



HRVATSKA NARODNA BANKA

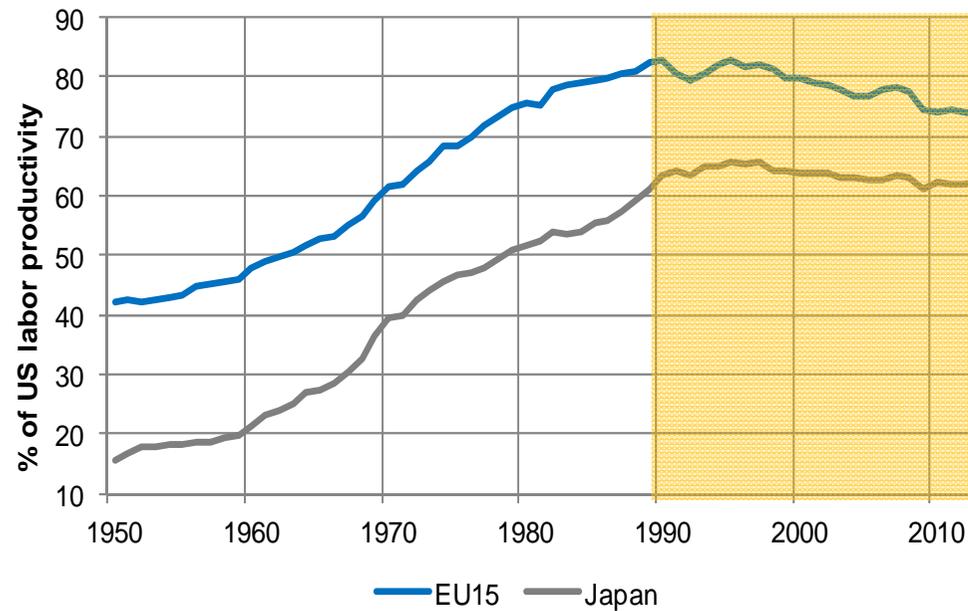
European Competitiveness in an Open World

