

SGH

Warsaw School
of Economics

Factors shaping growth in Europe: Focus on Innovation

Marzenna Anna Weresa
World Economy Research Institute
SGH Warsaw School of Economics, Poland
www.weresa.pl

11th NBP Annual Flagship Conference on the Future of the European
Economy (CoFEE), Warsaw, 20th October 2023

Innovation and growth: where are the opportunities?

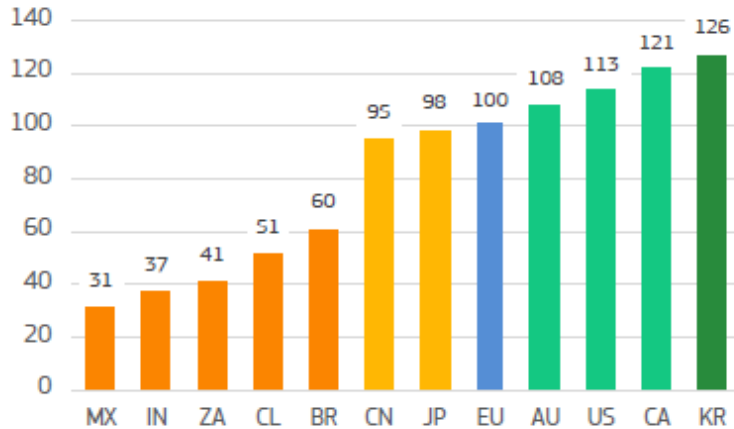
- Innovation is a driver of economic growth (Romer, 1990; Grossman & Helpman, 1994; Aghion, 2010).
- Schumpeter (1912, 1939) pointed out that there is a difference between economic growth and economic development (i.e., achieving beyond GDP goals).
- Different types of innovation play different roles at various development stages
- **In earlier stages, incremental innovation** including the adoption of foreign technology, and social innovation **can improve the effectiveness of business and public services.**
- **High-technology R&D-based innovations** matter at **later stages of development**, being both factors of competitiveness and of learning processes (Porter, 2008; Ketels & Porter, 2020)
- ICT and digital technologies in particular, offer many opportunities for innovation (Fachrunnisa et al., 2020; Oswald & Kleinemeier, 2017)
- Many growth-enhancing innovations also address social challenges.
- **Digital innovation** drives aggregate productivity growth, subject to its successful diffusion and use across society (inclusiveness) (OECD, 2016; 2019).

Innovation performance in Europe

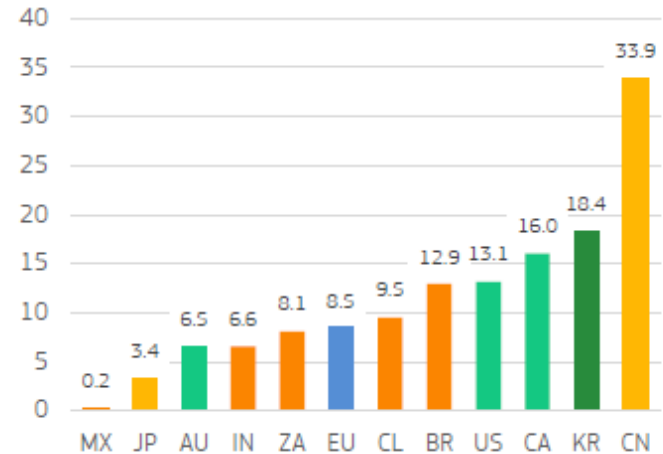
- The innovation performance of the EU as measured by the Summary Innovation Index (SII) – an increase by 8.5 percentage points in 2016-2023.
- Huge **differences** among the EU Member States: 4 **groups** according to the SII
- Innovation performance increased in 25 EU Member States (most in Cyprus, Estonia, Greece and Czechia)
- **Both convergence** and divergence trends observed in the performance differences
 - Moderate Innovators are **catching up**
 - Emerging Innovators have **not narrowed the innovation gap**, and they are not catching up to the next group of Moderate Innovators



