POLICY LECTURE

Returning To Growth: Lessons From History

By Professor Nicholas Crafts

Chaired by Professor Wendy Carlin
Returning to Growth: Policy Lessons from History

Nicholas Crafts
RES Policy Lecture,
October 17, 2012
Promoting Recovery

• 3 basic possible (not mutually exclusive) strategies
  • fiscal stimulus
  • monetary stimulus
  • supply-side reforms

• NB: fiscal stimulus is ruled out by fiscal consolidation (Plan A) and monetary stimulus has to be ‘unconventional’ at ZLB
Supply-Side Reforms

- Could stimulate private-sector investment and TFP growth
- As well as infrastructure and human capital, competition, regulation and taxation policies matter for medium-term growth
- Problem is these mostly have medium/long-rather than short-term effects
- Short term may conflict with long-term
Fiscal Consolidation

• Cutting government spending and raising taxes to improve fiscal sustainability

• Often urgently needed after banking crises, wars or profligate governments

• Risks adverse impact on GDP in short term if not offset by monetary stimulus or other boost to private sector activity
Take Fiscal Consolidation as a Given

• It is the basis of the Coalition Agreement

• Delaying fiscal consolidation risks excessive D/Y

• Return to ‘financial repression’ (capital controls, g > r) which would permit much looser fiscal policy while maintaining fiscal sustainability neither feasible nor desirable

• **NB:** the composition of fiscal consolidation is a big issue
Fiscal Consolidation and Productivity

• Reduction in ‘non-productive’ government expenditure and raising indirect taxes more favourable for growth than raising direct taxes and cutting ‘productive’ expenditure

• Effects can also work through NAIRU (benefits), labour force participation (retirement), efficiency (privatization, subsidy withdrawal)

• Design should presumably has to take account of political constraints and ‘fairness’ issues; otherwise easy to devise strategy that is good for supply-side
3 Periods of Recession and Recovery: 1930s, 1980s and Now

• Common feature is fiscal consolidation but banking crisis is new

• Similar downturns initially but different policy responses

• In both previous episodes there was a strong recovery which started around 4 years after the recession began

• **SO:** what can we learn?
Real GDP (Quarterly)

Sources: Mitchell et al. (2012); ONS
The 1930s UK Recovery: 1st Phase

- Started during fiscal consolidation which reduced structural deficit by 4\%GDP between 1930 and 1934

- Strong growth 1933-35 based on monetary stimulus which offset negative impact of fiscal policy: the key was credibly to commit to moderate inflation as a way to reduce real interest rates

- Exit from gold standard plus ‘cheap money’; housing investment led the recovery
## Public Finances (% GDP)

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Public Debt</th>
<th>Budget Deficit</th>
<th>Structural Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>158.4</td>
<td>0.7</td>
<td>-0.4</td>
</tr>
<tr>
<td>1930</td>
<td>159.2</td>
<td>1.4</td>
<td>-1.1</td>
</tr>
<tr>
<td>1931</td>
<td>169.8</td>
<td>2.2</td>
<td>-2.5</td>
</tr>
<tr>
<td>1932</td>
<td>173.6</td>
<td>0.5</td>
<td>-3.0</td>
</tr>
<tr>
<td>1933</td>
<td>179.2</td>
<td>-0.4</td>
<td>-4.2</td>
</tr>
<tr>
<td>1934</td>
<td>173.1</td>
<td>-0.5</td>
<td>-3.2</td>
</tr>
<tr>
<td>1935</td>
<td>165.0</td>
<td>0.3</td>
<td>-2.0</td>
</tr>
<tr>
<td>1936</td>
<td>158.7</td>
<td>0.7</td>
<td>-0.8</td>
</tr>
<tr>
<td>1937</td>
<td>147.2</td>
<td>1.5</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Source: Middleton (1996)
The ‘Cheap Money’ Policy