**EIB Economics Conference,
Berlin, 2-3 March, 2015**

Boris Vujčić, Governor
boris.vujcic@hnb.hr

Europe's convergence to the US has stopped a quarter of century ago

Labour productivity, EU15 and Japan relative to the US

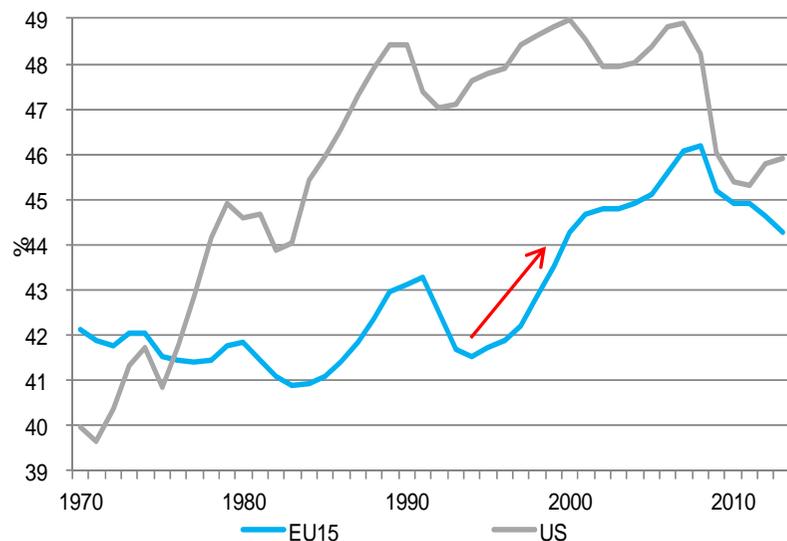


Note: GDP per hours worked in Geary/Khamis \$, United States = 100

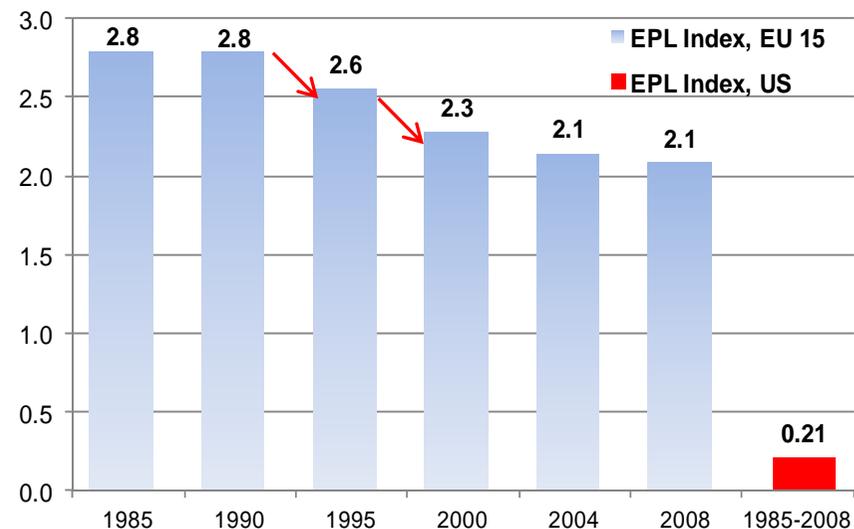
Source: Total Economy Database, Conference Board (2014)

Sometimes partly attributed to increase in employment/more flexible labor market institutions...

EU employment as a share of total population increasing in '90...



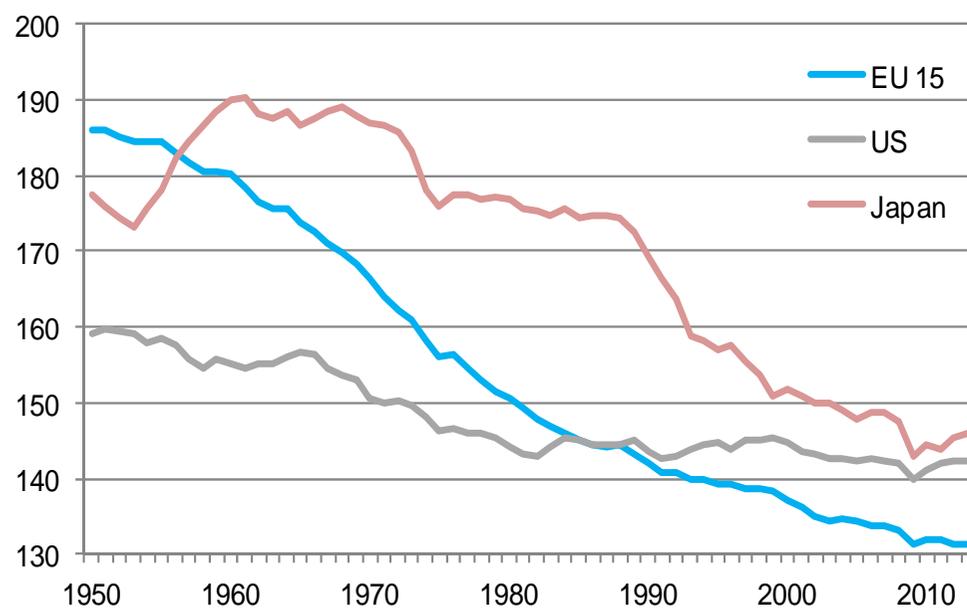
...Backed by institutional reforms



Source: Total Economy Database, Conference Board (2014), OECD

...and shorter working hours in the EU...

