

Norwegian Competitiveness: Where Does the Nation Stand?

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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 2004-2005, (Palgrave Macmillan, 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

Norwegian Competitiveness

- One of the most **prosperous** countries in the world
- Recent economic performance has fallen **below** that of many peer countries
- There is no consensus on the right strategy to secure Norwegian prosperity **after the oil resources** have been exploited

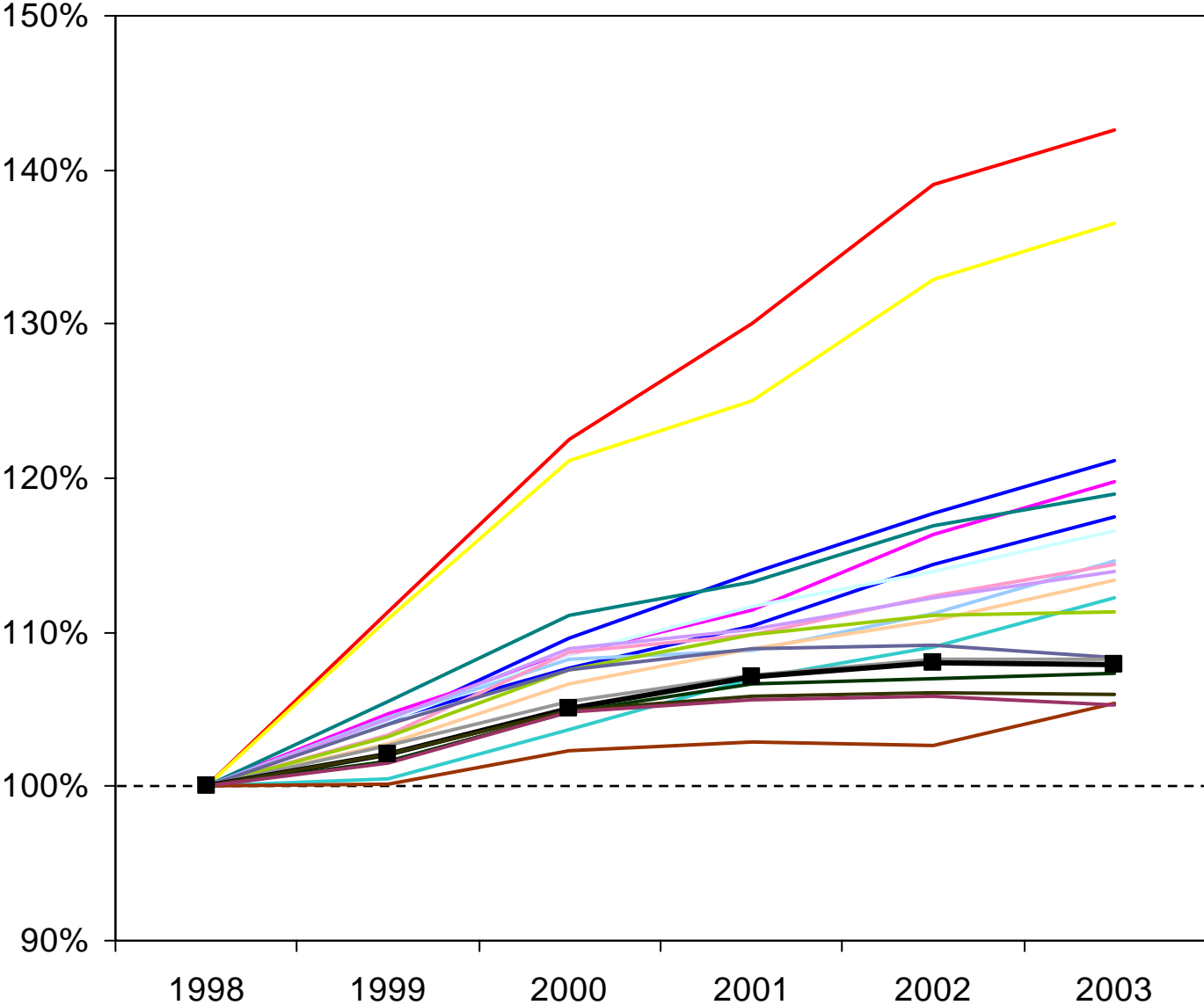


- An **objective assessment** of Norwegian competitiveness is essential to inform a discussion about the country's future strategy

