

International Economics

Unit 4

The Monetary Approach to the Balance of Payments

- Principal message: The BP is essentially a monetary phenomenon
- Thus, equilibrium (disequilibrium) in the BP will merely reflect the equilibrium (disequilibrium) in the money market.
- Consequently, the BP analysis needs to focus on both the demand for and supply of money

Aim:

Explain the performance of a small open economy

Assumptions:

- Stable money demand function
- Vertical aggregate supply curve
- Purchasing power parity

Economic relationships:

Equilibrium conditions and accounting identities

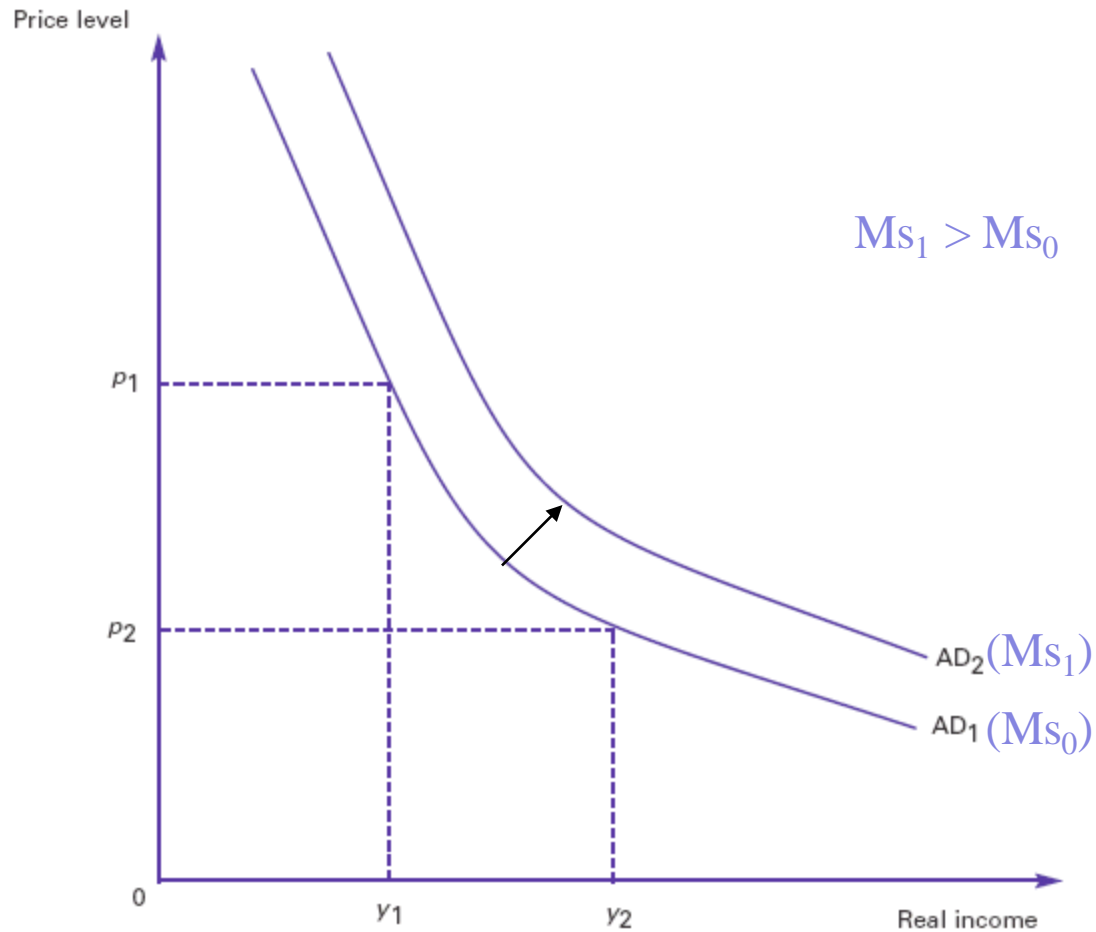
Comparative static analysis:

