WHERE IS FUTURE GROWTH GOING TO COME FROM?

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LSE Works Lecture; February 17th 2010
2008-09 “GREAT RECESSION” COMPARED TO PREVIOUS RECESSIONS, CUMULATIVE CHANGE IN UK GDP

Source: NIESR (data through 2010,Q3)
WORRIES ABOUT GROWTH

- Austerity program biggest budget cut since WW”
  - Chancellor: No need for a “Plan B” because economy firmly on road to recovery
  - Shrinking economy? 2010Q4 0.5% GDP fall
  - Pfizer closes down Sandwich research lab
UK QUARTERLY GDP GROWTH 2007Q1-2010Q4: LET’S HOPE IT’S JUST THE WRONG KIND OF SNOW........

Source: ONS (February 2011), Quarterly Growth of GDP, seasonally adjusted
THE WORRIES ABOUT GROWTH

• Austerity without a growth plan
  – need a “Plan V”
• An active de-industrial policy?
  – Macro policies damaging growth through premature scrapping of human capital and fixed capital
  – Micro policies are undermining growth (e.g. Universities, immigration)
• Faster income growth since mid-1990s, but still a productivity gap between UK & leading countries:
  – Technological innovation
  – Management practices
GREAT PEOPLE TO WORK FOR?

GREAT PLACES TO WORK?........
Ericsson factory shop floor
State-owned telecoms equipment factory in Belarus. Everyone on a mysterious break?
Family-owned textile company outside Mumbai, India
OUTLINE

1. International Comparisons: How is the UK doing?

2. Why is there a still productivity gap?
   - Technological Innovation
   - Management Practices

3. Short-Run policies: Alternatives to Extreme Austerity

4. Long Run Growth: The V-Plan
UK GROWTH PERFORMANCE SINCE 1997 IS GOOD: ANNUAL AVERAGE PER CAPITA GDP GROWTH, 1997-2010

Source: Conference Board World Economy Database, February 2011, EKS $PPPs
RELATIVE LABOUR PRODUCTIVITY (LEVELS OF GDP PER HOUR) IN 2009; $PPP

Source: Conference Board World Economy Database, September 2010, Table 8

UK ~13% less productive than US
GDP PER WORKER RELATIVE TO UK IN US, FRANCE & GERMANY (UK=100), 1979-2009

Source: Conference Board (2010), PPPs
UK RELATIVE GDP PER WORKER: GERMANY

UK Gap with Germany reverses from -4% to +7%

Source: Conference Board (2010), PPPs
UK RELATIVE GDP PER WORKER: FRANCE

UK Gap with France falls from -13% to -10%

Source: Conference Board (2010), PPPs
UK RELATIVE GDP PER WORKER: US

UK Gap steady with US which had a “productivity miracle”

Source: Conference Board (2010), PPPs
GDP PER WORKER RELATIVE TO UK IN US, FRANCE & GERMANY (UK=100), 1979-2009

Source: Conference Board (2010), PPPs
GDP PER WORKER RELATIVE TO UK IN SELECTED NATIONS (UK=100), 1979-2009

Source: Conference Board (2010), PPPs
PROPORTION OF UK WORKERS WITH A COLLEGE DEGREE ROSE BY 12 PERCENTAGE POINTS 1997-2010

Source: GHS and Labour Force Survey, Various years
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IS TECHNOLOGICAL INNOVATION THE CAUSE OF PRODUCTIVITY GAP WITH THE US?

• Partially correct - UK has innovation deficit

• Although universities/basic science strong.....
  – 14% of all top scientific papers in world (2nd only to US) with ~1% of world’s population

• Commercialization of innovation is weak: Research & Development (R&D), Patenting, etc.
RESEARCH AND DEVELOPMENT (R&D) – BUT WHAT ABOUT 2011?

Source: OECD (GERD/GDP)
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INNOVATION 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 not use?

- Research Program with Nick Bloom (Stanford), Raffaella Sadun (Harvard) & CEP team
  - How to measure, quantify and compare management across firms and countries?
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

3) Getting firms to participate in the interview
   • Official Endorsement: Bundesbank, RBI, HMT, etc.
   • Run by 75 MBA types (loud, assertive & business experience)
## INCENTIVES - e.g. “HOW DOES THE PROMOTION SYSTEM WORK?”

