Real convergence in the euro area or the lack thereof

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Outline

1. **Predictions of economic theory**
2. **Evidence of real convergence in the EURO12. A supply-side approach**
3. **Implications for the euro area:**
   - **What to expect? What drives convergence / generates divergence?**
   - **What can policy do?**
4. **The experience of Greece**
5. **Concluding remarks**

Growth theory: being poor can be an advantage

❑ **Convergence hypothesis:** Standard neoclassical growth model predicts that poorer countries will grow faster and converge to the income per capita of richer countries.

❑ Speed of convergence depends on initial income gap.

❑ As a result of convergence, income dispersion between countries will decline over time (σ-convergence).

❑ Convergence hypothesis relies on strong assumptions, such as:
  - ❑ All economies produce the same good
  - ❑ Free access to and use of identical technology
  - ❑ Common rate of technological progress
  - ❑ No role of human and intangible capital

In practice, full convergence is not always feasible

Given structural differences (that remain unchanged over time) and different initial levels of incomes per capita across countries, we can have several qualitatively different patterns of income distribution dynamics:

Convergence

- Distance between growth paths diminishes over time. Although income inequality does not vanish, it eventually stabilises at some constant level.
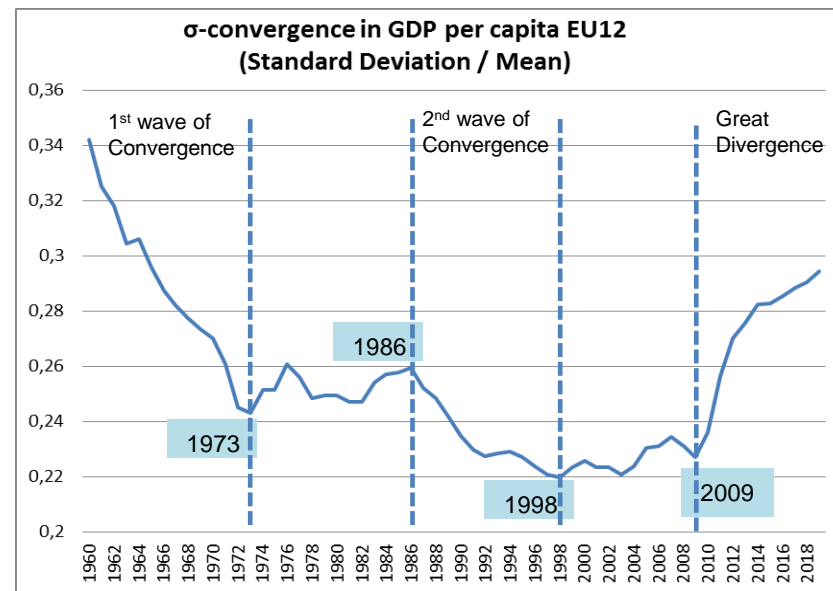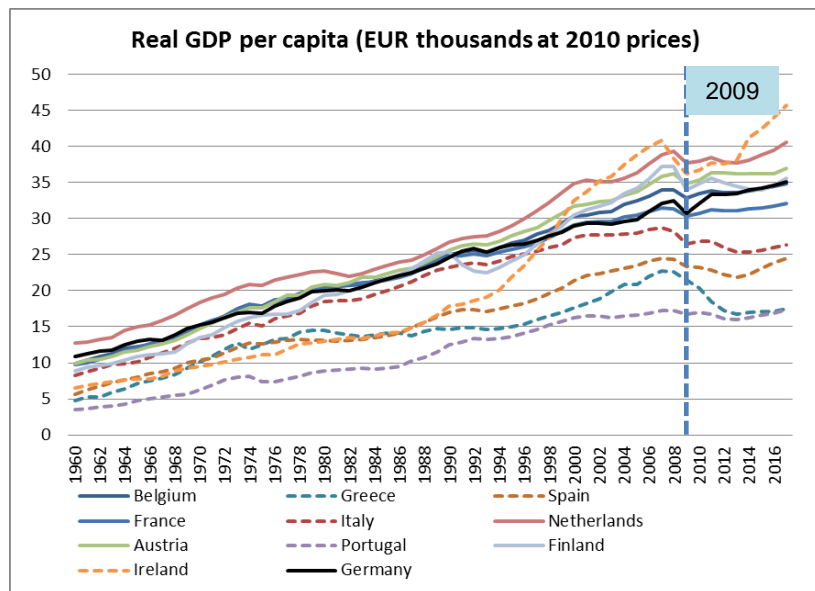
Club convergence

- Inequality within each club diminishes, but inequality between clubs may either decrease or increase. This depends primarily on whether TFP growth rates between the different clubs are equal or differ.

