



Management Matters

MANUFACTURING AND PRODUCTIVITY
GLOBAL STUDY

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LSE and Centre for Economic Performance
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WHY CARE ABOUT MANAGEMENT AND PRODUCTIVITY

Despite the importance of productivity, our understanding of what causes productivity differences is poor:

- Even after controlling for human and physical capital, there is a large “unexplained residual” in productivity across firms, both between countries and within countries

Productivity stories across the US, Europe and Asia:

- Is the US productivity miracle due to the information & communication technology revolution? But this is common across the world: What explains the US takeoff?
- Why does the UK lag?
Could this be in part because of differences in management?

Historically there has been no international management data

Our approach  What is the role of management practices?

6 year Centre for Economic Performance & McKinsey project to try to measure and explain management practices

AGENDA

Measuring management practices

Evaluating the management measure

Describing management across firms and countries

Explaining management across firms and countries

Future research and key takeaways

ASSESSING MANAGEMENT PRACTICE

Scoring management practice

- Created a robust assessment tool to score management of operations, people and performance

Setting the sampling frame

- 5,750 medium sized* manufacturers across the US, Asia, Europe and Latin America
 - Medium sized as intra-firm practices more homogeneous
 - Manufacturing as productivity easier to measure

Obtaining unbiased responses

- Conducted 'Double-blind' interviews
 - Managers unaware of the scoring methodology
 - Interviewers unaware of corporate performance
- Executed by >50 MBA/ PhD trained interviewers with business experience

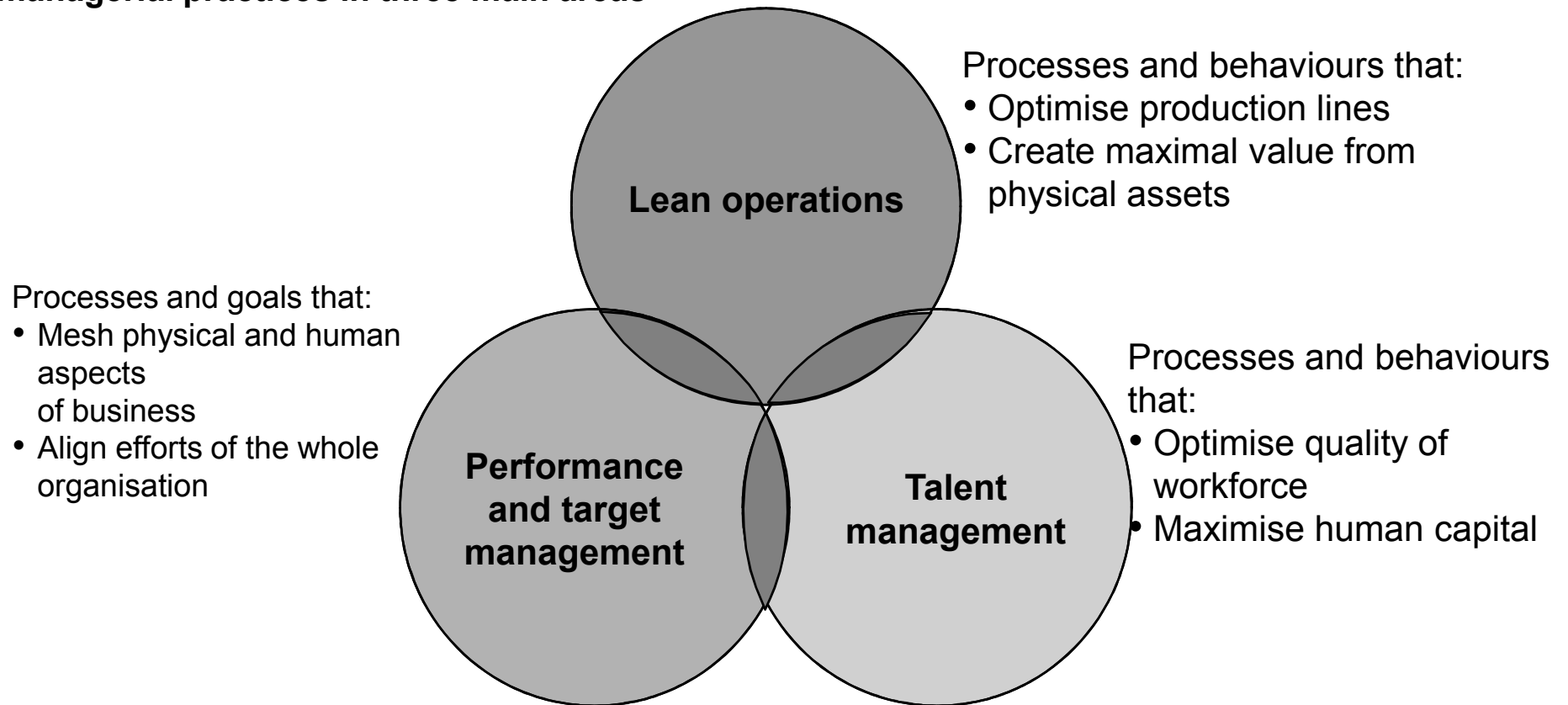
Getting firms to participate

- Obtained Central Bank, Ministry and Employer Association endorsements
- Managers ensured confidentiality

* Median ~250 employees

INTERVIEW METHOD FOCUSES ON MAIN AREAS OF MANAGEMENT

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



TO SCORE COMPANIES, WE USED DESCRIPTIONS OF POOR, AVERAGE AND GOOD PRACTICE FOR EACH DIMENSION

Management practices

Operations management

Performance management

People management

Example dimensions evaluated

Quality of targets

Interconnection of targets

Performance tracking

Time horizon of targets

Consequence management

Dimension scoring criteria

1	<i>Measures tracked do not directly indicate if overall business objectives are being met. Tracking is ad hoc</i>
3	<i>Most key performance indicators are tracked formally. Tracking is overseen by senior management</i>
5	<i>Performance is continuously tracked and communicated, formally and informally, to all staff, using a range of visual management tools</i>

TO GENERATE THE OVERALL MANAGEMENT SCORE WE TOOK THE AVERAGE OF ALL 18 DIMENSIONS MEASURED

Lean shop-floor operations

Dimensions	Score
1. Introduction of lean manufacturing	2
2. Degree of lean principles used	3
3. Documentation and improvement of processes	2
4. Performance tracking	3
5. ...	4

Performance and target management

7. Consequence management	3
8. Quality of targets	2
9. Target stretch	3
10. Clarity of goals and measurement	3
11. ...	

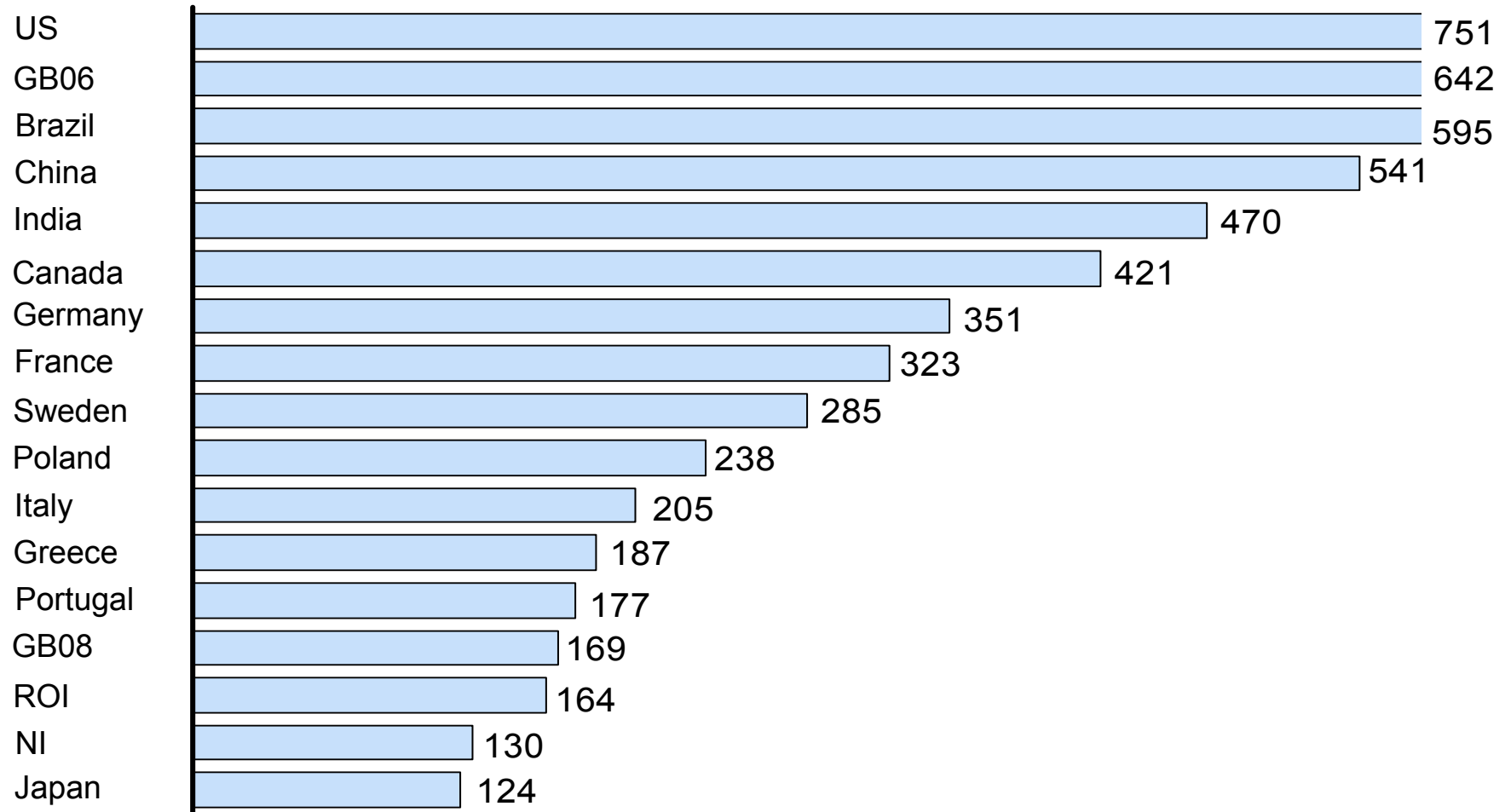
Talent management

13. Importance of human capital	3
14. Reward of high performers	4
15. Rewarding poor performers	3
16. Promoting high performers	4
17. ...	5

Overall management score, on scale of 1–5, is calculated from average of all 18 dimensions

THE DATABASE NOW CONTAINS OVER 5,750 INTERVIEWS* ACROSS 15 COUNTRIES

Number of interviews - by country



* This presentation uses a sample of companies with 50 to 4999 employees; total number of interviews exceeds 5,000 firms

Source: Data collected from interviews as of September 2008; team analysis

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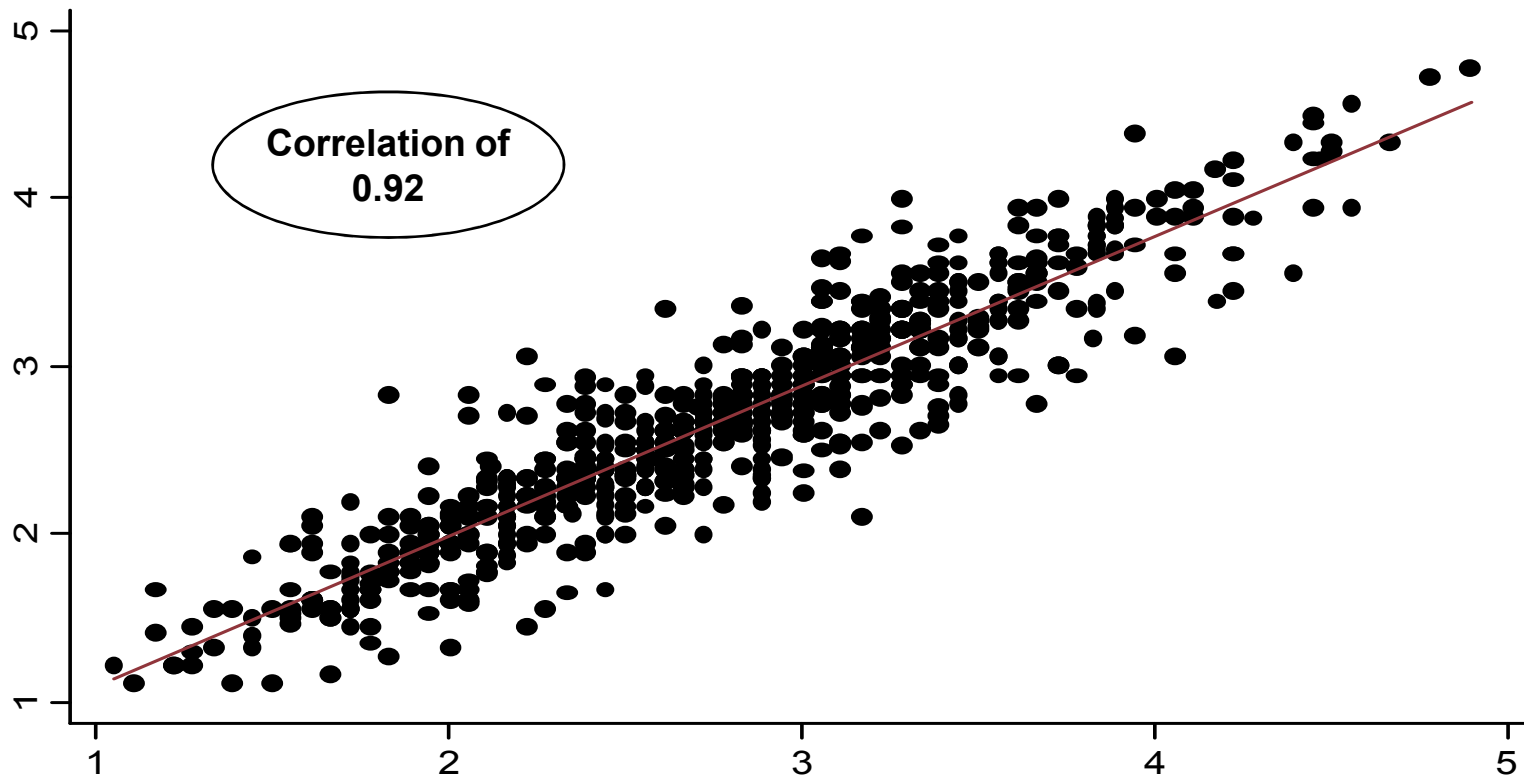
Explaining management across firms and countries

Future research and key takeaways

ASSESSMENT TOOL CONTINUES TO PROVE ROBUST

Assessed management practice score

1st analyst (interviewer)

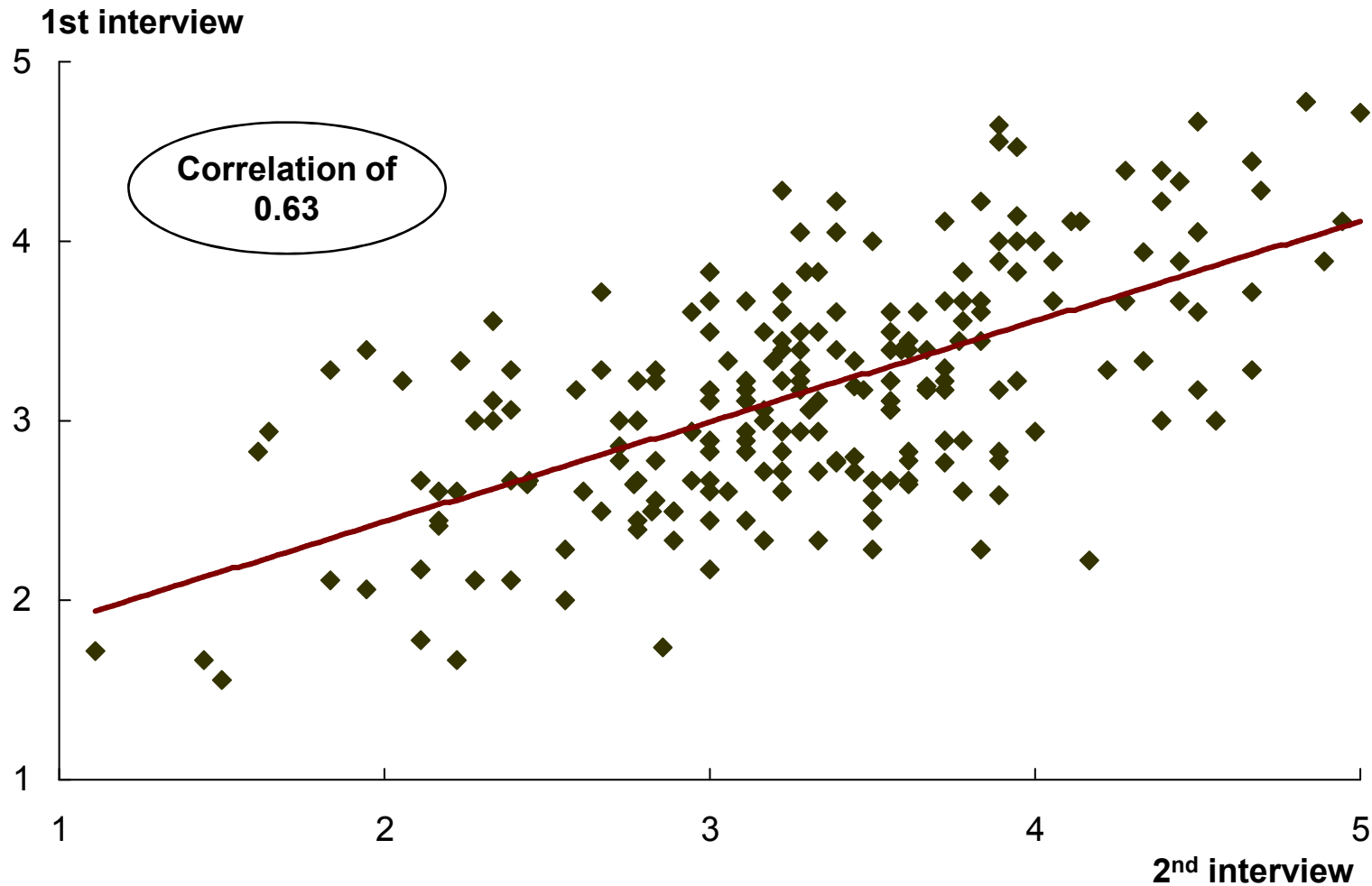


2nd analyst (silent listener)

