

Institute for

COMPETITIVENESS & PROSPERITY



UNIVERSITY OF
CAMBRIDGE

STANFORD
UNIVERSITY



MANUFACTURING MANAGEMENT GLOBAL STUDY 2008

OVERVIEW

1. INTRODUCTION

2. EXAMPLES

3. PRELIMINARY RESULTS

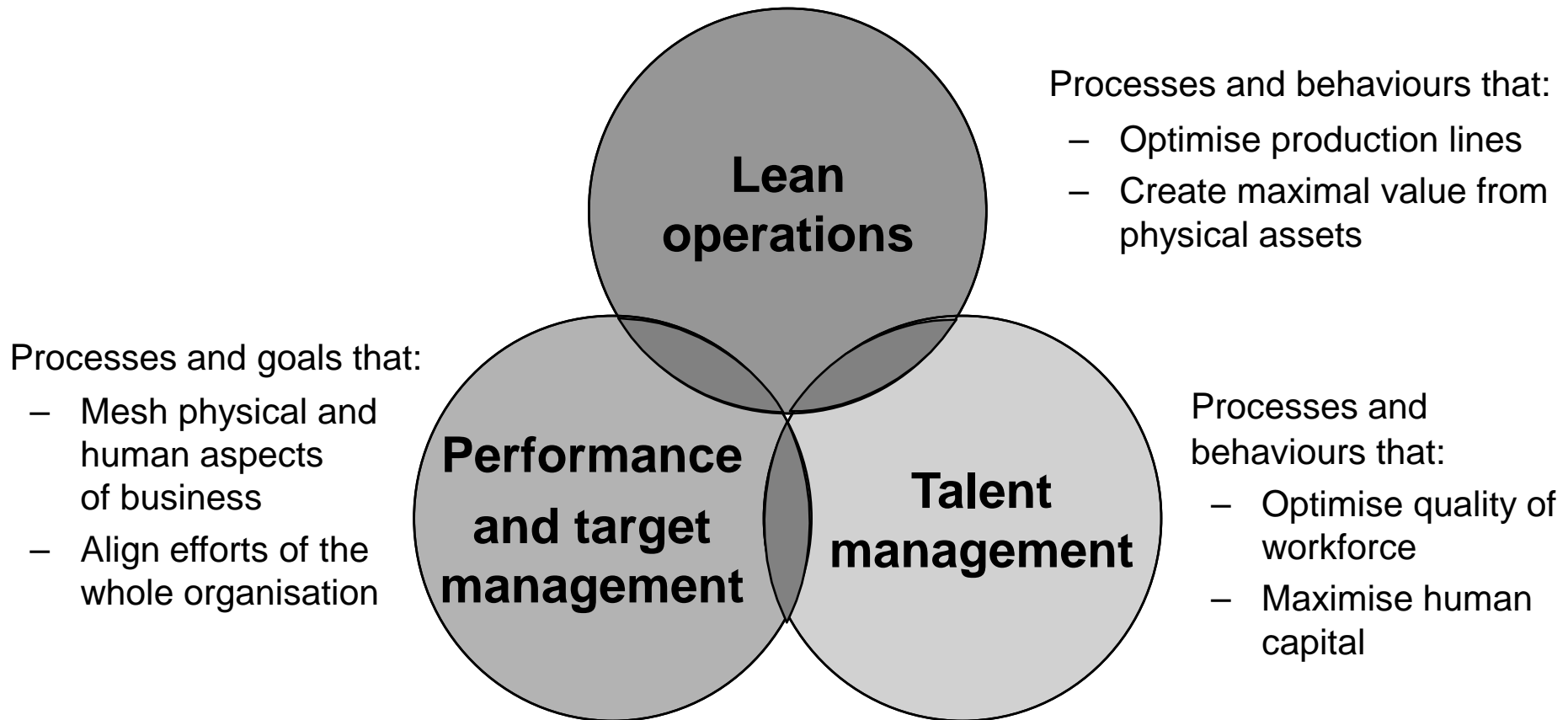
4. QUOTES

THE PROJECT

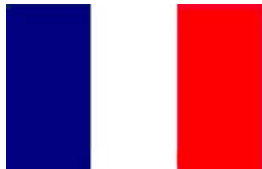
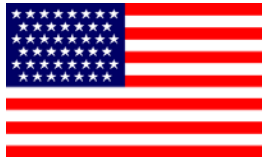
- A joint London School of Economics, Stanford University and Cambridge University project at the Centre for Economic Performance researching management practices in 15 countries.
- The aim of the project is to document management and organisational differences around the world.
- Collected in depth interviews on management practices with >5000 companies randomly chosen from a sample of manufacturing firms.
- All data is confidential. No companies or people are ever mentioned. No financial figures discussed – only management practices.
- This research is endorsed by twenty five Central Banks, Finance Ministries and Employers Federations around the world.

INTERVIEW METHOD

Interviews of about 45 minutes were conducted to examine managerial practices in three main areas



SAMPLE OF 15 COUNTRIES ACROSS 4 CONTINENTS



**Brazil
Canada
China
France
Germany
Greece
India
Ireland
Italy
Poland
Portugal
Sweden
Japan
United States
United Kingdom**

OUR INTERVIEWERS

60 MBA, MSc and PhD students from leading business schools with extensive background and ongoing training in operations management and the manufacturing industry.

Universities represented include:

Cambridge

Harvard

Stanford

Berkeley

London Business School

INSEAD

Toronto

Oxford

Yale

MIT

Northwestern (Kellogg)

