MANAGEMENT MATTERS

MANUFACTURING REPORT 2014

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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.

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 at the London School of Economics (LSE) in the UK, the project is a joint initiative from researchers based at the LSE, Stanford University and the Harvard Business School, and endorsed by several national Central Banks, Finance Ministries and Employers Federations around the world. Major international organizations, including the World Bank and the Inter-American Bank of Development also endorse this project. Since 2004we have collected in-depth interviews with over 15,000 managers in more than 33 countries across four sectors (manufacturing, retail, healthcare and education).

Rest assured that all collected information is completely confidential. No names of companies or managers are ever mentioned or published, only aggregate results. Your responses are guarded by strict research confidentiality rules from the Research Ethics Boards of the three major universities cited above. 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 very much welcome feedback about the research, and look forward to hearing back from you and keeping in touch. Please send your comments and suggestions to cep.managementproject@lse.ac.uk.

Best regards,

Research Team

Centre for Economic Performance
London School of Economics

INTRODUCTION TO THE PROJECT

The World Management Survey is a joint research project by academics at the London School of Economics (LSE), Stanford University, Harvard Business School, Oxford University and Cambridge University which looks at management practices within firms and how these affect productivity. There are large differences in organizational performance within and across sectors and regions, which research has thus far been unable to explain taking into account only the usual labour, capital and material inputs.

Traditionally, a portion of this unexplained differential has been ascribed to different levels of the quality of management across firms. However, there was no dataset of systematic and comparable quantitative data on firm-level management practices: until now. The raison d'être of the World Management Survey is to fill this gap. Since 2001 we have conducted over 13,000 interviews in 33 countries in North and South America, Oceania, Europe, Asia and Africa, in what is the first large-scale international management dataset to explore whether management can, in fact, help explain this productivity gap.

We find that that management practices vary greatly across both firms and countries, and that these practices are strongly linked to firm and national performance. Key factors associated with good management are competitive markets, multinational status, employee skills, and ownership and control, all of which are outlined in more detail below.

The data we have collected so far is not only helpful to company managers and business owners, it has also been used in several academic papers, as well as in numerous policy reports aimed at informing public policy, helping stakeholders understand how the adoption and implementation of modern management practices drives productivity and innovation.

We are currently riding one of the most challenging times we have seen in decades in terms of global economic tides and manufacturing growth. This research is key to the future development of policies for the manufacturing sector and has wide implications across the world, and, as mentioned before, has been strongly endorsed by several Central Banks as well as universities and manufacturing associations. Your input and continued help in this project is crucial for its successful continuation and also for the development of relevant policies. Again, we deeply thank you for your contribution.

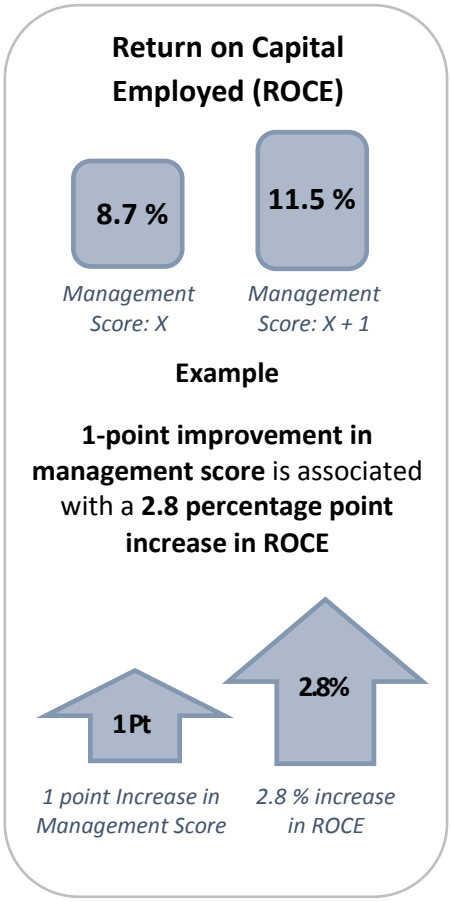
WHY SHOULD WE CARE?

The main premise of the project at its inception in 2001 was that management practices were likely to have a strong relationship with performance and productivity.

To explore this hypothesis our international team of industry and academic experts developed an interview tool in collaboration with leading businesses and consulting firms to capture management practices across firms and industries.

Using this interview tool we have documented, assessed and analysed a wide range of responses on managerial practices. Great efforts have been made to organise and codify these responses, in order to understand the variation in managerial practices.

Our earlier studies with manufacturing companies showed a strong relationship between management practices and company performance, such as productivity, return on capital employed, sales growth, market share growth and market capitalization. We have found that an improvement in management score is associated with an improvement in several performance measures, as shown in the diagrams below.

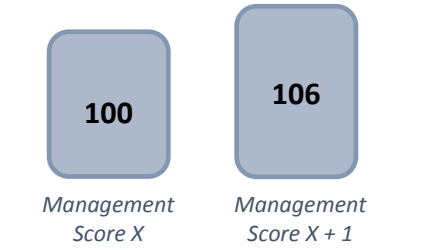


Understanding how management practices contribute to such improvements, is key to determining what drives productivity. Our past research shows that improving management practices is a highly leveraged means of getting more output from firms' existing labour and capital. Increasing the quality of management, as we measure it, by one point is the equivalent of a 65% increase in capital, or a 25% increase in labour, and is true for all companies independent of sector, profitability, past productivity growth and size.

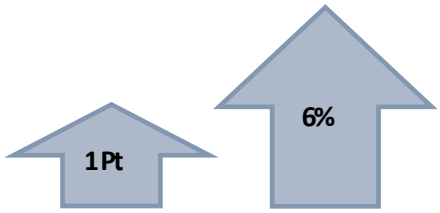
This is important because, although a one point increase in management cannot be achieved overnight, it is potentially significantly less costly than the equivalent increases in labour and capital.

Better management practices are associated with better company outcomes*

Productivity[1] (Indexed)

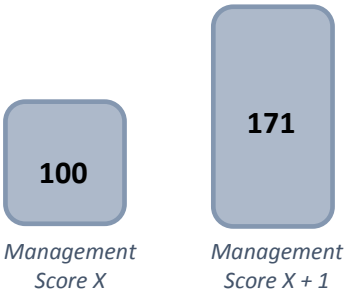


1-point improvement in management score is associated with **6% higher productivity**

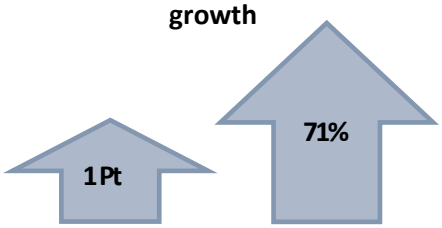


[1]Sales per employee

Market Share Growth (Indexed)

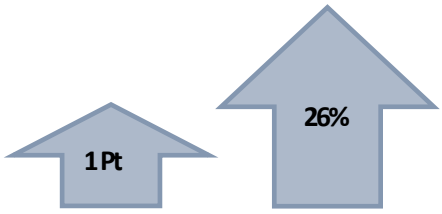


1-point improvement in management score is associated with **71% higher market share growth**



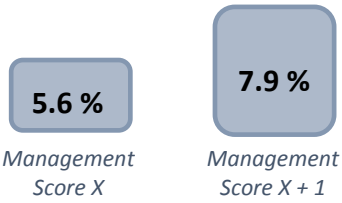
Market Capitalization[2] (Indexed)

1-point improvement in management score is associated with **26% higher market cap**