Innovation performance of global competitors

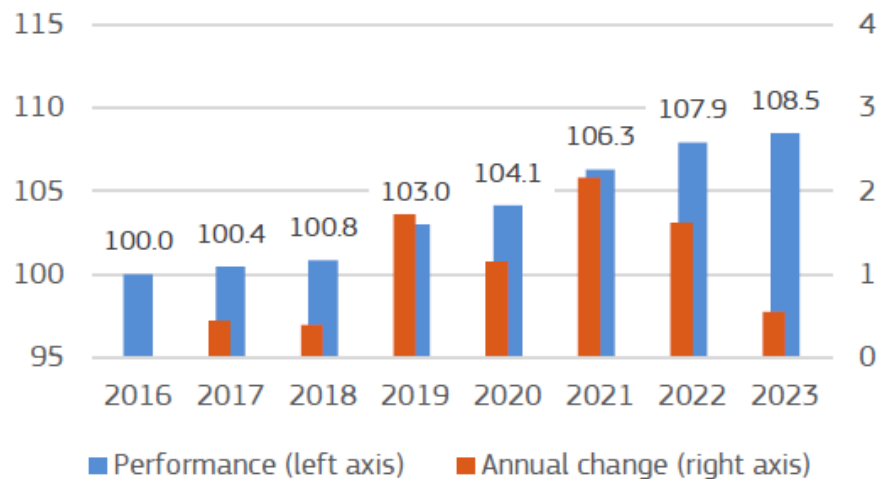


Performance in 2023 relative to that of the EU in 2023.



Performance change is measured as the difference between the 2023 and 2016 scores relative to that of the EU in 2016

Improvement in performance of the EU



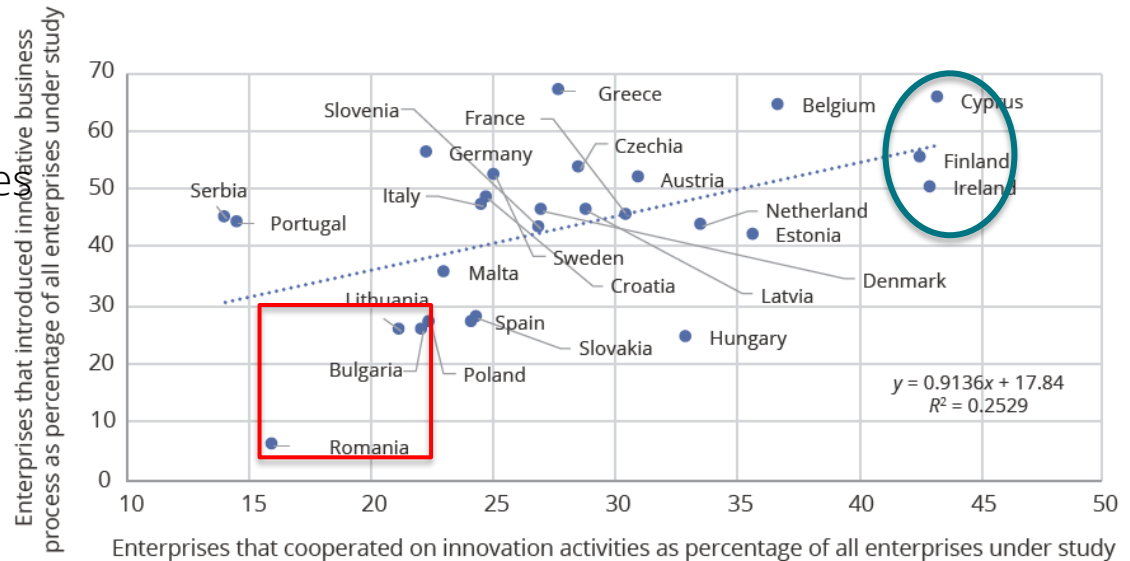
- Innovation indicators with the highest improvements in the EU in 2022-23:
 - ✓ business process innovation,
 - ✓ international scientific co-publications,
 - ✓ job-to-job mobility of human resources in science & technology,
 - ✓ venture capital expenditures
 - ✓ collaboration in innovation

