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26th OSCE Economic and Environmental Forum  
SECOND PREPARATORY MEETING  
Session II: Human capital development as an essential factor for  
economic security, growth, development and competitiveness  
Venice, 24 May 2018

## PRODUCTIVITY IN THE ERA OF DIGITAL TRANSFORMATION

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### Digital transformation and productivity

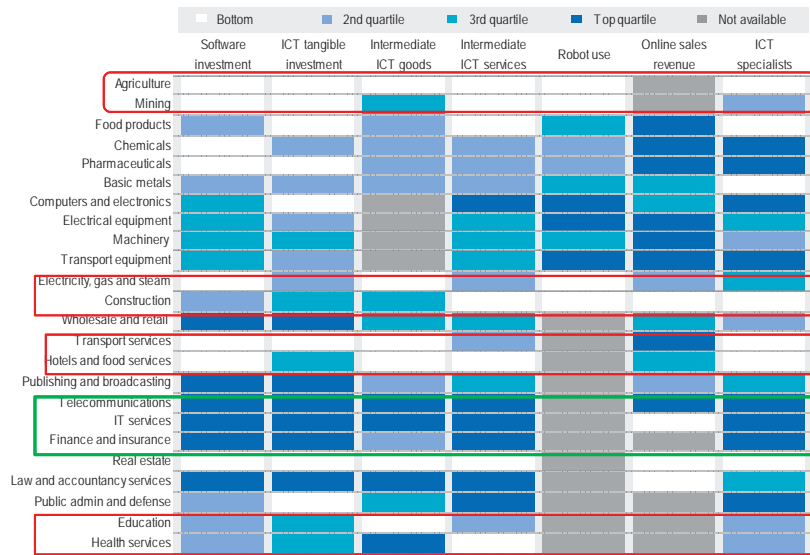
A new version of Solow's (1987) productivity paradox? Why do we see computers everywhere, but not (yet) in the productivity statistics?

We find that two factors play an important role:

- Lack of diffusion of technology, innovation and related business models
- Lack of structural change, a slowdown in business dynamics and possible impacts of competition

## THE DIGITAL TRANSFORMATION:

# A TALE OF MANY TALES...with large differences in digital intensity across sectors

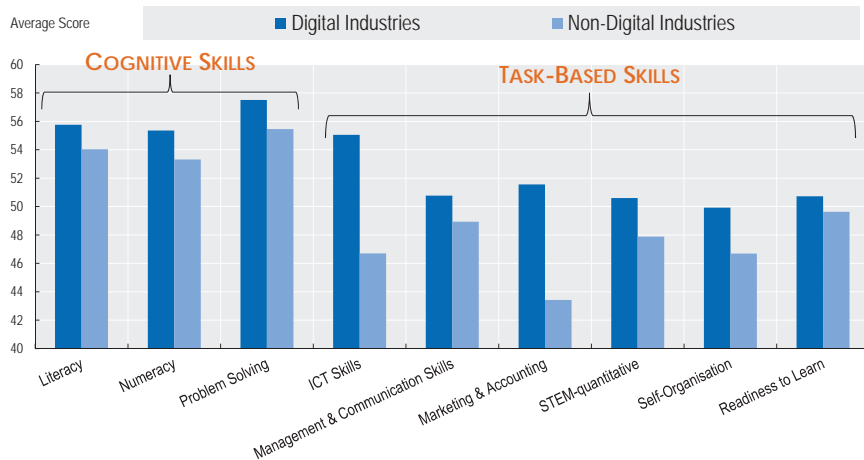


Source: OECD Science, Technology and Industry Scoreboard 2017

# DIGITAL INTENSITY COMES WITH HIGHER SKILL CONTENT...



Average skill levels in digital and non-digital sectors  
Cross-country averages, 31 OECD and non-OECD countries, 2012 or 2015

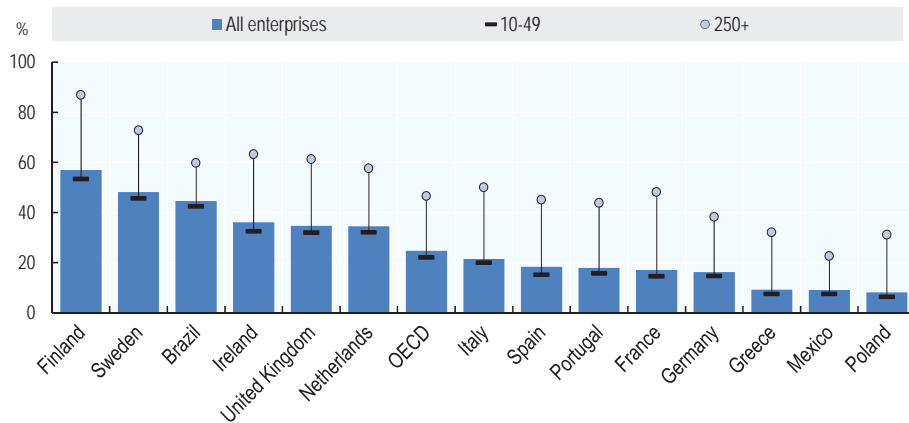


Source: OECD Science, Technology and Industry Scoreboard 2017 - Statlink: <http://dx.doi.org/10.1787/888933617453>

