JEB026 - European Economic Integration

Integration of Capital Flows and Services

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OUTLINE

- I. Services
  - Reasons to regulate services
  - Attributes of free movement of services
- II. Capital
  - Division of income between labour and capital
  - Classification of capital controls
  - Capital flows
  - TNT model and Dutch disease
- III. Introduction to Financial Integration

Readings: Baldwin, Wyplosz (Chapter 18).

I. SERVICES

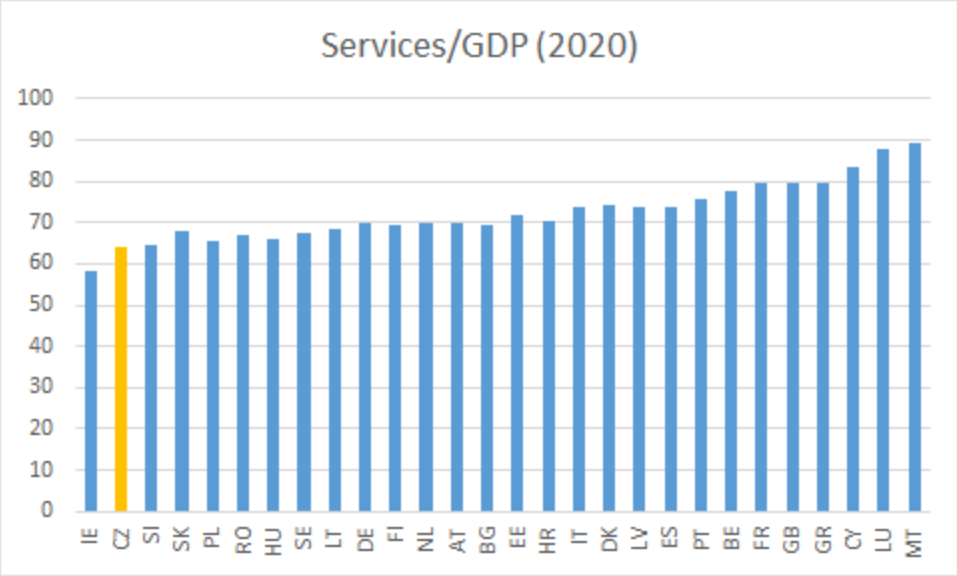
Terminological notes: SERVICES

- Services
  - **Economic concept of services:** intangible asset offered for purchase by a service provider at a given price (in contrast with tangible assets called goods)
  - **Freedom for services:** abolition of all controls that discriminate non-residents in providing services in host countries
- Freedom to provide services
  - One of the "four freedoms" of the EU is the freedom to provide services in other EU countries, once a company is established and regulated in its home country.

- Home vs. Host country
  - **Home country:** A state in which the business organization with cross-border operations is headquartered
  - (**Host country:** A state in which the business organization with cross-border operations carries out its activities)

Characteristics of service sector

- **Structure of GDP:**
  - Developed economies (G7, OECD, EA, EU): **Services > Industry > Agriculture**
  - Developing economies: **Services ≅ Industry > Agriculture**
  - Very poor economies: **Agriculture > Industry > Services**



- **Economic importance**
  - Services account aprox. for 70% of EU economic activity and aprox. 70% of EU employment
  - Services account for only 25% of intra EU cross border trade

Characteristics of service sector

- **High diversity of SS**
  - **Finance:** banking, insurance, securities, consulting, etc.
  - **Network**: telecommunication, transport, energy, broadcasting, postal services, etc.
  - **Retail:** tourism, entertainment, advertising, customer services, gambling, etc.
  - **Social:** health, security, education, childcare, work agencies, state administration, etc.

- **Service sector** – includes both:
  - tradable (market sector) => more cyclical
    - wholesale/retail trade (15%*), real estate services (11%*) => more oriented towards consumers
    - finance and insurance activities (5%*) => more business-oriented services.
  - non-tradable (non-market sector) => less cyclical
    - sectors such as education and health services ≈ constitutes around 1/3 of total services.

- **Slow progress in liberalization and integration of SS**
  - Complex nature of regulation in service sector (natural monopolies, information asymmetries, special features of financial services, etc.)
  - Tailor-made approaches to individual segments of service sector instead of some general liberalization formula

*Note: * of total value added*

Reasons to regulate services

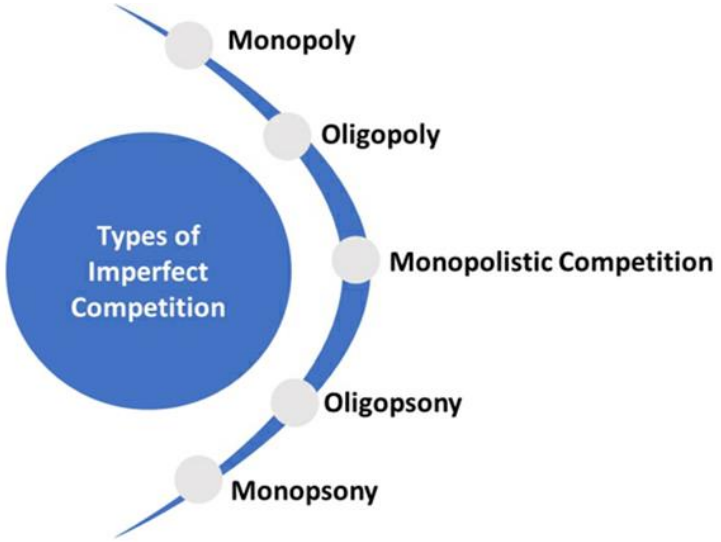
(1) Information asymmetries

- They arise when quality of the service cannot be credibly assessed by consumers
- Moral hazard: providers of services may earn higher profits by lowering quality below expected standards
- Adverse selection: providers of higher quality goods are pushed out of market
- Market solutions can be time-consuming and inefficient (agreed minimum standards, standardised contracts, build-up of reputation, promotion of trademarks, grievance procedures)

Characteristics	Asymmetric information	Adverse selection
Definition	Refers to a situation where one party enters an economic transaction while processing more knowledge compared to the other party	Refers to a case where sellers withhold vital information about a product or service to the buyers
Knowledge among parties	Both parties are knowledgeable about a product or service	The seller is more knowledgeable about a product or service

(2) Imperfect competition

- Low degree of contestability of market implies low threat of potential competition (typical for network services)
- Reasons: high economies of scale, high sunk costs



Reasons to regulate services

- **(3) Systemic risk in banking industry**
  - Bank run may undermine credibility of healthy financial institutions (contagion effect)
  - Owners' capital represents only a small fraction of total liabilities

- **(4) Social considerations**
  - High share in employment (particularly of women), high share of SMEs, weak labour unions, etc.

