

European Competitiveness in 2004

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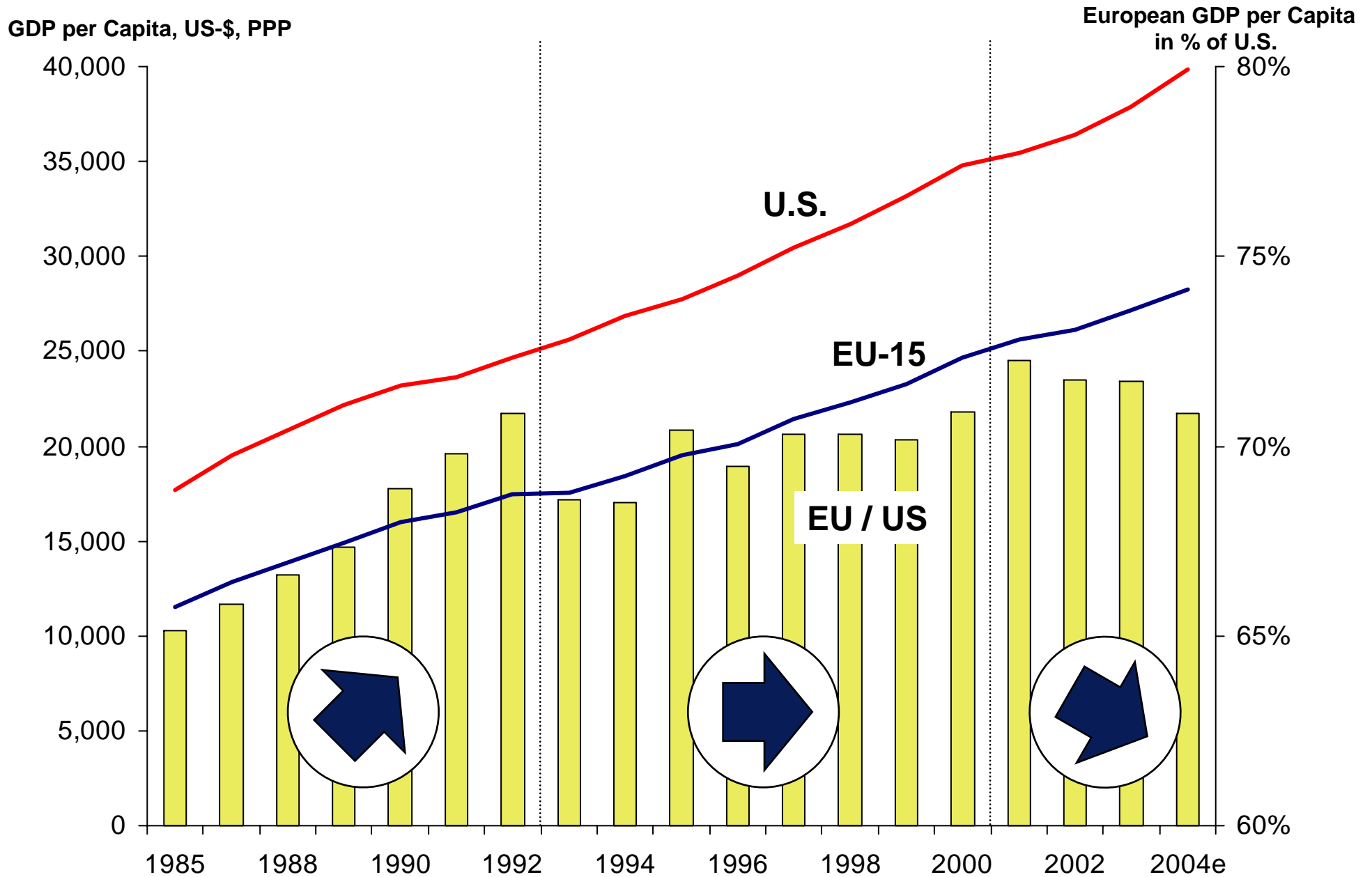
This presentation draws on ideas from Professor Porter's articles and books, in particular, The Competitive Advantage of Nations (The Free Press, 1990), "Building the Microeconomic Foundations of Competitiveness," in The Global Competitiveness Report 2003-2004, (Oxford University Press, 2004), "Clusters and the New Competitive Agenda for Companies and Governments" in On Competition (Harvard Business School Press, 1998), and ongoing research on clusters and competitiveness. 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 Michael E. Porter.

Further information on Professor Porter's work and the Institute for Strategy and Competitiveness is available at www.isc.hbs.edu

European Competitiveness 2004

- The economic climate is **weak** in most European countries, especially the large continental economies
- The prosperity catch-up to the United States has **stalled** and is now in reverse
- Europe is making **little if any progress** on the competitiveness targets set by the European Union (Lisbon-Agenda)
- The political discussion in Europe has **moved away** from a consensus focus on competitiveness
 - Other topics demand attention (Eastern accession, constitution, new commission, Stability and Growth Pact)
 - France and Germany toying with a return to Industrial Policy (Aventis, Alstom, ...)

European Prosperity Over Time



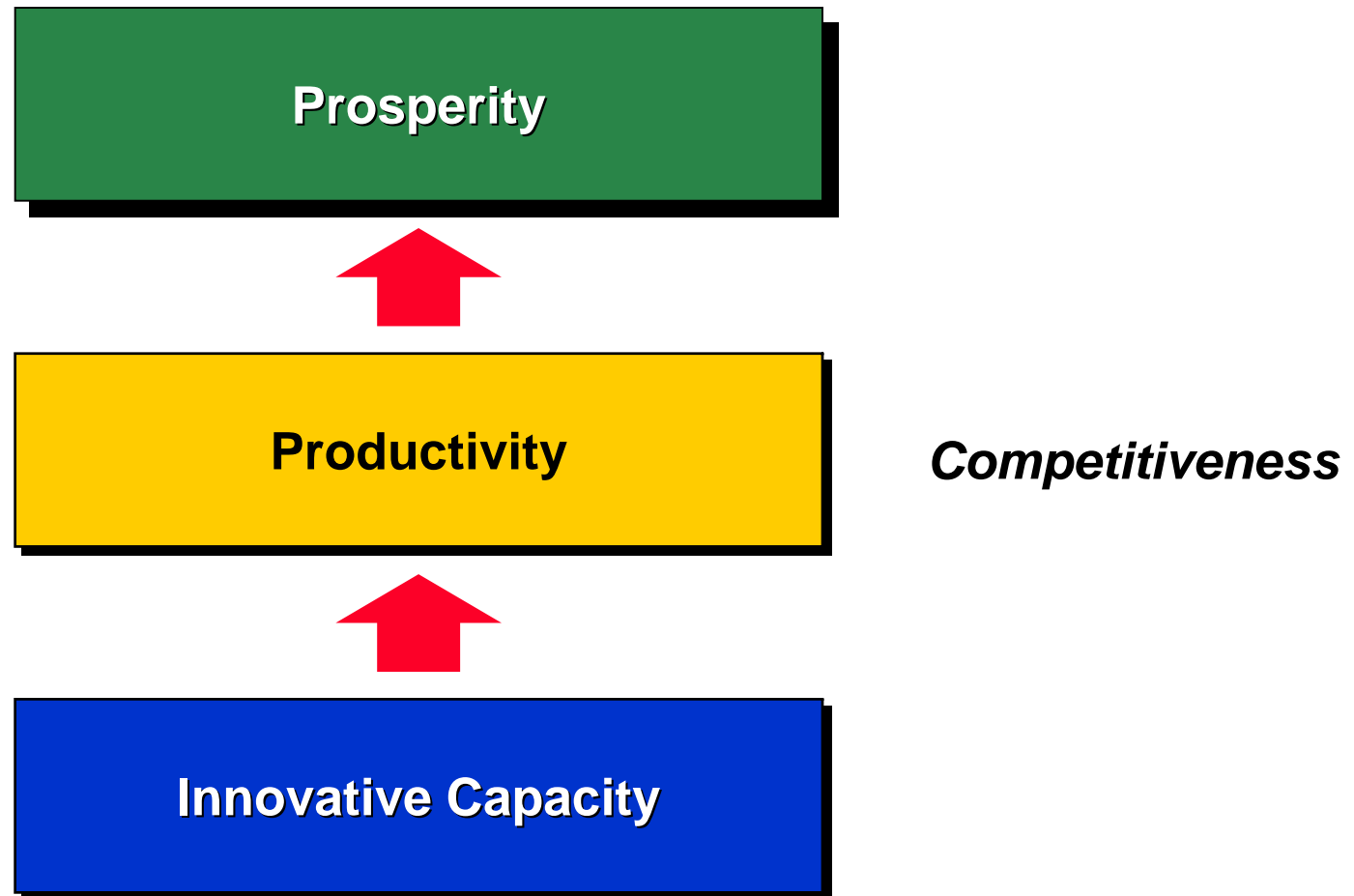
Source: EIU (2004)
European Competitiveness CROATIA 06-16-04 CK.ppt

European Competitiveness

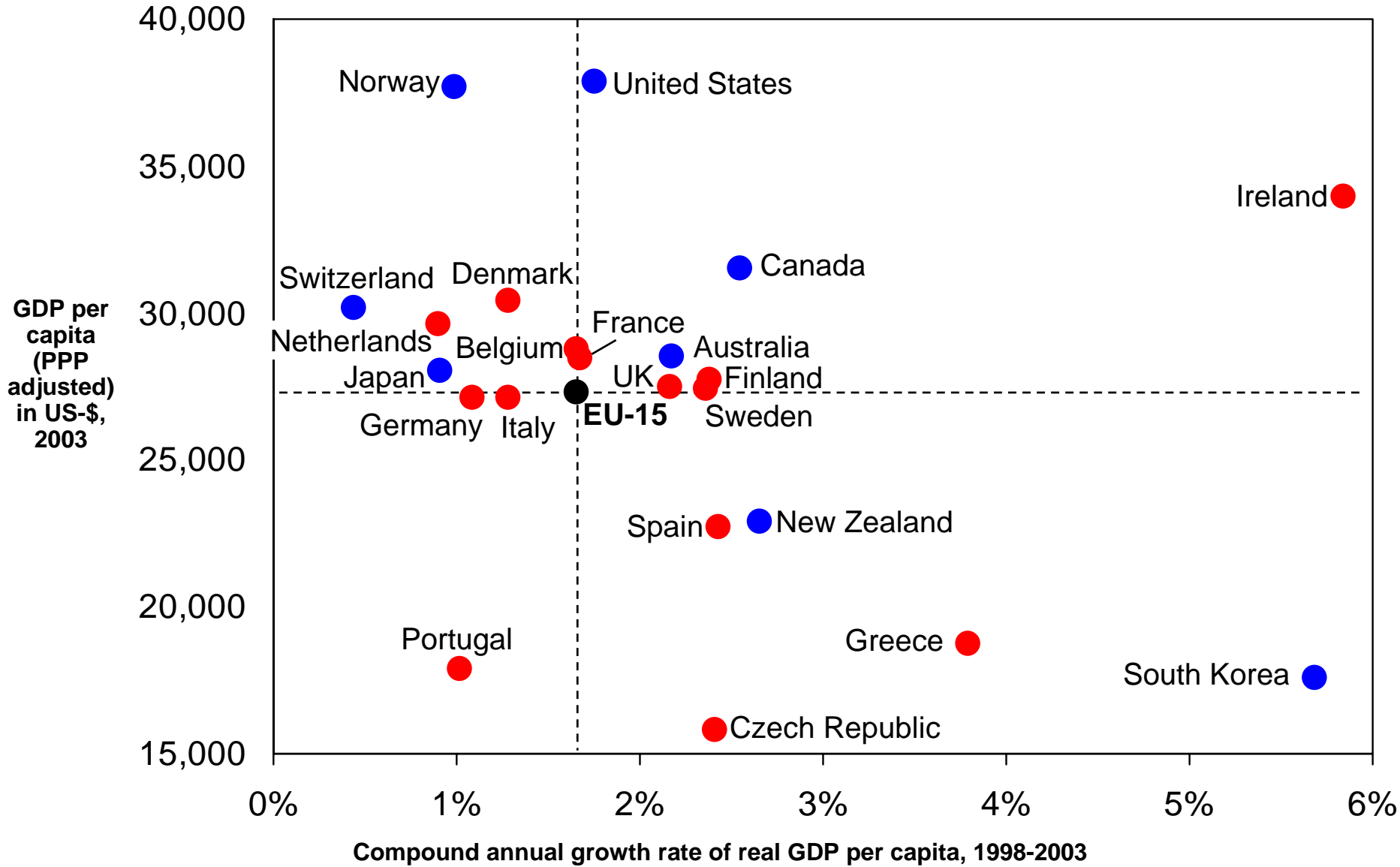
Key Questions

- How does the European Union **affect** competitiveness in Europe?
- What are the areas to **focus** on for the European Union to upgrade European competitiveness?
- What are the **implications** for Croatia?

Measures of Competitiveness

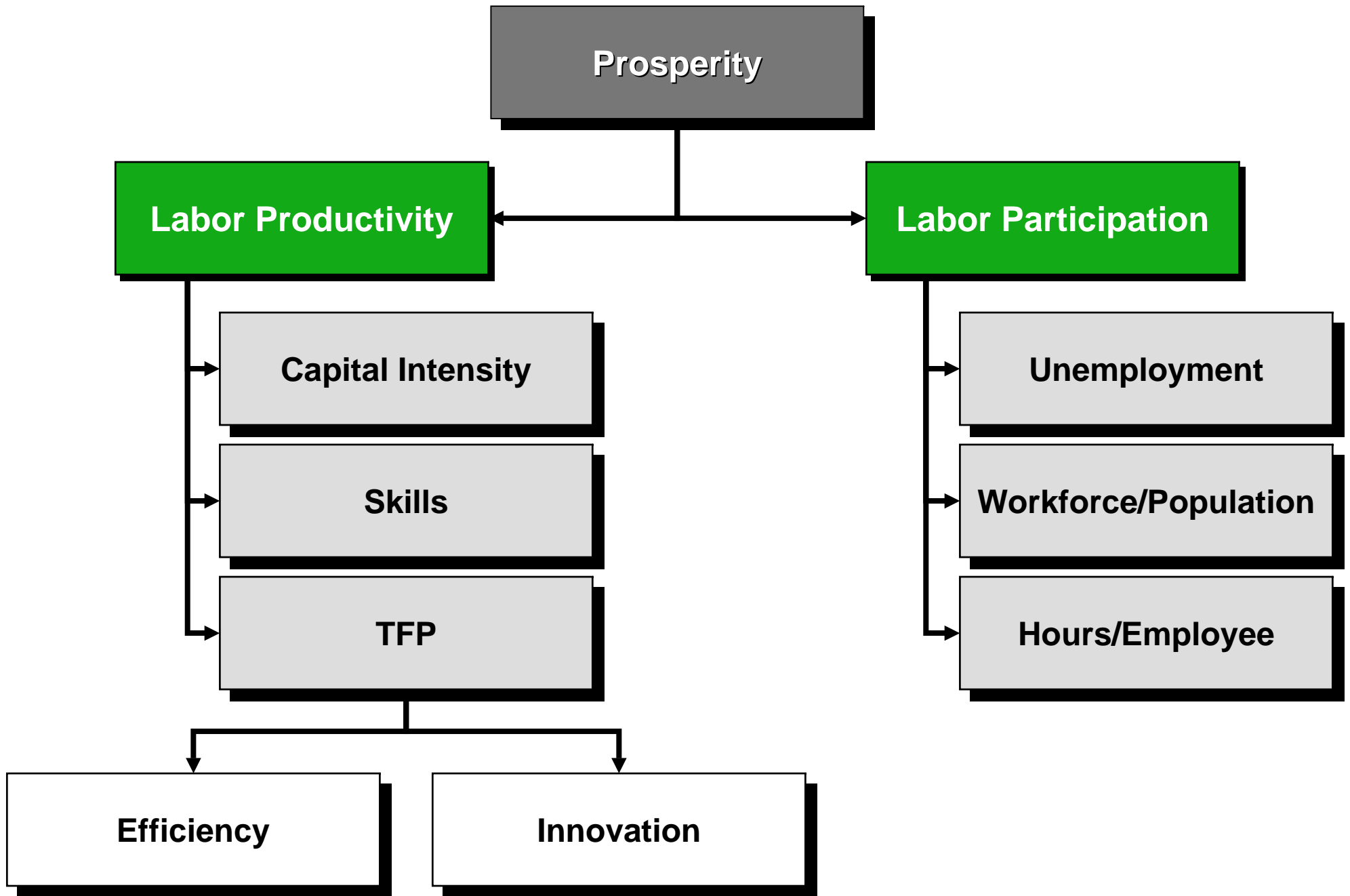


Prosperity



Source: EIU (2004)