London School of Economics

HEC

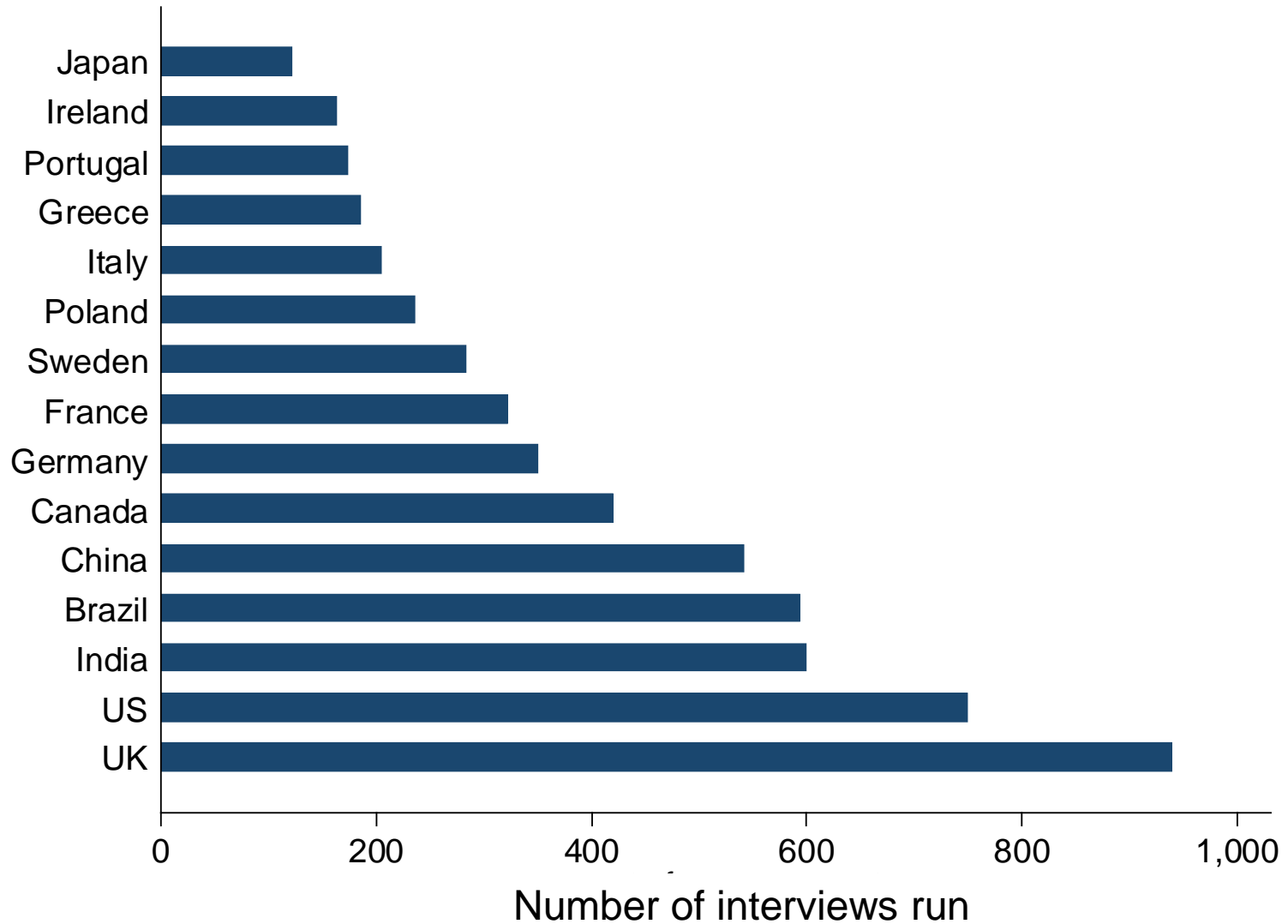
Queens

A WHOLE RANGE OF DIFFERENT FIRMS INTERVIEWED

Sample includes several types of manufacturing firms, including:

- Privately held
- Publicly listed
- Founder owned
- Family owned and family managed
- Family owned and professionally managed
- Cooperatives/Employee owned
- Government owned
- Private equity or venture capital
- Multinationals

COVERING A WORLD-WIDE GROUP OF COUNTRIES



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TOP FIRMS HAVE A FORMAL PROCESS OF PROBLEM SOLVING TO ENCOURAGE CONTINUOUS IMPROVEMENT

Good examples

The employees of a European 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.

Poor examples

An American firm has no formal or informal mechanism in place for either process documentation or improvement. The manager admitted that production takes place in an environment where nothing has been done to encourage or support process innovation.

An Asian plant manager revealed that workers on the line are not encouraged to act independently. They are expected simply to do their production jobs with no incentives or mechanisms for suggesting process improvements.

TOP FIRMS PROVIDE REGULAR VISUAL PERFORMANCE INFORMATION TO ALL MANAGERS AND EMPLOYEES

Good examples

An American firm has screens in view of every line. These screens are used to display progress on daily targets and other performance indicators. The manager meets shop floor employees every morning to discuss the previous day and the one ahead and uses monthly company meetings.

Another American firm stamps canteen napkins with key targets when these are met.

Poor examples

A manager of an American firm tracks a range of measures when he does not think that output is sufficient. He last requested these reports about 8 months ago and had them printed for a week until output increased again.

A European firm keeps track of the number of minutes spent in production, number of parts produced per day and number of workers. This information is infrequently shared with the line workers and typically sits on the plant manager's desk.

WELL MANAGED FIRMS HAVE DAILY UPDATED VISUAL DISPLAY BOARDS AT EACH STAGE OF THE PRODUCTION

Electronic board



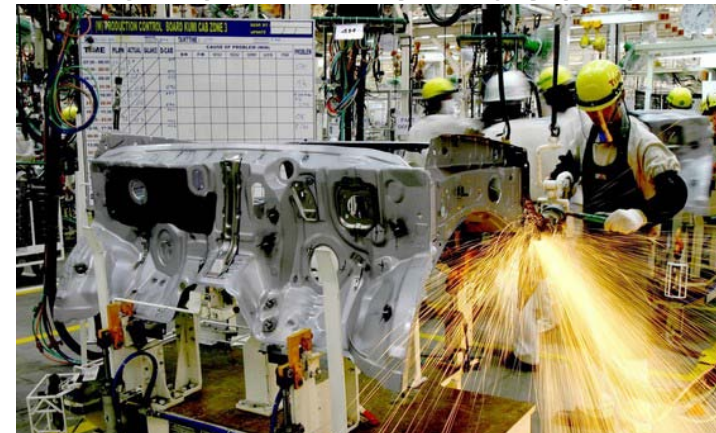
Hand written board



Manually updated board



Hand written board



TOP FIRMS HAVE A STANDARDISED JOINT PROCESS FOR ANALYSING REGULAR PERFORMANCE MEASURES

Good examples

A European firm tracks all performance numbers in real time (amount, quality, etc). These numbers are continuously matched to the plan on a shift-by-shift basis. Every employee can access these figures on workstations on the shop floor. If scheduled numbers are not met, action for improvement is taken immediately.

An Asian firm has regular meetings in which focused action plans with precise time frames are created. These parameters are discussed in daily meetings with the shop floor team leaders and workers.

Poor examples

A manager of an American firm relies heavily on his gut feeling for the business. He will review costs when he thinks they have too much or too little stock. He admits that as he is very busy, such a review can be quite infrequent. He also mentioned that staff feel like he is going on a hunt to find a problem, so he has now made a point of highlighting anything good that he finds too.

TOP FIRMS FIX EMPLOYEE PROBLEMS RAPIDLY: BY TRAINING AND THEN ROTATION OR EXIT IF THIS FAILS

Good examples

A European firm takes action as soon as a weakness is identified. They have even employed a psychologist to improve behaviour within a difficult group. People receive ongoing training to improve performance. If this doesn't help, they move them to other departments or even fire individuals if they repeatedly fail to meet agreed targets.

Poor examples

A European firm takes no action when objectives are not achieved. The President personally intervenes to warn employees but no stricter action is taken. Cutting pay or making people redundant because of a lack of performance is very rarely done.

TOP FIRMS HAVE SHORT- AND LONG-RUN TARGETS THAT ARE EXPLICITLY INTEGRATED

Good examples

A European firm translates all their goals – even their five year strategic goals – into short-term goals so that they can track their performance. They believe that it is only when you make someone accountable for delivery within a sensible timeframe that a long-term objective will be met. They think it is more interesting for employees to have a mix of immediate and longer-term goals.

