

Measures to enhance productivity growth: New developments

A (short) presentation

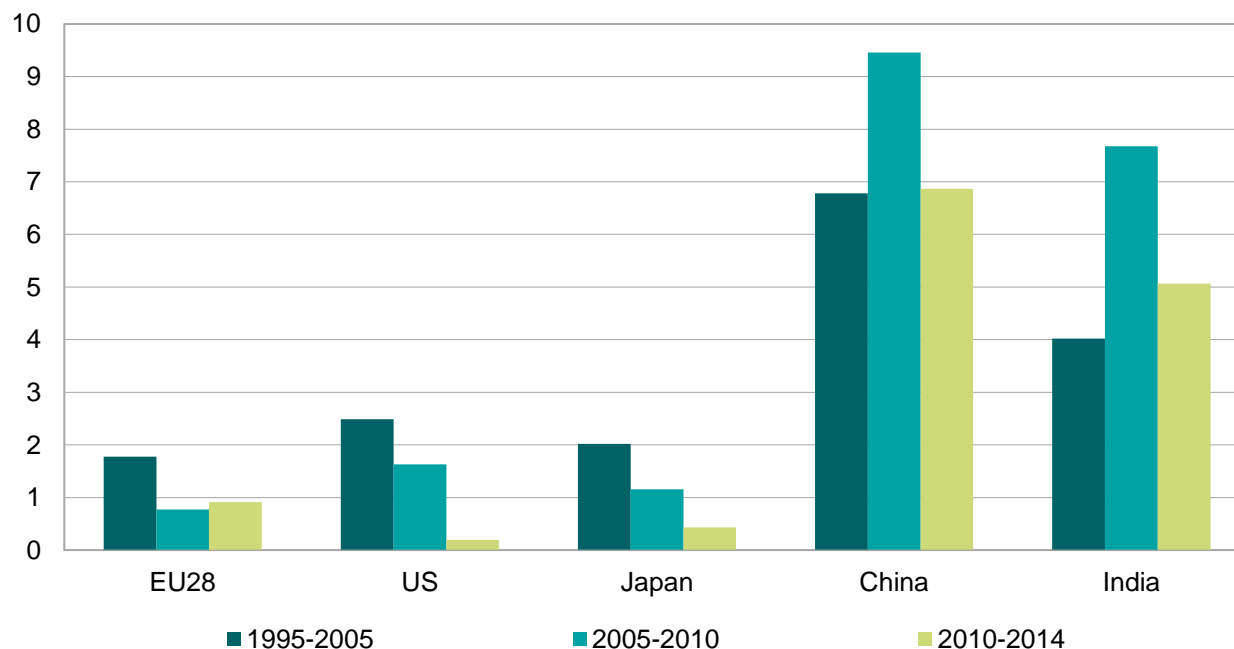
BBVA Foundation - Ivie International Workshops

Faculty of Economics
University of Valencia
October 30th, 2017

The productivity puzzle —or the productivity slowdown— is one of the current debates among economist but,

- What does it mean? **Deceleration since the beginning of the crisis and getting worse since 2010.**
- Two alternative measures: **productivity per hour, TFP**
- Is it a worldwide phenomenon? **US & Japan. EU-28 since 2005 but not as strong.**

Annual growth rate of productivity per hour worked by sub-periods.
EU28, US, Japan, China and India. 1995-2005, 2005-2010 and 2010-2014 (percentage)

