Management and the Wealth of Nations

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Private Enterprises, Productivity, and Economic Growth (STEG-PEDL Virtual Course)

May, 2026

Introduction

- Enormous difference in productivity between firms – "Persistent Performance Differences"

- Management long thought to be an important reason for such differences (Smith, 1776; Walker, 1887; Schumpeter, 1943)

- Last 2 decades have seen huge progress in getting better measures & analyzing management practices

- These have important macro-economic consequences (cross country productivity differences: the Wealth of Nations)

Measurement

Natural Laws

Drivers

Management & Mergers Structural Model

Conclusions

Understanding Growth: Three fundamental sources

- **Innovation:** *Frontier Productivity Growth*
  - Ideas that are new to the world

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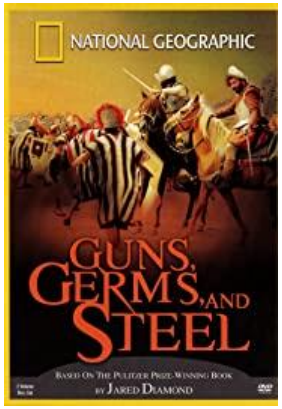

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  - The spread of these ideas

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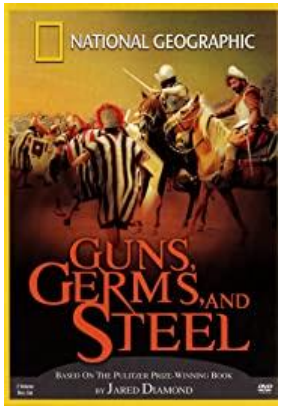

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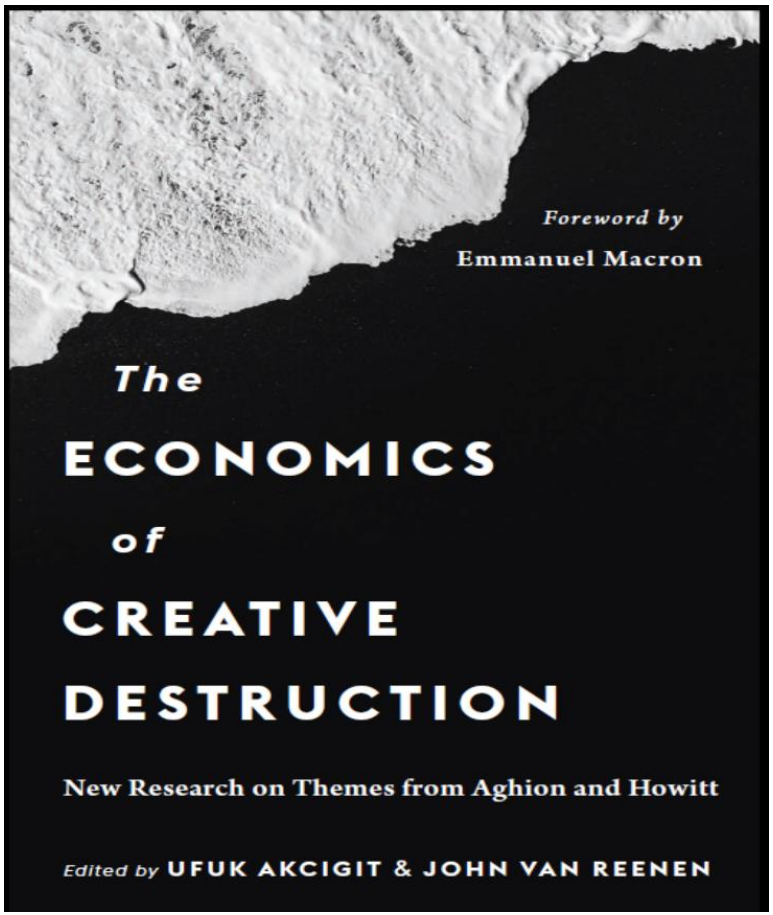
- **Reallocation** Important part of process: innovative & more productive firms displace less efficient (**creative destruction**)

Creative Destruction



NYT Best Sellers List (almost)

Joseph Schumpeter

Understanding Growth: Three fundamental sources

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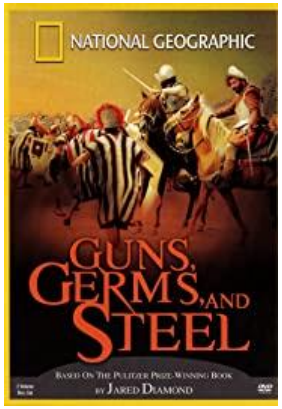

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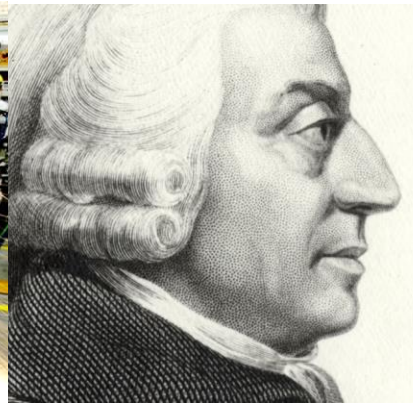
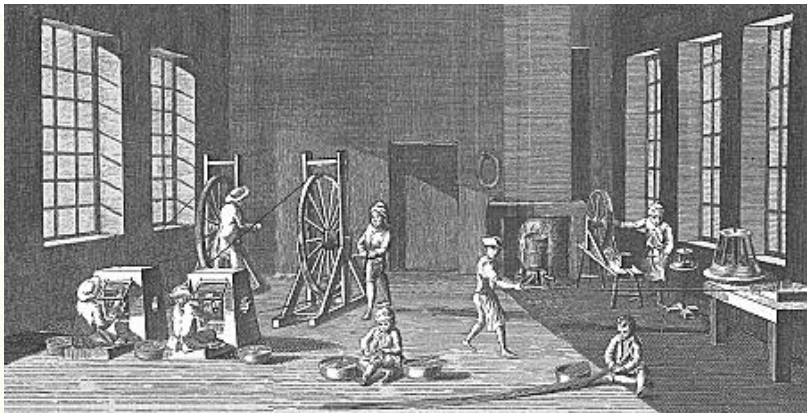
- **All 3 get reflected in macro Total Factor Productivity (TFP)**

TFP is not just “hard technologies”: Management practices also very important

Toyota Plant





Adam Smith and the Pin Factory

TFP is Not by technology alone….

- **Innovations in management,**
  - Fordist Mass production (1920s)
  - Sloan's M-form firm (1930s)
  - Toyota Lean Manufacturing System (1970s)
  - Global Value Chains; Gig economy (2000s)

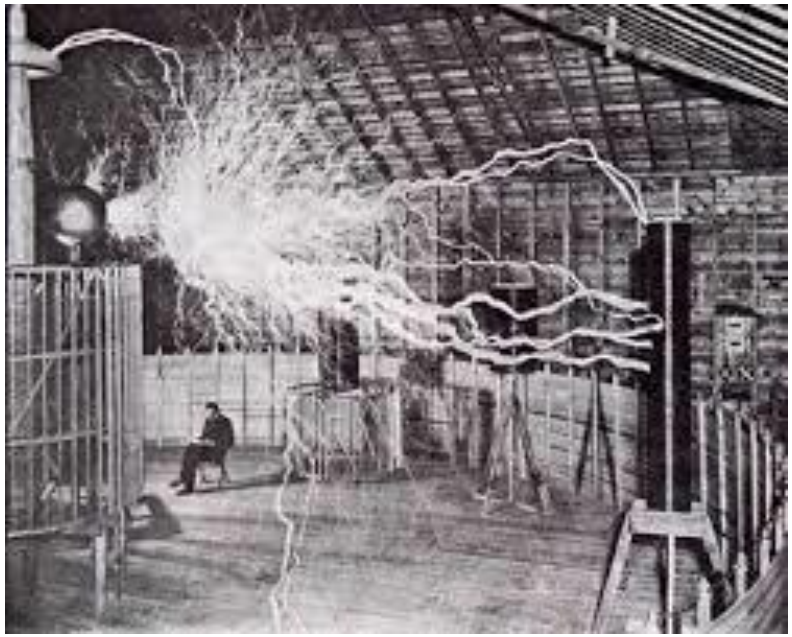
Alfred Sloan

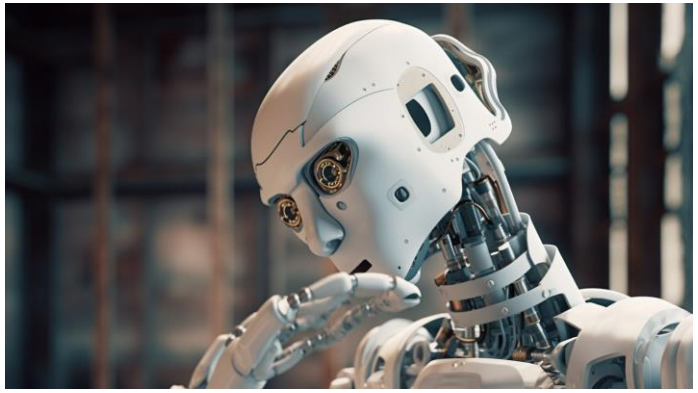
- But diffusion/reallocation more important

- Big TFP residual even after controlling for all observable measures of technology

Technology, management & complementarities

- Need to change work organization/management to make best use of innovation (electricity, computers, AI, …)





AI agentic manager-machine interaction (>2020s)?

Technology, management & complementarities

- Econometric work on impact of digital technologies on firm performance also show very heterogeneous impacts (e.g. Stiroh, 2010; Draca et al, 2007; Bronsoler et al., 2022)

- Case studies show that many organizations can invest heavily in technology (e.g. IT in UK NHS) & make little/no return

- Evidence of technology & managerial practice complementarity in productivity. Examples:
  - Bresnahan et al. (2002) US; Atkin et al. (2017); Pakistan; Bloom et al. (2012) EU; Giorcelli (2019) Italy.

But there is still debate on whether management practices really matter

"*No potential driving factor of productivity has seen a higher ratio of speculation to empirical study*".

Chad Syverson (*Journal of Economic Literature*)

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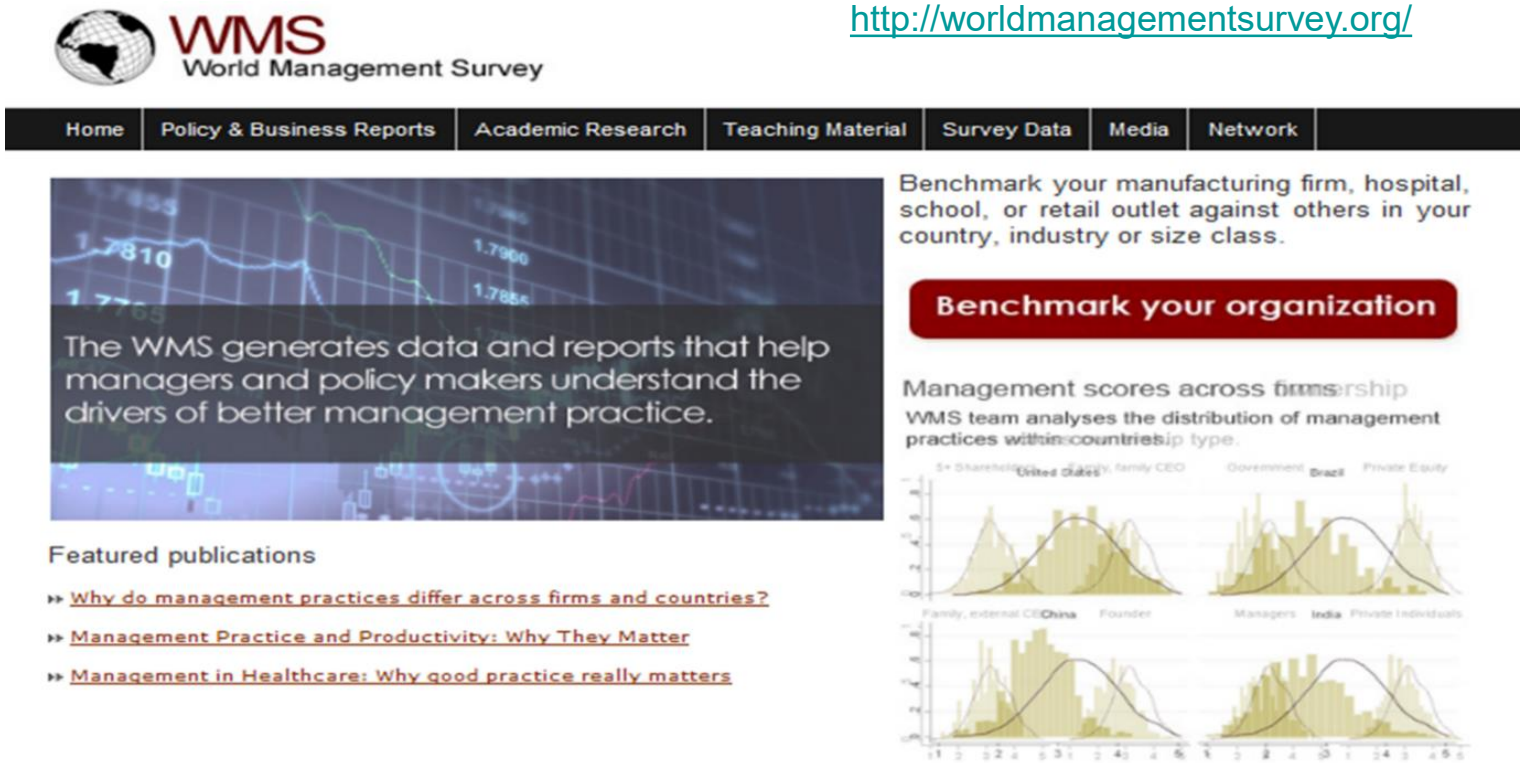
Enron ex-CEO, Jeff Skilling

But there is still debate on whether management practices really matter

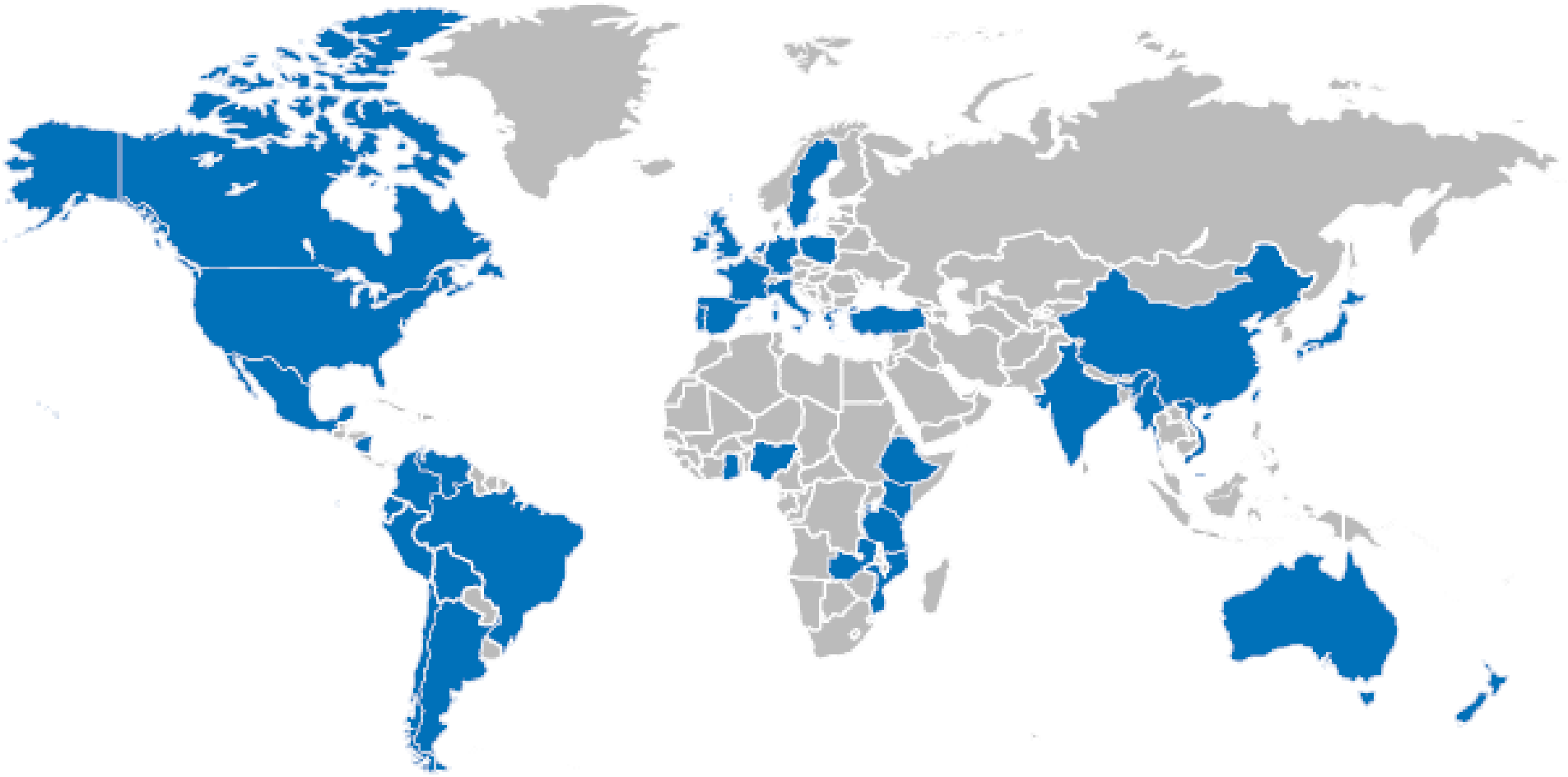
World Management Survey (~25k interviews since 2004, 38 countries)



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

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

FIGURE 1: GEOGRAPHIC SCOPE OF THE PROJECT



Note: WMS coverage 2004-2022

WORLD MANAGEMENT SURVEY (WMS); BLOOM & VAN REENEN (2007)

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

3) Getting firms to participate in the interview

- Official Endorsement: Bundesbank, Bank of England, RBI, etc.
- Run by 200 MBA types (loud, assertive & business experience)

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Example monitoring question, scored based on a number of questions starting with "*How is performance tracked?*"

Score	(1): Measures tracked do not indicate directly if overall business objectives are being met. Certain processes aren't tracked at all	(3): Most key performance indicators are tracked formally. Tracking is overseen by senior management	(5): Performance is continuously tracked and communicated, both formally and informally, to all staff using a range of visual management tools

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Americans on geography

Interviewer: "How many production sites do you have abroad?

