

UK Competitiveness: Entering a New Stage

Christian H. M. Ketels, PhD
Institute for Strategy and Competitiveness
Harvard Business School

Smith Institute
London, United Kingdom
16 March 2004

This presentation draws on ideas from Professor Porter's articles and books, in particular, [The Competitive Advantage of Nations](#) (The Free Press, 1990), "The Microeconomic Foundations of Economic Development," in [The Global Competitiveness Report 2003](#), (World Economic Forum, 2003), "Clusters and the New Competitive Agenda for Companies and Governments" in [On Competition](#) (Harvard Business School Press, 1998), and our joint ESRC/DTI report "UK Competitiveness: Entering a New Stage, 2003. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means - electronic, mechanical, photocopying, recording, or otherwise - without the permission of the author.

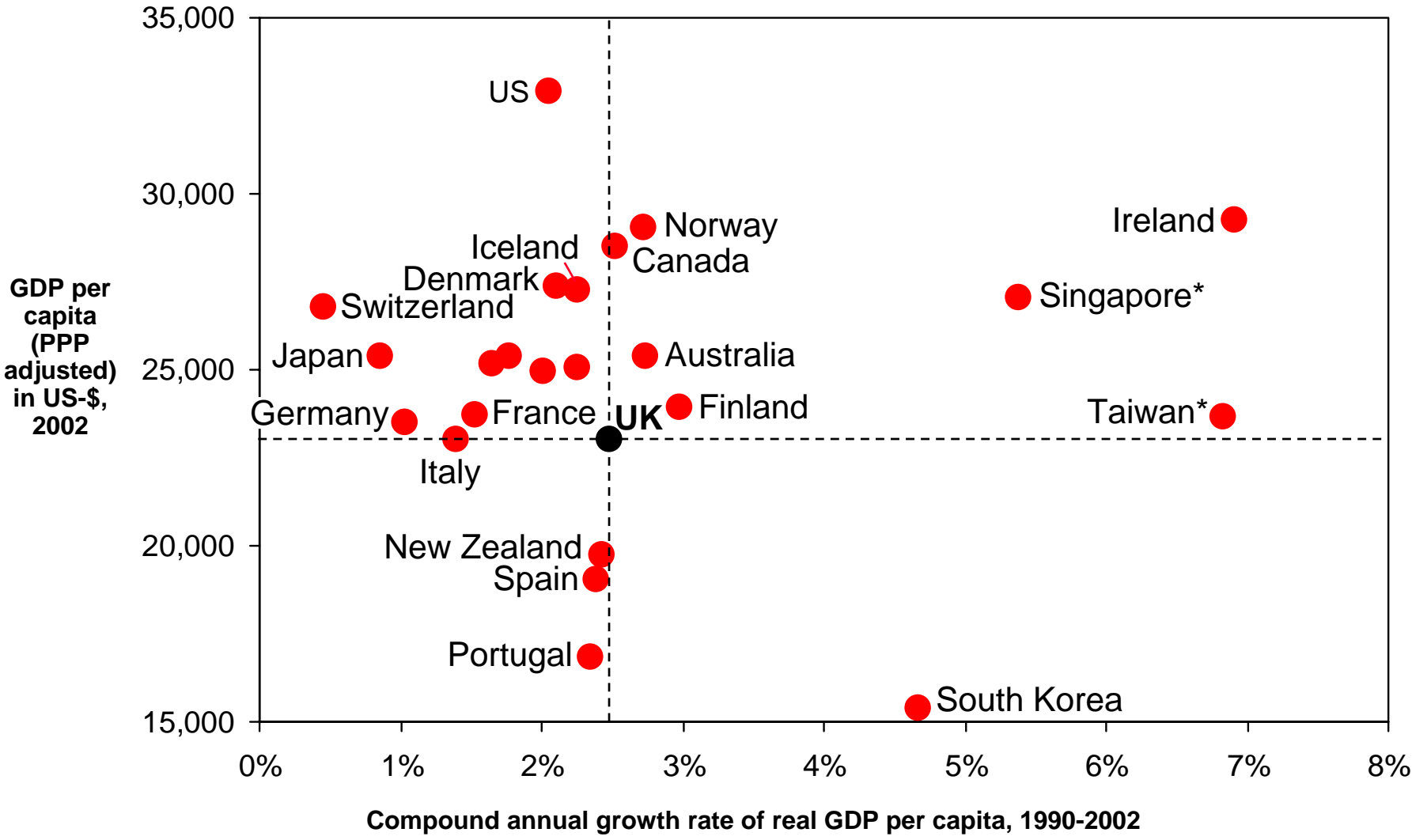
Additional information may be found at the website of the Institute for Strategy and Competitiveness, www.isc.hbs.edu

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

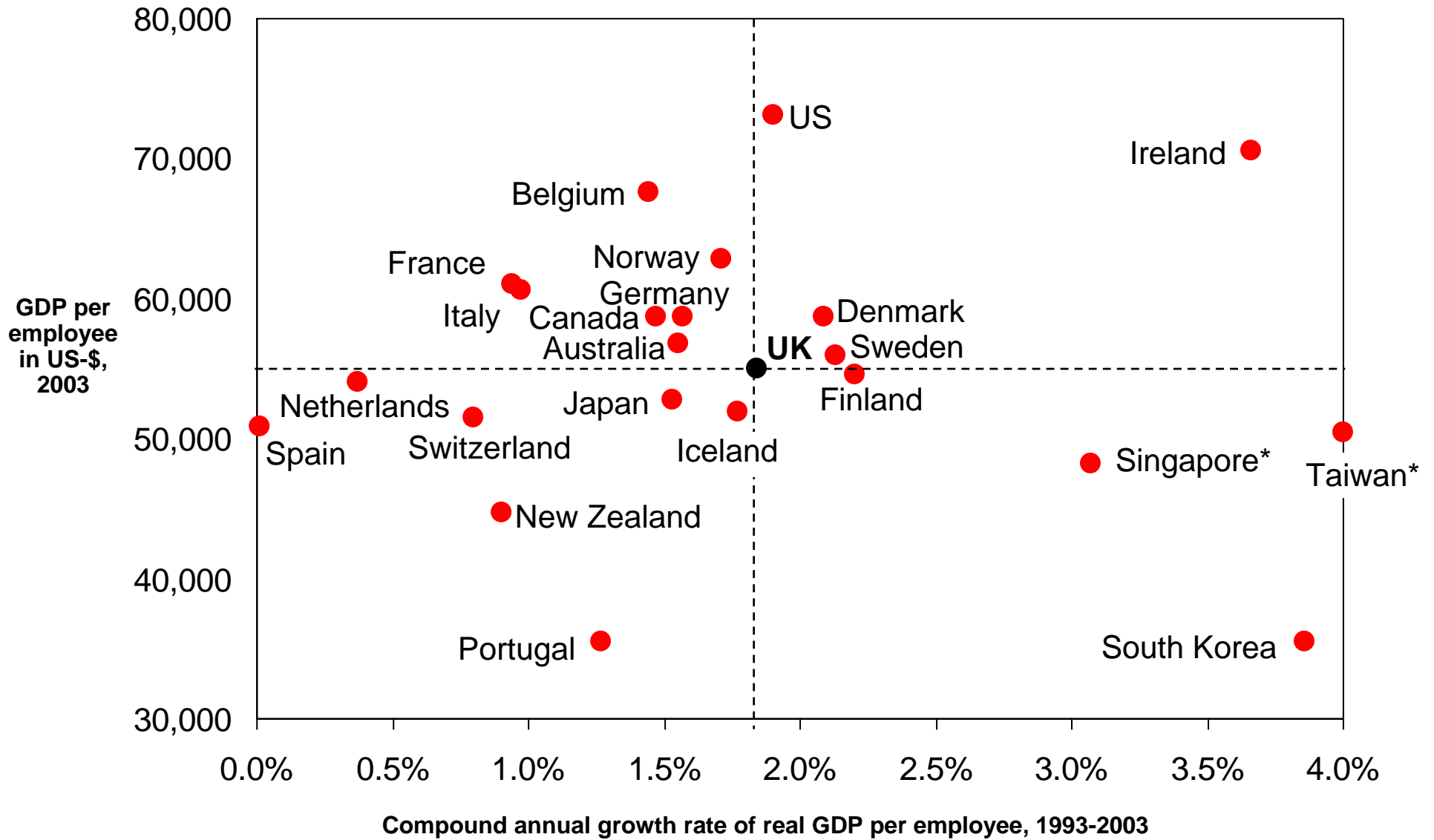
Prosperity



Note: Singapore and Taiwan data from EIU (2004)
 Source: World Development Indicators, World Bank (2003)

Labor Productivity

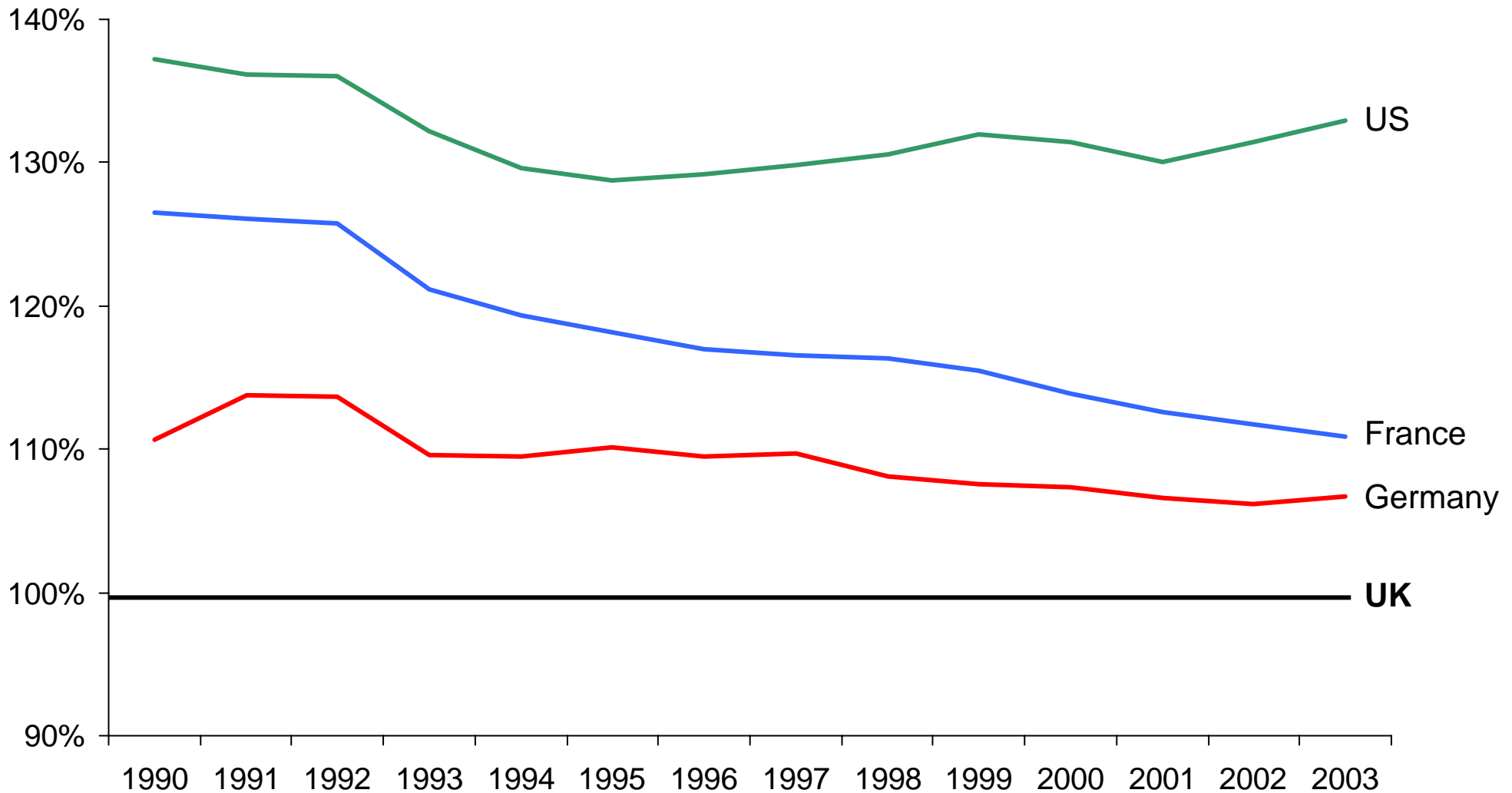
OECD



Note: Singapore and Taiwan data from EIU
 Source: Groningen Growth and Development Centre, 2004

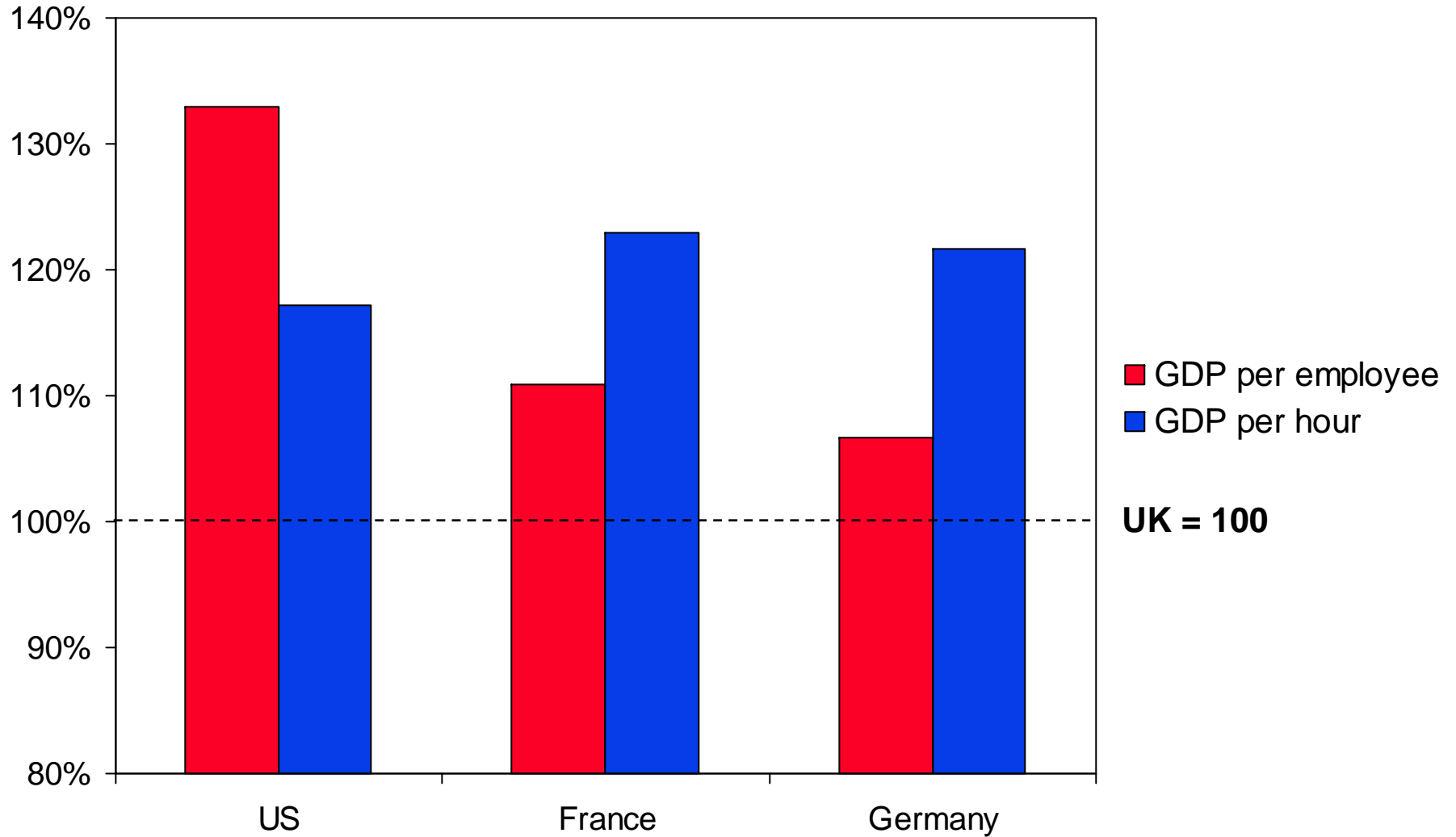
UK Labor Productivity Gap Selected Countries

