Productivity Issues: Past, Present & Future

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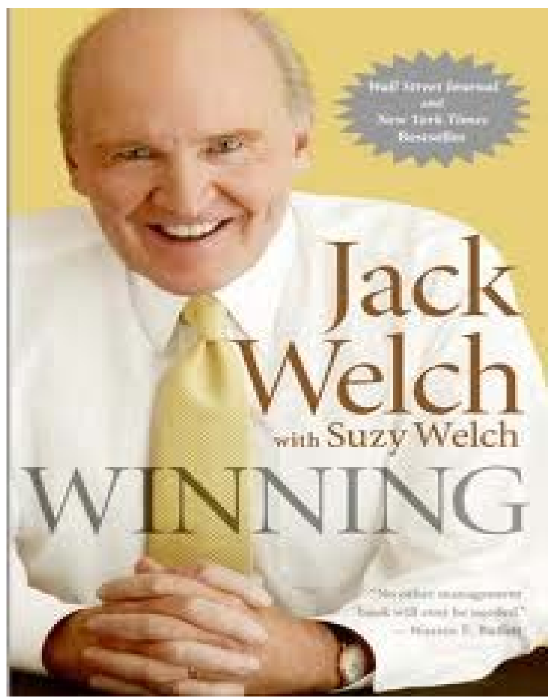
Peterson Institute, November 2015

LSE

CENTRE *for* ECONOMIC PERFORMANCE

Managers: Main Inhibiters & Drivers of Productivity?!



MOTIVATING QUESTIONS

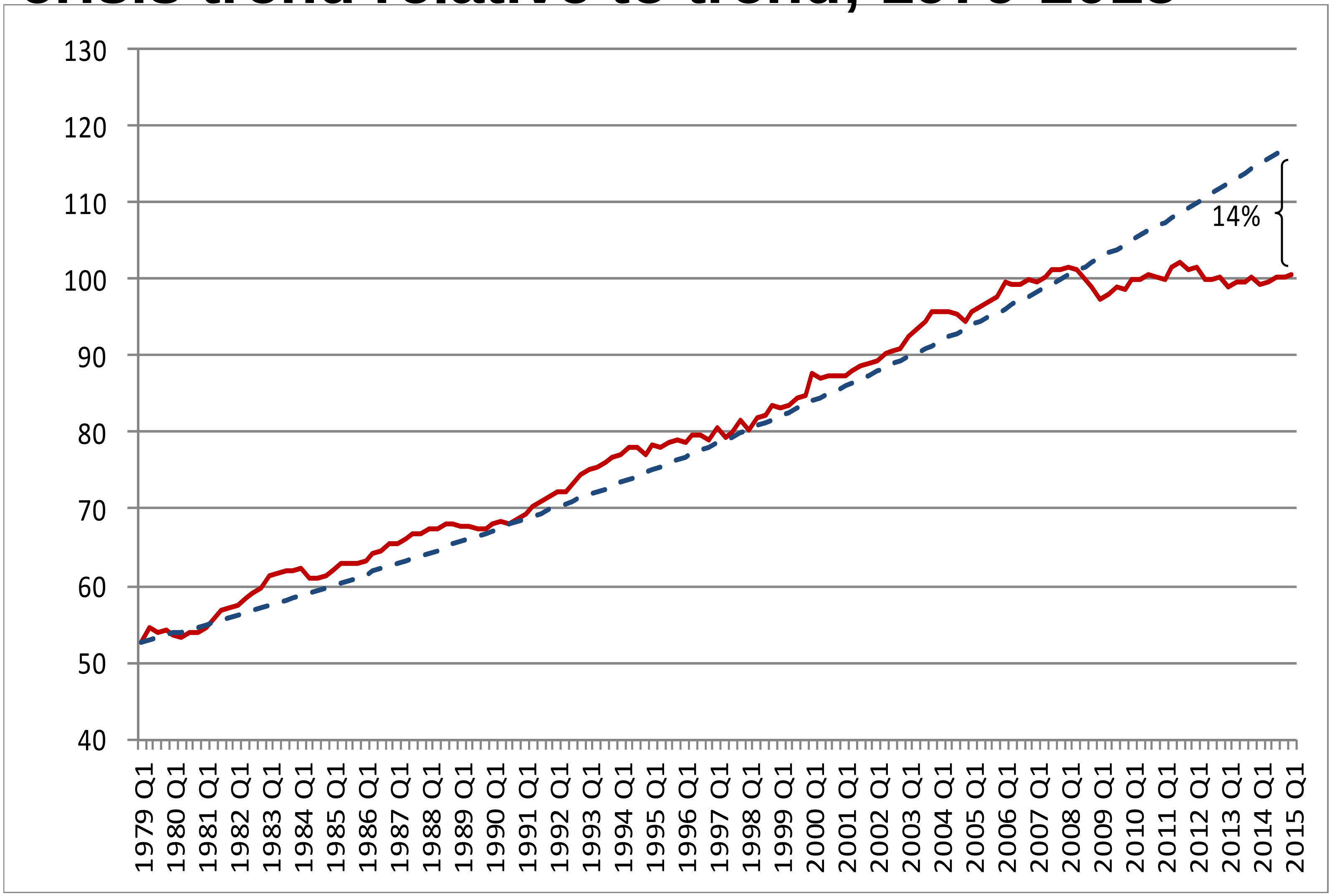
- Why has productivity growth been disappointing in recent years?
- What can be done?
- What are some of the big future issues in thinking about productivity?

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

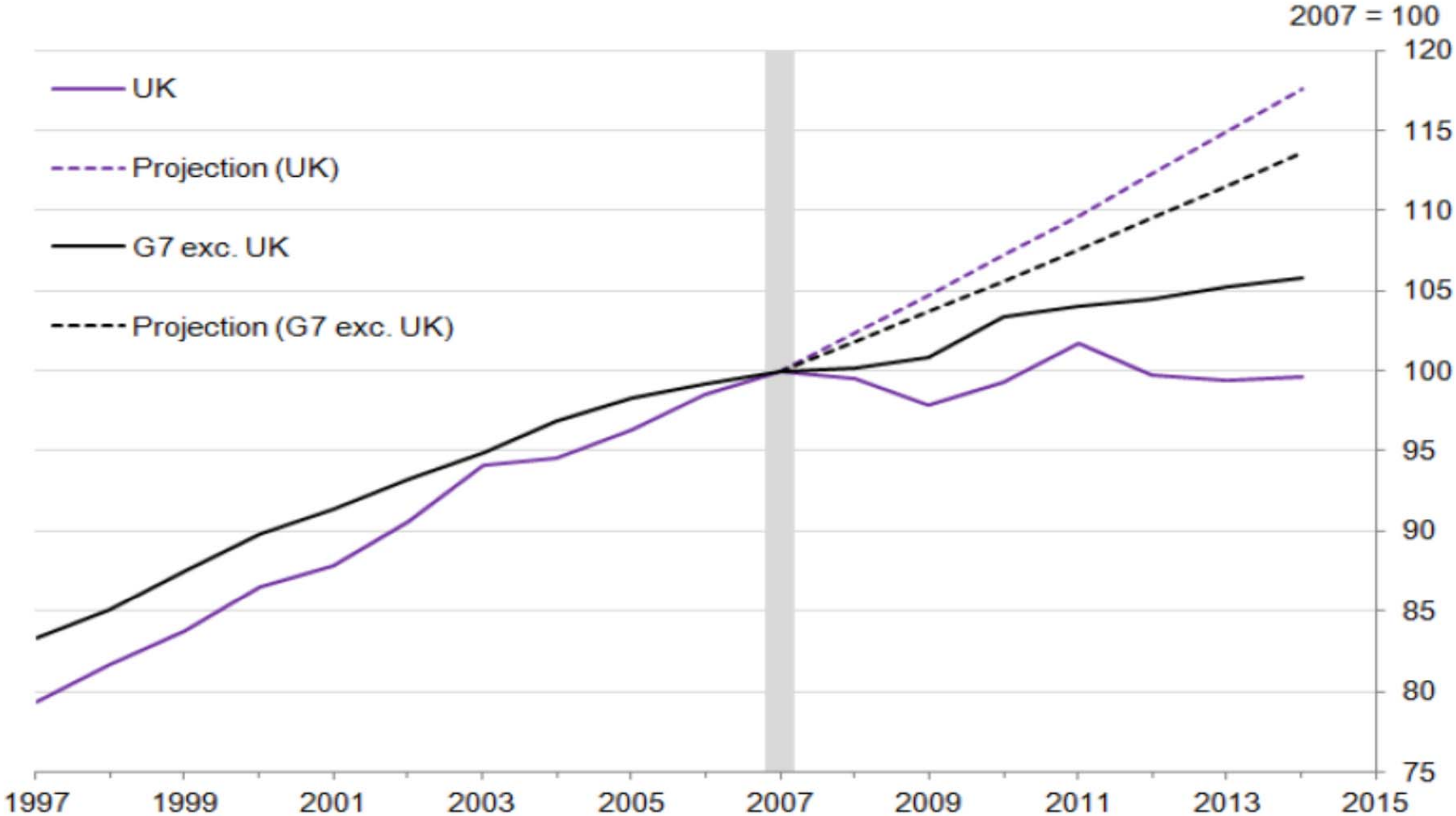


Source: Whole Economy GDP per hour worked, seasonally adjusted. ONS Statistical bulletin, Labour Productivity, Q1 2015, downloaded 8 September 2015. (Q2 2010=100)