Manager in Indiana, US:

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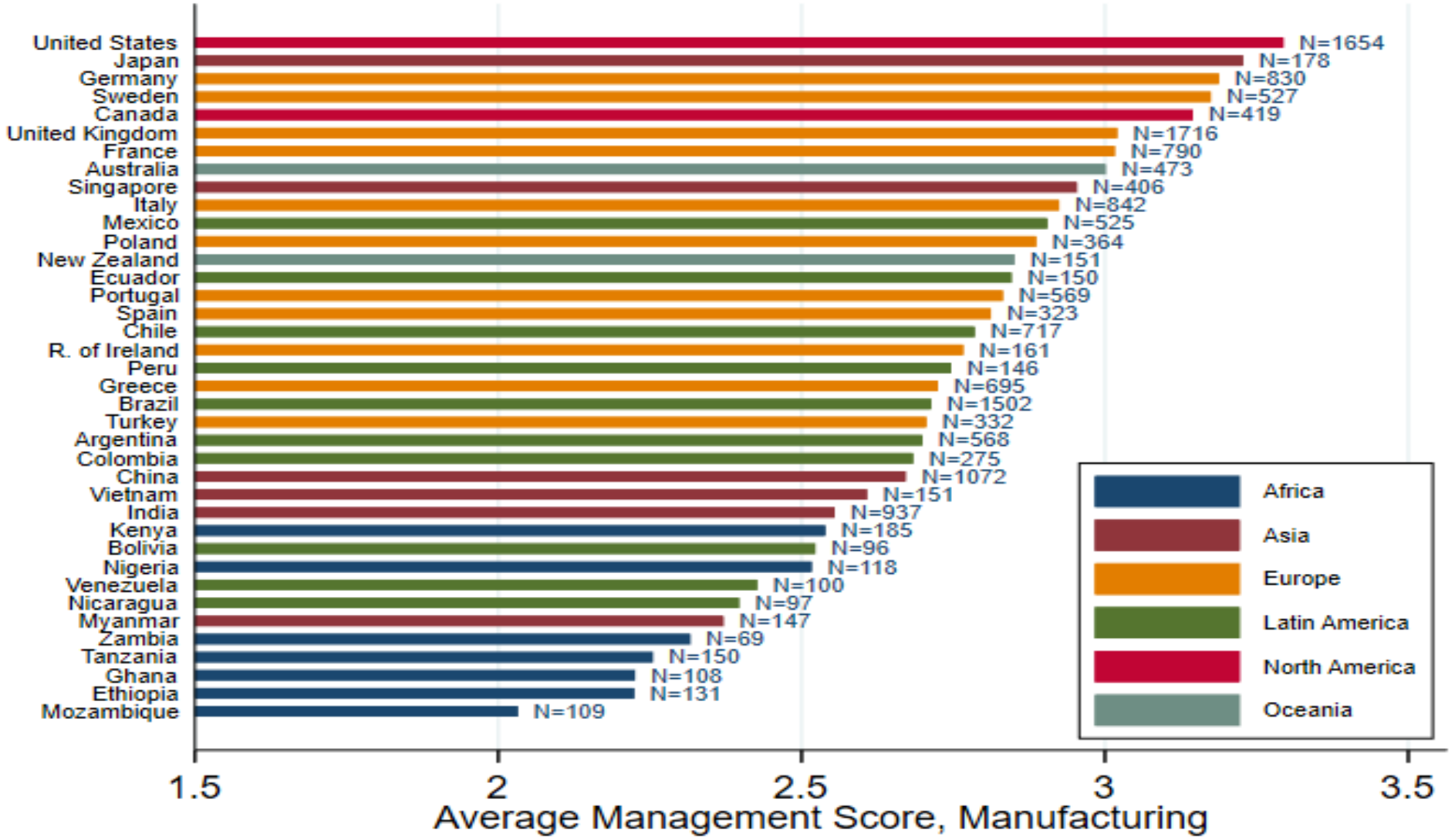
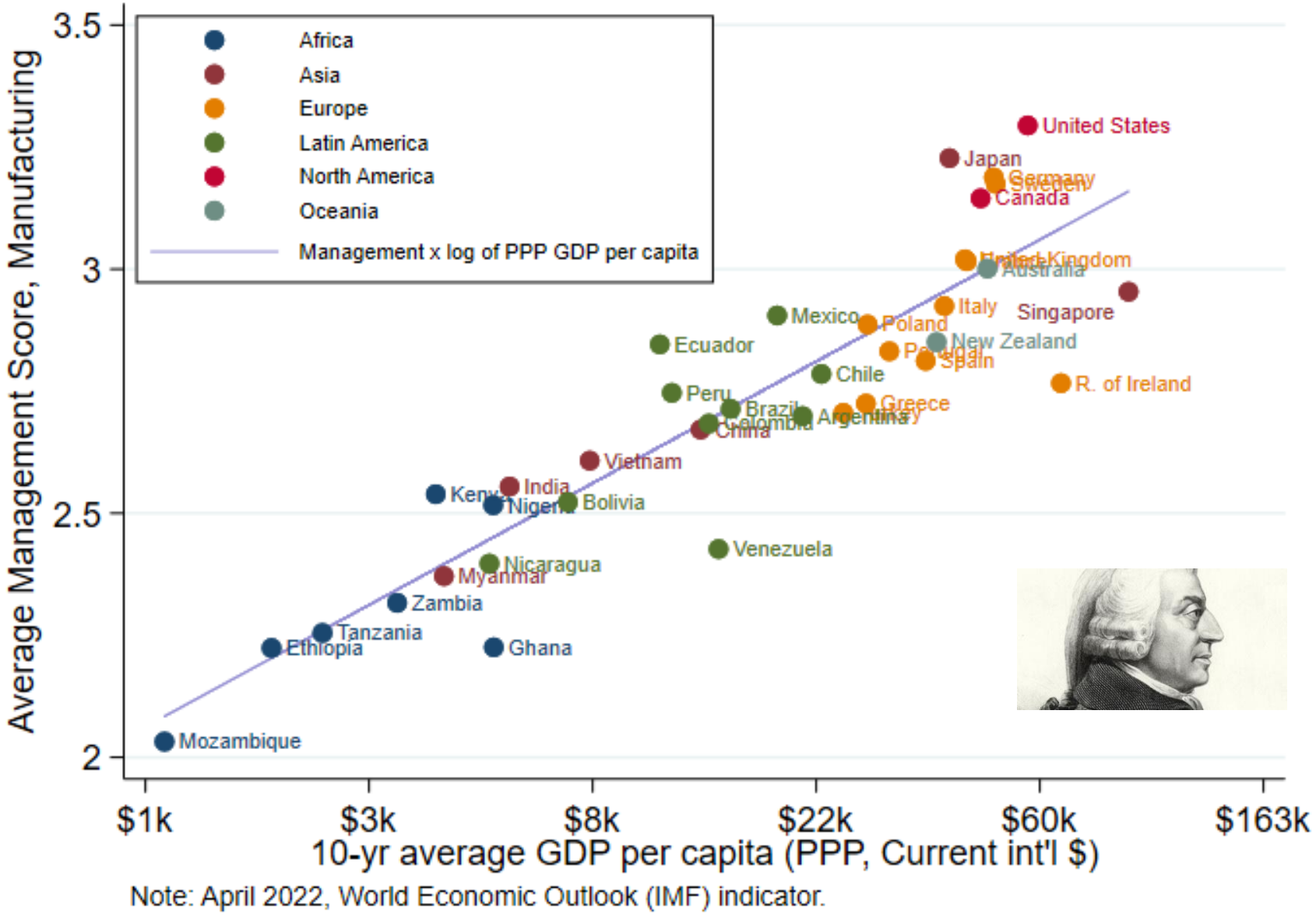
Manager in Indiana, US: "Well…we have one in Texas…"

WMS Management Scores across Countries

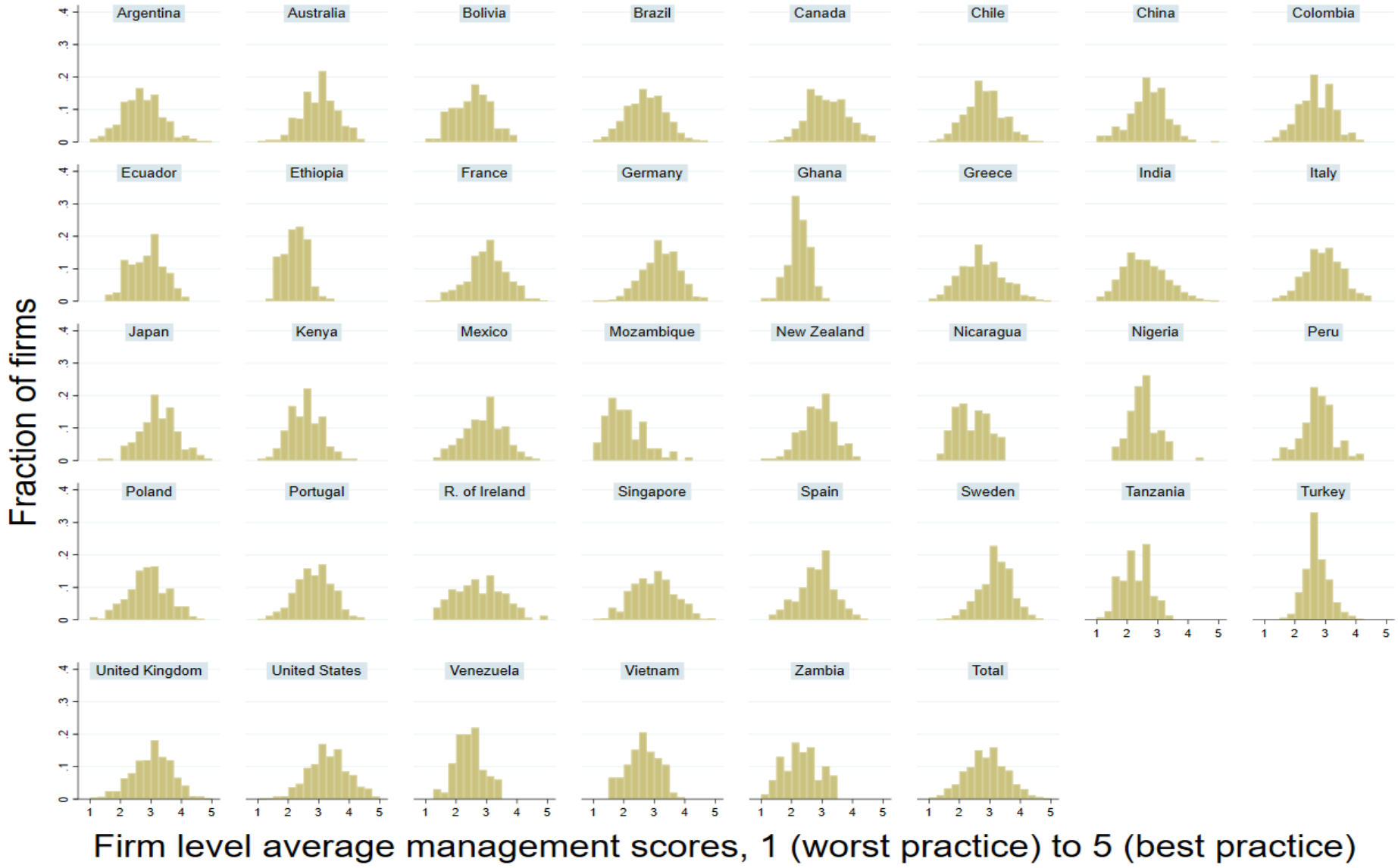


Note: Unweighted average management scores; # interviews in right column (total = 17,783); all waves pooled (2004-2022)

Average management scores across countries are strongly correlated with GDP per capita



Management also varies heavily within countries



Source: Bloom et al (2024)

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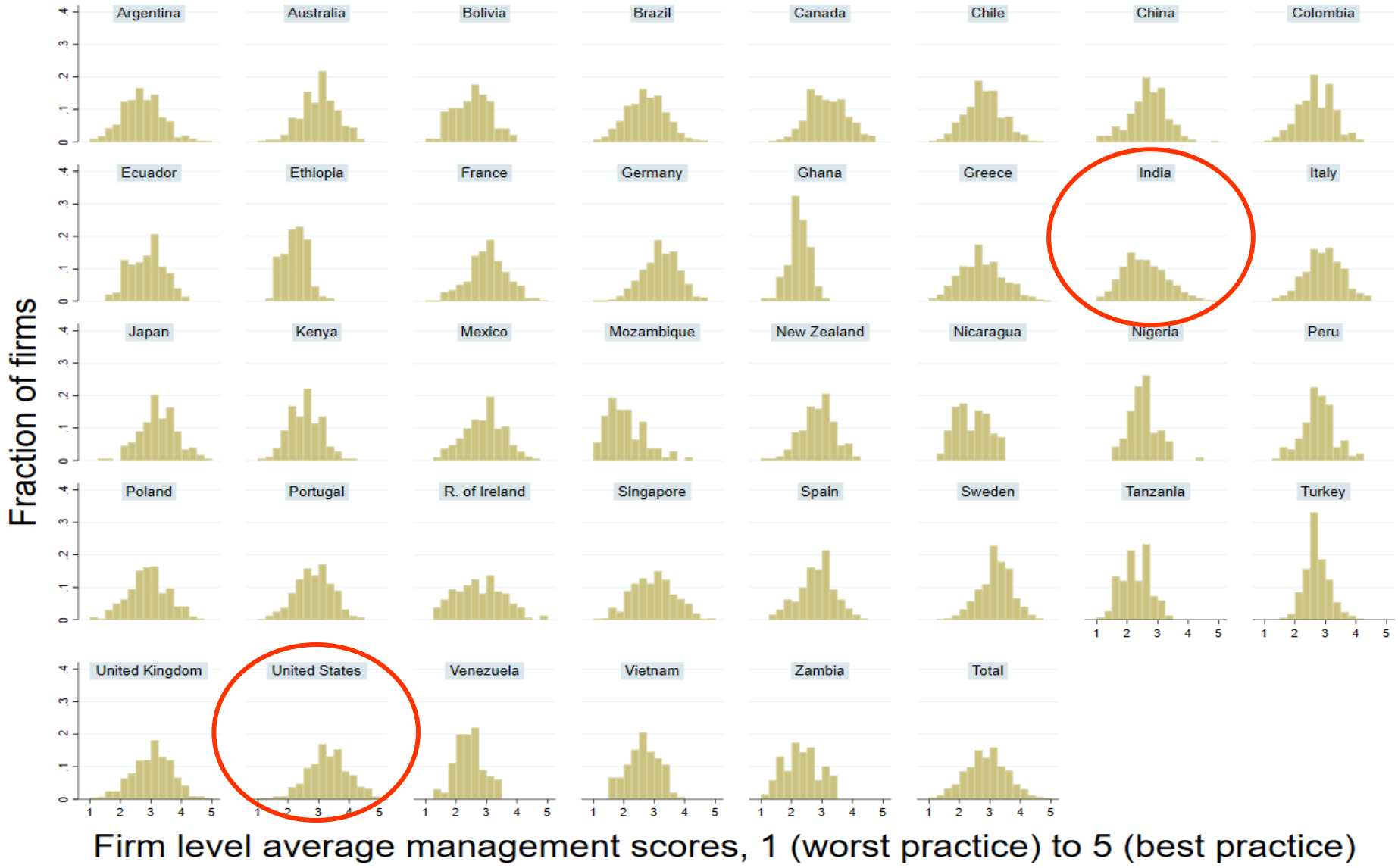
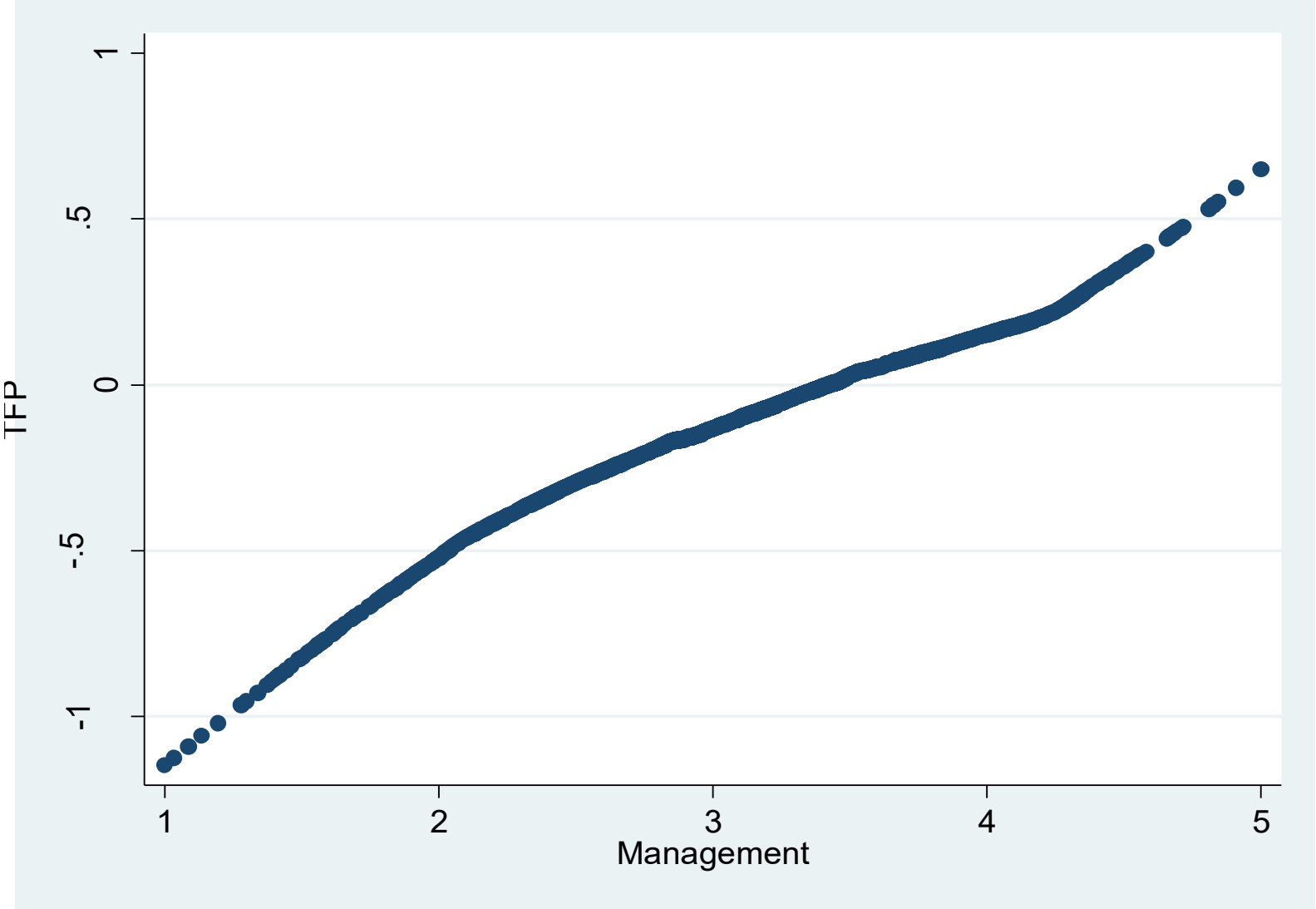


Source: Bloom et al (2024)

Firm productivity strongly & positively correlated with management scores



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

Are these correlations between performance and management causal?