Source: European Innovation Scoreboard 2023, p. 37

Business process innovation in the EU

- **Cooperation** - a key success factor for innovation (Chesbrough, 2003; Chesbrough, Bogers, 2014)
- **Differences** among European countries, both with regard to cooperation on innovation activities and the intensity of innovation of business processes
- **Leaders:** Finland, Ireland, Cyprus
- **Laggards:** Romania, Bulgaria, Lithuania, Poland

Business process innovation intensity vs. cooperation in innovation in European countries in 2018–2020 (%)



Source: Kowalski, Lewandowska, Weresa, 2023, p. 145 www.sgh.waw.pl

Digital technologies may enable firms to innovate

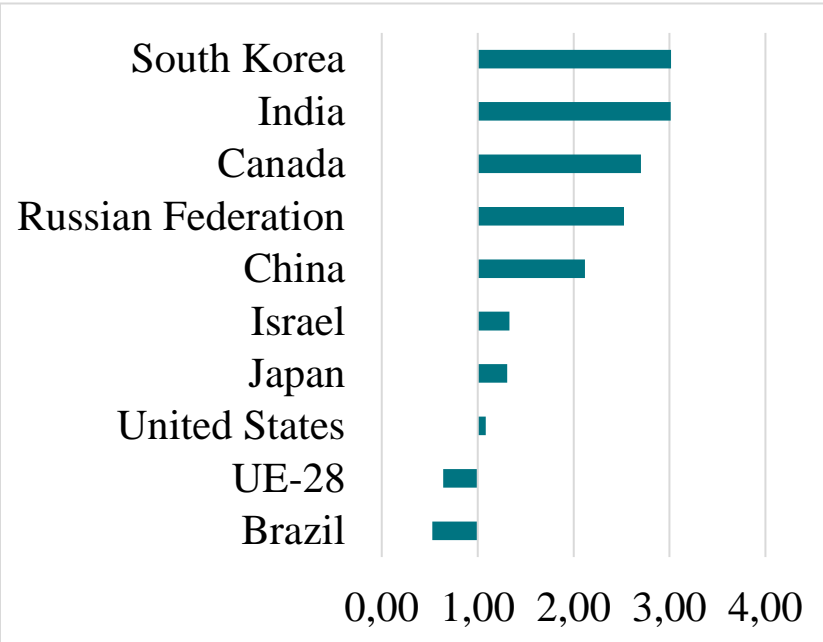
- Digital innovations and digital technologies adoption is associated to productivity gains at the firm level (Munch et al., 2018; Gal et al., 2019; Planes-Satorra and & Paunov, 2019).

Digital innovations

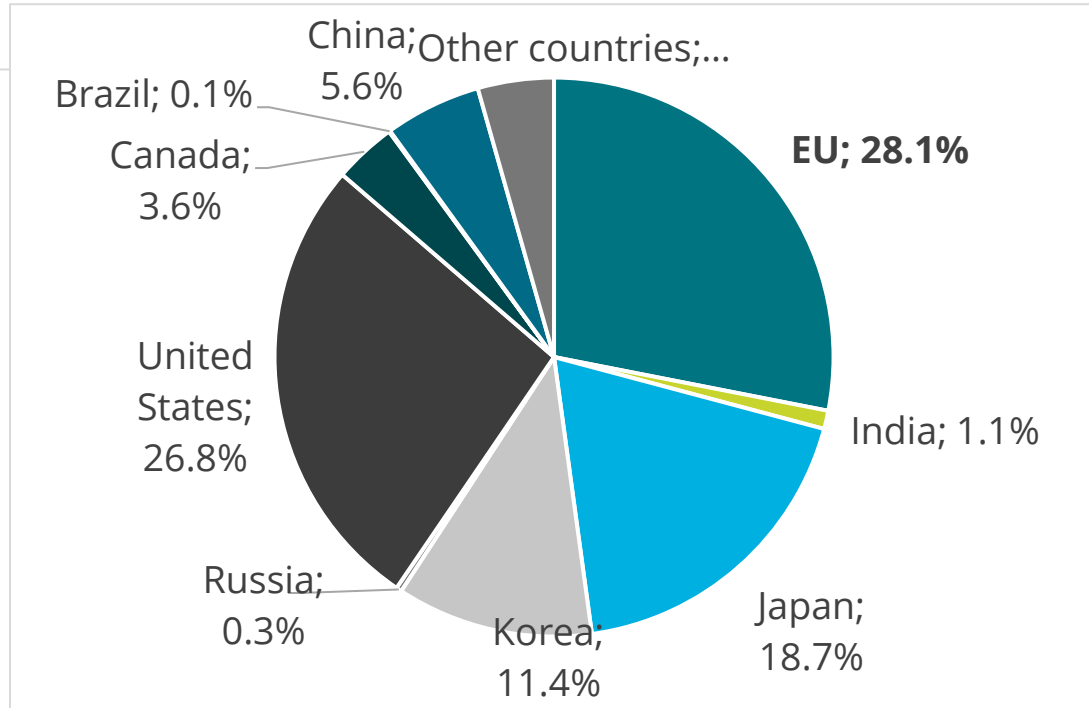
- Centered around Internet and digital products
- Focused on digitalized processes and digital business models