Real GDP Development Over Time

Selected OECD Countries, 1998 - 2003

Real GDP, PPP-adjusted,
1998 = 100%

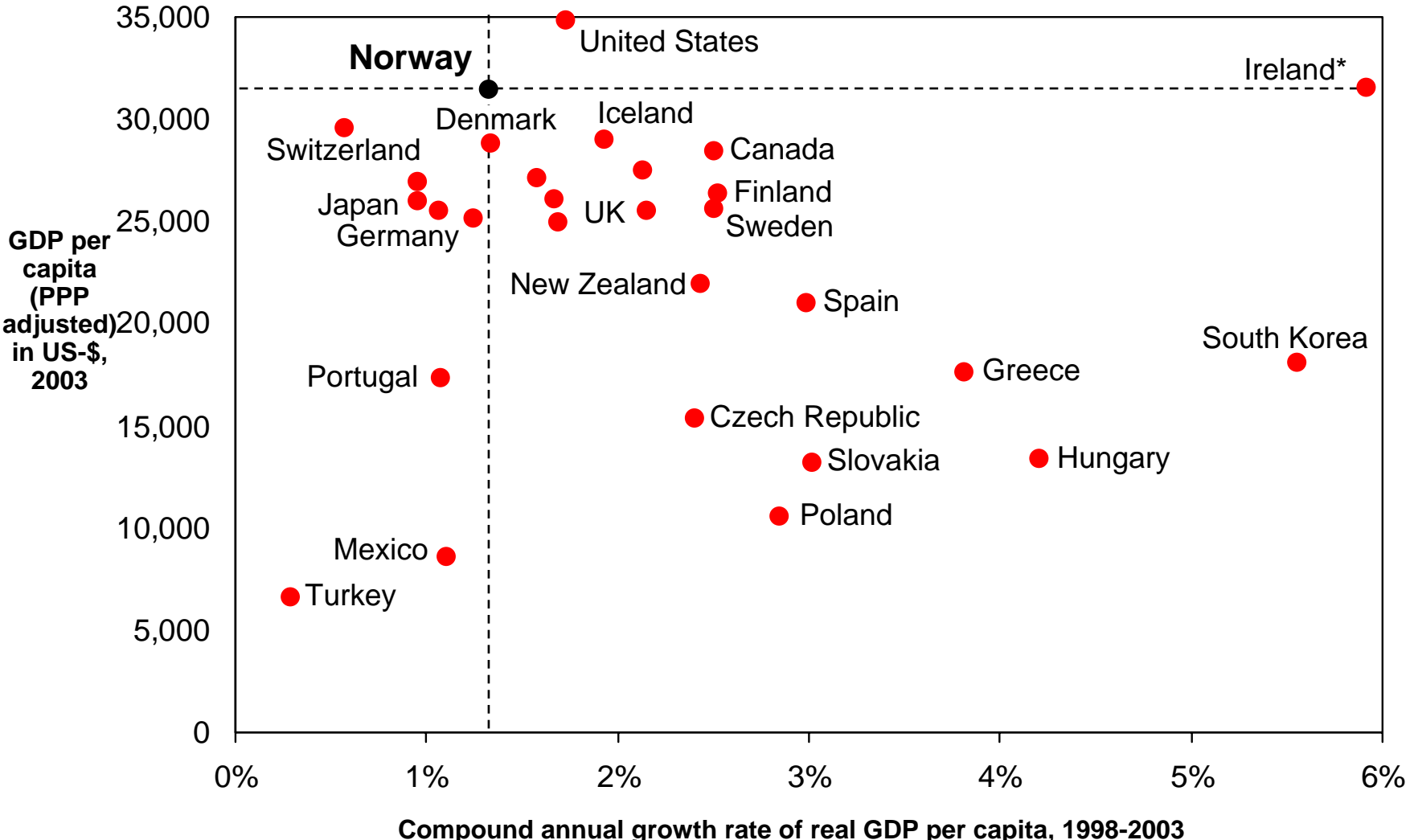


Sorted by CAGR,
1998 - 2003:

- IRELAND
- KOREA, REP. OF
- HUNGARY
- NEW ZEALAND
- CANADA
- AUSTRALIA
- SPAIN
- UNITED STATES
- FINLAND
- SWEDEN
- UNITED KINGDOM
- CZECH REPUBLIC
- FRANCE
- NETHERLANDS
- DENMARK
- NORWAY
- ITALY
- GERMANY
- JAPAN
- SWITZERLAND

Source: EIU (2004)