Attributes of free movement of services

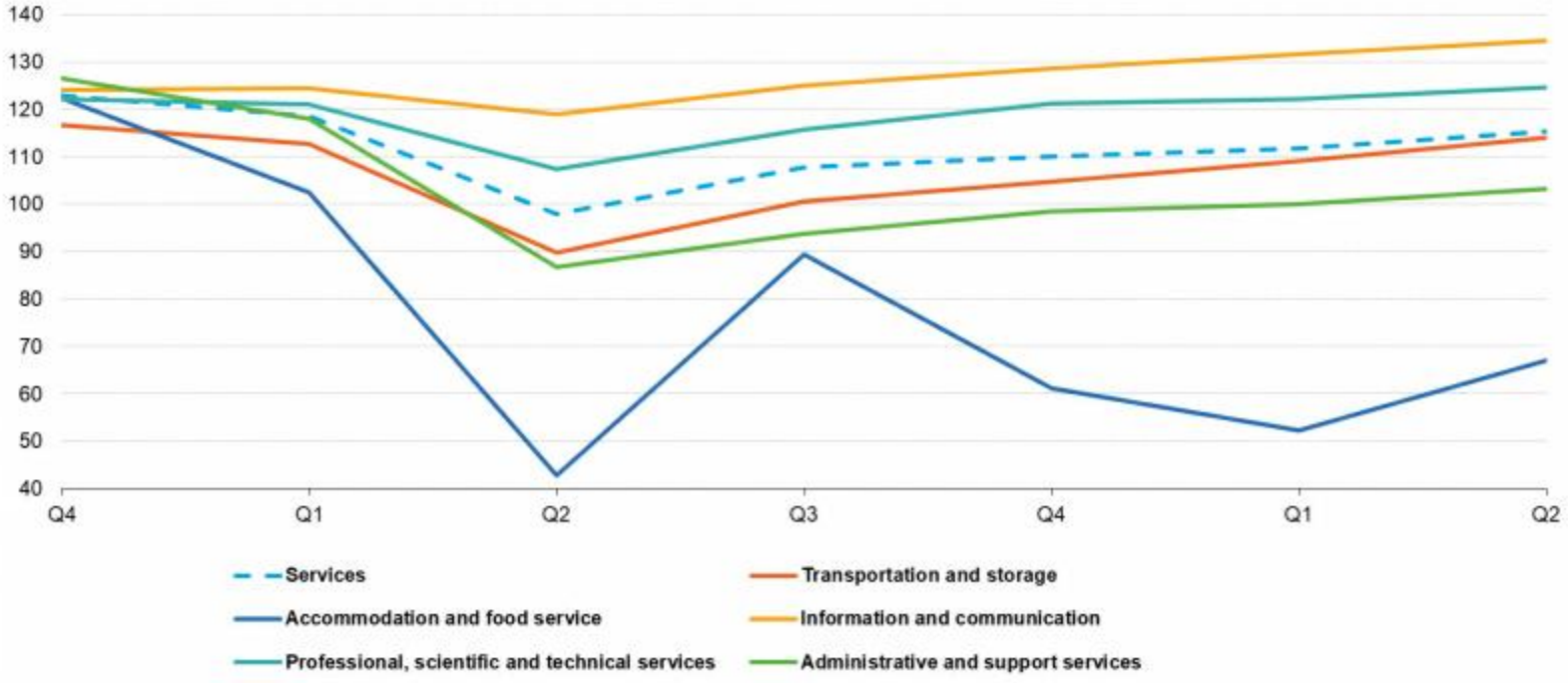
- Rome Treaty called for two types of freedoms
  - (1) **Right to provide services** = Any company of a MS (member state) can provide services in other MS without having to set up an office there
  - (2) **Right to set up establishment** = Any company from one MS may set up an establishment in another MS on the same conditions as nationals of the other MS

- Typical restrictions on free trade in services*
  - Authorization procedures, Local content rules
  - Reserving a certain share of the market for home producers
  - Recognition of qualification and experience
  - Government procurement
  - Requirements with regard to labour qualifications
  - Technical requirements and standards
  - Exchange controls
  - Subsidies to domestic service providers

** more information in the lecture about **Trade and aid policies***

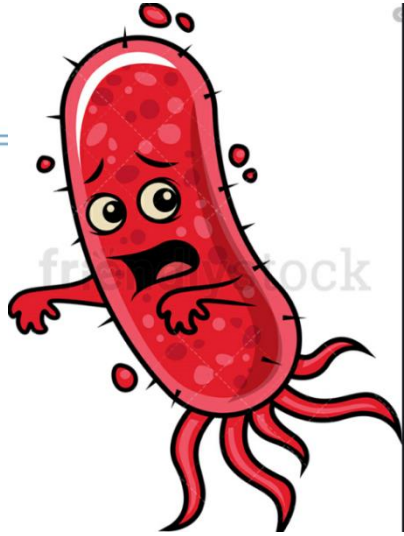
Covid-19 and services

EU development of services turnover, Q1 2020 - Q2 2021



Covid-19 and services

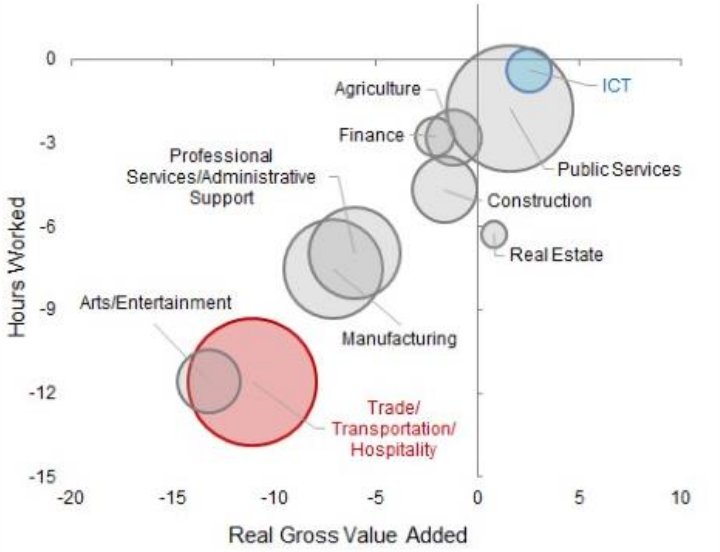
https://www.kansascityfed.org/research/jackson-hole-economic-symposium/macroeconomic-policy-in-an-uneven-economy/



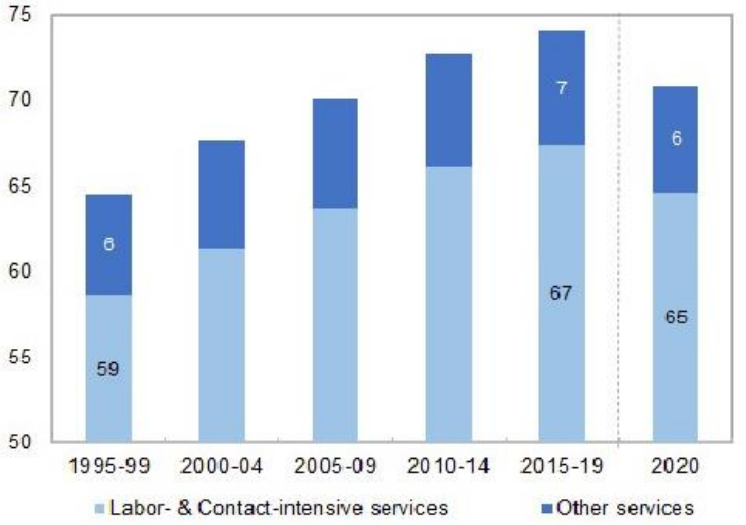
A key feature of the COVID-19 crisis is its highly uneven impact across sectors,…