Divergence

- Distance between growth paths increases over time. This can occur if TFP growth rates differ in the long run, reflecting differences in endowments or structural characteristics of economies. "**Poverty trap**".

Convergence in the euro area seems to have reached a limit in 2000-2009. Divergence after sovereign debt crisis of 2010

Real GDP per capita (EUR thousands at 2010 prices)

2009

Belgium — Greece — Spain — France — Italy — Netherlands — Austria — Portugal — Finland — Ireland — Germany

σ-convergence in GDP per capita EU12 (Standard Deviation / Mean)

1st wave of Convergence

2nd wave of Convergence

Great Divergence

1986

1973

1998

2009

Source: Eurostat Ameco

- ❑ **There has been real convergence up until the end-1990s.**
- ❑ **EMU has failed in fostering real convergence.**
- ❑ **Divergence after sovereign debt crisis has increased income inequality among euro area members to levels of the mid-1960s! Very alarming development!**

Divergence in the euro area is not due to Greece. The problem is more fundamental
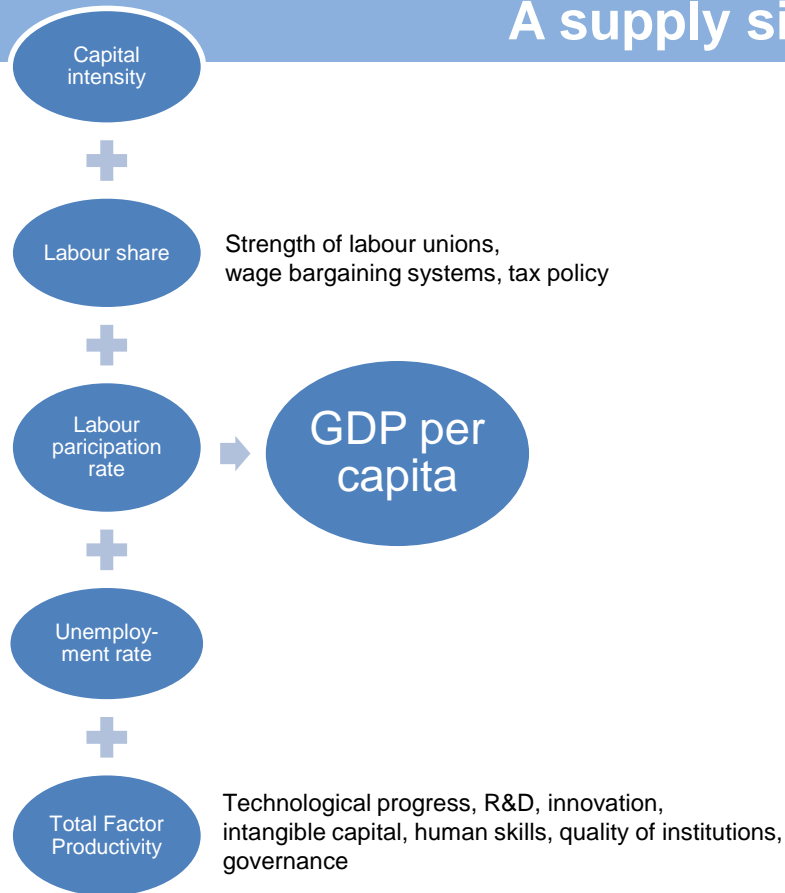