Policies and shocks

Aggregate demand

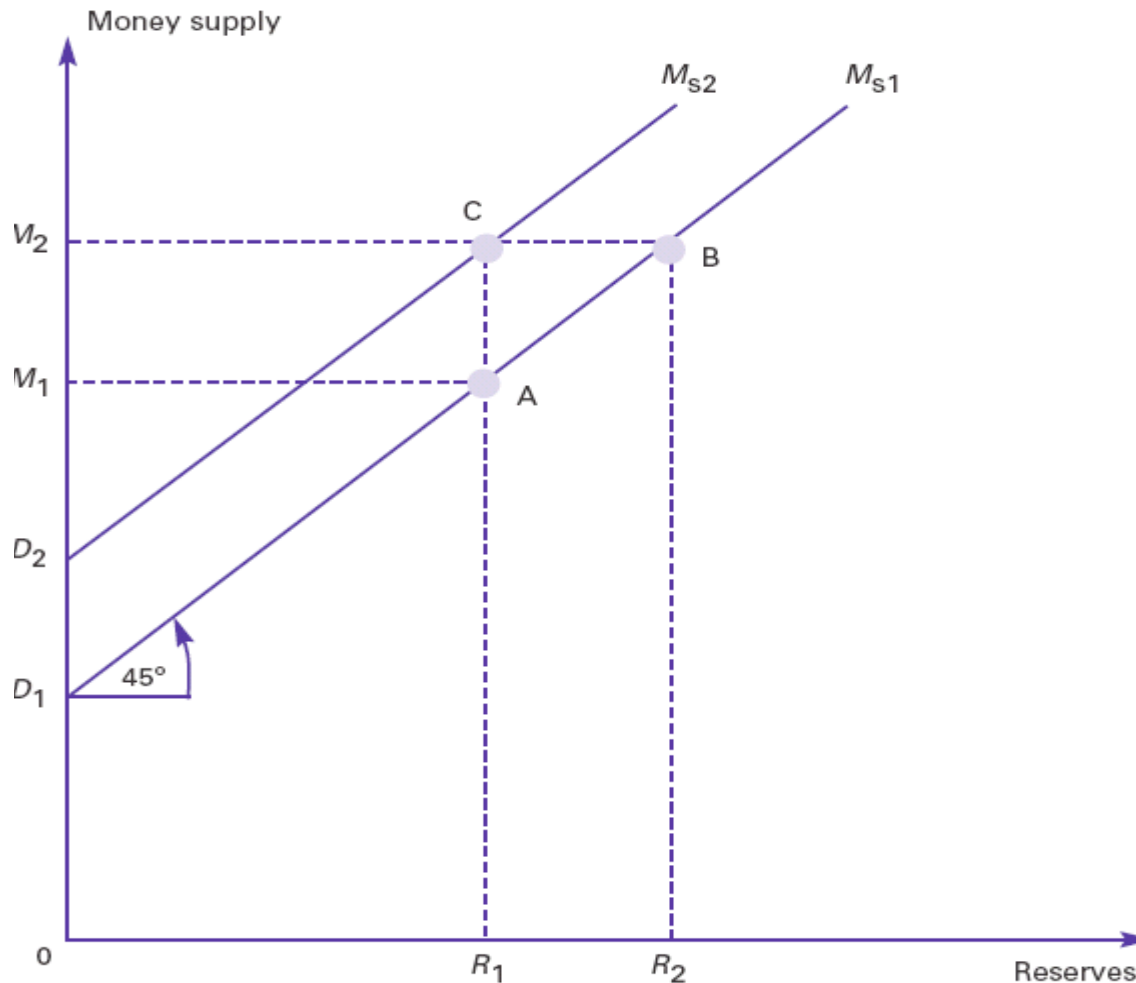
$$Md = kPy \text{ where } k > 0$$

$$\text{Equilibrium: } Ms = kPy$$



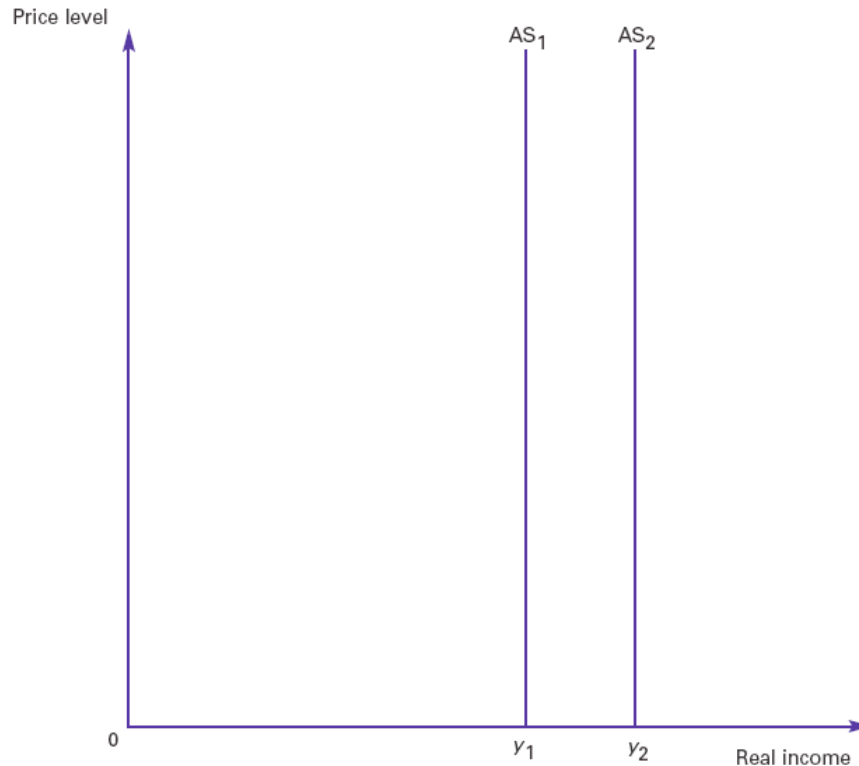
Money supply

$$M_S = D + R \quad dM_S = dD + dR$$



Aggregate supply

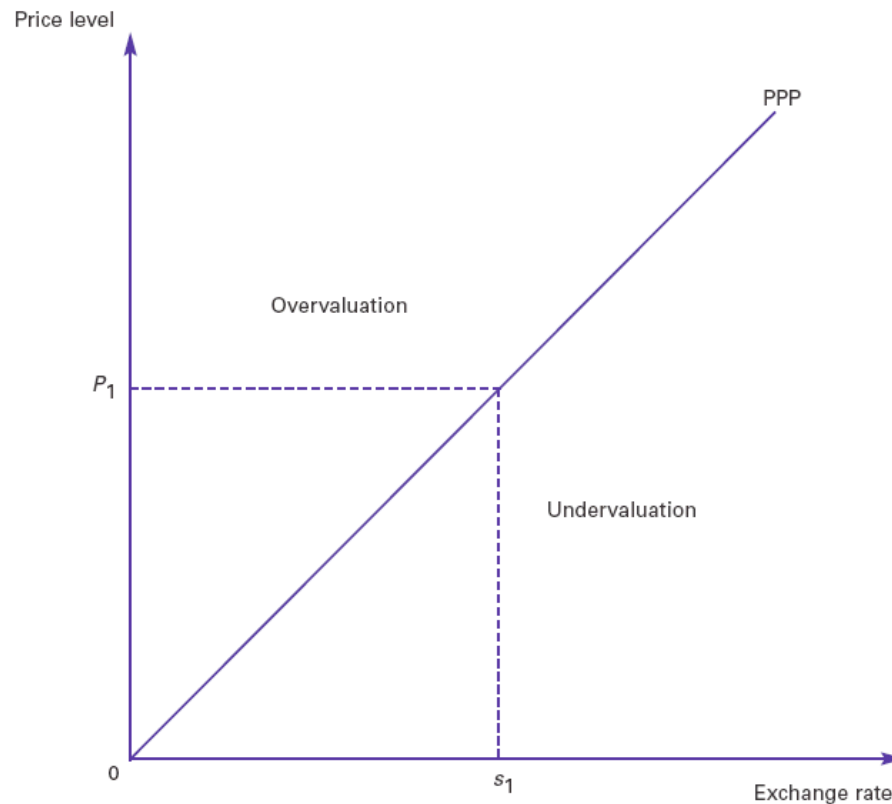
The labour market is sufficiently flexible as for the economy to be continuously at the full employment level of output.



