

# MANAGEMENT QUALITY IN THE UK: POLICY IMPLICATIONS

John Van Reenen (CEP & LSE)

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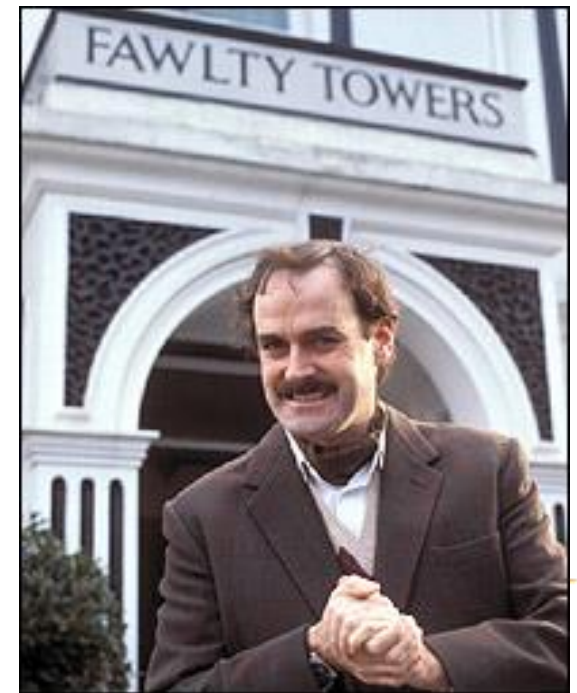
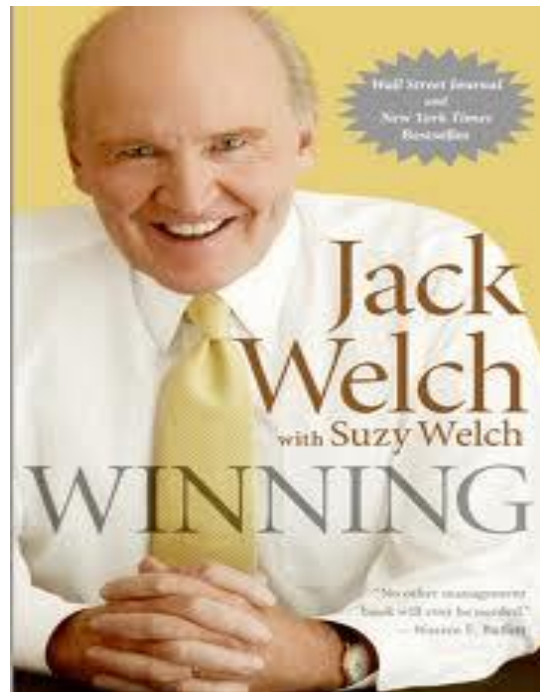
HM Treasury

May 16<sup>th</sup> 2013



# MANAGEMENT QUALITY IN THE UK: POLICY IMPLICATIONS

Draws heavily on joint work with Nick Bloom (Stanford) & Raffaella Sadun (HBS)



# **Measuring Management**

Data Description

Drivers & structural policies

More direct policy interventions

# BLOOM - VAN REENEN (2007) SURVEY METHODOLOGY

## 1) Developing management questions

- Scorecard for 18 monitoring (e.g. lean), targets & people (e.g. pay, promotions, retention and hiring). ≈45 minute phone interview of manufacturing plant managers

## 2) Obtaining unbiased comparable responses (“Double-blind”)

- Interviewers do not know the company’s performance
- Managers are not informed (in advance) they are scored
- Run from LSE, with same training and country rotation

