

# WEBINAR 2 | 2021 ANNUAL CONFERENCE OF THE GFP

## THE HUMAN SIDE OF PRODUCTIVITY – EXPERIENCES FROM ITALY, BELGIUM AND FRANCE

DISCUSSION BY BRINDUSA ANGHEL  
(BANCO DE ESPAÑA)

July 2nd, 2021



- ✓ **Higher human capital levels can foster economic growth by:**
  - Increasing the productivity of the labor force
  - Facilitating the development of new technologies
  - Diffusion of existing technologies
  
- ✓ **The papers open the black box of the firm: look into the human capital of the firms.**
  
- ✓ **France:**
  - Descriptive evidence of the level and evolution of human capital in France
  - Empirical evidence for the role of human capital in the slowdown of productivity (a long-term growth equation)
  - Review of empirical evidence of the link between skills and productivity.
  
- ✓ **Belgium:** the link between the skills of firms' employees and the productivity of firms and quantify the firm-level return on human capital, using LEED data
  
- ✓ **Italy:** the effect of digital technology adoption on the productivity of firms, using firm-level data

## ✓ **Belgium:**

- **the impact of the share of STEM workers on productivity is increasing over time, while the impact of the share of high-skilled workers is decreasing**
- **positive relationship between the share of STEM workers and productivity for manufacturing and less knowledge intensive services**

## ✓ **France - two challenges:**

- **reduce educational inequalities, starting at early ages;**
- **increase and improve lifelong learning and training and its provision to the least qualified individuals**

## ✓ **Italy:**

- **firms with high digital adoption experience an increase in productivity relative to firms with low digital adoption.**

- ✓ **Empirical specification:**
  - **include the share of medium-skilled workers**
  - **the composition of the firm in terms of the experience of the workers**
  - **the same additional controls in Table 3 as in Table 2**
  - **interesting analysis on the share of foreign workers: include it as a control variable in the empirical specification**
  
- ✓ **Correlation between the share of high-skilled and the share of STEM workers**
  
- ✓ **Analyze firms with less than 10 employees**
  
- ✓ **Endogeneity of human capital variables**

- ✓ **Additional explanatory variable: some measure of the human capital in a firm (share of high-skilled/qualified workers in the firm)**
- ✓ **Heterogeneity of firms: what kind of firms are behind the results you get? Benefits from digital adoption could be different for firms from **different sectors of activity** (Gal et al., 2019).**

Belgium paper: firms from manufacturing and less knowledge intensive services benefit more from increasing the share of high-skilled (STEM) workers (which should be highly correlated with the level of digital adoption in a firm)

- ✓ **The papers emphasize the need for an increased supply of high-skilled workers to increase productivity. Lifelong training programmes?**
- ✓ **Improvements due to investments in human capital **will not be immediate****
- ✓ **Policies which aim at increasing the adoption of digital technologies in firms have to be combined with policies that increase the level of skills of the firms' workforce**
- ✓ **The relationship between human capital and productivity is more precisely estimated when **the quality of human capital is taken into account****

THANK YOU FOR YOUR ATTENTION