• Was a coherent framework arrived at by mid-1932 with HMT not B of E in charge

• **Aim to raise the price level** and to underpin this by holding exchange rate at $3.40 then FFr. 88

• Short term interest rates kept at lower bound and **real interest rates** became **negative** after 1933

• Credible because it was clearly in HMT’s interests as a route to recovery that did not open Pandora’s Box and improved fiscal arithmetic
Treasury Bill Rate (%)

(1930q1-1938q1)

Sources: Howson (1975); derived from Capie and Collins (1983)
House-Building in the 1930s

• They built a lot of houses by our standards: 293,000 in peak year

• Building societies provided ample mortgage finance, deposits fell, repayment periods were extended and the possibility of buying a house came in reach of a new group of people

• For developers, after 1932 there was no good reason to delay and there were virtually no planning restrictions
Houses Built (without state assistance),
Six Months Ending

Source: Stolper (1941)
The 1930s UK Recovery: 2nd Phase

• From 1935 onwards, **rearmament** central

• Large **exogenous fiscal shock** with short-term interest rates held constant

• Probably raised real GDP by about 7.5% in 1938 but fiscal multiplier only 0.5-0.8; expectations of future defence spending crowded in investment

• Explanation for ‘**low**’ multiplier may be high D/Y
The “Managed Economy” in 1930s UK

• Post-1932 policy package included capital controls, devaluation, tariffs, cheap money and cartels

• Understandable as a short-term fix to raise prices at ZLB at a time of high unemployment

• Regrettable in terms of long-term implications for productivity performance; retreat from competition very hard to reverse

• Weak competition was a key factor that sustained bad management and dysfunctional industrial relations
Competition and Productivity Performance

• Research on postwar UK says weak competition a big problem for productivity until 1980s

• Weak competition in product markets nurtured infamous industrial relations and management problems

• Vested interests politically strong enough to block strong anti-trust and trade liberalization policies so 1930s legacy lasted several decades
Lessons about Recovery (1)

• Conventional inflation targeting may be inappropriate with fiscal consolidation at ZLB post banking crisis if need to cut real interest rates

• If can deliver monetary stimulus, want to address transmission mechanism to ‘crowd in’ investment

• Should not assume fiscal multiplier necessarily high at ZLB
1980s Relevance to Today

• Recovery came without policies designed to stimulate aggregate demand

• Strategy for disinflation entailed high real interest rates and eliminating the budget deficit

• The real success was to improve supply-side policies leading to higher TFP growth, a lower NAIRU and rapid diffusion of ICT

• De-regulation stimulated bank lending and consumer spending and set the scene for the expansion of the financial sector
Treasury Bill Rate (%) (1979q2-1987q2)

Sources: Bank of England; derived from ONS
## Public Finances (% GDP)

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Public Debt</th>
<th>Budget Deficit</th>
<th>Structural Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>44.0</td>
<td>4.1</td>
<td>4.0</td>
</tr>
<tr>
<td>1980</td>
<td>46.1</td>
<td>4.8</td>
<td>3.4</td>
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<tr>
<td>1981</td>
<td>46.1</td>
<td>2.3</td>
<td>-1.5</td>
</tr>
<tr>
<td>1982</td>
<td>44.8</td>
<td>3.0</td>
<td>-1.4</td>
</tr>
<tr>
<td>1983</td>
<td>45.1</td>
<td>3.7</td>
<td>0.0</td>
</tr>
<tr>
<td>1984</td>
<td>45.1</td>
<td>3.6</td>
<td>0.6</td>
</tr>
<tr>
<td>1985</td>
<td>43.2</td>
<td>2.4</td>
<td>0.6</td>
</tr>
<tr>
<td>1986</td>
<td>40.9</td>
<td>2.0</td>
<td>1.9</td>
</tr>
<tr>
<td>1987</td>
<td>36.6</td>
<td>1.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Source: IFS
1980s’ Supply-Side Policy