## 3) Getting firms to participate in the interview

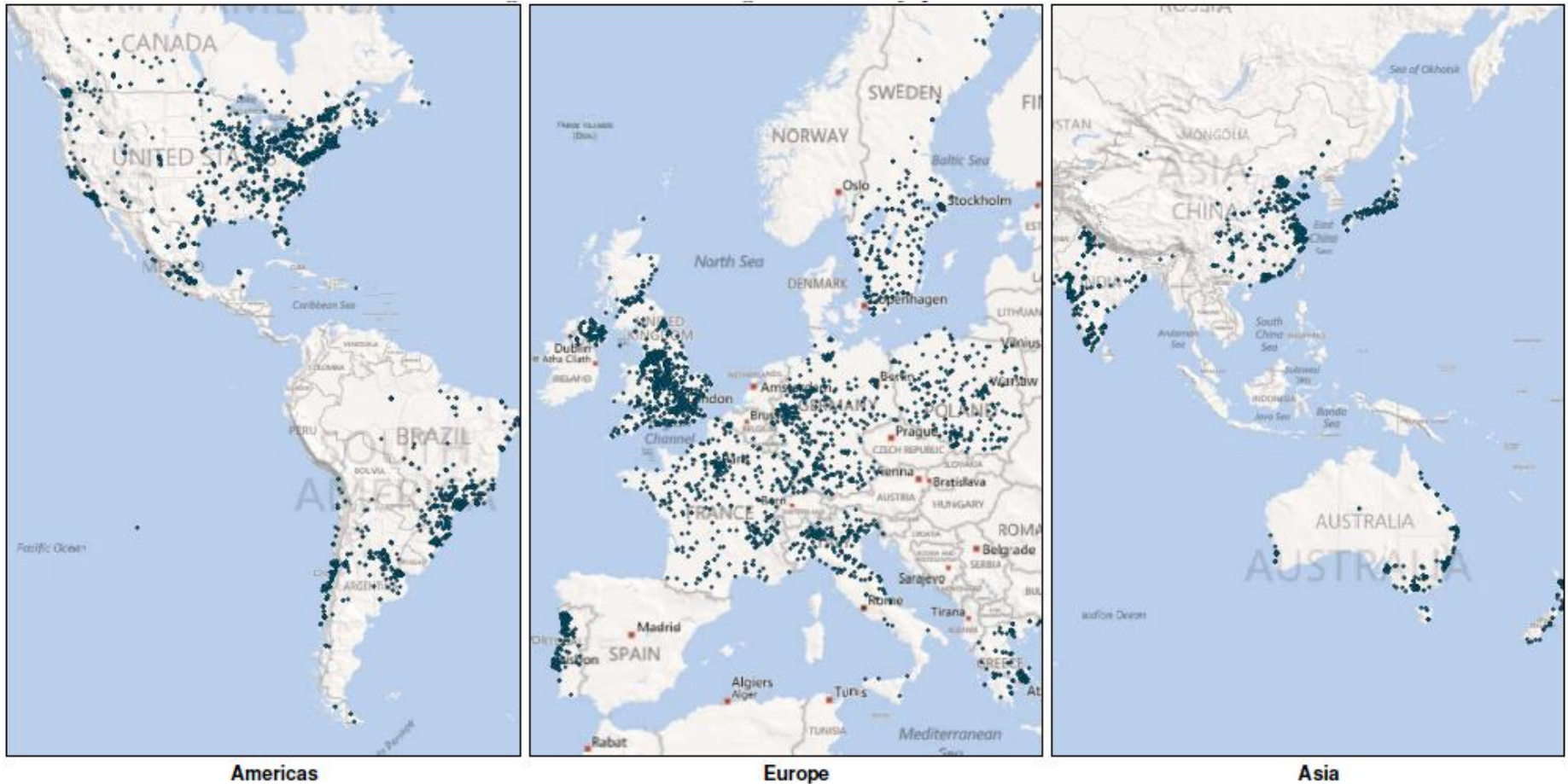
- Introduced as “Lean-manufacturing” interview, no financials
- Official Endorsement: Bundesbank, Bank of England, RBI, etc.
- Run by 100 MBA types (loud, assertive & business experience)

# MONITORING – e.g. “HOW IS PERFORMANCE TRACKED?”

<b>Score</b>	<b>(1): Measures tracked do not indicate directly if overall business objectives are being met. Certain processes aren't tracked at all</b>	<b>(3): Most key performance indicators are tracked formally. Tracking is overseen by senior management</b>	<b>(5): Performance is continuously tracked and communicated, both formally and informally, to all staff using a range of visual management tools</b>
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**Note:** All 18 questions and over 50 examples in Bloom & Van Reenen (2007) & Appendix D

# Plant locations from World Management Survey (~8,000 firms, 3 major waves: 2004, 2006, 2009; 21 countries)



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

Now extended to Hospitals, Retail, Schools, Universities, etc.

Extension to nearer population surveys (e.g. US MOPs)