## SMES ARE OFTEN LAGGING, EVEN IN TECHNOLOGIES WELL SUITED TO THEM

### Enterprises using cloud computing services, by firm size, 2016

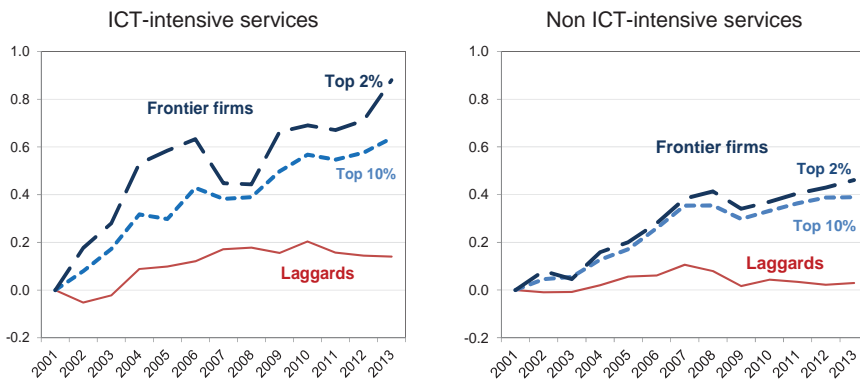
As a percentage of enterprises in each employment size class



Source: OECD Digital Economy Outlook 2017, StatLink: <http://dx.doi.org/10.1787/888933585495>

## THE WORLD'S MOST PRODUCTIVE FIRMS STILL MANAGE RAPID PRODUCTIVITY GROWTH ESPECIALLY IN DIGITAL SERVICES

The productivity gap between the globally most productive firms and other firms has widened especially in ICT intensive services



Note: "Frontier firms" is the average labour productivity (value added per worker) of the 2% (10%) globally most productive firms in each two-digit industry. "Non-frontier firms" is the average of all firms, except the 5% globally most productive firms.  
Source: OECD preliminary results based on Andrews, D., C. Criscuolo and P. Gal (2016), "Mind the Gap: Productivity Divergence between the Global Frontier and Laggard Firms", OECD Productivity Working Papers, forthcoming; Orbis database of Bureau van Dijk.

## OECD FINDINGS ON THE FUTURE OF PRODUCTIVITY ...

- The **diffusion** of advanced digital technologies (e.g. big data, robotics, AI) in OECD countries **is still underway** – it will take time, especially for SMEs, and in many sectors.
- It's **not only about technology diffusion** – changes in organisations, business models, workers skills and processes take even more time (and may be more difficult for many firms).
- The impacts of digital technologies will also **require more structural change** within & across industries, as digitally-intensive firms grow and less digitally-intensive firms decline.
- The digital transformation requires a **bundle of skills throughout the firm** to succeed
- This has implication for inclusive growth **in the digital economy**

## ... AND POLICIES THAT MAY BE APPROPRIATE

- **The good news:** the impacts of digital transformation are likely still to come and some firms are already reaping the benefits .
- **Policy can help** in several ways to strengthen these impacts, by:
  - Fostering **investment** in tangible and intangible capital
  - Strengthening **diffusion of technologies, practices and business models**
  - Improving **skills** of workers **and** management
  - Facilitating **structural change** – where certain sectors may require more policy attention
  - Strengthening **entrepreneurship and the scaling of firms**
  - Ensuring **good regulation** and **sound competition**.
  - Fostering **innovation** across the economy
- **Note also:** Improving **measurement** is important

## THE OECD GOING DIGITAL PROJECT

### GOING DIGITAL:

#### MAKING THE TRANSFORMATION WORK FOR GROWTH AND WELL-BEING

- ❑ Help policymakers better understand the digital transformation that is taking place;
- ❑ Develop tools to help create a policy environment enabling economies and societies to prosper in a world that is increasingly digital and data-driven;
- ❑ Deliver a whole-of-house perspective on state, effects, expected benefits and issues raised by digitalisation in different sectors and policy areas;
- ❑ Provide analysis of key cross-cutting issues, including: **jobs and skills; productivity, competition and market structure;** social challenges and well-being.

## Thank you

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**OECD Global Forum on Productivity:**

<http://www.oecd.org/global-forum-productivity>