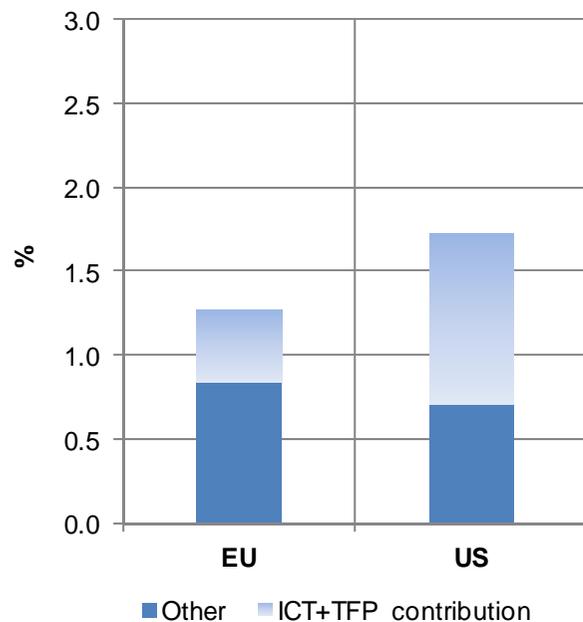
Average monthly hours worked



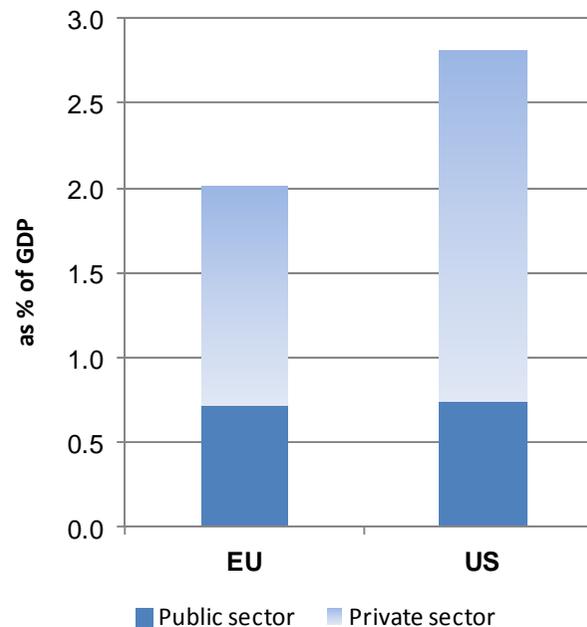
Note: Average monthly hours worked for EU 15 are weighted by GDP in Geary/Khamis \$, United States = 100
Source: Total Economy Database, Conference Board (2014)

ICT revolution explains much of the difference ...

