MANAGEMENT MATTERS

MANUFACTURING REPORT

2011

CONTENTS

LETTER TO THE MANAGERS

Dear manager,

We would like to extend our sincerest gratitude for taking the time to help us with this important research project. Here we present to you our findings, based on your insightful feedback, in a special report we compiled as a thank you for your valuable time.

The management research project is an international research initiative to explore differences in management practices across organizations and countries. Based at the Centre for Economic Performance, the project is a joint initiative from researchers based at the London School of Economics, Stanford University and the Harvard Business School, and endorsed by Central Banks, Finance Ministries and Employers Federations around the world. Since 2002 we have collected in-depth interviews with over 10,000 managers in 21 countries.

Rest assured that all collected information is completely confidential. No names of companies or managers are ever mentioned or published, only aggregate results. Furthermore, no company financial figures are discussed in our interviews, only management practices and organizational structures.

We hope you will enjoy reading this report and thank you again for your time and valuable contribution to this project.

We are always happy to receive feedback about the research. Please send you comments and suggestions to cep.managementproject@lse.ac.uk

Best regards,

Research Team

Centre for Economic Performance
London School of Economics

THE PROJECT

THE PROJECT: MOTIVATION

Motivation

There are widely documented, large and persistent productivity and profitability differences across firms and countries, which have typically been attributed to "management." We have collected the first large-scale international management dataset to explore whether management can, in fact, help explain this gap.

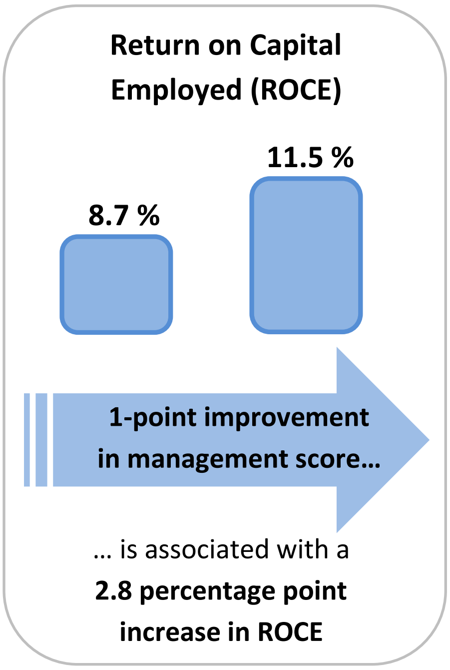
In summary, we find very large differences in management practices across firms and countries. We also find that management practices are strongly linked to firm and national performance, and that the key factors associated with good management are competitive markets, multinational status, employee skills, and dispersed ownership.

Why should we care?

At the project's inception in 2001, we believed that a firm's management practices were likely to have a strong relationship with performance.

To explore this hypothesis, working with leading businesses and consulting firms we developed an interview tool to assess and analyse management practices across firms and industries.

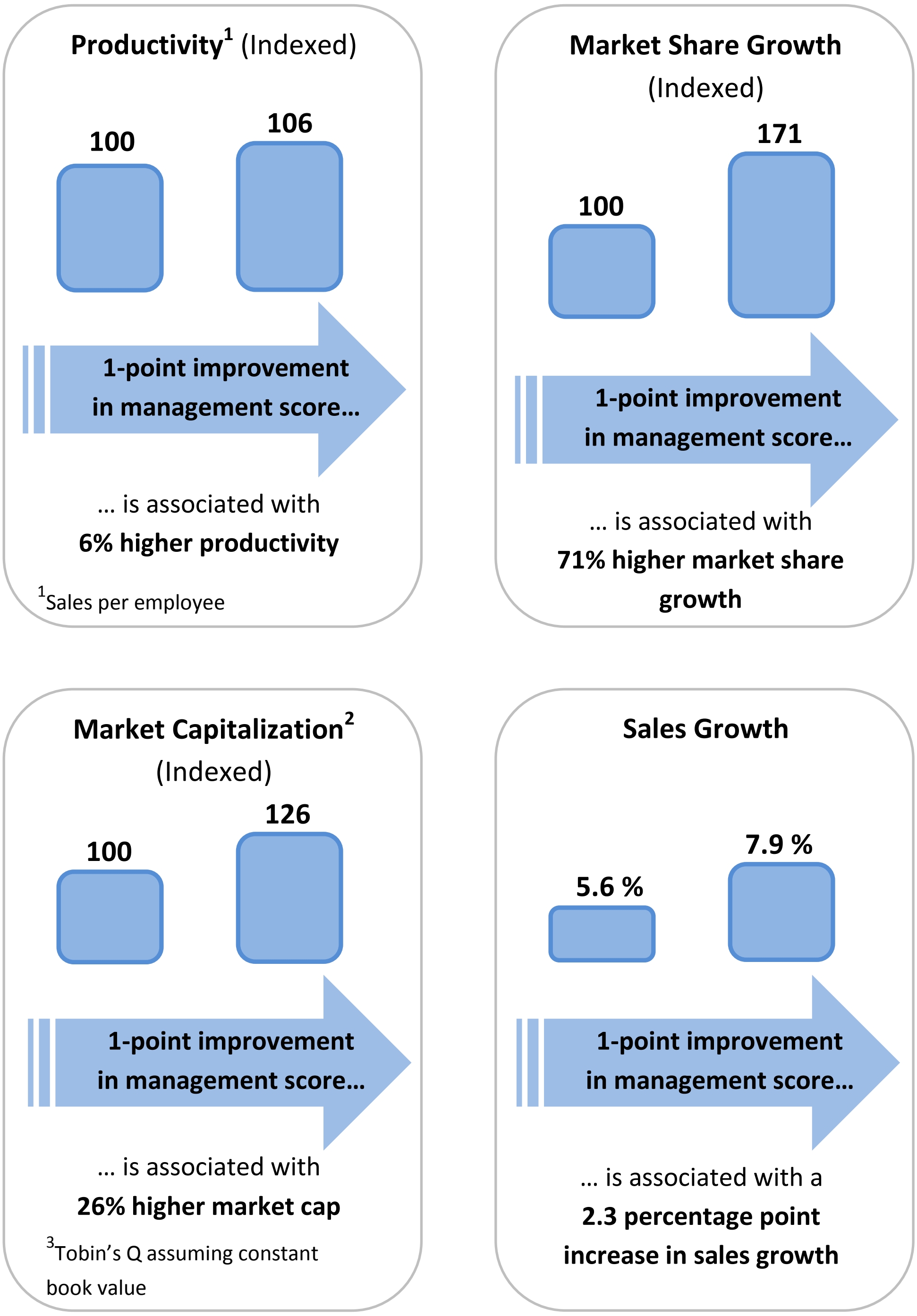
During these interviews, we documented a wide range of responses on managerial practices and found significant variation in management styles. Using this tool developed by our international team of industry and academic experts, we have made great efforts to organize and codify these responses.



