

Management and the Wealth of Nations

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Introduction

- Enormous difference in productivity between firms in every country – “Persistent Performance Differences”
- **Management practices** long thought to be an important reason for such differences (Smith, 1776; Walker, 1887)
- Last 20 years: much progress in getting better measures & analyzing management practices
- Partly contingent on environment (traditional view), but some practices increase productivity in wide range of environments
- Management has important macro consequences for cross country productivity differences: the Wealth of Nations₃

Understanding Growth

Measuring & Describing Management

Drivers of Management

Conclusions & Policy

Understanding Growth: Three fundamental sources

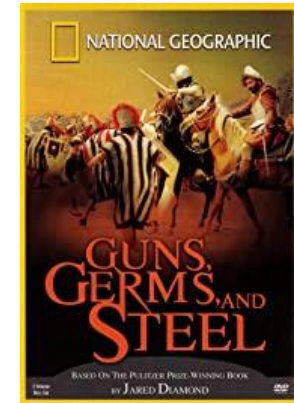
- **Innovation:** *Frontier Productivity Growth*
 - Ideas that are new to the world



Understanding Growth: Three fundamental sources

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

- **Diffusion:** *Catching up to frontier*
 - The spread of these ideas

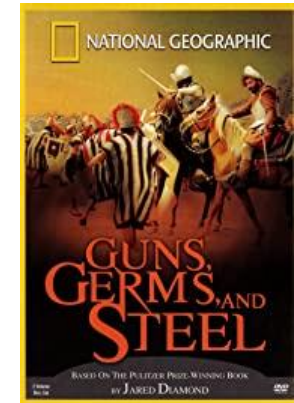


Understanding Growth: Three fundamental sources

- **Innovation:** *Frontier Productivity Growth*
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- **Reallocation:** *Creative Destruction* - More productive & innovative firms displace less efficient





Foreword by
Emmanuel Macron

The
ECONOMICS
of
CREATIVE
DESTRUCTION

New Research on Themes from Aghion and Howitt

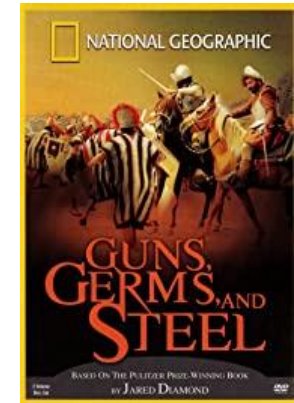
Edited by **UFUK AKCIGIT & JOHN VAN REENEN**

Understanding Growth: Three fundamental sources

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



- **Diffusion:** *Catching up to frontier*
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- **Reallocation** Important part of process: innovative & more productive firms displace less efficient (“creative destruction”)
- **All 3 get reflected in macro Total Factor Productivity (TFP)**

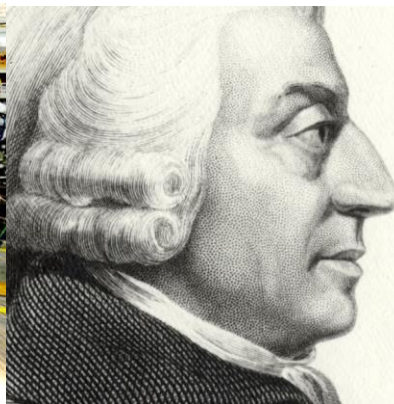
**TFP is not just “hard technologies”:
Management practices
also very important**



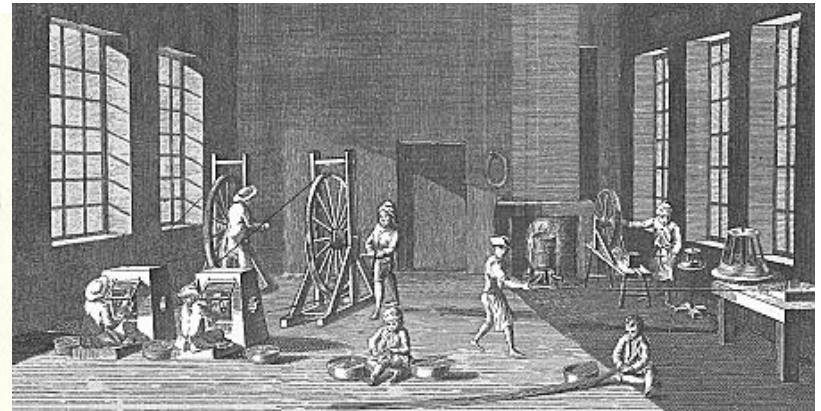
In Glasgow Uni Archives: 1st edition Wealth of Nations!



Toyota Plant



Adam Smith and the Pin Factory



Not by technology alone....

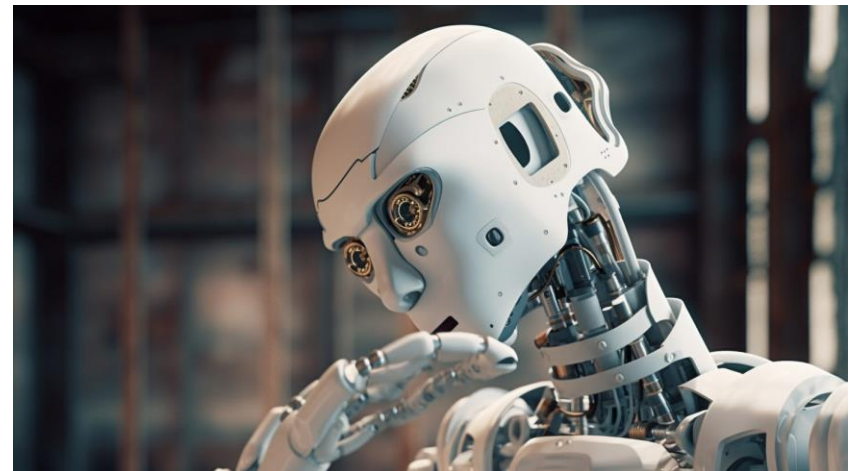
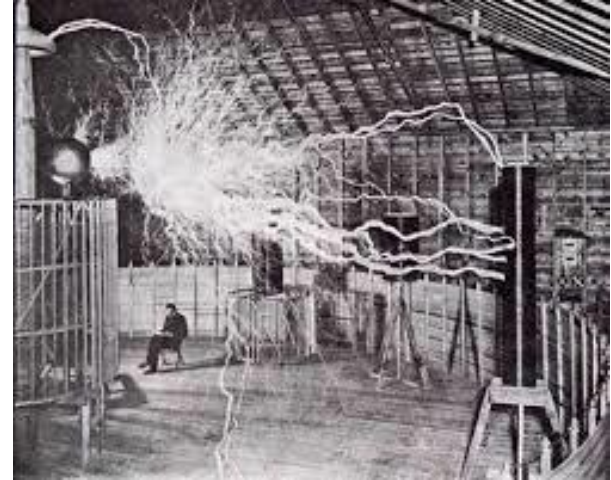
- **Innovations in management,**
 - Fordist Mass production (1920s)
 - Alfred Sloan's M-form firm (1930s)
 - Toyota Lean Manufacturing System (1970s)
 - Global Supply Chain Management (21st Century)

- But diffusion of management practices most important in driving aggregate productivity



Technology, management & complementarities

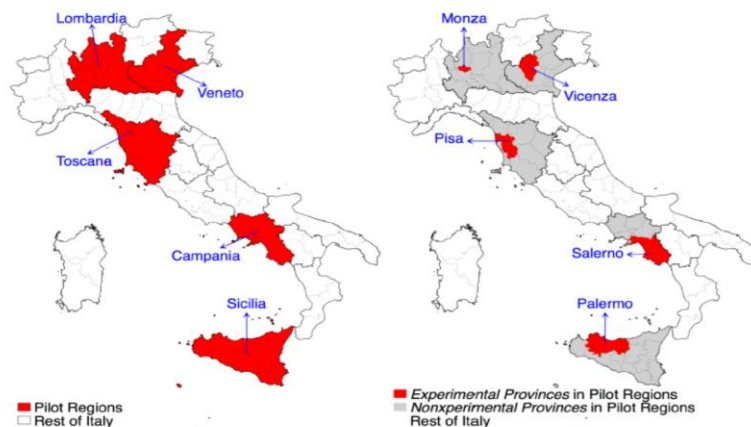
- Need to change work organization/management to make best use of innovation (textiles, electricity, computers, AI, ...)



Technology, management & complementarities

- Econometric & case studies on impact of digital tech on firm performance show very variable impacts
 - Heavy investments can make little/no return
 - e.g. Bronsoler et al., 2022; IT in UK NHS in 2000s
- Evidence that technology & managerial practices complementarity in productivity. Examples:
 - Bresnahan et al. (2002); Atkin et al. (2017); Bloom et al. (2012), Giorcelli (2019) on Marshall Plan Aid in Italy

Pilot Regions (1950) and Experimental Provinces (1952)



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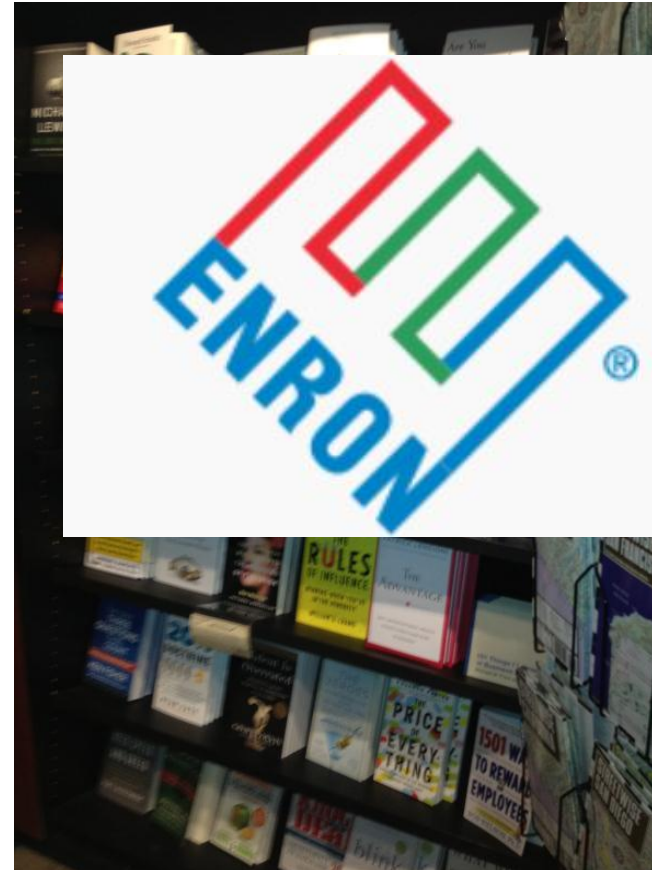
But there is still debate on whether management practices really matter

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

Chad Syverson (*Journal of Economic Literature*)



But there is still debate on whether management practices really matter



But there is still debate on whether management practices really matter



Enron ex-CEO, Jeff Skilling



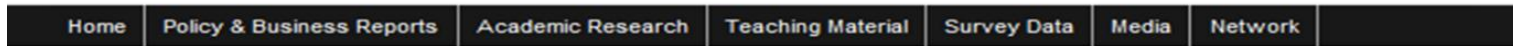
But there is still debate on whether management practices really matter



World Management Survey (~25k interviews 2004-23 in 38 countries)



<http://worldmanagementsurvey.org/>



Featured publications

- [Why do management practices differ across firms and countries?](#)
- [Management Practice and Productivity: Why They Matter](#)
- [Management in Healthcare: Why good practice really matters](#)

Benchmark your manufacturing firm, hospital, school, or retail outlet against others in your country, industry or size class.

