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**“The impact of macroeconomic factors on FDI attractiveness:
Romania, Slovakia and Greece in comparison”**

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Research Questions

- Which are the basic macroeconomic factors that influence foreign direct investment (FDI) inflows?
- How is the trade balance of the three countries affected by FDI inflows?
- How does the process of European integration affect FDI and trade?

Theoretical framework(1)

- **FDI categories and the effect on the trade balance**

- 1. FDI for producing goods for the domestic market (market-seeking FDI)**

Key *incentives* for FDI: Market size, tariffs, exchange rate, geographical distance, host country's economic complexity

➡ **Improvement of trade balance is expected**

- 2. FDI for producing goods for the global market (export-oriented FDI)**

Key *incentives* for FDI: reduction of production costs, host country's economic complexity

➡ **Improvement of trade balance is expected**

Source: Economakis et al., 2016

Theoretical framework(2)

- FDI categories and the effect on the trade balance
- However, it is possible that **increasing FDI of the first two categories** could cause an **increase of imports** for the host country
- FDI could **create import-demands** and could **drift inputs** mainly for the production process causing increased import flows

Source: Giannitsis, 1983

Theoretical framework(3)

- FDI categories and the effect on the trade balance

3. FDI for the establishment of commercial distribution networks

FDI of this category affects the trade balance depending on the type of distribution network

4. FDI in services sector for the domestic market

They usually do not affect the trade balance

5. FDI in financial intermediation

Unclear impact on the trade balance

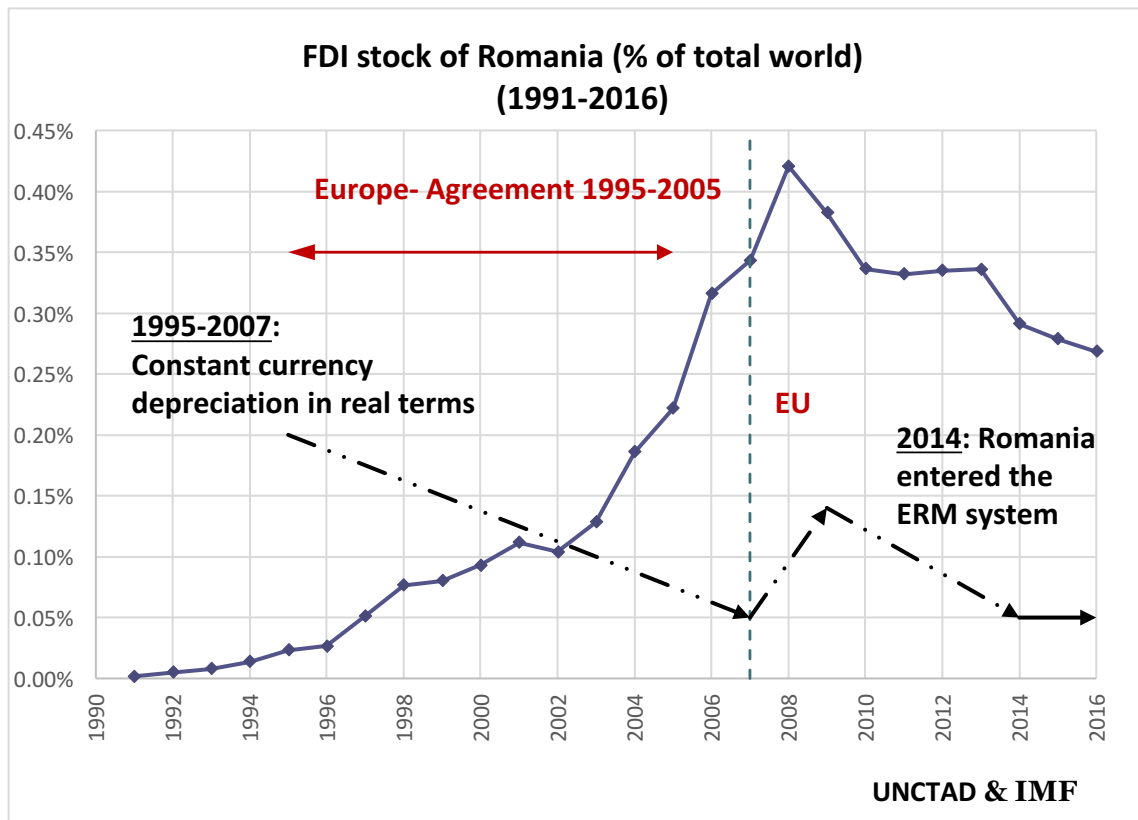
Source : Economakis et al., 2016

Theoretical framework(4)

- **Economic complexity and FDI**
- **Economic complexity** is a function of a country's productive **diversity** and product **ubiquity** (Hausmann-Hidalgo et al. 2011)
- National productivity depends on a country's **economic complexity** (Hausmann-Hidalgo et al. 2011)
- Therefore, countries with a relatively higher level of economic complexity, ceteris paribus, will tend to attract more FDI

Performance Reviews, General Interpretative Findings(1)

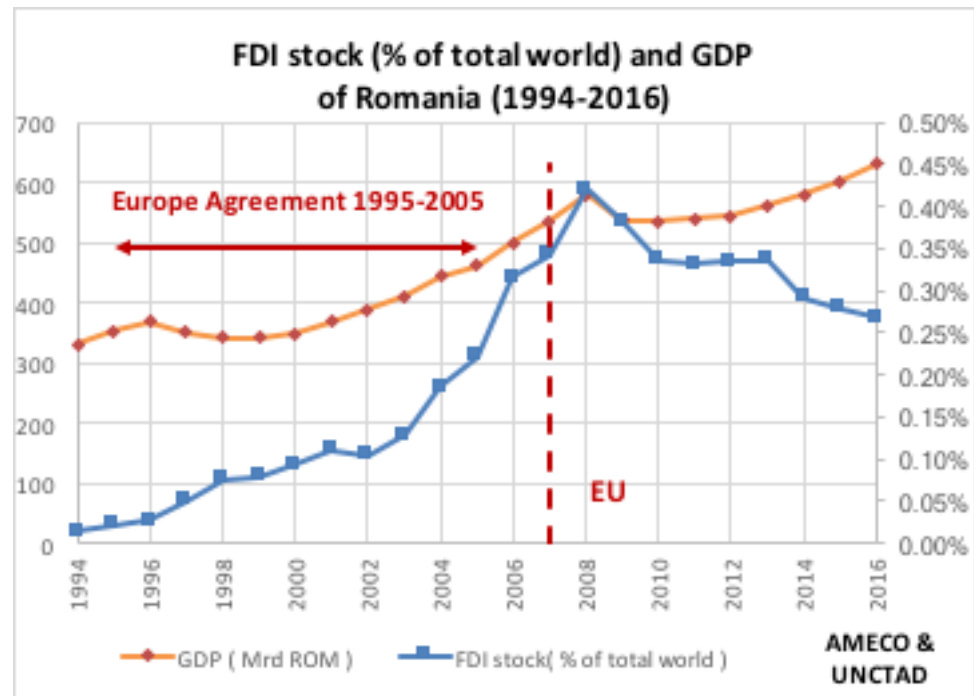
- FDI Stock, phasing out of tariffs and monetary protection of ROMANIA (incentives for market-seeking FDI)



- Romania's FDI stock as a percentage of the world total has an **upward trend** until 2008.
- The **phasing out of tariffs** (Europe-Agreement, 1995-2005) does not seem to deteriorate Romania's FDI attractiveness.
- Romania's **currency depreciation** in real terms (1995-2007) together with increased FDI could indicate the presence of FDI of the first category, i.e. FDI in order to circumvent the exchange rate protection.