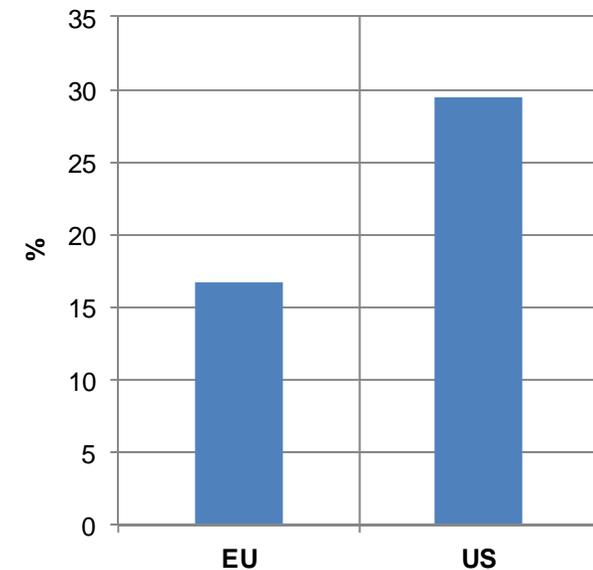
ICT and productivity growth, 2000-2013



Expenditure on R&D, 2011



Investment in ICT, % of total investment, average 2000-2010

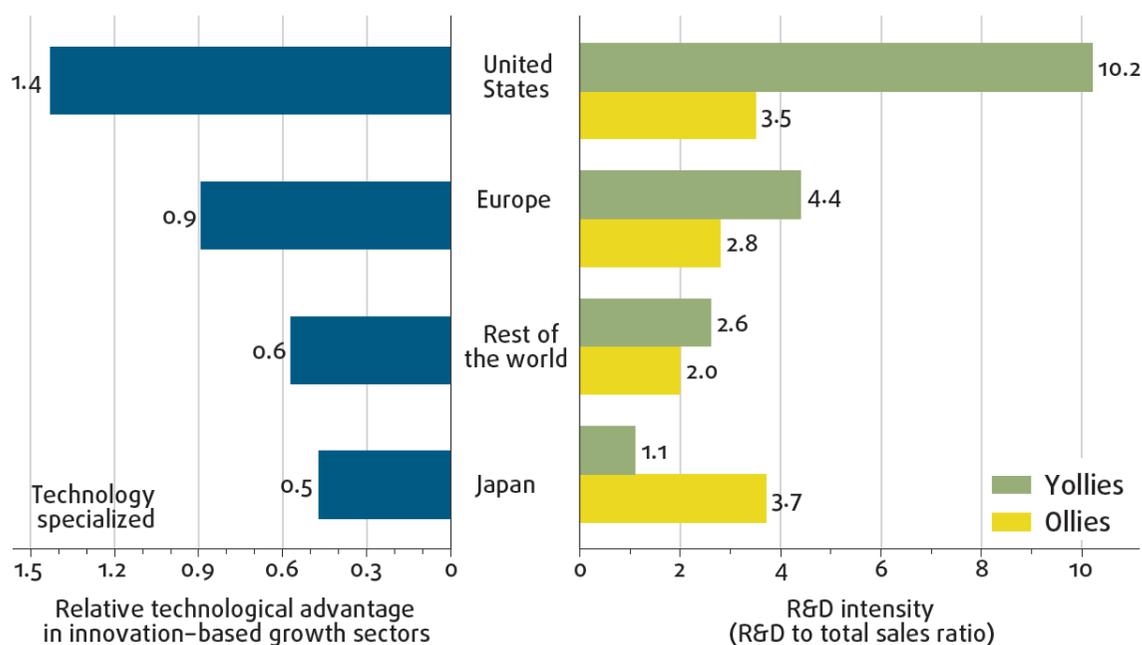


Note: ICT investment EU aggregate is an average of Austria, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Spain, Sweden and United Kingdom

Sources: European Commission, OECD, van Ark

US firms specialize in technologically advanced and R&D-intensive products, younger firms lead ...

