

R&D, Investment and productivity

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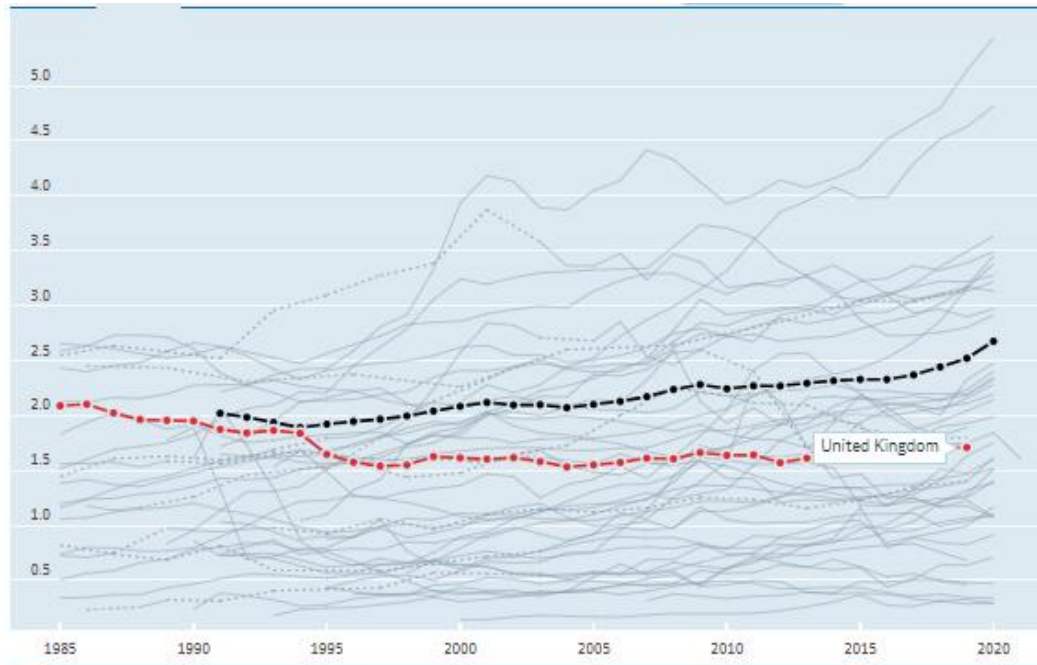
Remarks at Resolution Foundation, November 2023

Views are my own.

How do R&D revisions change UK performance?

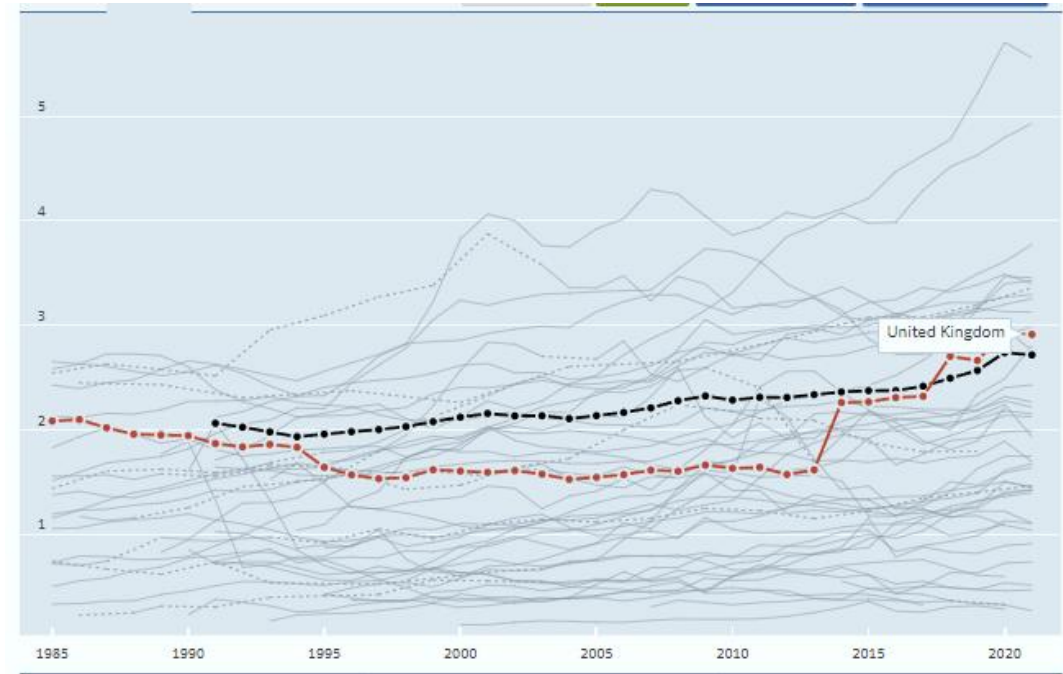
Beware of many moving parts...