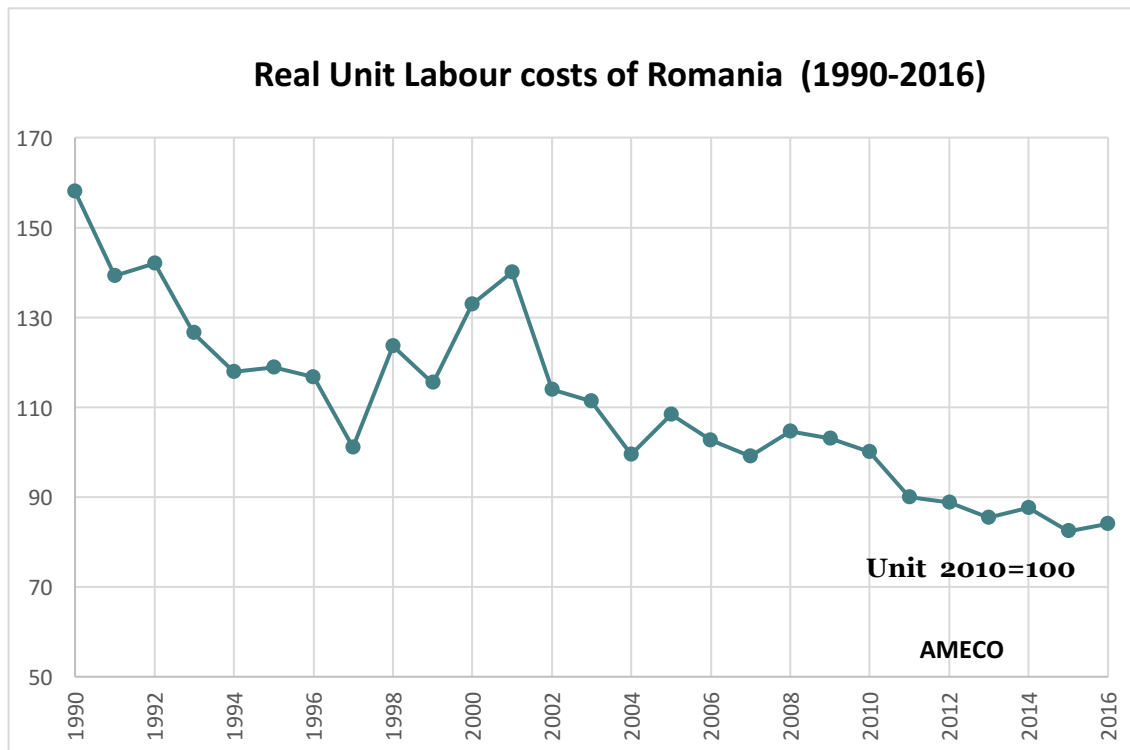
Performance Reviews, General Interpretative Findings(2)

- FDI Stock, geographical position and GDP of ROMANIA (incentives for market-seeking FDI)
- **Geographical position** does not play a significant role in attracting FDI of the first category since main investors and trade partners are the EU countries.
- **GDP** as an incentive for attracting FDI could be related to the increase of FDI in Romania during the period 1994-2008. After 2008, FDI stock and GDP seem to disconnect



Performance Reviews, General Interpretative Findings(3)

- FDI Stock and unit labour cost of ROMANIA (export-oriented FDI)
- **Low labour costs with rising labor productivity** can interpret, to some extent, the increased FDI of Romania.

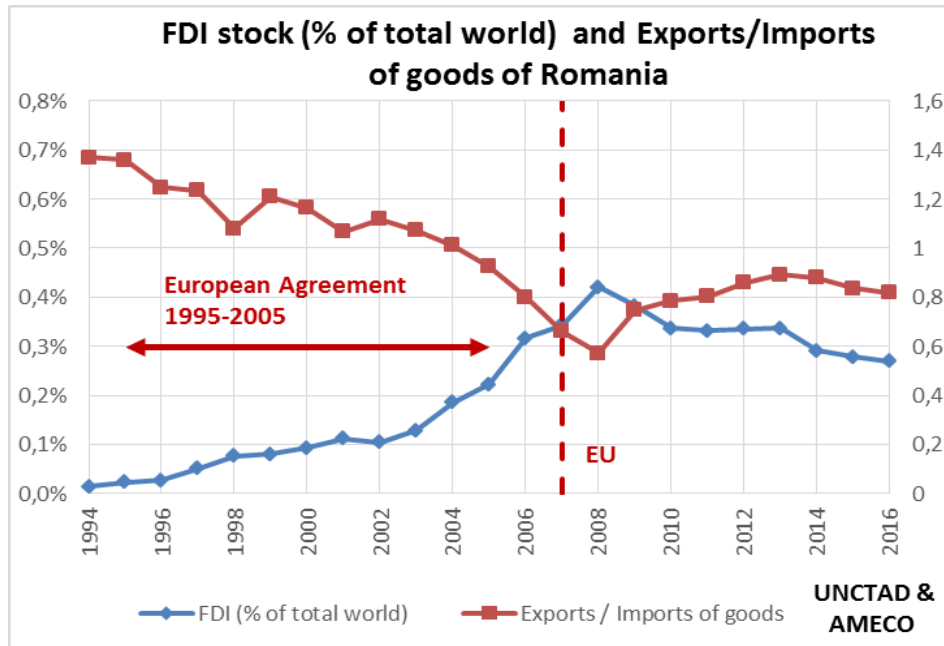


Negative relationship between FDI stock and unit labour cost, $\rho = -0.76$

The cost competitiveness of Romania has a strong relationship with the attraction of FDI

Performance Reviews, General Interpretative Findings(4)

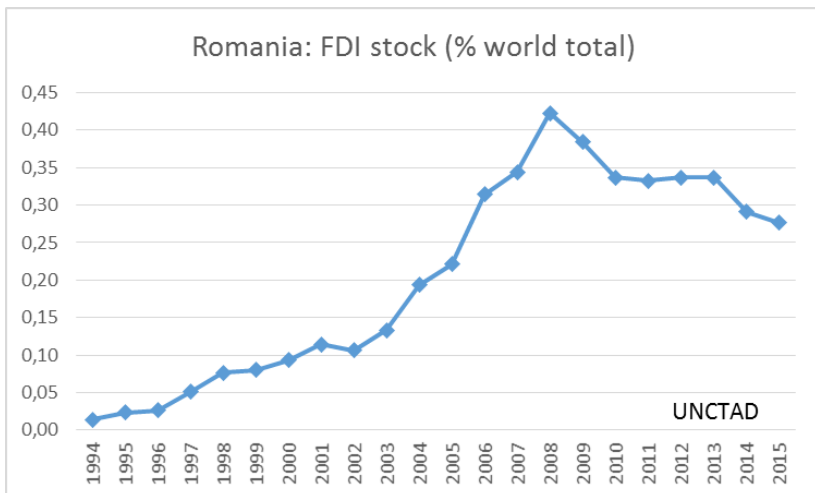
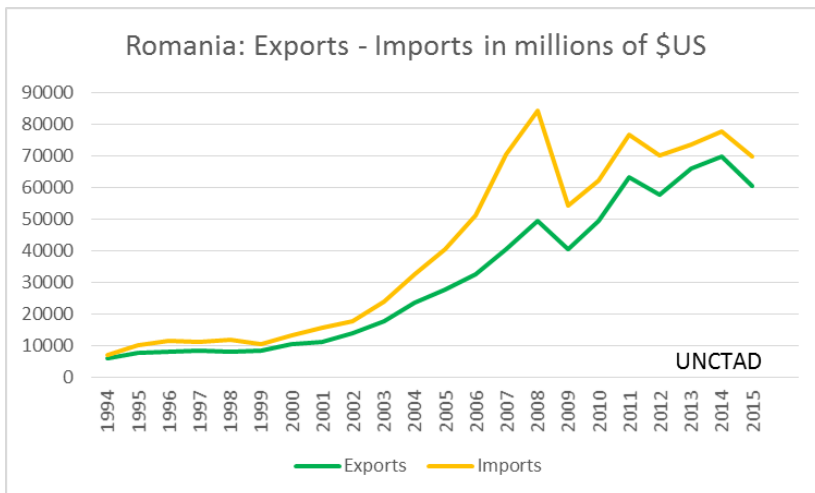
- Exports/Imports and FDI, Romania



