Discussion of:
"AI, human capital and productivity"
"The Employment Impact of Emerging Digital Technologies"

Fabiano Schivardi, LUISS University

The Economics of Data and Digital Infrastructures

Luiss University. February 5th 2026

Acknowledgments and Disclaimer

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- Over 150 pages for the poor discussant: any mistake in the interpretation is mine, any insight is theirs

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What the paper shows (among many other things):

- Advanced technologies–ATs–(AI, big data, IoT, robotics) build on **enabling ICTs**
  - Enablers: cloud, ERP/CRM, fast broadband

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Key messages:

1. ATs adoption is sequential, not plug-and-play
2. We can draw insights from what we learned from the previous
   generation of ICT technologies

The key question: Who Adopts—and Who Should?

- If AI requires enablers, but what determined **enabler adoption**?
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- Crucial for policy interpretation:
    - If firm characteristics, some firms may be optimally non-adopters
    - Subsidizing adoption (even of previous generation DTs) without addressing the "deep determinants" might even reduce productivity

Evaluating the benefits of adoption

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- ICT evidence: technology without complements can lower performance
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- Low adoption may reflect lack of readiness, not market failure

Policy and productivity implications

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- On education: Important to increase college education, but supply alone is not enough:
  - without firm demand $\Rightarrow$ brain drain.
- The the elephant in the room is **each country's productive structure** (size, management, HK, governance...) which is not easily amenable to policy intervention.

Paper 2: Ekaterina Prytkova, Fabien Petit, Deyu Li, Sugat Chaturvedi, Tommaso Ciarli

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- **Key result: exposure leads to net employment gains**
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  - Not directly adoption: no evidence of that in the paper
  - So, we cannot conclude that adoption of ADT increases technologies
  - Rather, exposure captures in a reduced form GEs and indirect effects: e.g., exposed activities increased worldwide, increasing the labor demand independently from adoption

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- Next paper: an IV analysis of employment on adoption, instrumented with exposure

Other comments

- Compare your ex-post results with these ex-ante of the previous literature: does it overestimate the employment effects of AI?
  - Webb assumes that similarity means substitutability, is this fundamentally wrong? Can we use your results to train LLMs to identify labor augmenting technologies?

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- I had some problems reconciling the overall effects with those by subgroups:
  - The overall positive effects are not clearly reflected at the sectoral level, were most coefficients are negative
  - Positive overall effects for skilled workers, but negative when considering labor augmenting technologies