

Digitalization & international competitiveness: A cross-country exploration of the relation between firm-level ICT use, productivity and export

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The study examines. . .

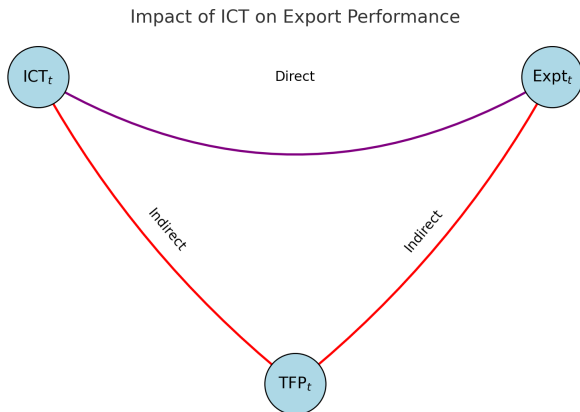
1. The **direct** impact of ICTs on firms' export performance.
2. The **indirect** impact of ICTs through productivity.
 - The analysis is conducted across **Belgium, France, and the Netherlands** over the period 2014 to 2021.
 - The use of ICTs is measured using a **Digital Intensity Index (DII)**, while the effects of individual technologies are also considered separately.

Findings: In Belgium and the Netherlands, exports are enhanced through ICT-driven productivity improvements, whereas in France, ICTs impact exporting mainly through other, unidentified channels.

Comments and suggestions

The good...

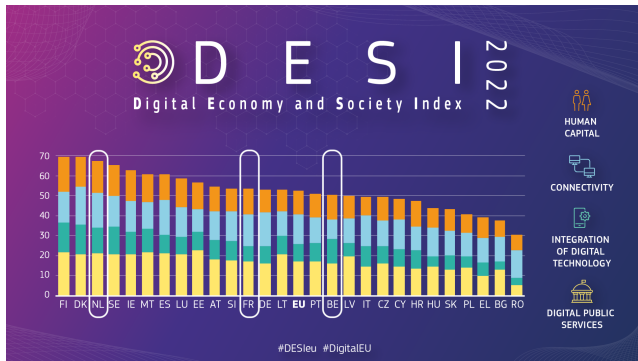
- The analysis of the direct and indirect effect of ICTs on firms' export performance using a structural model framework a la CDM



Comments and suggestions

The good...

- It covers firm-level data from 3 countries



The good. . .

- It considers an index of digitalization (DII) that captures the inter-relation of different digital technologies

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RESEARCH ARTICLE



Digitalization and trade participation of SMEs

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Contribution

- Explicitly state what makes your study unique and how it contributes to both theory and practice.

Definition of ICT

- What exactly are **ICTs**? Are all **digital technologies** considered ICTs?
 - Do **robots** and **AI** fall under the category of ICT? (data only available since 2018)
- Is the impact of robots and AI on trade comparable to that of traditional ICTs?
 - While you investigate the effects of E-commerce and CRM, what about the influence of AI and robots?
 - It's important to account for other technologies when analyzing the impact of a specific one to avoid bias.

ICT index

- Why not use the index as continuous values instead of categorizing it?
- The results suggest a linear relationship

ICT timing

- Endogenous Markov process:

$$\omega_{i,t} = g(\omega_{i,t-1}, e_{i,t-1}, i_{i,t}) + \xi_{i,t} \quad (1)$$

- Doralzeski & Jaumendreu (2013) for R&D, De Loecker (2013) for exports, and Koch et al. (2022) for robots assume that firm's strategies in t affect future productivity but there is no contemporaneous effect.
- It is not clear to me how the index enters the markov (categories?)

Interpretation of results

- Why only in France the direct effect seems relevant?
 - Besides the importance of the size of the domestic market
 - I wonder whether the direct effect may also depend on the extent of country's digital development (DESI), suggesting an inverted-U shape.
- For France, which effect is larger?
- Why only e-commerce has a negative impact on productivity in the Netherlands?

Other suggestions

- Address selection bias in the intensive margin.
- Consider exploring the interaction between skills and ICTs, particularly in the export equation.
- Since you are estimating a TFPR (no firm-level prices), it would be beneficial to include both markups and TFPR in the export equation.
- Given the availability of destination data (for France), it could be insightful to analyze whether more digitalized firms tend to export to more distant markets.

Finally...

- It is a promising paper

Thank you for citing my work.