Over the past decade, we have conducted interviews with more than 10,000 managers across 21 countries in North and South America, Europe, Asia and Australasia. Our earlier studies with manufacturing companies showed a strong relationship between management practice and manufacturing company outcomes, such as productivity, return on capital employed, sales growth, market share growth and market capitalization.

We have used this data to publish several academic papers as well as policy reports aimed at informing public policy, helping stakeholders understand how the adoption and implementation of modern management practices drives productivity and innovation.

Better management practices are associated with better company outcomes[a]



[a] The data in this graph uses over 6,000 firms from our sample

OUR ANALYSTS

The interviews were conducted by students from top business schools and economics departments around the world. Schools represented include:

- Cambridge University
- Harvard University
- HEC
- INSEAD
- London Business School
- London School of Economics
- MIT
- Northwestern (Kellogg)
- Oxford University
- Queens University
- Stanford University
- U.C. Berkeley
- University of Toronto
- Yale University

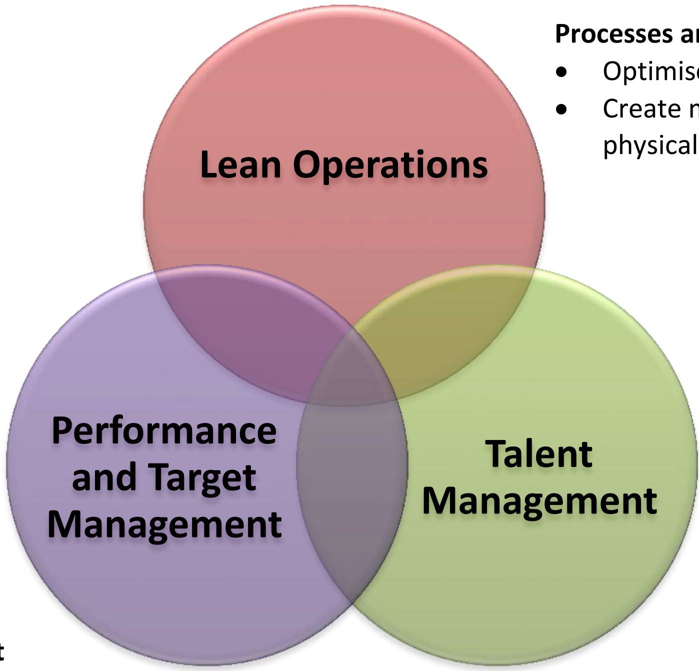
THE PROJECT: METHODOLOGY

Methodology

To examine management practices, we conduct interviews for between 45 to 60 minutes with plant managers and look at three main areas of management:

Processes and behaviours that

- Optimise production lines
- Create maximal value from physical assets



Processes and behaviors that

- Mesh physical and human aspects of business
- Align efforts of the whole organisation

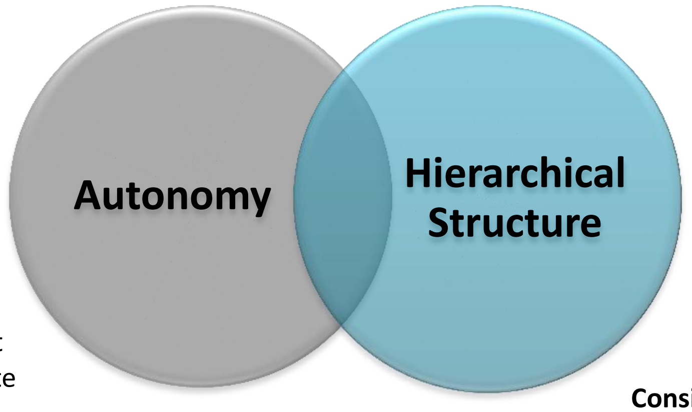
Processes and behaviours that

- Optimise quality of workforce
- Maximise human capital

We also examine a firm's organization structure, considering several aspects of manager and worker autonomy and the hierarchical structure of the company.

For Plant Managers:

- Hiring and firing autonomy
- Introduction of new products
- Maximum capital expenditures without signoff from corporate HQ
- Sales and marketing autonomy



For Workers:

- Who sets the pace of work?
- Who decides how tasks are allocated?

Considering:

- Number of layers below and above plant manager
- Changes in the layers in the previous three years
- Span of control (how many direct reports the manager has)

Some examples of strong and weak management practices across several manufacturing firms are as follows:

LEAN OPERATIONS

Best practice: *Top establishments have a formal process of problem solving to encourage continuous improvement*

Strong example: *The employees of a firm constantly analyse the production process as part of their normal duties. They film critical production steps to analyse areas more thoroughly. Every problem is registered in a special database that monitors critical processes and each issue must be reviewed and signed off by a manager.*

Weak example: *A firm has no formal or informal mechanism in place for either process documentation or improvement. The manager mentioned that production takes place in an environment where nothing has been done to encourage or support process innovation.*

PERFORMANCE AND TARGET MANAGEMENT

Best practice: *Top firms set very tough, but achievable targets cascaded directly from overall firm targets*

Strong example: *A firm stretches employees with ambitious targets. Performance is rewarded through bonuses, team lunches cooked by management, family picnics, movie and dinner vouchers, etc. They also incentivize staff with awards for perfect attendance, best suggestions etc.*

Weak example: *A firm pays its people equally and regardless of performance. There are no incentives to perform well in the company. The same policy applies to the management team, which is paid an hourly wage, with no bonus tied to the good performance of the firm.*

TALENT MANAGEMENT

Best practice: *Top firms have systems for regular appraisal and rewards – good performance is rewarded*

Strong example: *A manager insisted that he has to set aggressive and demanding goals for everyone – even for the security team. If they hit all their targets, he worries he hasn't stretched them enough. Each Key Performance Indicator (KPI) is linked to the overall business plan and everyone has to work hard to get their products out the door quickly.*

Weak example: *A firm uses easy targets to improve staff morale and encourage people. They find it difficult to set harder goals because people just give up and managers refuse to push their employees to work harder.*