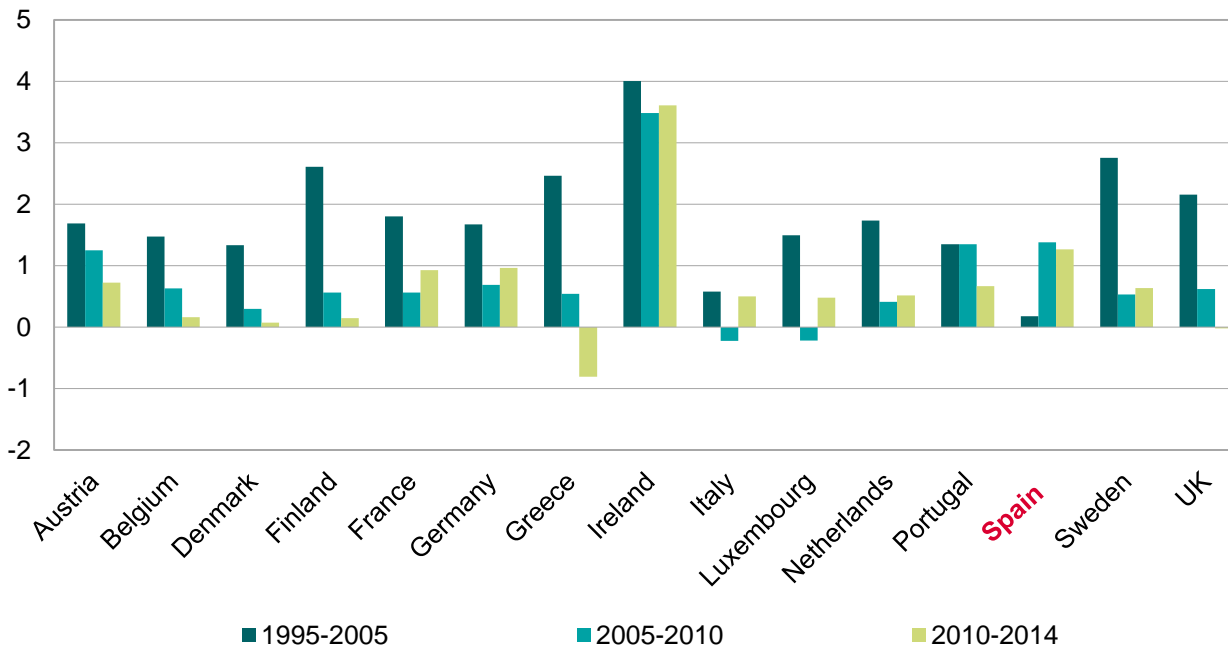


Source: 2017 PREDICT Dataset, elaborated by JRC Dir. B and Ivie.

What about EU-28? Do all countries follow the same pattern? EU-15

- For all countries, with the only exception of Spain, growth in 1995-2005 was higher than afterwards.
- Austria, Belgium, Denmark Finland, Greece, Portugal and UK shared the US pattern of growth

Annual growth rate of productivity per hour worked by sub-periods.
EU-15. 1995-2005, 2005-2010 and 2010-2014 (percentage)

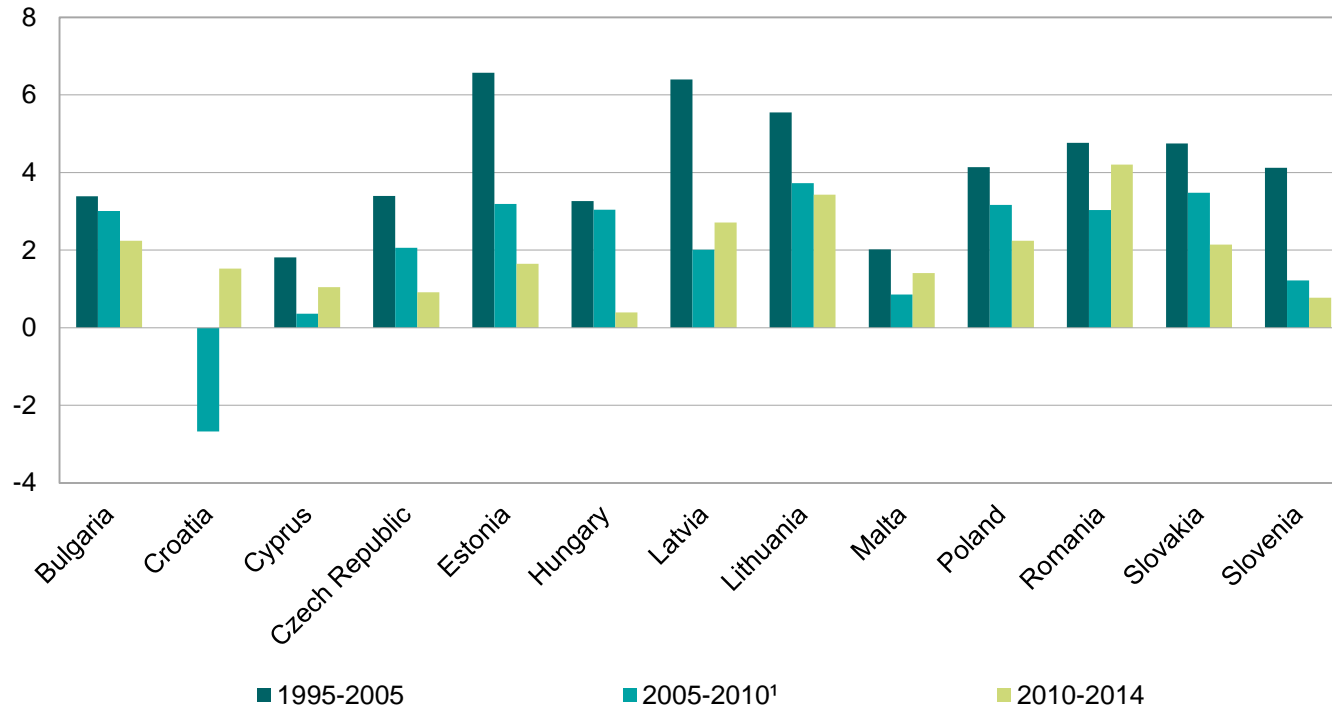


Source: 2017 PREDICT Dataset, elaborated by JRC Dir. B and Ivie.

What about EU-28? Do all countries follow the same pattern? **NMS**

- For all countries, **growth in 1995-2005 was higher than afterwards.**
- Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Poland, Slovakia & Slovenia **shared the US pattern of growth.**

Annual growth rate of productivity per hour worked by sub-periods.
NMS. 1995-2005, 2005-2010 and 2010-2014 (percentage)



¹ 2008-2010 for Croatia.

Source: 2017 PREDICT Dataset, elaborated by JRC Dir. B and Ivie.