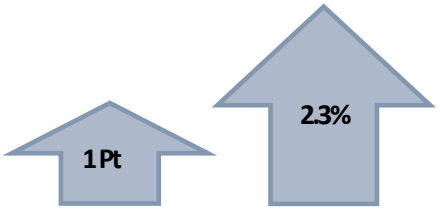


[3]Tobin's Q assuming constant book value

Sales Growth



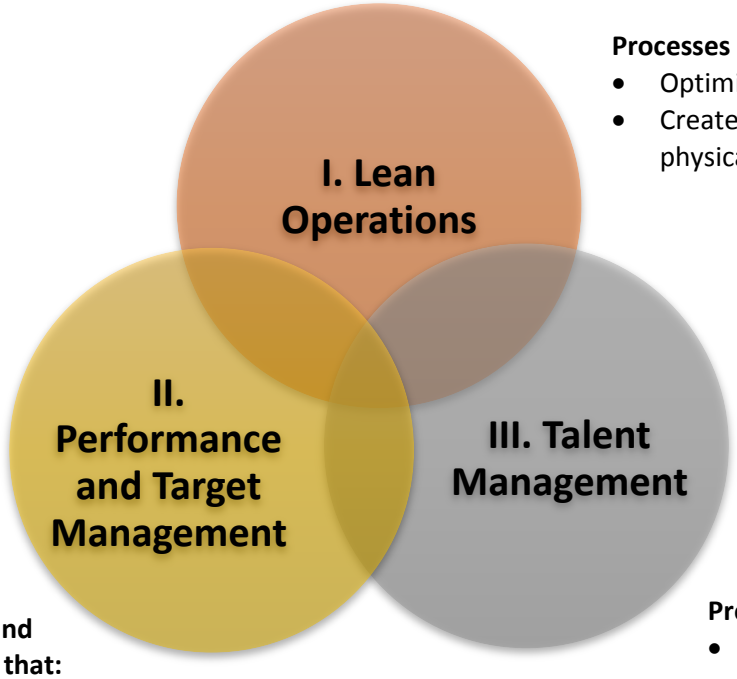
1-point improvement in management score is associated with a **2.3 percentage point increase in sales growth**



* The data in this graph uses over 6,000 firms from our sample

THE PROJECT: METHODOLOGY

To examine management practices, we conduct 45-60 minute interviews with managers in charge of production in manufacturing plants. We look at three main areas of management:



Processes and behaviours that:

- Optimise production lines
- Create maximal value from physical assets

Processes and behaviours 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

These three areas are broken down into 18 management topics, which cover each area in more depth. This allows us to examine the management of more specific parts of the plant.

Lean Operations

The first section of the interview covers the operations of the plant, and more specifically what modern processes and behaviours have been introduced to optimize production. The three principal topics addressed in this section are:

- How lean or modern processes have been introduced
- Why these processes have been introduced
- What the attitudes towards continuous improvement are

Performance and Target Management

This section is divided into 2 subsections, the first covers performance management in the plant, and more specifically how performance is measured, tracked and reviewed.

The principal topics addressed in this section are:

- How performance is tracked
- How performance is reviewed
- How differing levels of performance are managed

The second subsection deals with the targets and objectives of the company:

- Types of targets and objectives
- How the targets are broken down and communicated to the workers
- Timescale of the targets
- Motivation behind the targets

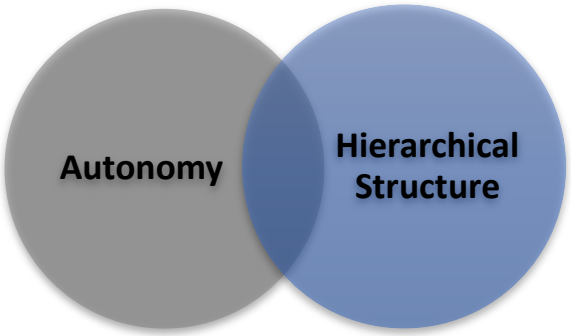
Talent management

The third section of the management questions looks at talent management within the company. The main issues covered in this section are:

- How talent is attracted and developed
- How good performance is identified, developed and rewarded
- What is done to manage underperformance

Organization Structure

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



For the **Managers** we want to understand:

- Their autonomy relating to hiring and firing workers
- Their role in the introductionm of new products
- The maximum capital expenditures they can make without signoff from corporate HQ
- Their sales and marketing autonomy

For the **workers** we want to understand:

- Who sets the pace of work in the plant
- Who decides how tasks are allocated across workers and their teams

All this is examined by considering:

- The number of levels below and above the plant manager
- Changes in the levels of hierarchy in the previous 3 years
- Span of control (how many direct reports the Manager has)

THE PROJECT: EXAMPLES

Lean Operations

Best practice example: *Lean processes are fully implemented across all areas of the firm, and have been in place for several years. Lean is part of the culture of the company, and was introduced as a means of achieving the business objectives of the company and thus be the best in the industry. The employees of the firm constantly analyse the production process as part of their normal duties. Critical areas of production are thoroughly analysed in regular meetings aimed at the continued improvement of processes in the firm. Every problem is registered in a special database that monitors critical processes and each issue must be reviewed and signed off by a manager.*

Intermediate example: *The firm has introduced some lean processes, but these are limited to a certain area in the firm, or are in start-phase. The implementation of such processes is geared towards reducing costs, and thus increasing the efficiency of the production process. Employees identify problems in the production process, and possible solutions are discussed in regular meetings involving employees and a manager.*

Weak example: *The firm has not introduced any lean or modern processes, retaining a traditional form of management. The 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 Management

Best practice example: *The firm tracks performance using a good range of indicators, which are measured formally and continuously. Records are updated automatically in computer systems which all staff can access. Various visual systems around the plant allow staff to check their performance against the indicators. Performance is reviewed is regular meetings involving the senior management, resulting in action plans for each issue raised in the meetings. The results of all meetings and the details of actions plans are communicated to all staff. Action plans are monitored continuously to ensure adequate progress.*

Intermediate example: *The firm has a range of performance indicators that are tracked daily and measured in regular meetings involving the senior management. Staff has access to performance data, which is published on the company server. This is updated monthly. The manager responsible regularly checks up action plans resulting from these meetings, with action taken to rectify potential problems.*

Weak example: *The firm tracks its performance using only volume as an indicator. Senior management sees this data, but it is not communicated to the rest of the staff. Performance is reviewed informally, with meetings being called to deal with specific problems in production. Little or no action is taken to rectify problems or delays in a plan.*

Target Management

Best practice example: *The firm has a good balance of financial and non-financial targets which are considered key to the long-term success of the firm, and which are regularly revised to reflect economic changes and ensure achievability. These goals are cascaded through the firm down to the individual worker. The goals and targets are clearly communicated to encourage individual workers to compare their performance against their targets and to encourage competition.*

Medium example: *The firm has some concrete non-financial goals that form part of the managers' appraisal, but these are not a priority. Performance measures and targets are clear and are broken down to department level. Targets are set taking into account a variety of factors that will affect their achievability, such as availability of raw materials and machine capability. Team or department performance is made public and is accessible to all staff.*

Weak example: *The firm's goals are exclusively financial and operational, and are largely of a short-term nature. The firm has general goals that are not cascaded down through the firm, staff being mostly unaware of their targets. Targets are generally surpassed, and are set based on the management's experience.*

Talent management

Best practice example: *Attracting and developing talent at all levels of the firm is formalized through targets and rewards. Both managers and non-managers are paid on a performance basis, and are given both financial and non-financial rewards for achieving their targets. Regular reviews are in place to assess each individual employee's performance, and identify the best and worst performers. Underperformers are put on performance improvement plans immediately. The best performers are given personalized career plans to develop the skills necessary for growth within the firm. The firm has a policy of offering the best opportunities for top performers within the firm, as well as for top prospective employees.*

Medium example: *Senior management in the firm believes that attracting and developing talent is important, but managers are not held accountable for it. All staff are regularly evaluated and are paid based on their individual performance. Underperformers are identified through these reviews and are removed or moved to less critical positions in the firm. The best performers are identified, and are identified as potential candidates for promotion.*

Weak example: *The firm has no system to attract or develop talent. Both managers and workers are paid equally regardless of their performance and there are no consequences for poor performance beyond some disciplinary measures (workers are never fired). The firm has not got a promotion system in place as there is very little room for growth and no one has been promoted in years.*

THE PROJECT: COVERAGE

The project began surveying Germany, France, the UK and the US, and has gradually been extended to include 33 countries across nearly all continents in the world. 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 50 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 15,000 managers for this project.

