Measuring and Explaining Management Practices Around the World

Nick Bloom (Stanford)

based on work with Renata Lemos (World Bank), Raffaella Sadun (Harvard), Daniela Scur (Oxford) & John Van Reenen (MIT)

ABFER May 24th 2018
Singapore MATH
Level 4
70 Must-Know Word Problems

- Word problems based on the leading math program in the world—Singapore Math!
- Introduction explaining the Singapore Math method
- Step-by-step solutions in the answer key
- Reproducible pages

Appropriate for students in Grade 5
US productivity growth is slowing, and I argue will likely remain low for the next 10 to 20 years.

Indeed, productivity growth is slowing across almost all countries (including Singapore)

Source: OECD, Syverson (2018)
Francis Walker (1840-1897), founding President American Economic Association

Walker ran the 1870 and 1880 Censuses. Based on this, Walker wrote his 1887 paper "On the Source of Business Profits" published in the first volume of the QJE. It claimed management was the major source of performance differences across US firms.

In the *Fortnightly* of September, 1879, Professor Henry Sidgwick, in reviewing the recent literature of the wages controversy, said, "It seems to me that, while Professor Walker's argument gives a coup de grâce to the wages fund theory, it supplies no substitute for it; it leaves us with no theoretical determination whatever of the average proportions in which produce is divided between labor and capital."

I confess that at the time this seemed to me a hard judgment. The current political economy had for more than a generation declared that the measure of possible wages was found in existing capital; that the average rate of wages was wholly determined by the ratio between the amount of capital and the numbers of the laboring class; for both the natural history and the literary history of this doctrine, reference may be made to an article by the present writer in the *North American Review* for January, 1875.

* "The circulating capital of a country is its wage-fund. Hence, if we desire to calculate the average money-wages received by each laborer, we have..."
But there is still a wide debate – many people claim management is “hot air” or “BS”

“No potential driving factor of productivity has seen a higher ratio of speculation to empirical study”

Chad Syversson (2011, Journal of Economic Literature)
Part of a research group looking scientifically at management, and summarize 15+ years research

1) Measuring management

2) Impact of management on performance
   - Regression results
   - Field experiments

3) Drivers and policy
World Management Survey has covered more than 20,000 firms in 35 countries since 2002.
Survey methodology (Bloom & Van Reenen, 2007, QJE)

1) Developing management questions
   - Scorecard for 18 monitoring, targets & people management practices ≈45 minute phone interview of plant managers

2) Getting firms to participate in the interview
   - Introduced as "Lean-manufacturing" interview, no financials
   - Official Endorsement: Bundesbank, RBI, World Bank, BOJ etc.

3) Obtaining unbiased comparable responses, “Double-blind”
   - Interviewers do not know the company's performance
   - Managers are not informed (in advance) they are scored
Some typical endorsement letters

Toshikho Fukui
Bank of Japan

July 4, 2006

Sir Howard Davies
Director
The London School of Economics and Political Science
Houghton Street
London WC2A 2AE
United Kingdom

Dear Howard,

Thank you for your letter regarding your international project to improve productivity in manufacturing companies around the world.

Given the increasing global linkage of economic activities, your initiative to extend the coverage of the project to Asia is indeed relevant and timely.

I wish you every success in the project.

Sincerely yours,

[Signature]

Yi Gang
Assistant Governor
People’s Bank of China

Dear Prof. Nicholas Stern,

Thank you for your email of August 29 addressed to Governor Zhou. On his behalf, I would like to congratulate you on your appointment as the first holder of the R. P. Patel Chair at the London School of Economics and the Director of the Asia Research Centre.

Governor Zhou thanks you for informing him of the joint London School of Economics and Stanford research project led by Professor John Van Reenen. He agrees with you that improving productivity and management practices is important for ensuring economic growth and employment, and believes that this project would be valuable in understanding managerial strengths and weaknesses. Personally he welcomes this project. He suggests that Professor Van Reenen approach the concerned firms directly. I believe many Chinese firms looking for international advice would be happy to take part in such a high-level academic survey.

With my best regards,

[Signature]

Zhou Xiaochuan
Governor
People’s Bank of China
1) Developing management questions
   • Scorecard for 18 monitoring, targets & people management practices ≈45 minute phone interview of plant managers

2) Getting firms to participate in the interview
   • Introduced as “Lean-manufacturing” interview, no financials
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3) Obtaining unbiased comparable responses, “Double-blind”
   • Interviewers do not know the company’s performance
   • Managers are not informed (in advance) they are scored
| Score | (1): Measures tracked do not indicate directly if overall business objectives are being met. Many processes aren’t tracked at all | (3): Most key performance indicators are tracked formally. Tracking is overseen by senior management | (5): Performance is continuously tracked and communicated, both formally and informally, to all staff using a range of visual management tools |