σ-convergence in GDP per capita EU12, EU11 ex Greece (Standard Deviation / Mean)
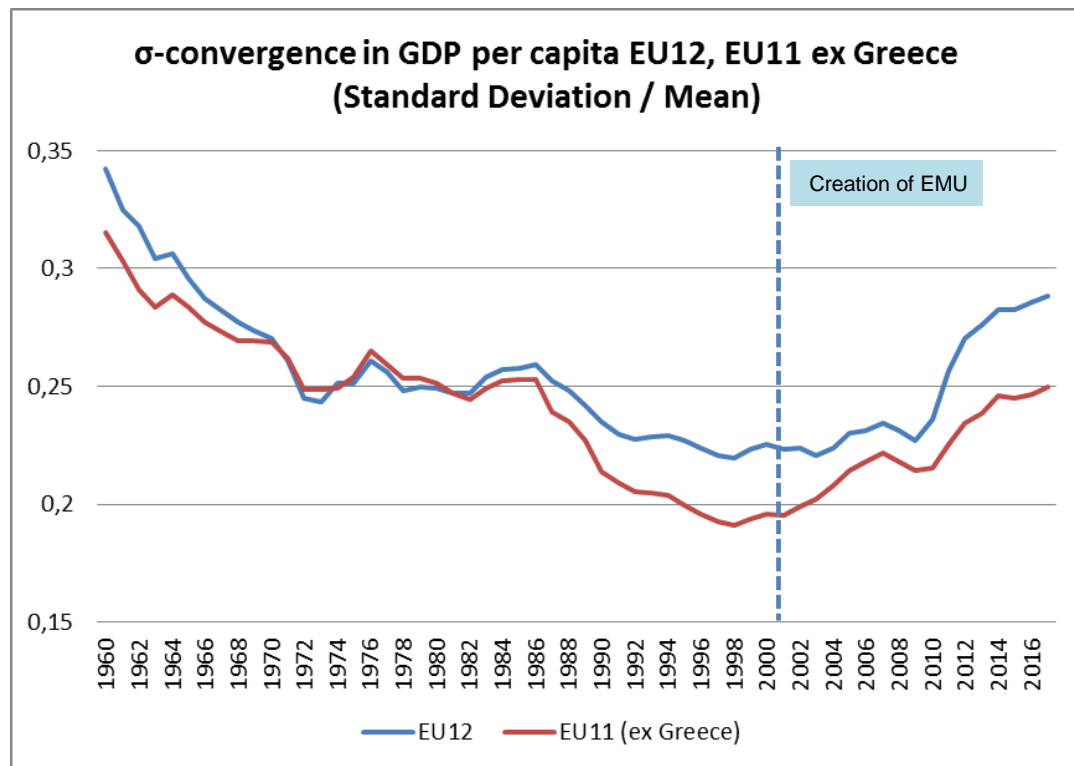
Counterfactual experiment: What would have been the degree of convergence among EU 11 if Greece had never joined the euro (and the EU) in the first place?

- ☐ Convergence would have been stronger during the 1980s-1990s.
- ☐ Divergence would have started ten years earlier (in 2000), just before the launch of the euro.
- ☐ We must look for more fundamental (supply-side) explanations of divergence.

Source: Eurostat Ameco

What drives convergence of GDP per capita between countries? A supply side approach

Capital intensity

+

Labour share — Strength of labour unions, wage bargaining systems, tax policy

+

Labour paricipation rate → GDP per capita

+

Unemployment rate

+

Total Factor Productivity — Technological progress, R&D, innovation, intangible capital, human skills, quality of institutions, governance

- ❑ **Convergence of GDP per capita between countries requires convergence in underlying supply-side components.**
- ❑ **There are five of them.**
- ❑ **Failure of convergence in at least one of these components implies failure of convergence of GDP per capita.**