… which interrupted the long-term trend of rising employment share of services

Hours Worked and Gross Value Added, 2020
(Year-on-year percent change)

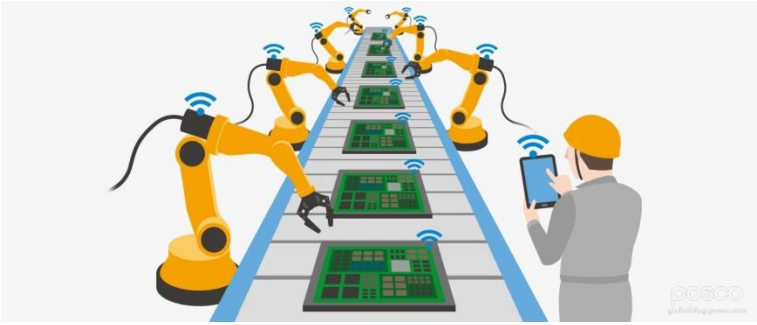


Employment Share of Services: 1995–2020
(Percent of total)



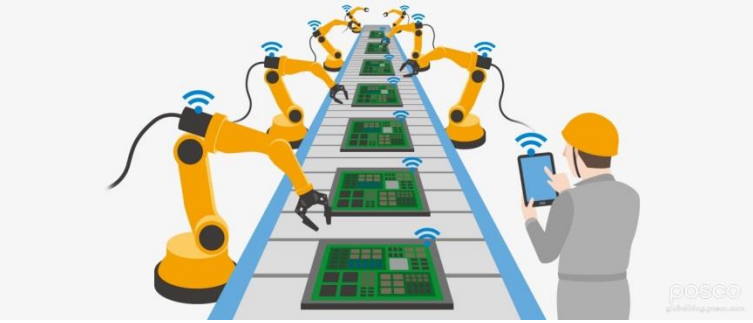
Sources: Eurostat; and IMF staff calculations.
Note: The left panel is based on EU27, with the size of the bubbles reflecting sectoral employment. The right panel shows the weighted average across European economies.

II. CAPITAL



Terminological notes: CAPITAL

- **Definition (in economics):** a factor of production that is not wanted for itself but for its ability to help in producing other goods



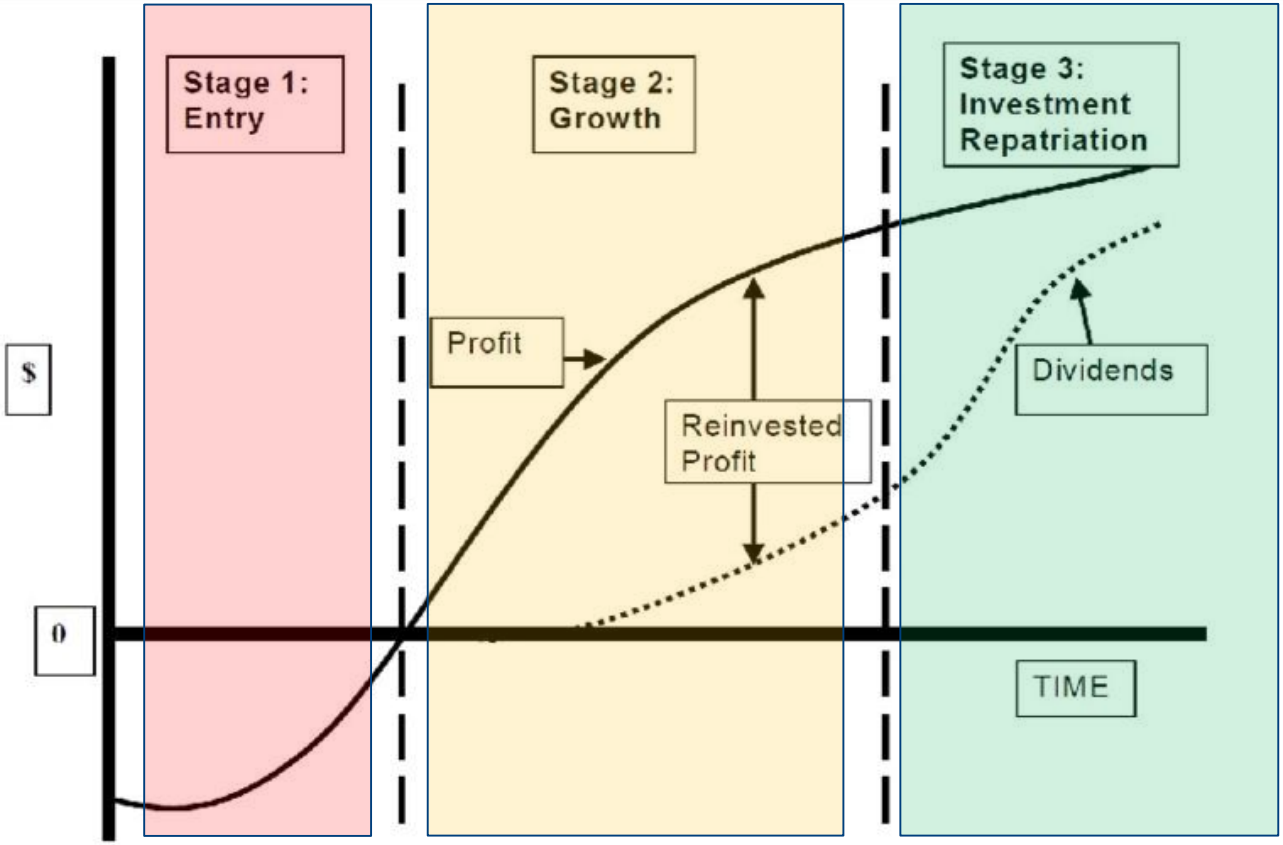
- **Economic concept of capital:** factor of production (along with labour and land), see Cobb-Douglas production function

$$Y=AL^{\beta}K^{\alpha}$$

- **Free movement for capital:** abolition of all controls on financial transactions registered on the balance-of-payments' **capital / financial account**

Terminological note: FDI

- Life cycle of FDI



- FDI - A foreign direct investment is an investment in the form of a controlling ownership in a business in one country by an entity based in another country.
- FDI includes mergers and acquisitions, building new facilities, reinvesting profits earned from overseas operations, and intra company loans.

Effects of capital market integration

- Motivation

- The Treaty of Rome explicitly provides for the free movement of capital
- Until the 1986 Single European Act and a 1988 Directive that ruled out any remaining restriction on capital movements among EU residents, EU capital markets were not very integrated.
- Maastricht Treaty (article 56) bans all national restrictions on the movement of capital except those required for law enforcement and national security reasons.