Poor examples

A European firm has had several years of ongoing senior management changes – therefore senior managers are only focusing on how the company is doing this month versus the next, believing that long-term targets will take care of themselves.

TOP FIRMS SET VERY TOUGH, BUT ACHIEVABLE TARGETS CASCADED DIRECTLY FROM OVERALL FIRM TARGETS

Good examples

A manager of a European firm 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.

Poor examples

A European 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 work people harder.

An Asian firm sets very easy targets that are always achievable, with growth as their rationale. The production manager proclaimed, "We are not pushed by the target, we pull the target towards us."

TOP FIRMS HAVE SYSTEMS FOR REGULAR APPRAISAL AND REWARDS

- GOOD PERFORMANCE IS REWARDED

Good examples

An American firm stretches employees with ambitious targets. Performance is rewarded through bonuses, team lunches cooked by management, family picnics, movie and dinner vouchers at nice local restaurants, etc. They also incentivise staff with awards for perfect attendance, best suggestion, etc.

An American firm has regular and random appraisals for all employees. They offer annual profit sharing with a strong environmental focus. For example, the plant's recycling money goes towards the employee fund for activities such as fishing trips.

Poor examples

A European 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 pay.

A European firm has no appraisal or bonus scheme for hourly workers. Their reward consists of an occasional case of beer.

TOP FIRMS MOVE RAPIDLY TO DEAL WITH UNDER-PERFORMANCE

Good examples

At an American firm, the manager fired four people in the last couple of months due to underperformance. They continually investigate who is underperforming and why.

An American manager explained a detailed attendance policy outlined in the company's handbook. If a worker were to break this policy or any other, they would receive a verbal warning and an evaluation after 30 days. If their performance had not improved, their employment would be terminated immediately.

Poor examples

A European firm had a supervisor who was regularly drinking alcohol at work but no action was taken to help him or move him to a less critical role. In fact no employee had ever been laid off in the factory. According to the plant manager, Human Resources kicked up a real fuss whenever management wanted to get rid of employees, and told managers their job was production not personnel. The only way he could get rid of employees from his factory was to transfer them to the other factory in the same firm.

TOP FIRMS FORMALLY TRACK THEIR BEST EMPLOYEES AND WORK HARD TO KEEP THEM

Good examples

An American firm knows who its top performers are and if any of them signal an interest in leaving, it pulls in senior managers and even corporate HQ to talk to them and try and persuade them to stay. Occasionally they will increase salary rates if necessary and if they feel the individual is being underpaid relative to the market. Managers have a responsibility to try to keep all desirable staff.

An Asian firm offers up to 100% education reimbursement for their top performing factory workers.

Poor examples

A European firm lets people leave the company if they want. They do nothing to keep those people since they think that it would make no sense to try to keep them. Management does not think they can keep people if they want to work somewhere else. The company also will not start salary negotiations to retain top talent.

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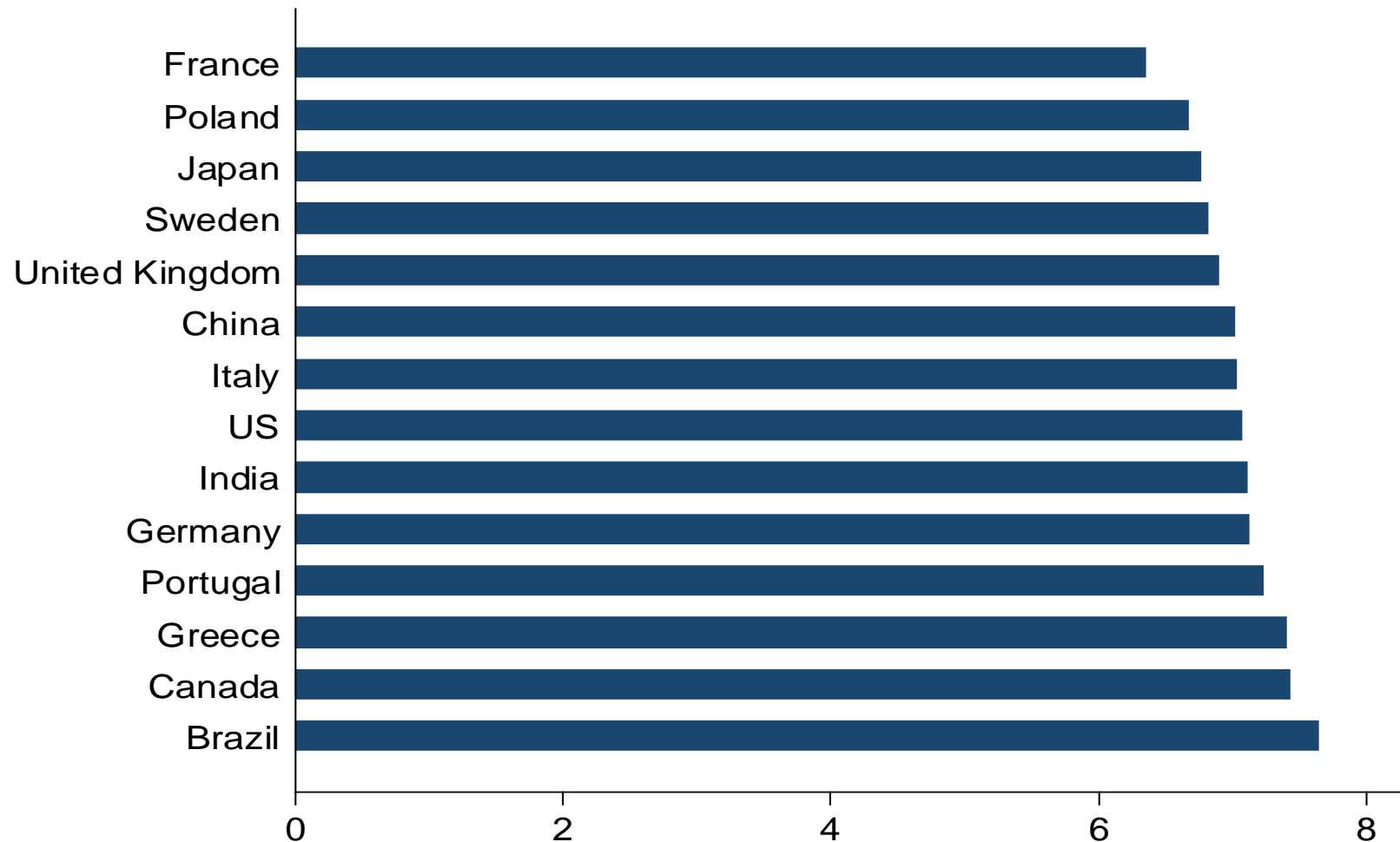
WE USED THE INTERVIEW RESPONSES TO UNDERSTAND AND CODIFY MANAGEMENT ACROSS COUNTRIES