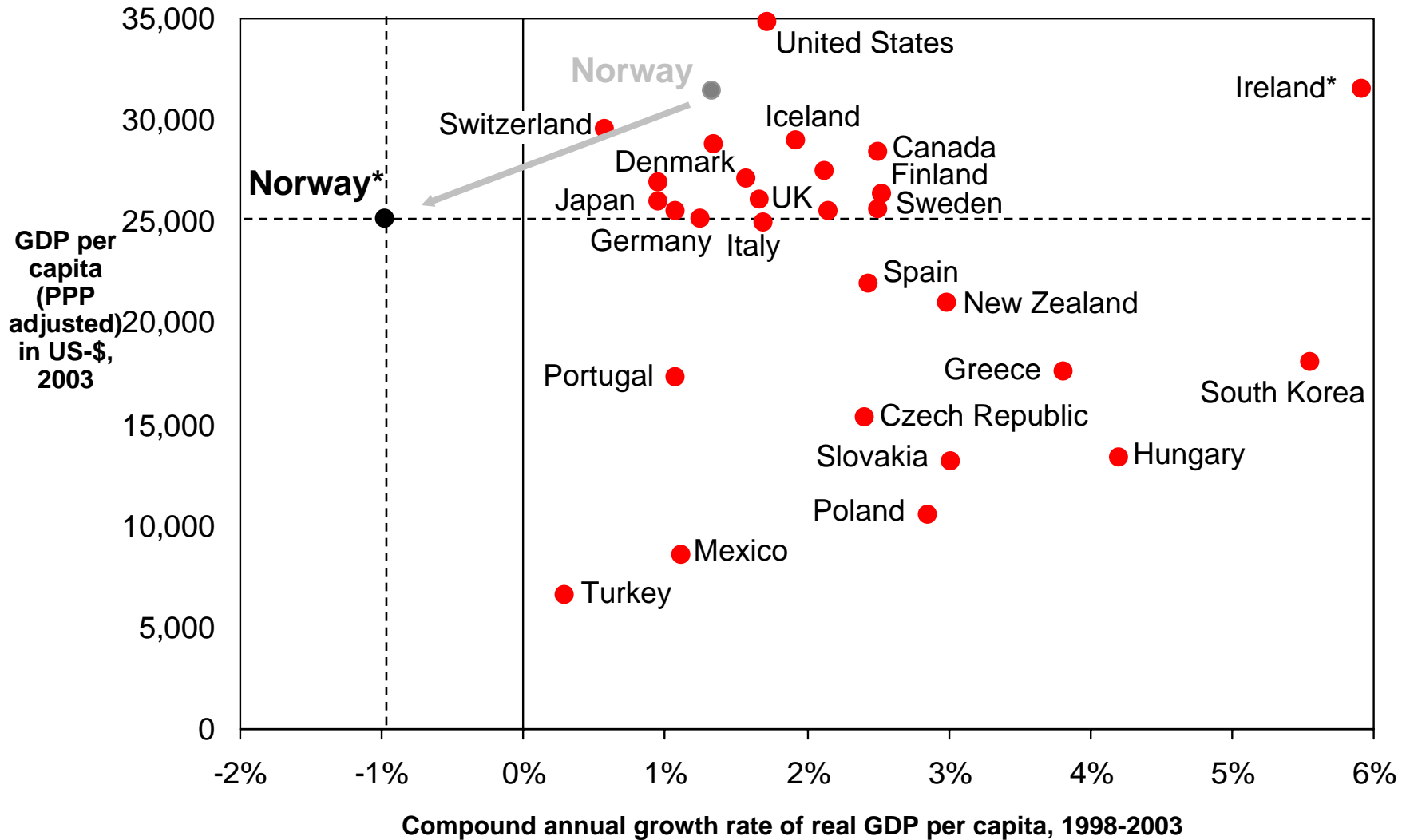
Comparative Economic Performance



Note: Ireland's GDP is above 20% above its GNI because of large profits accruing to foreign-owned companies
 Source: Groningen Growth and Development Centre and The Conference Board (2004), authors' calculations
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Comparative Economic Performance

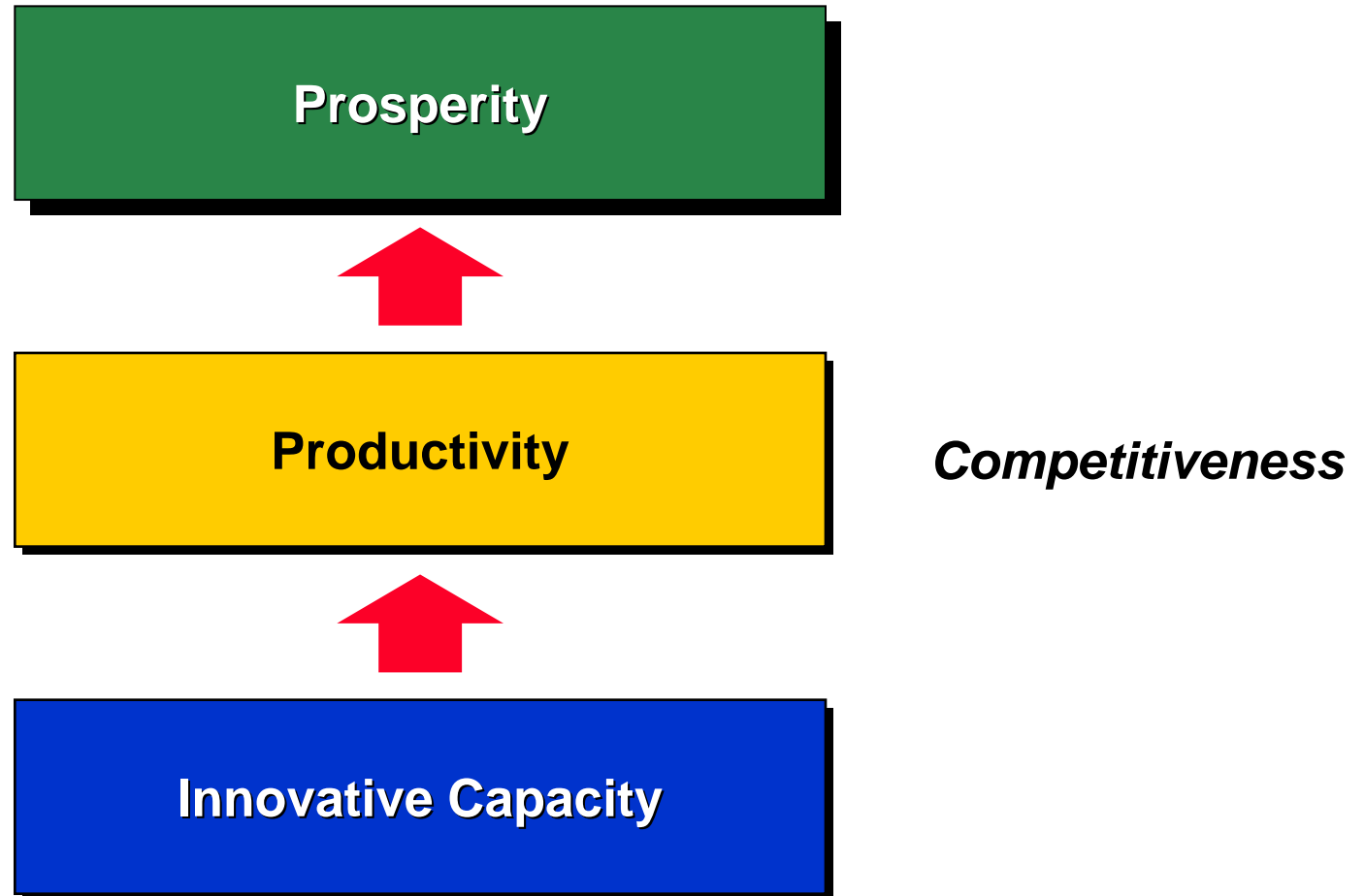
Prosperity Without the Direct Contribution of Oil & Gas



Note: Estimated performance without the direct GDP contribution of oil & gas ("mining and extraction sector"), Ireland's GNI is 20% lower than its GDP

Source: Groningen Growth and Development Centre and The Conference Board (2004), Statistics Norway (2004), authors' calculations

