



## EE-KK diagram



- Slides are largely based on Baldwin-Wyplosz's ones (textbook)



# EE-KK diagram (more formal)

- Study impact of integration on geographical concentration in EE-KK diagram = A diagram to determine regional shares in expenditures and industry and how these change with trade costs
- Simplifying assumptions:
  - Two regions, north and south,
  - Same technology and factor supplies (no CA),
  - Two factors, capital (mobile), labour (immobile),
  - Two sectors or goods (services L-intensive, industry K-intensive).
    - Services (requires just labour; freely traded)
    - Industry (one unit of capital and some labour; transaction cost). This implies North's share of K is its share of industry.
  - regions share capital = regions share industrial firms
- No intermediate goods = no cost linkages

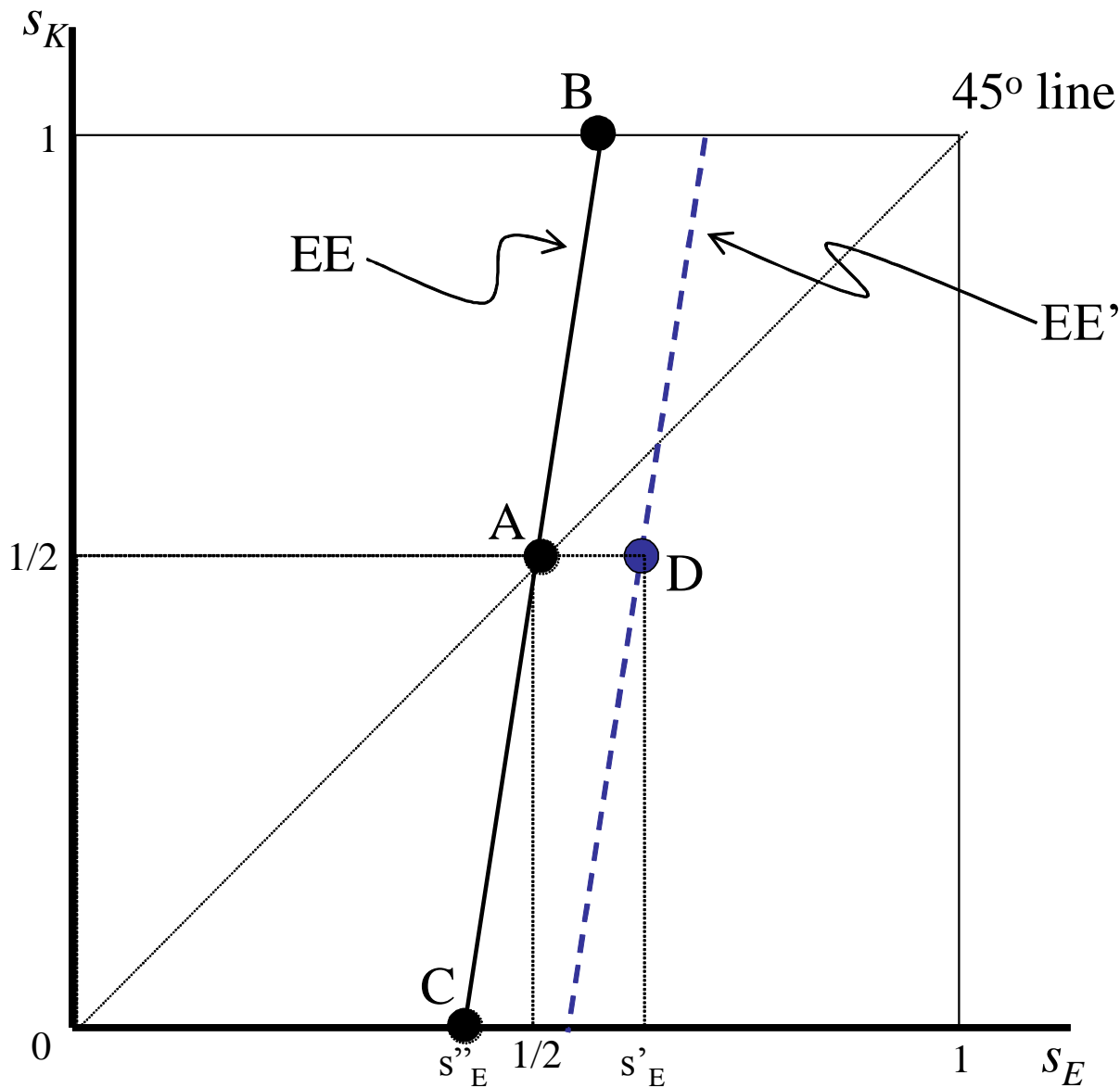


# Economic forces

- One agglomeration & one dispersion force
  - Demand linkage (there are more capital owners in the large market)
  - Product market competition (there are more firms in the large market)
- Ignores two forces
  - Cost linkages (no intermediate goods)
  - Factor market competition (immobile factor used in both sectors and services freely traded)

