



Theory and Politics of European Integration

Lecture 5: Growth Effects and Factor Market Integration

Dr. Ehsan Vallizadeh

Department of Economics – Integration of European Labor Markets



- **Market Size and Scale Effects**
 - Monopoly, Duopoly and Breakeven-Comp Diagram
 - Integration in the BE-COMP Diagram
 - + Larger Market Size
 - + Falling Average Costs
 - + Higher Competition
 - + Falling Prices
 - + Higher Demand
 - + Industrial Restructuring
 - + Problems:
 - Higher market power of firms
 - Mergers and acquisitions
 - Anti-competitive behaviour
 - State aid policies

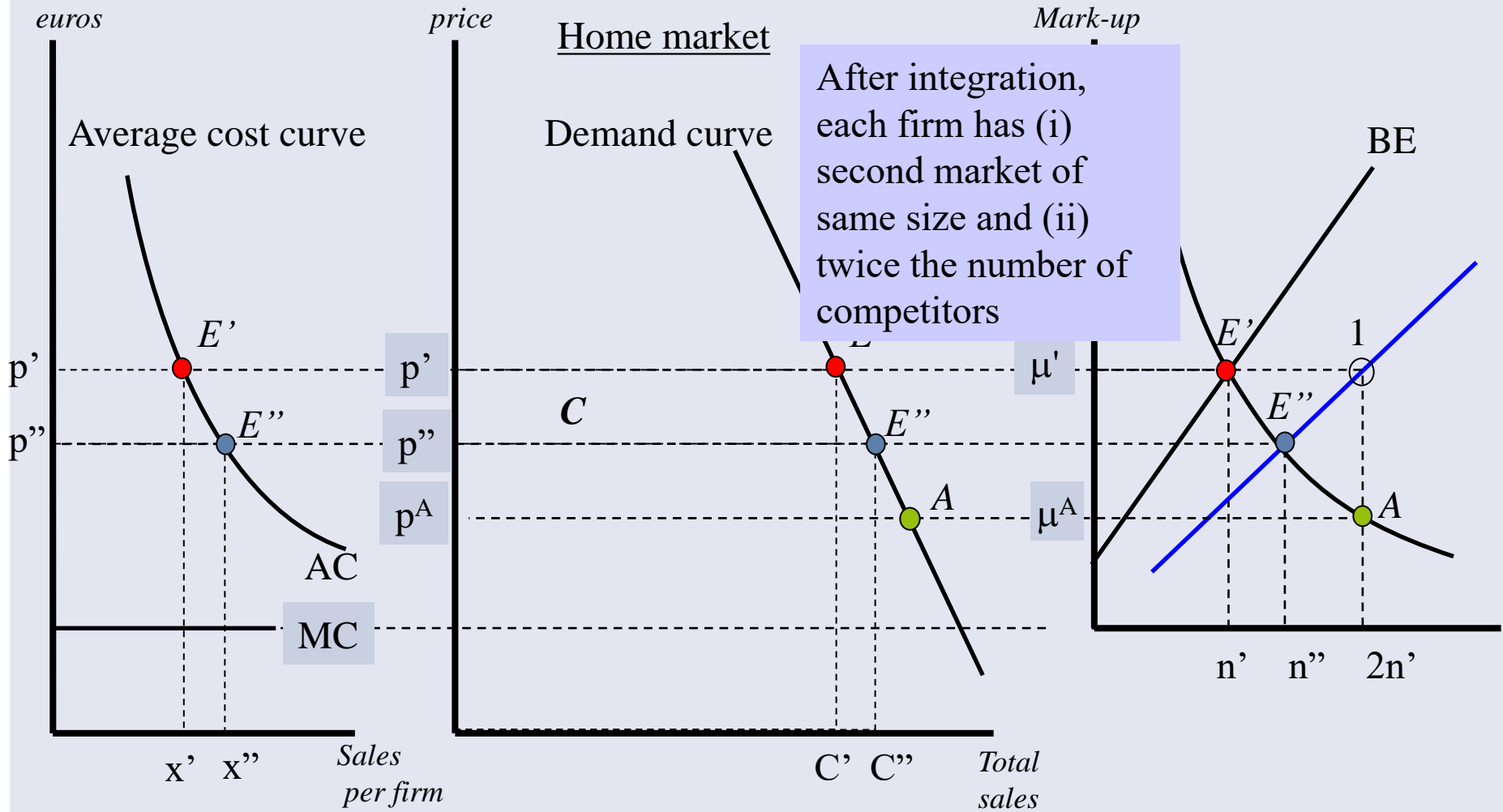


- **EU competition policy**
 - EU competency: 1st pillar
 - Forms of anti-competitive behaviour
 - + collusion
 - + cartels (e.g. vitamin cartel)
 - + territorial price discrimination (e.g. Nintendo, pharmaceuticals)
 - + abuse of dominant market position (e.g. Microsoft)
 - Two policy areas:
 - + merger control
 - + state aid policy



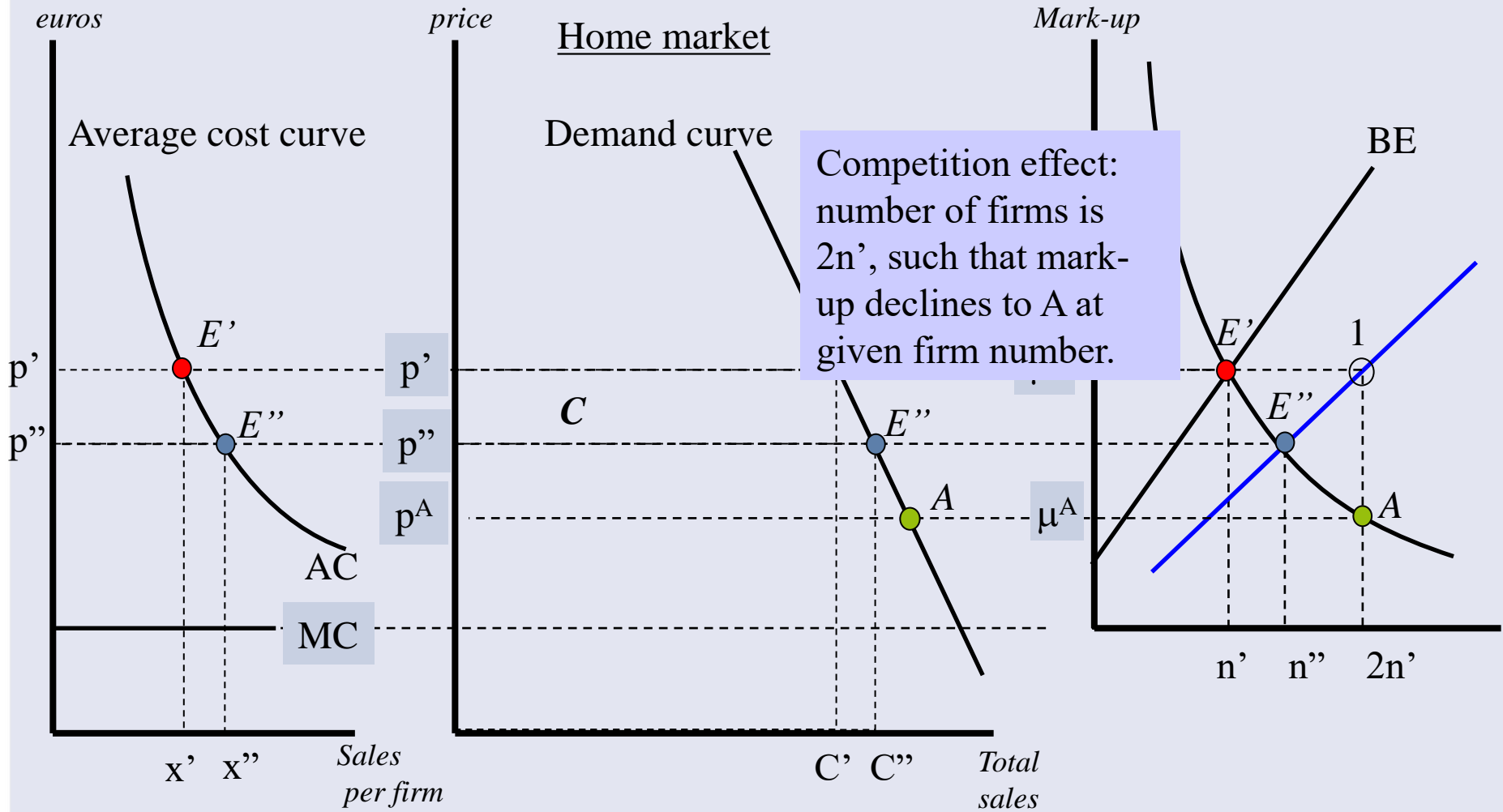
- **EU Trade Policy Policy**
 - Country composition of trade
 - Composition of goods on export and import side
 - EU Competencies in trade policies
 - Trade negotiations at WTO
 - Structure of MFN tariffs
 - Preferential trade agreements
 - Generalised System of Preferences

No-trade-to-free-trade integration

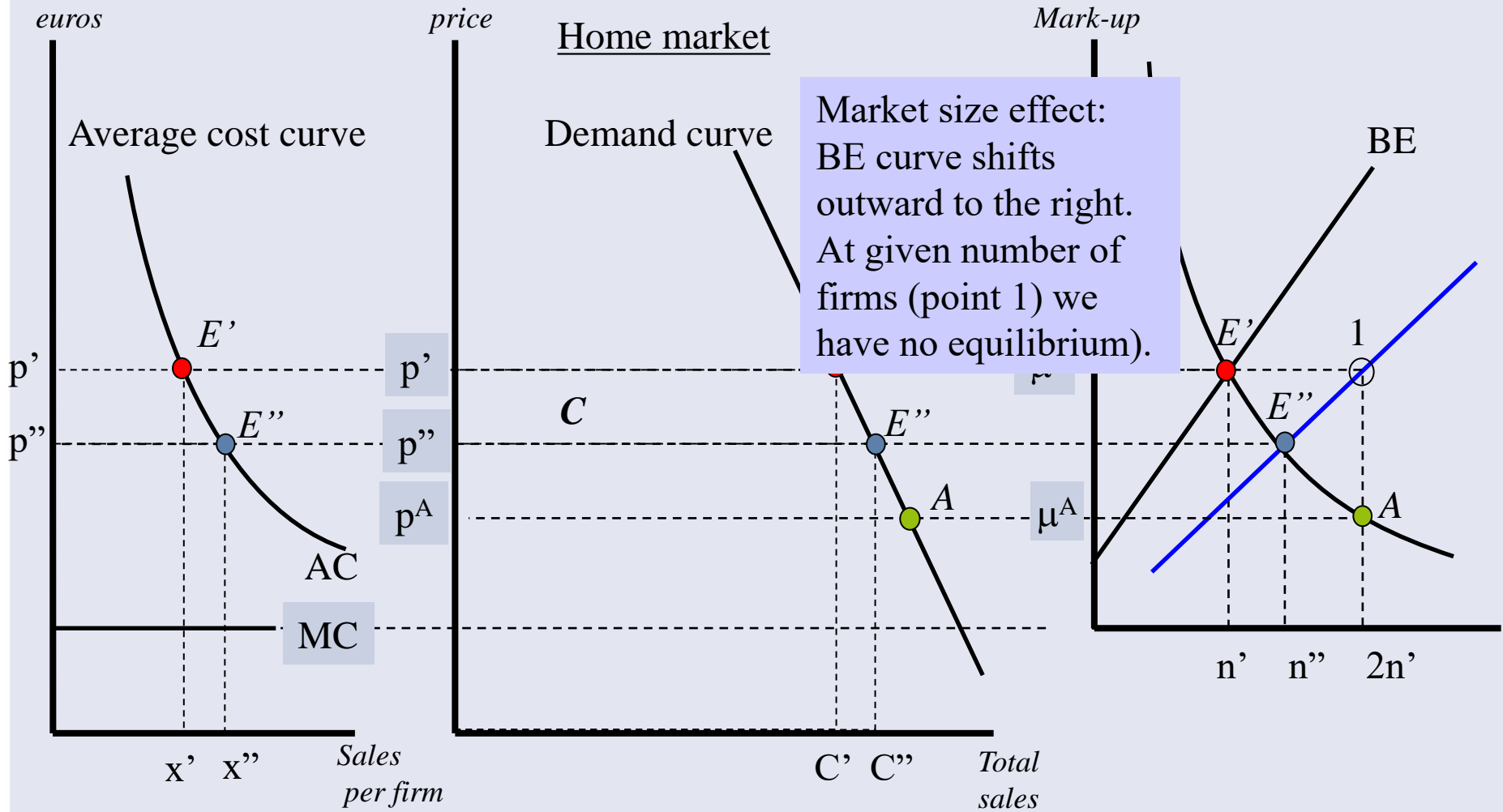


After integration, each firm has (i) second market of same size and (ii) twice the number of competitors

