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UNDP - MEF Consultation Workshop to Identify New Sources of Growth

Management Strategy and Organization

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June 14, 2023.

Management Strategy and Organization

1. Management Strategy

i. Nicholas Bloom and John Van Reenen (2007), "Measuring and Explaining Management Practices across Firms and Countries", Quarterly Journal of Economics, 122(4): 1341-1408.

ii. Nicholas Bloom, Ben Eifert, Abrijit Mahajan, David McKenzie and John Roberts (2013) "Does management matter? Evidence from India," Quarterly Journal of Economics, 128 (1): 1-51.

iii. Daniela Scur, Raffaella Sadun, John Van Reenen, Renata Lemos, and Nicolas Bloom (2021), "The World Management Survey at 18: Lessons and the Way Forward," Oxford Review of Economic Policy 37 (2): 231-258.

iv. US Census Bureau, Management and Organizational Practices Survey (MOPS).

2. Organization

i. Robert Gibbons and John Roberts (2015), "Organizational Economics," in Emerging Trends in the Social and Behavioral Science, Wiley.

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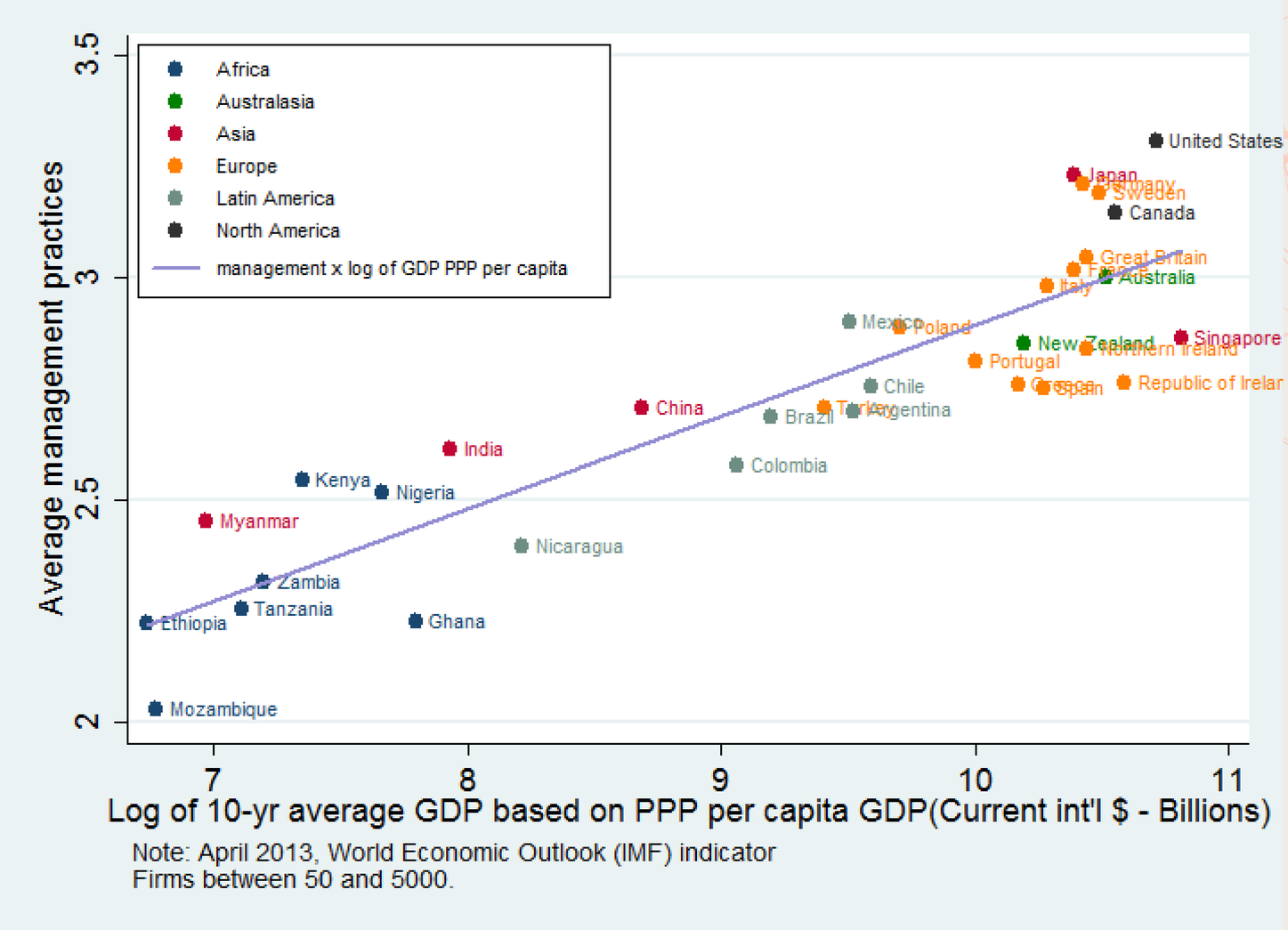
Management Strategy

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

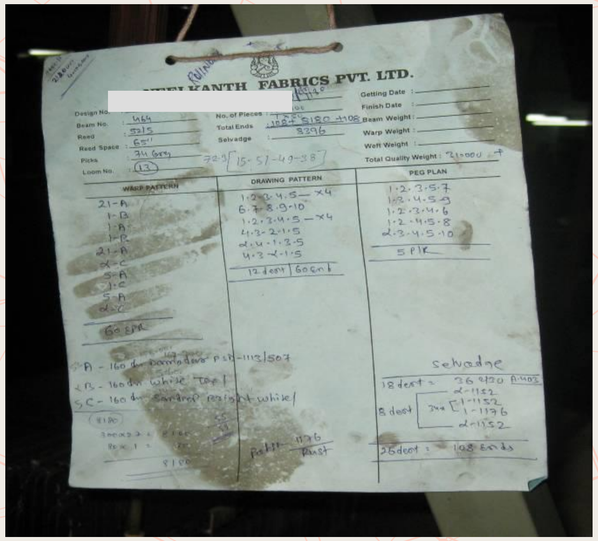


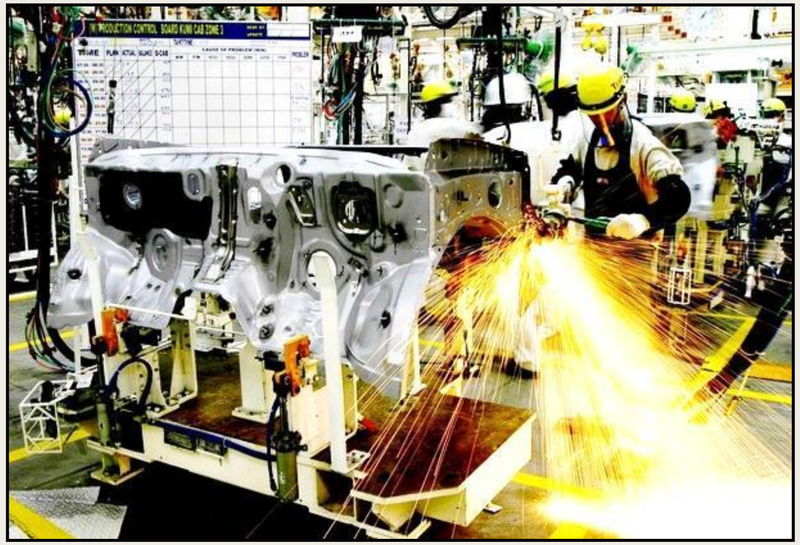
Note: April 2013, World Economic Outlook (IMF) indicator
Firms between 50 and 5000.

The Source of Business Profits

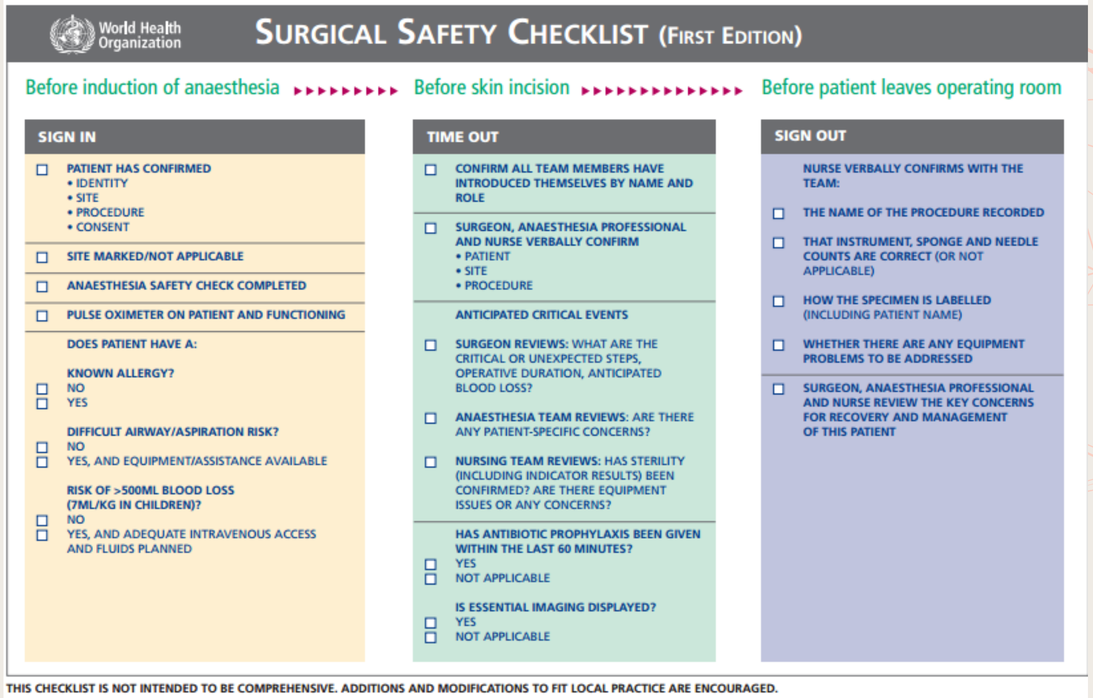
- The founding father of the American Economic Association, Francis A. Walker Francis, while analyzing the Source of Business Profits, in the first volume of the *Quarterly Journal of Economics (1887)*, argued that:
- "…we have the phenomenon in every community and in every trade, in whatever state of the market, of some employers realizing no profits at all, while others are making fair profits; others, again, large profits; others, still, colossal profits."
- Differences in the quality of management account for persistent differences in productivity and profitability across firms within an industry.

Examples of management practices





Management practices save lives



World Health Organization

SURGICAL SAFETY CHECKLIST (FIRST EDITION)

Before induction of anaesthesia ▸▸▸▸▸▸▸▸▸ Before skin incision ▸▸▸▸▸▸▸▸▸▸▸▸▸▸ Before patient leaves operating room

SIGN IN

- ☐ PATIENT HAS CONFIRMED
  - IDENTITY
  - SITE
  - PROCEDURE
  - CONSENT
- ☐ SITE MARKED/NOT APPLICABLE
- ☐ ANAESTHESIA SAFETY CHECK COMPLETED
- ☐ PULSE OXIMETER ON PATIENT AND FUNCTIONING

DOES PATIENT HAVE A:

KNOWN ALLERGY?
- ☐ NO
- ☐ YES

DIFFICULT AIRWAY/ASPIRATION RISK?
- ☐ NO
- ☐ YES, AND EQUIPMENT/ASSISTANCE AVAILABLE

RISK OF >500ML BLOOD LOSS (7ML/KG IN CHILDREN)?
- ☐ NO
- ☐ YES, AND ADEQUATE INTRAVENOUS ACCESS AND FLUIDS PLANNED

TIME OUT

- ☐ CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE
- ☐ SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM
  - PATIENT
  - SITE
  - PROCEDURE

ANTICIPATED CRITICAL EVENTS

- ☐ SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?
- ☐ ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS?
- ☐ NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?

HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?
- ☐ YES
- ☐ NOT APPLICABLE

IS ESSENTIAL IMAGING DISPLAYED?
- ☐ YES
- ☐ NOT APPLICABLE

SIGN OUT

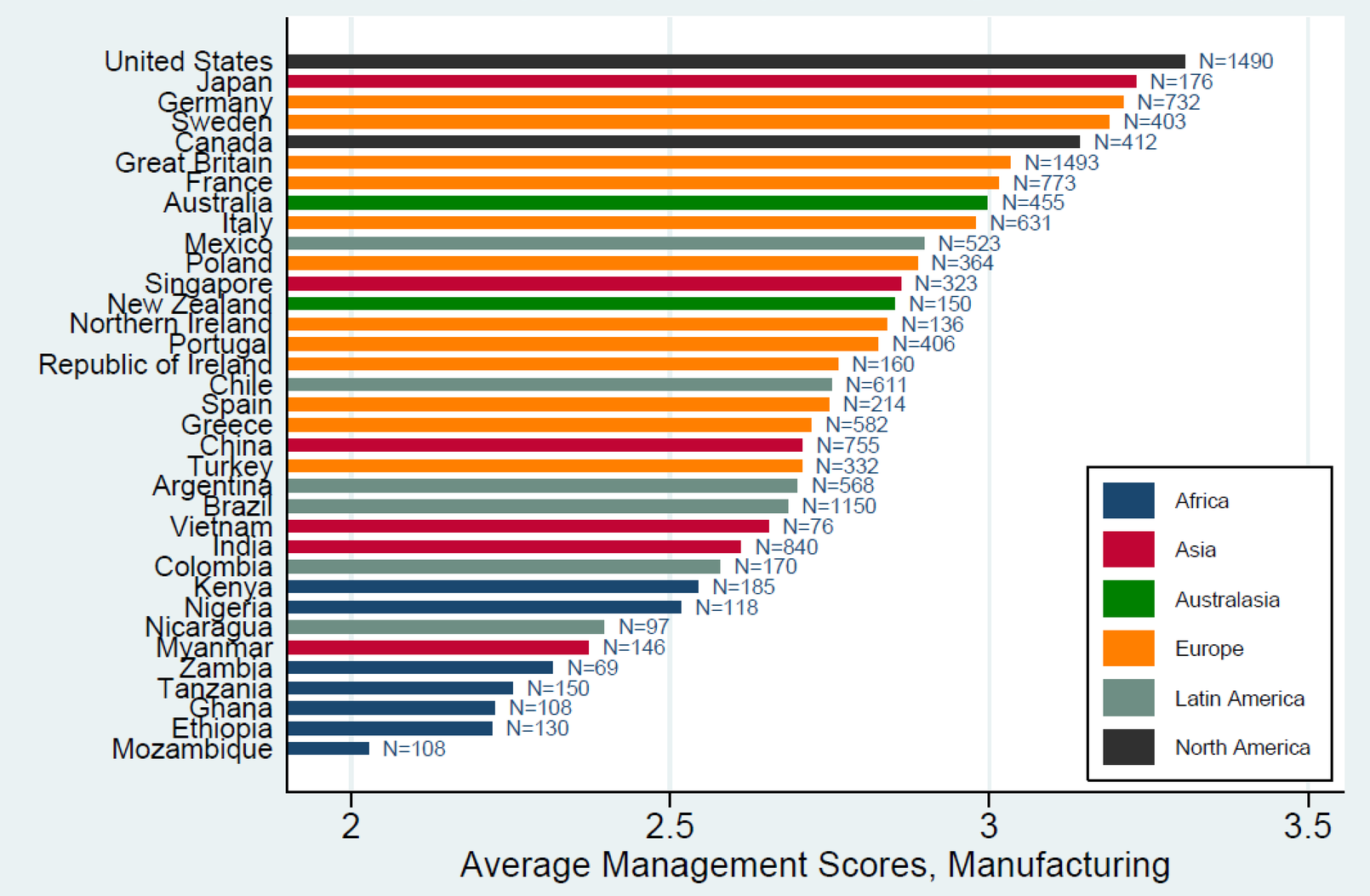
NURSE VERBALLY CONFIRMS WITH THE TEAM:

- ☐ THE NAME OF THE PROCEDURE RECORDED
- ☐ THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE)
- ☐ HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME)
- ☐ WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED
- ☐ SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT

THIS CHECKLIST IS NOT INTENDED TO BE COMPREHENSIVE. ADDITIONS AND MODIFICATIONS TO FIT LOCAL PRACTICE ARE ENCOURAGED.