Relative level of real
GDP per Employee,
UK = 100



Labor Productivity Level UK & Selected Countries, 2003

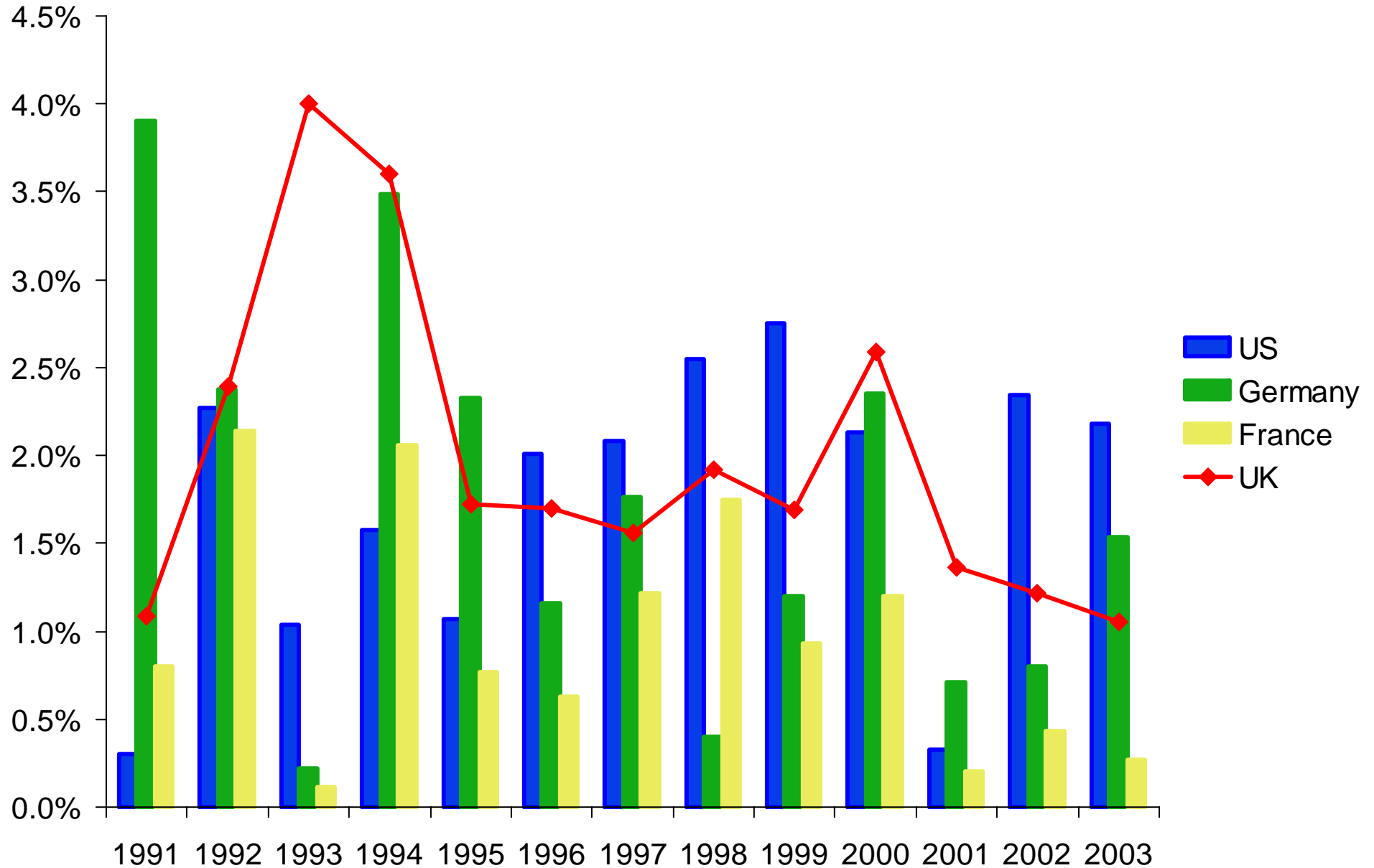
Relative level of real
GDP per Employee,
UK = 100



Labor Productivity Growth

UK & Selected Countries

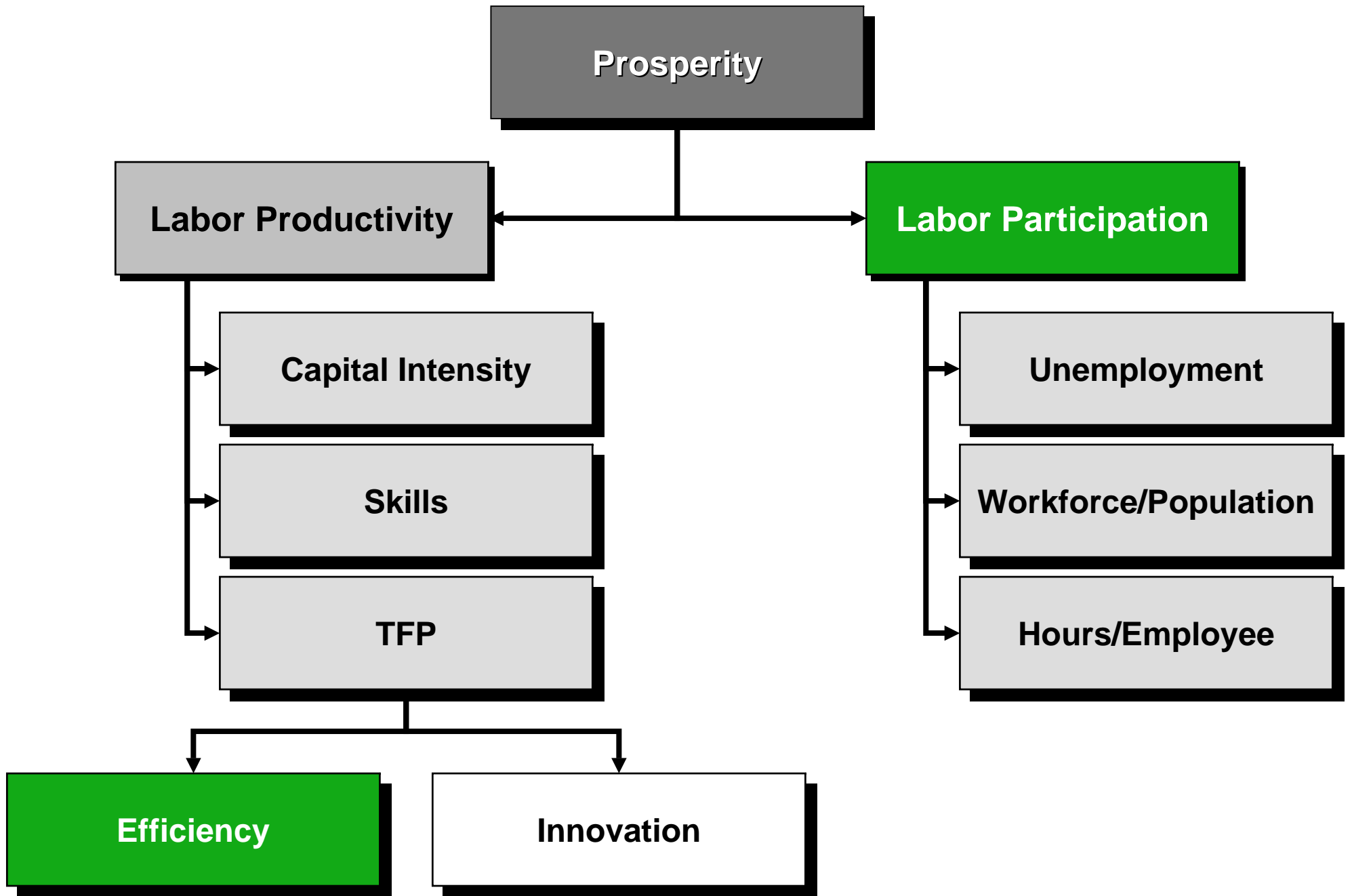
Annual change in real GDP
per Employee



Source: Groningen Growth and Development Centre, 2004

UK Competitiveness Smith Institute 03-16-04 CK

Decomposing Prosperity: Past Priorities



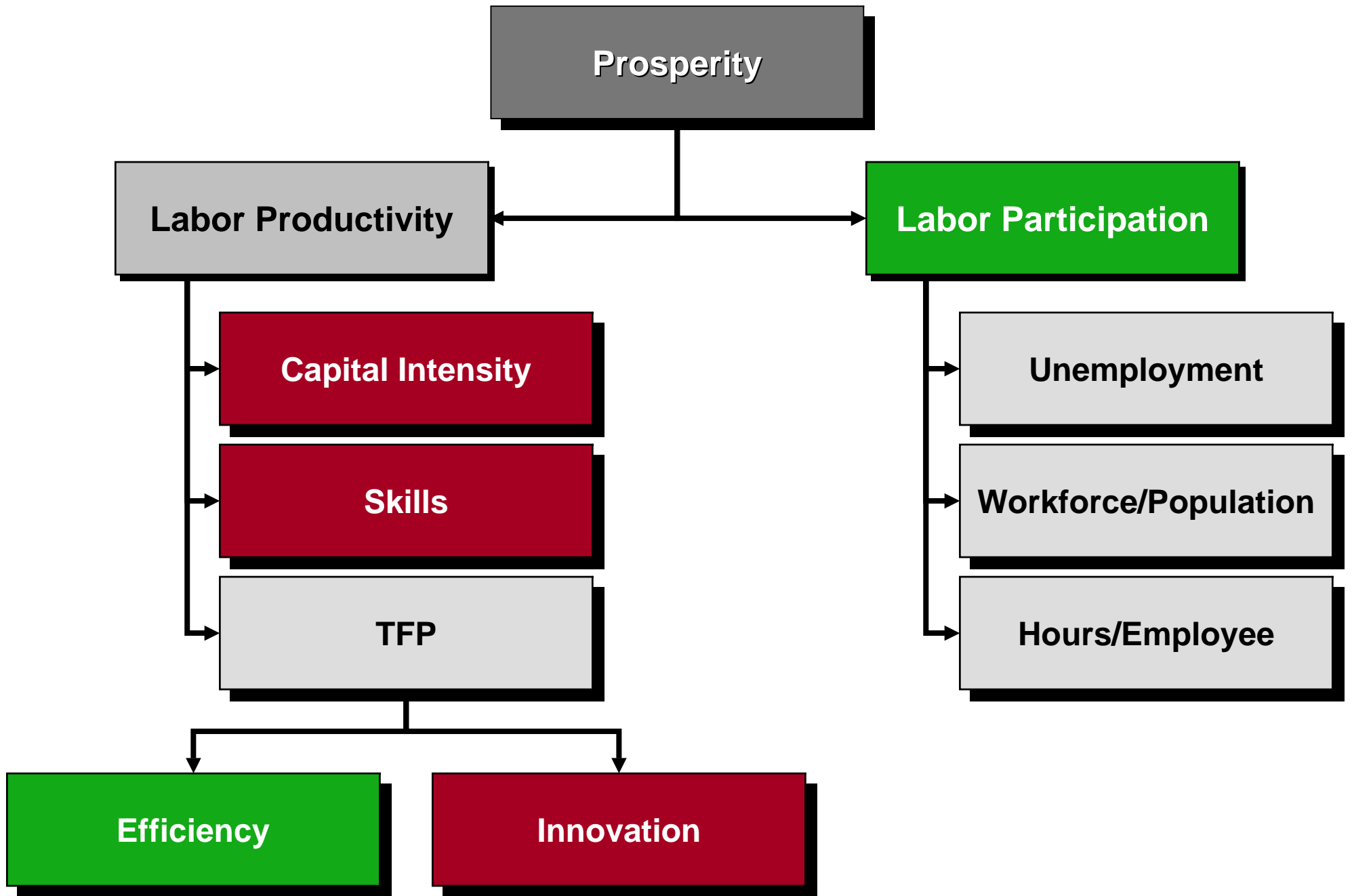
Past UK Economic Strategy

- Past policy reforms in the UK were 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** became 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



