UK Competitiveness: Entering a New Stage

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London, United Kingdom
16 March 2004


Additional information may be found at the website of the Institute for Strategy and Competitiveness, www.isc.hbs.edu
UK Competitiveness Entering a New Phase

Key Issues

- The economic performance of the UK in recent years has been positive but past reforms are now reaching diminishing returns
  - Past growth has been driven by increasing labor participation and efficiency, sources of growth that are inherently limited

- The past policy approach was based on open markets and macroeconomic stabilization
  - Catch-up by others and increasing European integration have reduced the UK’s relative advantage in these fields

- The new policy approach needs to mobilize additional sources of growth: Assets, skills, and innovation

- Changes are needed in policy content as well as policy process for the new approach to be effective
  - Invest efficiently
  - Define the new positioning of the UK as a place to do business
  - Reform the roles of the private and public sector in economic policy formulation and execution
  - Strengthen institutions for collaboration, especially on the regional level
Prosperity

Compound annual growth rate of real GDP per capita, 1990-2002

Note: Singapore and Taiwan data from EIU (2004)
Labor Productivity

OECD

Note: Singapore and Taiwan data from EIU
Source: Groningen Growth and Development Centre, 2004
UK Labor Productivity Gap
Selected Countries

Relative level of real GDP per Employee, UK = 100

Source: Groningen Growth and Development Centre, 2004
Labor Productivity Level
UK & Selected Countries, 2003

Relative level of real GDP per Employee, UK = 100

Source: Groningen Growth and Development Centre, 2004
Labor Productivity Growth
UK & Selected Countries

Annual change in real GDP per Employee

Source: Groningen Growth and Development Centre, 2004

US
Germany
France
UK
Past UK Economic Strategy

- Past policy reforms in the UK where first targeted on **market opening**, the most pressing barriers to competitiveness at that time
  - Low flexibility of product and labor markets
  - High costs of doing business
  - High tax burden

- More recently, **macroeconomic stabilization** become a second cornerstone of economic policy

- These reforms were **successful** in making the UK a more flexible and relatively low cost location for doing business in Europe
  - Strong foreign direct investment inflows
  - Increase of prosperity, productivity, and wages

- However, the potential of these policies is inherently **limited** and other countries have taken similar steps
Decomposing Prosperity: New Priorities

Prosperity

Labor Productivity
- Capital Intensity
- Skills
- TFP

Labor Participation
- Unemployment
- Workforce/Population
- Hours/Employee

Efficiency

Innovation
UK Economic Strategy: New Priorities

Capital Intensity
- Long debate about the effect of short-termism due to pressure from equity markets
- However, little hard evidence on relative costs and benefits
  - New studies suggest that Germany and France with their bank-based systems might have over-invested in capital because of artificially low interest rates on loans, driving value-destroying labor substitution

Skills
- UK effective in getting educational quality for investments made; now efforts to increase spending as well
- However, effects will take time to feed through as low skills are essentially a stock problem

Innovation
- Clearly an area of UK underperformance
- Skill base at universities is fundamentally good and public spending is ratcheting up, but so far too little commercialization and private sector R&D
  - Existing R&D over-extended on pharmaceuticals and aerospace/defense
Models of Competitive Strengths

- Sweden
- Germany
- France
- U.S.
- UK

- Assets Enabling Innovation and Productivity
- Competition Enforcing Innovation and Productivity
The UK Competitiveness Agenda 2004

Key Priorities

**Content**

- **Invest** in physical infrastructure, skill upgrading, and scientific and technological capacity
- Continue to upgrade productivity-driven **regulatory regimes**
- Reach consensus on the new **positioning of the UK** as a location for doing business

**Process**

- Define a new **partnership** of private and public sector in setting and executing economic policy
  - Cluster efforts can be an engine to make this transition
- Strengthen **regional institutions** with credible authority to make policy choices
Back-Up: Additional Data
Comparative Economic Performance
Real GDP Growth Rates

Annual growth rate of real GDP

Countries sorted by 1990-2002 annual real GDP growth rate (CAGR)

- Ireland
- Singapore
- S Korea
- Taiwan
- Australia
- US
- Canada
- Spain
- Germany
- UK
- Finland
- France
- Japan
- Switzerland

Source: EIU (2003)
Labor Productivity Gap to the United States
UK & Select Countries

Source: Groningen Growth and Development Centre, 2004
Decomposing the UK Labor Productivity Gap
Market Sector, 1999

• The UK lags all competitors in capital intensity. It lags France and Germany in labor force skills, and the US in total factor productivity.