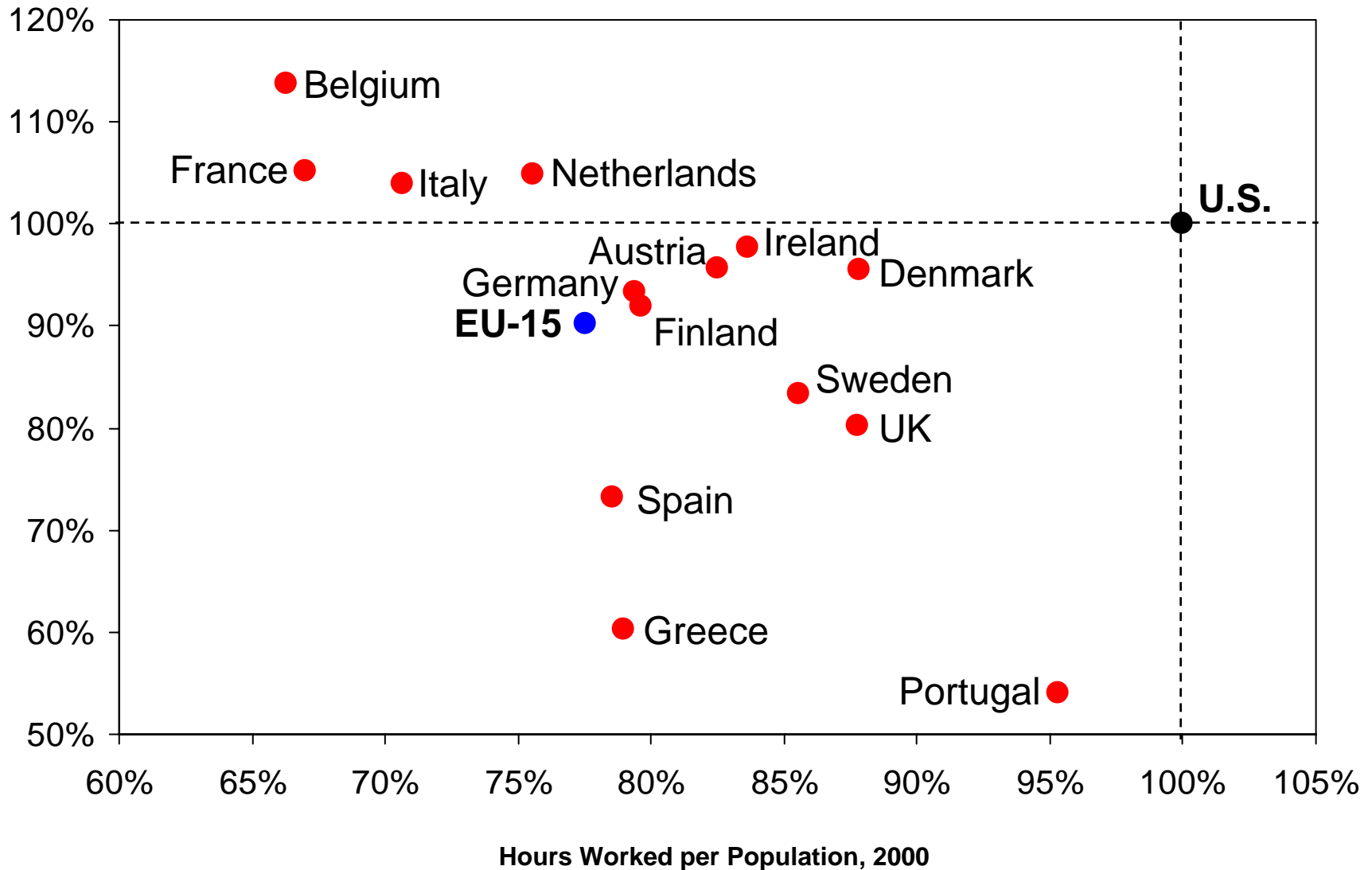
Decomposing Prosperity



Decomposing Prosperity

The EU-U.S. Gap

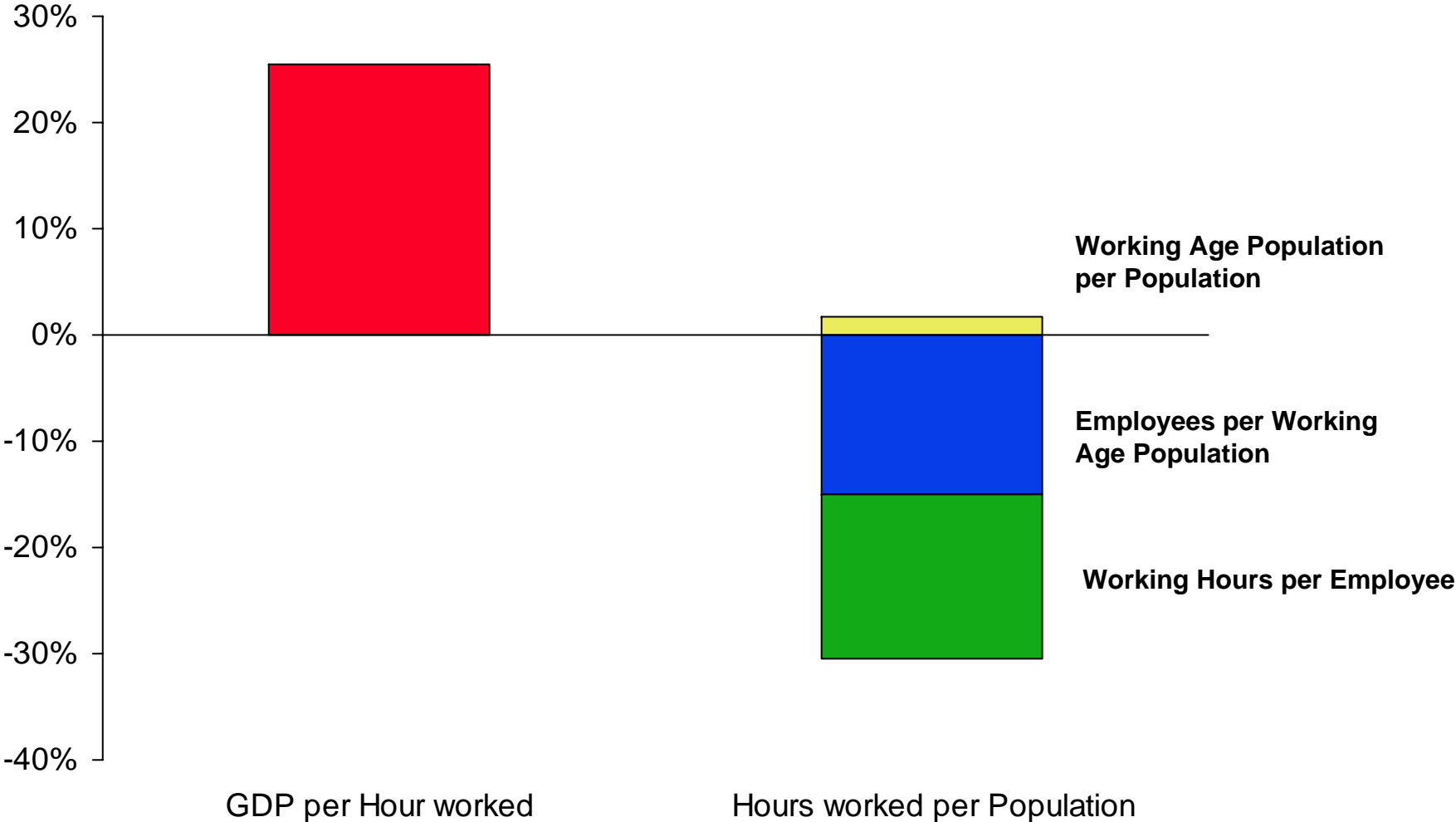
GDP per Hour Worked, 2000



Decomposing Prosperity

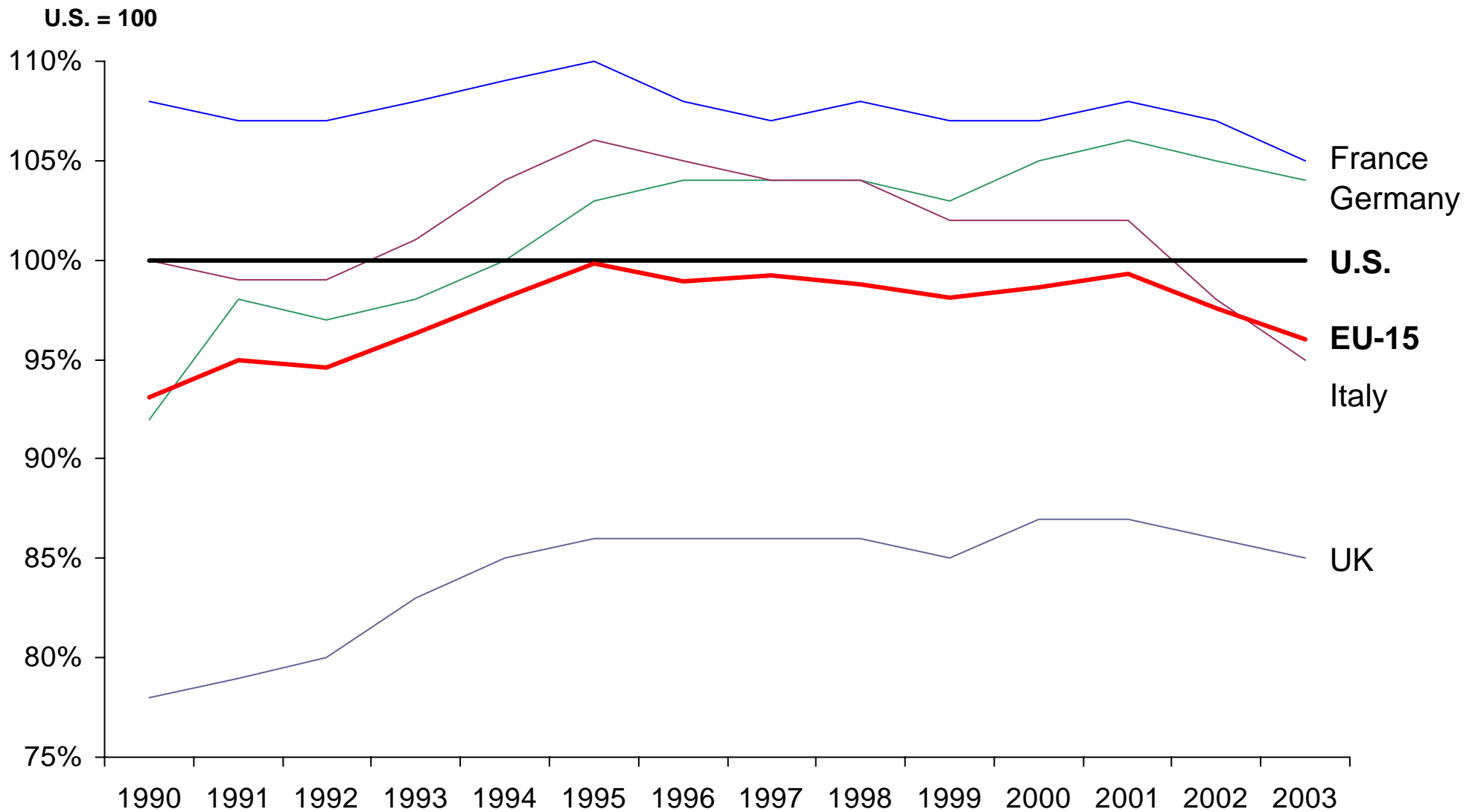
The EU-U.S. Gap between 1970 and 2000

Change relative to the U.S.,
1970 - 2000



Labor Productivity Over Time

GDP per Hour Worked



Determinants of Productivity and Productivity Growth

Macroeconomic, Political, Legal, and Social
Context for Development

Microeconomic Foundations of Development

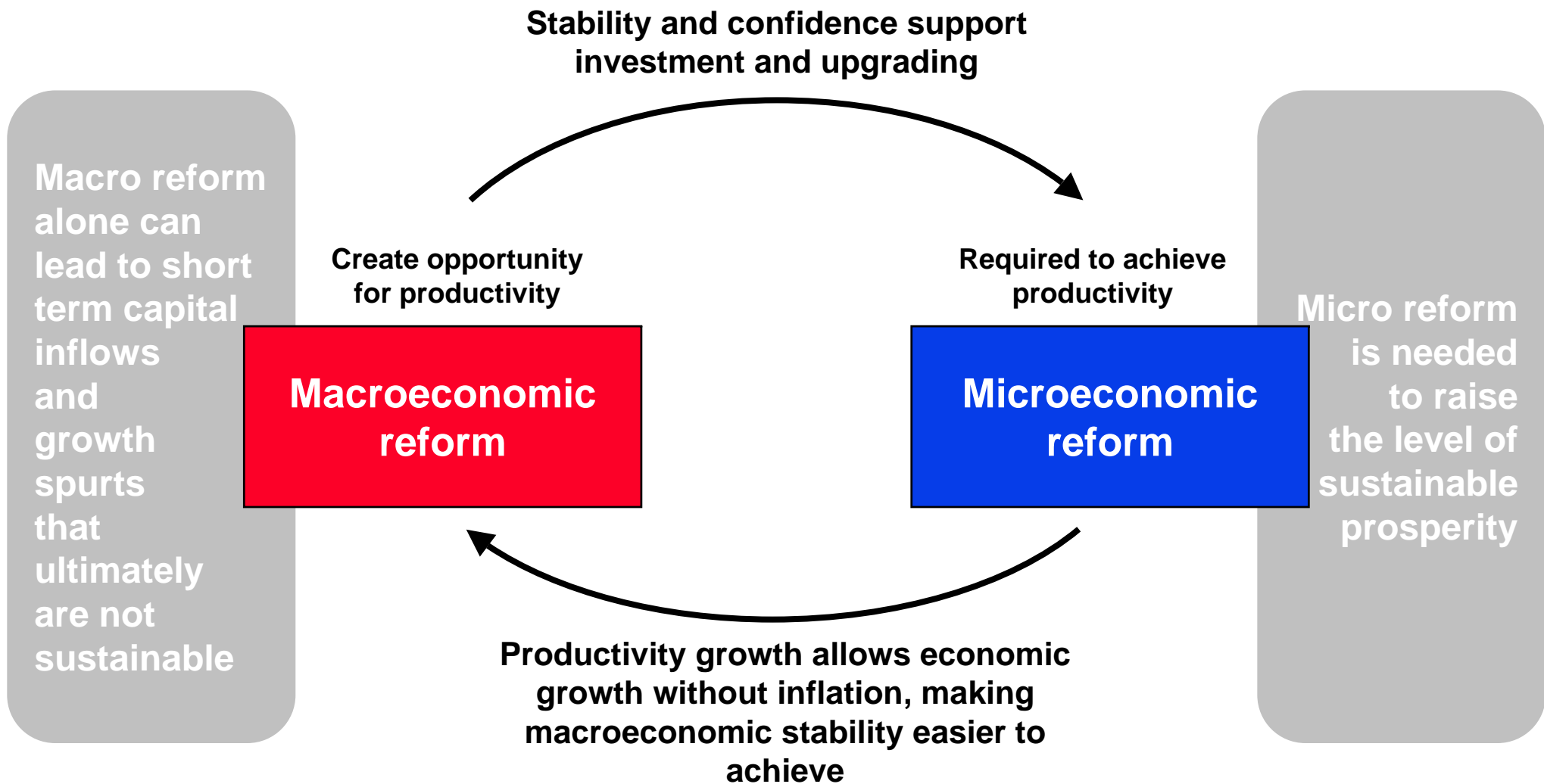
Sophistication
of Company
Operations and
Strategy