Source: Data collected from interviews as of September 2008; team analysis

FURTHER INTERNAL VALIDATION SUGGESTS THAT OUR ASSESSED MANAGEMENT PRACTICE SCORE IS INFORMATIVE

Assessed management practice score*

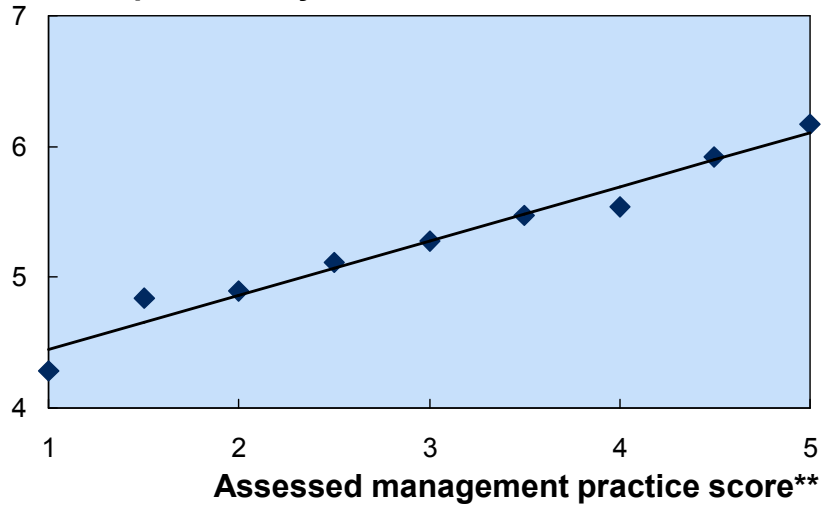


* 222 firms interviewed by 2 different interviewers, interviewing 2 different managers

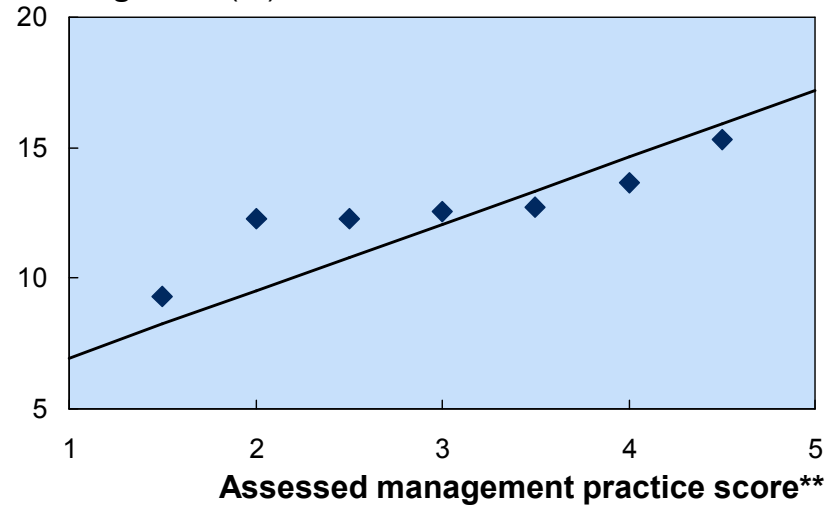
Source: Data collected from interviews as of September 2008; team analysis

THE ASSESSED MANAGEMENT PRACTICE SCORE CORRELATES WELL WITH A NUMBER OF FINANCIAL PERFORMANCE METRICS

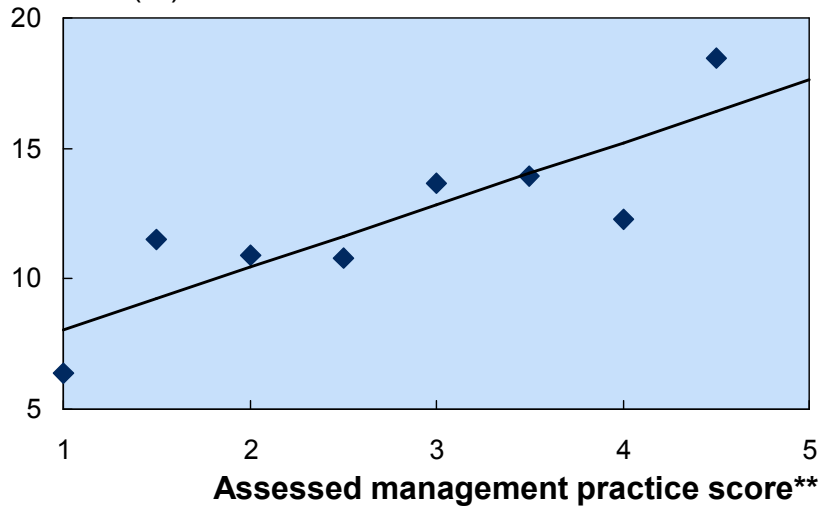
Labour productivity*



Sales growth (%)



ROCE (%)

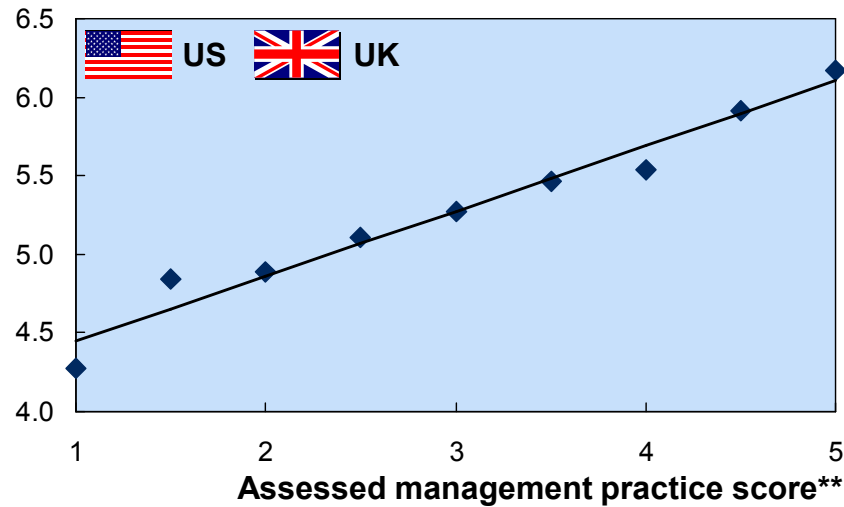


* Log scale

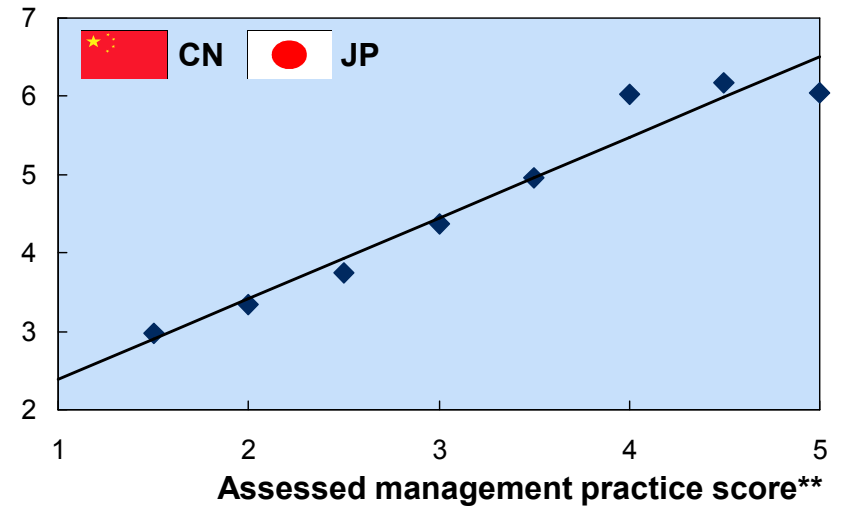
** Firms are grouped in 0.5 increments of assessed management score

THIS LINK HOLDS TRUE ACROSS DIFFERENT COUNTRIES AND CULTURES

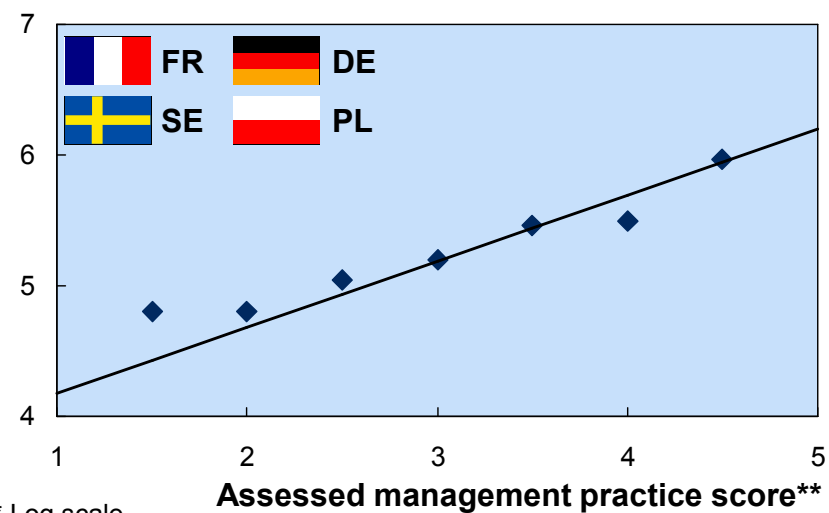
Labour productivity*



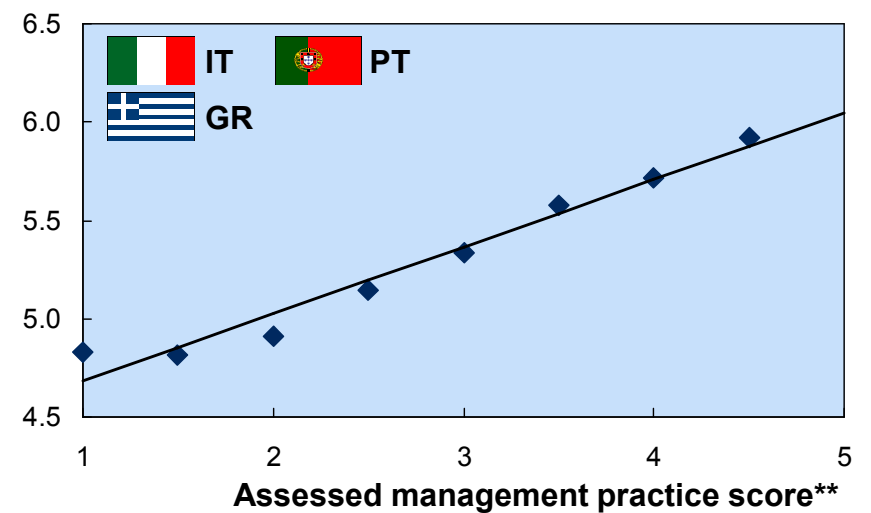
Labour productivity*



Labour productivity*



Labour productivity*



* Log scale

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Measuring management practice

Evaluating the management measure

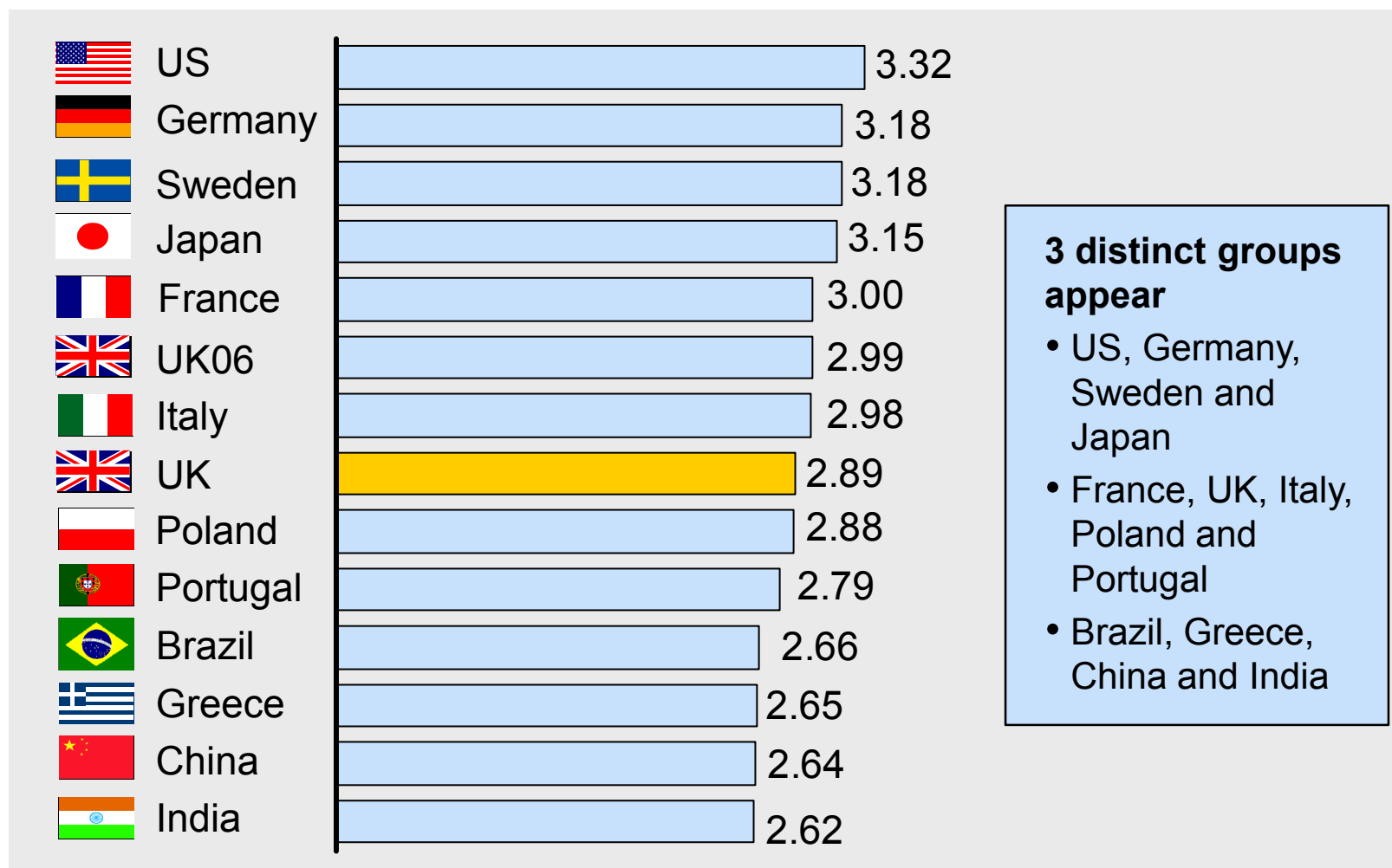
Describing management across firms and countries

