

The COVID Recovery and Beyond: Going for Growth

Irish Economic Policy Conference

September 14th 2021

John Van Reenen (LSE and MIT)



Programme on
Innovation and Diffusion



OUTLINE OF TALK

The Challenge

Defending Growth

Understanding Growth

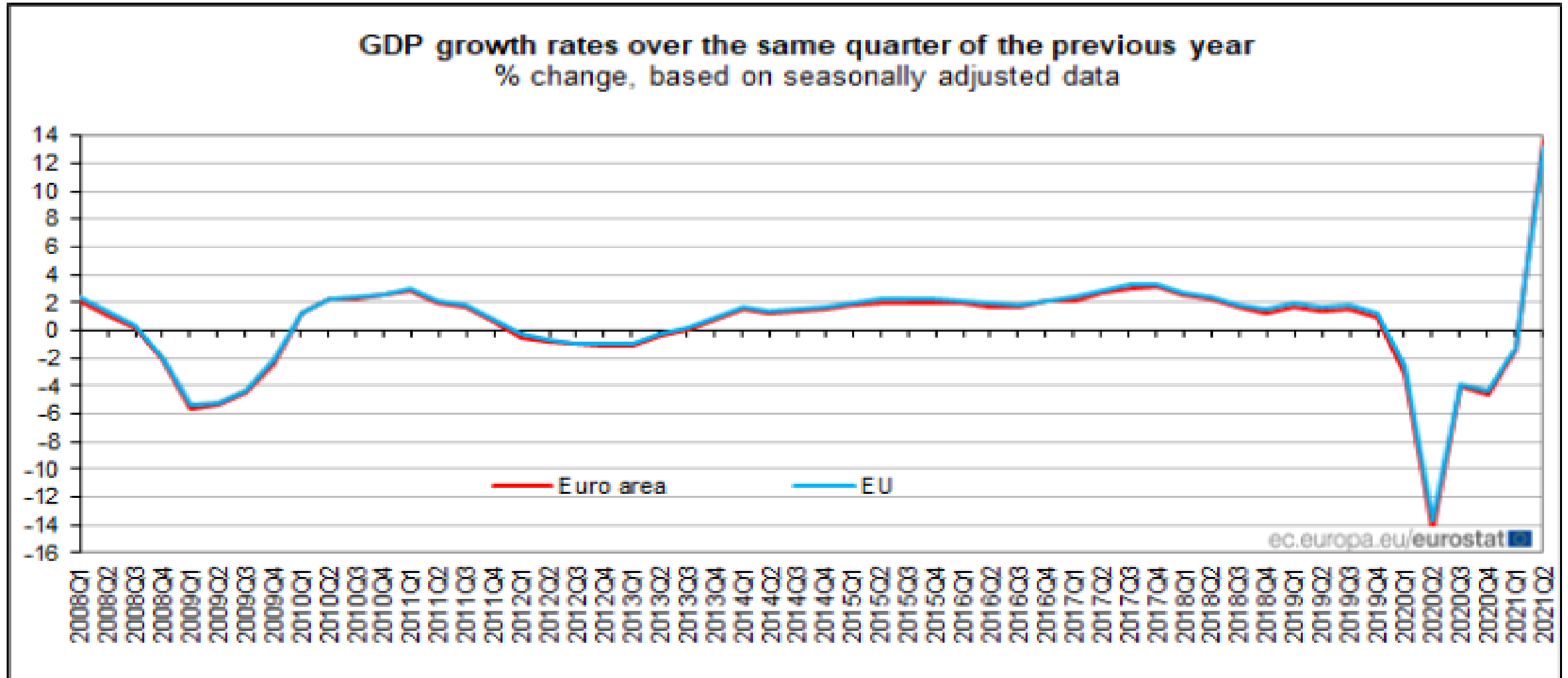
A Growth Plan

The Argument

- Face unprecedented **growth challenge** due to Pandemic. COVID has revealed existing weaknesses in politics and economy
- **World had many economic problems going into Pandemic Crisis:**
Low productivity growth & weak labor market
- Policy framework should be unashamedly around equitable and sustainable growth.
- **Innovation and Diffusion** of better *technologies* and *management practices* are key
- We know much over what to do, but need New Marshall **Growth Plan**
 - Short-run: Balance between **protection** and **reallocation**
 - Long Run: Frame around **Climate**, Health & Defense Missions
- **Vaccines** give opportunity: need policy urgency



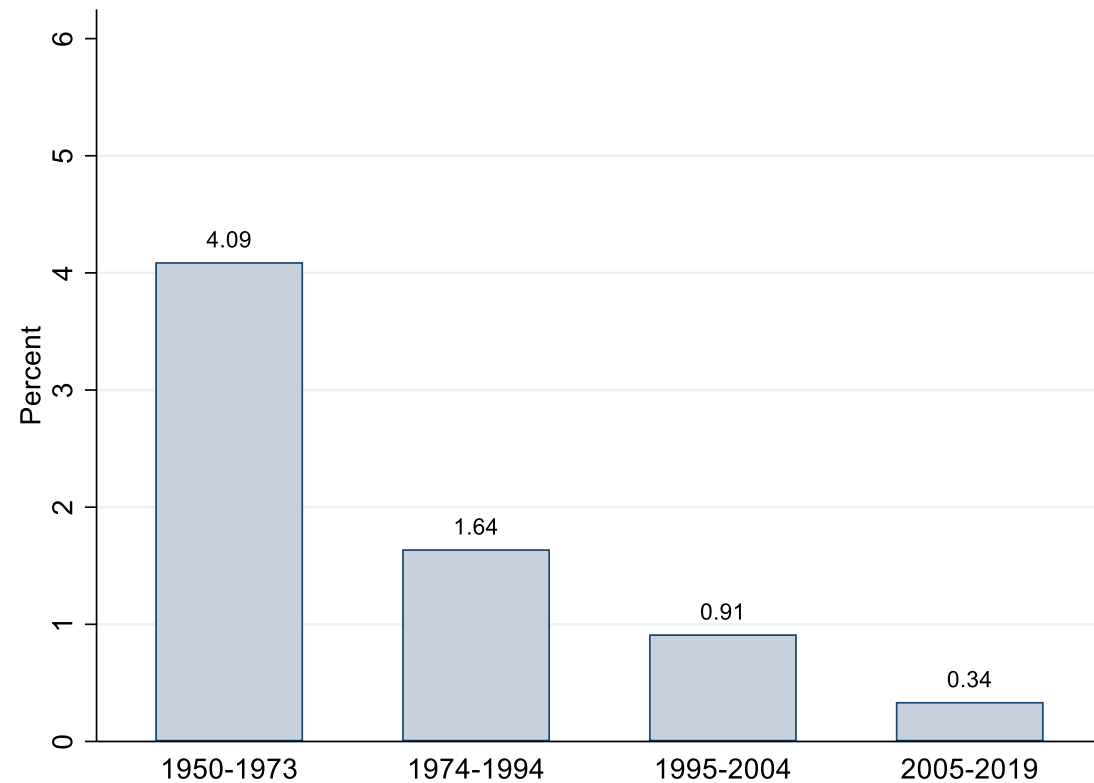
The Pandemic's Big Hit on European growth



Source: Eurostat, July 30th 2021 <https://ec.europa.eu/eurostat/documents/2995521/11563211/2-30072021-BP-EN.pdf/0567c280-b56c-2734-2a4b-e4af85a55bf5?t=1627630313030>

Slowing Productivity growth preceded COVID crisis (TFP 1950-2019)

Panel B: Euro zone

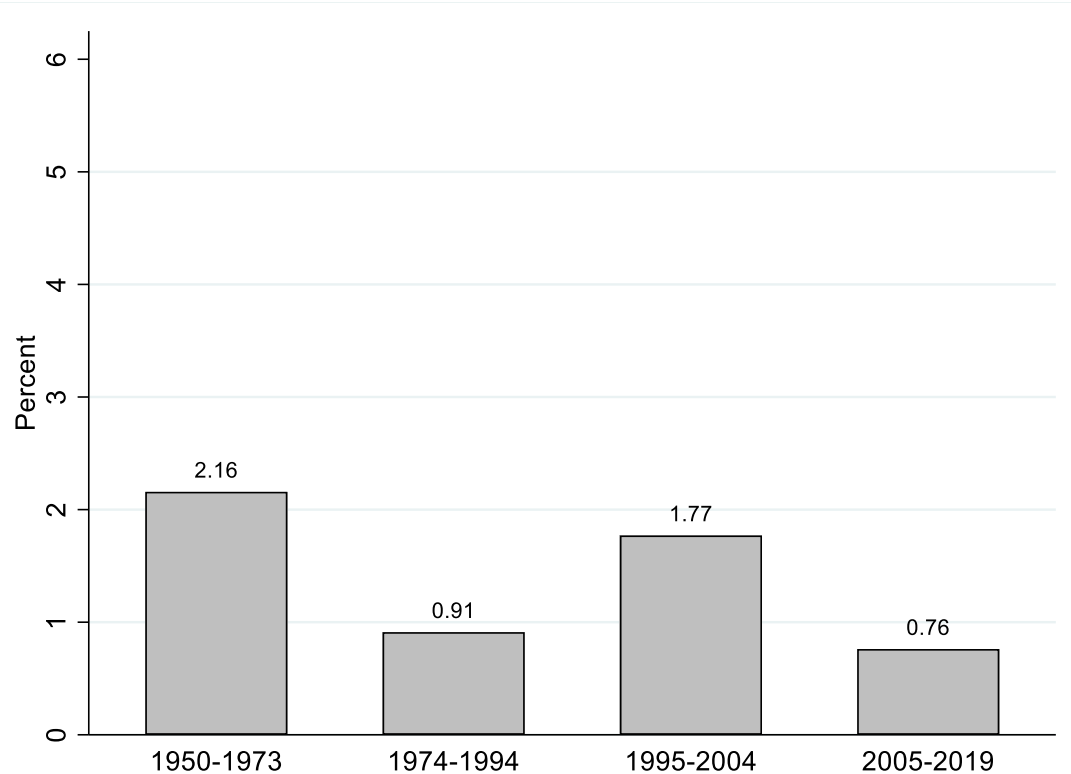


Source: TFP growth based on Bergeaud, Cette, and Lecat (2016).