- In Practice

- Many EU nations just did not believe that unrestricted capital mobility was a good idea (source of crisis? => balance of payment crises, banking crises)

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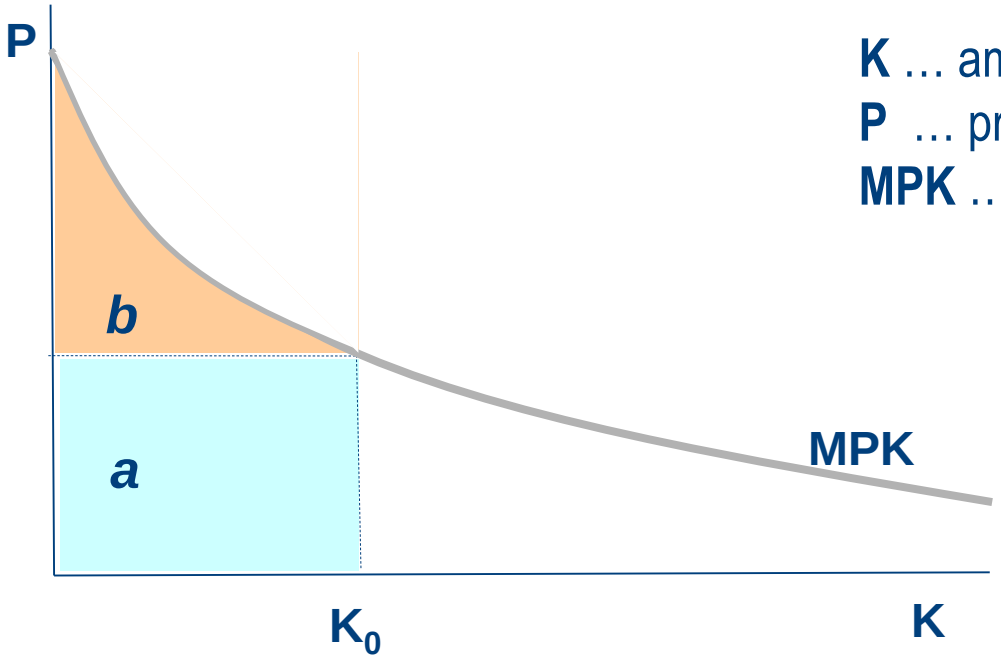
- Assumption of our analysis (effect of capital market integration):

- **(i) allocation efficiency** – requires capital to be invested in the activities that yield the highest rewards ≈ capital market is competitive
- **(ii) 2 nations** (Home and Foreign)
- **(iii) 1 good is only produced by both nations using capital** (K) **and labour** (L)
- **(iv) capital costs are costless**

Division of income between labour and capital



K … amount of capital
P … price paid for capital (euros)
MPK … marginal productivity of capital (declining shape)

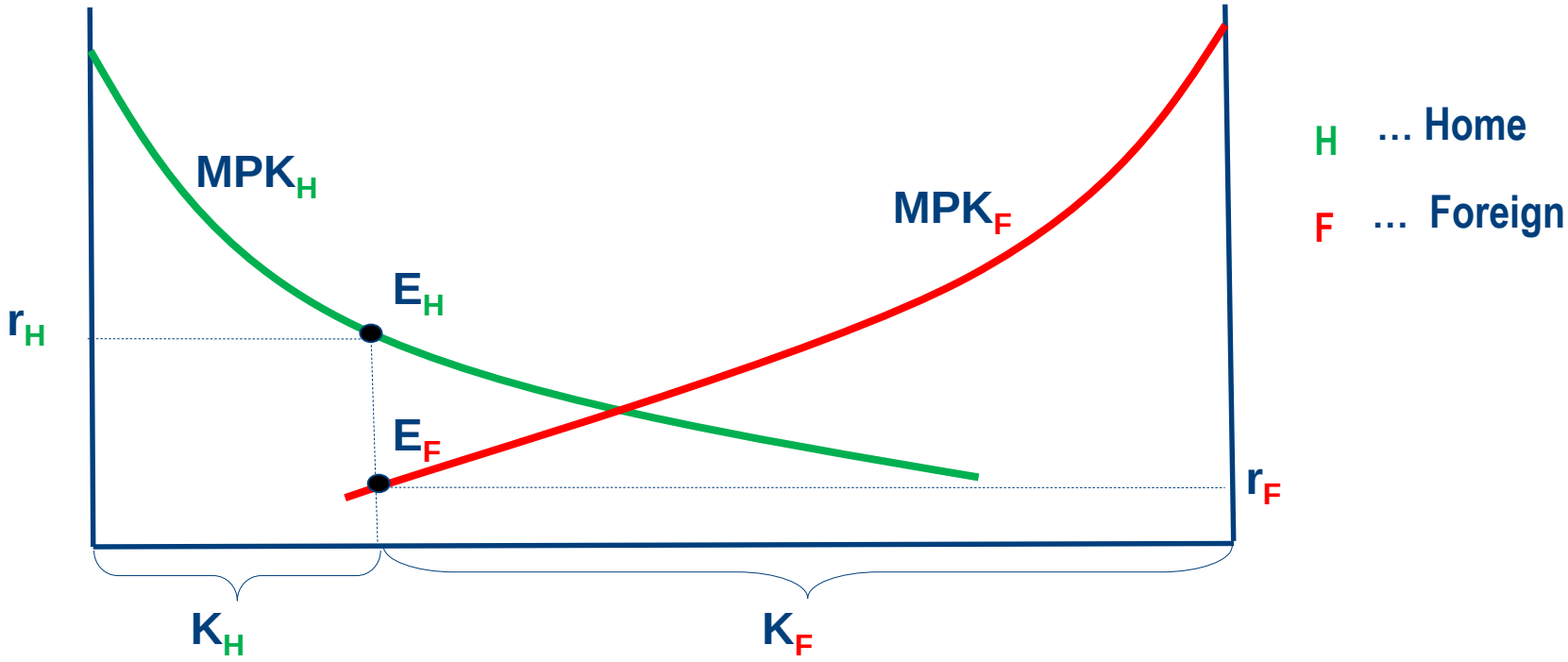
- **MPK** – marginal productivity of capital = the amount of output produced by an extra unit of capital => declines as the total amount of capital employed increases
- The area under MPK curve gives total output of the economy

a … income for capital ≈ payment to Home capital

b … income for labour (residual variable) ≈ payment to Home labour

a* + *b … value of total production

Effects of capital market integration (I)