MEMORABLE QUOTES

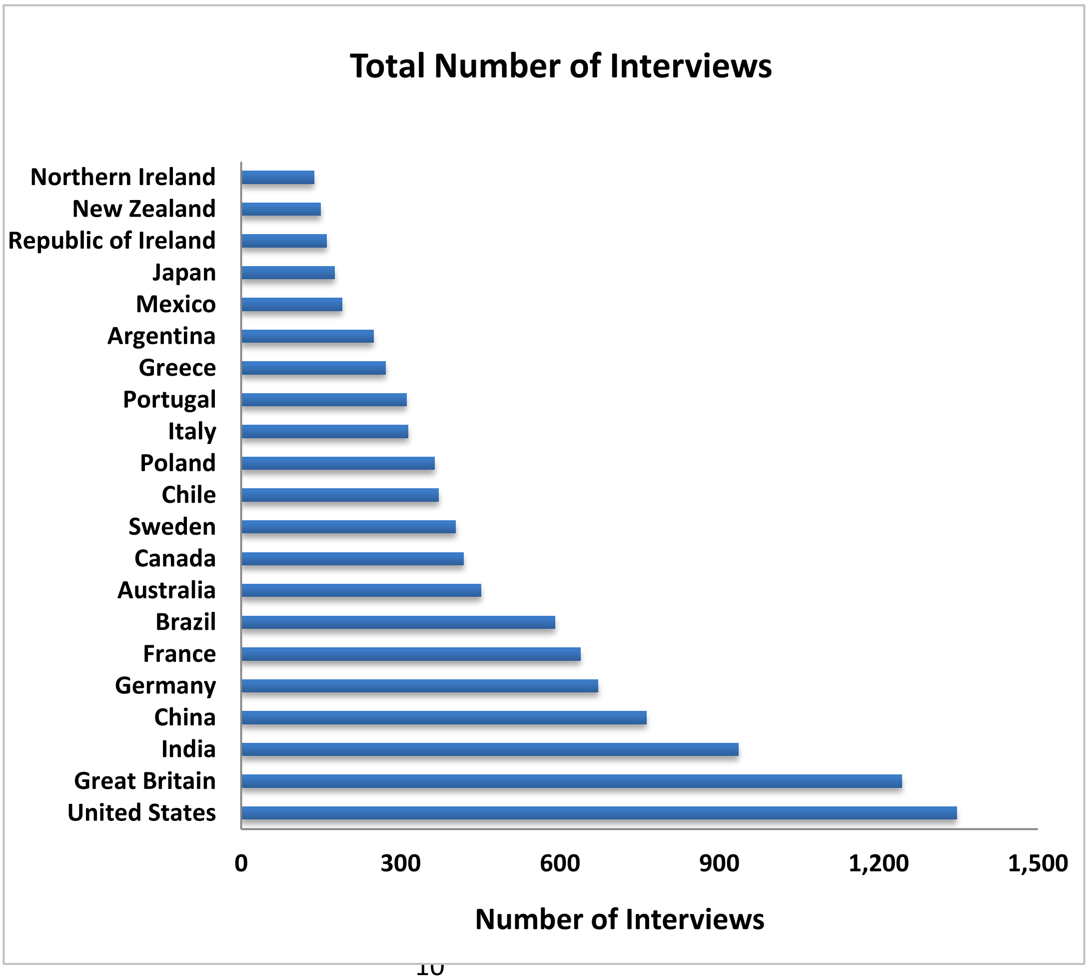
Getting you (dear managers) on the phone was not always easy…

- *French secretary:* "You want to talk to the plant manager? There are legal proceedings against him, so hurry up!!"

- *Analyst:* "I was wondering if you would have 30-40 minutes to talk with me about your day-to-day production process?"
  US manager: "You would have a better chance of coming in here with a razor and slitting my wrists than getting me on the phone for 40 minutes!!!"

THE PROJECT: COVERAGE

To ensure our results are representative, we take a comprehensive list of establishments from each country and industry, and randomly select managers to participate in our study. For manufacturing, our sample includes firms with 100 to 5000 employees. Since participation in the study is completely voluntary, we also record response rates and ensure no biased results. Since 2004, we have interviewed over 10,000 managers from 21 countries across 4 continents.



SUMMARY RESULTS

MANUFACTURING

MEMORABLE QUOTES

Staff retention the UK way

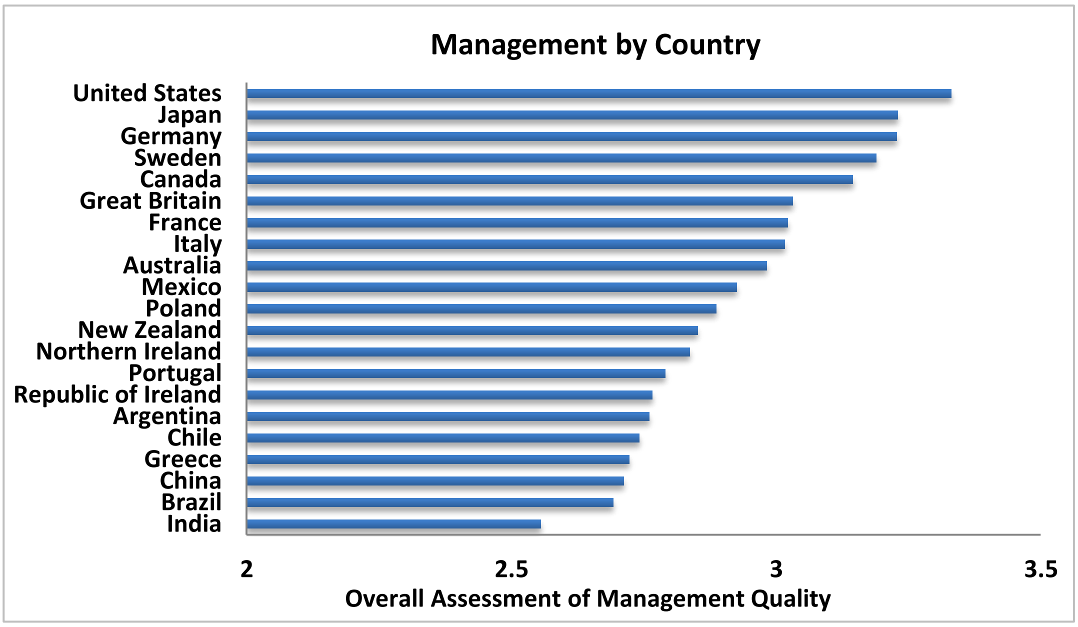
- ***Analyst****:* "How would you persuade your top performers to stay?" *UK Chairman:* "Sex is a great thing! If the employee finds a new girlfriend somewhere else, I can't do anything!"