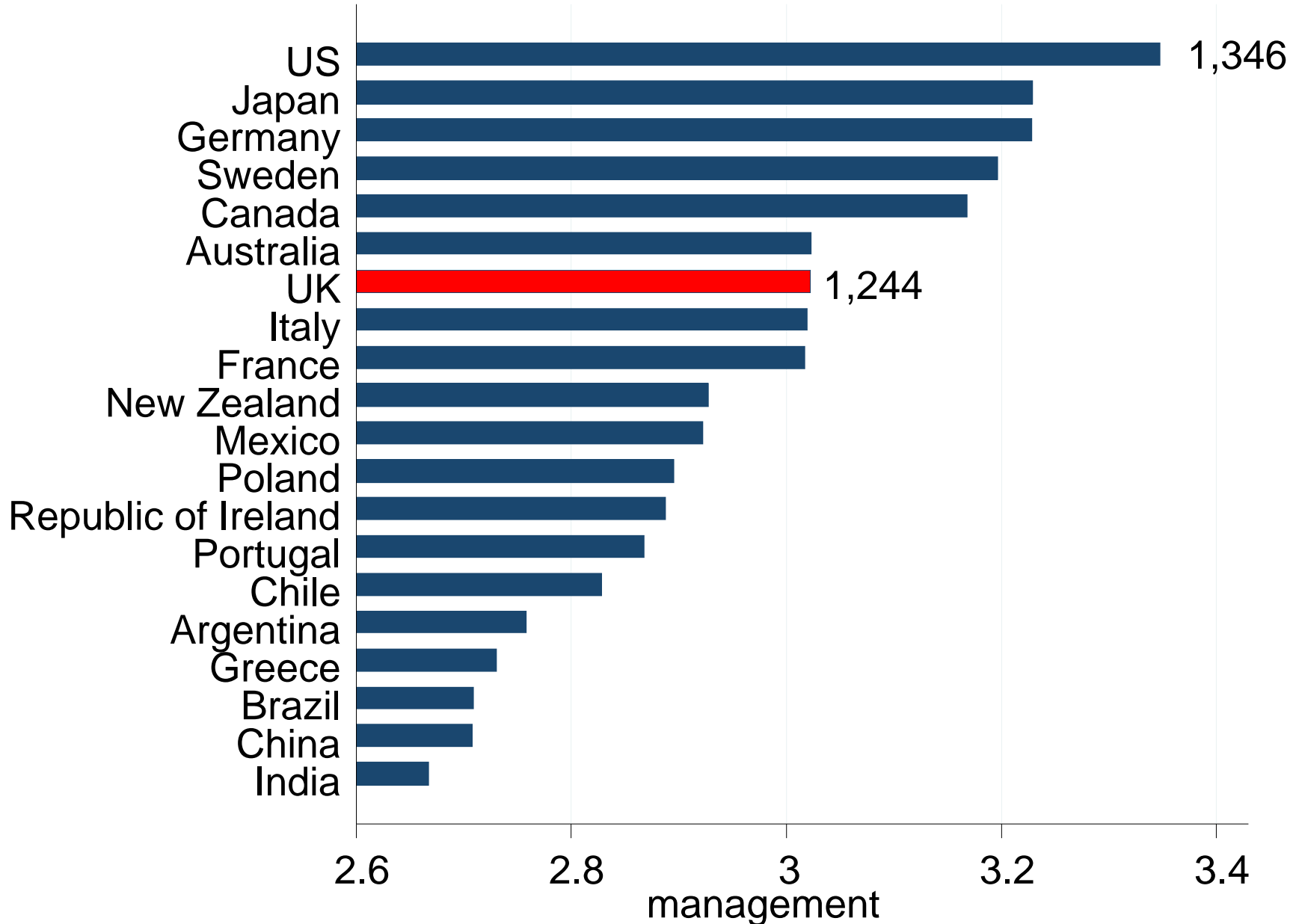
## Measuring Management

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