Quality of the
Microeconomic
Business
Environment

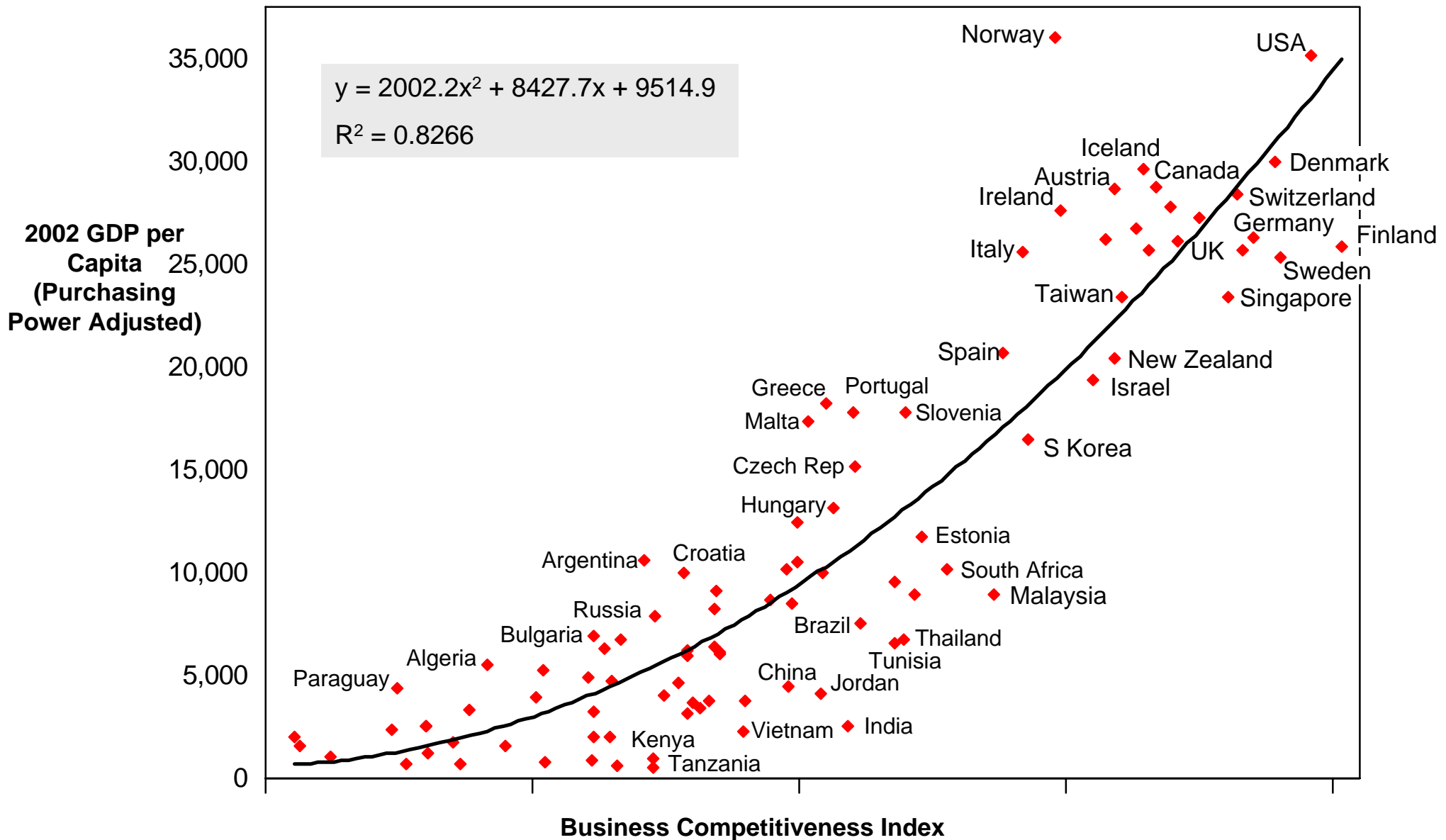
- A sound macroeconomic, political, legal, and social context creates the potential for competitiveness, **but is not sufficient**
- Competitiveness ultimately depends on improving the **microeconomic capability** of the economy and the **sophistication of local companies and local competition**

Integration of Macro- and Microeconomic Reforms

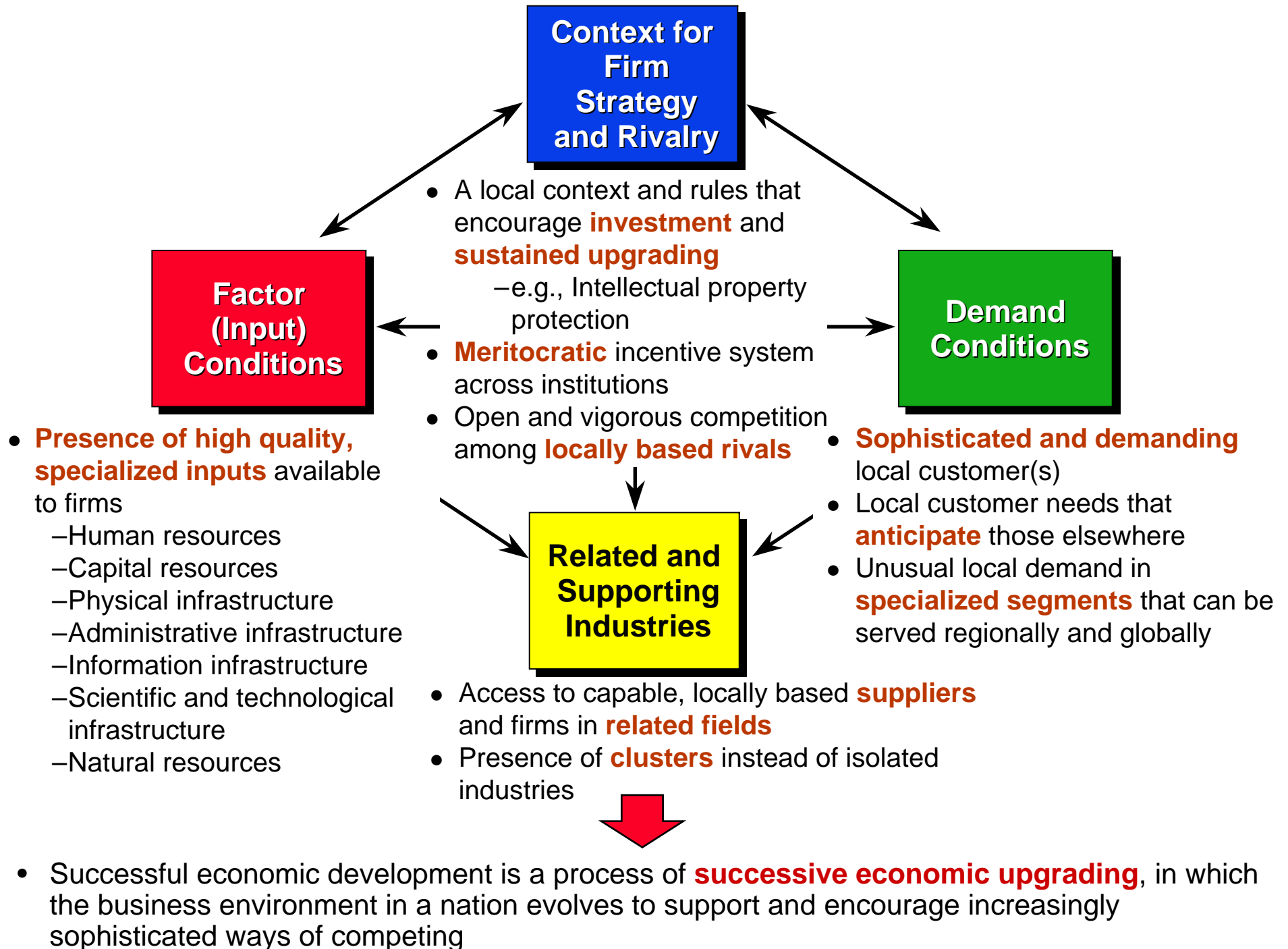


Business Competitiveness Index 2003

Relationship with GDP Per Capita

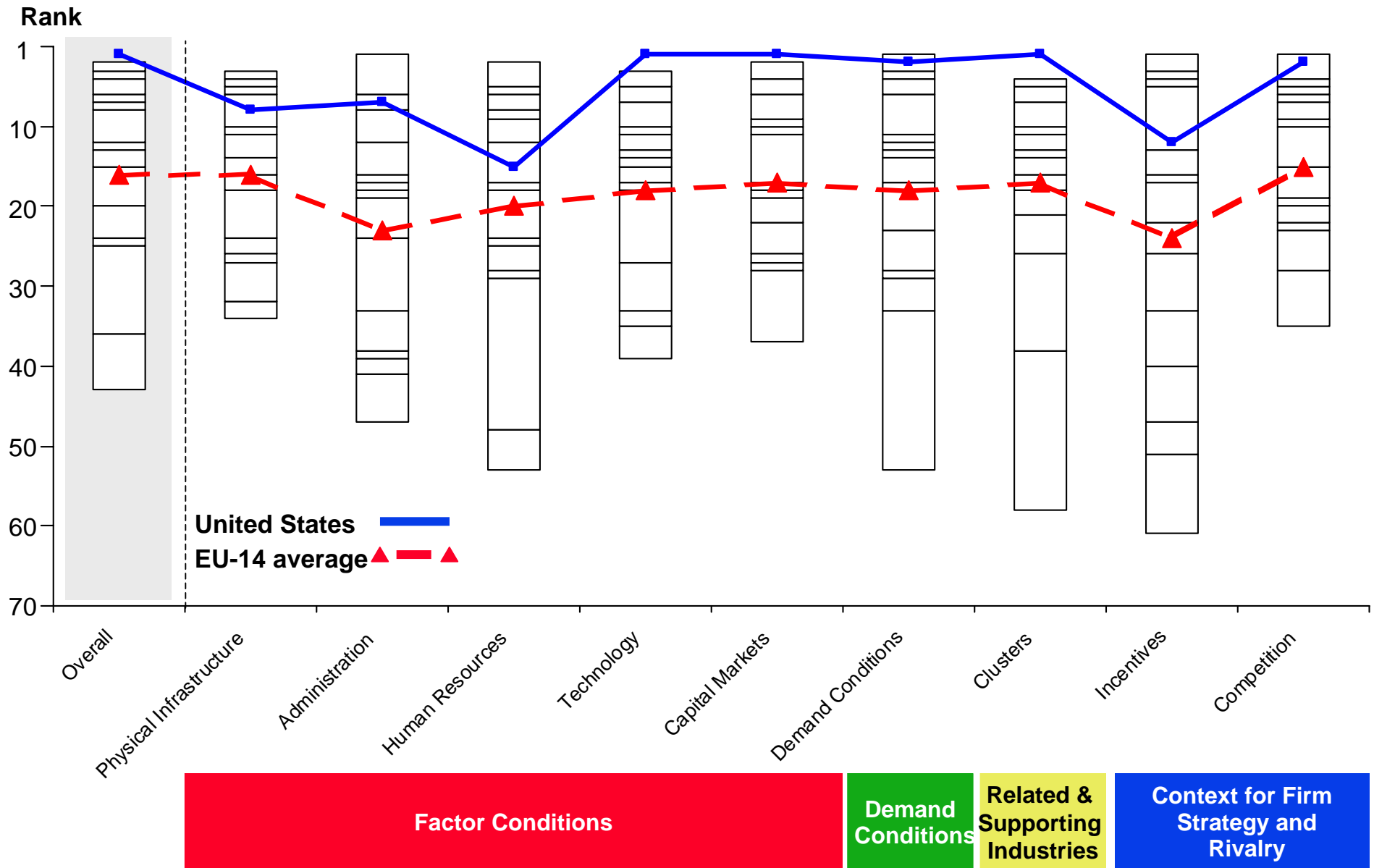


Productivity and the Business Environment



Business Environments in Europe and the U.S.