<table>
<thead>
<tr>
<th>Score</th>
<th>(1) People are promoted primarily upon the basis of tenure</th>
<th>(3) People are promoted upon the basis of performance</th>
<th>(5) We actively identify, develop and promote our top performers</th>
</tr>
</thead>
</table>

**Note:** All 18 dimensions and over 50 examples in Bloom & Van Reenen (2006)
THE LINK BETWEEN PRODUCTIVITY AND MANAGEMENT HOLDS TRUE ACROSS DIFFERENT COUNTRIES

<table>
<thead>
<tr>
<th>Country</th>
<th>Labour Productivity*</th>
<th>Management Practice Score**</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>6.5</td>
<td>1</td>
</tr>
<tr>
<td>U.K.</td>
<td>6.0</td>
<td>1.5</td>
</tr>
<tr>
<td>CN</td>
<td>5.5</td>
<td>2</td>
</tr>
<tr>
<td>JP</td>
<td>5.0</td>
<td>2.5</td>
</tr>
<tr>
<td>FR</td>
<td>4.5</td>
<td>3</td>
</tr>
<tr>
<td>DE</td>
<td>4.0</td>
<td>3.5</td>
</tr>
<tr>
<td>SE</td>
<td>3.5</td>
<td>4</td>
</tr>
<tr>
<td>IT</td>
<td>3.0</td>
<td>4.5</td>
</tr>
<tr>
<td>PT</td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>GR</td>
<td>2.0</td>
<td>5.5</td>
</tr>
</tbody>
</table>

* Log scale (sales per worker)
** Firms are grouped in 0.5 increments of assessed management score
UK MANAGEMENT MID-TABLE BY INTERNATIONAL STANDARDS

Note: Based on 8,261 management interviews between 2006 and 2010. We pool across multiple survey waves to maximize the extent of cross-country management comparison.
HUGE VARIATION OF MANAGEMENT PRACTICES ACROSS FIRMS WITHIN ALL COUNTRIES

Note: Based on 8,261 management interviews between 2006 and 2009.
MUCH OF THE CROSS-COUNTRY DIFFERENCES DUE TO THE "LOWER TAIL" OF BADLY MANAGED FIRMS

Distribution of firm level management practice scores

U.K.       U.S.

Low score | High score

Assessed management practice score

Assessed management practice score
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”
WHAT IMPROVES MANAGEMENT? COMPETITION

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

![Graph showing the relationship between assessed management practice score and reported number of competitors]

- The graph illustrates a positive correlation between the assessed management practice score and the reported number of competitors.
- As the number of competitors increases, the assessed management practice score tends to rise.

Reported number of competitors

Assessed management practice score

- The x-axis represents the reported number of competitors, ranging from 0 to 10 or more.
- The y-axis shows the assessed management practice score, ranging from 2.5 to 3.5.

- Data points are plotted to show the trend observed in the dataset.
WHAT HURTS GOOD MANAGEMENT? FAMILY FIRMS RUN BY ELDEST SON, GRANDSON, ETC.

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
# Family Firms and Government Firms Have Worst Management

Average score on 18 management practice questions:

<table>
<thead>
<tr>
<th>Category</th>
<th>Management</th>
<th>Management (same ownership 3+ years)</th>
<th>Number of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td></td>
<td></td>
<td>134</td>
</tr>
<tr>
<td>Founder</td>
<td></td>
<td></td>
<td>635</td>
</tr>
<tr>
<td>Family, family CEO</td>
<td></td>
<td></td>
<td>722</td>
</tr>
<tr>
<td>Private Individuals</td>
<td></td>
<td></td>
<td>625</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td>290</td>
</tr>
<tr>
<td>Managers</td>
<td></td>
<td></td>
<td>138</td>
</tr>
<tr>
<td>Family, external CEO</td>
<td></td>
<td></td>
<td>174</td>
</tr>
<tr>
<td>Dispersed Shareholders</td>
<td></td>
<td></td>
<td>1357</td>
</tr>
<tr>
<td>Private Equity</td>
<td></td>
<td></td>
<td>137</td>
</tr>
</tbody>
</table>

Note: Sample of 4,221 medium-sized manufacturing firms. The bottom bar-chart only covers the 3696 firms which have been in the same ownership for the last 3 years. The "Other" category includes venture capital, joint-ventures, charitable foundations and unknown ownership.
SUMMARY OF DETERMINANTS OF MANAGEMENT (& PRODUCTIVITY)

- Product market competition
- Meritocratic CEO selection
- Human Capital

- These account for almost all of the management gap between UK 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 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.
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THREE DIFFERENT VIEWS OF GROWTH

• **Right:** Shrink state & let markets flourish
  – Thatcherism and Osborne-ism?
  – But markets needs some intervention (e.g. Competition policy)

• **Left:** Top down plans
  – NHS Target-ism
  – Untargeted expansion of demand

• **Alternative:** The Enabling State
  – Market failures (e.g. Innovation, climate change, etc.)
  – Stimulate through targeted investing (e.g. Innovation, human capital, infrastructure)
AUSTERITY – LABOUR’S PLANS FOR FISCAL TIGHTENING IN MARCH 2010

5% of GDP by 2016/17
(£72.4bn by 2015/16)

Source: IFS, HMT
EXTREME AUSTERITY – JUNE EMERGENCY BUDGET.
LARGEST CUT SINCE WW2

7% of GDP a year earlier (£110.3bn)

Source: IFS, HMT
ACCELERATED AUSTERITY

• Government borrowing/GDP
  – Level in 2010 also 3rd (US and Ireland higher)