Explaining management across firms and countries

Future research and key takeaways

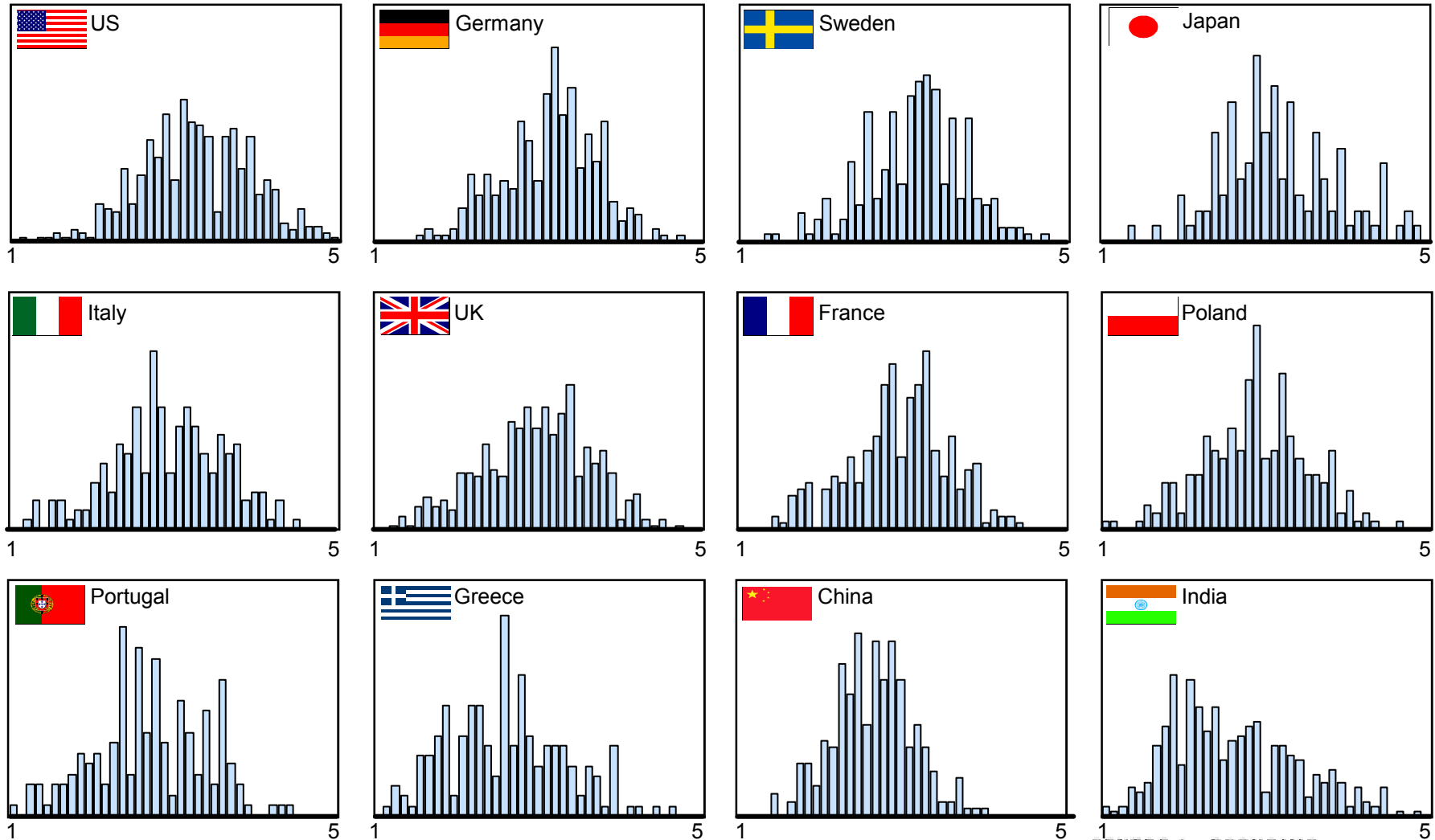
THERE IS SUBSTANTIAL INTER-COUNTRY MANAGEMENT PRACTICE VARIABILITY

Assessed Management Practice Score – by country



HOWEVER, MANAGEMENT PRACTICES VARY MUCH MORE *WITHIN* THAN *ACROSS* COUNTRIES

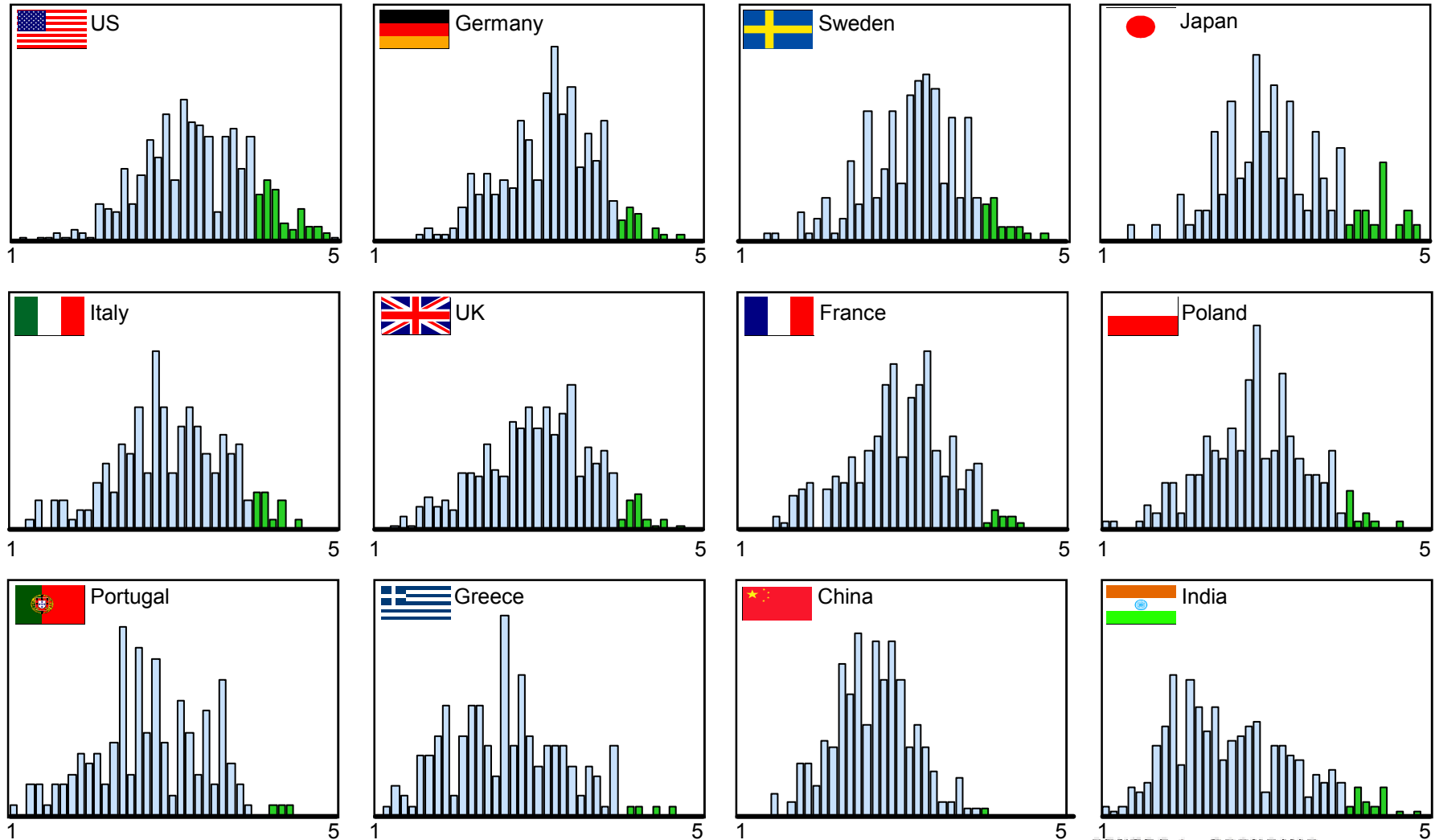
Distribution of firm level management practice scores – by country



Source: Data collected from interviews as of September 2007; team analysis

WHILE CERTAIN COUNTRIES SHOW HIGH LEVEL OF UPPER PERFORMERS

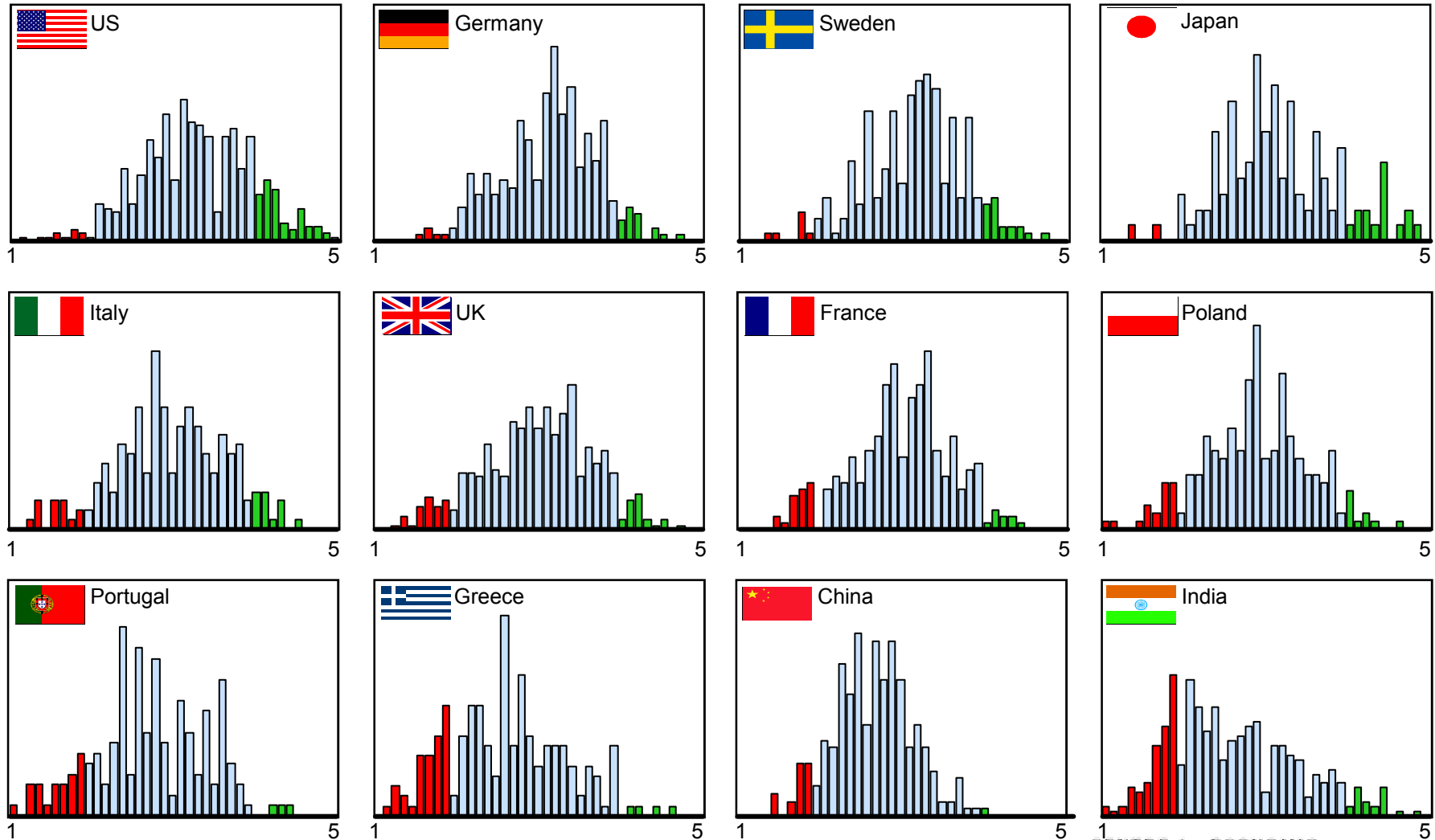
Distribution of firm level management practice scores – by country



Source: Data collected from interviews as of September 2007; team analysis

THERE IS A LONG TAIL OF UNDERPERFORMERS IN OTHERS

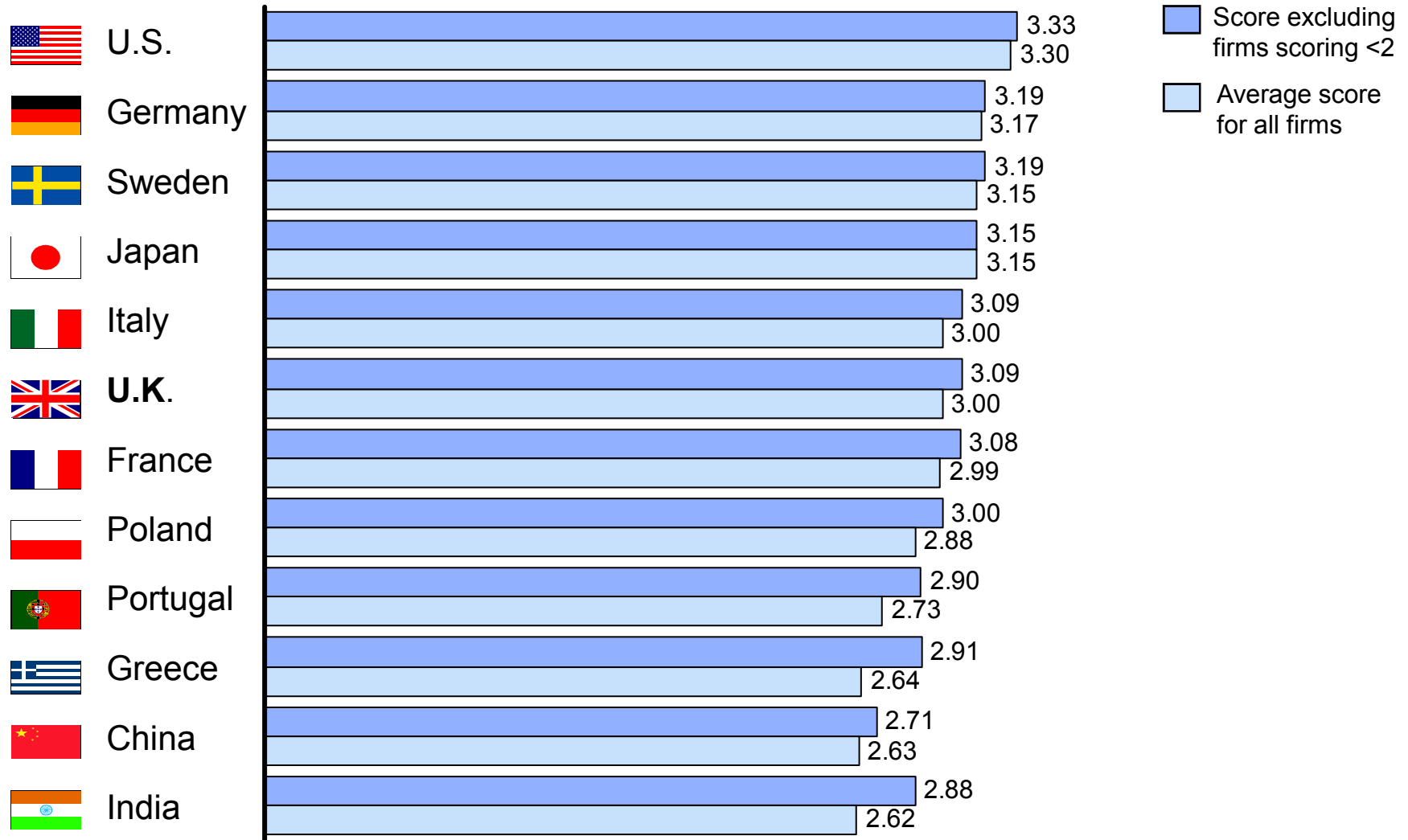
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Source: Data collected from interviews as of September 2007; team analysis

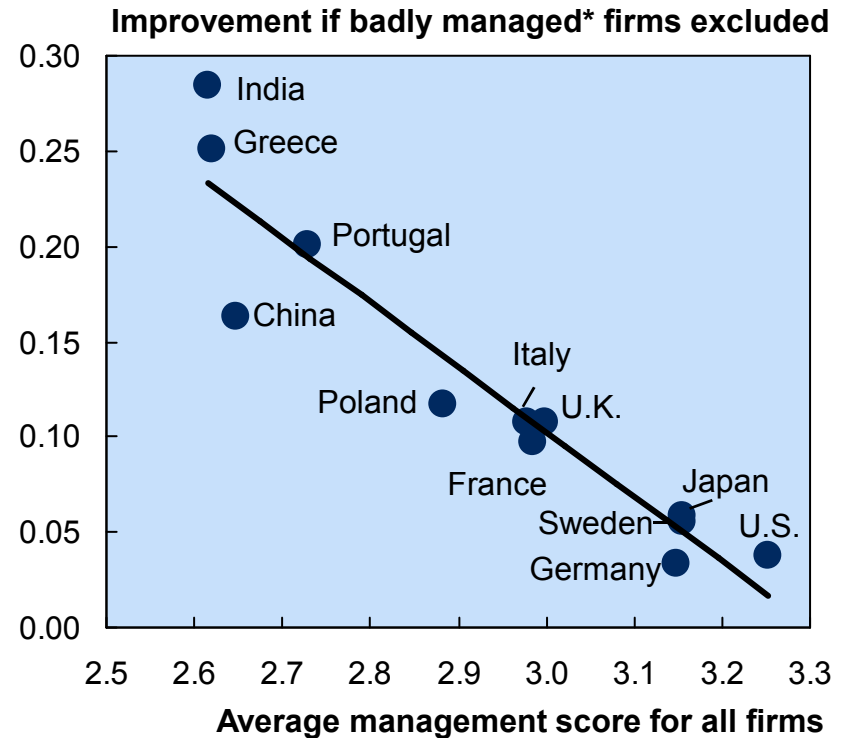
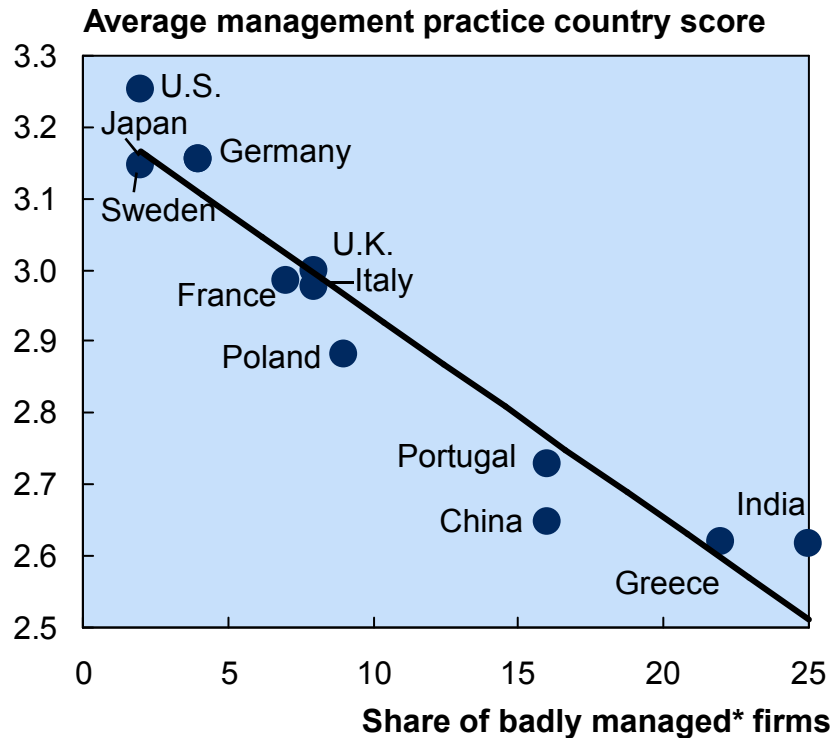
THIS LONG 'TAIL' OF POORLY MANAGED FIRMS PULLS DOWN THE AVERAGE MANAGEMENT SCORE OF LOW PERFORMING COUNTRIES