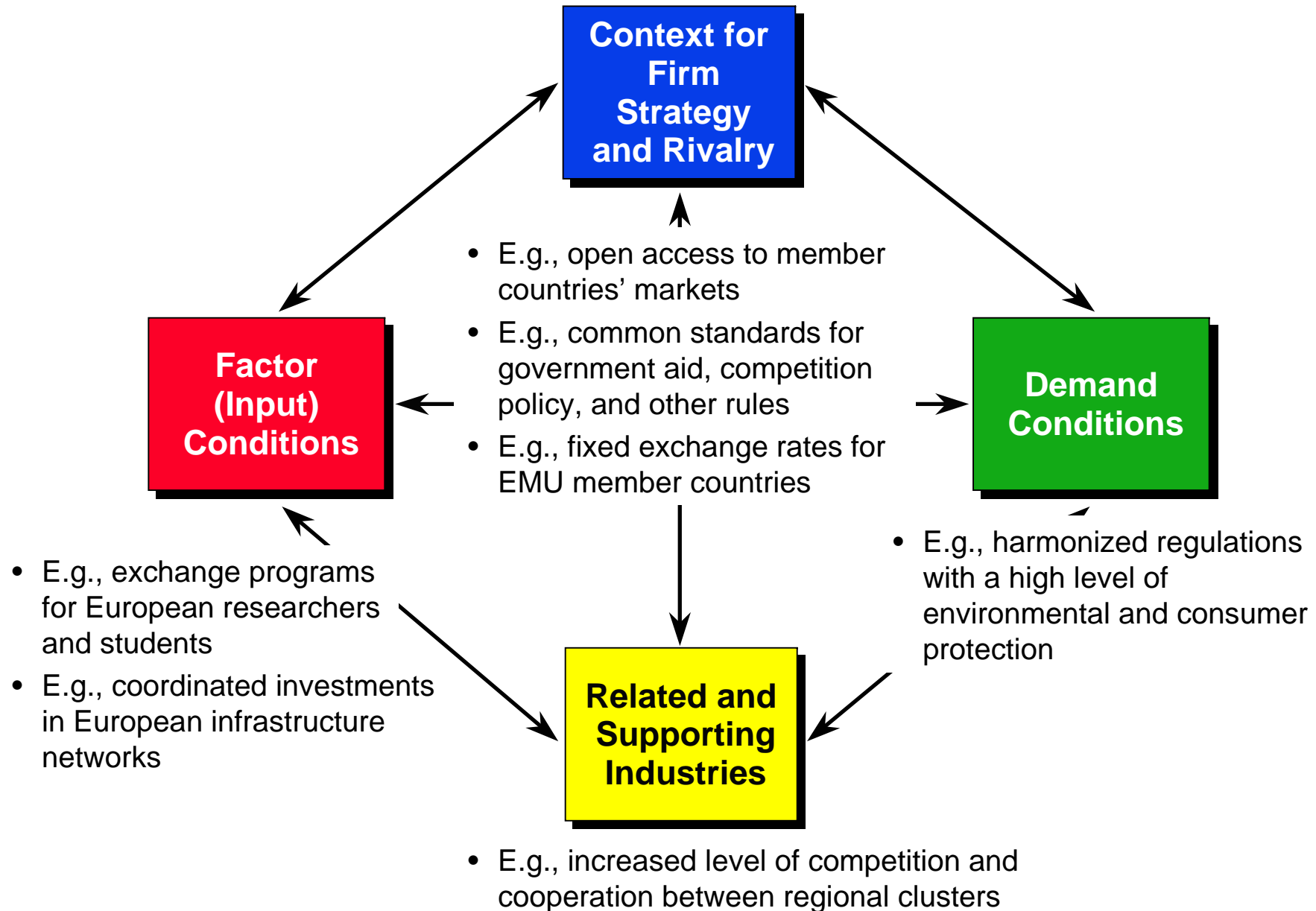
Country Ranking by GCR Sub-Index, 2002/03



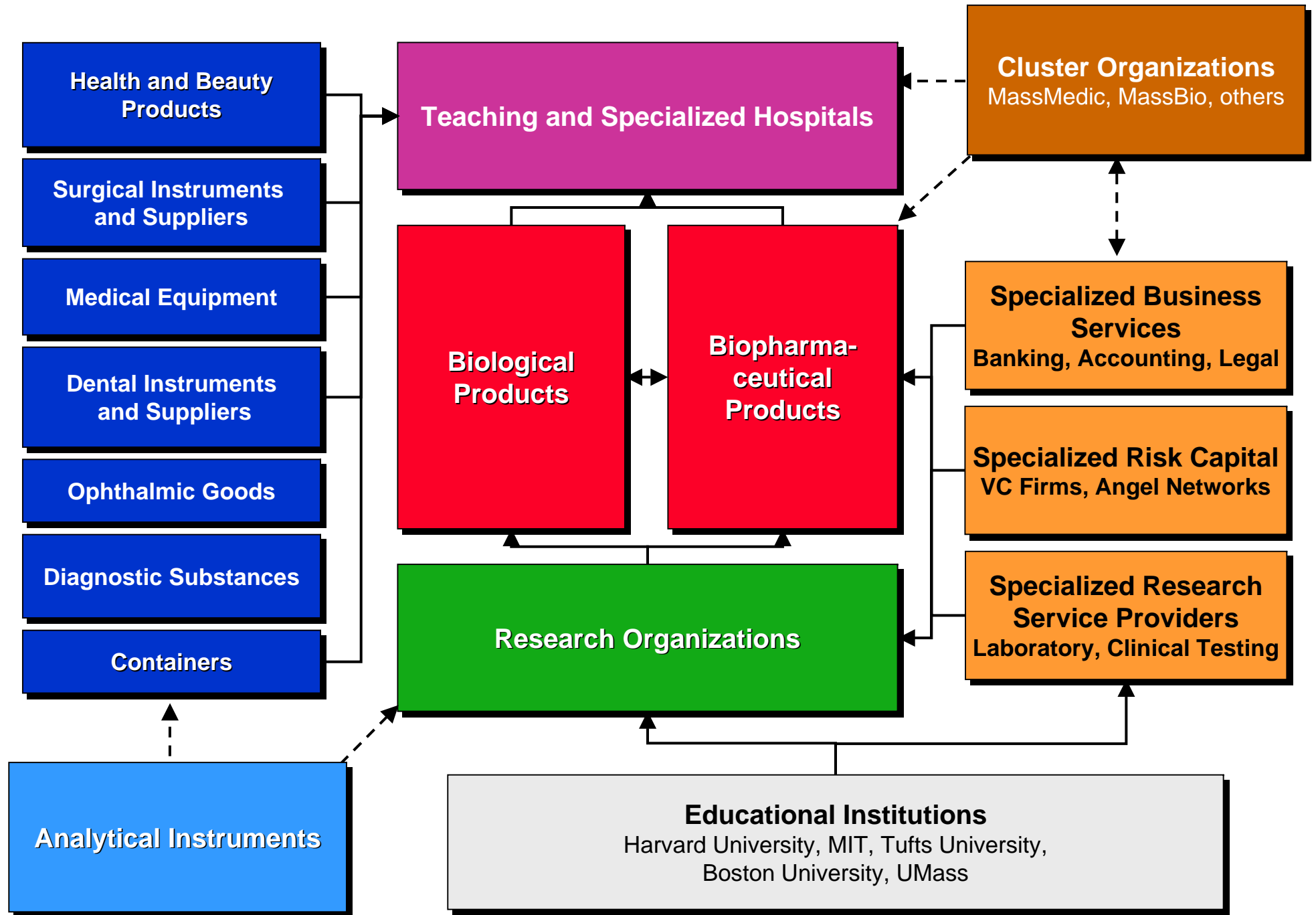
Note: Every horizontal line indicates one European country
 Source: Global Competitiveness Report 2002/03

Microeconomic Business Environment

Effects of European Integration



The Boston Life Sciences Cluster



Composition of Regional Economies

United States, 2001

	Traded Clusters	Local Clusters	Natural Resource-Driven Industries
Share of Employment	31.6%	67.6%	0.8%
Employment Growth, 1990 to 2001	1.7%	2.8%	-1.0%
Average Wage	\$44,956	\$28,288	\$33,245
Relative Wage	133.8	84.2	99.0
Wage Growth	4.5%	3.7%	2.0%
Relative Productivity	144.1	79.3	140.1
Patents per 10,000 Employees	21.7	1.3	7.2
Number of SIC Industries	590	241	48

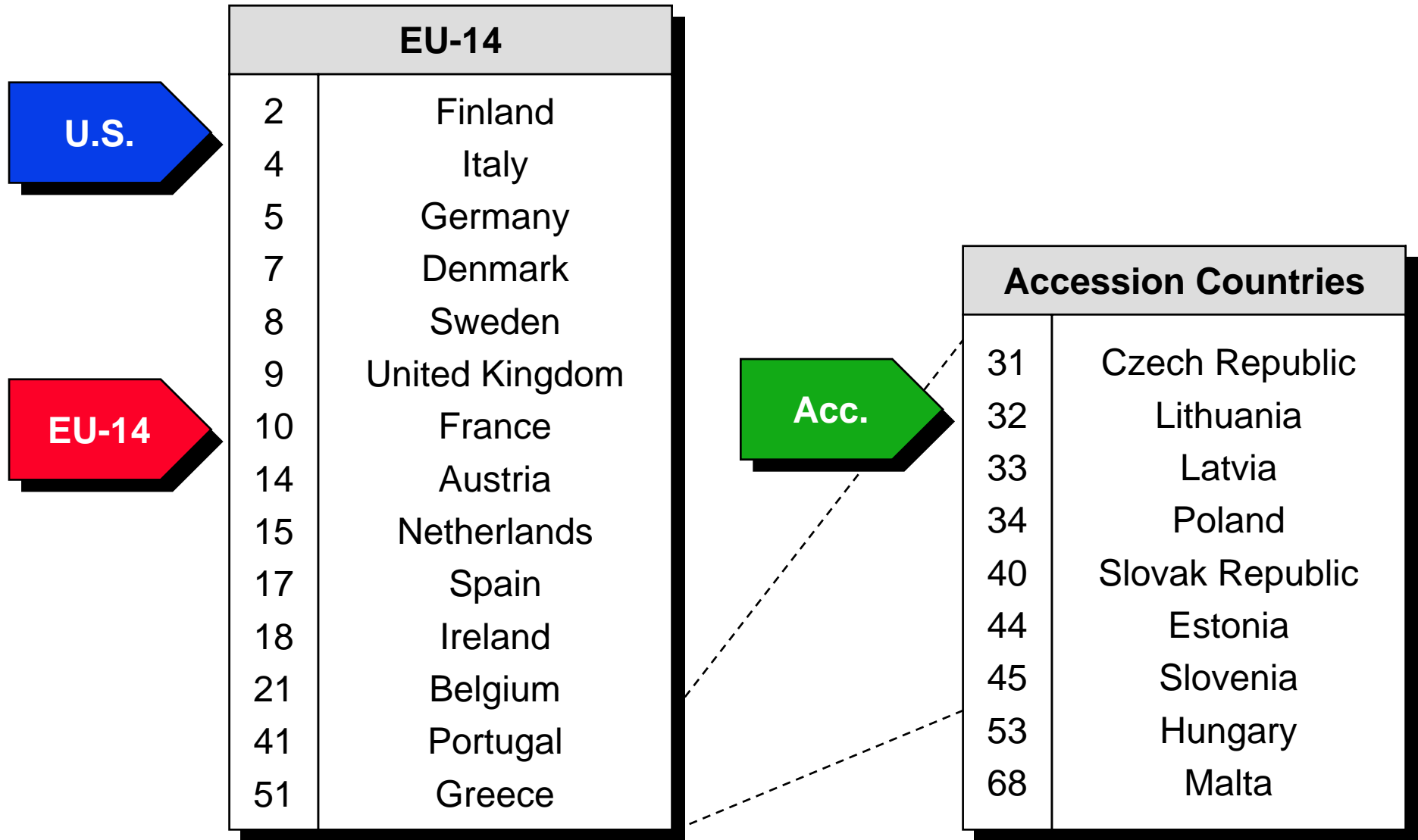
Note: 2001 data, except relative productivity which is 1997 data.

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

Types of Clusters

- There is often an **array of clusters** at different locations in a given field, each with different levels of specialization and sophistication
- Global **innovation centers**, such as Silicon Valley in semiconductors, are few in number. If there are multiple innovation centers, they normally **specialize** in different market segments
- Other clusters focus on **manufacturing**, outsourced **service functions**, or play the role of **regional** assembly or service centers
- Firms based in the most advanced clusters often **seed or enhance clusters** in other locations in order to reduce the risk of a single site, access lower cost inputs, or better serve particular regional markets
- The challenge for an economy is to move from **isolated firms** to an array of **clusters**, and then to **upgrade the breadth and sophistication** of clusters to more advanced activities

Cluster Strength in Europe



Cluster Presence

Effects of European Integration

- The European integration process removes barriers to competition that have created an **artificial structure** of regional clusters across Europe
- The emerging pattern of European clusters will depend on **different, sometimes countervailing forces**
 - Higher levels of competition will reduce the overall number of clusters in a given sector, and lead to **concentration** in the locations with the best cluster-specific business environments
 - Lower levels of barriers to trade, investment, and communication will offer new opportunities for the creation of “**satellite**” **clusters** to take advantage of lower input costs
- The **relative quality of regional business environments** will determine prosperity and attraction of economic activities across European locations
 - Differences in regional business environment quality will be the **ultimate** determinant of regional prosperity across Europe
 - If regional factor costs (wages, rents) are not **flexible** enough to reflect the underlying economic quality of their location, economic activity will concentrate in the most productive European locations
 - The common European currency (EMU) has **removed exchange rate flexibility** as the traditional lever to bring factor prices in line with relative productivity levels

European Competitiveness

- Understanding European Competitiveness
- **The Competitiveness Agenda for the EU**
- Implications for Croatia

Guiding Questions

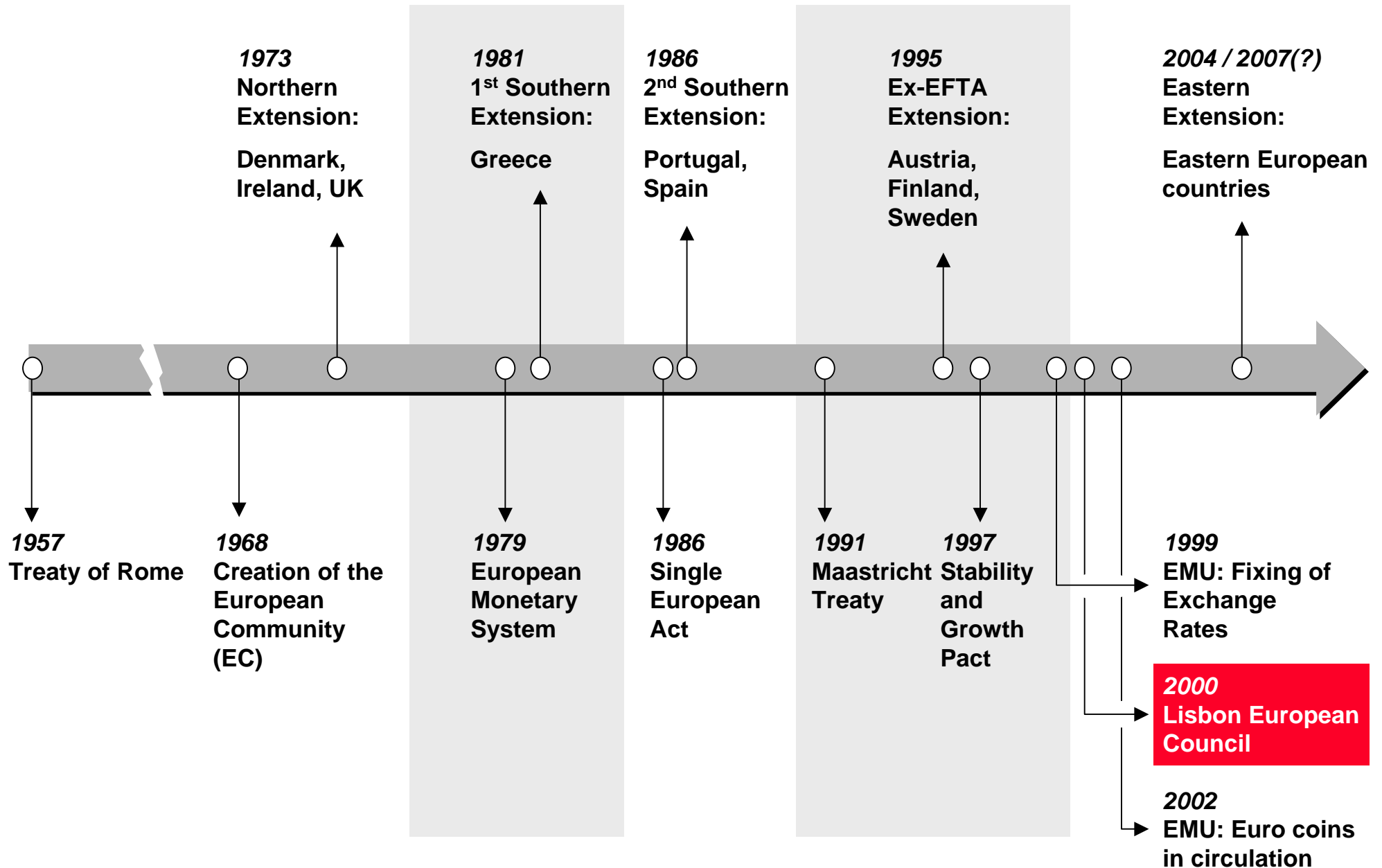
- What **policy areas** does Europe need to focus on to improve competitiveness, and what is already being done?
- Which of these should be tackled on the **EU level**, and how well is the EU equipped to enact the necessary changes?