- Many management practices have an important causal effect on firm performance
  - ***Randomized Control Trials***: e.g., Blader et al (2019), Bloom et al (2013, 2019); Brooks et al (2018); Bruhn et al (2018, JPE); Cai & Szeidl (2018, QJE); Custódio et al (2020); Fryer (2017); Gosnell et al (2020,JPE); Higuchi et al (2019);Iacovone et al (2022, ReStud); Karlan et al (2015)
  - ***Quasi-experiments:*** Giorcelli (2019); Huber et al (2020); Bandiera et al (2005, 2007); Bianchi & Giorcelli (2022)

Measurement

“Natural Laws”

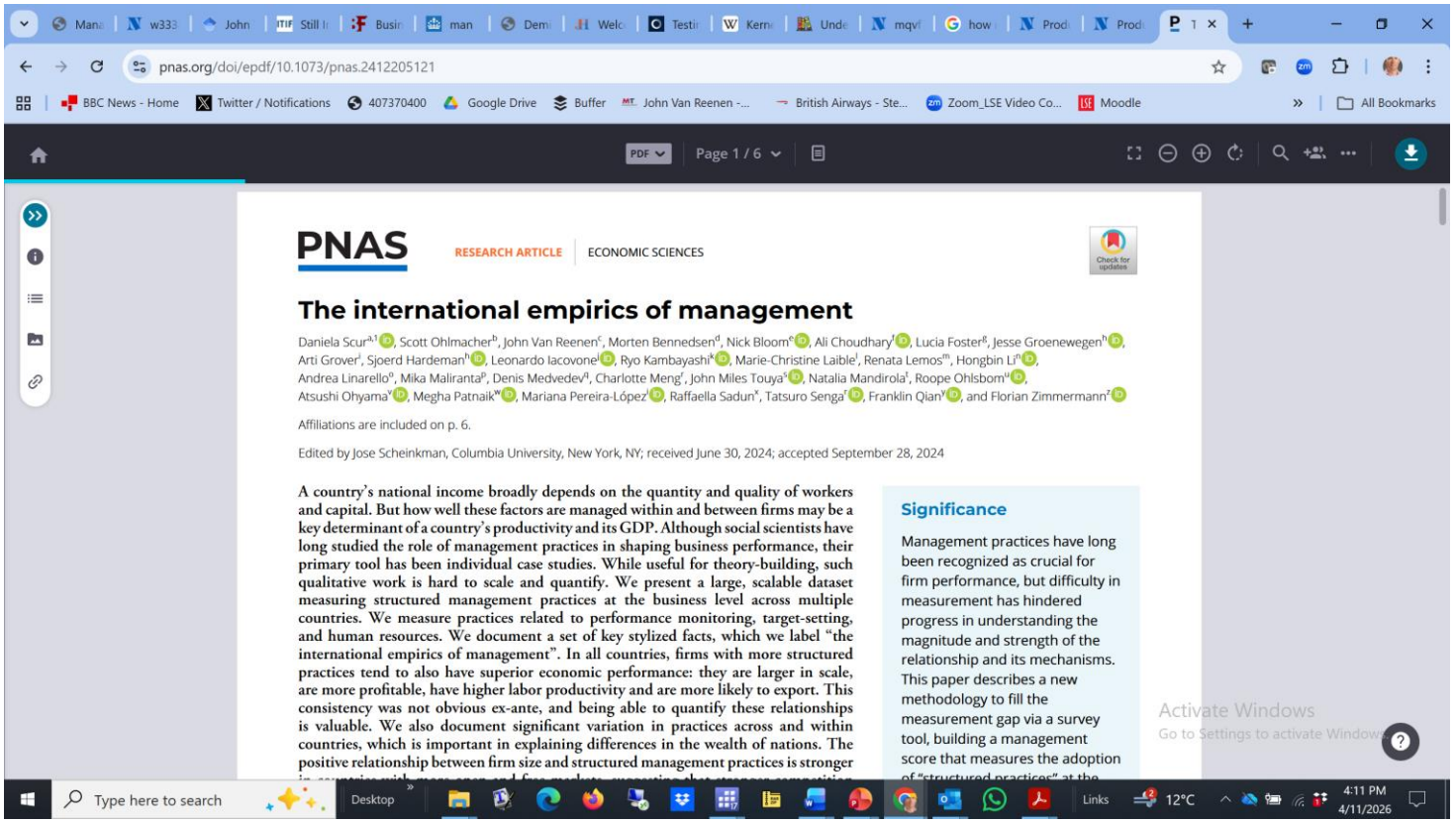
Drivers

Management & Mergers Structural Model

Conclusions

The Natural Laws of Management

Daniela Scur, et al.(2024, PNAS)



pnas.org/doi/epdf/10.1073/pnas.2412205121

PNAS RESEARCH ARTICLE | ECONOMIC SCIENCES

The international empirics of management

Daniela Scur[a,1], Scott Ohlmacher[b], John Van Reenen[c], Morten Bennedsen[d], Nick Bloom[e], Ali Choudhary[f], Lucia Foster[g], Jesse Groenewegen[h], Arti Grover[i], Sjoerd Hardeman[h], Leonardo Iacovone[j], Ryo Kambayashi[k], Marie-Christine Laible[l], Renata Lemos[m], Hongbin Li[n], Andrea Linarello[o], Mika Maliranta[p], Denis Medvedev[q], Charlotte Meng[r], John Miles Touya[s], Natalia Mandirola[t], Roope Ohlsbom[u], Atsushi Ohyama[v], Megha Patnaik[w], Mariana Pereira-López[t], Raffaella Sadun[x], Tatsuro Senga[z], Franklin Qian[y], and Florian Zimmermann[z]

Affiliations are included on p. 6.

Edited by Jose Scheinkman, Columbia University, New York, NY; received June 30, 2024; accepted September 28, 2024

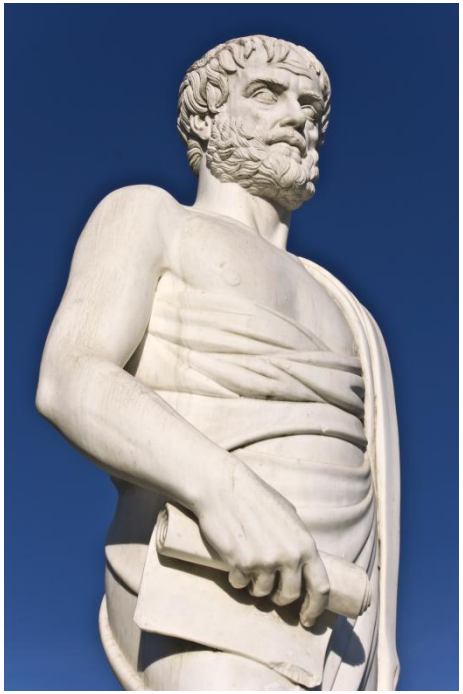
A country's national income broadly depends on the quantity and quality of workers and capital. But how well these factors are managed within and between firms may be a key determinant of a country's productivity and its GDP. Although social scientists have long studied the role of management practices in shaping business performance, their primary tool has been individual case studies. While useful for theory-building, such qualitative work is hard to scale and quantify. We present a large, scalable dataset measuring structured management practices at the business level across multiple countries. We measure practices related to performance monitoring, target-setting, and human resources. We document a set of key stylized facts, which we label "the international empirics of management". In all countries, firms with more structured practices tend to also have superior economic performance: they are larger in scale, are more profitable, have higher labor productivity and are more likely to export. This consistency was not obvious ex-ante, and being able to quantify these relationships is valuable. We also document significant variation in practices across and within countries, which is important in explaining differences in the wealth of nations. The positive relationship between firm size and structured management practices is stronger

Significance

Management practices have long been recognized as crucial for firm performance, but difficulty in measurement has hindered progress in understanding the magnitude and strength of the relationship and its mechanisms. This paper describes a new methodology to fill the measurement gap via a survey tool, building a management score that measures the adoption

Major thinkers about Natural Laws

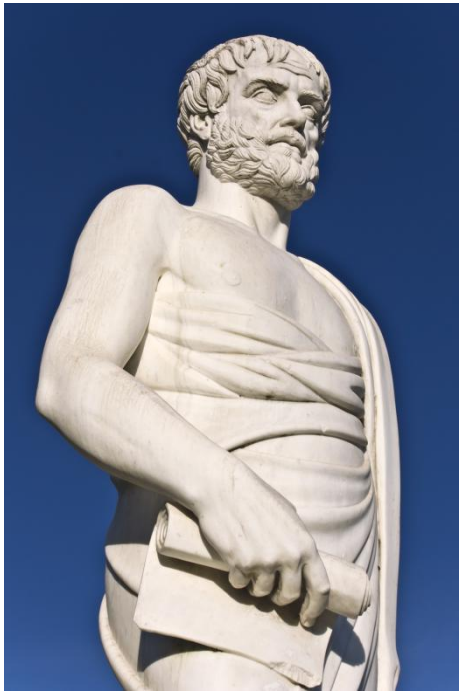
Hobbes



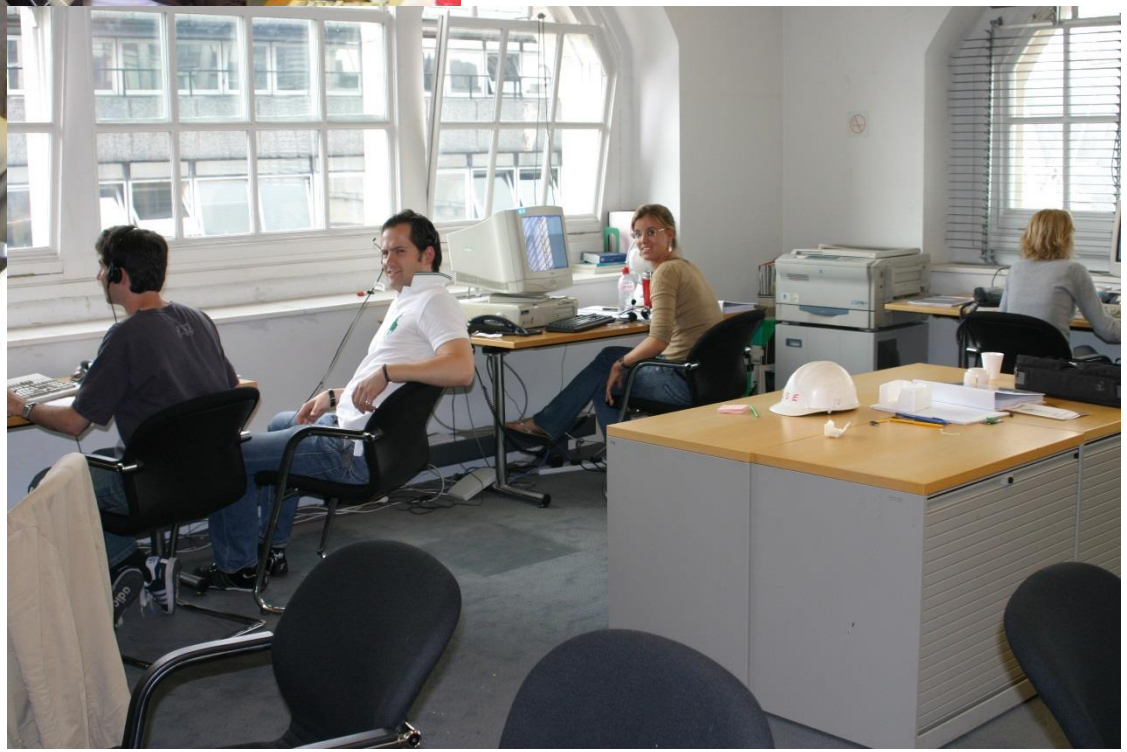
Aristotle

Aquinas

Major thinkers about Natural Laws??



One Problem with WMS is scale – we've collected ~25k interviews over ~20 years like this…



To get 35k in one quick wave we'd need this

Survey run with the US Census Bureau (MOPS)

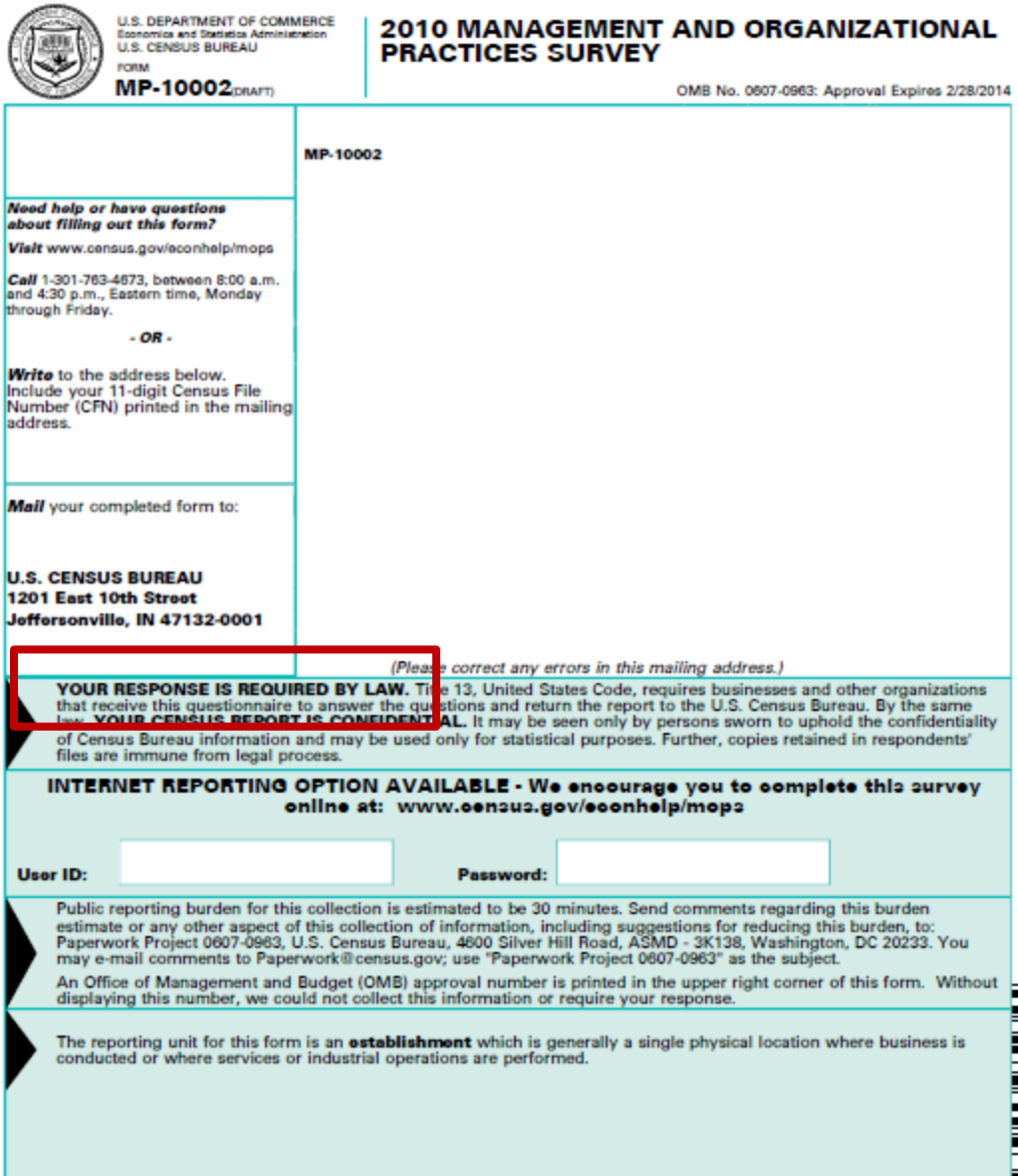
1st Wave delivered in 2011 to ~50k manufacturing plants (US ASM) asks about practices in 2010 and 2005.