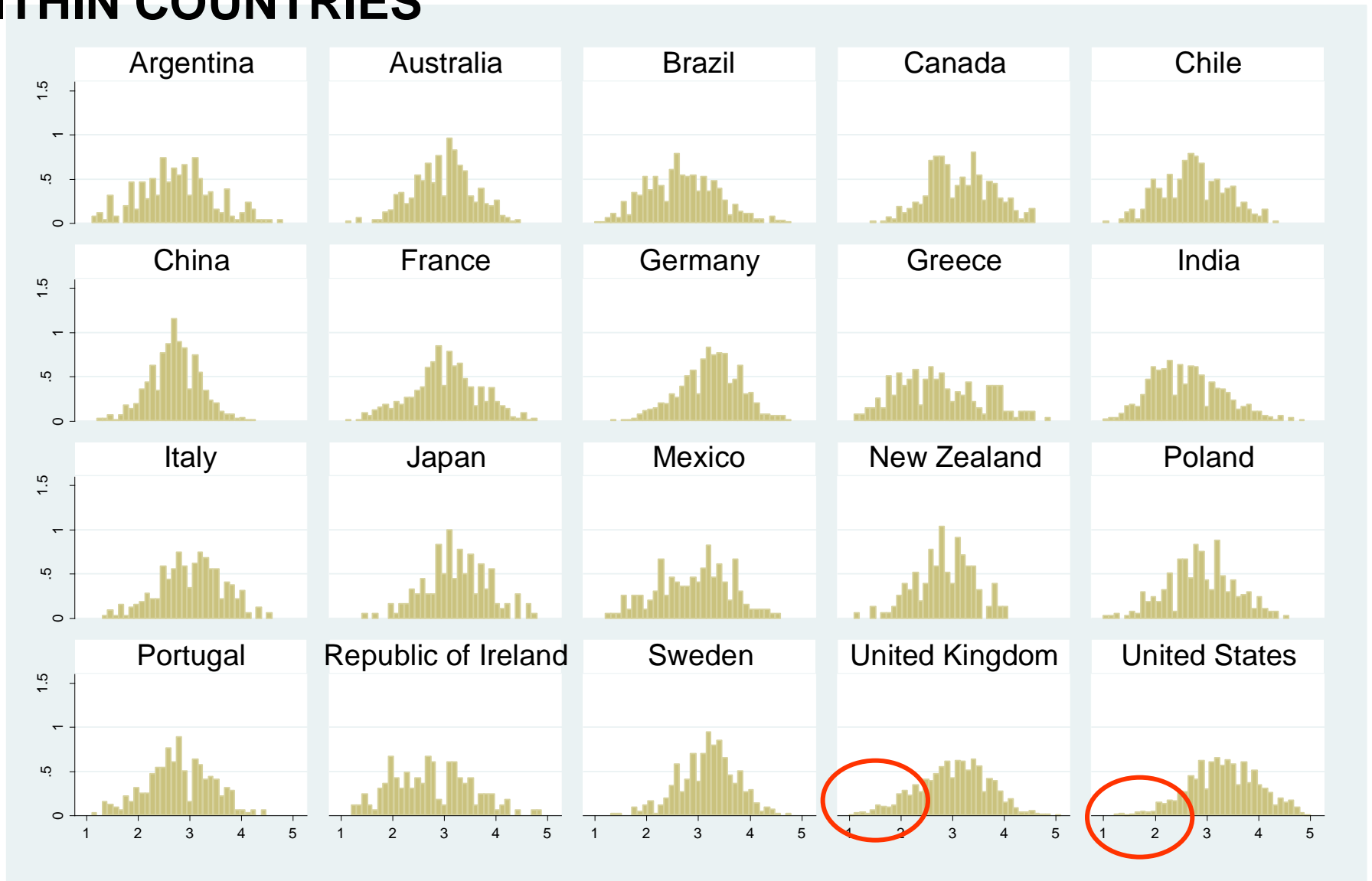
# MANAGEMENT PRACTICE SCORES ACROSS COUNTRIES