Geographic Scope of the Project

SUMMARY RESULTS

MANUFACTURING

MEMORABLE QUOTES

The difficulties of defining ownership in Europe

- ***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

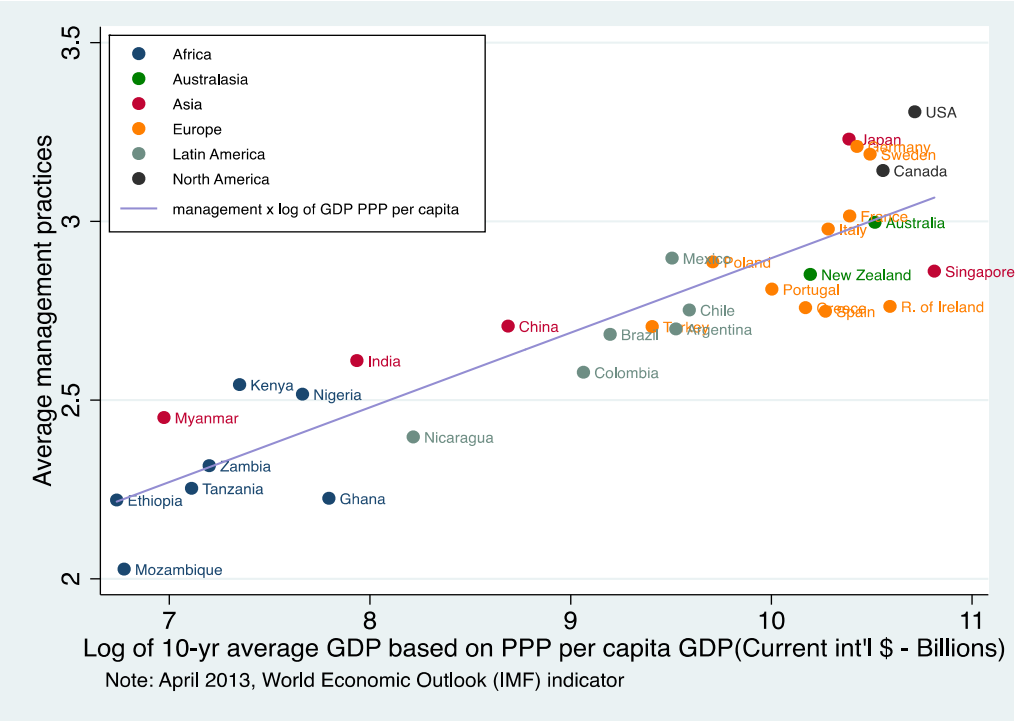
- ***Analyst**: "Would you mind if I asked how much your bonus is as a manager?"*
  ***Manager:** "I don't even tell my wife how much my bonus is!"*
  ***Analyst:** "Frankly, that's probably the right decision…"*

Others chose to withhold some information…

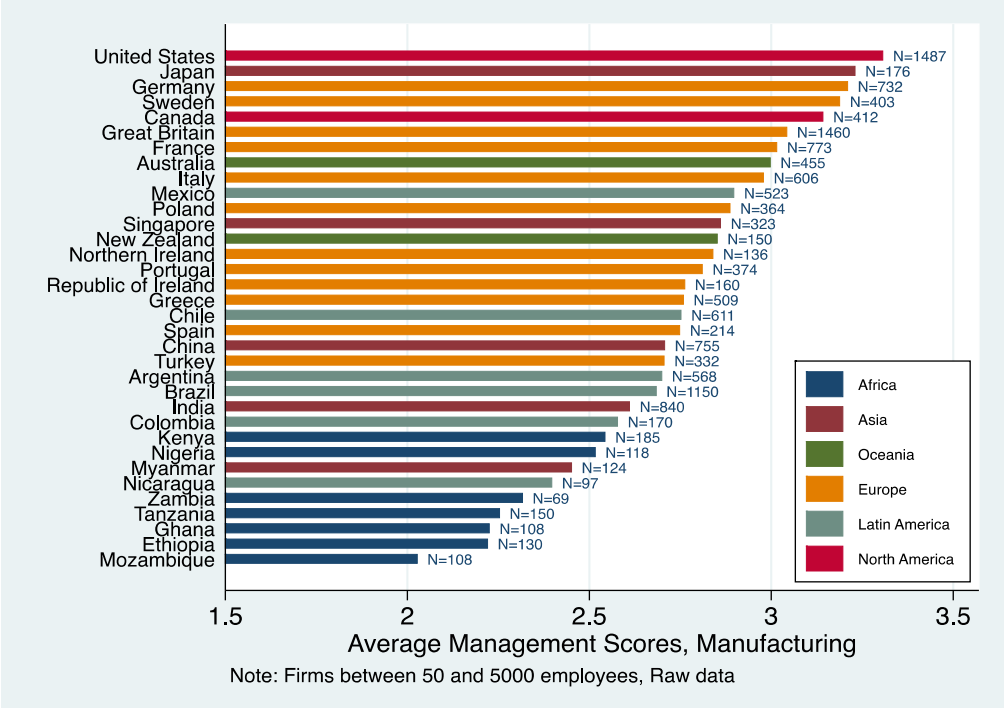
- ***Manager:** "I won't tell you what my bonus is, but suffice it to say that it is a VERY sexy bonus!"*

SUMMARY RESULTS: MANUFACTURING

There is a disparity of productivity and riches around the world, and industry makes up a big part of a country's GDP. What are some of the things that affect GDP? We see management as one of them. As expected, the countries that have higher GDP per capita also have better management.



Results vary greatly within and across industries, countries and regions. More developed economies like the United States and Japan typically have the best management, while emerging economies like Brazil and India fare less well. African and Latin American countries appear to be less well managed, on average.



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"

This is not, however, all good news for Europe and North America. Quite the contrary – this is simply a stylized fact that we can finally observe because we have data on it. Now that we observe it, we *know* that this is a great area of *current comparative* advantage, but Europe should not be complacent. Our data suggests that firms have an incredible learning capacity and when we interview the same firm across time, there is generally an improvement in the level of structured management practices. That is, it is very likely that within the next couple of decades we see significant improvements in developing countries that could erase Europe's current productivity advantage.

We would like to have this report be the first step towards this realization, and we hope that you will take some of the information in this report and think through it in a critical way. We are happy to lend a hand in helping with anything that you might need, and it is managers like you, who participate in projects that like this, who will drive the continuous improvement and drive to increased productivity over the next years.

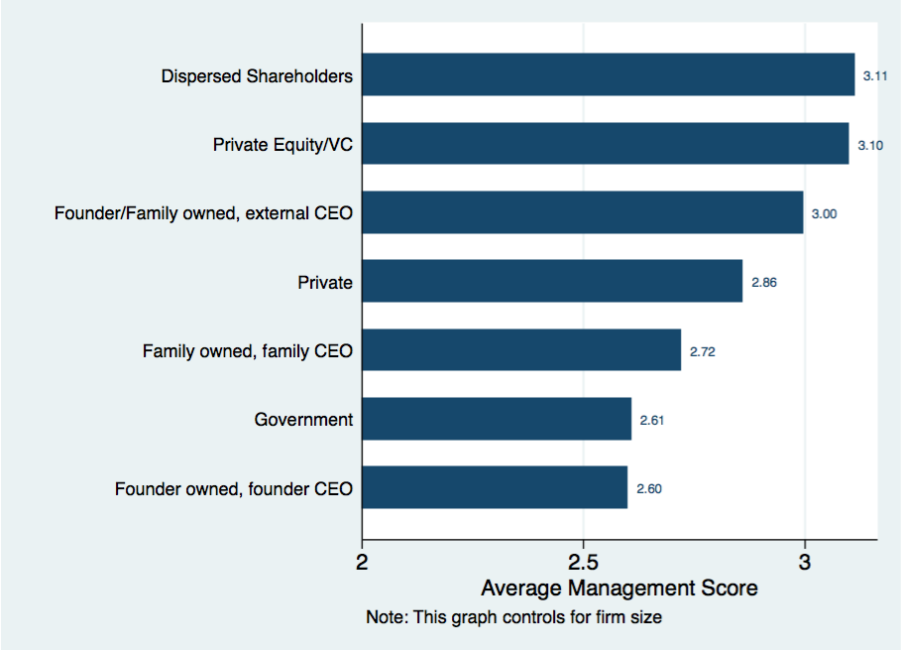
WHAT FACTORS MIGHT EXPLAIN THIS SPREAD?

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

Ownership

Management practices also vary significantly across ownership structures. The graph below includes companies from all countries surveyed, divided across ownership status.

Average management score of firms vs ownership structure



We find that firms with dispersed shareholders (no one entity owns more than 25% of the company) tend to have higher management scores. Family-owned *and controlled* firms tend to have the lowest average management scores, but interestingly when the

control is passed on to an external CEO these firms are, on average, nearly as well managed as dispersed shareholder firms. We are currently investigating further into why this could be the case, but we expect it has to do with implicit informality that arises from working in a familial environment.

We find that founder/family owned and managed firms tend to be less well managed than other firms, the key point being that founder/family ownership is not the main issue, but rather control (ie. family/non-family CEO). Founder/family firms that have a founder/family member as CEO are at the bottom of the ranking in terms of average quality of management practices, but founder/family firms with an external (non-family) CEO are just as good as other privately owned firms.

