Quarterly estimates of intangible investment in the UK

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All views my own, not those of the Bank of England or any of its committees. This presentation uses data from the UK Office for National Statistics, but this does not imply endorsement by the ONS.
Intangible investment more resilient to a crisis?

UK business investment by type, chained volume measures, seasonally adjusted

Global financial crisis - index 2007 = 100

Coronavirus pandemic – index 2019 = 100
Or is it measurement?

Research and development, UK market sector
Current prices (£m), non seasonally adjustment

Entertainment, literary and artistic originals, UK
Current prices (£m), non seasonally adjustment
Tangible investment measures more likely to be ‘genuinely’ quarterly

UK business investment by asset, current prices (£m)
So what’s going on?

Genuinely quarterly

- Tangible assets – quarterly business investment survey
- Purchased software, mineral exploration – quarterly business investment survey

Not genuinely quarterly

- R&D – annual survey, with a lag
- Own-account software – modelled, annual data, usually updated annually
- Entertainment originals – modelled, annual and ad-hoc data, infrequently updated
Quarterly own-account software investment tells a different story

Own-account software investment, current prices, £ million, quarterly, not seasonally adjusted, ONS estimates (ASHE-based) and Martin (2022) (LFS-based)

Source: Martin (2022), ONS
Quarterly own-account software investment tells a different story

Total software investment, chained volume measures, quarterly, selected countries

Source: Martin (2022), OECD (data extracted on 30/05/2022), ONS (since revised)
But... relying on the LFS is risky

**UK LFS response rate and achieved sample size, 2013-2023**


**Response rates to US mail surveys between 1971 and 2017 (n = 191 studies)**

Do we need *quarterly* estimates of intangible investment and TFP?

**GDP, activity measures**
- Used to monitor turning points
- Important during the pandemic, to inform rapid policy making
- Quarterly (or even monthly/weekly) indicators are important

**TFP, intangible investment**
- Structural variables?
- Interested in trend, not short-run variation?
- Why do we need *quarterly* data?
Experience of quarterly growth accounting at UK Office for National Statistics

• ONS moved from annual to quarterly TFP estimates in 2018 (ONS, 2018)
• Users didn’t much value the quarterly TFP data – too noisy, not meaningful
• They really valued the greater timeliness (shorter lags between reference period and publication)
  • The data was regularly updated, so revisions to source data (e.g. GVA) were taken on quickly
  • The regular publications allowed them to keep productivity at front of mind, and helped with communications
  • They could spot emerging trends of lower frequency, but still focussed on the long-run trends
• Due to resource constraints, has since been scaled back to quarterly estimates but only published at annual frequency (ONS, 2023)
Conclusions

• Existing quarterly data use mixed methods and sources

• Quarterly estimates likely to be noisy and imprecise
  • Should be tested carefully and communicated carefully

• Be mindful of data quality issues
  • Reliance on LFS data – e.g. recent UK LFS issues (response rates)

• Continue to focus on the long-term trends – don’t get seduced by the short-term variations
References


ONS. (2018). Quarterly multi-factor productivity: progress and next steps. ONS website.