Note: Unweighted averages taken across all firms within each country; 9,995 obs



# HUGE VARIATION IN MANAGEMENT SCORES ACROSS FIRMS WITHIN COUNTRIES

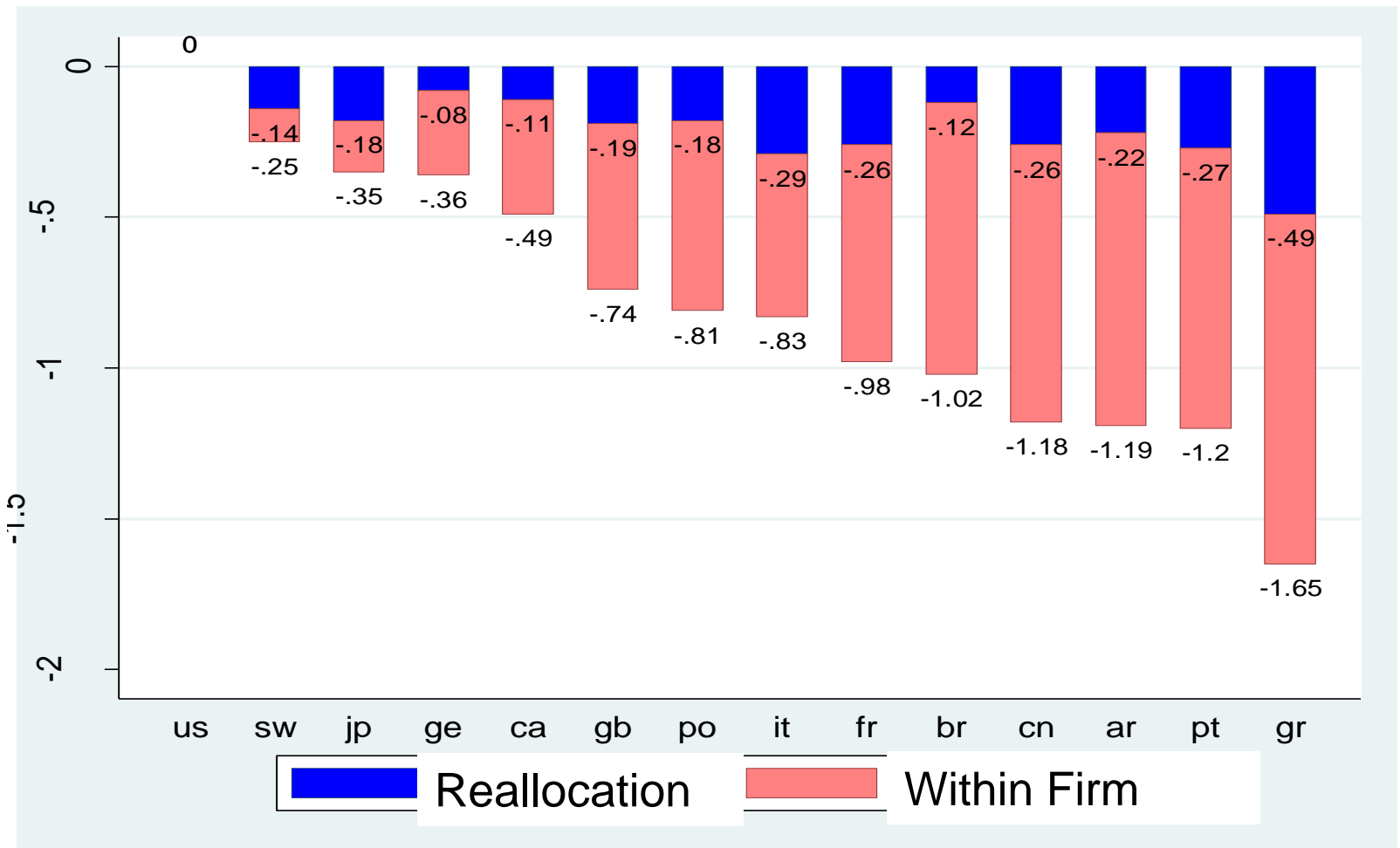


**Note:** Bars are the histogram of the actual density. Scores from 9,995 management interviews across 20 countries.

# Domestic UK firms $\frac{3}{4}$ of SD worse managed than US (26% of this is worse reallocation)

Country	Share-Weighted Average Management Score, M	Reallocation effect (Olley-Pakes, OP)	Unweighted Average Management Score	“Deficit” in Share-weighted Management Score relative to US	“Deficit” in Reallocation relative to US	% of deficit in management score due to worse reallocation
	(1)=(2)+(3)	(2)	(3)	(1)-0.67	(2)-0.36	(6)=(5)/(4)
US	0.67	0.36	0.31	0	0	
Sweden	0.42	0.22	0.20	-0.25	-0.14	56%
Japan	0.32	0.18	0.14	-0.35	-0.18	51%
Germany	0.31	0.28	0.03	-0.36	-0.08	22%
Canada	0.17	0.25	-0.07	-0.50	-0.11	22%
<b>Great Britain</b>	-0.07	0.17	-0.24	-0.74	-0.19	<b>26%</b>
Poland	-0.14	0.18	-0.32	-0.81	-0.18	22%
Italy	-0.15	0.07	-0.23	-0.82	-0.29	35%
France	-0.31	0.10	-0.41	-0.98	-0.26	27%
Brazil	-0.34	0.24	-0.59	-1.01	-0.12	12%
China	-0.50	0.10	-0.61	-1.17	-0.26	22%
Argentina	-0.51	0.14	-0.66	-1.18	-0.22	19%
Portugal	-0.53	0.09	-0.62	-1.20	-0.27	22%
Greece	-0.98	-0.13	-0.85	-1.65	-0.49	30%