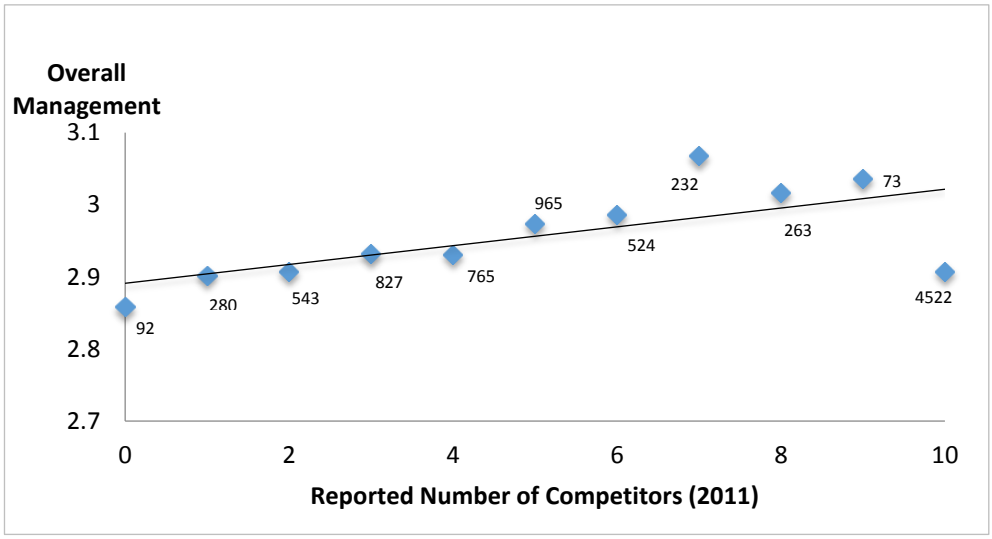
Considering that family firms are such an important feature of many countries' economies, this is a key finding in our research. This means there is an incredible productivity boost waiting to be unleashed in founder/family-owned and controlled firms. It is important to remember that we are not claiming that founder and family CEOs are categorically bad and causing the bad management in their firms. We believe this is a *key area for potential improvement* because we strongly believe that all managers are able to implement best practices, and the next step in this research agenda is to find out why these are not being implemented.

Competition

One of the reasons that the United States has practically no left tail of badly managed firms (when compared to Latin American and African countries) is that the level of competition in the US is substantially higher than elsewhere. Competition has long been pointed to as an effective driver of productivity because it forces firms with lower levels of structured management to improve or exit the market. Competition also provides firms with lots of rivals to copy and learn from. Thus, it is not surprising that competition is strongly linked with more structured management practices in every country and industry we have studied. Hence, a clear policy tool to increase management practices is increased product market competition – enabling firms to enter, removing any regulatory barriers on trade, FDI or market entry and vigorously policing anti-trust. In short, policy aimed at fostering competition should thus be given more attention.

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 the number of reported competitors and the quality of management practices within firms.

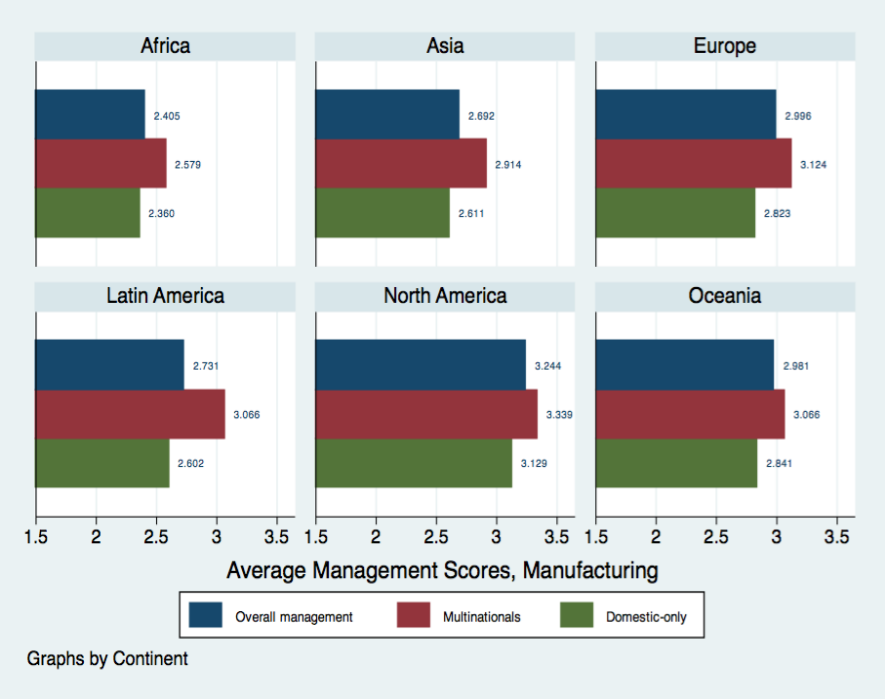
Average management vs number of competitors



Globalization

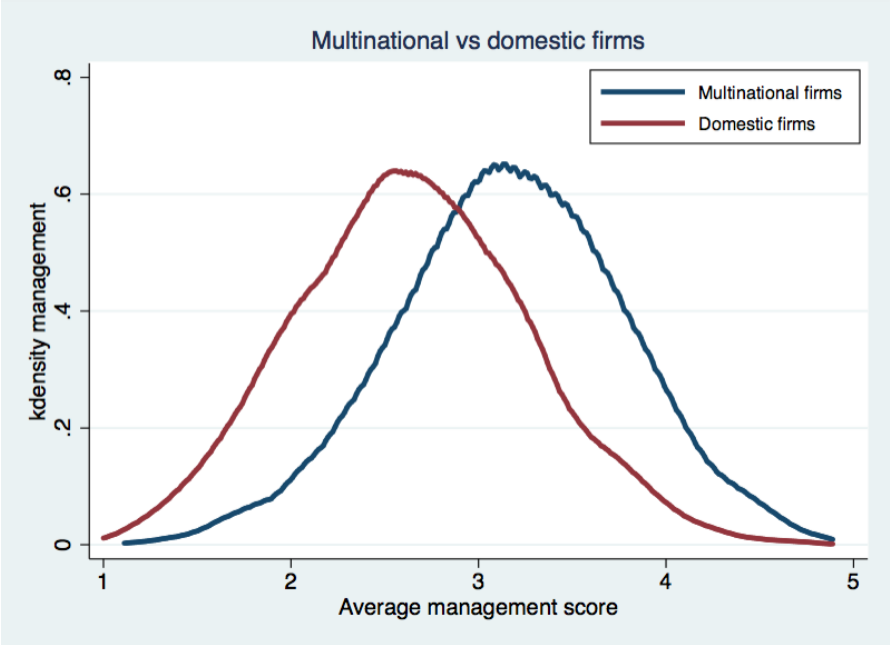
Multinational firms usually outperform domestic-focused firms on several dimensions, such as productivity, worker wages and Research and Development expenditures. Much of this push for innovation and competitiveness is a result of stiff competition in the global market. As we show above, there is evidence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

Average management scores of multinational vs domestic-only firms by continent



The higher levels of structured management on average of multinational firms can be tied to their substantially smaller share of firms with low levels of structured management – a scarce "lower tail" of the distribution, highlighted in the graphs below.

Average management scores of multinational vs domestic-only firms



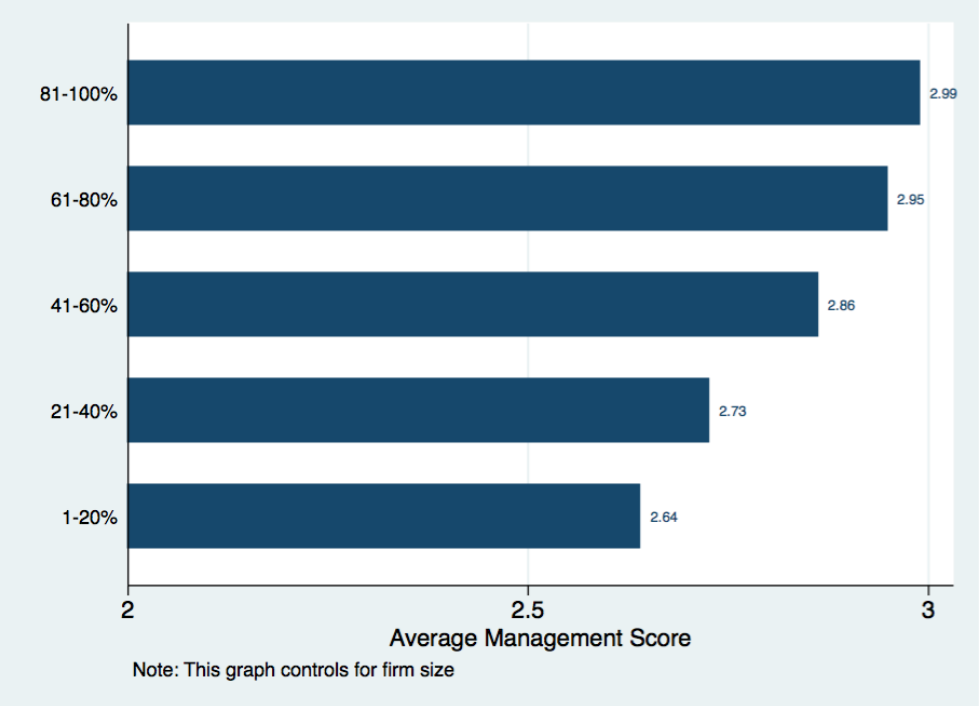
Human Capital

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 helps, but we also found an equally strong correlation between the education of the non-managers and our management scores.

