



2022 PREDICT Dataset

The EU ICT sector and its R&D Performance

JRC Digital Economy

July 2022

PREDICT 2022. Main results

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- [ICT sector Employment](#)
- [ICT sector Labour productivity](#)
- [ICT sector Business expenditure on R&D \(BERD\)](#)
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ICT sector Value added

ICT sector Value added (VA)



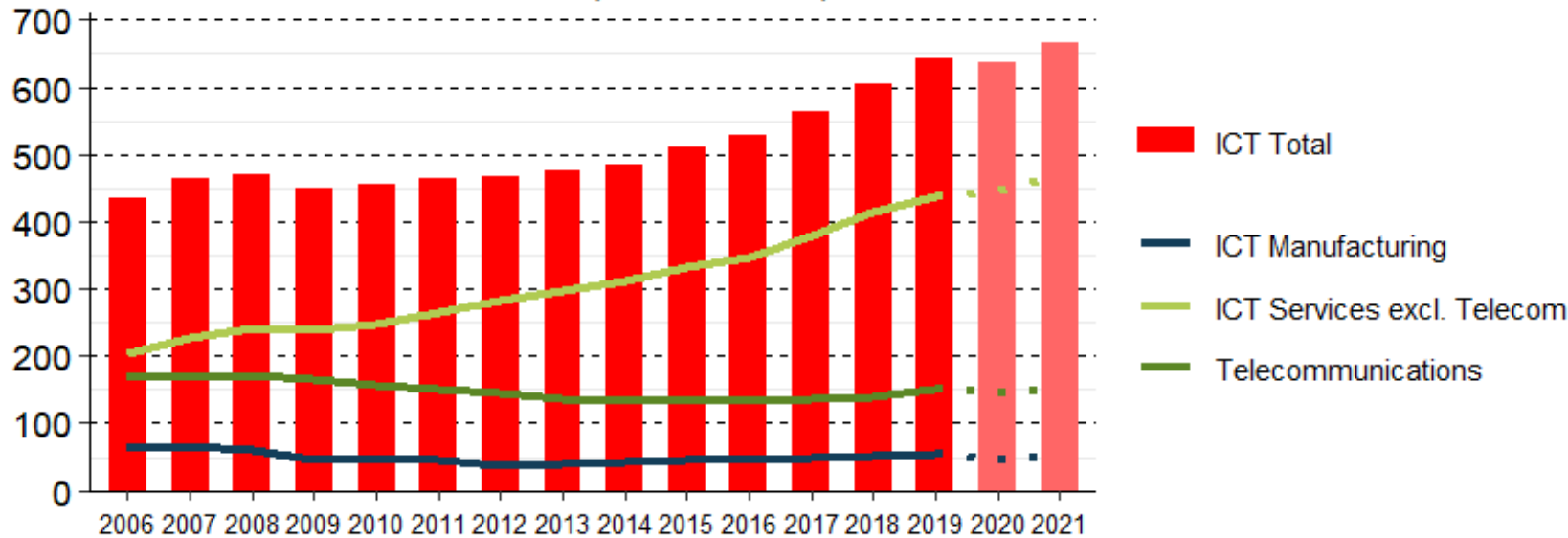
Increase in ICT sector VA

- 2019: €642 bn
- 2021 (estimated): €666 bn

ICT sub-sectors share (%)