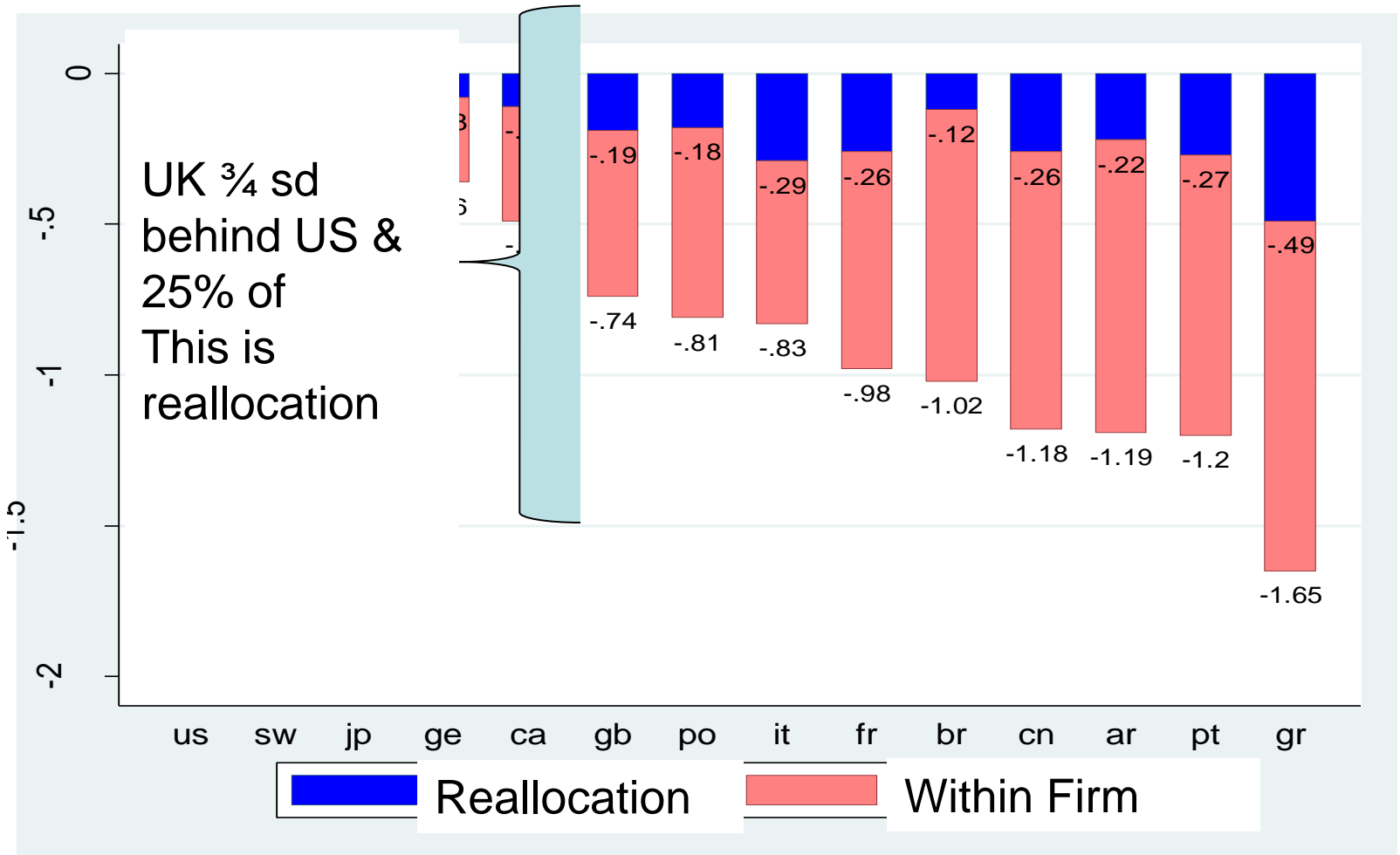
# MANAGEMENT SCORES & REALLOCATION ACROSS COUNTRIES RELATIVE TO THE US LEVEL



**Notes:** Total weighted mean management deficit with the US is the number on top of bar. This is decomposed into (i) reallocation effect (OP, blue bar) and (ii) unweighted average management scores (sd=1, red bar) . Domestic firms, scores corrected for sampling bias

Similar ranking to Bartelsman, Haltiwanger & Scarpetta (2013)

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Similar ranking to Bartelsman, Haltiwanger & Scarpetta (2013, AER) sub-sample

# ABOUT 37% OF US-UK TFP GAP ACCOUNTED FOR BY MANAGEMENT

<b>Country</b>	<b>Share-Weighted Average Management Deficit with US</b>	<b>TFP GAP with US</b>	<b>Proportion of TFP Gap due to Management</b>
<b>US</b>	0		
<b>Sweden</b>	-0.25	32.2	7.8%
<b>Japan</b>	-0.35	33.6	10.4%
<b>Canada</b>	-0.50	22.3	22.4%
<b>Great Britain</b>	-0.74	20.3	36.5%
<b>Italy</b>	-0.81	17.2	47.7%
<b>France</b>	-0.82	25.3	38.7%
<b>Brazil</b>	-0.98	59.6	16.9%
<b>China</b>	-1.01	78.3	14.9%
<b>Argentina</b>	-1.17	57.3	20.6%
<b>Portugal</b>	-1.18	24.9	48.2%
<b>Greece</b>	-1.65	51.0	32.4%
<b>Unweighted av.</b>			25%

Assume one sd increase in management increases TFP by 10%

Measuring Management

Data Description

**Drivers & structural policies**

More direct policy interventions

# STRUCTURAL FACTORS THAT AFFECT MANAGEMENT

- Product Market Competition
  - Trade openness (EU importance), EU/Us trade deal
- Family-run firms
- Human capital
- Public ownership
- Labour regulation
- FDI

# COMPETITION AND MANAGEMENT

3 competition proxies from Nickell (1996) & Aghion et al. (2005)

Competition proxies	Dependent variable: Management			
<b>Import penetration</b> (lagged industry-country level)	<b>0.081**</b> <b>(0.044)</b>			
<b>1- Lerner Index<sup>1</sup></b> (lagged industry-country level)		<b>5.035**</b> <b>(2.146)</b>		
<b># of competitors</b> (Firm level)			<b>0.115***</b> <b>(0.023)</b>	<b>0.120**</b> <b>(0.052)</b>
<b>Observations</b>	<b>2,657</b>	<b>2,819</b>	<b>2,789</b>	<b>864</b>
<b>Firm fixed effects?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>Yes</b>
<b>Full controls<sup>2</sup></b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