1994-2008: Romanian FDI is constantly increasing, while the trade balance deteriorates → the external trade is **strongly negatively** related to FDI in the case of Romania ($\rho = -0.96$)

2008-2016: Decrease both in FDI and imports. The global financial crisis and austerity measures leading to a relative stabilization of the trade balance.

- **Exports/Imports and FDI, Romania**



Further analysis :

Relationship between **FDI – exports** is strong and positive ($\rho=0,77$)

→ **export - oriented FDI**

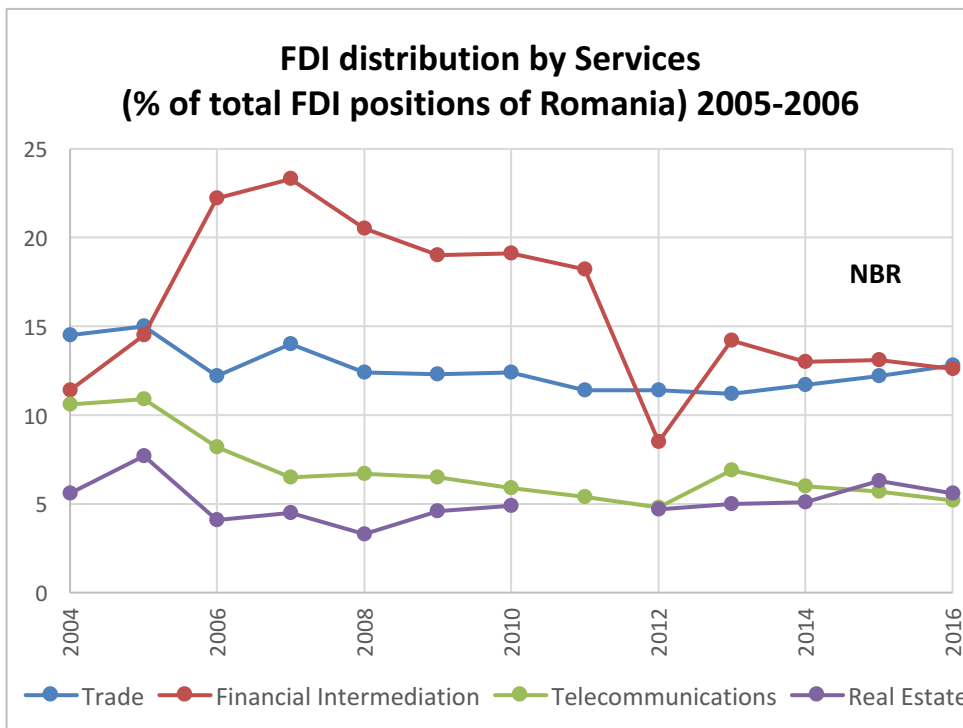
Relationship between **FDI – imports** is strong and positive ($\rho=0,87$)

→ **FDI does not seem to have substituted imports**

→ **FDI could possibly create import-demands and drift inputs** for the production process causing increased import flows

Performance Reviews, General Interpretative Findings(5)

- FDI in the services sector of Romania
- The received FDI of the first and second category are not strong enough so as to affect positively the trade balance.



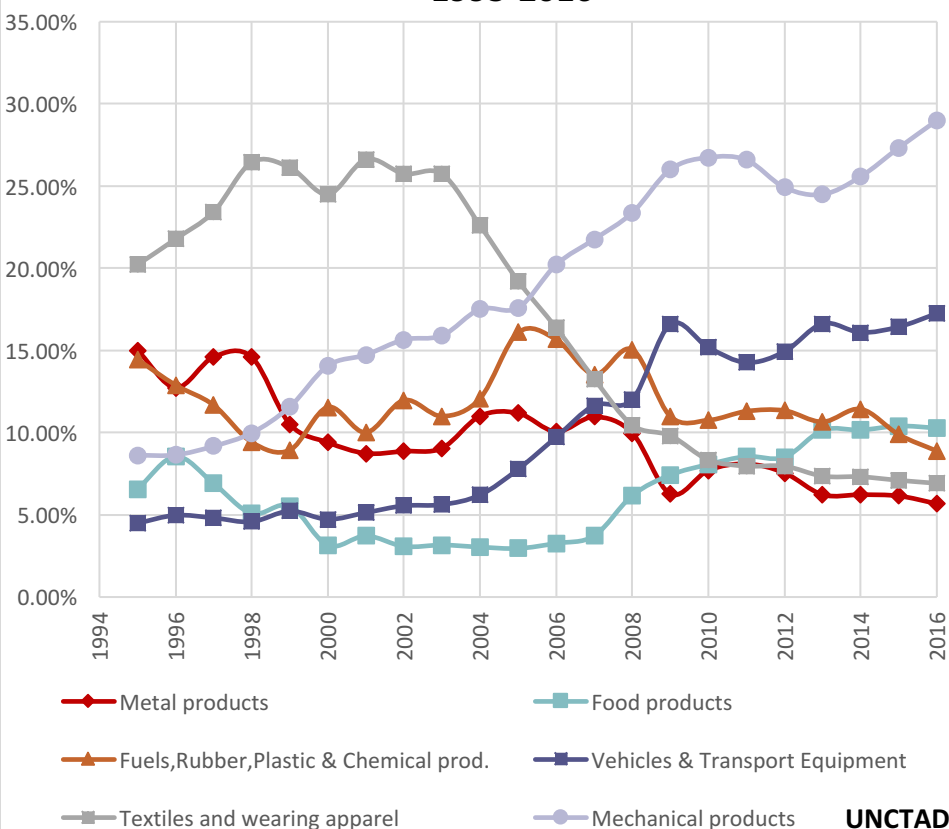
FDI in Romania is mostly attracted by non-tradable sectors or sectors that are not connected to external trade.

The basic service sectors which attract FDI in Romania are either **non-tradeable** ones (trade, telecommunications) or **tradeable but with unclear impact on the trade balance** (financial intermediation, real estate).