Staff retention the American way

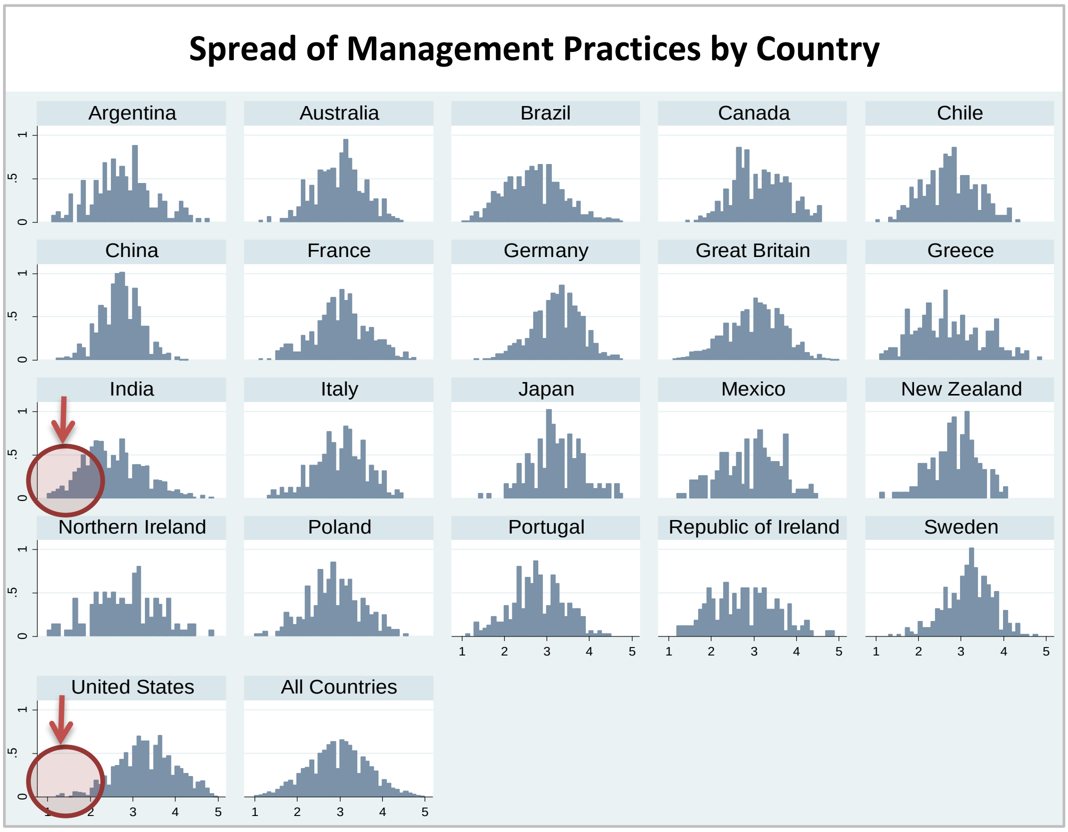
- ***Manager****:* "I spend most of my time walking around cuddling and encouraging people - my staff tell me that I give great hugs"

SUMMARY RESULTS: MANUFACTURING

More developed economies like the United States and Japan typically have the best management, while emerging economies like Brazil and India fare less well.

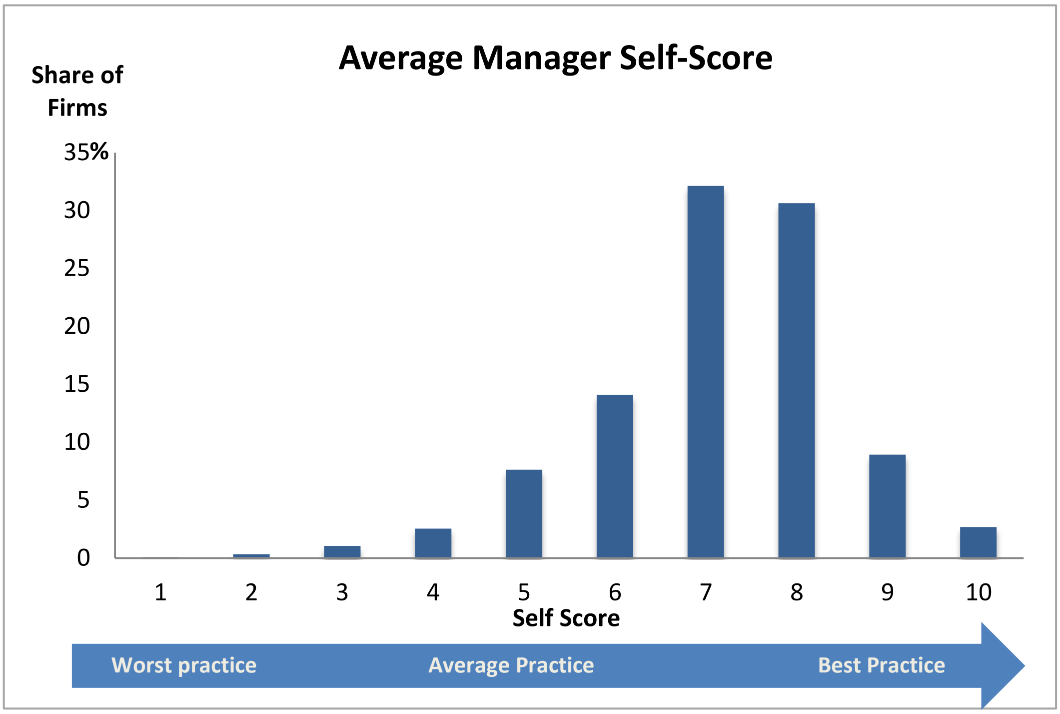


Below we show the distribution graphs for all interviewed companies within each country. The height of the bar shows what proportion of firms that have a score of that level. Each picture is "bell shaped" showing (unsurprisingly) that most firms cluster around the average but there are a few very low scoring firms ("left tail") and high scoring firms ("right tail"). In countries that are better managed on average, there are also a smaller proportion of less well managed firms – note the two "tails" highlighted by the red circles, and how much smaller the tail in the US distribution is when compared to the tail in the India distribution. The presence or absence of these lower tails goes a long way towards explaining the cross country differences.



Interestingly, managers generally over-score the management of their own firms across all countries in the sample.

In response to the question "*Excluding yourself, how would you rate your company's management from 1 to 10, one being the worst and ten being the best?*" the distribution of responses is as follows:



This shows that the vast majority of managers think that their firm is above average, and this pattern is consistent across countries within the sample.

MEMORABLE QUOTES

The difficulties of defining ownership in Europe

[Male manager speaking to an Australian female interviewer]

- ***Manager**: "We're owned by the Mafia"*
  ***Analyst**:* "I think that's the "*Other*" category… although I guess I could put you down as an '*Italian multinational*'?"

Some managers were too truthful

- ***Analyst**: "Would you mind if I asked how much your bonus is as a manager?"*
  Manager: "I don't even tell my wife how much my bonus is!"
  Analyst: "Frankly, that's probably the right decision..."