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

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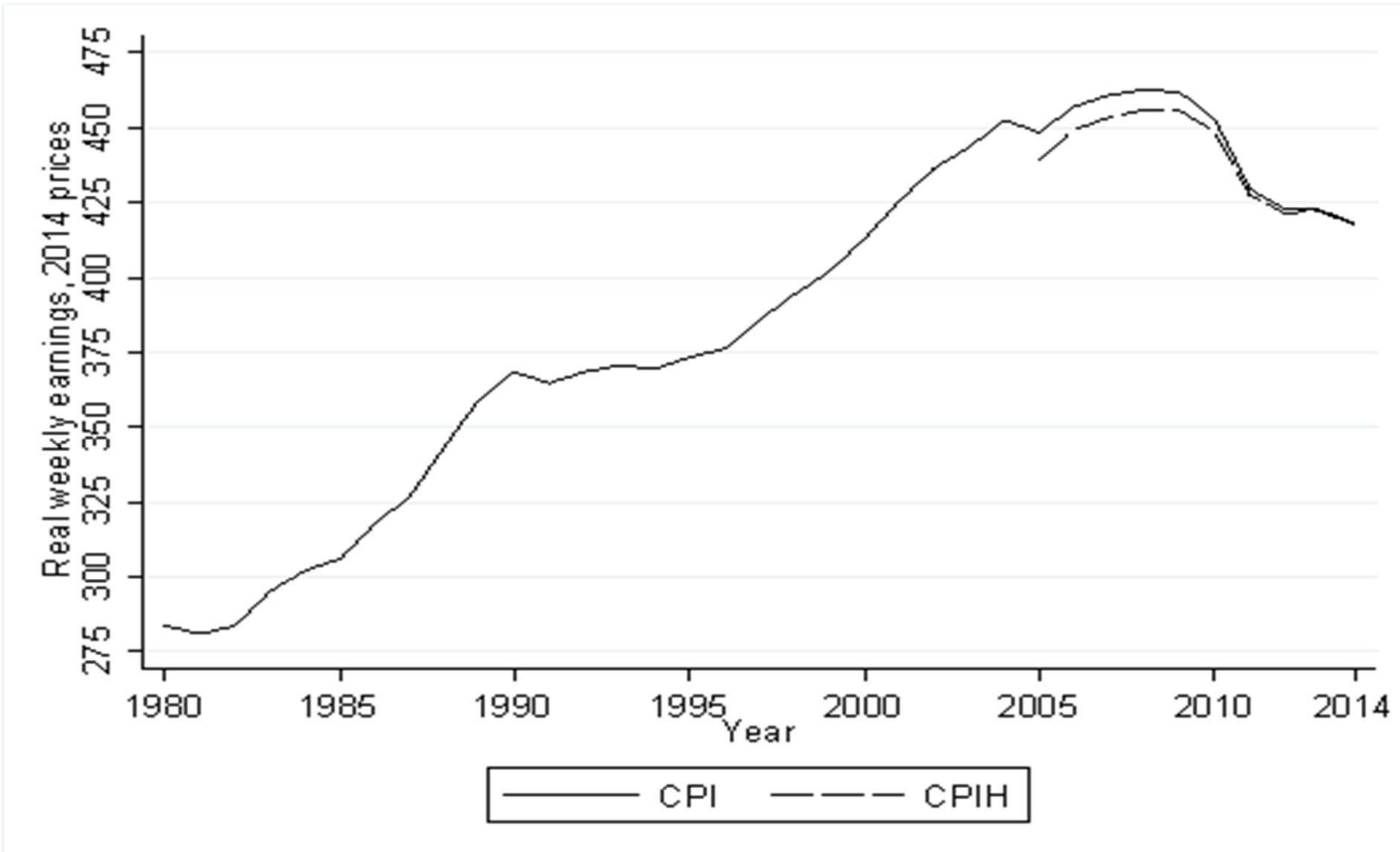
UK-SPECIFIC PRODUCTIVITY PUZZLE

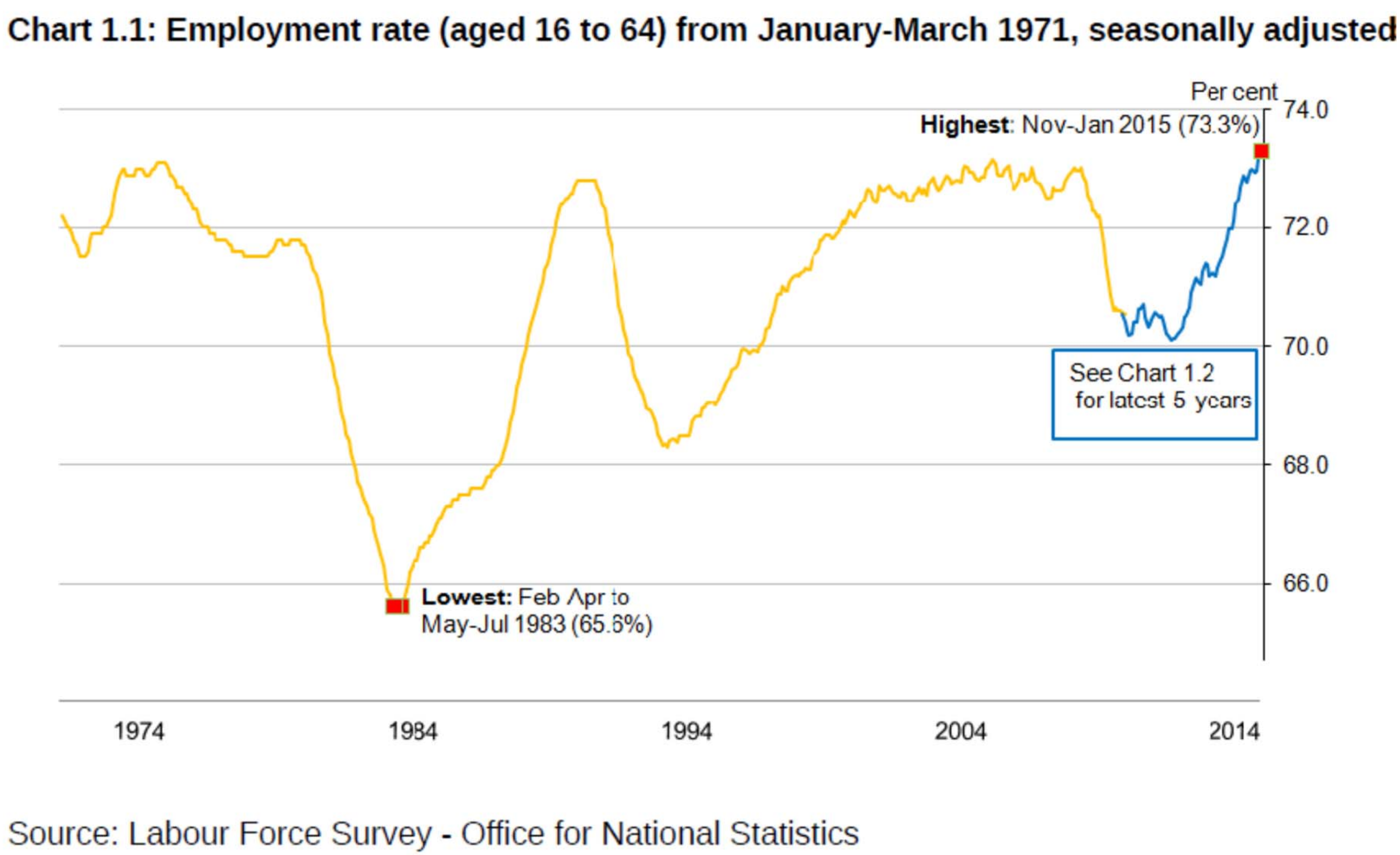
- Huge shock: Slowest recovery of GDP in a Century
- Accelerated fiscal austerity (unlike US). Continuing through at least 2020
  - e.g. ~40% cuts in public investment 2010-12
- UK Labor market reaction critical
  - Real wages fell by about 10% 2008-2014
  - Different from earlier recessions: welfare 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



Notes: Annual Survey of Hours and Earnings (ASHE) weekly earnings numbers, updated from Gregg et al (2014a, 2014b), deflated by CPI and CPIH (from 2005).

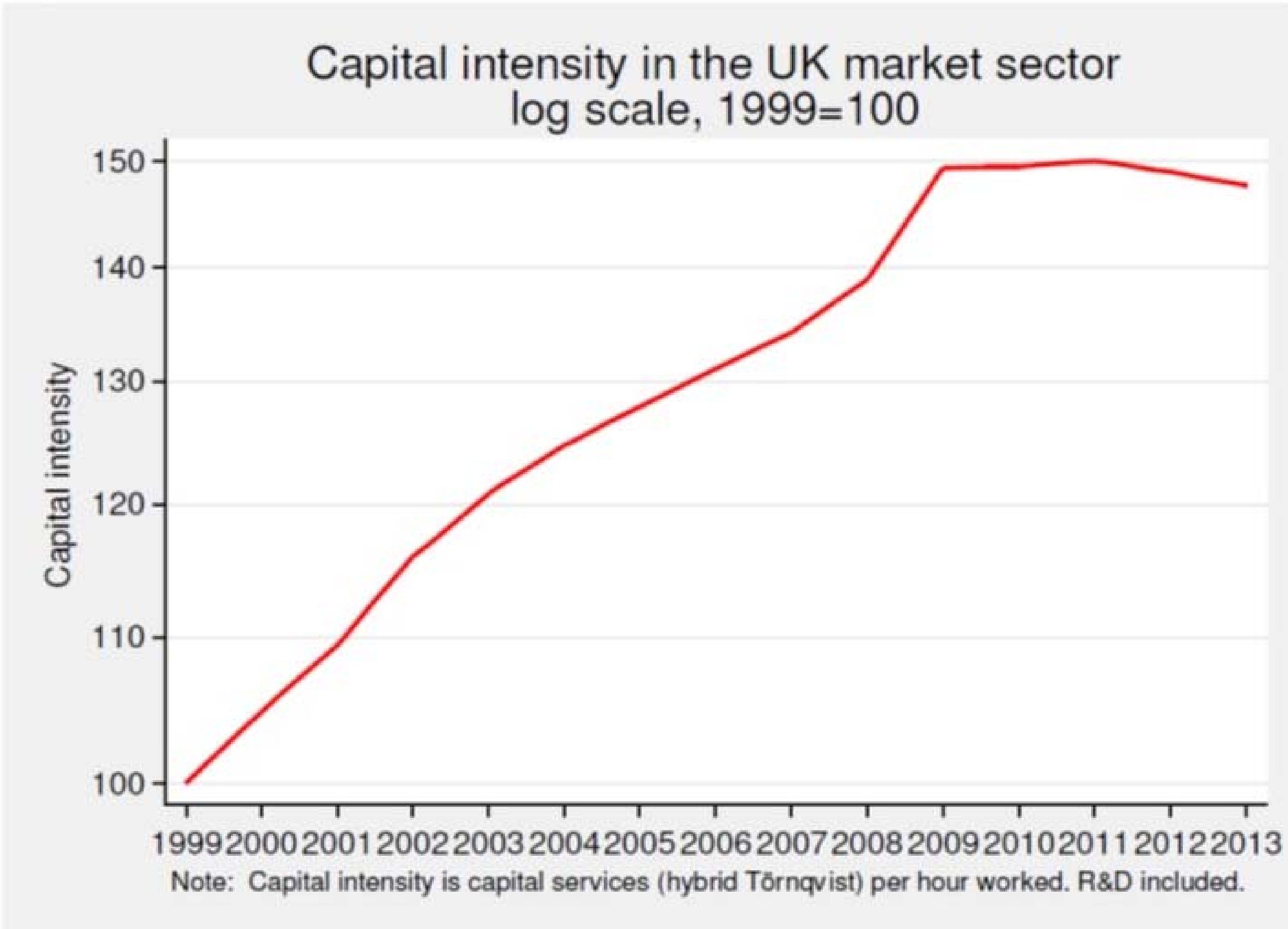
UK EMPLOYMENT RATE AT RECORD HIGH



Source: ONS LFS (2015, March) *http://www.ons.gov.uk/ons/dcp171*

POST 2009 STAGNATION OF CAPITAL SERVICES PER HOUR

Chart 8



Source: Oulton and Wallis (2015) http://cep.lse.ac.uk/pubs/download/dp1342.pdf

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)
  - Hysterisis 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