Assessed management practice score – by country



Source: Data collected from interviews as of September 2007; team analysis

ADJUSTING FOR THESE POORLY MANAGED FIRMS COULD IMPROVE THESE COUNTRIES' MANAGEMENT SCORES



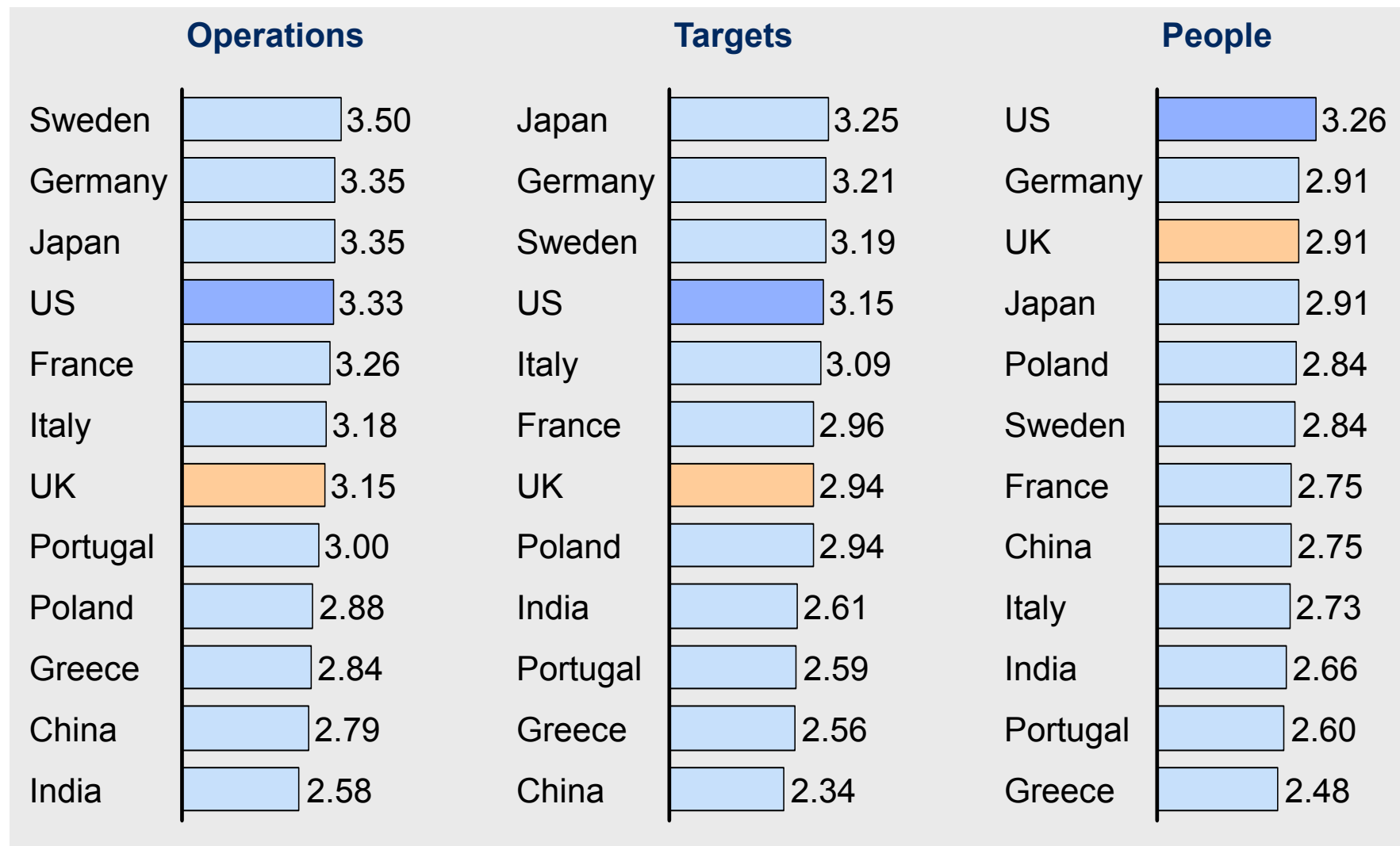
Removing tail of badly managed* firms from sample reduces standard deviation across country scores from 0.22 to 0.14

* Badly managed = management practice score <2

Source: Data collected from interviews as of September 2007

ALTHOUGH THE US IS DISTINCTIVE IN PEOPLE MANAGEMENT, SWEDISH FIRMS OUTPERFORM IN OPERATIONS

Assessed Scores across three dimensions – by country



ORGANISATIONAL PRACTICES ACROSS COUNTRIES VARY AS WELL

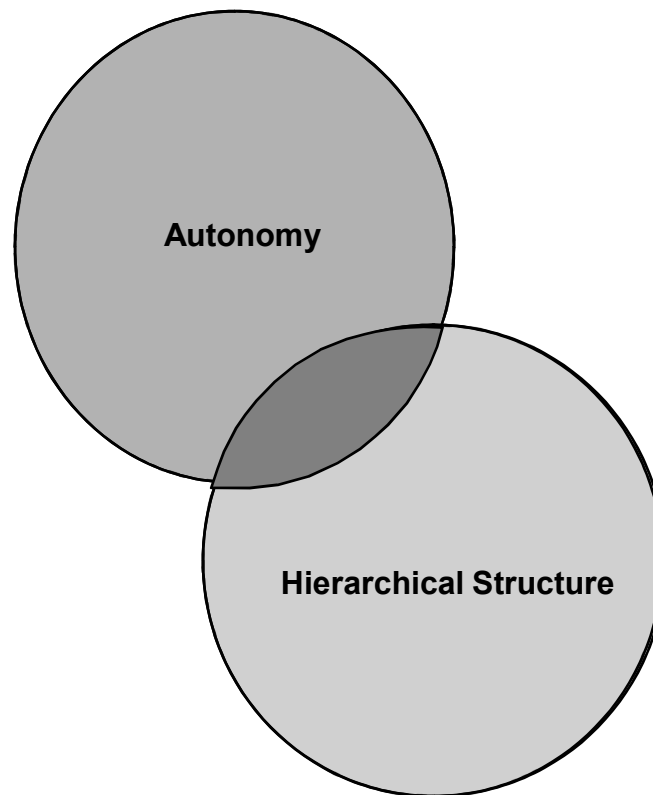
In the second phase of our interviews, we asked questions about firms' organisational aspects:

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?*

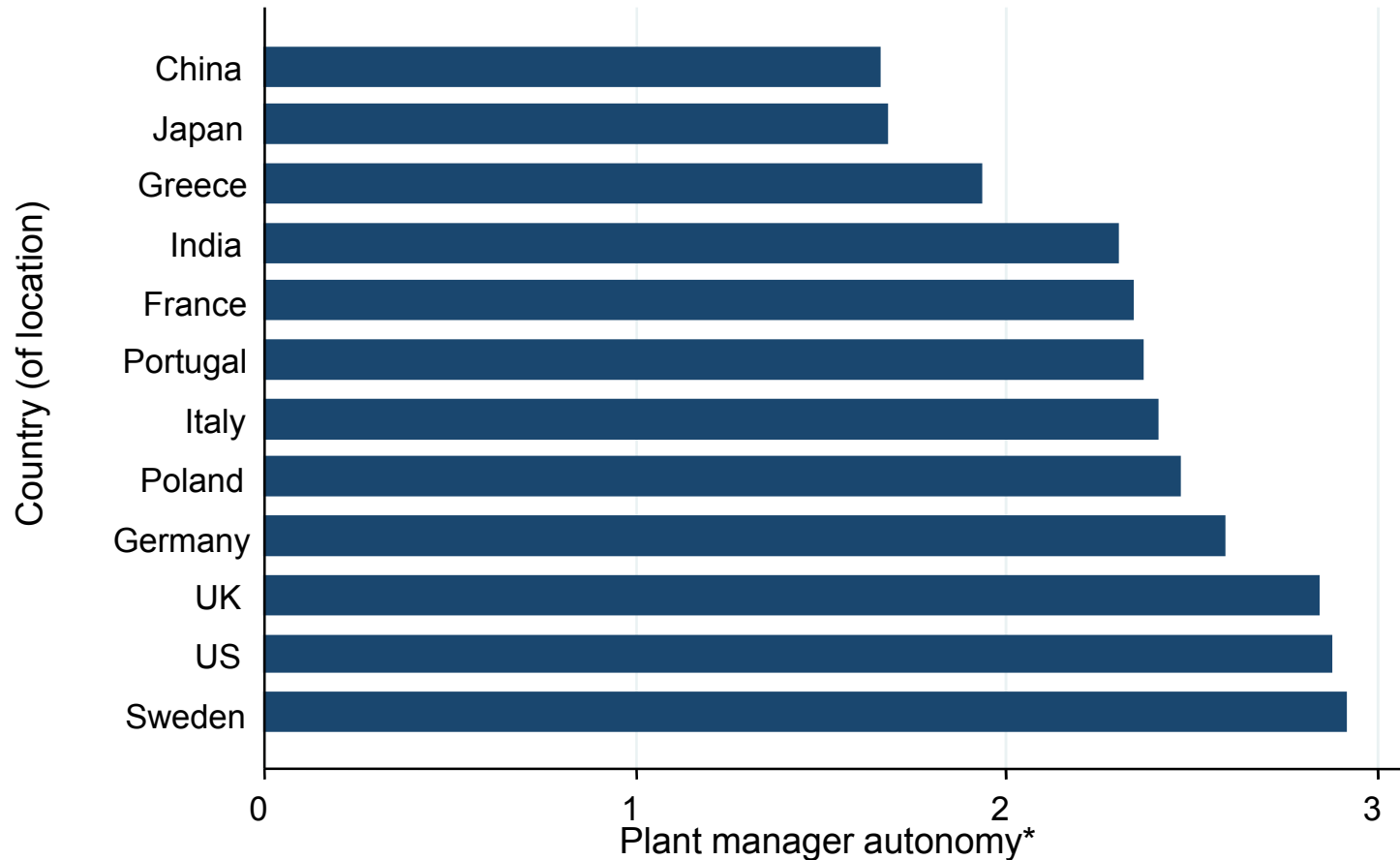


Firm slope and span

- 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?*)

ASIAN AND SOUTHERN EUROPEAN COUNTRIES HAVE THE LEAST PLANT MANAGER AUTONOMY AND ANGLO-SAXON AND SWEDISH COMPANIES THE MOST

Plant autonomy score, by country of origin

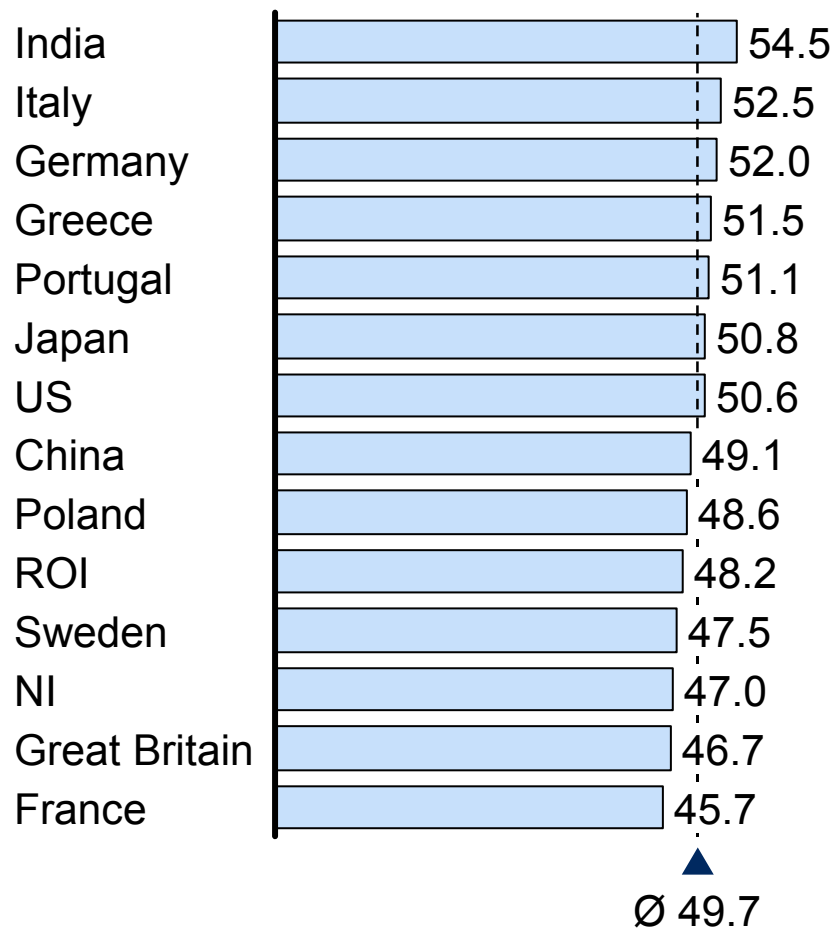


* Measure average score on four dimensions of decentralisation – plant managers' control (versus central HQ) on: employment, investment, new products and sales & marketing. Scores range from 1 (no autonomy) to 5 (complete autonomy).

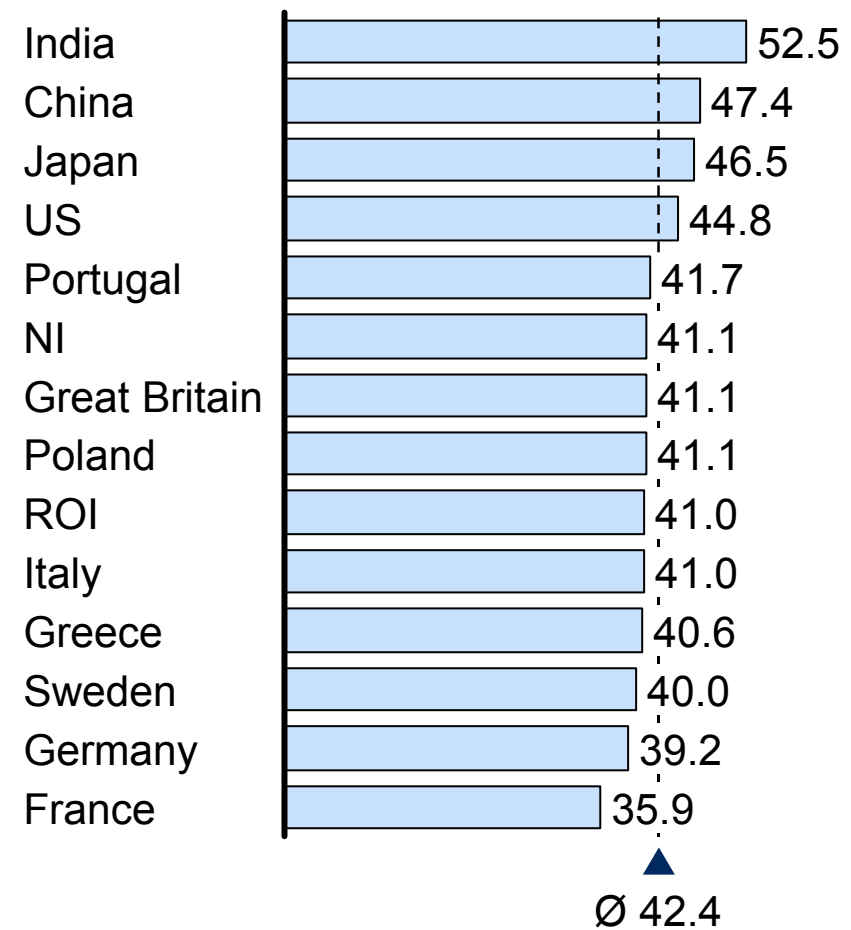
THE HOURS WORKED BY BOTH MANAGERS AND WORKERS VARIES AS WELL ACROSS COUNTRIES SURVEYED