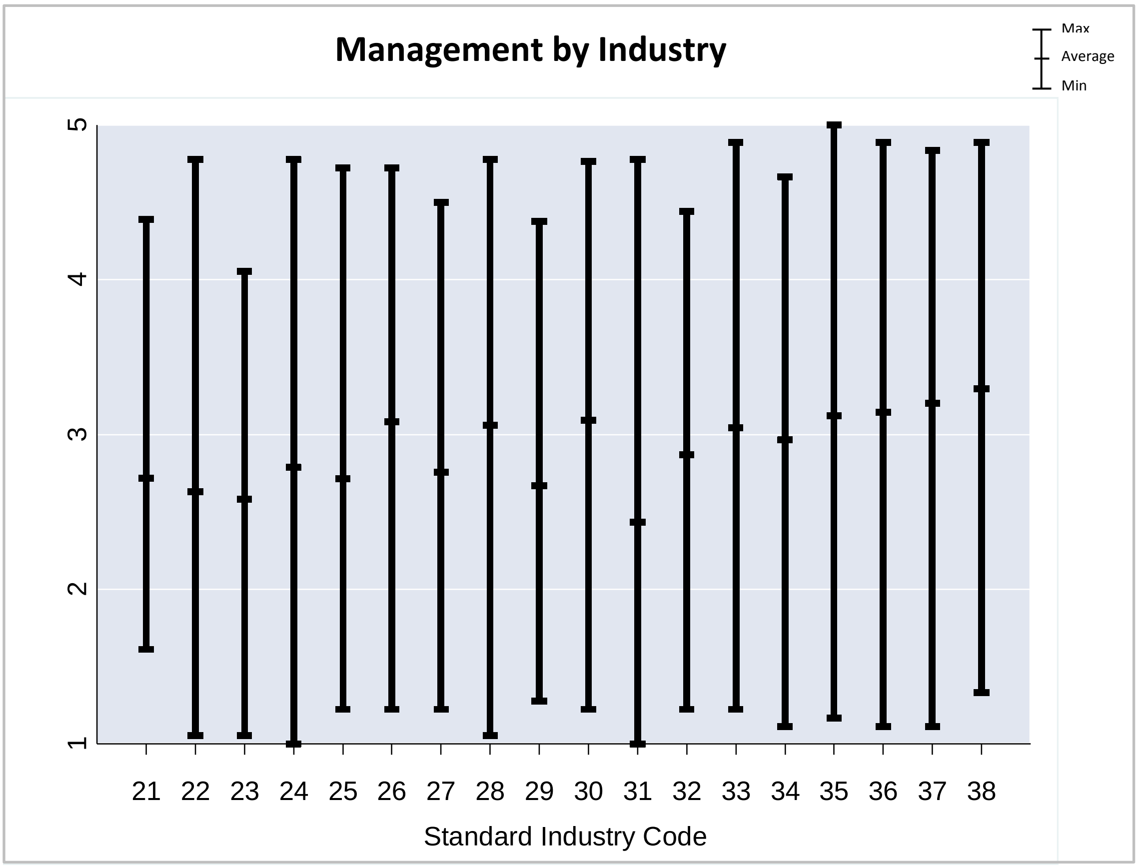
MEMORABLE QUOTES

India is such an interesting place…

- ***Manager***: "Six Sigma. Yes, we have started that. We have four of the sigmas outside the factory and the other two have been ordered…."
- ***Analyst***: "How do you keep your top performers?" ***Manager***: "I am a star performer and I want to leave!"
- ***Analyst***: "How do you identify your star performers?" ***Manager***: "This is India, everyone thinks he is a star performer!"

SUMMARY RESULTS: MANUFACTURING INDUSTRIES

In addition to a high level of variation in the quality of management practices across countries and within countries, and there is also variation within industrial sectors. Only 2 percent of the variation in management quality is due to countries, and 21 percent is due to industry sector.

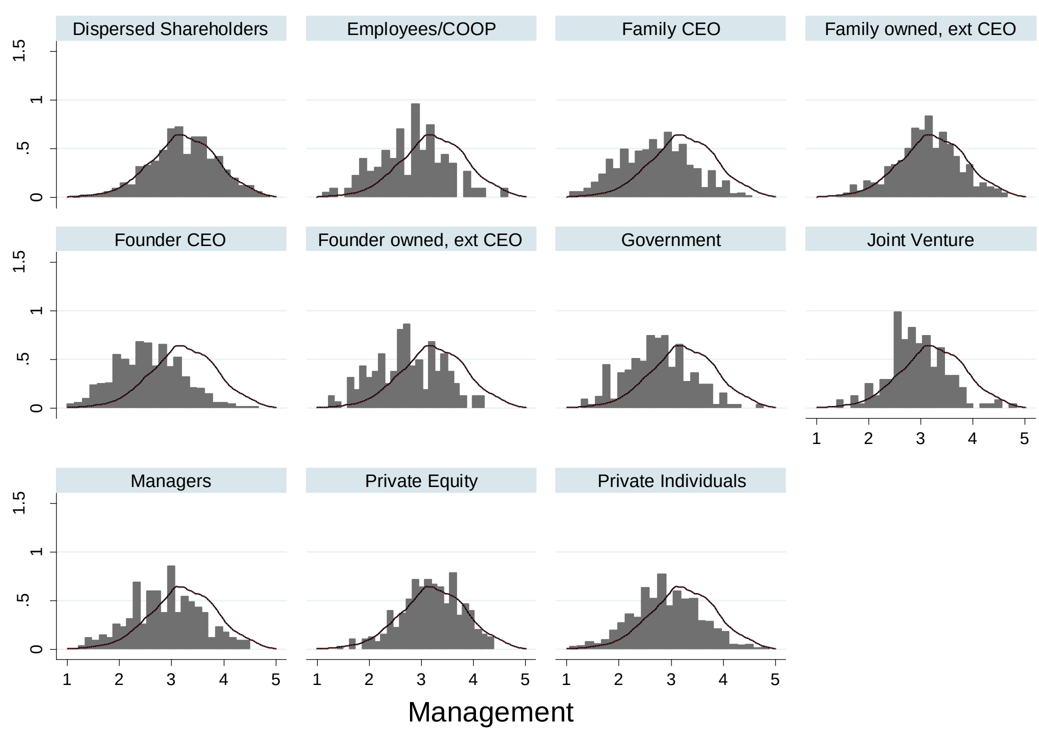


US SIC Code Industry Classification Description			
20	Food and kindred products	31	Leather and leather products
21	Tobacco products	32	Stone, clay, glass and concrete products
23	Apparel and other finished products made from fabrics and similar materials	33	Primary metal industries
24	Lumber and wood products, except furniture	34	Fabricated metal products, except machinery and transportation equipment
25	Furniture and fixtures	35	Industrial and commercial machinery and computer equipment
26	Paper and allied products	37	Transportation equipment
27	Printing, publishing and allied industries	38	Measuring, analysing and controlling instruments
28	Chemicals and allied products	39	Miscellaneous manufacturing industries
30	Rubber and miscellaneous plastic products		

Management practices also vary significantly across ownership structures. The graphs below include companies from all countries, divided across ownership status. For ease of comparison, we superimposed the distribution line of the firms owned by dispersed shareholders on each distribution graph of the subsequent ownership categories.