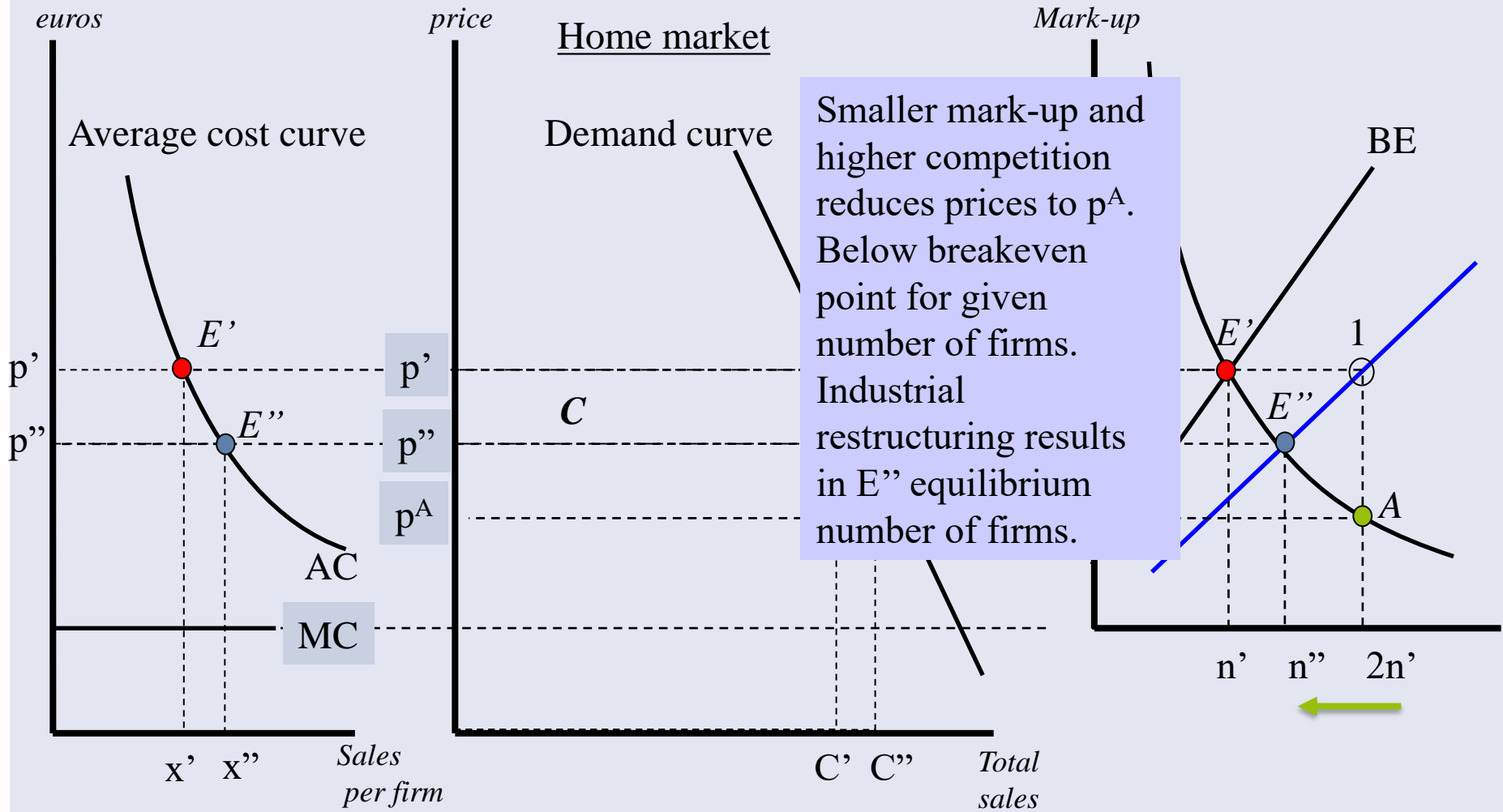
No-trade-to-free-trade integration



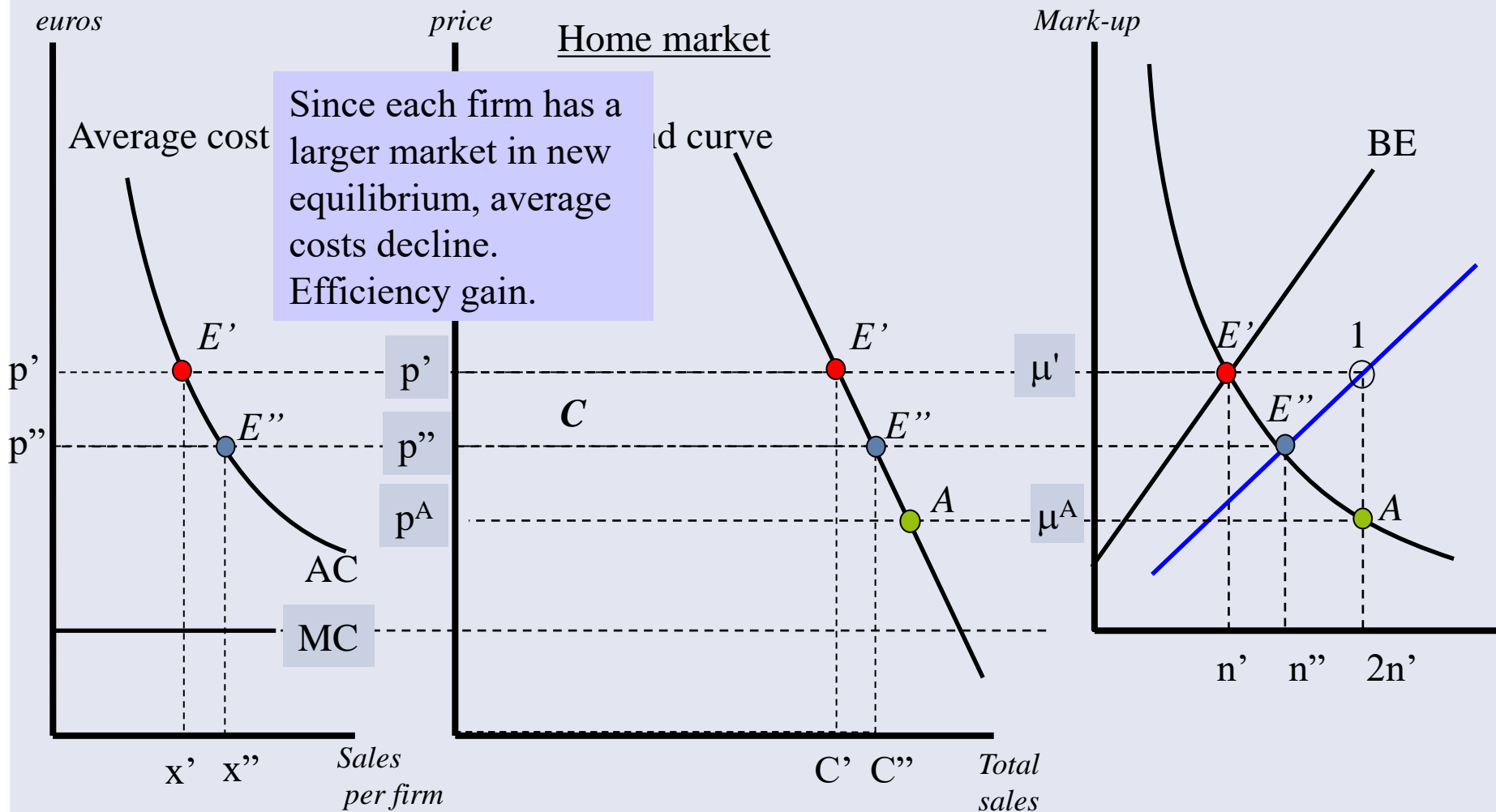
No-trade-to-free-trade integration



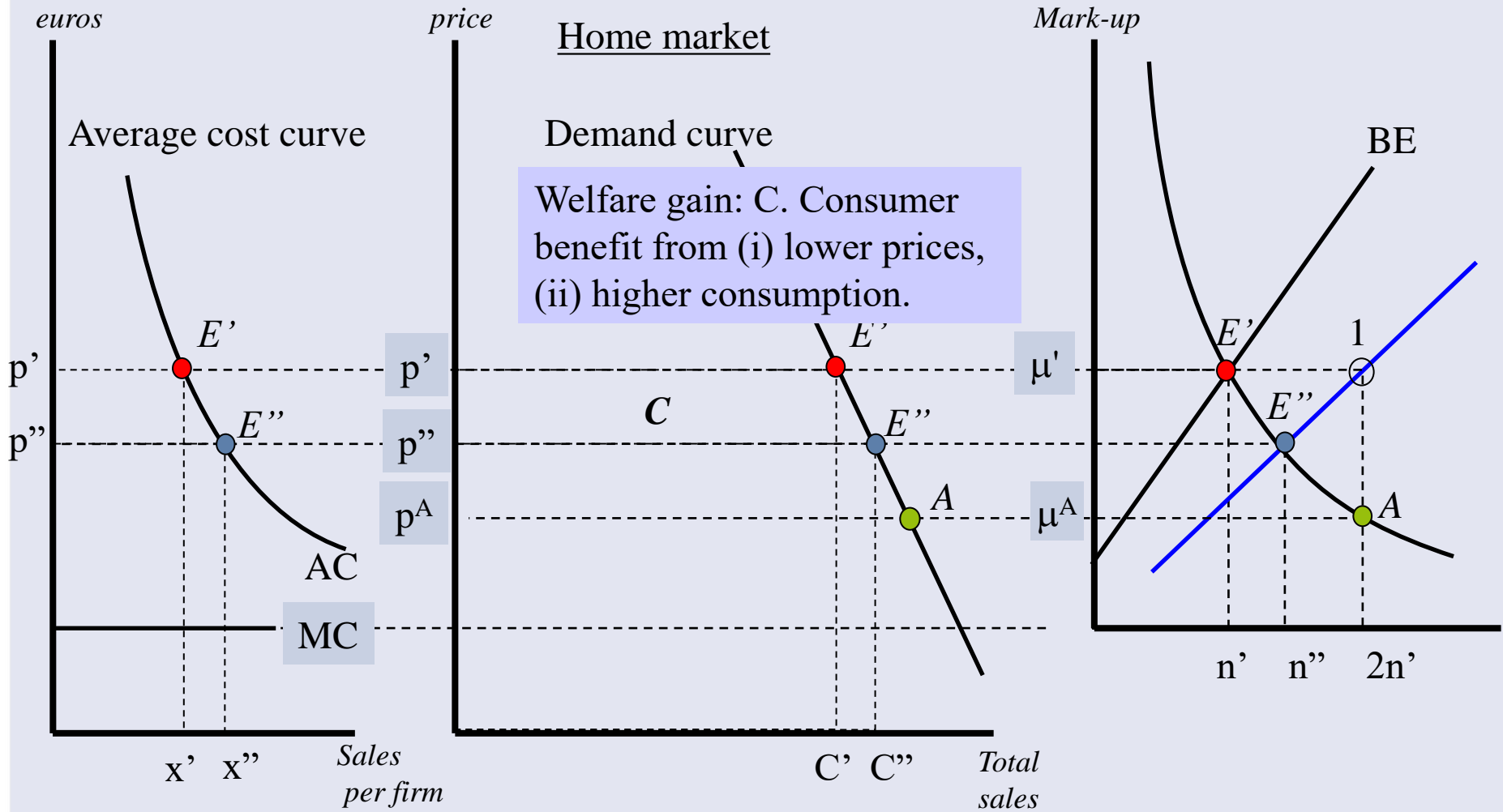
No-trade-to-free-trade integration



No-trade-to-free-trade integration



No-trade-to-free-trade integration





- Integration: no-trade-to-free-trade: BE curve shifts out (to point 1). (Larger market effect)
- Defragmentation:
 - PRE typical firm has 100% sales at home, 0% abroad;
POST: 50-50 ,
 - Can't see in diagram.
- Pro-competitive effect:
 - Equilibrium moves from E' to A: Firms losing money (below BE).
 - Pro-competitive effect = mark-up falls.
 - short-run price impact p' to p^A .



- **Growth effects**
 - Some facts on EU post-WWII growth
 - The neoclassical growth model (Solow-model)
 - Integration in the neoclassical growth model
- **Capital market integration**
 - Microeconomics of capital market integration



- Economic growth means producing more and more every year.
- European leaders have long emphasized the pro-growth aspects of European integration: it affects growth mainly via its effect on investment in
 - human capital (skills, training etc.),
 - physical capital (machines etc.)
 - knowledge capital (technology).
- Growth effects fall naturally into two categories:
 - medium term, like ‘induced physical capital formation’;
 - long term, involving a permanent change in the rate of accumulation, and thus a permanent change in the rate of growth.



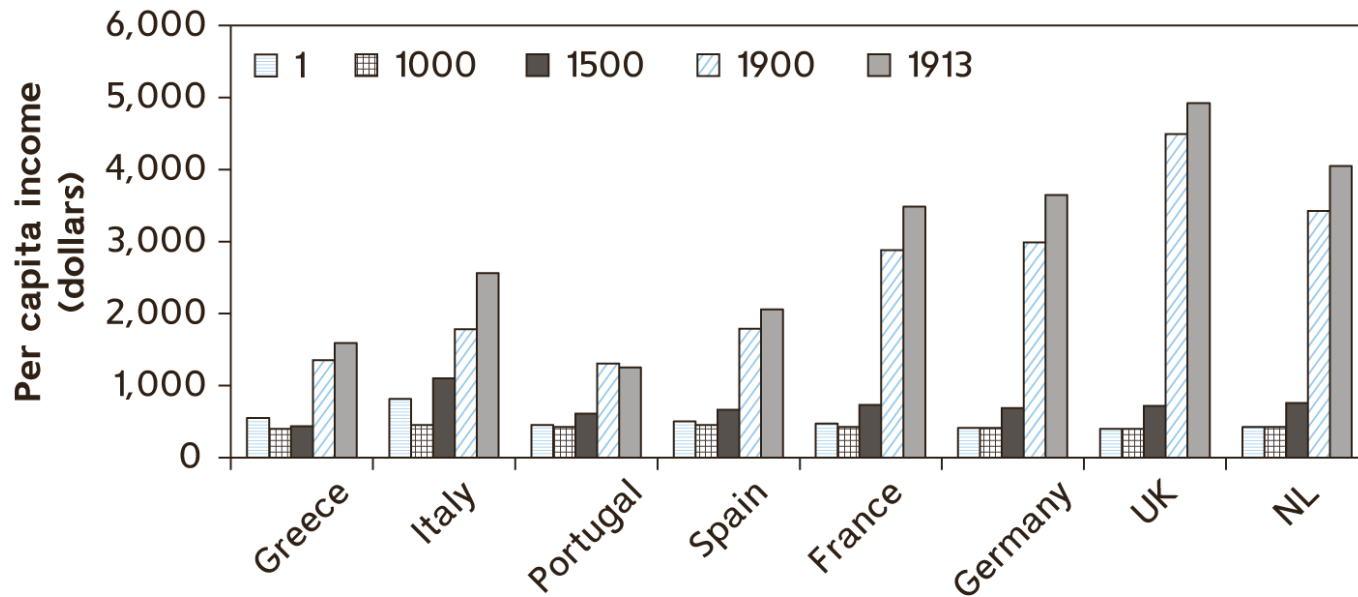
- Schematically:

European integration (or any other policy) → allocation effect → improved efficiency → better investment climate → more investment in machines, skills and/or technology → higher output per person.

- Under medium-run growth effects, the rise in output per person eventually stops at a new, higher level.
- Under long-run growth effects, the rate of growth of output, capital stock and consumption is forever higher due to technological changes.