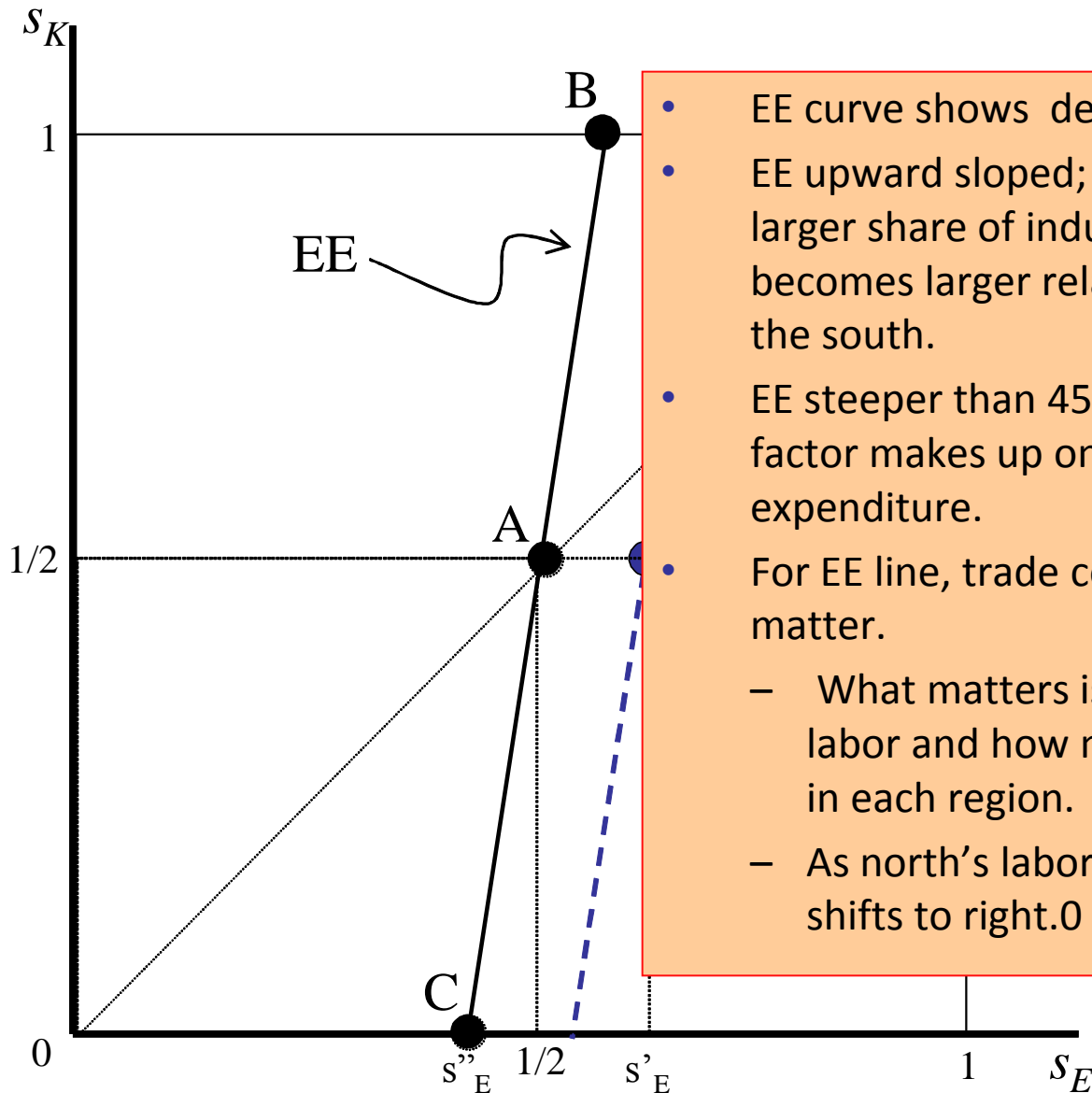


# EE curve





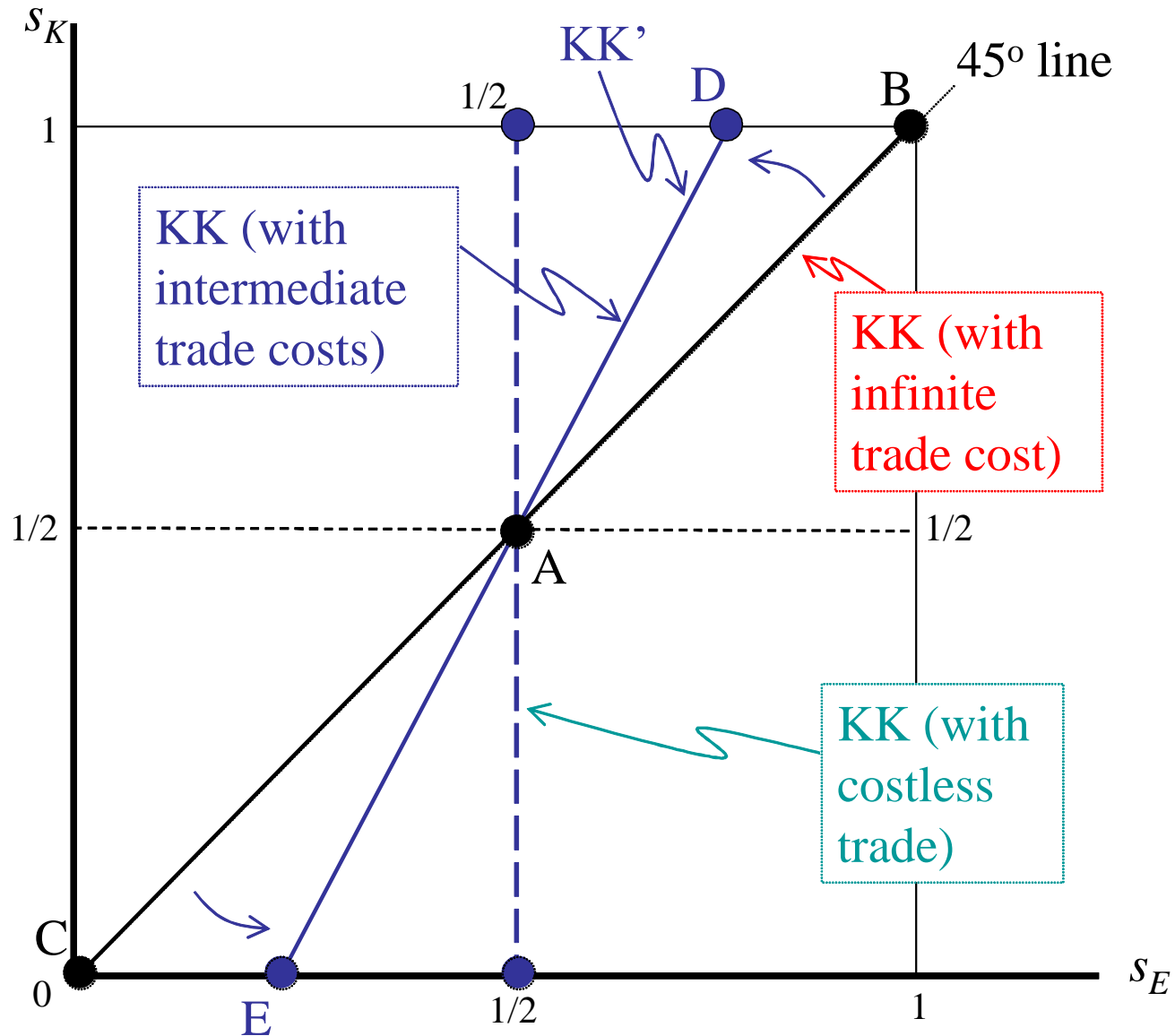
# EE curve



- EE curve shows demand linkage.
- EE upward sloped; as north gets a larger share of industry its market becomes larger relative to that of the south.
- EE steeper than 45°; the mobile factor makes up only part of total expenditure.
- For EE line, trade costs don't matter.
  - What matters is how much labor and how much capital is in each region.
  - As north's labor share rises, EE shifts to right.

