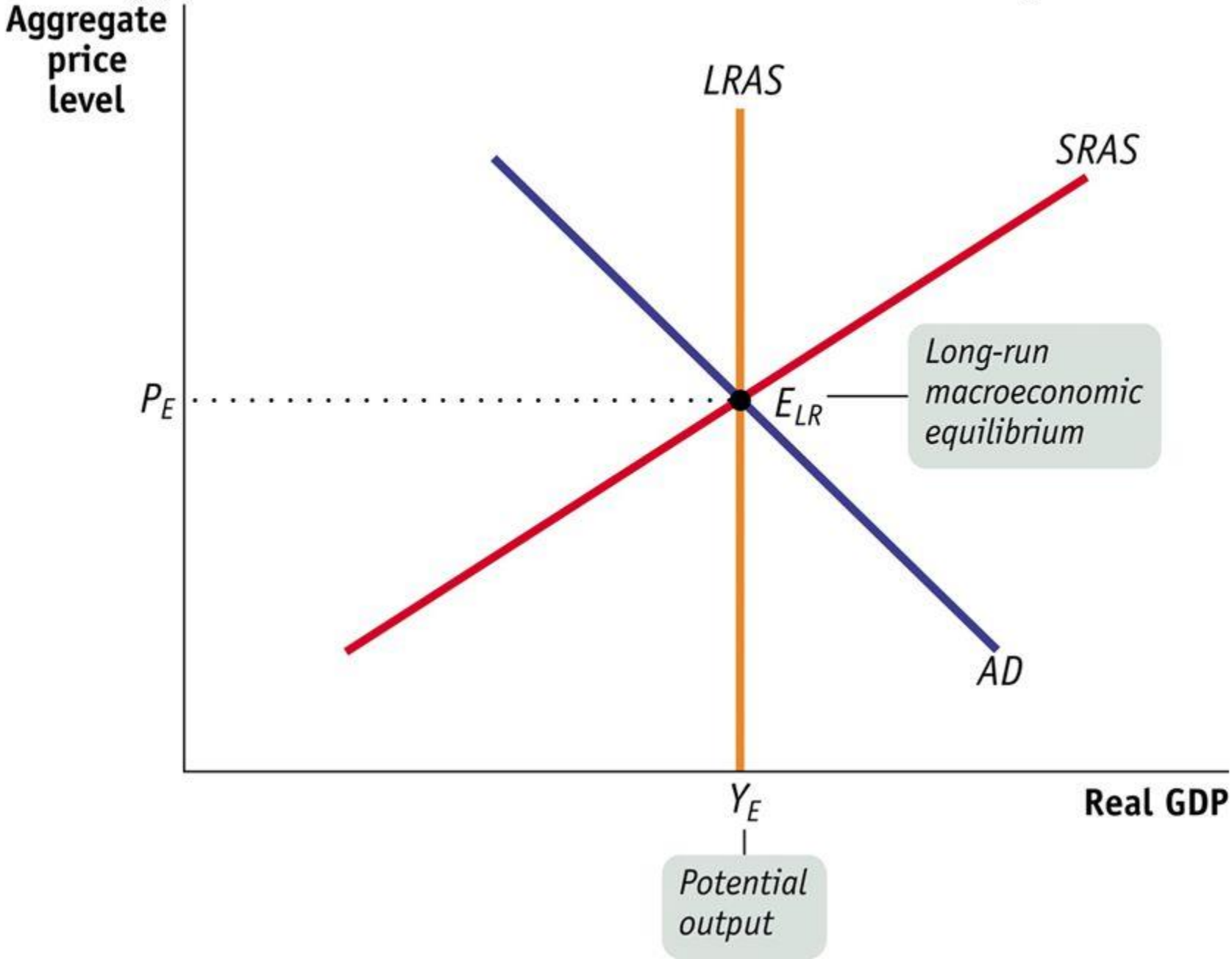
- **Short-run Equilibrium (SRE)**, where AD and SRAS meet.
  - SRE does NOT need to be on the LRAS curve.
  - SRE is temporary and is observed in the short run.

- **Long-run Equilibrium (LRE)**, where AD, SRAS, and LRAS meet.
  - In the long run, the economy will move back to LRE.