What is Competitiveness

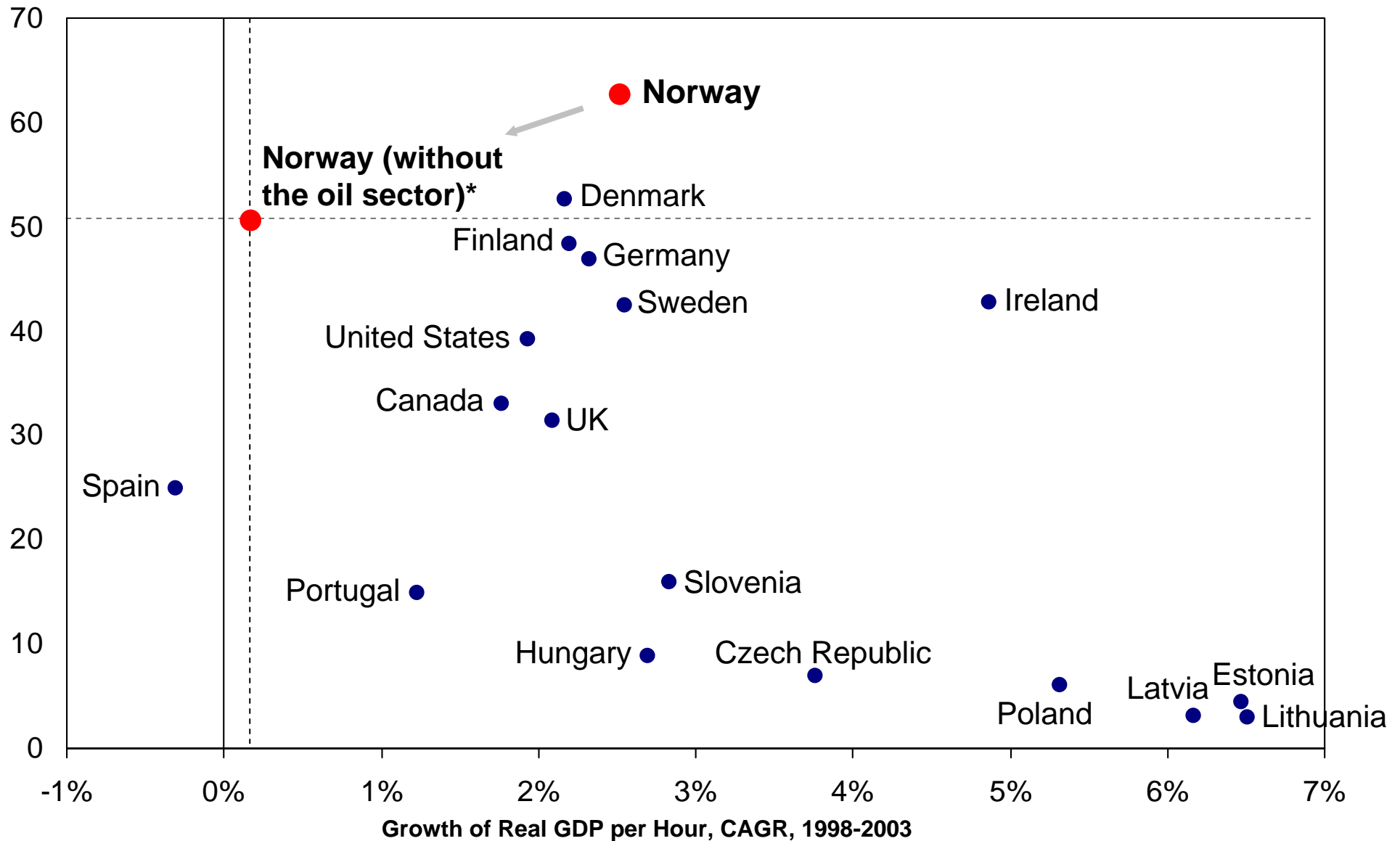


- Innovation is **more than just scientific discovery**
- There are **no low-tech industries**, only low-tech firms