- By historical standards, continuous economic growth is a relatively recent phenomenon. Before the Industrial Revolution, which started in Great Britain in the late 1700s, European incomes had stagnated for a millennium and a half.

Figure 7.1 European incomes, Year 1 to 1913.



Source: Maddison online dataset.

Note: Measured in 1990 dollars.

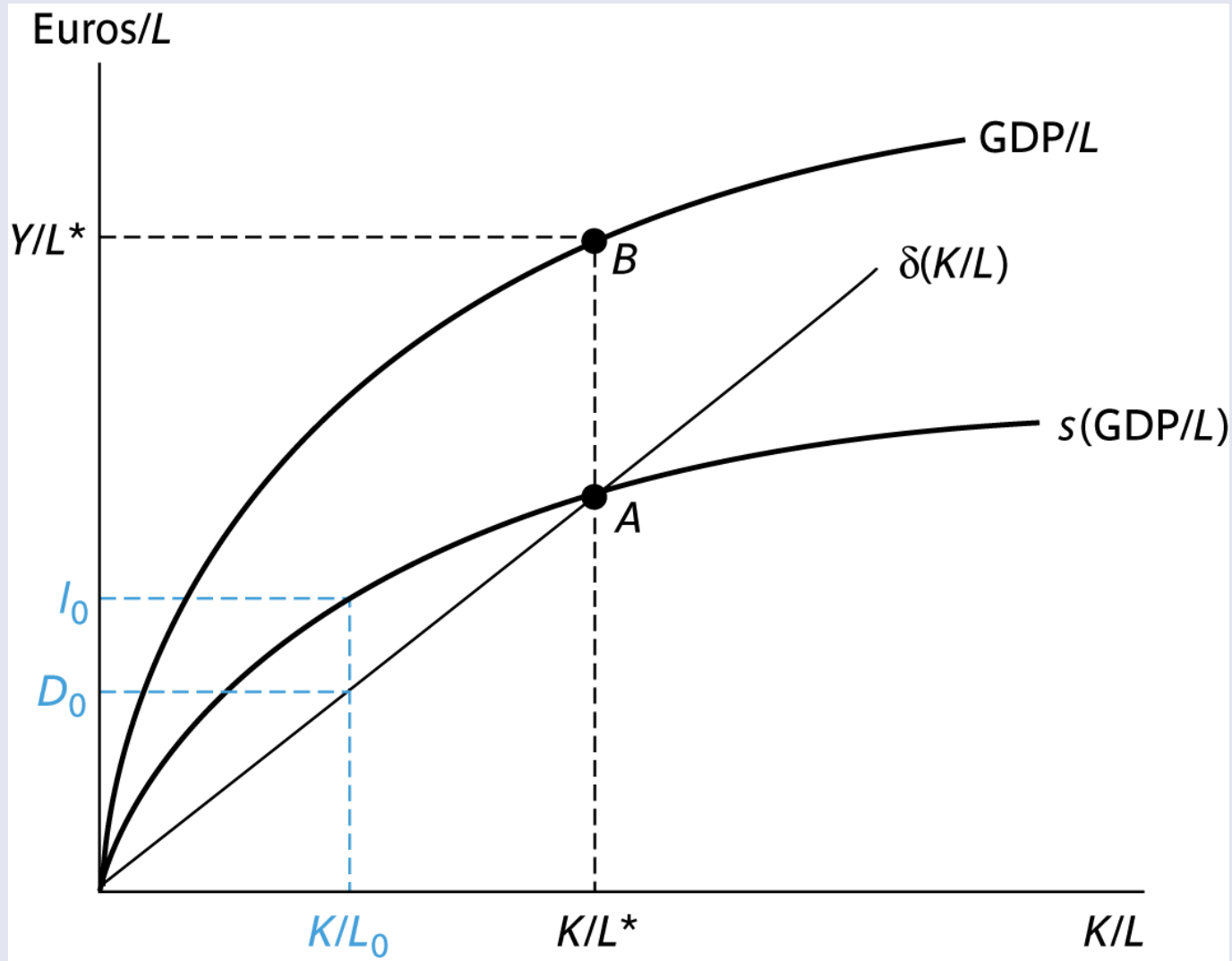


- For the analysis, we consider the whole EU as a single, closed economy with fully integrated capital and labour markets and the same technology everywhere.
- We study the link between growth and integration by focusing on the connection between GDP-per-worker and capital-per-worker: when a firm provides its workers with more and better equipment, output per worker rises. However, output per worker does not increase in proportion with equipment per worker: the GDP/L curve is concave.
- The equilibrium K/L ratio is where inflow and outflow of K/L are identical: the inflow is investment while the outflow is depreciation.

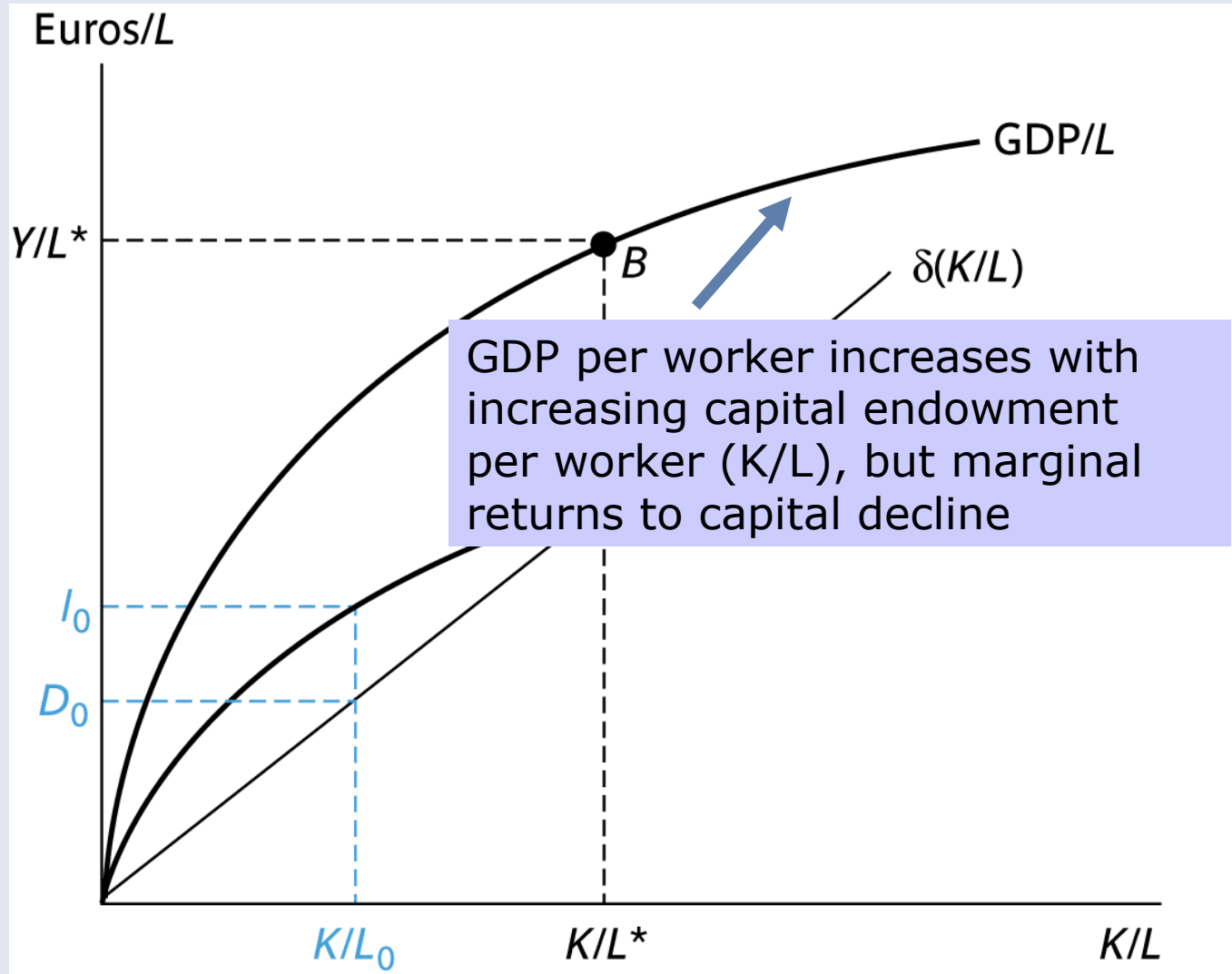


- Shows medium run growth effects in simple diagram
- Key assumptions:
 - Saving rate is constant (a fraction of GDP/L)
 - Depreciation rate is constant
 - Exogenous technological progress
 - Constant returns to scale
- To simplify, start with whole EU as a single, closed economy with fully integrated capital and labor markets and the same technology everywhere.

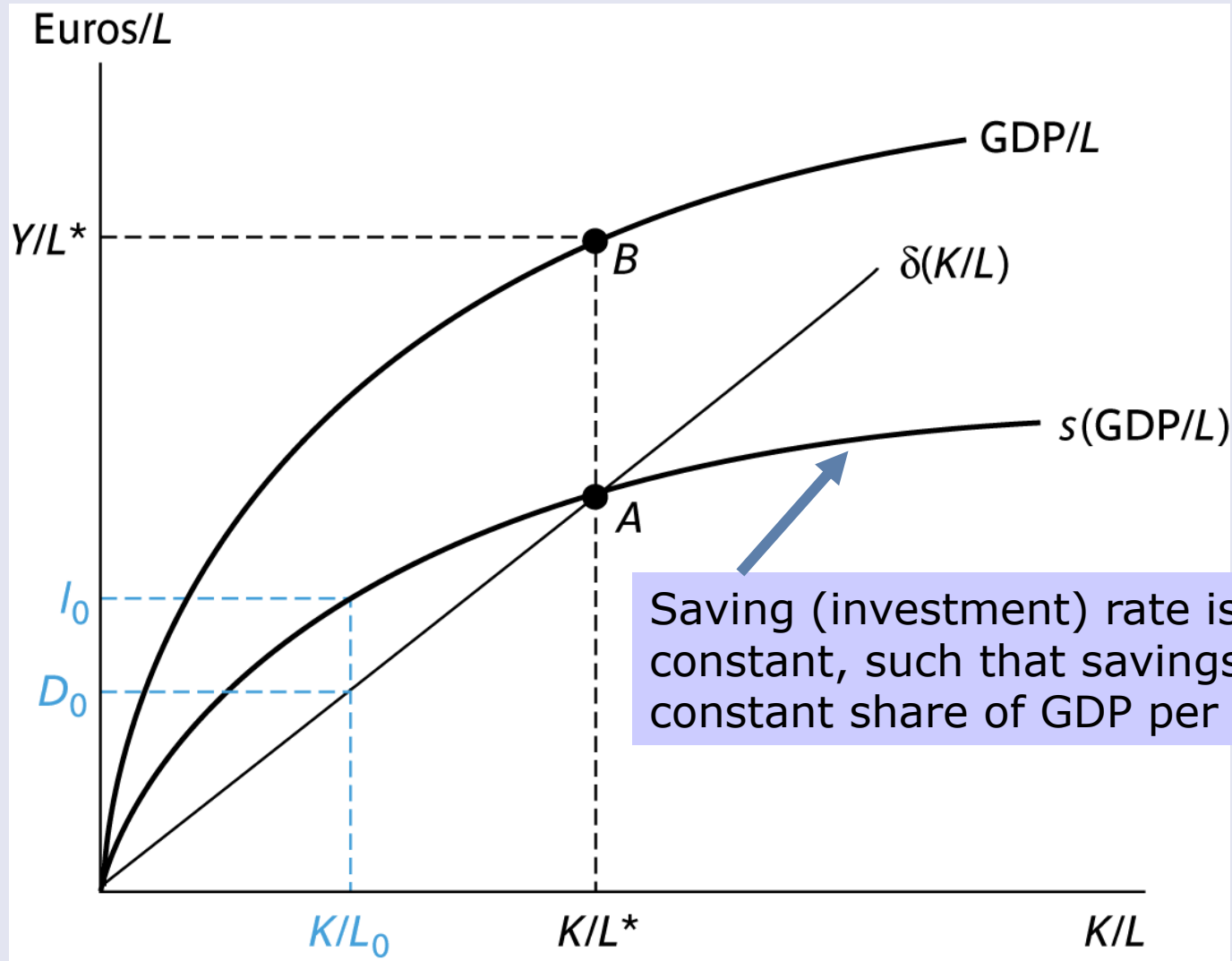
Medium-term growth effects: the Solow diagram