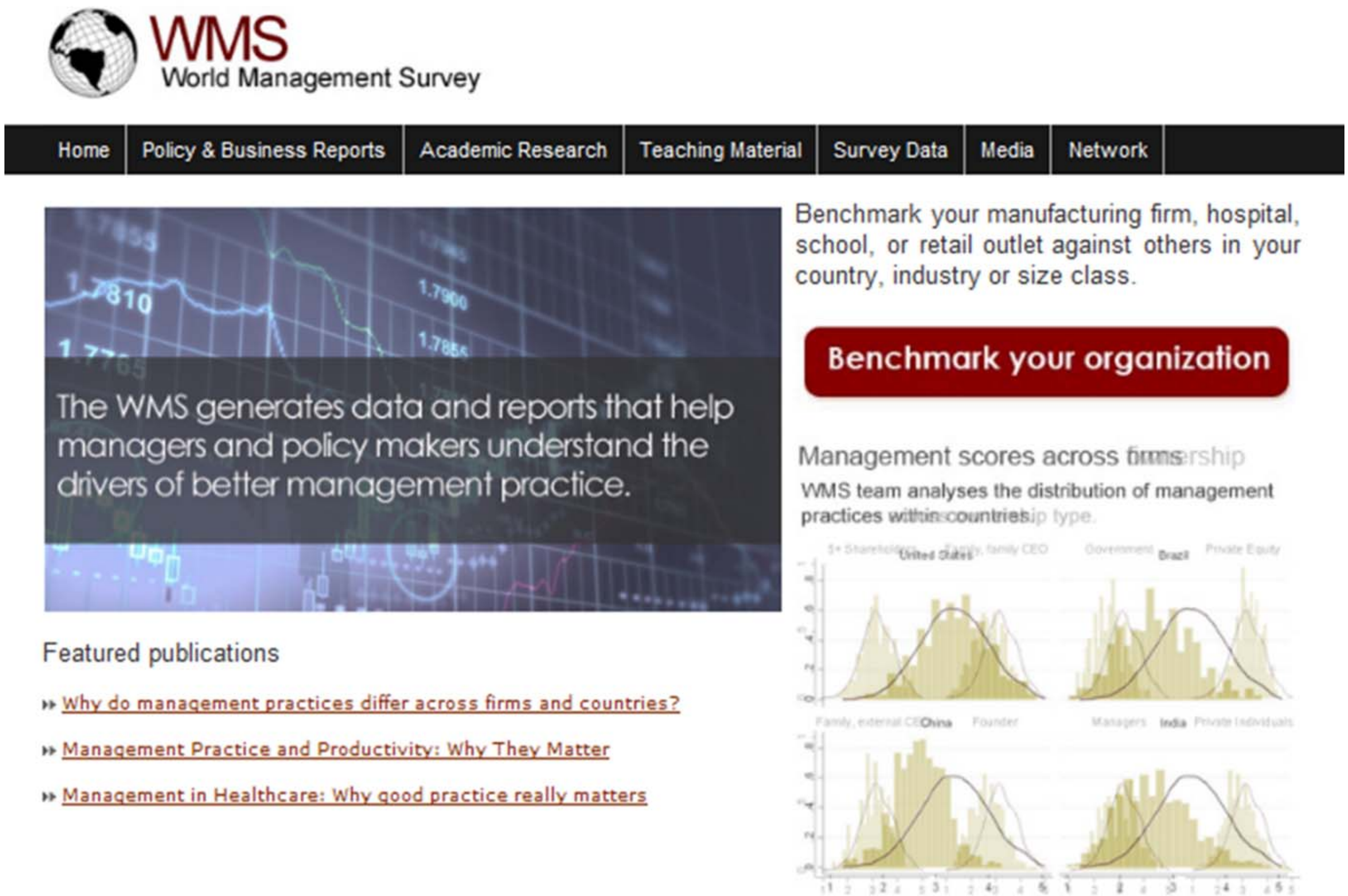
- Corrado, Hulten & Sichel (2007) - will cause mismeasurement of TFP growth (direction is ambiguous, but could be part of slowdown)

- 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
   - Bloom & Van Reenen (2007) World Management Survey (WMS)

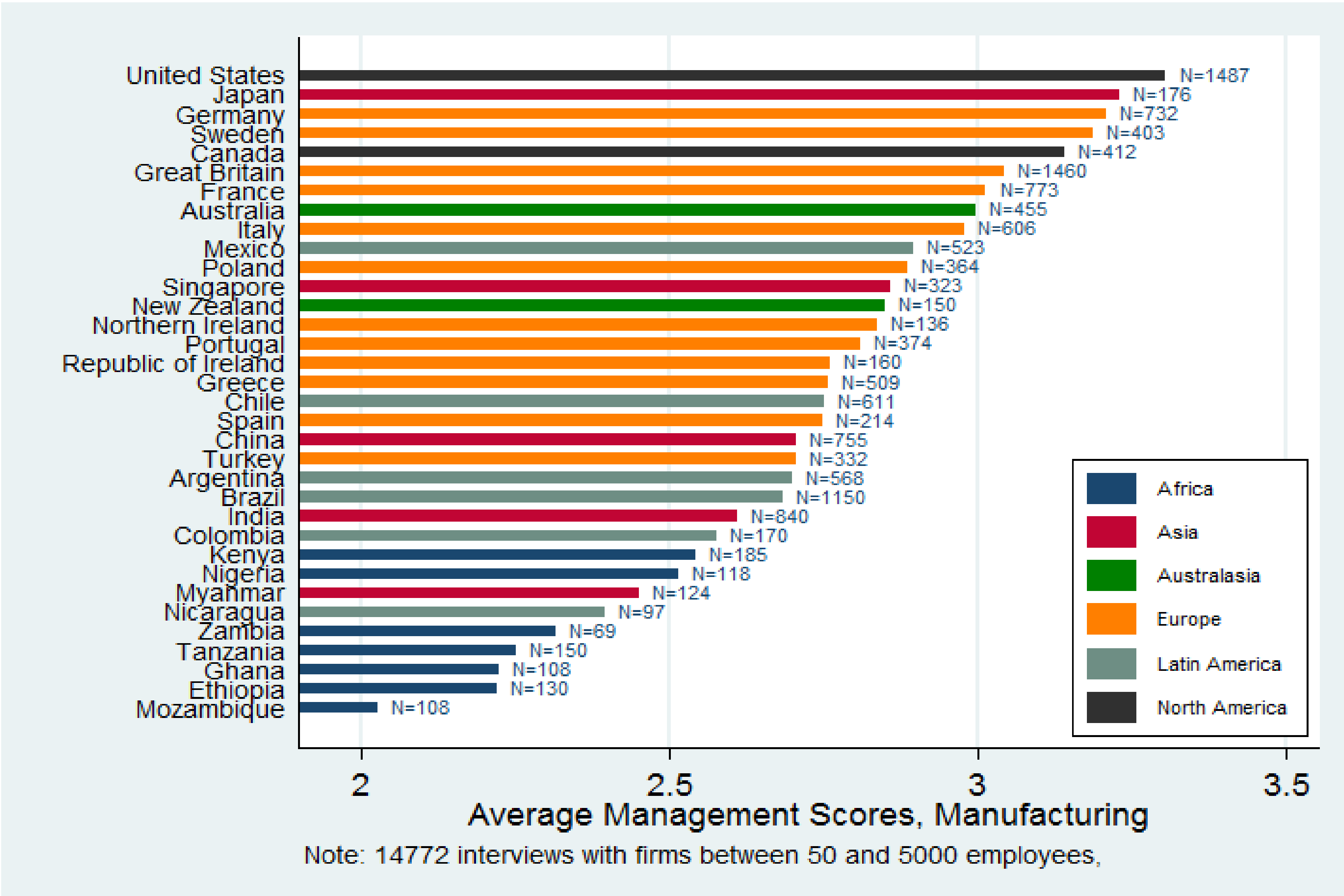
<u>World Management Survey</u> (12,342 firms, 4 major waves: 2004, 2006, 2009, 2014; 34 countries)



Medium sized manufacturing firms(50-5,000 workers, median≈250)