Gross domestic R&D spend/GDP, **last year**
(OECD average, UK)



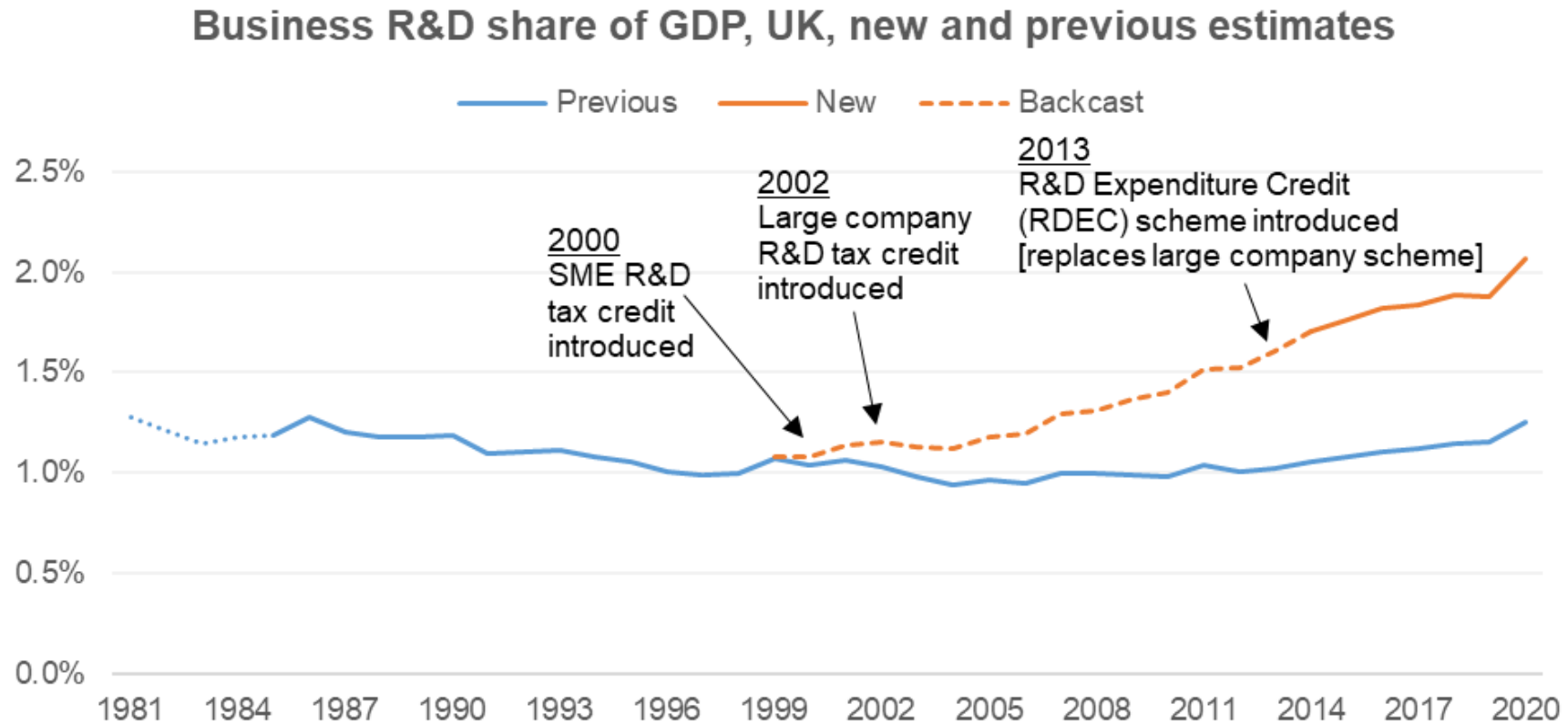
- Source: [OECD](#) 2022

Gross domestic R&D spend/GDP, **this year**
(OECD average, UK)



- Source: [OECD](#) 2023

What would the time series look like if you backcasted the new data?