**Notes:** “Full controls” includes 108 SIC-3 industry, country, firm-size, public and interview noise (interviewer, time, date & manager characteristic) controls, 2004-2006, UK, US, France and Germany only. Col (1) and (2) clustered SE by ind\*cty, col (3) clustered by firm



# IS COMPETITION EFFECT CAUSAL?

- Also use natural experiments to generate exogenous increases in competition
- Trade liberalization following China accession to WTO & subsequent phase out of MFA quotas in textiles & apparel industries in 2005. Bloom, Draca & Van Reenen (2013)
  - Strong first stage on Chinese imports into EU
  - Big improvement in management & productivity in more affected sectors
- Hospital competition in UK under Blair reforms (Bloom, Propper, Seiler & Van Reenen, 2013)

# ENDOGENOUS MANAGEMENT: THE COST OF SKILLS.

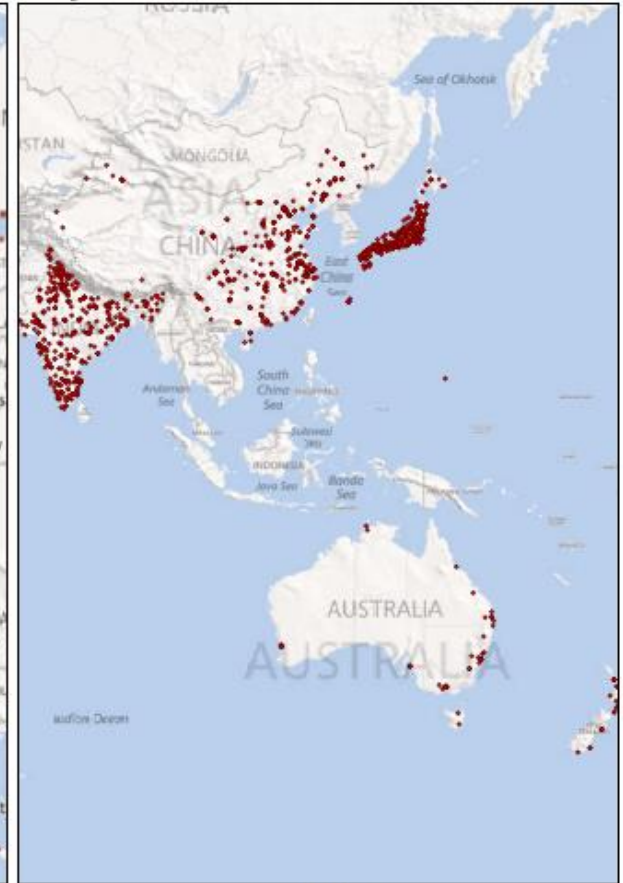
USE UNESCO World Higher Education Database university locations (N=9,081)



Americas



Europe



Asia

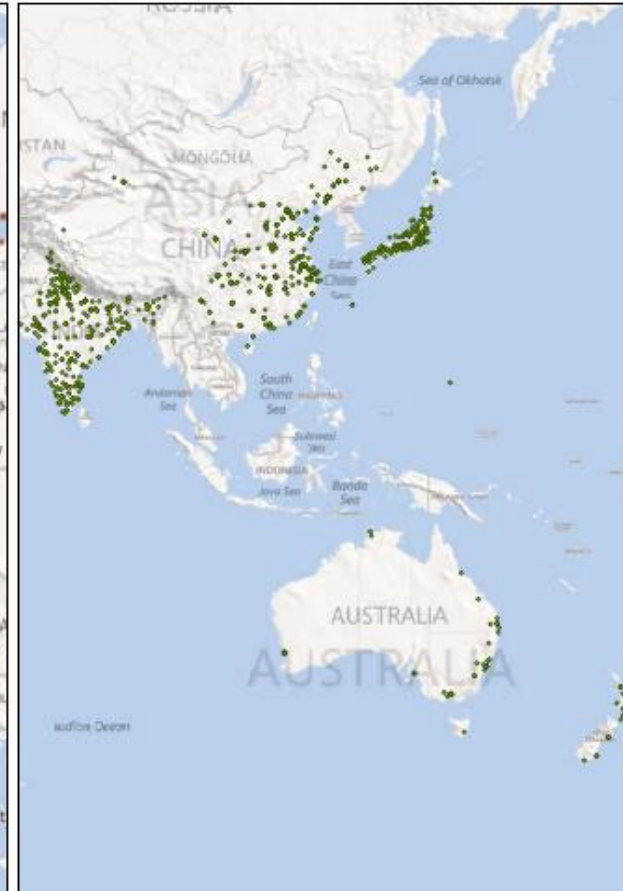
# UNESCO World Higher Education Database business school locations (N=5,724)