Short-Run Equilibrium (E)



Long-Run Macroeconomic Equilibrium



AS-AD and Economic Shocks

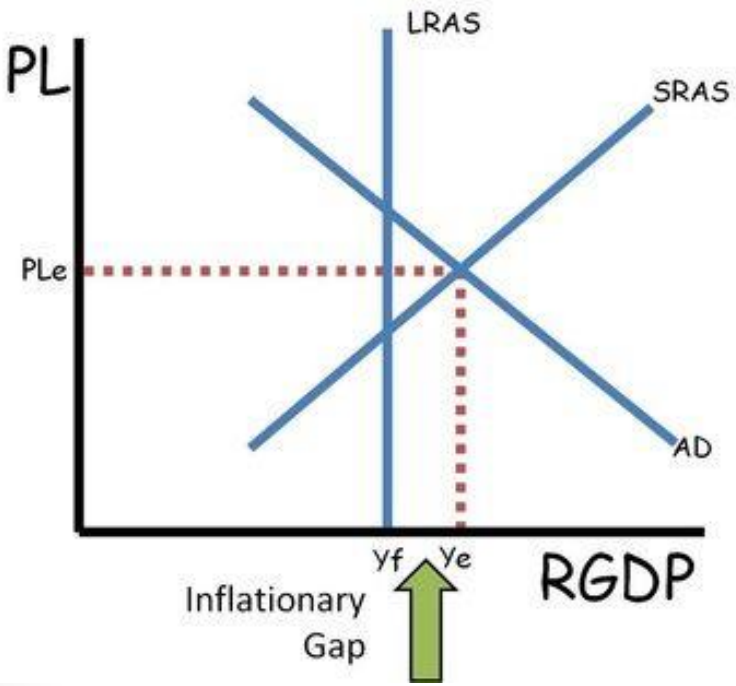
- AS-AD Model is used to analyze economic fluctuations or business cycles.
- In this model, economic fluctuations are due to shocks to AD or AS. These shocks can shift AD, SRAS, and LRAS.

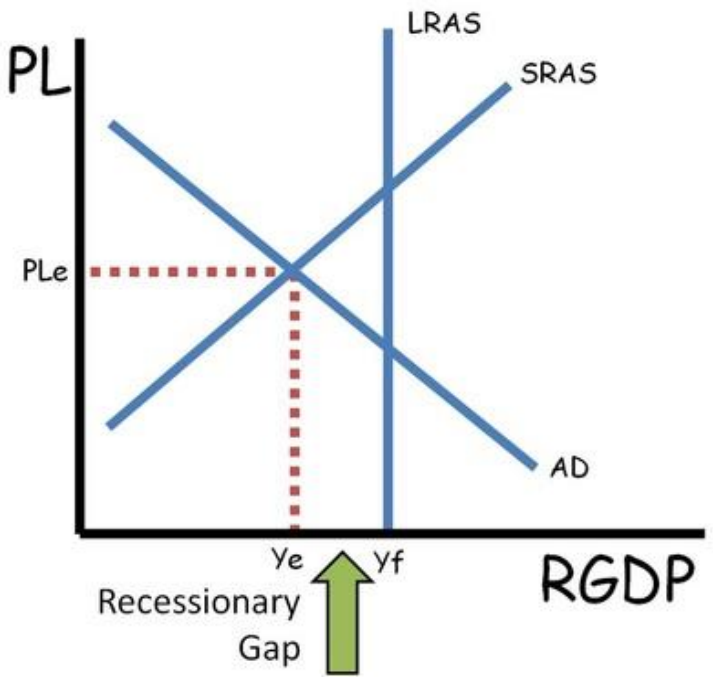
- Positive shock shifts the curve to the right. Negative shock shifts the curve to the left.
- For example,
  - Positive AD shocks: increase in consumer credit, etc.
  - Negative AS shocks: epidemic, bad weather, etc.