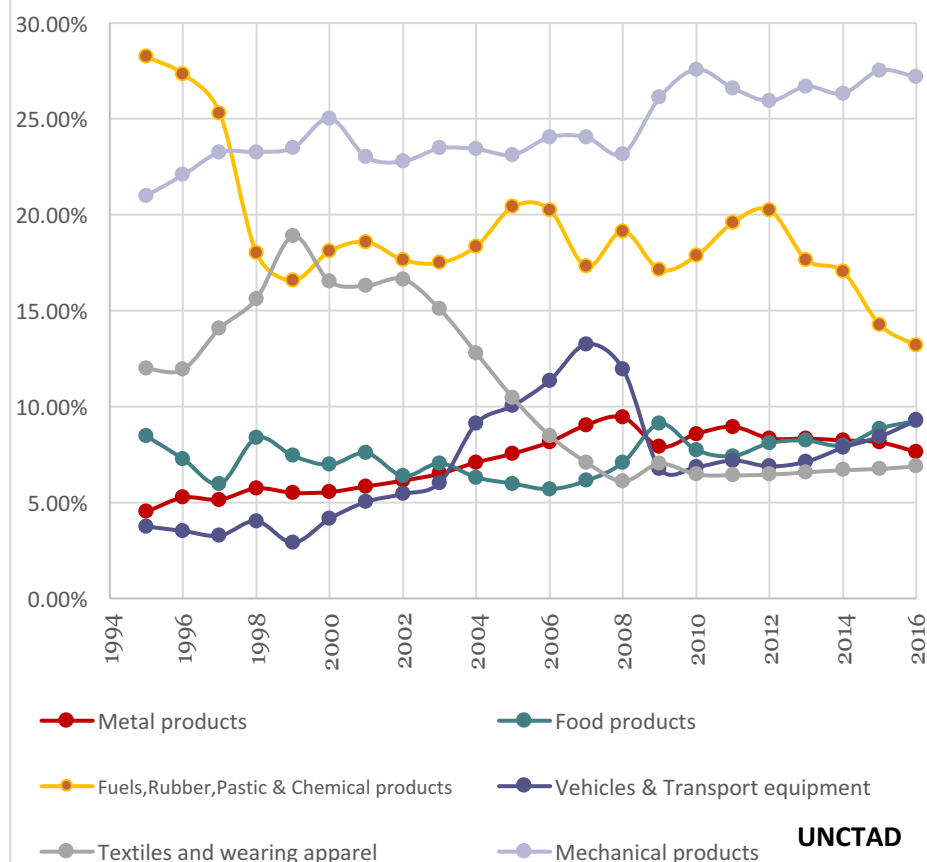
Performance Reviews, General Interpretative Findings(6)

- Exports & imports distribution by sector of Romania

**Exports distribution (% of total Exports of Romania)
1995-2016**

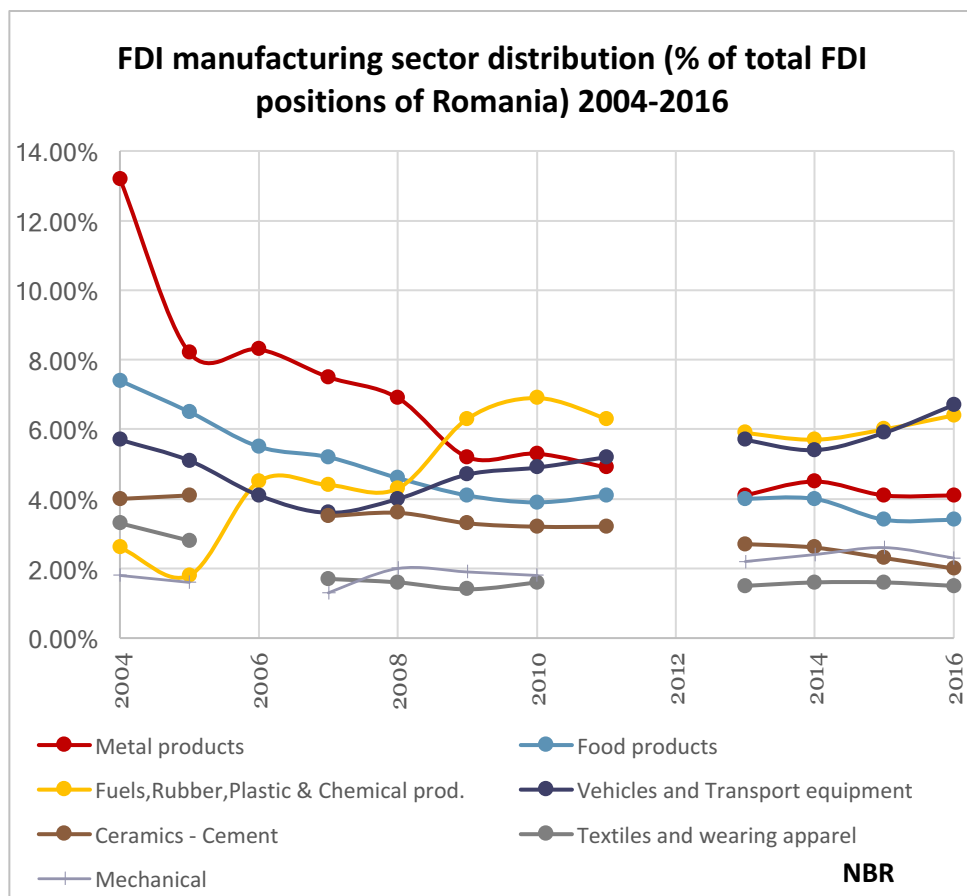


**Imports distribution (% of total Imports of Romania)
1995-2016**



Performance Reviews, General Interpretative Findings (7)

- FDI manufacturing sector distribution of Romania

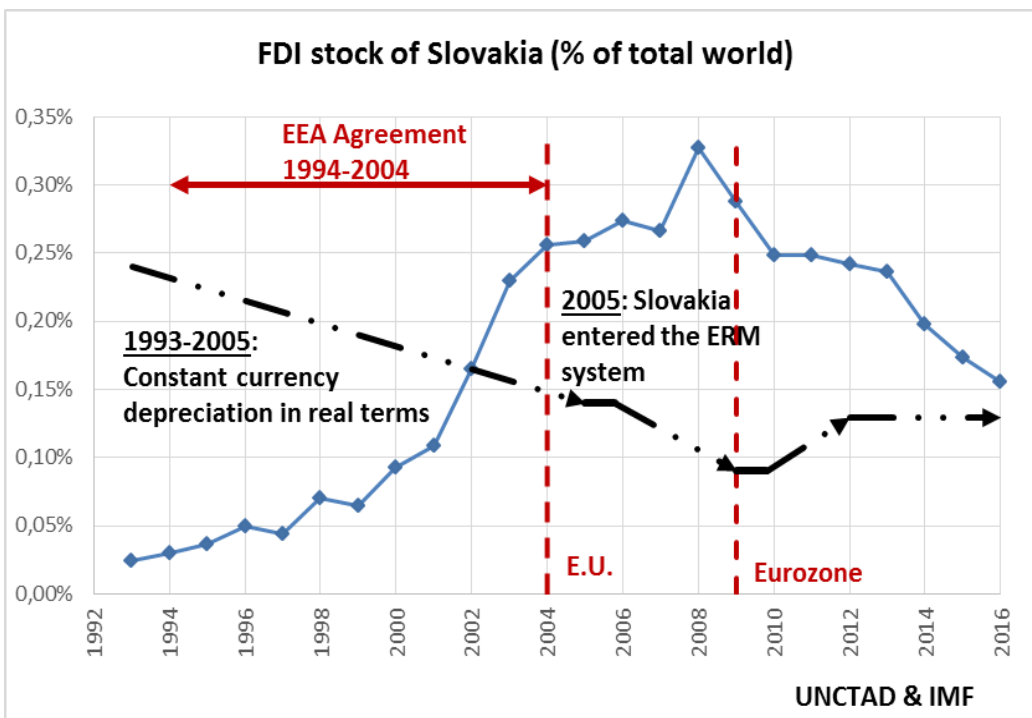


- Textile products: **unclear, probably of the second category**
- Vehicles and transport equipment: **second category**
- Mechanical products :**second category**
- Food industry : **first category**
- Fuel industry and cement-ceramics industry: **first category**
- Metal products :**second category** and **first category** as significant inflows for other industries

