

OECD-G20 2021 Annual Conference of the Global Forum on Productivity

Digitalisation, Intangibles and Productivity

Reinhilde Veugelers

Prof@KULeuven,

Senior Fellow at Bruegel; Non-Resident Senior Fellow at PIIE

My main take-aways on Eberly

- “Potential Capital,” the dwelling/residential capital and connective technologies that enabled some (fortunate) workers to work from home and others to provide remote services.
- Contribution of this capital, and the labor that it facilitated, to have roughly halved the decline in GDP in the seven OECD economies in their sample
- After Covid?

My take-away comments on Eberly

- To better understand what exactly this “potential capital” is, for whom it works/not work and how long it works
 - Will it further divide or equalize product & labour markets?
- Zoom in on the micro-economics
 - What is the “capital”: it is digital investment, is it connectivity, is it human capital, is it complementary other infrastructure (...)
 - Components and mix
 - On the side of the worker- On the side of the employer
 - Required **complementary** practices & investments: eg on employer side: which management practices?
 - What are the incentives of workers and firms to invest in “potential capital” and complementary skills/practices/capital?

My main take-aways on DeRidder

- Intangibles reduce marginal costs and raise fixed costs, which gives firms with high-intangible adoption a competitive advantage, in turn deterring other firms from entering.
- After initially boosting productivity, the rise of intangibles can cause a decline in productivity growth, a decline in business dynamism and a raise in market power.

My take-away comments on DeRidder

- What is in the basket of intangibles? Does it matter for its effects? Fixed versus marginal?
 - Brandname investments vs investment in skill formation
 - Digital (hardware, software; services): own vs outsourced
 - R&D: own versus acquired (eg license fees...
- New technology trends: Shift from fixed to marginal?
 - Eg outsourcing of IT infrastructure, software, digital services, ...
- Not only does each of the components have a different story- Also the mix of components used by the firm may matter,
 - as there are important complementarities; eg ERM & AI;
 - skills for abs cap and acquisition of technologies;
- Incentives for investing in “intangibles” for new entrants & incumbents
 - More complex: not all entry is drastic, not all incumbents are incremental, not all non-investing exit...

My main take-aways on Hazan

- Investing in intangibles correlates with productivity and sector growth.
- Regardless of the sector, companies that invest more in intangibles grow more
- Top growers develop “granular capabilities needed to accelerate impact”.
- Implications: invest more in “intangibles” & for corporates: execute better;
 - reskilling

My take-away comments on Hazan

- Correlation, but not causation
 - could be due to unobserved heterogeneity: eg better managed firms invest in intangibles and will perform better; firms with high (managerial) talent pool, firms with market power...
 - These unobserved factors may be driving the effects, rather than the intangibles
- What is intangibles? does it matter what is included cf previous comments
- Stock versus flow? Vintage effects?
- Important issue of rising inequality among firms? Who invests more? Who executes better?
- Access to skills:
 - may become more difficult to catch up; as these skills are being absorbed by leaders; biggest bottleneck for laggards to catch up could be access to skills;

Some evidence from own research on

- The growing digital divide among firms
- Which type of firms are on which side of the divide: young vs old? Large vs small?
- The different types of barriers faced by persistent laggards vs frontrunners
- The importance of complementary assets for returns on digital investments

Joint work with EIB:

C.Weiss, D. Ruckert, A. Virginie

EIBIS data on more than 13,000 companies from 29 countries (EU, US): various editions EIB2-EIB3...

Work in progress

Veugelers, R., D. Rückert, C. Weiss (2019) 'Bridging the divide: new evidence about firms and digitalisation' Bruegel Policy Contribution no 17, Bruegel, Brussels

Main take aways from pre-COVID

- Data confirm the trend toward digital polarisation and a growing digital divide in the corporate landscape.
- Old small firms are significantly more likely to be persistently non digitally active.
- No evidence that EU firms are significantly less likely to be digitally active and plan to digitally invest; But see differences in firm size-age profile
- (Persistent) digital investments go together with employment growth, innovation, mark-ups
- Availability of skilled staff is the most important major barrier for digital investments
- Persistent non-digitally active firms are in general more complacent.
- An exception is access to finance for digital investment, for the EU and for persistently non-active,

Main take aways from latest 2020 EIBIS (work in progress)

- Uncertainty has risen substantially in 2020 as a barrier for investing
- More firms have adopted state of the art digital technologies from 2019 to 2020;
- A majority of firms report that they expect Covid-19 to increase the use of digital technologies in the long-term
- Yet, Covid shock leads to growing polarization: those that have already adopted digital technologies, more likely to do so in future.
 - Small firms are more likely to be persistently lagging behind
 - The share of “persistently non-digital” firms in the EU (22%), is significantly higher than in the US (14%).
 - The share of young firms that are “persistently non-digital” is higher in the EU than in the US.
- Major barrier for investment for all: uncertainty & skills;
 - For persistently non-digital particularly: complacency; not digital infrastructure; a bit more: regulations and access to finance

Main take aways from latest 2020 EIBIS (still work in progress)

Evidence on complementarity

- Adoption of AI and FBM (Management Practices: Formal Business Monitoring)
 - Those investing in AI more likely to have FBM.
 - Those without FBM also less likely to invest in AI
- AI adopters have a higher VA growth, less likely to reduce employment, invest more in training
 - Highest VA growth for those that adopt AI and have FBM.