Results: The 20 studies that we analyzed included a single prospective randomized trial concerning the effect of the WHO checklist on safety-related behavior in the operating room. **The two surgical outcome studies documented a relative improvement of perioperative mortality by 47% in one study (from 56 in 3733 cases [1.5%] to 32 in 3955 cases [0.8%]) and by 62% in the other (from 31 in 842 cases [3.7%] to 13 in 908 cases [1.4%]), as well as a relative improvement of perioperative morbidity by 36% in one study (from 411 in 3733 cases [11.0%] to 288 in 3,955 cases [7.3%]) and by 37% in the other (from 151 in 842 cases [17.9%] to 102 in 908 cases [11.2%]).** Improved interdisciplinary communication was also found. Factors that aided effective use of the checklist included exemplary implementation by team leaders and structured training. https://www.aerzteblatt.de/int/archive/article/131757.

Average management scores around the world



Share of TFP gap explained by management

	US Management Gap	US TFP Gap	% Management
Sweden	-0.27	0.32	0.04
Japan	-0.34	0.34	0.05
Germany	-0.45	0.18	0.19
Canada	-0.49	0.22	0.17
Britain	-0.75	0.20	0.27
Australia	-0.76	0.23	0.25
Mexico	-0.77	0.60	0.12
Poland	-0.81	0.20	0.32
Italy	-0.82	0.17	0.31
Spain	-0.93	0.31	0.30
France	-1.02	0.25	0.29
Brazil	-1.02	0.60	0.15
Chile	-1.02	0.54	0.18
India	-1.09	0.81	0.12
China	-1.19	0.78	0.12
Argentina	-1.2	0.57	0.17
Greece	-1.67	0.51	0.23
Zambia	-2.09	0.95	0.17
Mozambique	-2.17	0.79	0.25
Mean (over all)			**22%**

Why should one care about management?

- Because it is a determinant of productivity, and it contributes to:
  - More and better goods and services
  - Welfare for workers
  - Profits for firms
  - Benefits for consumers

Evidence from the US Census Bureau Management and Organizational Practices Survey (MOPS)

- The U.S. Census Bureau is conducting the MOPS to better understand current and evolving management and organizational practices and to assist in identifying determinants of establishment and productivity growth.
- Results from the 2021 MOPS were released on April 26, 2023. There were previous rounds in 2015 and 2010, which also included questions about 2005.

Table 6. Share of Respondents Providing Responses by Question

Question	Response	Percent of Respondents (%)		Standard Error (%)	
		2015	2021	2015	2021
Managing production problems	We fixed it but did not take further action	4.61	5.79	0.20	0.24
	We fixed it and took action to make sure that it did not happen again	33.19	36.88	0.38	0.41
	We fixed it and took action to make sure that it did not happen again, and had a continuous improvement process to anticipate problems like these in advance	60.67	55.50	0.39	0.41
	No action was taken	1.53	1.81	0.13	0.13
	No response[1]	0.00	0.00	0.00	0.00

Management and Organizational Practices Survey (MOPS)

Operations:

Monitoring:

Goals:

2021 MANAGEMENT AND ORGANIZATIONAL PRACTICES SURVEY

SECTION A
Management Practices

1 In 2021, what best describes what happened at this establishment when a problem in the production process arose?

Examples: Finding a quality defect in a product or a piece of machinery breaking down.

- ☐ We fixed it but did not take further action
- ☐ We fixed it and took action to make sure that it did not happen again
- ☐ We fixed it and took action to make sure that it did not happen again, and had a continuous improvement process to anticipate problems like these in advance
- ☐ No action was taken

2 In 2021, how many key performance indicators were monitored at this establishment?

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

- ☐ 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, SKIP to Question 6.)

3 During 2021, how frequently were the key performance indicators **reviewed** by **managers** at this establishment?

A manager is someone who has employees directly reporting to them, with whom they meet on a regular basis, and whose pay and promotion they may be involved with, e.g., Plant Manager, Human Resource Manager, Quality Manager.

Select all that apply

- ☐ Yearly
- ☐ Quarterly
- ☐ Monthly
- ☐ Weekly
- ☐ Daily
- ☐ Hourly or more frequently
- ☐ Never

4 During 2021, how frequently were the key performance indicators **reviewed** by **non-managers** at this establishment?

Non-managers are all employees at the establishment who are not managers as defined in ❸

Select all that apply

- ☐ Yearly
- ☐ Quarterly
- ☐ Monthly
- ☐ Weekly
- ☐ Daily
- ☐ Hourly or more frequently
- ☐ Never

5 During 2021, where were the production display boards showing output and other key performance indicators located at this establishment?

- ☐ All display boards were located in one place (e.g. at the end of the production line)
- ☐ Display boards were located in multiple places (e.g. at multiple stages of the production line)
- ☐ We did not have any display boards

6 In 2021, what best describes the time frame of production targets at this establishment?

Examples of production targets are: production, quality, efficiency, waste, on-time delivery.

- ☐ Main focus was on short-term (less than one year) production targets
- ☐ Main focus was on long-term (more than one year) production targets
- ☐ Combination of short-term and long-term production targets
- ☐ No production targets (If no production targets, SKIP to Quesion 13.)

7 In 2021, how easy or difficult was it for this establishment to achieve its production targets?

- ☐ Possible to achieve without much effort
- ☐ Possible to achieve with some effort
- ☐ Possible to achieve with normal amount of effort
- ☐ Possible to achieve with more than normal effort
- ☐ Only possible to achieve with extraordinary effort

Management and Organizational Practices Survey (MOPS)

Incentives:

8 In 2021, who was aware of the production targets at this establishment?

- ☐ Only senior managers
- ☐ Most managers and some production workers
- ☐ Most managers and most production workers
- ☐ All managers and most production workers

9 In 2021, what were **non-managers'** performance bonuses usually based on at this establishment?
Select all that apply

- ☐ Their own performance as measured by production targets
- ☐ Their team or shift performance as measured by production targets
- ☐ Their establishment's performance as measured by production targets
- ☐ Their company's performance as measured by production targets
- ☐ No performance bonuses (If no performance bonuses, SKIP to Question 11.)

10 In 2021, when production targets were met, what percent of **non-managers** at this establishment received performance bonuses?

- ☐ 0%
- ☐ 1-33%
- ☐ 34-66%
- ☐ 67-99%
- ☐ 100%
- ☐ Production targets not met

11 In 2021, what were **managers'** performance bonuses usually based on at this establishment?
Select all that apply

- ☐ Their own performance as measured by production targets
- ☐ Their team or shift performance as measured by production targets
- ☐ Their establishment's performance as measured by production targets
- ☐ Their company's performance as measured by production targets
- ☐ No performance bonuses (If no performance bonuses, SKIP to Question 13.)

12 In 2021, when production targets were met, what percent of **managers** at this establishment received performance bonuses?

- ☐ 0%
- ☐ 1-33%
- ☐ 34-66%
- ☐ 67-99%
- ☐ 100%
- ☐ Production targets not met

13 In 2021, what was the primary way **non-managers** were promoted at this establishment?

- ☐ Promotions were based solely on performance and ability
- ☐ Promotions were based partly on performance and ability, and partly on other factors (for example, tenure or family connections)
- ☐ Promotions were based mainly on factors other than performance or ability (for example, tenure or family connections)
- ☐ Non-managers are normally not promoted

14 In 2021, what was the primary way **managers** were promoted at this establishment?

- ☐ Promotions were based solely on performance and ability
- ☐ Promotions were based partly on performance and ability, and partly on other factors (for example, tenure or family connections)
- ☐ Promotions were based mainly on factors other than performance or ability (for example, tenure or family connections)
- ☐ Managers are normally not promoted

15 In 2021, when was an under-performing **non-manager** reassigned or dismissed at this establishment?

- ☐ Within 6 months of identifying non-manager under-performance
- ☐ After 6 months of identifying non-manager under-performance
- ☐ Rarely or never

16 In 2021, when was an under-performing **manager** reassigned or dismissed at this establishment?

- ☐ Within 6 months of identifying manager under-performance
- ☐ After 6 months of identifying manager under-performance
- ☐ Rarely or never

MOPS: Monitoring

Question	Response	Percent of Respondents (%) 2015	Percent of Respondents (%) 2021	Standard Error (%) 2015	Standard Error (%) 2021
Number of key performance indicators[2]	1-2 key performance indicators	7.95	10.20	0.26	0.30
	3-9 key performance indicators	47.97	48.51	0.39	0.41
	10 or more key performance indicators	34.65	31.79	0.32	0.32
	No key performance indicators	9.43	9.49	0.29	0.31
	No response[1]	0.00	0.00	0.00	0.00
Frequency of review of key performance indicators by managers[3]	Yearly	18.74	20.00	0.28	0.30
	Quarterly	22.19	26.19	0.31	0.33
	Monthly	39.97	44.00	0.36	0.39
	Weekly	27.99	31.03	0.31	0.35
	Daily	25.65	25.54	0.30	0.31
	Hourly or more frequently	3.51	3.33	0.11	0.10
	Never	9.43	9.82	0.29	0.31
	No Response	0.21	0.15	0.04	0.03
Frequency of review of key performance indicators by non-managers[3]	Yearly	14.31	14.82	0.25	0.26
	Quarterly	18.97	21.19	0.26	0.29
	Monthly	27.74	29.35	0.30	0.33
	Weekly	17.27	20.11	0.25	0.28
	Daily	17.74	19.60	0.26	0.28
	Hourly or more frequently	4.08	4.06	0.12	0.12
	Never	26.51	26.02	0.38	0.41
	No response	0.23	0.11	0.04	0.02
Location of display boards	All display boards were located in one place	20.72	17.49	0.30	0.30
	Display boards were located in multiple places	32.72	33.85	0.31	0.32
	We did not have any display boards	46.41	48.56	0.39	0.41
	No response	0.16	0.08	0.03	0.02

MOPS: Goals

Question	Response	Percent of Respondents (%) 2015	Percent of Respondents (%) 2021	Standard Error (%) 2015	Standard Error (%) 2021
Production targets timeframe	Main focus was on short-term (less than one year) production targets	34.29	39.05	0.37	0.41
	Main focus was on long-term (more than one year) production targets	2.92	1.68	0.13	0.10
	Combination of short-term and long-term production targets	50.85	49.58	0.38	0.40
	No production targets	11.94	9.68	0.31	0.32
	No response[1]	0.00	0.00	0.00	0.00
Effort needed to achieve production targets	Possible to achieve without much effort	4.19	2.62	0.18	0.15
	Possible to achieve with some effort	11.82	10.99	0.26	0.26
	Possible to achieve with normal amount of effort	40.26	35.15	0.37	0.39
	Possible to achieve with more than normal effort	27.76	33.85	0.31	0.36
	Only possible to achieve with extraordinary effort	4.91	7.93	0.16	0.20
	No response	11.05	9.44	0.30	0.32
Aware of production targets	Only senior managers	7.81	8.39	0.23	0.27
	Most managers and some production workers	20.96	22.66	0.32	0.33
	Most managers and most production workers	14.63	12.58	0.24	0.25
	All managers and most production workers	45.61	46.87	0.38	0.40
	No response	11.00	9.48	0.30	0.32

MOPS: Incentives

Question	Response	Percent of Respondents (%) 2015	Percent of Respondents (%) 2021	Standard Error (%) 2015	Standard Error (%) 2021
Basis for non-manager performance bonuses[3]	Their own performance	13.16	17.10	0.25	0.30
	Their team or shift performance	6.84	7.92	0.17	0.17
	Their establishment's performance	13.12	14.48	0.20	0.23
	Their company's performance	25.87	27.67	0.30	0.32
	No performance bonuses	53.53	50.11	0.38	0.41
	No response	0.87	0.16	0.07	0.02
Share of non-managers receiving performance bonuses	0%	6.70	3.03	0.18	0.14
	1-33%	8.23	8.21	0.21	0.21
	34-66%	2.52	2.87	0.10	0.10
	67-99%	7.87	9.85	0.16	0.20
	100%	23.36	25.19	0.29	0.33
	Production targets not met	13.14	11.01	0.31	0.32
	No response	38.18	39.83	0.38	0.41
Basis for manager performance bonuses[3]	Their own performance	17.64	20.73	0.26	0.30
	Their team or shift performance	8.48	10.35	0.18	0.19
	Their establishment's performance	18.60	19.56	0.24	0.25
	Their company's performance	41.04	42.36	0.35	0.37
	No performance bonuses	40.26	38.61	0.39	0.43
	No response	0.80	0.21	0.07	0.03
Share of managers receiving performance bonuses	0%	5.01	1.87	0.18	0.12
	1-33%	10.75	9.86	0.21	0.22
	34-66%	3.12	3.18	0.11	0.11
	67-99%	9.03	10.22	0.16	0.19
	100%	32.84	34.52	0.33	0.36
	Production targets not met	13.55	11.45	0.31	0.33
	No response	25.71	28.88	0.36	0.40

MOPS: Incentives (cont.)