Europe specializes in old sectors, the US in new

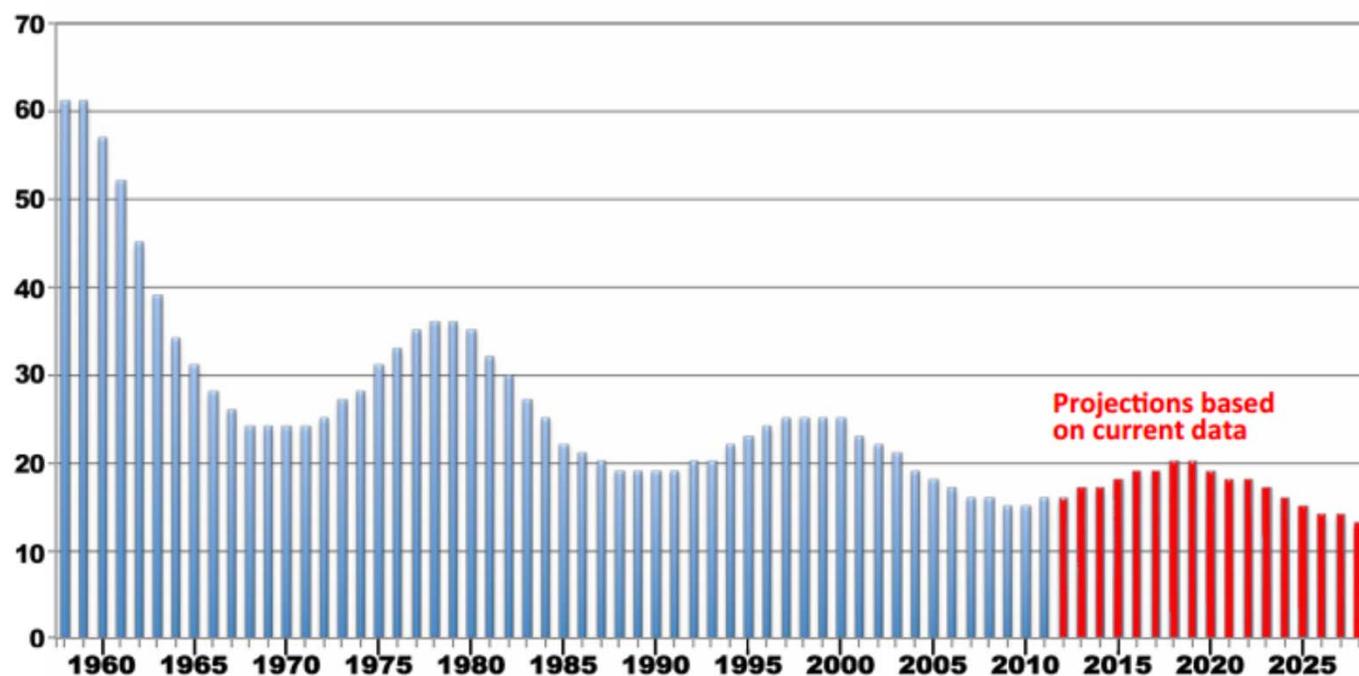


Note: R&D intensity is measured as the ratio of R&D spending to total sales, for firms established after 1975 (young leading innovators or “Yollies”) or before 1975 (“Ollies”). The relative technological advantage is calculated as the share of each region or country (say Europe) in the R&D of a particular sector (say the Internet) relative to the share of Europe in world R&D; values greater than 1 indicate the region is technology specialized in the sector.

Source: Bruegel and World Bank staff calculations, based on the European Commission’s Institute for Prospective Technological Studies R&D Scoreboard

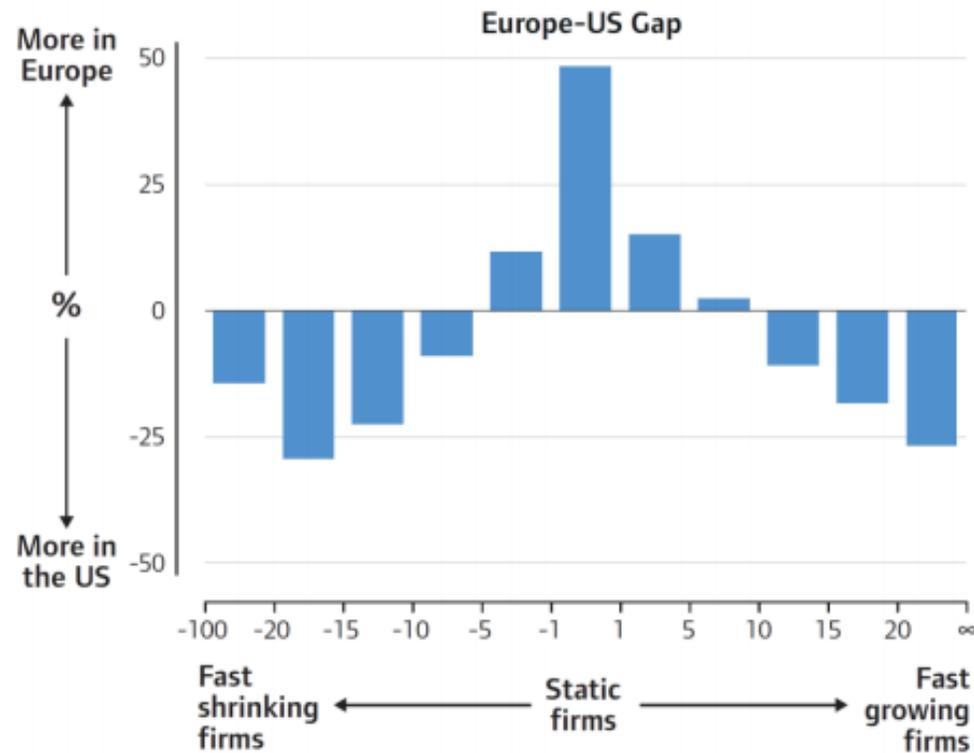
US is also experiencing intense creative destruction ...

Average company lifespan on S&P Index (in years)



Source: INNOSIGHT, Executive Briefing 2012

Europe is lagging in business dynamism ...