European Business Environment

Barriers to Higher Productivity

- Labor market and social policies
 - Reduce non-wage labor costs (social security contributions)
 - Improve incentives to work (taxes)
 - ...
- Competition
 - Remove existing barriers between European markets
 - Reduce subsidies
 - Reform bankruptcy laws
 - Integrate financial markets
 - ...
- Mobilization of Europe's innovative capacity
 - Modernize the university system
 - Introduce EU patent
 - Address weaknesses in education and life-long learning
 - ...

European Economic Integration Evolution



The Lisbon Agenda

European Council, 23/24 March 2000

“Become the most competitive and knowledge-based economy in the world economy by 2010”

Transition to a competitive knowledge-based economy

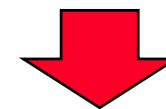
- Improve use of IT
- Create a European Research Area
- Upgrade business environment for SMEs
- Deepen the common market
- Integrate financial markets
- Strengthen coordination of macroeconomic policies



Improve productivity

Modernization of the European Social Model

- Invest in education
- Modernize employment policy
- Reform social policy



Improve labor participation

Motivation of the Lisbon Agenda

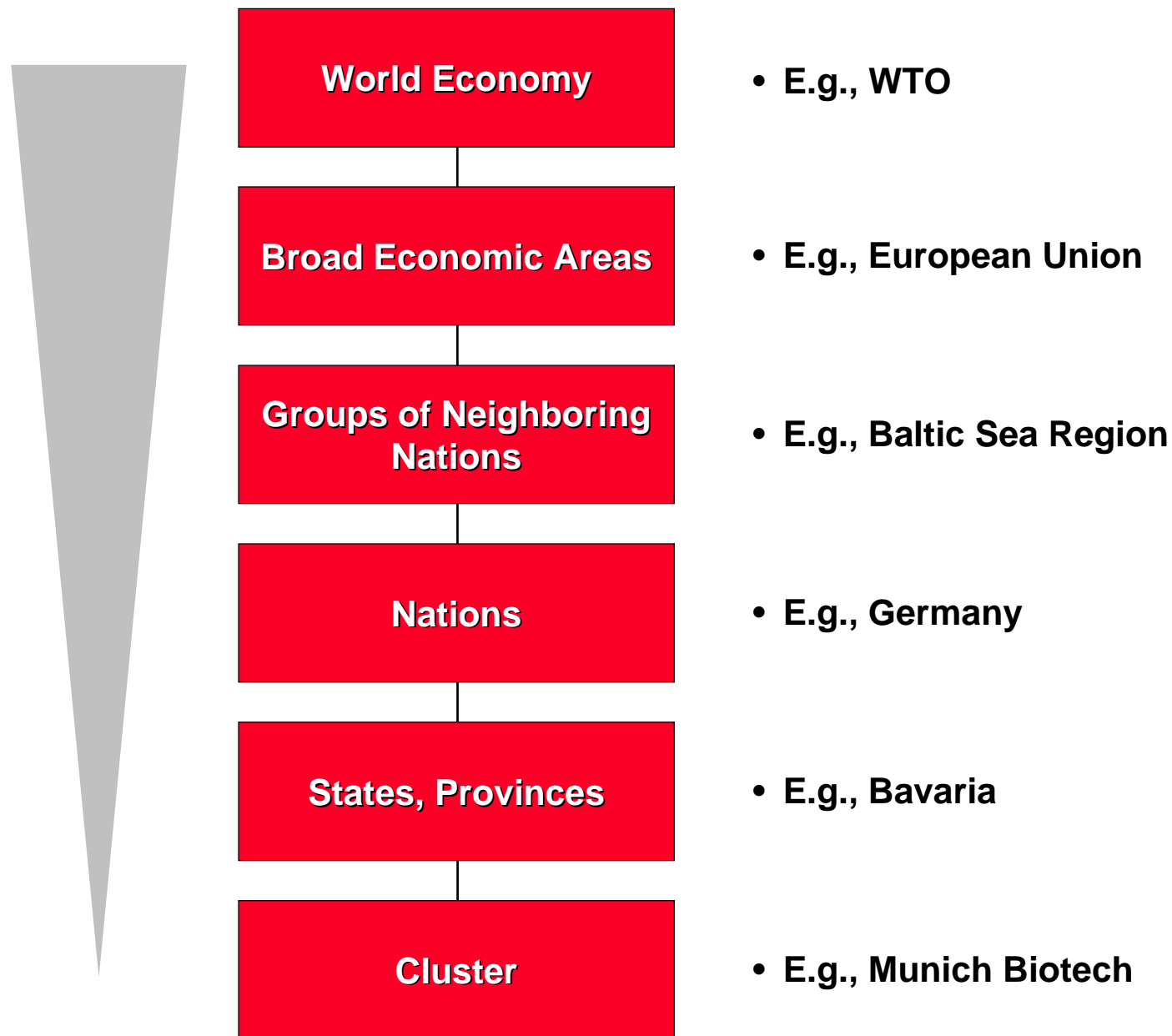
- Success of the U.S. economy in increasing productivity and prosperity from a high level, especially through the use of IT
- Apparent weaknesses of alternative approaches used in EU member countries
 - **Market opening** and **macroeconomic stabilization** (UK) alone has over time tended to exhibit falling returns
 - **Wage moderation** (NL) has failed to create sustainable prosperity growth and distorted market signals
 - Increasing the quality of factor conditions alone, for example through **R&D investments** (Sweden) is exhibiting falling returns
 - **Market intervention** and industrial policy (France) have fared even worse, undermining prosperity over time



- Microeconomic competitiveness is seen as a **market-based** approach to economic policy that can overcome the limitations of past approaches
 - **Clusters** are a prominent tool that is perceived as the key practical application of the competitiveness approach

Influences on Competitiveness

Multiple Geographic Levels



Possible Transition of the EU's Strategic Role

Harmonization

- Open markets for goods, services, capital, and labor
- Harmonize regulations
- Limit national interventions that affect regional competition
- Upgrade physical infrastructure to common minimum standard

Support Upgrading

- Continue to open markets
- Create a level playing field in regulation, industrial policy, and infrastructure

AND

- Support/pressure national governments to liberalize
- Support sub national / regional economic strategies

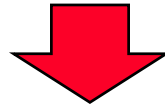
Who is in Charge of Competitiveness?

European Union

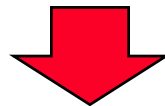
EU	<ul style="list-style-type: none">• Sole responsibility for foreign trade policy• Can take initiative in areas defined by the Treaty of the EU<ul style="list-style-type: none">– Removal of internal frontiers, strengthening of economic and social cohesion, and establishment of economic and monetary union
Countries	<ul style="list-style-type: none">• Sole responsibility for areas like tax and social policy, and control the implementation of EU rules• Key role in setting and implementing EU policies
Regions	<ul style="list-style-type: none">• In some European countries regional governments have sole responsibility for areas like planning and education• Most European regions have a strong role in economic development efforts

Organizing A Coherent EU Competitiveness Policy

- Most EU institutions, the Commission being the prime example, are organized by **functional** specialty
- Given the political architecture of Europe, there is significant **freedom** for different policies within and across these institutions



- Competitiveness is **not** a functional specialty
- Competitiveness is a cross-functional approach that requires a **unified strategy** with coordinated activities in different functional areas
 - A Vice-President for Competitiveness in the Commission could help, but the odds of success are low

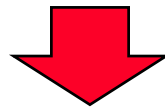


- Europe **lacks** a common understanding of the sources of economic success that could integrate policies
- Individual policies follow **inconsistent** underlying views about the merits of competition and government intervention

European Competitiveness

Priorities Reviewed

- Move towards a common view on the **sources of economic prosperity**
- Assign **clear responsibilities** for policy areas to geographical levels based on agreed set of economic and political factors
- Reorganize the structure of the **EU policy process and institutions** to allow consistent cross-functional strategies
- Review and implement the **action agenda** to remove specific barriers in the European business environment(s)



- Without progress on **strategy and process** it is hard to see how Europe can move effectively in those areas identified as critical

European Competitiveness

- Understanding European Competitiveness
- The Competitiveness Agenda for the EU
- **Implications for Croatia**

Why Should Croatia Care?

- Croatia's economy is tightly **integrated with the EU** and will be strongly affected by its performance and policies
- Croatia wants to become an **EU member** and will be faced with the challenge to integrate into EU institutions and initiatives
- Croatia can **learn** from the EU's (and its member countries') experience in competitiveness

Stages Of Competitive Development



Opportunities of More Diverse EU Membership

Factor-Driven Economies

- E.g., Romania

Investment-Driven Economies

- E.g., Poland

Innovation-Driven Economies

- E.g., Germany

- Gain access to **standard technology** and **global distribution channels**
- **Gain** attractiveness for foreign direct investment
- Adopt tested **macroeconomic, legal, and regulatory policies**

- Gain access to **world-class technology** and **innovative management techniques**
- **Integrate into the value chain** of world class clusters, and gain support for own emerging clusters
- **Improve** attractiveness for foreign direct investment

- Gain additional markets and investment opportunities, especially for **advanced services** to emerging clusters
- **Strengthen existing clusters** by outsourcing lower value-add activities to less costly locations



- For these economic opportunities to materialize, a **strategy** of business environment upgrading will be critical
- Without it, prosperity **divergence** and geographic **concentration** of economic activity

Implications for Croatia

- Croatia needs to identify how it **aims to compete** as a place to do business in the world economy in the future
- Croatia then needs to mobilize a coherent strategy to remove the **most pressing barriers** currently on the way to that goal
 - The existing National Competitiveness Council provides a promising operational platform
 - Cooperation with regional neighbors will be important and carry both economic and political benefits
- With a clear **competitiveness strategy** of its own, Croatia will be able to take maximum advantage of closer ties to the EU without being dragged into a generic plan for economic development