Benchmark your organization

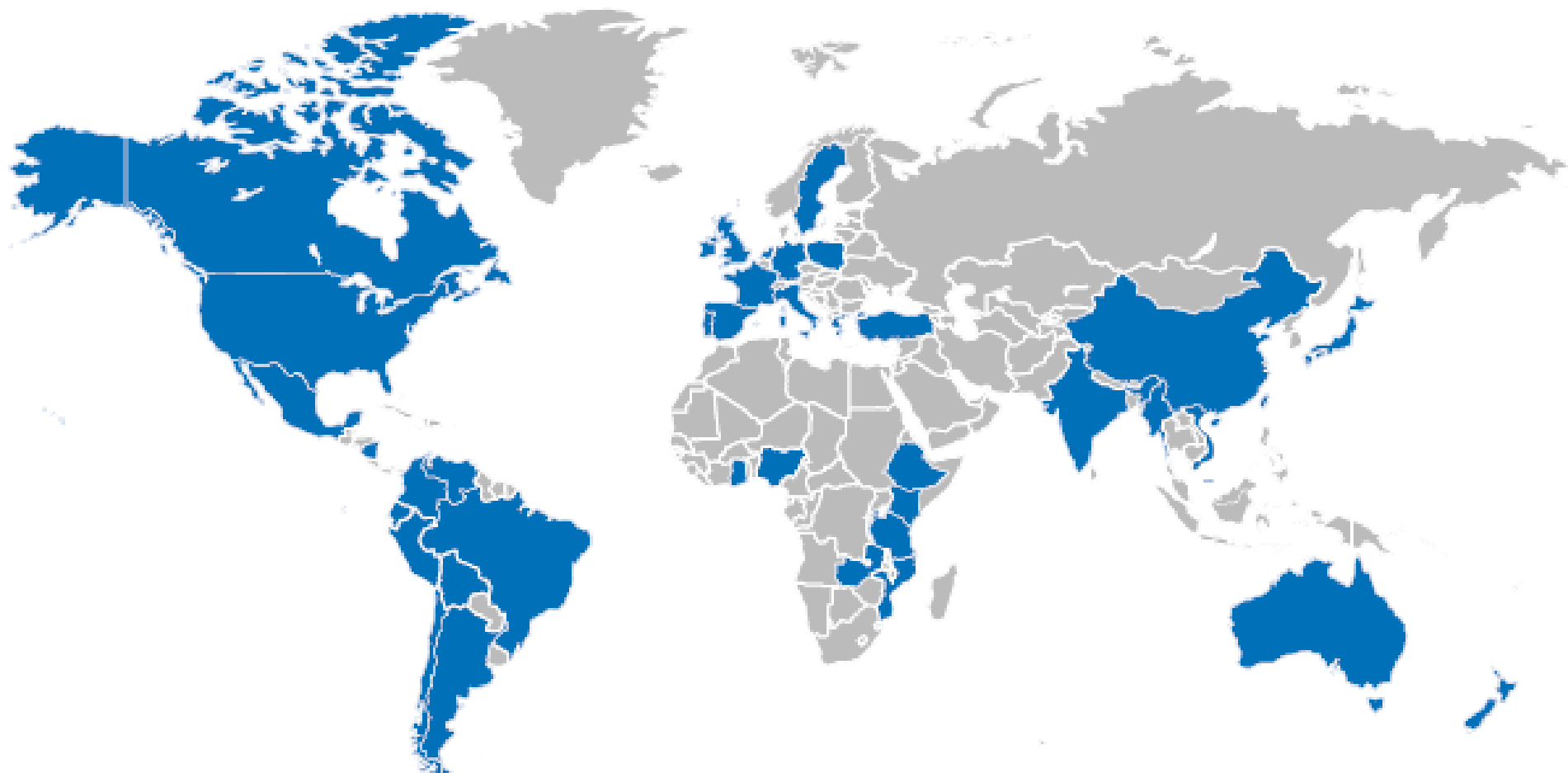
Management scores across firms
WMS team analyses the distribution of management practices within countries by type.



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 2004-2023

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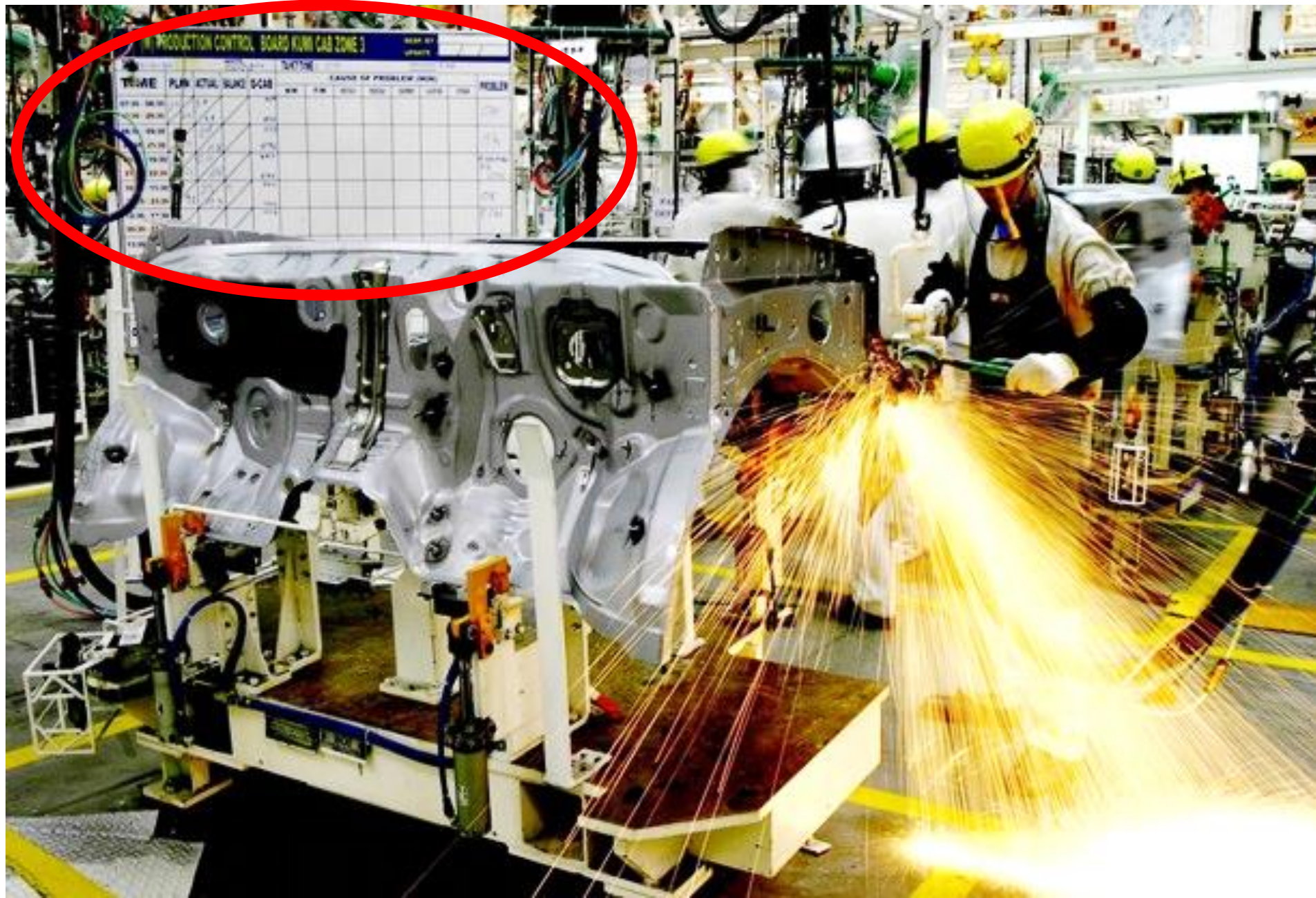
Example monitoring question, scored based on a number of questions starting with “*How is performance tracked?*”

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

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Examples of performance metrics – Car Plant



Examples of a performance metrics – Hospital



MY FAVOURITE QUOTES:

Americans on geography



Interviewer: “How many production sites do you have abroad?”

Manager in Indiana, US:

MY FAVOURITE QUOTES:

Americans on geography



Interviewer: “How many production sites do you have abroad?”

Manager in Indiana, US: “Well...we have one in Texas...”

MY FAVOURITE QUOTES:

The traditional Indian Chat-Up

Production Manager: “Are you a Brahmin?”

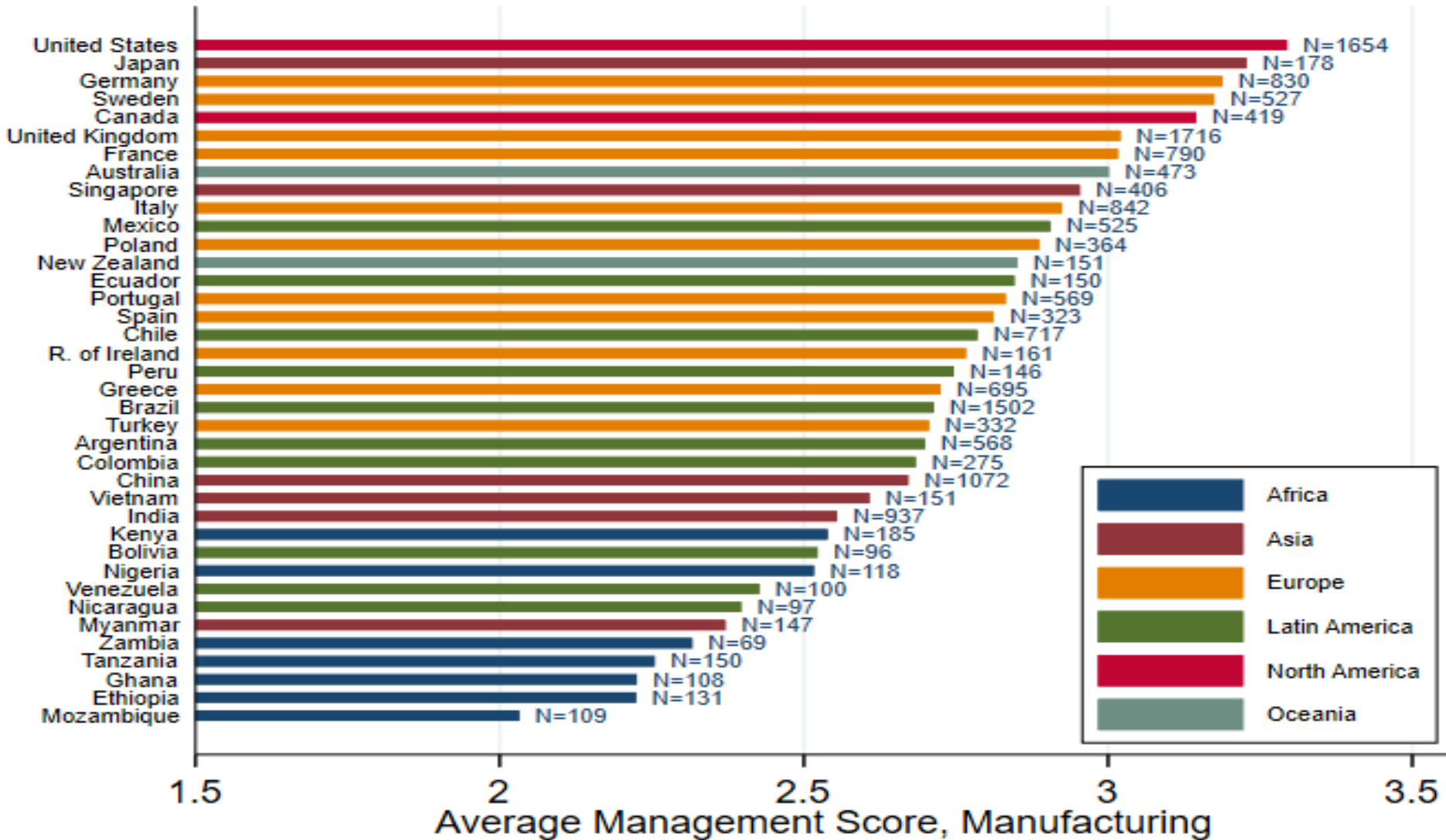
Interviewer “Yes, why do you ask?”

Production manager “And are you married?”

Interviewer “No?”