Source: Mahoney, de Boer (2002)
Comparative Capital Intensity and Investment
Selected Countries

Capital Stock per Hour worked, 1996-2000, UK = 100%

Growth Rate of Capital Stock per Hour worked, 1996-2000

Productivity Performance
Selected OECD Countries

Total Factor Productivity Growth, 1990-98

Labor Productivity Growth, 1990-98

Source: IMF, 2001

Efficiency-driven

Investment-driven
Total Factor Productivity Performance
Selected OECD Countries

Total Factor Productivity Level, 1995-97, US = 100

Total Factor Productivity Growth, 1990-98

Source: IMF, 2001
Unemployment in OECD Countries

Source: EIU (2003)
Labor Force Participation

Employees as Share of Population

Source: EIU (2003)
UK Export Performance
World Export Market Shares

UK’s Export Performance By Broad Sector, 1995-2000

UK’s change in world average export share: +0.7%

UK’s average export share: 4.88%

Source: UNCTAD Trade Data. Author’s analysis.
Export Performance
European Countries and Regions

Exports per capita, in 1,000 ECU, 1998

- Greece: 2.3
- Spain: 2.8
- Italy: 3.3
- Portugal: 3.4
- France: 4.6
- Basque Country: 4.7
- UK: 4.8
- Germany: 5
- Finland: 5.7
- Sweden: 6.8
- Austria: 7.6
- Denmark: 7.9
- Ireland: 10.6
- Netherlands: 11.4
- Belgium: 14

Source: Basque Statistical Office
Comparative Inward Foreign Investment
Selected Advanced Economies

FDI Stocks as % of GDP, Average 1998-2000

FDI Inflows as % of Gross Fixed Capital Formation, Average 1998-2000

Note: Germany’s FDI inflows in this period were exceptionally high due to the Vodafone-Mannesmann takeover in 2000

Global Competitiveness Report 2003
The Relationship Between Business Competitiveness and GDP Per Capita

Source: Global Competitiveness Report 2003
UK Competitiveness Smith Institute 03-16-04 CK
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Current Competitiveness Index

UK Position over Time

Source: Global Competitiveness Report 2003

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Determinants of Productivity and Productivity Growth

Macroeconomic, Political, Legal, and Social Context for Development

Microeconomic Foundations of Development

Sophistication of Company Operations and Strategy

Quality of the Microeconomic Business Environment
### Competitive Advantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
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<tbody>
<tr>
<td>Extent of Incentive Compensation</td>
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<tr>
<td>Reliance on Professional Management</td>
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<tr>
<td>Extent of Marketing</td>
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<tr>
<td>Breadth of International Markets</td>
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<tr>
<td>Extent of Branding</td>
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<tr>
<td>Nature of Competitive Advantage</td>
<td>7</td>
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</table>

Country Ranking, Arrows indicate a change of 2 or more ranks since 2001.

### Competitive Disadvantages Relative to GDP per Capita

<table>
<thead>
<tr>
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<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent of Regional Sales</td>
<td>22</td>
</tr>
<tr>
<td>Degree of Customer Orientation</td>
<td>14</td>
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<tr>
<td>Production Process Sophistication</td>
<td>13</td>
</tr>
<tr>
<td>Company Spending on R&amp;D</td>
<td>11</td>
</tr>
<tr>
<td>Extent of Staff Training</td>
<td>11</td>
</tr>
<tr>
<td>Willingness to Delegate Authority</td>
<td>9</td>
</tr>
<tr>
<td>Control of International Distribution</td>
<td>9</td>
</tr>
</tbody>
</table>

Country Ranking, Arrows indicate a change of 2 or more ranks since 2001.