We find that firms with dispersed shareholders tend to have higher management scores.[1] Also, when an external CEO is in place in a family firm, these are, on average, as well managed as dispersed shareholder firms.

Management by Ownership Status



MEMORABLE QUOTES

The British chat-up

[Male manager speaking to an Australian female interviewer]

- ***Manager**: "Your accent is really cute and I love the way you talk. Do you fancy meeting up near the factory?"*
  ***Analyst**:* "Sorry, but I'm washing my hair every night for the next month…."

The Indian chat-up

- ***Manager**: "Are you a* Brahmin?"
  Analyst: "Yes, why do you ask?"
  ***Manager**:* "And are you married?"
  Analyst: "No?"
  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"

[1]Dispersed shareholders ownership is defined as having no shareholder owning more than 25.01% of the company.

MEMORABLE QUOTES

Swedish manufacturing goals

- ***Production manager:*** "Workers individual goals? They just want to go home!"

Americans on geography

- ***Analyst***: *"How many production sites do you have abroad?* ***Manager (in Indiana)***: *"Well…we have one in Texas…"*

The Bizarre

- ***Analyst***: *[long silence]… hello, hello… are you still there… hello?"* ***Manager:*** *"…I'm sorry, I just got distracted by a submarine surfacing in front of my window"*

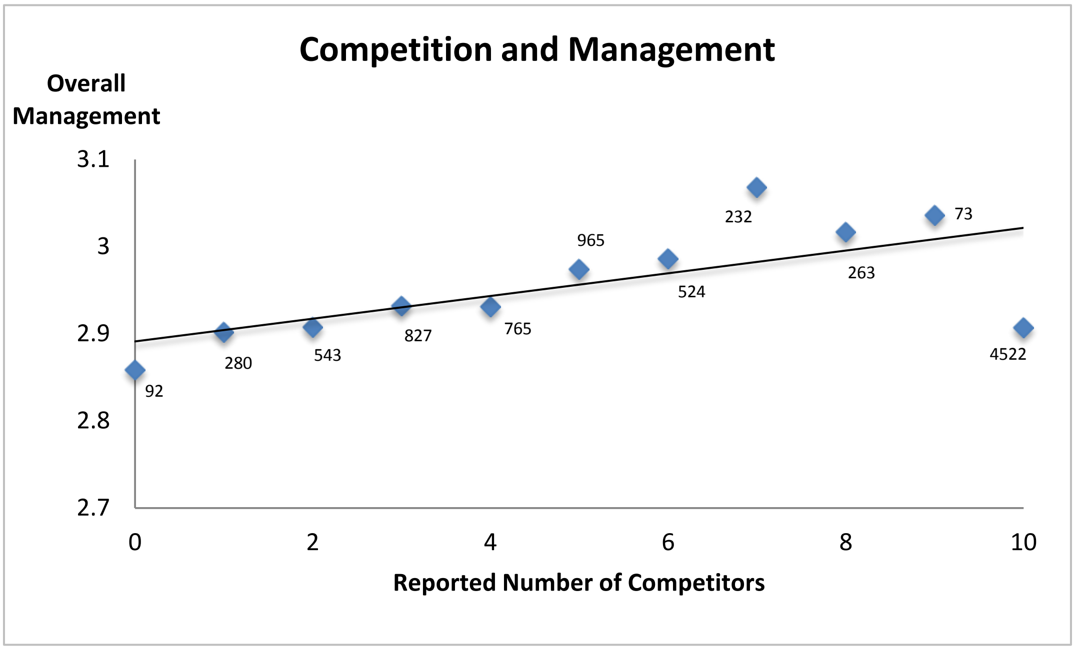
WHAT FACTORS MIGHT EXPLAIN THIS SPREAD?

We explored a few reasons that may explain why we see such variability in management practices: competition, globalization, human capital and regulation.

Competition

Competition has long been pointed to as an effective driver of productivity. In more competitive environments, firms need to continuously work towards being more efficient and productive to survive. In this environment, firms that do not strive towards improvements risk losing customers and being forced out of the market.

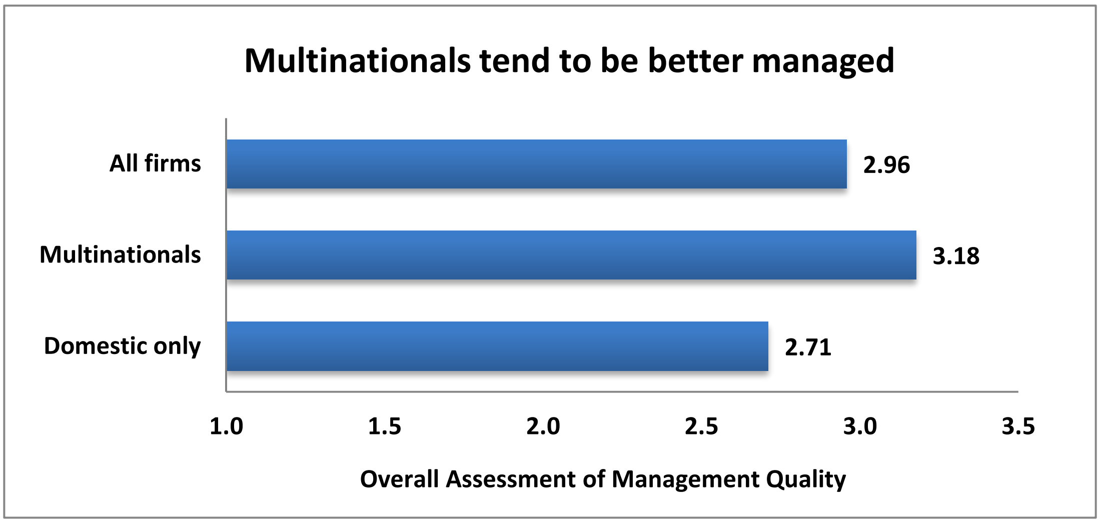
At the beginning of the interview, we ask managers how many major competitors they believe they have. We see that there is a clear positive correlation between number of reported competitors and quality of management practices.