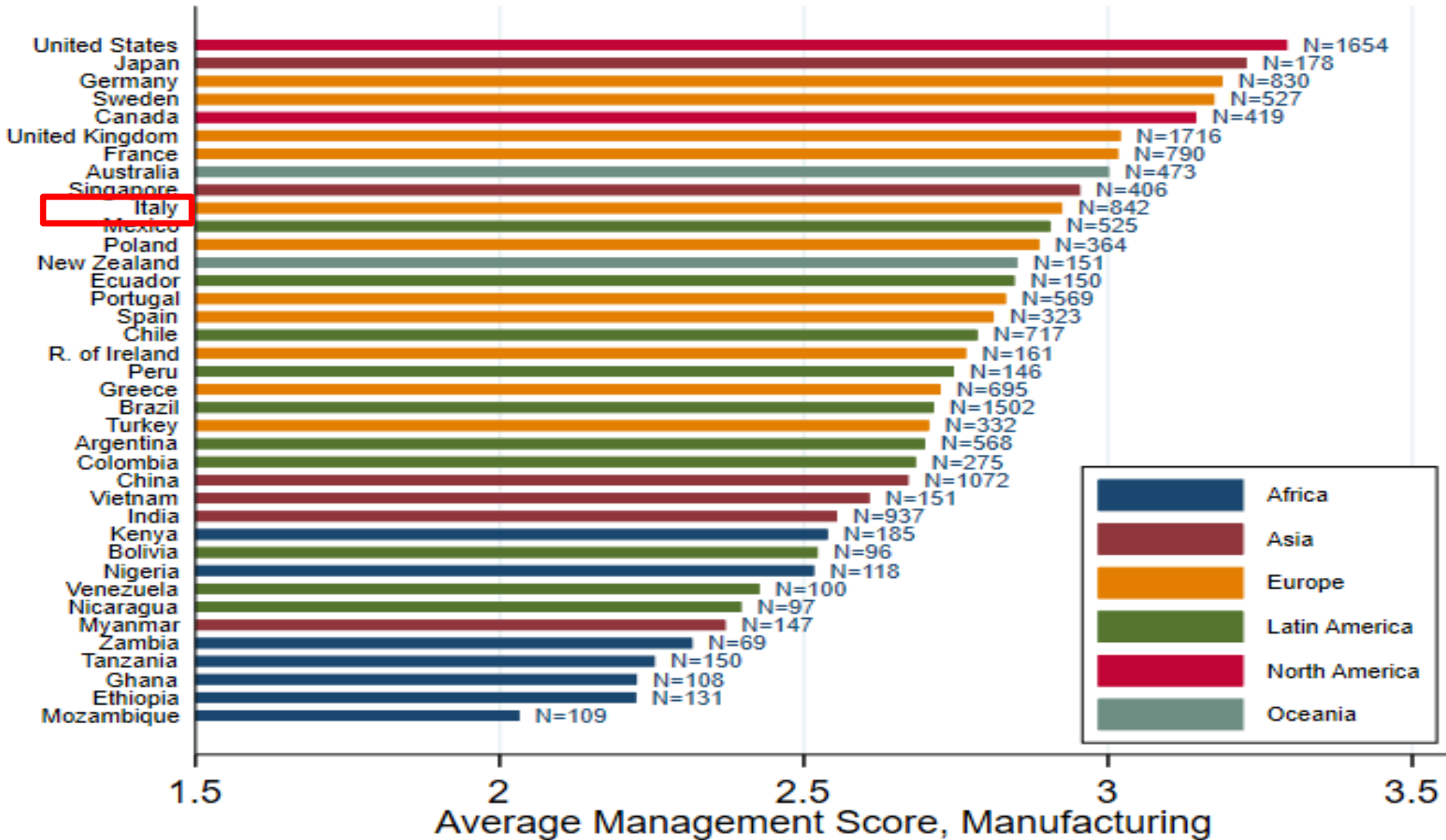
Production manager “Excellent, excellent, my son is looking for a bride and I think you could be perfect. I must contact your parents to discuss this”

WMS Management Scores across Countries



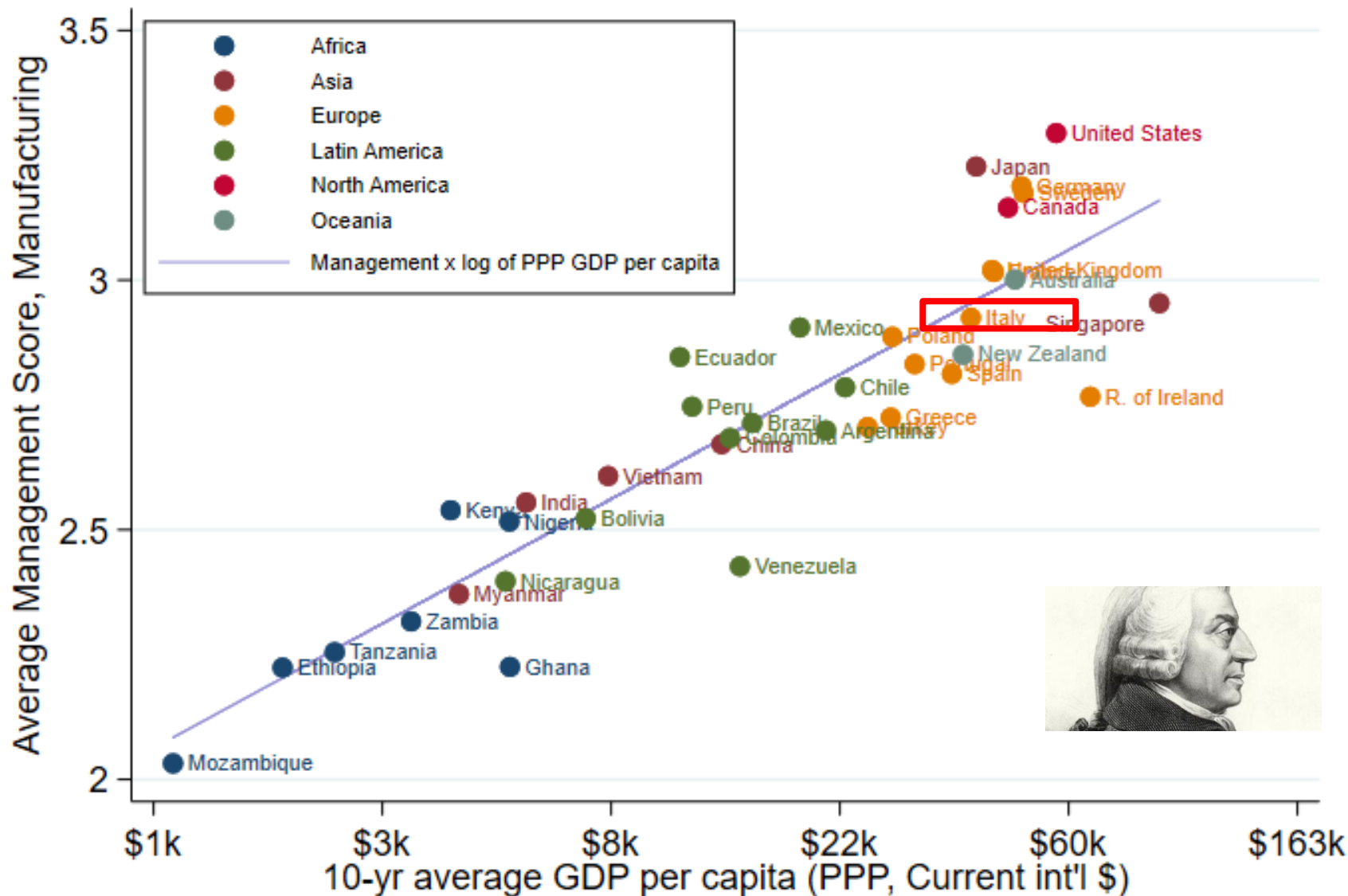
Note: Unweighted average management scores; # interviews in right column (total = 17,783); all waves pooled (2004-2022)

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



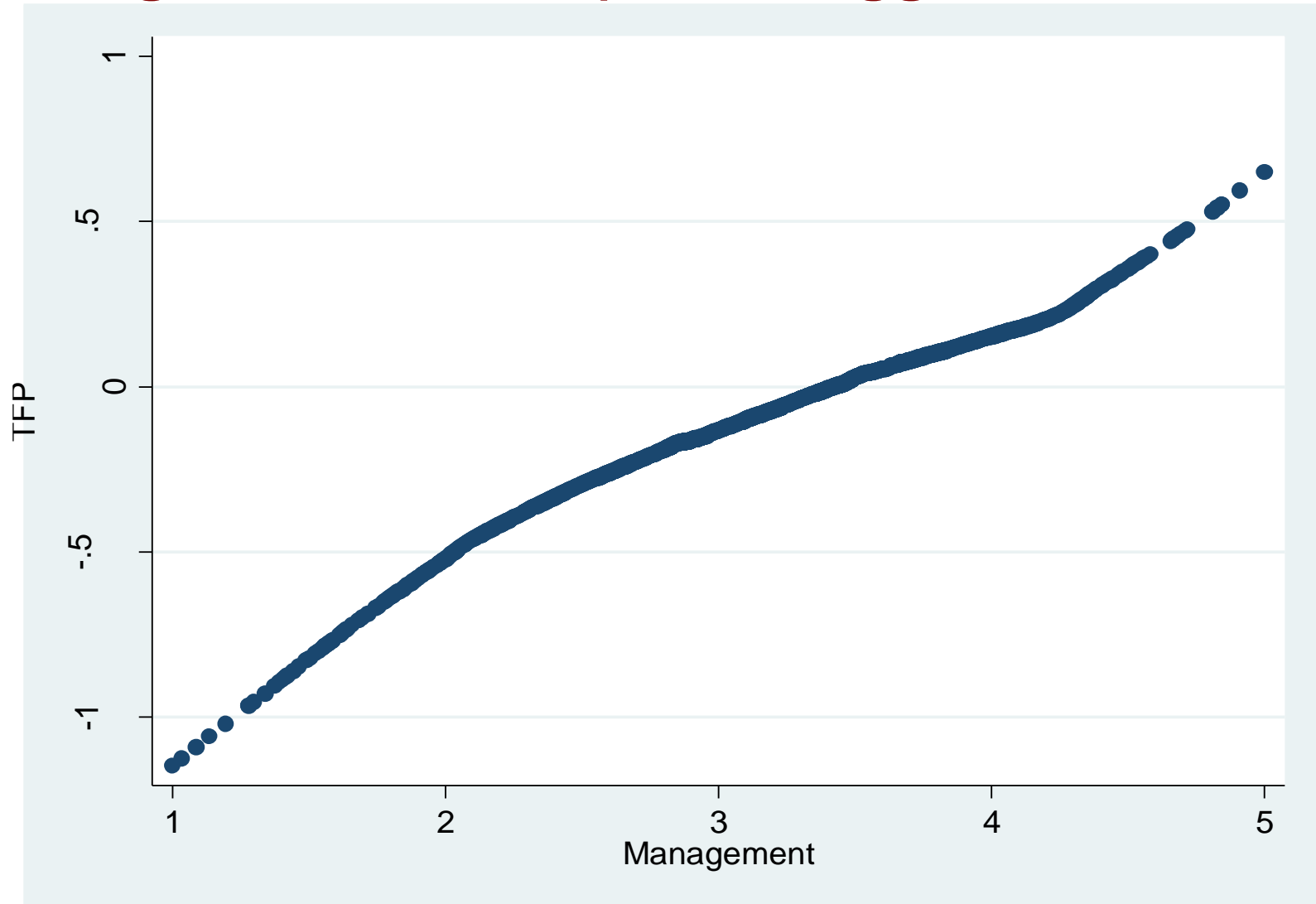
Note: April 2022, World Economic Outlook (IMF) indicator.

Management also varies heavily within countries



Source: Scur et al (2023)

Firm productivity positively correlated with management scores (RCTs suggest this is causal)



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

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 & 3rd Waves cover 2015 & 2021 practices

Very high response rates !

U.S. DEPARTMENT OF COMMERCE
Economic and Statistics Administration
U.S. CENSUS BUREAU
FORM
MP-10002 (DRAFT)

2010 MANAGEMENT AND ORGANIZATIONAL PRACTICES SURVEY

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

MP-10002

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Visit www.census.gov/econhelp/mops
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.

