Open Economy AS/AD Model: Policy Analysis (Fixed Exchange Rate)

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Model Recap

AS:

$$Y/L = F\left(\frac{P}{P^e}\frac{1}{1+m}, z\right) \tag{1}$$

AD:

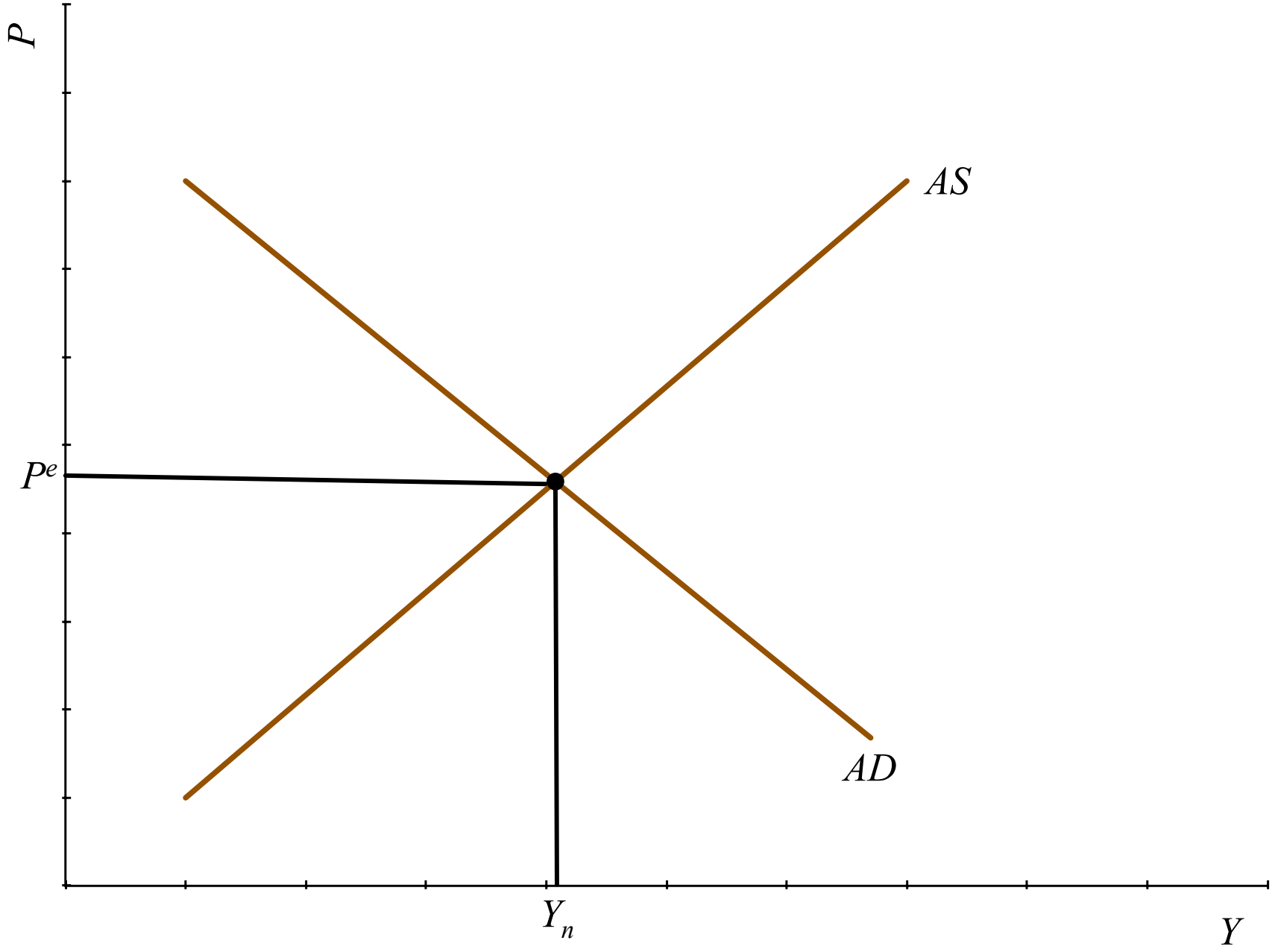
$$Y = Y\left(P/(\bar{E}P^*), G, T\right) \tag{2}$$

Short run: P^e is given.

Medium run: $P^e = P$.

Transition: $P^e \to P$ shifts AS.

Government spending



$G\uparrow$: Medium run

$P^e = P$

MR-AS fixed $Y = Y_n$.

AD shifts up $\implies P\uparrow$

$NX\downarrow$ due to higher prices.

Money market: $M/P = Y \times L(i^*)$ is unchanged

Overall result:

- full crowding out
- the government ends up sending all of its extra demand abroad!

$G\uparrow$: Short run

P^e fixed

AD shifts up.

Move along AS

- higher P and Y

$NX\downarrow$ because $P\uparrow$ and $Y\uparrow$

- partial crowding out

Money market: $M/P = YL(i^*)$

- $M\uparrow$ to offset higher P and higher Y

Draw IS/LM diagram for more intuition (and understanding transition) ...

Devaluation

Suppose the economy is in recession with $Y < Y_n$.