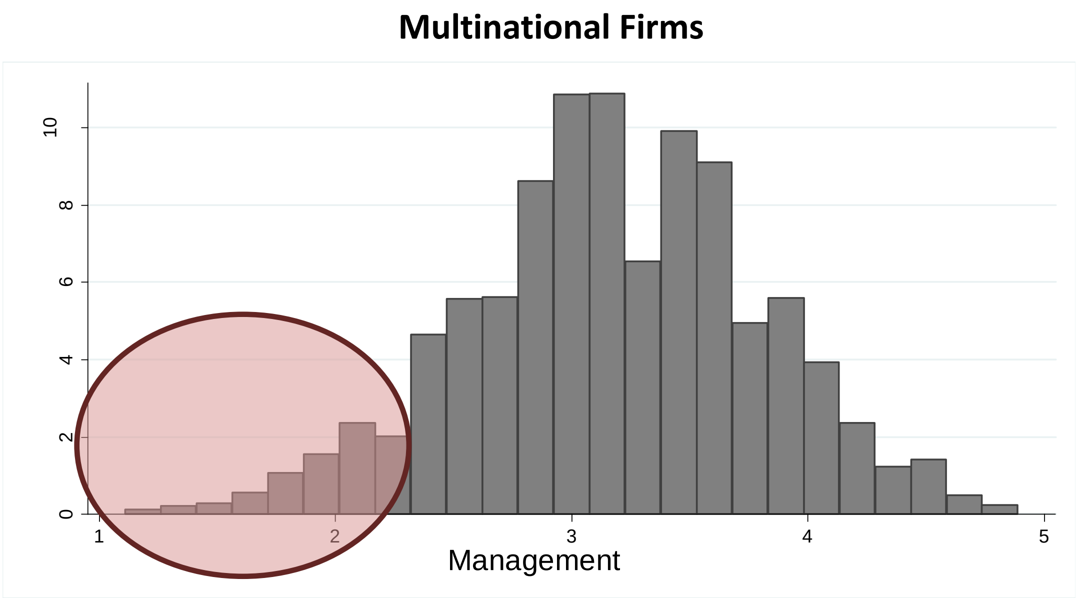
Globalization

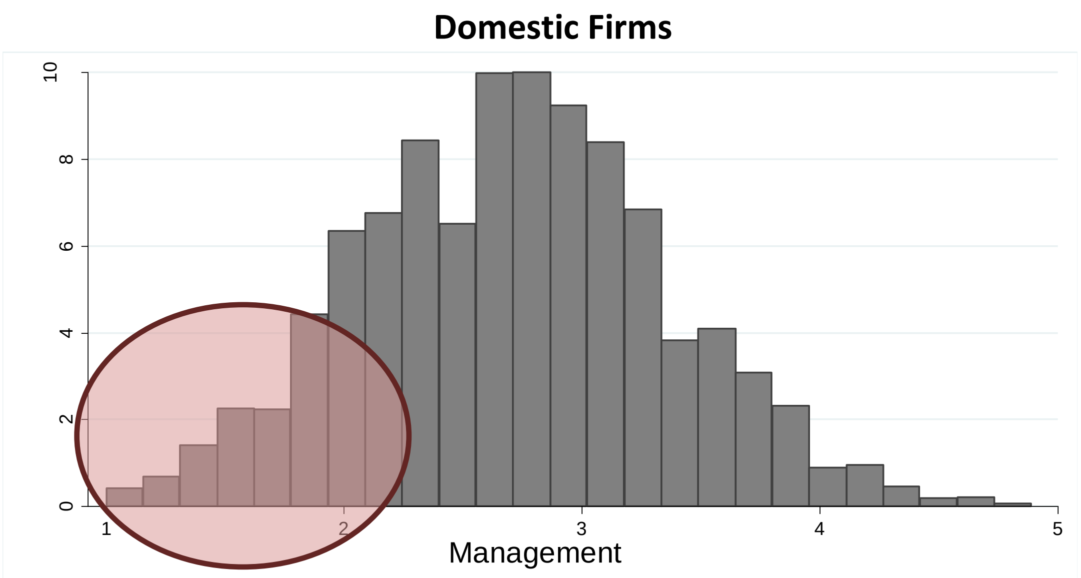
Multinational firms usually outperform domestic-focused firms on several dimensions, such as productivity, worker wages and R&D expenditures. Much of this push for innovation and competitiveness is a result of stiff competition in the global market. As we showed above, there is evidence that competition is linked with better management practices.

WHAT FACTORS MIGHT EXPLAIN THIS SPREAD?



The better average management performance of multinational firms can be tied to their substantially smaller share of poorly managed firms – a scarce "lower tail" of the distribution, highlighted in the graphs below.

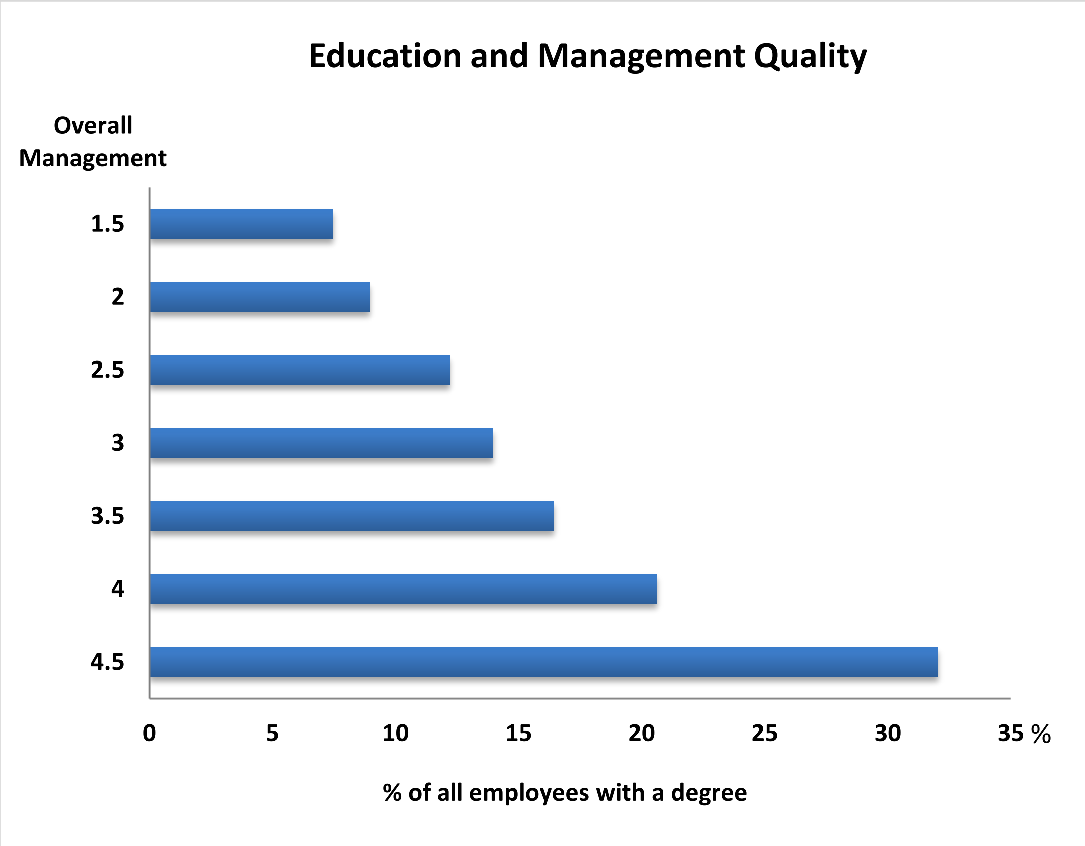




WHAT FACTORS MIGHT EXPLAIN THIS SPREAD?