Question	Response	Percent of Respondents (%) 2015	Percent of Respondents (%) 2021	Standard Error (%) 2015	Standard Error (%) 2021
Non-manager promotions	Promotions were based solely on performance and ability	68.33	67.92	0.38	0.42
	Promotions were based partly on performance and ability, and partly on other factors	13.50	12.30	0.25	0.26
	Promotions were based mainly on factors other than performance and ability	1.86	1.73	0.10	0.12
	Non-managers are normally not promoted	16.31	18.03	0.35	0.40
	No response[1]	0.00	0.00	0.00	0.00
Manager promotions	Promotions were based solely on performance and ability	65.64	64.85	0.39	0.42
	Promotions were based partly on performance and ability, and partly on other factors	10.66	10.32	0.22	0.24
	Promotions were based mainly on factors other than performance and ability	1.44	1.42	0.09	0.11
	Managers are normally not promoted	22.25	23.39	0.37	0.42
	No response[1]	0.00	0.00	0.00	0.00
Reassignment or dismissal of under-performing non-managers	Within 6 months of identifying non-manager under-performance	46.62	39.87	0.38	0.37
	After 6 months of identifying non-manager under-performance	20.15	15.48	0.26	0.24
	Rarely or never	33.23	44.64	0.40	0.42
	No response[1]	0.00	0.00	0.00	0.00
Reassignment or dismissal of under-performing managers	Within 6 months of identifying manager under-performance	33.01	27.20	0.34	0.32
	After 6 months of identifying manager under-performance	24.19	17.73	0.28	0.25
	Rarely or never	42.80	55.05	0.39	0.40
	No response[1]	0.00	0.00	0.00	0.00

MOPS: between 2015 and 2021 there was a worsening in the Structured Management Score by NAICS

Table 1. Structured Management Score by NAICS Subsector		Structured Management Score[2]		Standard Error	
2017 NAICS[1] code	Meaning of NAICS Code	2015	2021	2015	2021
31-33	Manufacturing	0.549	0.532	0.002	0.002
311	Food Manufacturing	0.568	0.532	0.008	0.009
312	Beverage and Tobacco Product Manufacturing	0.604	0.526	0.010	0.014
313	Textile Mills	0.557	0.584	0.013	0.008
314	Textile Product Mills	0.475	0.433	0.022	0.016
315	Apparel Manufacturing	0.420	0.366	0.017	0.018
316	Leather and Allied Product Manufacturing	0.557	0.418	0.016	0.047
321	Wood Product Manufacturing	0.537	0.542	0.008	0.006
322	Paper Manufacturing	0.654	0.628	0.007	0.011
323	Printing and Related Support Activities	0.469	0.430	0.009	0.009
324	Petroleum and Coal Products Manufacturing	0.569	0.569	0.016	0.008
325	Chemical Manufacturing	0.652	0.617	0.006	0.006
326	Plastics and Rubber Products Manufacturing	0.643	0.624	0.005	0.006
327	Nonmetallic Mineral Product Manufacturing	0.516	0.514	0.006	0.007
331	Primary Metal Manufacturing	0.646	0.642	0.007	0.006
332	Fabricated Metal Product Manufacturing	0.514	0.507	0.003	0.004
333	Machinery Manufacturing	0.557	0.544	0.005	0.005
334	Computer and Electronic Product Manufacturing	0.598	0.600	0.007	0.007
335	Electrical Equipment, Appliance, and Component Manufacturing	0.627	0.601	0.006	0.007
336	Transportation Equipment Manufacturing	0.645	0.628	0.008	0.007
337	Furniture and Related Product Manufacturing	0.474	0.471	0.010	0.009
339	Miscellaneous Manufacturing	0.487	0.455	0.009	0.009

Source: U.S. Census Bureau, University of Chicago Booth School of Business, Stanford School of Humanities and Sciences, and Stanford Institute for Human-Centered Artificial Intelligence; 2021 Management and Organizational Practices Survey. Information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions can be found at https://www.census.gov/programs-surveys/mops/technical-documentation/methodology.html

Approval ID: (CBDRB-FY23-0237)

(1) For a full description of the NAICS codes used in this table, see https://www.census.gov/naics/

(2) The structured management practice score for each establishment is generated in two steps. First, the responses for each of the 16 management questions, responses are normalized on a 0-1 scale. The response which is associated with the most structured management practice is normalized to 1, and the one associated with the least structured practices is normalized to zero. If a question has three categories, the "in between" category is assigned the value 0.5. Similarly for four categories, the "in between" categories are assigned 1/3 and 2/3, and so on. Then, the management score for the establishment is calculated as the unweighted average of the normalized responses for the 16 management questions. The scores presented in the table are the weighted averages of the scores for all establishments in the estimation domain. For more information, see https://www.census.gov/programs-surveys/mops/technical-documentation/methodology.html

MOPS: larger firms have, on average, better management practices. Even without controlling for survival, there is no clear relationship between age and management score.

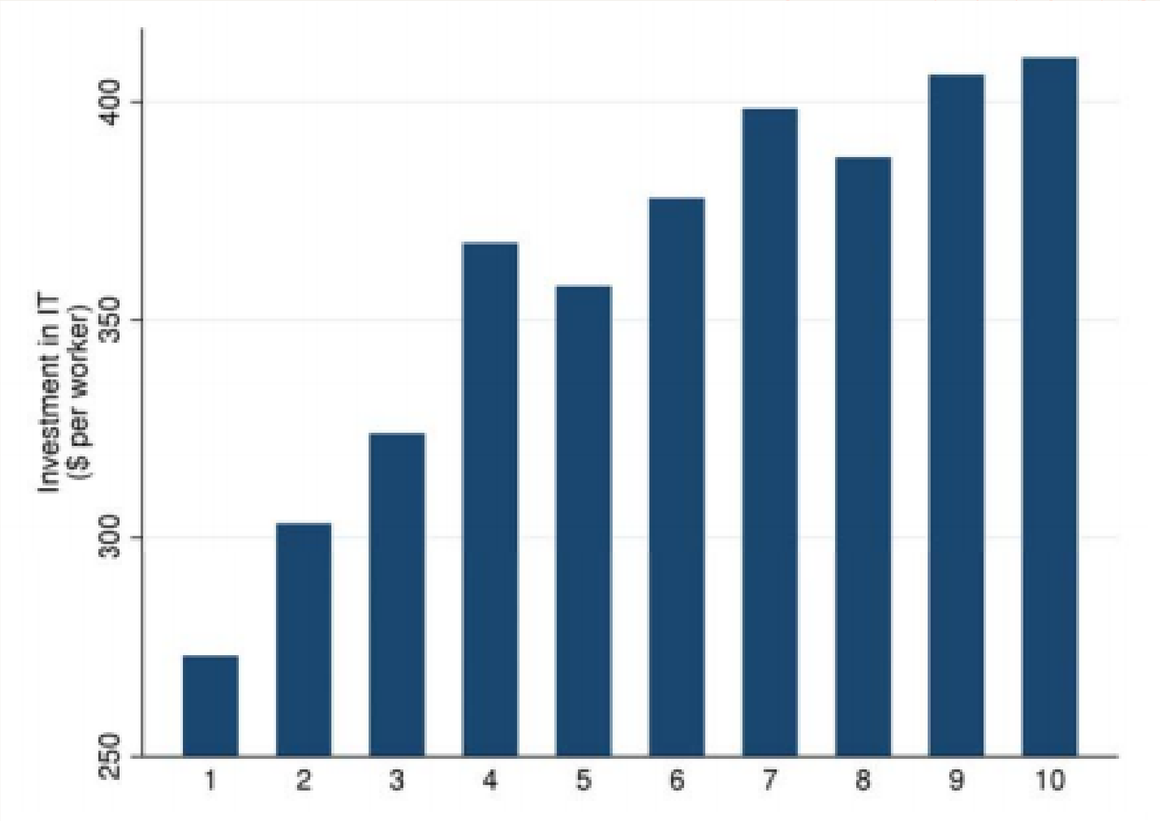
Table 3. Structured Management Score by Employment Size

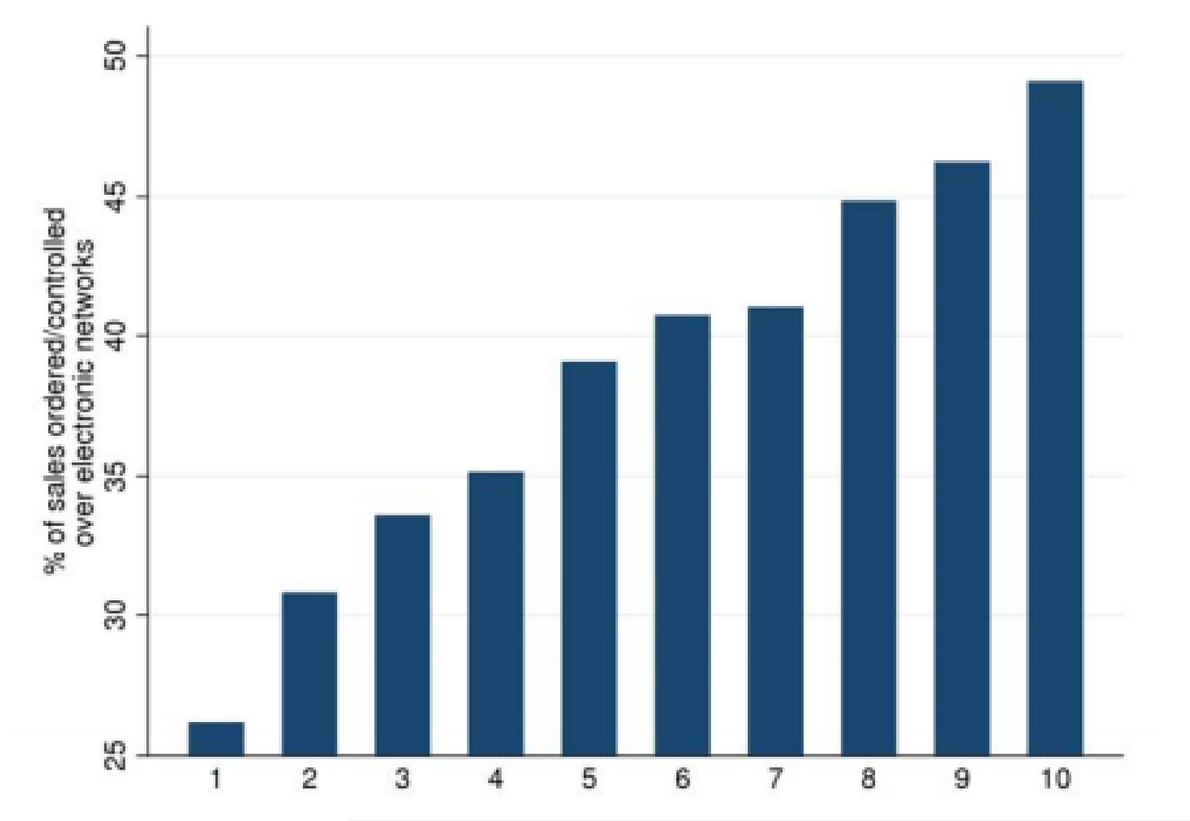
Number of Employees	2015	2021
All	0.549	0.532
1-4	0.454	0.402
5-9	0.410	0.407
10-19	0.442	0.438
20-49	0.508	0.501
50-99	0.599	0.582
100-249	0.663	0.645
250-499	0.708	0.685
500-999	0.734	0.704
1000-2499	0.754	0.720
2500+	0.764	0.742

Table 4. Structured Management Score by Establishment Age

Age of Establishment, in Years	2015	2021
All	0.549	0.532
0-5	0.561	0.539
6-15	0.544	0.534
16-25	0.536	0.526
26+	0.555	0.531

Better management practices are positively associated with higher intensity in the use of information technologies (IT) measured in terms of larger IT expenses and more on-line sales.