Labor Productivity

Selected Countries

Real GDP per Hour Worked
2003, \$-US



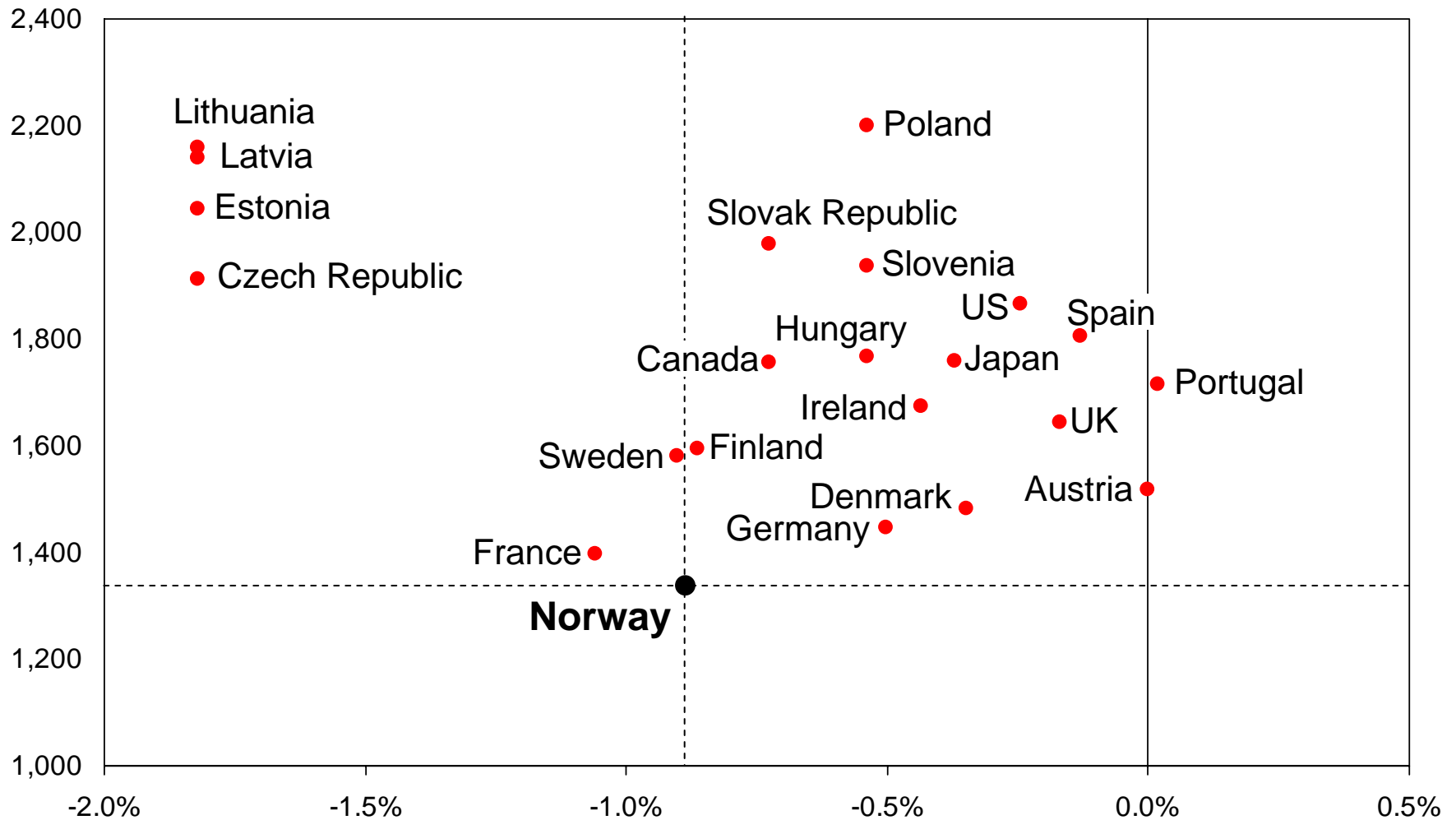
Note: Estimated performance without the direct GDP contribution and hours worked of oil & gas ("mining and extraction sector")

Source: Groningen Growth and Development Centre and The Conference Board (2004), Statistics Norway (2004), authors' calculations

Labor Force Utilization

Selected Countries

Annual Hours Worked
per Employee, 2003



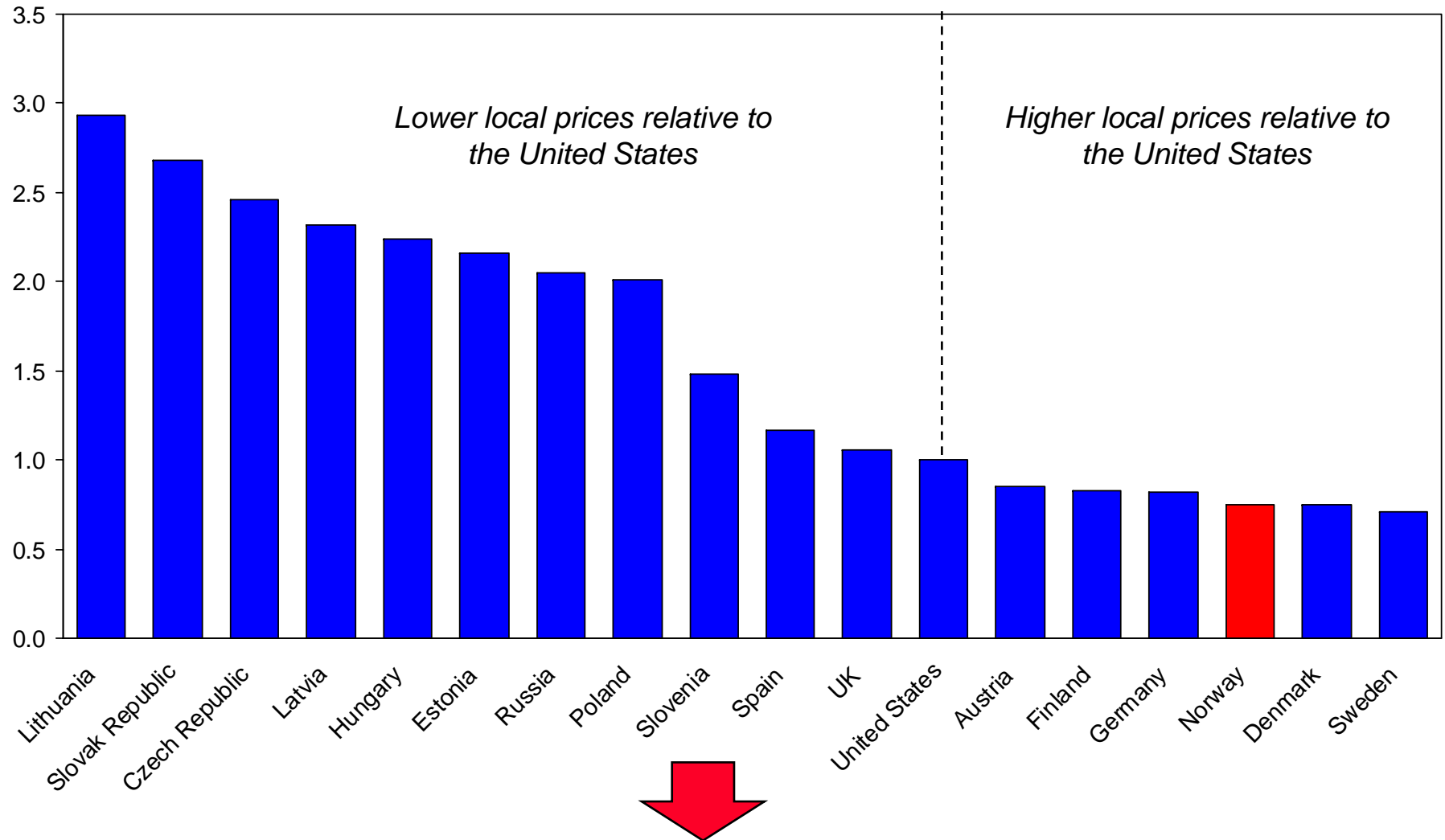
Growth of Annual Hours Worked per Employee, CAGR, 2000-2003