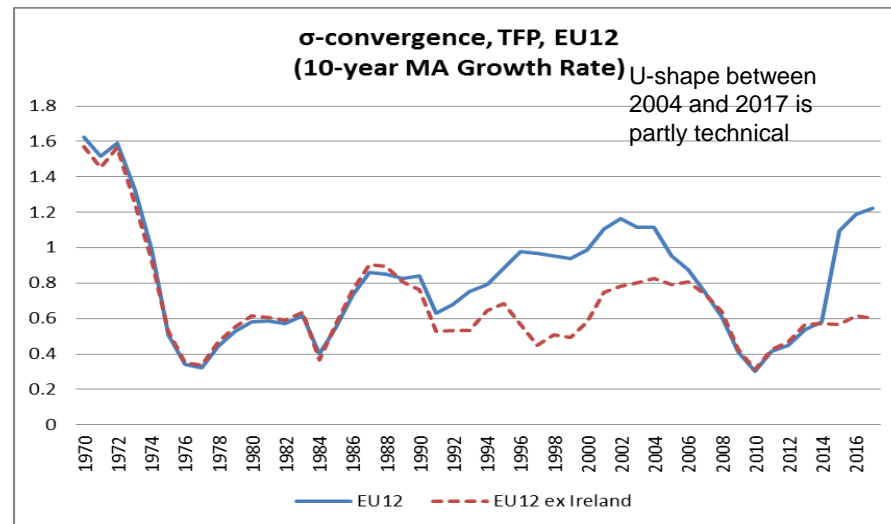## Successful convergence in capital intensity, labour participation ratio and (partly) unemployment rate

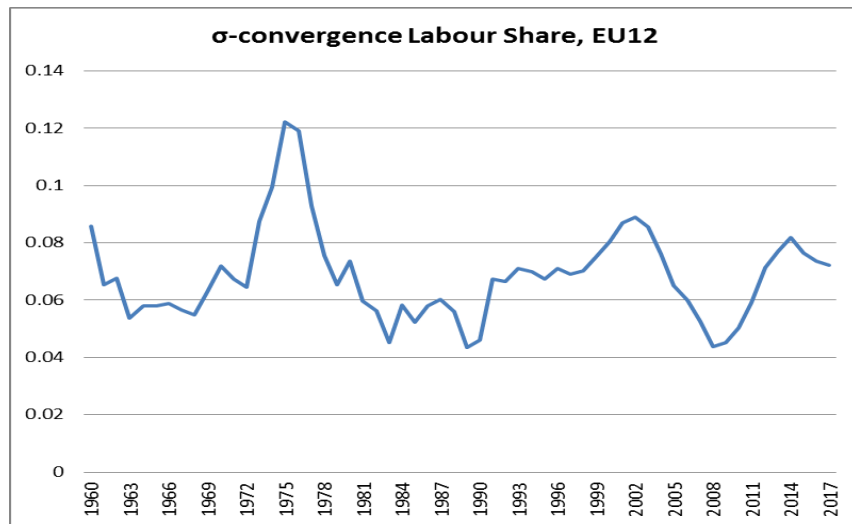❑ **Surprisingly, there has been strong convergence in capital intensity among EU12 countries.**
❑ **Weaker evidence of convergence in labour participation and unemployment rates (until 2007).**
❑ **Divergence in unemployment rates after GFC of 2008.**

Source: Eurostat Ameco
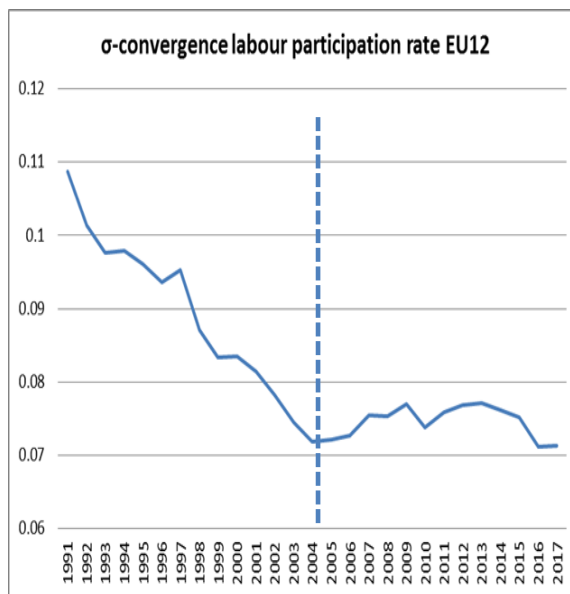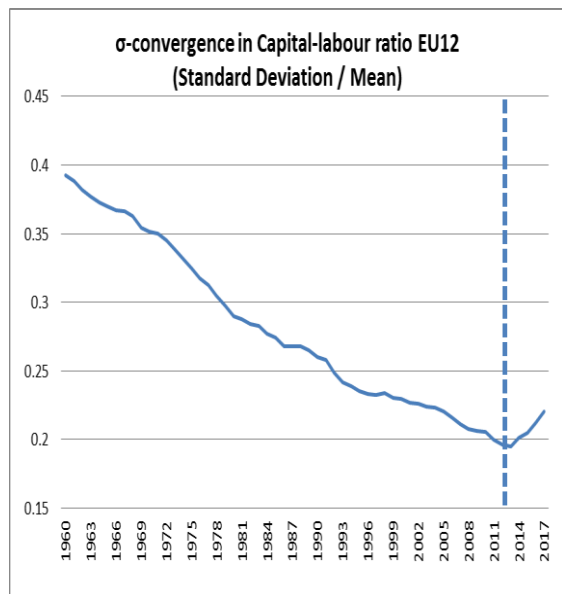
Lack of convergence in labour share and, most importantly, in TFP growth