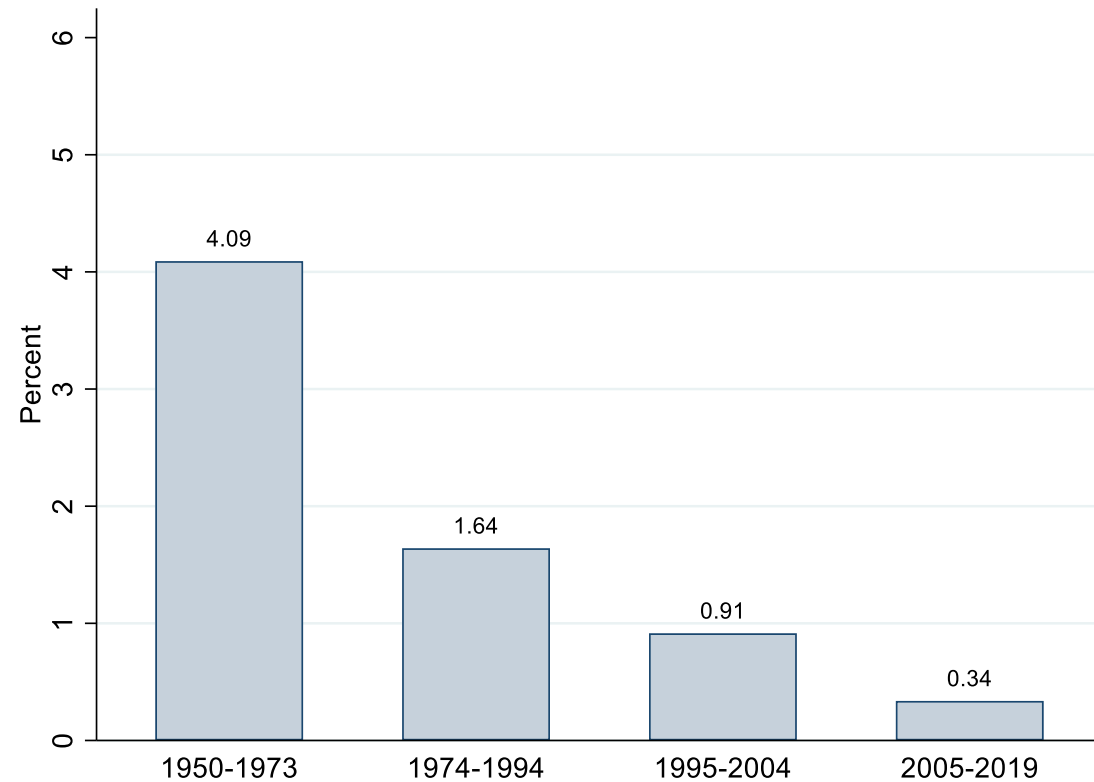
Note: “Euro Zone” is Germany, France, Italy, Spain, Netherlands, and Finland.

Slowing Productivity growth preceded COVID crisis (TFP 1950-2019)

Panel A: US



Panel B: Euro zone



Source: TFP growth based on updated data from Bergeaud, Cette, and Lecat (2016).

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Defending Growth

1. “Capitalists get all the benefits of growth, not workers”
2. “Faster growth means more inequality”
3. “Growth is inevitably bad for the environment”
4. “Growth doesn’t make us any happier”
5. **“There’s nothing we can do to improve the growth rate”**
(Growth pessimism as the “new normal”)
 - Traditional economics vs. modern growth theory



Philippe Aghion



Robert Gordon



OUTLINE OF TALK

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Understanding Growth

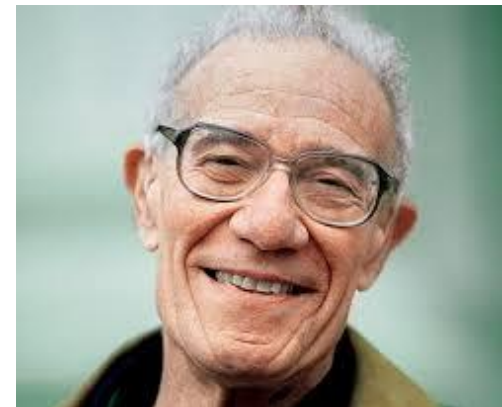
- Growth is a story of innovation rather than the accumulation of people and capital

- **US Output per hour grew at ~2.5% per annum since WW2**

Jones (2015) Growth Accounting decomposition

- 0.1% from capital deepening
- 0.4% from labour composition
- 2.0% from TFP (“Solow Residual”)

Nobel Laureate Bob Solow, MIT

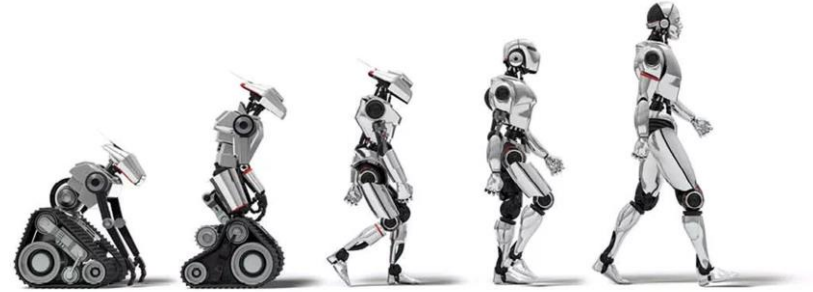


TFP growth is not just frontier advances

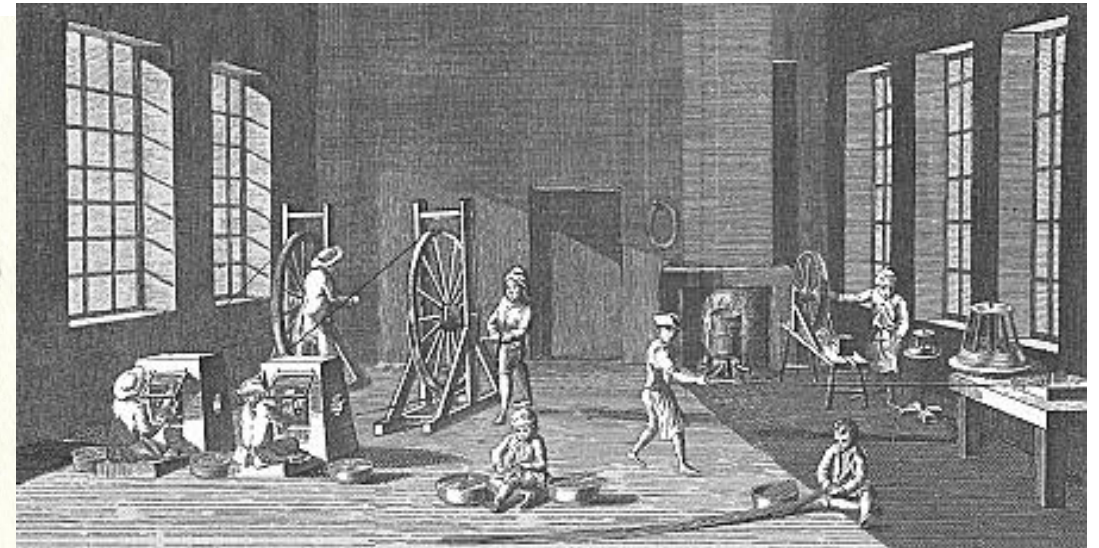
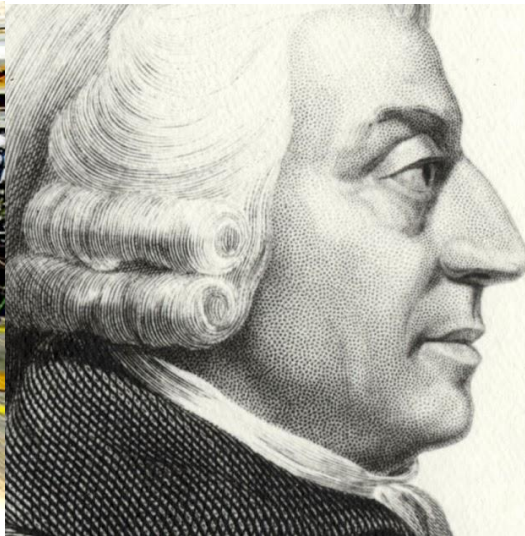
- In advanced economies like Ireland, **frontier innovation is very important**, but still room for improvement without frontier growth
 - **Diffusion** of technology (adoption of best practice)
 - Reducing **Misallocation** (too little market share going to the most productive firms)

Growth Analytics: Two fundamental sources of growth

- Technology
- Management practices



Toyota Plant



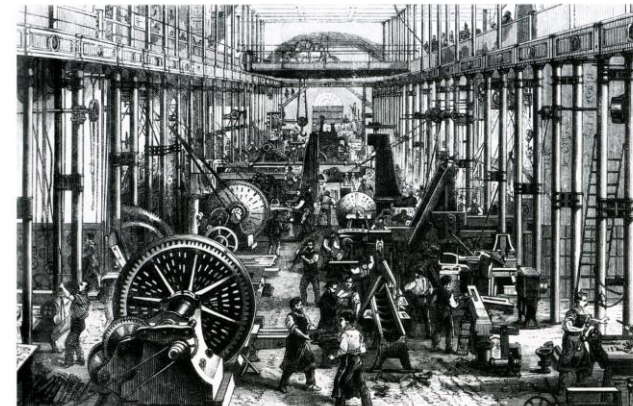
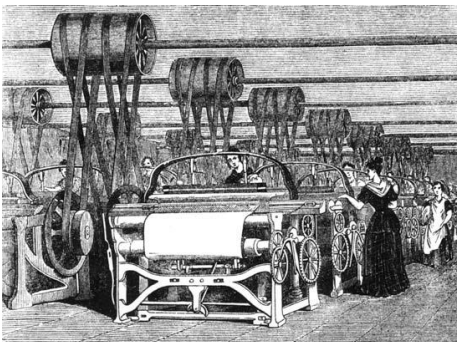
Adam Smith and the Pin Factory

Industrial revolutions

- **First Industrial Revolution: ~1760-1840**
- Second Industrial Revolution: 1870-1914
- Third Industrial Revolution: 1996-2004; Digital
- Fourth Industrial Revolution: ???