MPK – marginal productivity of capital

r_H – rate of return earned on capital at Home

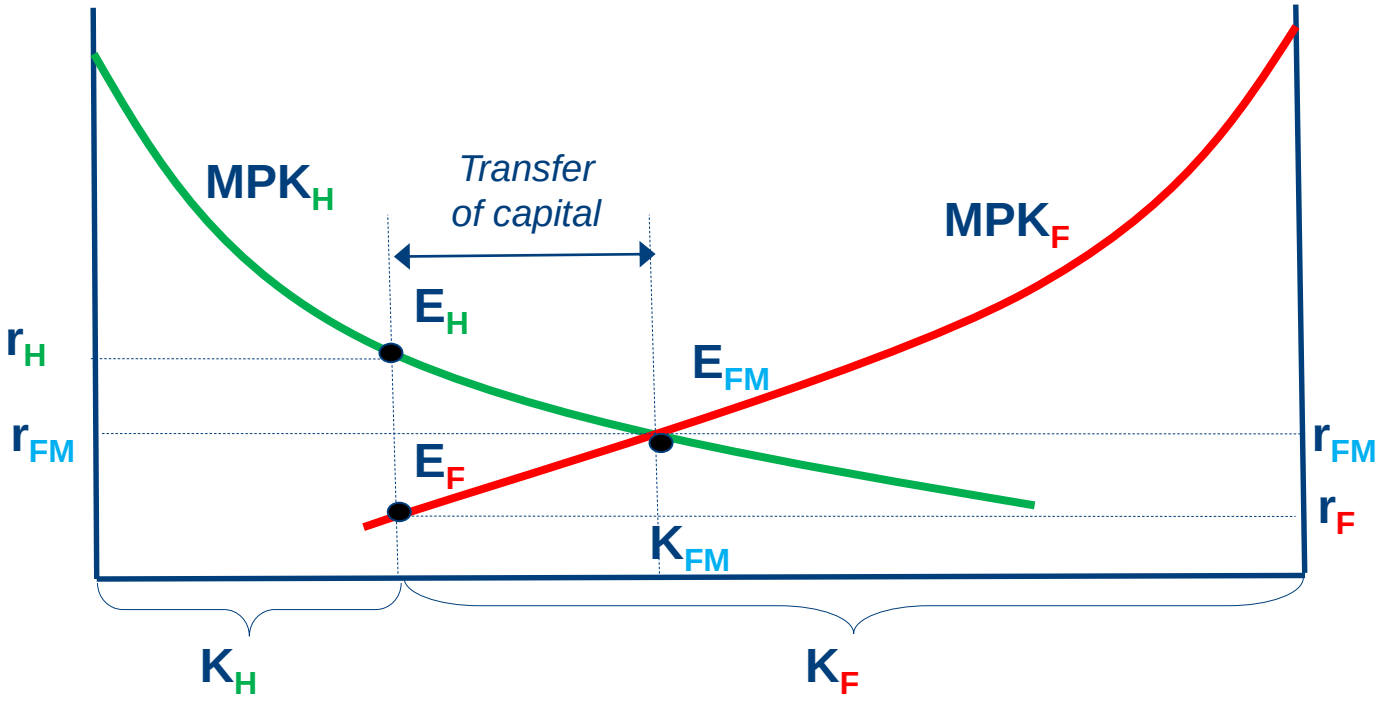
K_H– capital stock in Home

r_F – rate of return earned on capital at Home

K_F– capital stock in Home

Firms competing for Home‘s capital supply force the „price“ of capital (r), up to the point where the price they pay for capital just equals its marginal product.

Effects of capital market integration (II)