Romanian FDI in manufacturing sector between the years 2004 and 2016 is both market seeking (first category) and export-oriented (second category)

Performance Reviews, General Interpretative Findings(8)

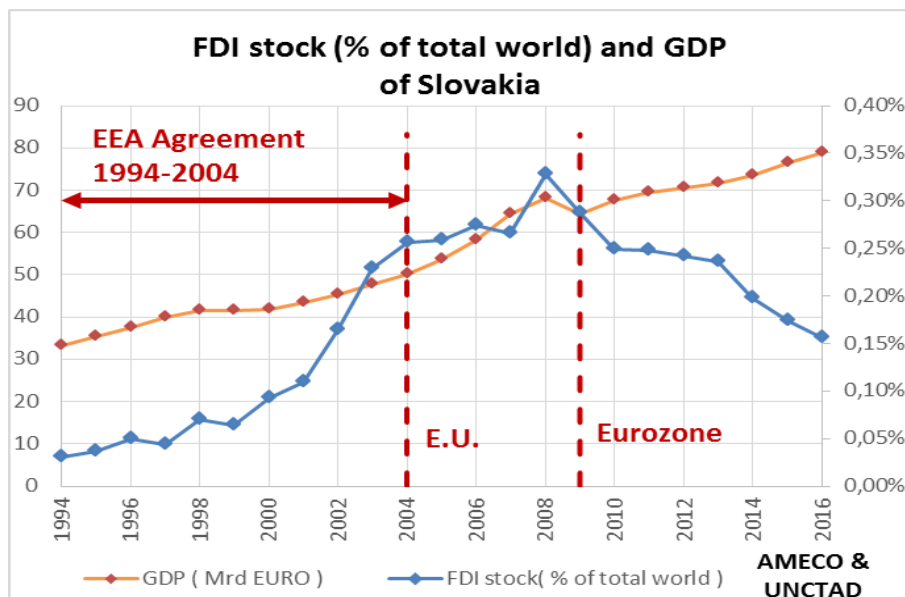
- FDI Stock, phasing out of tariffs and monetary protection of SLOVAKIA (incentives for market-seeking FDI)



- Slovakia's FDI stock as a percentage of the world total has an **upward trend** until 2008.
- The **phasing out of tariffs** (EEA Agreement, 1994-2004) and the accession to the EU do not influence the FDI attracted which continues to increase during the same period.
- Slovakia's **currency depreciation** in real terms (1993-2009) is an incentive of attracting FDI of the first category in order to overpass exchange rate barriers.

Performance Reviews, General Interpretative Findings(9)

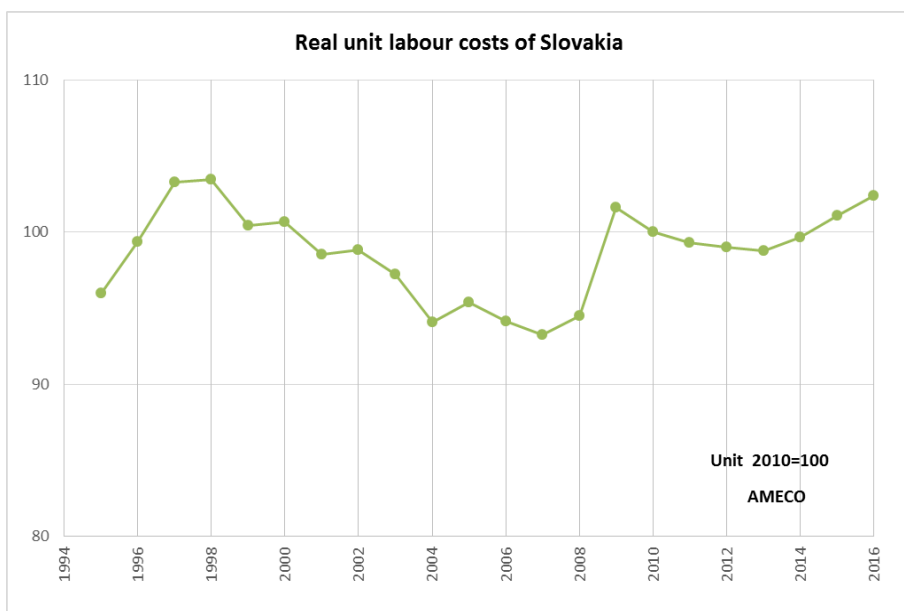
- FDI Stock, phasing out of tariffs and monetary protection of SLOVAKIA (incentives for market-seeking FDI)
- **Geographical position** does not play a significant role in attracting FDI of the first category since main investors and trade partners are the EU countries.
- **GDP** as an incentive for attracting FDI seems to be related to the increase of market-seeking FDI in Slovakia during the period 1994-2008.



After 2008, FDI stock and GDP seem to disconnect.

Performance Reviews, General Interpretative Findings(10)

- **FDI Stock and unit labour cost of SLOVAKIA (export-oriented FDI)**
 - **Low labor costs with rising labor productivity** can interpret, to some extent, the increased FDI in Slovakia until 2008.

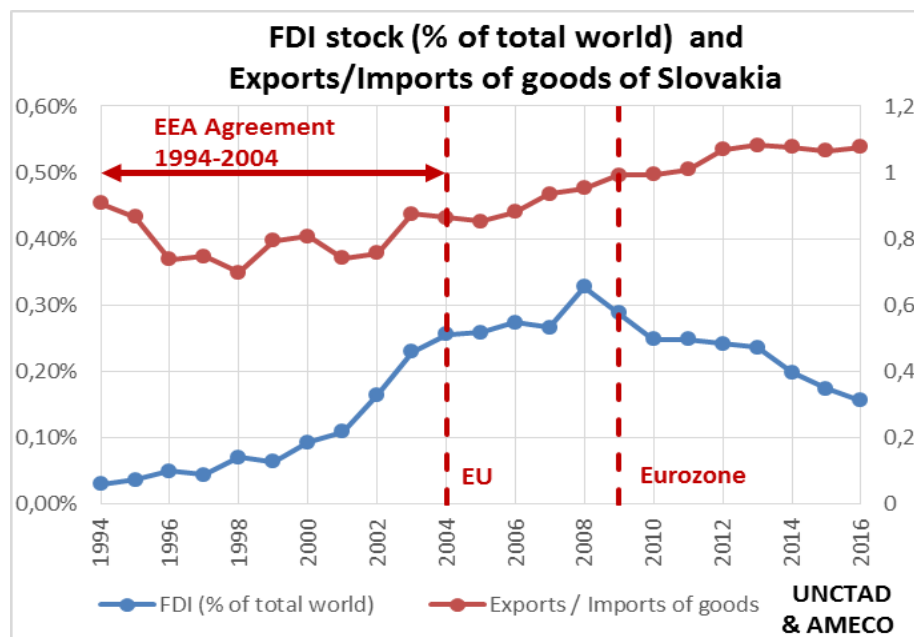


Negative relationship between FDI stock and unit labour cost, $\rho = -0.52$

The cost competitiveness of Slovakia has a weak relationship with the attraction of FDI