- We document a wide range of responses on managerial practices across all 15 countries
- There are obvious strong cultural differences and significant variation in management styles
- Our international team of industry and academic experts made great effort in trying to organise and codify those responses
- Key objective is to use this information for an unprecedented cross-country comparison of management and organisational practices
- This will help understand strengths and weaknesses in the adoption and implementation of modern managerial tools in various manufacturing industries
- At the same time, it will also help managers to identify opportunities and threats in the global economy

WHILE THE AVERAGE MANAGERS THINK THAT THEIR FIRM'S MANAGEMENT IS WELL ABOVE AVERAGE



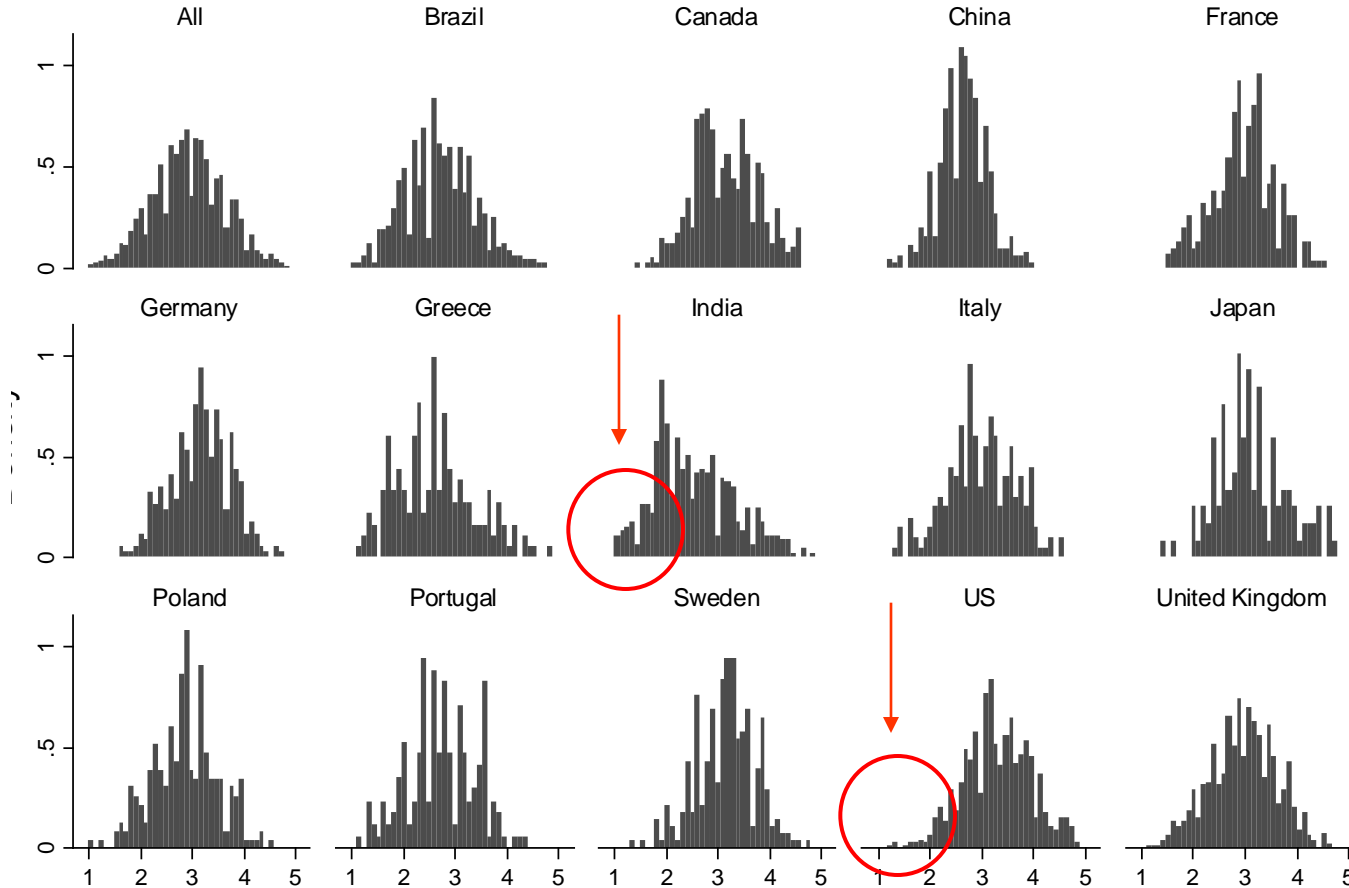
AND THIS OVER-CONFIDENCE OCCURS IN EVERY COUNTRY IN OUR SAMPLE



Note: 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 REALITY IS THAT THERE IS A HUGE VARIATION IN MANAGEMENT PRACTICES ACROSS COUNTRIES

Distribution of firm level management scores, by country*

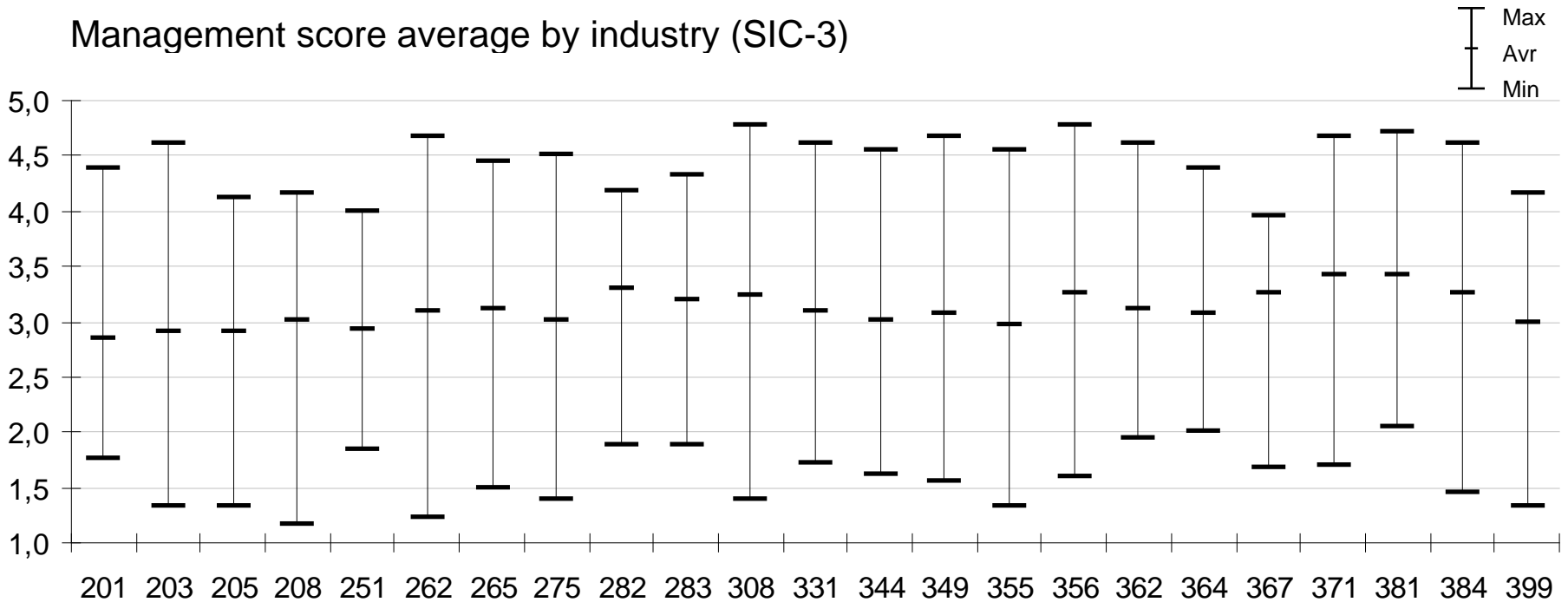


There are fewer badly managed firms in countries that are better managed on average (e.g. a smaller “tail” of poor performers in the US compared to India)