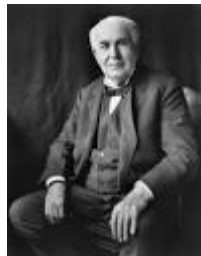


James Watt
(1736-1819)



Industrial revolutions

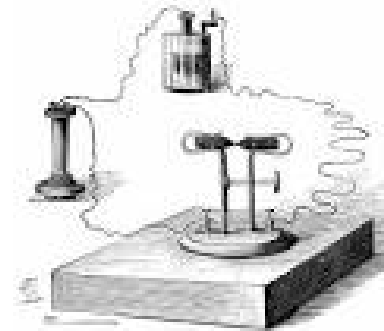
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Lightbulb
Thomas Edison,
1879



**Internal Combustion
Engine**
Karl Benz, 1879



**Wireless, David
Edward Hughes,**
1879

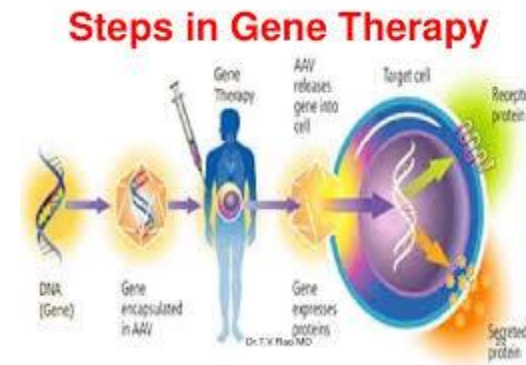
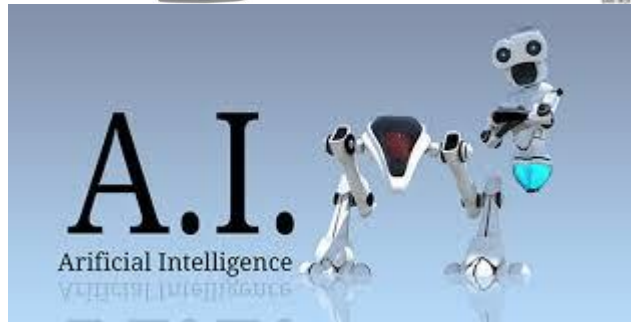
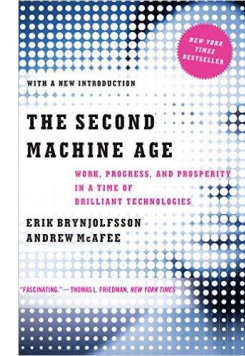
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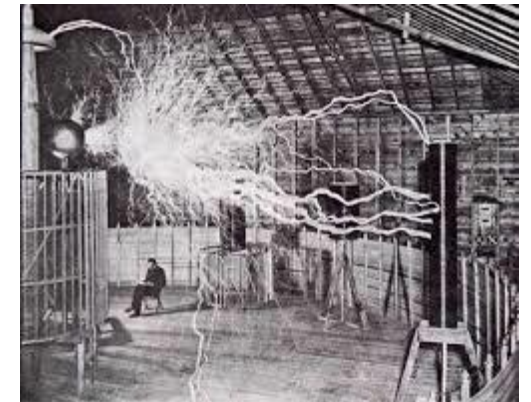
Not just technology: Management practices a driver of productivity growth

- **Innovations in management,**
 - Taylor's Scientific management (1900s)
 - Fordist Mass production (1920s)
 - Alfred Sloan's M-form firm (1930s)
 - Demming's quality movement (1950s)
 - Toyota Lean Manufacturing System (1970s)
 - Global Value Chains (1990s)



Not just technology: Management practices a driver of productivity growth

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 - Demming's quality movement (1950s)
 - Toyota Lean Manufacturing System (1970s)
 - Global Value Chains (1990s)
- Need to change organization of work to make best use of new technologies (electricity, computers, AI, ...)
- Firms can spend a lot of money on tech to little effect



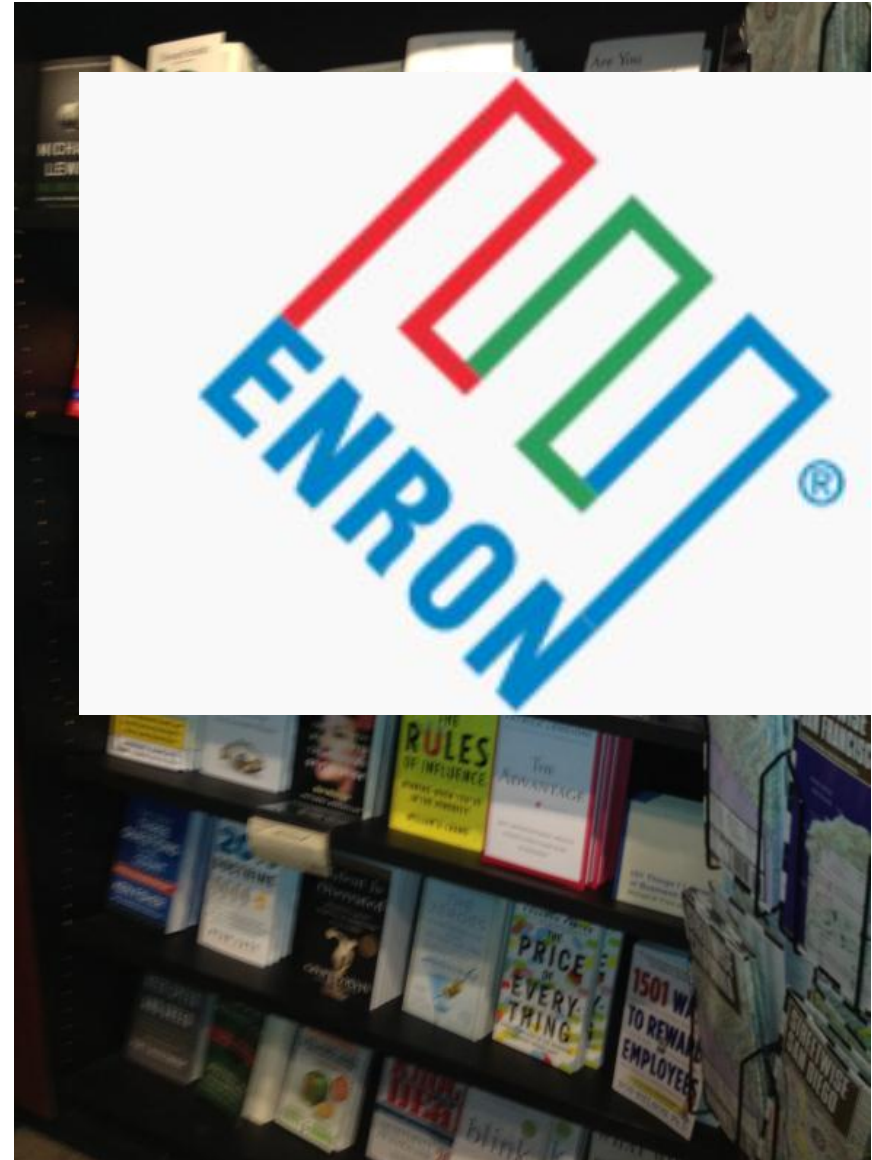
There is still debate on whether management practices really matter

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

Chad Syverson (*Journal of Economic Literature*)



There is still debate on whether management practices really matter



There is still debate on whether management practices really matter



Enron ex-CEO, Jeff Skilling



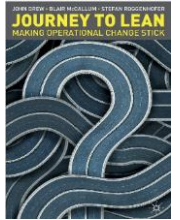
There is still debate on whether management practices really matter



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

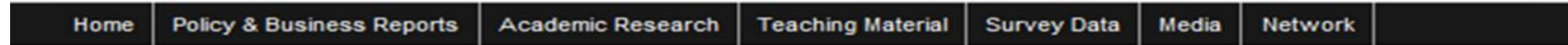
3) Getting firms to participate in the interview

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

World Management Survey (~25k interviews, 34 countries since 2004)



<http://worldmanagementsurvey.org/>



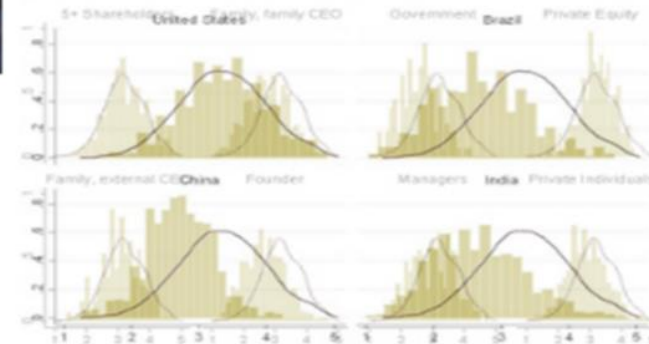
Featured publications

- » [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.