Note: About 1% of all hours worked in Norway take place in the Oil sector; subtracting the oil sector Hours worked per employee increases by 7 hours a year
 Source: Groningen Growth and Development Centre and The Conference Board (2004), Statistics Norway (2004), authors' calculations

Domestic Cost Levels

Selected European Countries

Purchasing Power
Parity Factor, 2003

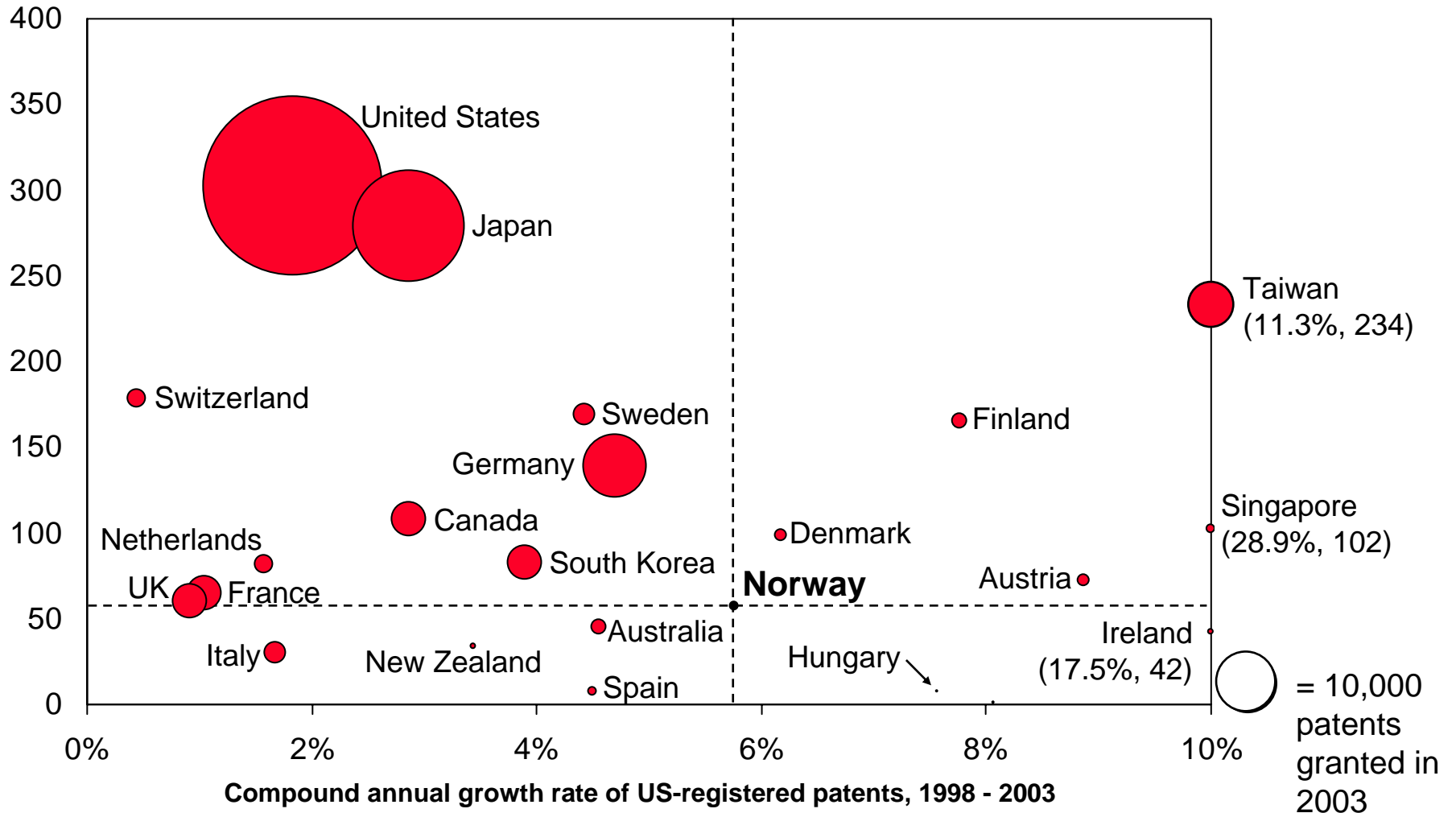


- Norway is a **high cost** place to live and conduct business, as are other Nordic countries

Source: Groningen Growth and Development Centre and The Conference Board (2004), authors' calculations