*Note: Based on giving an approximate overall score to each firms interview response.

THERE IS ALSO A HIGH LEVEL OF VARIATION IN MANAGEMENT PRACTICES WITHIN INDUSTRIAL SECTORS

Management score average by industry (SIC-3)



Top 5

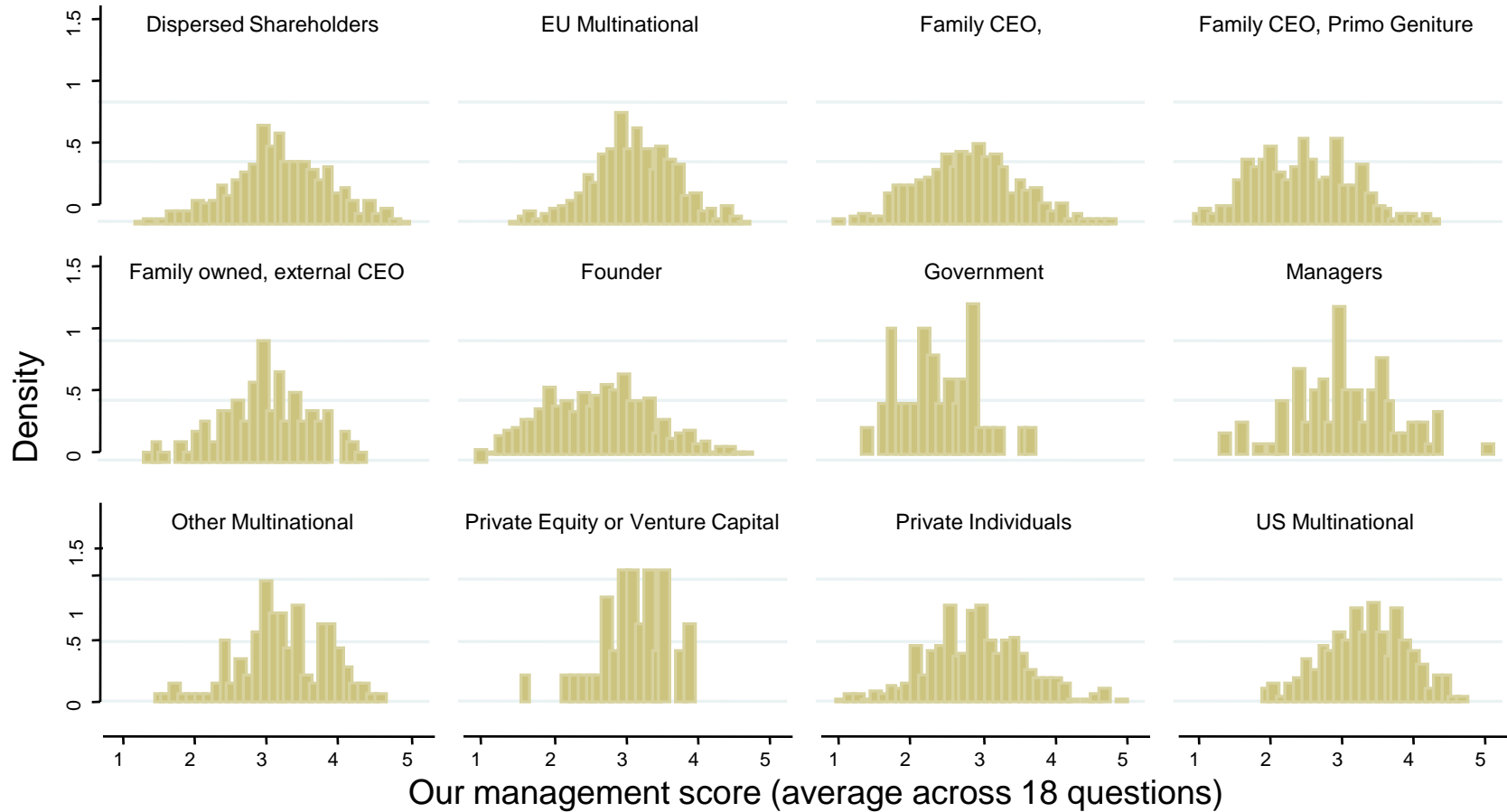
Sic Code	Industry
371	Motor Vehicles and Equipment
381	Search and Navigation Equipment
282	Plastics Materials and Synthetic
356	General Industrial Machinery
384	Medical Instruments & Supplies

Bottom 5

Sic Code	Industry
355	Special Industry Machinery
251	Household Furniture
205	Bakery Products
203	Preserved Fruits and Vegetables
201	Meat Products

MANAGEMENT PRACTICES ALSO DISPLAY A WIDE SPREAD WITHIN OWNERSHIP CATEGORIES

Distribution of firm level management scores, by type of ownership*



*Note: Based on giving an approximate overall score to each firms interview response.

ORGANISATIONAL PRACTICES ACROSS COUNTRIES

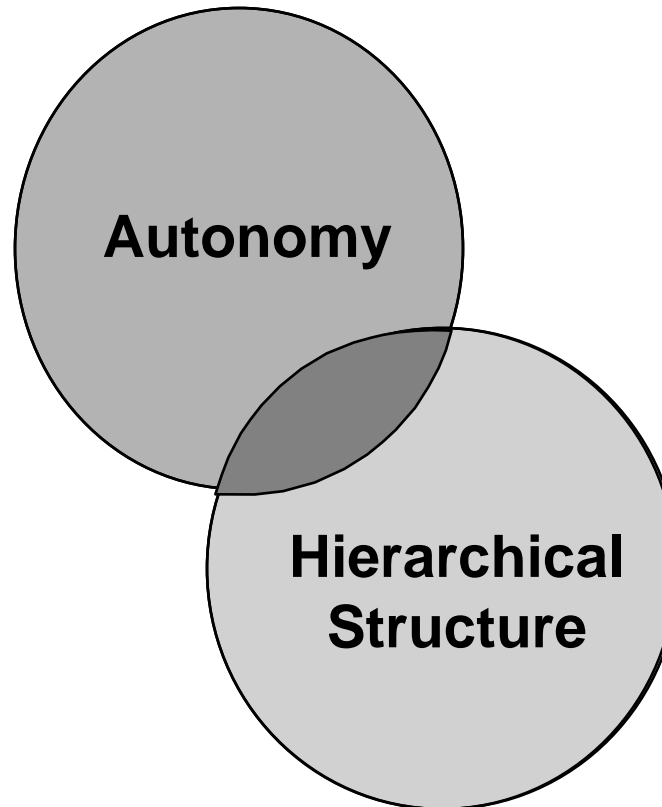
In the second phase of our interviews, we asked questions about firms' organisational aspects:

Plant managers:

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

Workers:

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



- Number of layers below and above plant manager
- Changes in layers in the last three years
- Span of control (*How many people report directly to the plant manager?*)

WHAT FACTORS MIGHT EXPLAIN THIS SPREAD OF MANAGEMENT PRACTICES?