Reasons behind the Productivity Slowdown.

Three potential explanations

- **Measurement problems.** Main argument: our measurement toolkit is not prepared for the digital revolution. D. Byrne & D. Sichel (August 2017, VOX) the problem is in the **ICT assets price measurement**. When properly measured the technological sector continues to improve at a good rate. Thus, why is productivity growth so slow? **Long diffusion lags (as in previous Revolutions)**
- **Secular stagnation** (L. Summers): Originated by weak demand plus sluggish potential output growth combined with sociodemographic constraints. R. Hall: A **unique theory** cannot explain the behavior of the countries that it analyses (France, Germany, Italy, UK, Spain and US)
- **Supply shocks:** Those affecting potential output operating through the production side: **Capital, Labor and Technical Progress (TFP)**. Bloom, Jones, Van Reenen and Webb: Are Ideas Harder to Find?

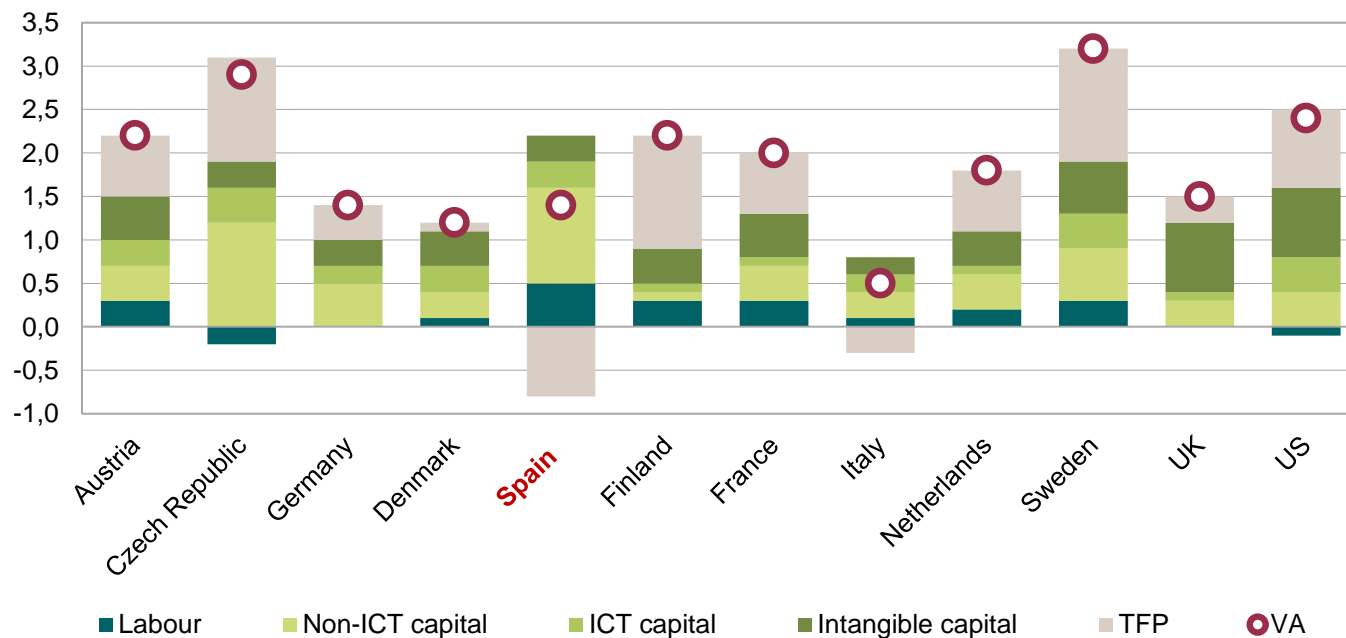
Total Factor Productivity (TFP)

Labor productivity (per worker or per hour worked) **is not a good indicator of the efficiency with which resources are used because it does not consider the use of other production factors.** For example, a man working with a hoe in a field obtains less products –i.e. he is less productive– than if he works with a tractor (the more **physical capital**, the more production). Furthermore, the more qualified he is (the more **human capital** he has), the more productive he is. And, with the same physical capital and human capital, he will be more productive if he works in a company that is more innovative, organizes efficiently its production, more internationalized, etc. (that has more **intangible capital**).

Growth Accounting: Decomposition of the sources of VA growth

- Labor (and its composition)
- Capital distinguishing between: **ICT, Non-ICT & Intangible**
- Technological Progress (TFP)

Growth accounting. International comparison. Non-farm business sector. 1999-2013 (percentage)



Source: Corrado, Haskel, Jona-Lasinio and Iommi (2016).

Objective of the Workshop: To shed some light on the factors that determine the productivity slowdown, and the levers to boost it

Issues to be Addressed

- The role played by the **factors of production** and the problems posed by its **measurement**. **Intangible** and **human capital**.
- Relevance of the **allocation of resources** across firms and industries.
- The implication of cross-border fragmentation of the production process, the so called *global value-chains*.
- **Measurement problems** posed by the emergence of the new economy
 - R&D and innovation
 - Digital transformation and the use of big data
 - With a reference to a specific intangible such as brands

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