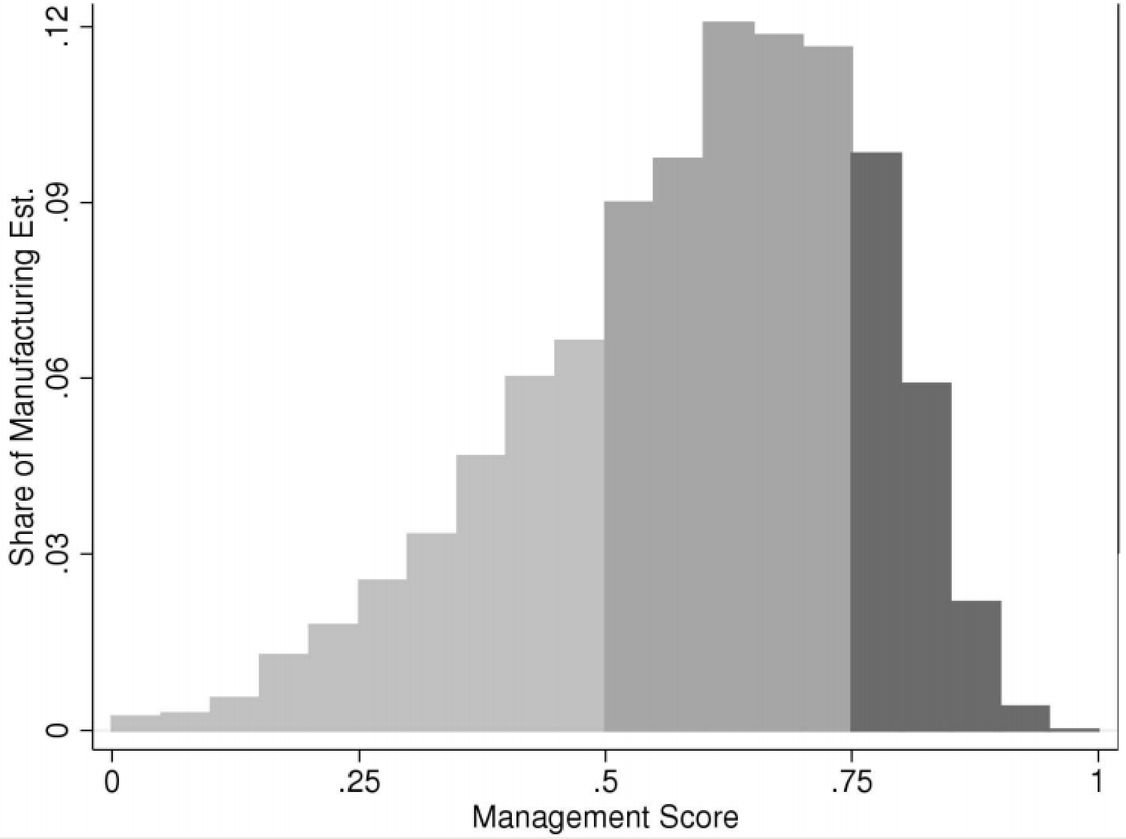


Management decile

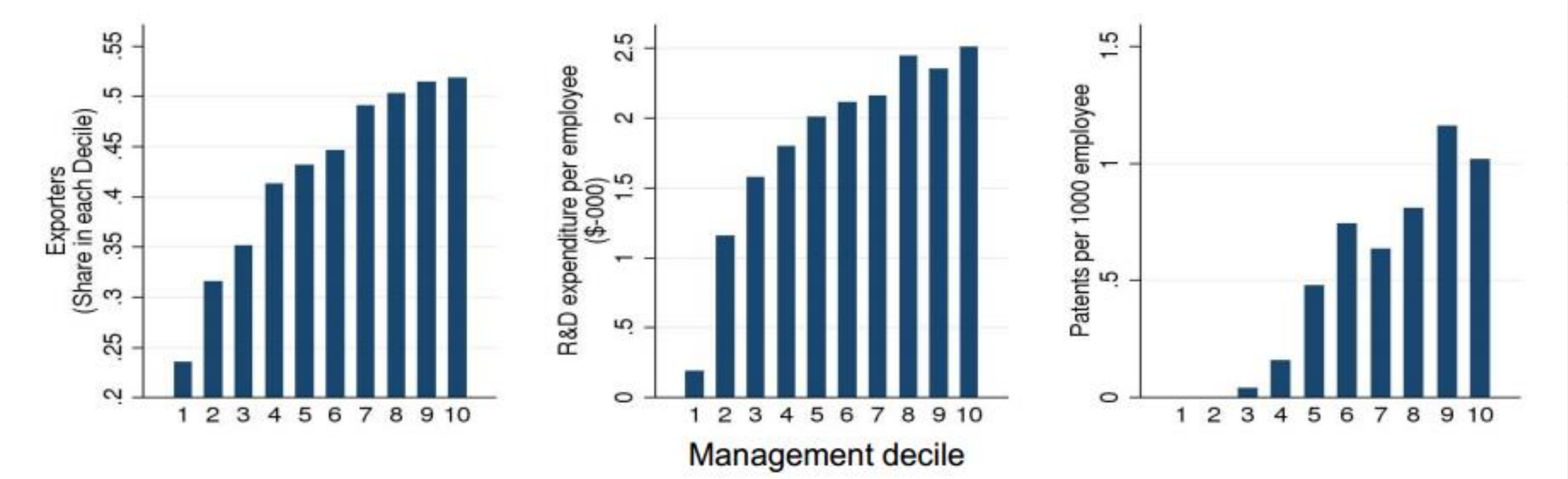
Better management practices are related with better performance measured in terms of higher productivity, profitability and employment growth.

There is a wide dispersion in the quality of managerial practices in the surveyed establishments: only 18% of the establishments have adopted 75% or more of the most advance practices, while 27% have adopted less than half of those practices.

Figure 2: The Wide Spread of Management Scores Across Establishments



Better managerial practices are more common in establishments that export, are larger (or are part of large firms), have higher innovation rates and have workers with higher education levels.



There are important regional differences in the degree of adoption of managerial practices across the U.S.

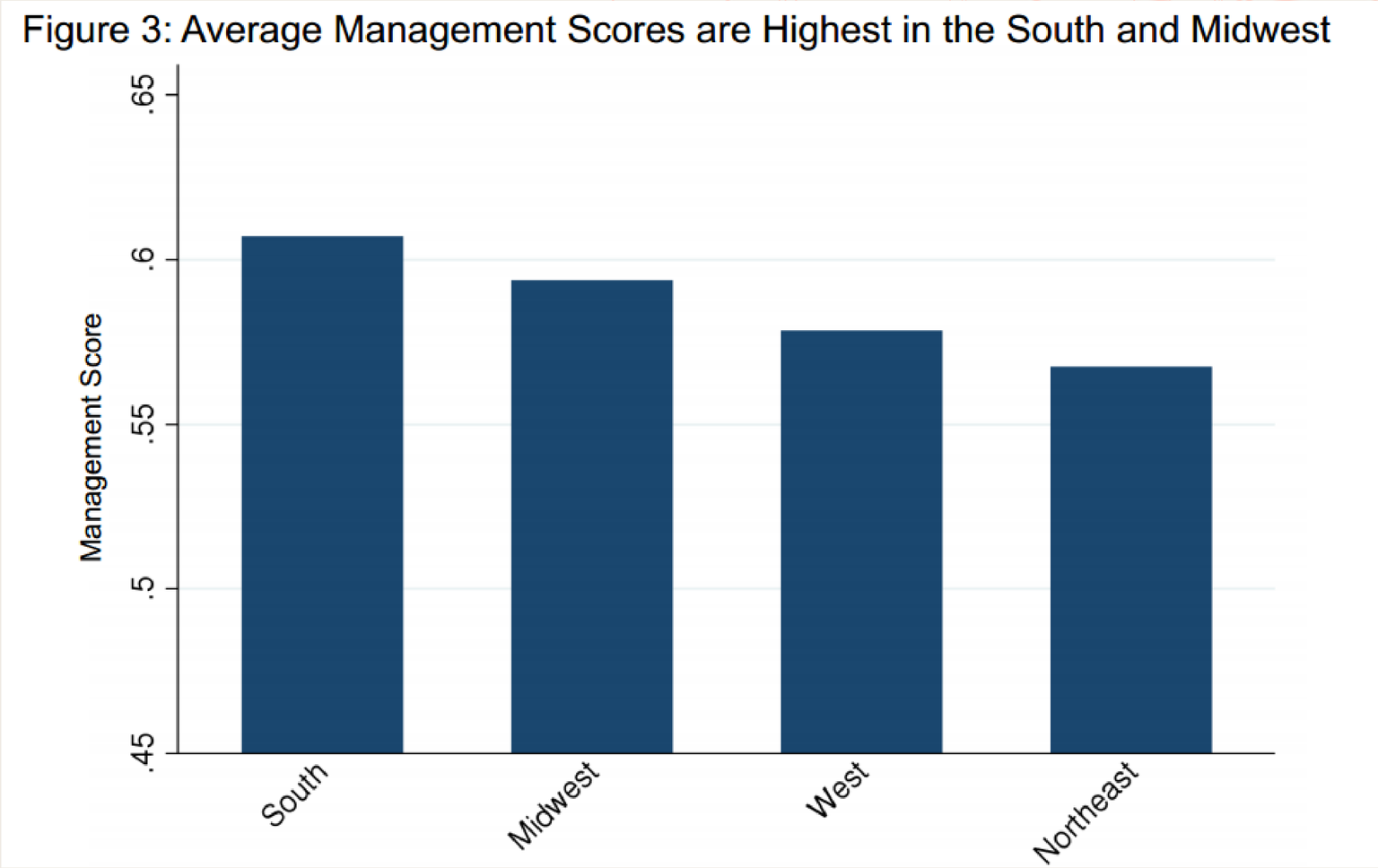
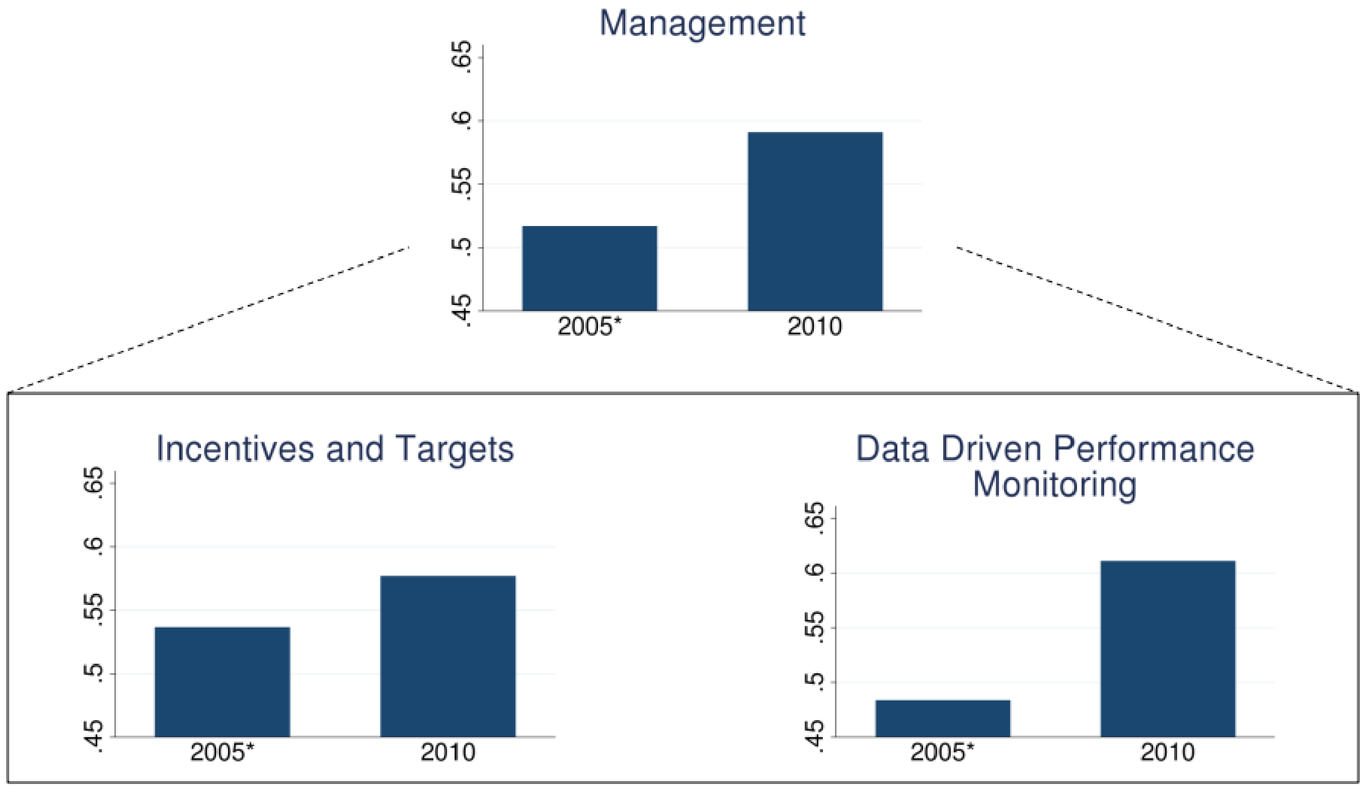


Table 5. Structured Management Score by Census Region

Census Region[1]	2015	2021
All	0.549	0.532
South	0.568	0.546
Midwest	0.556	0.542
West	0.533	0.510
Northeast	0.517	0.506

Between 2005 and 2010 there was an increase in the adoption of good management practices in the surviving firms, especially of information and indicators generation and analysis.

Figure 5: Average Management Scores Increased between 2005 and 2010, Especially for Data Driven Performance Monitoring



* Based on recall: When surveyed in 2010, respondents were asked about 2005.

Measuring management practices around the world: https://worldmanagementsurvey.org/

- Objective:

  Understand the determinants an implications of management practices around the world.

- Strategy:
  - Measure management practices.
  - Describe the international patterns of management and its relationship with the firms' performance.
  - Explore which factors explain the difference in the management practices between countries and industries.

How to measure management?

- Research program with two decades with interviews to more than 20,000 managers across the world.
- The interviews measure four big areas of management practices:
  - Operations
  - Monitoring
  - Goals
  - Incentives
- The methodology was designed and implemented carefully to guarantee that the interviews provide reliable information.

Measure management: Operations and Monitoring

Categories	*Score from 1–5 based on:*
1) Introduction of modern manufacturing techniques	What aspects of manufacturing have been formally introduced, including just-in-time delivery from suppliers, autonomation, flexible manpower, support systems, attitudes, and behavior?
2) Rationale for introduction of modern manufacturing techniques	Were modern manufacturing techniques adopted just because others were using them, or are they linked to meeting business objectives like reducing costs and improving quality?
3) Process problem documentation	Are process improvements made only when problems arise, or are they actively sought out for continuous improvement as part of a normal business process?
4) Performance tracking	Is tracking ad hoc and incomplete, or is performance continually tracked and communicated to all staff?
5) Performance review	Is performance reviewed infrequently and only on a success/failure scale, or is performance reviewed continually with an expectation of continuous improvement?
6) Performance dialogue	In review/performance conversations, to what extent is the purpose, data, agenda, and follow-up steps (like coaching) clear to all parties?