Comparison of managerial and non-managerial work-hours per week – by country

Average managerial hours/week



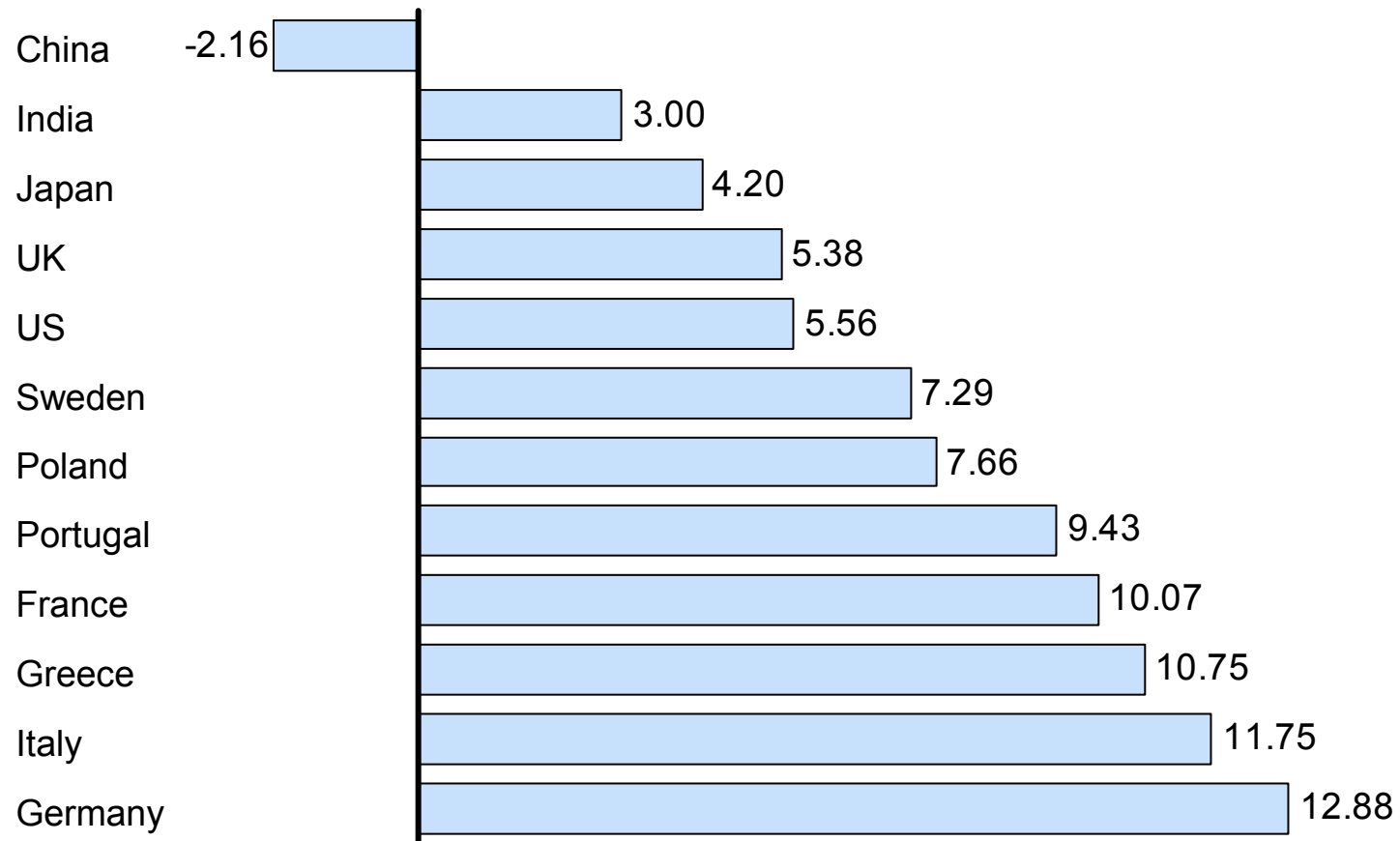
Average non-managerial hours/week



Source: Data collected from interviews as of September 2008; team analysis

AND SO DOES THE GAP BETWEEN MANAGER AND NON-MANAGER WORKING HOURS

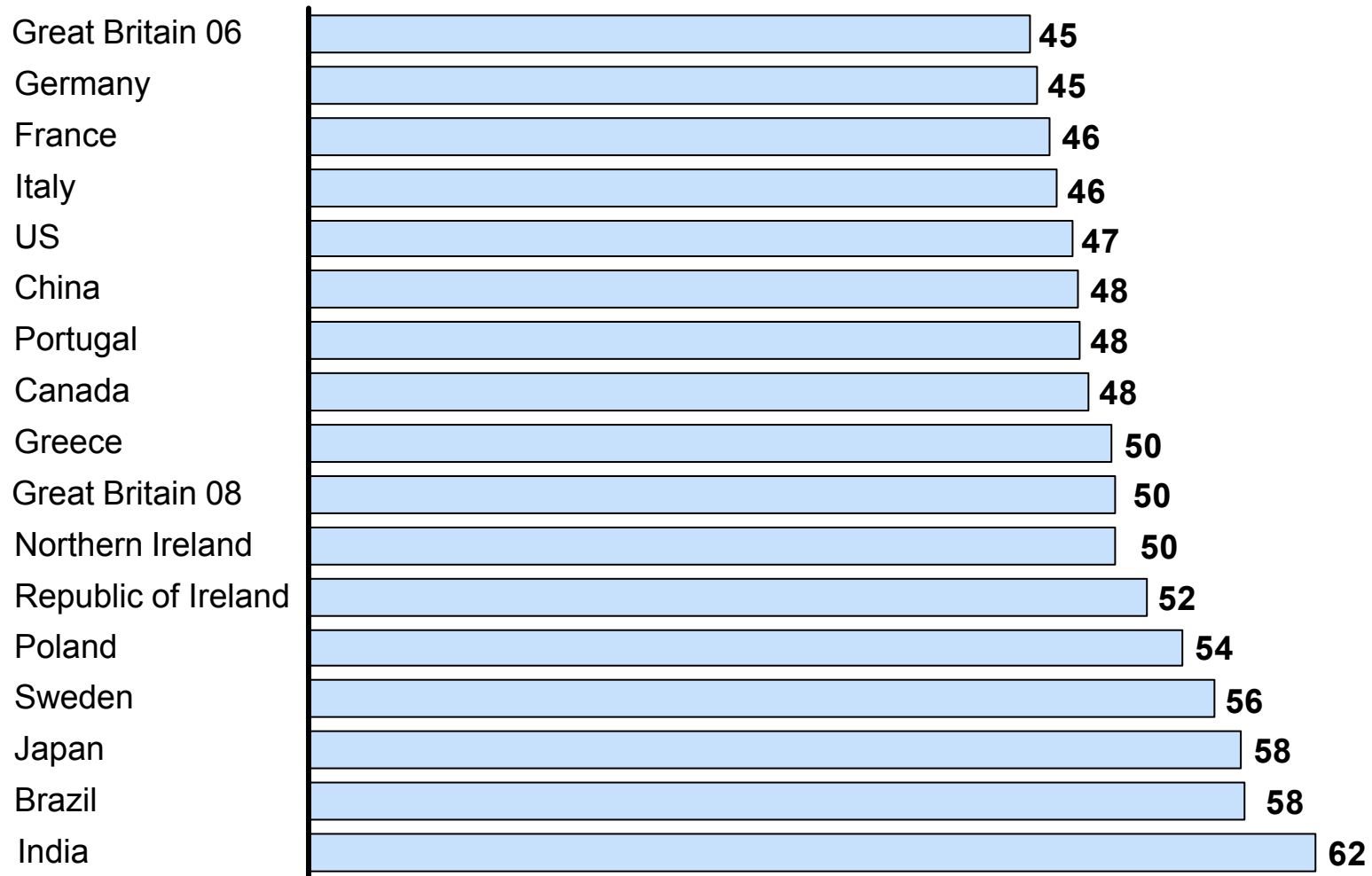
Gap between manager and non-manager hours – by country



Source: Data collected from interviews as of September 2008 team analysis

AND THE INDIANS ARE WILLING TO TALK FOR AN ABOVE AVERAGE PERIOD OF TIME. (AS ARE THE MOST ASIAN FIRMS...)

Average duration of interview



AGENDA

Measuring management practices

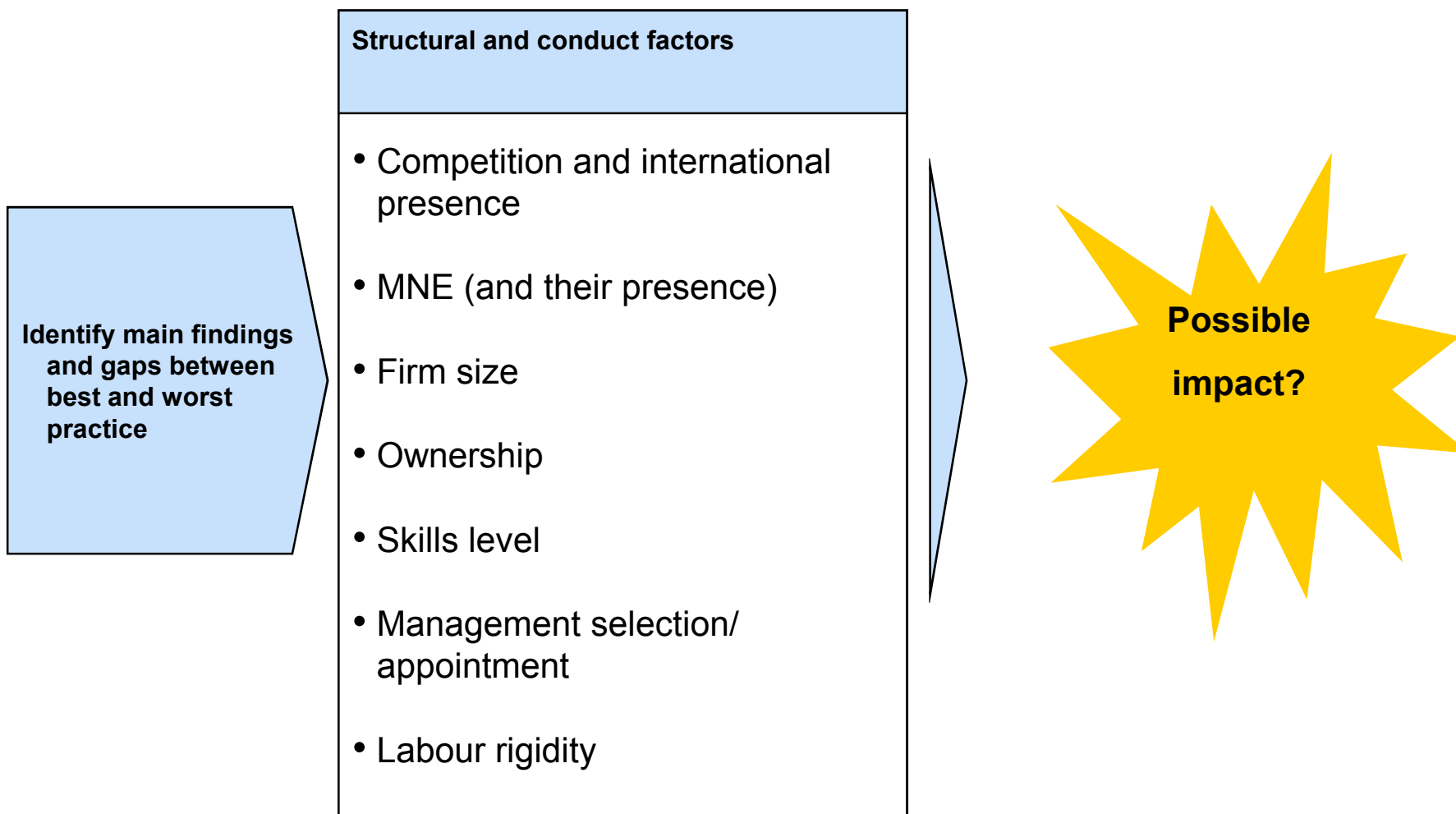
Evaluating the management measure

Describing management across firms and countries

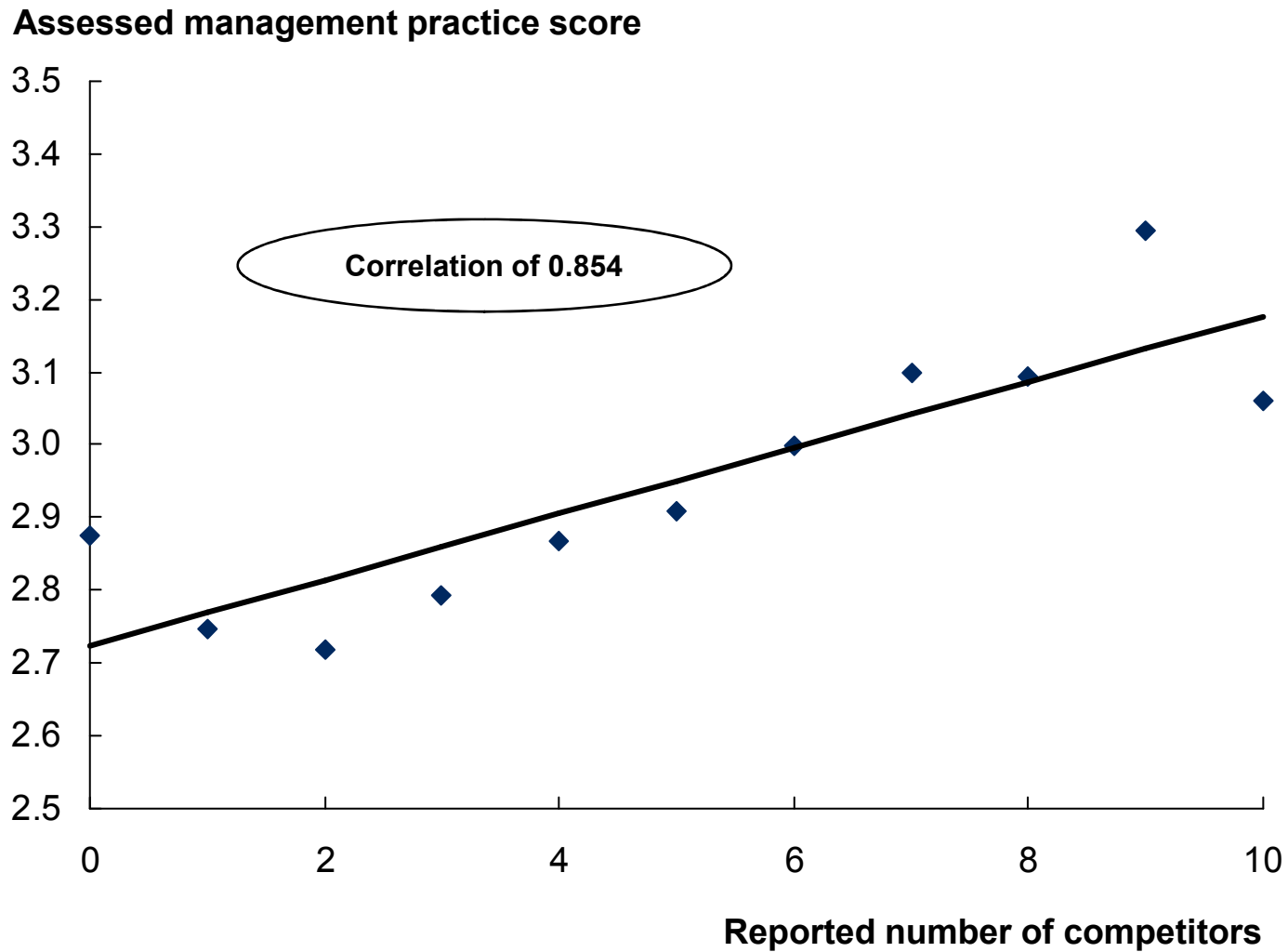
Explaining management across firms and countries

Future research and key takeaways

WE OBSERVE SEVEN STRUCTURE AND CONDUCT FACTORS THAT INFLUENCE THE IMPACT OF MANAGEMENT PRACTICES



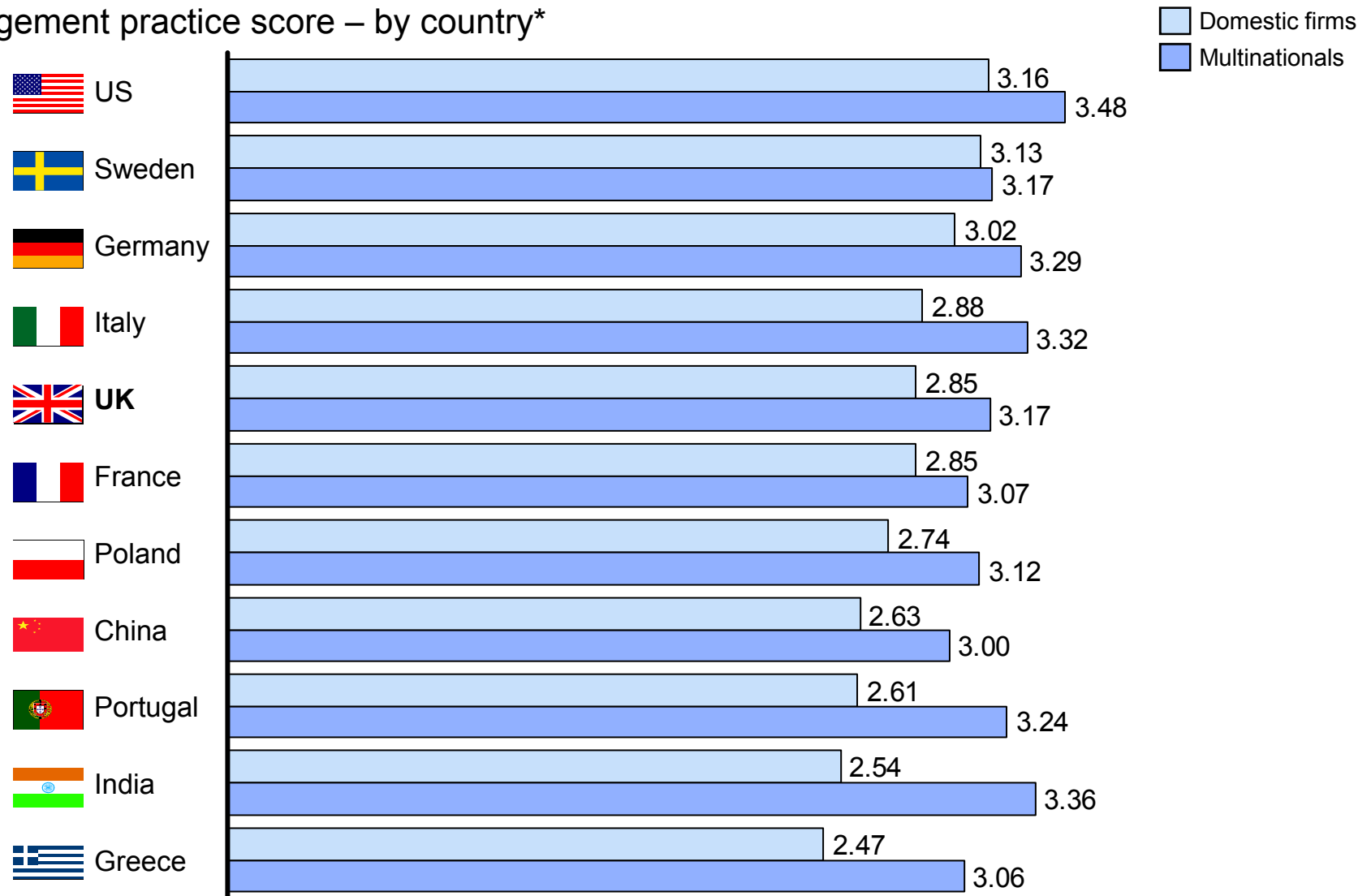
MORE INTENSE COMPETITION IS CLEARLY ASSOCIATED WITH BETTER MANAGEMENT PRACTICES



Source: Data collected from interviews as of September 2007; team analysis

MULTINATIONALS ARE WELL RUN EVERYWHERE

Management practice score – by country*



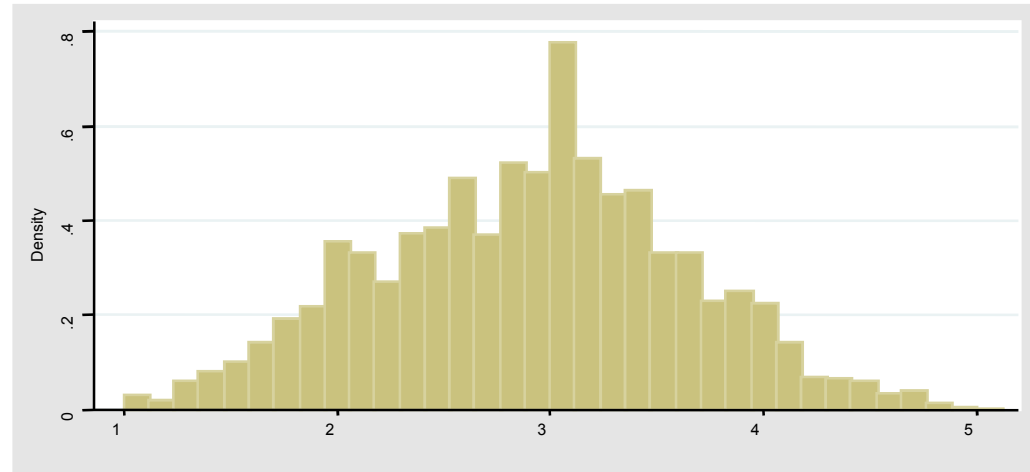
* Japan excluded due to low multinational sample size