2nd Wave covers 2015 & 2010 practices

3rd Wave covers 2021 practices.

Quick to fill out - and mandatory - so ~70-80% of plants responded

Extensive cognitive tests



U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
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FORM
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2010 MANAGEMENT AND ORGANIZATIONAL PRACTICES SURVEY

OMB No. 0607-0963: Approval Expires 2/28/2014

MP-10002

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Call 1-301-763-4673, between 8:00 a.m. and 4:30 p.m., Eastern time, Monday through Friday.

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Write to the address below. Include your 11-digit Census File Number (CFN) printed in the mailing address.

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The reporting unit for this form is an **establishment** which is generally a single physical location where business is conducted or where services or industrial operations are performed.

10002012

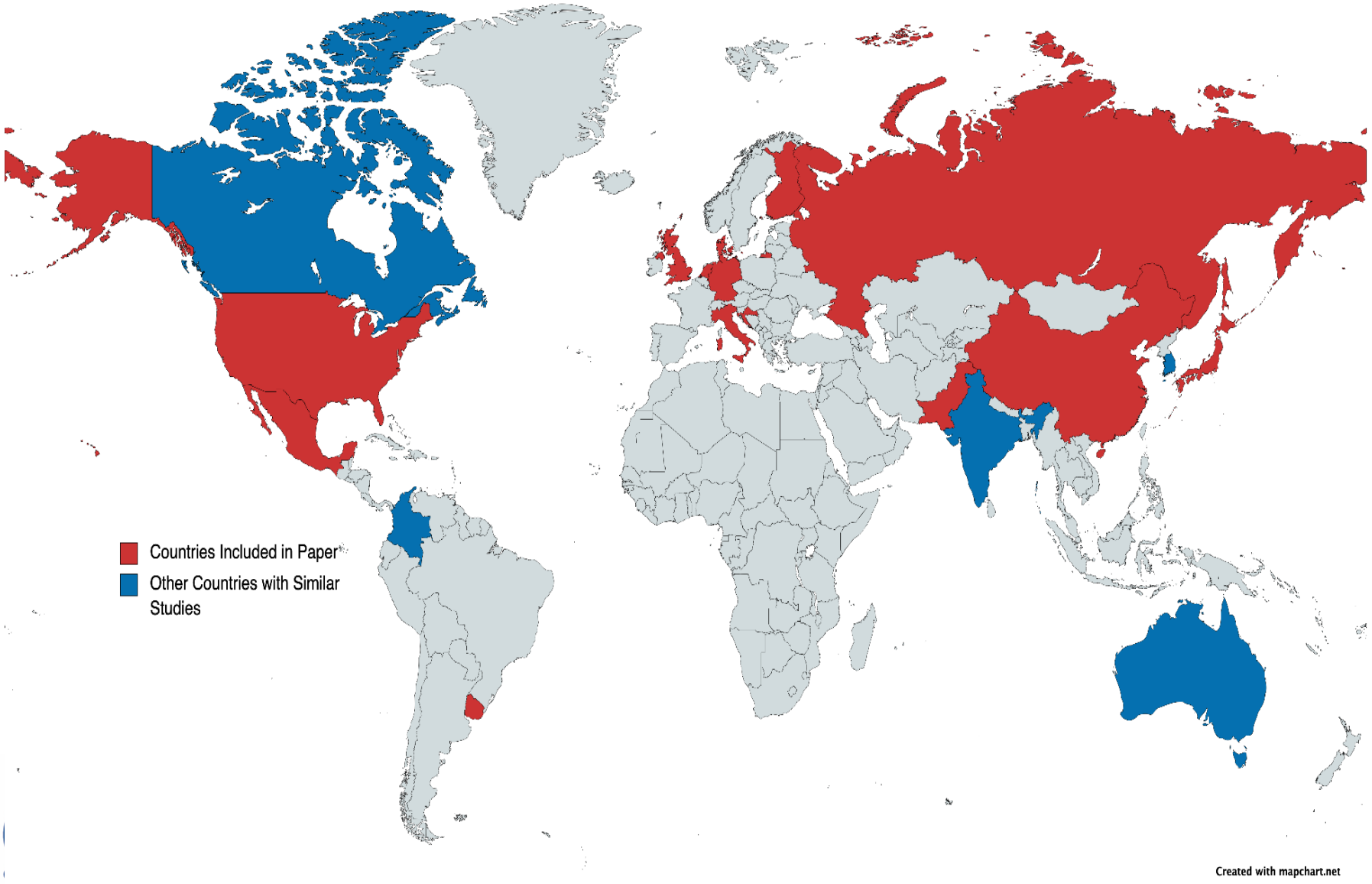
MOPS asks similar questions to WMS on monitoring, targeting, and incentives practices. For example, performance monitoring

2 In 2005 and 2010, how many key performance indicators were monitored at this establishment?

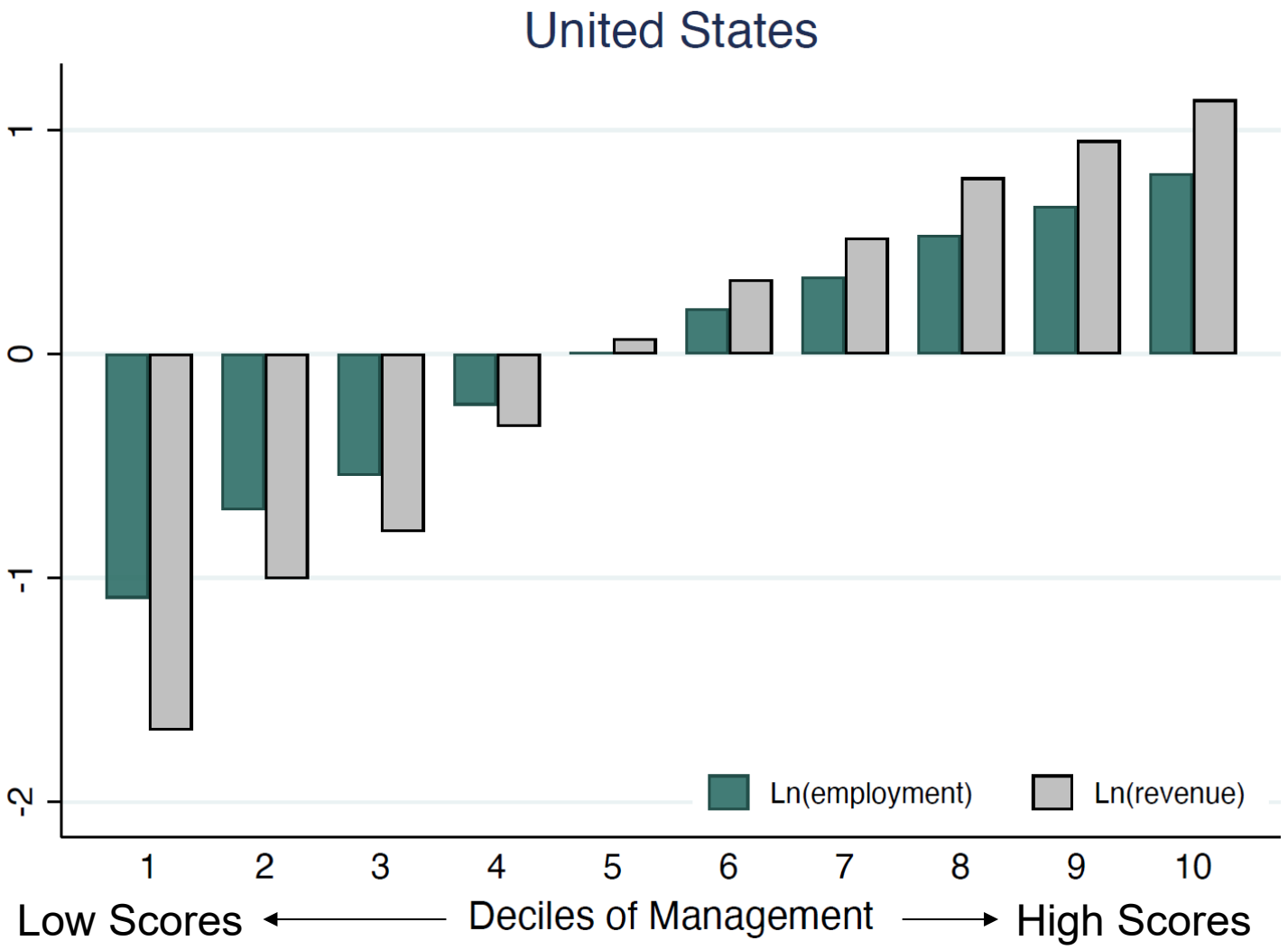
Examples: Metrics on production, cost, waste, quality, inventory, energy, absenteeism and deliveries on time.

Check one box for each year	2005	2010
1-2 key performance indicators	☐	☐
3-9 key performance indicators	☐	☐
10 or more key performance indicators	☐	☐
No key performance indicators (If no key performance indicators in both years, SKIP to **6**)	☐	☐

Coverage of MOPS across countries

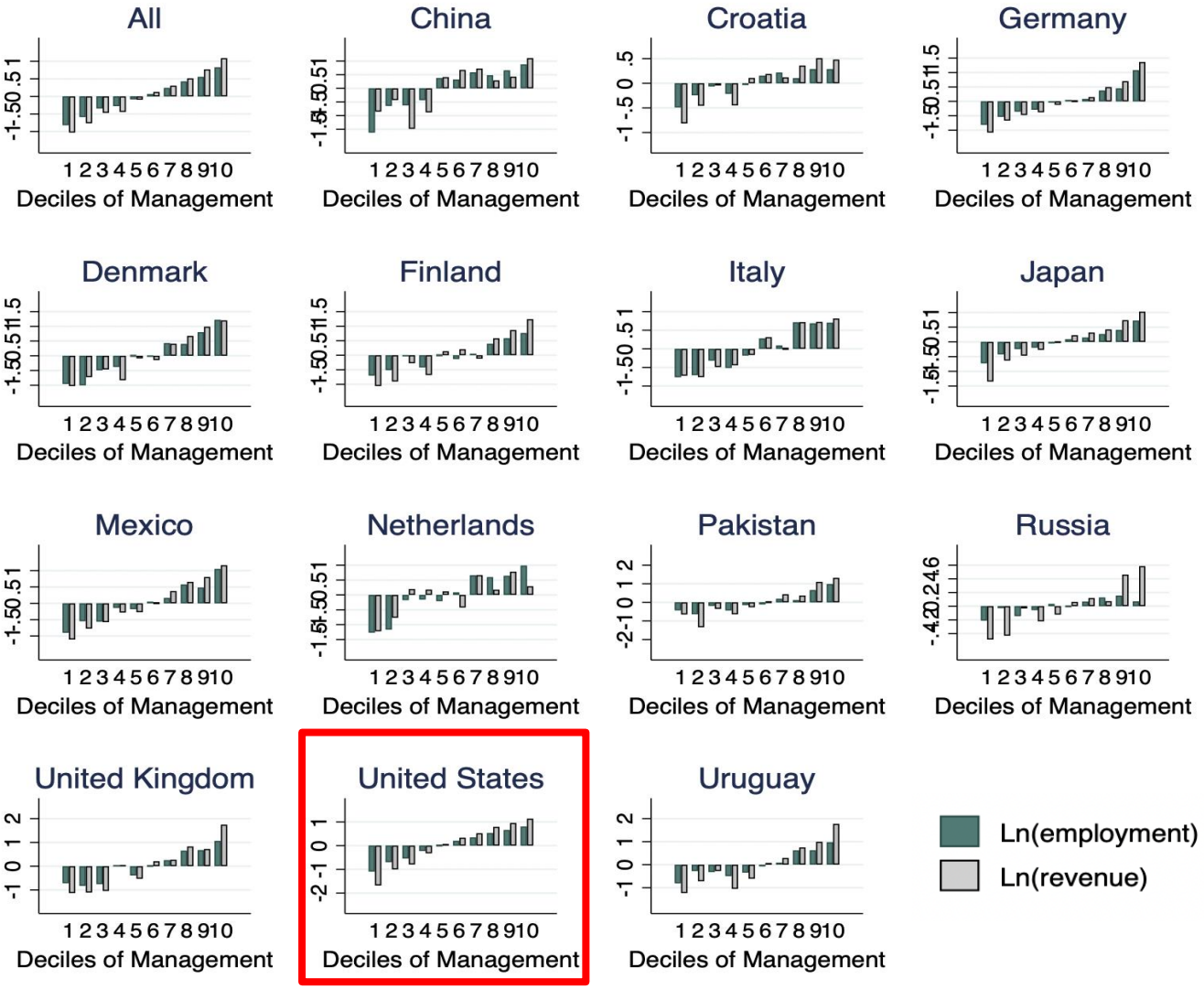


Businesses with higher MOPS scores are larger (both more jobs and higher sales): Example of USA



Notes: The x-axis divides firms into deciles of their management score. The vertical axis gives the natural logarithm of the mean level of employment (and of revenue) in each of these bins relative to overall country specific mean. Number of observations about 35,000

Businesses with higher MOPS scores are larger (both more jobs and higher sales): International



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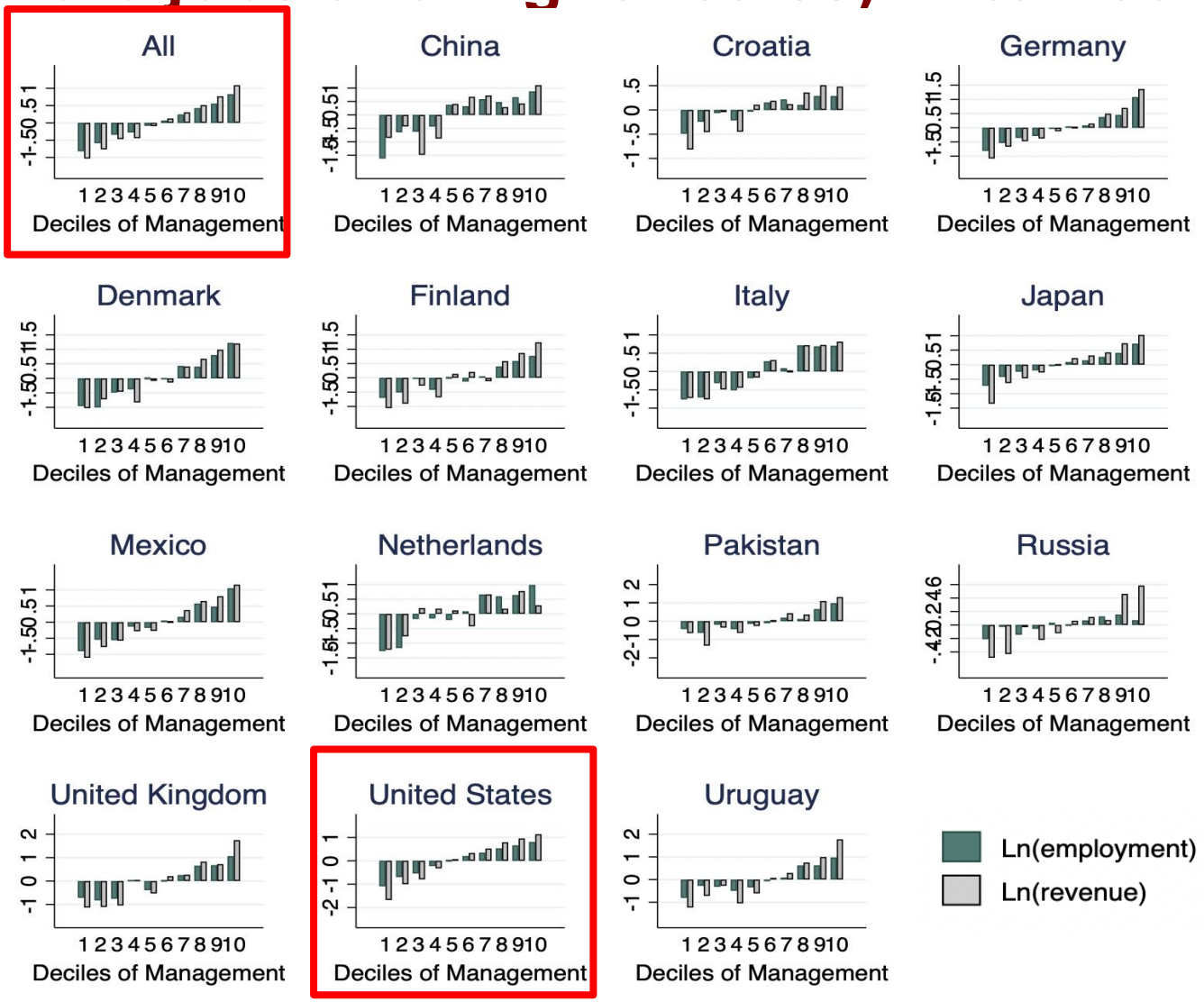