Purchasing power parity condition

The exchange rate adjusts so as to keep this equilibrium equation

$$S = \frac{P}{P^*} \quad \text{that is, } P = SP^*$$



Equilibrium and disequilibrium

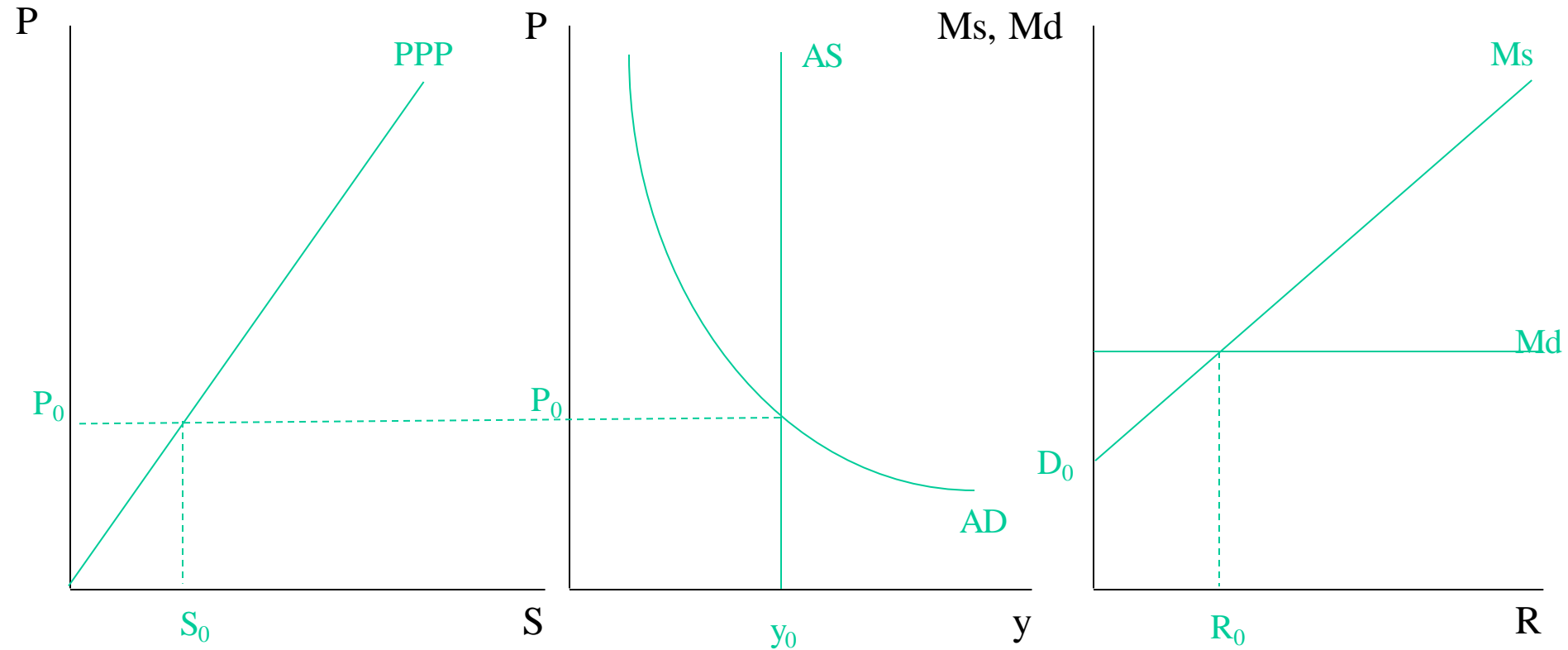
The monetarists view the BP surpluses and deficits as monetary flows due to stock disequilibrium in the money market