Performance Reviews, General Interpretative Findings(11)

- Exports/Imports and FDI, SLOVAKIA



1994-2008: Slovakia's FDI is increasing and the trade balance is improving → The external trade in Slovakia is **weakly positively** related to FDI ($p = 0,56$)

2008-2016: FDI and trade balance follow different directions

→ Trade balance continuous to improve

→ FDI of the first and second category during the previous period seem to continue to influence positively the trade balance of Slovakia

Further analysis : Relationship between **FDI – exports**, positive ($p=0,64$)

→ **export - oriented FDI**

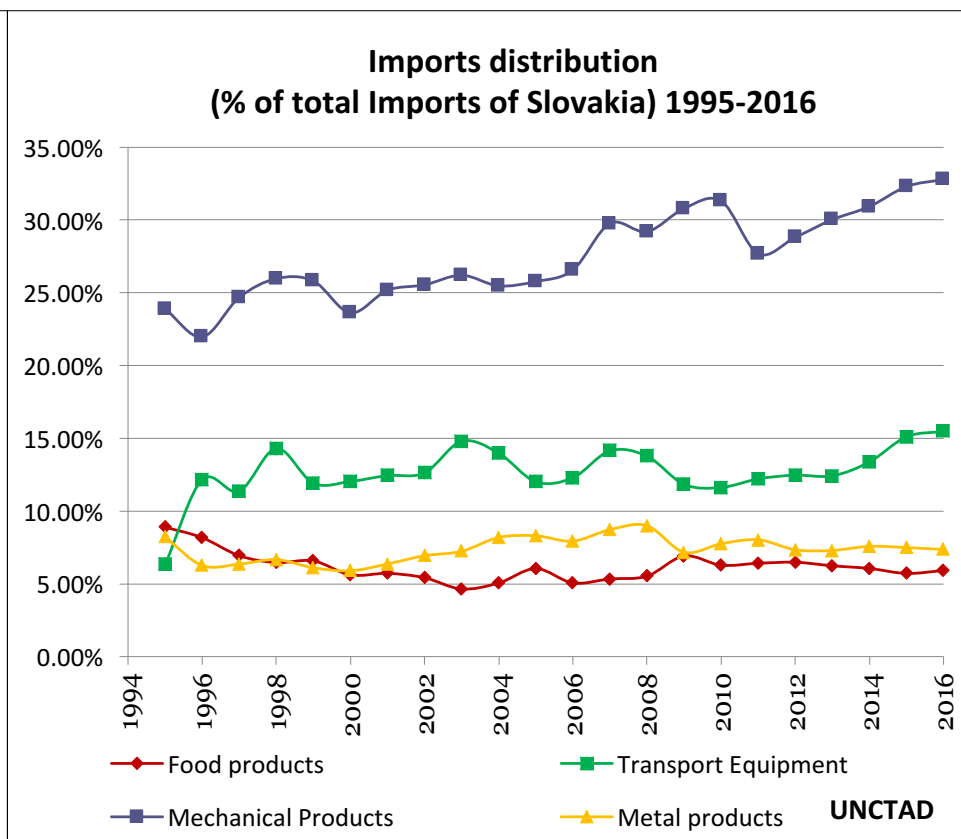
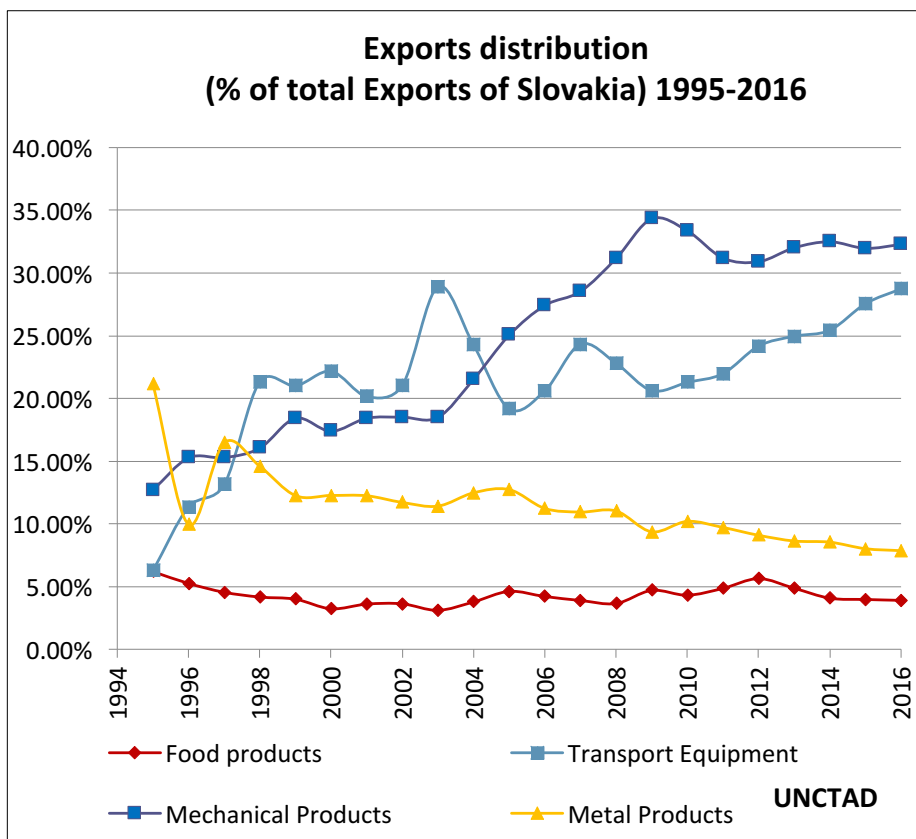
Relationship between **FDI – imports**, strong and positive ($p=0,70$)

→ FDI does not seem to have substituted imports*

→ FDI **creates import-demands** and **drifts inputs** mainly for the production process causing increased import flows

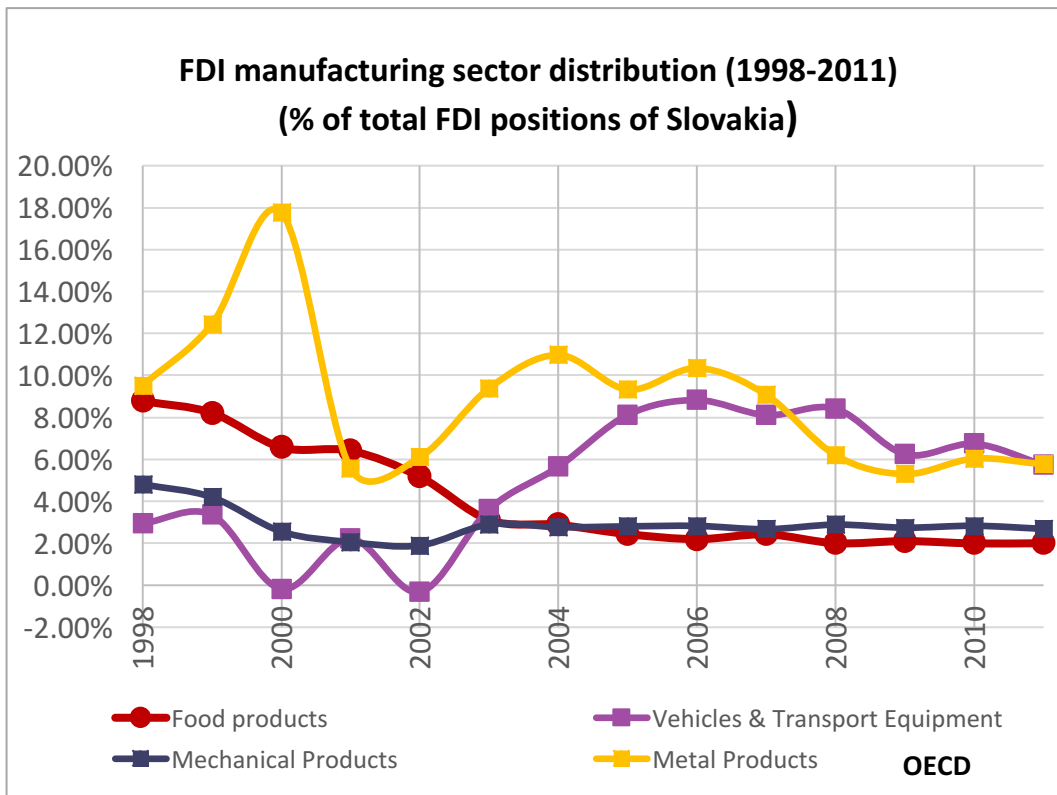
Performance Reviews, General Interpretative Findings (12)