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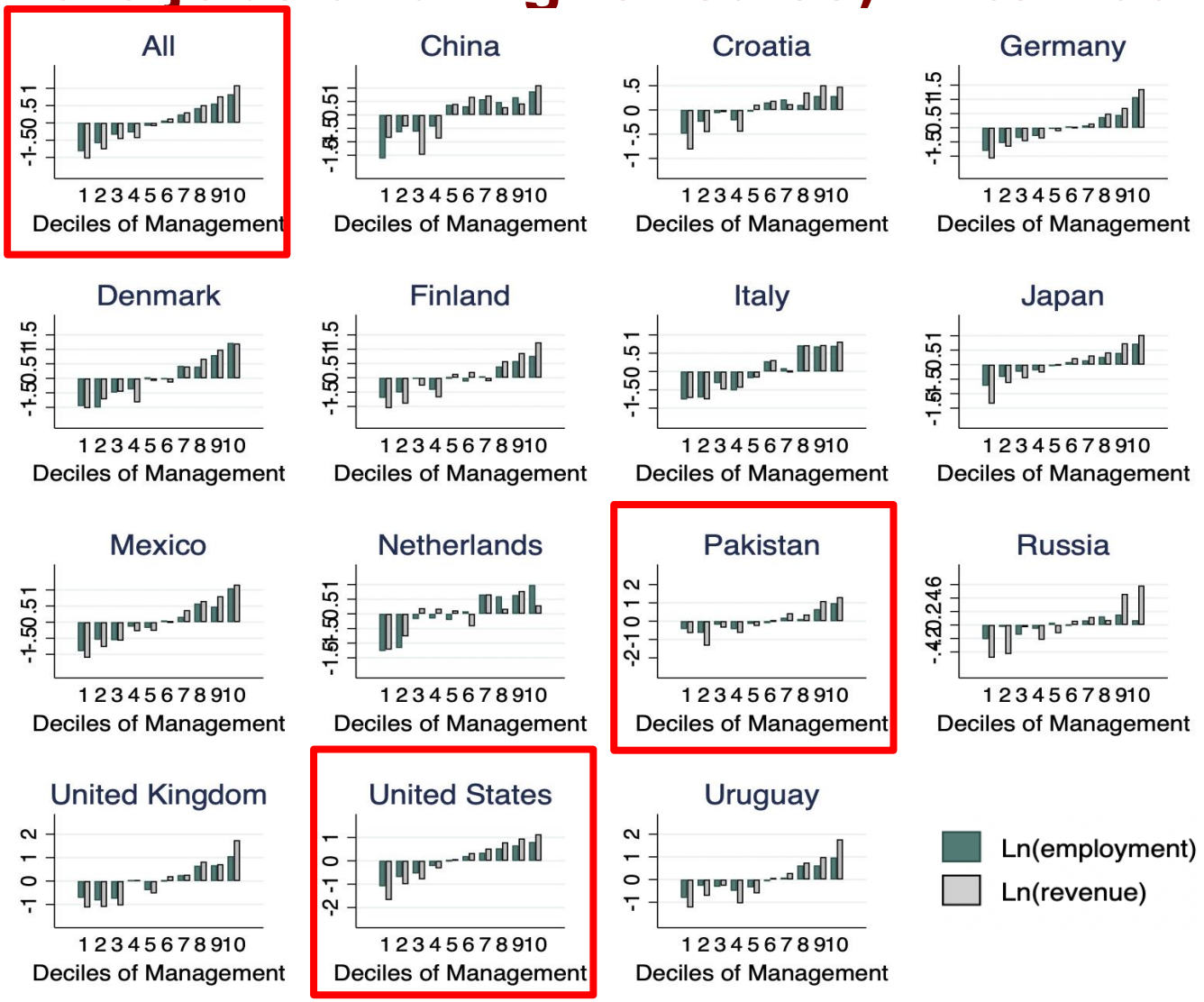

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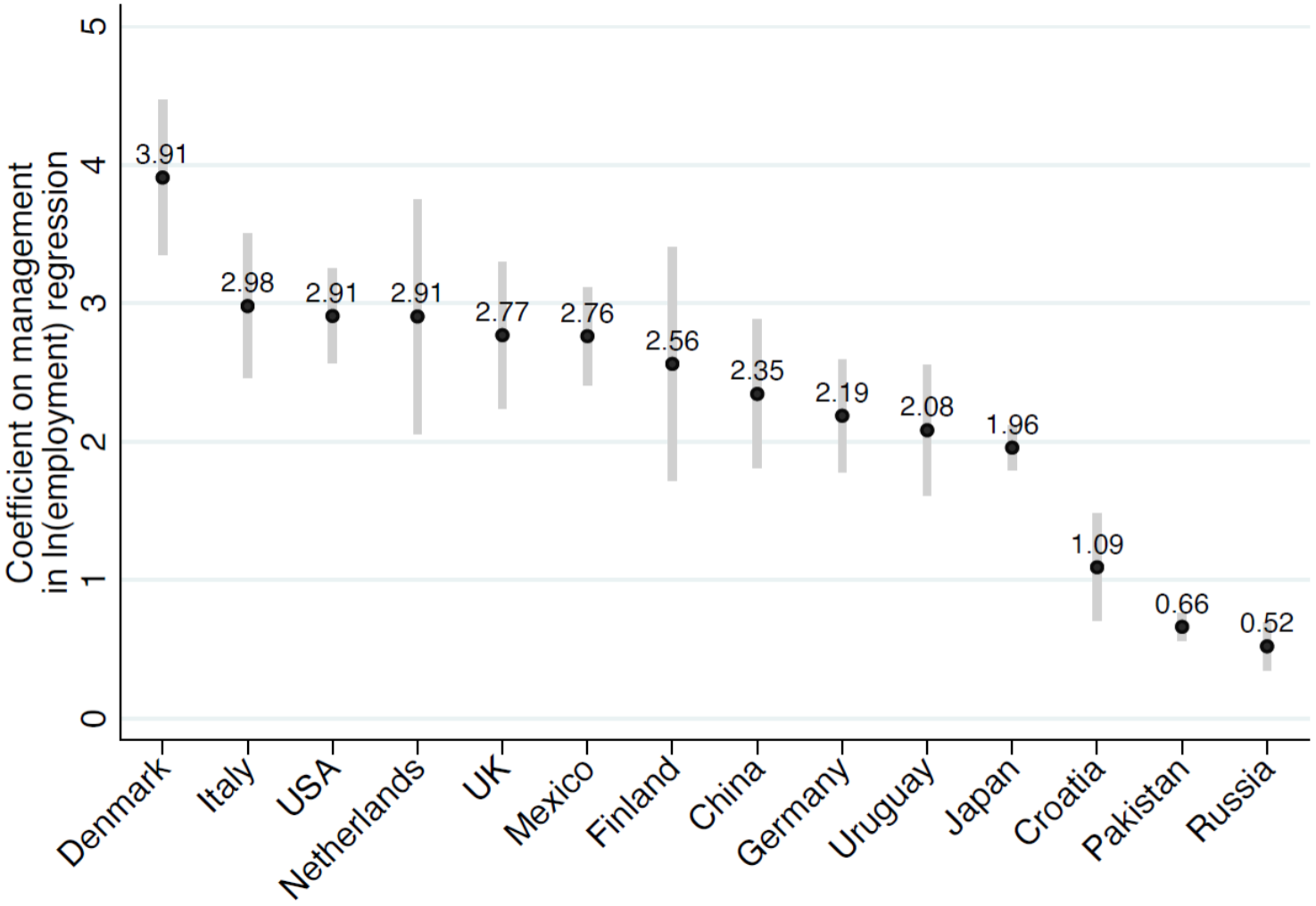
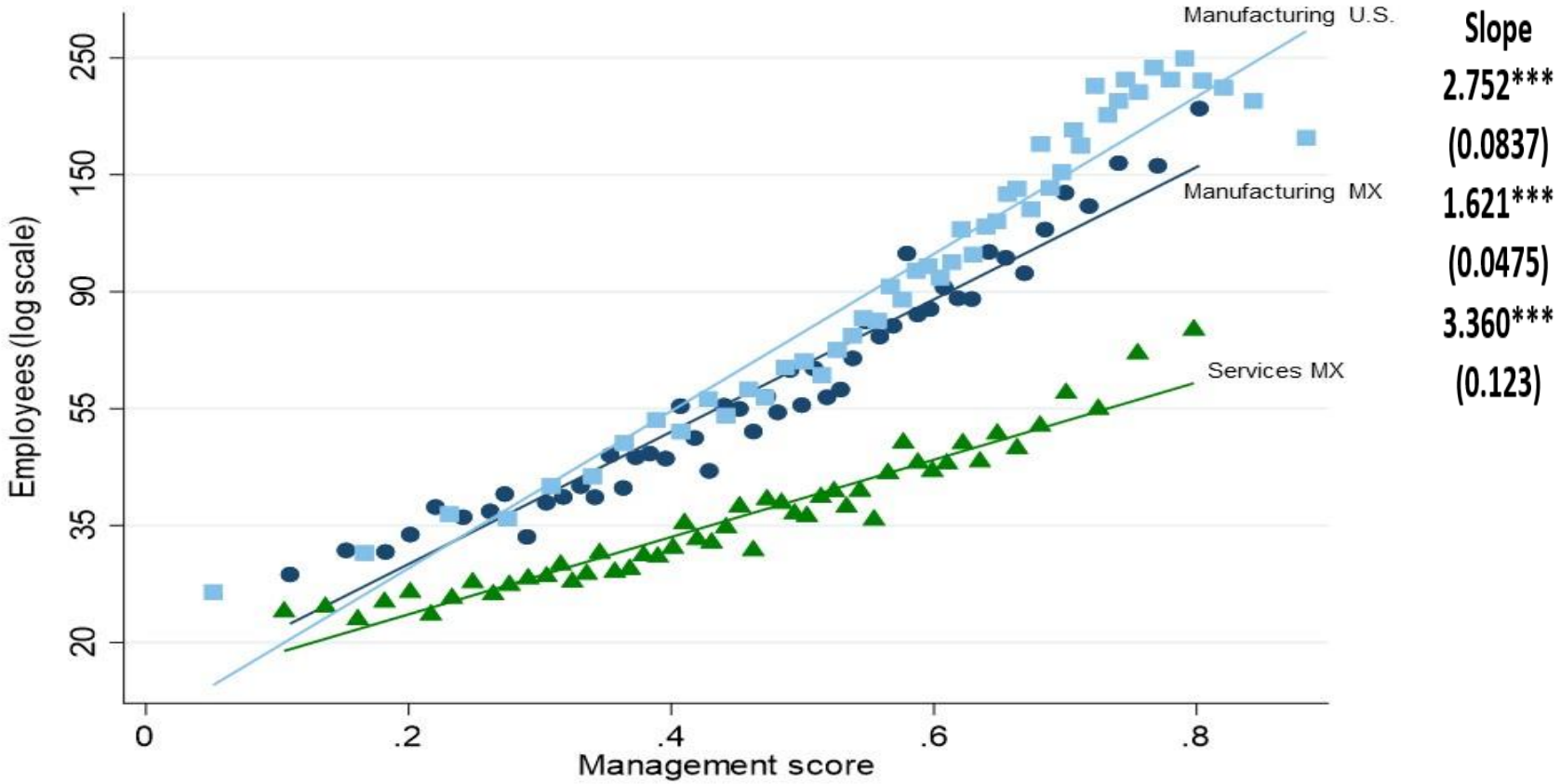
Better managed firms find it harder to achieve scale in many countries (e.g. Denmark vs. Pakistan)



Notes: Each circle is the coefficient on a country specific OLS regression of log firm employment size on management. The regression was run on 20 observations per country, using the average employment and average management score within each vingtile. 95% confidence bands are also shown. Number of observations for each country in the original datasets (manufacturing sector only): China = 1,986; Croatia = 314; Denmark = 743; Finland = 582; Germany = 1,927; Italy = 1,122; Japan = 10,081; Mexico = 3,729; Netherlands = 377; Pakistan = 11,159; Russia = 978; UK = 1,329; US = 35,000; Uruguay = 550.

Firm Size increases in management, but much less in Mexico than US, and much less in services than manufacturing



Notes: Results from Bin scatter with 50 quantiles from Mexican and U.S. firm-level Census management data. U.S data described in Bloom et al. (2018). Regression results reported for log(employment) on management score across the 50 bins. Samples 3,707 Mexican manufacturing plants in 2014 and 2,936 in 2017; 10,175 Mexican services firms in 2014 and 7,509 in 2017; and 32,000 US manufacturing plants which have been aggregated into 18,000 firms for this analysis.

Source: Bloom, Iacovone, Pereira-López & Van Reenen (2026)

THIS IS ALL SUGGESTIVE OF REALLOCATION

- In an efficient market, businesses with better management practices are able to grow larger as they offer better prices/quality
- But if there are many frictions, even well managed high TFP firms will find it difficult to reach their optimal scale
- Frictions can ve of many sorts – market imperfections, corruptions, weak rule of law, etc.

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Natural Laws

Drivers

Management & Mergers Structural Model

Conclusions

What determines management practices?

- **"Design" or "Contingency" Perspective**
  - Standard Org Econ: Firms are choosing organizational features rationally & optimally at all times
  - **Recall:** Performance pay. A focus on magnitude of β in linear total remuneration contract: $w = \alpha + \beta p$ where p is some signal of performance
    - Optimal contracts depends on noisiness of signal; Degree of risk aversion of the agent; uncertainty of the environment, etc.
- **Productivity Perspective**
  - Some core management practices will raise output in most environments
  - Management an intangible capital in production function
  - Why don't all firms adopt? Parallel question in technological diffusion

Design

- Clearly firms are making management decisions & this is likely to be influenced by environment
- But difficult to create experiments that induce different types of adoption.
- Literature more successful at looking at impact of management than at determinants.

Example of contingency

- Bloom & Van Reenen (2007) show how in WMS data firms specialize in types of management practice depending on environment
- Group WMS practices into “people” (pay, promotion, firing, hiring) vs. “monitoring/targets” (collecting and using information)
- Industries with high human capital & high rates of innovation have relatively higher intensity of people management
- Industries with high physical capital have relatively higher intensity of targets/monitoring management

Contingency – people management more prevalent than monitoring in high R&D, high human capital, less capital-intensive sectors

	People Management (P)	Monitoring &Targets (MT)	Relative People (P-MT)	Relative People (P-MT)
Countries	All	All	All	OECD
Measure	US SIC4	US SIC4	US SIC4	KLEMS SIC2
ln(K/L)	-0.000	0.096***	-0.125***	-0.126***
	(0.014)	(0.016)	(0.019)	(0.037)
R&D Intensity	0.031	-0.125*	0.201***	0.721**
	(0.062)	(0.072)	(0.074)	(0.306)
ln(%degree)	0.139***	0.123***	0.011	0.070***
	(0.008)	(0.007)	(0.010)	(0.019)
Observations	13,681	13,681	13,681	4,855

Notes: "People management" is the index for all questions in questions 13 – 18 (i.e. take the average of these z-scores and then z-score this index) and "Monitoring and targets" are all the remaining questions. US SIC4 from NBER Bartelsman-Gray data, KLEMS is country by SIC2 industry specific.
Source: Bloom, Sadun & Van Reenen (2017, table 6) "Management as a Technology"

General perspective on why seemingly beneficial management practices are not adopted (Jan Rivkin, 2000)

1. Not knowing firm has poor management practices
2. Knowing that management is poor, but not knowing how to change
3. Knowing firm is poorly managed & what do, but weak incentives to change (economics focus)
4. Knowledge & strong incentives but political problems within firm (relational contracts)

So why does management vary across countries and firms?

Some factors that seem important. Illustrate using WMS & MOPs (see Bloom et al, 2014, JEEA for summary)

- **Product Market Competition**
- Family firms
- Multinationals
- Labor market regulations
- Education
- Information

Theories of Competition and Management

- **Selection (positive)**
  - Poorly managed/low TFP firms more likely to exit. And even if they survive have lower market shares.
- **Incentives (ambiguous)**
- **Positive**: Agency issues (e.g. Hart, 1983)
    - Bankruptcy threat stronger & this can align incentives between managers and shareholders (Schmidt, 1997)
    - Greater competition implies that reduction in marginal costs (from managerial effort) has bigger effect on market shares (Raith, 2003).
- **Negative**: "Schumpeterian" lower price cost margins ex-post, less incentive to invest in management ex-ante
  - Like innovation models, theory has ambiguous predictions over Management (e.g. Aghion et al., 2005, argue for inverted U)

Most Studies find competition has positive effect on TFP

Surveys in Holmes & Schmitz (2010); Van Reenen (2011); De Loecker & Goldberg (2014, Annual Review). ***Examples:***

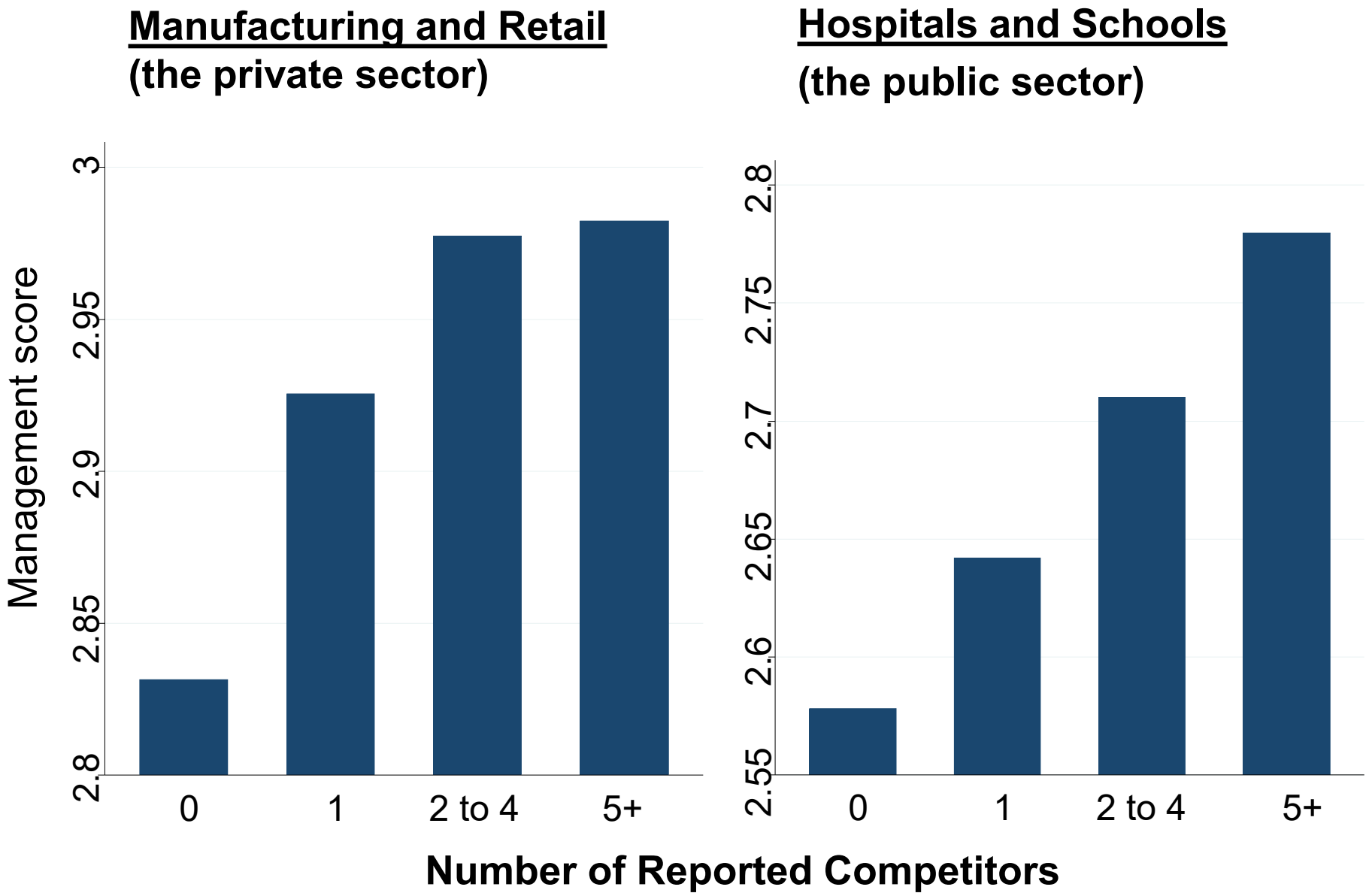
Nickell (1996, JPE) shows changes in competition lead to faster TFP growth within a panel of firms

Syverson (2004, JPE) on US concrete industry. More competitive markets had higher average levels of TFP & less dispersion.

