"Science, Research and Innovation Performance of the EU 2018"

Investment in R&I and other intangible assets

ERAC Workshop
Brussels, 4 October 2017
1. R&D INVESTMENT
Key messages

- EU is major player in world R&D
- EU has highest world share of public R&D
- R&D intensity in China exceeds that in the EU
- EU's R&D target of 3% will not be achieved
- Public R&D grew while business R&D did not
- R&D tax incentives increased significantly
The EU is a major player in global R&D, accounting for one fifth of world R&D expenditure in 2015.
The EU has the highest world share of public R&D expenditure but has a lower share of business R&D expenditure than the United States and China.
EU R&D intensity was overtaken by that of China in 2015 following low growth from 2012 to 2015
The EU will probably not achieve its 2020 R&D intensity target of 3% although a number of Member States are on course to reach their individual targets.
Public R&D intensities experienced significant growth in several Member States during the economic crisis.
The effect of the economic crisis can be seen in the low business R&D intensity growth experienced by many Member States. In some lagging countries, it grew, some times significantly.
Tax incentives for R&D now equal 0.1% of GDP in the EU

The percentage of GDP allocated for tax incentives for R&D varies across countries, with some regions showing a significant increase from 2006 to 2014. The graph illustrates the percentage of GDP allocated for tax incentives in countries such as South Korea, Japan, the EU, the United States, China, Ireland, France, Belgium, Hungary, the United Kingdom, Austria, Slovenia, Portugal, Denmark, Greece, Czech Republic, Spain, Lithuania, Finland, Romania, Latvia, Italy, Slovakia, Iceland, Norway, and Turkey.
2. ECONOMIC COMPETENCES AND ICT INVESTMENT
Key messages

- The EU still underinvests in Economic competences and ICT when compared to other major economies, though there are some positive trends and differences across Member States.

- This underinvestment seems to lead to relatively lower productivity and innovativeness in the ICT sector in Europe.

- The regulatory environment will need to be flexible enough to accommodate the potential of digitalisation while ensuring at the same time that competition in the market, consumer protection and data security are in place.
Public investment in economic competences in the EU has not substantially increased in contrast to the developments in the United States...
... and private investment in economic competences is also lower in the EU, though with a general increase in EU Member States.
The EU still invests less in ICT than other third countries such as Japan and the United States...
…which is reflected in a lower role of the ICT sector in the European economy than in other international players…
...with lower R&D-intensive levels in the EU, with significant intra-EU differences...
... as well as lower innovativeness in digital technologies.
Overall EU Member States are making progress in improving their digital performance, but an intra-EU digital gap persists.
3. SKILLS AND HUMAN RESOURCES
Key messages

- Development towards knowledge-based economy: investment in skills and their lifelong upgrading vital

- EU still underinvests in tertiary education, compared to competitors, whose level of private spending is higher

- Tertiary attainment is still increasing in the EU, with a growing share of graduates in science and technology

- Demographic trends likely to result in fewer graduates in the EU in the future, while countries like China progress quickly in expanding skilled human capital

- The EU still underperforms as regards researchers in the business sector, partly for structural reasons
The EU still under-invests in tertiary education, especially private spending is low…

Total educational expenditure on tertiary education\(^{(1)}\) from public and private sources as % of GDP, 2014\(^{(2)}\)

- **United States**
- **South Korea**
- **Japan**
- **EU(28)**
- **United Kingdom**
- **Netherlands**
- **Sweden**
- **Austria**
- **Denmark**
- **Lithuania**
- **Estonia**
- **France**
- **Cypria**
- **Belgium**
- **Latvia**
- **Poland**
- **Portugal**
- **Croatia**
- **Spain**
- **Italy**
- **India**
- **Hungary**
- **Romania**
- **Estonia**
- **Bulgaria**
- **Slovenia**
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- **Latvia**
- **Poland**
- **Portugal**
- **Croatia**
- **Spain**
- **Italy**
- **India**
- **Hungary**
- **Romania**
- **Estonia**
- **Bulgaria**
- **Slovenia**

\(^{(1)}\) International Comparison of Educational Expenditures

\(^{(2)}\) Source: Eurostat
... although tertiary attainment is increasing and 40% target almost reached, attainment still higher in the US and Japan.
At the same time, the EU is more successful in increasing the share of S&T graduates...
...but the number of tertiary graduates is now stagnating in the EU, while quickly progressing in China...
..and a decline in the number of tertiary students in many EU countries implies a risk of fewer tertiary graduates in the future.
The EU still has a relatively low share of researchers in the business sector, partly a result of medium-tech orientation of economy.
Thank you very much for your attention!