- From industrial to competition policy
- Privatization promoted
- Taxation restructured
- Benefit/wage ratios reduced
- Trade-union power undermined
- De-industrialization accepted
From Industrial to Competition Policy

• Trade policy liberalized through EU membership and GATT rounds
• Subsidies largely withdrawn
• De-regulation
• Competition policy belatedly strengthened through 1998 and 2002 Acts

• NB: before, during and after Thatcher
1970s Experience

• Strong bias towards subsidizing ailing industries, e.g., shipbuilding (Wren, 1996) also reflected in pattern of tariff protection (Greenaway & Milner, 1994)

• Subsidizing hi –tech national champions failed in civil aircraft (Gardner, 1976), computers (Hendry, 1989), nuclear power (Cowan, 1990)

• Rates of return on NEB portfolio very poor (Hindley & Richardson, 1983)

• Investment subsidies a costly mistake – huge deadweight loss and little or no impact on investment (Sumner, 1989)
Competition and Productivity Growth

• Absence of competition allows managers to be sleepy if ineffective control/monitoring by shareholders

• Competition is strongly positive for productivity outcomes in UK firms without dominant shareholder (Nickell et al., 1997)

• Competition promotes better management practices (Bloom and van Reenen, 2007)

• **Strengthening competition addressed Britain’s Golden-Age productivity problem quite effectively** (Crafts, 2012)
Increased Competition and Productivity Performance

- Increases in competition correlated with 1980s productivity growth at sectoral level (Haskel, 1991); openness promoted TFP growth in manufacturing sectors post-1970 (Proudman & Redding, 1998)

- Single Market shock improved TFP performance in plants exposed to agency problems (Griffith, 2001)

- Post-1980, competition for corporate control meant restructuring and divestment in large firms (Toms & Wright, 2002); management buyouts raised TFP (Harris et al., 2005)

- Entry & exit: 25% Y/L growth in 1980-5 manufacturing rising to 40% in 1995-2000 (Crisculo et al., 2004)
Increased Competition: Effects via Industrial Relations

• During the 1980s and 1990s, increased competition reduced union membership, union wage mark-ups and union effects on productivity (Brown et al., 2008; Metcalf, 2002)

• Surge of productivity growth in unionized firms in 1980s via organizational change under pressure of competition (Machin & Wadhwani, 1989)

• De-recognition of unions in face of increased foreign competition had strong effect on productivity growth in late 1980s (Gregg et al., 1993)
Levels of Productivity in the Market Sector  (UK = 100)

<table>
<thead>
<tr>
<th>Year</th>
<th>Y/HW</th>
<th>W. Germany</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>95</td>
<td>132</td>
<td>160</td>
</tr>
<tr>
<td>1979</td>
<td>112</td>
<td>157</td>
<td>166</td>
</tr>
<tr>
<td>1991</td>
<td>123</td>
<td>161/143</td>
<td>156</td>
</tr>
<tr>
<td>1995</td>
<td>117</td>
<td>133</td>
<td>146</td>
</tr>
<tr>
<td>2007</td>
<td>109</td>
<td>119</td>
<td>147</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>TFP</th>
<th>W. Germany</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>87</td>
<td>112</td>
<td>127</td>
</tr>
<tr>
<td>1979</td>
<td>103</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td>1991</td>
<td>110</td>
<td>133/123</td>
<td>128</td>
</tr>
<tr>
<td>1995</td>
<td>104</td>
<td>115</td>
<td>123</td>
</tr>
<tr>
<td>2007</td>
<td>101</td>
<td>110</td>
<td>125</td>
</tr>
</tbody>
</table>

Data from Mary O'Mahony
Recent History of UK NAIRU

• Policy changes contributed to substantial reduction in U* from 1980s notably through improved industrial relations, lower employment taxes and unemployment benefits reform

• The key decisions that lowered U* were made by the Conservatives (Nickell & Quintini, 2002)

**NB:** lowering the NAIRU has adverse batting-average effect on labour productivity: perhaps 6 percentage points vis-à-vis France in 2007
## Real GDP/Person (UK = 100 in each year)