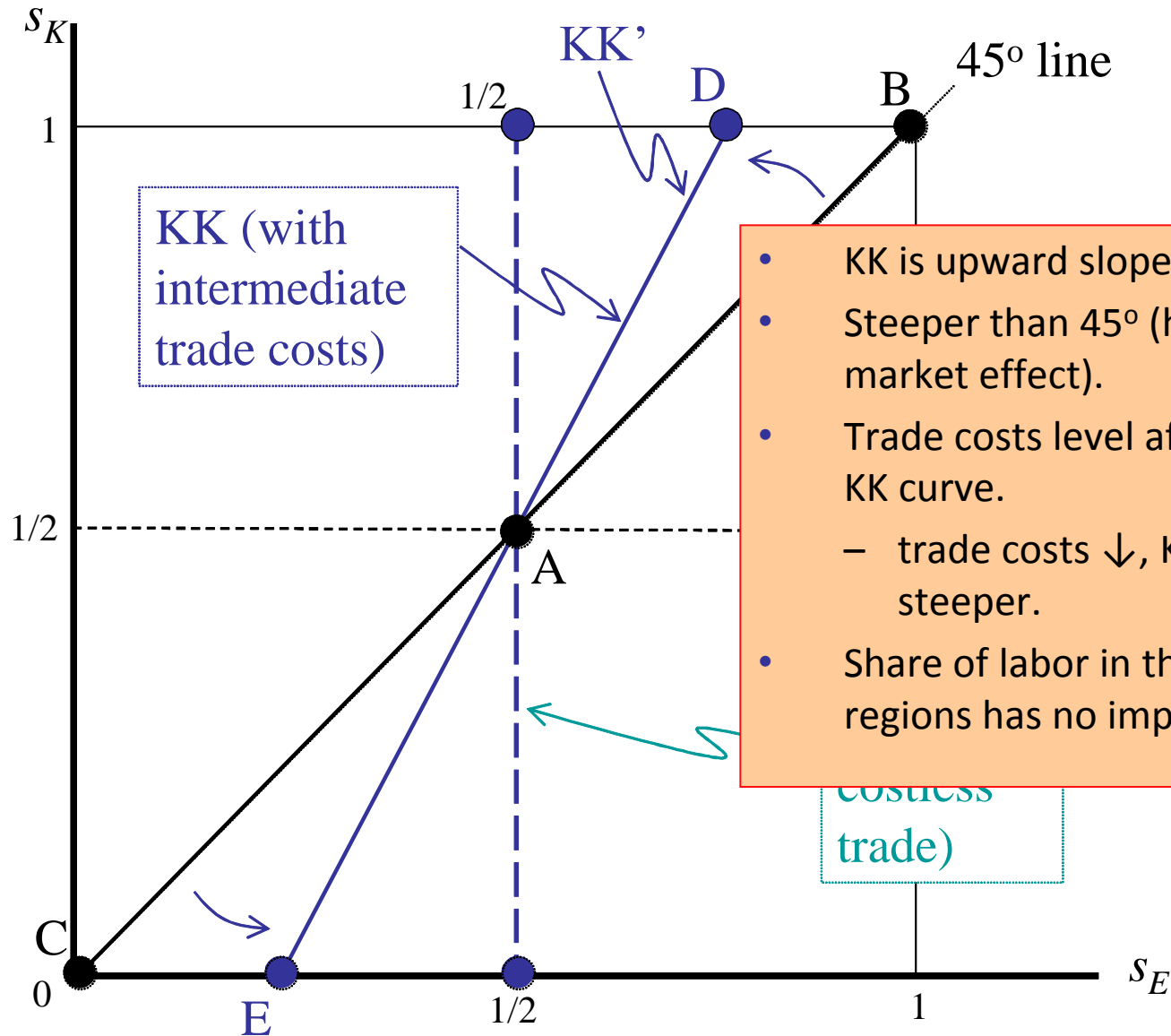


# KK curve





# KK curve