Source: Data collected from interviews as of September 2007; team analysis

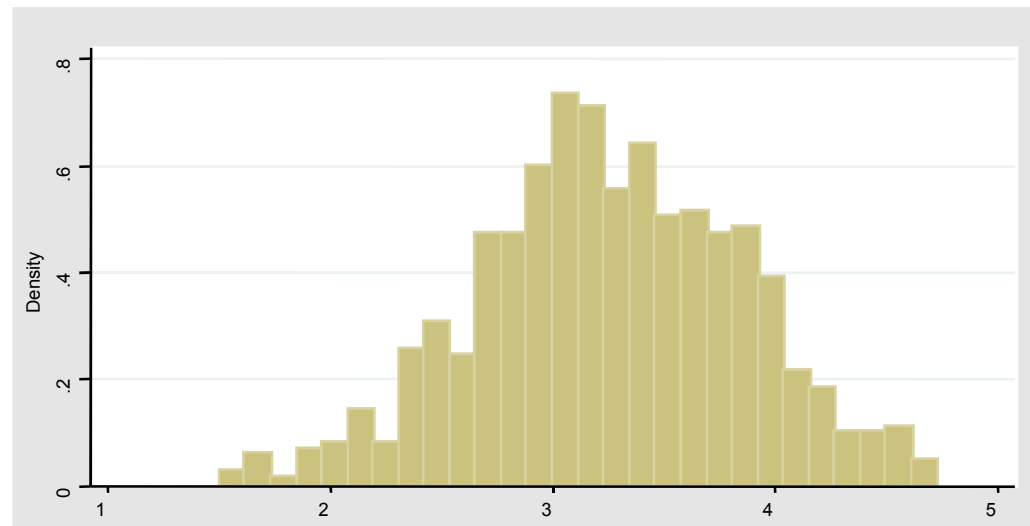
THERE IS NO TAIL OF REALLY POORLY RUN MULTINATIONALS

Distribution of management scores*

Domestic Firms

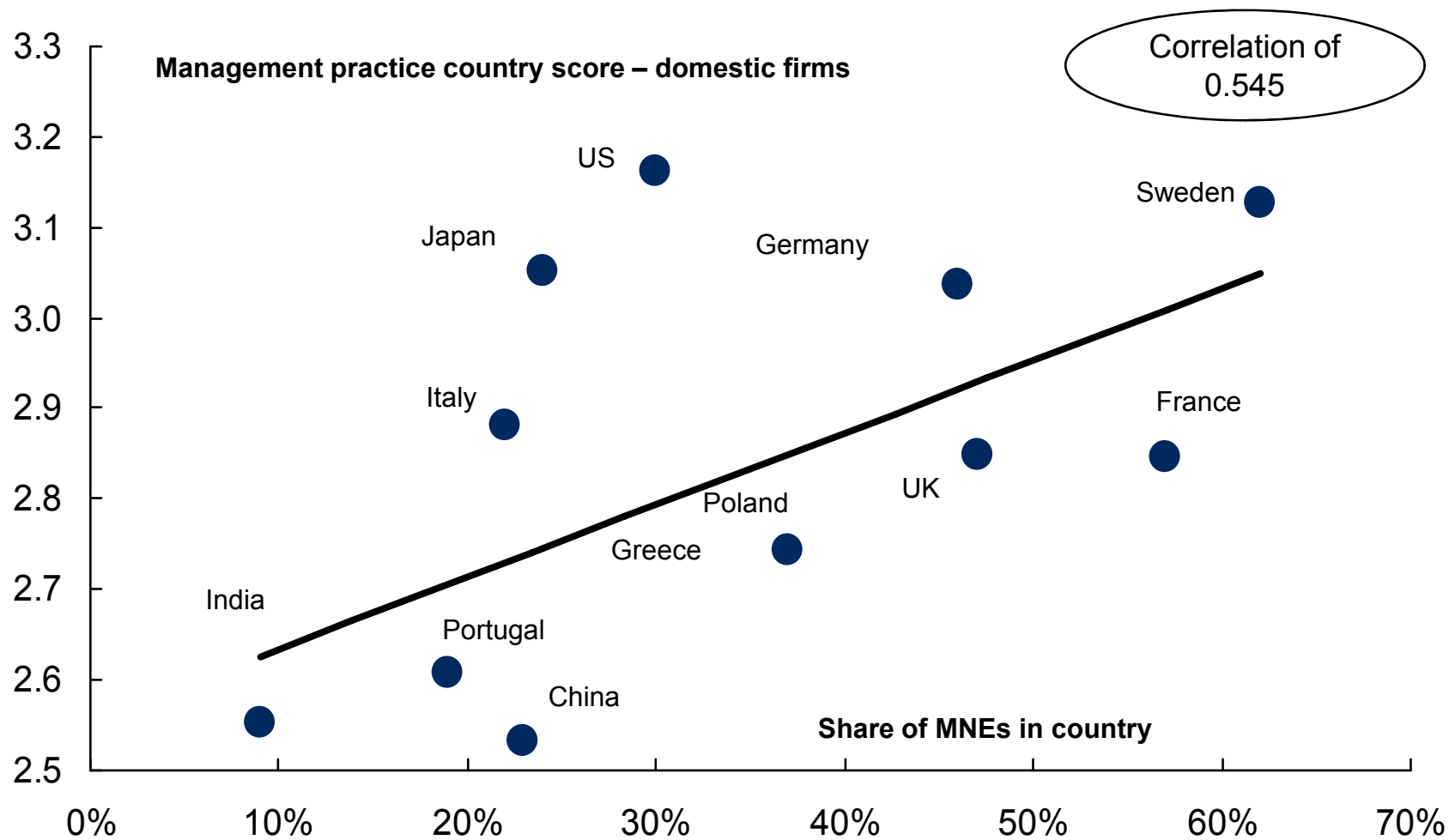


Foreign Multinationals



*Note: Based on giving an approximate overall score to each firms interview response.
Source: Data collected from interviews as of September 2007; team analysis

AND THERE IS ALSO A LINK BETWEEN MORE MNEs IN A COUNTRY AND IMPROVED MANAGEMENT PRACTICES AT DOMESTIC FIRMS

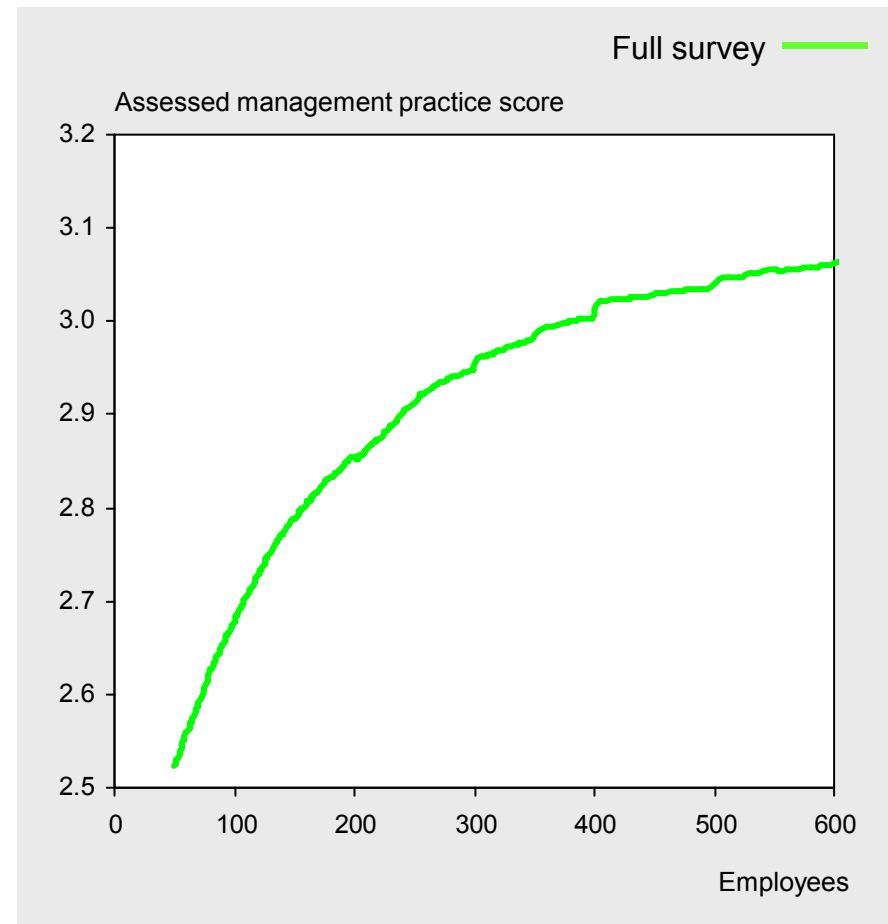
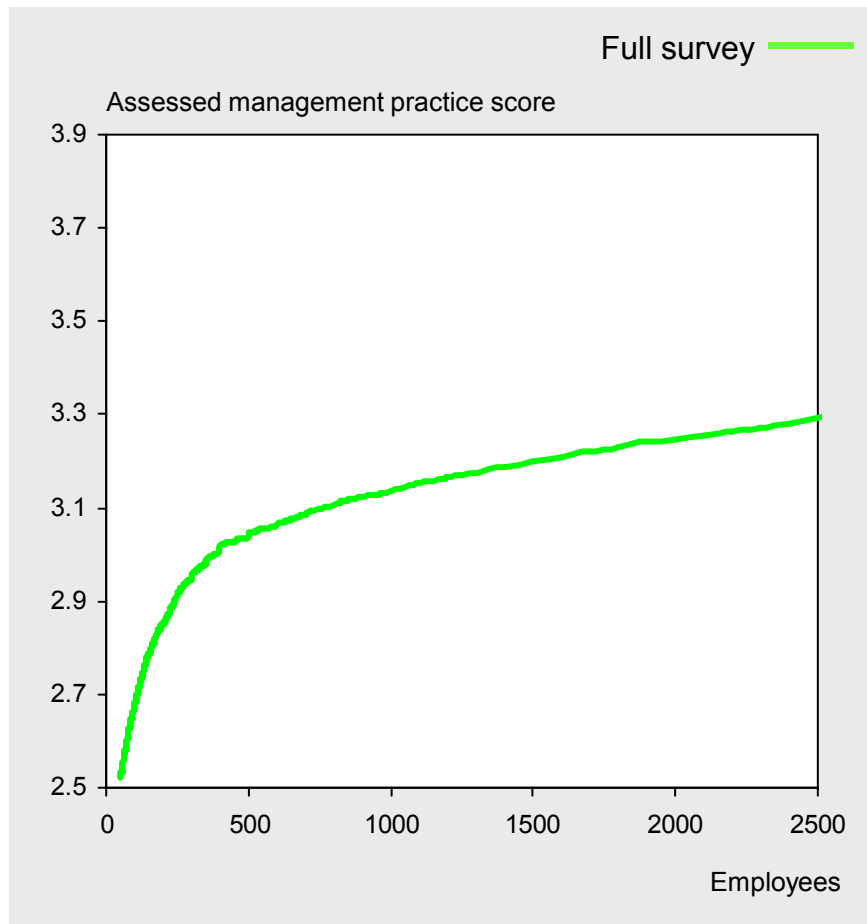


Source: Data collected from interviews as of September 2007; team analysis

MANAGEMENT INCREASES WITH SIZE BUT SLOWS AT 500 EMPLOYEES

...

Firm size vs. assessed management practice score*

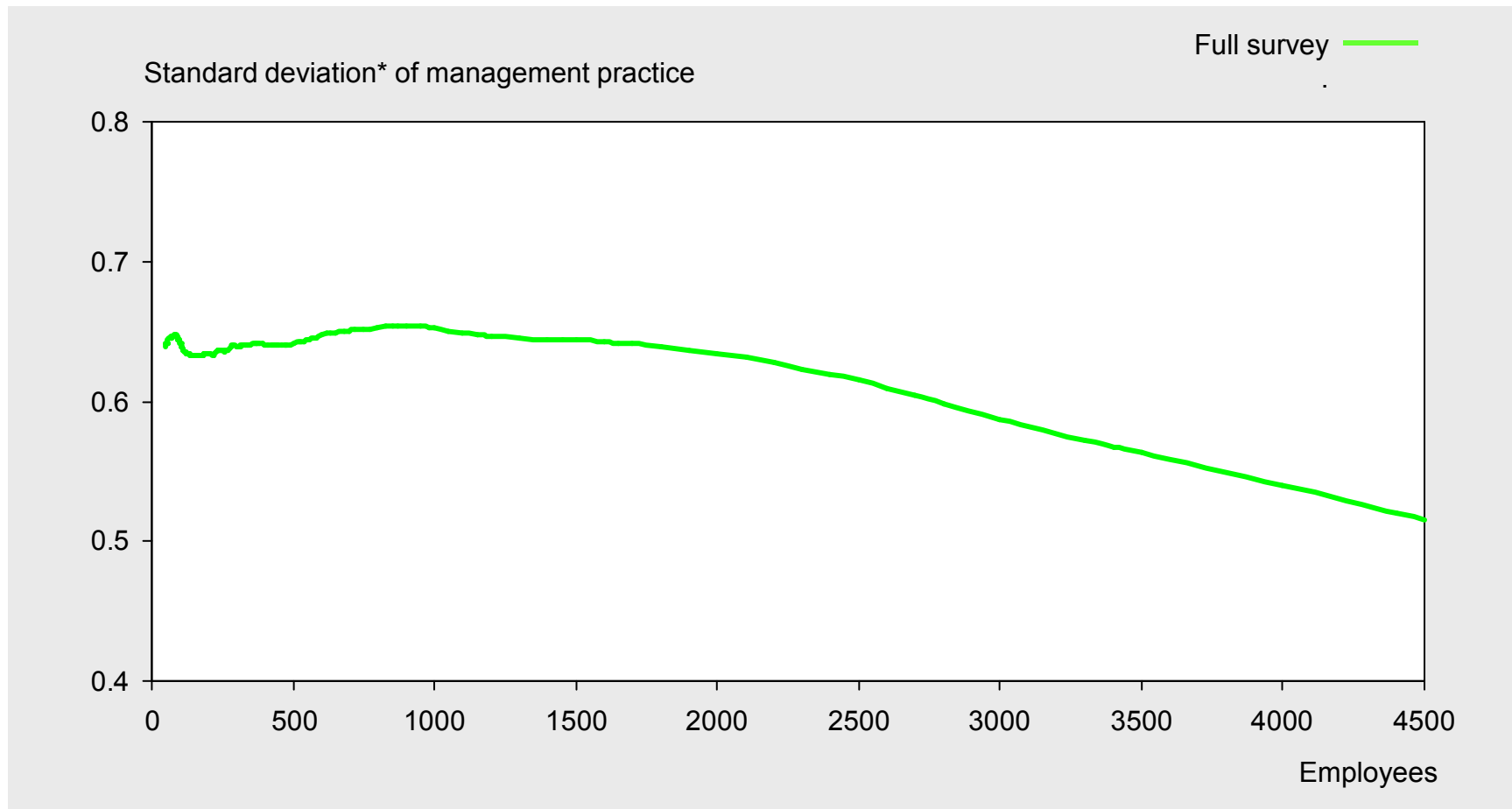


* Lowess regression fit; Size significant with step-wise linear regression, cut-off point 500 employees

Source: Data collected from interviews as of Jan 15, 2007; team analysis

...BEYOND ~500 EMPLOYEES FIRMS OF SIMILAR SIZE SHOW REDUCED VARIATION IN THEIR MANAGEMENT PRACTICE

Variation in firms' management practice vs. assessed management practice score**



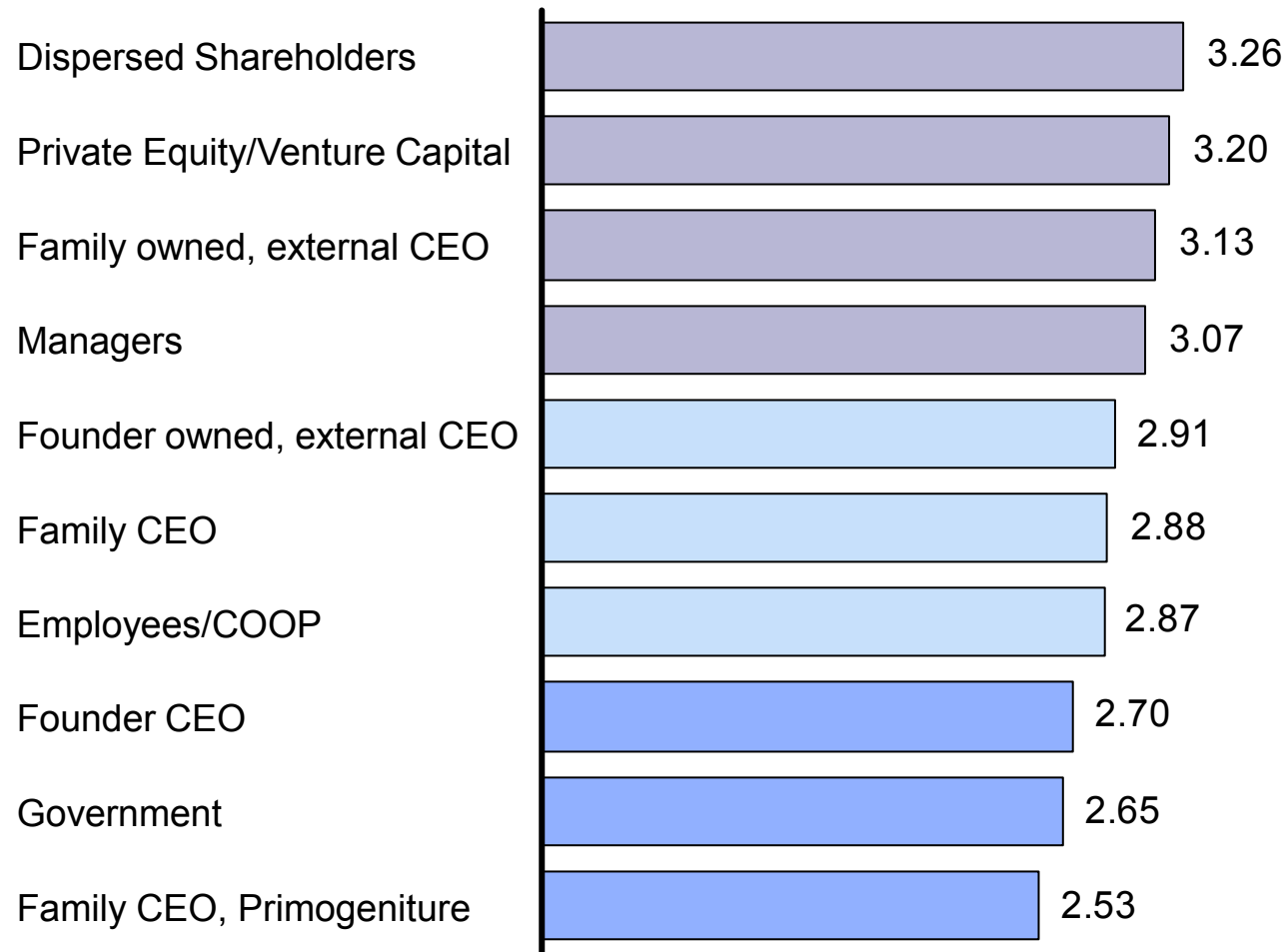
* Note that decreasing variance may well be a purely statistical effect (“fringe effect”) due to limitation within 1-5 band