We find a strong relationship between the share of managers and workers with college degrees and level of management structures. This makes sense when considering the importance of not just *knowledge* of best practices, but also of *implementation* of these best practices. Cultural changes within companies are only successful when there is understanding of these changes among employees, which is often easier to achieve when workers have higher education levels and can be included in discussions about these changes. If an employee understands how what they do on a day-to-day basis affects the company and how it affects them, they are also more likely to work harder.

Building a skilled workforce in areas where the average level of schooling is generally low can be challenging. However based on our findings, it is clear that there is an added incentive for continuing education of managers as well as employees aimed at improving workforce skills. This does not necessarily mean enrolling employees in university degrees, it can mean investing in human capital development by identifying the skills most needed and offering training and workshops to address those areas. These can be as simple as classes on how to understand numbers or classes on what the company is striving to achieve, and how the employee fits into that. For example, if the manager says "we want to increase profit margins by 10%", but the employees have no concept of what that means, it is less helpful. However, if the employee understands that, say, missing their individual production target by 2 sacks of rice in a day will reduce this profit margin by 0.5% which in turn reduces the likelihood of a wage rise, the employee would have both a better understanding of their responsibility and more motivation to reach those targets.

% of employees holding a university degree vs average management score of firms



Labour Market Regulations

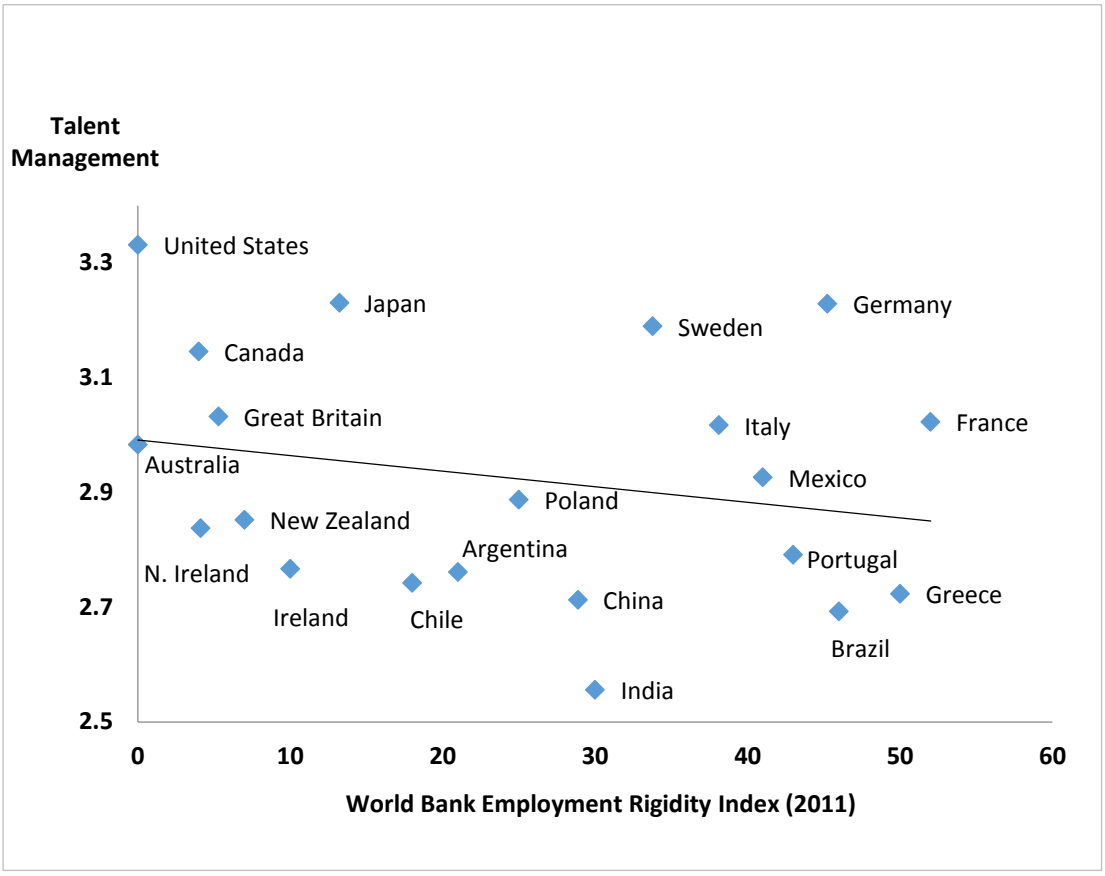
Labour regulations can often be important safeguards for workers against unfair employers; however, they can also create a very rigid labor market and cause inefficiencies within a firm.

The *Doing Business Project* provides measures of business regulations across the world. From 2009 to 2011 the World Bank ranked 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 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 practices.

Although we understand these are, of course, out of the hands of individual managers and firms, we still believe there is a benefit to introducing *at least some* structure to talent management. For example, even if the legal labour environment does not allow for firing of poor performing employees, there should be a structure in place that a) identifies who these poor performers are; b) attempts to re-train and motivate them to do better; c) if (b) fails, then rather than firing them at the very least re-locate them to a position that will not be detrimental to productivity within the firm.

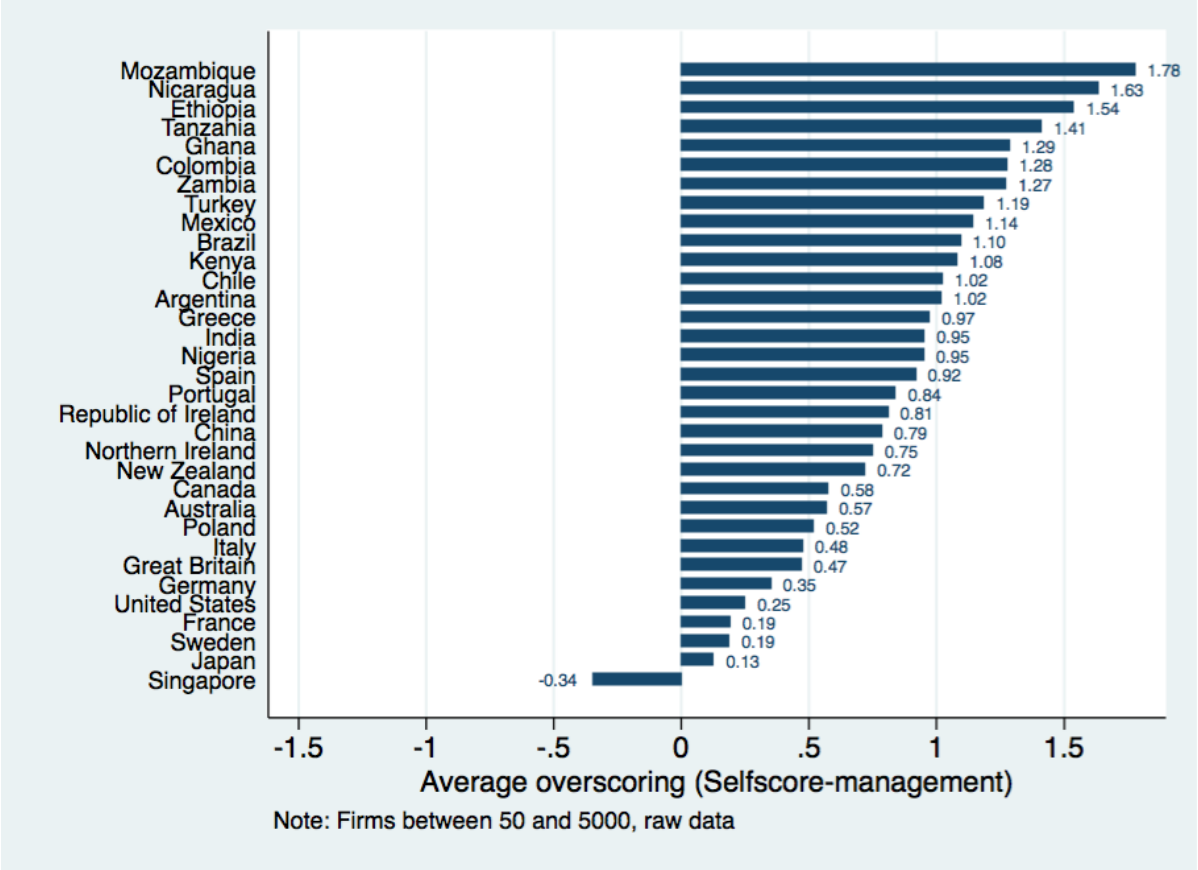
Degree of labour market regulation vs talent management scores internationally