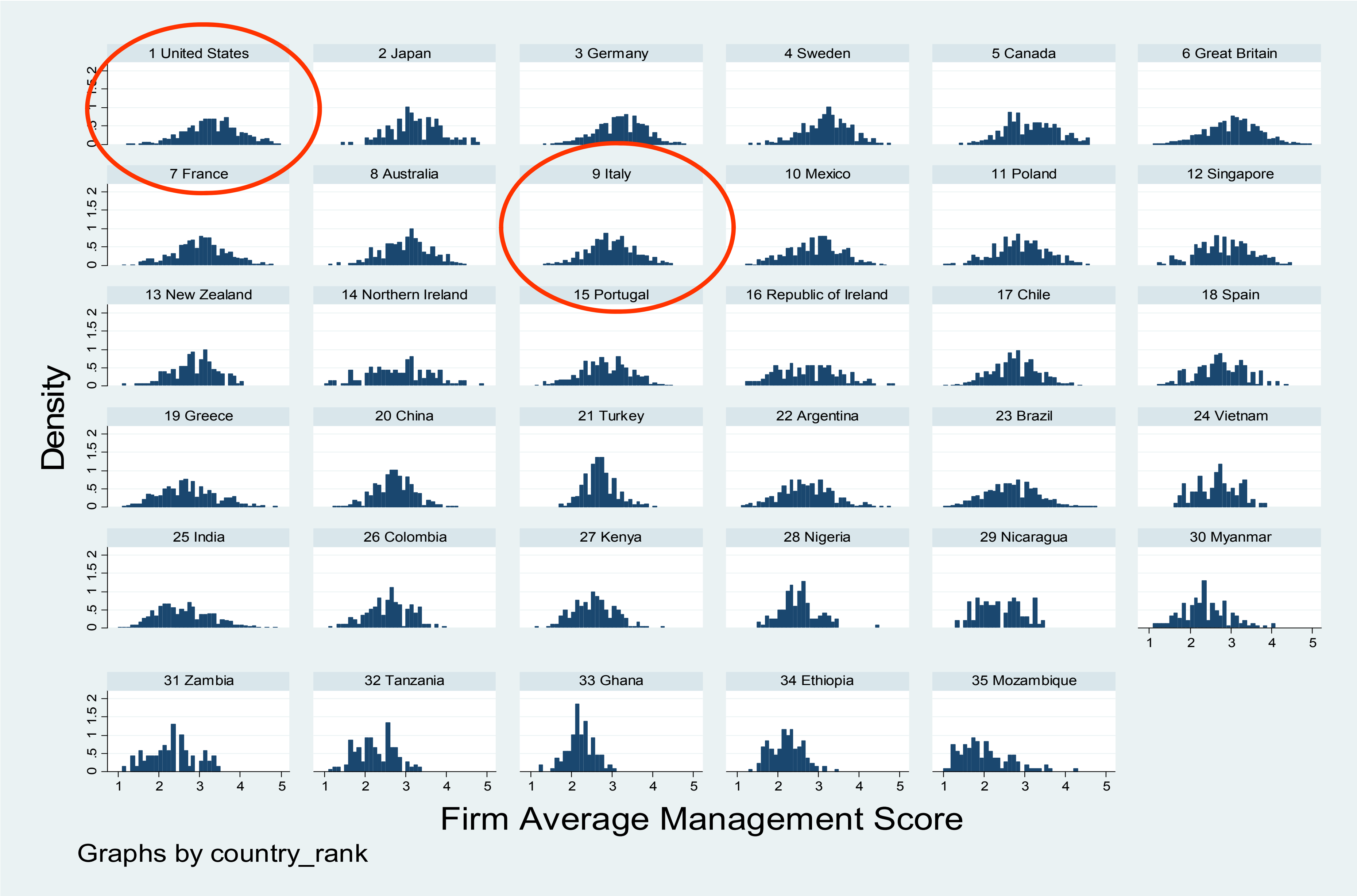
Now extended to Hospitals, Retail, Schools, etc.

Average Management Scores by Country



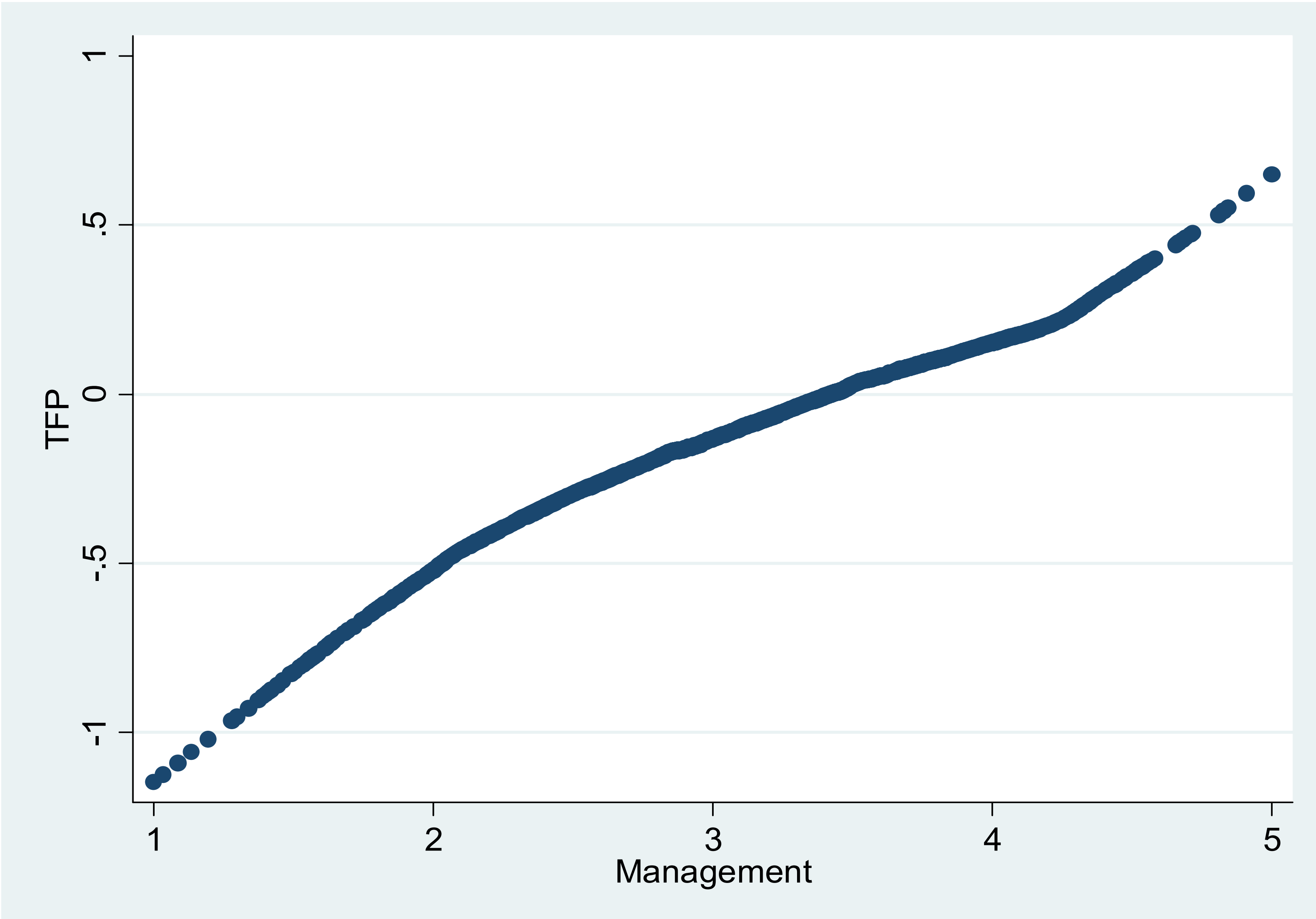
Note: Unweighted average management scores (raw data) with number of observations. All waves pooled (2004-2014); **Source**: Bloom, Sadun & Van Reenen (2015)

Large variation of firm management within countries



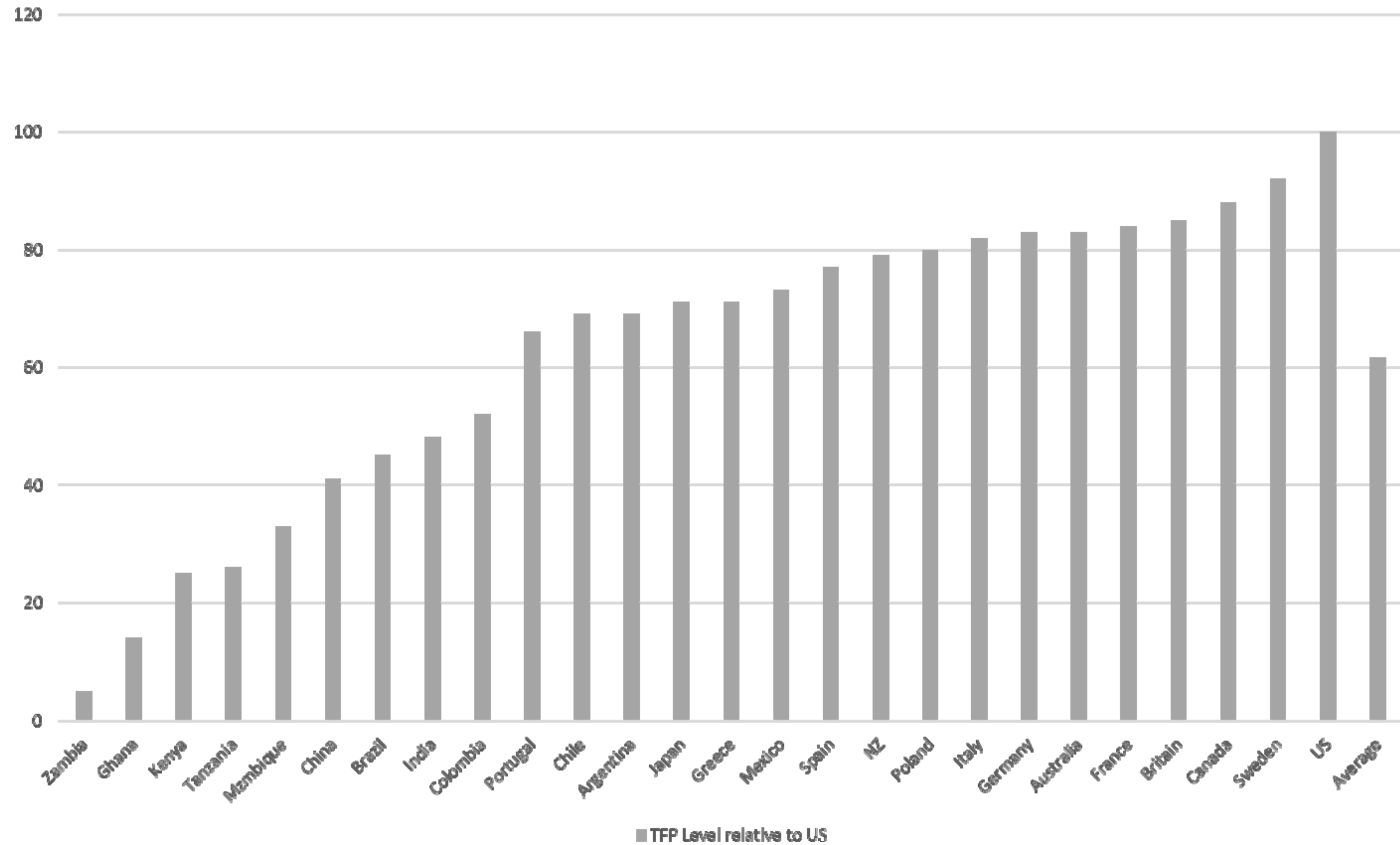
Notes: Firms with 50 to 5000 employees randomly surveyed from country population.