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

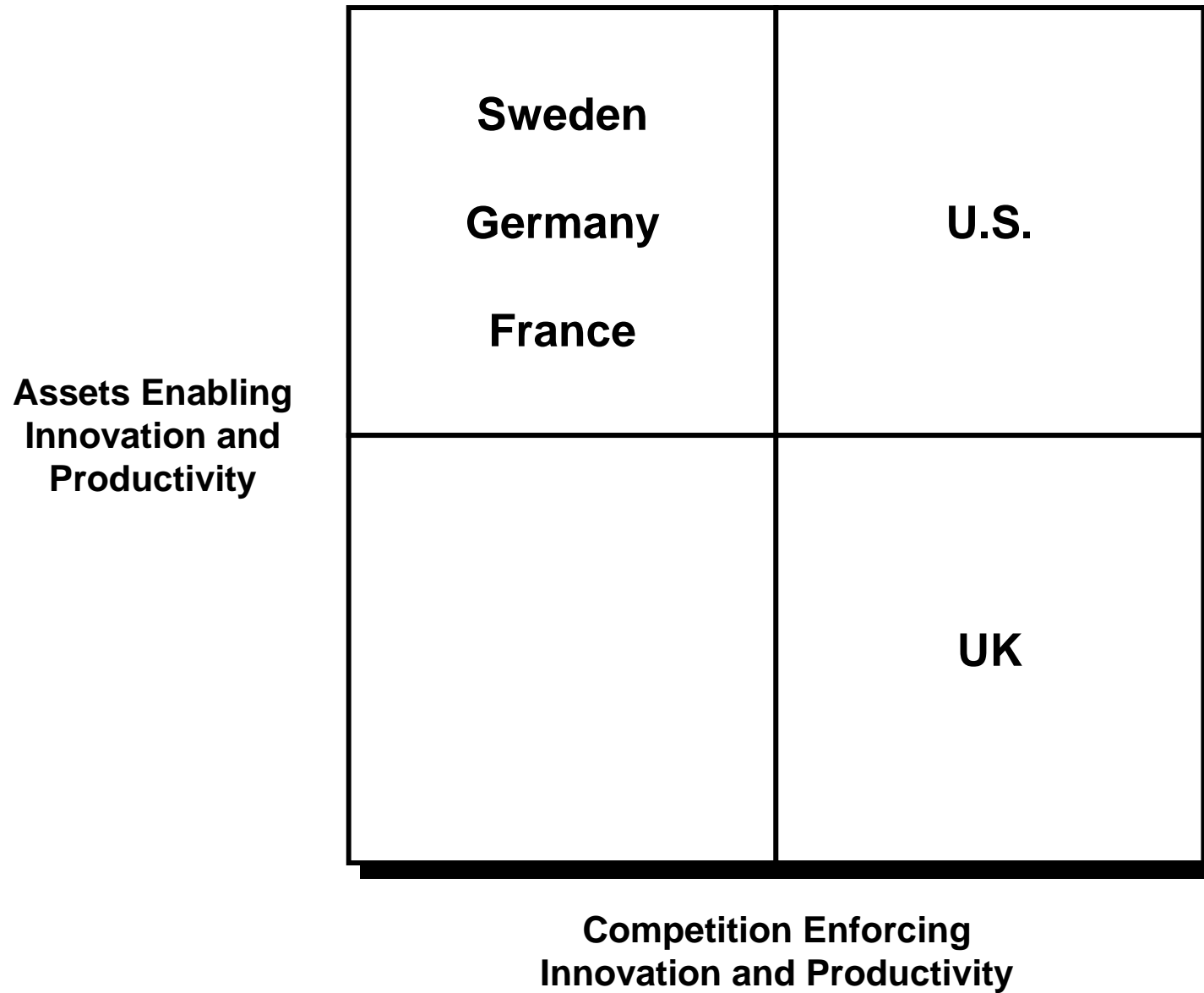
Skills

- 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



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

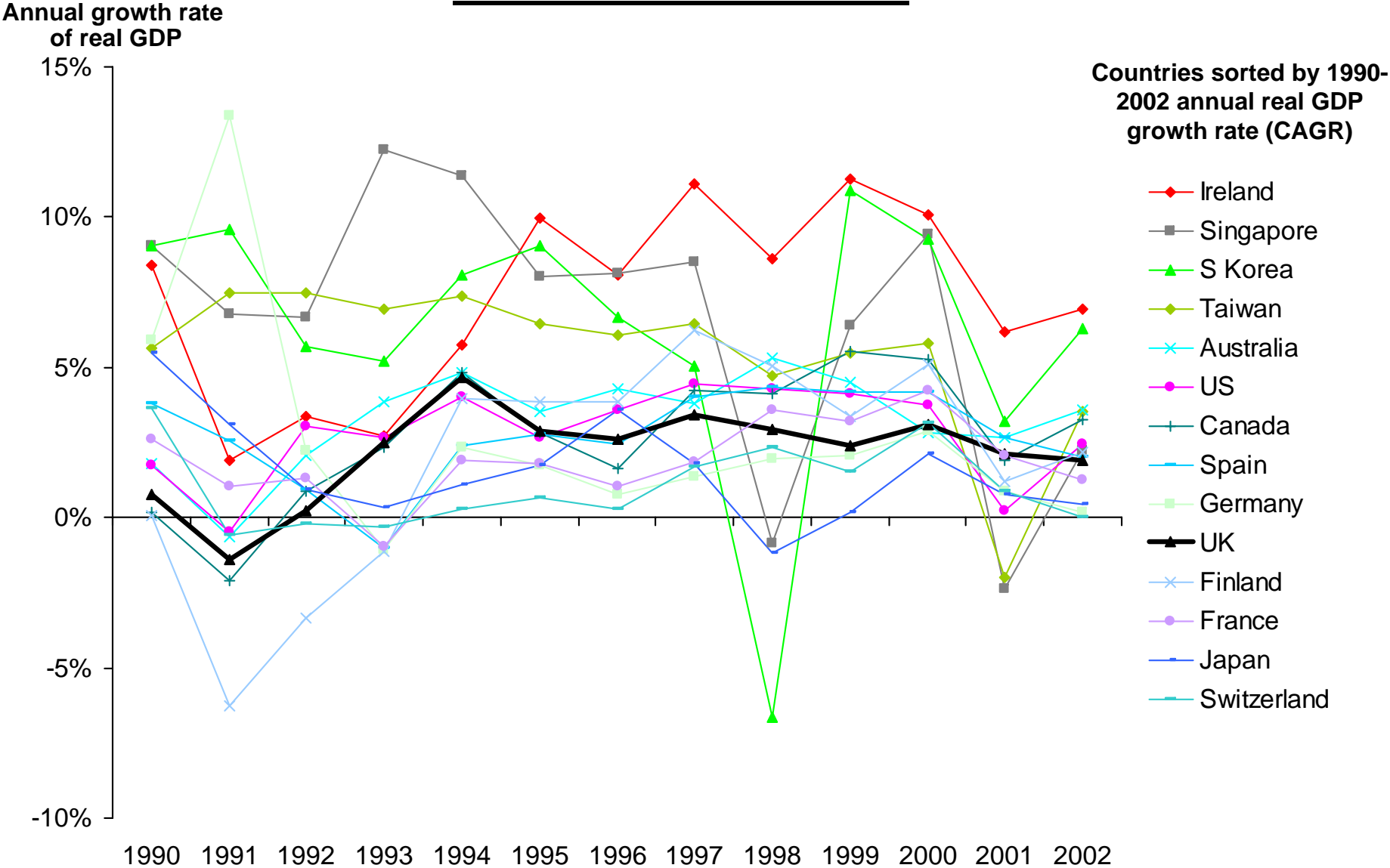
Process

- 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

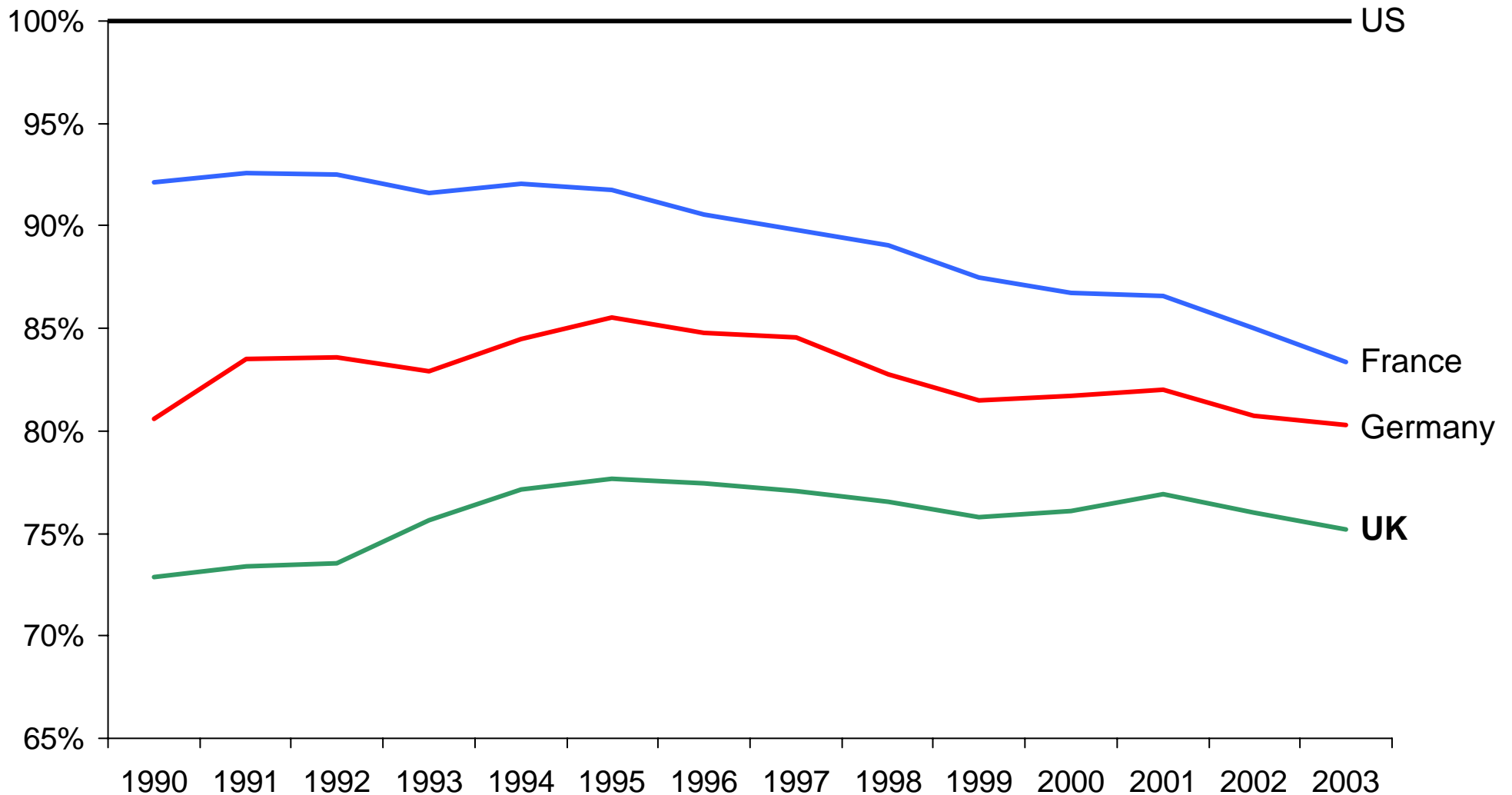
Real GDP Growth Rates



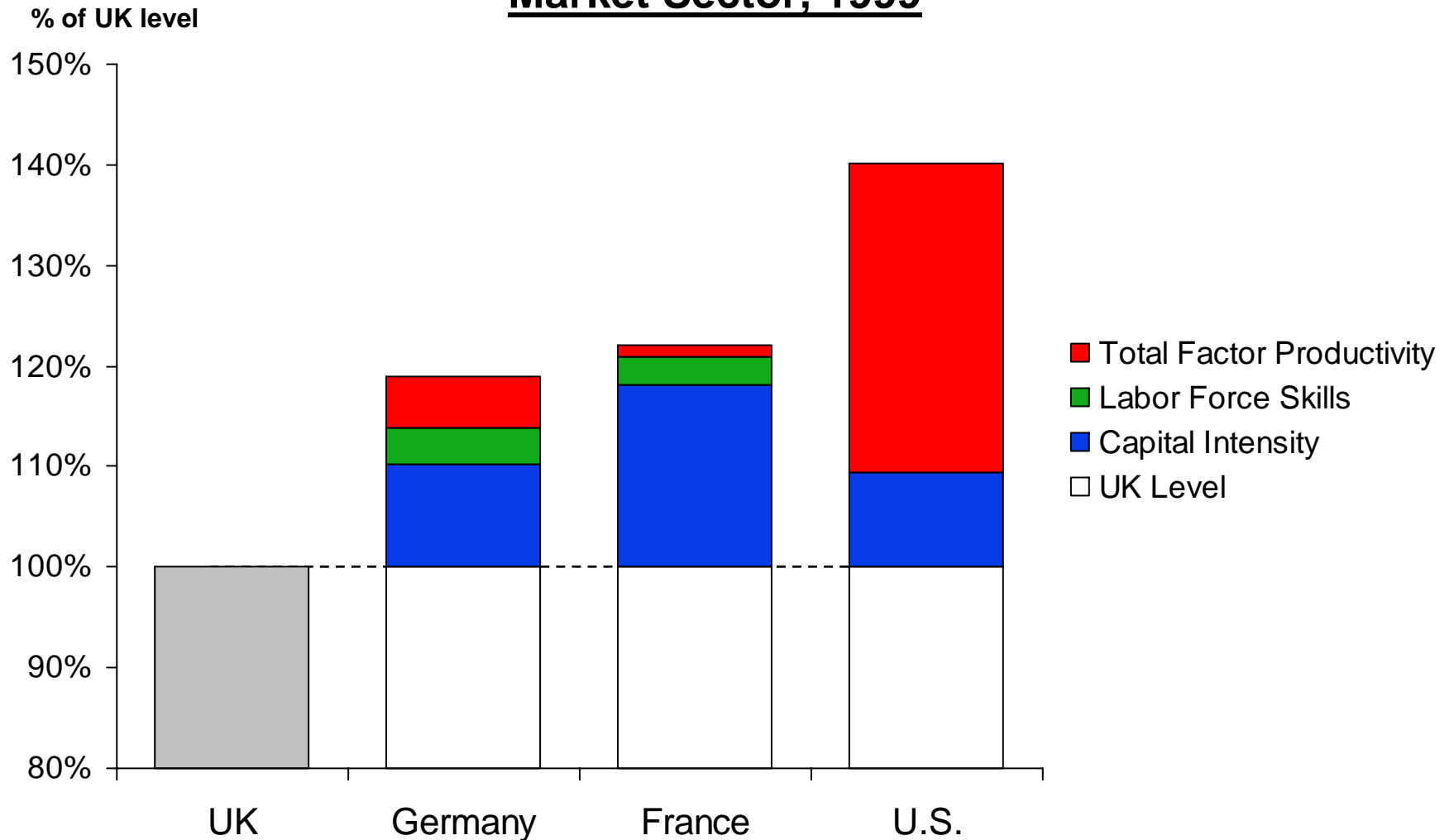
Source: EIU (2003)