Manager perceptions and perspectives

An important driver of levels of structured management stems from the manager's perception of the level of structured management of their establishment. The last question in our survey asks managers to score the level of the management practices in their firm on a scale of 1 to 10, and the average results are quite telling. It is obvious that managers across the globe believe the management practices followed by their establishments are substantially better than our measures would indicate. The main issue this raises is that, if managers are not aware of the opportunities for improvement, they are not likely to pursue any initiatives to do so. The gap across countries is shown below.

Information gap across countries



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)

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

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

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

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

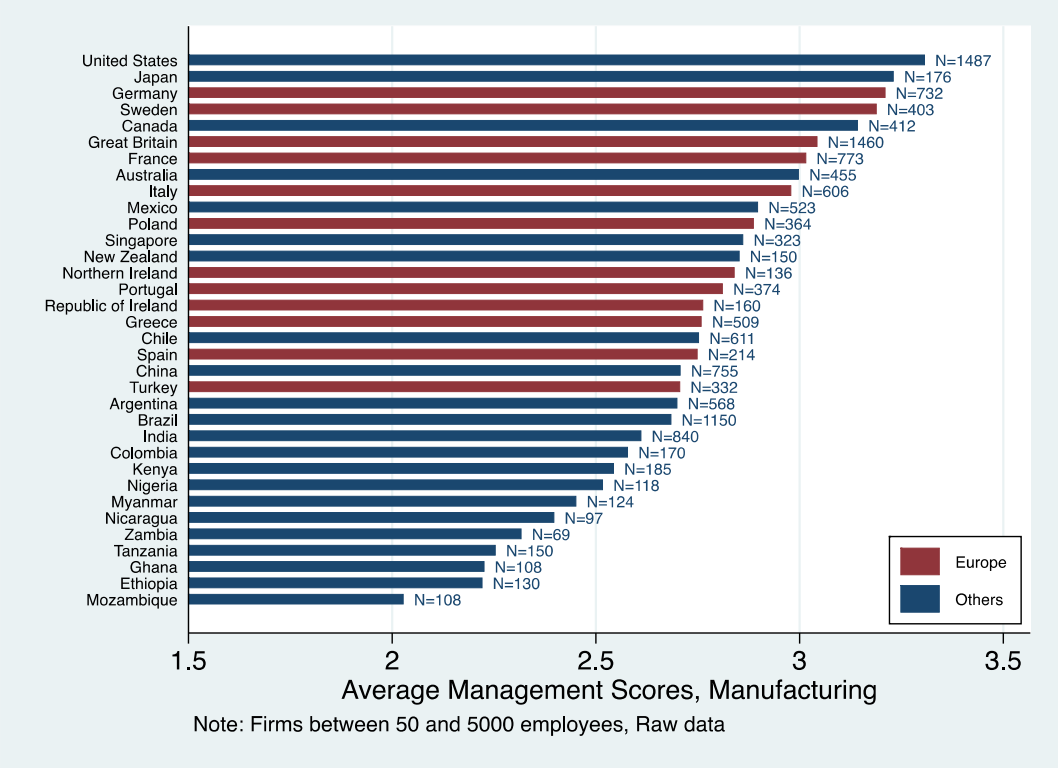
MEXICO & ARGENTINA

- 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.

REGIONAL FOCUS: EUROPE

One factor long thought to be linked to these differences is the quality of management practices implemented at the establishment level. Naturally, the management of an establishment can have a number of distinctive features. Understanding the diversity in management quality as well as its relationship with economic performance is a crucial step towards understanding the emergence and expansion of a sector, as well as its contribution to economic development as whole. However, because of dearth of good data, especially in low- and middle-income economies, it is only recently that empirical economists have started giving this topic any attention.

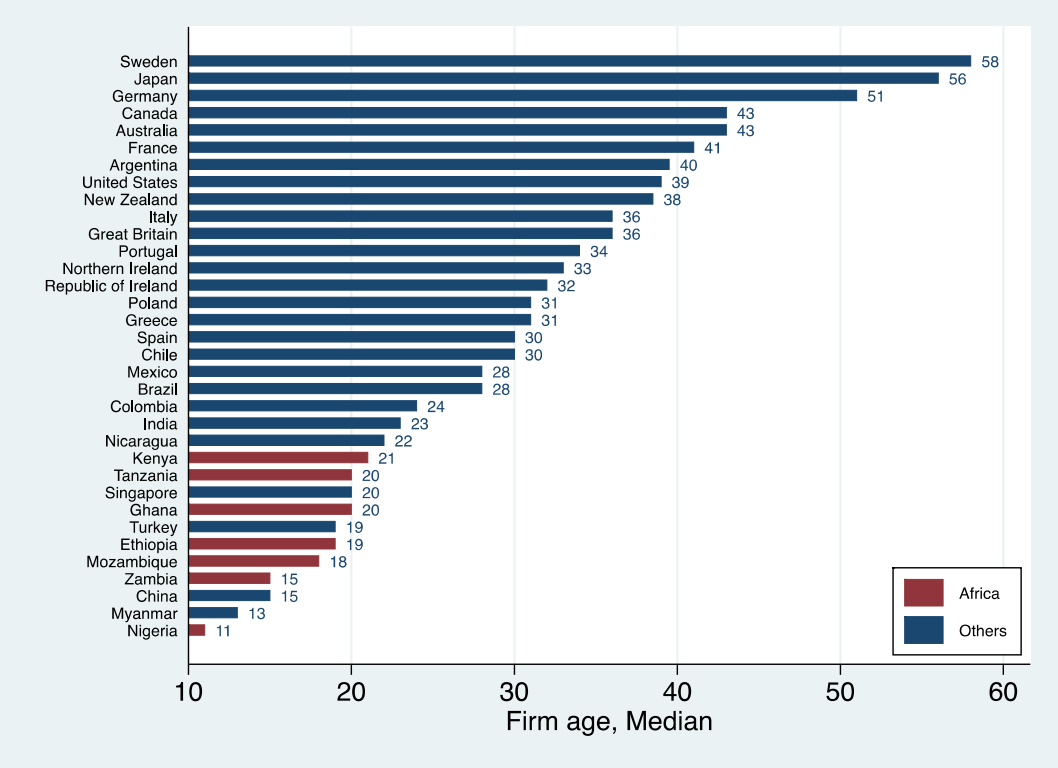
As evident from the figure below, we find management practices in Europe to be both at the average and above the average. There is a clear divide between countries in "Western Europe," such as Germany, Sweden, Great Britain and France, and those in "Southern Europe" including Italy, Portugal, Greece and Spain. Overall, however, it is also clear that Europe has more management structures in place than the average competitor firm in emerging economies such as Latin America and Asia.