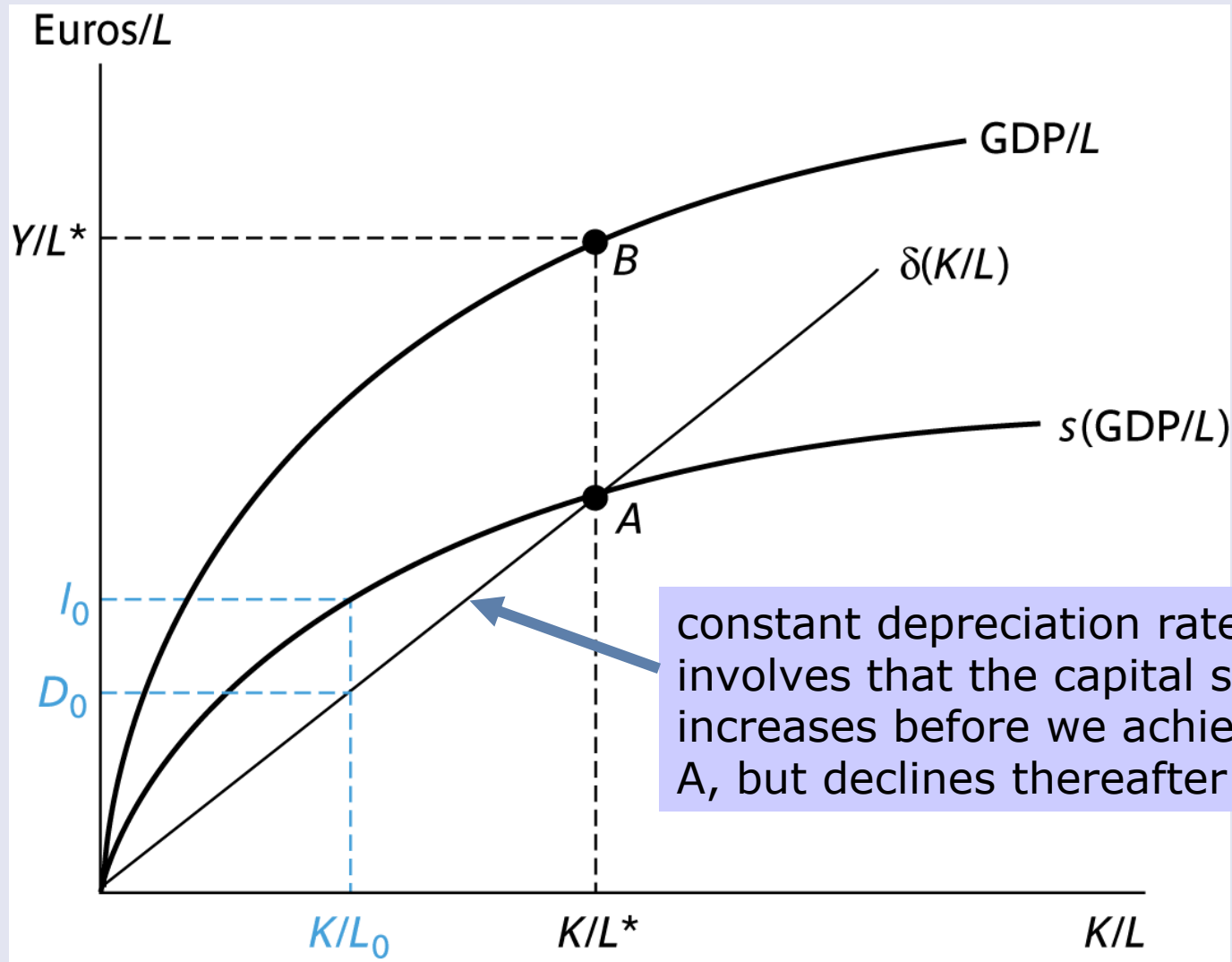
Medium-term growth effects: the Solow diagram



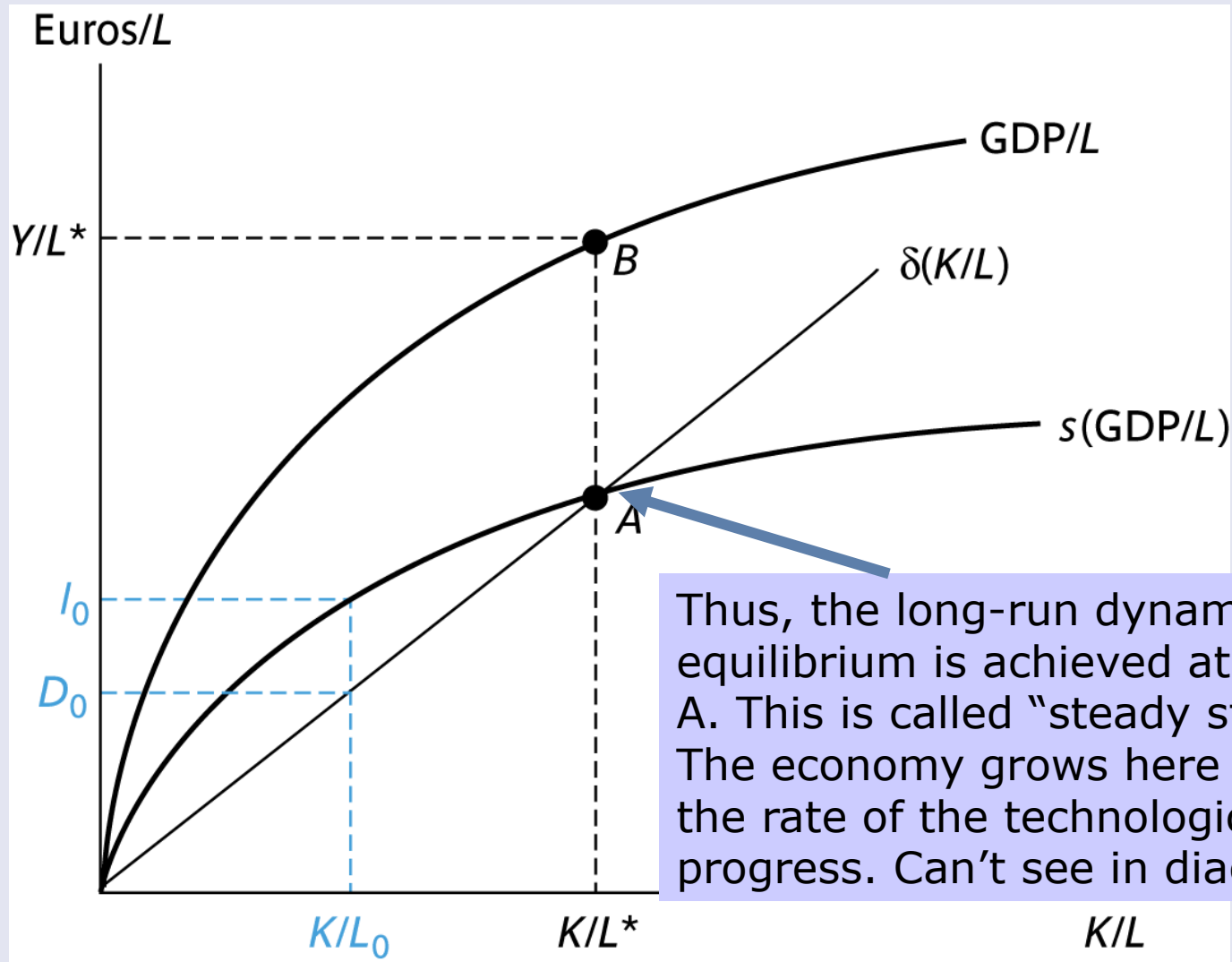
Medium-term growth effects: the Solow diagram



Medium-term growth effects: the Solow diagram



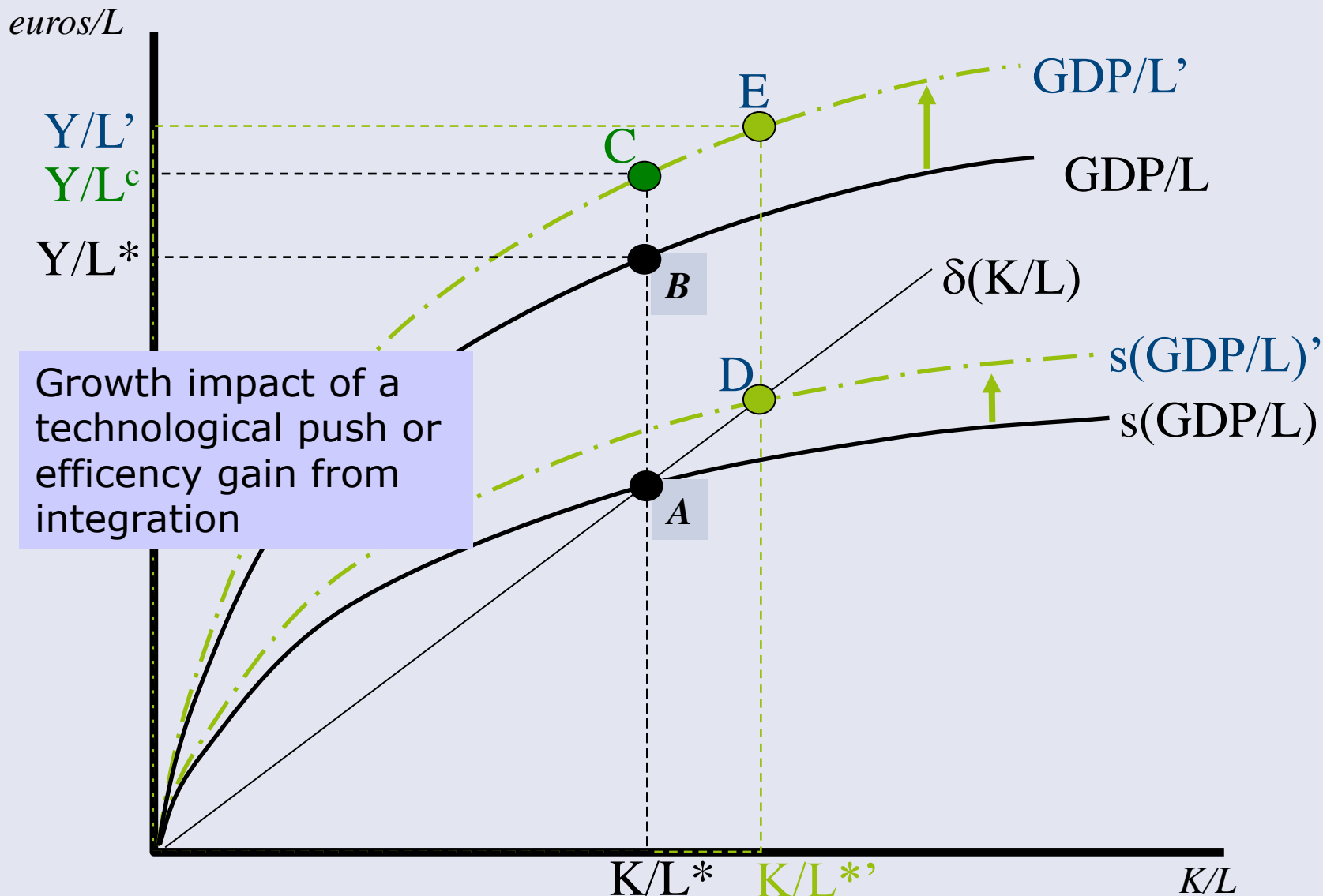
Medium-term growth effects: the Solow diagram



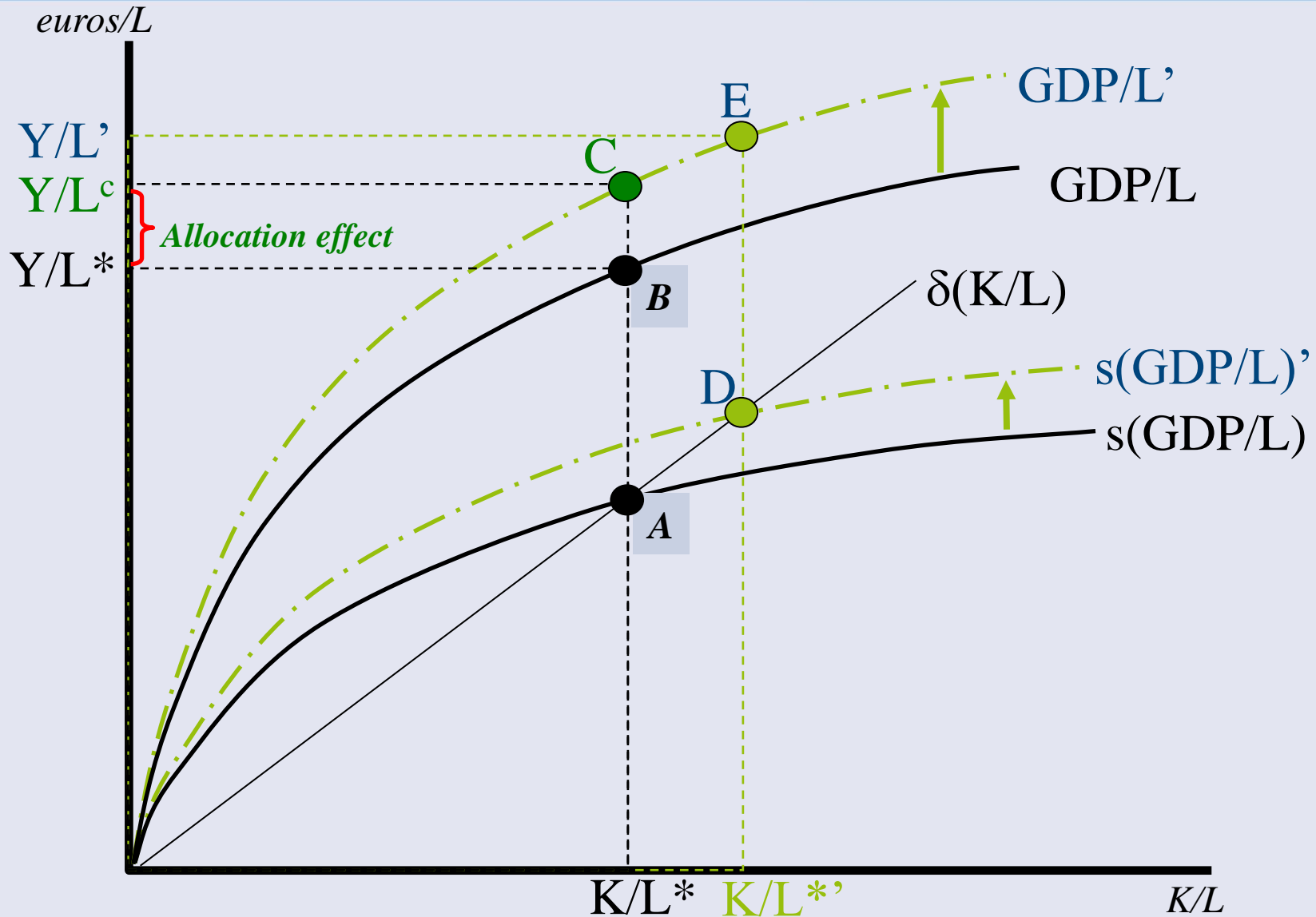
Thus, the long-run dynamic equilibrium is achieved at point A. This is called "steady state". The economy grows here only at the rate of the technological progress. Can't see in diagram.