AS-AD and Economic Shocks

- **AS-AD assumes that the economy starts at the LRE**.
- But the shocks to AD, SRAS, or LRAS can move the economy to the SRE.
- At SRE, if Y* < Yf, we have **recessionary gap.**
- At SRE, if Y* > Yf, we have **inflationary gap.**
- To move back to the LRE,
  - The economy can SLOWLY adjust itself, **through shifts in SRAS.**
  - The government can intervene by **using demand-side policies (fiscal or monetary) to shift the AD**, or **using supply-side policies to shift the AS.**

Output Gaps


PL
LRAS
SRAS
PLe
AD
yf
ye
RGDP
Inflationary
Gap


PL
LRAS
SRAS
PLe
AD
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yf
RGDP
Recessionary
Gap

Aggregate Demand Shocks

- Factors that shift AD:
  - Autonomous C and I
  - Fiscal Policy (G and T) and Monetary Policy (M)

- Since G, T, and M can be perfectly controlled by the government, they are NOT economic shocks.

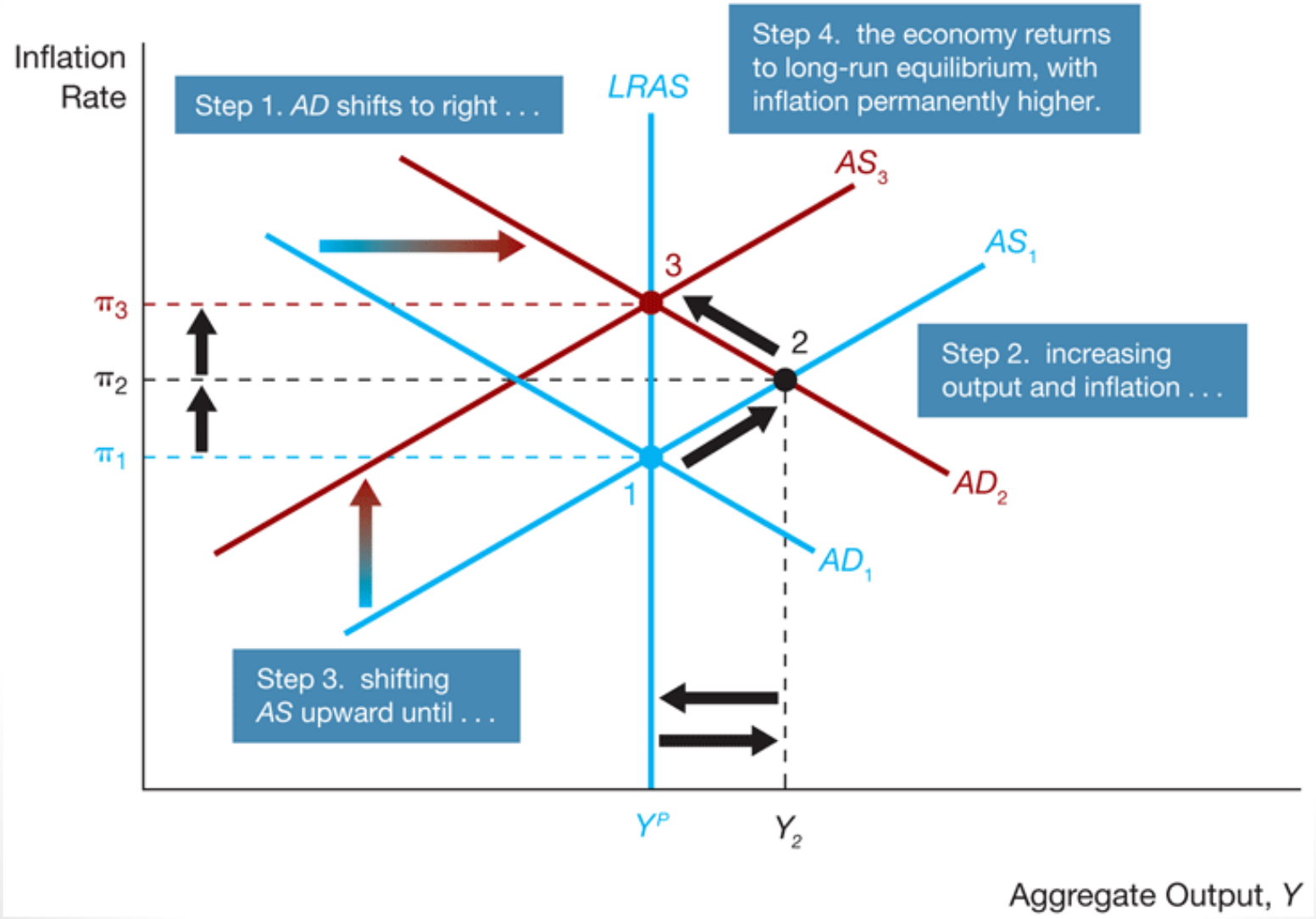
- Thus, AD shocks are the exogenous events that change autonomous C and I. For example,
  - Consumers' confidence can raise auto. C and AD.
  - Investors' optimism can raise auto. I and AD.