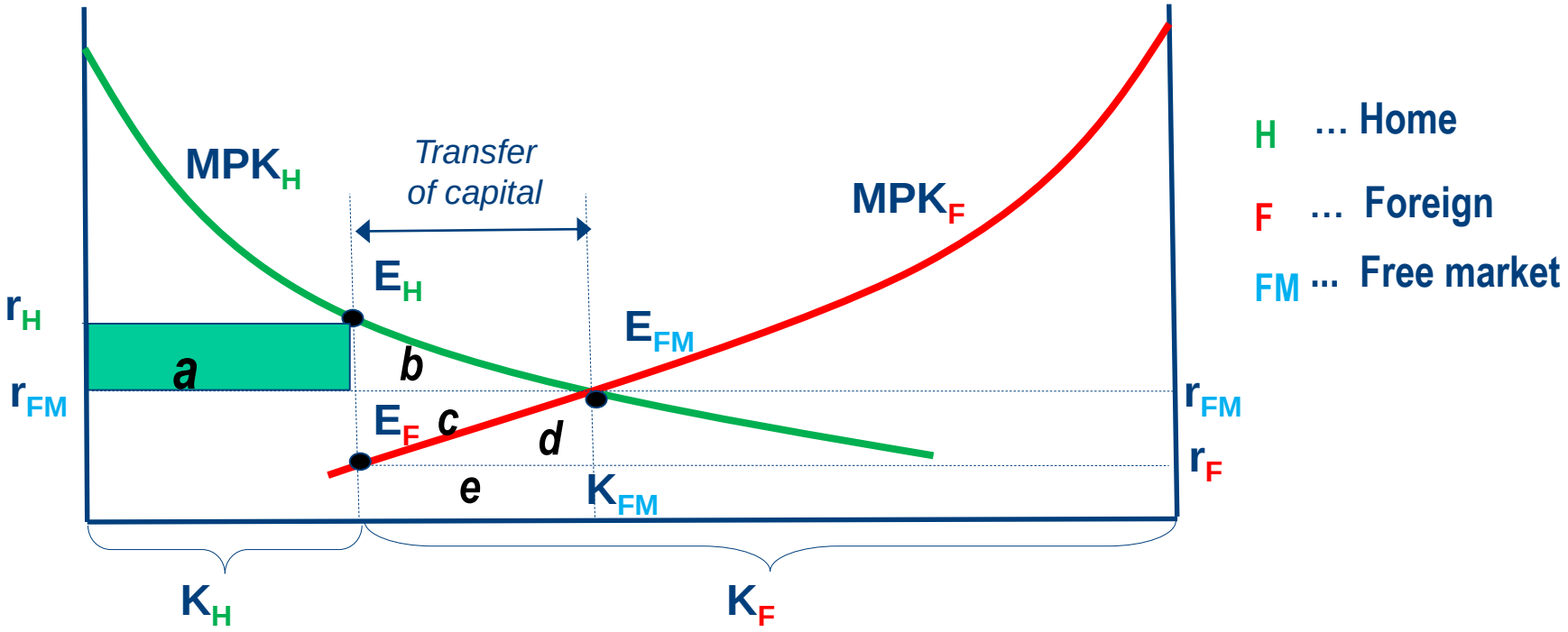
H … Home

F … Foreign

FM … Free market

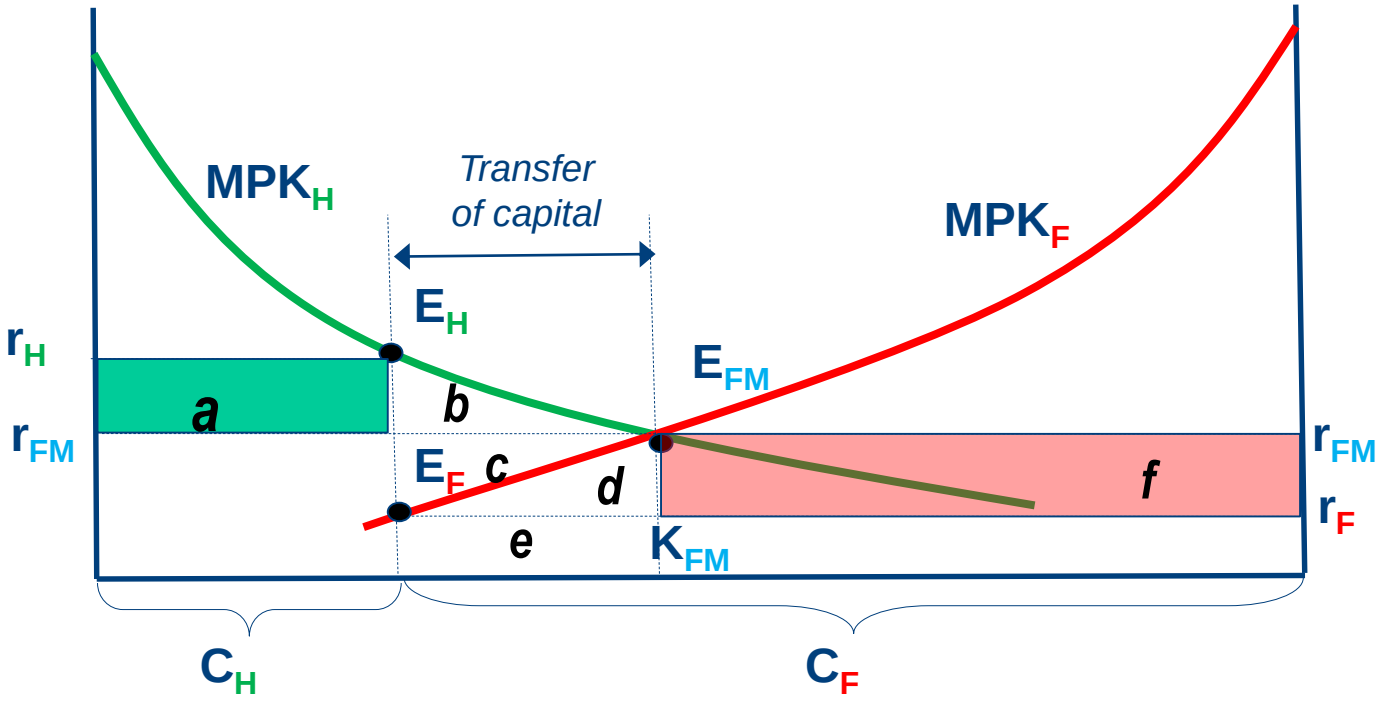
- Capital earns a higher return in **Home** than it does in **Foreign** ($r_H > r_F$)=>
  - => Capital will leave Foreign and move to Home in search of a higher yields
  - => narrowing gap between r_H and r_F at free market „price“ (r_{FM}) at point E_{FM} (intersects of two MPK curves)

Who wins and who loses? (HOME)



- Home: <u>total gain **(b)**</u>
  - => „native“ capital owners in Home lose rectangle **(a)** since their reward (yield) has fallen form r_H to r_{FM}
  - => Home labour increases its earnings by area **(a+b).** The total economic impact on Home citizens is positive and equal to triangle **(b)**
  - The extra capital that flows in raises total output in home by the areas (**b + c + d + e**), but the payments to the new capital only equal the areas **c+d+e** (r_{FM} times the capital flow) => **total gain b**

Who wins and who loses? (FOREIGN)



H … Home

F … Foreign

FM … Free market

Foreign: <u>total gain **(c)**</u>

- => total output drops by **d+e** (movement from E_F to E_{FM})
- => the capital remaining in Foreign sees its yield (reward) rise from r_F to r_{FM} (gain rectangle **f**)
- => foreign labour sees its earnings drop by **d+f**

combining all these losses and gains: foreign lose overall by triangle **d**

BUT: If we count the welfare of foreign factor owners (including the capital that is now working in Home) the conclusion is reversed, because: total gains for Foreign capital are **(c+d+f)**, while the loss to foreign labour is **(d+f)** => <u>total gain **(c)**</u>

Classification of capital controls (1)

- Capital controls encompass a wide range of diversified and often country-specific measures:

(1) Administrative or direct controls

- Capital transactions are restricted by outright prohibitions
- Areas of control (exaples): currency convertibility, purchases of government securities, foreign holdings of pension funds, reinvestment requirements on profits, mandatory repatriation of export earnings

(2) Market-based or indirect controls

- Capital transactions are discouraged by making them more costly
- Areas of control (examples): dual exchange rates for current and capital transactions, non-interest-bearing deposits, discriminatory taxation, etc.

Capital flows (1)

- **Long-term vs. short-term capital flows**
  - Traditional view about the difference between "safe capital" **(FDI)** and "hot money" **(portfolio investment)**
  - Caveats: advanced techniques of financial management, interdependences between short-term and long-term financial operations, artificial dividing lines between safe and hot money
  - Numerous examples of sudden stops: „In crisis all money is hot"

  - https://www.wallstreetmojo.com/short-term-vs-long-term-capital-gains/

Capital flows (2)

- **Inflow vs. outflow of capital**
  - Inclination to benevolent treatment of capital inflows while raising barriers to capital outflows
  - Objectives: preserving savings for domestic use, protection of balance of payment against hot money
  - **Dutch disease:** troubles arising from excessive capital inflows
  - Easier outflows stimulate inflows

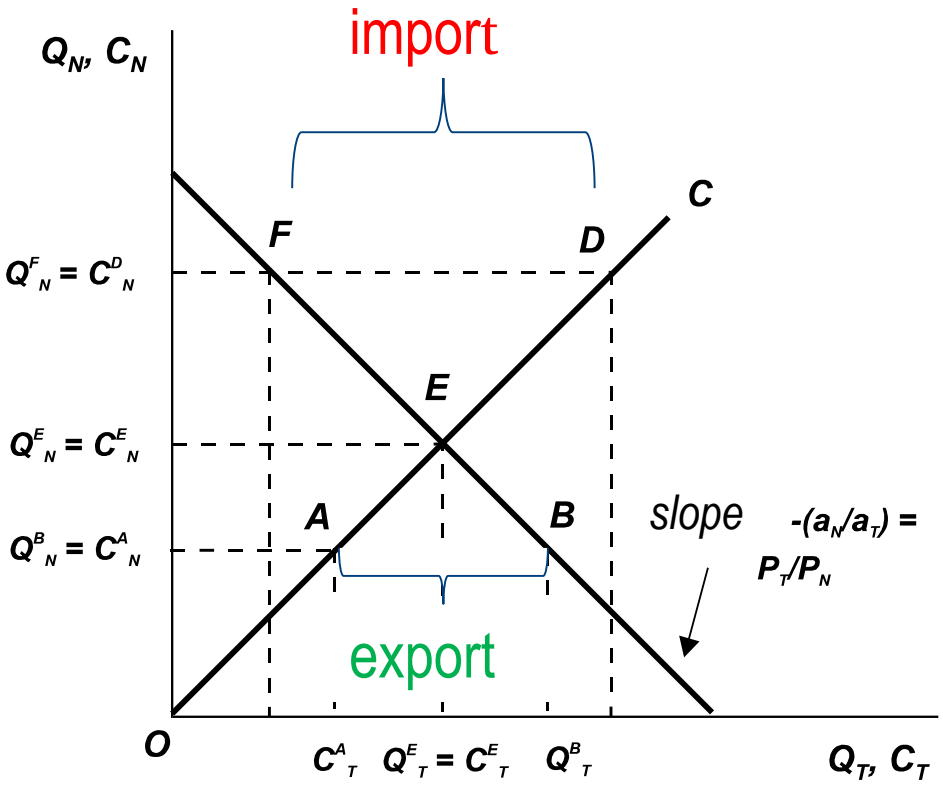
- **Residents vs. non-residents**
  - Practice of imposing stricter controls on residents
  - Objectives: keeping control over domestic assets, protection of strategic industries, national safety and self-sufficiency