- Exports & imports distribution sector of Slovakia



Performance Reviews, General Interpretative Findings (13)

- FDI manufacturing sector distribution of Slovakia

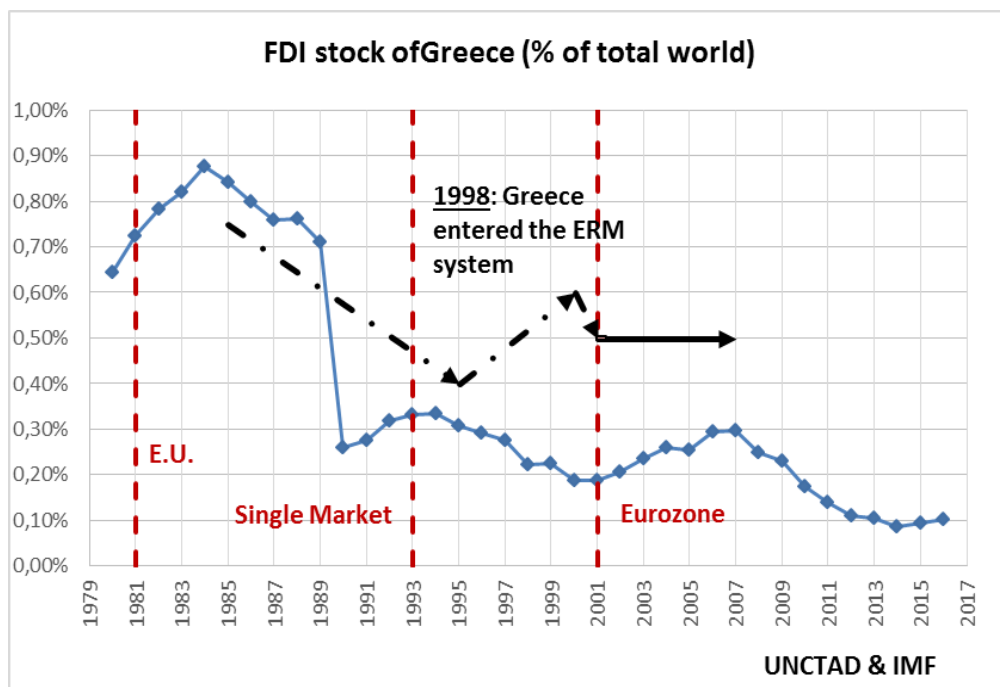


- Vehicles and transport equipment: **second category**
- Mechanical products: **second category** and **first category** as significant inflows for other industries
- Food industry: **unclear**
- Metal products: **second category** and **first category** as significant inflows for other industries

Slovakia's FDI, between the years 1998 and 2011, is mainly export-oriented (second category), while market-seeking FDI, apart from covering domestic needs, also consists important inflows for production for other industries.

Performance Reviews, General Interpretative Findings(14)

- FDI Stock, phasing out of tariffs and monetary protection of GREECE (incentives for market-seeking FDI)



Greece's FDI stock as a percentage of the world total has a **downfall trend** during the whole period 1984-2016.

The **phasing out of tariffs (1985)** (Single market, 1993) seems to deteriorate Greece's FDI attractiveness.

Greece's **exchange rate** seems to have no effect on FDI.

- **GDP** and FDI flows have different directions and they do not connect. The market size seems to have no influence in the level of FDI attracted.
- **Geographical position** does not play a significant role in attracting FDI of the first category since main investors and trade partners are the EU countries.

Performance Reviews, General Interpretative Findings(15)

- FDI Stock and unit labour cost of GREECE (export-oriented FDI)
- **Real unit labor cost** seems to have no effect on FDI.

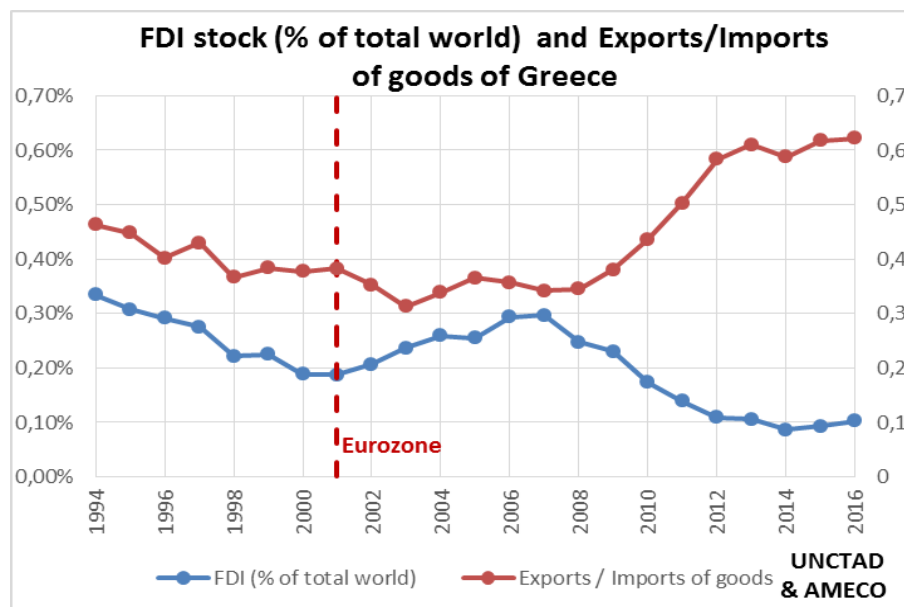


Positive relationship between FDI stock and unit labour cost, $\rho = 0.70$

Whatever FDI is attracted to Greece cannot be interpreted by its cost competitiveness

Performance Reviews, General Interpretative Findings(16)

- Exports/Imports and FDI, GREECE



1994-2008: Greece's trade balance has a general deteriorating trend between 1994 and 2008, while FDI deteriorates from 1994 to 2001 and has an upward trend from 2002 until 2007 → The external trade in Greece is **strongly negatively** related to FDI ($\rho = -0,74$)

2008-2016: FDI and trade balance follow different directions

→ FDI decreases as do imports, due to restrictive policy measures leading to a relative improvement of the trade balance

Further analysis: Relationship between **FDI – exports**, strong and negative ($\rho = -0,74$)