International Patenting Output OECD Countries

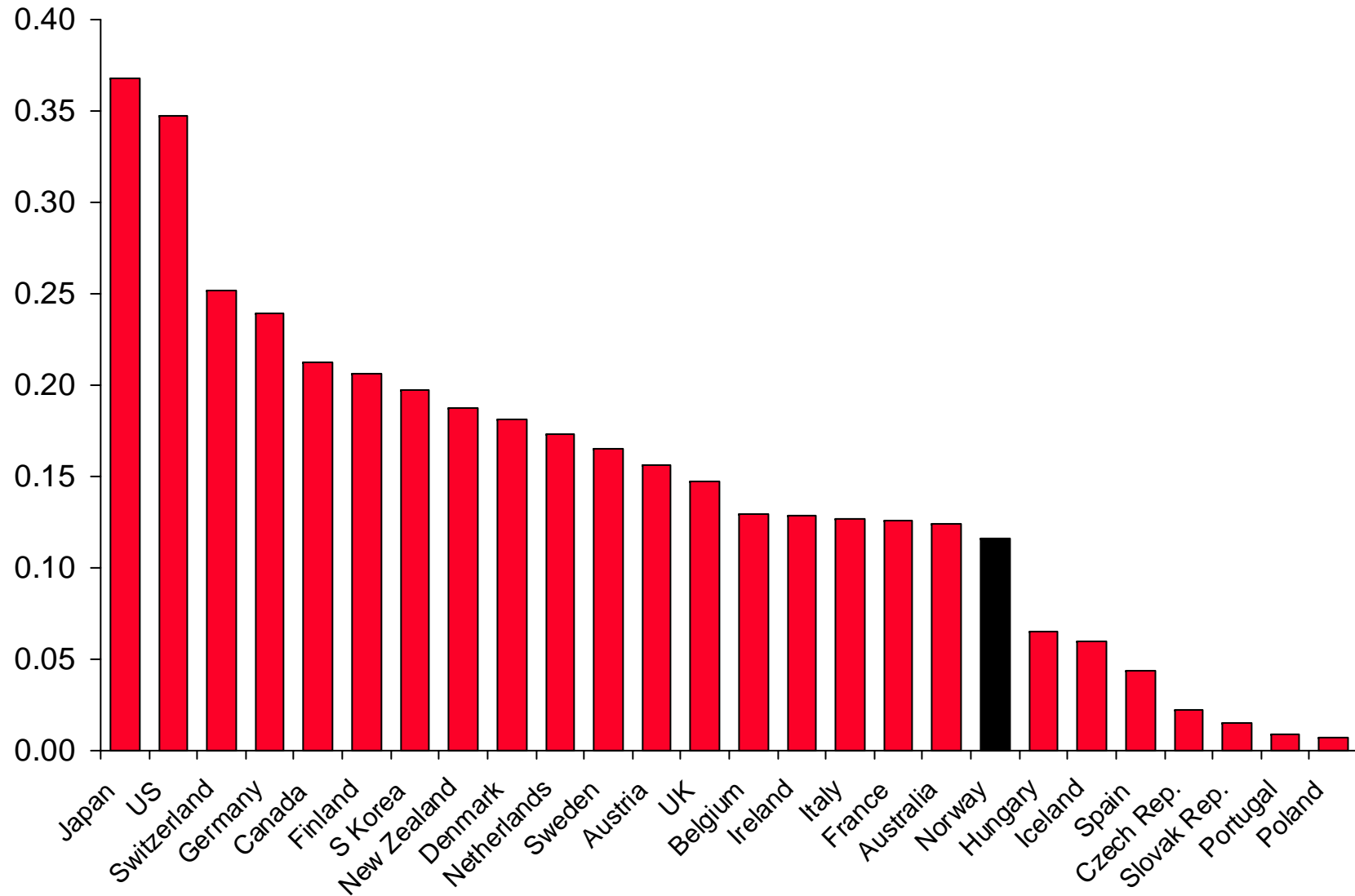
Annual U.S. patents per 1 million population, 2003



- Norway's output of internationally significant patents is **low** and well below innovation leaders

Effectiveness of R&D Spending

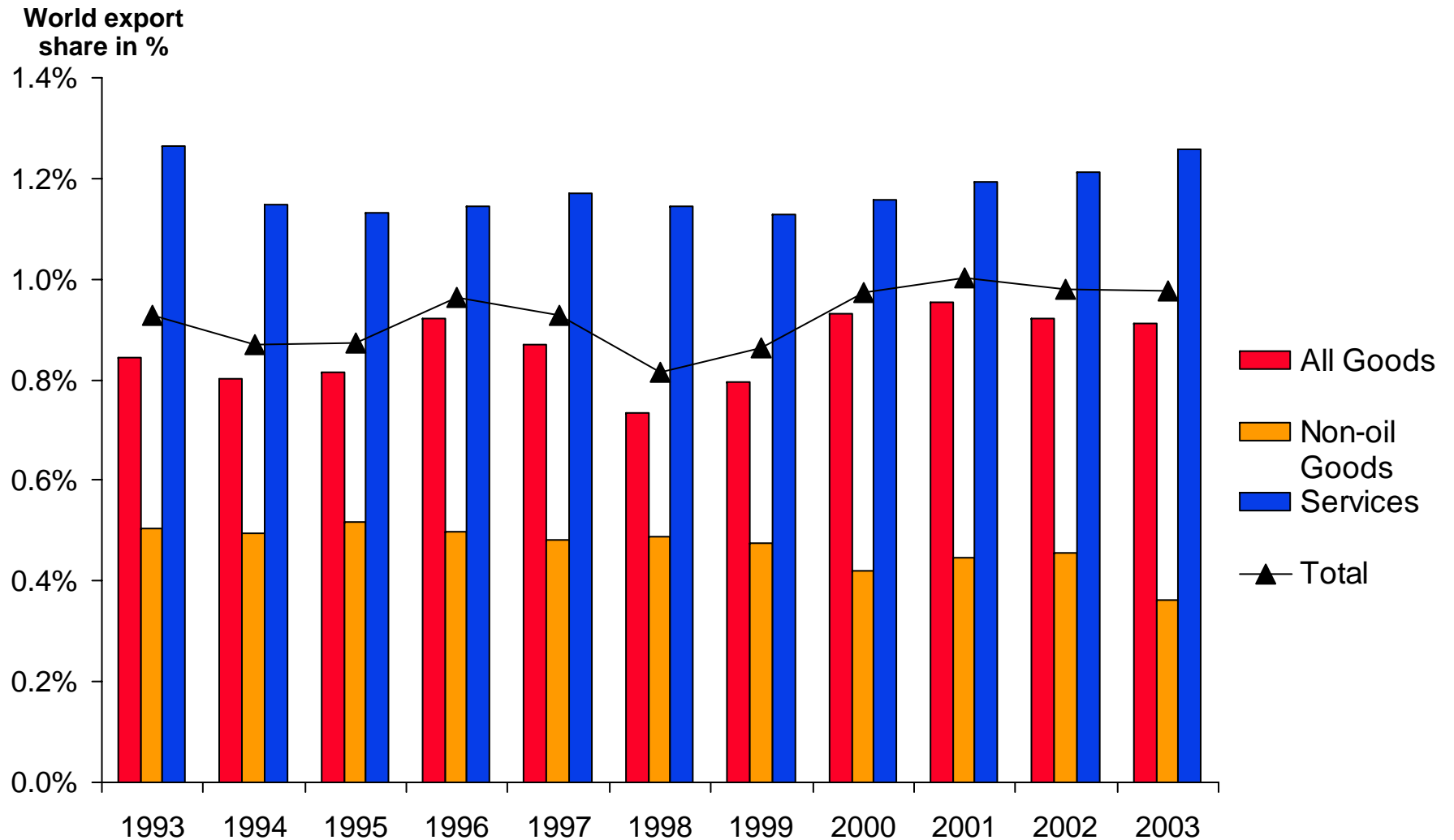
US Patents in 2003 per 1
Mio. R&D Spending in 2001
(or latest available)