- ❑ **We fail to find convergence in labour shares (not so worrying, since theory predicts that labour share is constant).**
- ❑ **More worrying, there is <u>divergence in TFP growth </u>after mid-1970s.**
- ❑ **Excluding Ireland, convergence in TFP growth just stops in the mid-1970s.**

σ-convergence Labour Share, EU12

σ-convergence, TFP, EU12
(10-year MA Growth Rate)

U-shape between 2004 and 2017 is partly technical

EU12   EU12 ex Ireland

Source: Eurostat Ameco

Implications for the euro area: What to expect

❑ **Nominal convergence does not necessarily imply sustainable real convergence if economies are structurally different.**

❑ **Distance from technological frontier plays an important role during the catch-up process.**

❑ **Following an initial catch-up period, the process of real convergence seems to be extremely slow** and must be measured in several decades.

❑ **Full convergence is not feasible, in or out of a currency union**. There is no full convergence in the US either, which is considered an OCA.

❑ **Differences in sectoral composition of economies may hinder full convergence if technologies (and, consequently, TFP growth rates) differ across sectors.**

Some policy implications I

❑   **Real divergence in the euro area is not (only) a Greek problem.**

   ❑   **It started ten years before the sovereign debt crisis, just before the launch of the euro.**

   ❑   **The sovereign debt crisis has only intensified the underlying diverging trend.**

   ❑   **But, divergence has currently reached alarming levels. There is urgent need to address the issue.**

❑   **The deeper problem is divergence in TFP growth among euro area countries.**

   ❑   **It can produce real income divergence in the long run. It must be addressed through structural policies.**

❑   **The type of investment matters for growth dynamics**. Investment in human and technological capital plays a crucial role for growth.

❑   **In order to reinforce real convergence, the euro area needs stronger institutional convergence.** Increasing institutional quality will boost TFP growth.
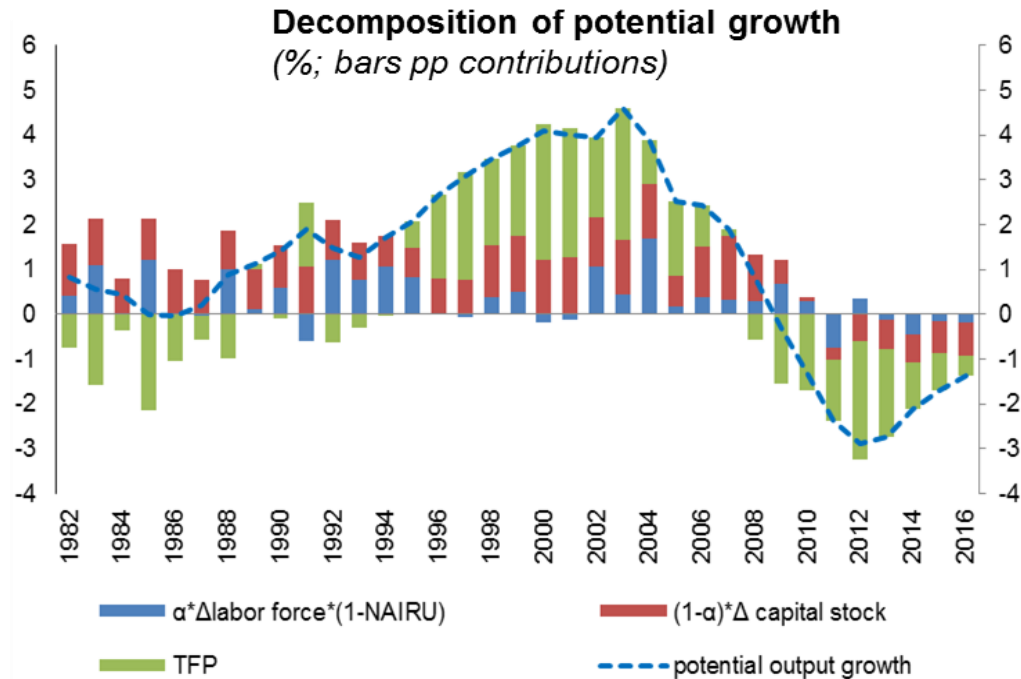
Some policy implications II