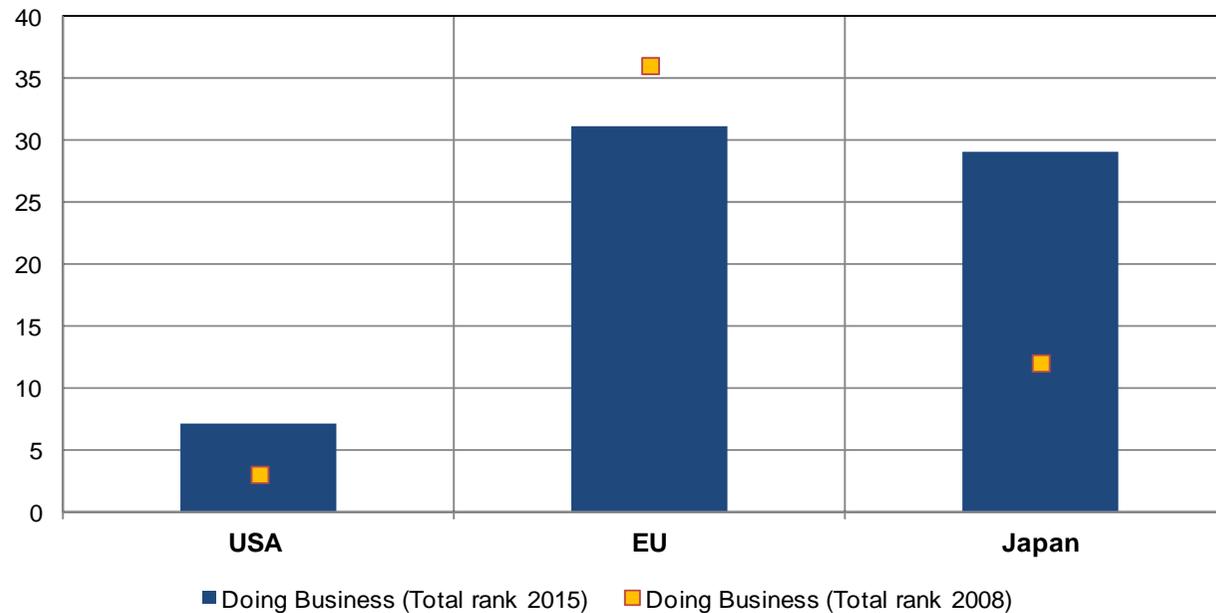


Source: Biosca, A. B., A look at business growth and contraction in Europe, 2011, 3rd European Conference on Corporate R&D and Innovation

Why were firms like Facebook, Google and E-bay created in the US and not in EU?

Creative destruction and growth of new businesses constrained by institutional framework ...

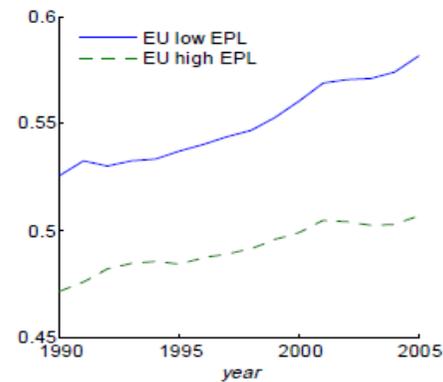
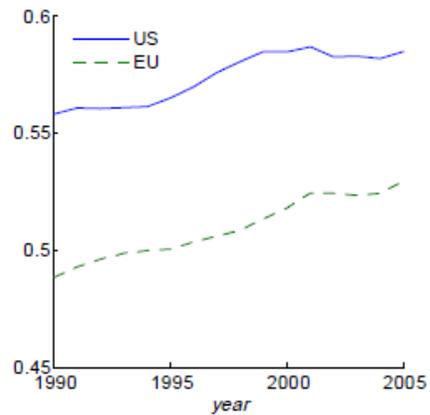
Europe must make it easier to do business



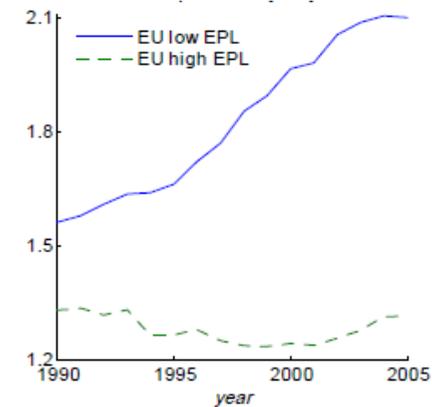
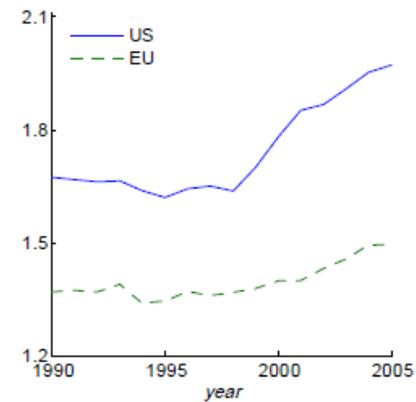
Source: Doing Business

Labour market institutions not conducive to adopt risky ICT investment decisions ...