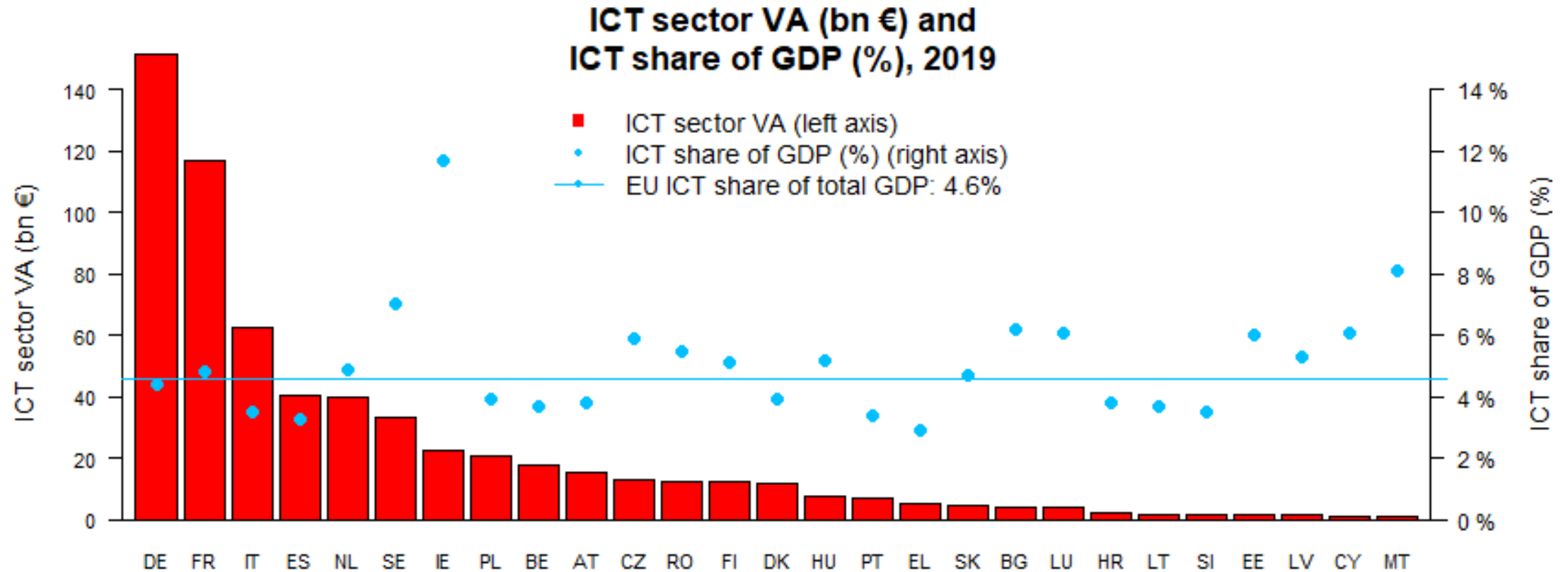
- ↓ Manufacturing: decreasing to 29% (2019) and 21% (2021)
- ↑ Services: increasing to 71% (2019) and 79% (2021)
- ↔ Telecomms: stable at 8%

ICT sector Value Added, EUR billion, 2006-2021



Note: Values for the years 2020 and 2021 are nowcasted data.

ICT sector Value added in EU27 MS



Note: Data for Ireland refers to 2014.