Labor Productivity Gap to the United States

UK & Select Countries



Decomposing the UK Labor Productivity Gap Market Sector, 1999

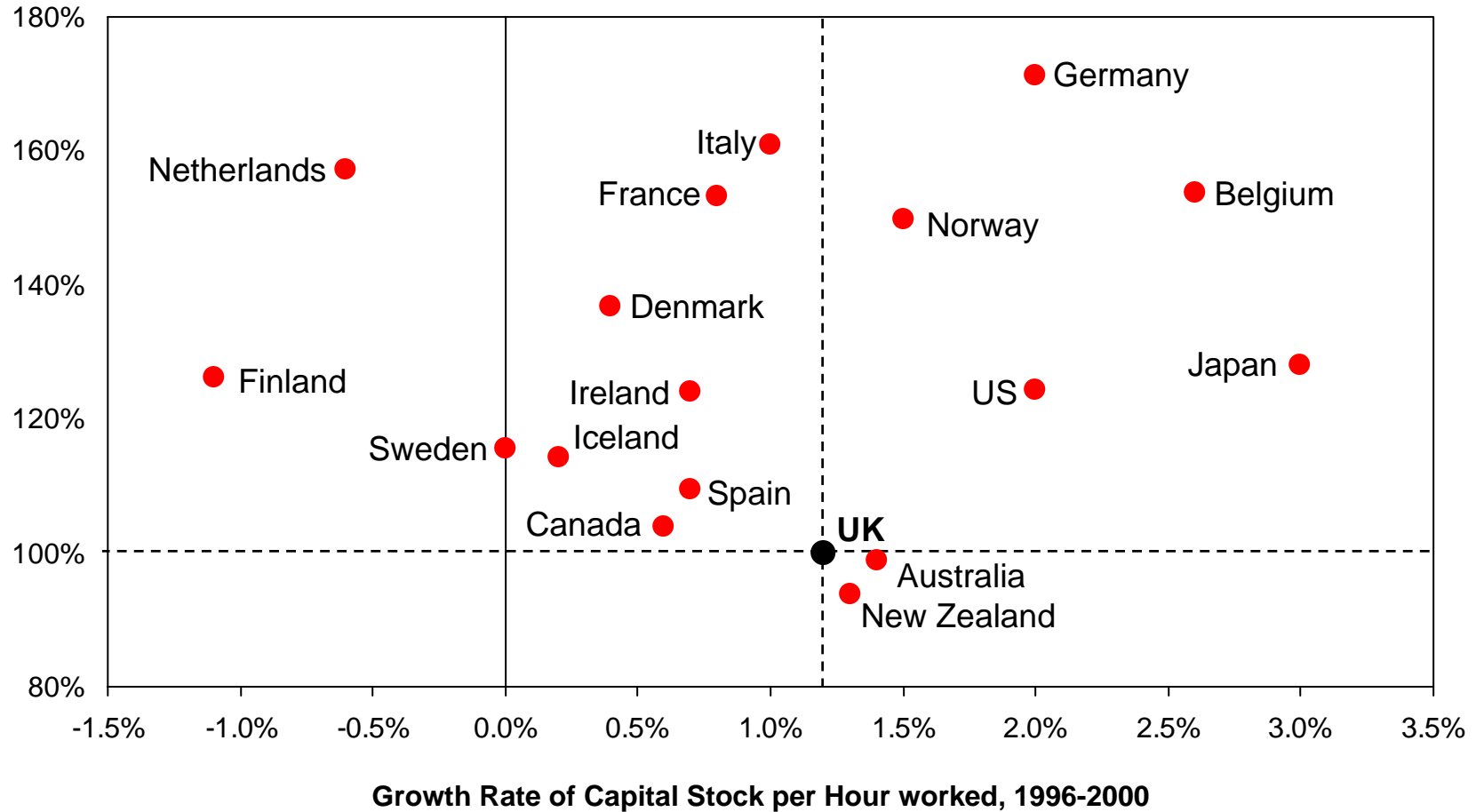


- The UK lags all competitors in capital intensity. It lags France and Germany in labor force skills, and the US in total factor productivity

Comparative Capital Intensity and Investment

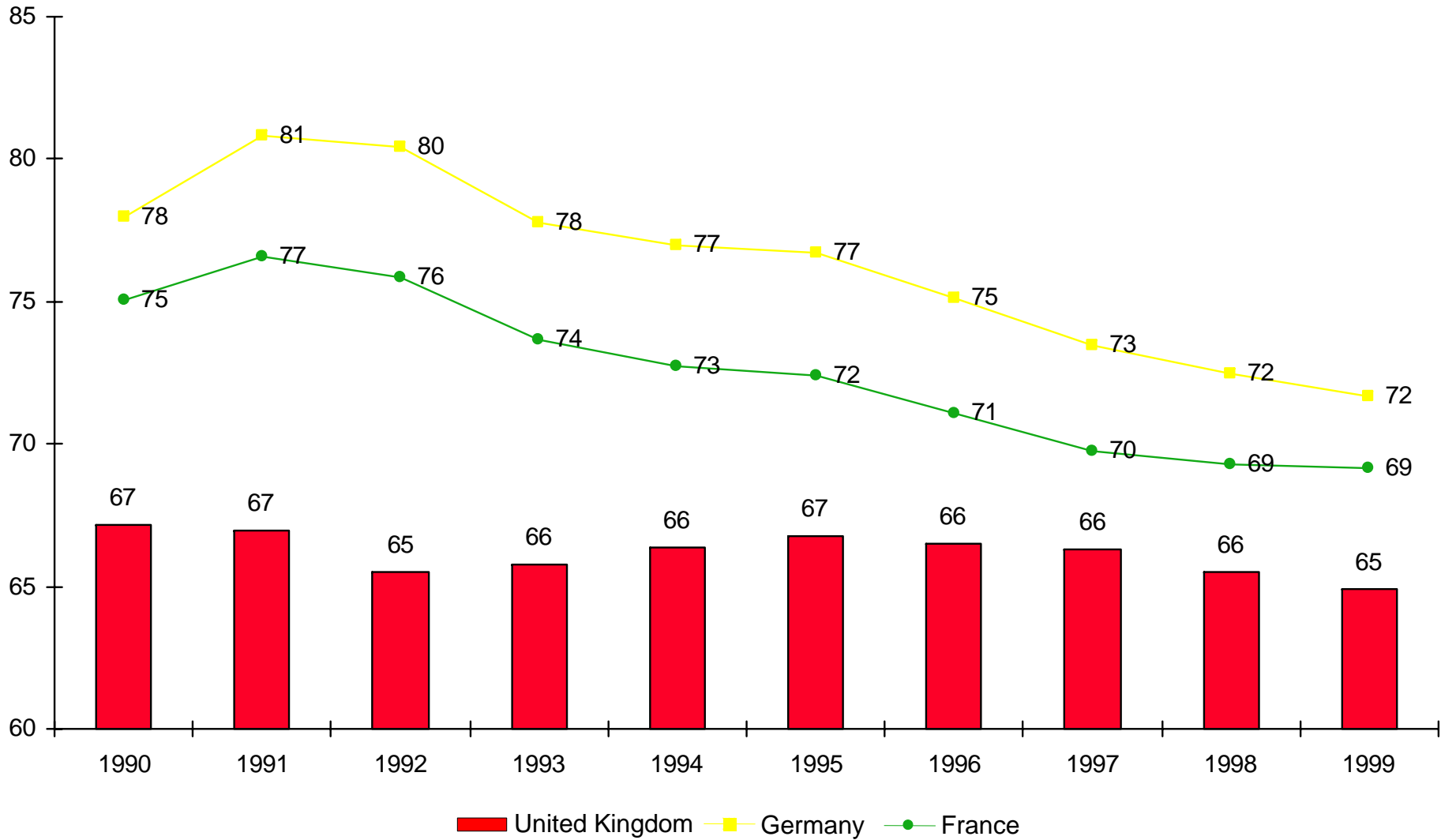
Selected Countries

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



Total Factor Productivity UK & Select Countries

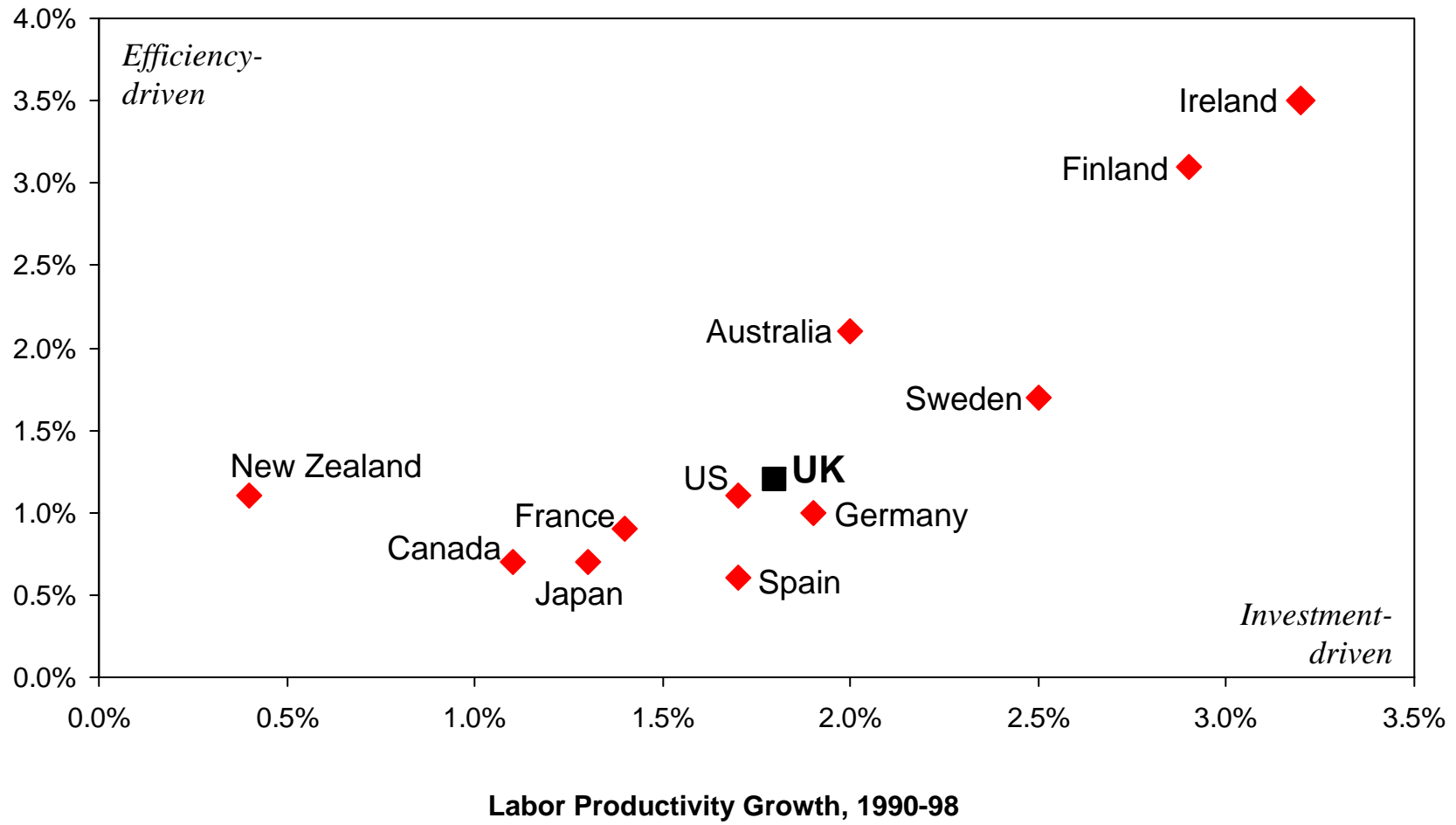
Total Factor
Productivity
Level,
US = 100



Source: OECD

Productivity Performance Selected OECD Countries

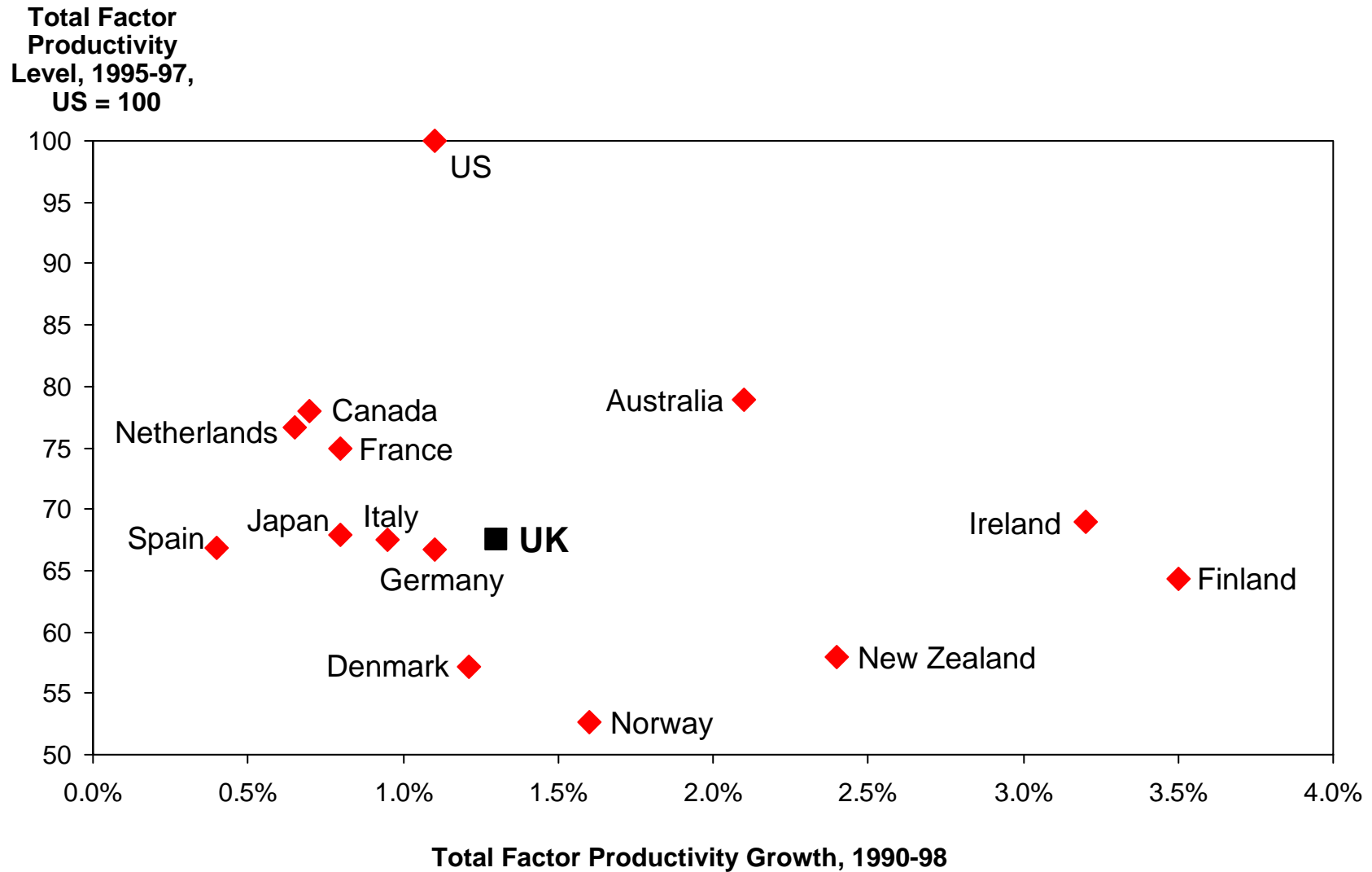
**Total Factor
Productivity
Growth, 1990-98**