Positive AD Shock

- Positive AD shock shifts AD to the right. At the new SRE, we have higher P and Y (inflationary gap).
- To correct inflationary gap, the government can use **"contractionary"** fiscal (G or T) or monetary (M) policies to shift AD back to its original position.

- Otherwise, the economy can SLOWLY adjust itself:
  - Higher P means that costs of production, e.g. W, also goes up. **This causes SRAS to shift left**.
  - The economy returns to the LRE, but with higher P.

Positive AD Shock



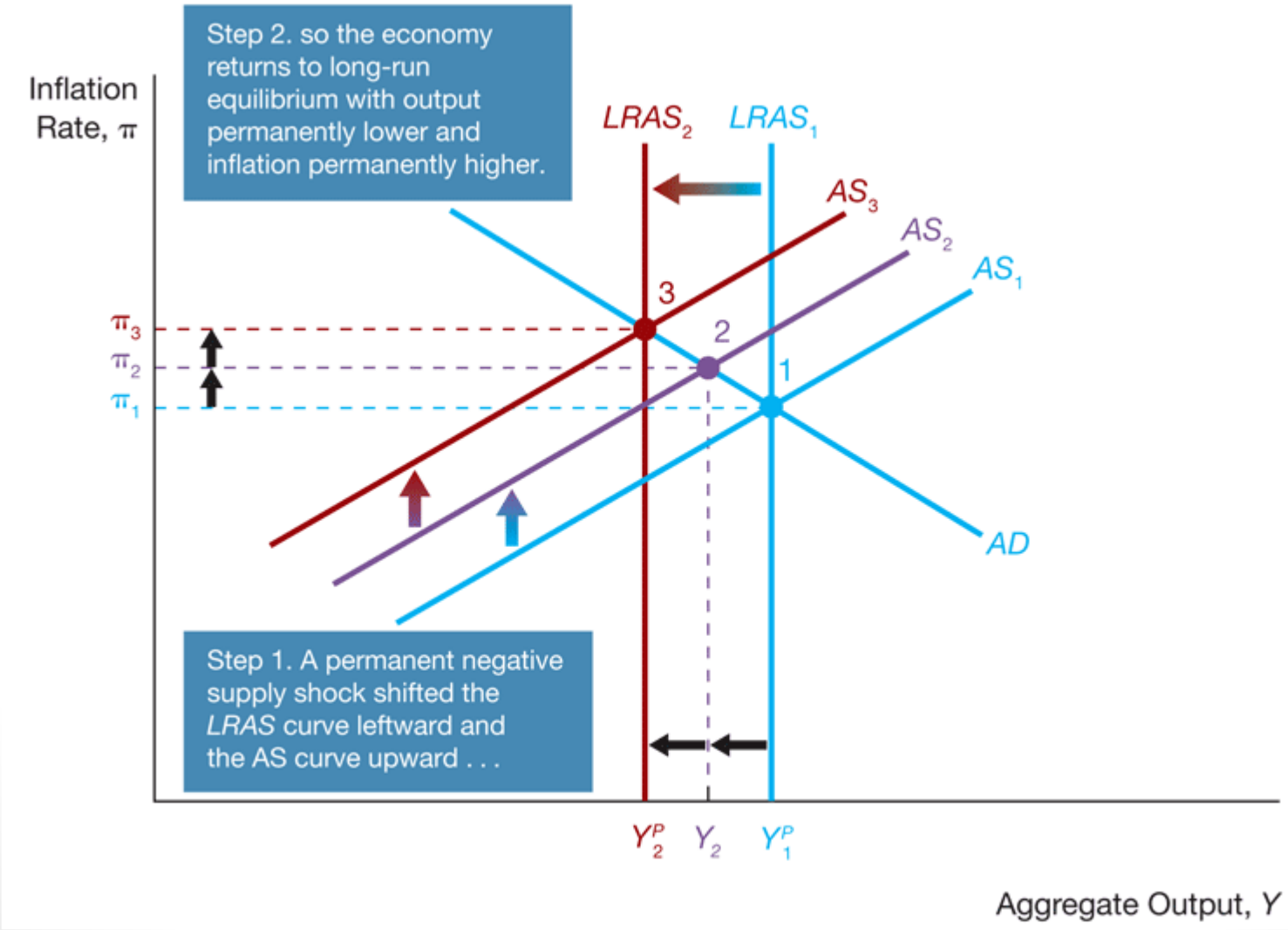
Aggregate Supply Shocks

- AS shocks are more complicated, as we need to consider whether the shock is permanent or temporary.

- **Permanent AS shocks shift SRAS and LRAS**. For example,
  - Permanent change in birth or mortality rate
  - Discovery of very large natural resources

- **Temporary AS shocks shift SRAS**. For example,
  - Good or bad weather
  - Epidemic
  - Short-term change in regulations