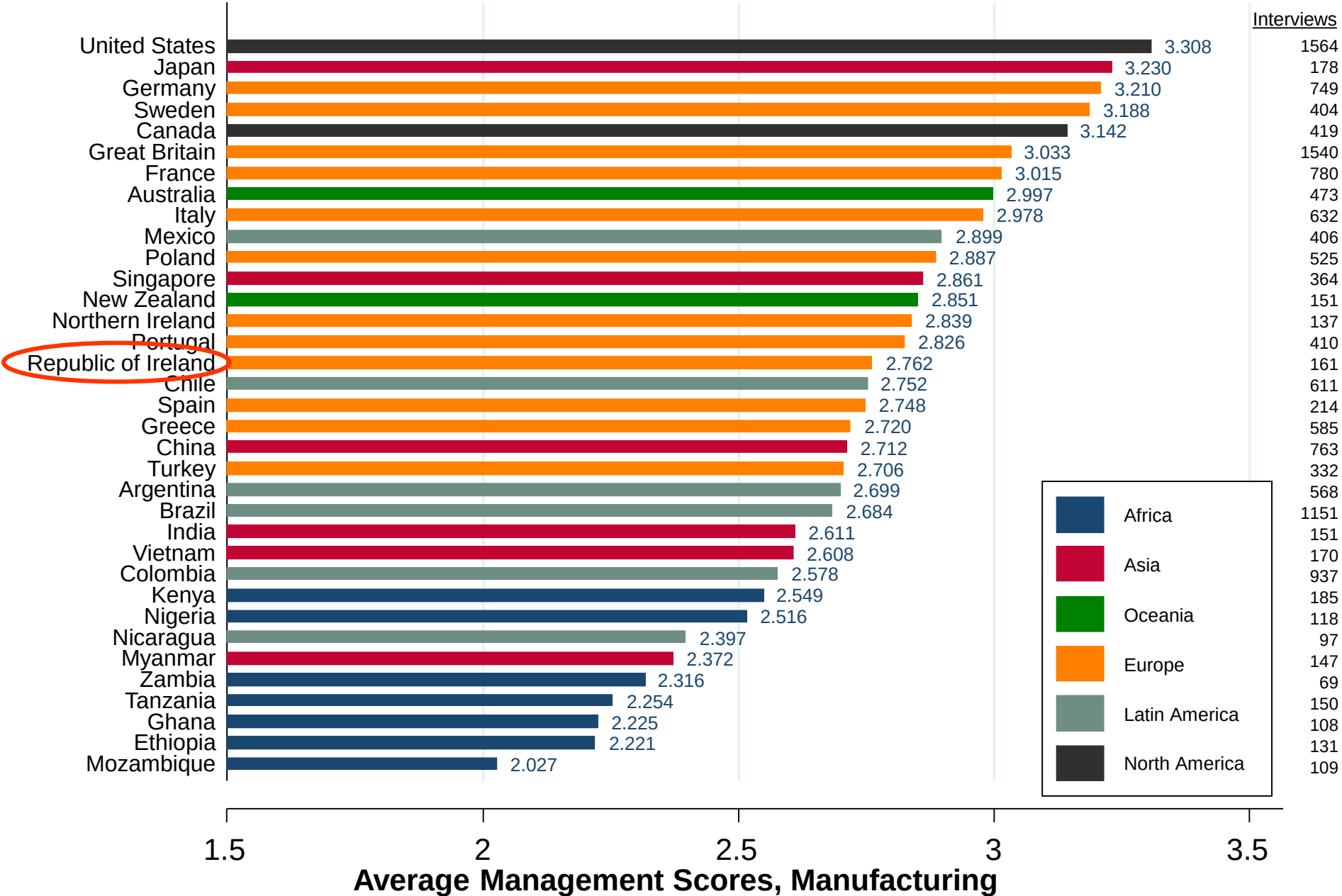
Benchmark your organization

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



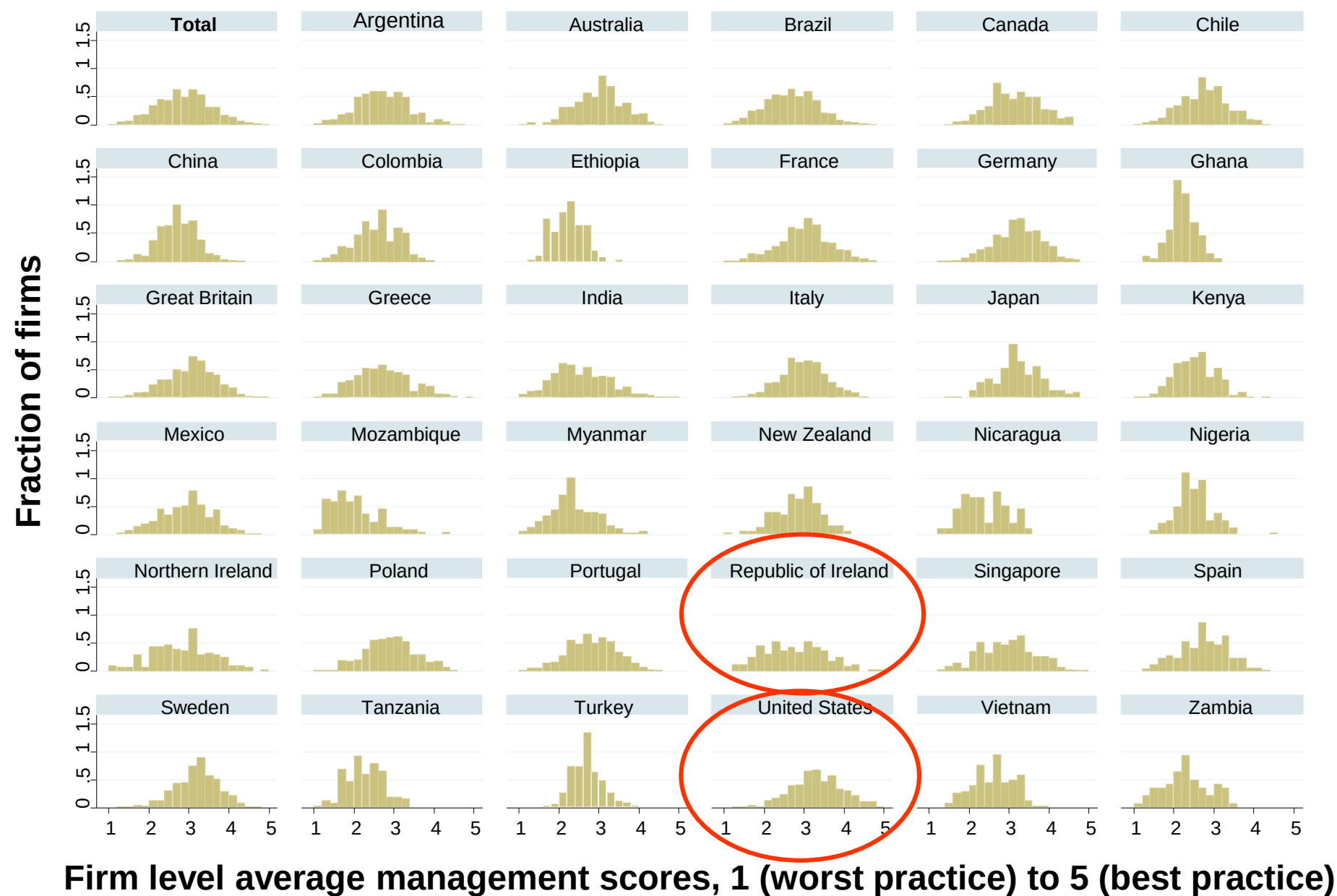
- Medium sized manufacturing firms(50-5,000 workers, median≈250)
- MOPS with Census Bureau (~40k US plants all sizes) & 9 other countries
- Extended to Hospitals, Retail, Education, Civil Service, etc.

Average Management Scores by Country similar to productivity



Source: Bloom, Sadun & Van Reenen (2020). Note: Unweighted average management scores; # interviews in right column (total = 15,489); all waves pooled (2004-2014)

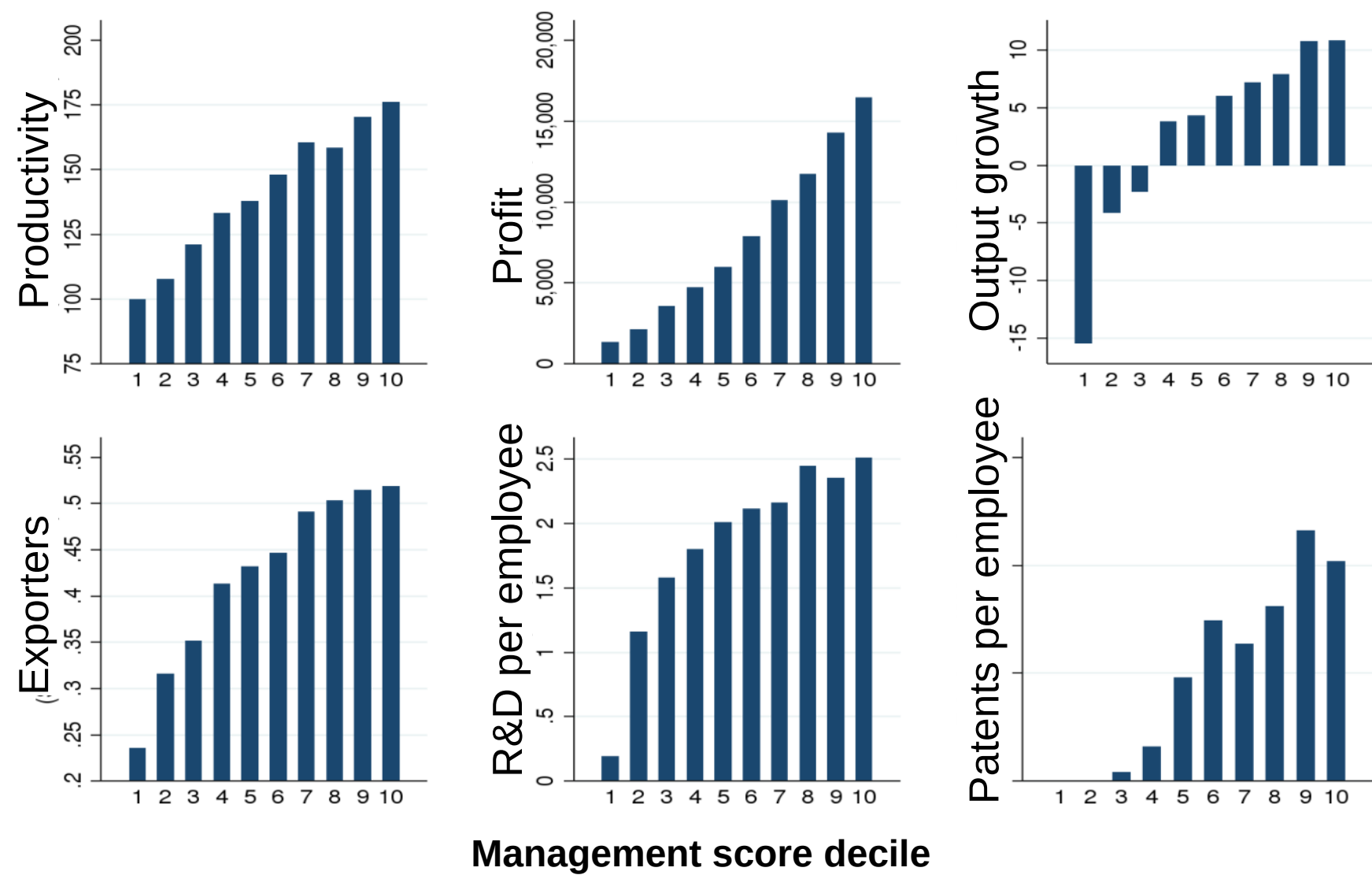
Management also varies heavily within countries