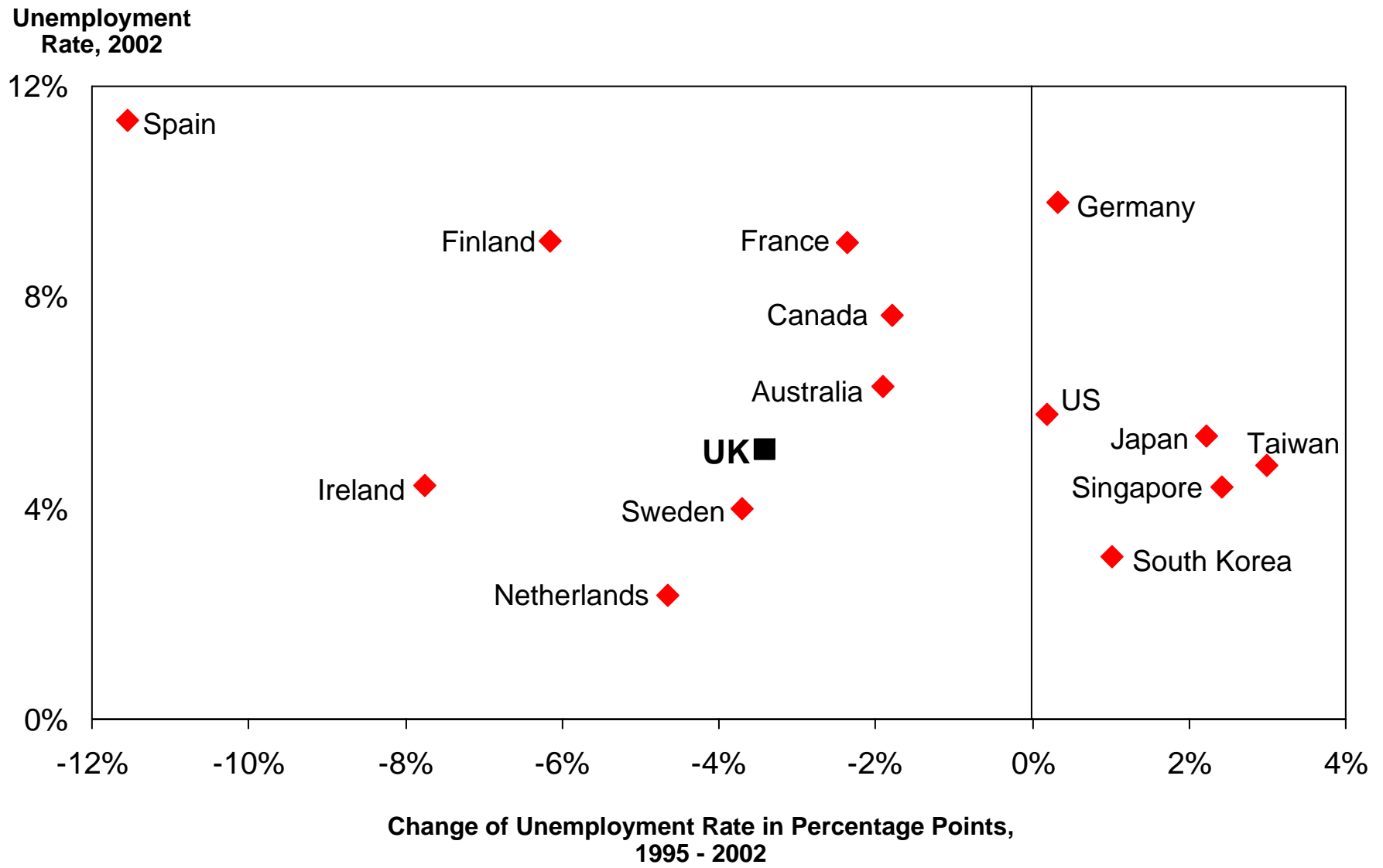
Source: IMF, 2001

Total Factor Productivity Performance

Selected OECD Countries

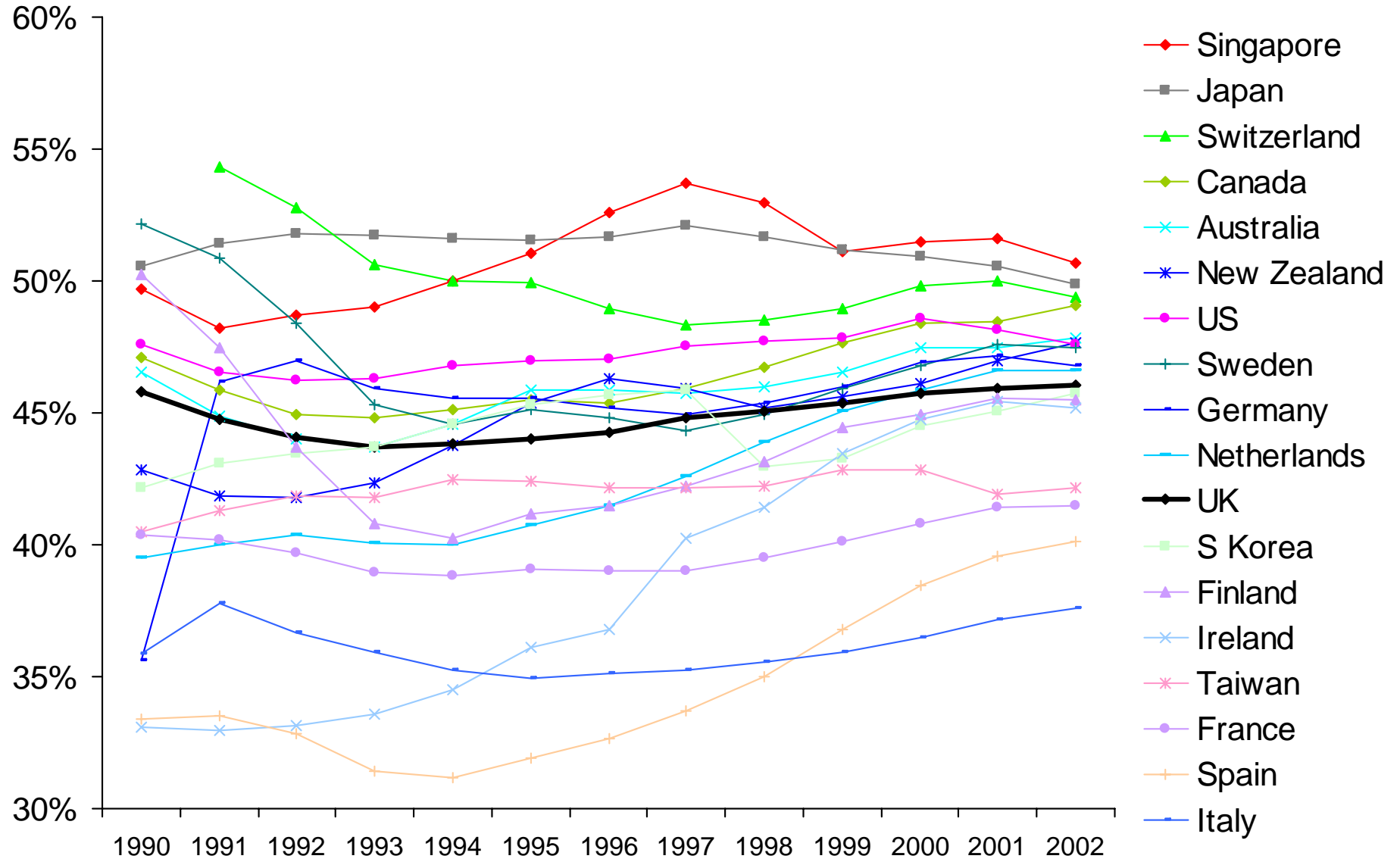


Unemployment in OECD Countries



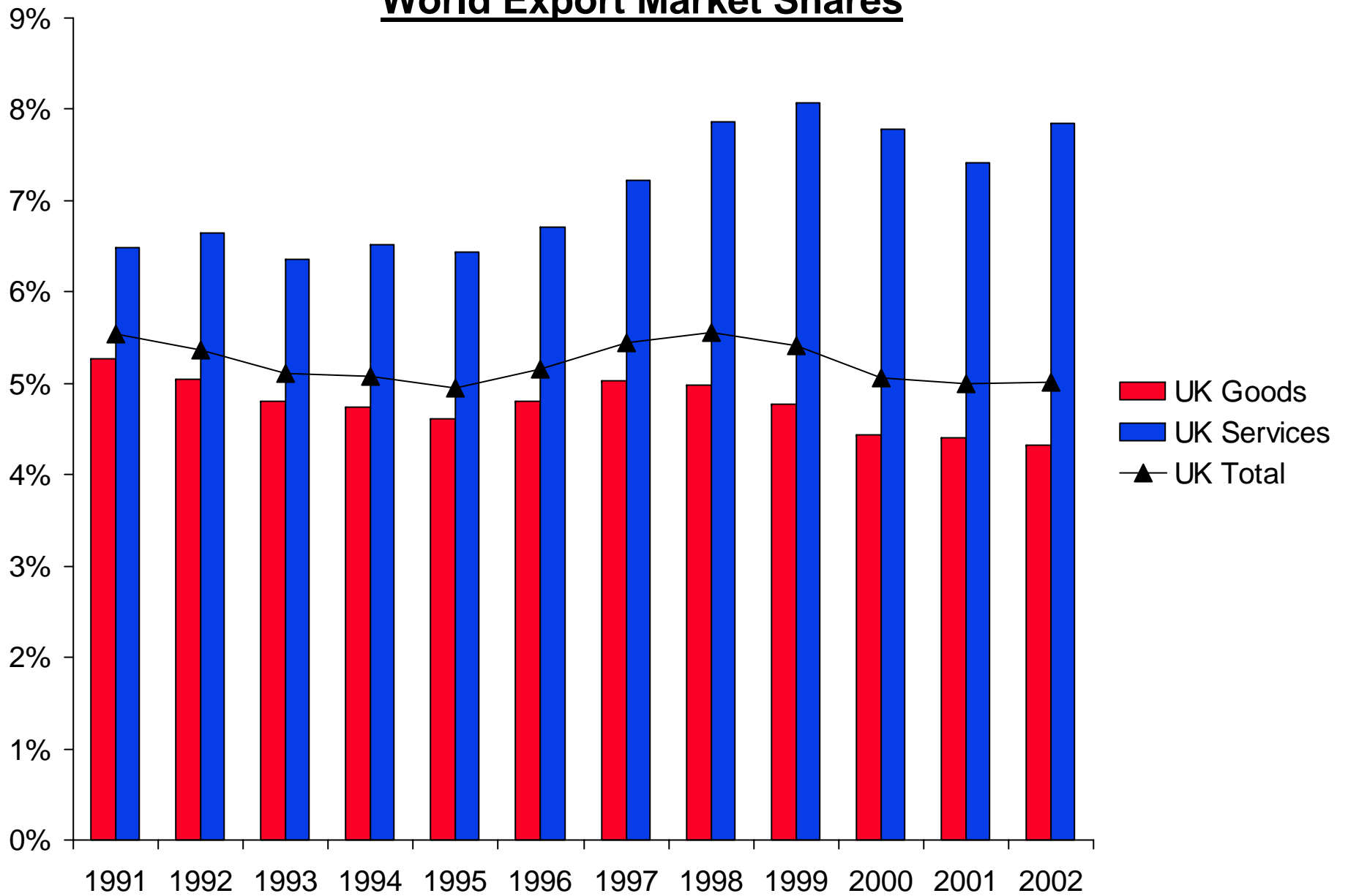
Labor Force Participation

Employees as Share of Population



UK Export Performance

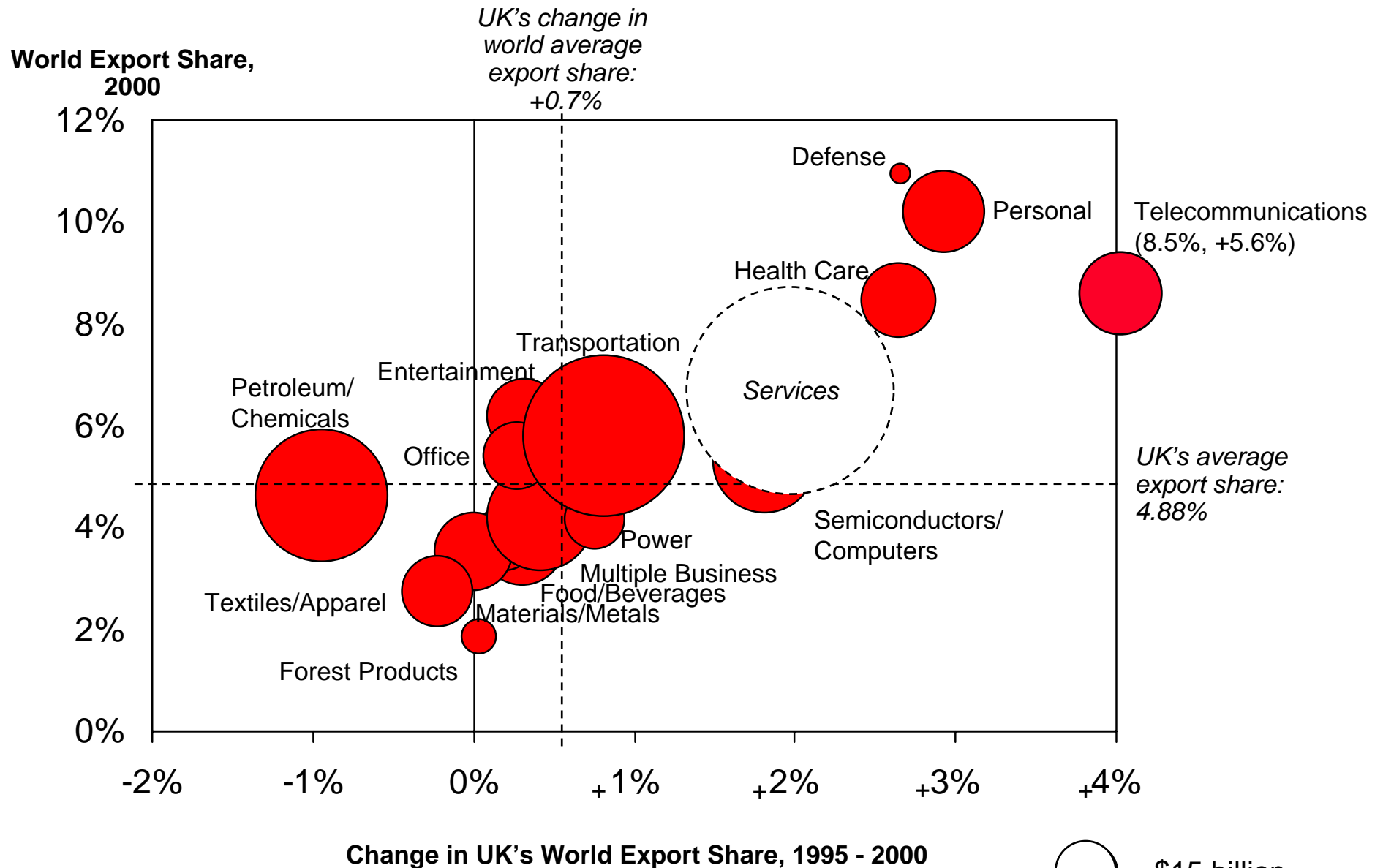
World Export Market Shares



Source: WTO (2004)