Trade Reforms (big lit.): Pavcnik (2002, REStud). Generally positive, stress between firm reallocation (Melitiz, 2003).

Olley-Pakes (1996, ECMA) Deregulation of telecom equipment

Competition Appears Linked to Better Management in WMS



Sample of 9469 manufacturing and 661 retail firms (private sector panel) and 1183 hospitals and 780 schools (public sector panel). Reported competitors defined from the response to the question “How many competitors does your [organization] face?”

Changes in competition & improved management (WMS & similar correlations in MOPS)

TABLE 4: COMPETITION AND MANAGEMENT

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: Management						
(1-Lerner)	0.990***	1.751***				
	(0.366)	(0.443)				
Import Penetration			0.398**	0.830**		
			(0.170)	(0.327)		
Import Penetration - China					2.090**	2.204*
					(0.972)	(1.137)
Observations	8,630	8,630	8,630	8,630	8,630	8,630
Size- weight the regressions?	n	y	n	y	n	y

Notes: Includes SIC-3 industry * country dummies, firm-size, public and interview noise (interviewer, time, date & manager characteristic) controls. Clustered by industry*country

Source: Bloom, Sadun & Van Reenen (2017)

Other competition natural experiments look at management directly as well as TFP

- **Chinese trade:** Growth of Chinese exports by industry using WTO accession natural experiment where quotas fell dramatically in textiles & apparel (Bloom, Draca and Van Reenen, 2016, ReStud)
- **Findings**
  - Increase in productivity, innovation and management quality (WMS)
  - Improvements a combination of within firm effect AND selection effects
  - Some differences across countries: e.g. Autor et al, 2020 on US. See Shu & Steinwender, 2019, survey
- In WMS more generally, reducing competitive frictions (tariffs, regulations, etc.) causes reallocation towards better managed firms

Other competition natural experiments looking at management directly as well as performance

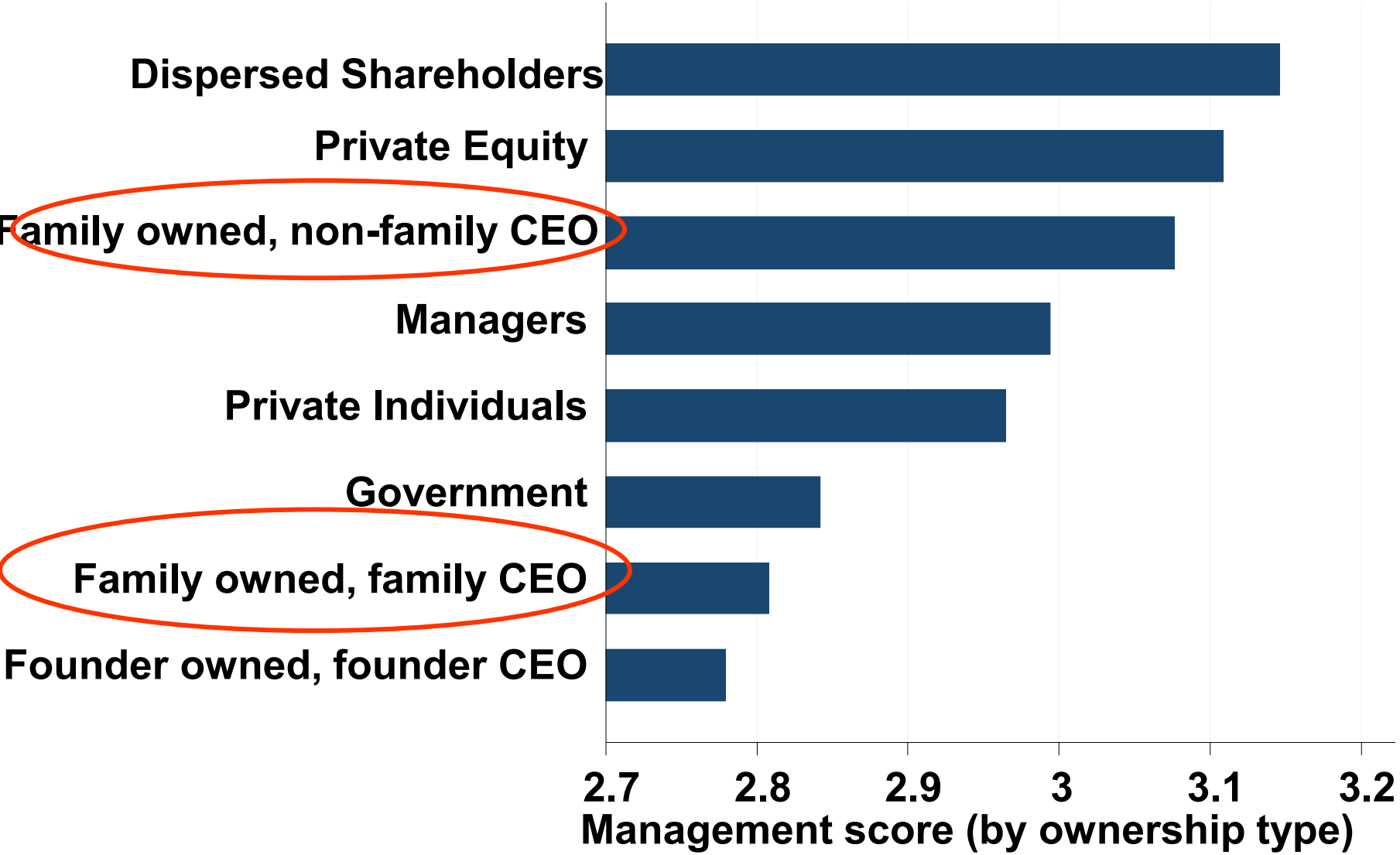
- **Political marginals**:
  - Hospital competition in UK NHS after 2000s reforms. Incentives to attract patients.
  - Under publicly run system hospitals rarely closed down in districts that are politically marginal.
  - Implies some exogenous variation in market structure
  - Bloom, Propper, Seiler & Van Reenen (2015, ReStud) find positive impact of competition (more hospitals) on management (& outcomes such as survival rates)
- Cooper et al. (2013, EJ); Gaynor et al (2016, AER) confirm result on patient outcomes using Diff in Diffs
  - Compare areas with high hospitals density pre-reform (where competition increased) vs. those with few hospitals

So why does management vary across countries and firms?

Factors that seem important

- Competition
- **Family firms**
- Multinationals
- Labor market regulations
- Education
- Information

Differences in management across ownership types (even controlling for country, industry and size)



Note: Management scores after controlling for country, industry and number of employees. Data from 9085 manufacturers. “Founder owned , founder CEO” firms are those still owned and managed by their founders. “Family firms” are those owned by descendants of the founder “Dispersed shareholder” firms are those with no shareholder with more than 25% of equity, such as widely held public firms.

Discussion of family firms

- Negative correlation of management with Primogeniture (first born son inherits) robust to many other controls
- Consistent with earlier lecture on negative impact of family firms on performance
- Lemos and Scur (2019) use the gender composition (# male children controlling for family size) of founders' children. WMS data on 13 countries. Find family firms significantly reduce WMS scores under IV.
- Could reflect deeper rooted problems of contract enforceability, trust, corruption

So why does management vary across countries and firms?

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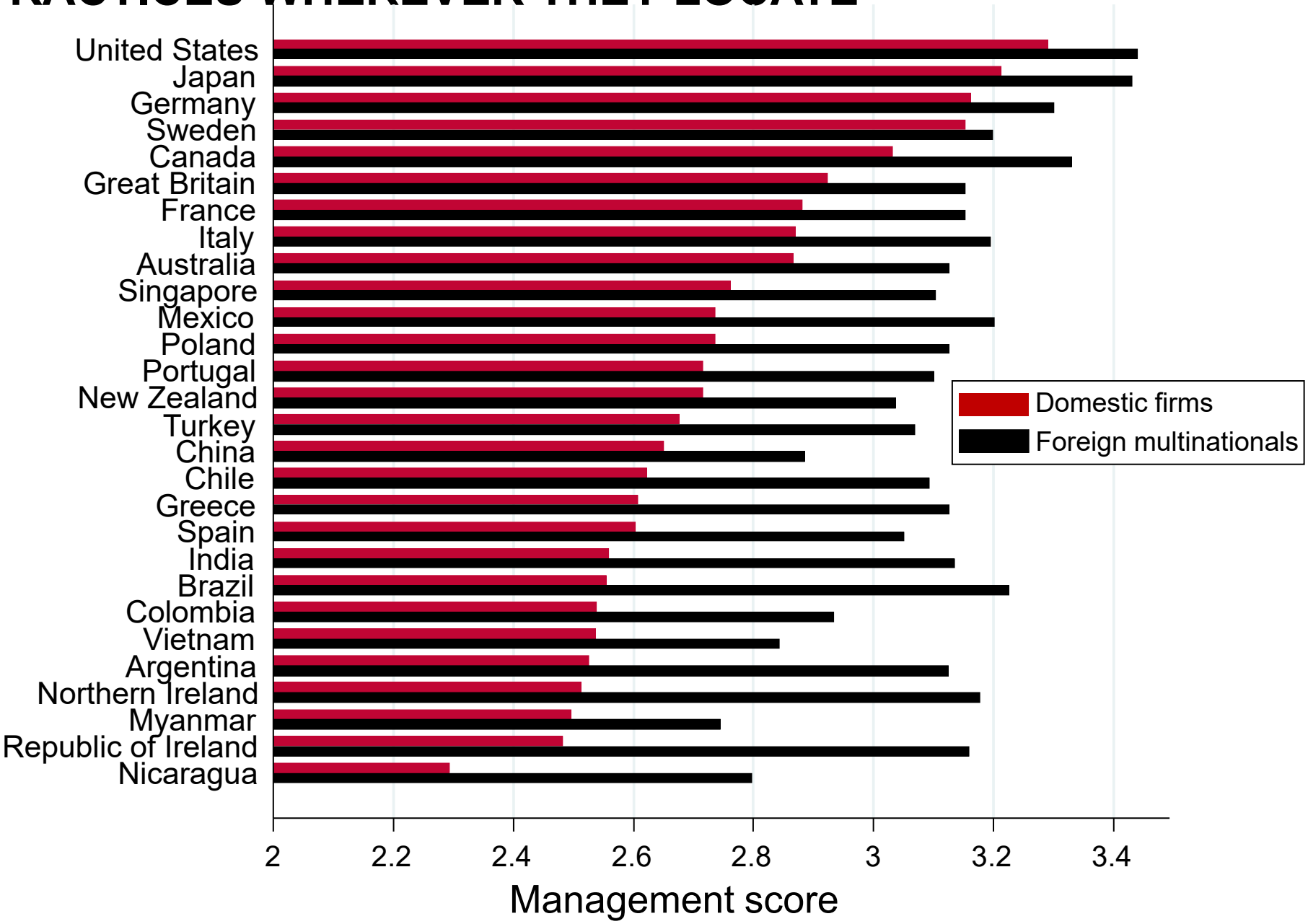
- Information

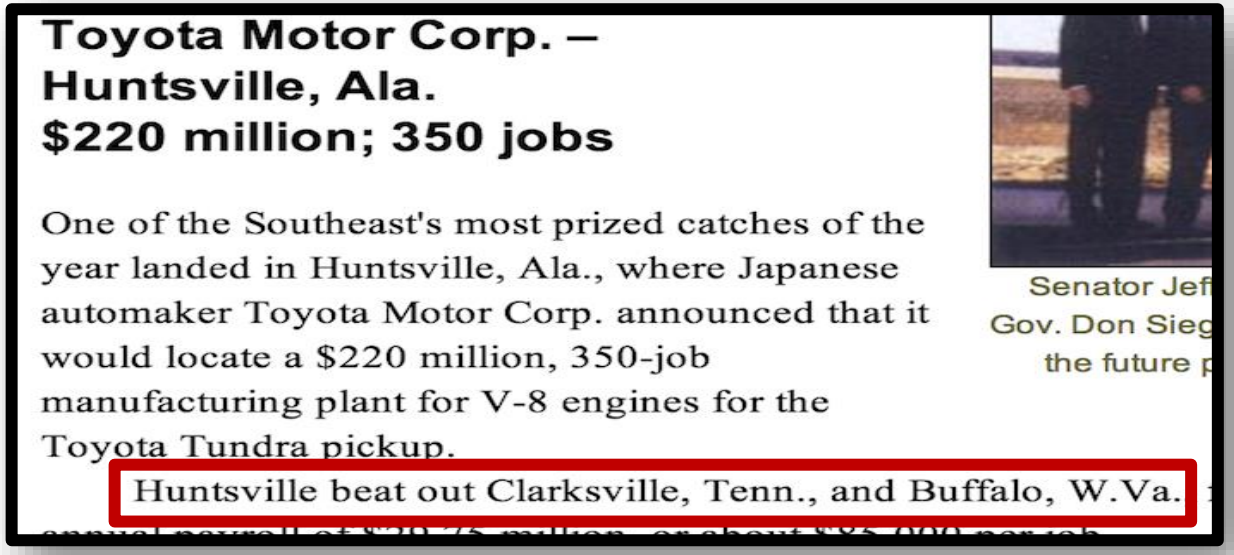
MULTINATIONALS ACHIEVE GOOD MANAGEMENT PRACTICES WHEREVER THEY LOCATE



<u>Spillovers</u> - Look at impact of winning a "Million Dollar Plant" (MDP) versus being the runner up

Following Greenstone, Hornbeck & Moretti (2010) **"Million Dollar Plants"** use Site Selection magazine (& other sources) to look at impact of winning an MDP

Magazine has monthly stories about winning county and runner up counties, which we supplement with news coverage



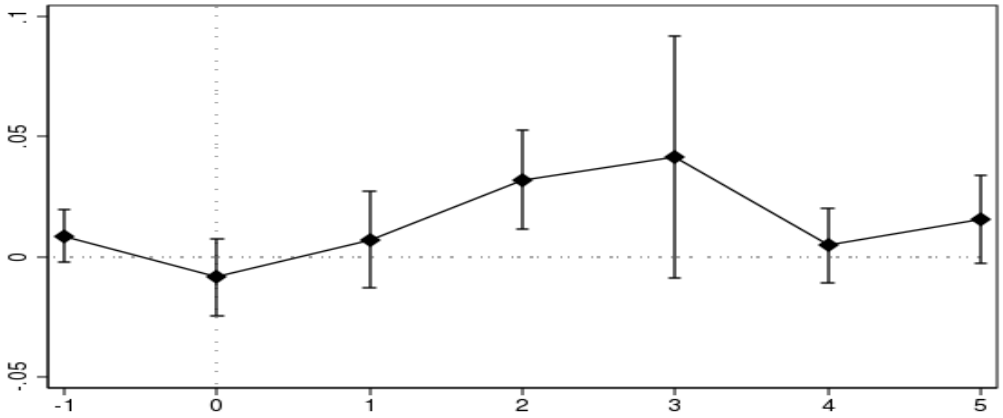
Toyota Motor Corp. –
Huntsville, Ala.
$220 million; 350 jobs

One of the Southeast's most prized catches of the year landed in Huntsville, Ala., where Japanese automaker Toyota Motor Corp. announced that it would locate a $220 million, 350-job manufacturing plant for V-8 engines for the Toyota Tundra pickup.

Huntsville beat out Clarksville, Tenn., and Buffalo, W.Va.