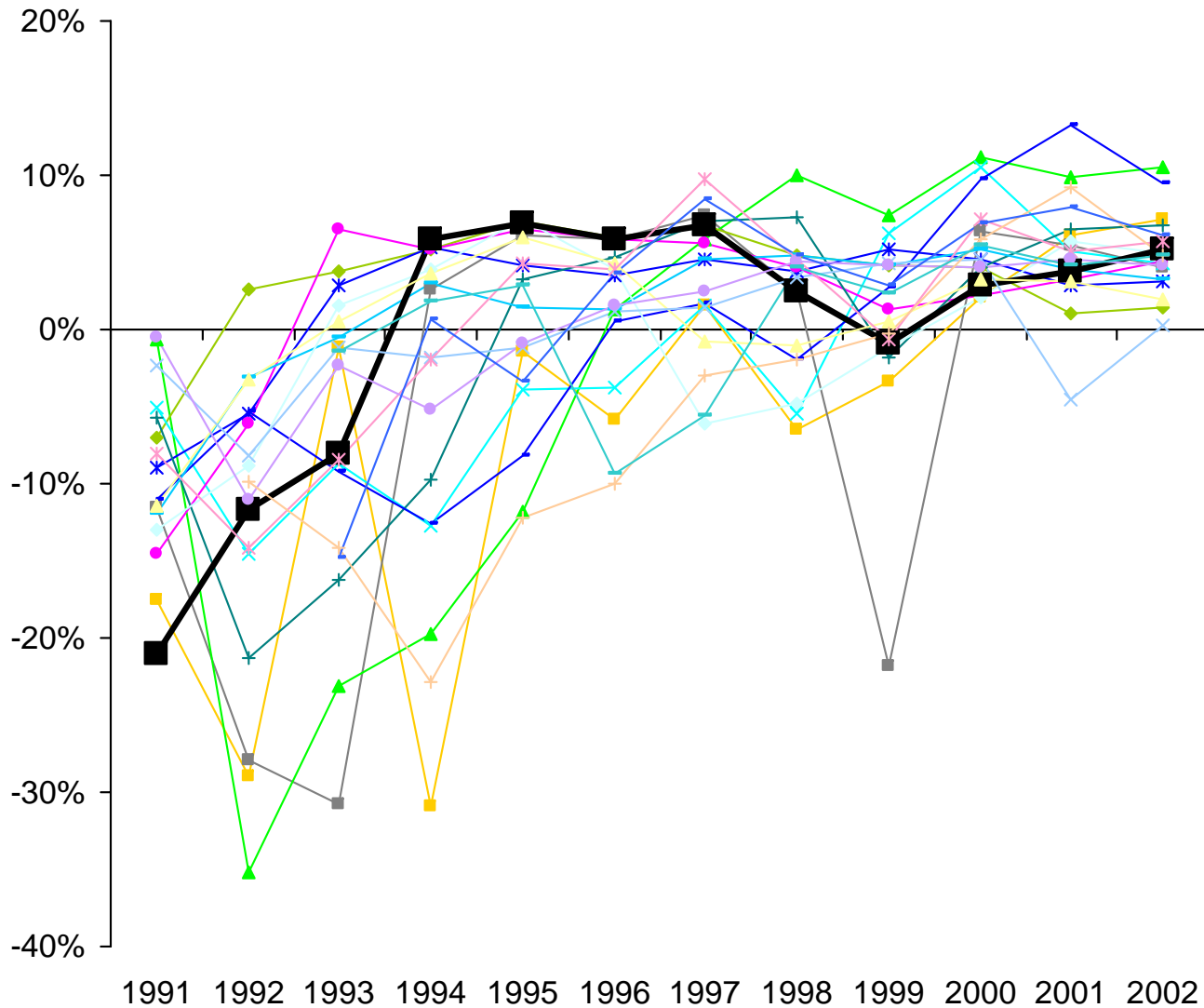
Appendix: Croatian Competitiveness Data

Comparative Economic Performance

Real GDP Growth Rates

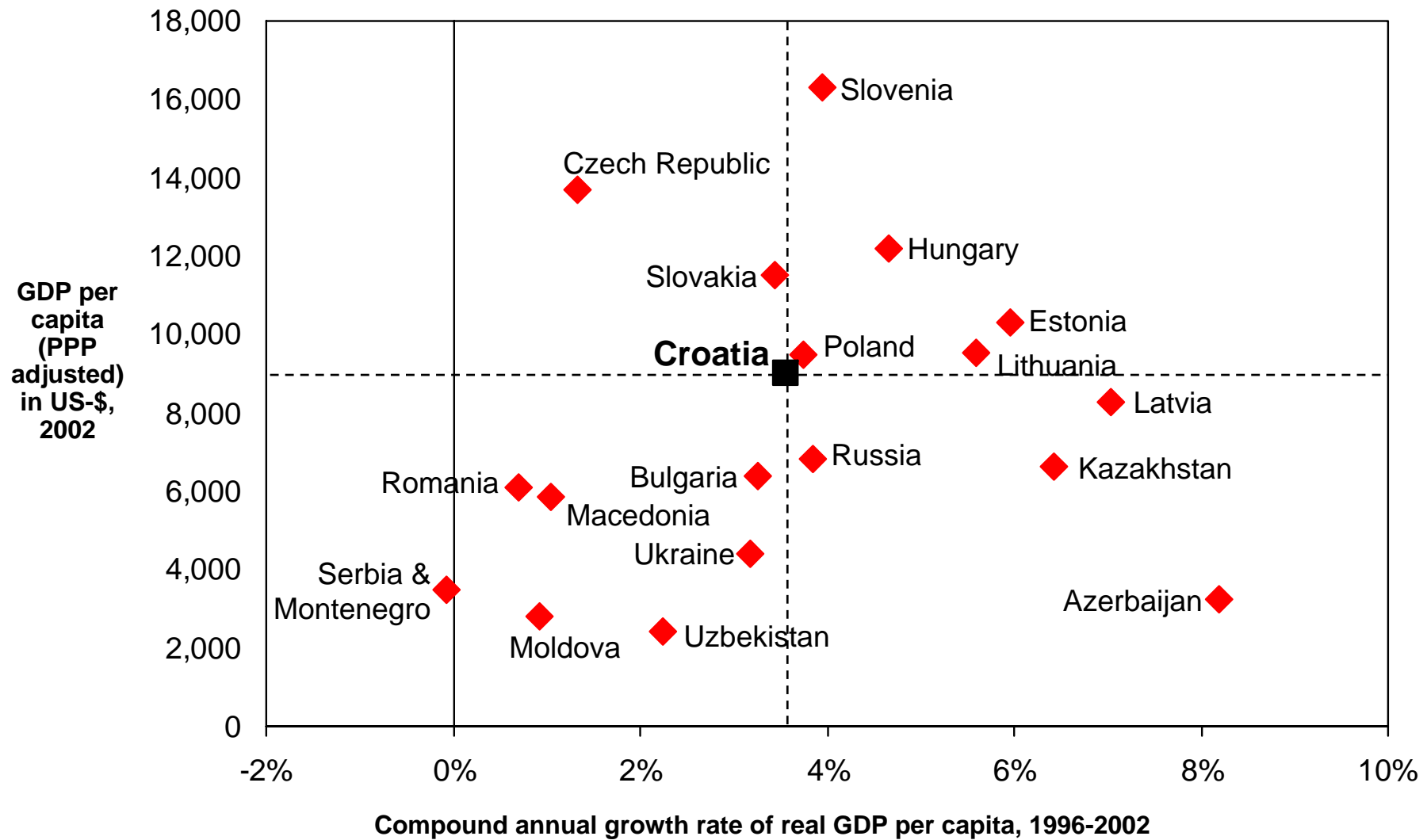
Annual growth rate of real GDP

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



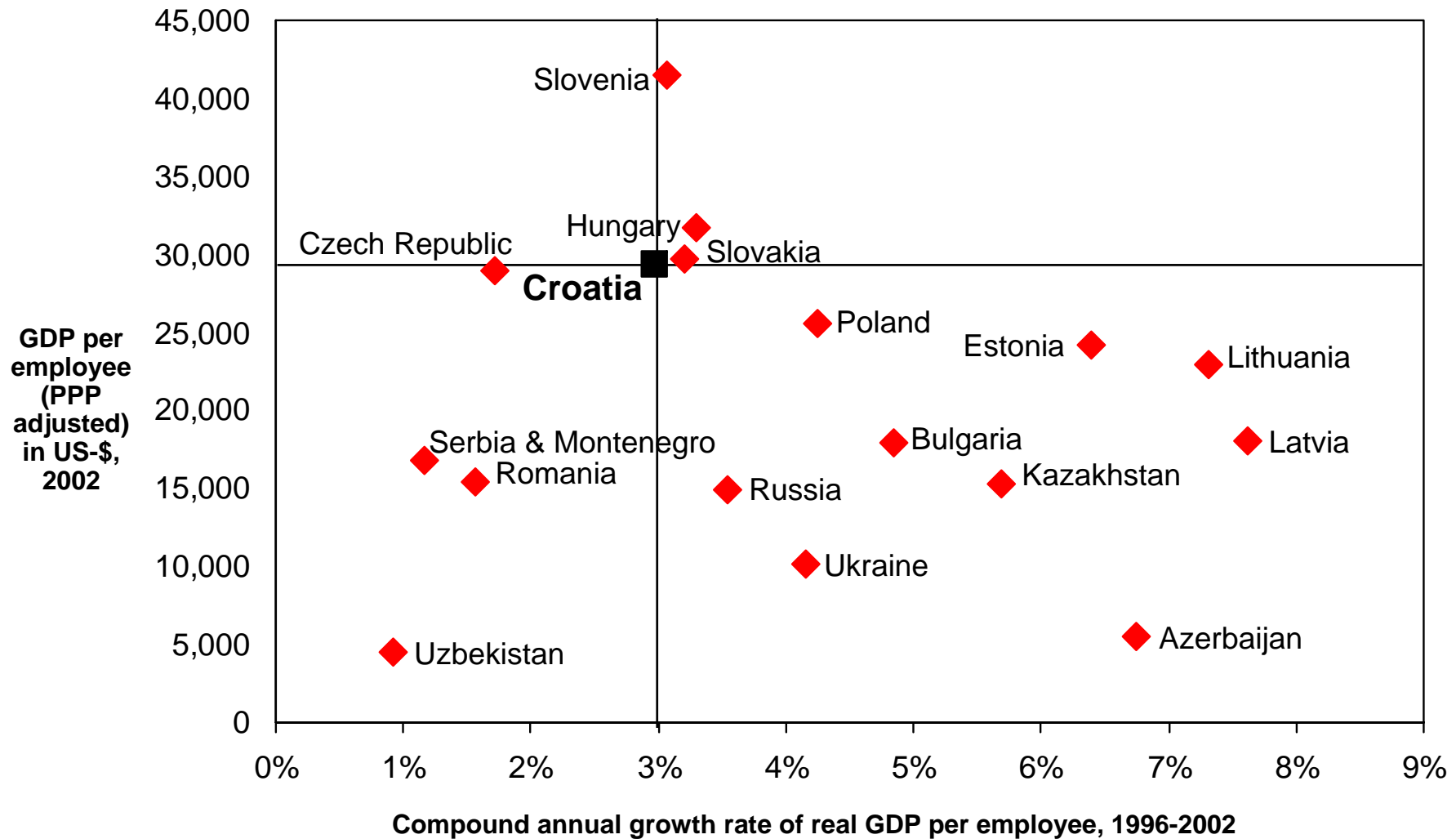
- Moldova
- Serbia & Montenegro
- ▲ Azerbaijan
- ◆ Poland
- ✦ Russian Federation
- ✧ Slovenia
- Slovakia
- ✦ Lithuania
- Kazakhstan
- Hungary
- Romania
- Croatia
- ▲ Czech Republic
- ✦ Macedonia
- ✦ Estonia
- Uzbekistan
- ✦ Ukraine
- Latvia
- Bulgaria

Comparative Economic Performance



Source: EIU (2003)

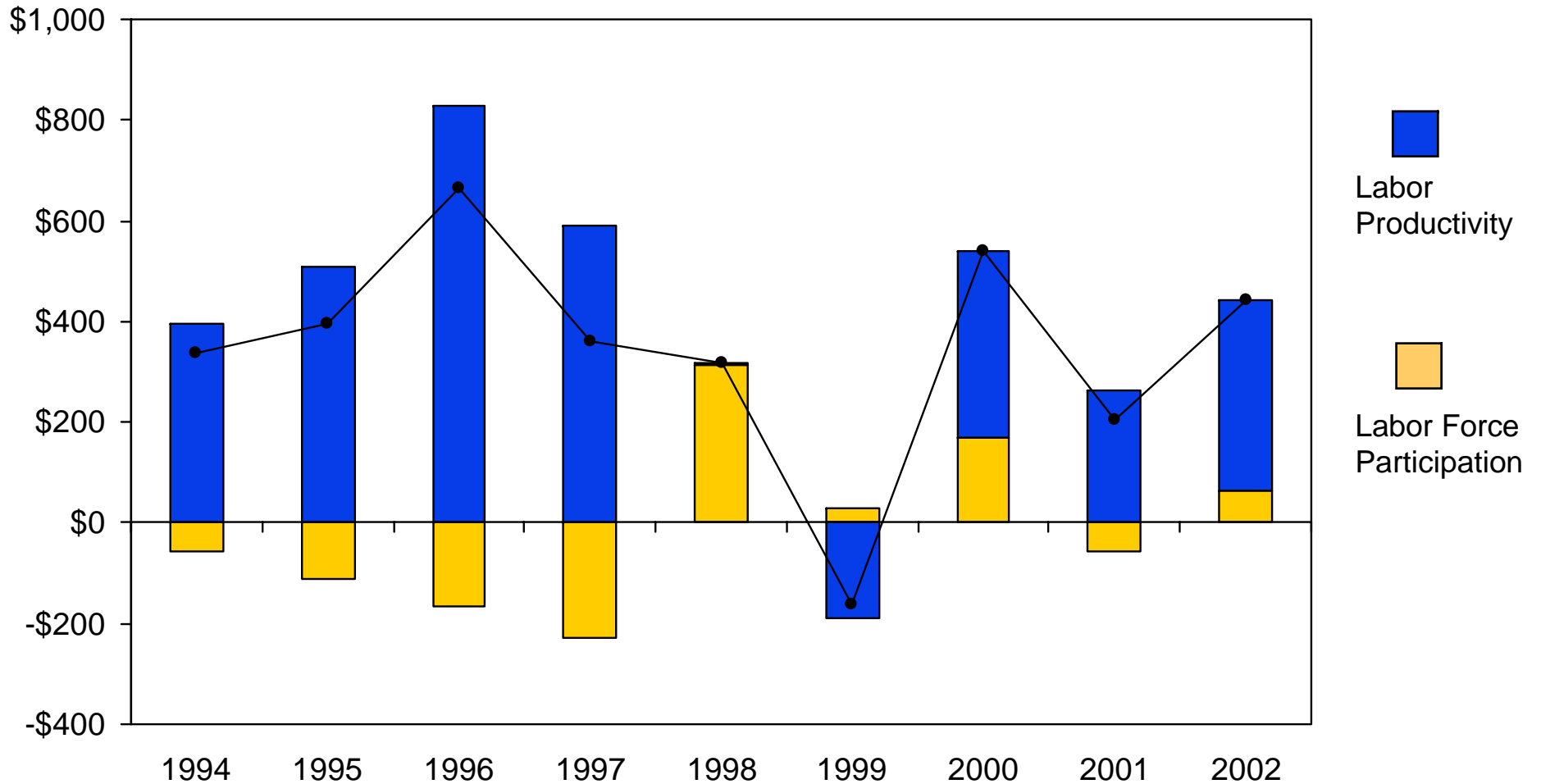
Comparative Labor Productivity Performance



Source: EIU (2003)

Decomposing Croatian GDP per Capita Growth

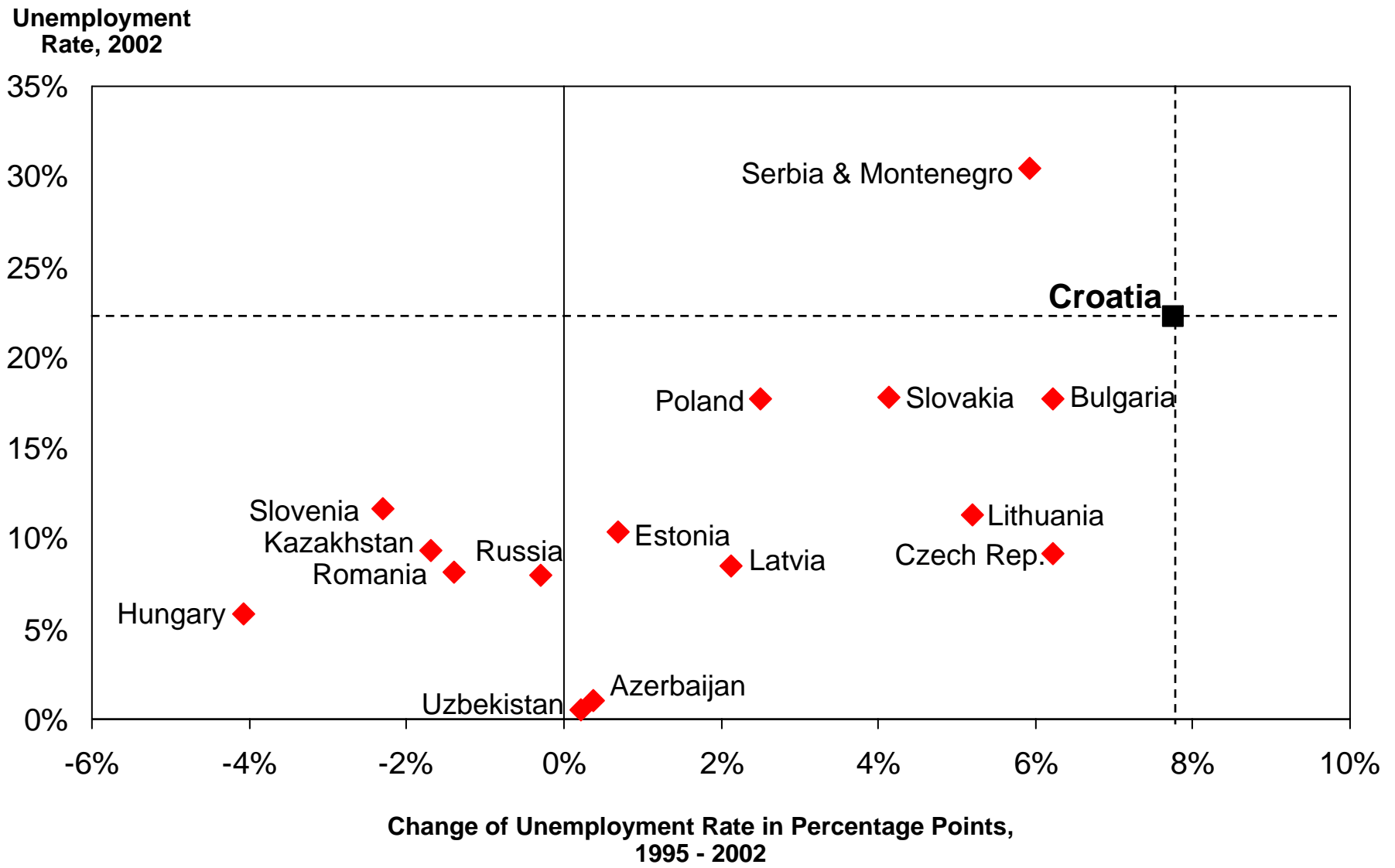
Contribution to change in
GDP per Capita



Source: EIU (2003)