➤ Globalisation

➤ Competition

- Investment from multinationals force badly run firms to improve or exit

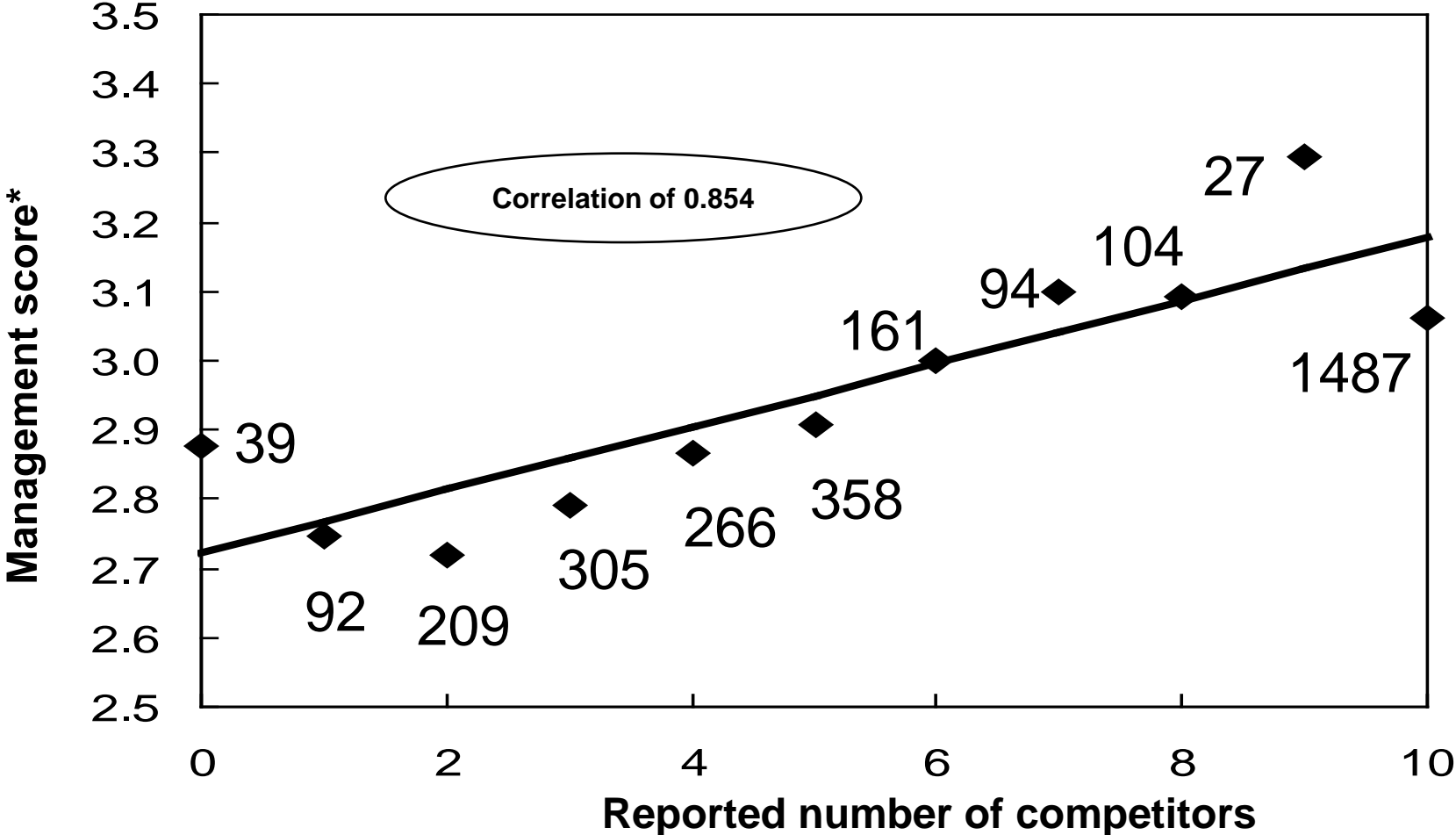
➤ Education

- Skill levels of managers and workers

➤ Regulation

- Labour markets, bankruptcy rules and ease of restructuring

HIGHER COMPETITION IS ASSOCIATED WITH BETTER MANAGEMENT PRACTICES

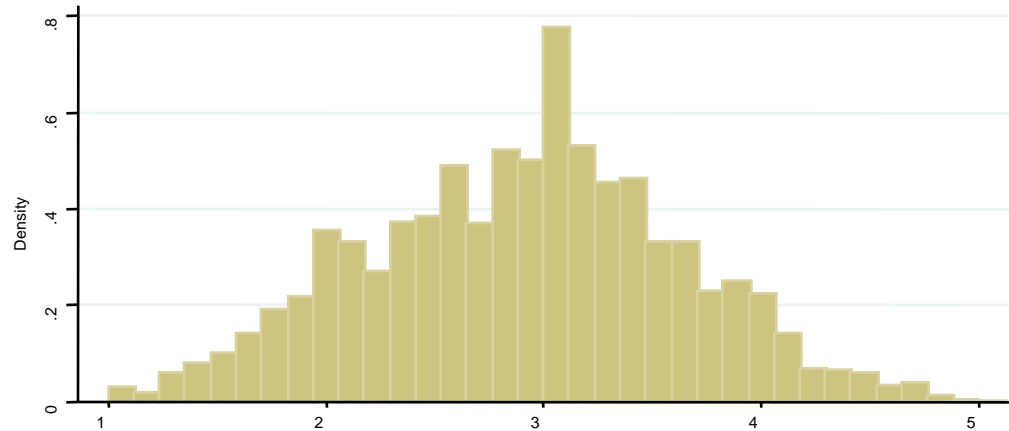


*Note: Based on giving an approximate overall score to each firms interview response.