$$M_s = M_d \quad BP = 0$$

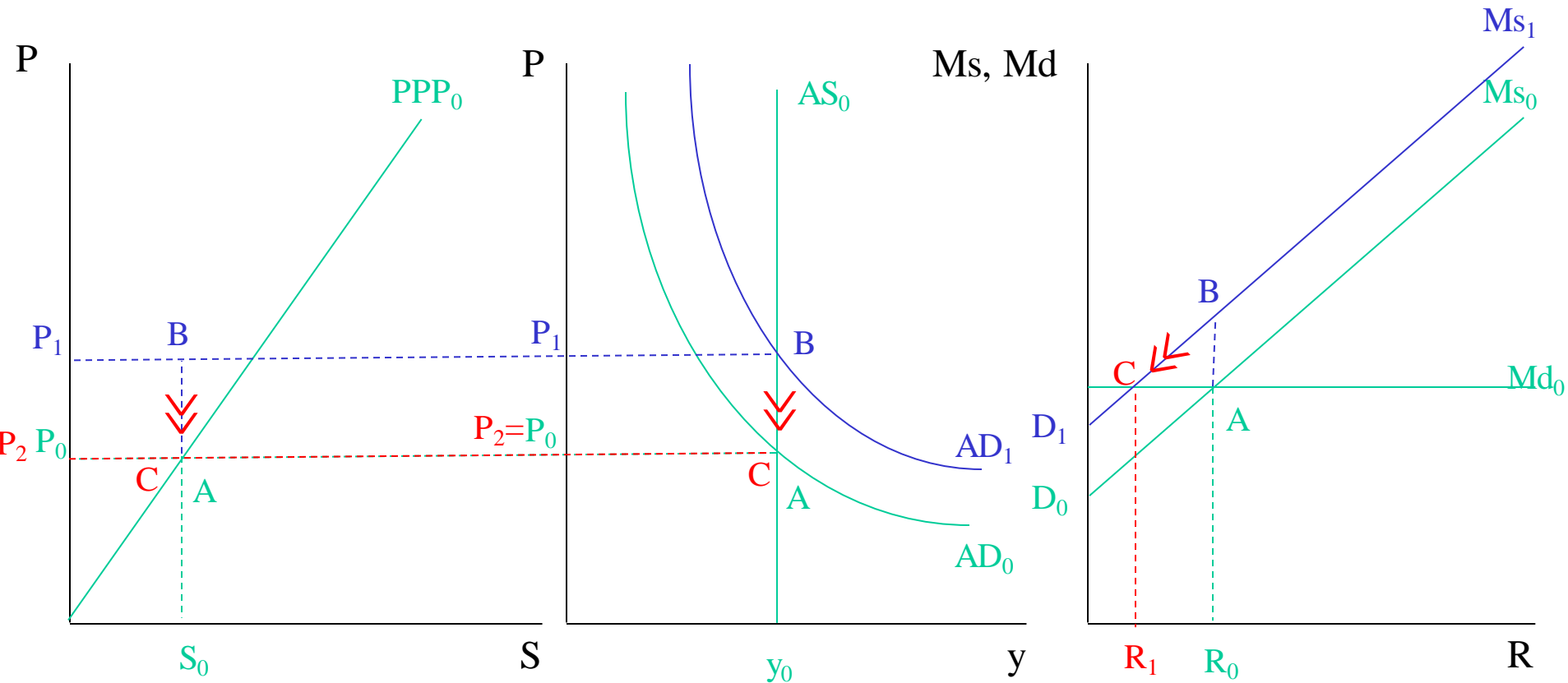
$$M_s > M_d \quad BP < 0$$

$$M_s < M_d \quad BP > 0$$

Equilibrium of the model



A monetary expansion under fixed exchange rates

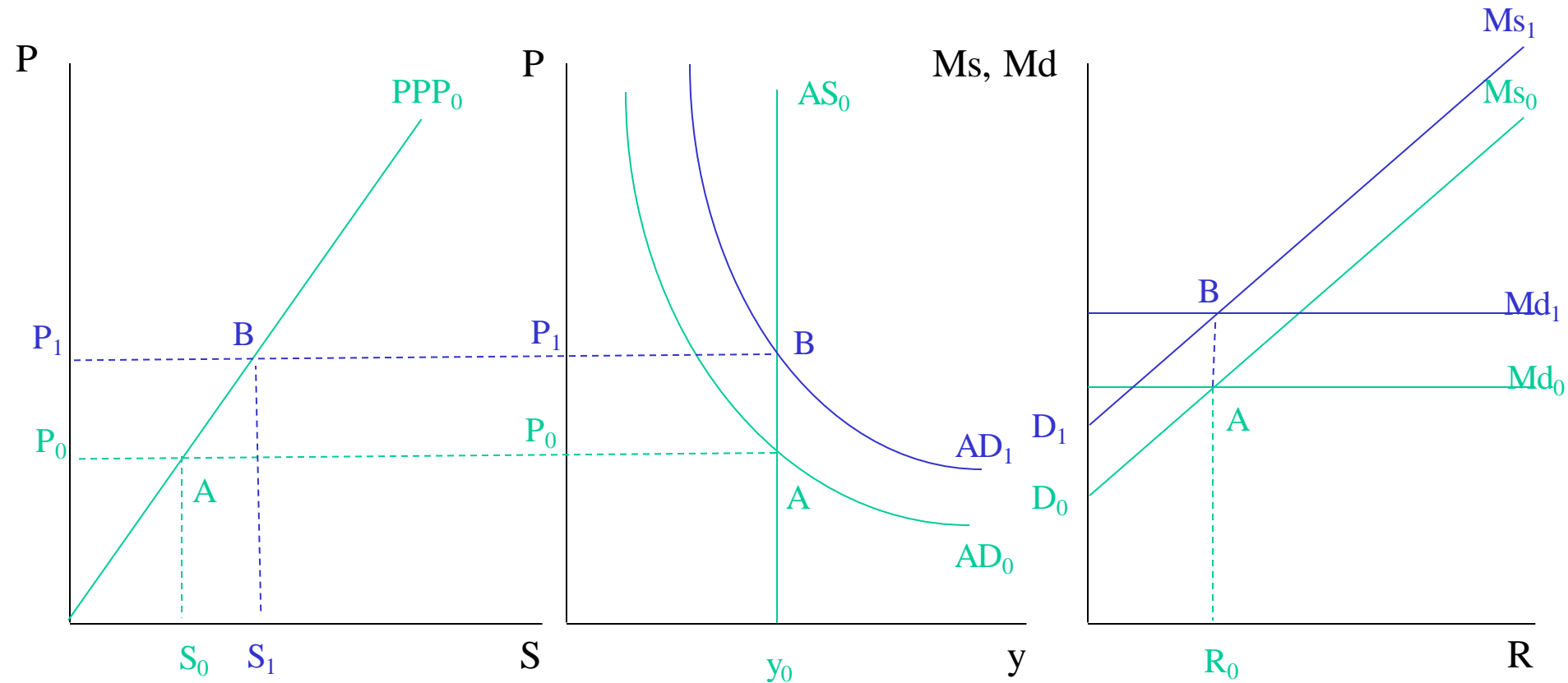


CB conducts open market operation by buying bonds $\rightarrow \Delta D \rightarrow \Delta Ms$

Rightward shift in the ΔD curve $\rightarrow \Delta P \rightarrow$ loss in competitiveness $\rightarrow \nabla BP$

Pressures on the ER $\rightarrow \Delta Supply \$ \rightarrow \nabla Reserves \rightarrow \nabla Ms \rightarrow$ Equilibriums restored

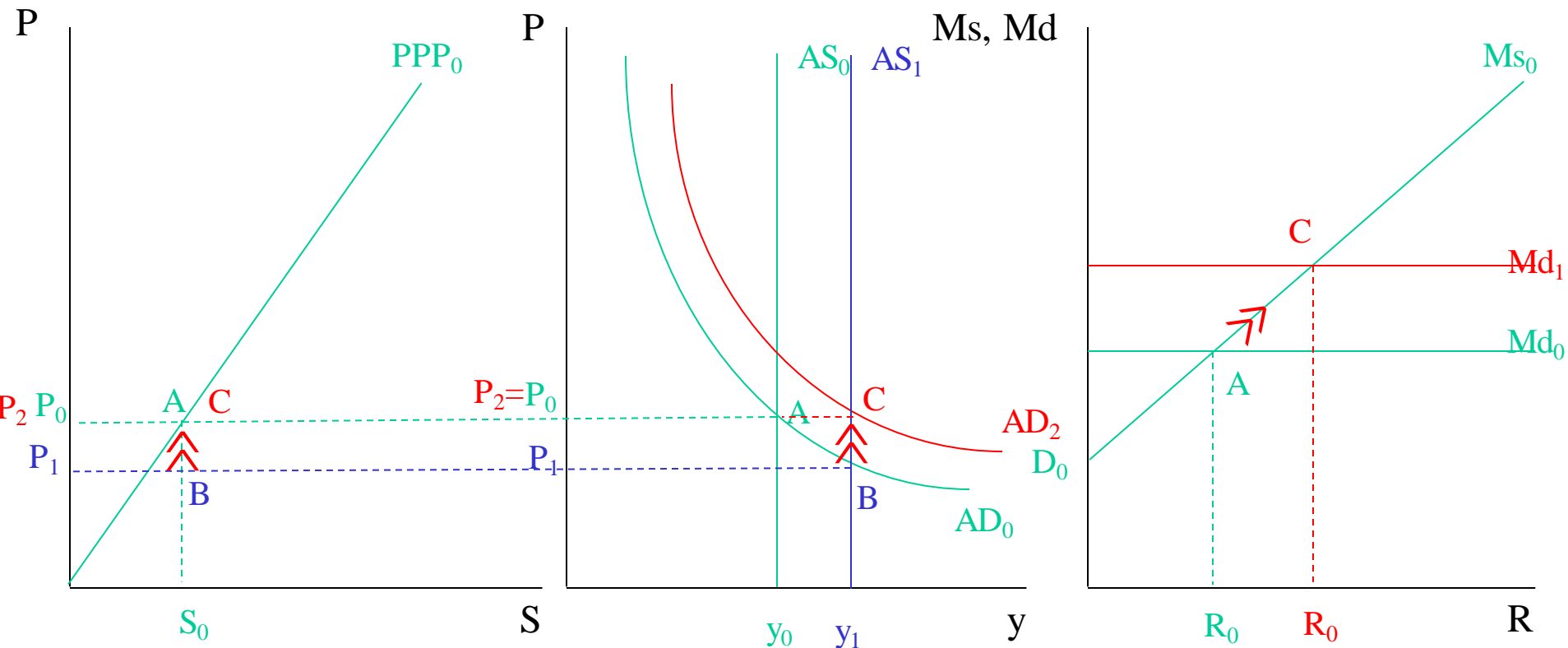
A monetary expansion under floating exchange rates