Firm level average management scores, 1 (worst practice) to 5 (best practice)

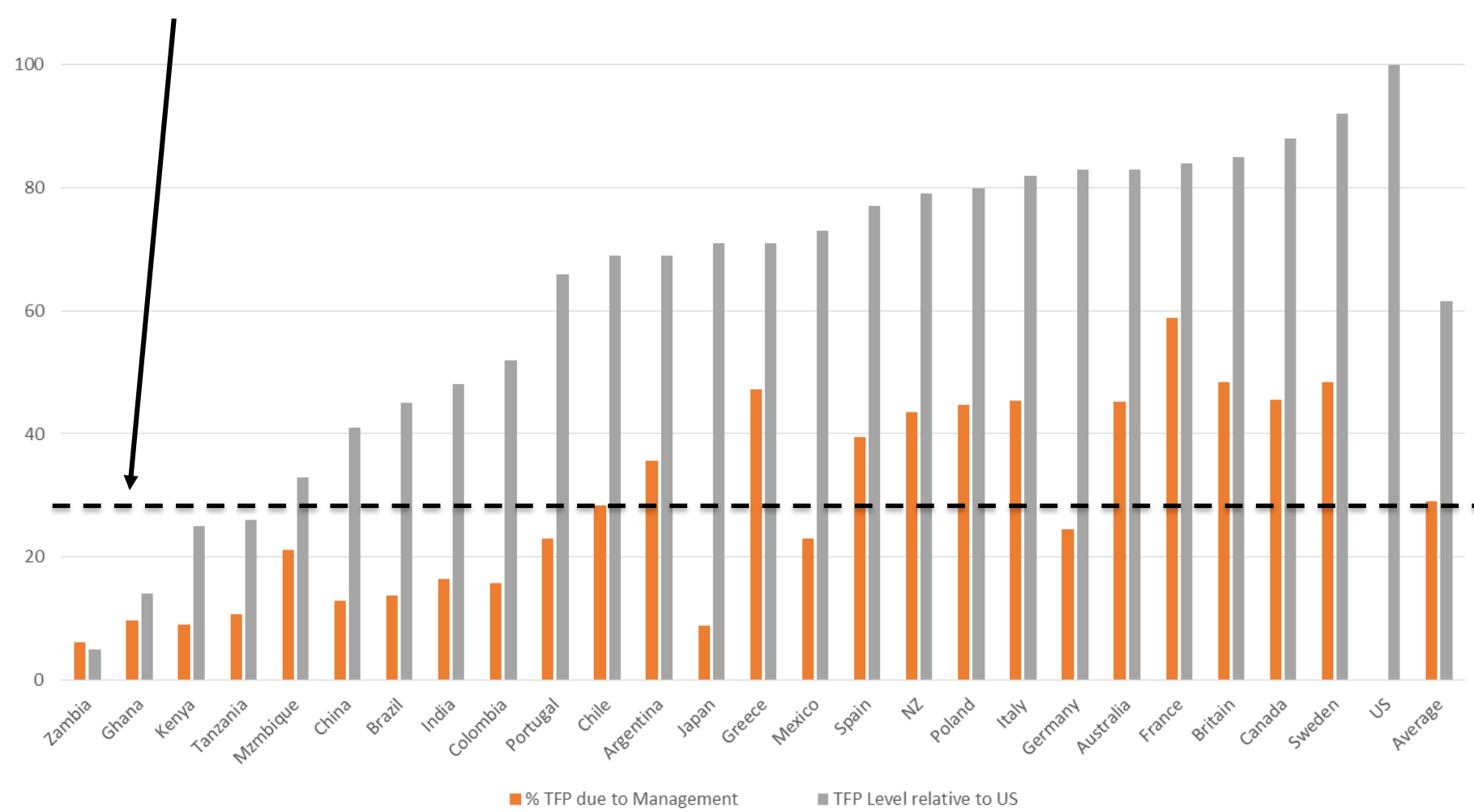
Source: Scur, Sadun, Van Reenen, Lemos and Bloom (2021)

Management scores positively correlated with many measures of firm performance



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

Management matters for macro-economic performance: accounts for about 30% of TFP Gap with US on average



Source: Bloom, Sadun & Van Reenen “Management as a Technology”

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

MY FAVOURITE QUOTES:

The difficulties of defining ownership in Europe

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Production Manager: “We’re owned by the Mafia”

Interviewer:

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Interviewer: “I think that’s the “*Other*” category.....although I guess I could put you down as an “*Italian multinational*” ?”

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Americans on geography

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

Manager in Indiana, US:

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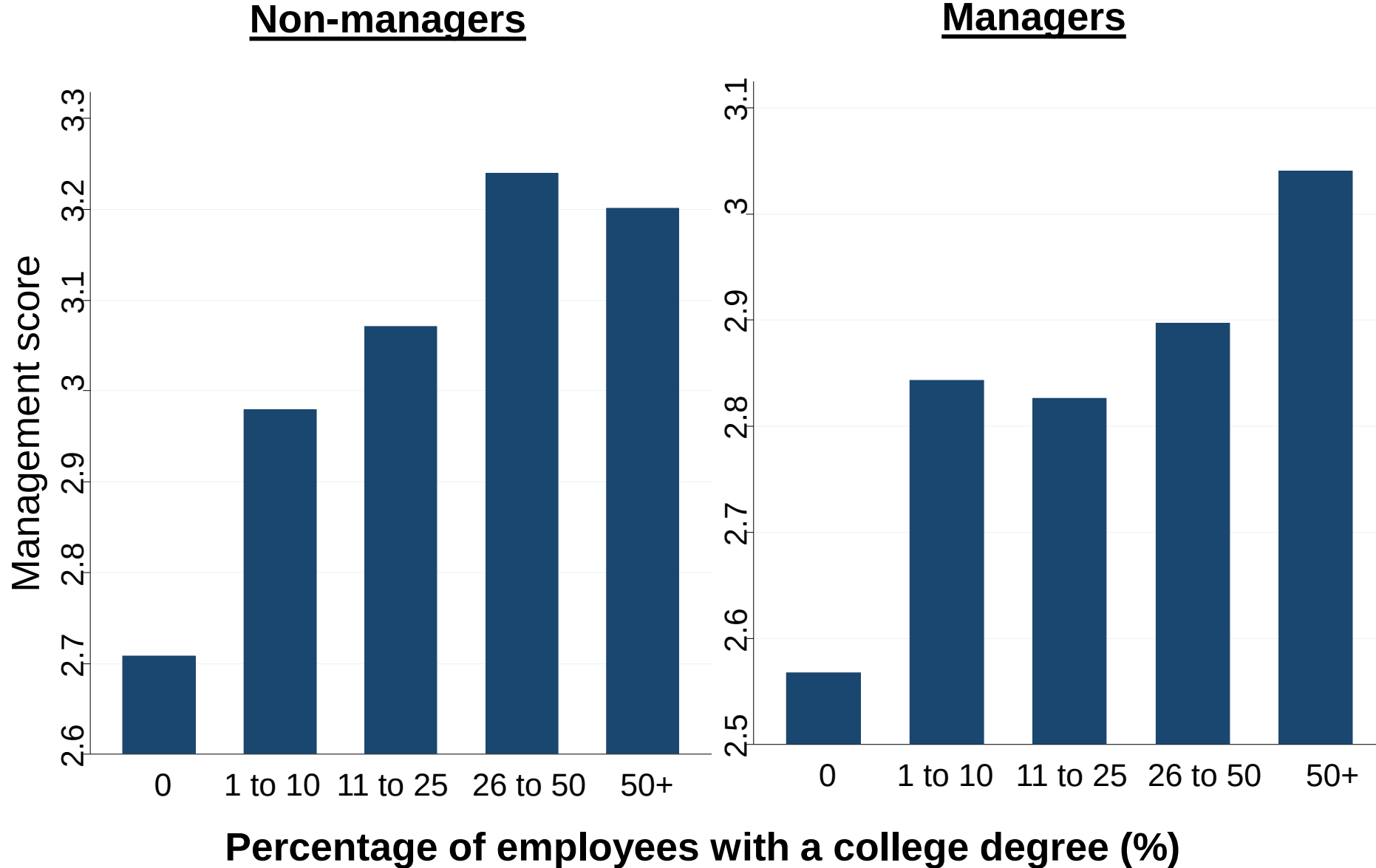
Manager in Indiana, US: “Well...we have one in Texas...”