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

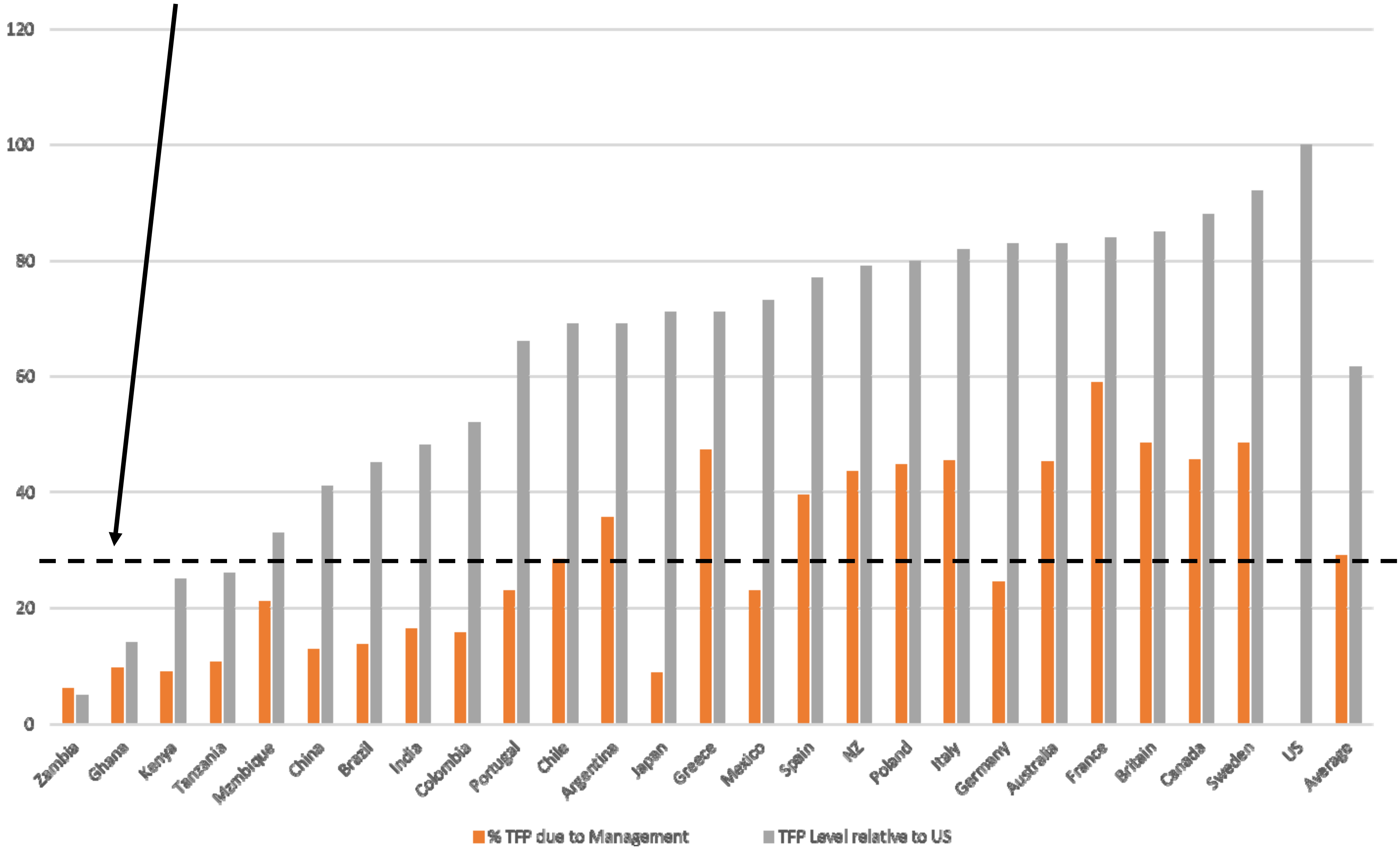
Country Total Factor Productivity (TFP) relative to US



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



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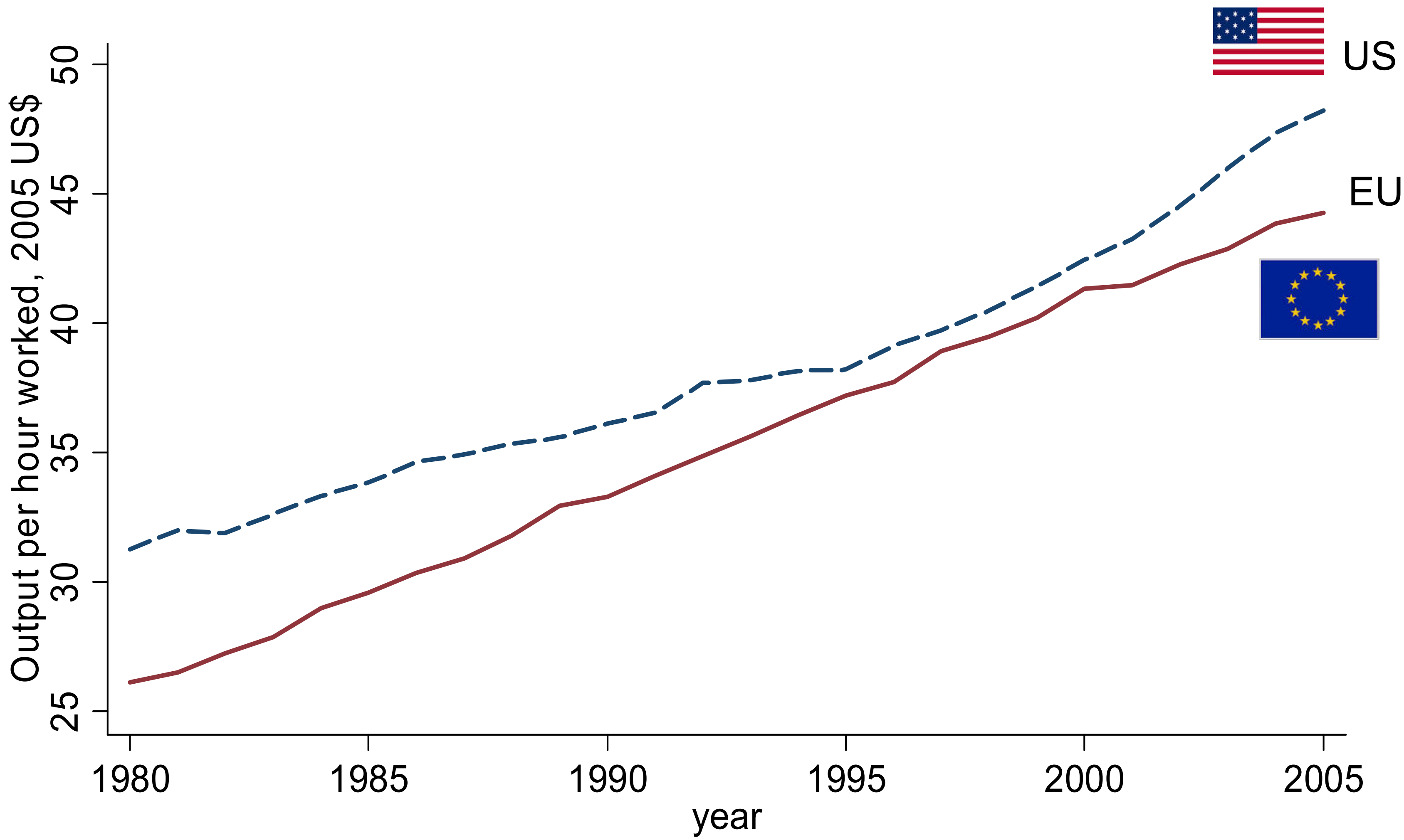
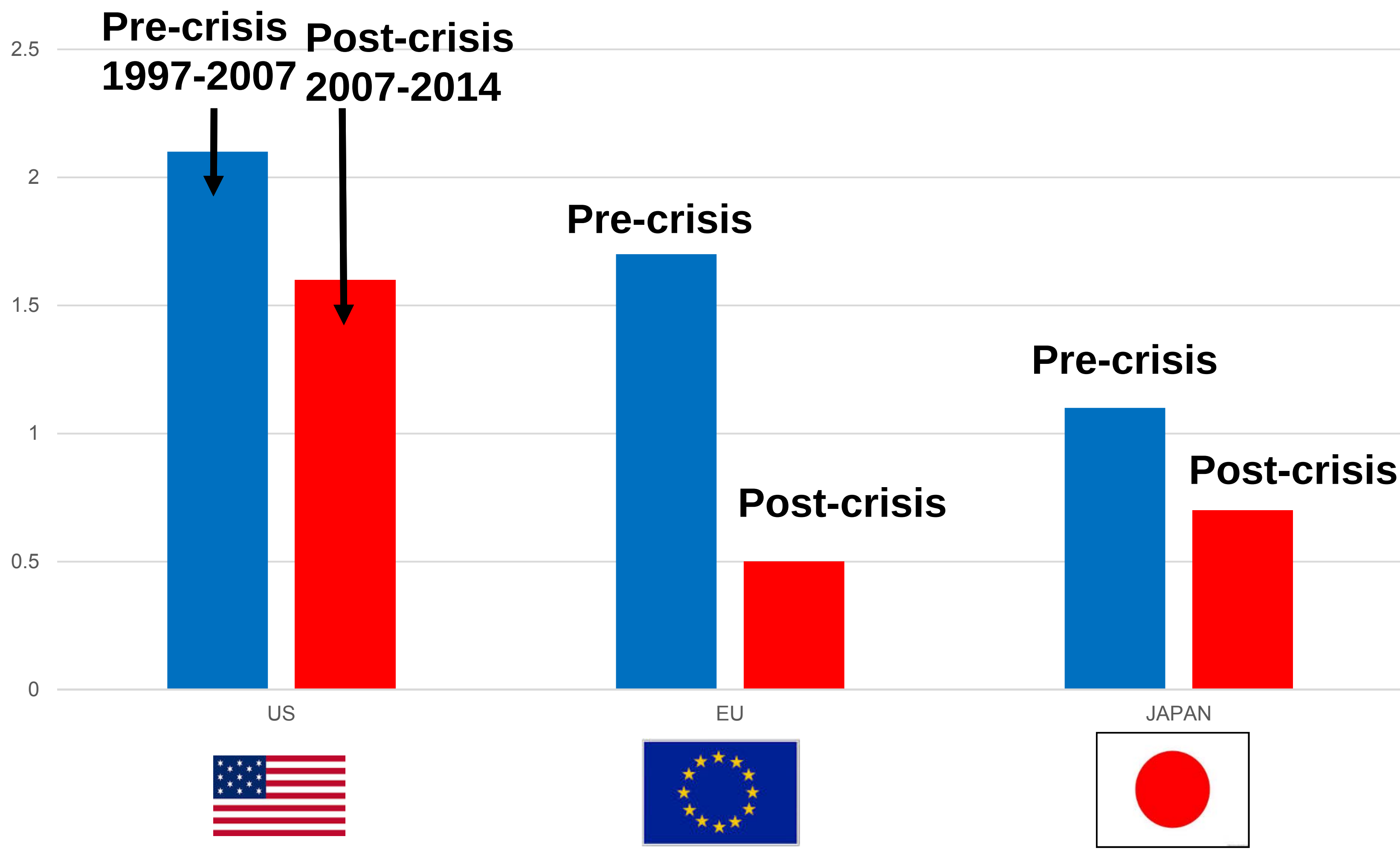
MANAGEMENT & PRODUCTIVITY GROWTH