ICT sector Employment

ICT sector Employment

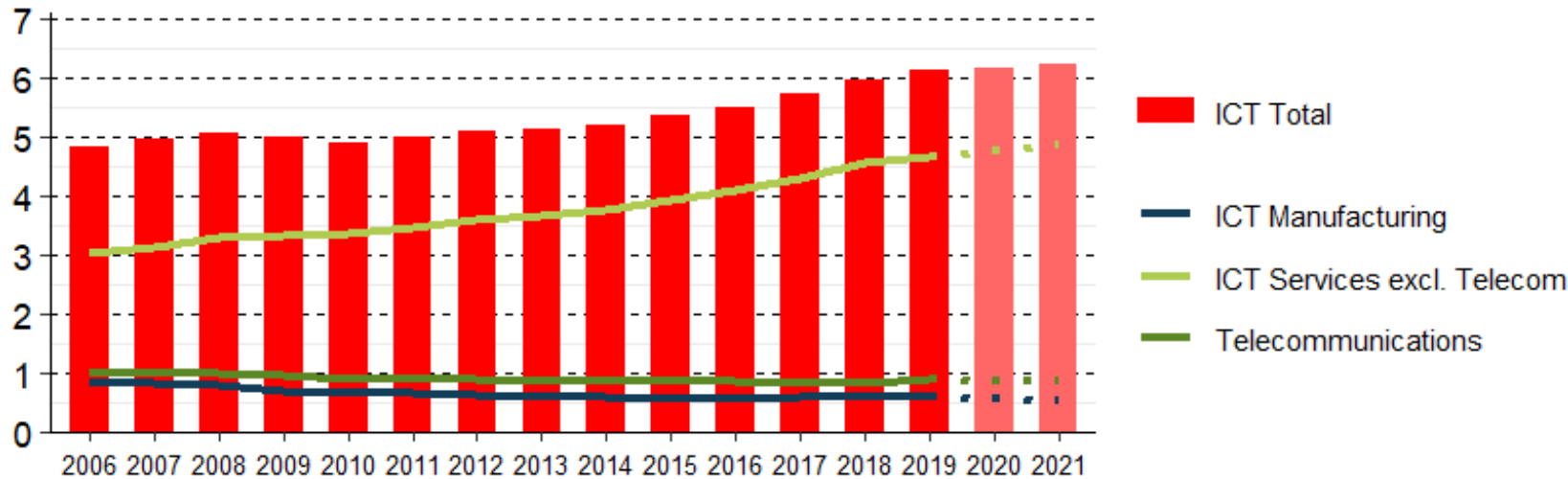
ICT sector

- ↑ 2019: 6.1 million
- ↔ 2021 (estimated): 6.2 million

ICT sub-sectors (%)

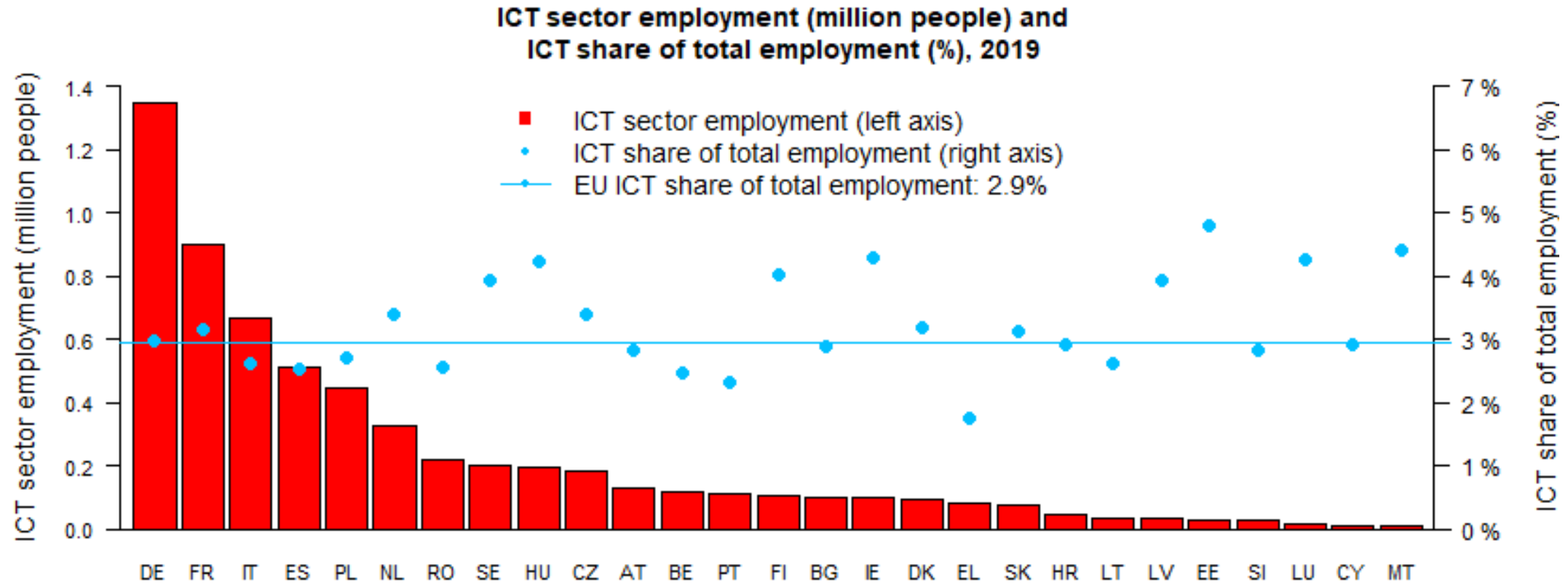
- ↓ Manufacturing: decreasing to 10% (2019) and 8% (2021)
- ↑ Services: increasing to 90% (2019) and 92% (2021)
- ↔ Telecomms: stable at 14%

Employment in the ICT sector,
million people, 2006-2021



Note: Values for the years 2020 and 2021 are nowcasted data.