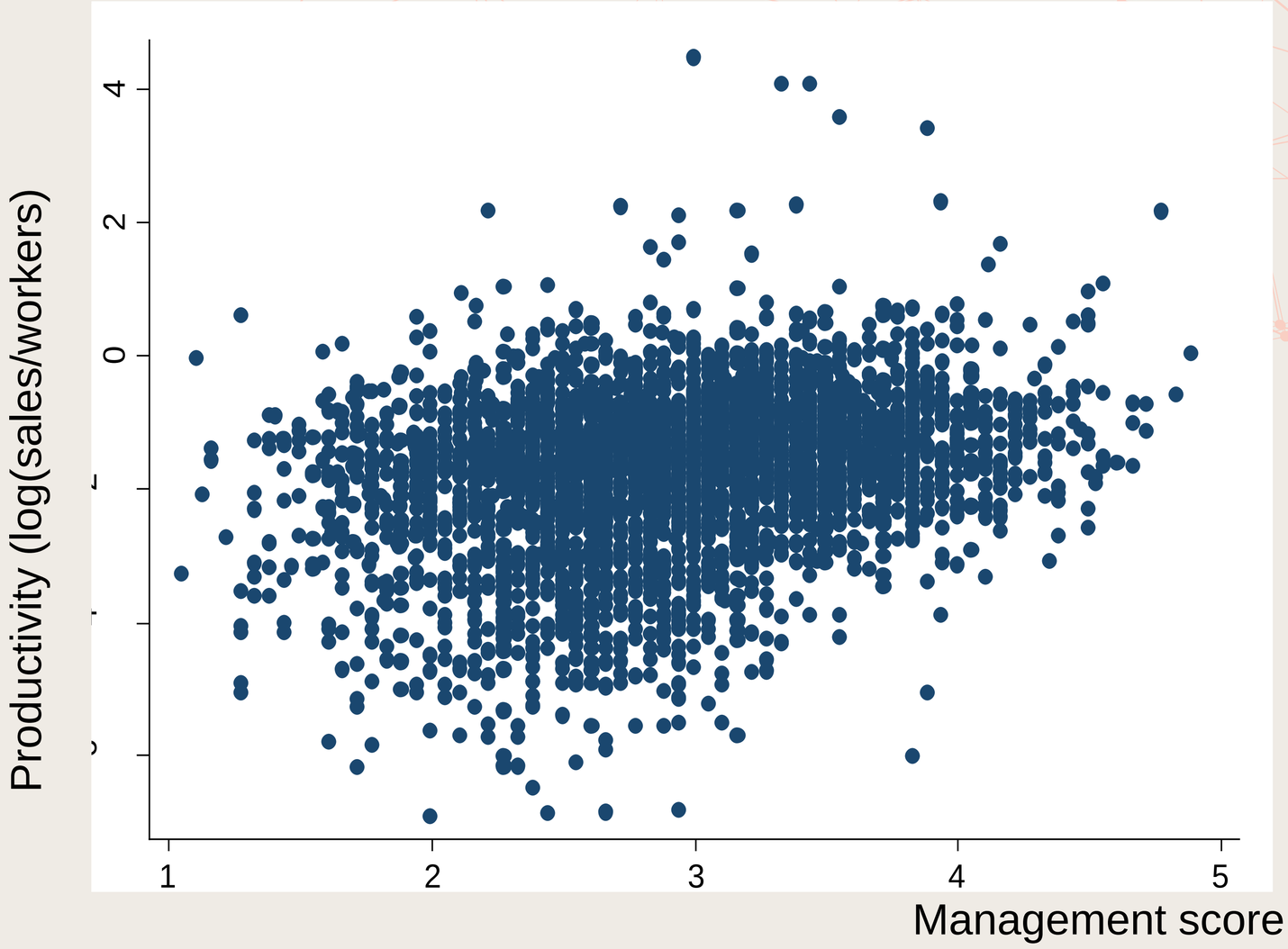
Measure Management: Goals

Categories	*Score from 1–5 based on:*
8) Target balance	Are the goals exclusively financial, or is there a balance of financial and nonfinancial targets?
9) Target interconnection	Are goals based on accounting value, or are they based on shareholder value in a way that works through business units and ultimately is connected to individual performance expectations?
10) Target time horizon	Does top management focus mainly on the short term, or does it visualize short-term targets as a "staircase" toward the main focus on long-term goals?
11) Targets are stretching	Are goals too easy to achieve, especially for some "sacred cows" areas of the firm, or are goals demanding but attainable for all parts of the firm?
12) Performance clarity	Are performance measures ill-defined, poorly understood, and private, or are they well-defined, clearly communicated, and made public?

Measure Management: Incentives

Categories	*Score from 1–5 based on:*
7) Consequence management	To what extent does failure to achieve agreed objectives carry consequences, which can include retraining or reassignment to other jobs?
13) Managing human capital	To what extent are senior managers evaluated and held accountable for attracting, retaining, and developing talent throughout the organization?
14) Rewarding high performance	To what extent are people in the firm rewarded equally irrespective of performance level, or are rewards related to performance and effort?
15) Removing poor performers	Are poor performers rarely removed, or are they retrained and/or moved into different roles or out of the company as soon as the weakness is identified?
16) Promoting high performers	Are people promoted mainly on the basis of tenure, or does the firm actively identify, develop, and promote its top performers?
17) Attracting human capital	Do competitors offer stronger reasons for talented people to join their companies, or does a firm provide a wide range of reasons to encourage talented people to join?
18) Retaining human capital	Does the firm do relatively little to retain top talent or do whatever it takes to retain top talent when they look likely to leave?

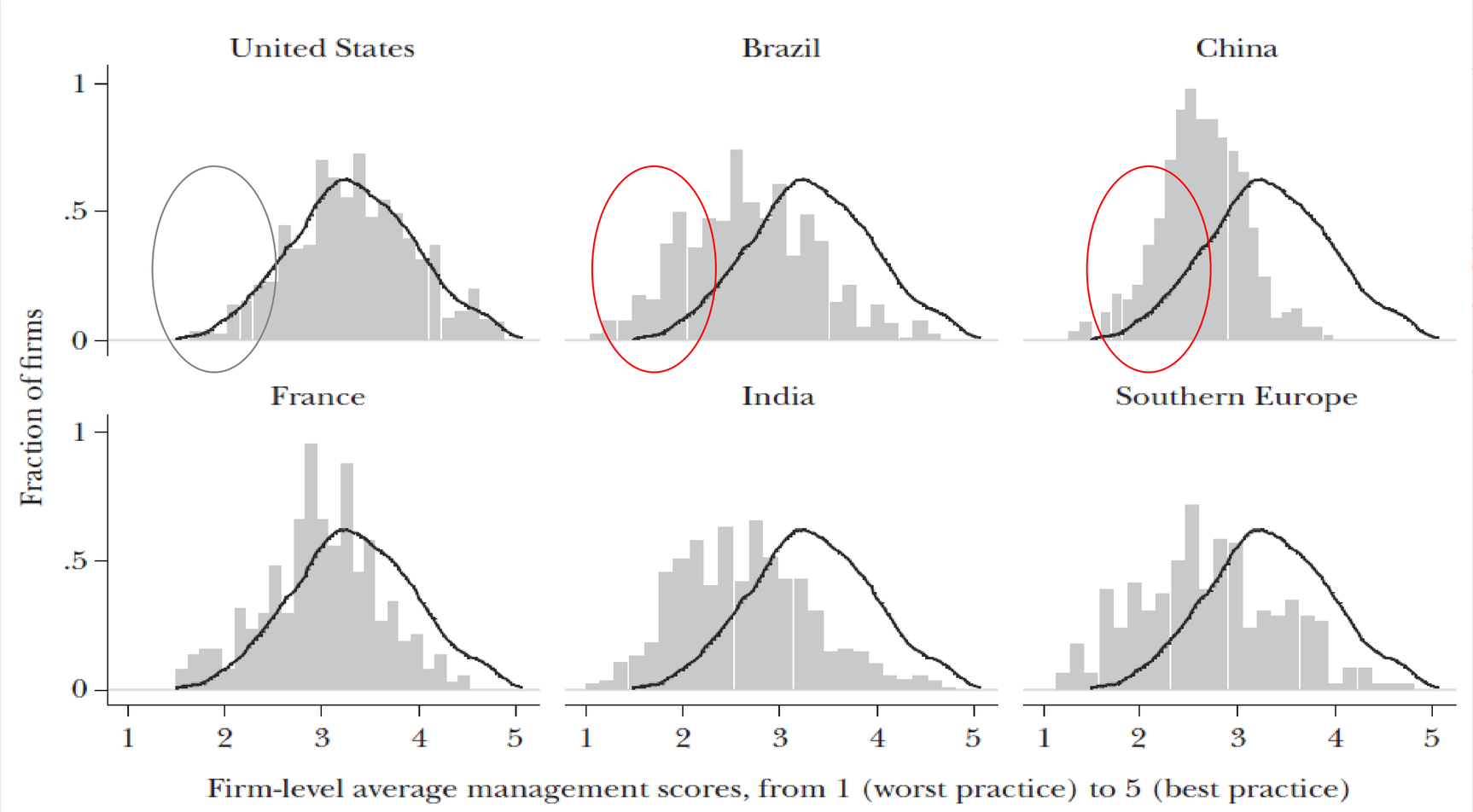
Conclusion # 1: firms with “better” management practices have better performance.



Conclusion # 1: this relationship, between management and performance, is observed in a wide range of dimensions: they are bigger, more productive, grow faster, and have higher survival rates.

	Dependent variable						
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
	ln(Sales/ Employee)	*ln(Sales/ Employee)*	*ln(Sales/ Employee)*	*Profitability (ROCE)*	*Ln (Tobin's Q)*	*Sales growth*	*Survival*
Management	0.450***	0.208***	0.172***	1.804***	0.150**	0.044***	0.55*[a]
	(0.028)	(0.021)	(0.024)	(0.668)	(0.062)	(0.014)	(0.30)[a]
ln(Capital/Employee)			0.106***				
			(0.014)				
% College degree			0.076***				
			(0.014)				
Country & industry dummies	No	Yes	Yes	Yes	Yes	Yes	Yes
General controls	No	No	Yes	Yes	Yes	Yes	Yes
Noise controls	No	No	Yes	Yes	Yes	Yes	Yes
Firms	3,380	3,380	3,380	2,369	524	2,298	3,627
Observations	29,390	29,390	29,390	20,141	3,505	19,568	3,627

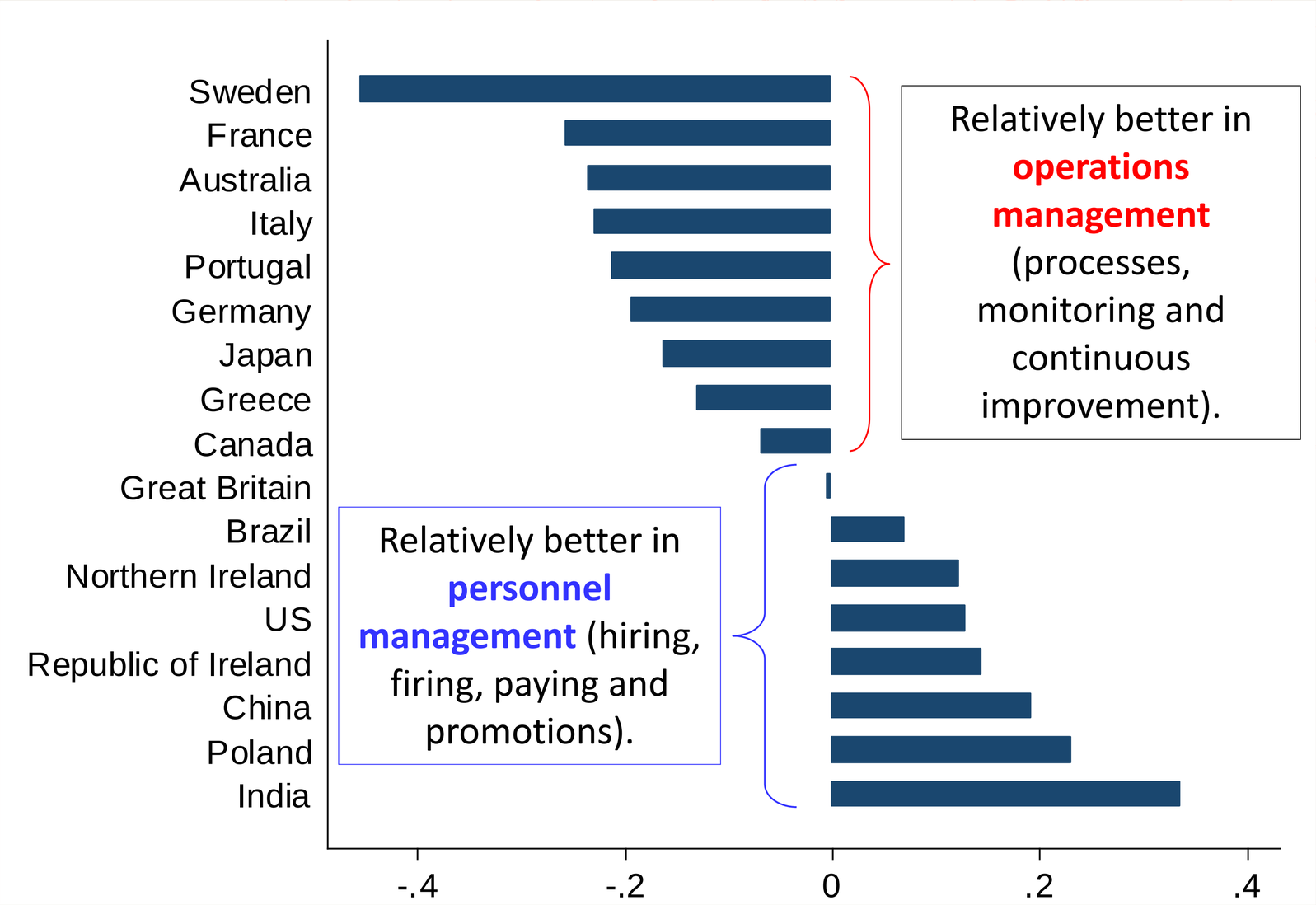
Conclusion # 2: managerial practices vary widely among firms and countries. A large part of the difference in the average score is due to the relative number of firms in the extremes.



Conclusion # 3: firms and countries specialize in different management styles.

Country	*Overall management*	*Monitoring management*	*Targets management*	*Incentives management*	*# of firms in the sample*
Australia	2.99	3.27	2.96	2.76	382
Brazil	2.69	2.81	2.68	2.60	559
Canada	3.13	3.35	3.02	3.02	344
China	**2.64**	2.72	**2.53**	2.66	524
France	3.00	3.28	2.98	2.78	312
Germany	3.18	3.40	**3.24**	2.95	336
Great Britain	2.98	3.16	2.93	2.88	762
Greece	2.65	2.90	2.56	**2.50**	171
India	2.65	**2.62**	2.66	2.67	620
Italy	2.99	2.98	2.80	2.73	194
Japan	3.15	3.20	3.25	2.90	188
Northern Ireland	2.91	3.01	2.84	2.86	92
Poland	2.88	2.88	2.93	2.85	231
Portugal	2.79	3.07	2.72	2.61	140
Republic of Ireland	2.84	2.95	2.76	2.81	102
Sweden	3.18	**3.54**	3.22	2.86	270
United States	**3.33**	3.44	3.23	**3.30**	695
Average	*2.94*	*3.09*	*2.91*	*2.84*	*344*

Conclusion # 3: firms and countries specialize in different management styles. (cont.)



Conclusion # 4: competition is positively correlated with management practices.