Some Drivers of Management

- **Human Capital**

- FDI
- Information
- Competition
- Governance

EDUCATION FOR NON-MANAGERS AND MANAGERS APPEAR LINKED TO BETTER MANAGEMENT



Sample of 8,032 manufacturing and 647 retail firms.

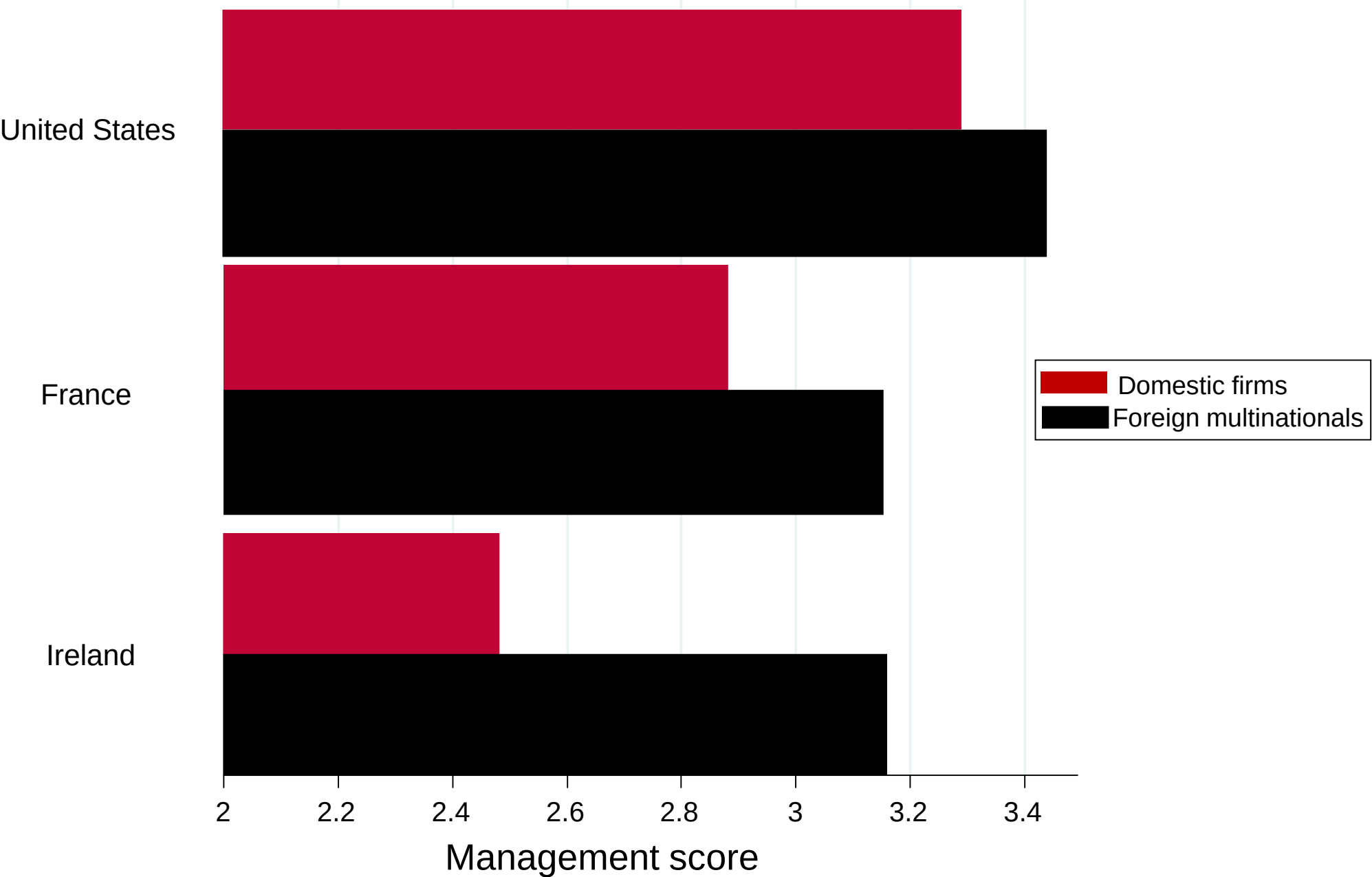
Some Drivers of Management

- Human Capital
- **FDI**
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Foreign Direct Investment

- Well established that multinationals are more productive and pay higher wages
- We show that they also have better management practices
- Multinationals transplant their practices overseas

MULTINATIONALS ACHIEVE HIGH MANAGEMENT SCORES WHEREVER THEY LOCATE



Foreign Direct Investment

- Well established that multinationals are more productive and pay higher wages
- We show that they also have better management practices
- Multinationals transplant their practices overseas
- **And that these benefits spill-over to the management & productivity of other local firms**

Impact of multinationals - Look at impact on incumbent plants in a U.S. county which wins a multinational plant versus plants in runner up counties

Plants in runner-up counties are “control group” for “treatment” of the multinational’s arrival.

Use Site Selection Magazine which has stories about winning county and runner up counties.

**Toyota Motor Corp. —
Huntsville, Ala.
\$220 million; 350 jobs**

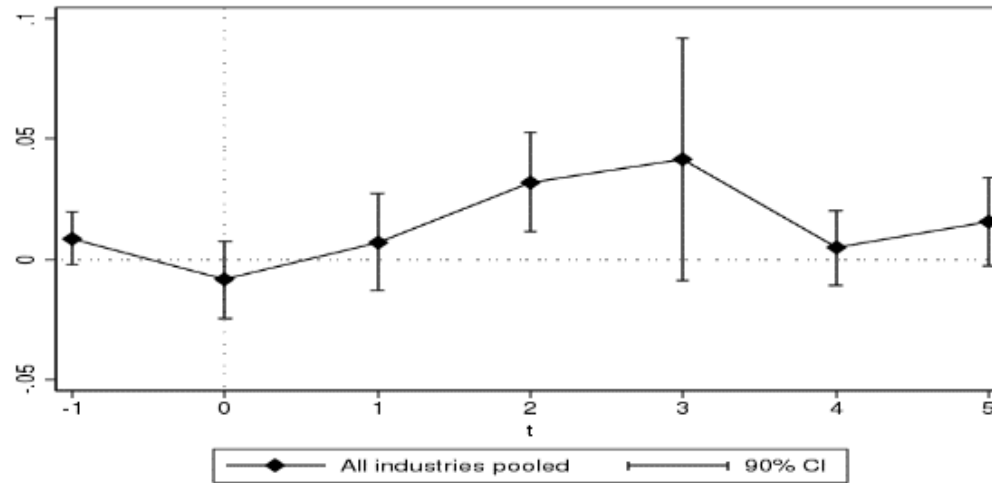
One of the Southeast's most prized catches of the year landed in Huntsville, Ala., where Japanese automaker Toyota Motor Corp. announced that it would locate a \$220 million, 350-job manufacturing plant for V-8 engines for the Toyota Tundra pickup.

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



Senator Jeff
Gov. Don Sieg
the future p

Multinational Plants' better management spills over to management quality of other local plants



Panel A:
Overall Treatment Effect

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

Some Drivers of Management

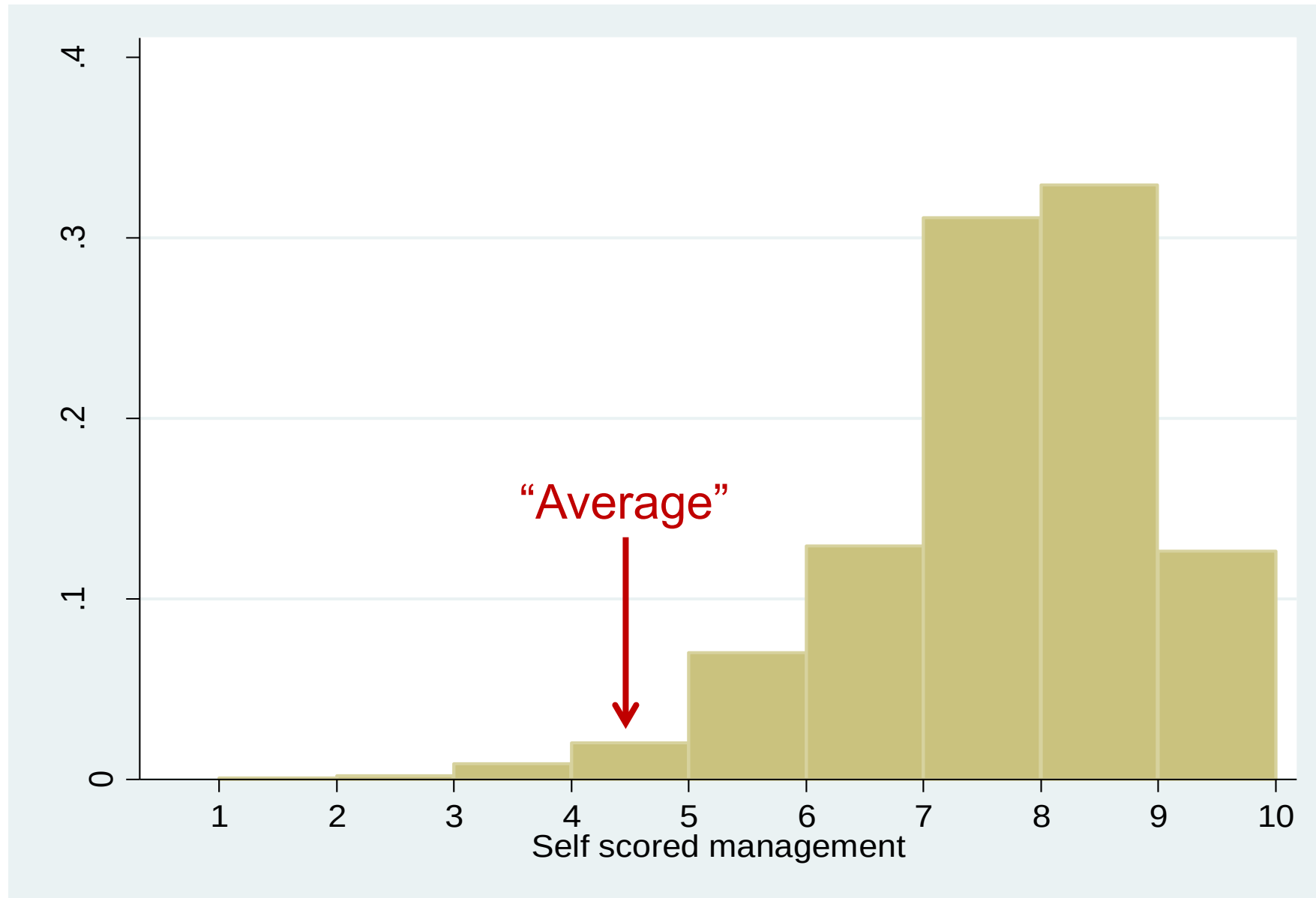
- Human Capital
- FDI
- **Information**
- Competition
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Information – Managers bad at self assessment