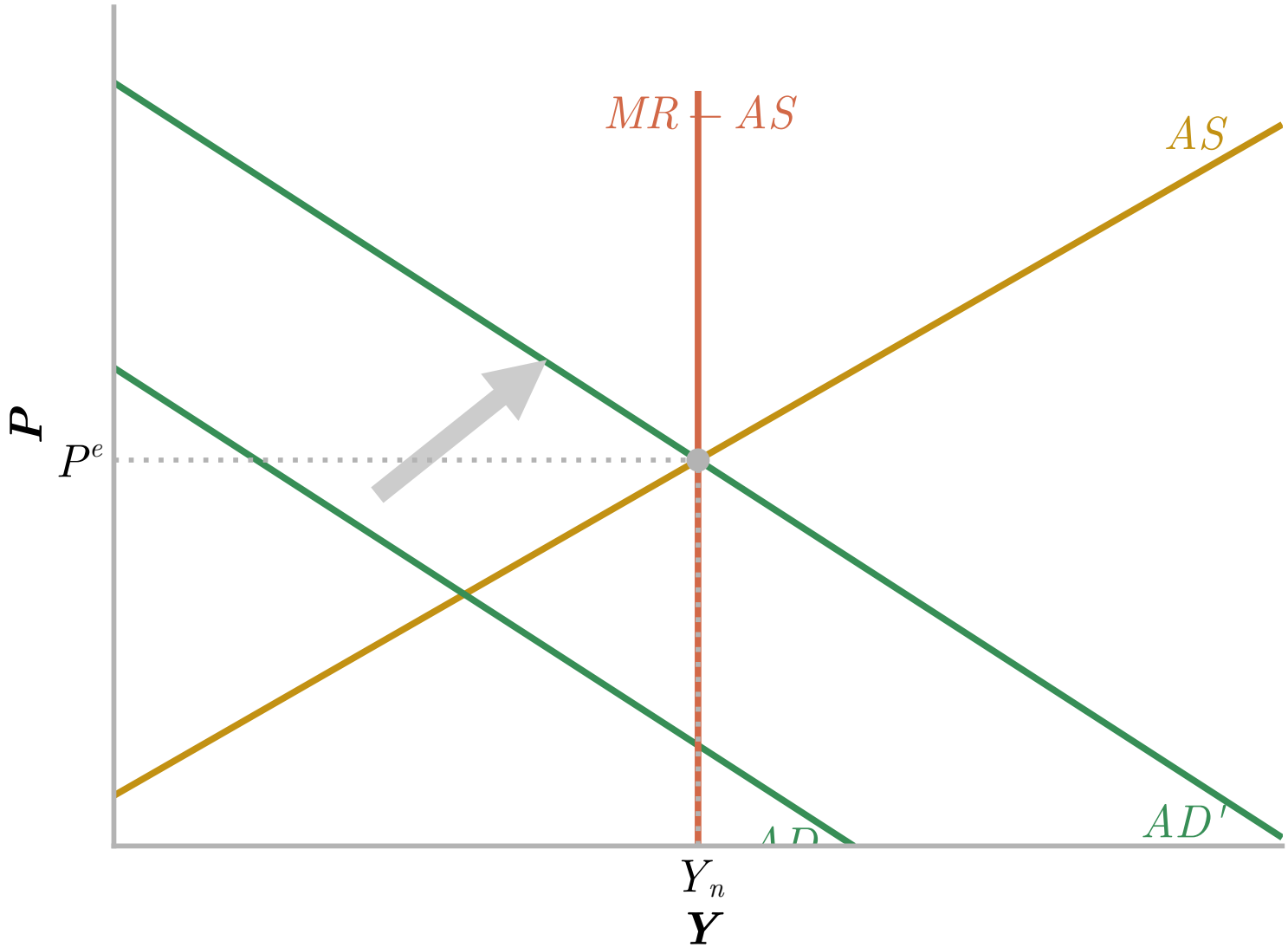
What are the options?

1. $G \uparrow$ (budget deficit, $NX \downarrow$)
2. Wait for the AS curve to shift (takes time)

Instead of waiting for P to fall, why not simply lower E?

- The effect on the real exchange rate and on demand is the same.
- Avoid the painful period of unemployment.

Devaluation



A Free Lunch?

Now fixed exchange rates look like a free lunch.

- Avoid exchange rate volatility
- Gain instant adjustment to full employment through devaluation.

What's the catch?

- Hint: what happens to E^e?

International Spillovers

What are the effects of a devaluation on the other country?

- "Beggar my neighbor"

Trade Restrictions

Tariff shifts AD right: NX rises, holding everything else fixed.

Short run:

- the same as other AD shifters: $Y \uparrow, P \uparrow$
- the Fed must raise M to prevent i from rising
- tariffs work in the short run (while price expectations are fixed)

But not clear that NX/Y improves:

$$\underbrace{\frac{I}{Y}}_{?} = \underbrace{\frac{Y-C-T}{Y}}_{S^P \text{ unchanged}} + \underbrace{\frac{T-G}{Y}}_{S^G ?} + \underbrace{\frac{NX}{Y}}_{?} \tag{3}$$

Trade Restrictions

Medium run:

- vertical AS curve fixes $Y = Y_n$
- tariffs don't work – what gives?
- prices rise until NX is unchanged again

Price adjustments mimic the role of exchange rate adjustments.

Even with a fixed exchange rate, tariffs do not improve the trade balance.

Reading

- Blanchard / Johson, Macroeconomics, 6th ed., ch. 21

Additional reading:

- Jones, Macroeconomics, ch. 15.