Mail your completed form to:

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1201 East 10th Street
Jeffersonville, IN 47132-0001

(Please correct any errors in this mailing address.)

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User ID: Password:

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

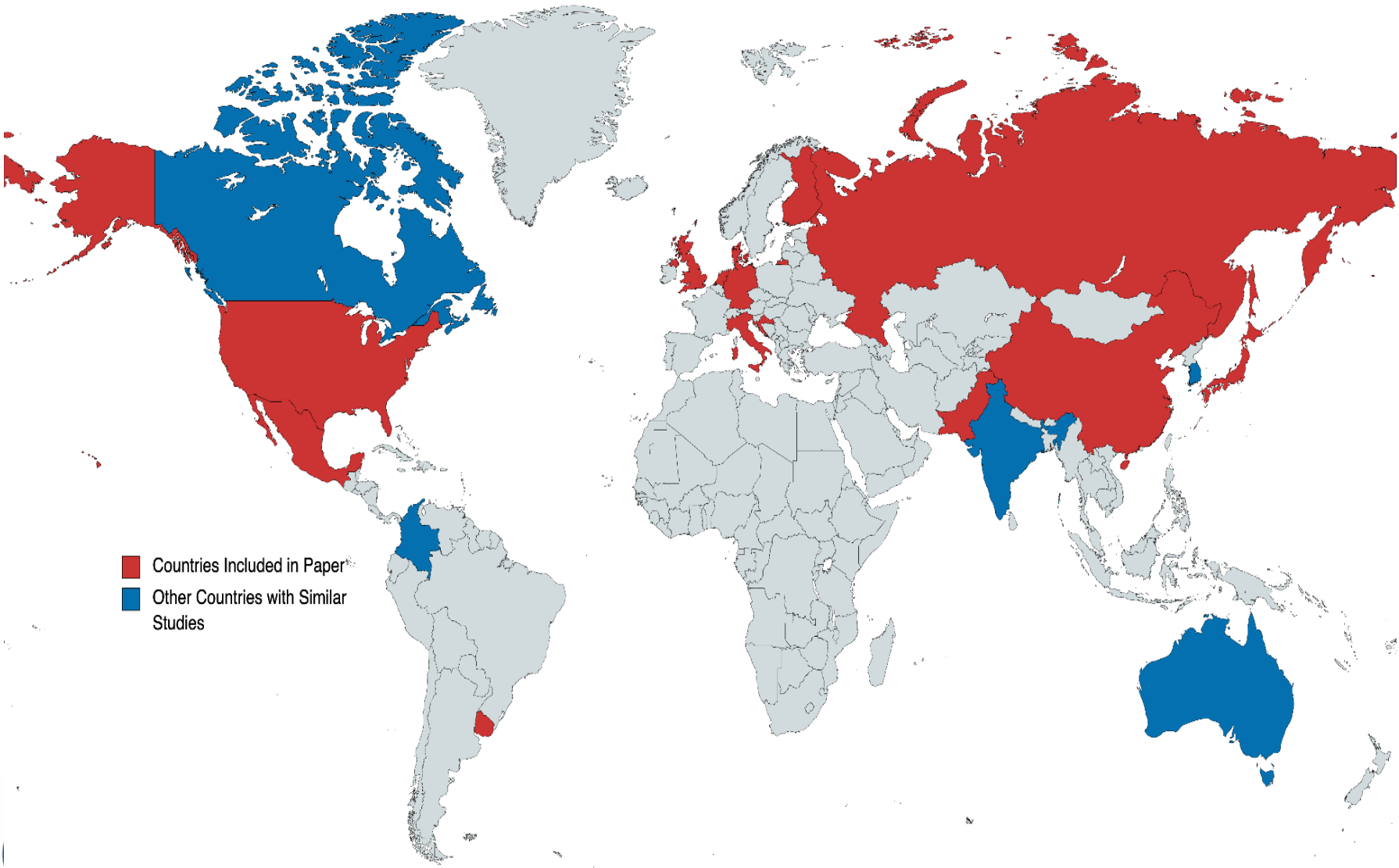
2 In 2005 and 2010, how many key performance indicators were monitored at this establishment?

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

Check one box for each year

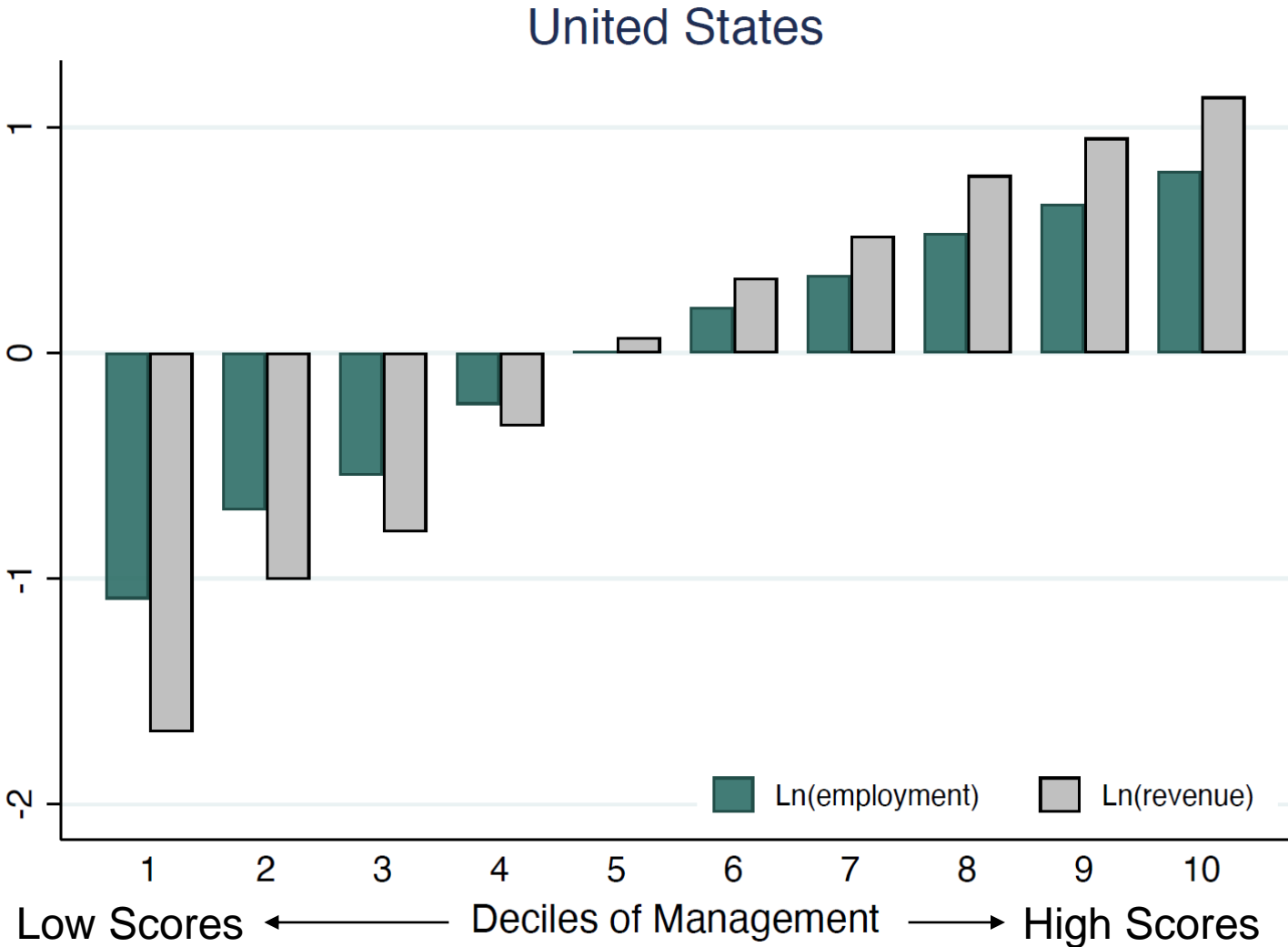
	2005	2010
1-2 key performance indicators	<input type="checkbox"/>	<input type="checkbox"/>
3-9 key performance indicators	<input type="checkbox"/>	<input type="checkbox"/>
10 or more key performance indicators	<input type="checkbox"/>	<input type="checkbox"/>
No key performance indicators (If no key performance indicators in both years, SKIP to 6)	<input type="checkbox"/>	<input type="checkbox"/>

Coverage of MOPS across countries



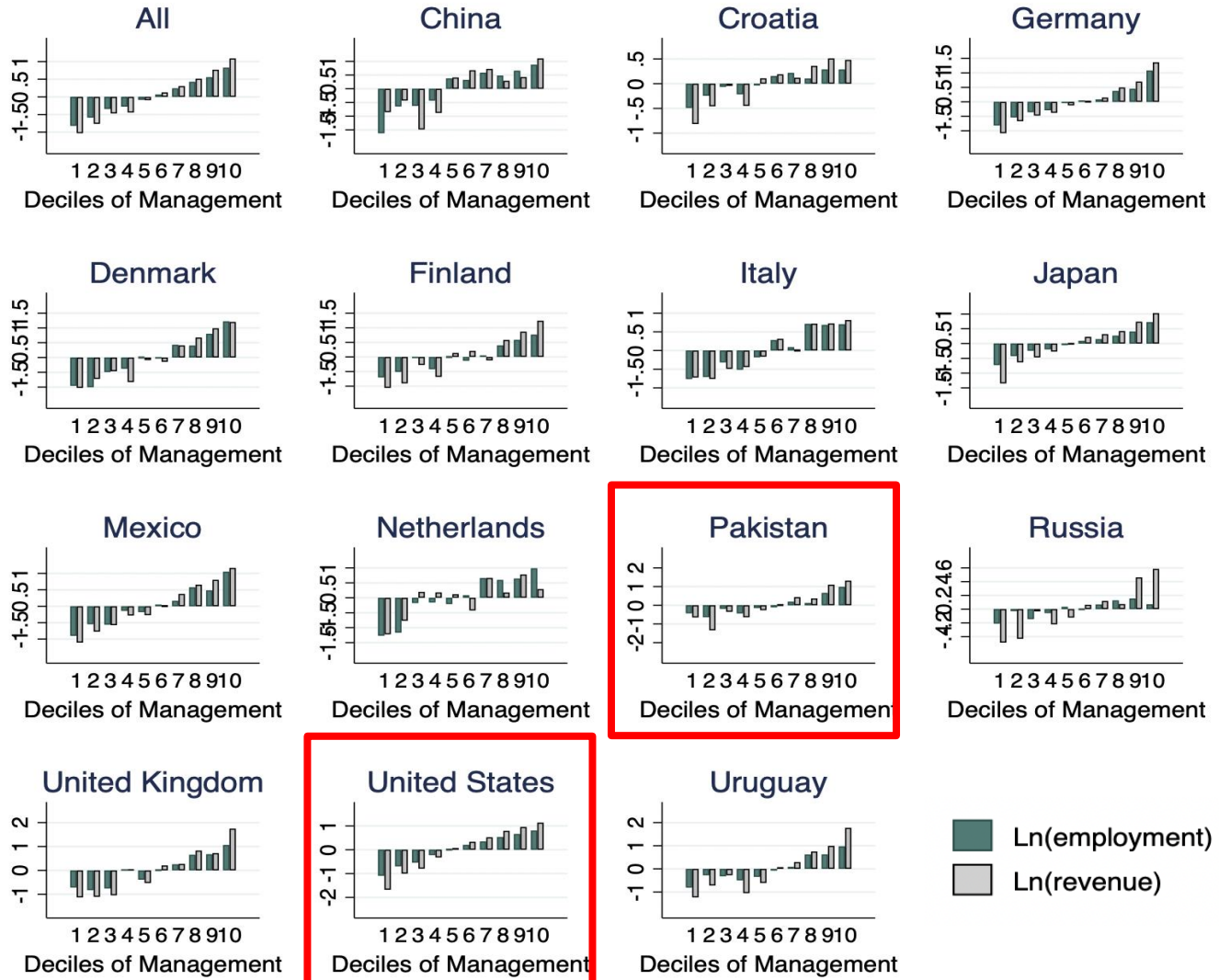
- Countries Included in Paper
- Other Countries with Similar Studies