ICT sector Employment in EU27 MS



ICT sector Labour productivity

ICT sector Productivity per person employed

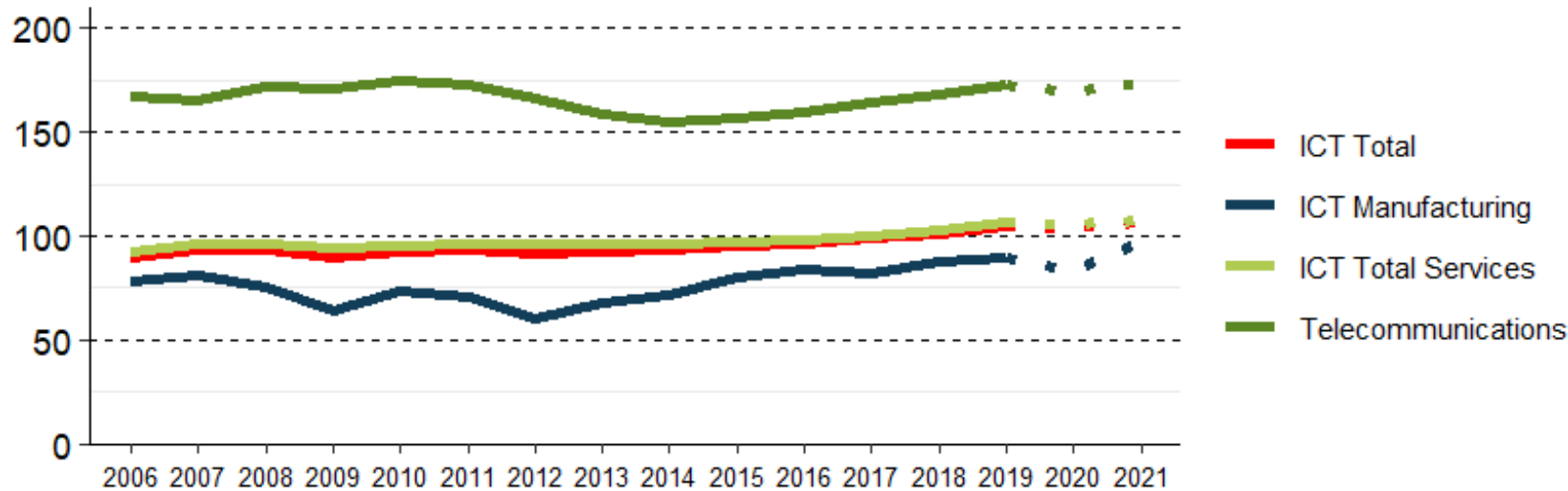
ICT sector

- 2019: €105 thousand/person
- 2021 (estimated): €107 th/person

ICT sub-sectors

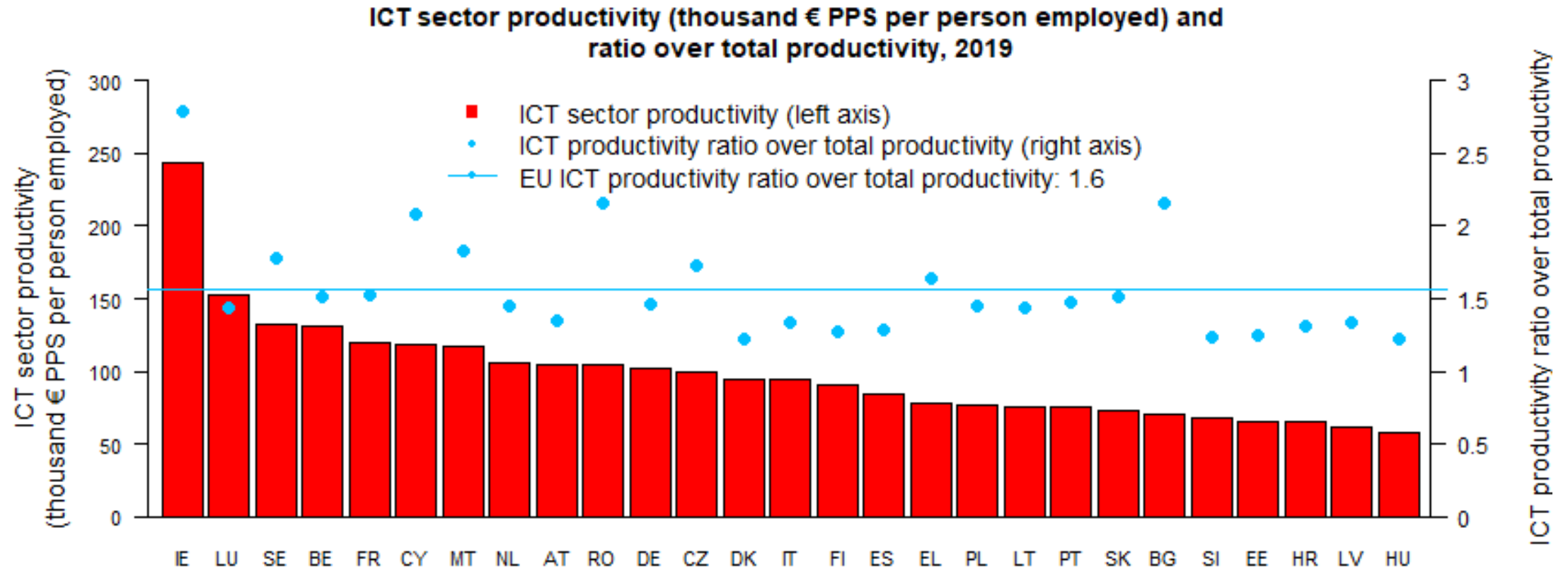
- ↑ • Manufacturing: increasing to €89 th/p (2019) and €97 th/p (2021)
- ↑ • Services: increasing to 106 (2019) and €108 th/p (2021)
- ↑ • Telecomms: increasing to €173 th/p (2019) and €174 th/p (2021)

Productivity in the ICT sector,
thousand EUR per person employed, 2006-2021



Note: Values for the years 2020 and 2021 are nowcasted data.

ICT sector Labour Productivity in EU27 MS



Note: Data for Ireland refers to 2014.

ICT sector Businesses expenditure on R&D (BERD)