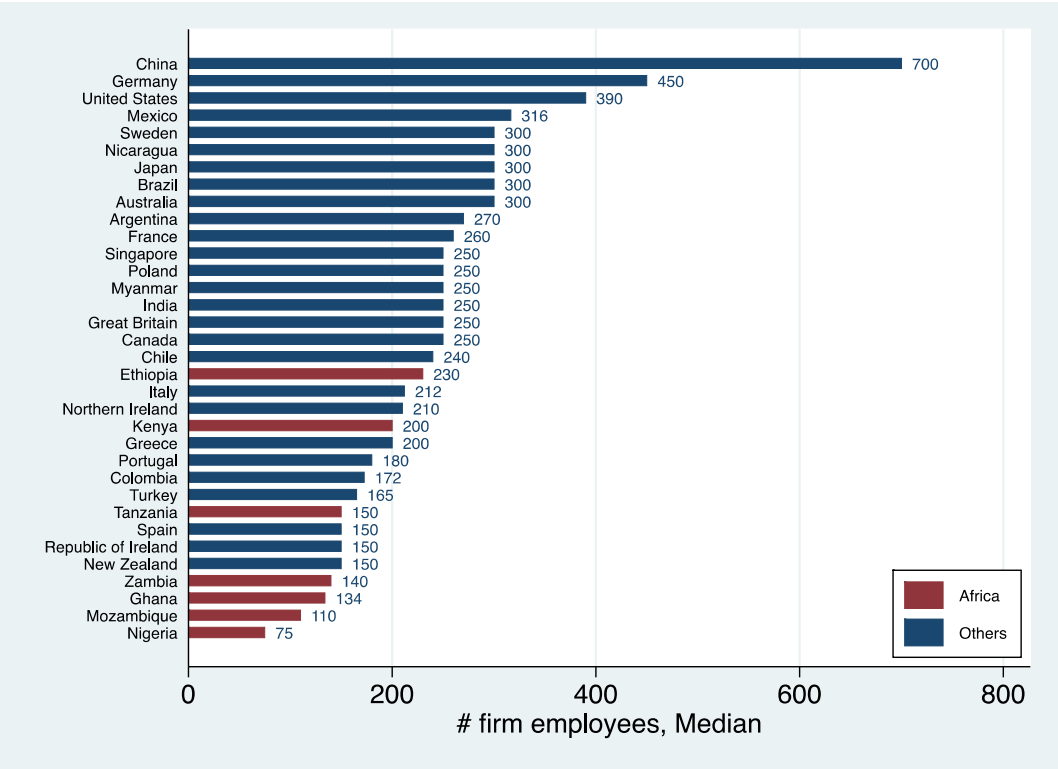


Note: Firms between 50 and 5000 employees, Raw data

But what sort of firms are we interviewing? Our survey results indicate that the median manufacturing firm in France is 41 years old with 260 employees. The median firm in Germany is 51 years old with 450 employees. The median firm in Great Britain is 36 years old with 250 employees. The median firm in Greece is 31 years old with 200 employees. The median firm in Italy is 36 years old with 212 employees. The median firm in Northern Ireland is 33 years old with 210 employees. The median firm in Poland is 31 years old with 250 employees. The median firm in Portugal is 34 years old with 180 employees. The median firm in the Republic of Ireland is 32 years old with 150 employees. The median firm in Spain is 30 years old also with 150 employees. The median firm in Sweden is 58 years old with 300 employees. The median firm in Turkey is only 19 years old with 165 employees. For comparison purposes, the median North American firm is 40 years old and has 350 employees, the median African firm is 19 years old with 150 employees, the median Asian firm is 21 years old with 400 employees, and the median Latin American firm is 30 years old with 270 employees.

Clearly, European firms are some of the oldest in the world. In terms of size, however, there is quite a wide dispersion. Firms in Spain and the Republic of Ireland are as small, on average, as the average African firm. Firms in Germany and Sweden are closer to the Asian firms, the largest continental average firm size in our sample. These are important factors because of stylized facts we have observed in the full dataset: we see a strong correlation between firm age and management (firms take a few years of maturity to fully implement practices, so younger firms tend to have less of them), and also a strong correlation between firm size and management (larger firms tend to have more structures in place).

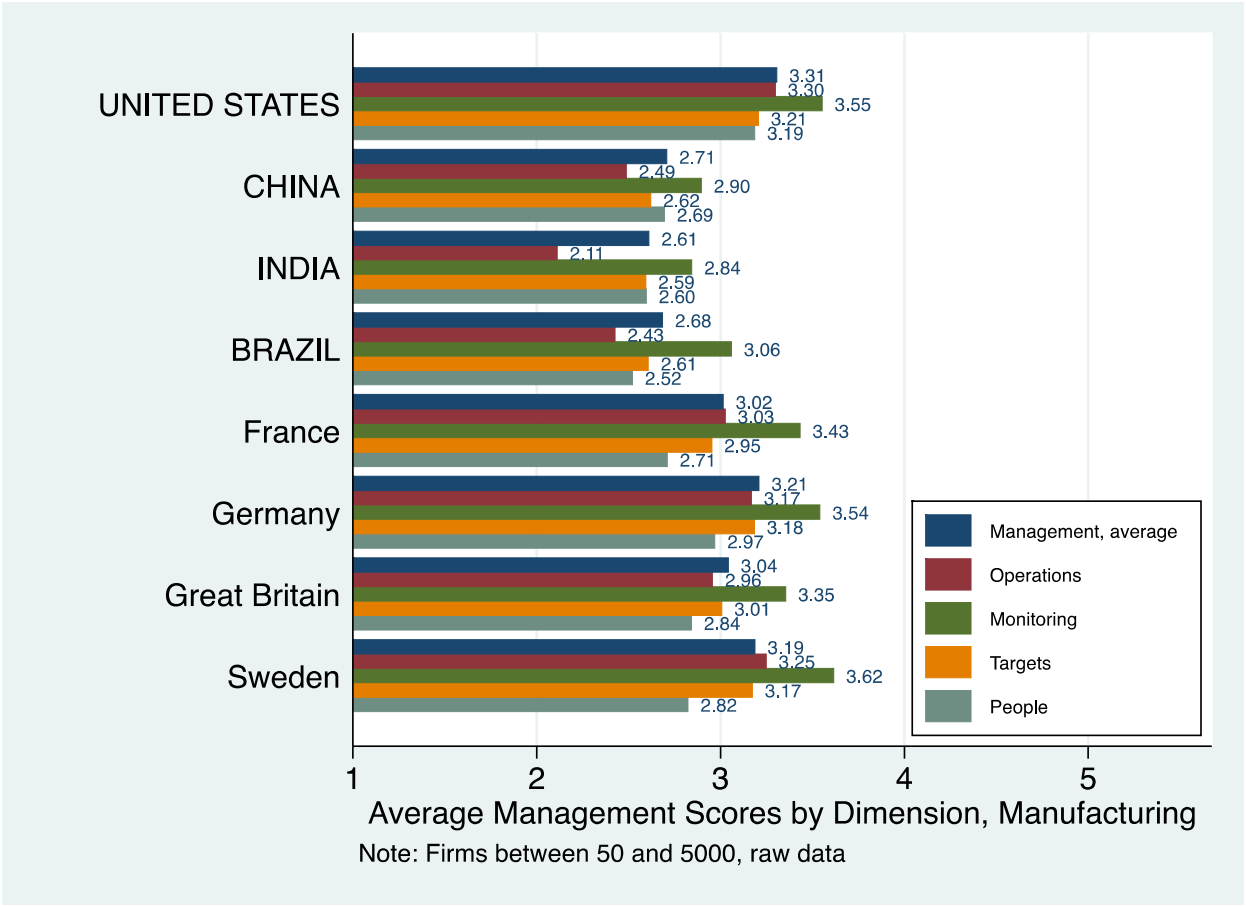




Firm performance by management area: Europe

Beyond simply looking at the average level of structured management in firms across countries, it is also important to look *within* the management index into its different components. As mentioned before, we separate the management index into four different parts: operations, monitoring, targets and talent/people management. Comparing Europe with some of the fiercest competitor markets, the US, China, India and Brazil, "West" European countries fare quite well, often nearly matching the leader, the US. Again, it is important to understand where the current disadvantage of emerging economies lies, and look to continue improving to maintain the advantage on those areas as well as focusing on the areas where the main competitors are catching up.