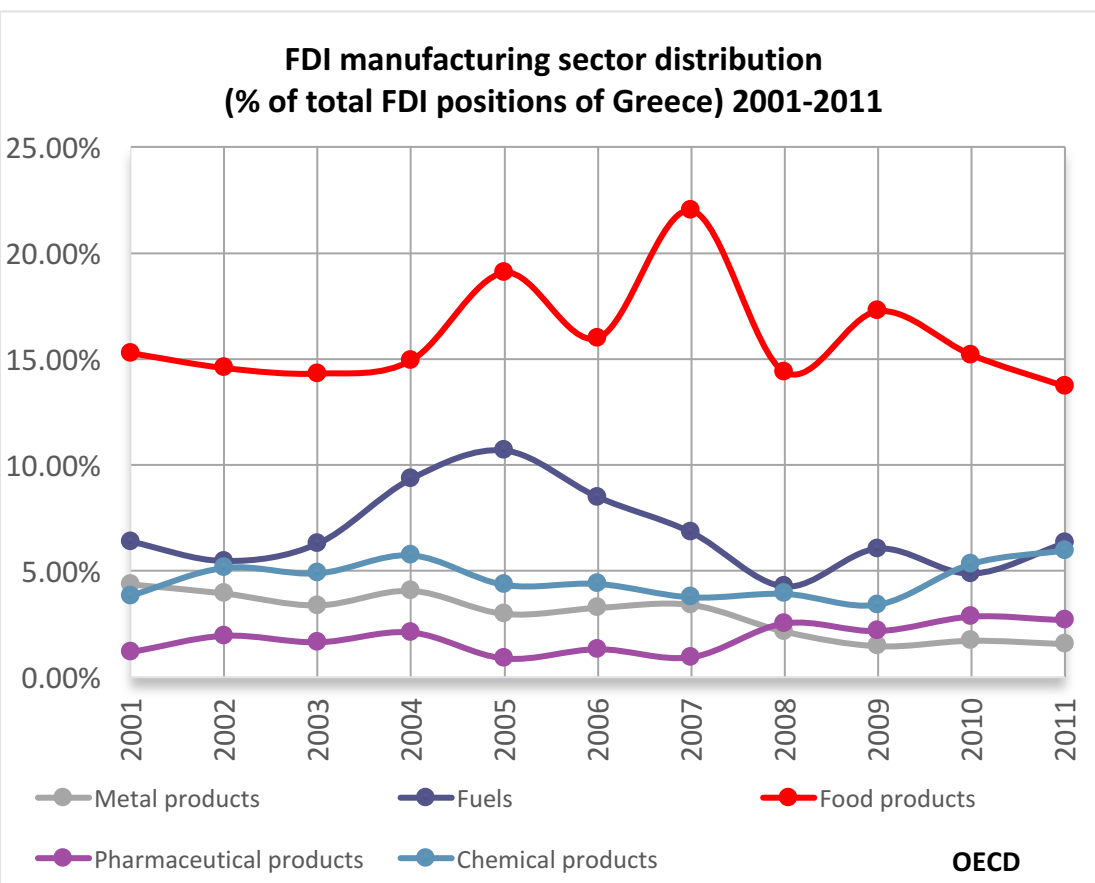
→ **FDI do not connect with exports**

Relationship between **FDI – imports**, negative ($\rho = -0,08$)

→ **FDI do not substitute imports**

Performance Reviews, General Interpretative Findings(17)

- FDI manufacturing sector distribution of GREECE



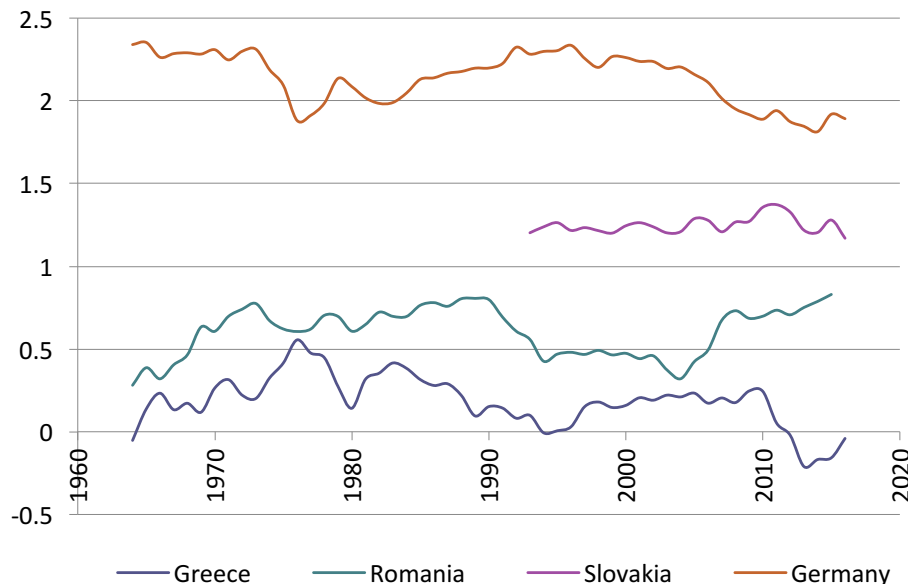
FDI in Greece's manufacturing sector remains at a low level during the period 2001 – 2011.

FDI in Greece is mostly attracted by non-tradable sectors or sectors that are not connected to external trade.

- Telecommunications
- Trade
- Financial intermediation
- Real estate

Economic Complexity Index (ECI) and FDI

Economic Complexity Index (1965-2016)



Source: The Observatory of Economic Complexity

- Germany is the second-most complex economy in the world (benchmark).
- For **Romania**, ECI has an upward trend especially in recent years.
- For **Slovakia**, ECI maintains a high level and remains stable for the period under review.
- For **Greece**, the level of ECI is too low, while after 2010 is negative due to the application of memorandum policies.

In cases of countries with high ECI, FDI mainly is directed to high technology sectors (exports and imports), which is confirmed for all countries.

Romania : Medium Level of ECI ➡ FDI mainly in Medium Technological sectors

Slovakia : High Level of ECI ➡ FDI mainly in Medium-High Technological sectors

Greece : Low ECI ➡ ECI is not an incentive for attracting FDI

Conclusions (1/3)

- **Size of the market (GDP) and FDI**
 - Romania → Positive relation with FDI
 - Slovakia → Positive relation with FDI
 - Greece → No relation with FDI
- **Phasing out of tariffs and FDI (until 2008)**
 - Romania → Does not deteriorate FDI attractiveness
 - Slovakia → Does not deteriorate FDI attractiveness
 - Greece → Deteriorates FDI attractiveness
- **Exchange rate depreciation (until EMU for Slovakia & Greece)**
 - Romania → Improves FDI attractiveness
 - Slovakia → Improves FDI attractiveness
 - Greece → Has no effect on FDI attractiveness

Conclusions (2/3)

- **Economic complexity and FDI**

→ Seems to explain the relative FDI attractiveness of the three examined countries

- **Real unit labor cost and FDI**

Romania → Low RULC attracts FDI

Slovakia → Low RULC attracts FDI

Greece → RULC is irrelevant with FDI

- **FDI and the host country's trade balance**

Romania → The trade balance deteriorates with FDI

Slovakia → The trade balance improves with FDI

Greece → The trade balance deteriorates independently of FDI

Conclusions (3/3)

- **The process of European integration (EU and EMU) does not seem to have the same effect on FDI and trade for all country members**

Thank you for your time!

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