BOSS-ONOMICS: Does Management Matter?

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GREAT PEOPLE TO WORK FOR?

GREAT PLACES TO WORK?........
Nokia factory shop floor: area around the machines is clean and organised
State-owned telecoms equipment factory in Belarus. Everyone on a mysterious break?
Family-owned textile company outside
Mumbai, India
1. What is productivity & why should we care?

2. International Comparisons: How is Italy doing?

3. Why is there a productivity gap?
   - Technology
   - The role of management

4. What can we do to improve things?
   - Long-run structural change
   - Short run
WHAT IS PRODUCTIVITY AND WHY SHOULD WE CARE?

• “Productivity isn’t everything, but in the long run it is almost everything” (Paul Krugman)

• **Productivity growth**
  – Drives growth of real wages
  – Can facilitate redistribution

• Particularly important during current era of budgetary cutbacks
WHAT IS LABOUR PRODUCTIVITY? 3 COMPONENTS OF GDP (NATIONAL INCOME) PER PERSON

Basic “welfare” measure

$$\frac{GDP}{Population} \times \frac{GDP}{hours} = \text{Labour productivity}$$
WHAT IS LABOUR PRODUCTIVITY? 3 COMPONENTS OF GDP (OR GNP) PER CAPITA

Basic “welfare” measure

\[
\frac{GDP}{Population} = \frac{GDP}{hours} \times \frac{hours}{workers} \times \cdot
\]

Labour productivity
WHAT IS LABOUR PRODUCTIVITY? 3 COMPONENTS OF GDP (OR GNP) PER CAPITA

Basic “welfare” measure

\[
\frac{GDP}{Population} = \frac{GDP}{hours} \times \frac{hours}{workers} \times \frac{workers}{population}
\]

Labour productivity

Employment rate.

Unemployment & inactivity

Demographics
WHAT IS LABOUR PRODUCTIVITY? 3 COMPONENTS OF GDP (OR GNP) PER CAPITA

Basic “welfare” measure

\[
\frac{GDP}{Population} = \frac{GDP}{hours} \times \frac{hours}{workers} \times \frac{workers}{population}
\]

- Labour productivity

• Growth per capita matters for welfare. Total growth does not!
MEASURING PRODUCTIVITY

- Labour Productivity (Output per hour) depends on:
  - Inputs per hour (plant & equipment, human capital, materials, energy, etc.)
  - “Total Factor Productivity” = TFP = “Solow residual”
  - TFP Accounts for most of long-term growth & much of differences in wealth of nations
  - But what causes TFP??
LARGE INCOME & TFP DIFFERENCES BETWEEN COUNTRIES

Source: Jones and Romer (2009). US=1
1. What is productivity & why should we care?

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RELATIVE LABOUR PRODUCTIVITY (GDP PER HOUR) IN 2009; $PPP

Source: Conference Board World Economy Database,
ALSO LOW ITALIAN ANNUAL PRODUCTIVITY GROWTH (GDP PER HOUR)

Source: Conference Board World Economy Database, 2009 US$ PPP
ALSO LOW ITALIAN ANNUAL PRODUCTIVITY GROWTH (GDP PER HOUR)

Source: Conference Board World Economy Database, 2009 US$ PPP
1. What is productivity & why should we care?

2. International Comparisons

3. Why is there a productivity gap?
   - “hard” technologies
   - The role of management

4. What can we do to improve things?
IS TECHNOLOGICAL INNOVATION THE CAUSE OF PRODUCTIVITY GAP WITH THE US?

• Partially correct – Italy has innovation deficit

• ....Commercialization of innovation is weak: Research & Development (R&D), Patenting, etc.
Source: OECD, MSTI
IS MANAGEMENT ALSO A CAUSE OF PRODUCTIVITY GAP?