CB conducts open market operation by buying bonds $\rightarrow \Delta D \rightarrow \Delta Ms$

Rightward shift in the ΔD curve $\rightarrow \Delta P \rightarrow \begin{cases} \Delta S \\ \Delta Md \end{cases}$

An increase in income under fixed exchange rates

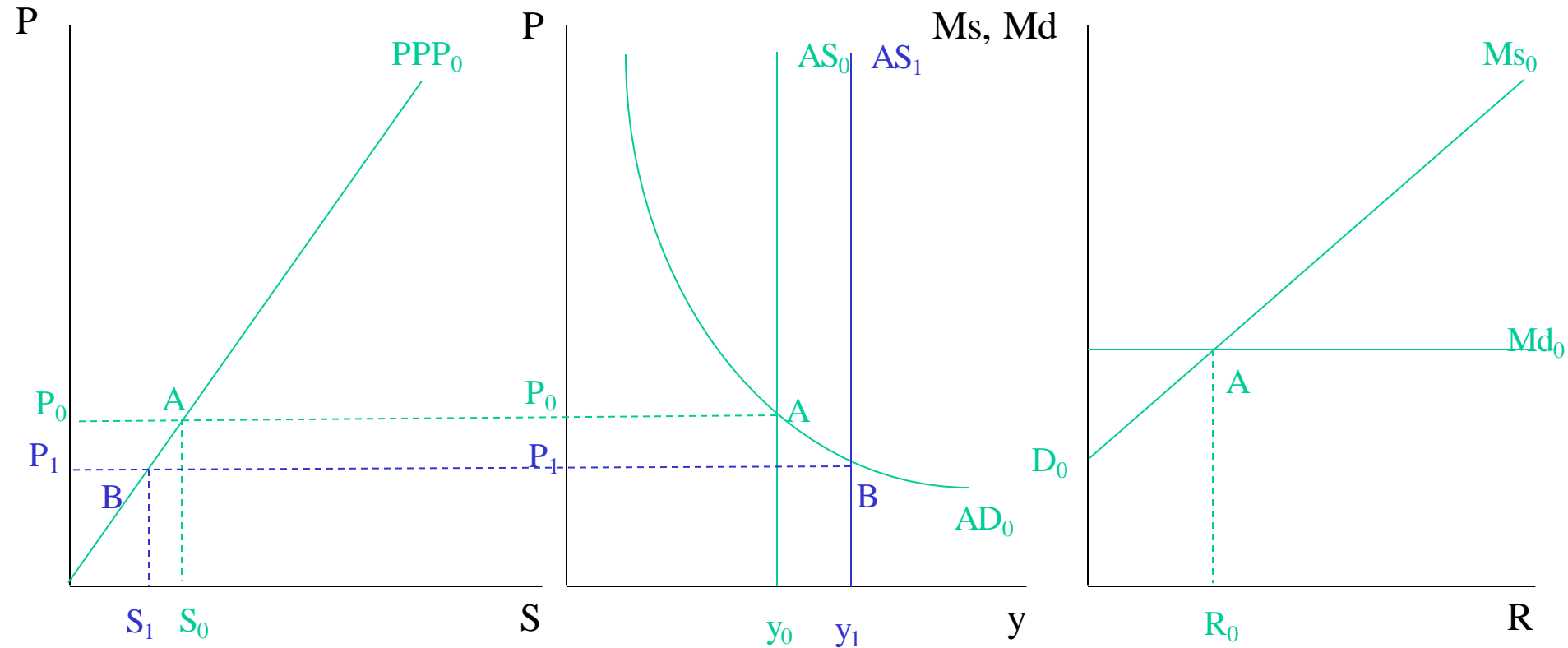


SA shifts rightward $\rightarrow \nabla P$

Δ competitiveness $\rightarrow \Delta BP \rightarrow \Delta Reserves \rightarrow \Delta Ms \rightarrow AD$ shifts rightward $\rightarrow \Delta P$

