THE FUTURE OF PRODUCTIVITY

… productivity isn't everything, but in the long run it is almost everything.

Paul Krugman, 1994

Chiara Criscuolo
Directorate for Science, Technology and Innovation

CSTP-TIP Workshop on Future Trends in STI Policy
OECD, Paris | 17 December 2015
The OECD new book: out now!

Available at:
http://www.oecd.org/economy/the-future-of-productivity.htm

Book + 5 page policy note + technical papers + videos and ppt

Authors:
Müge Adalet McGowan
Dan Andrews
Chiara Criscuolo
Giuseppe Nicoletti
Cross-country gaps in GDP per capita mainly reflect productivity shortfalls.

A. Percentage GDP per capita difference compared with the upper half of OECD countries

Note: GDP/Population = (GDP/Employment) * (Employment/Population)

B. Percentage difference in labour resource utilisation and labour productivity

Productivity growth slowed across the OECD, even before the crisis

Labour productivity growth since 1990
GDP per hour worked (China and India refer to GDP per worker)

Slower capital deepening is weighing on productivity, but the slowdown precedes the crisis suggesting structural factors at work

Source: OECD calculations based on the Conference Board Total Economy Database.
Decomposing Growth: Growth without MFP?

Contribution of production factors to GDP growth 1990-2013 (%pts)

- Labour composition
- MFP
- Capital intensity
- Labour quantity

Source: Conference Board Total Economy Database
Knowledge based capital accumulation has been slowing too

Investment in KBC; annual average growth

Source: Corrado et al., (2012).
The slow-down...is it here to stay? Techno-pessimists vs techno-optimists...The debate is not settled

Economic odd couple Robert Gordon, left, and Joel Mokyr encapsulate the debate on the future of innovation. ROB HART FOR THE WALL STREET JOURNAL

Economists Debate: Has All the Important Stuff Already Been Invented? By Timothy Aeppel, June 15, 2014 10:38 p.m. ET
Why the slow-down? Taking a granular approach:

1. Is it because the productivity frontier is slowing?
2. Is it because “laggards” are not catching up?
3. Is it because of misallocation and declining business dynamism?
4. …or something else?

• Role of policies?

Source: Criscuolo, Harvard Business Review
Analytical framework

Country A

Country B

Country C

Global frontier

Adoption convergence

Penetration divergence

Laggards
The Increasing gap between firms at the frontier and the others

Solid growth at the global productivity frontier but growth of the rest disappointed

Labour productivity; index 2001=0

Possible explanations and how to revive growth

- Technological diffusion slowed down
- “Winner takes all”
- Replication and diffusion of the magic “bundle” is becoming more difficult

Three areas for policy:

1. **Pushing out the global frontier:** More and more efficient public investment in **basic research**. Role for international co-operation? Enabling **experimentation** of firms with new technologies and business models.

2. **More efficient resource allocation:** Reduce barriers to firm **entry and exit** to enable high productivity firms to grow and low productivity firms to exit. “Resolving” **Skill mismatch** and **upscaling**

3. **Reviving the diffusion machine:** From global to national frontier and from national frontier to laggards through exposure to best practice (trade and GVC participation, FDI, mobility of skilled workers) resource (e.g. skill) allocation and absorptive capacity (e.g. R&D; University collaboration)
Policies to revive productivity growth

Framework policies
1. Pro-competition product market reforms, esp. in services
2. Exit matters: bankruptcy legislation that does not excessively penalise failure
3. Policies that do not inhibit labour and residential mobility
4. Education & social policies to help workers adapt to technological change and the costs of reallocation

Innovation policies
1. Public investment in basic research
2. Collaboration between firms and universities
3. R&D fiscal incentives and IPRs but design is crucial
THANK YOU!

CHIARA.CRISCUOLO@OECD.ORG