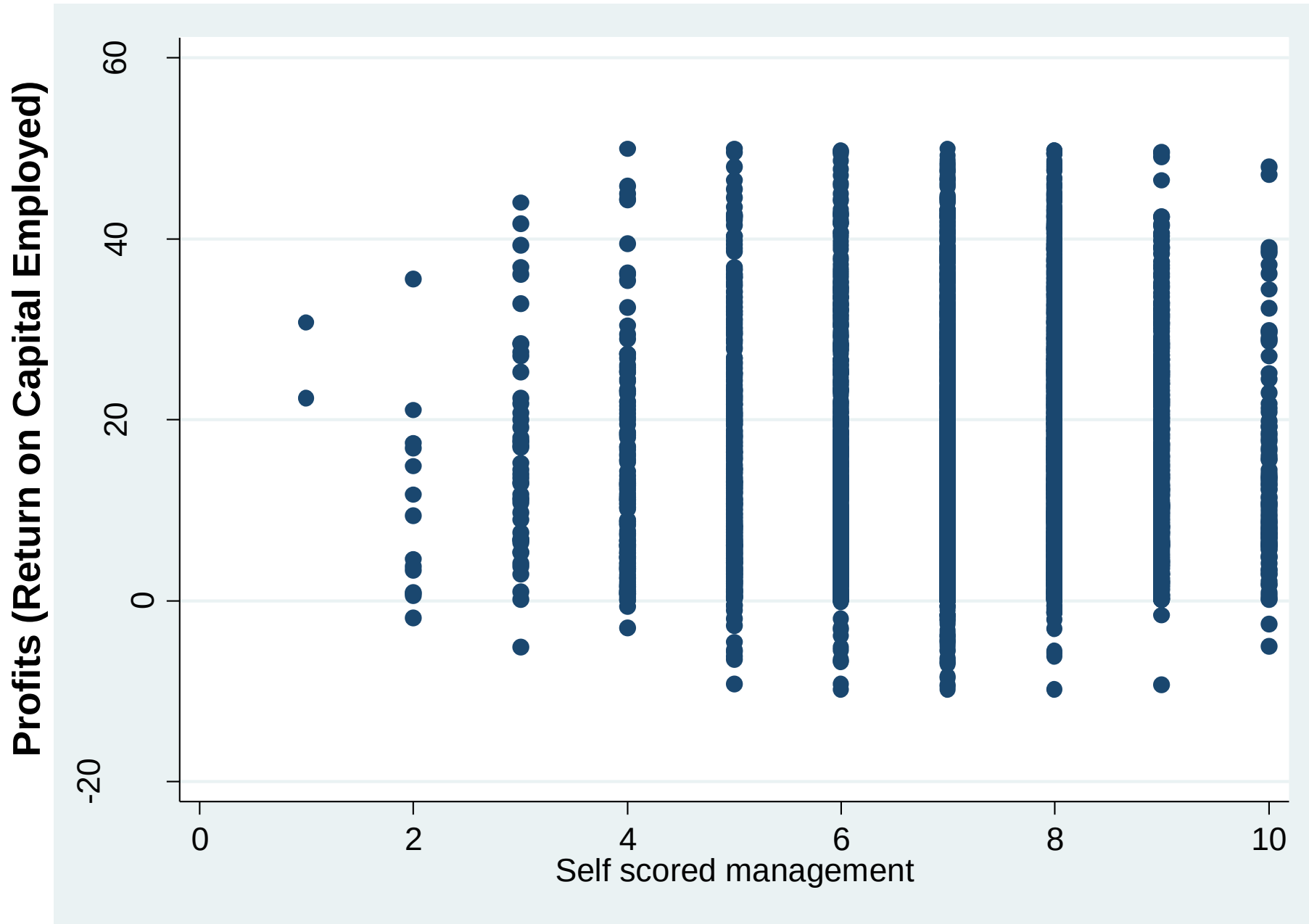
At the end of the WMS survey we asked:

“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



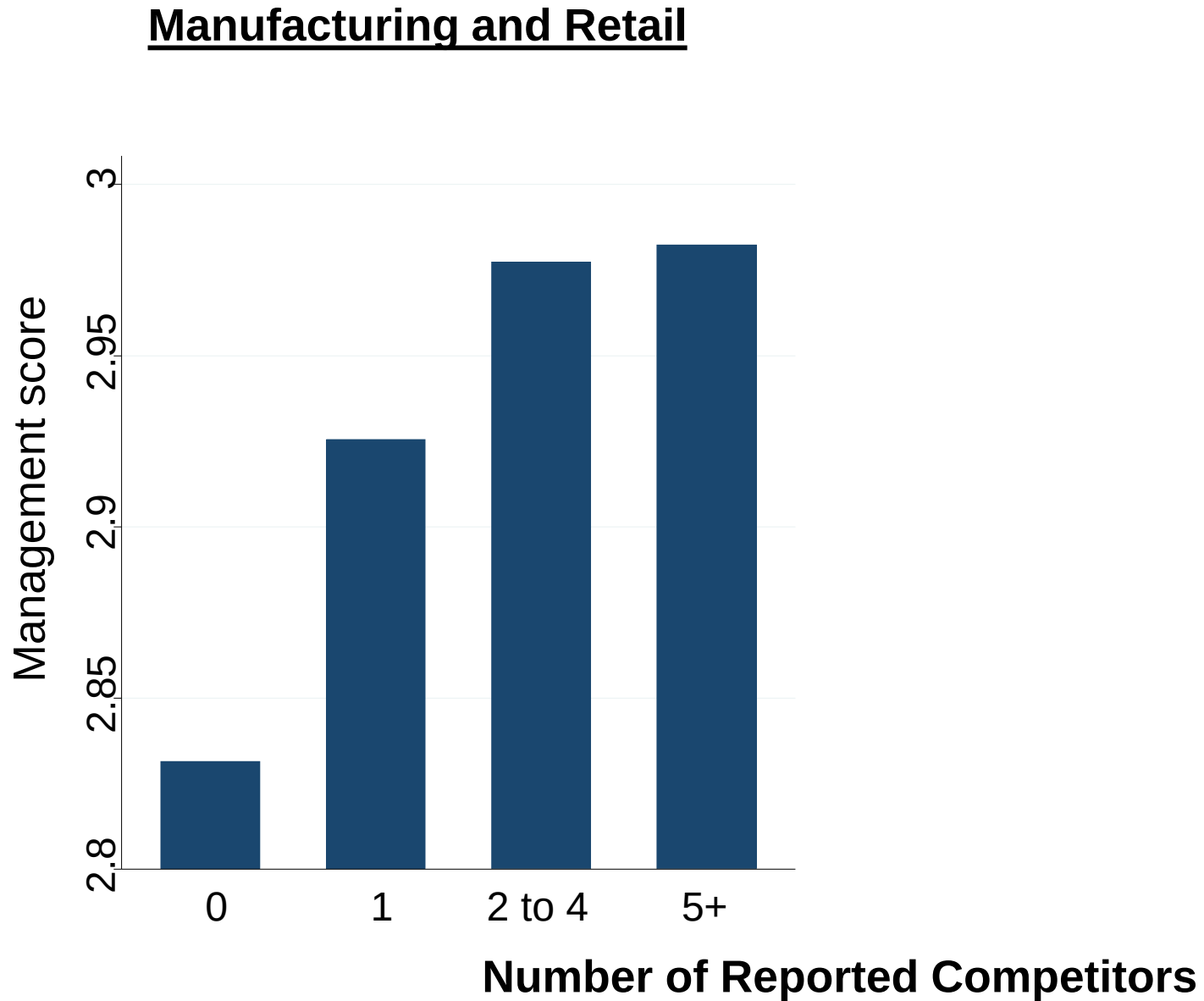
...and self-scores show no link to performance