ΔMd as long as prices are increasing

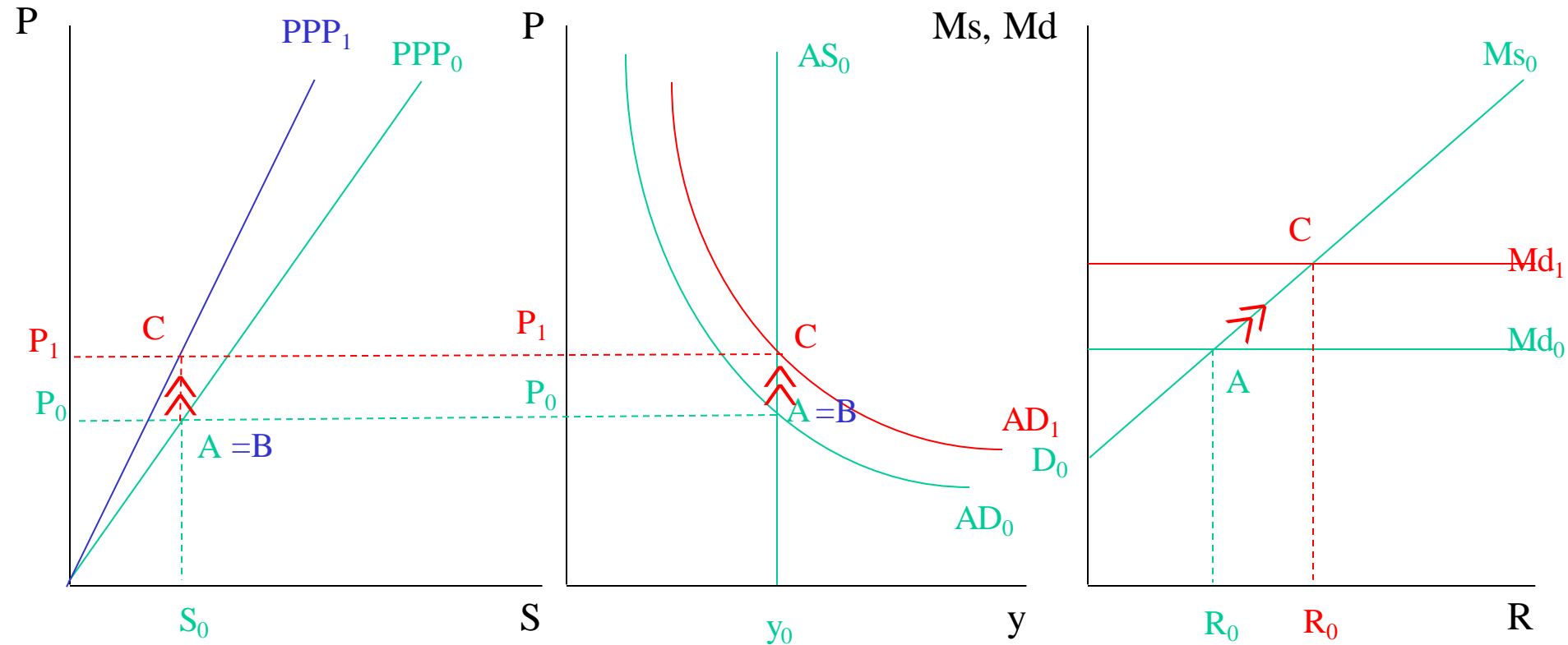
An increase in income under floating exchange rates



SA shifts rightward $\rightarrow \nabla P$

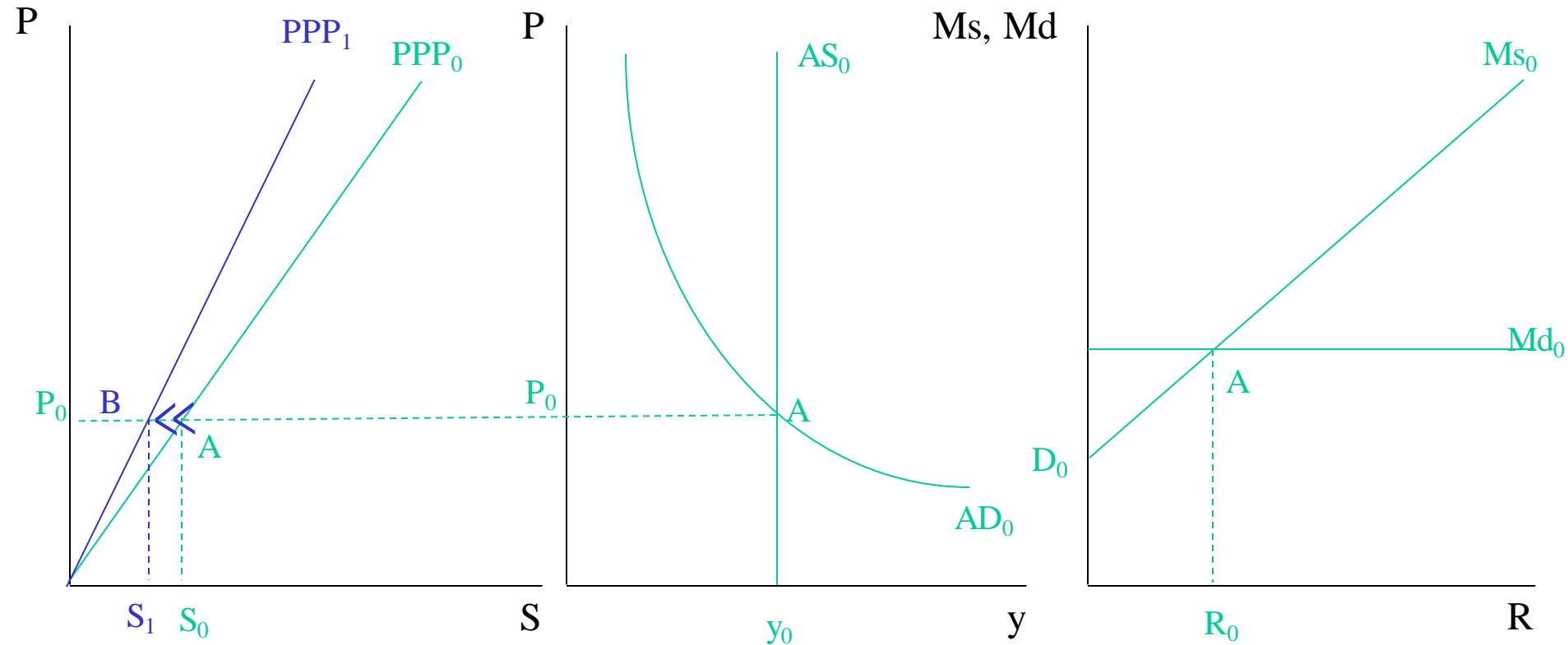
The Δ competitiveness is offset by ∇S

An increase in foreign prices under fixed exchange rates



$\Delta P^* \rightarrow \Delta \text{slope of the PPP curve} \rightarrow \text{At point A, doing nothing, situation changes}$
 $\Delta P^* \rightarrow \Delta \text{compet.} \rightarrow \Delta BP \rightarrow \Delta \text{Reserves} \rightarrow \Delta Ms \rightarrow AD \text{ shifts rightward} \rightarrow \Delta P$
 $\Delta Md \text{ as long as prices are increasing}$

An increase in foreign prices under floating exchange rates



$$\Delta P^* \rightarrow \Delta \text{slope of the PPP curve} \rightarrow \nabla S$$

Let's change the model: new money demand function

$$Md = kPy - \lambda r$$

What's the main difference now? Hint: Derivation of the AD curve
Is there now an extra factor affecting the position of the AD curve?