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



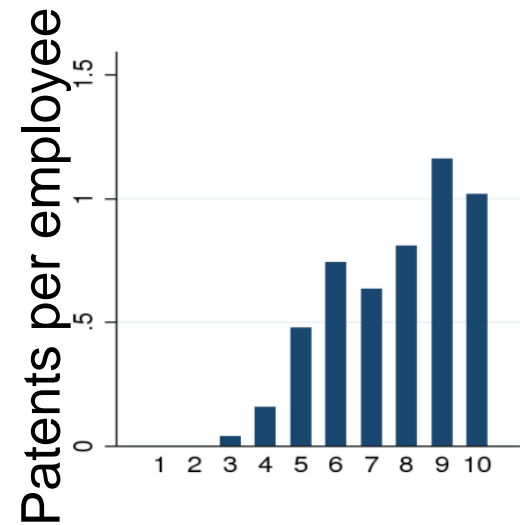
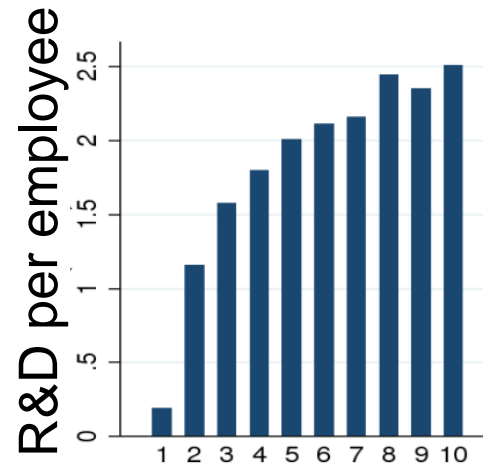
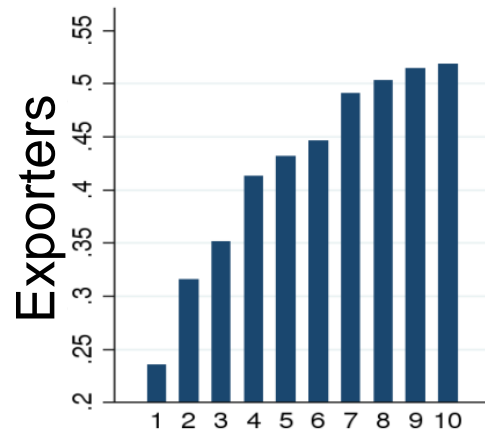
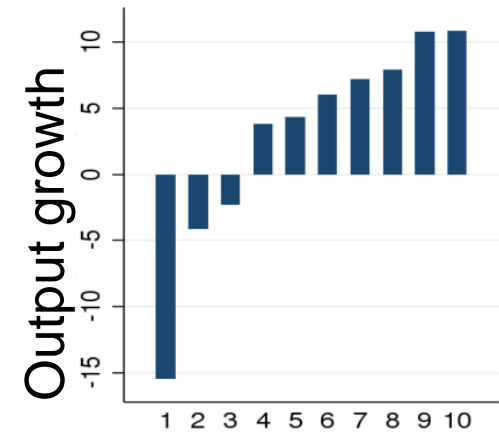
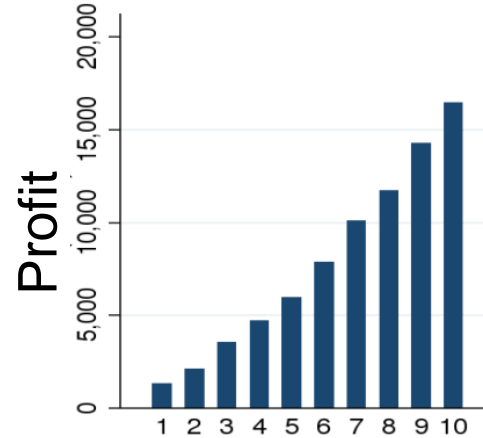
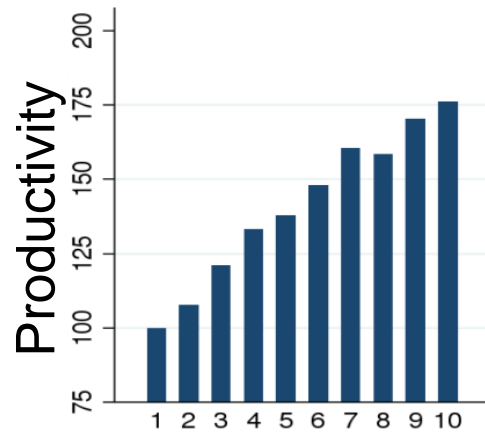
Notes: The x-axis divides firms into deciles of their management score. The vertical axis gives the natural logarithm of the mean level of employment (and of revenue) in each of these bins relative to overall country specific mean. Number of observations about 35,000

Well managed firms larger, but this reallocation stronger in some countries (e.g. US) than others (e.g. Pakistan)



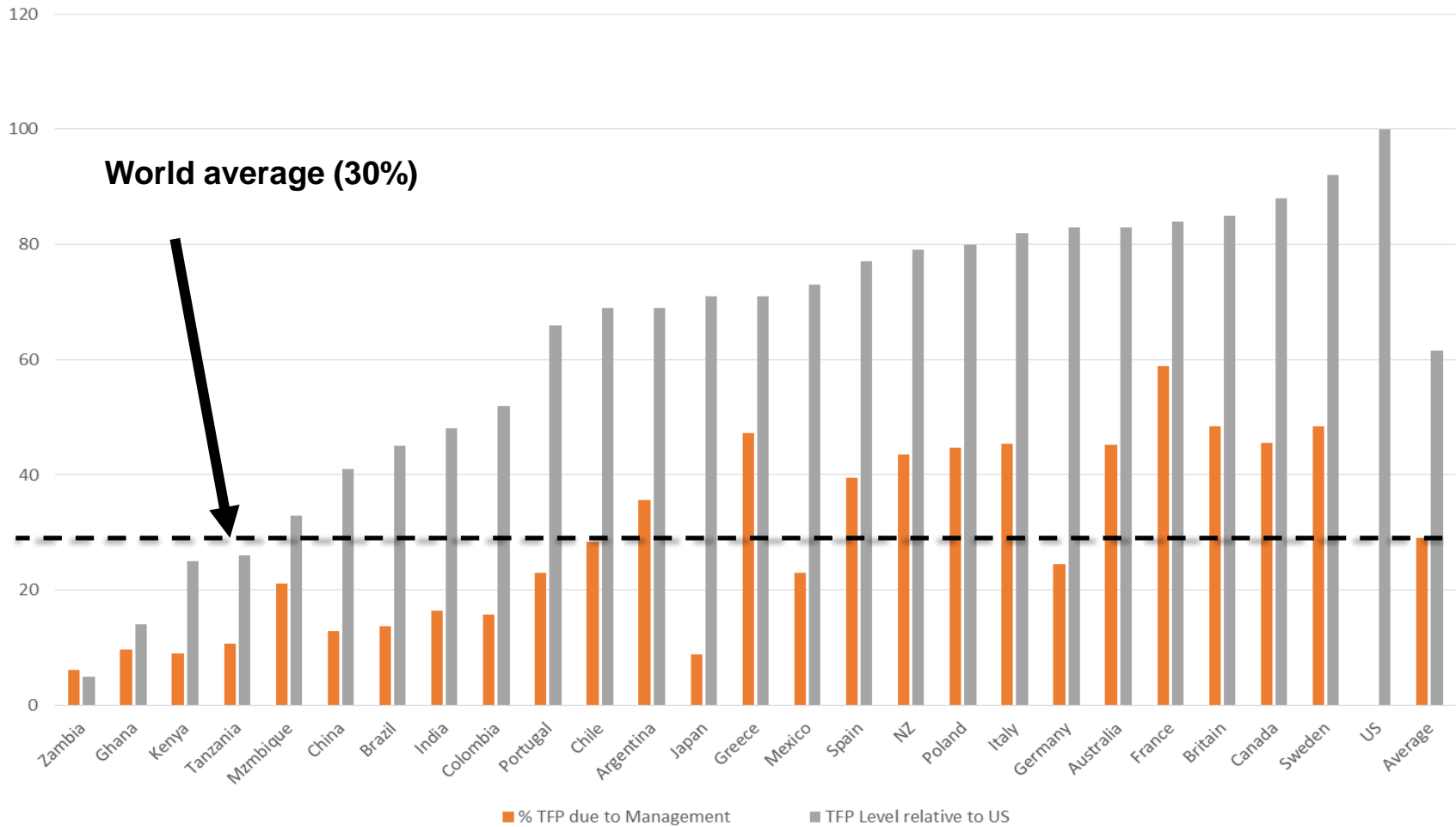
Notes: The x-axis divides firms into country-specific deciles of their management score. The vertical axis gives the natural logarithm of the mean level of employment (and of revenue) in each of these bins. Number of observations for each country in the original datasets (manufacturing sector only): 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

Management scores positively correlated with many other measures of firm performance



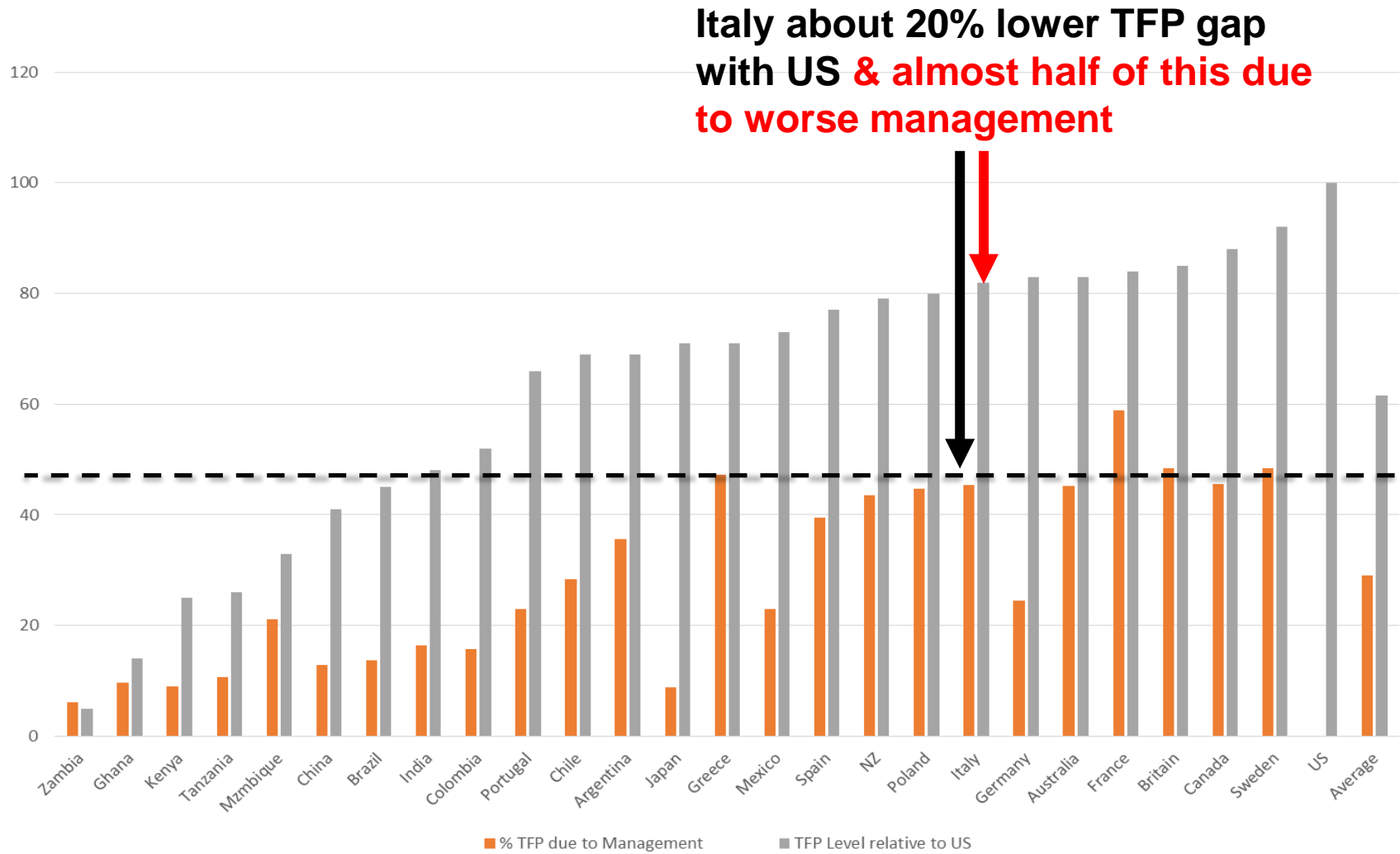
Management score decile

Size of the Prize: Across countries, management accounts for about a third of international productivity gaps



Source: Bloom, Hartley, Sadun, Schuh & Van Reenen (2024)

About 50% of Italian TFP Gap with US related to poor management



Source: Bloom, Hartley, Sadun, Schuh & Van Reenen (2024)

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Drivers of Management

Conclusions & Policy

Why are beneficial management practices are not adopted (Jan Rivkin, 2000)?