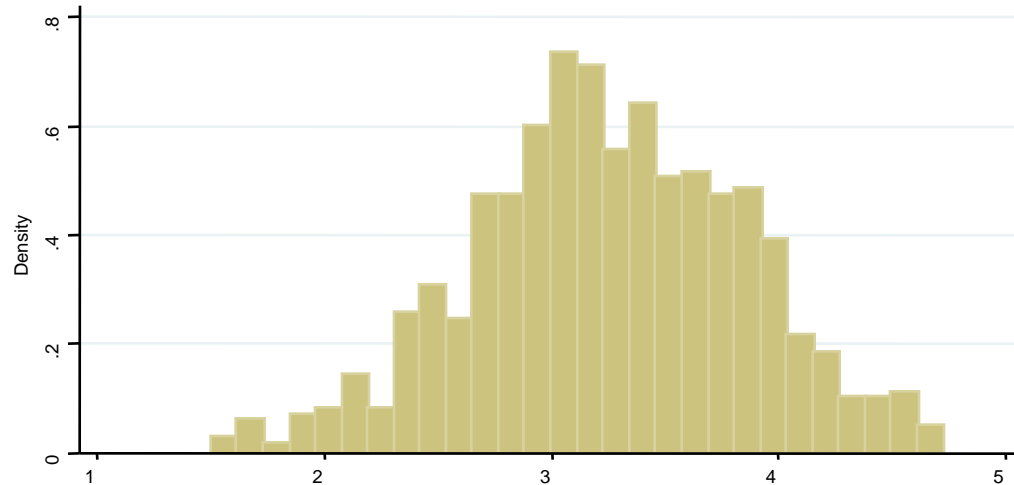
THERE IS NO TAIL OF REALLY BADLY RUN MULTINATIONALS

Distribution of management scores*

Domestic Firms



Foreign Multinationals



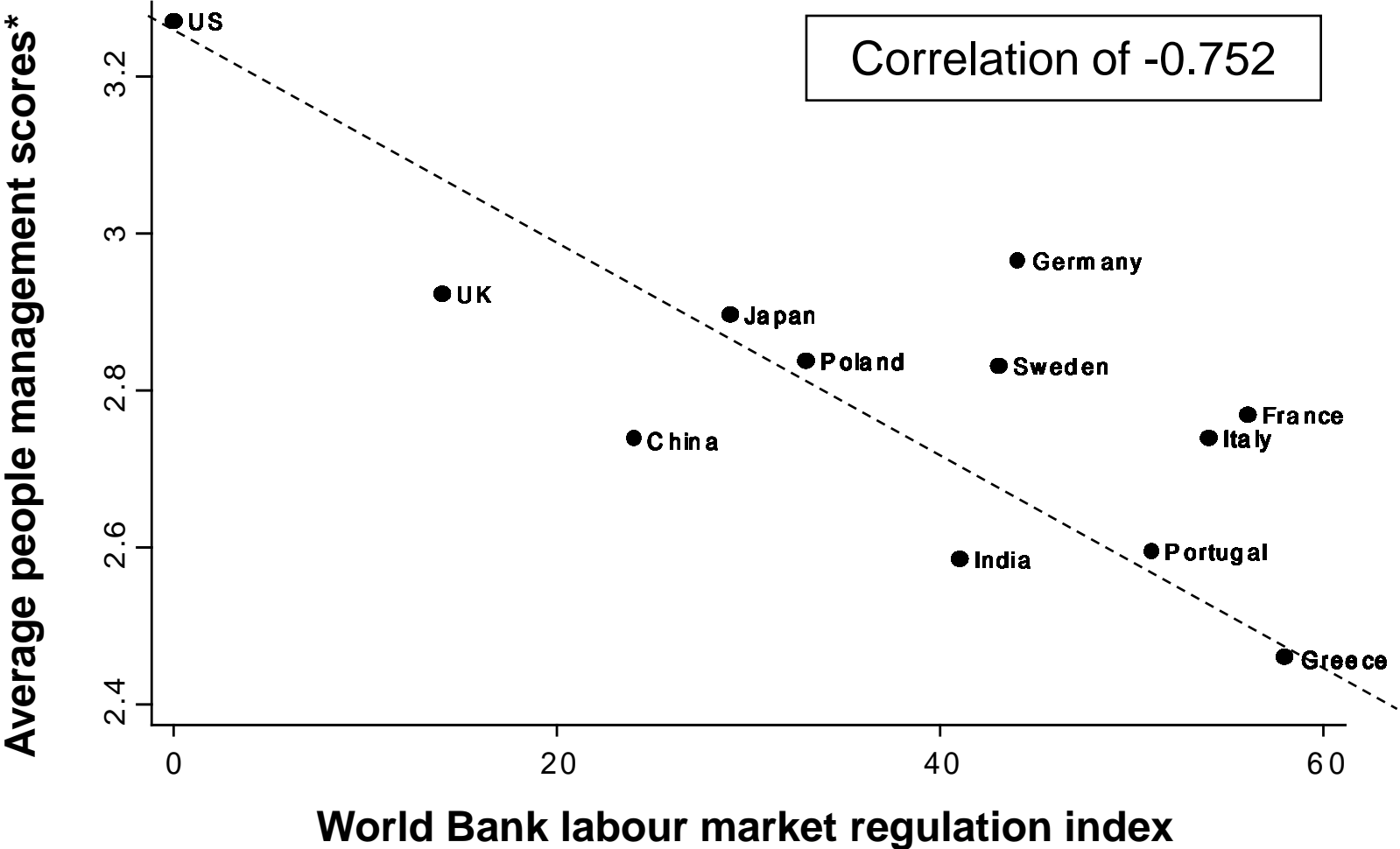
*Note: Based on giving an approximate overall score to each firms interview response.

BETTER MANAGED FIRMS HAVE SIGNIFICANTLY MORE EDUCATED EMPLOYEES



*Note: Based on giving an approximate overall score to each firms interview response.

LABOUR MARKET REGULATION IS NEGATIVELY CORRELATED WITH PEOPLE MANAGEMENT...