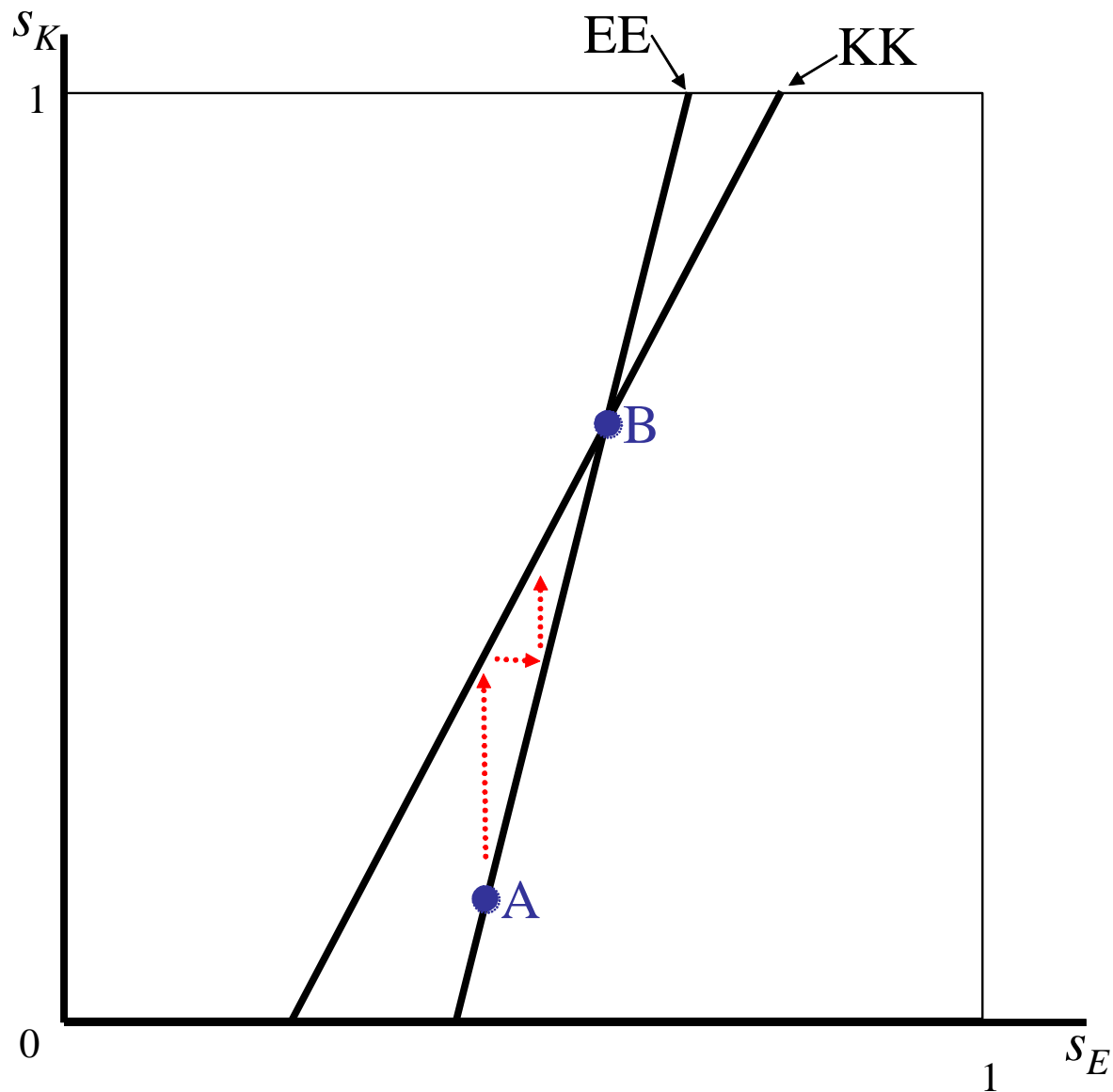
KK (with intermediate trade costs)