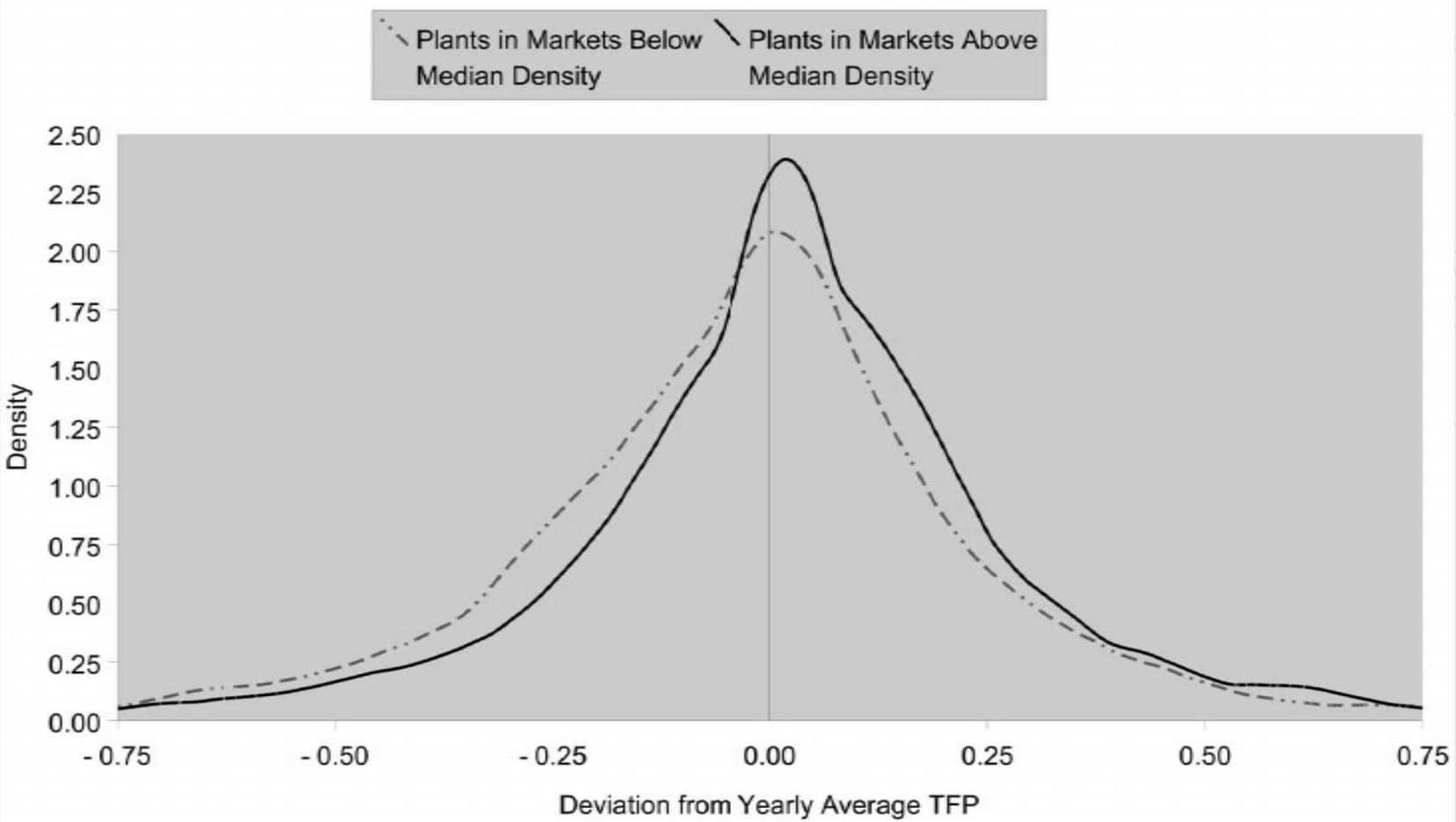
Competition proxies	Dependent variable: Management		
Import penetration (SIC-3 industry, 1995-99)	**0.066**** **(0.033)**		
"1-Rents" measure[1] (SIC-3 except firm itself, 1995-99)		**1.964**** **(0.721)**	
# of competitors (Firm level, 2004 and 2006)			**0.158***** **(0.023)**
Observations	**2499**	**2980**	**3589**
Full controls[2,3]	**Yes**	**Yes**	**Yes**

[1] 1-Rents = 1- (operating profit – capital costs)/sales

[2] Includes 108 SIC-3 industry, country, firm-size, public and interview noise (analyst, time, date, and manager characteristic) controls

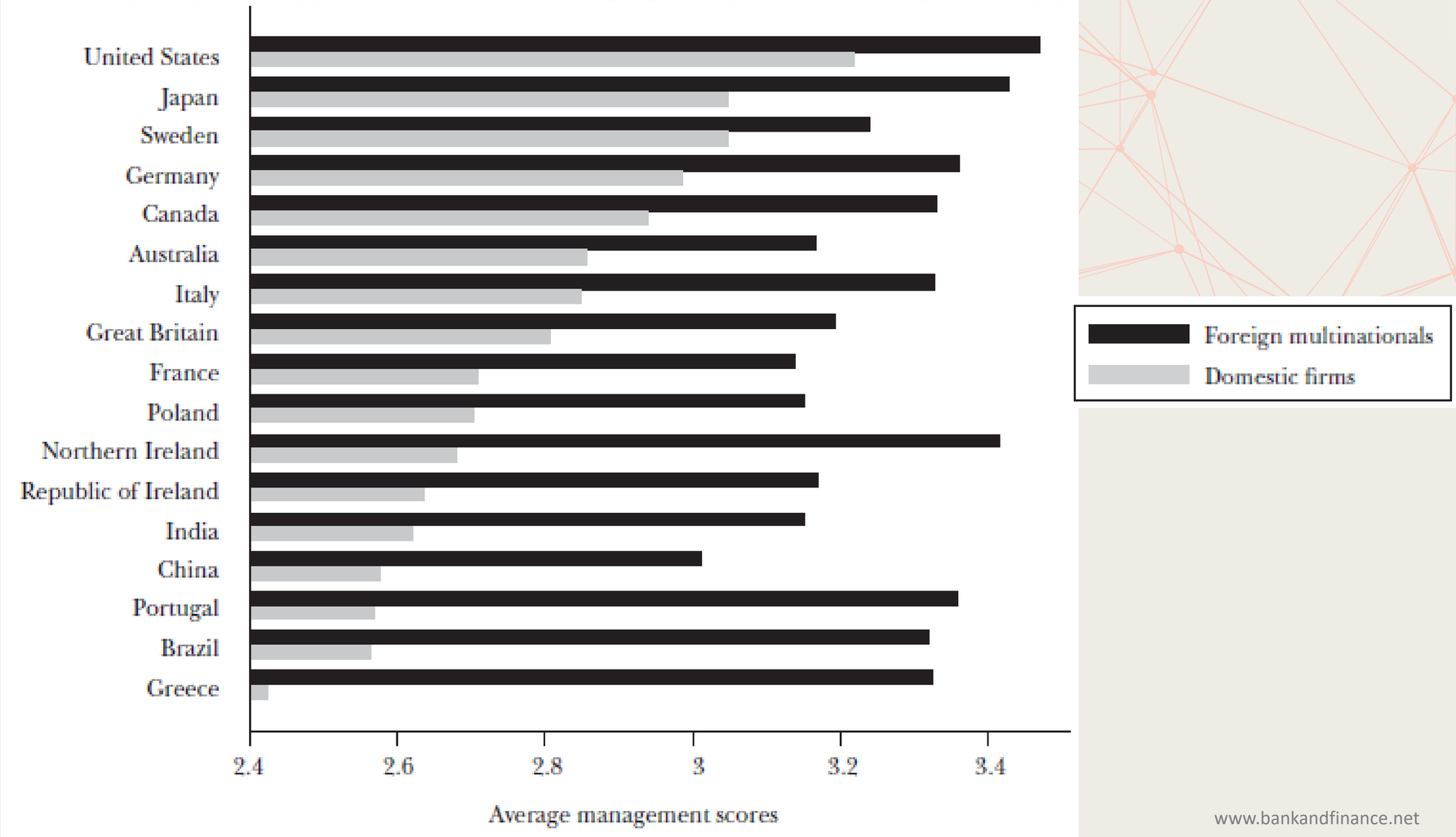
[3] S.E.s in ( ) below, robust to heteroskedasticity, clustered by country-industry

Conclusion # 5: competition reduces productivity dispersion.

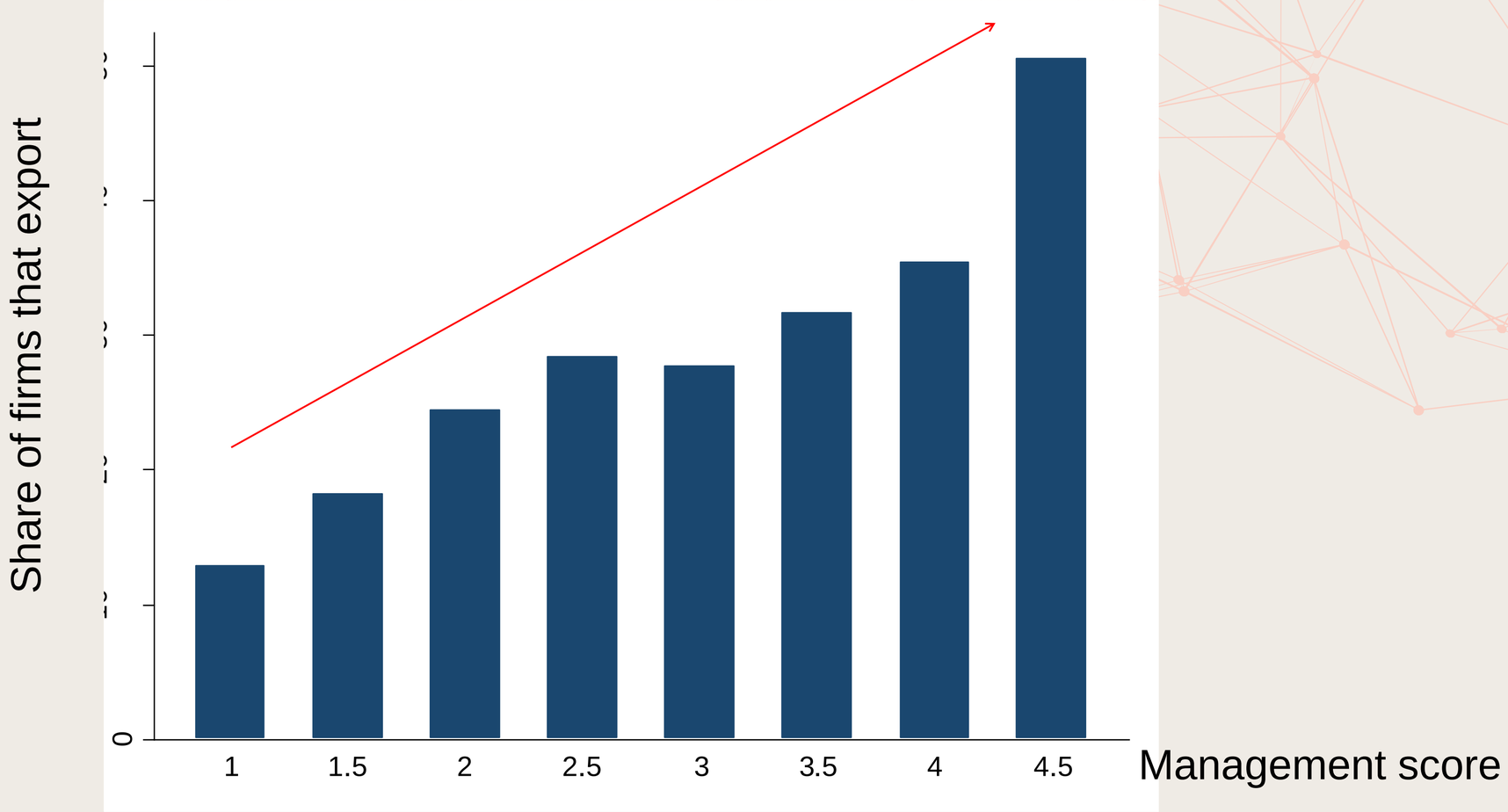


Source: Syverson (2004)

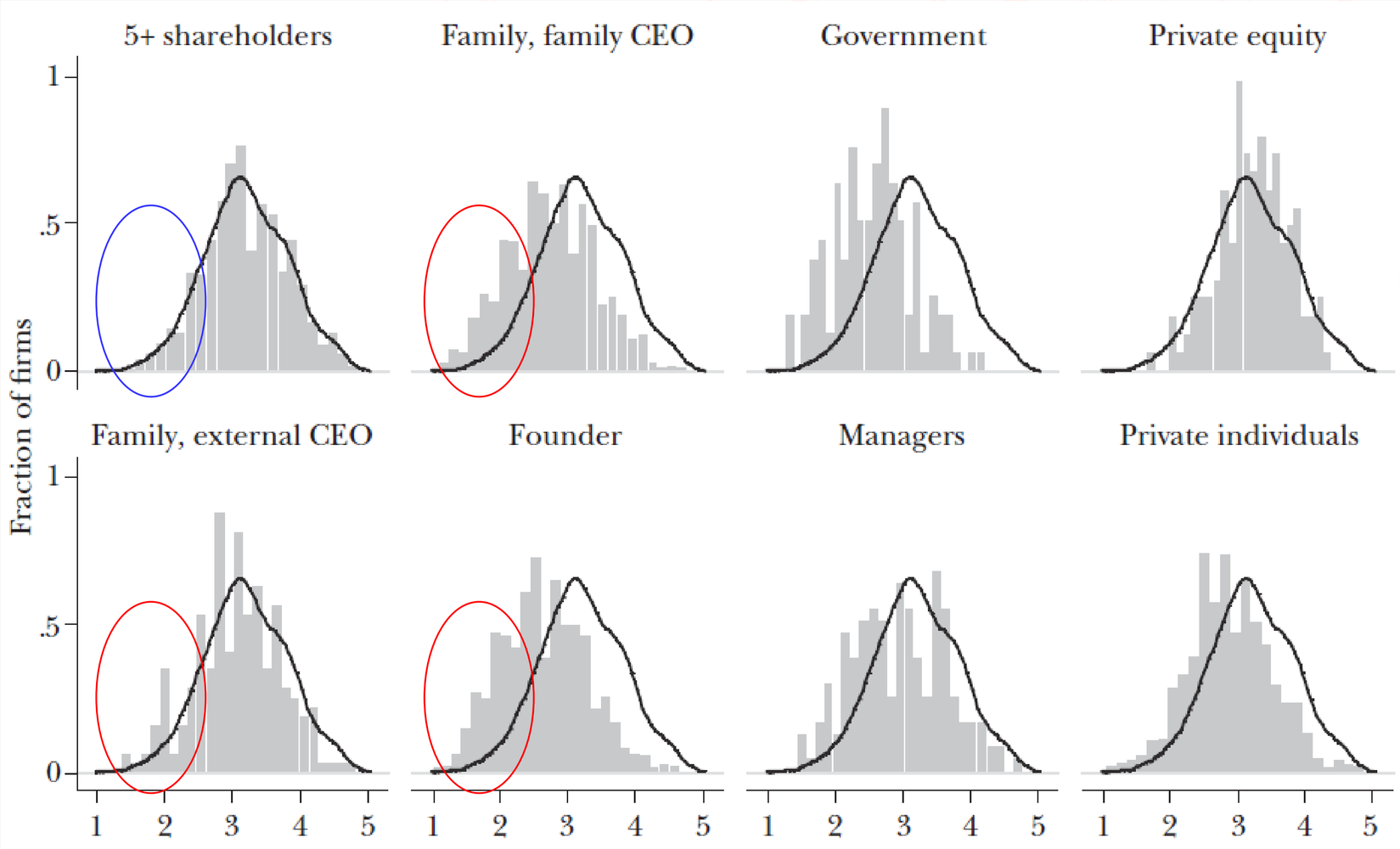
Conclusion # 6: generally, multinational firms are well managed in each country. These firms tend to bring with them their managerial practices in the countries where they operate.