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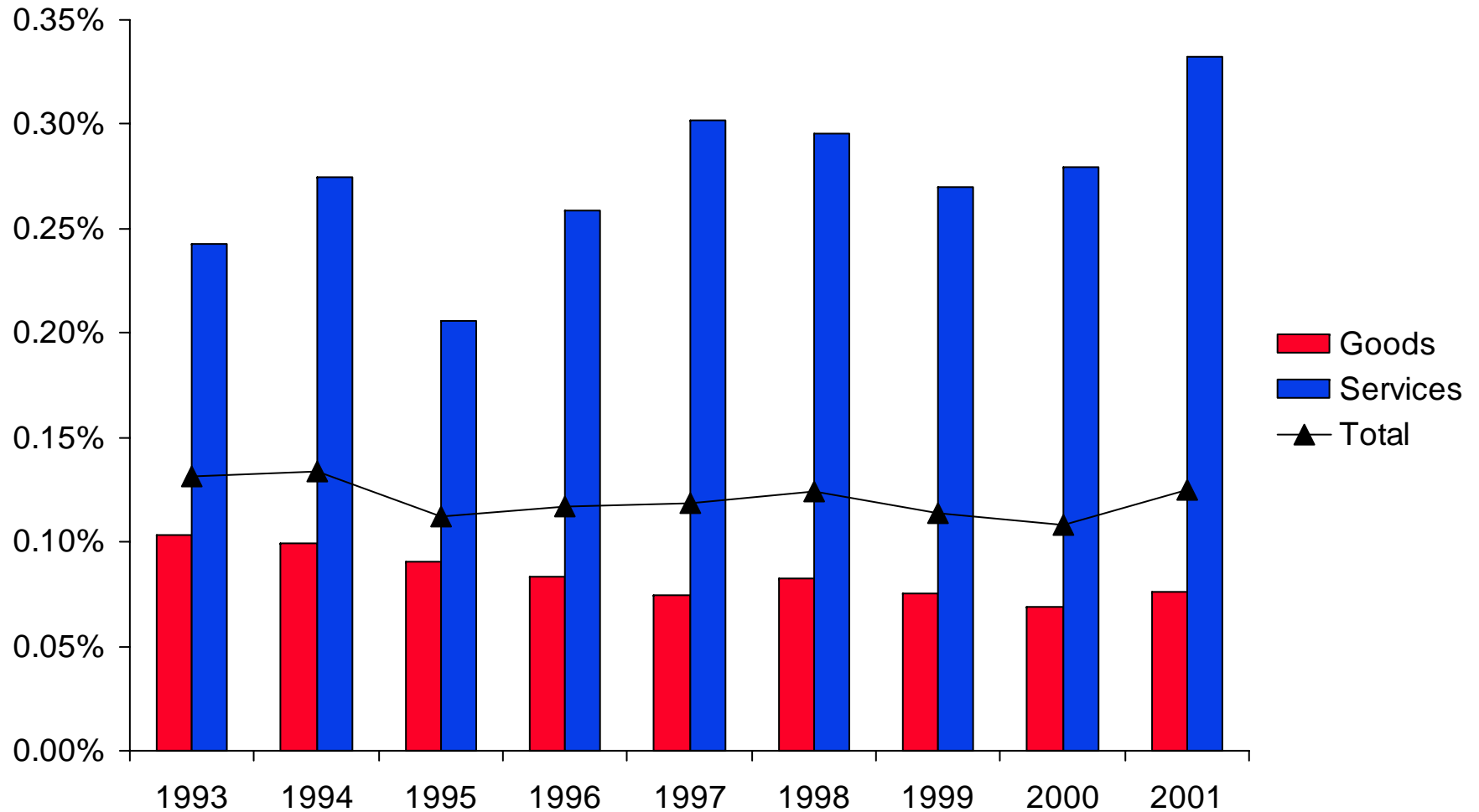
Unemployment in Transition Countries



Croatia's Export Performance

World Export Market Shares

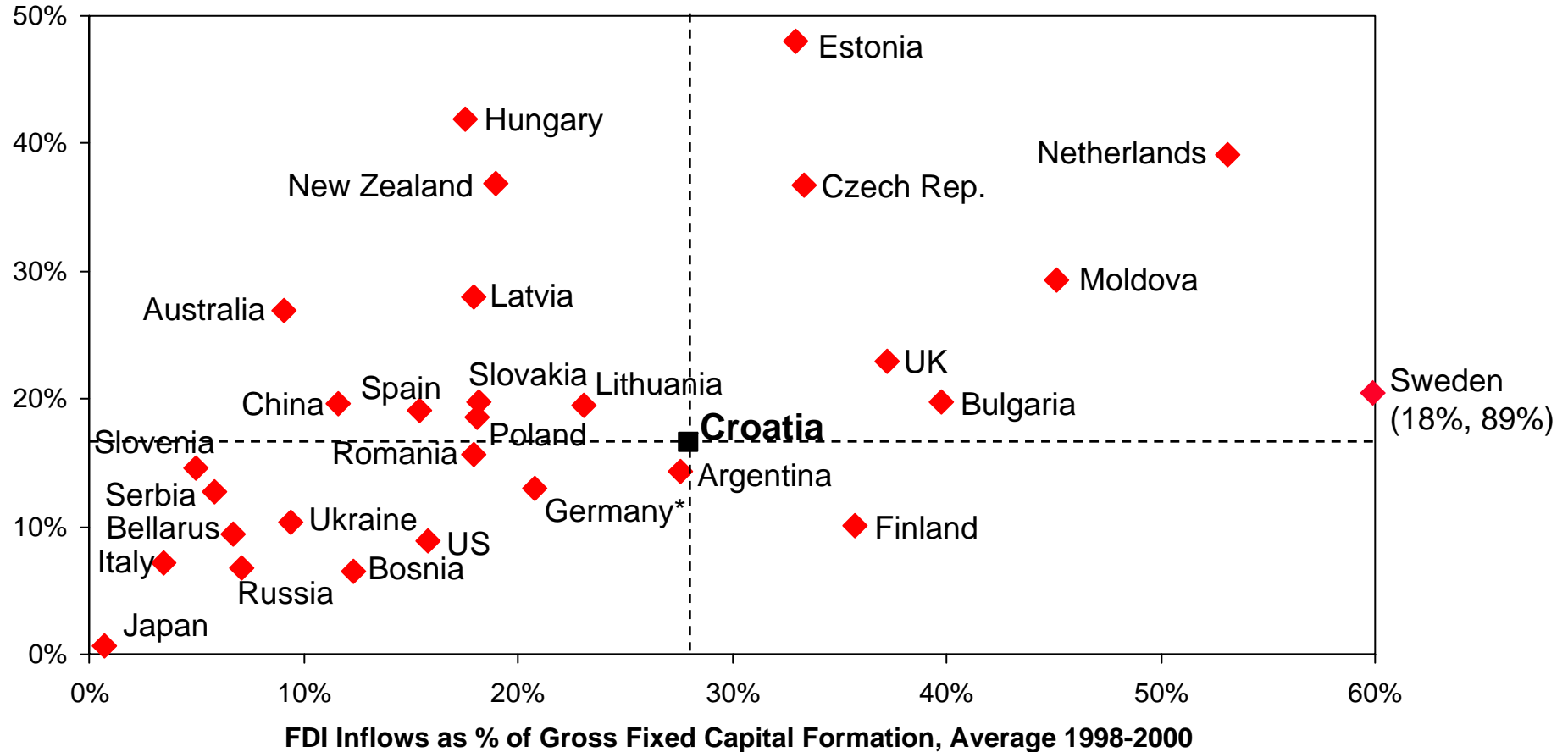
World export share in %



Comparative Inward Foreign Investment

Selected Economies

FDI Stocks as % of GDP,
Average 1998-2000



Note: FDI Stocks and Inflows for transition countries are the average of 1998-2001

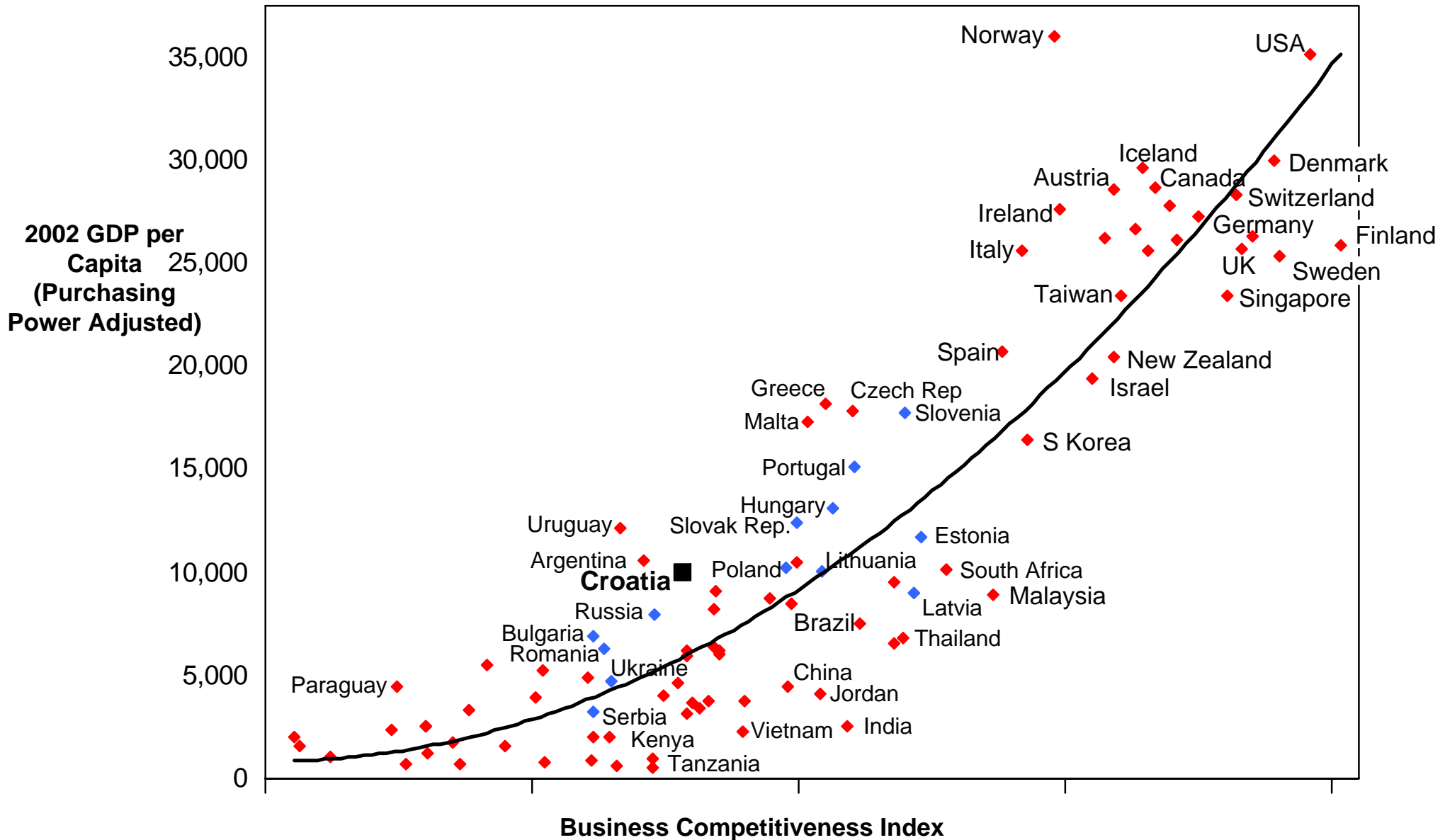
Germany's FDI inflows in this period were exceptionally high due to the Vodafone-Mannesmann takeover in 2000

Source: World Investment Report 2002

European Competitiveness CROATIA 06-16-04 CK.ppt

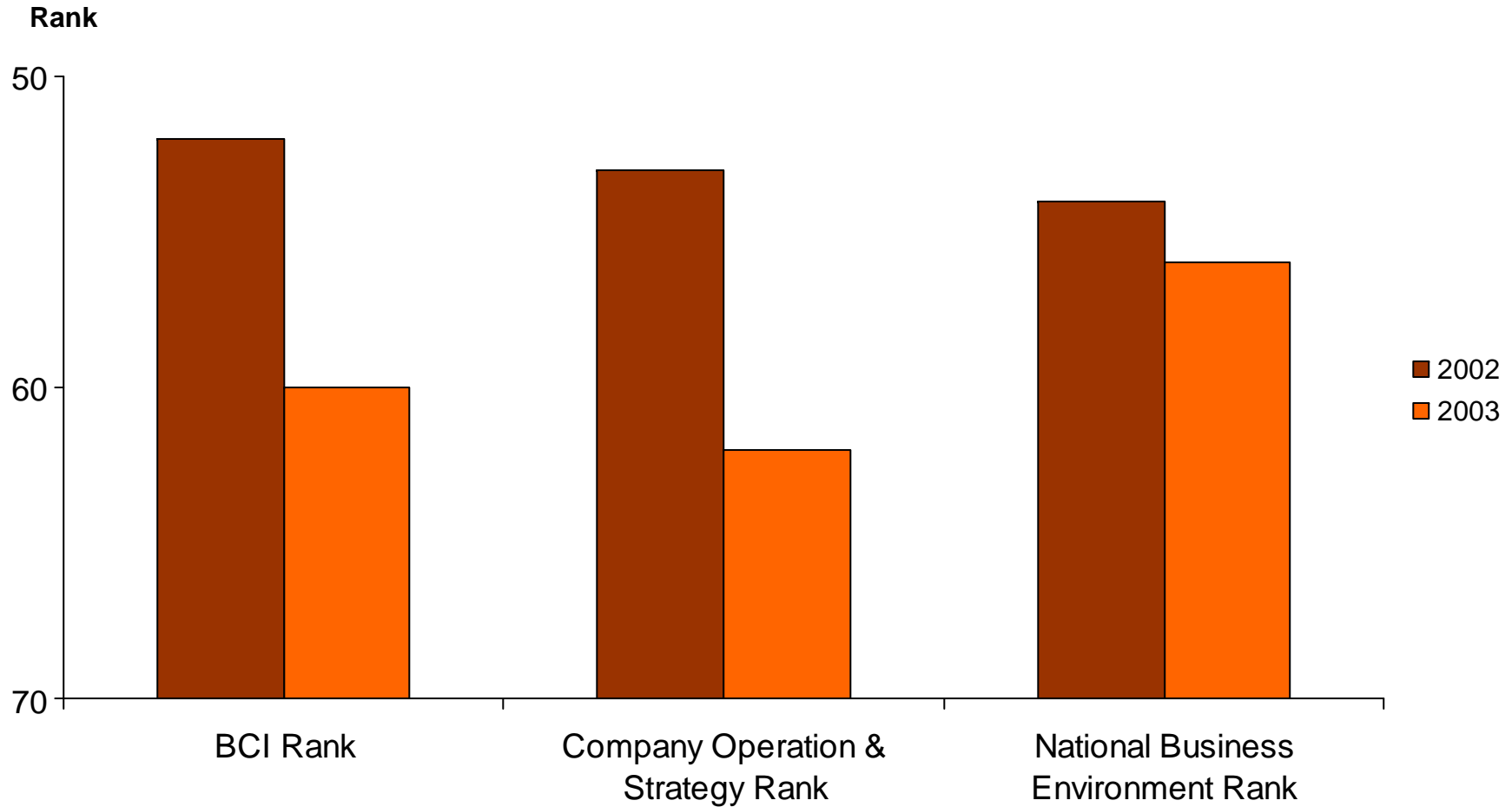
Global Competitiveness Report 2003

The Relationship Between Business Competitiveness and GDP Per Capita



Current Competitiveness Index

Croatia's Position over Time

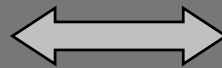


Determinants of Productivity and Productivity Growth

**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

Croatia's Relative Position 2003

Competitive Advantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Prevalence of Foreign Technology Licensing	21	↑
Control of International Distribution	33	↓
Nature of Competitive Advantage	42	↓
Capacity for Innovation	43	
Extent of Branding	48	
Value Chain Presence	51	
Company Spending on R&D	53	
Willingness to Delegate Authority	62	