• Problem is not just “hard” technologies. Also problems with the way firms are managed.
• Technologies available globally - why do some countries/firms use & manage them more effectively?
• But how to measure, quantify and compare management practices across firms and countries?
• My Research Program with Nick Bloom (Stanford), Raffaella Sadun (HBS) & CEP/LSE team over last 8 years tries to tackle this
THE SURVEY METHODOLOGY

1) Developing management questions
   • Scorecard for 18 monitoring, targets and people
   • ≈45 minute phone interview of manufacturing plant managers

2) Obtaining unbiased comparable responses ("Double-blind")
   • Interviewers do not know the company’s performance
   • Managers are not informed (in advance) they are scored
   • Run from LSE, with same training and country rotation

3) Getting firms to participate in the interview
   • Introduced as “Lean-manufacturing” interview, no financials
   • Official Endorsement: Bundesbank, PBC, RBI, etc.
   • Run by ~100 MBA-types (loud, assertive, business experience)
| Score | (1): Measures tracked do not indicate directly if overall business objectives are being met. Certain 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 dimensions and over 50 examples in Bloom & Van Reenen (2006)
### INCENTIVES - e.g. “HOW DOES THE PROMOTION SYSTEM WORK?”

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

**Note:** All 18 dimensions and over 50 examples in Bloom & Van Reenen (2006)
MANAGEMENT SURVEY SAMPLE

- Interviewed over 8,000 firms across Americas, Asia & Europe
- Obtained 45% response rate from sampling frame (with responses uncorrelated with performance measures)

Medium sized manufacturing firms:
- Medium sized (100 - 5,000 employees, median ≈ 250) because firm practices more homogeneous
- Manufacturing as easier to measure productivity (also conducted in Schools, Hospitals & Retail Firms)
EXTERNAL VALIDATION: MANAGEMENT SCORE CORRELATES WELL WITH PERFORMANCE INDICATORS

Labour productivity*

Sales growth (%)

Return On Capital Employed, ROCE

* Log scale
** Firms are grouped in 0.5 increments of assessed management score
THE LINK BETWEEN PRODUCTIVITY AND MANAGEMENT HOLDS TRUE ACROSS DIFFERENT COUNTRIES

Labour productivity*

U.S. U.K.

CN JP

* Log scale (sales per worker)

** Firms are grouped in 0.5 increments of assessed management score
AVERAGE MANAGEMENT SCORE ACROSS COUNTRIES: ITALY IN “SERIE B” OF MANAGEMENT QUALITY LEAGUE

Note: Averages taken across all firms within each country. 9079 observations in total.
OVER 90% OF VARIATION IN MANAGEMENT IS WITHIN COUNTRIES ACROSS FIRMS

1= Worst managed, 5=Best managed, average of 18 questions
MUCH OF THE CROSS-COUNTRY DIFFERENCES DUE TO THE “LOWER TAIL”

Distribution of firm level management practice scores

Assessed management practice score

Low score | High score

1 | 5

Italy. U.S.
MY FAVOURITE QUOTES:

The traditional British Chat-Up

[Male manager speaking to an Australian female interviewer]

*Production Manager:* “Your accent is really cute and I love the way you talk. Do you fancy meeting up near the factory?”

*Interviewer* “Sorry, but I’m washing my hair every night for the next month….”
The traditional Indian Chat-Up

Production Manager: “Are you a Brahmin?’

Interviewer “Yes, why do you ask?”

Production manager  “And are you married?”

Interviewer “No?”

Production 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”
COMPETITION & MODELS OF MANAGEMENT

Various ways that competition may influence management

- **Selection** – badly run firms more likely to exit
- **Effort** – forces badly run firms to try harder to survive

We find competition is strongly linked with better management through a mixture of selection & effort.
MORE COMPETITION IS ASSOCIATED WITH BETTER MANAGEMENT PRACTICES

Assessed management practice score

Reported number of competitors
RIGID LABOUR MARKET REGULATION LOWERS PEOPLE MANAGEMENT SCORES

Labour market rigidity* vs people management practice score – by country

* World Bank “Employee rigidity index”
Source: World Bank; Management Matters dataset
Impact of family firms depends on involvement

- **Ownership** but not management probably positive
  - Concentrated ownership so better monitoring
- **Management** probably negative
  - Smaller pool to select CEO from
  - Possible “Carnegie” effect on future CEO’s
  - Less career incentive for non-family managers