❑ **Symmetric adjustment to imbalances helps real convergence in a currency union**. The burden of correcting external imbalances was incurred primarily by "deficit countries" mainly via the income channel and "internal devaluation". This asymmetry in external rebalancing contributed to the great divergence after 2010.

❑ **External shocks can have a disruptive effect on real convergence process, if temporary effects become more persistent.** Proper crisis prevention and resolution tools, economic governance, banking union, capital market union and MIP are all important elements of the new institutional architecture of EMU that ensure that convergence process is not again persistently disrupted by macro-financial shocks.

The Greek experience: convergence process was not structurally anchored

❑ Since the adoption of the euro and until the crisis, **Greece has shown signs of income convergence, but this has proved unsolid and short-lived**. Real GDP per capita in Greece converged from 76% of the EU average in 2000 to 86% in 2008, but declined to 63% in 2017 (an all time low!).

❑ **Capital flows from core euro area countries to Greece led to a credit boom, fuelling domestic demand and inflation.**

❑ **Procyclical fiscal policy exacerbated the upturn of the business cycle**, re-enforcing inflationary pressures.

❑ **The sharp decline in real interest rates led to misallocation of resources** in low-productivity non-tradables sectors (construction, consumer services etc).

❑ At the same time, **structurally higher inflation** due to lack of competition in product markets **led to erosion of competitiveness**.

The Greek experience: a boom-bust cycle

Decomposition of potential growth
(%; bars pp contributions)

Legend:
- α*Δlabor force*(1-NAIRU)
- (1-α)*Δ capital stock
- TFP
- potential output growth

Sources: Eurostat Ameco and Bank of Greece

- ❑ **There was no sustained productivity convergence** following the launch of the euro; Greece started from a lower point in 1995, caught up in TFP growth to top-4 until 1999, temporarily overshooted until the crisis and collapsed thereafter.

- ❑ In other words, there was a cyclical convergence in GDP levels, but this was not structurally anchored.

- ❑ Nevertheless, following nine years of economic adjustment, Greece has gone a long way in rebalancing its economy towards a sustainable growth model.

Summary and concluding remarks

❑ **Real convergence in the euro area cannot continue without decisive policy action**
   - o Lack of structural convergence shows up in diverging (or not converging) paths of TFP growth
   - o Degree of divergence has reached alarming levels following sovereign debt crisis

❑ **There is urgent need of structural policies to reverse the diverging trend. Union needs**
   - o Institutional convergence
   - o Structural reforms to open up markets to competition
   - o Policies which support Innovation and investment in knowledge based capital

❑ **Greek experience** suggests that nominal convergence can lead to real divergence if growth is demand-driven and supply-side cannot adjust appropriately

❑ **Convergence in TFP growth** is the result of long-term structural adjustment. In the short- to medium-term, perhaps the most effective role that public policy can play in boosting TFP growth is to strengthen the conditions for reallocation to sectors that are *already* productive.

❑ **Banks can also play an active role** in the reallocation of capital to more productive uses by
   - o restructuring non-performing loans of viable firms
   - o helping sectors to consolidate / achieve economies of scale

Thank you for your attention