Senator Jef
Gov. Don Sieg
the future p

Event Studies of impact of Million Dollar Plants on incumbent plants



Panel A:
Overall Treatment Effect

Source: Bloom, Brynjolfsson, Foster, Jarmin, Patnaik, Saporta-Eksten & Van Reenen (2019, AER) “What Drives management?”

MDP lead to local (county-specific) spillovers in management, TFP and employment for incumbent plants (& stronger in industries with high managerial inflows from MDP's industry

Dependent variable:	Change in Management	Change in Log(TFP)	Employment Growth
Panel A: All industries pooled			
MDP Opens	0.018**	0.024	0.014**
	(0.007)	(0.017)	(0.005)
Panel B: Split high/low manager flow			
MDP Opens×High	0.031***	0.069***	0.017**
	(0.008)	(0.019)	(0.006)
MDP Opens×Low	-0.005	-0.050	0.009
	(0.011)	(0.034)	(0.01)
P-value for equality	0.007	0.004	0.495
Observations	~2,500	~2,500	~2,500

Source: Bloom, Brynjolfsson, Foster, Jarmin, Patnaik, Saporta-Eksten & Van Reenen (2019, AER) "What Drives management?"

So why does management vary across countries and firms?

Factors that seem important

- Competition
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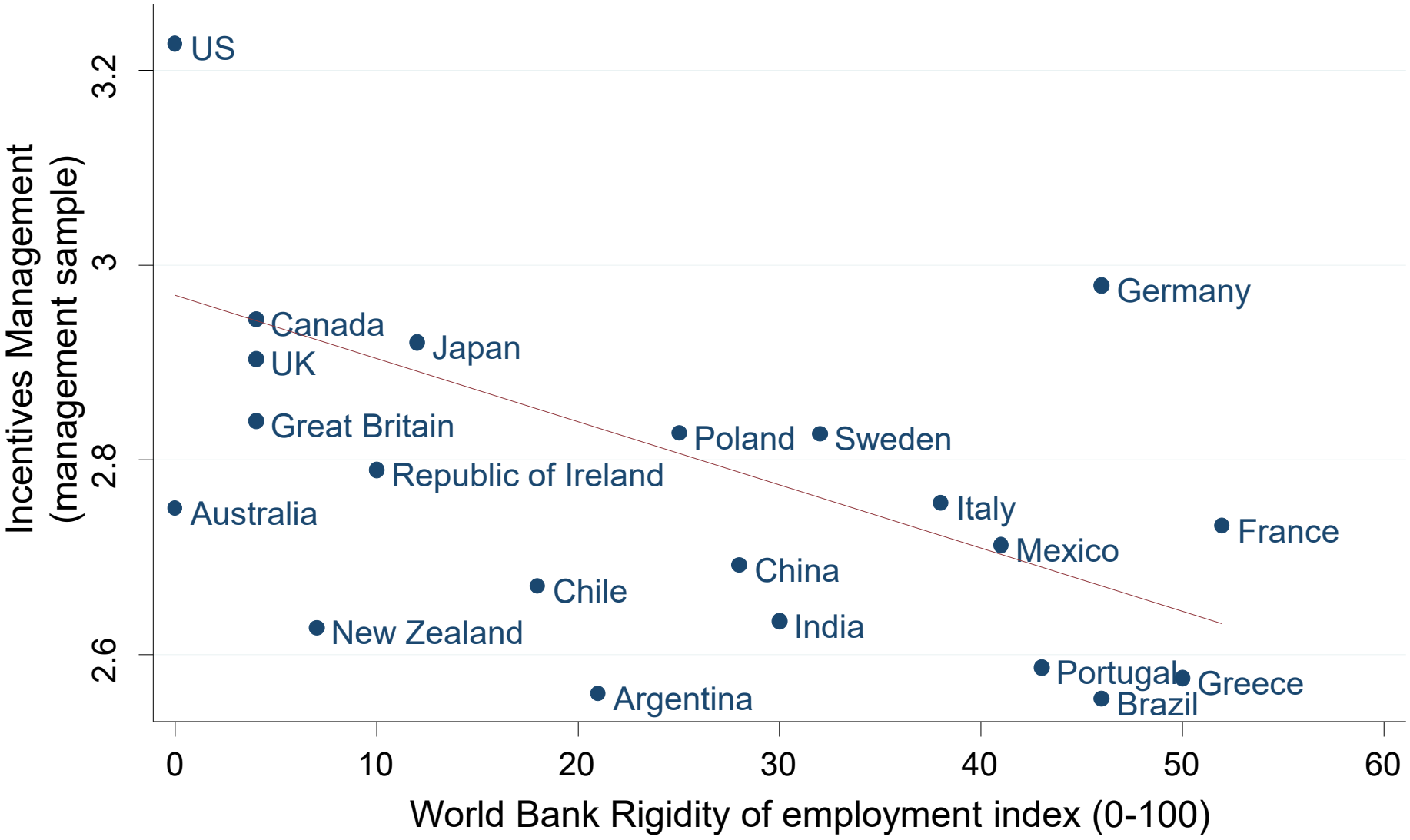
- Multinationals
- **Labor market regulations**
- Education
- Information

Labor Market Regulation & Incentives Management



Note: Averaged across all manufacturing firms within each country (9079 observations). We did not include other sectors as we do not have the same international coverage. Incentives management defined as management practices around hiring, firing, pay and promotions. The index is from the Doing Business database http://www.doingbusiness.org/ExploreTopics/EmployingWorkers/

Regulation – Bloom et al (2019) on causal Effect of "Right to work" (RTW: no automatic deduction of union dues)?

First approach:

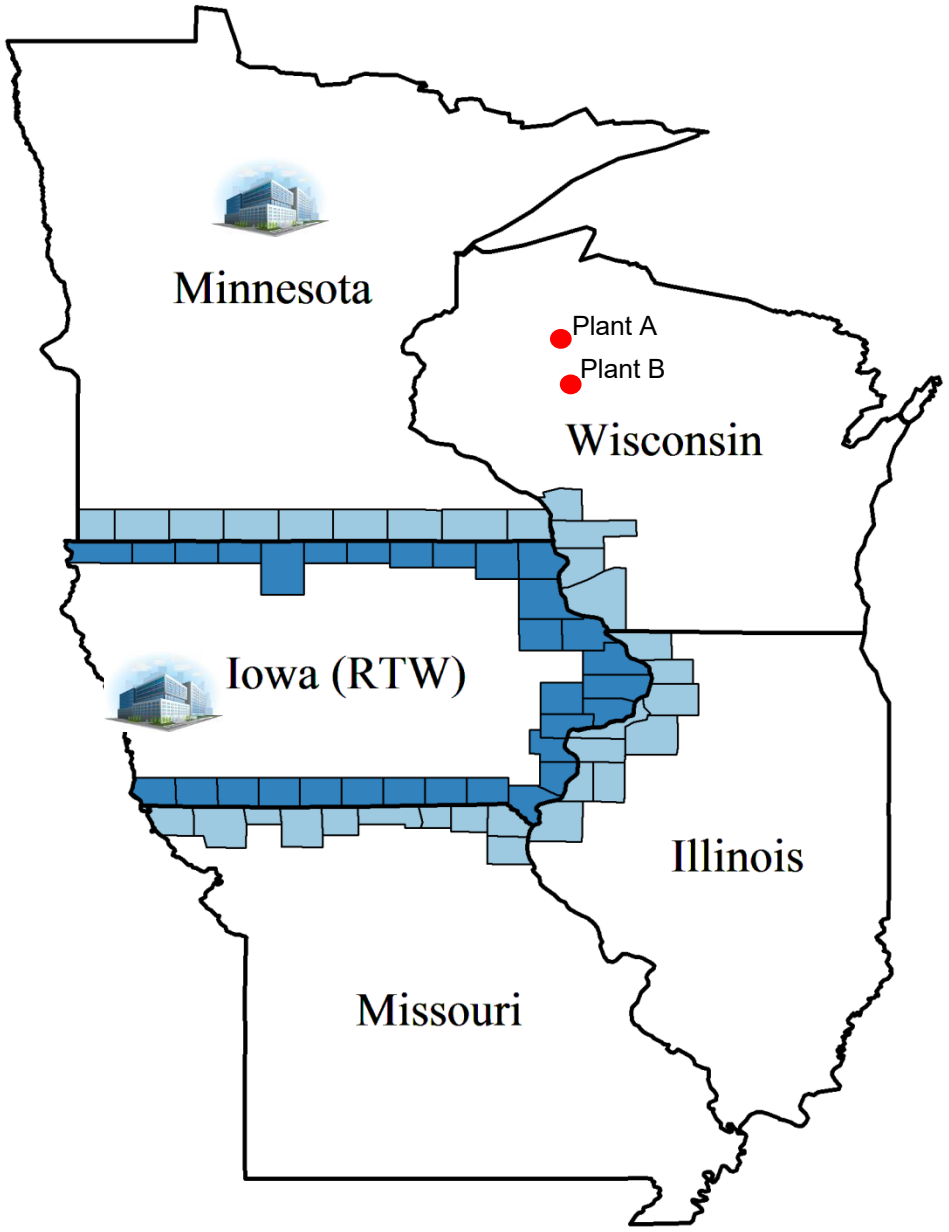
Focus on counties 30 miles of the RTW state border (Holmes 1998). Use spatial RD Design

Second approach:

Use MOPS 2015 for Diff-in-Diffs over states that changed since 2010 (IN, MI, WI)

Results:

Both approaches suggest RTW improves people management, but not other aspects



So why does management vary across countries and firms?

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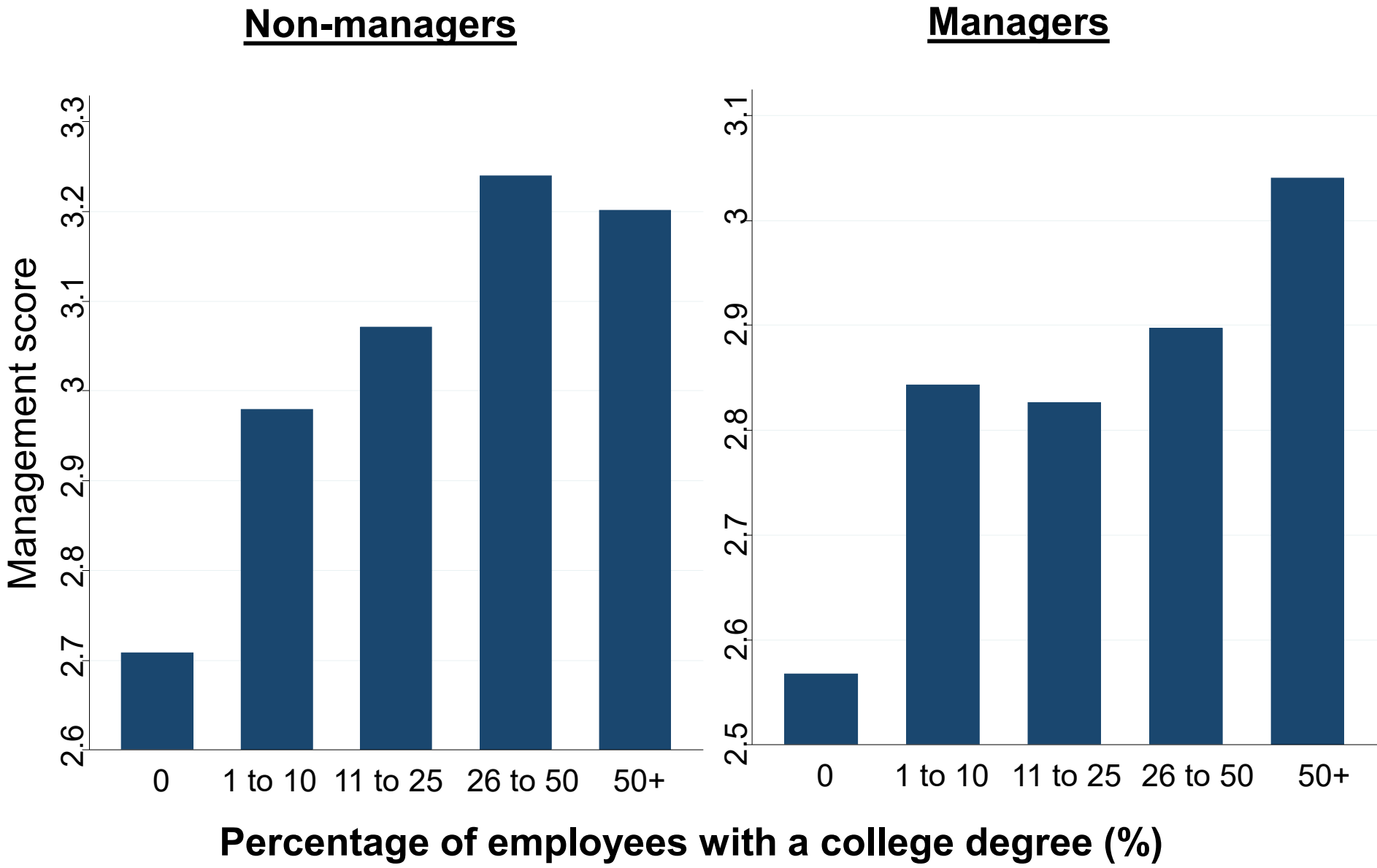
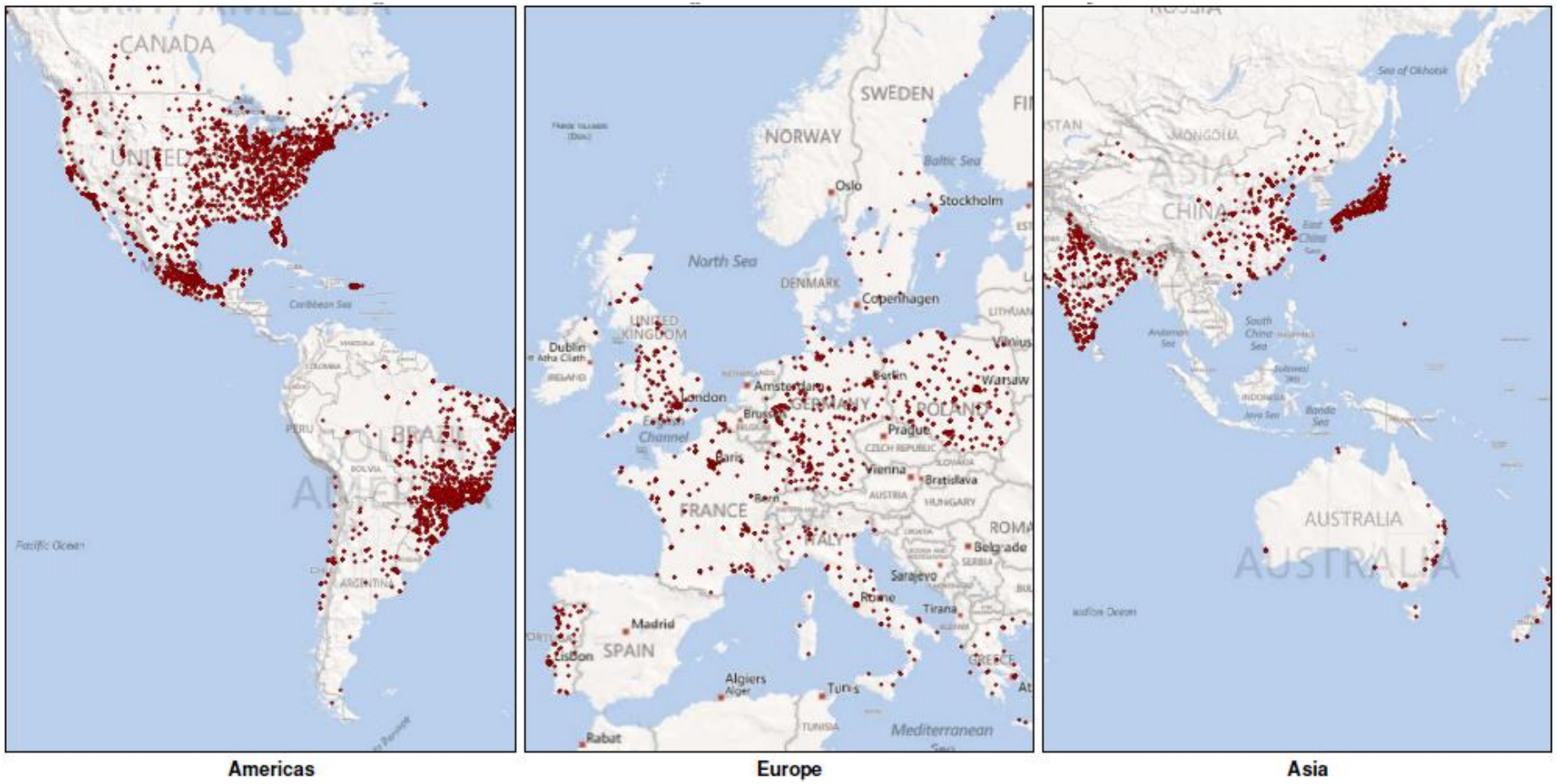
- **Education**
- Information

Education for Non-Managers and Managers Appear Linked to Better Management (in manufacturing and retail)



Sample of 8,032 manufacturing and 647 retail firms. We did not collect comparable education data in hospitals and schools.

Management and Education: UNESCO World Higher Education Database university locations (N=9,081)



Americas Europe Asia

Source: Valero & Van Reenen (2019)

Human capital and management

- Feng & Valero (2019) show plants located closer to universities have more educated employees & higher WMS management scores

- Bloom et al. (2020): hospitals located closer to colleges offering clinical and business education (Med Schools + B-Schools) had higher WMS management scores & better clinical outcomes

So why does management vary across countries and firms?