ICT Business expenditure on R&D

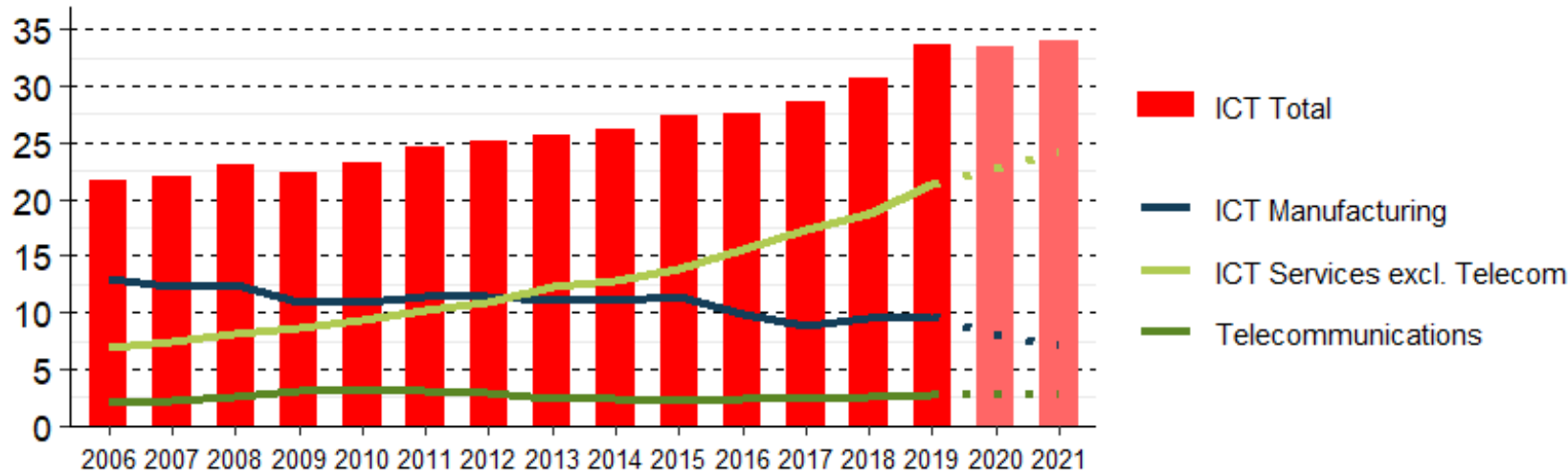
ICT sector

- ↑ 2019: growth slows down: €33.7 bn
- ↔ 2021 (estimated): €33.9 bn

ICT sub-sectors (%)

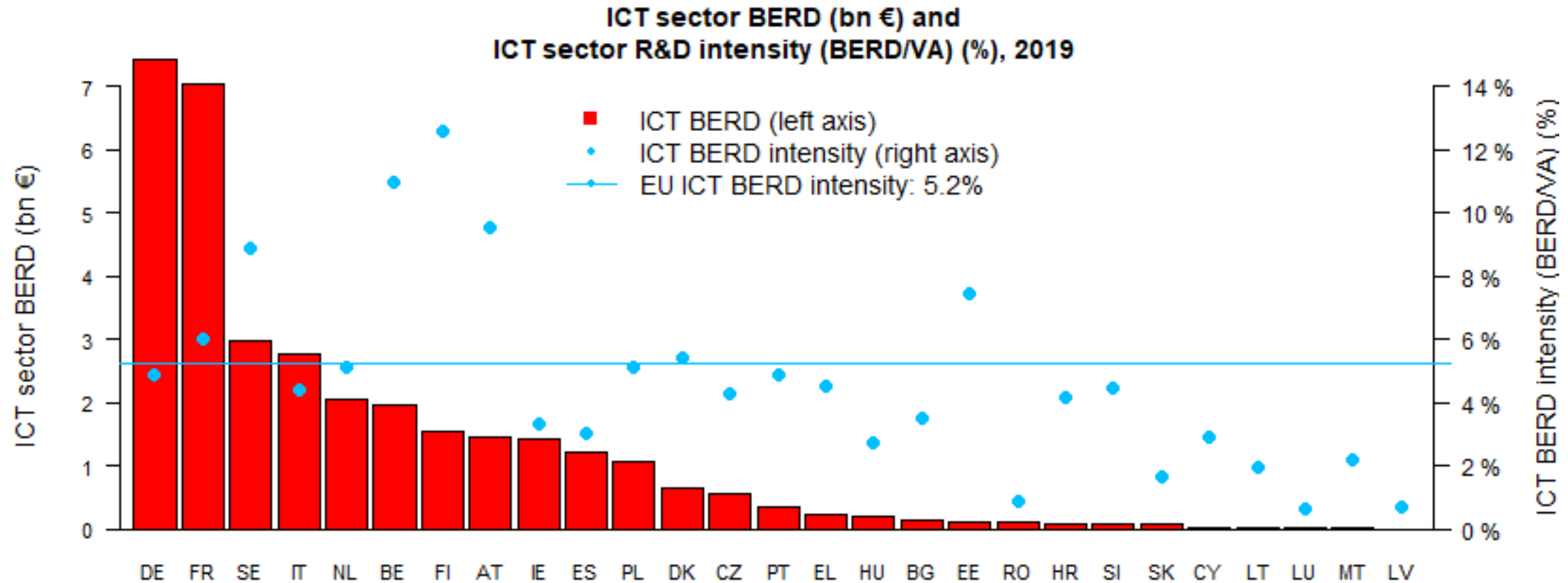
- ↓ Manufacturing: decreasing to 29% (2019) and 21% (2021)
- ↑ Services: increasing to 71% (2019) and 79% (2021)
- ↔ Telecomms: stable at 8%

R&D expenditure by business enterprises (BERD) in the ICT sector
EUR billion, 2006-2021



Note: Values for the years 2020 and 2021 are nowcasted data.