TNT model

- A country produces and consumes 2 products: Tradable (T) and Non-tradable (N) goods
  - **Tradable:** Manufacturing, Agriculture & fisheries, Mining, etc.
  - **Non-tradable:** Construction, Real estate, Public services
- Production is linear function of factor(s)

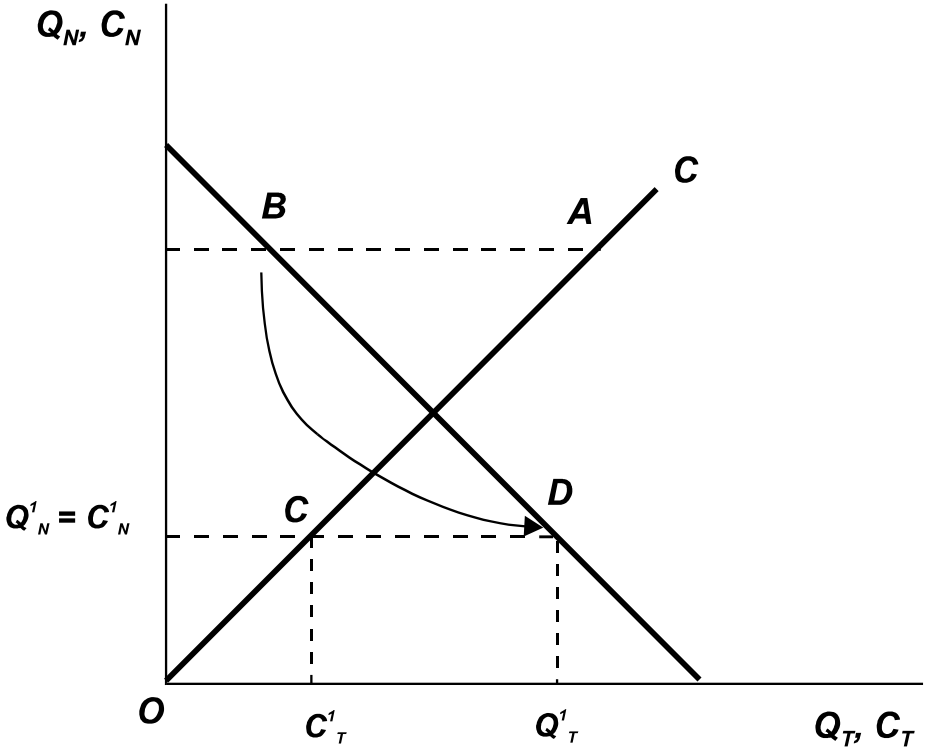
$Q_T = a_T.L_T$	**(1)...** Production of tradable goods (a_T – labour productivity of T)
$Q_N = a_N.L_N$	**(2)...** Production of non-tradable goods (a_{NT} – …… NT)
$L = L_T + L_N$	**(3)...**Labour = Labour working in T and NT sector
$L = Q_T/a_T + Q_N/a_N$	**(4)**…*using (1) and (2)*
$Q_N = a_N.L - (a_N/a_T)\, Q_T$	**(5)**…production–possibility frontier (PPF)
$P_T = w/a_T$	**(6)**…labour cost of T (w – wages)
$P_N = w/a_N$	**(7)**…labour cost of NT (w – wages)
$R = P_T/P_N = a_N/a_T$	***(8)…****real exchange rate*
$A = P_TC_T + P_NC_N$	**(9)**… domestic absorption
$Q_N = C_N$	**(10)**… all NT products must be produced and consumed in our economy
$TB = Q_T - C_T$	**(11)**…trade balance = difference between production of T and consumption of T products

TNT model



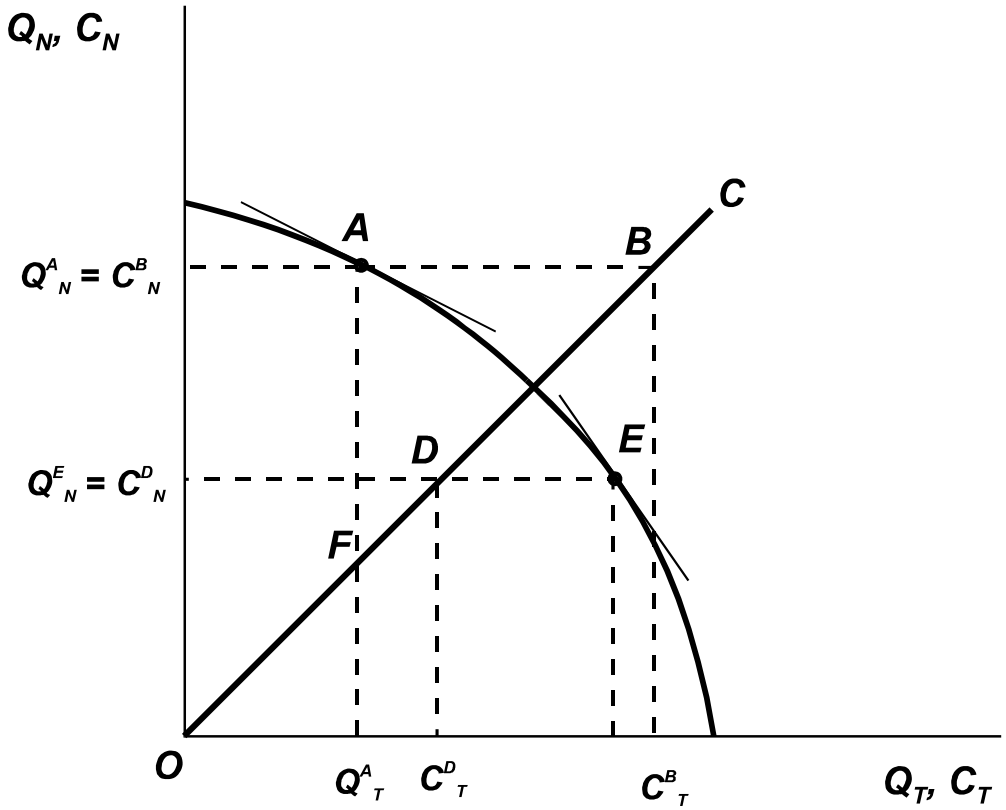
- **FEB line** = PPF = production
- **AED line** = C = consuption
- Distance FD: F – what we produce, D – what we consume: difference is **import**
- Distance AB: A – what we consume, B – what we produce: difference is **export**