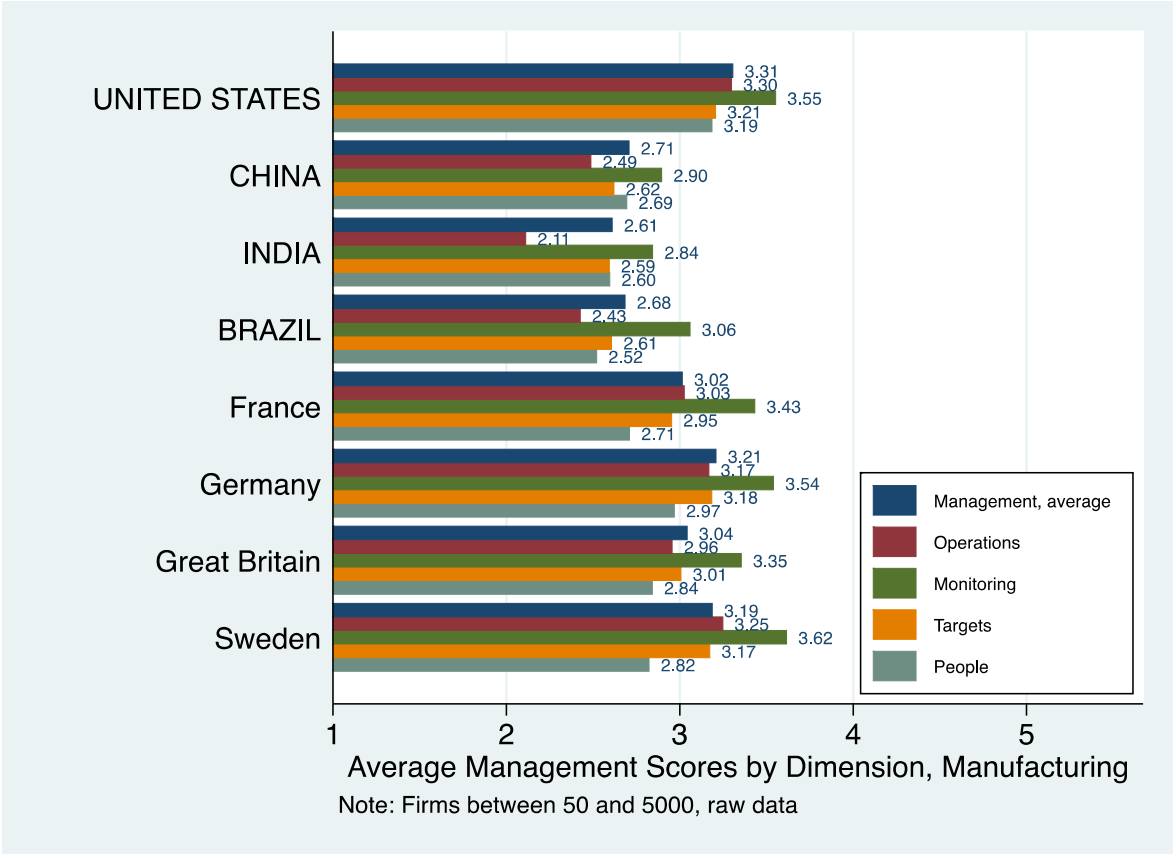
Operations measures the degree to which modern manufacturing processes have been implemented as well as the rationale behind implementing these practices. **Europe's average score in operations is 2.94.** An average score of 2.94 implies that a good set of modern manufacturing processes have been implemented, mostly formally but with some weaknesses. Further, this score implies that firms consider more than simply profits (ie. "the bottom line") as a reason to implement these practices, and are starting to understand the importance of being "ahead of the curve" when it comes to innovative practices. Often firms may implement these to follow what other firms have done in order to "stay in the game."



In terms of monitoring, **the average score for Europe is 3.29.** This implies that the average firm has a good set of key performance indicators (KPIs) and data on these is collected on a regular basis, though probably not quite often enough (ie. weekly or bi-weekly) and they generally are only available to senior managers. It also implies there is a regular manager meeting in place to review these KPIs, but while the structure and timing of the meetings is formal, communication of results to other employees is still informal and incomplete. For a score of 4 or higher in this management area there should be a good set

of KPIs that are measured as continuously as possible and the main ones are displayed on the shop floor so all employees can see them. These are then reviewed at least weekly in a regular and structured management meeting, where problems are identified and root causes found and dealt with. The results of these meetings are then clearly communicated to (and understood by!) the rest of the staff to ensure continuous improvement.

The average score for Europe for target-setting is 2.93. This implies that the average firm tends to have a formal set of targets, but that these targets that are perhaps 'broad objectives' rather than actionable and measurable targets with clear time frames. For a score of 3 or above in target-setting firms also need to have a good rationale for benchmarking their targets such that these targets are economically important, and challenging yet achievable for the managers and employees. However, this later point is naturally harder to achieve if the targets are not measurable and actionable in first place. Further, firms need to also have a system where all employees not only understand the targets, but also understand their role in achieving these targets. For example, having a target that is clear and actionable such as "Increase ROCE by 1% in the next fiscal year" is very good in terms of being measurable, concrete and with a timeline attached, but it would only be clear if the employee understands the concept of ROCE. For a better score here there should be a link created between this target and individual employees' day-to-day responsibilities.

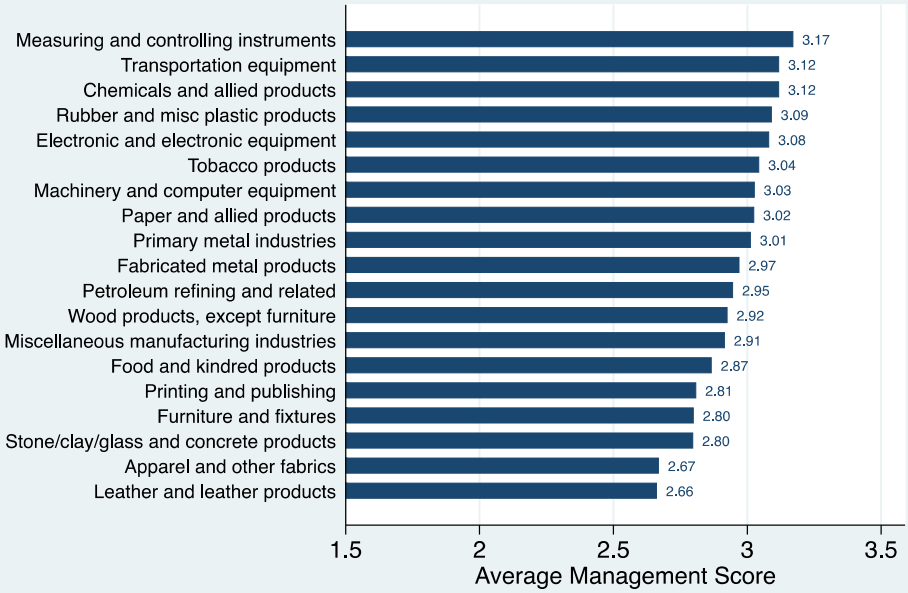


Finally, **the average score for people management in Europe is 2.77.** This implies that the average firm is not quite proactive enough in dealing with poor performers or high performers. With poor performers, a score between 2 and 3 implies that the average firm has an informal system of identifying poor performers and that they stay in their role without much consequence for a while before they are identified. Once they are identified, however, there is a system in place that eventually allows managers to move them from their role into another role, but this process is usually lengthy and not always well documented. Further, a score of 2.77 implies that the average firm is not aware of the importance of attracting and keeping talented people in their firm, offering very few *differential* opportunities to their top staff and doing little to try and maintain their best people. The manager may try to do many things informally, but there is no set process to handle these different levels of employee productivity.

Firm performance by industry: Europe

Another important stylized fact that has arisen from our research is that, within manufacturing, there are some sub-industries that on average tend to have higher or lower levels of structured management. Generally high-tech sub-industries such as electronics and computers seem to have more management structures in place, while lower-tech industries such as furniture and textiles are at the lower end of the management score ranking.

When we look at the types of industries in Europe, the pattern of higher average scores starts to become clearer. Particularly in comparison with emerging economies, the mix of sub-industries that dominate the European sample tend to be higher-tech and better managed (on average) than the mix of sub-industries in these other countries. In particular, the top five best-managed sub-industries in the European sample make up 35.5% of the sample, while the bottom 5 worst managed sub-industries account for only 14.3% of the sample.



Note: This graph controls for firm size and uses ONLY the data points for Europe.

CONCLUDING POINTS

If we accept the link between firm management and productivity, these findings suggest that poor management practices could be a factor behind the lower levels of productivity in many countries. This is also an opportunity for policy development: many improvements in management practices can be effected with relatively low capital investment, which is particularly important in low- and middle-income economies such as those in Africa.

Understanding the drivers of better management in establishments is a fruitful area for policy development. The main policy relevance of this academic work stems from the fact that many of the best practice management changes do not require a high level of physical capital investment, but rather an investment on the part of the owners/managers to drive a deep culture change within their firm to change *processes* of doing things.

We hope this report will serve as a first step towards critically assessing the management structures in place in your firm, and we greatly welcome any comments and views you would like to share. As mentioned in the opening letter of this report, please get in touch with us at cep.managementproject@lse.ac.uk with your comments and questions.

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