Americas



Europe



Asia

# EFFECT OF DISTANCE TO UNIVERSITY ON MANAGEMENT AND SKILLS

Dependent Variable:	Management	Management	% firm employees with degree	% firm employees with degree	Management	Management
	OLS	OLS	OLS	OLS	OLS	IV
Distance (drive time to nearest university)	-0.070*** (0.018)	-0.049*** (0.019)	-2.267*** (0.403)	-1.534*** (0.423)		
% employees with Degree in firm					0.789*** (0.082)	3.190*** (1.113)
Observations	6,406	6,406	6,406	6,406	6,406	6,406

**Source:** Feng (2013)

**Notes:** Clustered by 313 regions. In final column proportion skilled is instrumented with distance to university

Measuring Management

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# WHAT'S THE MARKET FAILURE TO JUSTIFY BUSINESS ADVICE INTERVENTION?

- We don't understand why so many firms don't adopt more efficient practices
  - Perception, Motivation, Persuasion
- **Information:** you don't know what you don't know
- **Motivation:** other structural market failures allow survival of inefficient firms
- For larger firms active consultancy market, but not so obvious for SMEs
- SMEs face more financial constraints so sub-optimal investment in intangible managerial capital

# DIRECT INTERVENTIONS TO IMPROVE MANAGEMENT

- Lots of policies around the world
  - But woeful lack of evaluation. Need for a “business evaluation endowment fund” like EEF
- Focus on SMEs, but difference between small and young
  - Policy risk of “artificial life support” for inefficient
- Do “consultancy” interventions ever work?
  - Bloom et al, 2013, on Indian textile plants
  - Karlan survey, e.g. Bruhn et al (2013)
    - [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2010710](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2010710);
    - [http://karlan.yale.edu/p/BruhnKarlanSchoar\\_AER\\_P&P.pdf](http://karlan.yale.edu/p/BruhnKarlanSchoar_AER_P&P.pdf)
  - <http://ideas.repec.org/p/nbr/nberwo/18325.html>

# RANDOMIZED CONTROL TRIALS: BLOOM ET AL (2013)

- Experiment on plants in Indian textile firms outside Mumbai
- Randomized treatment plants get heavy management consulting, control plants get very light consulting (just enough to get data)
- Collected weekly performance data on all plants from 2008 to 2010
- Improved management practices led to large & significant improvements in:
  - **Productivity:** sd increase in management caused 10% higher TFP
  - **Profitability:** around \$325k p.a. compared to ~\$200k market cost of consultancy



# PRODUCTIVITY IMPROVEMENTS IN RCT ON ADOPTION OF MANAGEMENT PRACTICES



**Notes:** Weekly average total factor productivity for the 14 treatment plants which adopted modern management practices for quality, inventory and production efficiency and the 6 control plants. All plants make cotton fabric near Mumbai, India, with between 100 and 1000 employees. Values normalized so both series have an average of 100 prior to the start of the intervention. Confidence intervals bootstrapped over firms. **Source:** Bloom, Eifert Mahajan, McKenzie, Roberts (2013).

# EXAMPLES OF DIRECT POLICY INTERVENTION

- US Manufacturing (& Agricultural) Extension Services
- EBRD TAM/BAS
- BIS/DBERR Benchmark Index
- Manufacturing (& other) Advisory Services
- Chambers of Commerce (Heseltine Review)
- BIS Growth Accelerator (£200m, SMEs)  
<http://www.growthaccelerator.com/>
  - Basically coaching
  - Opportunity for high quality evaluation

# CONCLUSIONS

- Structural policies over competition, trade, tax, human capital, FDI, etc. likely to be beneficial and work. Pretty good data
- Direct policies much more uncertainty
- All rather unsatisfactory

**Back Up**

# **INCENTIVES - e.g. “HOW DOES THE PROMOTION SYSTEM WORK?”**

<b>Score</b>	<b>(1) People are promoted primarily upon the basis of tenure, irrespective of performance (ability &amp; effort)</b>	<b>(3) People are promoted primarily upon the basis of performance</b>	<b>(5) We actively identify, develop and promote our top performers</b>
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**Note:** All 18 questions and over 50 examples in Bloom & Van Reenen (2007)

<http://worldmanagementsurvey.org/>

# TYPES OF SUPPORT

- Business LINK
- BIS/DBERR Benchmark Index
- Manufacturing (& other) Advisory Services
- Trade Associations
- UKTI
- Skills: sector skills councils, apprenticeships, etc