** Lowess fit

Source: Data collected from interviews as of January 15, 2007; team analysis

WE FIND MANAGEMENT PRACTICES TO VARY SUBSTANTIALLY BY OWNERSHIP TYPE

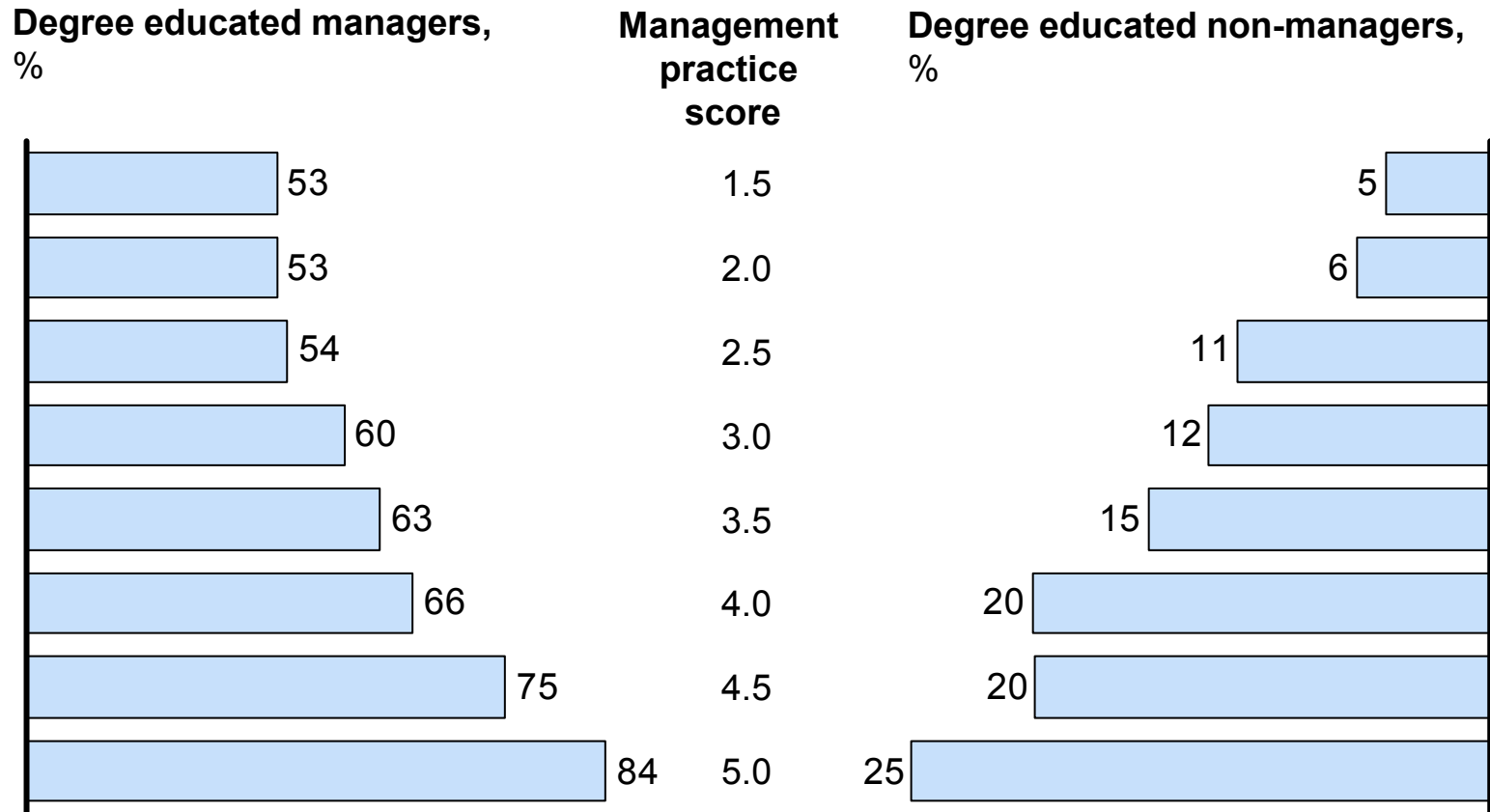
Management practice score– by ownership type



3 distinct groups appear

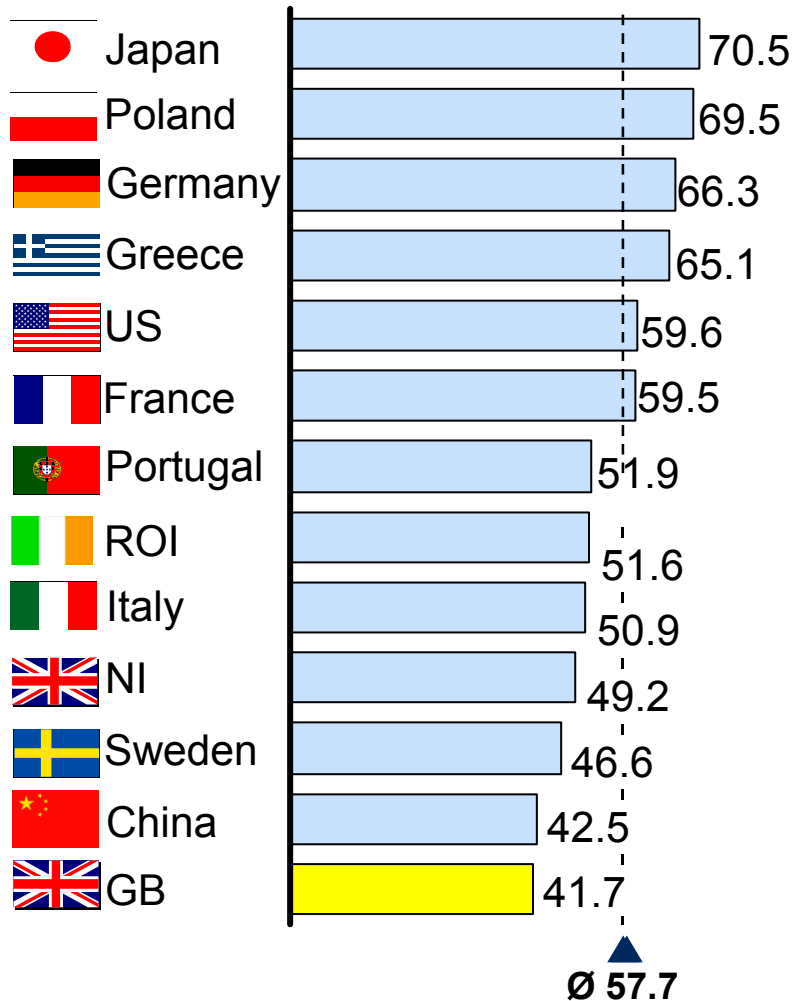
- Dispersed shareholders; Private Equity/Venture Capital; Family owned with external CEO; Managers
- Founder owned with external CEO; Family CEO; Employees/COOP
- Founder CEO; Government; Family CEO, Primogeniture

BETTER MANAGEMENT IS ALSO LINKED WITH HIGHER SKILL LEVELS OF BOTH MANAGERS AND NON-MANAGERS

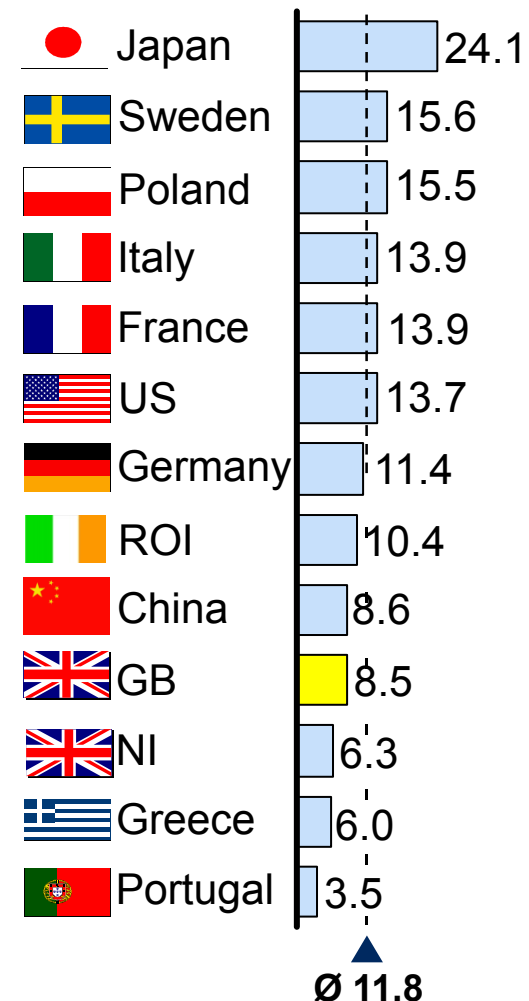


ONE KEY DRIVER OF THE UK AVERAGE MANAGEMENT SCORE IS ITS RELATIVELY LOW SKILL LEVELS

Average share of managers with degree – by country

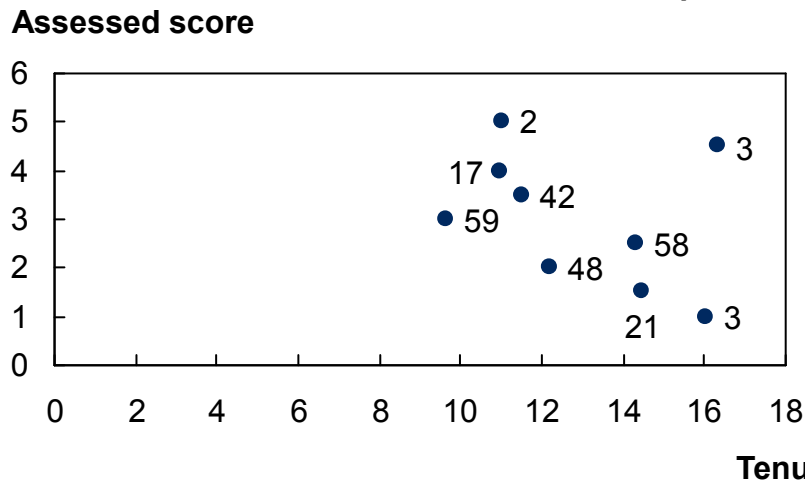
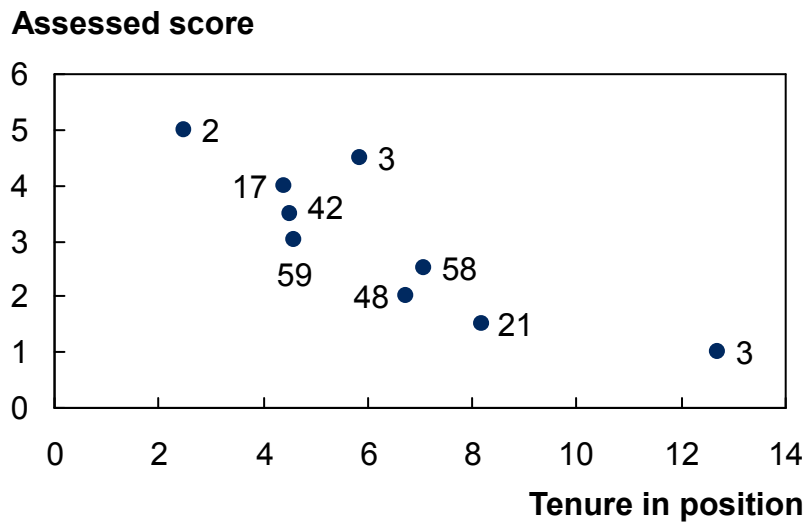


Average share of non-managers with degree – by country



WE CONTINUE TO SEE THAT GOOD MANAGEMENT IS CORRELATED WITH RAPID CHANGES IN A MANAGERS' ROLE, BUT NOT TENURE IN COMPANY

Assessed score, tenure in years



- Firms whose managers have shorter tenure in current role received higher average scores
- However, there is no strong correlation between a manager's tenure in a firm and their average scores

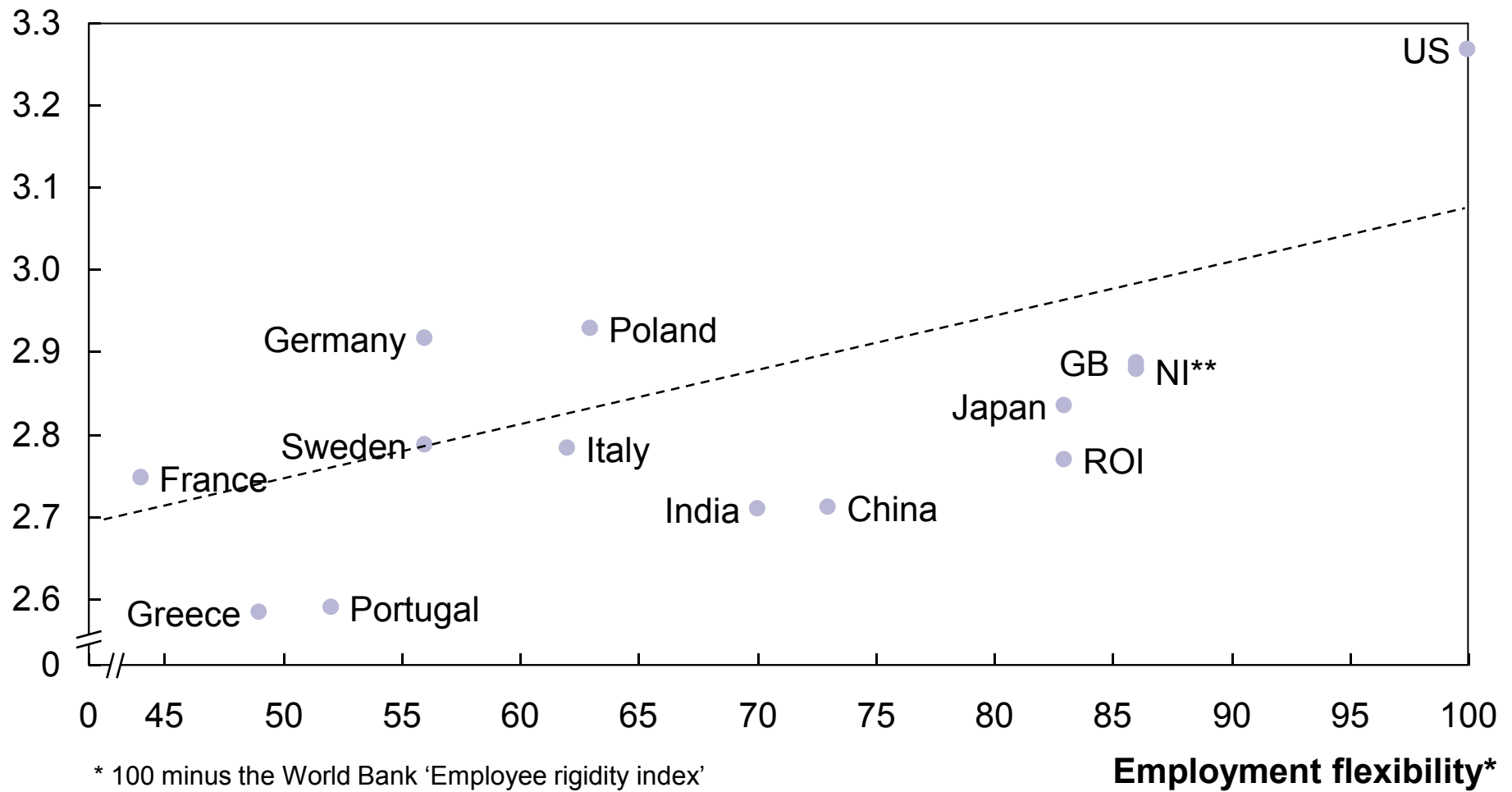
* Only companies with 50 to 4999 employees, bucketed by overall scores in 0.5 increments

Source: ROI and NI data collected from interviews as of September 15, 2008

COUNTRIES WITH MORE FLEXIBLE LABOUR MARKETS HAVE BETTER PEOPLE MANAGEMENT SCORES

Labour market rigidity index* vs people Management Practice score – By country

People Management Practice score



* 100 minus the World Bank 'Employee rigidity index'

** Assumed NI labour productivity same as Great Britain

Source: Data collected from interviews as of September 2008, World Bank; team analysis

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Evaluating the management measure

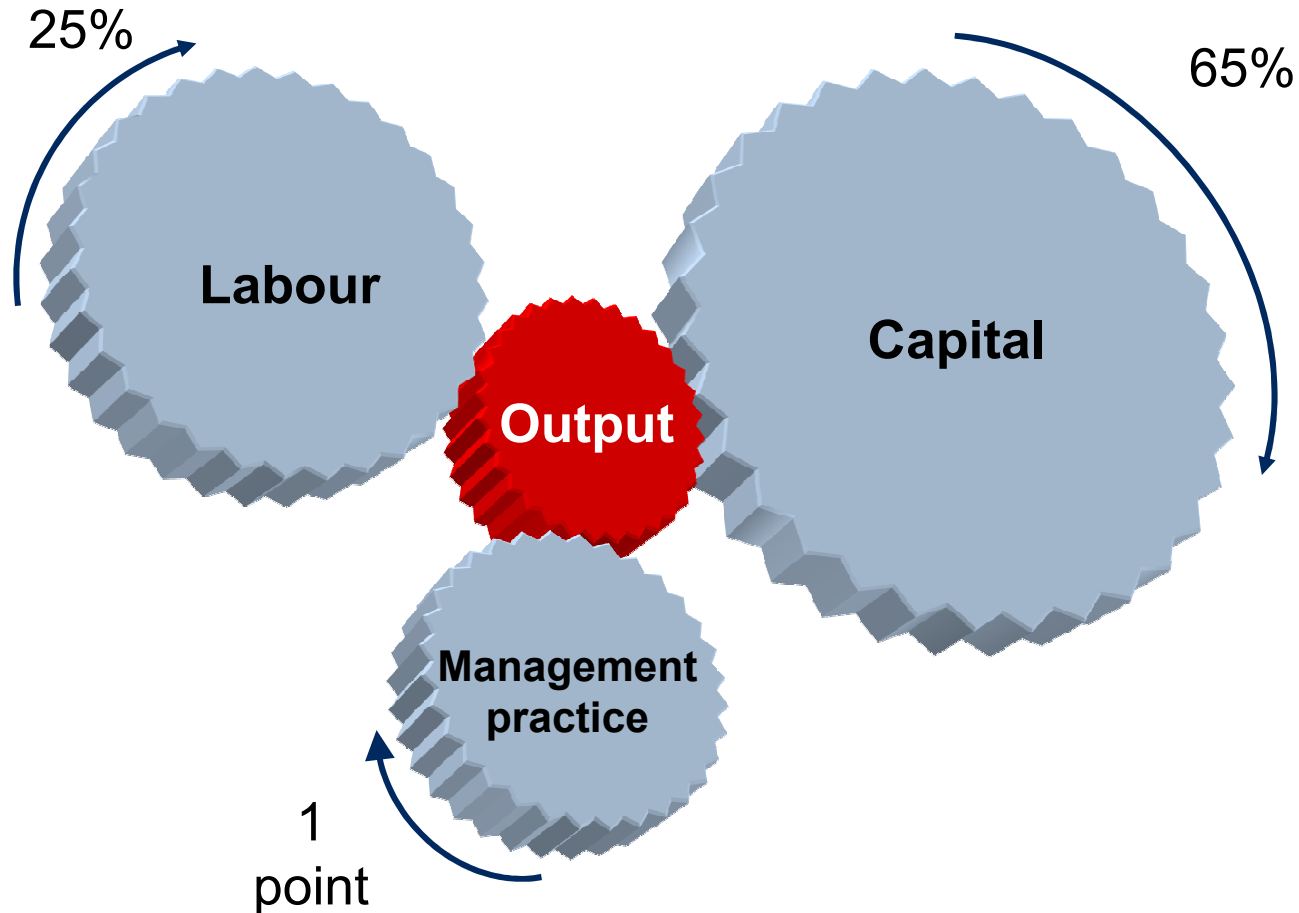
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Future research and key takeaways