**Note:** All 18 questions & 50+ examples in [http://worldmanagementsurvey.org/](http://worldmanagementsurvey.org/)
Examples of performance metrics – Car Plant
Examples of a performance metrics – Hospital
Examples of performance metrics – Retail (Ctrip)
Examples of performance metrics – hotels (ASSA)
Example of *no* performance metrics: Textile Plant
### Example Incentives Question

| Score | (1) People are promoted primarily upon the basis of tenure, irrespective of performance (ability & effort) | (3) People are promoted primarily upon the basis of performance | (5) We actively identify, develop and promote our top performers |

Note: All 18 questions & 50+ examples in [http://worldmanagementsurvey.org/](http://worldmanagementsurvey.org/)
Examples of performance reviews – Retail Bank

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Interviewers survey multiple countries, typically all from the same place (e.g. London 2006)
Wide spread of management in manufacturing

- United States: 3.308
- Japan: 3.230
- Germany: 3.210
- Sweden: 3.188
- Canada: 3.142
- Great Britain: 3.033
- France: 3.015
- Australia: 2.997
- Italy: 2.978
- Mexico: 2.899
- Poland: 2.887
- Singapore: 2.861
- New Zealand: 2.851
- Northern Ireland: 2.839
- Portugal: 2.839
- Republic of Ireland: 2.826
- Chile: 2.762
- Spain: 2.752
- Greece: 2.748
- China: 2.720
- Turkey: 2.712
- Argentina: 2.706
- Brazil: 2.699
- India: 2.689
- Vietnam: 2.684
- Colombia: 2.611
- Colombia: 2.608
- Kenya: 2.578
- Nigeria: 2.549
- Nicaragua: 2.516
- Myanmar: 2.397
- Zambia: 2.372
- Tanzania: 2.316
- Ghana: 2.254
- Ethiopia: 2.225
- Mozambique: 2.027

Average Management Scores, Manufacturing Firms

- Africa
- Asia
- Oceania
- Europe
- Latin America
- North America
Average management scores across countries are strongly correlated with GDP per capita.
Management also varies heavily within countries

Firm level average management scores, 1 (worst practice) to 5 (best practice)
Also been looking at other sectors: hospitals

Randomly surveyed population of hospitals in each country that offer acute care (take emergencies), and have an orthopedics and/or cardiology department. Total of 1687 hospitals.
So we find a huge spread in management practices across firms and countries....

....but does this matter?
I will try to summarize 15+ years research in 2 areas

1) Measuring management

2) Impact of management on performance
   - Regression results
   - Field experiments

3) Drivers and policy
These management scores are robustly positively correlated with firm performance.
Better management associated with lower pollution

Source: “Modern management: Good for the environment or all hot air?” Bloom, Genakos, Martin and Sadun, (2010, EJ). Data from UK census of production and WMS management survey. Energy intensity=energy/output.
Of course this correlation may not be causal.

So I’ve also been working with the World Bank on management randomized control trial
Took 28 large textile plants near Mumbai and randomized into treatment (improved management) & control (same as before)
Factory operations: Before
Factory operations: After
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| Weight   | 50 kg          |

| Selvage  | 12 deats 10,400 kg |
|          | 2152          |
|          | 5 deats 20,452  |
|          | 1.1528       |
|          | 20,452       |

| Return & Dust | 25 deats 10,840 kg |
|              | 20,452       |
Factory information: After
These simple management improvements increased productivity by 20% within 1 year alone.

Source: Bloom, Eifert, Mahajan, McKenzie & Roberts, forthcoming *Quarterly Journal of Economics*
1) Measuring management

2) Impact of management on performance
   - Regression results
   - Field experiments

3) Drivers and policy
So why don’t firms just improve their management practices – one reason is they cannot self assess

At the end of the survey we asked:

“Excluding yourself, how well managed would you say your firm is on a scale of 1 to 10, where 1 is worst practice, 5 is average and 10 is best practice”
...and found firms are too optimistic on management

“Average”
...and self-scores show no link to performance
So what policies Governments could enact?

