Productivity Issues: Past, Present & Future

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Managers: Main Inhibitors & Drivers of Productivity?!
MOTIVATING QUESTIONS

• Why has productivity growth been disappointing in recent years?

• What can be done?

• What are some of the big future issues in thinking about productivity?
Productivity Puzzle in UK

Specific & General Causes of low productivity

Future Issues: Intangible capital & management
UK Productivity (GDP per hour) 14% below pre-crisis trend relative to trend; 1979-2015

Source: Whole Economy GDP per hour worked, seasonally adjusted. ONS Statistical bulletin, Labour Productivity, Q1 2015, downloaded 8 September 2015. (Q2 2010=100)

Note: predicted value after Q2 2008 is the dashed line calculated assuming a historical average growth rate of 2.2%.
PRODUCTIVITY GROWTH SLOWS EVERYWHERE, BUT UK PARTICULARLY BAD

Figure 4: Constant price GDP per hour worked, actuals and projections

Source: Office for National Statistics
Productivity Puzzle in UK

Specific & General Causes of low productivity

Future Issues: Intangible capital & management
UK-SPECIFIC PRODUCTIVITY PUZZLE

- Huge shock: Slowest recovery of GDP in a Century
- Accelerated fiscal austerity (unlike US). Continuing through at least 2020
  - e.g. ~40% cuts in public investment 2010-12
- UK Labor market reaction critical
  - Real wages fell by about 10% 2008-2014
  - Different from earlier recessions: welfare system more effective & unions weaker
  - Meant unemployment did not rise as much as US & participation rates held up
- Cheap labor & credit crunch hangover means labor-capital substitution, depressing investment
MEDIAN REAL WAGES FELL BY ~10% SINCE 2008

UK EMPLOYMENT RATE AT RECORD HIGH
POST 2009 STAGNATION OF CAPITAL SERVICES PER HOUR

Chart 8

Capital intensity in the UK market sector log scale, 1999=100

GLOBAL LESSONS

• Demand
  – Initial shock, but unlikely to be so persistent? But:
  – Ongoing Eurozone crisis (~50% of UK exports)
  – Tough austerity (through at least 2020)
  – Hysteresis effects, e.g. capital scrapping (Delong & Summers)

• Supply
  – Banking Sector: bad debts not fixed as quickly as US.
    e.g. RBS still in public hands (UK big financial sector)
  – Technology. I find idea of technological slowdown unconvincing
Productivity Puzzle in UK

Specific & General Causes of low productivity

Future Issues: Intangible capital
INCREASING IMPORTANCE OF INTANGIBLES

• Corrado, Hulten & Sichel (2007) - will cause mismeasurement of TFP growth (direction is ambiguous, but could be part of slowdown)

• Two types of intangible capital:

1. Technological Innovation – ICT, R&D, IP

2. “Economic Competencies”
   – Evidence of importance of management practices for productivity across firms & countries

Medium sized manufacturing firms (50-5,000 workers, median≈250)
Now extended to Hospitals, Retail, Schools, etc.
Average Management Scores by Country

Note: Unweighted average management scores (raw data) with number of observations. All waves pooled (2004-2014); Source: Bloom, Sadun & Van Reenen (2015)
Large variation of firm management within countries

Notes: Firms with 50 to 5000 employees randomly surveyed from country population.
Firm TFP strongly increasing in management

Management is an average of all 18 questions (set to sd=1). TFP residuals of sales on capital, labor, skills controls plus a full set of SIC-3 industry, country and year dummies controls. N=8314
Country Total Factor Productivity (TFP) relative to US

Source: Bloom, Sadun & Van Reenen (2015)

Notes: TFP gaps from Penn World Tables; fraction accounted for by management uses the weighted average management scores and an assumed 10% impact of management on TFP
Management accounts for ~30% of TFP Gap with US

Source: Bloom, Sadun & Van Reenen (2015)

Notes: TFP gaps from Penn World Tables; fraction accounted for by management uses the weighted average management scores and an assumed 10% impact of management on TFP
EU did not enjoy the 1995-2003 acceleration in US productivity growth

Weaker product & labor market competition so less flexible management means slower to pick up on technological opportunities from ICT

Bloom, Sadun & Van Reenen (2012) estimate 50% of slower EU performance was management related
EUROPEAN CATCH-UP WITH US REVERSED IN MID 1990S
Average Labour Productivity (GDP per worker) Growth before and after the Global Financial Crisis


US

EU

JAPAN

Source: Conference Board (2014), TED Table 9 derived
https://www.conference-board.org/retrievfile.cfm?filename=SummaryTables_Jan20141.pdf&type=subsite
MANAGEMENT & PRODUCTIVITY GROWTH

• Weaker product & labor market competition so less flexible management means slower to pick up on technological opportunities from ICT

• Bloom, Sadun & Van Reenen (2012) estimate 50% of slower EU performance was management related
CONCLUSIONS

• Slowing productivity growth post crisis has hit some countries (e.g. UK) more than others
  – Labor market flexibility helped
  – Unsupportive fiscal policy in face of enormous negative shock
  – But puzzle deepens if it persists

• One key issue for understanding productivity is intangibles
  – “hard technologies”
  – “soft technologies” (e.g. management)
  – Why patterns of diffusion of intangible differ so much across countries & firms?
FURTHER READING

• CEP Election Analysis Series
  http://cep.lse.ac.uk/_new/publications/series.asp?prog=CEPEA

• World Management Survey
  http://worldmanagementsurvey.org/

• LSE Growth Commission Final Report
Europe about 30% lower income (GDP per head) than US

Source: Conference Board (2014), TED Table 8 derived, EU-15
https://www.conference-board.org/retrievefile.cfm?filename=SummaryTables_Jan20141.pdf&type=subsite
It isn’t just less jobs and more holidays. EU productivity **22%** lower than US

Source: Conference Board (2014), TED Table 8 derived, EU-15
https://www.conference-board.org/retrievelfile.cfm?filename=SummaryTables_Jan20141.pdf&type=subsite
Average Labour Productivity (GDP per worker)
Growth before and after the Global Financial Crisis

Source: Conference Board (2014), TED Table 9 derived
https://www.conference-board.org/retrievelfile.cfm?filename=SummaryTables_Jan20141.pdf&type= subsite
Average Labour Productivity (GDP per worker) Growth before and after the Global Financial Crisis

Pre-crisis 1997-2007  
Post-crisis 2007-2014

Source: Conference Board (2014), TED Table 9 derived
https://www.conference-board.org/retrievfile.cfm?filename=SummaryTables_Jan20141.pdf&type=subsite
Foreign Multinationals appear to transplant management overseas

Source: Bloom, Sadun and Van Reenen (2015) “Management as a Technology”
THINGS PICKING UP IN 2015Q2 – TREND OR BLIP?

Figure 5: Market sector output per hour
Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 2 (Apr to Jun) 2015

Source: Office for National Statistics
Management accounts for ~30% of TFP Gap with US

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<th>Country</th>
<th>Weighted Mng. Gap with US</th>
<th>TFP Gap With US</th>
<th>% TFP due to Management</th>
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PRODUCTIVITY IN LEVELS: THE GAP

Source: ONS International Comparisons of Productivity, First Estimates, 2013

Notes: Current price GDP per hour worked from ONS data. Average refers to G7 average, excluding UK