Note: Rank by countries; overall UK ranks 6 (8 on Company Operations and Strategy, 16 on GDP pc 2002).
Determinants of Productivity and Productivity Growth

Microeconomic Foundations of Development

- Sophistication of Company Operations and Strategy
- Quality of the Microeconomic Business Environment

Macroeconomic, Political, Legal, and Social Context for Development
National Business Environment Overview
UK’s Relative Strengths and Weaknesses

Overall rank: 6

Factor Conditions
- Capital Markets
- Market Incentives
- Clusters
- Demand Conditions
- Administrative Rules and Procedures
- Science and Technology
- Physical Infrastructure
- Human Resources

Source: Global Competitiveness Report 2003
## Factor (Input) Conditions
### UK’s Relative Position

<table>
<thead>
<tr>
<th>Competitive Advantages Relative to GDP per Capita</th>
<th>Competitive Disadvantages Relative to GDP per Capita</th>
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<td>Country Ranking, Arrows indicate a change of 2 or more ranks since 2001</td>
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</tr>
<tr>
<td>Financial Market Sophistication</td>
<td>Extent of Bureaucratic Red Tape</td>
</tr>
<tr>
<td>Venture Capital Availability</td>
<td>Quality of Math and Science Education</td>
</tr>
<tr>
<td>Ease of Access to Loans</td>
<td>Availability of Scientists and Engineers</td>
</tr>
<tr>
<td>Quality of Scientific Research Institutions</td>
<td>Quality of Public Schools</td>
</tr>
<tr>
<td>Adequacy of Public Sector Legal Recourse</td>
<td>Railroad Infrastructure Quality</td>
</tr>
<tr>
<td>Quality of Management Schools</td>
<td>Overall Infrastructure Quality</td>
</tr>
</tbody>
</table>

- **Note:** Rank by countries; overall UK ranks 6 (6 on National Business Environment, 16 on GDP pc 2002)

**Source:** Global Competitiveness Report 2003

UK Competitiveness Smith Institute 03-16-04 CK

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## Factor (Input) Conditions Continued

### UK’s Relative Position

<table>
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<tr>
<td>Relative to GDP per Capita</td>
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<tr>
<td>Quality of Electricity Supply</td>
<td>14</td>
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<tr>
<td>Judicial Independence</td>
<td>10</td>
</tr>
<tr>
<td>Air Transport Infrastructure Quality</td>
<td>10</td>
</tr>
<tr>
<td>Cell phones per 100 people (2002)</td>
<td>9</td>
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<tr>
<td>University/Industry Research Collaboration</td>
<td>8</td>
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</table>

Country Ranking, Arrows indicate a change of 2 or more ranks since 2001.

Note: Rank by countries; overall UK ranks 6 (6 on National Business Environment, 16 on GDP pc 2002).

Source: Global Competitiveness Report 2003
Innovation Quantity and Quality
Selected Countries

Annual U.S. patents per 1 million population, 2000

Share of country’s patents that are highly cited*

Note: * The share of a country’s patents filed between 1994 and 1998 that were highly cited in 1999.
Source: CHI Patent, National Science Foundation and Council on Competitiveness data. Author’s analysis.
### U.S. Patenting by UK Institutions

<table>
<thead>
<tr>
<th>Organization</th>
<th>Patents Issued from 1997 to 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ZENECA LIMITED</td>
<td>398</td>
</tr>
<tr>
<td>2. BRITISH TELECOMMUNICATION, PLC</td>
<td>335</td>
</tr>
<tr>
<td>3. INTERNATIONAL BUSINESS MACHINES CORPORATION</td>
<td>280</td>
</tr>
<tr>
<td>4. U.S. PHILIPS CORPORATION</td>
<td>257</td>
</tr>
<tr>
<td>5. SMITHKLINE BEECHAM PLC</td>
<td>244</td>
</tr>
<tr>
<td>6. EASTMAN KODAK COMPANY</td>
<td>206</td>
</tr>
<tr>
<td>7. LUCAS INDUSTRIES PUBLIC LTD. COMPANY</td>
<td>204</td>
</tr>
<tr>
<td>8. SECRETARY OF STATE FOR DEFENCE IN HER BRITANNIC MAJESTY'S GOVERNMENT OF THE UNITED KINGDOM</td>
<td>183</td>
</tr>
<tr>
<td>9. ROLLS-ROYCE PLC</td>
<td>174</td>
</tr>
<tr>
<td>10. MERCK SHARP &amp; DOHME LIMITED</td>
<td>167</td>
</tr>
<tr>
<td>11. IMPERIAL CHEMICAL INDUSTRIES PLC</td>
<td>160</td>
</tr>
<tr>
<td>12. PROCTER + GAMBLE COMPANY</td>
<td>154</td>
</tr>
<tr>
<td>12. NORTHERN TELECOM LIMITED</td>
<td>154</td>
</tr>
<tr>
<td>14. NORTEL NETWORKS CORPORATION</td>
<td>135</td>
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<tr>
<td>15. THE BOC GROUP PLC</td>
<td>131</td>
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<tr>
<td>16. SHARP KABUSHIKI KAISHA (SHARP CORPORATION)</td>
<td>117</td>
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<tr>
<td>17. PFIZER INC.</td>
<td>115</td>
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<tr>
<td>18. BRITISH TECHNOLOGY GROUP LIMITED</td>
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<tr>
<td>19. HEWLETT-PACKARD COMPANY</td>
<td>103</td>
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<td>19. BP CHEMICALS LIMITED</td>
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<td>21. NOKIA MOBILE PHONES LTD.</td>
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<td>22. SONY CORPORATION</td>
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<td>23. NCR CORPORATION</td>
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<td>24. BRITISH NUCLEAR FUELS PLC</td>
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<td>25. GLAXO GROUP LIMITED</td>
<td>83</td>
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</table>