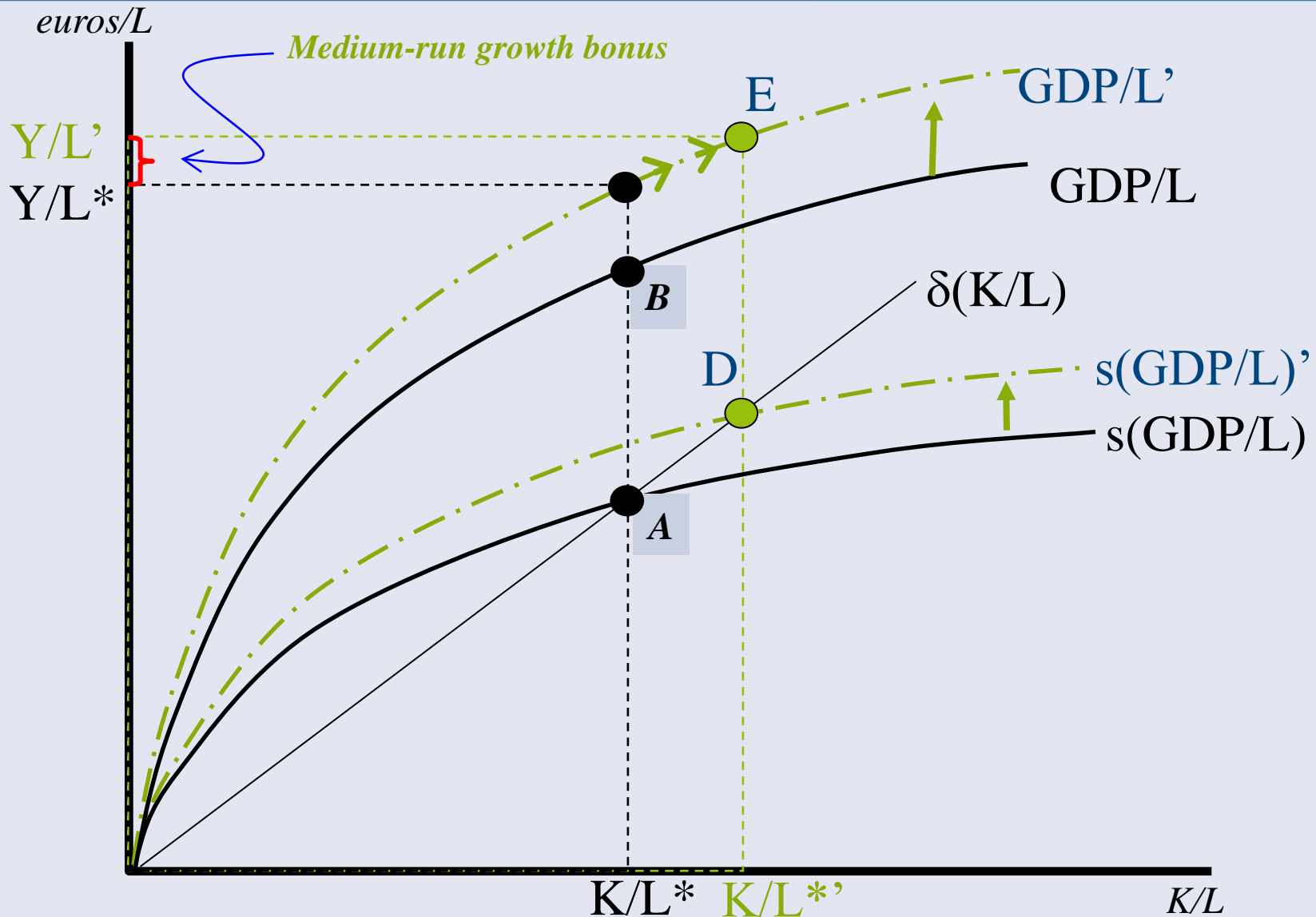
- Integration improves the efficiency of the European economy by encouraging a more efficient allocation of European resources via trade, scale economies and competition:
 - this positive **allocation effect** shifts the GDP/L curve.
- With higher output (GDP/L), a fixed investment rate implies higher accumulation of capital and knowledge
 - This shifts up the investment curve, i.e. a higher inflow of investment for any given K/L ratio.
- Schematically:
 - integration → improved efficiency → higher GDP/L → higher investment-per-worker → economy's K/L ratio starts to rise towards new, higher equilibrium value → faster growth of output per worker during the transition from the old to the new K/L ratio.
 - This is the so-called **medium-term growth bonus** from European integration.



Induced capital formation



Induced capital formation



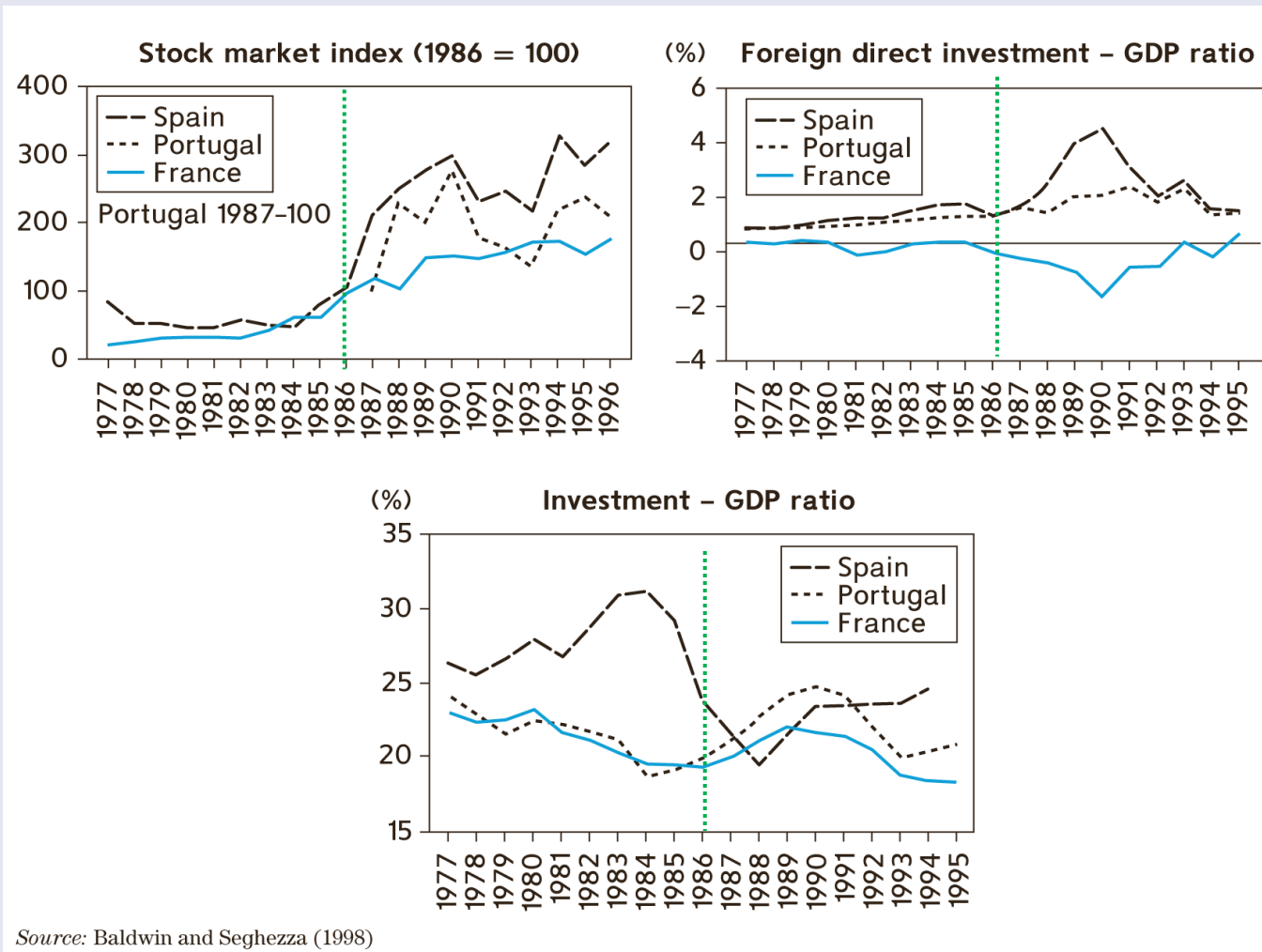
Medium-term growth effects: EU accessions



- Accession countries provide a natural experiment to evaluate the medium-term growth effects of European integration since these countries experienced a rather sudden and well-defined increase in economic integration when they joined.
- The logic described above should lead to observe the following after accessions:
 1. stock market prices should increase;
 2. the aggregate investment to GDP ratio should rise;
 3. the net direct investment figures should improve.

Medium-term growth effects: EU accessions

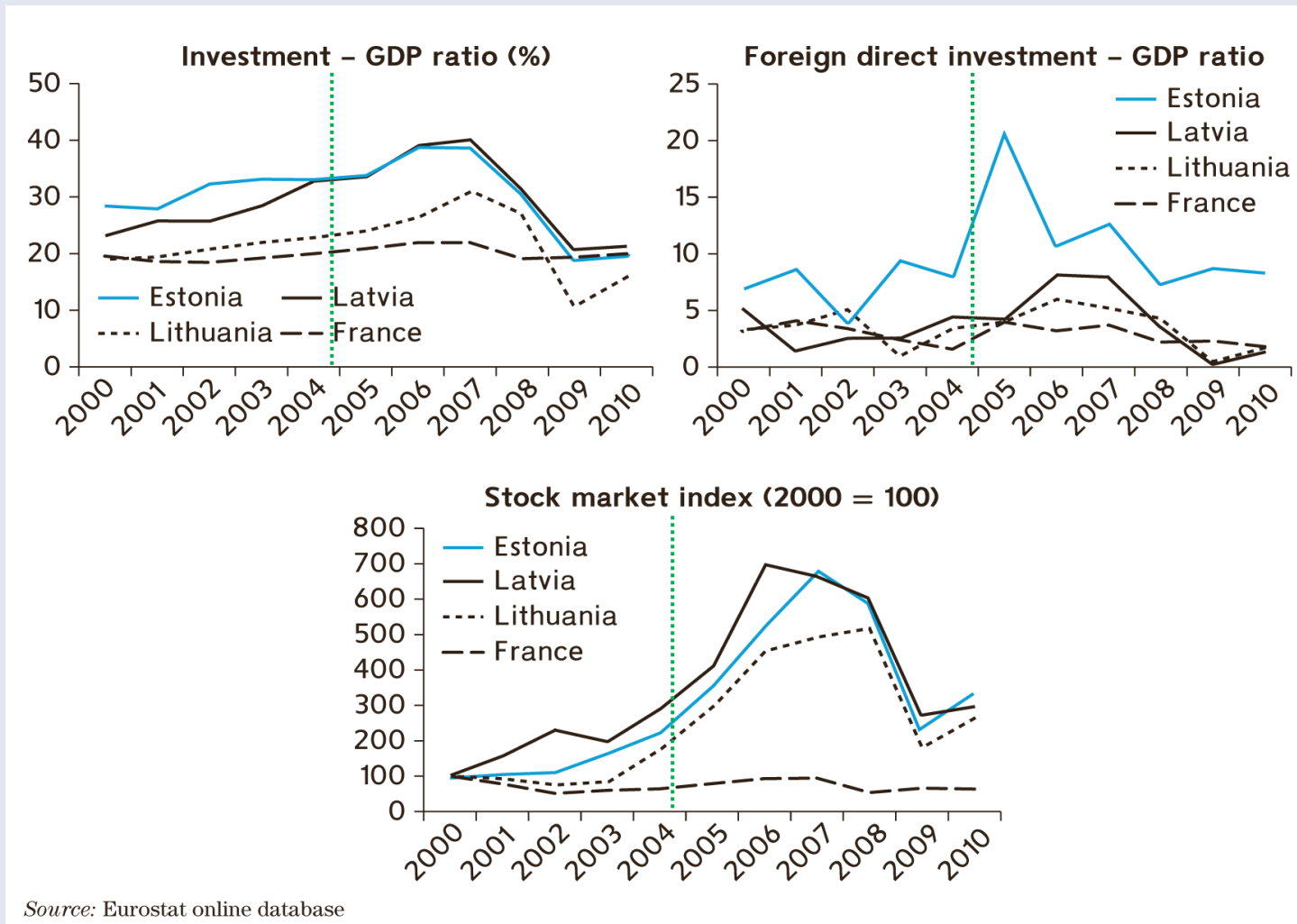
Spain and Portugal: Jan. 1, 1986



Source: Baldwin and Seghezza (1998)

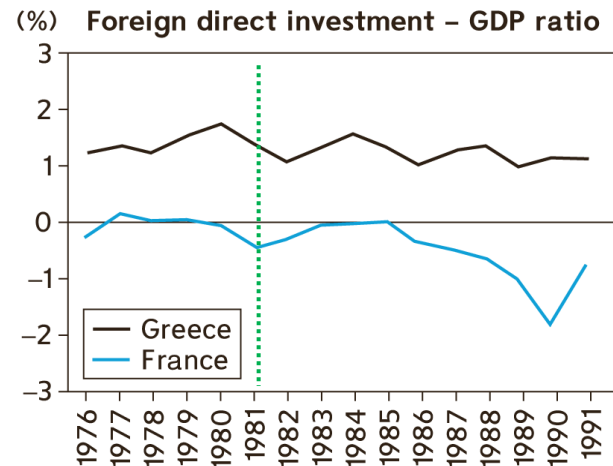
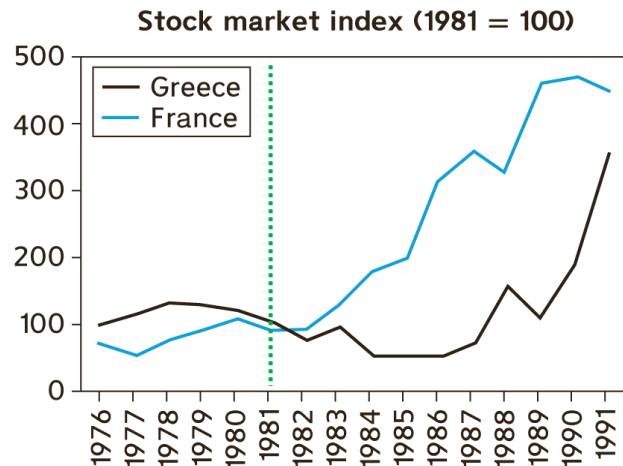
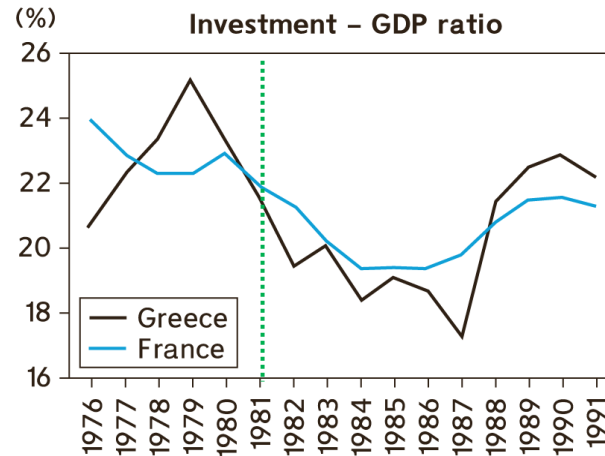
Medium-term growth effects: EU accessions