UK Competitiveness Smith Institute 03-16-04 CK

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



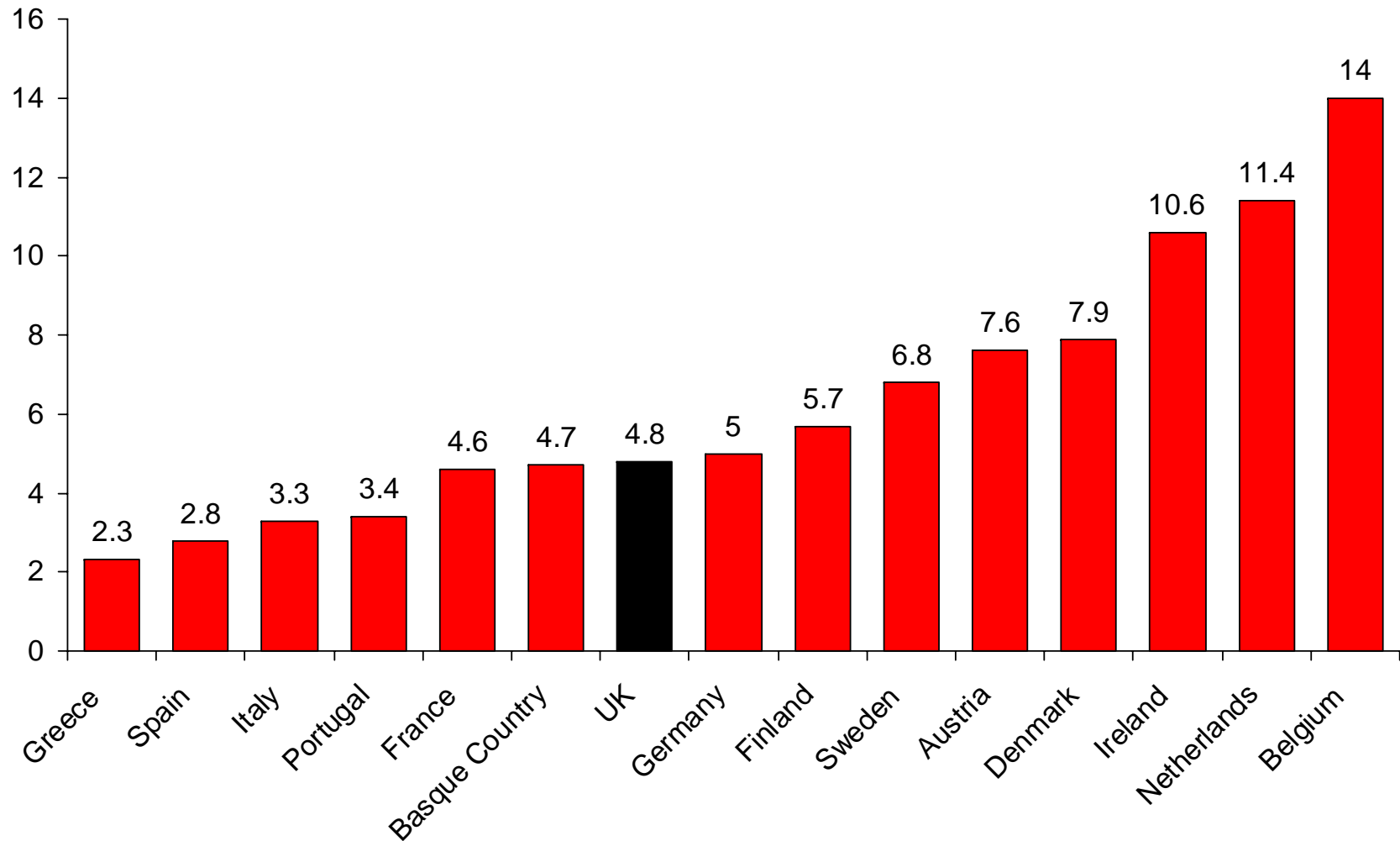
○ = \$15 billion export volume in 2000

Source: UNCTAD Trade Data. Author's analysis.

Export Performance

European Countries and Regions

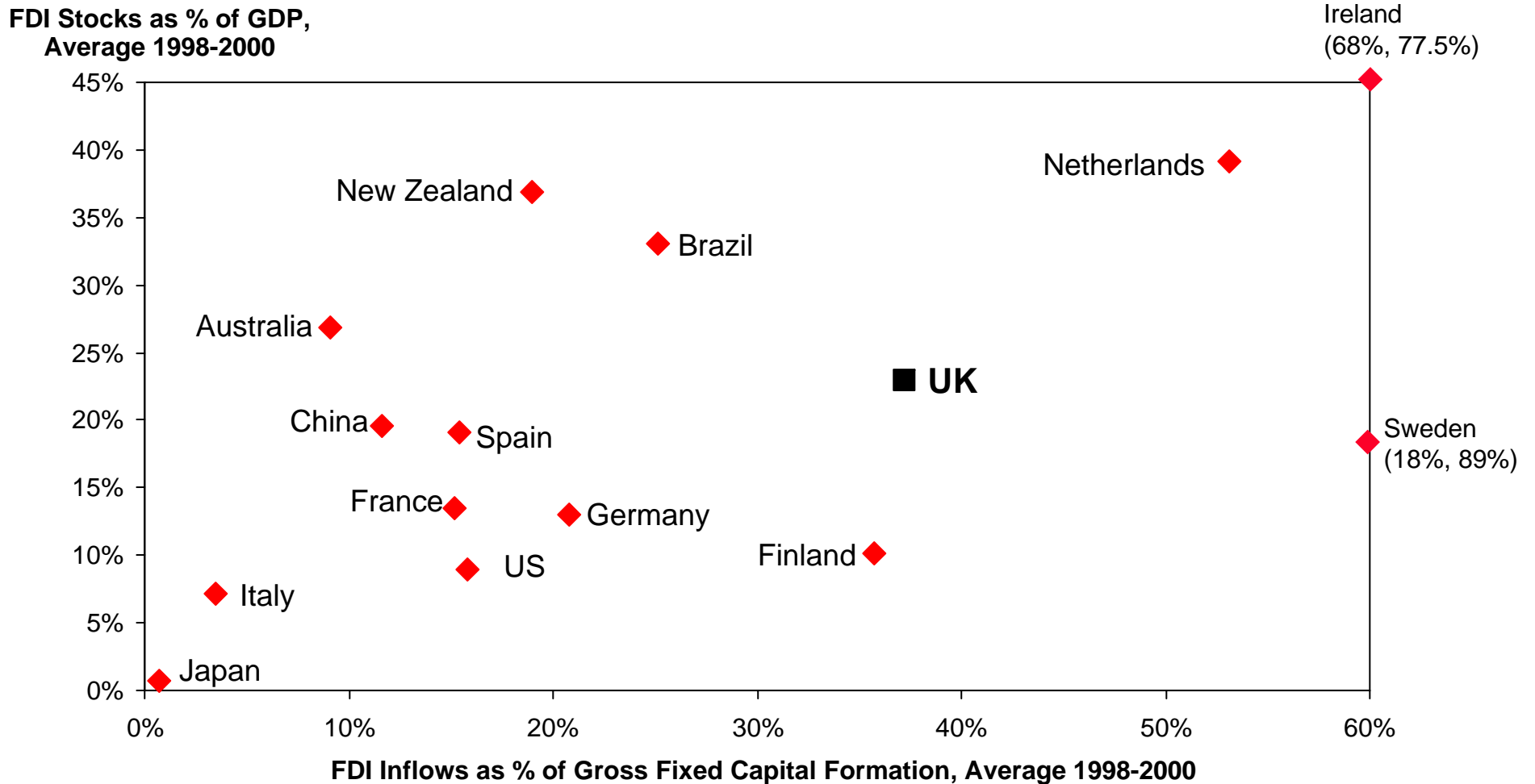
Exports per capita,
in 1,000 ECU, 1998



Source: Basque Statistical Office

Comparative Inward Foreign Investment

Selected Advanced Economies

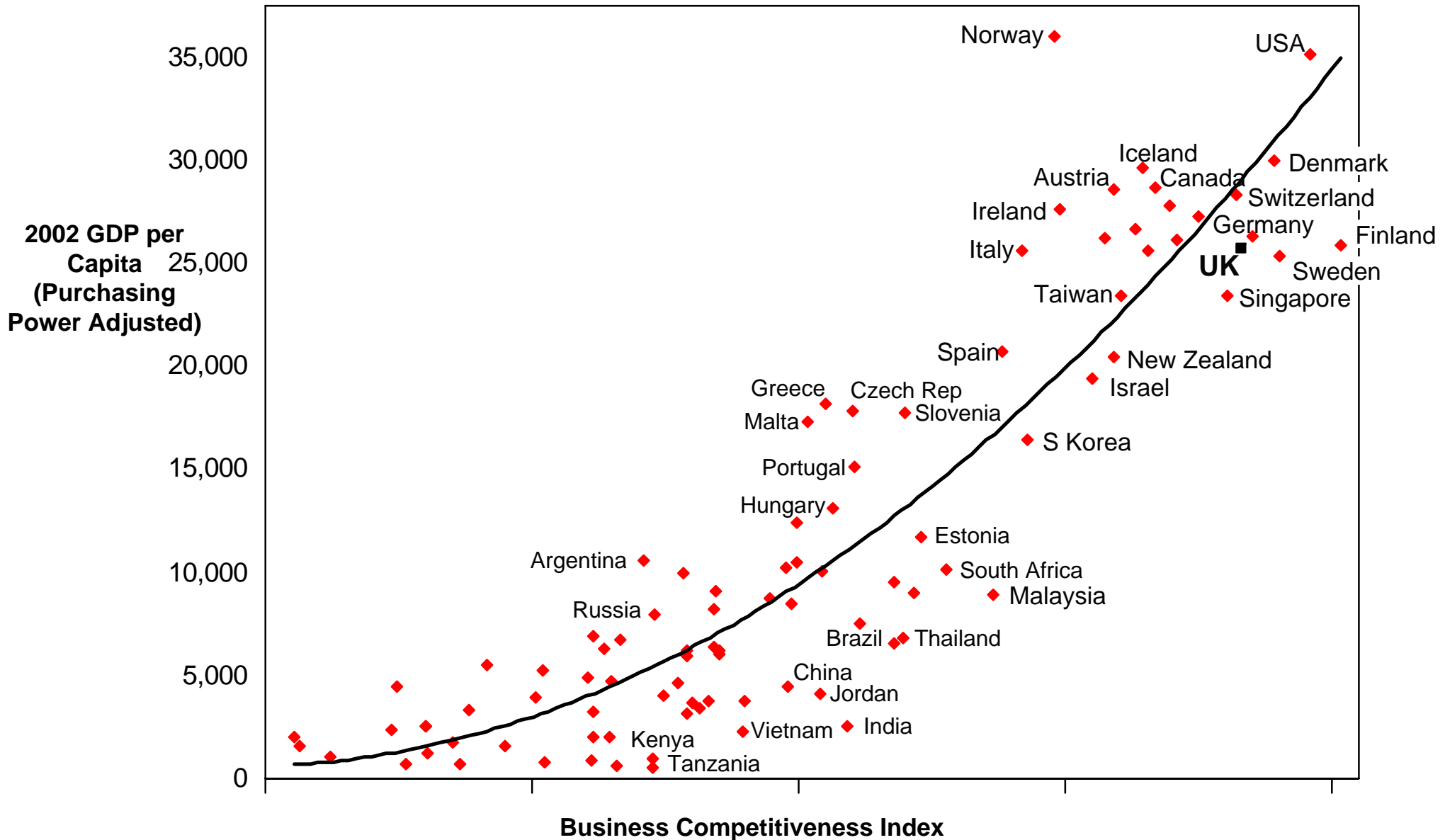


Note: Germany's FDI inflows in this period were exceptionally high due to the Vodafone-Mannesmann takeover in 2000

Source: World Investment Report 2002

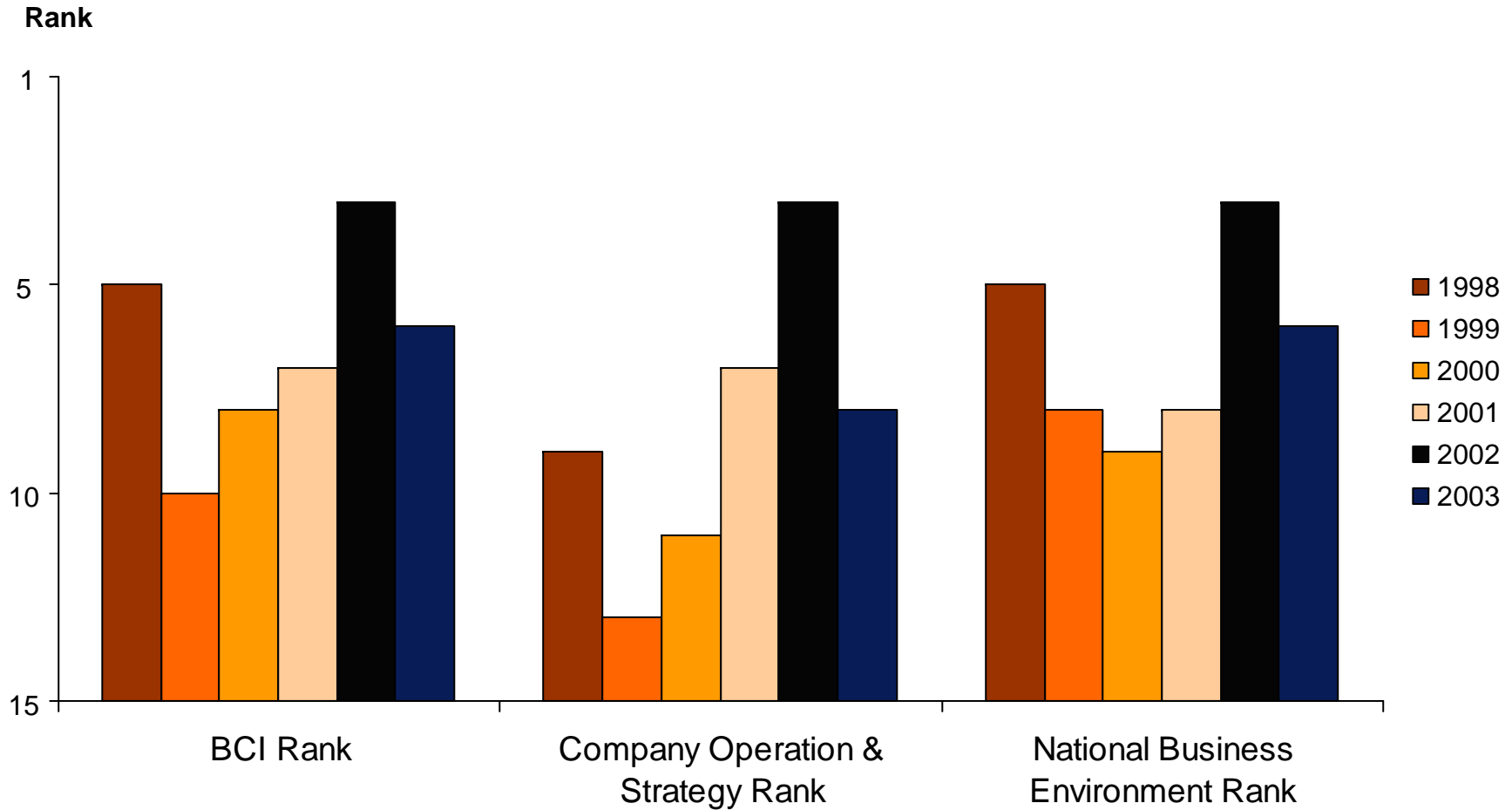
Global Competitiveness Report 2003

The Relationship Between Business Competitiveness and GDP Per Capita



Current Competitiveness Index

UK Position over Time

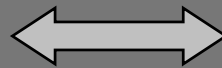


Determinants of Productivity and Productivity Growth

**Macroeconomic, Political, Legal, and Social
Context for Development**

Microeconomic Foundations of Development

**Sophistication
of Company
Operations and
Strategy**



**Quality of the
Microeconomic
Business
Environment**

Company Operations and Strategy

UK's Relative Position 2003

Competitive Advantages Relative to GDP per Capita

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

Extent of Incentive Compensation	2	
Reliance on Professional Management	2	↑
Extent of Marketing	3	
Breadth of International Markets	4	↑
Extent of Branding	5	↑
Nature of Competitive Advantage	7	↑