Permanent Negative AS Shock



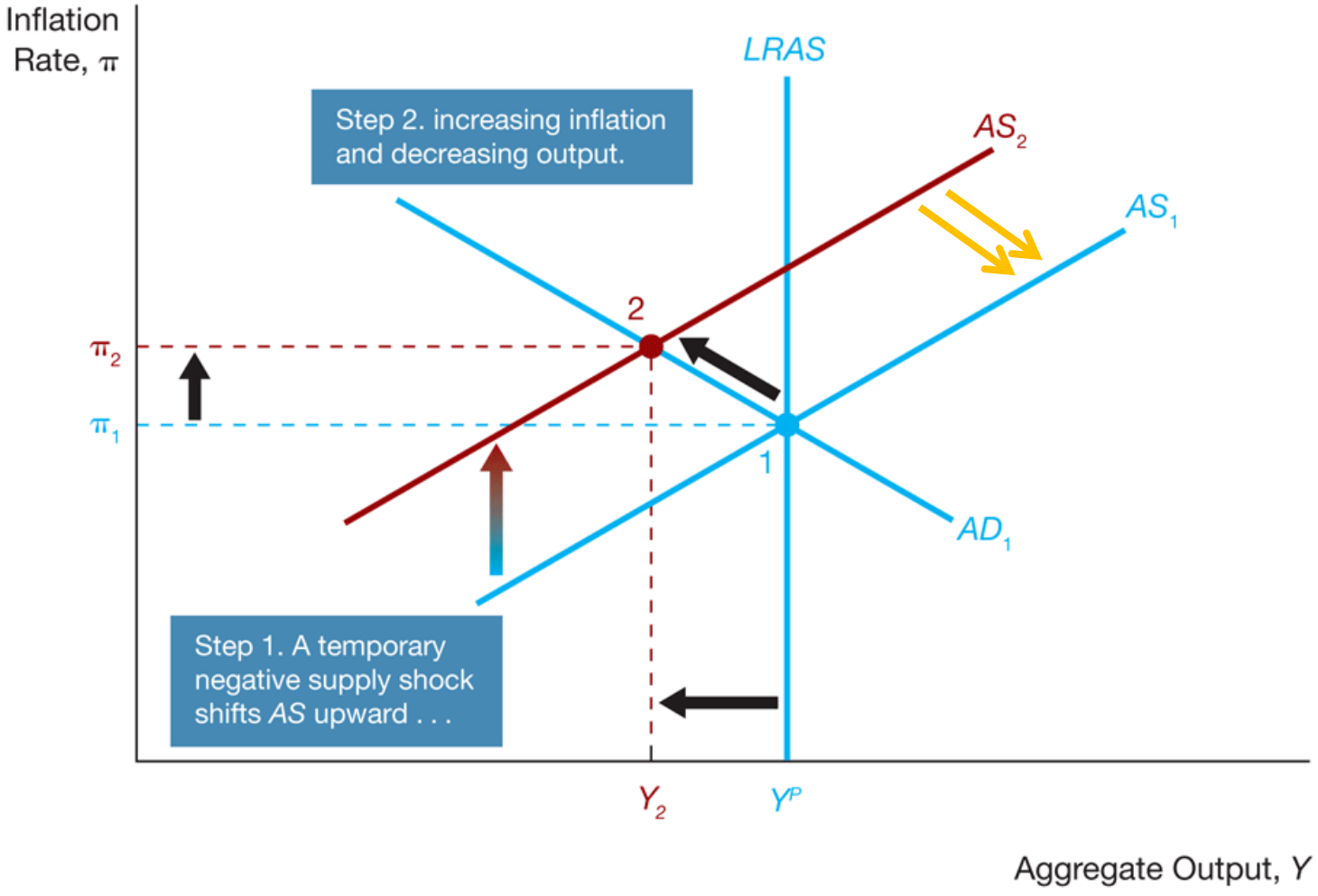
Temporary AS Shock

- Temporary AS shocks shift SRAS. **Afterwards, the shocks disappear**, and the SRAS moves back to its original position. For example, a short-term epidemic temporarily reduces labor force. After some time, new workers enters labor force. The economy returns to its LRE.

- The government can also use fiscal or monetary policy (to shift AD) to return the economy to the LRE. It can also use supply-side policy to boost AS as well.

Temporary Negative AS Shock

- **Over time**, AS2 returns to its original position (AS1).



Causes of Inflation

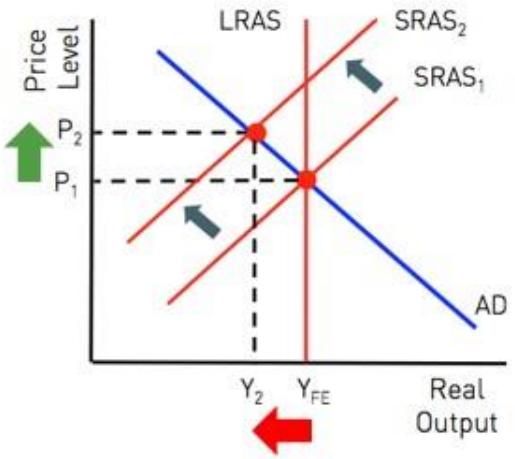
- We learn that printing money is one cause of inflation.
- We can use AD-AS Model to shows two other causes.