The Baltic States: May 1, 2004



Medium-term growth effects: EU accessions

Greece (sharp contrast with other accessions): Jan. 1, 1981



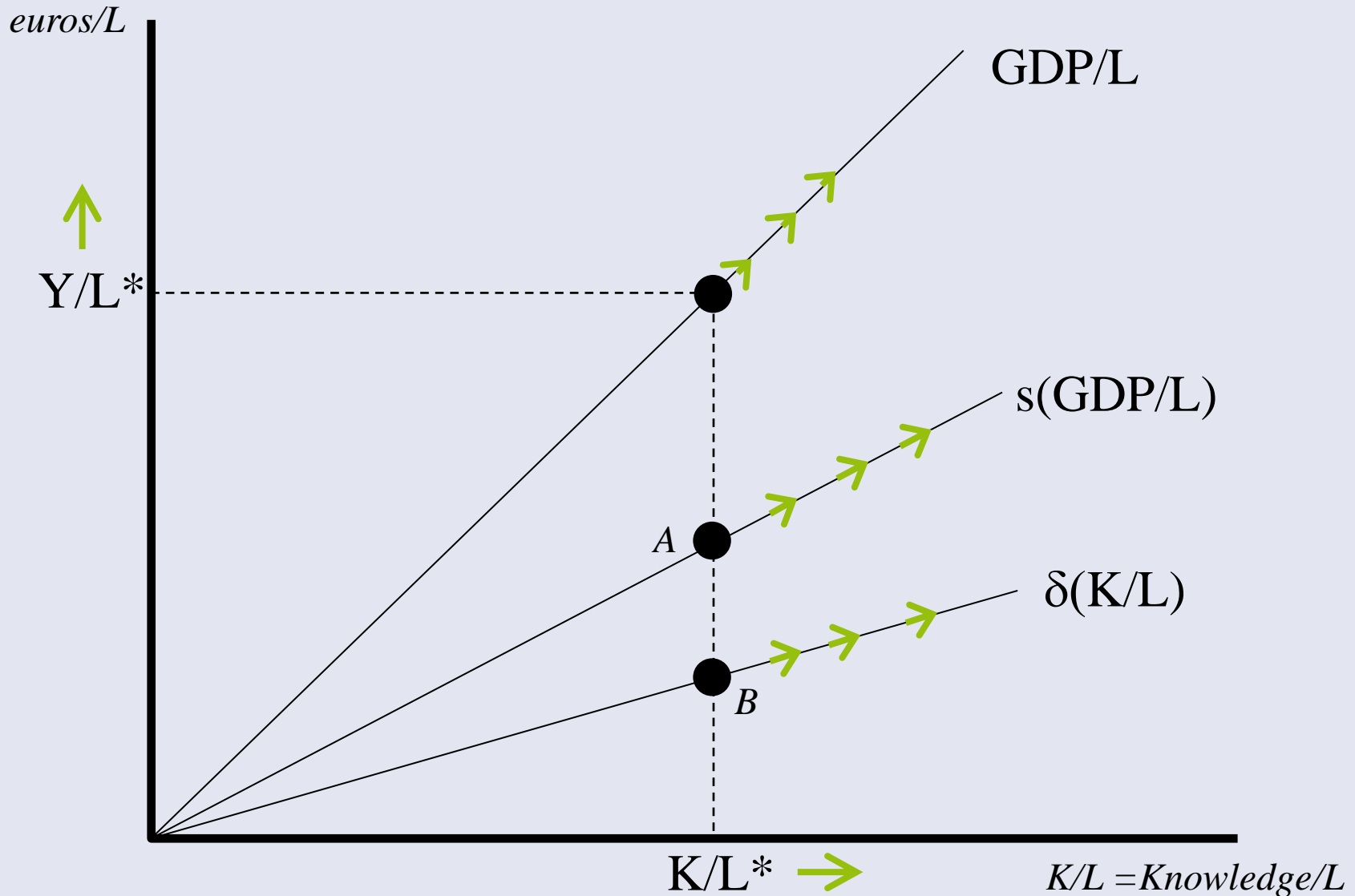
Source: Baldwin and Seghezza (1998)

Long-term growth effects: Knowledge accumulation

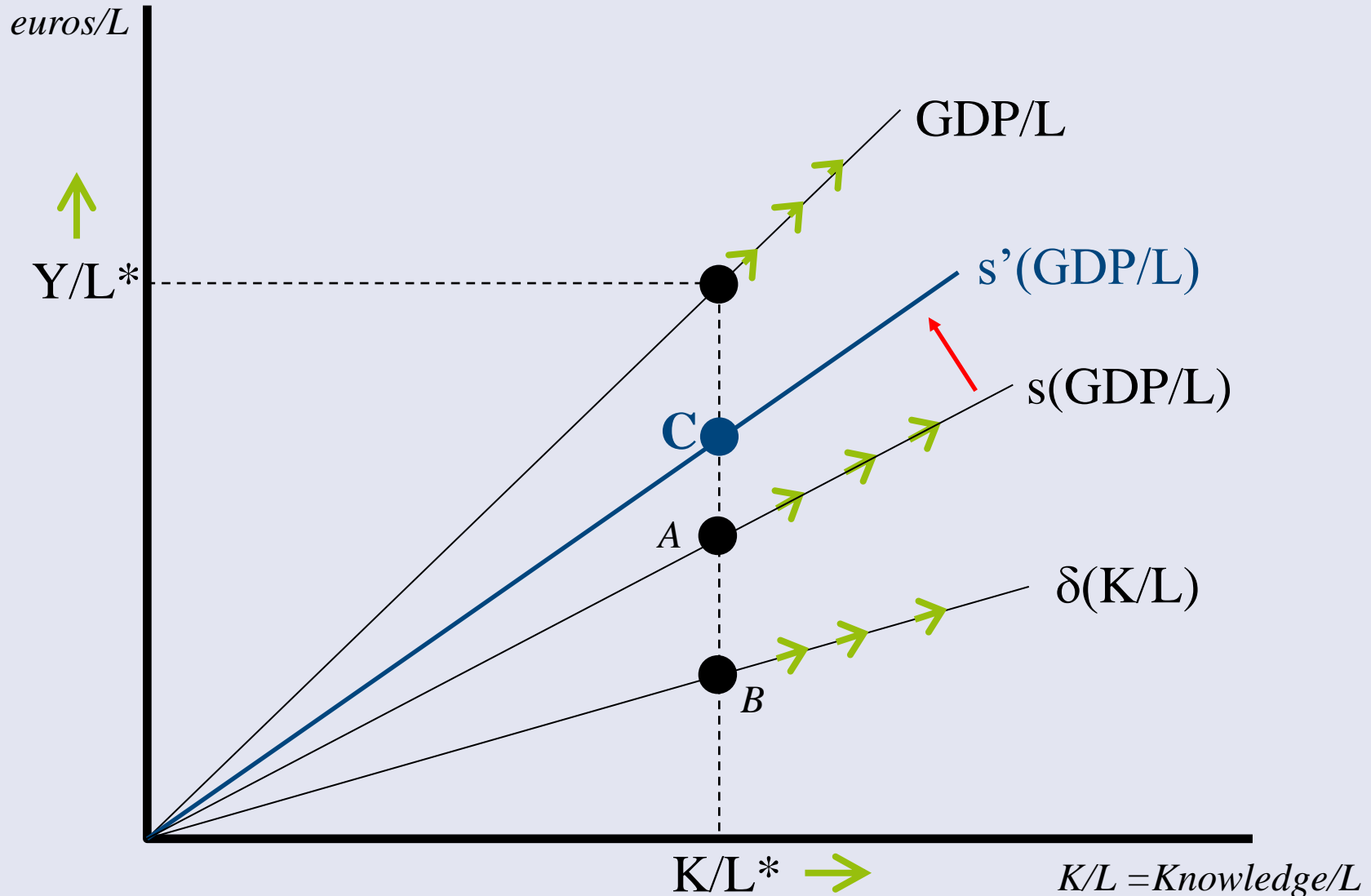


- Integration increases market size
- Larger market size is related to higher allocative efficiency and scale economies
- Higher market size increases e.g. knowledge pool
- High knowledge pool is related to higher rate of knowledge accumulation
- Similar for higher allocative efficiency: higher returns to knowledge accumulation
- Higher knowledge accumulation increases rate of technological progress
- Higher rate of technological progress increases long-term (permanent) growth rate