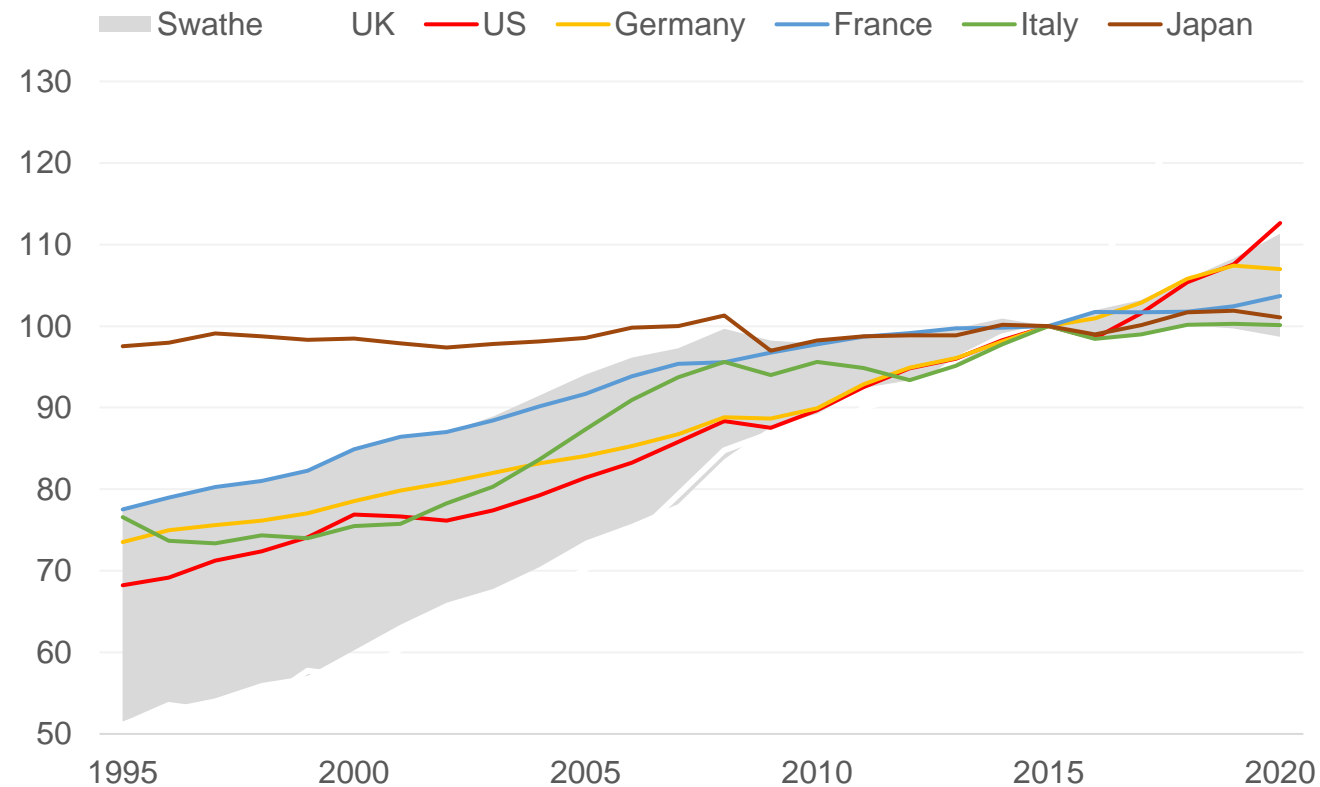


Source: ONS, author's calculations. Notes: "Previous" shows the share of BERD in GDP on a Blue Book 2021 basis (i.e. currently published). "New" are revised BERD estimates published by ONS on 29 Sept 2022, divided by GDP on BB22 basis, with adjustment to GDP for the higher level of R&D. "Backcast" assumes data up to 1999 are correct, and deviation starts in 2000 to coincide with introduction of SME R&D tax credits. Growth rates from the original series are preserved, but uplifted to hit new estimates in 2014.