- Demand-pull inflation: positive AD shock raises P (and Y)

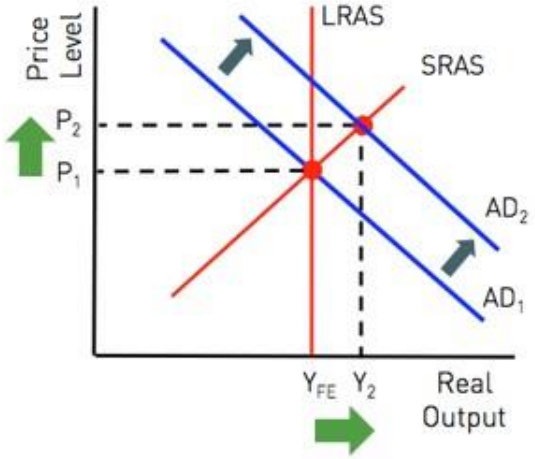
- Cost-push inflation: negative SRAS shock raises P (but reduces Y)

Causes of Inflation

Cost-push



Demand-pull



Price level	Rises	Rises
Real output	Falls	Rises
Output gap	Negative	Positive
Shift	SRAS	AD
Movement	AD	SRAS

Key Summary

- A shift in AD affects P and Y only in the short run, but has no effect in the long run.
- A temporary AS shock affects P and Y only in the short run, but has no effect in the long run.
- A permanent AS shock affects P and Y both in the short run and long run.
- The economy has a self-correcting mechanism to return to the long-run equilibrium, through shifts in SRAS.
- Furthermore, the government can use demand-side or supply-side policies to speed up the adjustment process.