- Ownership
- Competition
- Education
- Regulation
OWNERSHIP: MULTINATIONALS ACHIEVE GOOD MANAGEMENT PRACTICES WHEREVER THEY LOCATE

- United States
- Japan
- Germany
- Sweden
- Canada
- Great Britain
- France
- Italy
- Australia
- Singapore
- Mexico
- Poland
- Portugal
- New Zealand
- Turkey
- China
- Chile
- Greece
- Spain
- India
- Brazil
- Colombia
- Vietnam
- Argentina
- Northern Ireland
- Myanmar
- Republic of Ireland
- Nicaragua

Management score

- Domestic firms (red)
- Foreign multinationals (black)
OWNERSHIP: FAMILY-RUN AND GOVERNMENT FIRMS TYPICALLY HAVE VERY POOR MANAGEMENT

Management scores after controlling for country, industry and number of employees. Data from 9085 manufacturers and 658 retailers. “Founder owned, founder CEO” firms are those still owned and managed by their founders. “Family firms” are those owned by descendants of the founder. “Dispersed shareholder” firms are those with no shareholder with more than 25% of equity, such as widely held public firms.
Family & founder firms common in Asia

Notes: Data from 14,686 interviews. Created May 2015. Source: www.worldmanagementsurvey.com
EDUCATION FOR NON-MANAGERS AND MANAGERS APPEAR LINKED TO BETTER MANAGEMENT

Sample of 8,032 manufacturing and 647 retail firms.

Percentage of employees with a college degree (%)
Note: Management scores for the 15,454 interviews in the WMS survey plotted against the World Bank’s 2014 doing business “Ease of Doing Business” rank, where 1 is best and 189 is worst. See [http://www.doingbusiness.org/rankings](http://www.doingbusiness.org/rankings). Smaller and larger firms in China, Nigeria and Mozambique have been re-stratified in order to balance the sampling frame.
Also been working with the US Census Bureau on running national management surveys (MOPS)

It was delivered to ≈50,000 manufacturing plants in 2010 and again in 2015

This was quick and easy to fill out - and mandatory - so 78% of plants responded, covering 5.6m employees (>50% of US manufacturing employment)

Samples all ages & sizes
Regulation: Right to work (less regulation) improves management scores

Average RTW: 0.61 (0.004)
Average non-RTW: 0.58 (0.004)

Notes: Black outline: right-to-work states as of 2010. The RTW and non-RTW averages are calculated using the 35 states which are reported in the paper, weighted by the number of observations in each state.
MOPS surveys in other countries - including China, Japan and Pakistan – maybe Singapore soon?

Dear Sir or Madam,

Please find the questionnaire for the Management and Expectations Survey attached. Please complete for the period 1 January 2016 to 31 December 2016. The questions in this survey are aimed primarily at the most senior person responsible for day-to-day operations of this business. Once complete, the questionnaire can be returned by post or fax using the details in the box below.

The Office for National Statistics (ONS) is responsible for producing key economic statistics that are used across Government to respond to and manage the UK economy. Information from this survey will be used to better understand how businesses operate and how this relates to business performance. Understanding the drivers of business performance is essential to understanding the dynamics of the UK economy. Your response to this survey is of great value to government.

Management and Expectations Survey

Encuesta Nacional sobre Productividad y Competitividad de las Empresas
ENAPROCE 2015
Empresas Manufactureras

Management and Organizational Practices Survey
Jointly Conducted
by State Bank of Pakistan and Pakistan Bureau of Statistics

Section A - Particulars of Establishment
1. Name
2. Regional Address
3. Mobile Address
4. Date of Establishment (Nascent or Pre-existing, Format: YYYY-MM-DD)
Conclusions

You can measure management practices in large samples

Explains ≈1/3 cross-country & plant TFP spreads

Key drivers appear to be:
  - competition
  - ownership
  - regulation
  - skills
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” ?”

Americans on geography

Interviewer: “How many production sites do you have abroad?
Manager in Indiana, US: “Well…we have one in Texas…”
Interviewer: “Do staff sometimes end up doing the wrong sort of work for their skills?”

NHS Manager: “You mean like doctors doing nurses jobs, and nurses doing porter jobs? Yeah, all the time. Last week, we had to get the healthier patients to push around the beds for the sicker patients”

Interviewer: “Is this hospital for profit or not for profit”

Hospital Manager: “Oh no, this hospital is only for loss making”
Interviewer: “Do you offer acute care?”

Switchboard: “Yes ma’am we do”

Interviewer: “Do you have an orthopaedic department?”

Switchboard: “Yes ma’am we do”

Interviewer: “What about a cardiology department?”

Switchboard: “Yes ma’am”

Interviewer: “Great – can you connect me to the ortho department”

Switchboard?: “Sorry ma’am – I’m a patient here”
More research, policy briefs & media available here www.worldmanagementsurvey.com

RESEARCH

We have worked with thousands of managers from nearly 40 countries to measure performance in their firms.

DATE FOR YOUR CALENDARS: NEXT EMPIRICAL MANAGEMENT CONFERENCE AT MIT ON DECEMBER 8-9, CALL FOR PAPERS COMING IN JULY.

NEW PAPER: INTERNATIONAL DATA ON MEASURING MANAGEMENT PRACTICES

Benchmark your organization

Using our web-based tool, answer a set of questions to benchmark your organization against our full dataset in the four main sectors of the WMS research.

BENCHMARK NOW

Survey Data