<table>
<thead>
<tr>
<th>Year</th>
<th>USA</th>
<th>West Germany</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870</td>
<td>76.6</td>
<td>57.6</td>
<td>58.8</td>
</tr>
<tr>
<td>1913</td>
<td>107.8</td>
<td>74.1</td>
<td>70.8</td>
</tr>
<tr>
<td>1929</td>
<td>125.3</td>
<td>73.6</td>
<td>85.6</td>
</tr>
<tr>
<td>1937</td>
<td>103.4</td>
<td>75.4</td>
<td>72.2</td>
</tr>
<tr>
<td>1950</td>
<td>137.7</td>
<td>61.7</td>
<td>74.7</td>
</tr>
<tr>
<td>1979</td>
<td>142.7</td>
<td>115.9</td>
<td>111.1</td>
</tr>
<tr>
<td>2007</td>
<td>132.6</td>
<td>98.6</td>
<td>94.3</td>
</tr>
</tbody>
</table>

*Note:* estimates refer to Germany from 1870 to 1937.

*Sources:* Angus Maddison historical database and West Germany in 2007 calculated from Statistiches Bundesamt Deutschland 2010.
UK in the ICT Age

• Invests relatively large amount in ICT capital with positive productivity effects

• This requires reorganization and is supported by light regulation

• This would not have happened with 1970s-style industrial relations and weak competition
Regulation and the contribution of ICT-using services to aggregate productivity growth

ICT using services, 1996-2001

Correlation coefficient: -0.62
\( t \)-statistic: -3.35

Source: Nicoletti & Scarpetta (2005)
## Sources of Labour Productivity Growth in the Market Sector, 1995-2005 (% per year)

<table>
<thead>
<tr>
<th>Country</th>
<th>Labour Quality</th>
<th>ICT K/HW</th>
<th>Non-ICT K/HW</th>
<th>TFP Growth</th>
<th>Y/L Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Germany</td>
<td>0.1</td>
<td>0.5</td>
<td>0.6</td>
<td>0.4</td>
<td>1.6</td>
</tr>
<tr>
<td>UK</td>
<td>0.5</td>
<td>0.9</td>
<td>0.4</td>
<td>0.8</td>
<td>2.6</td>
</tr>
<tr>
<td>USA</td>
<td>0.3</td>
<td>1.0</td>
<td>0.3</td>
<td>1.3</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Source: Timmer et al. (2010)
Financial De-Regulation and 1980s’ Recovery

• Major liberalization of financial markets reflected in CCI index (Fernandez-Corugedo & Muellbauer, 2006)

• Relaxation of constraints directly and indirectly raised personal sector borrowing and lowered household savings rate

• Impact raised consumption by 3.5%GDP (Muellbauer, 2008) and improved supply-side

• NB: ultimately de-regulation and bank leverage went too far (cf. Miles et al., 2012)
Household Savings Ratio (%)
Credit Conditions Index

Data kindly supplied by John Muellbauer: scale adjusted
Lessons (2)

• The 1980s is an episode of fiscal consolidation that improved the supply-side

• Lots of bad policies to dump (not all of which were dealt with); strengthening competition was central

• 364 economists underestimated the value of supply-side reform in promoting recovery

• De-regulation ‘crowded in’ private sector spending
Macroeconomic Policy and Post-2009 Recovery

- **Recovery has faltered badly** in the last 2 years; “strong headwinds” from Euro, household real incomes and debts, weak bank lending

- Fiscal stimulus ruled out by worries about fiscal sustainability given large post-crisis structural deficit

- Nominal interest rates at the ZLB; 2% inflation targeting cannot be abandoned

- Suggests ‘growth-friendly’ fiscal consolidation and supply-side reforms should be prominent
Bank Advances to Non-Bank Private Sector

Sources: Bankers’ Magazine; Bank of England
Fiscal Consolidation since 2010: Growth Friendly?