Human Capital

Human capital and skills has been pointed to as being a key driver of productivity across countries. In our research, we also find that better managed firms have a higher share of employees holding a degree. It is perhaps unsurprising that having more educated managers helped, but we also found an equally strong correlation between the education of the non-managers and our management scores. It appears to be easier to rank more highly in management when workers are more skilled.

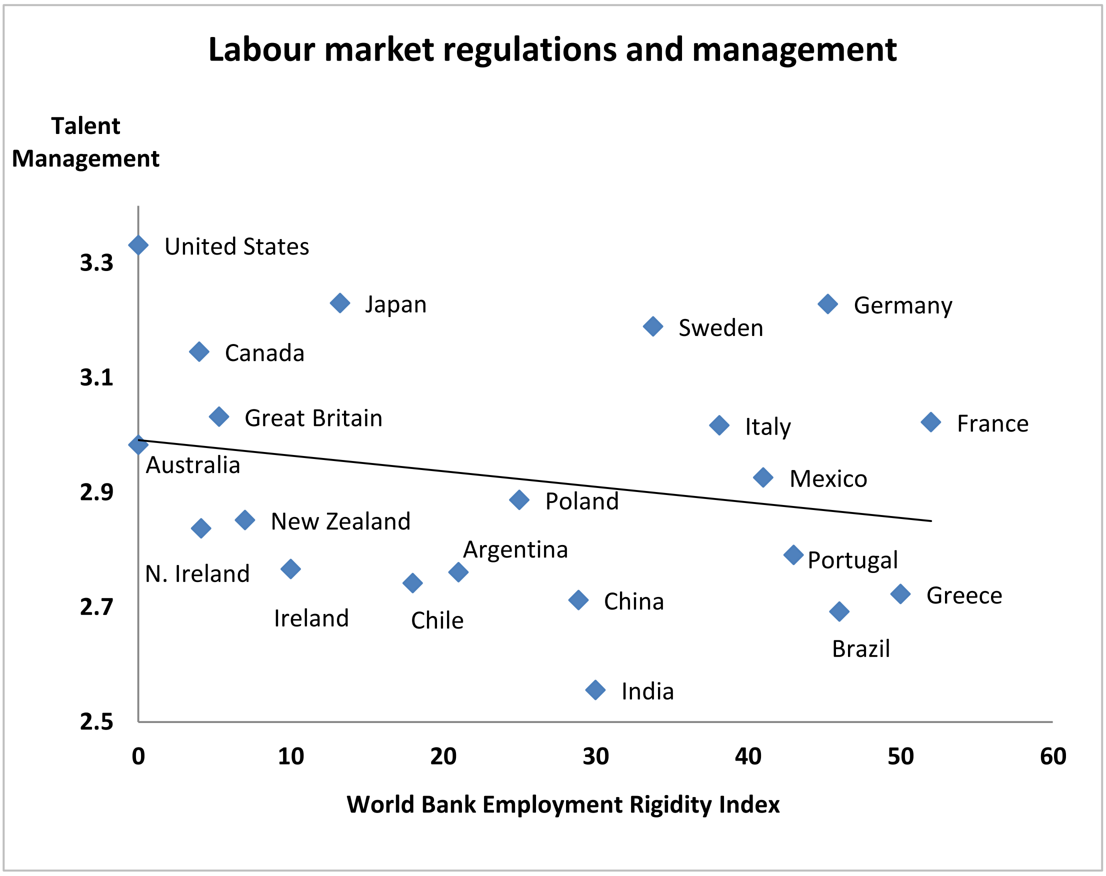


Labour Market Regulations

Labour regulations can often be important safeguards for workers against unfair employers; however, they can also create a very rigid labor market and cause inefficiencies.

The World Bank routinely ranks countries on the ease of doing business; an important component of this index is the Rigidity of Employment Index (REI). In its ranking, the REI considers the difficulty of hiring and firing employees, scheduling nonstandard work hours, and scheduling annual paid leave.

We found a weak correlation between a higher REI and a lower talent management score. The United States is one of the countries with the lowest REI, and also the country with the highest talent management score. On the other hand, labor market regulations did not seem to have a depressing effect on other types of management practice.



REGIONAL DIFFERENCES

We noticed some key differences across sets of countries in their management style.

UNITED STATES & CANADA

- Good management practices, particularly strong talent management
- High managerial freedom (corporate HQ allows plant managers a lot of control over hiring and investment)
- Flat hierarchies (few managerial layers)

BRAZIL & INDIA

- Firms in richer states/regions appear to be better managed (e.g. Tamil Nadu or Maharashtra in India, the South-East in Brazil)
- Multinationals appears to bring their strong management practices with them from Europe and the US
- The best domestic firms are as well managed as any in Europe, the US or Japan
- Limited managerial freedom with strong central support

CHINA

- While multinationals appear to bring their strong management practices with them, foreign joint ventures perform more poorly
- Less variation in management practices across firms, especially when compared to other Asian countries
- Firms appear to exhibit more hierarchical organizational structures, with limited plant manager discretion or control

EUROPE

- Very wide spread of management practices
- Multinationals are typically well-run across Europe, but have characteristics of their homeland (i.e. US firms have managerial freedom, Japanese firms are very 'lean')
- Strong managerial freedom in Northern Europe, more central control in Southern Europe

JAPAN

- Extremely well managed in process operations, with world class 'lean' and continuous improvement across almost all industries
- More mixed on talent management –firms often seem to struggle to deal with poor performing workers
- Strongly hierarchical structures –plant managers have limited discretion and there are many layers within firms

MEXICO & ARGENTINA

- Strong drive for innovation and a push towards systematic process improvements in multinational firms
- Managers often noted that the entrenched cultural norms presented a significant barrier to the implementation of people management best practices
- Despite managers' overconfidence in evaluating their firms' management practices, both present a tail of good and bad managed firms and their practices are strongly associated with firm productivity.

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