

Rebooting productivity and innovation policy

Slides for 2nd December 2015 Foundation for Science and Technology debate:
Closing the US/UK Productivity Gap: Connecting Innovation and Research to Economic Output

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The productivity gap with the US (GDP per hour worked, \$US, PPP, US=1)



Source: OECD, http://stats.oecd.org/index.aspx?DatasetCode=PDB_LV

The usual suspects

- Lack of investment
 - Tangible: machines, computers etc.
 - Intangible: R&D
 - private (but tax competition)
 - Public (return to public R&D is about 20%, [Haskel/Hughes](#) work for CASE)
- Lack of skills
 - Public (schools)
 - Private (training)
- Adverse business climate
 - Planning (important for retail productivity)
 - Infrastructure (Heathrow?)
- But...
 - Have these got suddenly worse since 2008?
 - is the modern UK economy captured in investment, R&D and GDP data?

Britain's most famous recent innovation



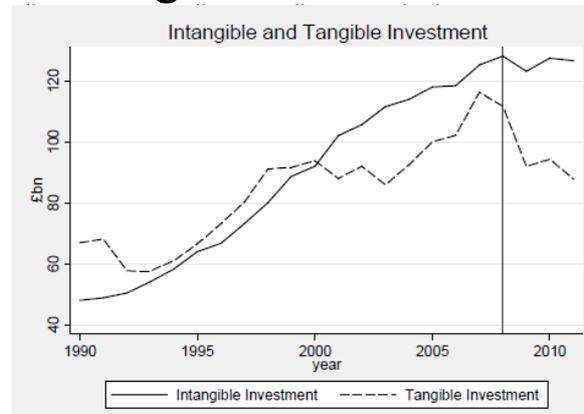
More innovation in Britain



Are these innovations counted in GDP, investment or R&D data?

- Not in R&D
 - R&D does not include design, market research, branding.
 - Banks (until very recently) didn't get an R&D form
- In investment?
 - Software: yes
 - Artistic originals: mostly are
 - R&D only this year
 - Innovation spending like design, market research, training, business process re-engineering, is not.
- Does this matter?
- Depends if intangible investment is quantitatively important...

UK intangible investment exceeds tangible investment



Tangibles: computer hardware, machinery, buildings, vehicles
 Intangibles: software, R&D, artistic originals, design, training, market research, business process re-engineering

Innovation and productivity evidence and policy: a reboot

- So policy and analysis needs a reboot
 - Investment and GDP focus is on tangible investment and some intangibles (software, artistic originals, R&D)
 - That focus does not capture what the UK economy is investing in instead: design, Big Data, marketing, training etc.
- What would happen if we counted these investments?
 - More complete view of investment and GDP
 - Understand why measured investment seems so low and measured GDP has fallen
 - Better grip on policy: it's not just R&D and R&D tax credits
 - It's firm's intangible investment (is banking system fit for purpose?)
 - It's other forms of IP, software and innovation clusters
 - It's not tangible infrastructure, but intangible infrastructure too
 - The science base
 - Broadband