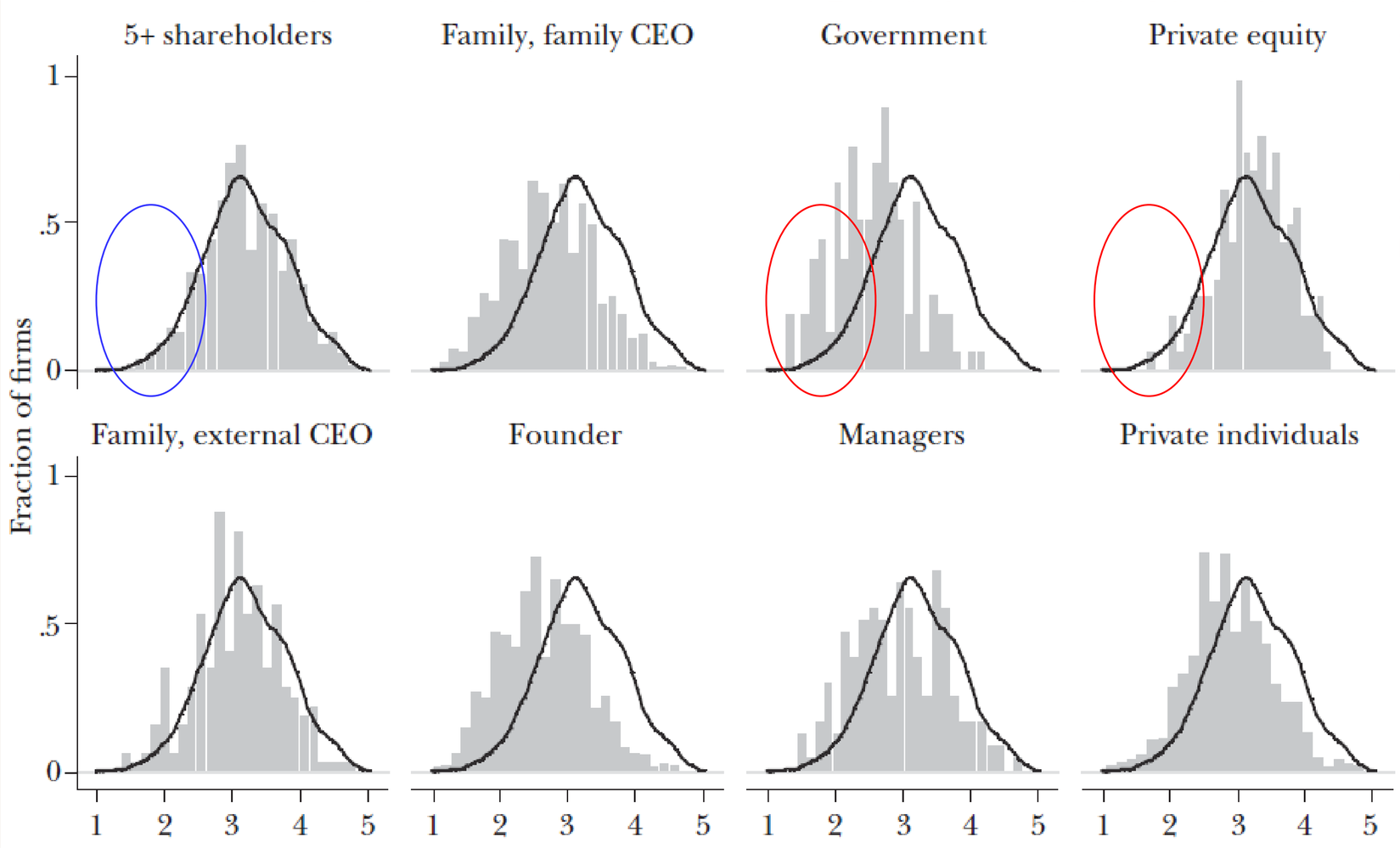
Conclusion # 7: firms that export (but that do not produce) in other country are better managed that firms that do not export, but they are worse managed than multinational firms.



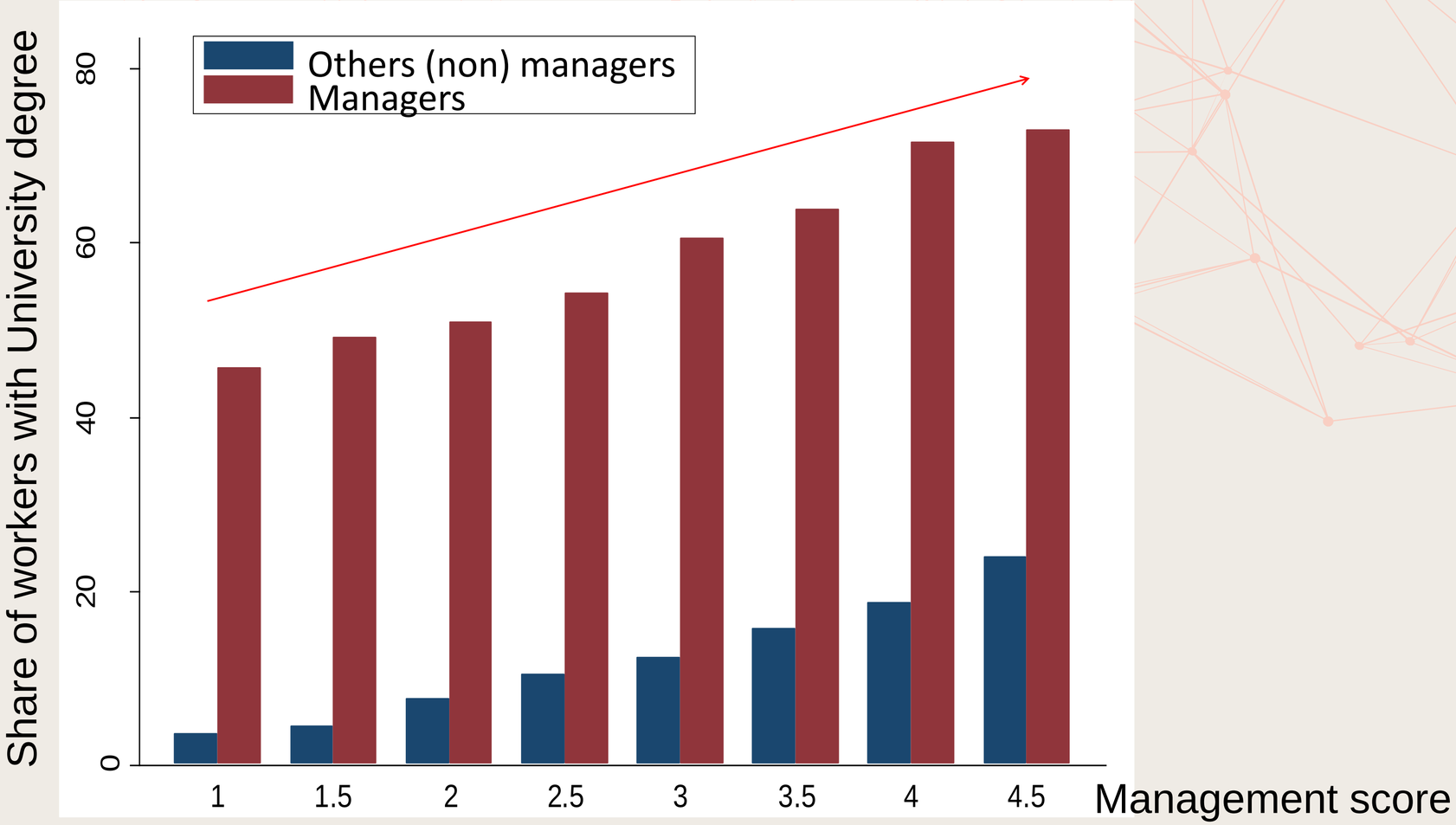
Conclusion # 8: family-owned firms that designate a family member (specially the eldest son) as CEO generally are badly managed.



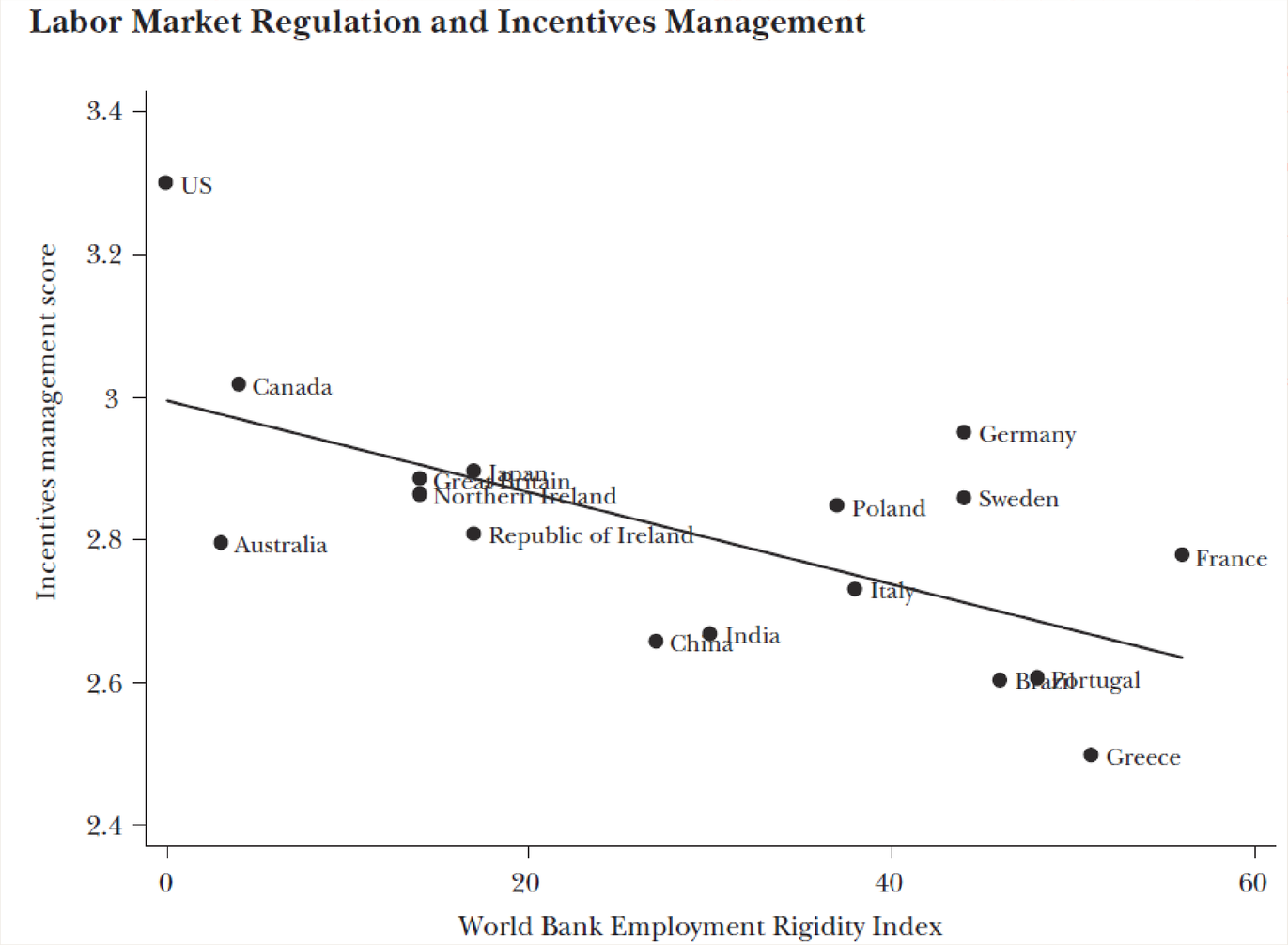
Conclusion # 9: public firms are generally poorly managed, while firms that are listed in the stock market or that have private capital are generally better managed.



Conclusion # 10: firms that use human capital more intensively, measured by the education of their workers, have better management practices (without implying causality).



Conclusion # 11: a strict pro-worker labor regulation promotes more use of monitoring, while a pro-firm legal framework is associated with a better use of incentives.



Why don’t firms adopt better managerial practices?

- The main reason is lack of information:
  - either because firms had never heard about those practices (lack of information),
  - or because they believe that those practices are not relevant (incorrect information).
- Inclusive, many times, despite overcoming the information barriers, better managerial practices are not correctly implemented due to lack of time and/or management ability.

BANK & FINANCE
CONSULTING GROUP

Organization

Organizational Economics

- Organizational Economics is the application of economic logic and methods to understand the nature, design and performance of organizations, especially managed ones like business firms.

1. <u>The Roots of Organizational Economics</u>

- Adam Smith (1776) was concerned that directors of joint-stock companies would have inadequate incentives to provide proper oversight.
- Frank Knight (1921) discussed entrepreneurship and the nature of the firm, which he saw as an institution in which the more uncertainty-averse worked for fixed wages while the entrepreneur bore the risk but had authority over the employees.
- Berle and Means (1932) described conflicts of interest arising from the separation of corporate ownership by shareholders from corporate control by top managers.
- Ronald Coase (1937) raised the question of the vertical boundaries of the firm, arguing that economizing on the costs of market transactions would lead some activities to be removed from the market and brought inside the firm under hierarchic control.

Organizational Economics (cont.)

- Chester Barnard (1938) saw organizations as systems of collaborative activity and discussed the roles of incentives and authority in the formal and informal aspects of organization.
- Herbert Simon (1951), in the first formal model in organizational economics, treated the employment relationship as the acceptance and use of authority – rather than contracting – over particular activities as a response to uncertainty and the need of speedy adaptation.
- Edith Penrose (1959) studied managerial activities and decision-making, organizational routines, and knowledge creation within firms and argued that these are critical determinants of the success and growth of firms.
- Alfred Chandler (1962, 1977) documented the historical emergence of the modern corporation and professional management.
- March (1962) described “The Business Firm as a Political Coalition,” where conflict, collusion, negotiation and strategic interactions are the norm.

Organizational Economics (cont).