Competitive Disadvantages Relative to GDP per Capita

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

Extent of Regional Sales	22	↓
Degree of Customer Orientation	14	
Production Process Sophistication	13	↑
Company Spending on R&D	11	
Extent of Staff Training	11	↑
Willingness to Delegate Authority	9	
Control of International Distribution	9	↓

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

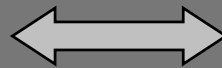
Source: Global Competitiveness Report 2003

Determinants of Productivity and Productivity Growth

**Macroeconomic, Political, Legal, and Social
Context for Development**

Microeconomic Foundations of Development

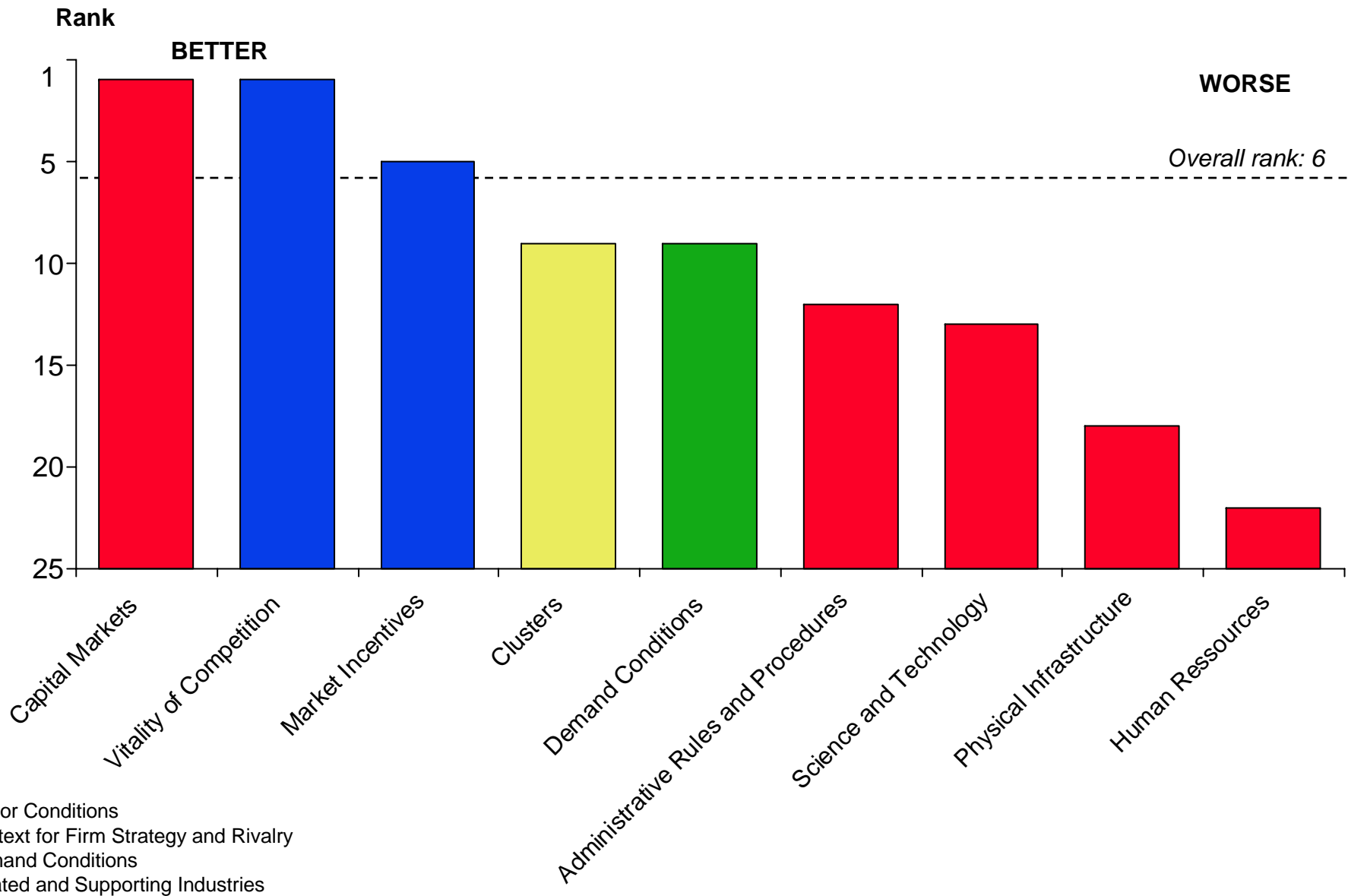
**Sophistication
of Company
Operations and
Strategy**



**Quality of the
Microeconomic
Business
Environment**

National Business Environment Overview

UK's Relative Strengths and Weaknesses



Source: Global Competitiveness Report 2003

UK Competitiveness Smith Institute 03-16-04 CK

Factor (Input) 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

Financial Market Sophistication	1	
Venture Capital Availability	2	↑
Ease of Access to Loans	2	
Quality of Scientific Research Institutions	5	
Adequacy of Public Sector Legal Recourse	5	↑
Quality of Management Schools	5	↑

Competitive Disadvantages Relative to GDP per Capita

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

Extent of Bureaucratic Red Tape	44	↓
Quality of Math and Science Education	42	
Availability of Scientists and Engineers	36	
Quality of Public Schools	34	↓
Railroad Infrastructure Quality	29	
Overall Infrastructure Quality	25	↓
Quality of Educational System	25	
Port Infrastructure Quality	24	↓
Telephone/Fax Infrastructure Quality	21	↓
Local Equity Market Access	18	↓
Internet users per 100 people (2002)	18	
Patents per million Population (2002)	17	
Police Protection of Businesses	17	↑
Administrative Burden for Start-Ups	15	↓

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

Source: Global Competitiveness Report 2003

Factor (Input) Conditions Continued

UK's Relative Position

Competitive Advantages Relative to GDP per Capita

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

Competitive Disadvantages Relative to GDP per Capita

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

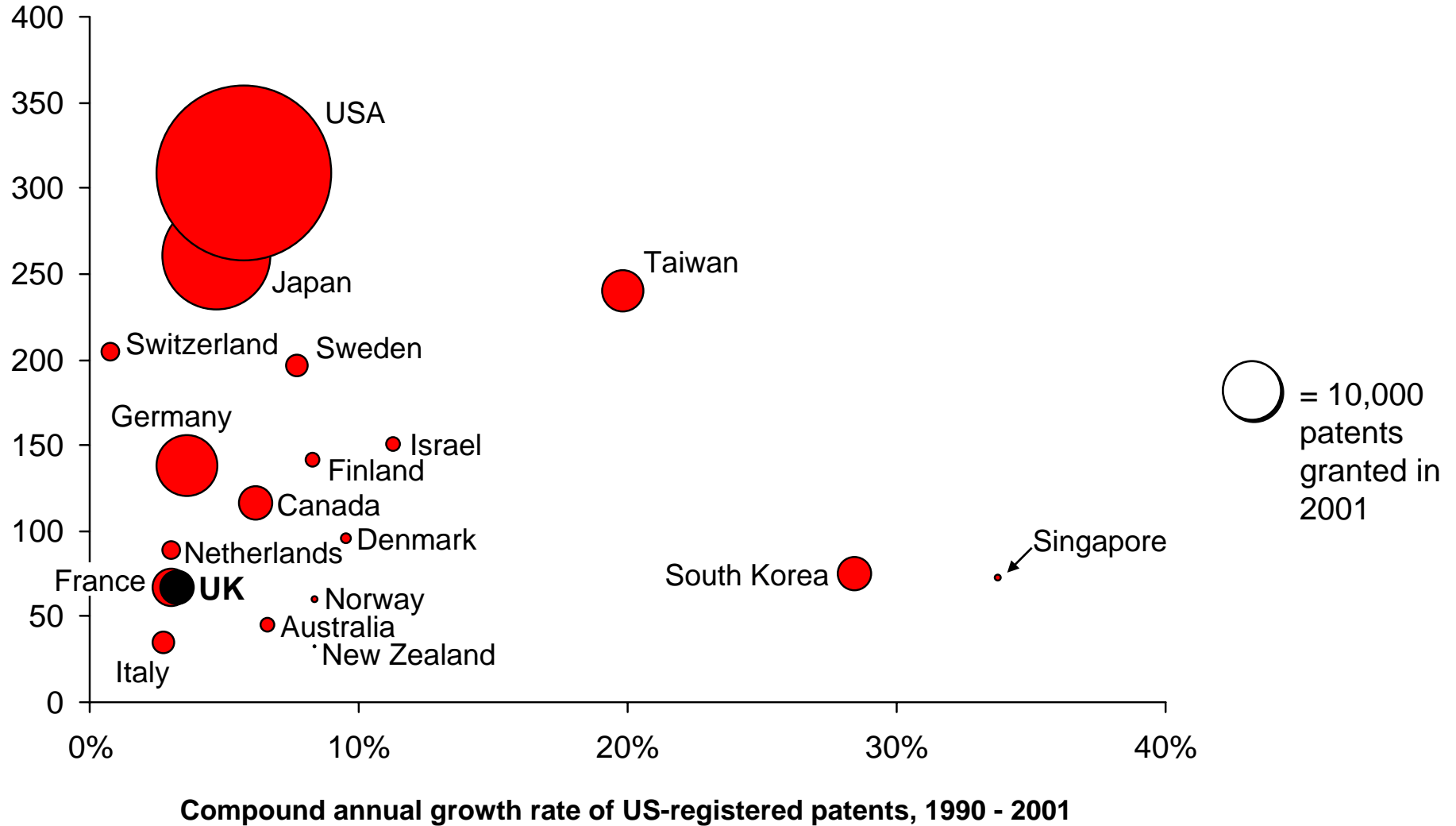
Quality of Electricity Supply	14	
Judicial Independence	10	
Air Transport Infrastructure Quality	10	↑
Cell phones per 100 people (2002)	9	
University/Industry Research Collaboration	8	↑

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

Source: Global Competitiveness Report 2003

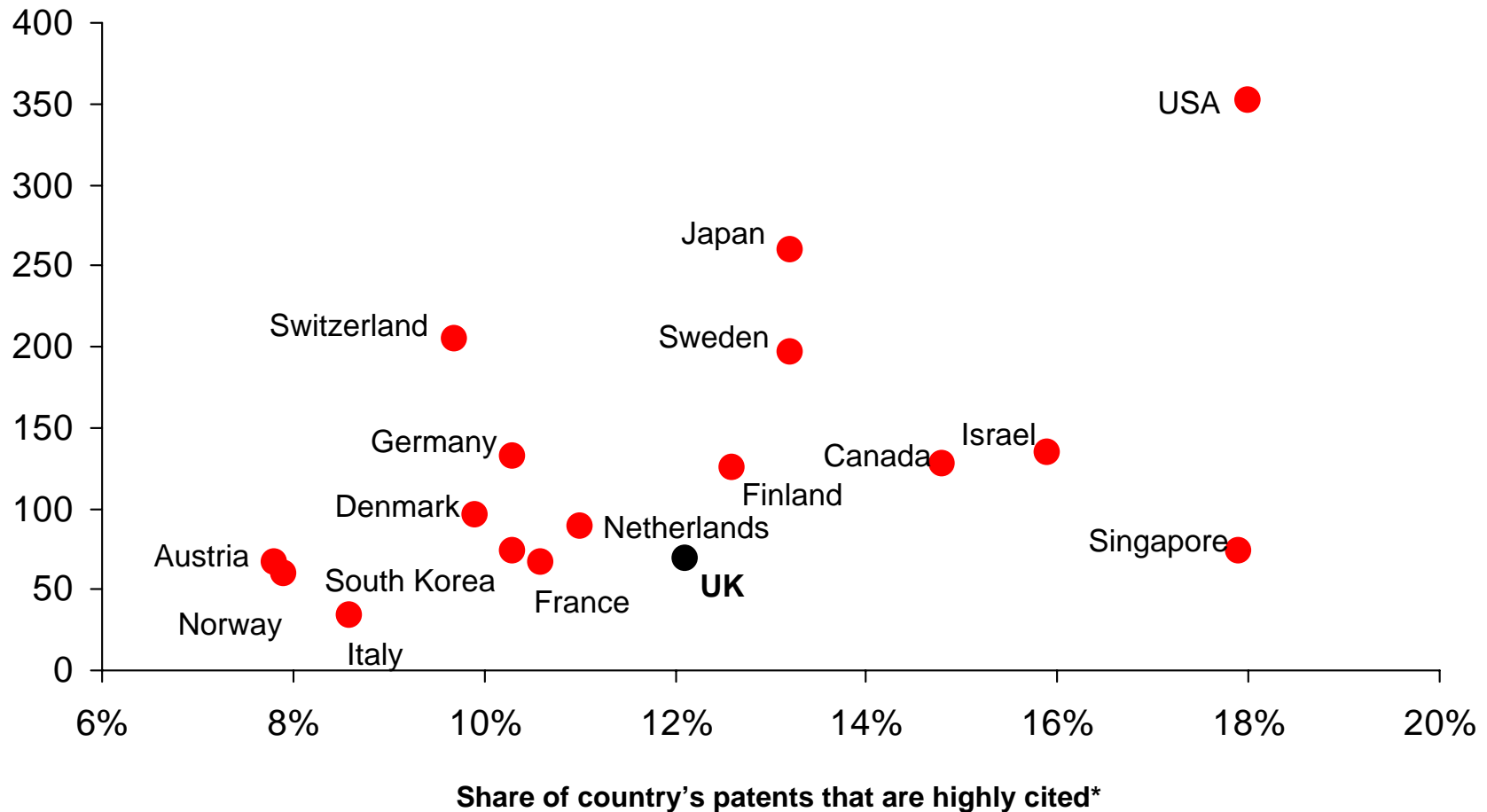
International Patenting Output

Annual U.S. patents
per 1 million
population, 2001



Innovation Quantity and Quality Selected Countries

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



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

	Organization	Patents Issued from 1997 to 2001
1	ZENECA LIMITED	398
2	BRITISH TELECOMMUNICATION, PLC	335
3	INTERNATIONAL BUSINESS MACHINES CORPORATION	280
4	U.S. PHILIPS CORPORATION	257
5	SMITHKLINE BEECHAM PLC	244
6	EASTMAN KODAK COMPANY	206
7	LUCAS INDUSTRIES PUBLIC LTD. COMPANY	204
8	SECRETARY OF STATE FOR DEFENCE IN HER BRITANNIC MAJESTY'S GOVERNMENT OF THE UNITED KINGDOM	183
9	ROLLS-ROYCE PLC	174
10	MERCK SHARP & DOHME LIMITED	167
11	IMPERIAL CHEMICAL INDUSTRIES PLC	160
12	PROCTER + GAMBLE COMPANY	154
12	NORTHERN TELECOM LIMITED	154
14	NORTEL NETWORKS CORPORATION	135
15	THE BOC GROUP PLC	131
16	SHARP KABUSHIKI KAISHA (SHARP CORPORATION)	117
17	PFIZER INC.	115
18	BRITISH TECHNOLOGY GROUP LIMITED	109
19	HEWLETT-PACKARD COMPANY	103
19	BP CHEMICALS LIMITED	103
21	NOKIA MOBILE PHONES LTD.	92
22	SONY CORPORATION	91
23	NCR CORPORATION	89
24	BRITISH NUCLEAR FUELS PLC	88
25	GLAXO GROUP LIMITED	83

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

Source: US Patent and Trademark Office (www.uspto.gov). Author's analysis.