Italy has a lot of family owned firms run by eldest sons

- Three times more Primo geniture firms in Italy than US (9% vs. 3% in our sample)
- See also Bandiera, Guiso, Prat & Sadun (2011)
FAMILY FIRMS TYPICALLY HAVE THE WORST 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.
EDUCATION FOR NON-MANAGERS AND MANAGERS APPEAR LINKED TO BETTER MANAGEMENT

Sample of 8,032 manufacturing and 647 retail firms.
FOREIGN MULTINATIONALS APPEAR TO BE WELL MANAGED IN ALL COUNTRIES
SUMMARY OF DETERMINANTS OF MANAGEMENT (& PRODUCTIVITY)

• Product market competition
• Labour market regulation
• Meritocratic CEO selection
• Human Capital

• These account for almost all of the management gap between Italy and US
BUT DOES MANAGEMENT REALLY CAUSE HIGHER PRODUCTIVITY? BLOOM ET AL (2011)

• Run experiment on plants in Indian textile firms outside Mumbai

• Randomized “treatment” plants get heavy management consulting; “control” plants get very light consulting (just enough to get data)

• Collect weekly performance data on all plants from 2008 to 2010

  - Improved management practices led to large and significant improvements in productivity and profitability (~$200k pa)
MANY PARTS OF THE FACTORIES ARE DIRTY AND UNSAFE
THE FACTORIES ARE ALSO DISORGANIZED

Instrument not removed after use, blocking hallway.

Oil leaking from the machine

Cotton lying on the floor

Instrument blocking the hallway
THE TREATED FIRMS INTRODUCED BASIC INITIATIVES (CALLED “5S”)

Worker involved in 5S initiative on the shop floor, marking out the area around the model machine.

Snag tagging to identify the abnormalities on & around the machines, such as redundant materials, broken equipment, or accident areas. The operator and the maintenance team is responsible for removing these abnormalities.
Notes: Displays the average weekly quality defects index, which is a weighted index of quality defects, so a higher score means lower quality. This is plotted for the 14 on-site treatment plants (+ symbols) and the 6 on-site control plants (♦ symbols). Values normalized so both series have an average of 100 prior to the start of the intervention. To obtain confidence intervals we bootstrapped the firms with replacement 250 times.
1. What is productivity & why should we care?

2. International Comparisons: How is Europe doing?

3. Why is there a European productivity gap?
   - The role of management

4. Why has the situation got worse?

5. What can we do to improve things?
   - Short run
   - Long-run structural changes
SHORT-RUN: DEALING WITH THE IMMEDIATE CRISIS

• Italy needs credible plan for debt reduction over medium term
• Eurozone needs to:
  – Get an orderly debt restructuring in Greece & probably allow it to leave Euro
  – Protect solvent (but illiquid) Member States and banks
• But world as a whole needs fiscal and monetary policy to stimulate demand not current trajectory of co-ordinated austerity (US and EU)
• In long-run Italy (and other countries) need a long-term strategy for growth and structural reform. A “Plan V”....
LONG-RUN: STRUCTURAL REFORMS TO IMPROVE MANAGEMENT & PRODUCTIVITY

- Product market Competition
  - Competition policy, Trade policy
  - Deregulation
  - Public sector
- Labour market regulation
- Human Capital
- Meritocratic CEO appointment
- Openness to foreign investment
- Financial market regulation
CONCLUSIONS

• Sources of productivity growth are innovation (well-studied) and management (understudied)

• Management and productivity can be improved by micro-economic structural reforms - especially over competition, human capital, tax reform, labour markets.

• Immediate crisis requires concerted action on demand as well as debt plan. Could be a stimulus for needed reforms
MY FAVOURITE QUOTES:

Staff rewards the American way

*Production Manager:* “For example, if an employee suggests a company slogan, and his name is used, he gets a TV. If he is employee of the month, he gets a parking space”

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!”
MY FAVOURITE QUOTES:

India is such an interesting place…

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

Americans on geography

Interviewer: “How many production sites do you have abroad?”
Manager in Indiana, US: “Well…we have one in Texas…”
Further Reading