- 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



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

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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

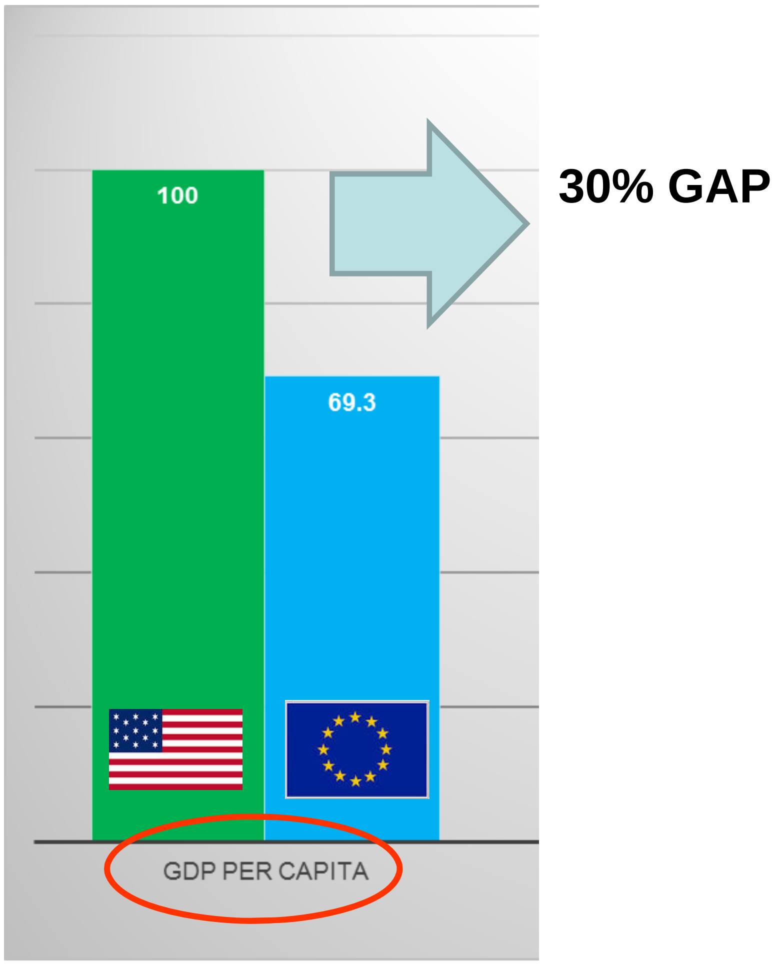
- One key issue for understanding productivity is intangibles
  - “hard technologies”
  - “soft technologies” (e.g. management)
  - Why patterns of diffusion of intangible differ so much across countries & firms?

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

http://www.lse.ac.uk/researchAndExpertise/units/growthCommission/documents/pdf/GCReportSummary.pdf

Europe about 30% lower income (GDP per head) than US



Source: Conference Board (2014), TED Table 8 derived, EU-15
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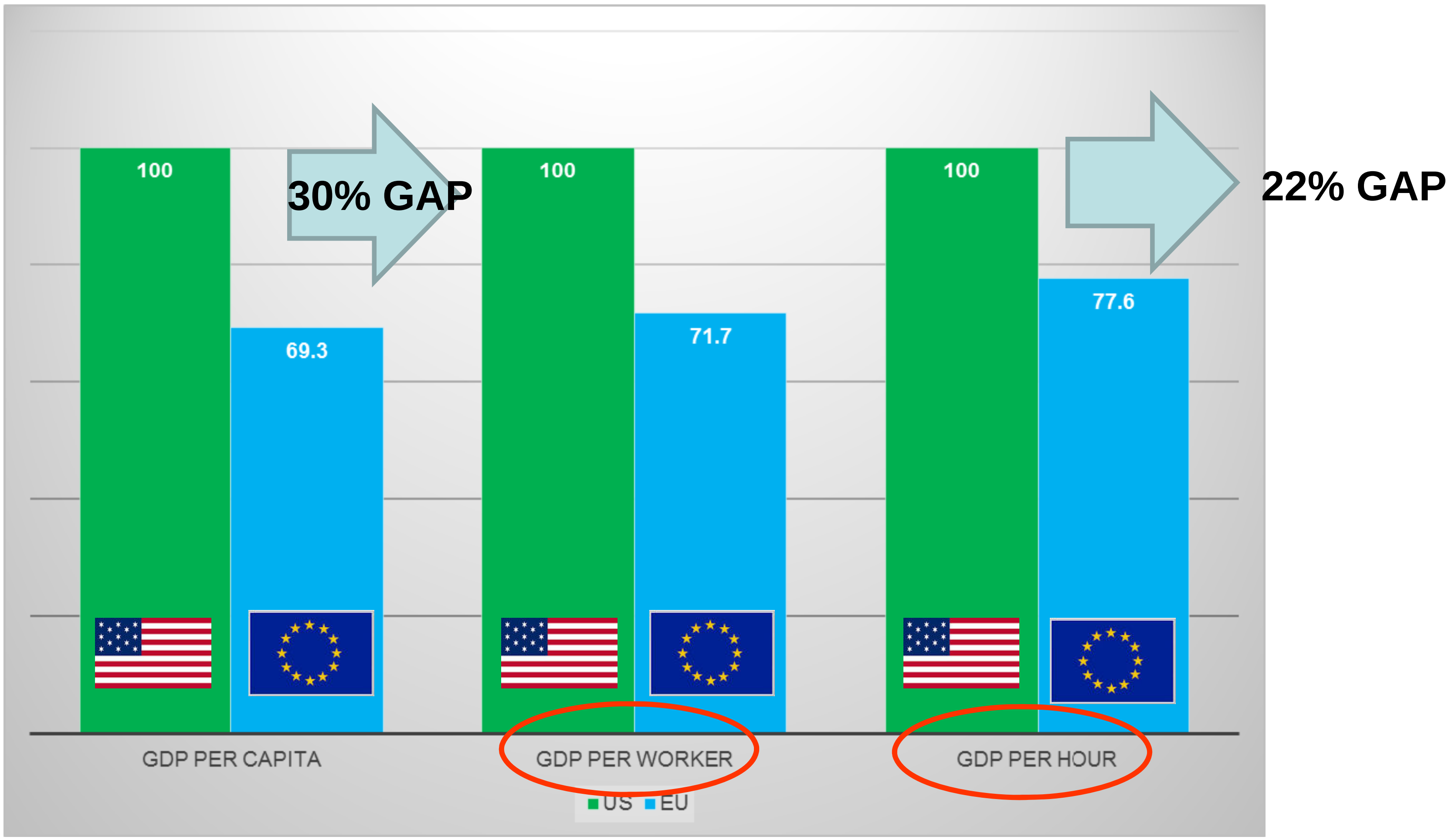
It isn't just less jobs and more holidays. EU <u>productivity</u> 22% lower than US



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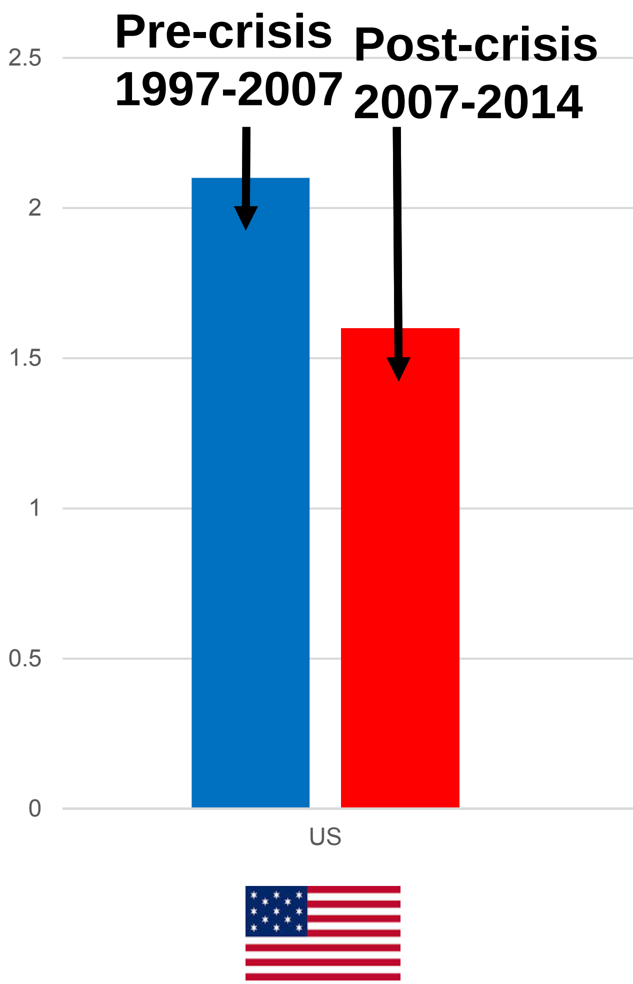