- **Good News:**
  corporate tax rate reduced from 28% to 23% in 2014/15 and VAT raised to 20% in January 2011

- **Bad News:**
  public net investment cut by 45% while current expenditure up by 18% by 2016/17

VAT base not widened

917,000 more higher-rate but 1,800,000 fewer basic-rate taxpayers in 2012/13
## Government Outlays (£bn., current)
(OBR, 2011, 2012)

<table>
<thead>
<tr>
<th></th>
<th>2009/10</th>
<th>2016/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>600.9</td>
<td>708.6</td>
</tr>
<tr>
<td>Social Security</td>
<td>162.8</td>
<td>199.3</td>
</tr>
<tr>
<td>Debt Interest</td>
<td>30.9</td>
<td>64.0</td>
</tr>
<tr>
<td>Net Investment</td>
<td>49.5</td>
<td>22.1</td>
</tr>
<tr>
<td><strong>Total Managed Expenditure</strong></td>
<td><strong>669.7</strong></td>
<td><strong>756.3</strong></td>
</tr>
</tbody>
</table>
UK Success Stories

• Have been promoted by horizontal not selective industrial policy

• **Pharma**: human capital, science base

• **Financial Services**: human capital, de-regulation, planning reform, transport

• **ICT Diffusion**: human capital, industrial relations reform, less obstructive regulation than elsewhere in Europe
Horizontal Industrial Policies: Could Do Better

- Infrastructure
- Education
- Taxation
- Regulation

NB: effects on growth through the incentives to invest, innovate and adopt new technologies
Infrastructure: Not Good Enough

• Pre-crisis investment in public capital shortfall: 1.3% GDP per year below growth-maximizing amount (Crafts, 2009)

• E.g., lots of road projects with high BCR not done

• Eddington Report (2006) – big welfare gains and tax revenues from efficient programme of road building and road pricing – ignored

• Perhaps roads should be provided by a regulated utility (Helm, 2012)
Education: Could Do Better

• ‘Cognitive skills’ strongly correlated with long-run growth; 100 test-score points → 1.4 ppts per year (Hanushek & Woessman, 2011)

• Institutional design matters a lot for educational outcomes (principal-agent)

• International comparisons suggest UK could raise scores considerably by greater private operation (and probably by having higher-quality exams) (OECD, 2007)

• Key point: better incentive structures could improve educational quality without spending more money
## Cognitive Skills: Top 6 and UK, 2009
(OECD, PISA Maths & Science average)

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai, China</td>
<td>586</td>
<td>Korea</td>
<td>542</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>552</td>
<td>Japan</td>
<td>534</td>
</tr>
<tr>
<td>Singapore</td>
<td>552</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>548</td>
<td>UK</td>
<td>503</td>
</tr>
</tbody>
</table>
Tax Doesn’t Have to be So Taxing

• **MIRRLEES REVIEW** (2011) presents powerful case for reform

• For example, revenue-neutral extension of VAT base to all consumption and reform of capital taxation by exempting normal rate of return to raise GDP by 1.4% and investment by 6.1%

• More generally, OECD research finds significant increases to GDP from shifting taxes from income to consumption and property (Arnold et al., 2011)
Planning Rules Matter

• An important horizontal ‘industrial policy’

• **Planning** restrictions impose massive distortions in land use – **regulatory tax rate of around 300%** makes office space in Manchester more expensive than Manhattan (Cheshire & Hilber, 2008)

• Successful British cities are too small and constraints on growth threaten to undermine competitive advantage

• Spatial adjustment to globalization is inhibited
Full Relaxation of Planning Controls on House-Building

• Average real English house-price down by 35% and equilibrium housing stock up by 17% (Hilber & Vermeulen, 2012; NHPAU, 2007)

• 20-year transition entails 175K extra houses per year employing 750K (back to 1930s!)