Note: Shading indicates universities, research institutions, and other government agencies.

## Innovative Capacity Index
### 2003 Rankings

<table>
<thead>
<tr>
<th>Rank</th>
<th>Scientists &amp; Engineers Index</th>
<th>Innovation Policy Index</th>
<th>Cluster Environment Index</th>
<th>Linkages Index</th>
<th>Operations and Strategy Index</th>
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<td>Switzerland</td>
<td>Korea</td>
<td>United Kingdom</td>
</tr>
</tbody>
</table>

Source: Global Competitiveness Report 2003, forthcoming
Educational Spending and Performance

Source: PISA-Study, OECD
Education in Science & Technology
Selected Countries

Share of Science & Technology graduates in the age 20 – 29 population, 2000 or latest

EU average: 10.3%

Source: EU Scoreboard 2002
Total R&D Spending
Selected Countries

Total R&D Spending as % of GDP, 2001 (or last available)

Change of Public R&D Spending as % of GDP, last three years

Source: OECD
### Competitive Advantages Relative to GDP per Capita

- Prevalence of mergers and acquisitions 1
- Efficacy of Corporate Boards 1
- Foreign Ownership of Companies 1
- Intensity of Local Competition 1
- Protection of Minority Shareholders 2
- Effectiveness of Anti-Trust Policy 2
- Existence of Bankruptcy Law 2
- Regulation of Securities Exchanges 2
- Decentralization of Corporate Activity 3
- Intellectual Property Protection 3

### Competitive Disadvantages Relative to GDP per Capita

- Centralization of Economic Policy-making 46
- Cooperation in Labor-Employer Relations 21
- Extent of Locally Based Competitors 19
- Extent of Distortive Government Subsidies 14
- Favoritism in Decisions of Government Officials 12
- Tariff Liberalization 12
- Business Costs of Corruption 10
- Hidden Trade Barrier Liberalization 8

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Note: Rank by countries; overall UK ranks 6 (6 on National Business Environment, 16 on GDP pc 2002)

Source: Global Competitiveness Report 2003
Demand Conditions
UK’s Relative Position

Competitive Advantages
Relative to GDP per Capita

Country Ranking, Arrows indicate a change of 2 or more ranks since 2001

Buyer Sophistication 1

Competitive Disadvantages
Relative to GDP per Capita

Country Ranking, Arrows indicate a change of 2 or more ranks since 2001

Government Procurement of Advanced Technology Products 37
Stringency of Environmental Regulations 14
Presence ofDemanding Regulatory Standards 11
Laws Relating to Information Technology 8
Consumer Adoption of Latest Products 7

Note: Rank by countries; overall UK ranks 6 (6 on National Business Environment, 16 on GDP pc 2002)
Source: Global Competitiveness Report 2003
Related and Supporting Industries

UK’s Relative Position

Competitive Advantages Relative to GDP per Capita

- Local Availability of Specialized Research and Training Services 4
- Local Supplier Quantity 5

Competitive Disadvantages Relative to GDP per Capita

- Extent of Product and Process Collaboration 22
- Local Availability of Process Machinery 15
- State of Cluster Development 14
- Local Availability of Components and Parts 12
- Local Supplier Quality 8

Note: Rank by countries; overall UK ranks 6 (6 on National Business Environment, 16 on GDP pc 2002)
Source: Global Competitiveness Report 2003