GLOBALLY, THE EFFECT OF IMPROVING MANAGEMENT IS LARGE COMPARED TO INVESTING IN LABOUR OR CAPITAL

Effect* of increased factor inputs on output



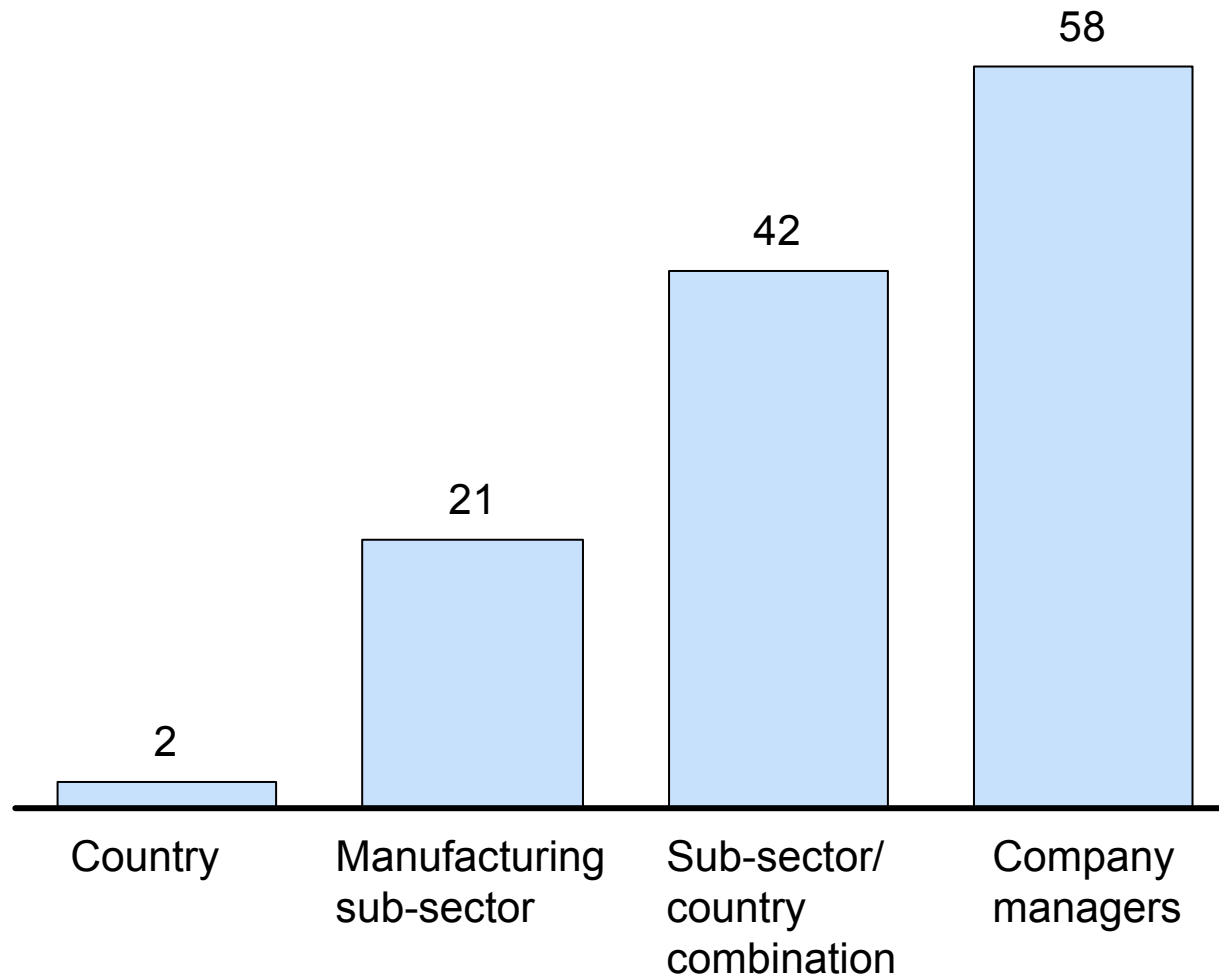
- Improving management practice is a highly leveraged means of getting more output from the firms existing
 - Labour
 - Capital
- This is true for all companies* irrespective of the quality of current management practices

* Independent of sector, ownership type, profitability, past productivity growth, size
Source: Data collected from interviews as of October 2008; team analysis

THESE DIFFERENCES IN MANAGEMENT PRACTICE ARE DUE TO THE CHOICES INDIVIDUAL MANAGERS MAKE

Dependency of management score (% of variance)

EXAMPLE ONLY



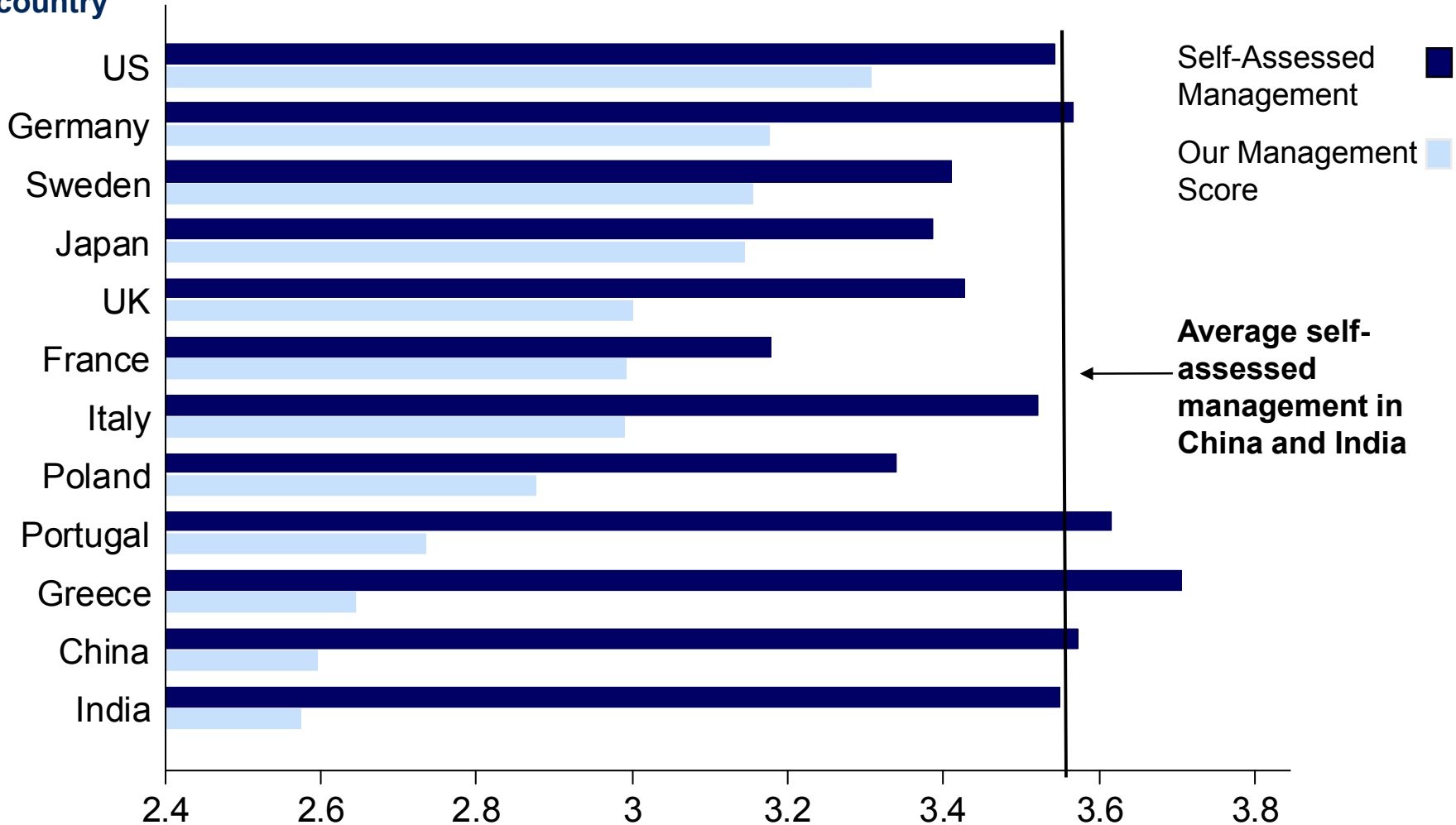
Managers' choices determine over half a company's management practice score

WHILE THE AVERAGE MANAGER THINKS THAT HIS OR HER FIRM'S MANAGEMENT IS WELL-ABOVE AVERAGE



THE REALITY IS THAT MANAGEMENT PRACTICES VARY SUBSTANTIALLY ACROSS COUNTRIES

Average score on 18 management practice questions and self-assessed management score, by country





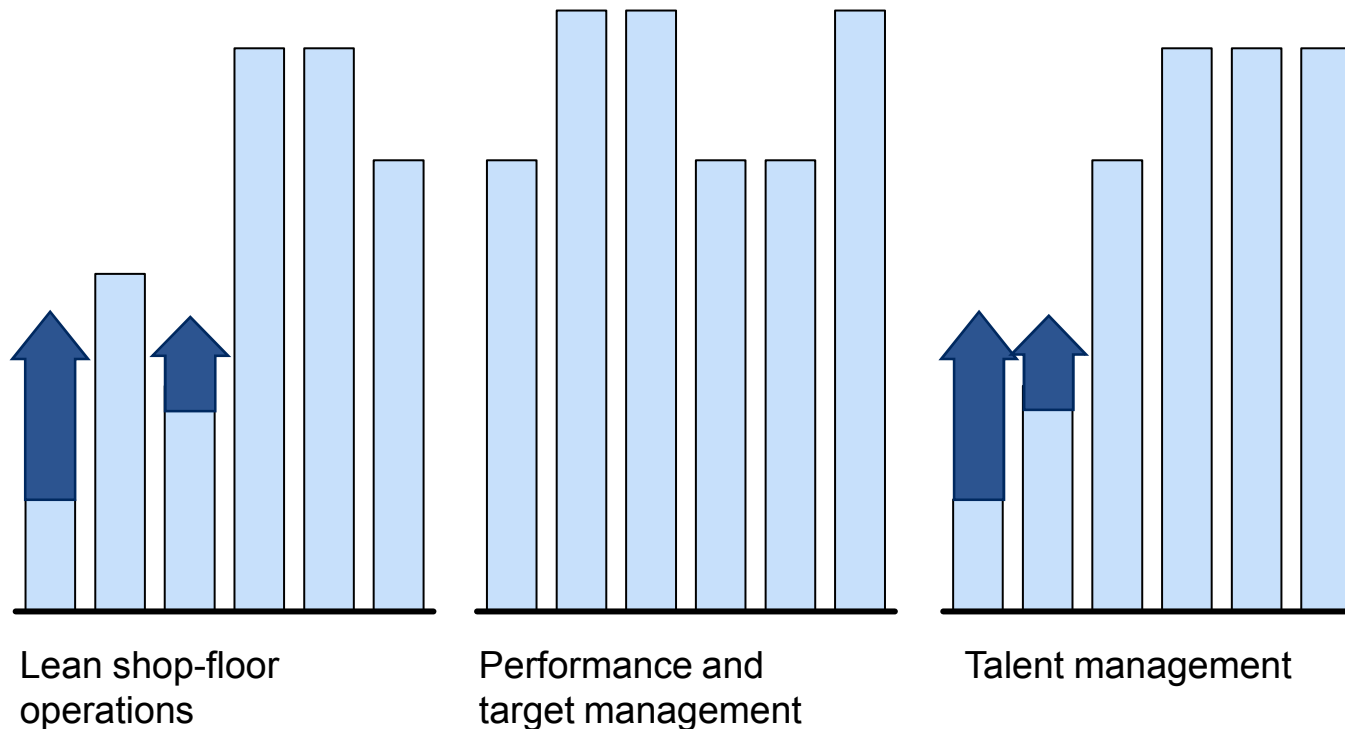
Note: Scores are divided by 2 to put them on the same scale as our management scores

BUT OUR ASSESSMENT AND TOOLS CAN HIGHLIGHT THE AREAS FOR TARGETED IMPROVEMENTS TO INCREASE PERFORMANCE

Management score

ILLUSTRATIVE

 Targeted interventions
 Management practice score



- Focus on key areas to improve
- Consistency of management practice
 - Average management score
 - Associated performance
 - ROCE
 - Productivity
 - Growth
 - Market capitalisation

MANAGEMENT PROJECT ALLOWS US TO EXPLORE AND ANALYSE DIFFERENCES ACROSS FIRMS AND COUNTRIES

Created a robust assessment tool to score management across 5,000 companies in 15 countries

KEY INSIGHTS:

- Substantial intra-country variation in management practice
- Our assessment of management practice is clearly correlated with corporate performance, both when measured in productivity and financial returns
- Firm ownership is a key driver of management practice variation
- Relative to domestic firms, foreign multinationals are better managed and more likely to be amongst a country's best-managed firms
- Higher levels of competition correlates with better management practice
- Managers' perceptions of their own management practice does not correlate with either their assessed management practice nor with their firms' performance

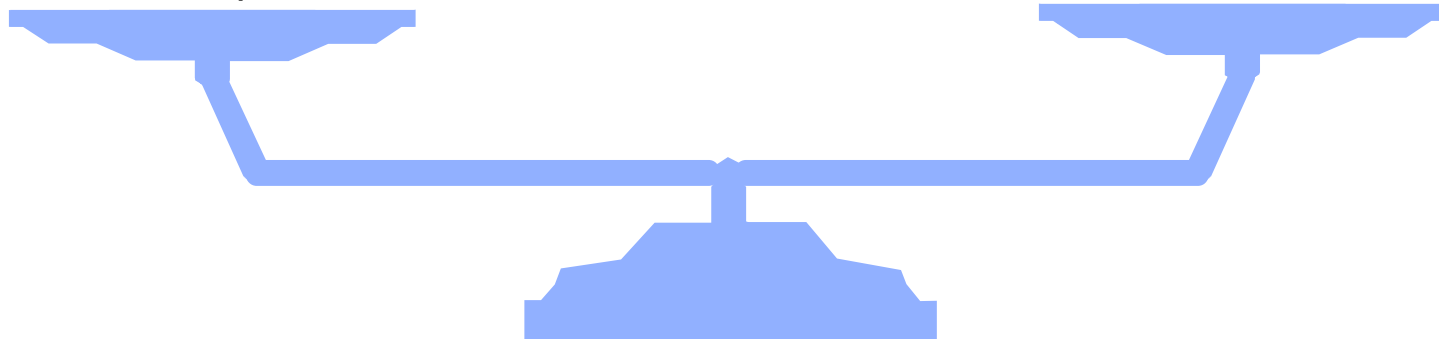
CONCLUSIONS

For Businesses

- Some can thrive even in tough conditions
- Self- assessment may be poor
- Meritocratic CEO selection important

For Policy makers

- Competition vital
- Ownership
- Skills
- International competitors catching up fast



KEY INSIGHTS EMERGING FROM CURRENT AND FUTURE RESEARCH EXPLORING MANAGEMENT AND PRODUCTIVITY

**Impact of firm
and plant
organisational
structure**

Role of IT

**Beyond a
manufacturing
focus.....**

Initial progress and emerging insights

- Beginning to analyze role of national characteristics on organizational structures
- Initial data shows strong organizational similarities between firms originating from the same country, irrespective of firms' location, sector or size

Also related to Manager Contact project

- Returns to IT are extremely variable and the key difference is the management and organisation of the firm
- Possible relationship between impact of IT and firm organisational structure

- Public sector focus
- Impact of environmental focus
- Industry variation
 - Project investigating and scoring tradable service firms in ROI and Northern Ireland being conducted currently

NEXT STEPS: Management Matters Australia Wave!



THESE MANAGERS SHARED SEVERAL MEMORABLE QUOTES

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!”

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!”

... AND DURING OUR IRISH INTERVIEWS, WE'VE ALREADY HEARD SOME GREAT QUOTES

Money's a sensitive topic to the Irish....

Interviewer: "Would you mind if I asked how much your bonus is as a manager?"

Irish manager: "I don't even tell my wife how much my bonus is!"

Interviewer: "Probably the right decision..."

No fault attrition...

Interviewer: "Have any managers left within the last 12 months?"

Irish manager: "One died..."

Interviewer: "I won't count that one."

Irish manager: "And one fell in love with a girl a long way away. So there was nothing I could do."

Position fatigue in Ireland....

Interviewer : How long have you been with the company for?

Irish manager: : 24 years

Interviewer : Brilliant!

Irish manager: : Brilliant? I'd be out of prison at this stage.

... AND FINALLY, SOME MORE INTERESTING QUOTES

Staff retention the American way

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

The difficulties of defining ownership in Europe

Production Manager: "We're owned by the Mafia"

Interviewer: "I think that's the "Other" category.....although I guess I could put you down as an "Italian multinational" ?"

Competitive market in Sweden?

PM: We have no competitors, just parasites [Swedish female PM for medical instruments company with 70% of world market]

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QUESTIONS