2. <u>Modern Foundations of Organizational Economics</u>

- Many important contributions in the 1970s concerned the nature and boundaries of the firm.
- Following Coase, Oliver Williamson (1971, 1975) proposed a theory of the replacement of market dealings by authority within the firm based on the potential for inefficient haggling when unplanned adaptations are required.
- In contrast, Armen Alchian and Harold Demsetz (1972) argued against the idea that the firm is a manifestation of authority, proposing instead that the firm was best viewed as a collection of contracts.
- George Richardson (1972) undercut the simple firm-versus-market dichotomy by accentuating the great variety of organizational forms and relationships between firms that actually populate the economy and he wrote convincingly of the role of capabilities – information, knowledge, and skills – in determining the effectiveness of activities within and between firms.

Organizational Economics (cont).

- Benjamin Klein, Robert Crawford and Armen Alchian (1978) and Williamson (1979) explored the consequences of specific assets (ones whose value in their intended use far exceeds their value in other uses) and a hold-up (opportunistic renegotiation to expropriate returns to specific assets) for firms' make-or-buy decisions and contracting between firms.
- Inside organization, Kenneth Arrow (1974) addressed topics ranging from authority and codes to responsibility, trust, and values.
- Richard Nelson and Sydney Winter (1982) wrote in evolutionary terms about organizational routines that enable the organization to do what it does.
- Michael Jensen and William Meckling (1976) provided the first treatment of agency costs (deviations from efficiency occasioned by self-serving behavior by managers) as a necessary consequence of the separation of ownership from control.

Organizational Economics (cont).

- In formal modeling, Jacob Marschak and Rod Radner (1972) modeled optimal communication and decision-making processes in uncertain environments with dispersed information but shared objectives.
- Leonid Hurwicz (1972) introduced the concept of incentive compatibility and initiated mechanism-design theory, where the institutions used to allocate resources become a choice variable, thereby setting the stage for formal economic analysis and organizational design.
- James Mirrlees (1975, 1999) and Bengt Holmström (1979) introduced formal models of moral hazard (socially inefficient behavior occasioned by it not being possible to make the actor bear all the costs and benefits of her actions), launching a literature that would have tremendous influence on organizational economics.

Organizational Economics (cont).

3. <u>Emergence of a Field</u>

- The early contribution laid the foundations for the large literature that has emerged in the last 40 years.
- What is bought from outside and what is made inside, for the firm's own use?
- How are relations with suppliers and customers organized: in arm's-length market dealings or through long-term relationships?
- Who owns which of the assets used in production?
- How are the activities of the organization financed?
- How is governance defined and exercised, both within the organization and by different parties with ownership or other claims?
- What are the horizontal boundaries of the firm: what products or services does it produce, for what users, using what technologies, and in what locations?

Organizational Economics (cont).

- How are subunits within the firm defined, linked and coordinated?
- How are resources of different types allocated?
- Where does decision-making on different issues occur within the organization?
- What is the role of hierarchy, how many levels are there, and what are the spans of control (the number of individuals reporting directly to a hierarchic superior)?
- What are the behavioral and performance effects of delegation?
- Is the organization fundamentally an expression of authority or is it a “nexus of contracts?”
- What are the roles of formal, legally enforceable contracts within and between organizations versus relational contracts (shared understandings that cannot be enforced in courts and so must be self-enforcing, perhaps through reputational concerns)?
- How is power achieved and exercised, and what role does politics play within organizations?

Organizational Economics (cont).

- What information is collected on different matters, by whom, to whom is it communicated, and how is it used?
- How are they evaluated and rewarded?
- What effects do rewards have on behavior?
- What norms exist regarding behavior towards other within the organization, as well as outsiders, and how do these affect actual behavior and organizational performance.
- How are transgressions against organizational rules and norms treated by different parties?
- What is the nature and role of leadership in organization?
- How the answers to these questions depend on the markets in which the organization operates, the strategies it adopts to compete, and the social, legal, regulatory and technological environment in which it is embedded, and how do all of these choices interact and affect performance?

Handbook of Organizational Economics (Gibbons and Roberts, 2013)

Use the structure of the *Handbook if Organizational Economics* (Gibbons and Roberts, 2013) to suggest how existing work in organizational economics has begun to address many of the topics just mentioned. The *Handbook* consists of six parts.

- **Part I** contains foundational material on incentives, property rights, transaction-cost economics, and complementarities.
- On **incentives**, pay for performance is one means of motivating people in organization, but there are also non-financial means of motivation, as well as incentive contracts in other settings besides employment (such as contracts between firms).
- **Property rights** (the powers that come with ownership) are a central issue in organizational economics, leading to analyses of the boundaries of the firm and of authority structures within organizations.
- **Transaction-cost** economics examines contracting processes in great detail – not only the writing of contract but, more importantly, the living of them.
- The theory and econometrics of **complementarity** provide an alternative to the usual assumptions in microeconomics (concavity, divisibility, etc.) that allows modeling organizational questions with great richness and still permits drawing strong conclusions.

Handbook of Organizational Economics (cont.)

- **Part II** describes three empirical research methods that loom large in organizational economics but may not be completely familiar to those not involved in the field: case studies, experiments, and "insider econometrics."
- Clinical or **case studies** have played an important role in organizational economics, at least since Klein et. al.'s (1978) discussion of the troubled contractual relationship between General Motors and Fisher Body, which culminated in the former's acquisition of the latter.
- **Experiments**—both in the lab and, more recently, in the field—play a major role in studying organizational issues. The chapter describes a number of such studies and explicates what makes for a good experimental study.
- Finally, **insider econometrics** involves formulation of hypotheses and econometric analysis of data whose collection inside organizations is guided by detailed knowledge of the phenomena gained both from insiders (managers and other employees) and from in--depth personal observation.

Handbook of Organizational Economics (cont.)

- Each part in the remainder of the *Handbook* then focuses on a specific set of organizational issues.
- **Part III** studies individuals and groups within organizations, including three contributions on employment, two on authority, power, politics, and influence, and one on culture and leadership.
- The three chapters on **employment** illustrate the significant intersection between organizational economics and personnel economics, as well as connections to economic sociology and human resource management.
- The other three chapters in Part III can be seen as discussing different **aspects of decision-making in organizations**, often echoing Barnard and the Carnegie School's view of "the organization as a decision-making process" (Cyert and March, 1963 [1992]: 202), in which individuals compete for resources, power and influence and use information as a strategic tool and in which some parties attain particular influence through various means.

Handbook of Organizational Economics (cont.)

- **Part IV** studies structures and processes within organizations, with two chapters on hierarchy and individual chapters on corporate governance, innovation and organization, the connection between strategy and organization, resource allocation within firms, and organizational capabilities.
- The two chapters on **hierarchy** are complements, in that one follows the emphasis in Simon (1947), March-Simon (1958), and Marschak-Radner (1972) on the acquisition, communication, and processing of information, to the exclusion of incentive issues, whereas the other focuses entirely on the ways in which hierarchy may either ameliorate or exacerbate incentive issues (relative to Hurwicz's (1972) mechanism-design approach, which seems to offer a centralized method for all organizational communication and decision-making).
- The chapters on **corporate governance** and **innovation** connect to other fields within economics, such as law and economics on the one hand and growth on the other, with the governance chapter building on themes from Smith (1776) and Jensen-Meckling (1976), and the innovation chapter on themes from Knight (1921) and Penrose (1959).
- And the chapters on **strategy**, **resource allocation**, and **capabilities** connect to management research on strategy, corporate finance, and managerial practices, echoing Walker (1887), Penrose (1959), Chandler (1962, 1977), and Nelson-Winter (1982).

Handbook of Organizational Economics (cont.)

- **Part V** considers the boundary of the firm, contracts between firms, and multi-firm governance structures, with chapters on vertical integration, the empirics of contracting between firms, hybrid organizations, relational incentive contracts, contract law and economics, and legal forms of organization.
- The chapters on **vertical integration** and **contracting** illustrate connections between organizational economics and industrial organization (building on Coase (1961), Williamson (1971), and Klein et al. (1978)), and the chapter on **hybrids** —such as alliances, joint ventures, consortia, and so on— illustrates the rich middle ground between integration and simple contracting (building on Richardson (1972)).
- The chapter on **relational incentive contracts** is cast in terms of buyer---supplier relations but applies as well within firms and so complements the early chapter on incentives (building on Mirrlees (1975) and Holmström (1979)).
- The chapters on **legal contracting** and **legal forms** illustrate connections with the legal literatures on contracts and organizations (connecting to Alchian-Demsetz (1972)).

Handbook of Organizational Economics (cont.)

- Finally, although much of the foregoing could be applied to organizations other than firms, **Part VI** explicitly adopts this focus, with chapters on corruption and on government agencies.
- The **corruption** chapter applies a mechanism-design approach to understanding both the endogeneity and the net costs and benefits of corruption, illustrating connections to economic development.
- The chapter on **agencies** informally applies ideas about organizational design and performance to understand the complexity (and, at times, seeming perversity) of government agencies, illustrating connections to political science.

Management and Organizational Practices Survey (MOPS)

Decentralization in decision making

SECTION B
Organization

17 In 2021, was the headquarters for this company at the same location as this establishment?

- ☐ Yes (If yes, SKIP to Question 21.)
- ☐ No – If no, what state (if in the US) or country (if abroad)? _____

18 In 2021, where were the following decisions made for this establishment?

Select one for each row

Decisions	Only at this establishment	Only at headquarters	Both at this establishment and at headquarters	Other
Decisions on hiring permanent full-time employees	☐	☐	☐	☐
Decisions to give an employee a pay increase of at least 10%	☐	☐	☐	☐
Decisions on new product introductions	☐	☐	☐	☐
Product pricing decisions	☐	☐	☐	☐
Advertising decisions	☐	☐	☐	☐

19 In 2021, where were decisions to use this firm's own employees, contractors, temporary staff, or leased workers for the following activities made for this establishment?

Select one for each row

Activities	Only at this establishment	Only at headquarters	Both at this establishment and at headquarters	Other
Cleaning and janitorial services	☐	☐	☐	☐
Physical security services including decisions related to hiring security personnel (for example, guards) and monitoring services	☐	☐	☐	☐
Direct production	☐	☐	☐	☐

20 In 2021, what was the dollar amount that could be used to purchase a fixed/capital asset for this establishment without prior authorization from headquarters?

- ☐ Under $1,000
- ☐ $1,000 to $9,999
- ☐ $10,000 to $99,999
- ☐ $100,000 to $999,999
- ☐ $1 million or more

Information for decision making

SECTION D
Data, Decision Making, and Artificial Intelligence

26 In 2021, how much of the information related to each of the following functions for this establishment was **stored in a digital format**?

Select one for each row

Functions	None	Up to 50%	More than 50%, but not all	All or nearly all	Function not performed at this establishment
Production scheduling and monitoring	☐	☐	☐	☐	☐
Quality control	☐	☐	☐	☐	☐
Environmental or safety compliance	☐	☐	☐	☐	☐
Equipment maintenance	☐	☐	☐	☐	☐
Supply chain management and logistics	☐	☐	☐	☐	☐
Sales forecasting	☐	☐	☐	☐	☐

27 In 2021, who decided what type of digital information (data) to collect for this establishment?

Select all that apply

- ☐ Managers at this establishment
- ☐ Managers at headquarters and/or other establishments
- ☐ Production workers at this establishment
- ☐ Engineers at this establishment
- ☐ Customers
- ☐ Government regulations or agencies
- ☐ Consultants (including systems integrators)

Management and Organizational Practices Survey (MOPS)

28A In 2021, what descriptive analyses of data were **typically** used to support making key decisions at this establishment?

Select all that apply

- ☐ Little to no use of descriptive analyses (If little to no use, SKIP to Question 29.)
- ☐ Use of summary statistics (examples: maximum, average, count per category, variance)
- ☐ Use of trends and comparisons across time periods
- ☐ Use of real-time dashboards reflecting current data (possibly along with past data)
- ☐ Use of customized or interactive descriptive analysis requested by decision makers

28B In 2021 and 2019, how often did decision makers rely on descriptive analyses of data when making key decisions at this establishment?

Select one for each year

	2021	2019
Did not use	☐	☐
Up to 50% of the time	☐	☐
More than 50% of the time, but not all of the time	☐	☐
All or nearly all of the time	☐	☐

29 In 2021, what share of **expenses for data processing and other purchased computer services** paid by this establishment was spent on **cloud services**?

Cloud services are services provided by a third party that is accessed on demand via the internet and includes software, storage, platform capabilities, and other digital infrastructure services.

Estimates are acceptable

- ☐ None
- ☐ Up to 50%
- ☐ More than 50% but not all
- ☐ All or nearly all
- ☐ Not applicable. This establishment did not have expenses for data processing and other purchased computer services in 2021.

Artificial Intelligence

30 In 2021, to what extent did this establishment use **predictive analytics** to support each of the following functions?

Predictive analytics are statistical or algorithm-based models that analyze historical and current data to make predictions about future or unknown events in areas such as demand forecasting, production planning, or human resources management.

Select one for each row

Functions	None	Up to 50%	More than 50%, but not all	All or nearly all	Function not performed at this establishment
Production scheduling and monitoring	☐	☐	☐	☐	☐
Quality control	☐	☐	☐	☐	☐
Environmental or safety compliance	☐	☐	☐	☐	☐
Equipment maintenance	☐	☐	☐	☐	☐
Supply chain management and logistics	☐	☐	☐	☐	☐
Sales forecasting	☐	☐	☐	☐	☐

31 In 2021, to what extent did this establishment **use artificial intelligence** (including machine learning algorithms in software applications) to support each of the following functions?

Select one for each row

Functions	None	Up to 50%	More than 50%, but not all	All or nearly all	Function not performed at this establishment
Production scheduling and monitoring	☐	☐	☐	☐	☐
Quality control	☐	☐	☐	☐	☐
Environmental or safety compliance	☐	☐	☐	☐	☐
Equipment maintenance	☐	☐	☐	☐	☐
Supply chain management and logistics	☐	☐	☐	☐	☐
Sales forecasting	☐	☐	☐	☐	☐

32 In 2021, to what extent did this establishment use the following **technical applications of artificial intelligence**?

Artificial intelligence is a machine-based system that can perceive and learn about its environment and then make relevant predictions, recommendations, or decisions for an objective that is determined by humans.

Select one for each row

Applications	Did not use	Testing or piloting only	Up to 50% of direct production	More than 50% of direct production, but not all	All direct production	Don't know
Machine vision	☐	☐	☐	☐	☐	☐
Speech recognition	☐	☐	☐	☐	☐	☐
Predictive maintenance	☐	☐	☐	☐	☐	☐
Artificial intelligence-enabled industrial robots	☐	☐	☐	☐	☐	☐
Automated guided vehicles (AGV)	☐	☐	☐	☐	☐	☐