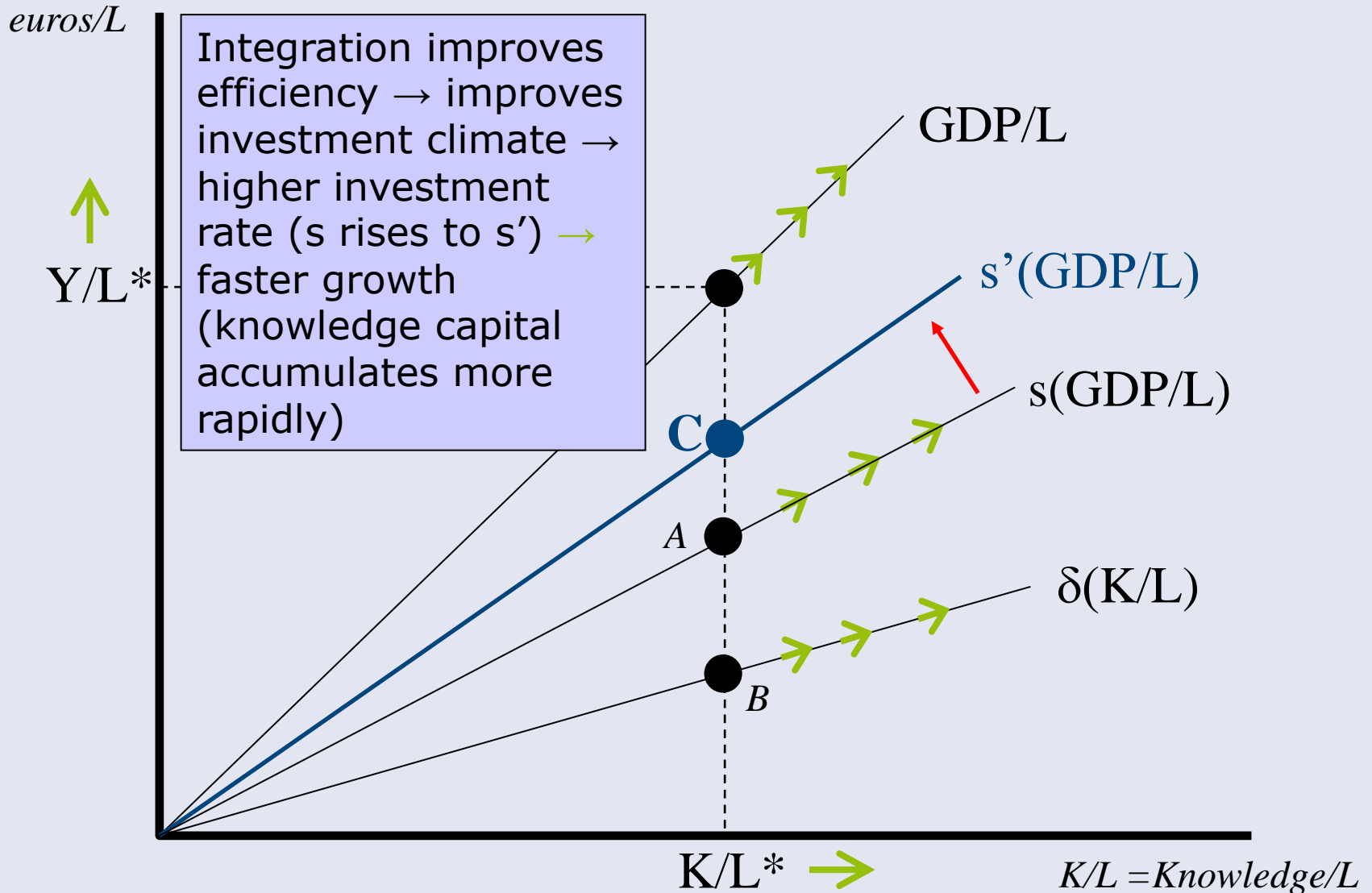
Long-term endogenous growth



Long-term growth impact of integration



Long-term growth impact of integration





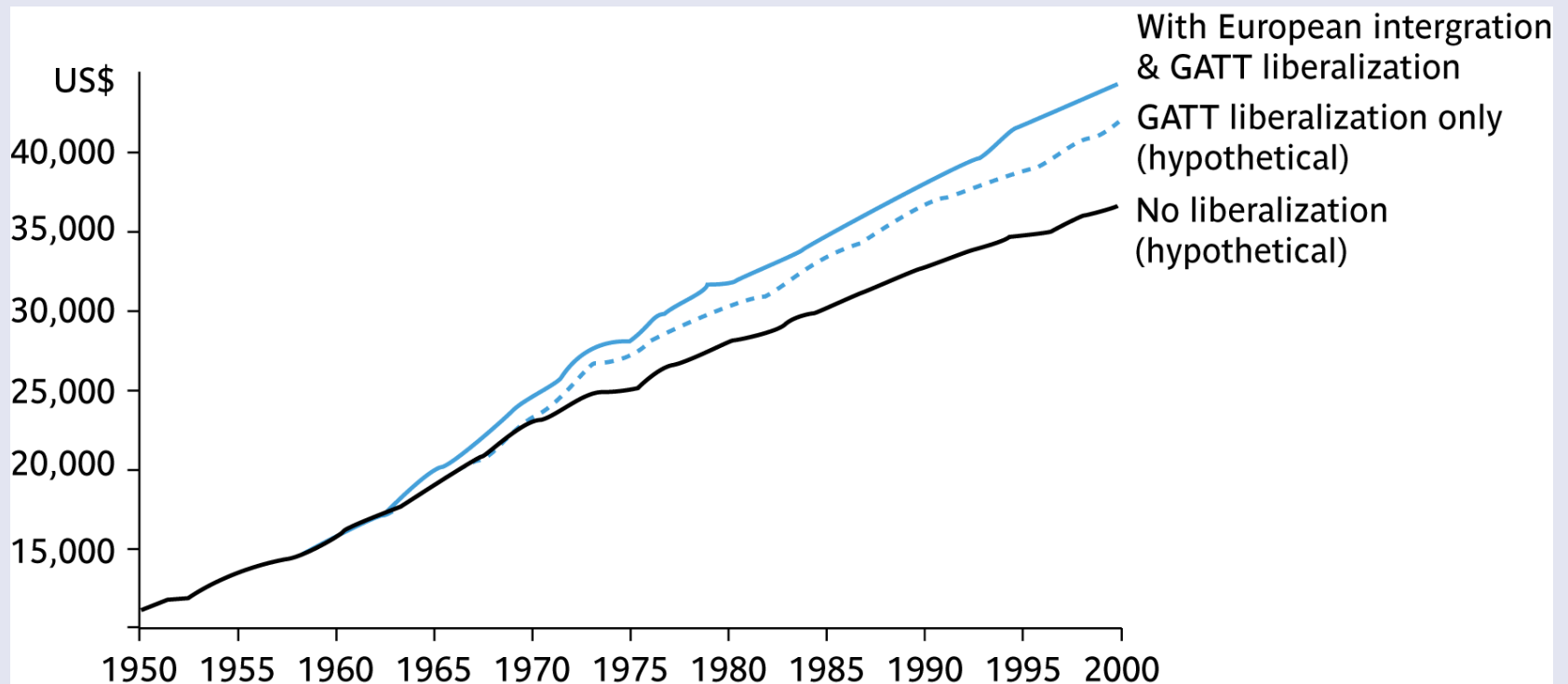
- The evidence on long-term growth effects of European integration is much harder to find.
- Also, the overarching fact is that long-term growth rates around the world, including those in Europe, returned to their pre-Golden Age levels. It is hard to explain how the long-run growth rate in Europe returned to its pre-integration average, if European integration strongly boosted long-run growth.
- For this reason, it is probably best to focus on medium-term growth effects.
- The experience of the new Member States will provide an important opportunity for testing the growth effects of EU membership, but as yet not have enough data to undertake serious statistical analysis.

- With industrialization incomes began to rise at a respectable rate of something like 2 per cent per year. Growth rates, however, were hardly constant from this date:

Table 7.1 European growth phases, 1890–1992

Period	Real GDP	Real GDP per capita	Real GDP per hour
1890–1913	2.6	1.7	1.6
1913–1950	1.4	1.0	1.9
1950–1973	4.6	3.8	4.7
1973–1992	2.0	1.7	2.7
Whole period 1890–1992	2.5	1.9	2.6

- Are growth and European integration related?
→ Statistical evidence shows sizeable medium-run effect of integration:



Facts: Growth in the WWII Reconstruction Phase



	The Set-Back: (Pre-war year when GDP equalled that of 1945)	Back-on-Track Year (Year GDP attained highest pre-war level)	Reconstruction Growth (rate 1945 to col. 2 year)
Austria	1886	1951	15.2%
Belgium	1924	1948	6.0%
Denmark	1936	1946	13.5%
France	1891	1949	19.0%
Germany	1908	1951	13.5%
Italy	1909	1950	11.2%
Netherlands	1912	1947	39.8%
Norway	1937	1946	9.7%
Sweden	These nations grew during WWII		
Switzerland			
UK			

Facts: GDP per capita & Rankings, 1950 and 1973 (1990 international dollars)



	1950 GDP (1990 \$)	European Rank 1950	Change in Rank 1950-1973	GDP Growth Rate
EEC average	4,825	8.0	+ 1.2	4.2
Netherlands	5,850	5	-1	3.4
Belgium	5,346	6	-2	3.5
France	5,221	7	+ 2	4.0
Germany	4,281	9	+ 5	5.0
Italy	3,425	13	+ 2	4.9
EFTA average	6,835	3.6	-1.4	3.0
Switzerland	8,939	1	0	3.1
UK	6,847	2	-5	2.4
Sweden	6,738	3	+ 1	3.1
Denmark	6,683	4	+ 1	3.1
Norway	4,969	8	-4	3.2
Finland	4,131	10	0	4.2
Austria	3,731	11	+ 2	4.9
Others average	2,401	14.3	-0.3	5.2
Ireland	3,518	12	-3	3.1
Spain	2,397	14	+ 1	5.8
Portugal	2,132	15	+ 1	5.6
Greece	1,558	16	0	6.2
For Comparison				
USA	9,573			2.4
Japan	1,873			8.0

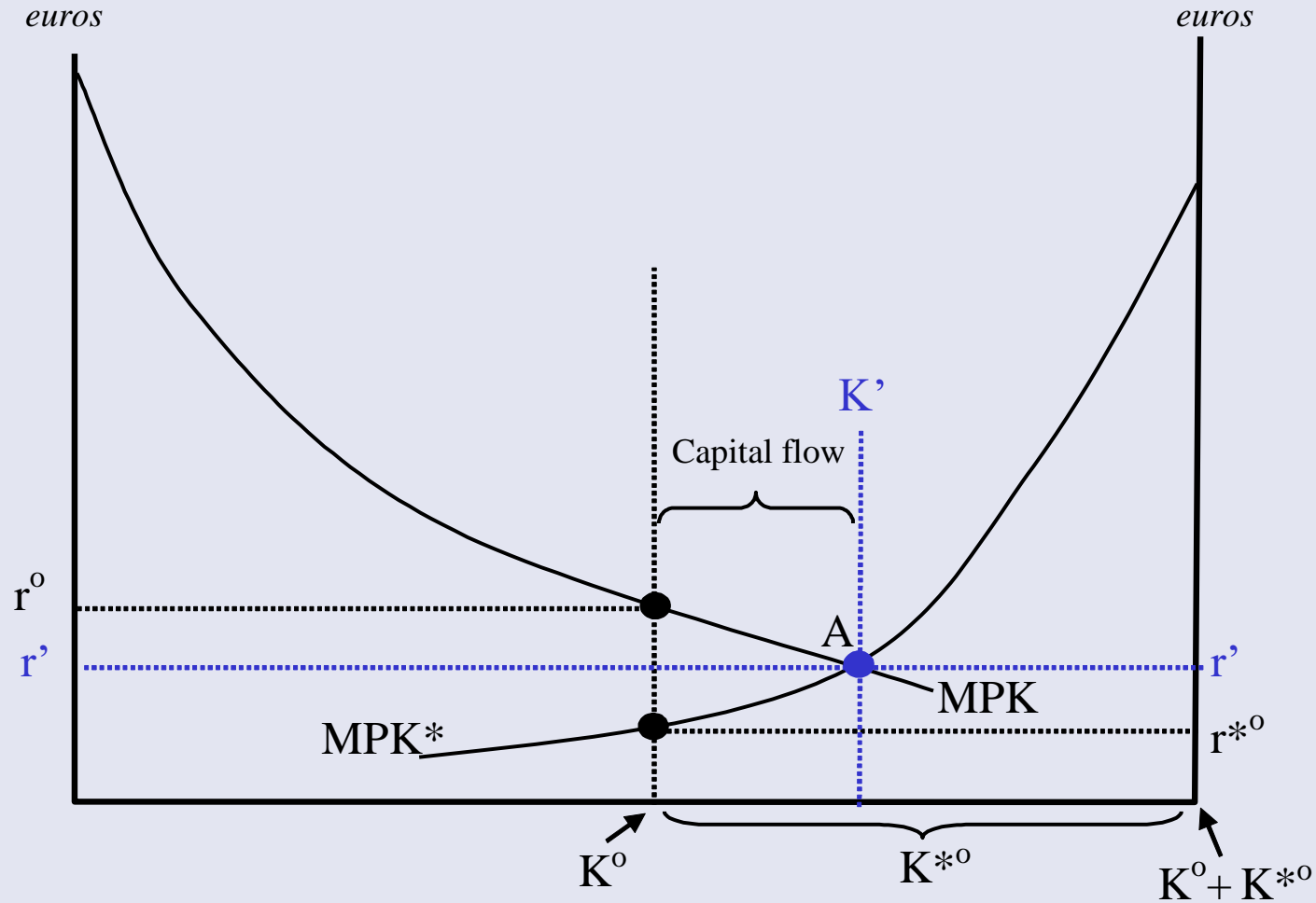
Empirical evidence: Are growth and integration related?



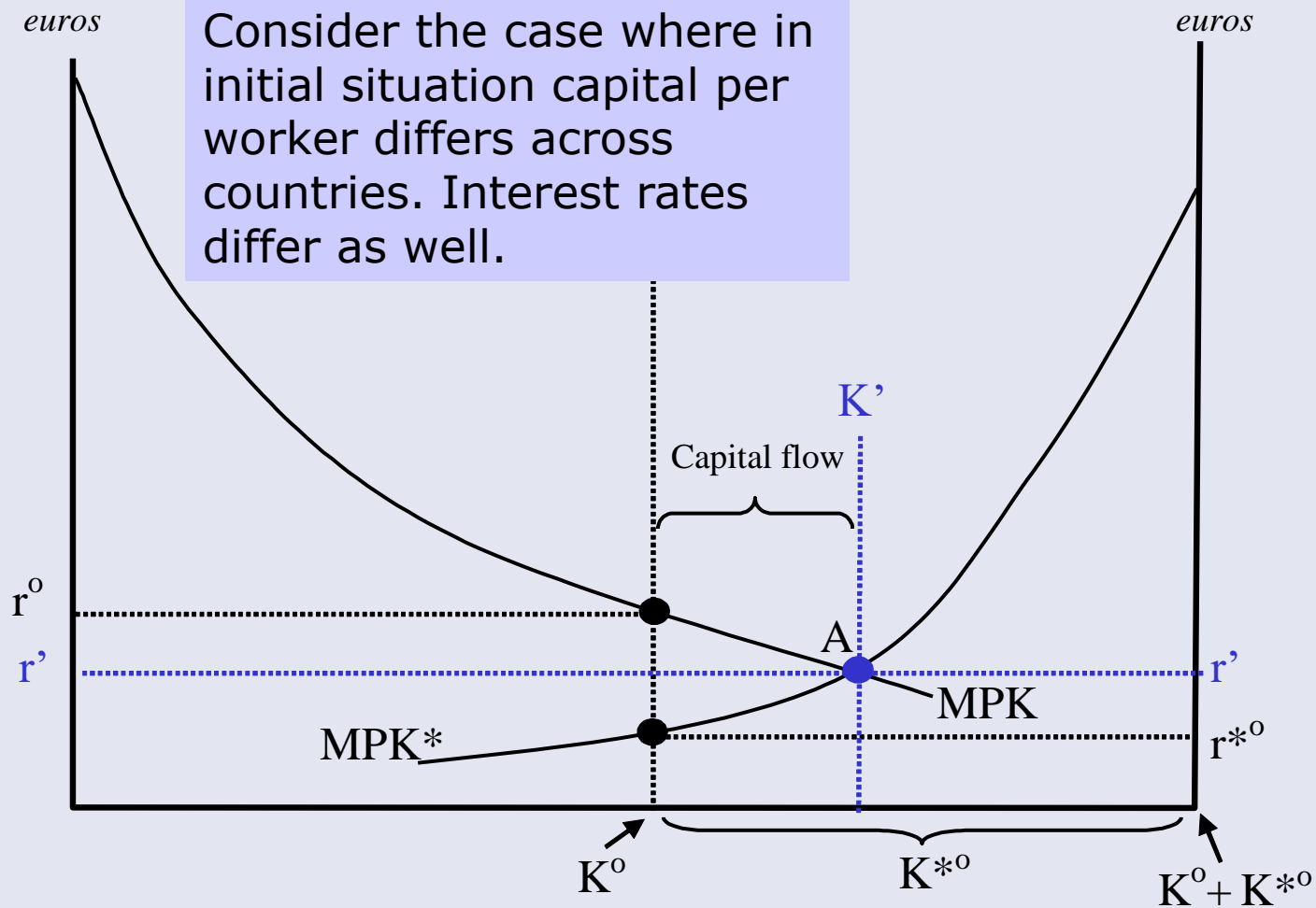
- Econometric evidence
 - Medium term growth bonus, but no long-run effects
 - Badinger 2005a, 2005b,
 - Coe/Moghadem 1993; Italianer 1994, Henrekson 1997
- EU Eastern enlargement: CGE simulation evidence
 - GDP level effect of 0.2-0.3% for EU-15
 - GDP level effect of 2-4% for NMS-10
 - Germany: GDP level effect of 0.4-0.6%
 - e.g. Baas/Brücker/Hönekopp 2007; Baas/Brücker/Hauptmann 2009; Keuschnigg/Kohler 2002