TNT model



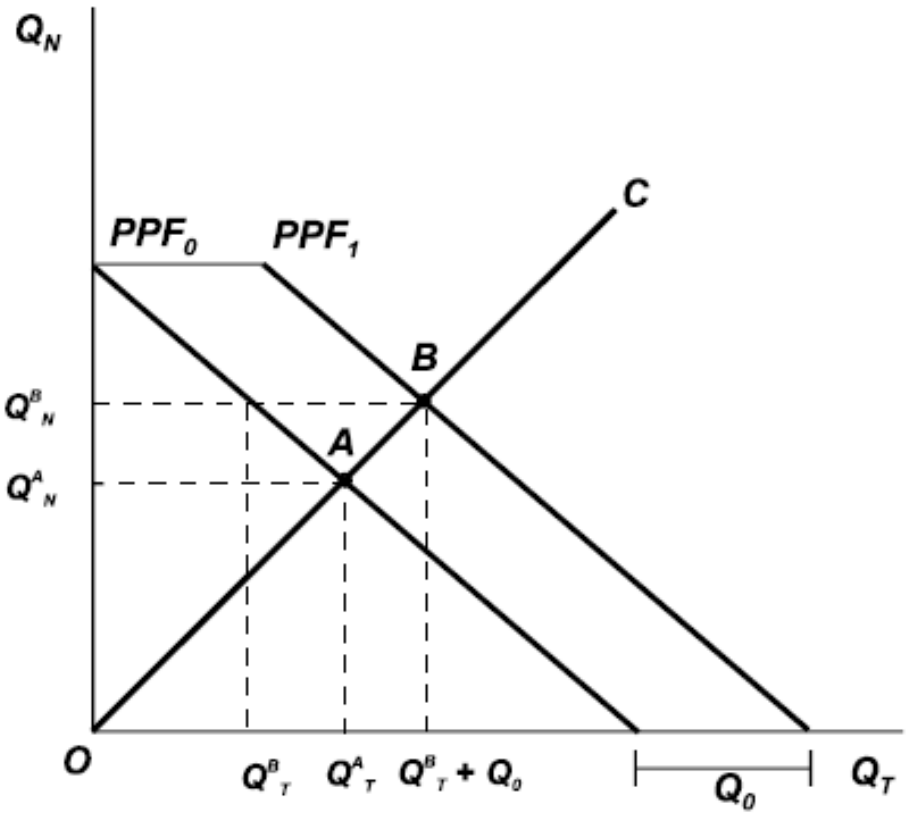
- From trade balance deficit to surplus

TNT model – two factors production function



- Two factors production function (concave shape): Labour and Capital
- $Q_T = Q_T(L_T , C_T)$ (12)
- $Q_N = Q_N(L_N, C_N)$ (13)

TNT model – Duch disease



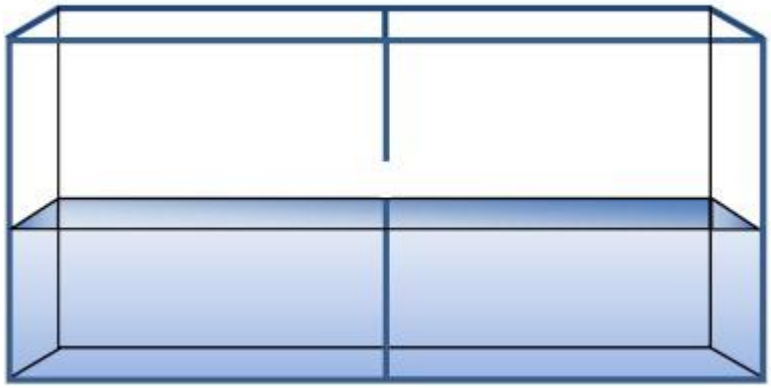
- **PPF = production–possibility frontier**
- New gas deposit / discovery => good news for a economy => ER appreciate => PPF move from PPF_0 to PPF_1.
- Total production increase by Q_o, but production of traditional goods decrease from Q^A_T to Q^B_T (due to appreciation of exchange rate)

III. INTRODUCTION TO FINANCIAL INTEGRATION

Financial Integration and the law of one price

- In a fully integrated market the same asset traded in different locations should have the same price everywhere. *("law of one price")*

Example: There is only one sea level!



- Financial market integration should take place when financial assets having similar risk factors and yields are priced identically by the markets no matter where they are traded. This follows from the law of one price.

CB and financial integration

- Central banks in the EU care about financial integration (FI): The more integrated financial markets are, the more effectively monetary policy is transmitted through the financial system;
- The Czech National Bank assesses progress in FI in its regular euro area accession document "Analyses of the Czech Republic's current economic alignment with the euro area".
- Quite large evidence on FI available for the euro area, for example:
  - Adam et al. (2002), Baele et al. (2004) $\Rightarrow$ financial market integration can be measured by comparing the returns of assets (e.g. in terms of beta and sigma convergence);
  - European Commission (1999), Hartmann, Maddaloni and Manganelli (2003), Ayuso and Blanco (1999) $\Rightarrow$ financial market integration between stock markets of the euro area has increased during the nineties.

Potential Benefits of Financial Integration

(i) **Consumption smoothing:** by allowing the country to borrow in "bad" times (say, during a recession or a sharp deterioration in the country's terms of trade) and lend in "good" times

(ii) **Domestic investment and growth:** the ability to draw upon the international pool of resources that financial openness gives access to may also affect domestic investment and growth.

(iii) **Enhanced Macroeconomic Discipline:** the free flow of capital across borders may induce countries to follow more disciplined macroeconomic policies and, thus, reduce the frequency of policy mistakes - Obstfeld (1998)

(iv) **Increased Banking System Efficiency and Financial Stability:** it may enhance the depth and breadth of domestic financial markets and lead to an increase in the degree of efficiency of the financial intermediation process, by lowering costs and "excessive" profits associated with monopolistic or cartelized markets, thereby lowering the cost of investment and improving resource allocation.

Potential Costs of Financial Integration

(i) **Concentration of Capital Flows and Lack of Access:** Many developing countries (including oil producers) are able to borrow on world capital markets only in "good" times, whereas in "bad" times they tend to face credit constraints.

(ii) **Domestic Misallocation of Capital Flows:** Although capital inflows that are associated with an open capital account may raise domestic investment, their impact on long-run growth could be limited, if such inflows are used to finance speculative or low-quality domestic investments.

(iii) **Loss of Macroeconomic Stability:** Large capital inflows induced by financial openness can have undesirable macroeconomic effects, including rapid monetary expansion, inflationary pressures, real exchange rate appreciation and widening current account deficits.

(iv) **Pro-cyclicality of Short-Term Flows:** A common adverse shock to a group of countries may cause a deterioration in some countries' creditworthiness, as a result of abrupt changes in risk perception.

(v) **Herding, Contagion, and Volatility of Capital Flows:** A high degree of financial openness may also be conducive to a high degree of volatility in capital movements.

Readings (for whom who are interested)**:**

- Readings:

- Additional Readings / Videos:
  - Developments in the services sector and its relationship with manufacturing. ECB Economic Bulletin, Issue 7/2019 https://www.ecb.europa.eu/pub/economic-bulletin/focus/2019/html/ecb.ebbox201907_02~860ce32c39.en.html

Thank you for your attention!