ICT sector BERD in EU27 MS



Note: Data on ICT sector R&D intensity for Ireland refers to 2014.

ICT sector R&D personnel

ICT sector R&D Personnel

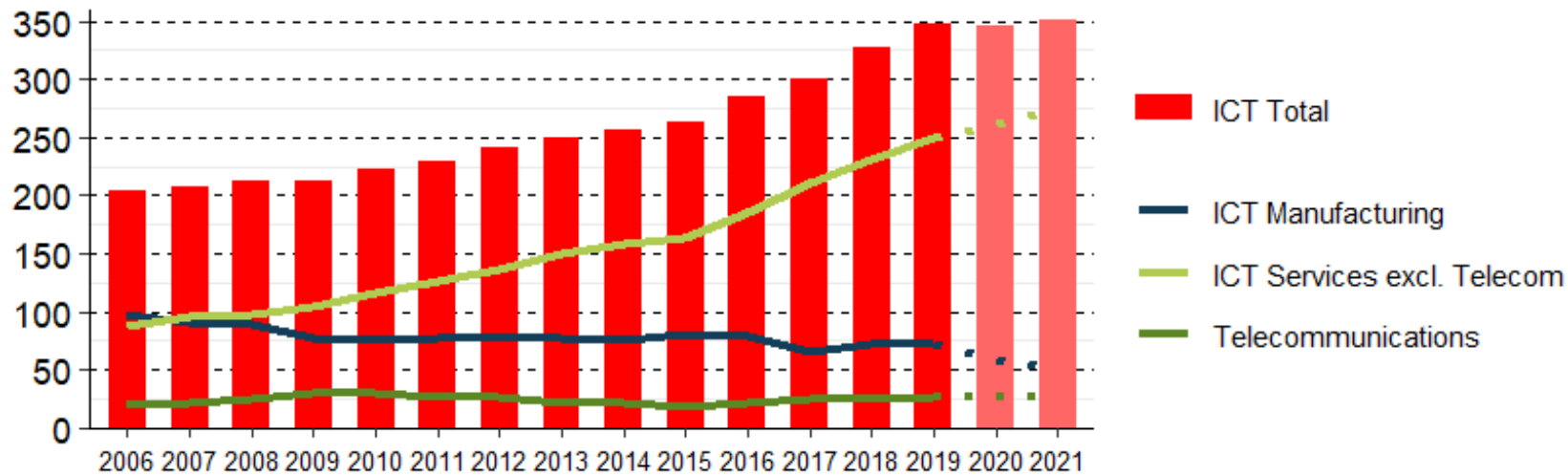
ICT sector

- ↑ 2019: 349,000 FTE*
- ↔ 2021 (estimated): 351,000 FTE

ICT sub-sectors (%)

- ↓ Manufacturing: decreasing to 21% (2019) and 15% (2021)
- ↑ Services: increasing to 79% (2019) and 85% (2021)
- ↔ Telecomms: stable at 8%