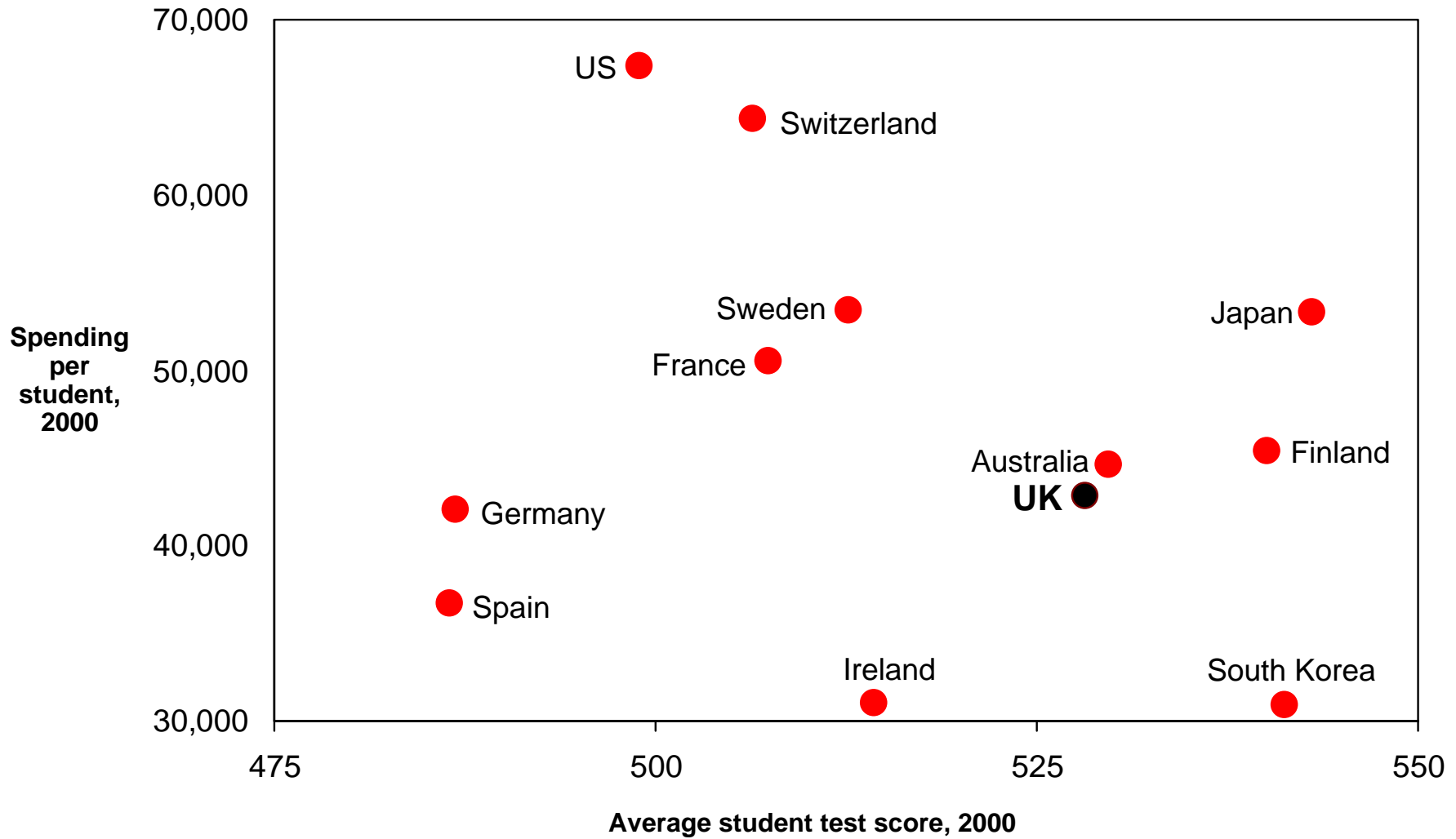
Innovative Capacity Index

2003 Rankings

Rank	Scientists & Engineers Index	Innovation Policy Index	Cluster Environment Index	Linkages Index	Operations and Strategy Index
1	Iceland	Singapore	Japan	USA	USA
2	Japan	Luxembourg	USA	Finland	Switzerland
3	Finland	Taiwan	Finland	United Kingdom	United Kingdom
4	USA	Finland	Germany	Israel	Denmark
5	Sweden	USA	Italy	Netherlands	Japan
6	Singapore	Australia	Taiwan	Sweden	Singapore
7	Norway	Canada	Denmark	Canada	Finland
8	Switzerland	Israel	France	Denmark	Germany
9	Russian Fed.	France	Canada	France	Sweden
10	Denmark	United Kingdom	Switzerland	Australia	Hong Kong
11	Australia	Germany	Singapore	Germany	France
12	Germany	Netherlands	United Kingdom	Switzerland	Israel
13	Canada	Belgium	Austria	Japan	Taiwan
14	Belgium	Austria	Hong Kong	Singapore	Luxembourg
15	France	Ireland	Sweden	Belgium	Netherlands
16	Taiwan	Japan	Korea	Ireland	Austria
17	United Kingdom	Malaysia	Netherlands	New Zealand	Belgium
18	Netherlands	Denmark	Malaysia	Korea	Iceland
19	Austria	Sweden	Australia	Italy	Canada
20	Korea	Tunisia	New Zealand	Norway	Ireland
21	New Zealand	Spain	South Africa	Taiwan	Italy
22	Ireland	Portugal	Luxembourg	Austria	Korea
23	Slovenia	Iceland	Ireland	Iceland	Australia

Source: Global Competitiveness Report 2003, forthcoming

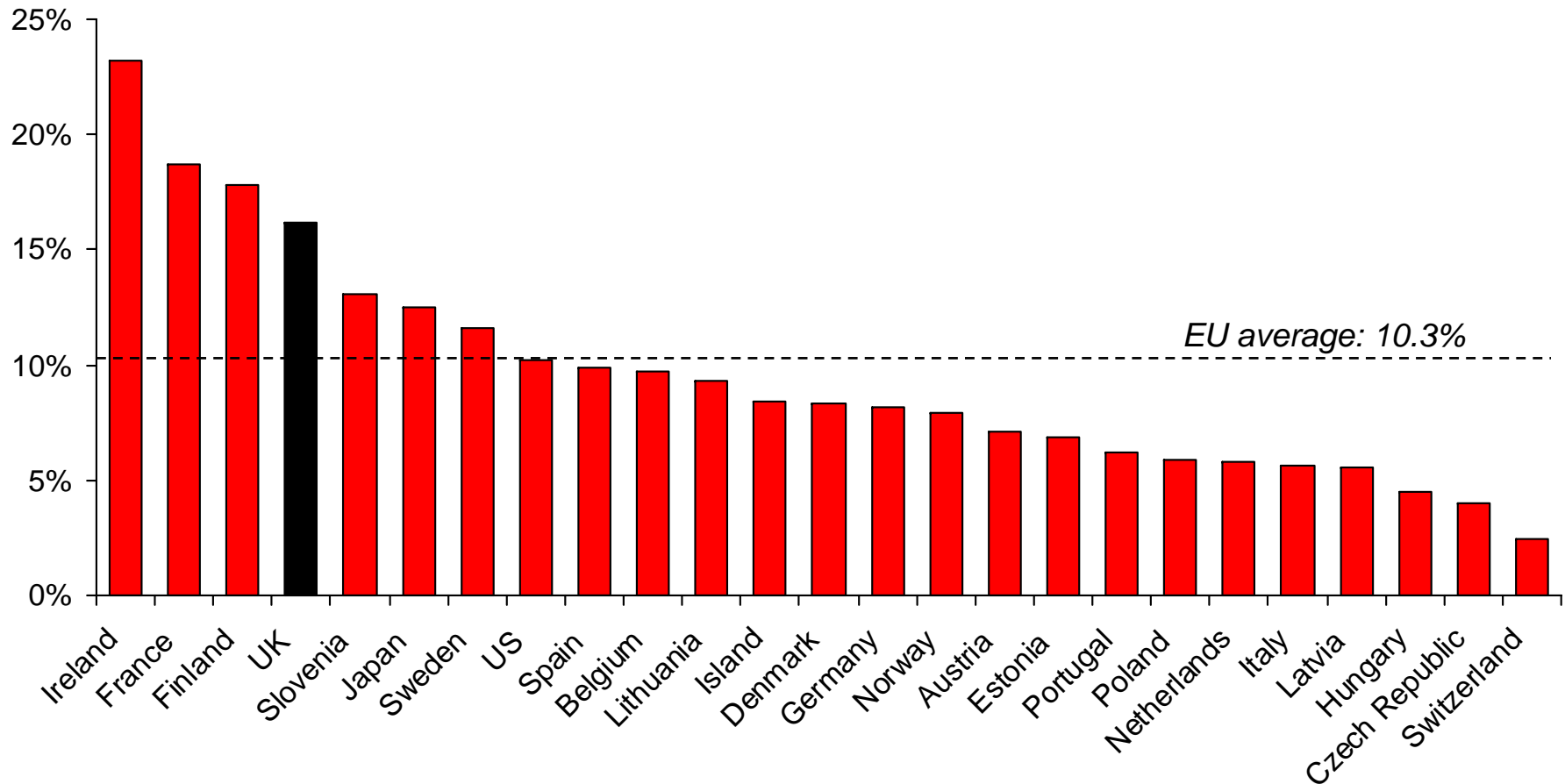
Educational Spending and Performance



Education in Science & Technology

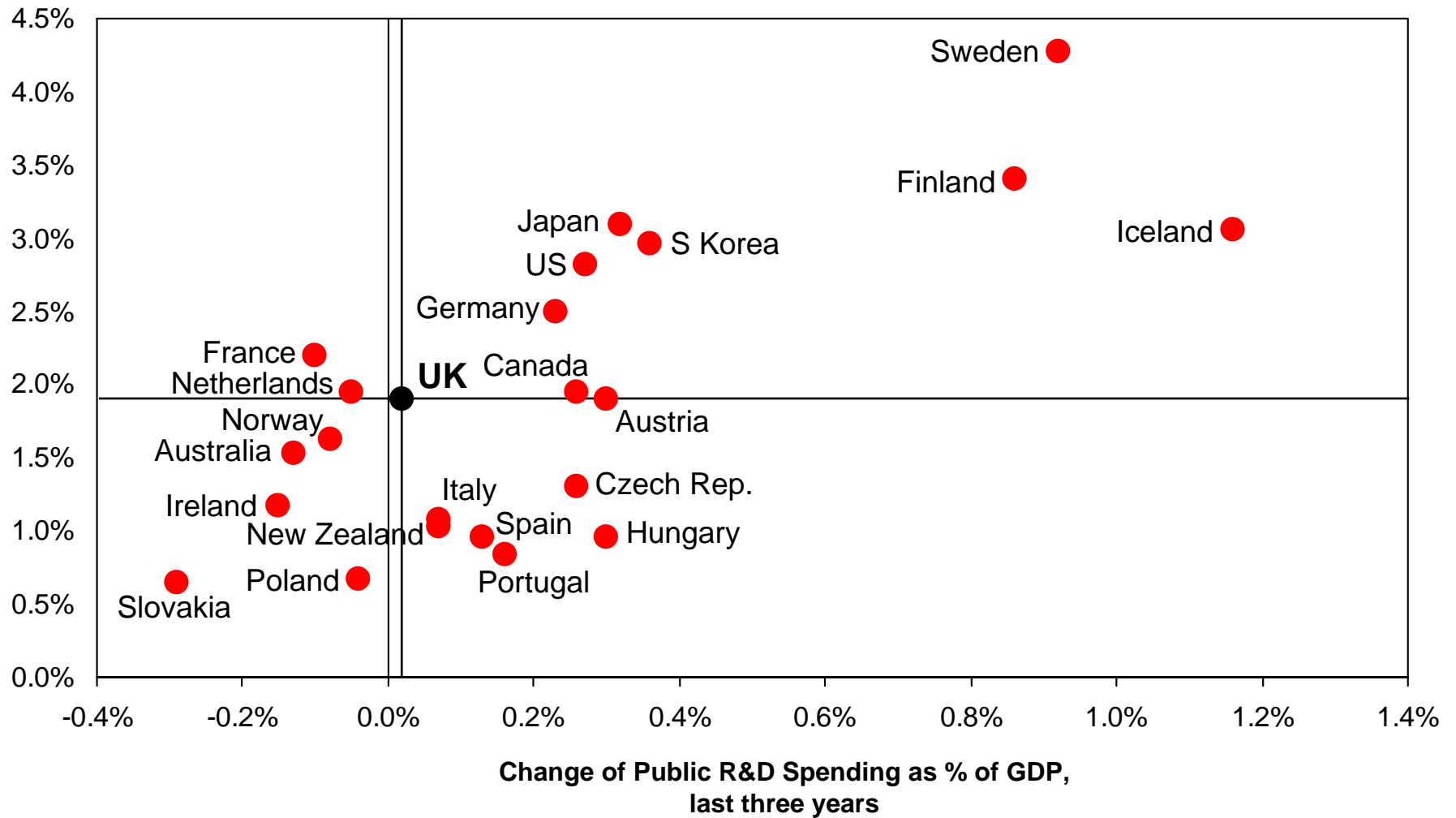
Selected Countries

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



Total R&D Spending Selected Countries

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



Context for Firm Strategy and Rivalry

UK's Relative Position

Competitive Advantages Relative to GDP per Capita

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

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

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

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	↓

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 of Demanding 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

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

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

Competitive Disadvantages Relative to GDP per Capita

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

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