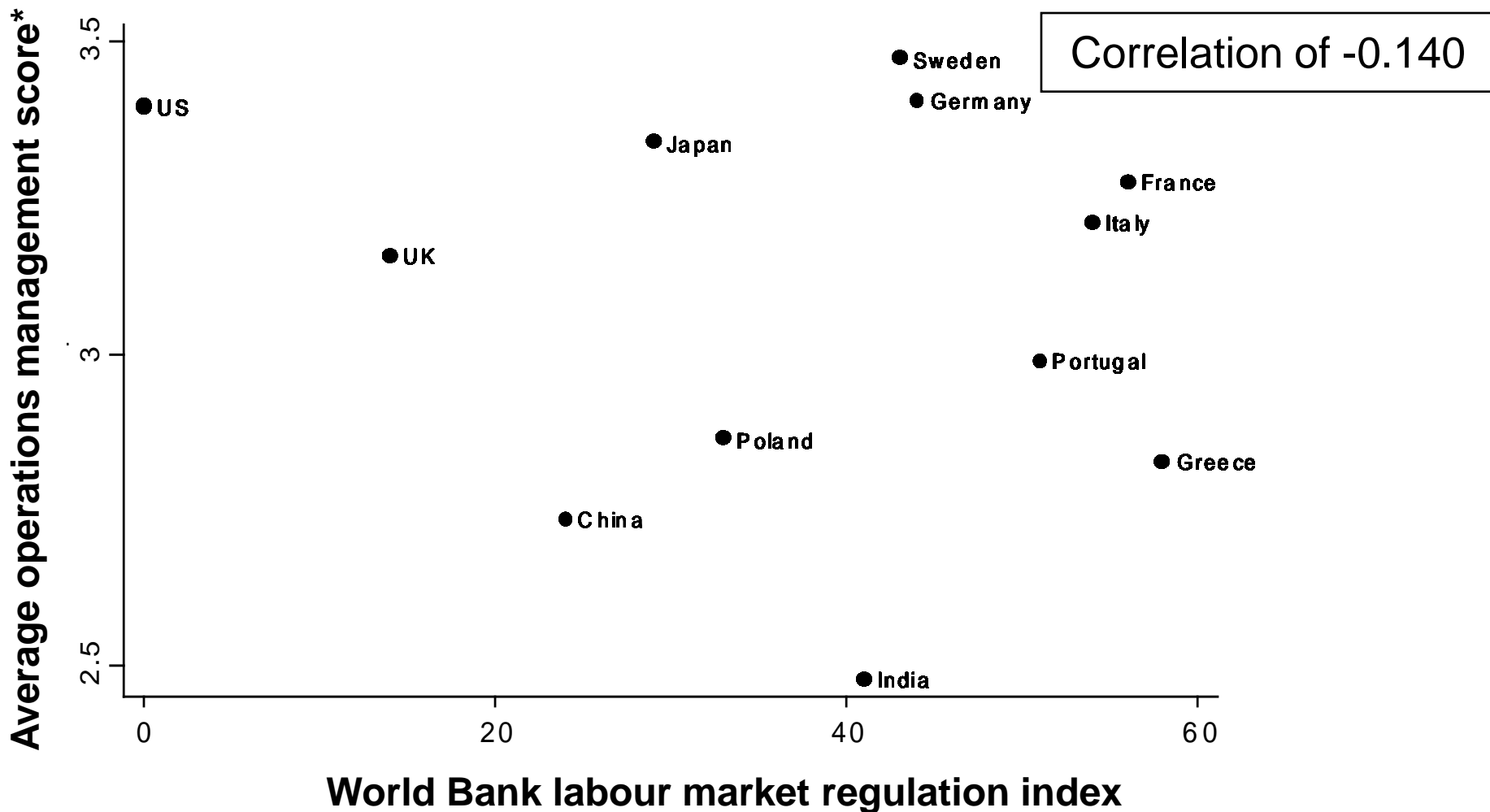


World Bank labour market regulation index

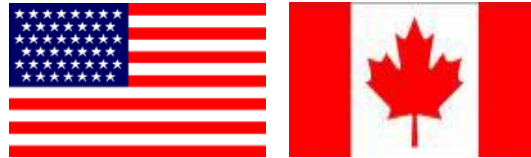
(0 = Most flexible labour market)
(100 = Most rigid labour market)

*Note: Based on giving an approximate overall score to each firms interview response.

...BUT, LABOUR MARKET REGULATION IS NOT LINKED WITH POOR OPERATIONS MANAGEMENT

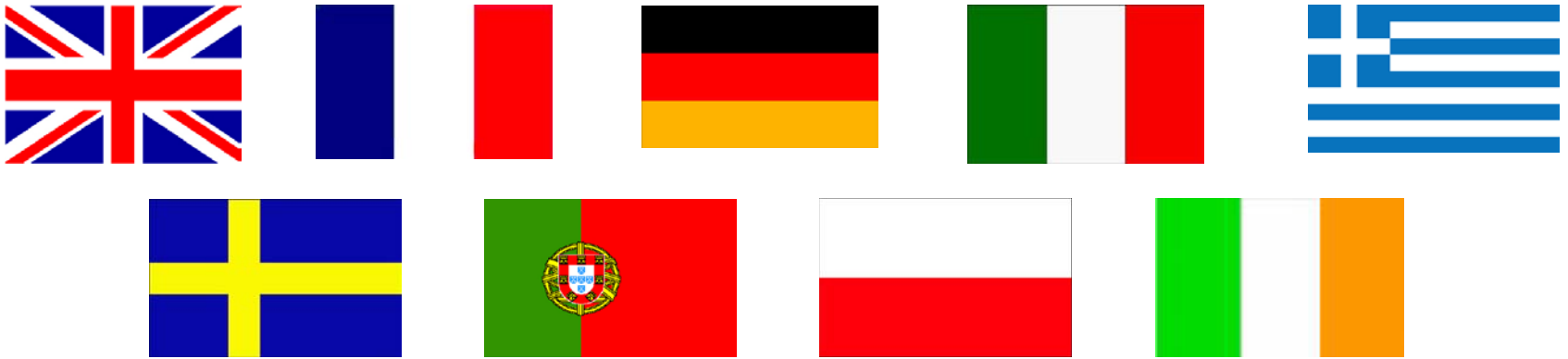


WHAT DO NORTH AMERICAN FIRMS LOOK LIKE?



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

WHAT ABOUT EUROPEAN FIRMS?



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

SOME INTERESTING CHARACTERISTICS OF BRAZILIAN and INDIAN FIRMS



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

SOME INTERESTING CHARACTERISTICS OF JAPANESE FIRMS



- 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

SOME INTERESTING CHARACTERISTICS OF CHINESE FIRMS



- 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 organisational structures, with limited plant manager discretion or control

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A SELECTION OF THE MEMORABLE QUOTES (1)

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

[Female interviewer speaking to a US manager]

Interviewer: "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!!!"

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

Swedish manufacturing goals...

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

Staff retention the UK way...

Interviewer: "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!"

A SELECTION OF THE MEMORABLE QUOTES (2)

India is such an interesting place...

Plant Manager: "Modern manufacturing? Yes, I have heard about it, but it doesn't make any sense at all, does it?"

Interviewer: "How do you keep your top performers?"
Manager: "I am a star performer and I want to leave!"

Interviewer: "How do you identify your star performers?"
Manager: "This is India, everyone thinks he is a star performer!"

A BIG THANK YOU FROM OUR CANADA 2008 TEAM FOR ALL OF YOUR TIME AND COOPERATION!!!



A BIG THANK YOU FROM OUR TEAM FOR ALL OF YOUR TIME AND COOPERATION!!!



A BIG THANK YOU FROM OUR IRISH 2008 TEAM FOR ALL OF YOUR TIME AND COOPERATION!!!



A BIG THANK YOU FROM OUR BRAZIL 2008 TEAM FOR ALL OF YOUR TIME AND COOPERATION!!!



A BIG THANK YOU FROM OUR CHINA 2007 TEAM FOR ALL OF YOUR TIME AND COOPERATION!!!



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