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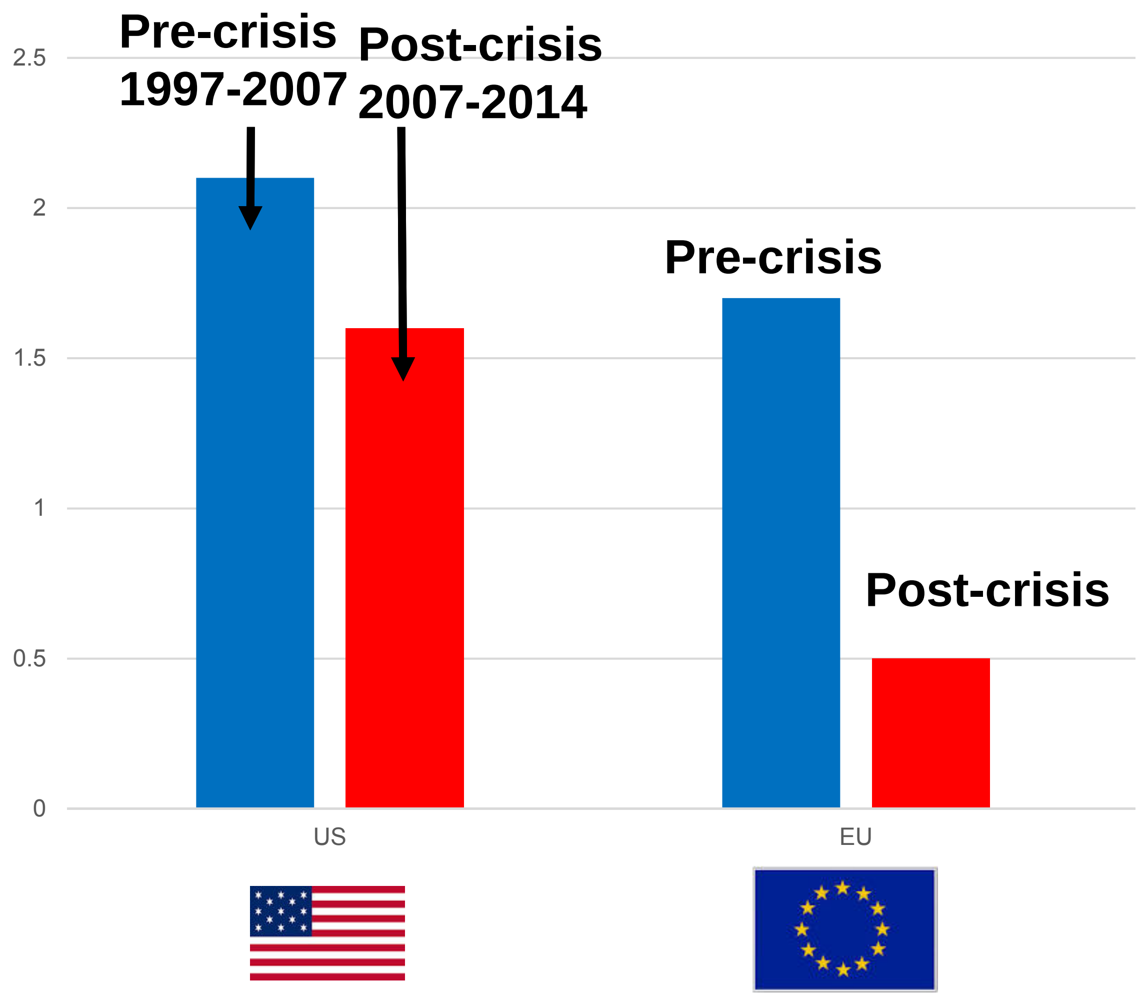

Source: Conference Board (2014), TED Table 9 derived
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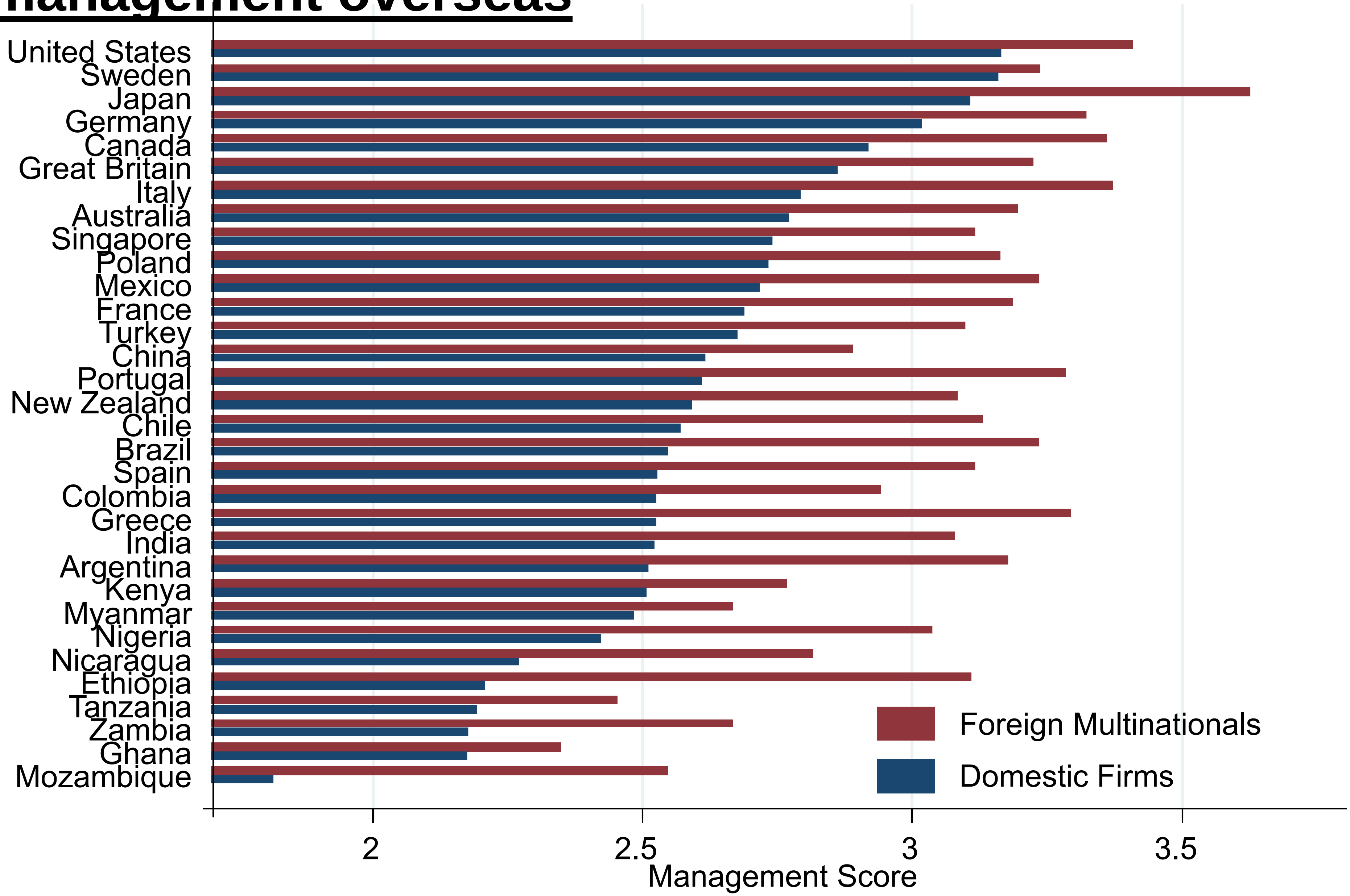
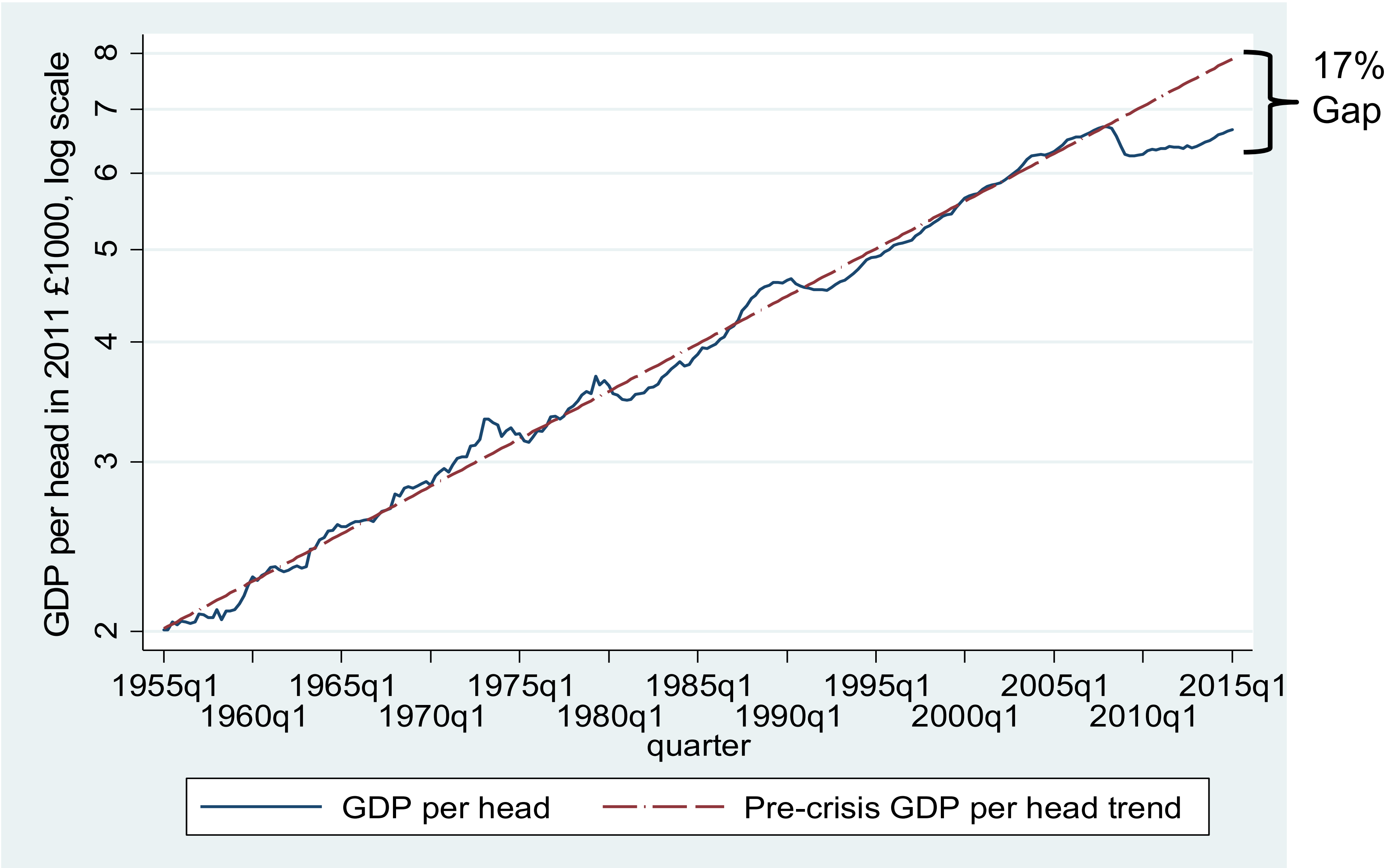
Foreign Multinationals appear to transplant management overseas