Digital technologies development in the EU: a stocktaking

Specialization in digital technologies as measured by the RTA index: EU compared to selected countries, 2009-2016 (RTA > 1 indicates relative specialization in a given technological field)

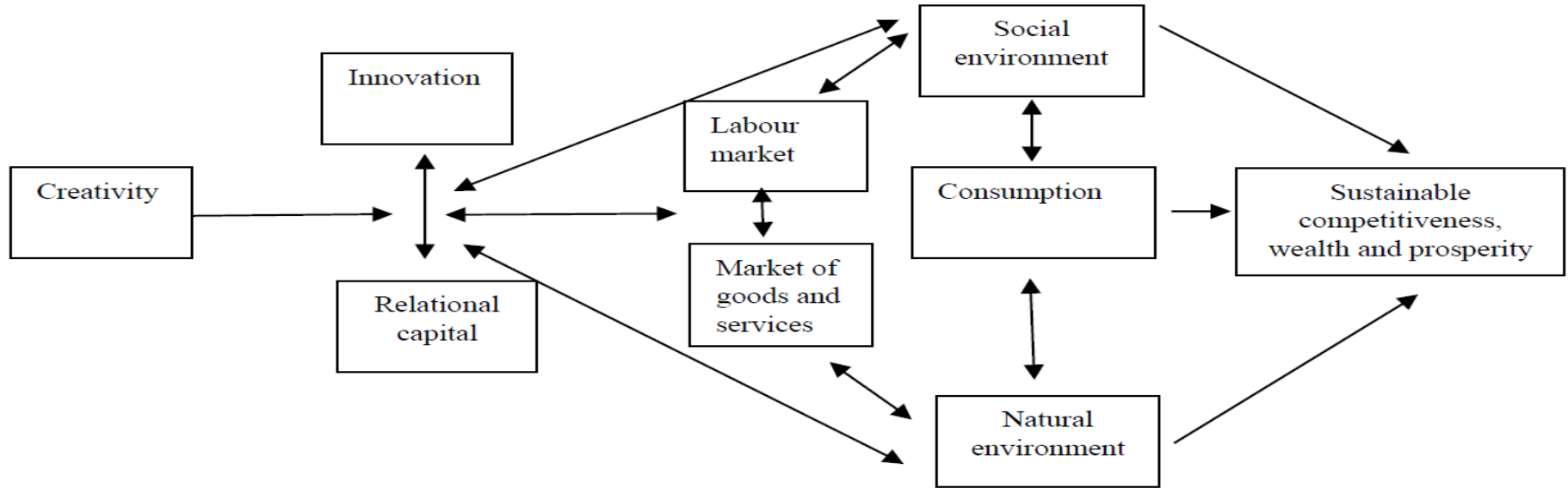


The role of the EU patents on the world's patent portfolio in the field of digital technologies as reflected by the Patent Share index in 2009-2016



• The leaders in the EU: Germany, Sweden and France.

Conclusion: innovation (including new digital solutions) and relational capital as main drivers of growth and competitiveness



Source: Author's concept.



**Thank you for your attention
Questions?**

marzenna.weresa@sgh.waw.pl
www.weresa.pl