Employment share in ICT intensive sectors



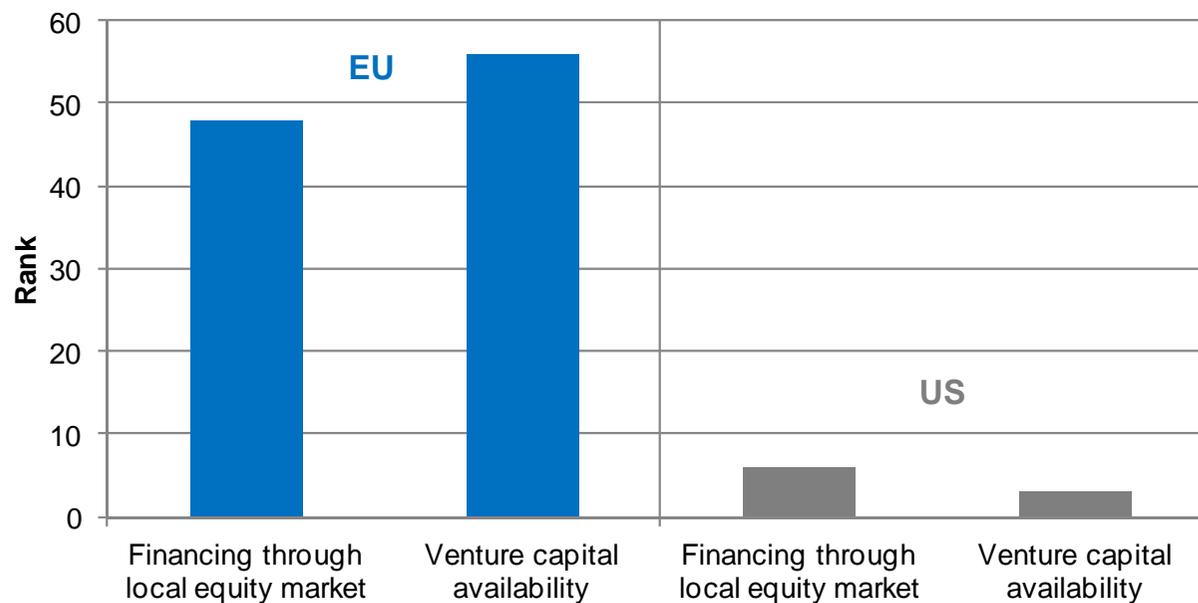
Labour productivity growth in ICT intensive sectors



Source: Bartelsman, Eric J, Pieter A Gautier, and Joris de Wind (2010), "Employment Protection, Technology Choice, and Worker Allocation", IZA DP No. 4895

..nor are the financial markets
- a key to the growth of young companies ...

Access to finance rankings

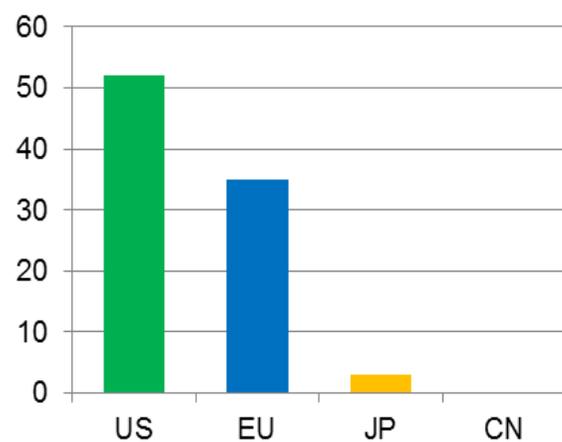


Note: EU is a GDP weighted average of EU28 country rankings

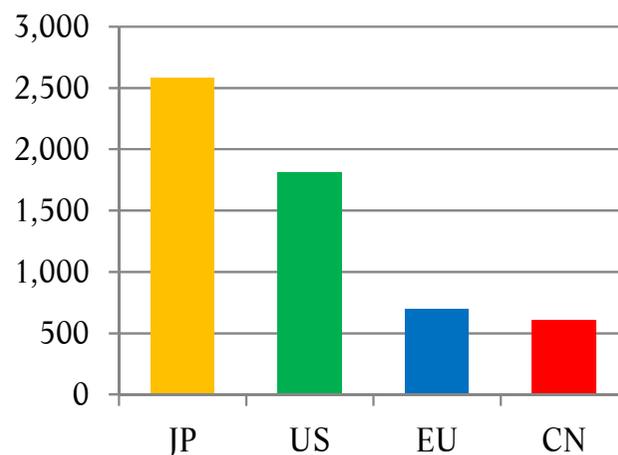
Source: Global Competitiveness Report 2014-2015