Source: Josh Martin, (2022) Wonkhe blog: ["We just met the government's R&D spending target... or did we?"](#)

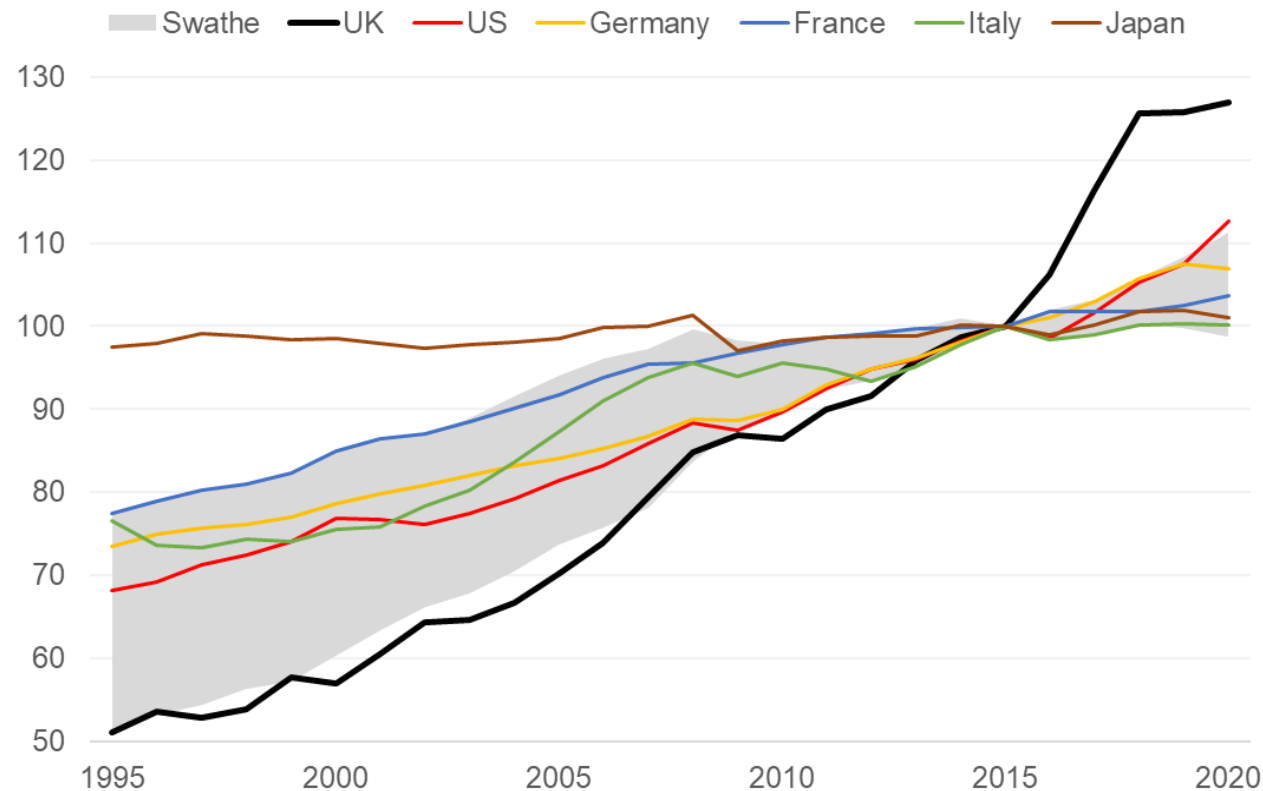
Now convert nominal R&D spend into inflation-adjusted R&D spend....