Factors that seem important

- Competition
- Family firms
- Multinationals
- Labor market regulations
- Education
- **Information**

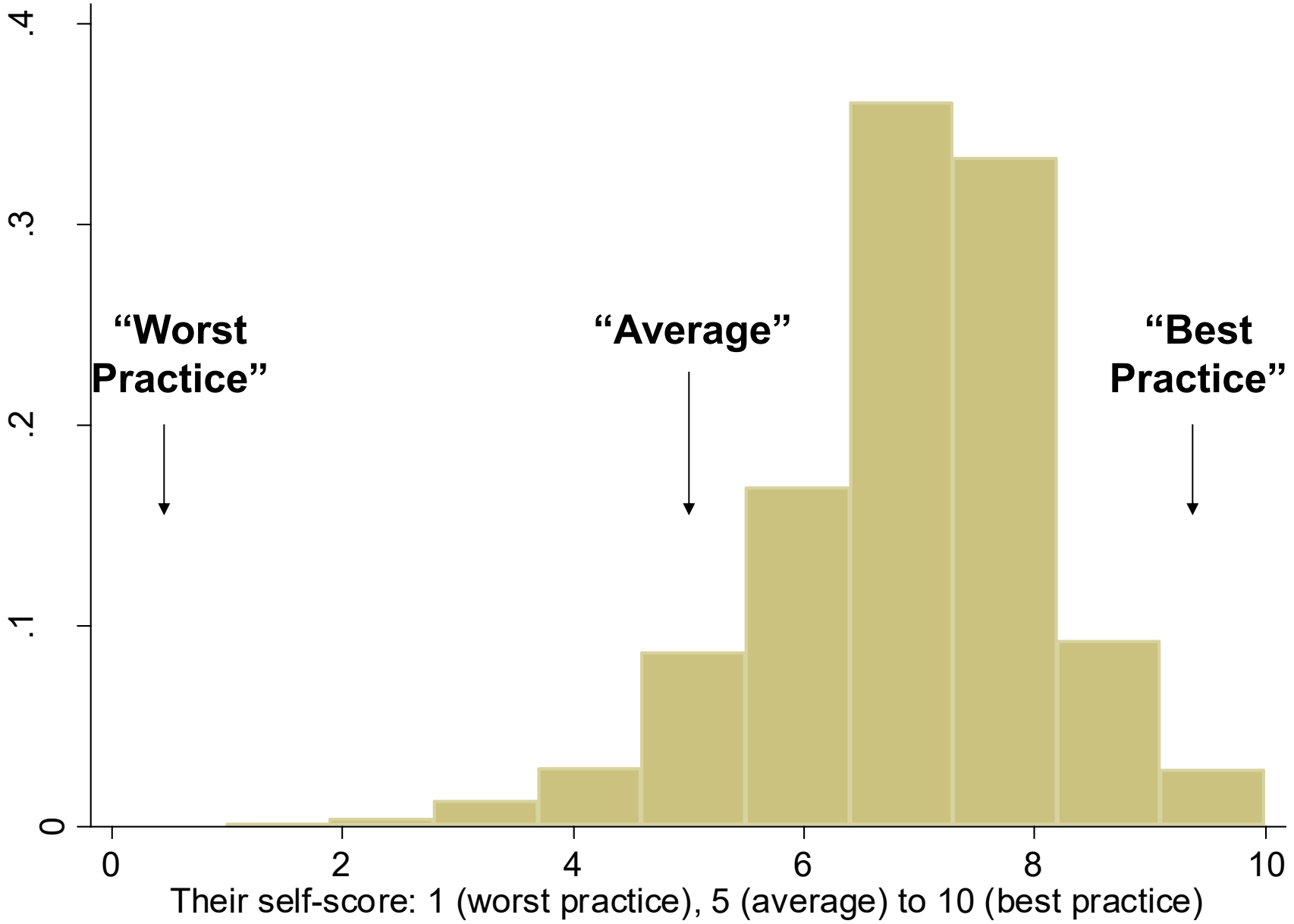
INFORMATION: ARE FIRMS AWARE OF THEIR MANAGEMENT PRACTICES BEING GOOD/BAD?

We asked:

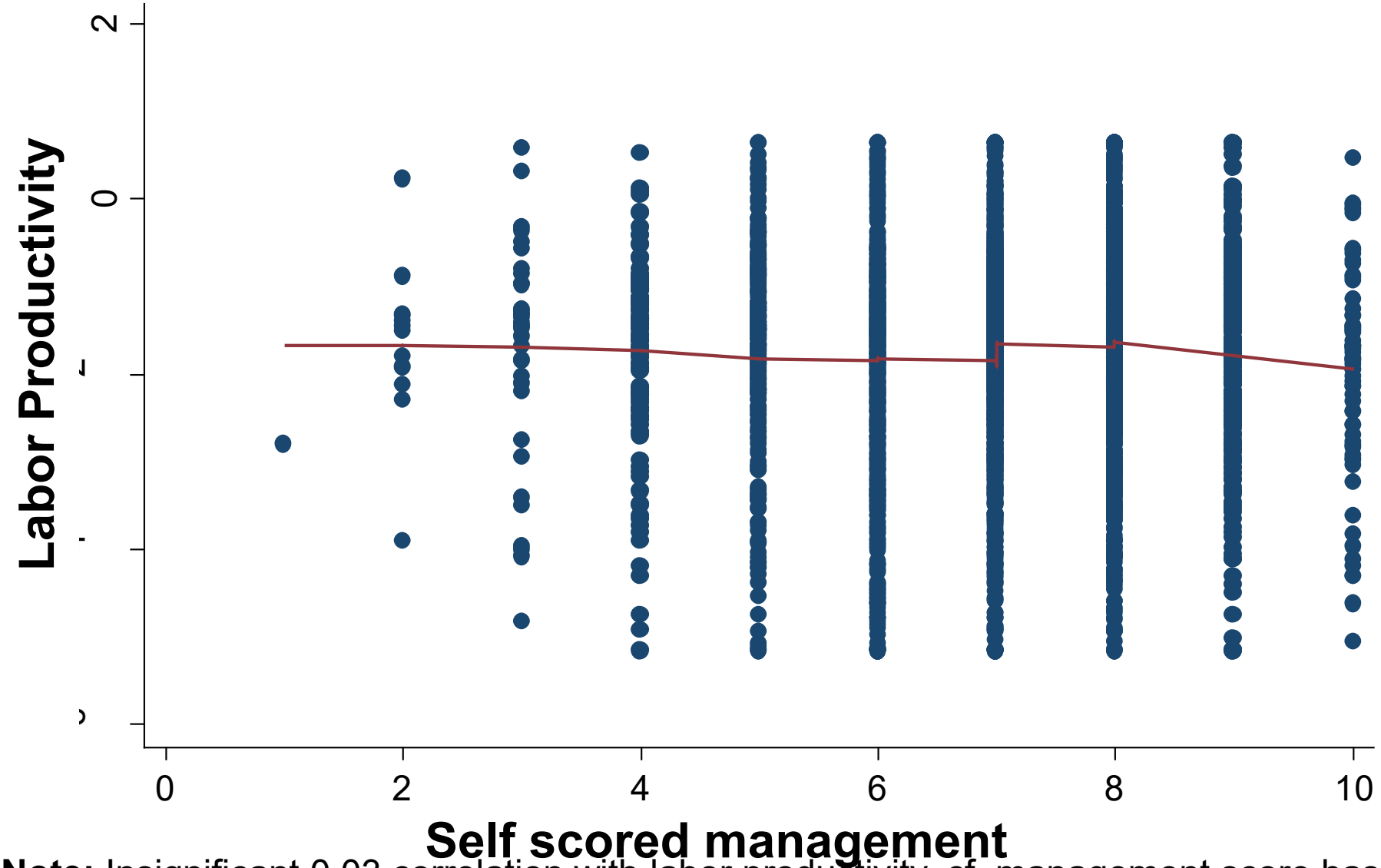
"*Excluding yourself, how well managed would you say your firm is on a scale of 1 to 10, where 1 is worst practice, 5 is average and 10 is best practice*"

We also asked them to give themselves scores on operations and people management separately

MOST MANAGERS THINK THEY ARE WELL ABOVE AVERAGE



SELF-SCORES UNCORRELATED WITH PRODUCTIVITY



Note: Insignificant 0.03 correlation with labor productivity, cf. management score has a correlation of 0.30

Managerial Informational RCTs

- **Cai and Szeidl (2018, QJE)**
  - 2,820 Chinese firms randomized into small groups whose managers met monthly for a year vs. no-meetings
  - MOPs style management scores rise significantly (~0.2 sd)
  - Revenue rises by 8.1%; profits ↑, inputs ↑
  - Mechanism appears to be via **information** - finding more business partners (supplier-client matching; trust). Better peers (i.e. if randomly matched to larger firms) increases benefits
- See also Brooks et al (2018); Bianchi and Giorcelli (2021, JPE)

Summary

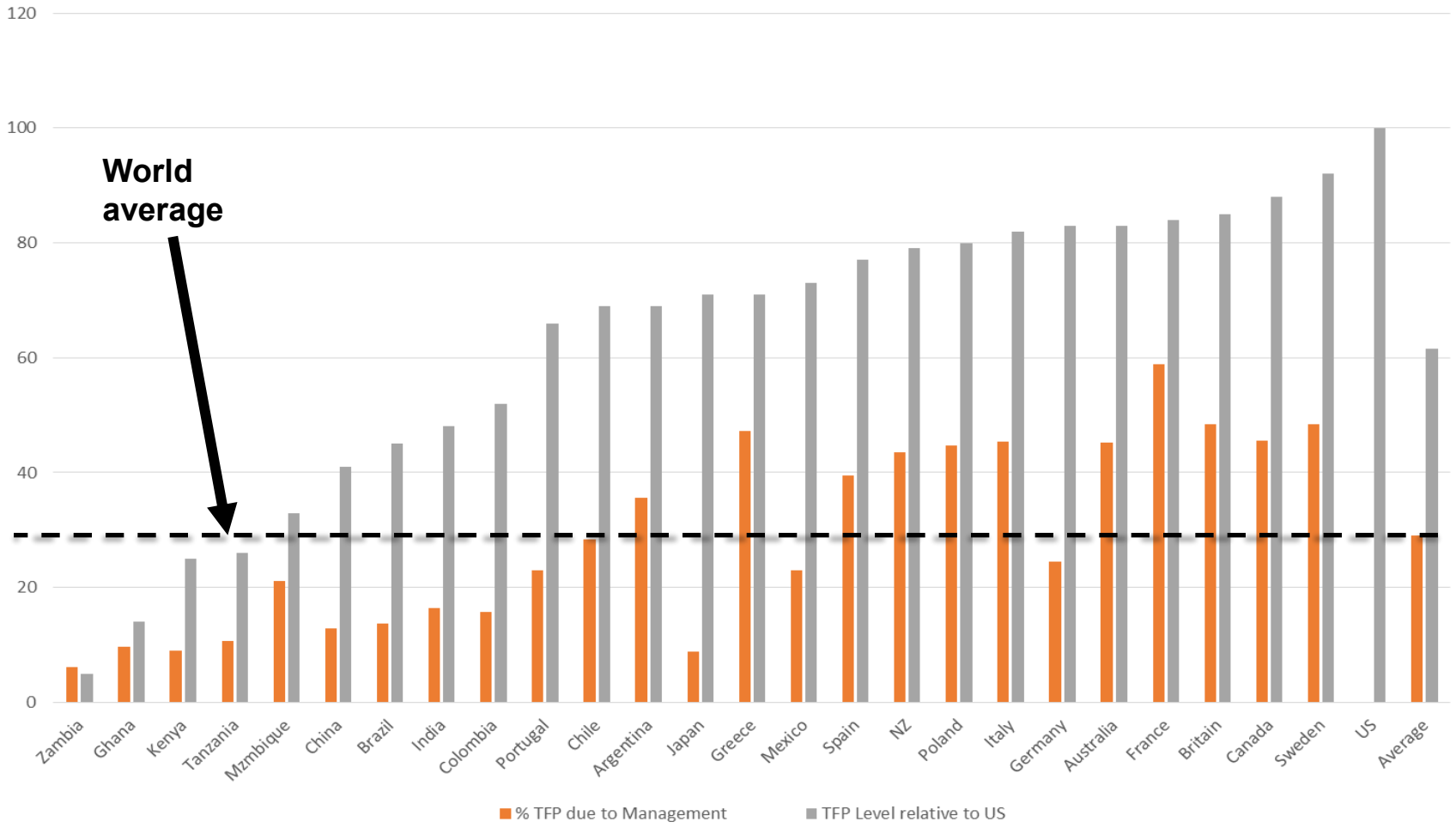
- Management is partially contingent, but some core practices (WMS style) do seem to raise performance in a variety of contexts

- Robust correlations with structural features of environment

- But there is far too much we do not know in this area. A rich seam of potential research projects

- Finally: does this matter from a macro-economic perspective?

Across countries, management accounts for about a third of international TFP gaps



Source: Bloom, Hartley, Sadun, Schuh & Van Reenen (2025)

Measurement

Natural Laws

Drivers

Management & Mergers Structural Model

Conclusions

Conclusions

- New generation of (scalable) survey tools generate robust management measures
- Huge variation in management within & between nations
- Higher management score firms more productive & larger (but frictions reduce ability of such firms to grow)
- Example of a structural model with endogenous management, M&A and imperfect competition
  - M&A and competition increase management
  - Management accounts for ~30% of cross country TFP
- **Management matters a lot for the wealth of nations**
  - **and is amenable to policy influence (over)**

Structural Management Model with Mergers & Acquisitions (Bloom et al, 2026)

- **Key Features**
  - Exogenous managerial talent + endogenous investment to build managerial capital
  - Heterogeneous firm productivity & imperfect competition
  - M&A: a reallocation mechanism
- **Firms can grow** (or shrink) in three ways:
  - Organically (plant investment)
  - Starting up greenfield plants
  - Acquiring brownfield plants

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  - M&A: a reallocation mechanism
- **Firms can grow** (or shrink) in three ways:
  - Organically (plant investment)
  - Starting up greenfield plants
  - Acquiring brownfield plants
- **Use model to study counterfactuals**
  - Increasing costs of M&A
  - Strengthening competition
  - Aggregate management impact on TFP differences

Structural Management Model

Production Function of establishment *e*: $Y_e = C_i^c [AM^\gamma K^\alpha L^\beta]_e$

C = Firm *i* management (e.g. entrepreneurial/CEO talent) which spreads across establishments in the firm;

A = Establishment TFPQ

M = Establishment management capital

K = Establishment Non-management capital

L = Establishment Labor

Invest in *M* which depreciates (like *K)*, but unlike *K*, firms draw an *M* endowment at entry (Melitz, 2003).

Structural Management Model

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Toolkit of Management policies

Policy type	Strength of evidence	Policy Net benefit (out of 5)	Ease of implementation	Time frame
Structural				
Competition	H		M	medium
Trade and FDI	H		L	medium
Education	M		M	long
Deregulation	M		L	medium
Governance	M		M/L	long
Direct				
Training - consulting	H		H	short
Training - formal classroom	M		H	medium
Information/benchmarking	L/M		H	medium

Source: Scur, Sadun, Van Reenen, Lemos & Bloom (2021)

L = Low; Not politically easy
M = Medium
H = Highly possible

Thank you!

Some Further Reading (and viewing)

"Innovation Policies to Boost Productivity" (2020) Hamilton Policy Proposal 2020-13 https://www.hamiltonproject.org/assets/files/JVR_PP_LO_6.15_FINAL.pdf webinar

"A Toolkit of Policies to promote Innovation" (Nick Bloom, Heidi Williams and John Van Reenen), *Journal of Economic Perspectives (2019)* 33(3) 163–184 http://cep.lse.ac.uk/pubs/download/dp1634.pdf

"Why Do We Undervalue Competent Management" (Raffaella Sadun, Nick Bloom and John Van Reenen) *Harvard Business Review* (2017), September-October

"The new empirical economics of management" (Nick Bloom, Renata Lemos, Raffaella Sadun, Daniella Scur and John Van Reenen), *Journal of the European Economic Association* (2014) 12: 835–76,

"Measuring and Explaining Management practices across firms and nations" (Nick Bloom and John Van Reenen) *Quarterly Journal of Economics* (2007) 122(4), 1351–1408.

"The Costs and Benefits of Brexit" (Swati Dhingra, Hanwei Huang, Gianmarco Ottaviani, Joao Pessoa, Tom Sampson and John Van Reenen) *Economic Policy* (2017), 32(92) 651–705 Vox

"Who Becomes an Inventor in America? The Importance of Exposure to Innovation" (Alex Bell, Raj Chetty, Xavier Jaravel, Neviana Petkova and John Van Reenen), http://cep.lse.ac.uk/pubs/download/dp1519.pdf Data *Quarterly Journal of Economics* (2019)134(2) 647–713, New York Times Vox Atlantic Fortune Conversation VoxUS Economist VC Centrepiece INET

COVID-19: "A major wave of UK business closures by April 2021? The scale of the problem and what can be done." (Peter Lambert and John Van Reenen) 2021 CEP COVID analysis https://cep.lse.ac.uk/_NEW/PUBLICATIONS/abstract.asp?index=7711 IGA Radio Carona MIT Technology Review

Further reading

- "The World Management Survey at 18" (Bloom, Lemos, Sadun, Scur & Van Reenen, 2021), *Oxford Review of Economic Policy* https://poid.lse.ac.uk/textonly/publications/downloads/poidwp002.pdf
- World Management Survey http://worldmanagementsurvey.org/
- "Increasing Difference Between Firms" *Changing Market Structures and Implications for Monetary Policy*, Jackson Hole Symposium (Van Reenen, 2018) 19-65 http://cep.lse.ac.uk/pubs/download/dp1576.pdf NYT NPR
- LSE Growth Commission Final Report (Aghion et al, 2013)

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

- "Management as a Technology" (Bloom, Sadun and Van Reenen, 2020): http://mitsloan.mit.edu/shared/ods/documents/?DocumentID=2685