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

Some Drivers of Management

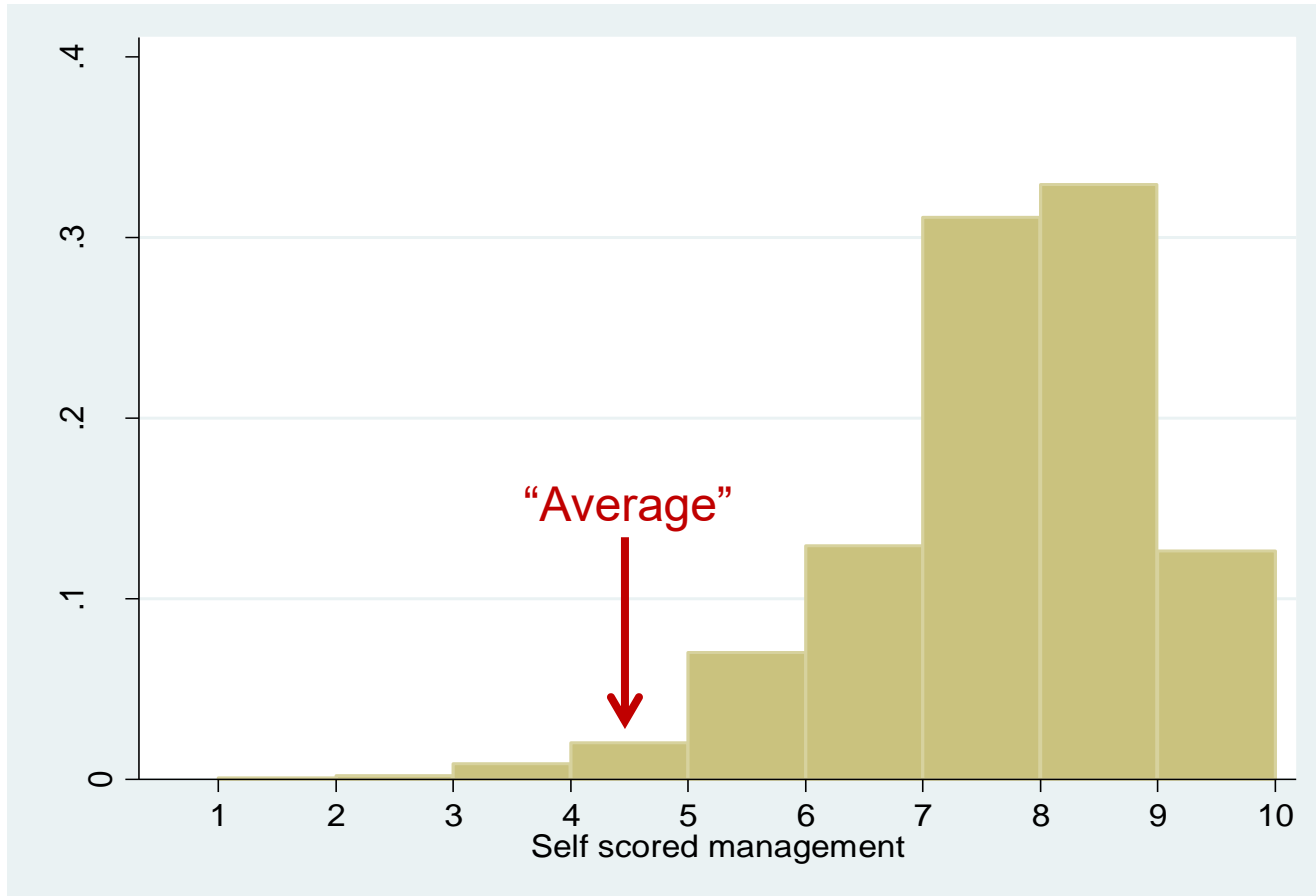
- **Information**
- Multinationals
- Product Market Competition
- Governance & ownership
- Human Capital

Information – Managers bad at self-assessment

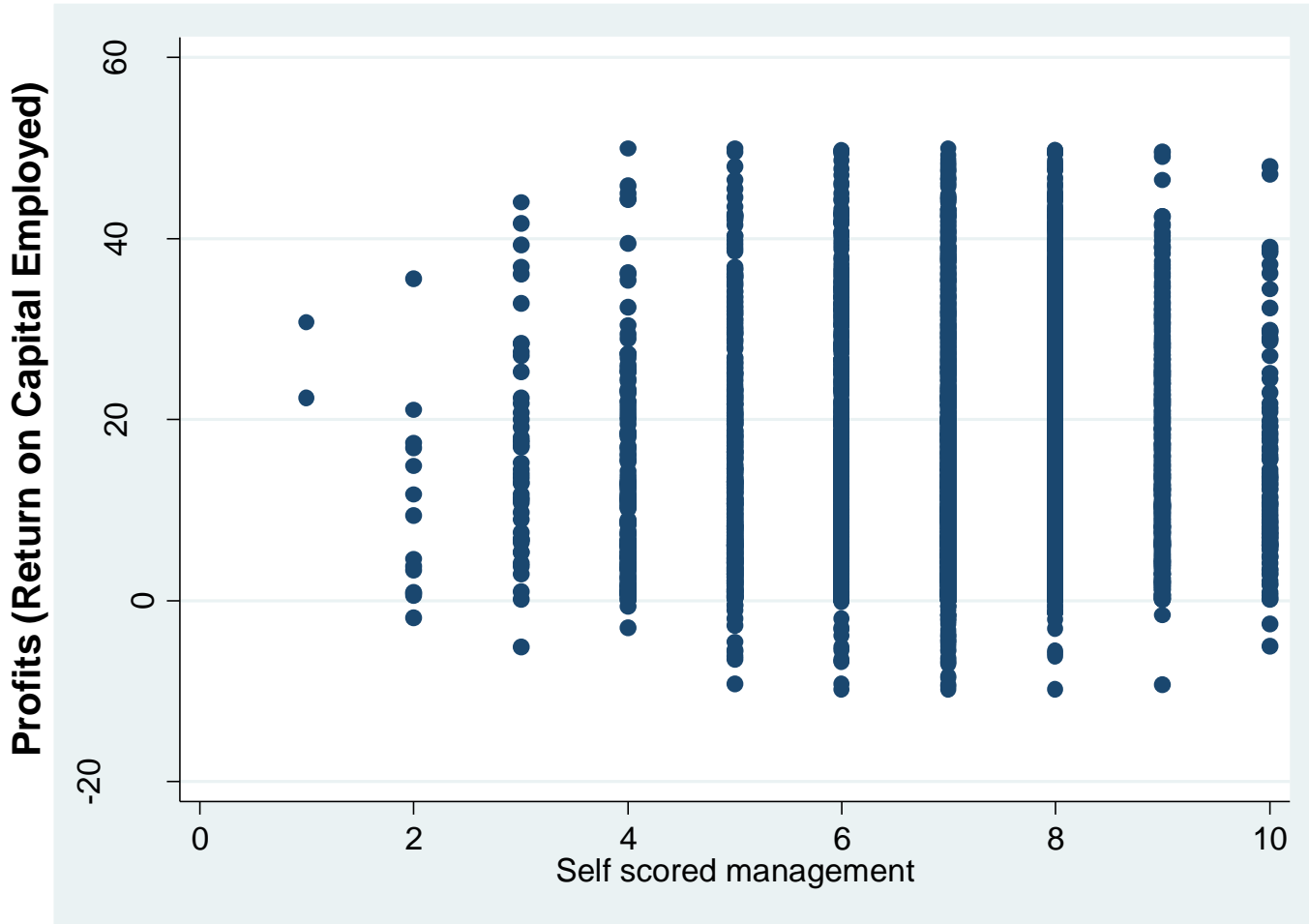
At the end of the WMS survey we asked:

“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”

...and found firms are too optimistic on management



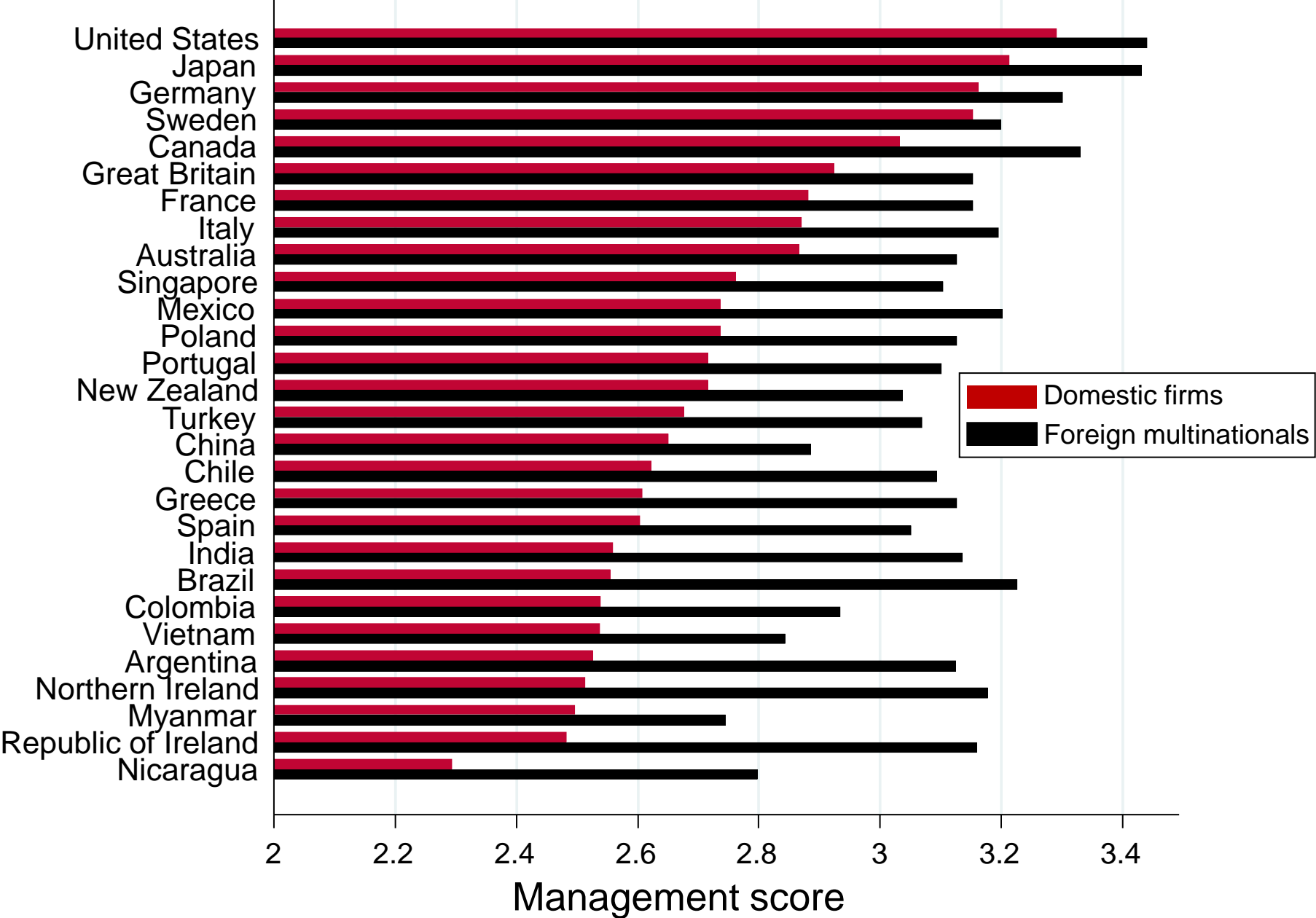
...and unlike our WMS scores, self-scores show no link to performance



Some Drivers of Management

- Information
- **Multinationals**
- Product Market Competition
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Foreign Multinationals transplant better management practices across diverse locations



Look at impact on incumbent plants in counties winning a multinational's "Million Dollar Plant"

Site Selection magazine (+ news coverage) to look at impact on incumbent plants winning million dollar plant vs. runner up counties

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.