- International R&D deflators

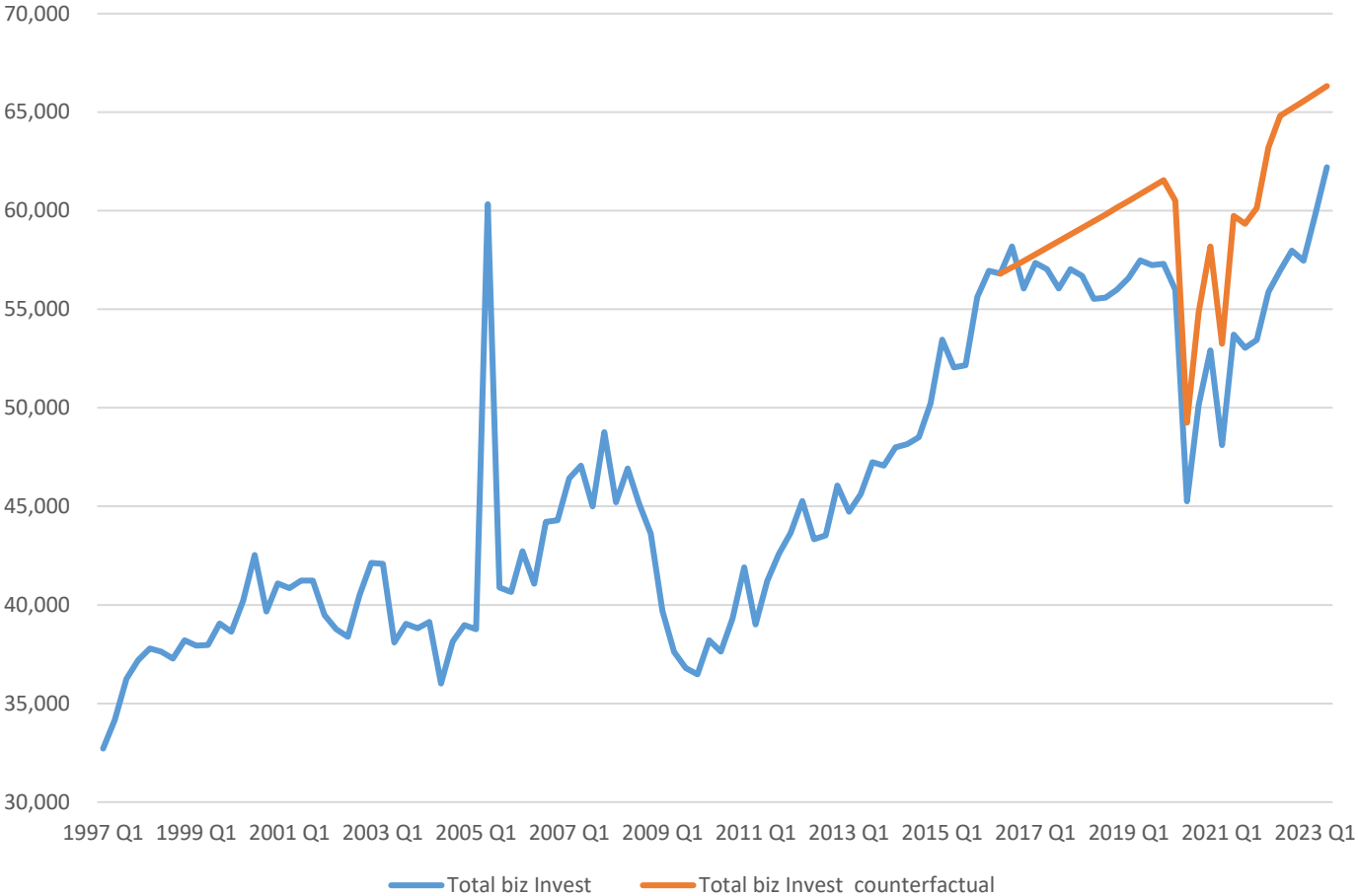


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