...more effort in education and knowledge transfer is needed

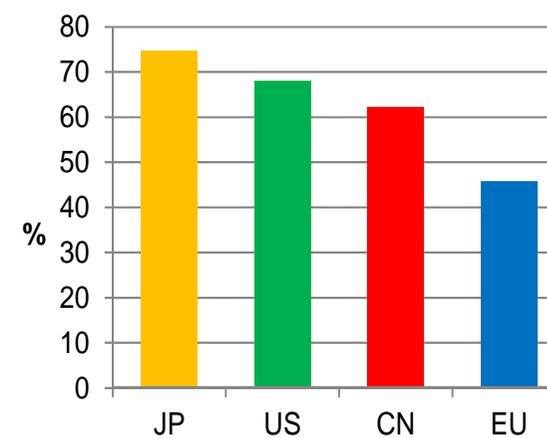
**Number of universities in Top
100 (Shanghai Index, 2014)**



**Total patent applications per
million people (2013)**



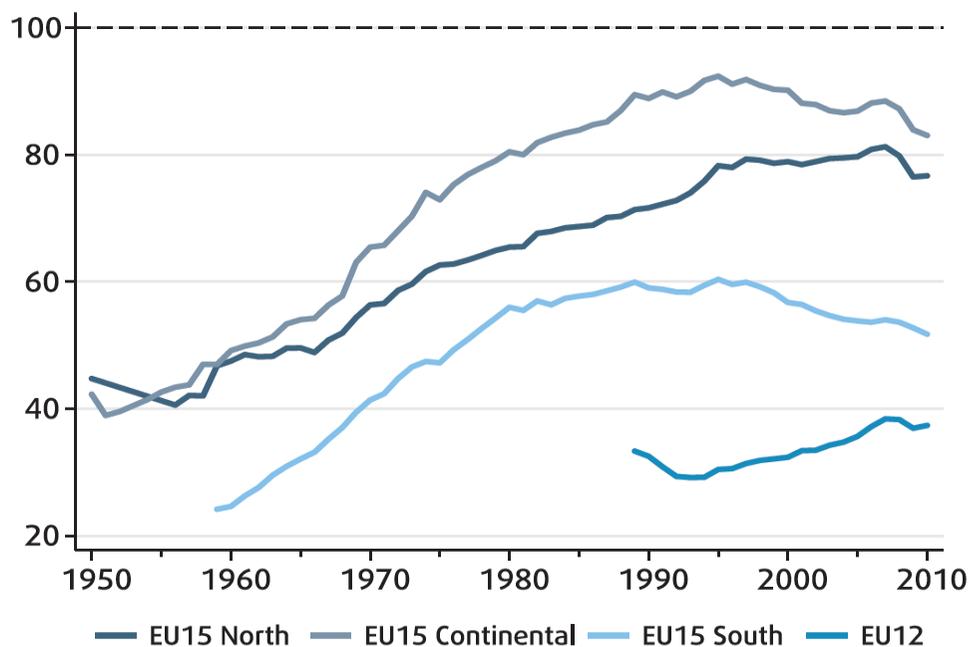
**Share of researchers in
business sector (% of total
researchers, 2011)**



Sources: Shanghai/ARWU index, OECD, European Commission

Problem is also within the EU: Convergence between North and South has been absent for more than 20 years

(GDP per hours worked in Geary/Khamis \$, United States = 100)



Note: EU15 North = Denmark, Finland, Sweden, and the United Kingdom; EU15 Continental = Austria, Belgium, France, Germany, and the Netherlands; EU15 South = Greece, Italy, Portugal, and Spain.

Source: World Bank staff calculations, based on Conference Board (2011); see **Chapter 5**.

Thank you!