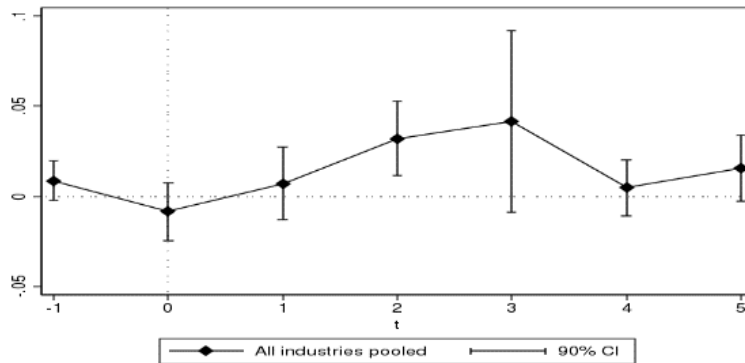


Senator Jeff
Gov. Don Sieg
the future p

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

annual payroll of \$20.75 million, or about \$85,000 per job

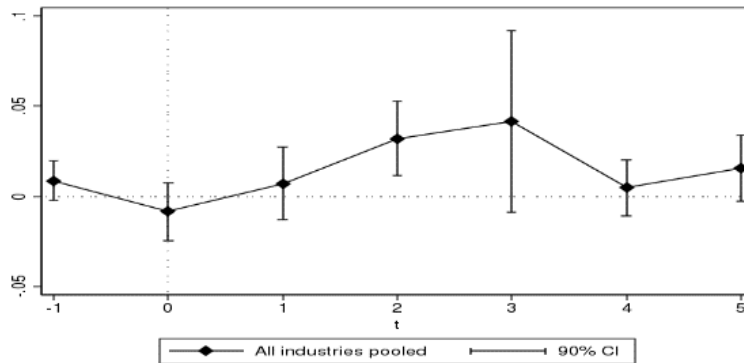
Multinational Plants' information spills over to other incumbent local plants' MOPS management



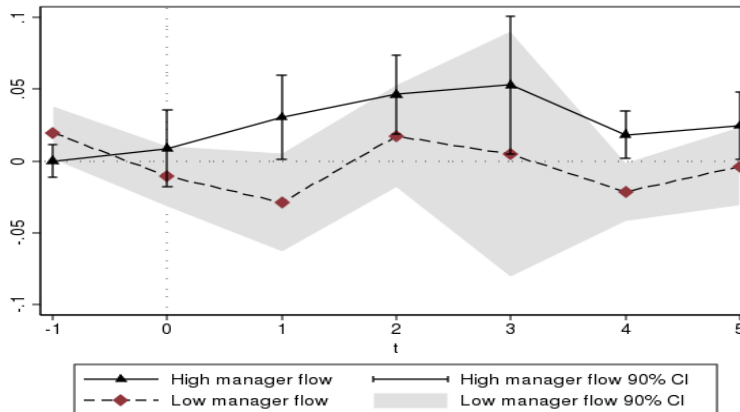
Overall Treatment Effect

Source: Bloom, Brynjolfsson, Foster, Jarmin, Patnaik, Saporta-Eksten & Van Reenen (2019, AER)

Multinational Plants' information spills over to other incumbent local plants' MOPS management



Overall Treatment Effect



Bigger effects on plants in sectors where managerial Labor market flows higher

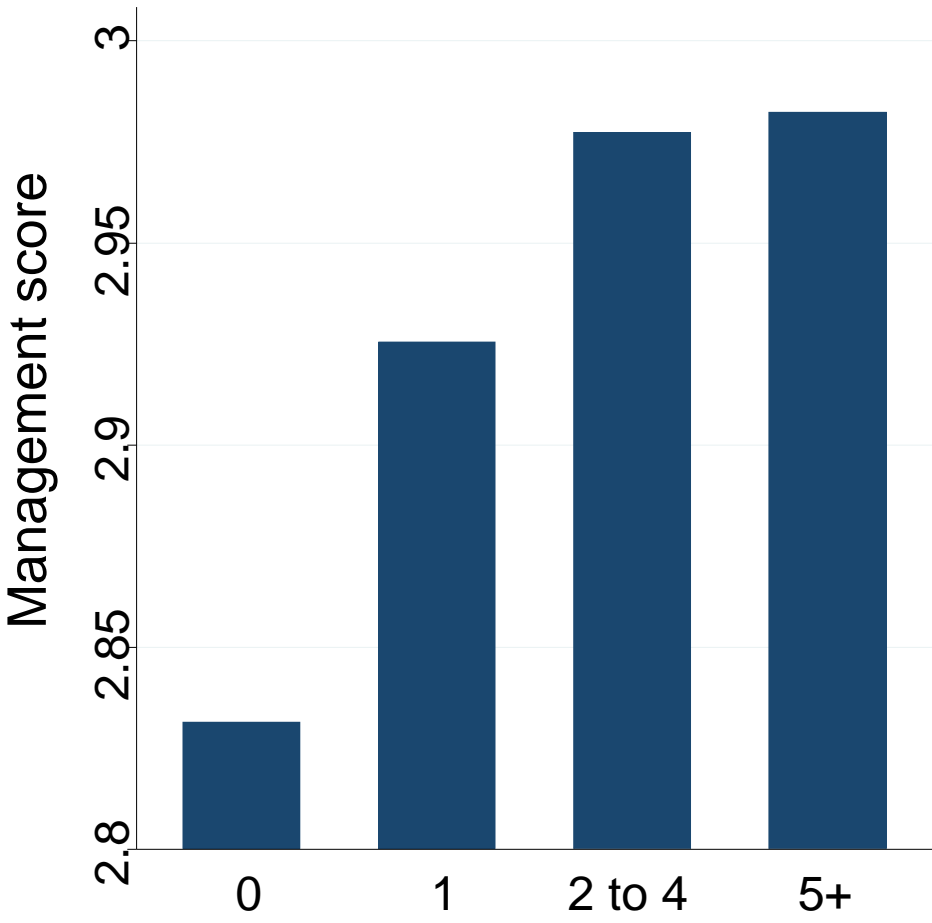
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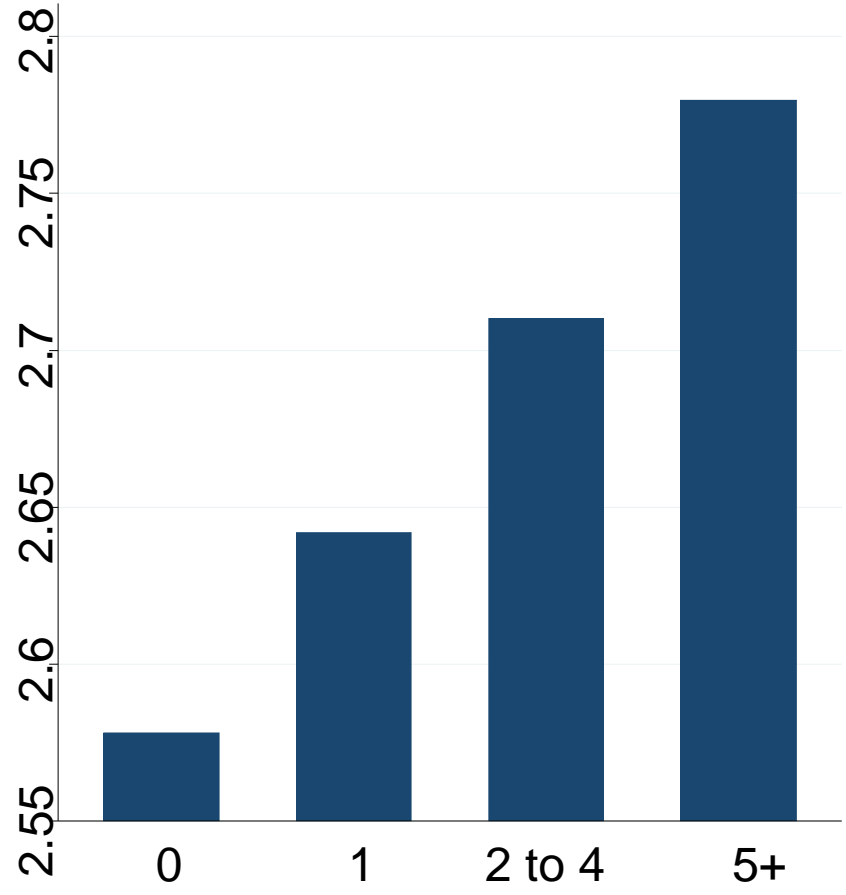
- Information
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Competition increases Management quality

Manufacturing and Retail
(the private sector)



Hospitals and Schools
(the public sector)

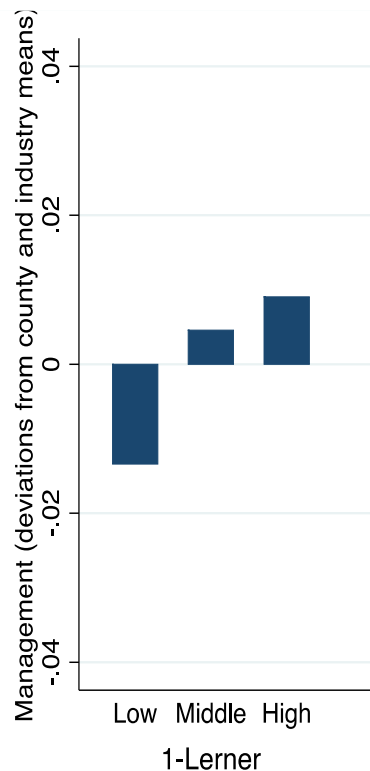


Number of Reported Competitors

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?”