$$M_s = 50$$

Possible situations:

$$50 = 2 \cdot 10 \cdot 3 - 5 \cdot 2$$

$$50 = 2 \cdot 7.5 \cdot 4 - 5 \cdot 2$$

$$M_s = 100$$

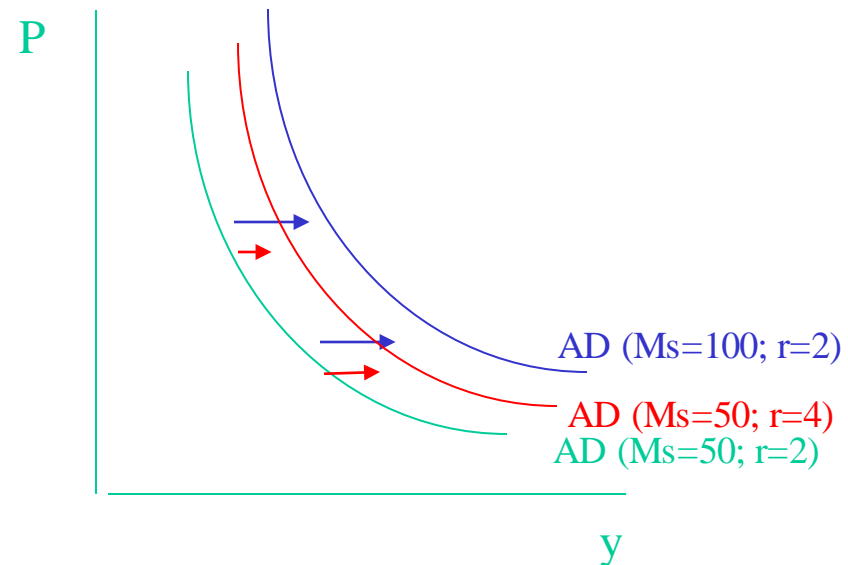
$$100 = 2 \cdot 10 \cdot 5.5 - 5 \cdot 2$$