<table>
<thead>
<tr>
<th></th>
<th>2007/8</th>
<th>2009/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total government spending/GDP</td>
<td>41%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Total government receipts/GDP</td>
<td>38.6%</td>
<td>37.2%</td>
</tr>
<tr>
<td>Budget deficit</td>
<td>2.4%</td>
<td>10.4%</td>
</tr>
</tbody>
</table>

• Spending out of control? No: GDP fell dramatically
FEATURES OF ACCELERATED AUSTERITY

• Choice of government spending/GDP of 40%
  – 43% 1970/1 - 2008/9 average

• Assumes a large permanent fall in GDP?
  – Unknown. Ranges from 2% to 10%
  – Ignores some productivity improvements

• Serious costs of frontloading cuts
  – Withdrawal of demand risks recovery
  – Scrapping of human and fixed capital (e.g. Chris Pissarides & long-term unemployment)
  • A pessimistic view of UK capacity becomes a self-fulfilling prophecy
BENEFITS OF ACCELERATED AUSTERITY?

• UK has unsustainable debt?
  – Debt “crisis” exaggerated
    • Historically moderate (42% in 2006; 79% 2011; av=118%)
    • Long maturity
    • No formal default

• Credibility & Confidence
  – Gives reassurance to irrational bond markets?
  – Surely better to deliver a realistic good plan than fail to deliver an unrealistic bad plan

• Voters’ memory is short
EXTREME AUSTERITY – THE NEED FOR A “PLAN B”

• Chancellor has argued against a Plan B

• Mervyn King & MPC to the rescue?
  – Low interest rates
  – Inflation fears

• If really in trouble we can always slow down
  – Hard to fine tune
  – Given rhetoric, would lead to extreme loss of credibility
  – Better to move towards a sensible plan now

• Need also to think long term “From Plan B to Plan V”
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WHAT WE NEED IN A GROWTH PLAN

• Getting external conditions right
  – Admit we do not know exactly where new growth will come from
  – Get the conditions right so we can generate and exploit new ideas and areas for growth

• Focus on sectoral growth areas....
  – Examples: Universities; Healthcare; Business services; Green; ICT; Niche manufacturing, etc.

• ...where UK has comparative advantage & capability
  – Market services, academic science-based (bio-pharma), creative sectors
WHAT ARE THE **CONDITIONS** FOR GROWTH?

- **Product market Competition**
  - Competition policy, Trade policy, planning
  - Public sector (e.g. UK hospital reforms)

- **Taxation**
  - 100% Inheritance Tax exemption for family business assets encourages family firms not meritocratic CEO
  - Mirrlees Review: stability and simplicity, not level

- **Human Capital**
  - UK weak at lower end (e.g. EMA, Apprenticeships)

- **Innovation Policy & Tax regime** (later)

- **Financial markets** – Too Big to Fail issues
AN EXAMPLE OF A GROWTH INDUSTRY: UNIVERSITIES

• Current situation
  – overseas students: globally from 0.5m (1980) to 3.3m (2010). Growing at ~7% pa (McKinsey, 2010)
  – UK research & share of overseas 2nd only to US.
  – Opportunity: US lost share 2000-2008 (24% to 18%); Australia 2009 due to immigration policy

• Current Policies
  – Reduce teaching subsidy to zero
  – Immigration target of 100,000 a disaster.
    • Discourages overseas students from UK
    • Harder to attract global academic talent
  • Explicitly anti-growth policies
EXAMPLE OF INNOVATION POLICY: R&D SUPPORT

• Failure in market for knowledge
  – Too little R&D because ideas are promiscuous
  – Social return to R&D 2x as big as private return
• R&D helps catch-up with technological leaders as well as pushing out technological frontier
• Abolish “Patent Box” policy costs £1bn+ & subsidises existing intellectual property not new ideas
• Put this money into R&D tax credit (under review) & support of basic research
• Maps of firm “distance” focus where UK has existing or potential strength
  – Technology, Geography, Product markets
  – Can focus directed efforts
BACK TO CURRENT GROWTH – UH-OH, LOOKS MORE LIKE “W” THAN “V”

Source: ONS (February 2011), Quarterly Growth of value added, seasonally adjusted
BEFORE THE V-PLAN
DURING THE V-PLAN
DURING THE V-PLAN
AFTER THE V-PLAN
CONCLUSIONS

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

• Extreme austerity a political choice not economic necessity
  – Need a Plan B

• Management and innovation can be improved via reforms to competition, tax reform, universities, R&D
  – Need a Plan V

• You learn a lot from talking to people......
MY FAVOURITE QUOTES:

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…”
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!”
Further Reading


3. Lisbon agenda [http://cep.lse.ac.uk/briefings/pa_lisbon_agenda.pdf](http://cep.lse.ac.uk/briefings/pa_lisbon_agenda.pdf)

4. UK productivity improvements : [http://cep.lse.ac.uk/briefings/pa_uk_productivity.pdf](http://cep.lse.ac.uk/briefings/pa_uk_productivity.pdf)