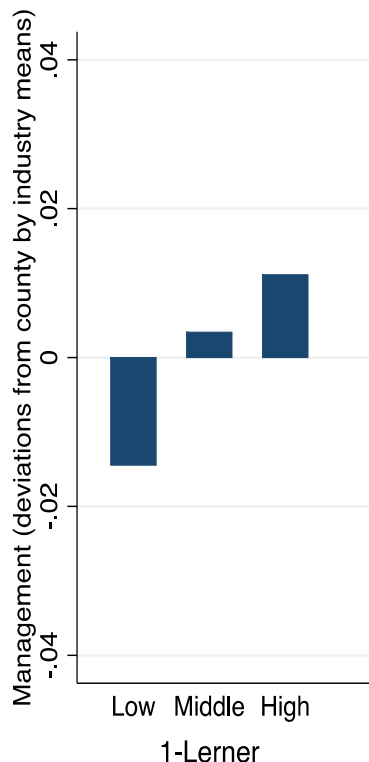
In more competitive environments Management is higher (& more reallocation) – WMS Data

A. Management & Competition: Levels



Competition Higher →

B. Management & Competition: Changes

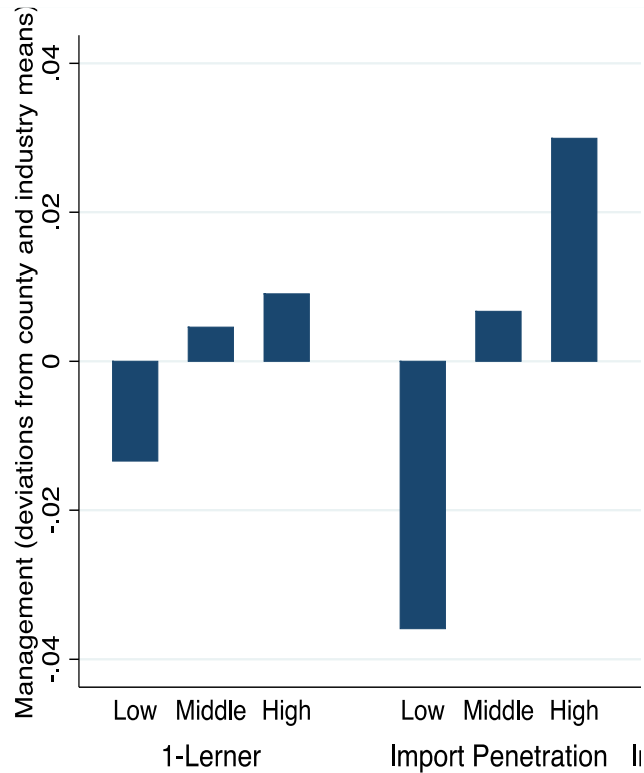


Competition Higher →

Notes: Competition proxies (at industry by country level) are 1-Lerner = median firm profits/sales, Imports = imports/apparent consumption, Imports China = imports from China/apparent consumption, all in an industry by country cell. In “levels” panels control for linear country & industry average. “Changes” are in deviations from time-specific country by industry dummies. WMS data.

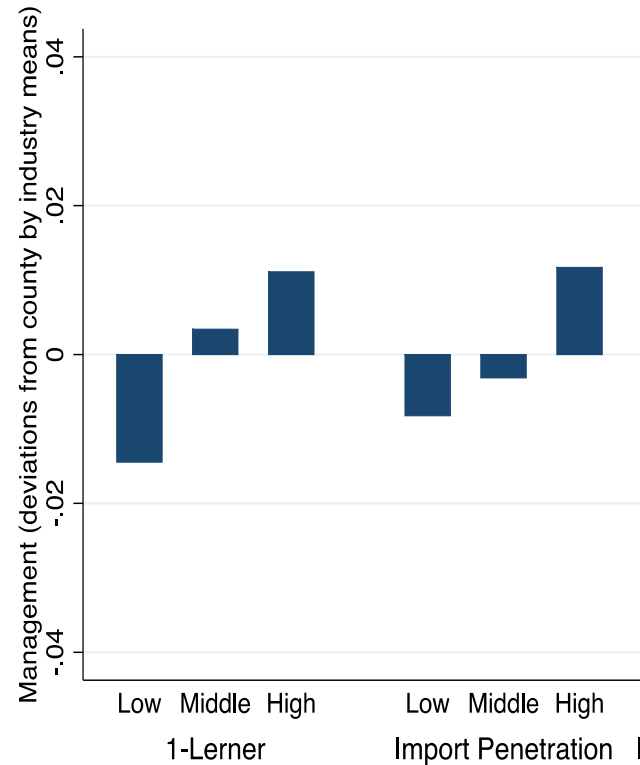
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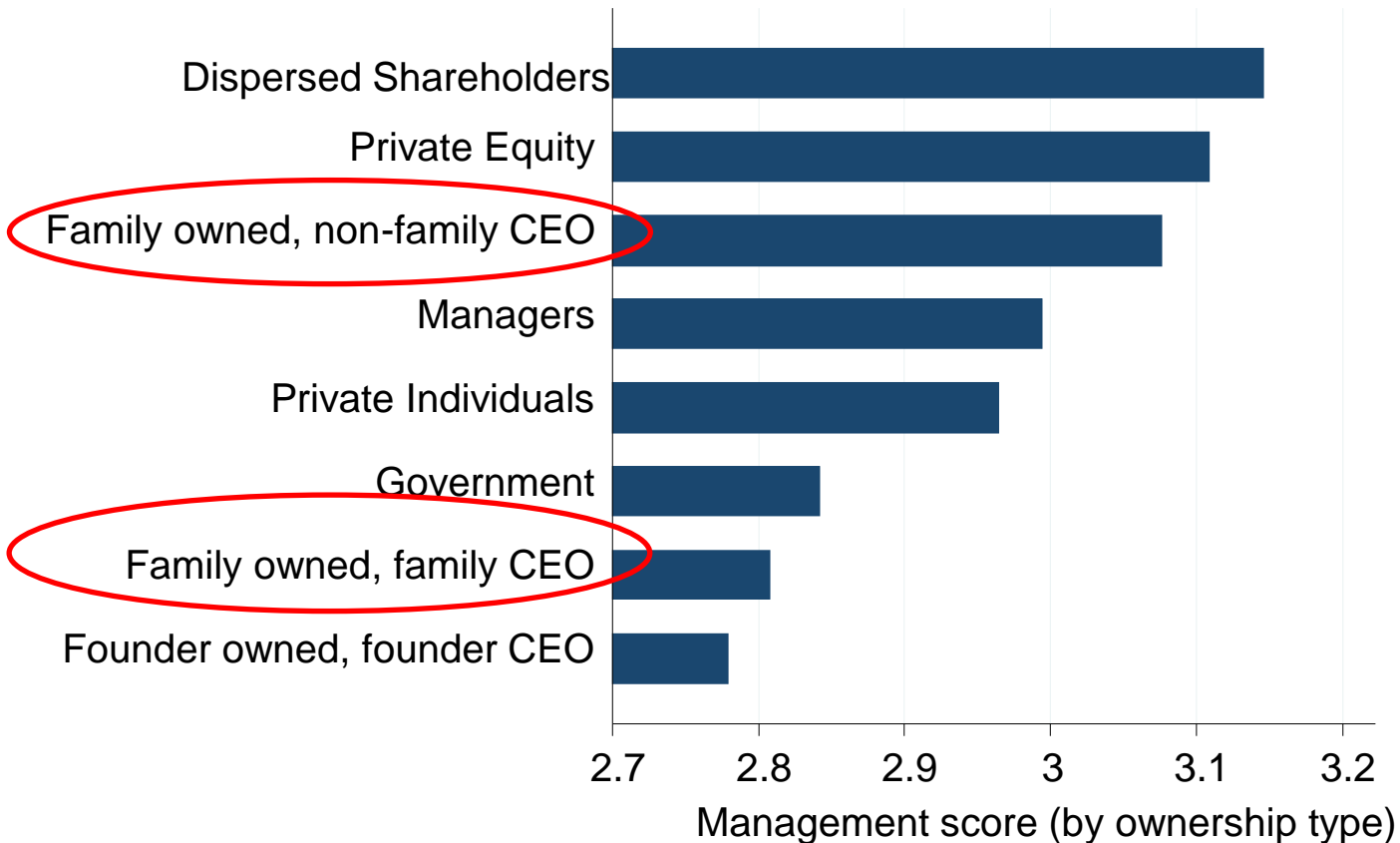
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- Product Market Competition
- **Governance & ownership**
- Human Capital

Ownership & Governance: Family-run firms typically have poor management

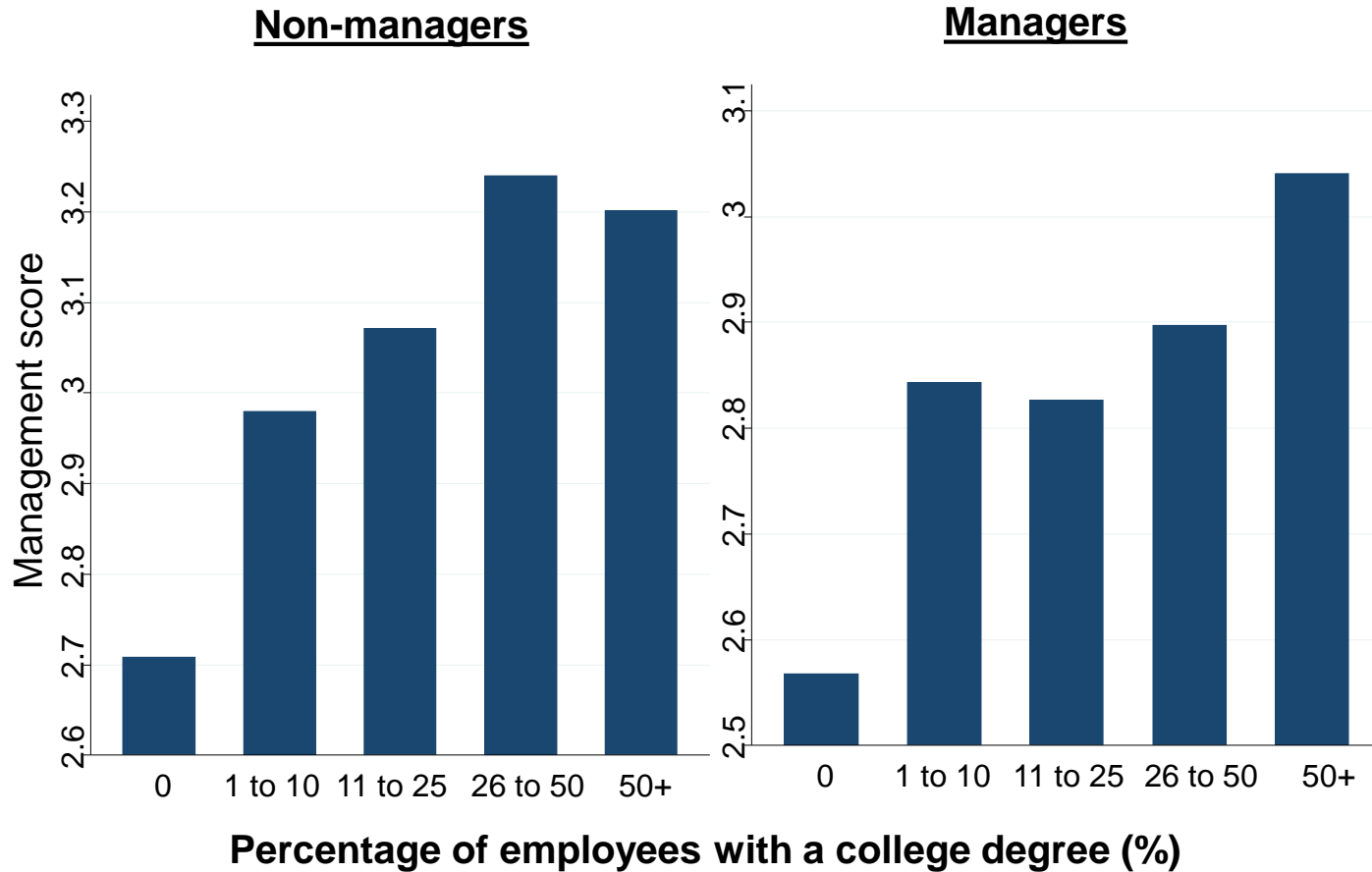


Management scores after controlling for country, industry and number of employees. Data from 9085 manufacturers and 658 retailers. "Founder owned , founder CEO" firms are those still owned and managed by their founders. "Family firms" are those owned by descendants of the founder "Dispersed shareholder" firms are those with no shareholder with more than 25% of equity, such as widely held public firms.

Some Drivers of Management

- Information
- Multinationals
- Product Market Competition
- Governance & ownership
- **Human Capital**

Higher Education for Managers and Non-Managers Appear Linked to Better Management



Sample of 8,032 manufacturing and 647 retail firms.

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For business leaders

- Fundamentally optimistic message
 - Improving management can have substantial effect on firm outcomes: not all driven by outside factors
 - Family firms: consider succession planning

For policy makers

- **Many structural ways of improving management**
 - Stronger competition
 - Openness to multinationals
 - Better firm governance
 - Strengthening human capital

- **Role for direct interventions**
 - Benchmarking and information
 - Training interventions
 - Consultancy for SMEs

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)
- **Drivers:** information, competition, family firms, human capital
- **Management matters for the wealth of nations**
 - and is amenable to influence by business and political leaders

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>

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