Some Drivers of Management

- Human Capital
- FDI
- Information
- **Competition**
- Governance

COMPETITION ASSOCIATED WITH BETTER MANAGEMENT

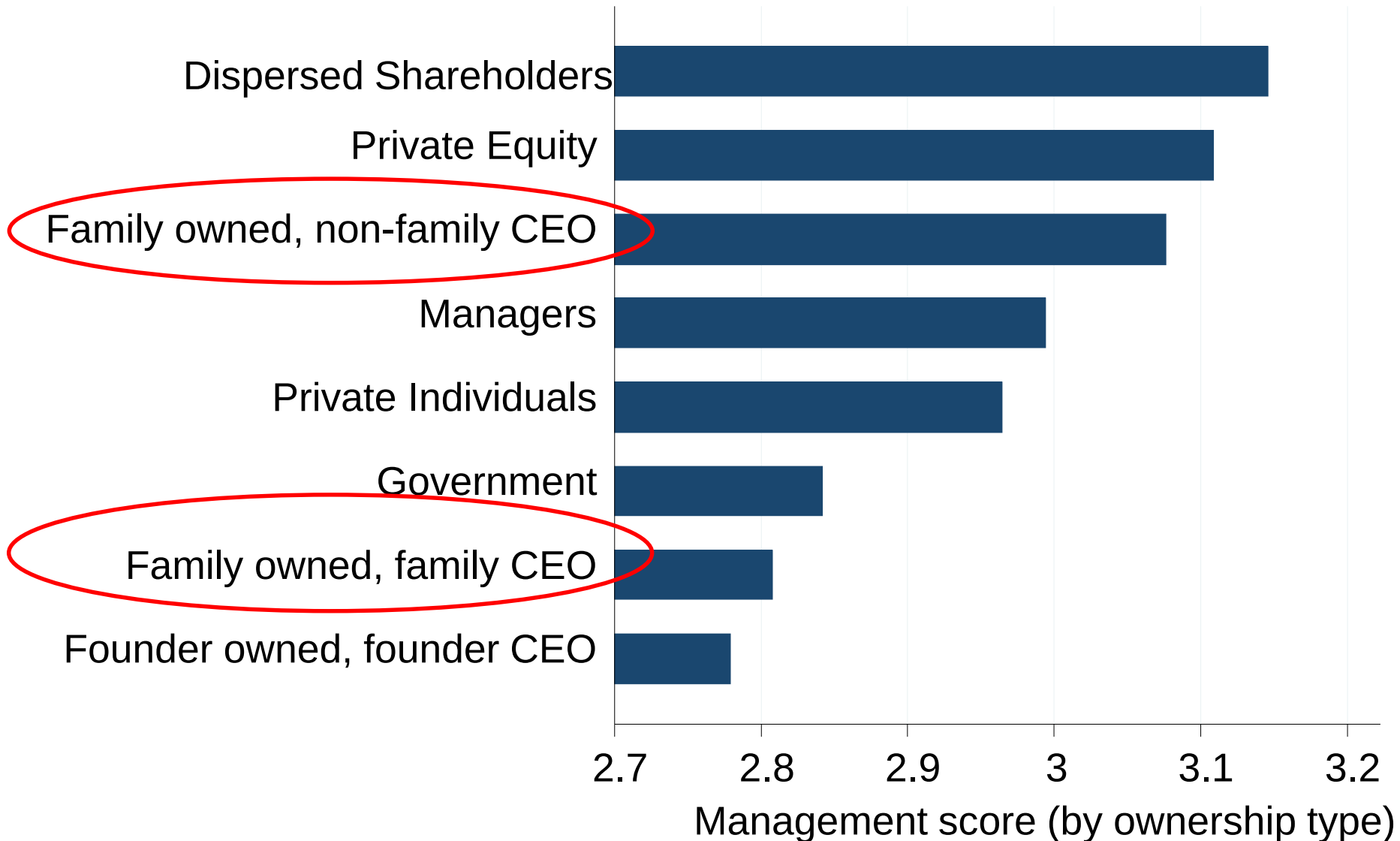


Sample of 9469 manufacturing and 661 retail firms (private sector panel) Reported competitors defined from the response to the question “How many competitors does your [organization] face?”

Some Drivers of Management

- Human Capital
- FDI
- Information
- Competition
- **Governance**

GOVERNANCE: FAMILY-RUN AND GOVERNMENT FIRMS TYPICALLY HAVE VERY 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.

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Principles for Inclusive and Sustainable Growth

- **Short-run**
 - Balancing protection and reallocation
- **Long-run**
 - Innovation and management
- Need to link together and be **evidence-based**
- For some policy **details** see 

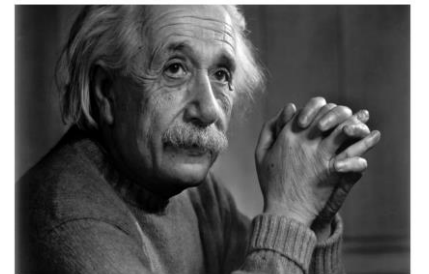


A Growth Plan for Ireland?

- **Many strengths**
 - FDI (esp. US multinationals)
 - Single Market Access
 - Young & diverse workforce
 - Flexible labour market
- **Challenges?**
 - Attracting multinationals harder
 - Brexit
 - “Long tail” of under-performing firms
 - Governance

Successful Innovation Policies

- R&D tax credits
- Direct government grants
- **Human capital supply**
 - Expanding STEM workforce
 - Universities
 - Immigration
 - **“Lost Marie Curies”**: under-representation of women, minorities and kids from low income families in inventor pool represents a major loss of talent (Bell et al, 2019)



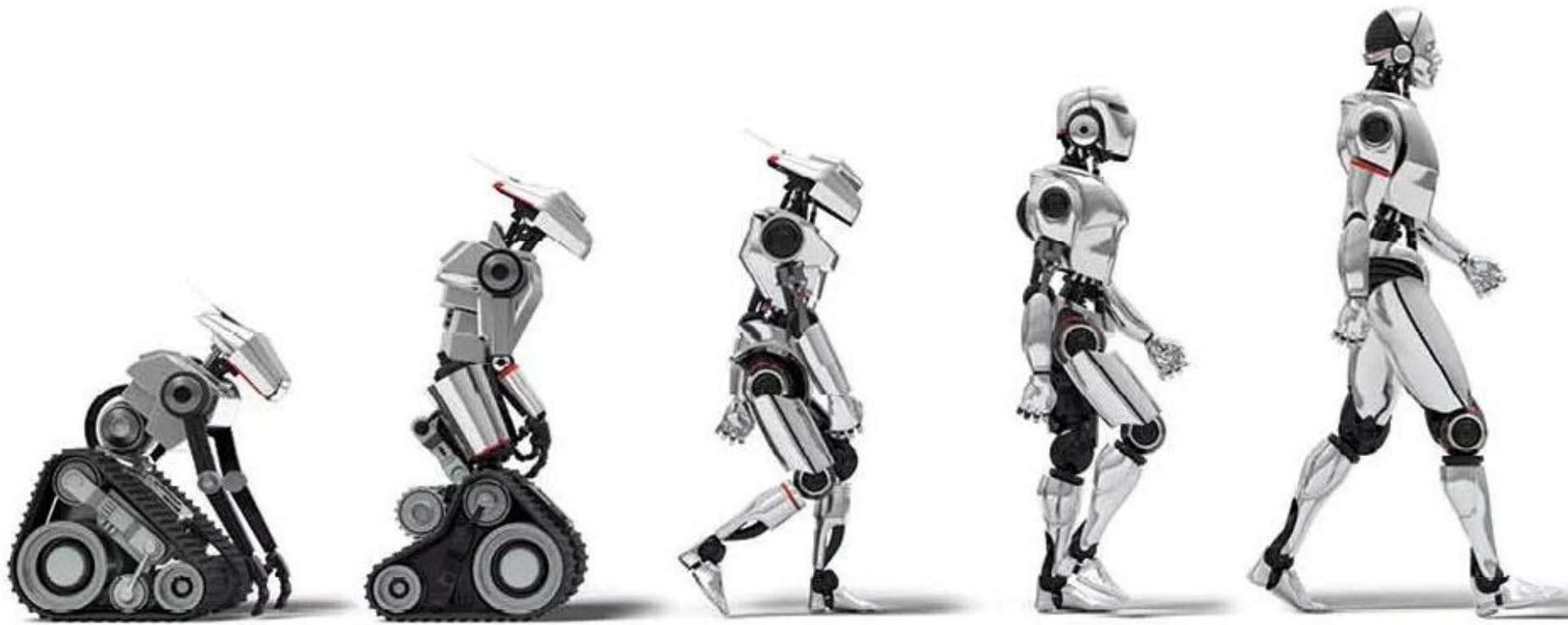
Successful Policies towards improving management

- Strong Competition
- Openness to Trade and FDI
- Governance Reforms
- Managerial training
- Information/benchmarking

Final Thoughts: Is a Growth Plan politically feasible?

- The world has severe productivity growth problem, particularly bad in the UK after Global Financial Crisis
- Events causing major damage (e.g. COVID and Brexit) can shock society into making radical changes (e.g. WWII)
- Cross political consensus on:
 - Need for investment in innovation
 - Important role of the state in rebuilding economy
- We can learn from social science what policies do (and do not) work in helping restore growth
- Time to move from words to action to help create sustainable and equitable growth

THANKS!



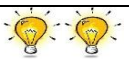
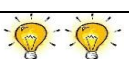
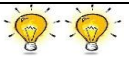
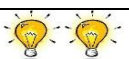
Some Further Reading (and viewing)

- “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/>
- LSE Growth Commission Final Report
<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>

We summarize evidence in a Policy “Lightbulb” Table

(1)	(2)	(3)	(4)	(5)	(6)
Policy	Quality of evidence	Conclusiveness of evidence	Benefit - Cost	Time frame:	Effect on inequality
Direct R&D Grants	Medium	Medium		Medium-Run	↑
R&D tax credits	High	High		Short-Run	↑
Patent Box	Medium	Medium	Negative	n/a	↑
Skilled Immigration	High	High		Short to Medium-Run	↓
Universities: incentives	Medium	Low		Medium-Run	↑
Universities: STEM Supply	Medium	Medium		Long-Run	↓
Exposure Policies	Medium	Low		Long-run	↓
Trade and competition	High	Medium		Medium-Run	↑
Grand Innovation Challenge	Low	Low		Medium-Run	↓

Source: Bloom, Van Reenen and Williams (2019)



Policy type	Strength of evidence	Policy Net benefit (out of 5)	Difficulty of implementation	Time frame
Structural				
Competition	H		M	medium
Trade and FDI	H		L	medium
Education	M		M	long
Labour 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