- KK is upward sloped.
- Steeper than 45° (home market effect).
- Trade costs level affects the KK curve.
  - trade costs ↓, KK gets steeper.
- Share of labor in the two regions has no impact on KK.

costless trade)

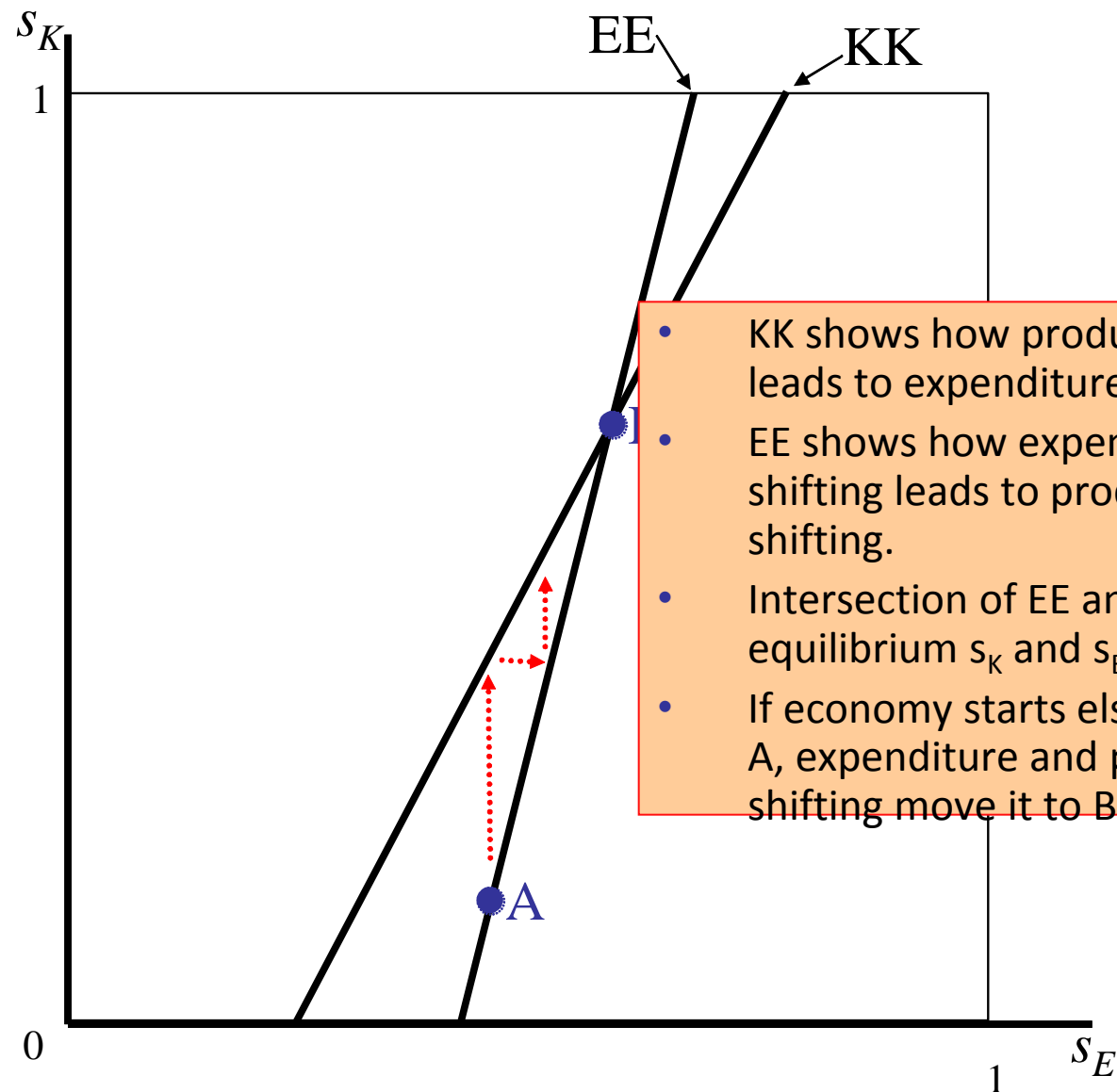


# EE-KK Diagram: Locational equilibrium





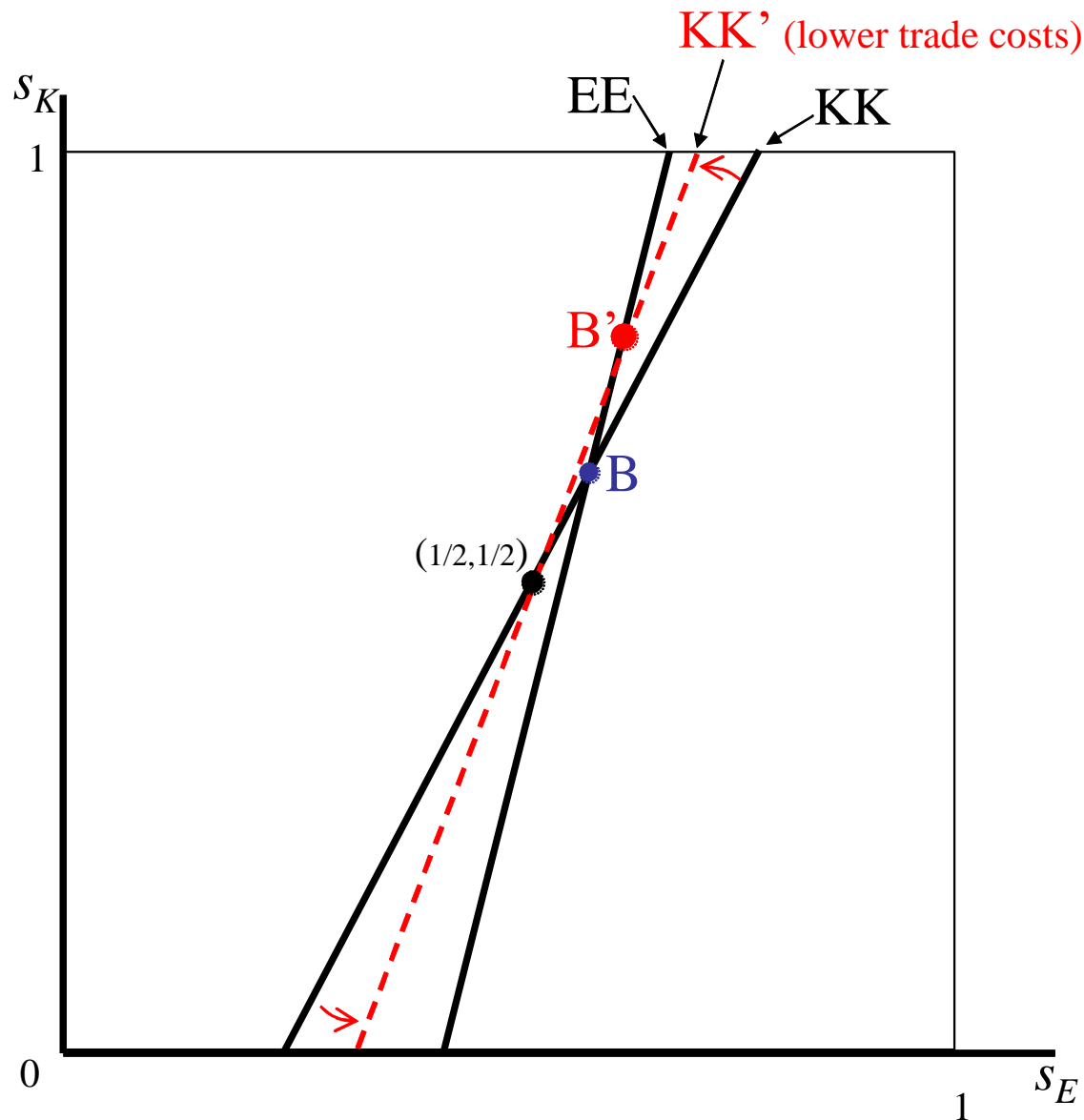
# EE-KK Diagram: Locational equilibrium



- KK shows how production shifting leads to expenditure shifting.
- EE shows how expenditure shifting leads to production shifting.
- Intersection of EE and KK show equilibrium  $s_K$  and  $s_E$ .
- If economy starts elsewhere, say A, expenditure and production shifting move it to B.