• **Massive welfare gain** makes it quite possible to incentivize local communities to like the idea (Leunig, 2007)

• Tobin’s Q is high but need to disincentivize waiting for better time to build
What is the Most Effective Role for UK Government?

- Good horizontal industrial policies and strong pro-competition stance; not back to the 1970s
- Address market failures and remember CBA
- **Facilitate diffusion;** don’t fixate on R & D
- Recognize that wide set of government actions including regulation affect the attractiveness of investment, innovation and technology adoption
Diffusion

- **Benefits of new technologies** mainly (98%) from use not invention (Nordhaus, 2004)

- Vast majority (89%) of new technology in UK comes from R & D in ROW (Eaton & Kortum, 1999)

- Regulation and competition affect diffusion

- Delays in adoption of new technologies can be very costly; e.g., cell phones in USA where regulatory delay caused S100 bn. consumer welfare losses (Hausman, 1997)
## Sources of Growth in Real GDP/HW in the UK Market Sector, 1990-2008

(dal Borgo et al., 2012) (% per year)

<table>
<thead>
<tr>
<th></th>
<th>1990-95</th>
<th>1995-2000</th>
<th>2000-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible Capital</td>
<td>0.95</td>
<td>0.74</td>
<td>0.67</td>
</tr>
<tr>
<td>Labour Quality</td>
<td>0.17</td>
<td>0.25</td>
<td>0.16</td>
</tr>
<tr>
<td>R &amp; D</td>
<td>0.05</td>
<td>0.04</td>
<td>0.05</td>
</tr>
<tr>
<td>Other Intangibles</td>
<td>0.58</td>
<td>0.63</td>
<td>0.47</td>
</tr>
<tr>
<td>TFP</td>
<td>1.19</td>
<td>1.87</td>
<td>0.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.94</strong></td>
<td><strong>3.53</strong></td>
<td><strong>2.25</strong></td>
</tr>
</tbody>
</table>
### Top 6 Sectoral Contributions to UK Labour Productivity Growth, 1995-2007
*(Crafts, 2012) (% per year)*

<table>
<thead>
<tr>
<th>Sector</th>
<th>Value-added share weight</th>
<th>Growth Rate of Real GDP/HW</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale and Retail Trade</td>
<td>0.123</td>
<td>3.05</td>
<td>0.38</td>
</tr>
<tr>
<td>Post &amp; Telecommunications</td>
<td>0.030</td>
<td>9.00</td>
<td>0.28</td>
</tr>
<tr>
<td>Business Services</td>
<td>0.220</td>
<td>1.06</td>
<td>0.23</td>
</tr>
<tr>
<td>Financial Services</td>
<td>0.046</td>
<td>4.23</td>
<td>0.19</td>
</tr>
<tr>
<td>Electrical and Optical Equipment</td>
<td>0.021</td>
<td>6.64</td>
<td>0.14</td>
</tr>
<tr>
<td>Transport &amp; Storage</td>
<td>0.048</td>
<td>2.58</td>
<td>0.12</td>
</tr>
</tbody>
</table>
Wholesale and Retail Trade

- Would be considered irrelevant by traditional industrial policy
- Does not do much R & D (0.5% of UK R & D) but is the sector that contributed most to recent UK labour-productivity growth
- Is a **big user of new technology**
- Has been adversely affected by planning regulations; TFP in modern supermarkets reduced by at least 20% (Cheshire et al., 2011)
Policy Implications

• **Evidence-based supply-side reforms** could improve productivity performance; e.g., tax, planning, transport

• Planning rules matter for productivity as well as R & D subsidies

• If there is more emphasis on industrial policy it should be designed with a view to **minimizing the adverse effects on competition**
Lessons (3)

- The recovery is weak compared with the 1930s and 1980s after a credit boom and bust
- There is limited scope to boost aggregate demand; need to act on supply-side
- Fiscal consolidation could be made more productivity friendly
- Radical supply-side reform delivered growth in the 1980s and could do so again even in the short term – if only politics allowed!