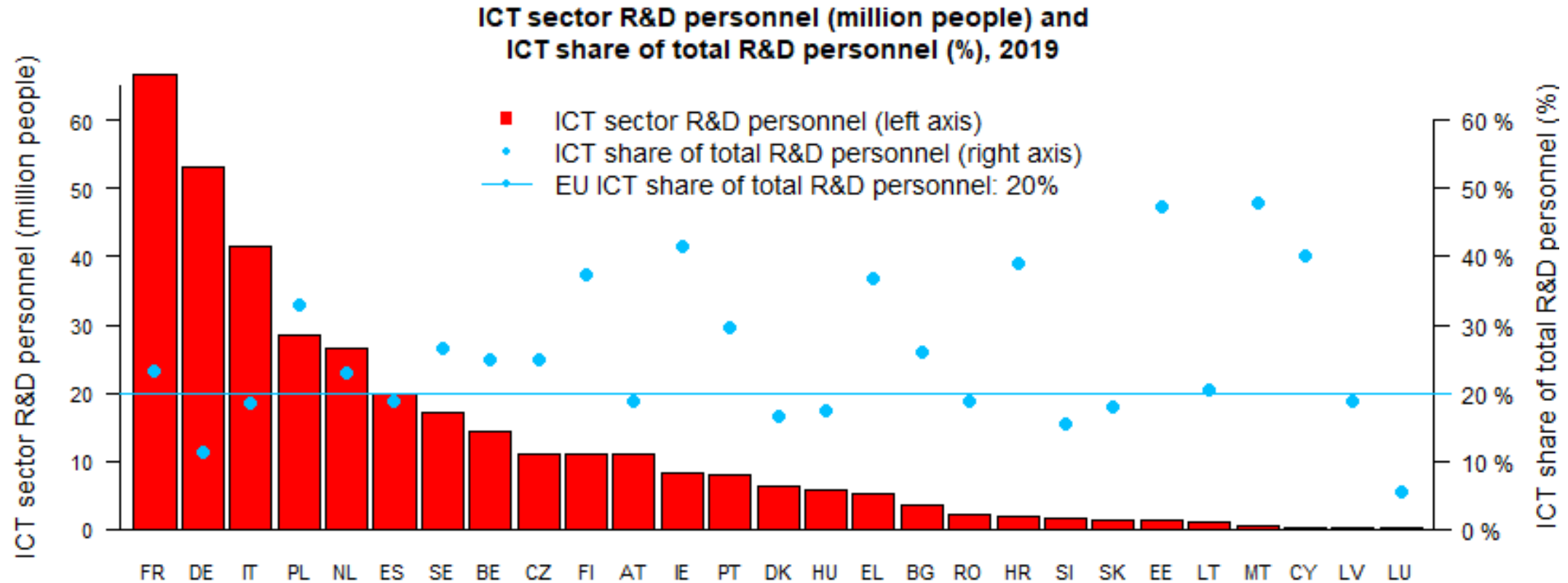
R&D Personnel (PERD) in the ICT sector, thousand FTEs, 2006-2021



Note: Values for the years 2020 and 2021 are nowcasted data.

* FTE: Full time equivalent

ICT sector R&D Personnel in EU27 MS



Methodological note

Definition of the ICT sector

The ICT sector is defined according to the definition provided by the OECD and based on the NACE (Statistical Classification of Economic Activities in the European Community) Rev.2 (2008) nomenclature. The ICT sector has 12 industries:

ICT manufacturing

- C261 Manufacture of electronic components and boards
- C262 Manufacture of computers and peripheral equipment
- C263 Manufacture of communication equipment
- C264 Manufacture of consumer electronics
- C268 Manufacture of magnetic and optical media

ICT services

- G4651 Wholesale of computers, computer peripheral equipment and software
- G4652 Wholesale of electronic and telecommunications equipment and parts
- J5820 Software publishing
- J61 Telecommunications
- J62 Computer programming, consultancy and related activities
- J631 Data processing, hosting and related activities; web portals
- S951 Repair of computers and communication equipment

PREDICT Website, Dataset and Methodology

PREDICT website

https://joint-research-centre.ec.europa.eu/predict_en

Dataset

2022 PREDICT Dataset: <https://data.jrc.ec.europa.eu/dataset/21b9cbe7-5918-41b6-a6f2-ab071b8ecf06> (Joint Research Centre – Dir. B Growth and Innovation (JRC– Dir. B))

Methodology

The detailed methodology describing the data sources and methodologies used can be found at: https://joint-research-centre.ec.europa.eu/predict/ict-sector-analysis-2022/methodology-2022_en

Calculations and estimates from the PREDICT project are based on Eurostat, the OECD's structural analysis database (STAN), EU-KLEMS data and other national sources. All data contained in these databases come from official sources (e.g. Eurostat, OECD, national statistical institutes).

Discrepancies with the original sources are due to updates of the original data or the use of multiple auxiliary sources and variables to estimate missing values.

Thank you



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