Source: Bloom, Sadun and Van Reenen (2015) “Management as a Technology”

THE GROWTH PROBLEM UK GDP PER CAPITA, 1955-2015

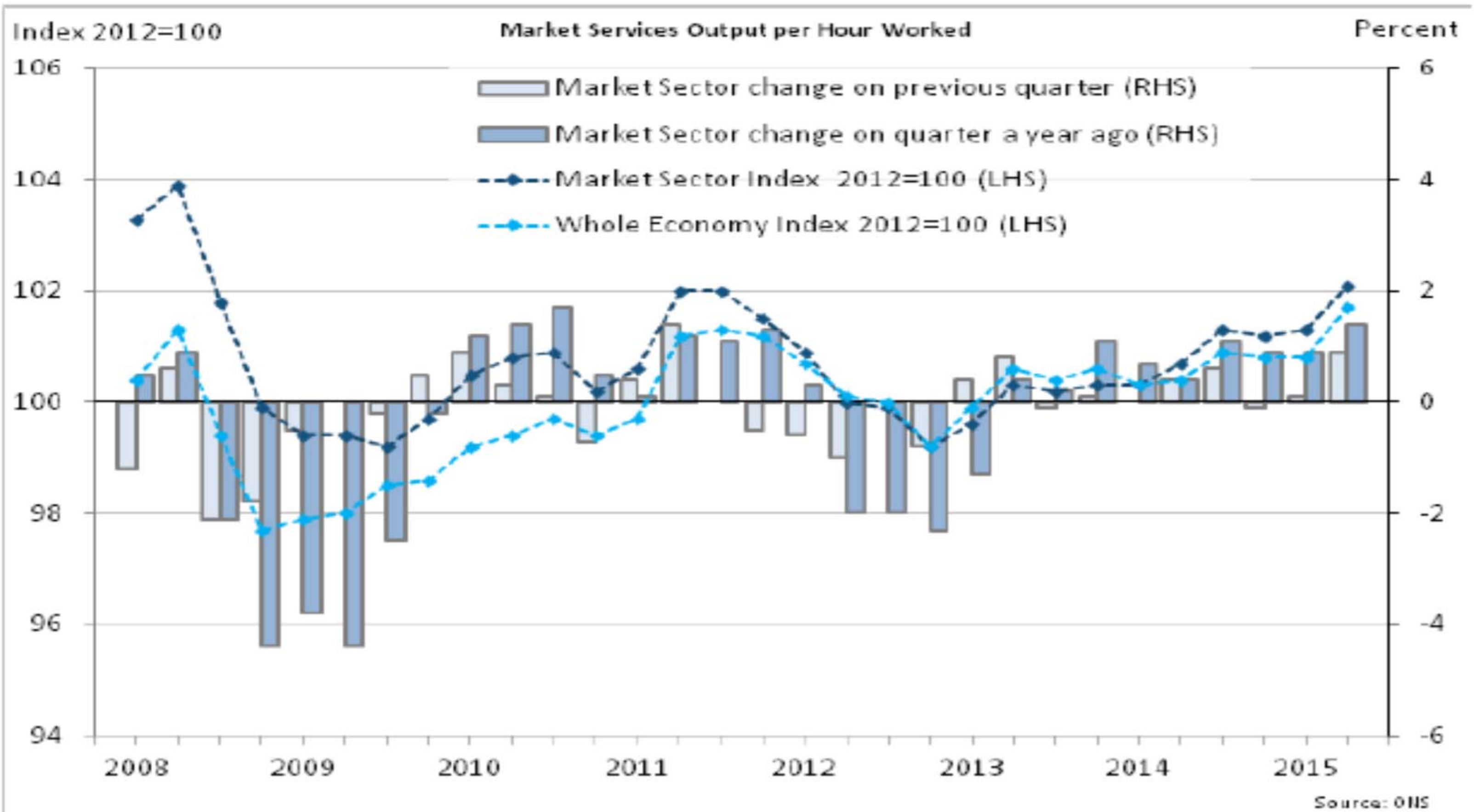


Notes: Trend line at 0.57% per quarter (linear trend from 1955Q1 to 2008Q1 when recession began). Quarterly GDP (in £1000) per head (ONS series IHXW), market prices (downloaded April 28th 2015) http://www.ons.gov.uk/ons/datasets-and-tables/data-selector.html?cdid=IHXW&dataset=ukea&table-id=X11. 2015Q1 estimated using GDP growth http://www.ons.gov.uk/ons/dcp171778_402219.pdf

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

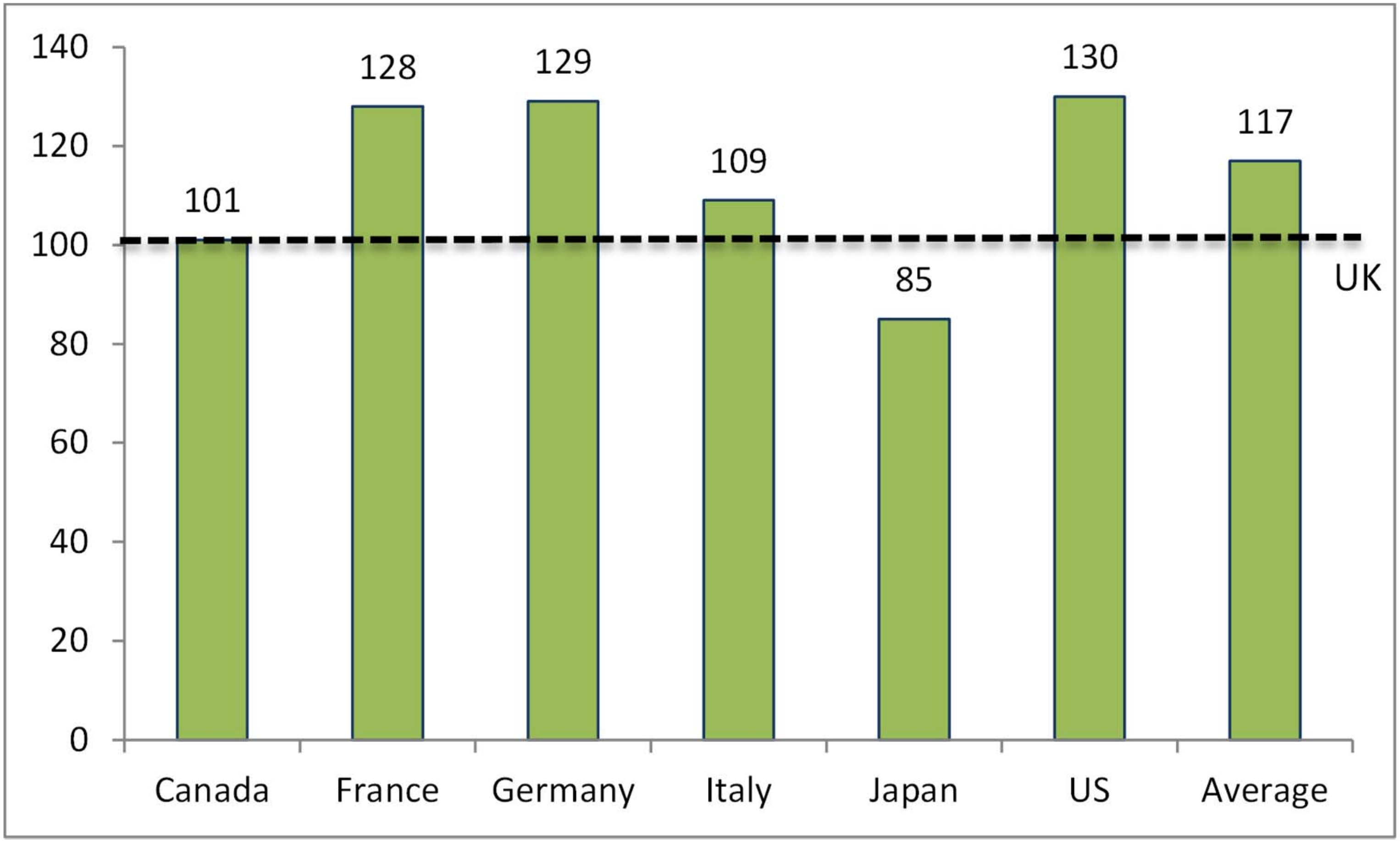


Source: Office for National Statistics

Management accounts for ~30% of TFP Gap with US

	Weighted Mng. Gap with US	TFP Gap With US	% TFP due to Management
US	0	1	
Japan	-.3	.71	8.82
Sweden	-.39	.92	48.46
Germany	-.46	.83	24.46
Canada	-.59	.88	45.55
Britain	-.71	.85	48.5
Mexico	-.74	.73	23.04
Australia	-.86	.83	45.24
Italy	-.92	.82	45.4
Portugal	-.95	.66	23.04
Poland	-.98	.8	44.74
France	-1.02	.84	58.87
Colombia	-1.03	.52	15.69
NZ	-1.05	.79	43.54
Chile	-1.05	.69	28.4
Spain	-1.05	.77	39.41
Brazil	-1.09	.45	13.75
China	-1.16	.41	12.89
India	-1.19	.48	16.38
Kenya	-1.26	.25	9.04
Argentina	-1.34	.69	35.64
Tanzania	-1.43	.26	10.69
Greece	-1.64	.71	47.28
Zambia	-1.84	.05	6.06
Ghana	-1.93	.14	9.64
Mzmbique	-2.33	.33	21.13
Average			**29.03**

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