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Breadth of International Markets	82	↓
Extent of Regional Sales	77	↓
Degree of Customer Orientation	73	
Extent of Staff Training	72	
Reliance on Professional Management	67	
Extent of Incentive Compensation	66	
Production Process Sophistication	65	↓
Extent of Marketing	65	

Note: Rank by countries; overall Croatia ranks 62 (65 on Company Operations and Strategy, 40 on GDP pc 2002)

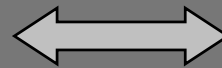
Source: Global Competitiveness Report 2003

Determinants of Productivity and Productivity Growth

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

Microeconomic Foundations of Development

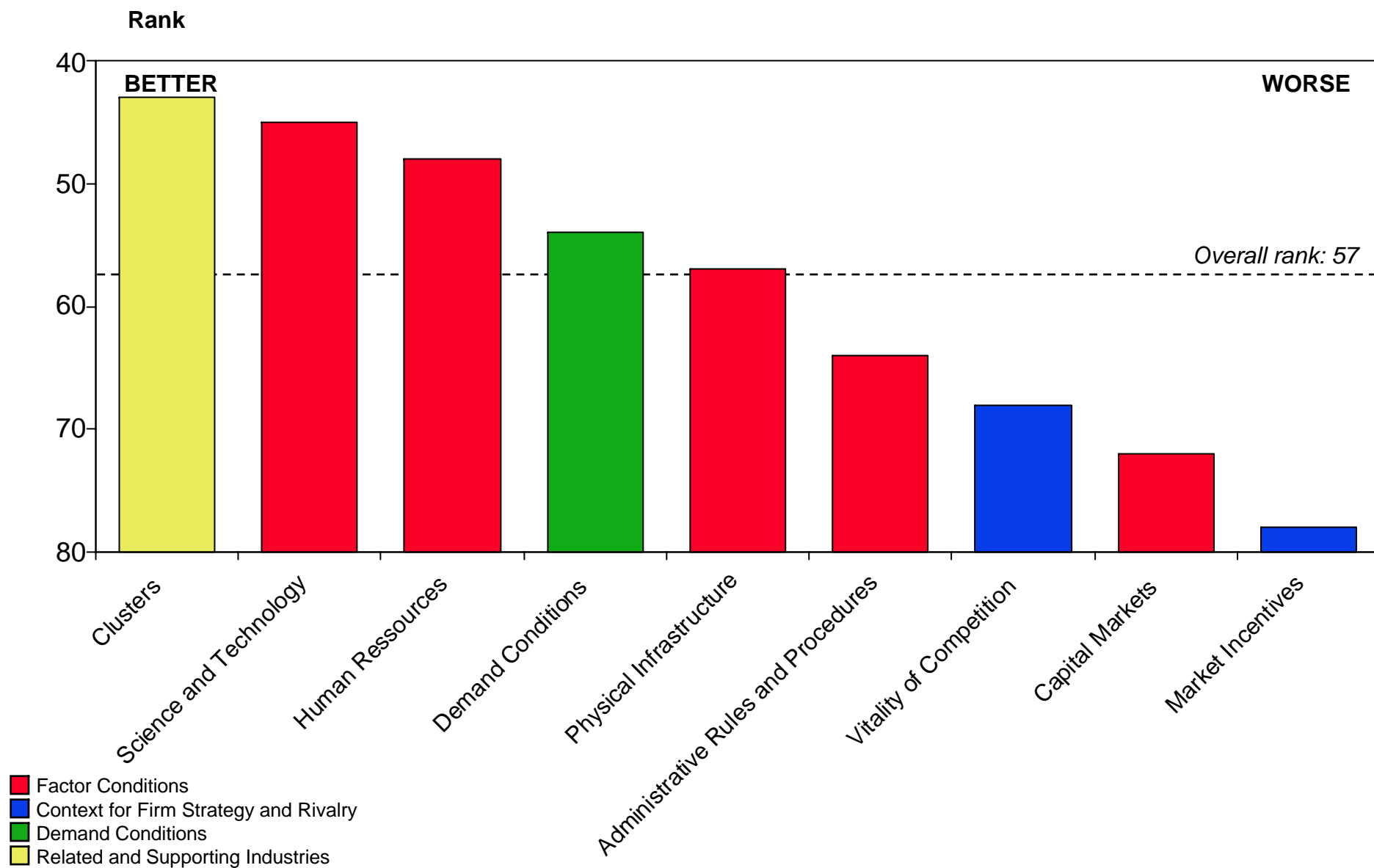
**Sophistication
of Company
Operations and
Strategy**



**Quality of the
Microeconomic
Business
Environment**

National Business Environment Overview

Croatia's Relative Strengths and Weaknesses



Source: Global Competitiveness Report 2003

European Competitiveness CROATIA 06-16-04 CK.ppt

Factor (Input) Conditions Croatia's Relative Position

Competitive Advantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Extent of Bureaucratic Red Tape	9	↓
Patents per million Population (2002)	30	
Internet users per 100 people (2002)	33	
Cell phones per 100 people (2002)	34	
Quality of Math and Science Education	35	
Quality of Scientific Research Institutions	40	
Quality of Public Schools	40	↓
Availability of Scientists and Engineers	41	
Telephone/Fax Infrastructure Quality	41	↓
University/Industry Research Collaboration	44	↑
Quality of Electricity Supply	50	
Administrative Burden for Start-Ups	51	↓
Quality of Educational System	52	

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

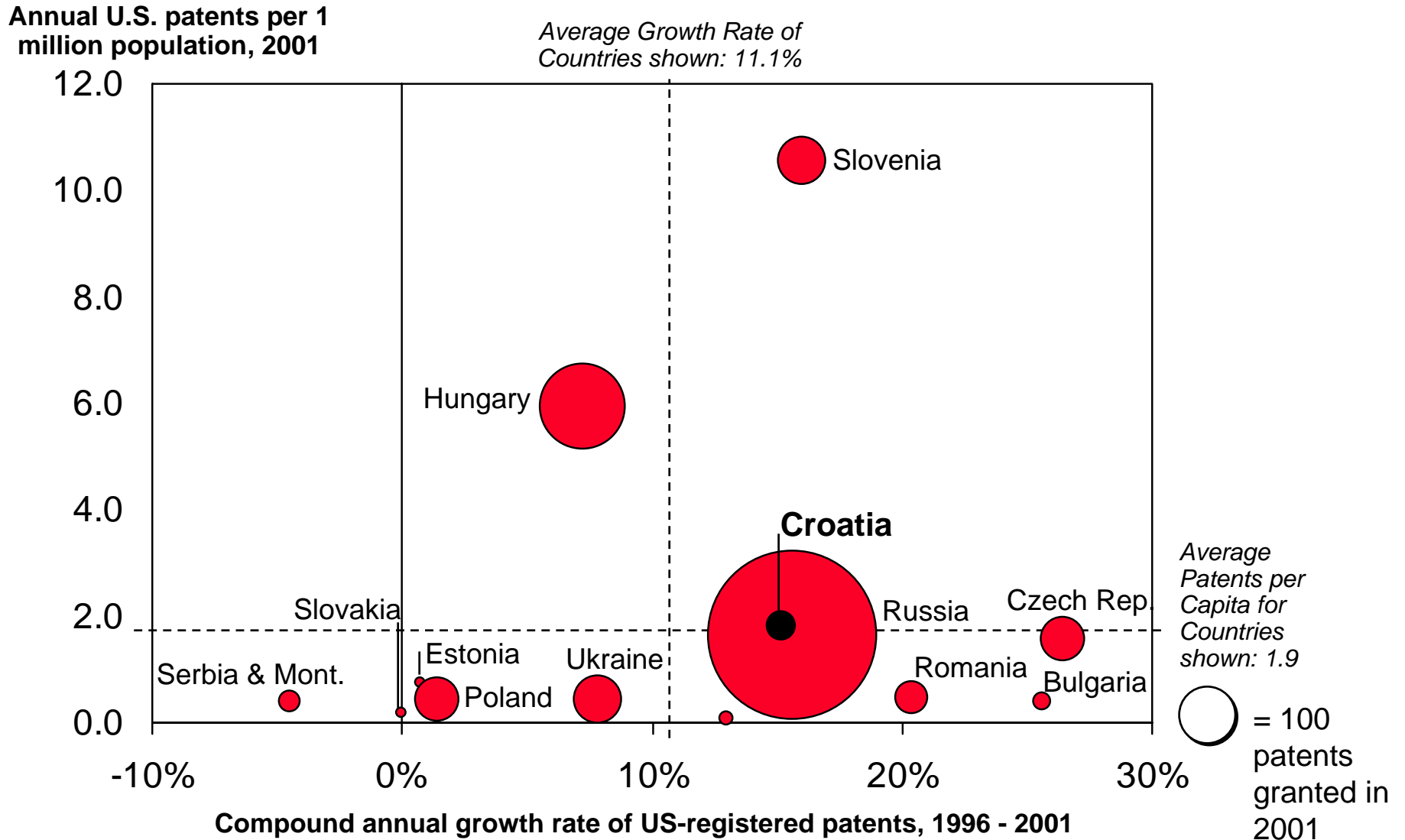
Port Infrastructure Quality	78	
Overall Infrastructure Quality	78	↓
Quality of Management Schools	75	
Judicial Independence	73	
Financial Market Sophistication	72	
Local Equity Market Access	72	
Air Transport Infrastructure Quality	70	
Adequacy of Public Sector Legal Recourse	68	
Railroad Infrastructure Quality	66	
Venture Capital Availability	62	
Police Protection of Businesses	60	
Ease of Access to Loans	58	

Note: Rank by countries; overall Croatia ranks 62 (57 on National Business Environment, 40 on GDP pc 2002)

Source: Global Competitiveness Report 2003

**Factor
(Input)
Conditions**

International Patenting Output Selected Transition Countries



Note: Other Latin American countries have negligible rates of US patenting
 Source: US Patent and Trademark Office (www.uspto.gov). Author's analysis.
 European Competitiveness CROATIA 06-16-04 CK.ppt

Innovative Capacity Index

2003 Rankings

Rank	Scientists & Engineers Index	Innovation Policy Index	Cluster Environment Index	Linkages Index	Operations and Strategy Index
..	Croatia (37)
40	Latvia	Latvia	Czech Republic	Russia	El Salvador
41	Romania	India	Turkey	China	Greece
42	Argentina	Vietnam	Chile	Greece	South Africa
43	China	Slovak Republic	Tunisia	Romania	Hungary
44	Costa Rica	Jordan	Croatia	Croatia	Malta
45	Egypt	Indonesia	Slovak Republic	Hungary	Tunisia
46	Mauritius	Mexico	Mauritius	Mauritius	Slovak Republic
47	Macedonia	China	Morocco	Costa Rica	Mauritius
48	Chile	Botswana	Mexico	Jordan	Namibia
49	Indonesia	Poland	Romania	Thailand	Morocco
50	Turkey	Rwanda	Costa Rica	Dominican Rep.	Egypt
51	Tunisia	Mauritius	Egypt	Morocco	Indonesia
52	Brazil	Morocco	Jordan	Egypt	China
53	Vietnam	Trinidad & Tobago	Indonesia	Panama	Mexico
54	Mexico	Croatia	Lithuania	Mexico	Kenya
55	Peru	Turkey	Russia	Slovak Republic	India
56	Uruguay	Namibia	Colombia	Vietnam	Panama
57	Venezuela	Panama	Philippines	Ghana	Botswana
58	Sri Lanka	Costa Rica	Ukraine	Uganda	Jordan
59	Philippines	Egypt	Sri Lanka	Sri Lanka	Philippines
60	Malaysia	Bulgaria	Pakistan	Jamaica	Vietnam
..	Croatia (64)

Source: Global Competitiveness Report 2003

U.S. Patenting by Croatian Organizations

Organization	1996	1997	1998	1999	2000	2001	Patents Issued 1996-2001
PLIVA FARMACEUTSKA, KEMIJSKA, PREHRAMBENA I KOZMETICKA	1	6	5	4	4	1	21
PACESETTER AB	0	1	2	1	0	0	4
PLIVA FARMACEUTSKA	1	1	0	1	0	0	3
AT&T CORP.	0	0	0	1	1	0	2
UNIVERSAL MASCHINENFABRIK DR. RUDOLF SCHIEBER KG	1	0	0	0	0	0	1
UNIVERSITY OF SOUTH FLORIDA	0	1	0	0	0	0	1
RHONE-POULENC AGROCHIMIE LIMITED	0	0	0	0	1	0	1
INDUSTRIE CHIMICHE CAPPARO S.P.A.	0	0	1	0	0	0	1
SULZER OSYPKA GMBH	0	0	1	0	0	0	1
IVASIM D.D. ZA PROIZVODNJU KEMIJSKIH PROIZVODA	0	0	0	1	0	0	1
PLIVA, FARMACEUTSKA INDUSTRIJA, DIONICKO DRUSTVO	0	0	0	0	0	1	1

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

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

Context for Firm Strategy and Rivalry

Croatia's Relative Position

Competitive Advantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Centralization of Economic Policy-making 36

Tariff Liberalization 53 ↓

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Cooperation in Labor-Employer Relations 90

Foreign Ownership of Companies 86

Protection of Minority Shareholders 85

Existence of Bankruptcy Law 79

Regulation of Securities Exchanges 76

Extent of Distortive Government Subsidies 76 ↑

Extent of Locally Based Competitors 75

Prevalence of mergers and acquisitions 74

Business Costs of Corruption 73

Efficacy of Corporate Boards 72 ↓

Note: Rank by countries; overall Croatia ranks 62 (57 on National Business Environment, 40 on GDP pc 2002)

Source: Global Competitiveness Report 2003

Context for Firm Strategy and Rivalry

Croatia's Relative Position (Continued)

Competitive Advantages Relative to GDP per Capita

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Intellectual Property Protection	70	
Favoritism in Decisions of Government Officials	67	
Decentralization of Corporate Activity	63	
Effectiveness of Anti-Trust Policy	63	↓
Intensity of Local Competition	62	
Hidden Trade Barrier Liberalization	61	↓

Note: Rank by countries; overall Croatia ranks 62 (57 on National Business Environment, 40 on GDP pc 2002)

Source: Global Competitiveness Report 2003

Demand Conditions Croatia's Relative Position

Competitive Advantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Stringency of Environmental Regulations 45

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 2002

Buyer Sophistication 66 ↓

Government Procurement of Advanced
Technology Products 65

Laws Relating to Information Technology 59

Consumer Adoption of Latest Products 59

Presence of Demanding Regulatory
Standards 58 ↓

Note: Rank by countries; overall Croatia ranks 62 (57 on National Business Environment, 40 on GDP pc 2002)


Source: Global Competitiveness Report 2003

Related and Supporting Industries

Croatia's Relative Position


Competitive Advantages Relative to GDP per Capita

Country Ranking, Arrows indicate a change of 5 or more ranks since 2002

Extent of Product and Process Collaboration	14
Local Availability of Specialized Research and Training Services	35
Local Availability of Process Machinery	41
Local Availability of Components and Parts	50
Local Supplier Quantity	54 

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows indicate a change of 5 or more ranks since 2002

State of Cluster Development	72
Local Supplier Quality	64 

Note: Rank by countries; overall Croatia ranks 62 (57 on National Business Environment, 40 on GDP pc 2002)

Source: Global Competitiveness Report 2003