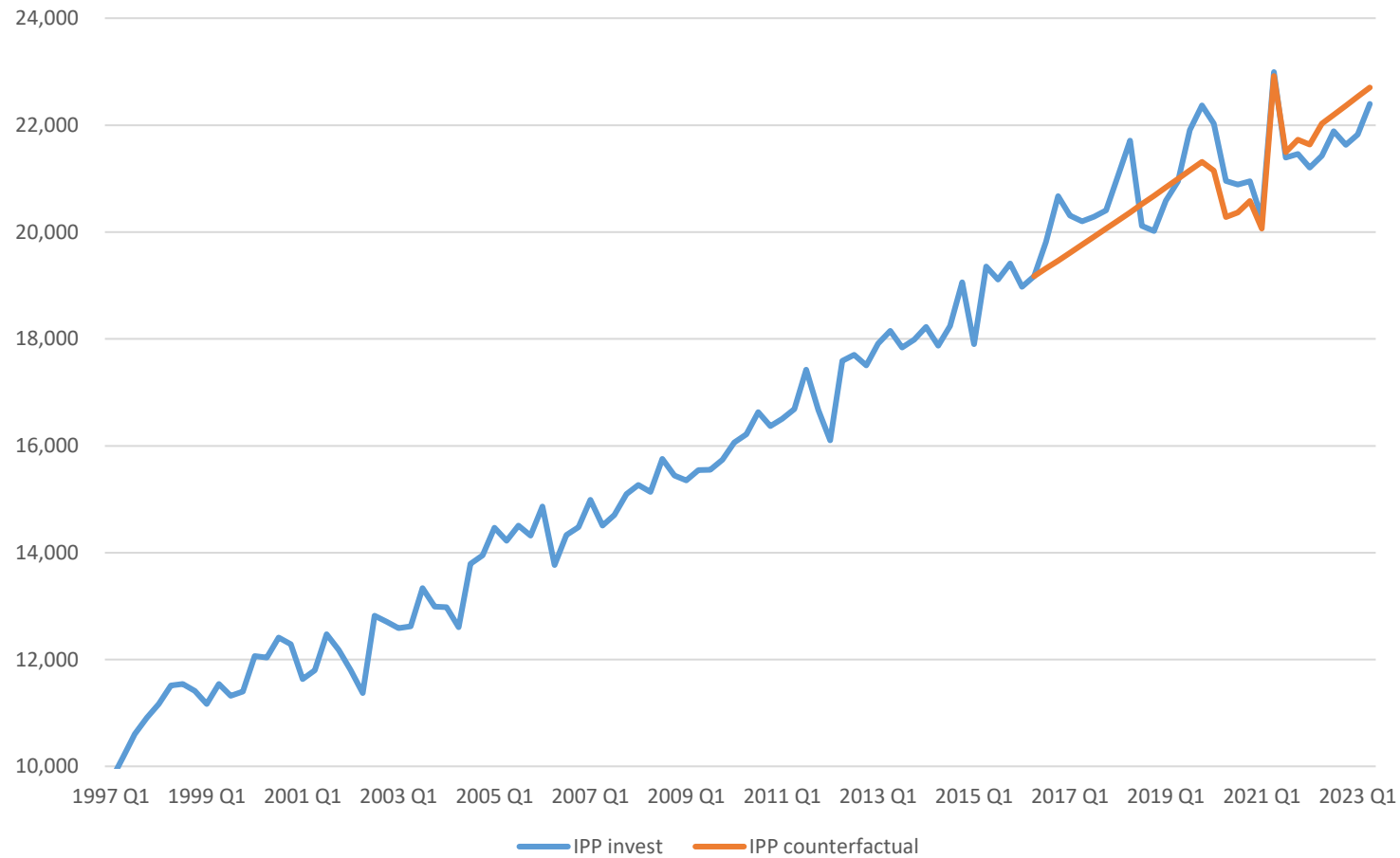
- International R&D deflators



The broader investment picture since the Brexit vote...