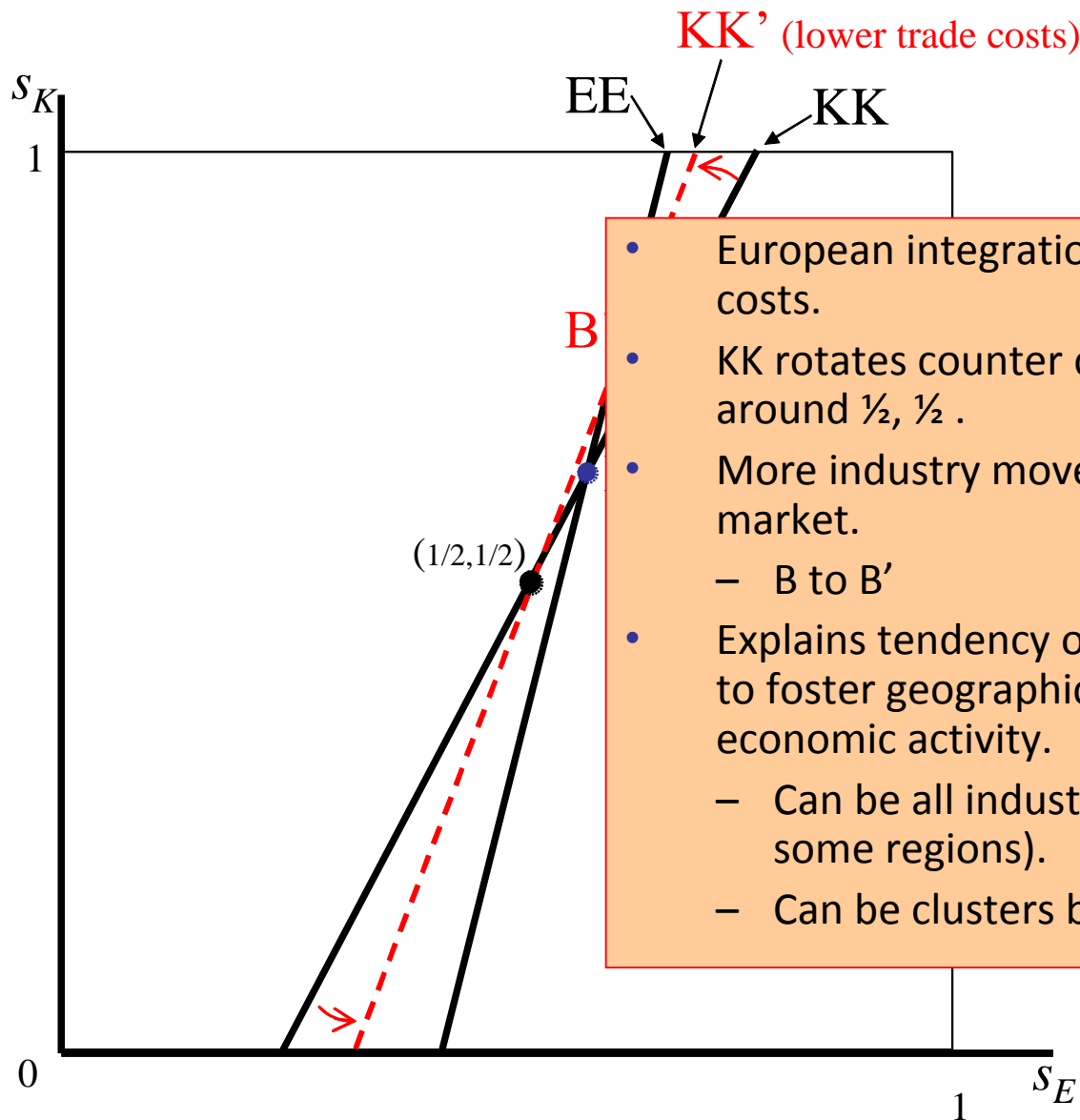


# EE-KK Diagram: EU integration





# EE-KK Diagram: EU integration



- European integration lowers trade costs.
- KK rotates counter clockwise around  $\frac{1}{2}, \frac{1}{2}$ .
- More industry moves to the bigger market.
  - B to B'
- Explains tendency of integration to foster geographic clustering of economic activity.
  - Can be all industry (empty out some regions).
  - Can be clusters by sector.