$$50 = 2 \cdot 7.5 \cdot 7.33 - 5 \cdot 2$$

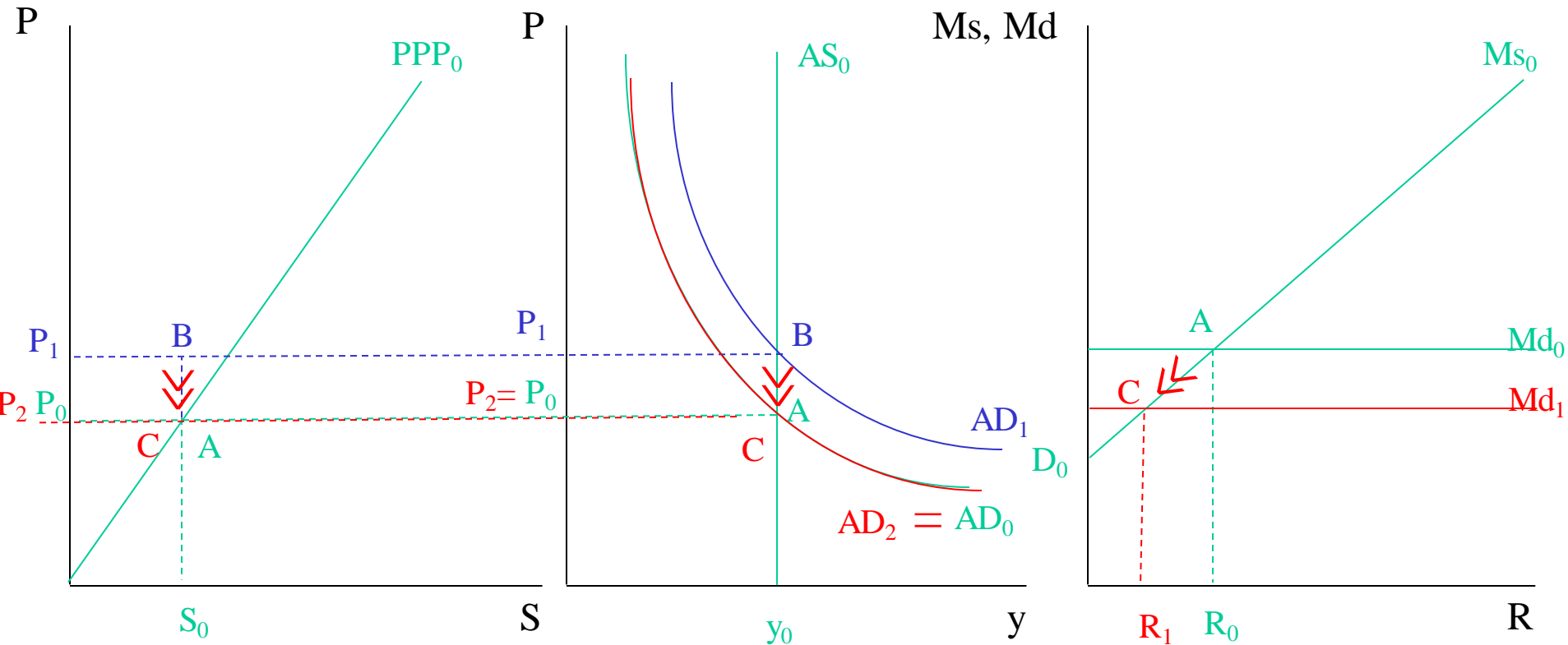
$$r = 4$$

$$50 = 2 \cdot 10 \cdot 3.5 - 5 \cdot 4$$

$$50 = 2 \cdot 7.5 \cdot 4.66 - 5 \cdot 4$$



An increase in the domestic interest rate under fixed exchange rates

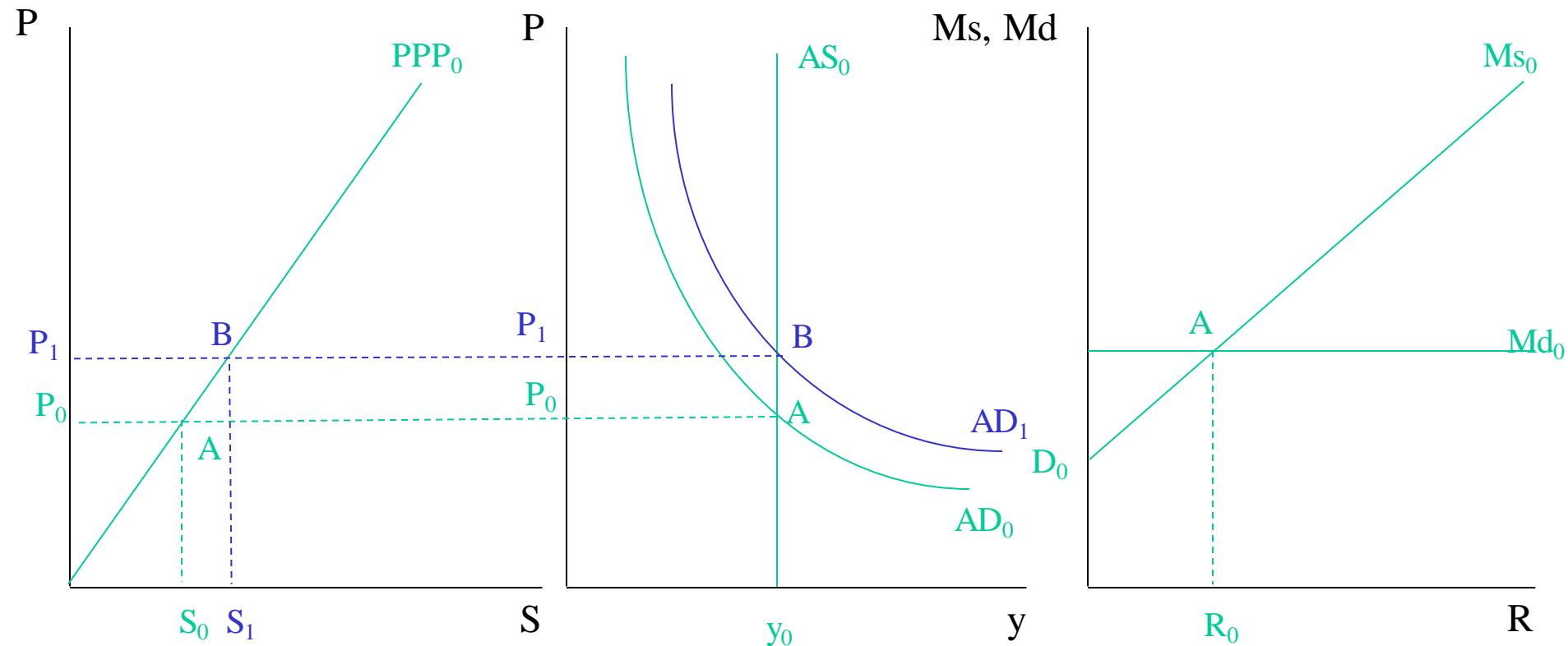


$\Delta r \rightarrow AD$ shifts to the right $\rightarrow \Delta P$ keeping Md fixed

$\Delta P \rightarrow$ Drop in competitiveness $\rightarrow \nabla BP \rightarrow$ Pressures on the ER \rightarrow
 Δ Supply \$ $\rightarrow \nabla$ Reserves $\rightarrow \nabla Ms \rightarrow AD$ shifts to the left \rightarrow Initial point

What about money market? As long as P decrease, Md decreases

An increase in the domestic interest rate under floating exchange rates

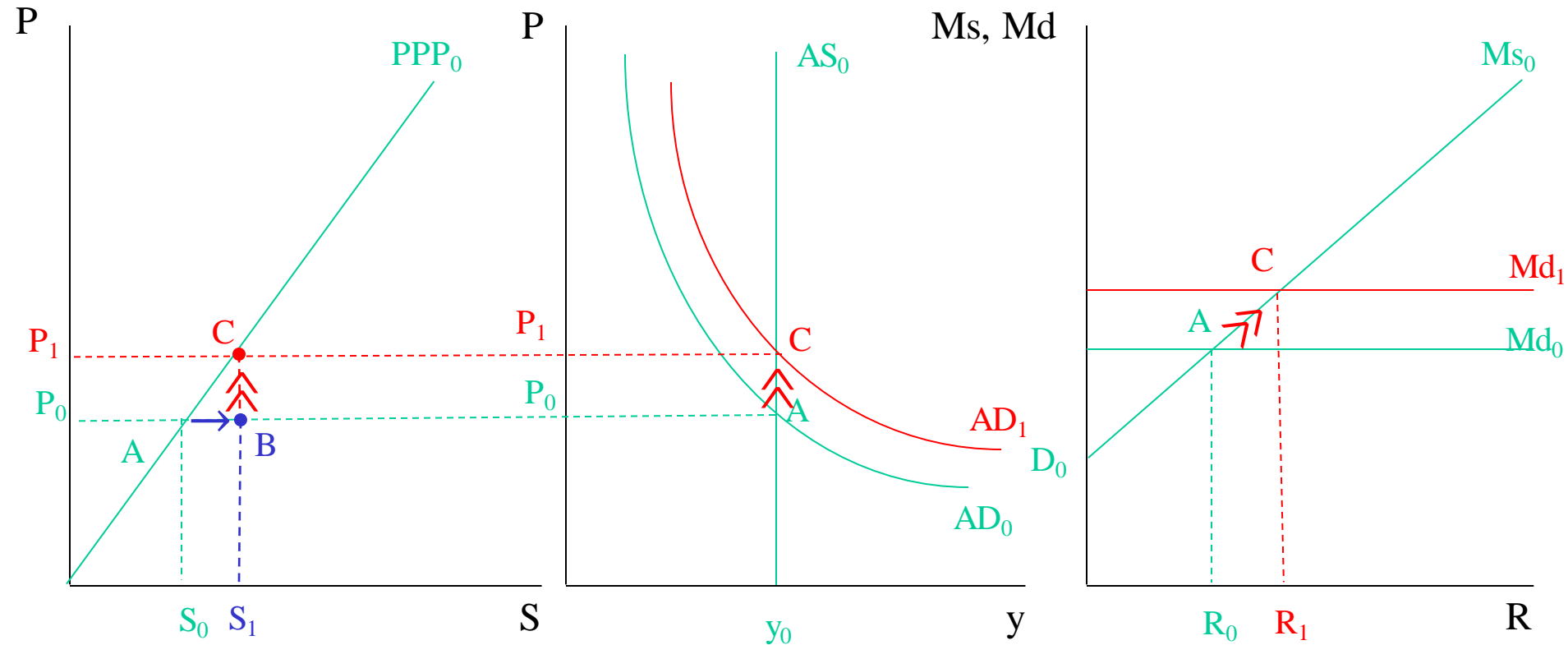


$\Delta r \rightarrow AD$ shifts to the right $\rightarrow \Delta P$ keeping Md fixed

$\Delta P \rightarrow \Delta S$

What about money market? Only changes the composition of Md 18

The effect of a devaluation



$\Delta S \rightarrow$ we gain competitiveness $\rightarrow \Delta BP$

To keep the new optimum exchange rate the CB $\Delta D\$ \rightarrow \Delta Reserves \rightarrow \Delta Ms$

AD shifts upwards $\rightarrow \Delta P \rightarrow$ competitive advantage vanishes 19

Money market? \rightarrow due to $\Delta P \rightarrow \Delta Md$