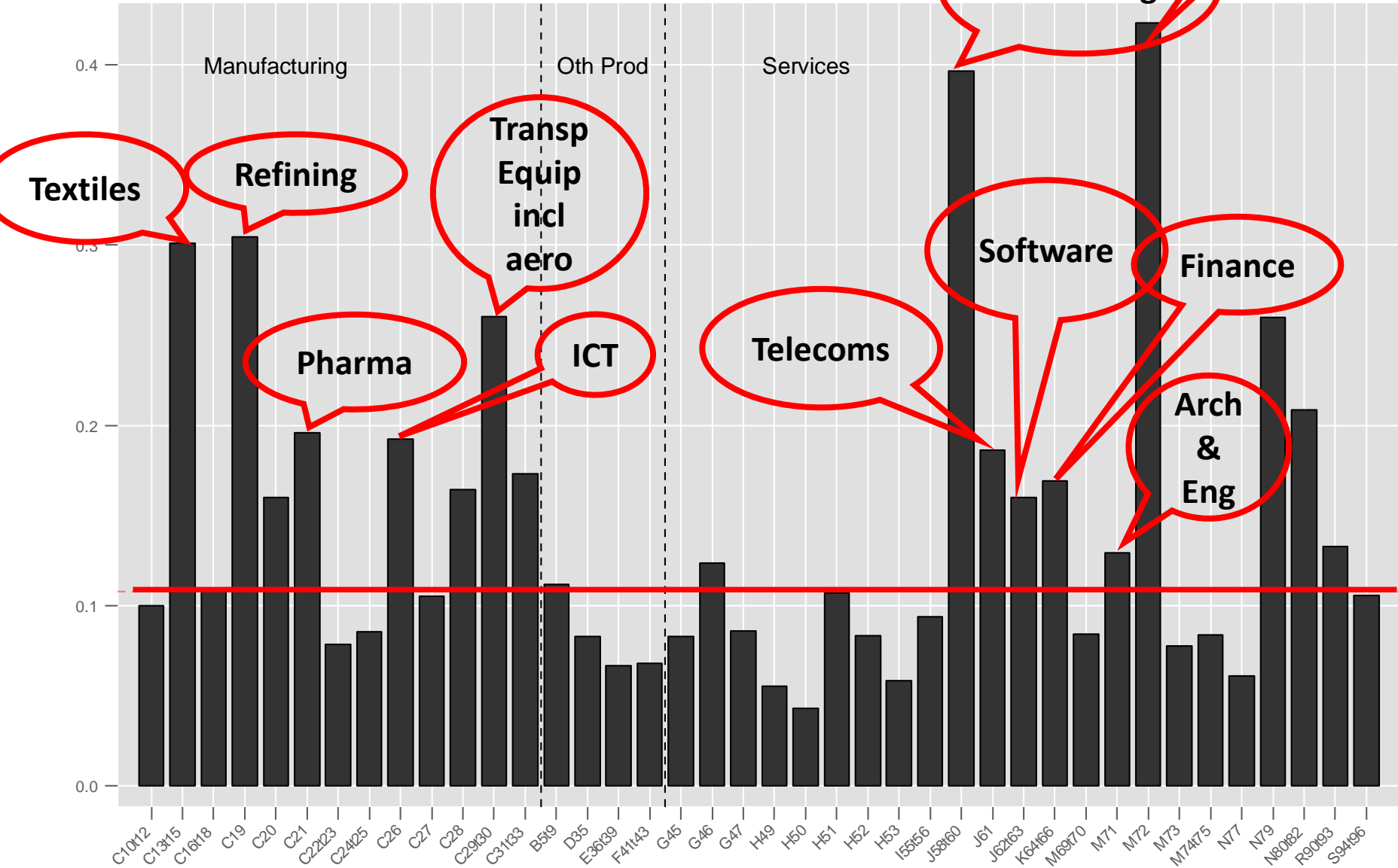
...IPP investment has held up, but is this measurement?



...we need to look at a broader range of intangible investment besides R&D...

Category	Asset	Included in national accounts
Computerised information	Software and databases	✓
Innovative property	R&D	✓
	Artistic originals	✓
	Design	✗
Economic competencies	Firm-specific training	✗
	Branding (advertising and market research)	✗
	Organisational capital	✗

Intangibles are everywhere!



- Intangible-intensity = mean share of intangible capital income in industry output
- Red line = median

R&D and beyond

- Public sector R&D is complementary to private
- Stability/certainty
- AI?
- Wider reach of R&D/intangibles e.g. health?