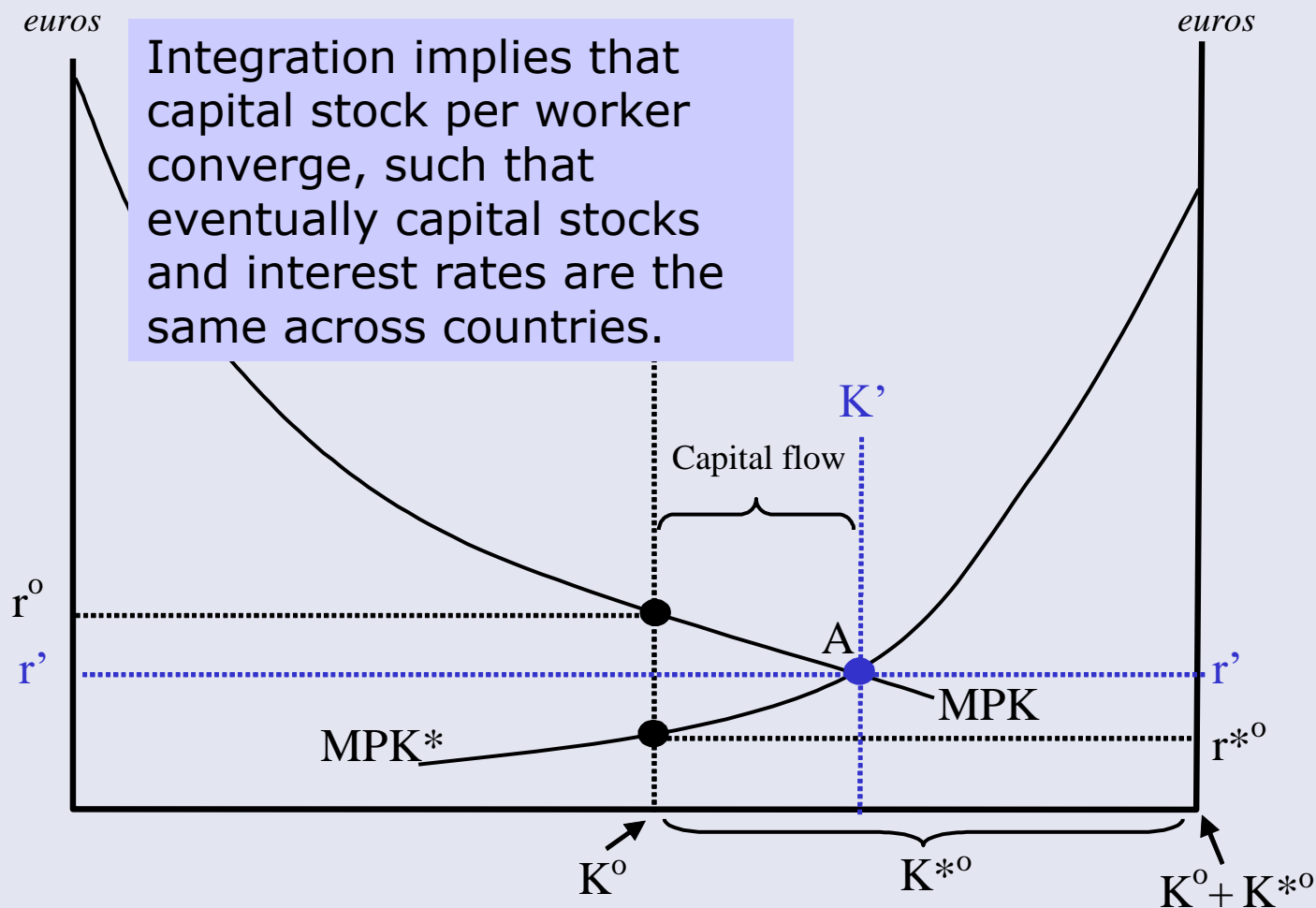
Microeconomics of capital market integration



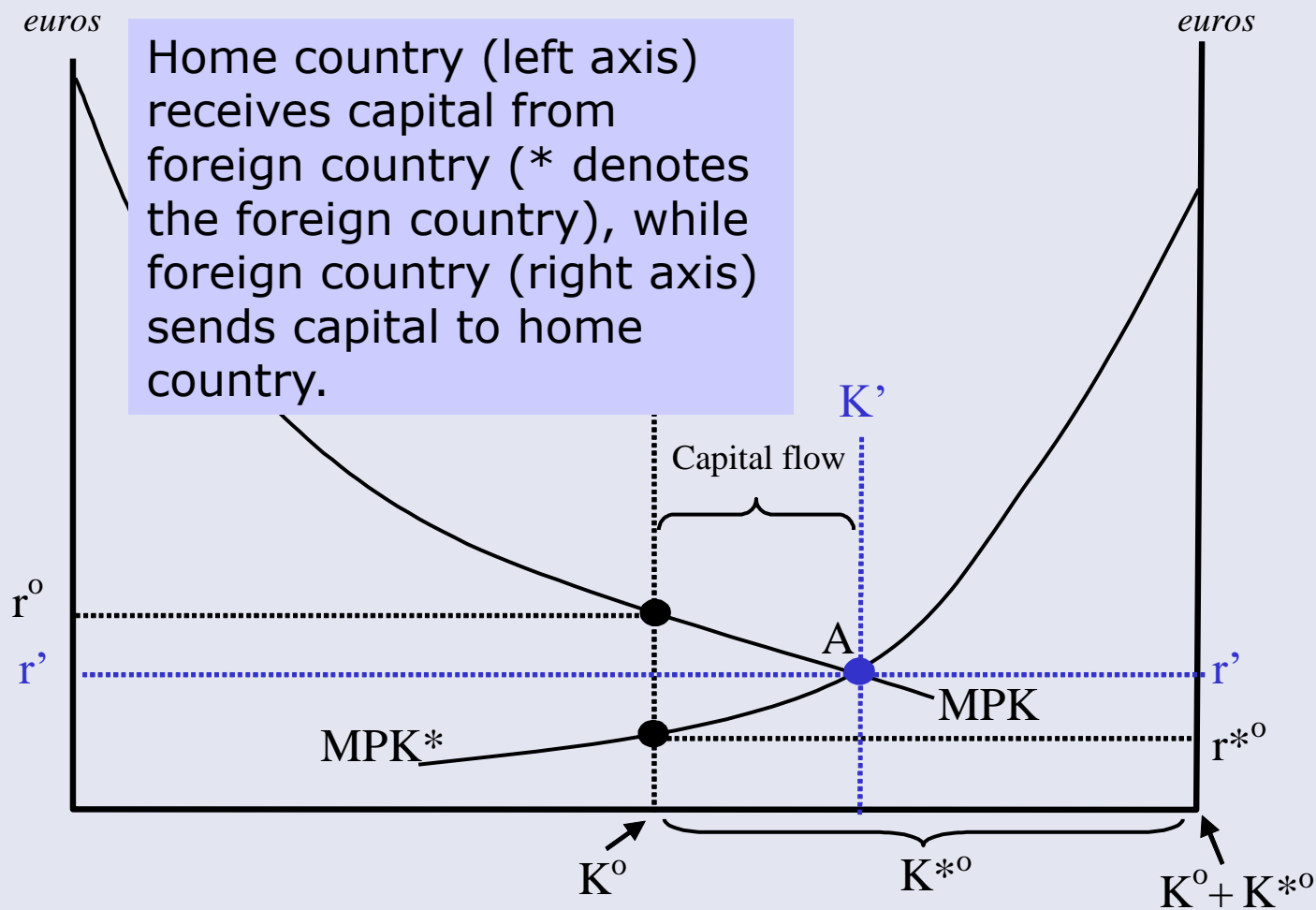
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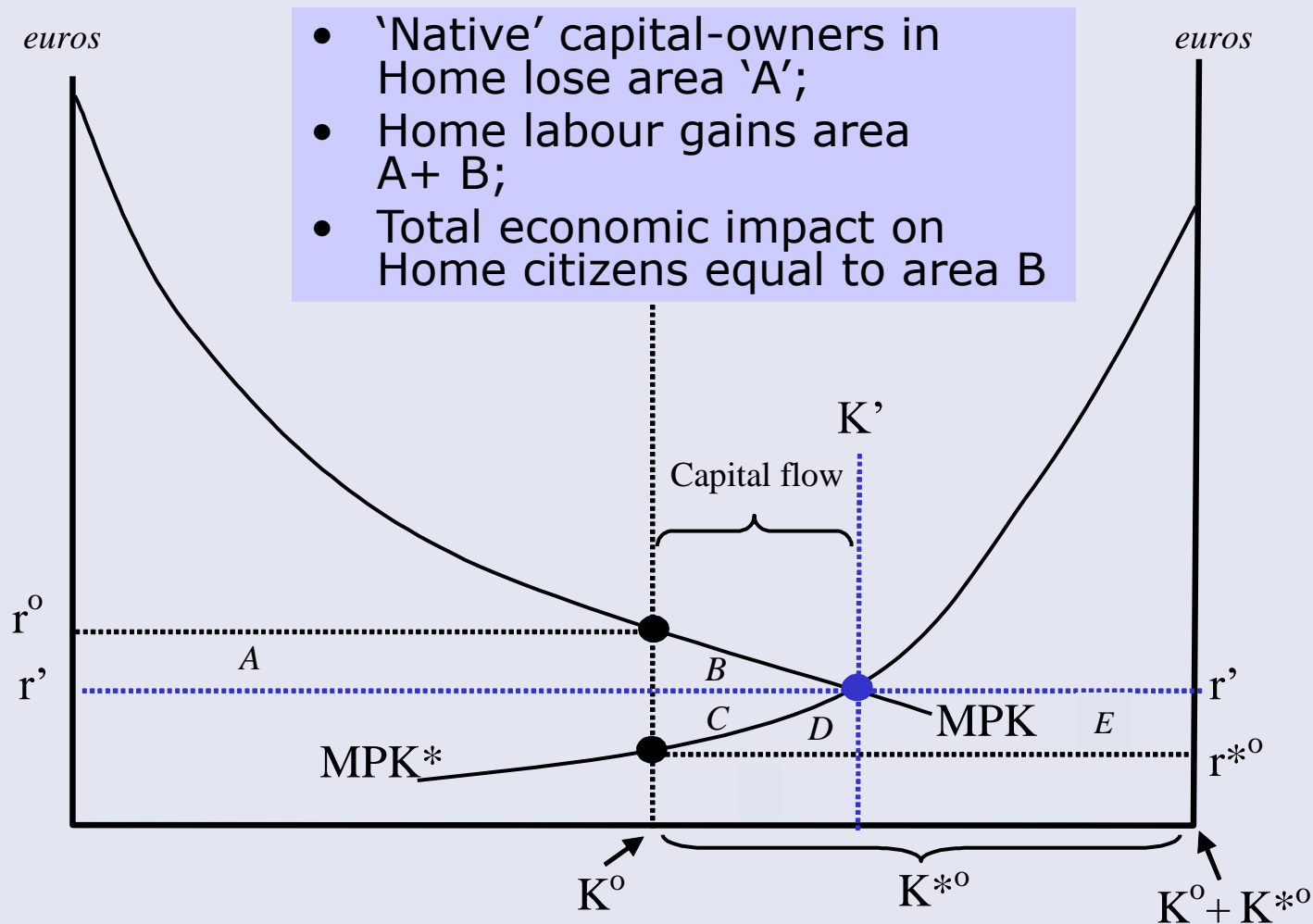
Microeconomics of capital market integration



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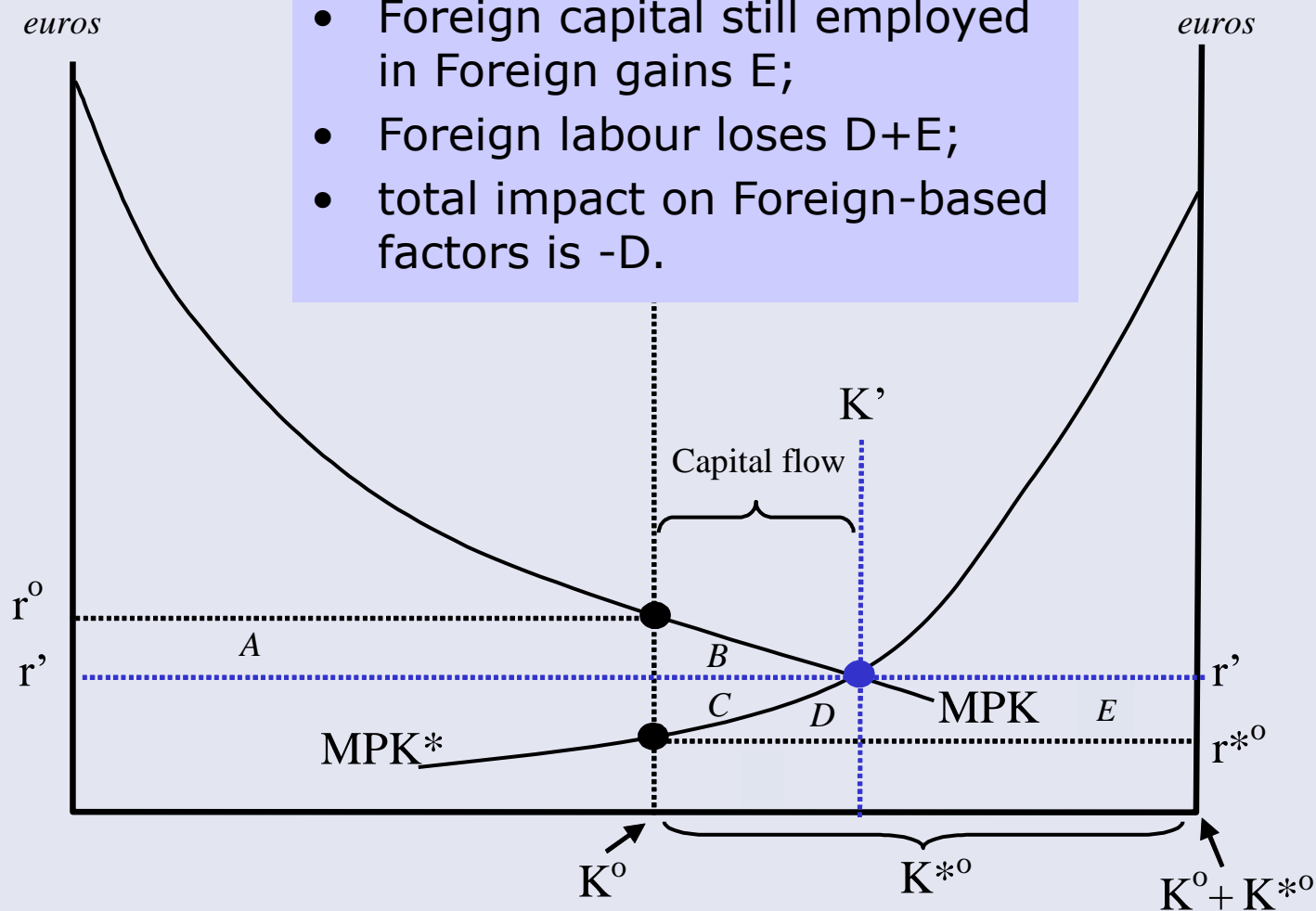


Microeconomics of capital market integration



Microeconomics of capital market integration

- Foreign capital still employed in Foreign gains E;
- Foreign labour loses D+E;
- total impact on Foreign-based factors is -D.





- **January 25, 2021, 11:00 hours**
- **Next Topic: Baldwin & Wyplosz (2015), Ch. 8: Integration of Labor Markets and Migration**