Source: OECD, USPTO, author's calculation

Norway's Export Performance

World Export Market Shares



Oil & Gas share of Goods exports

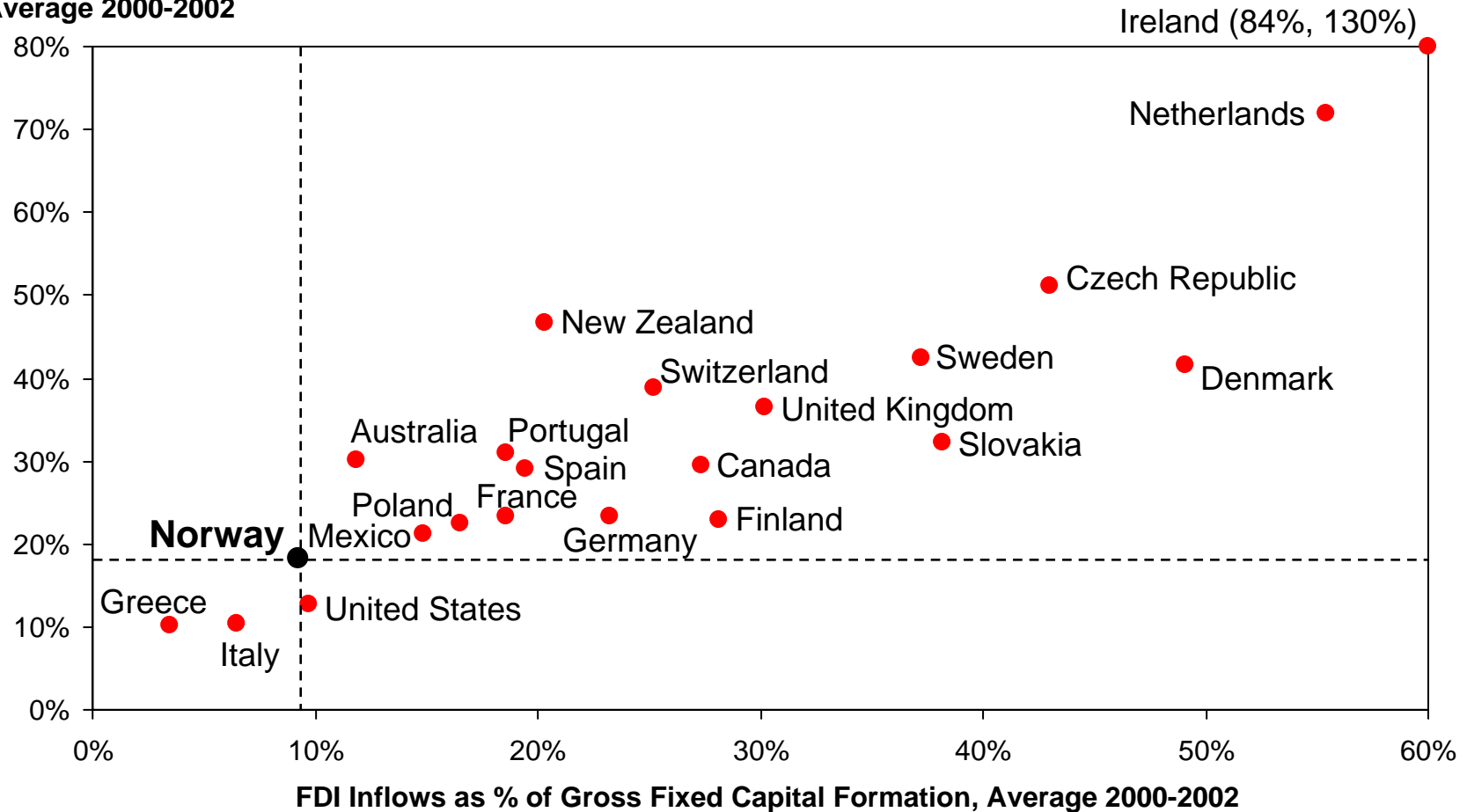
50.9%	49.4%	46.8%	54.4%	53.6%	43.2%	49.8%	63.6%	61.4%	60.1%	na
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Source: WTO (2004), Institute for Strategy and Competitiveness (2004)

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Comparative Inward Foreign Investment OECD Countries

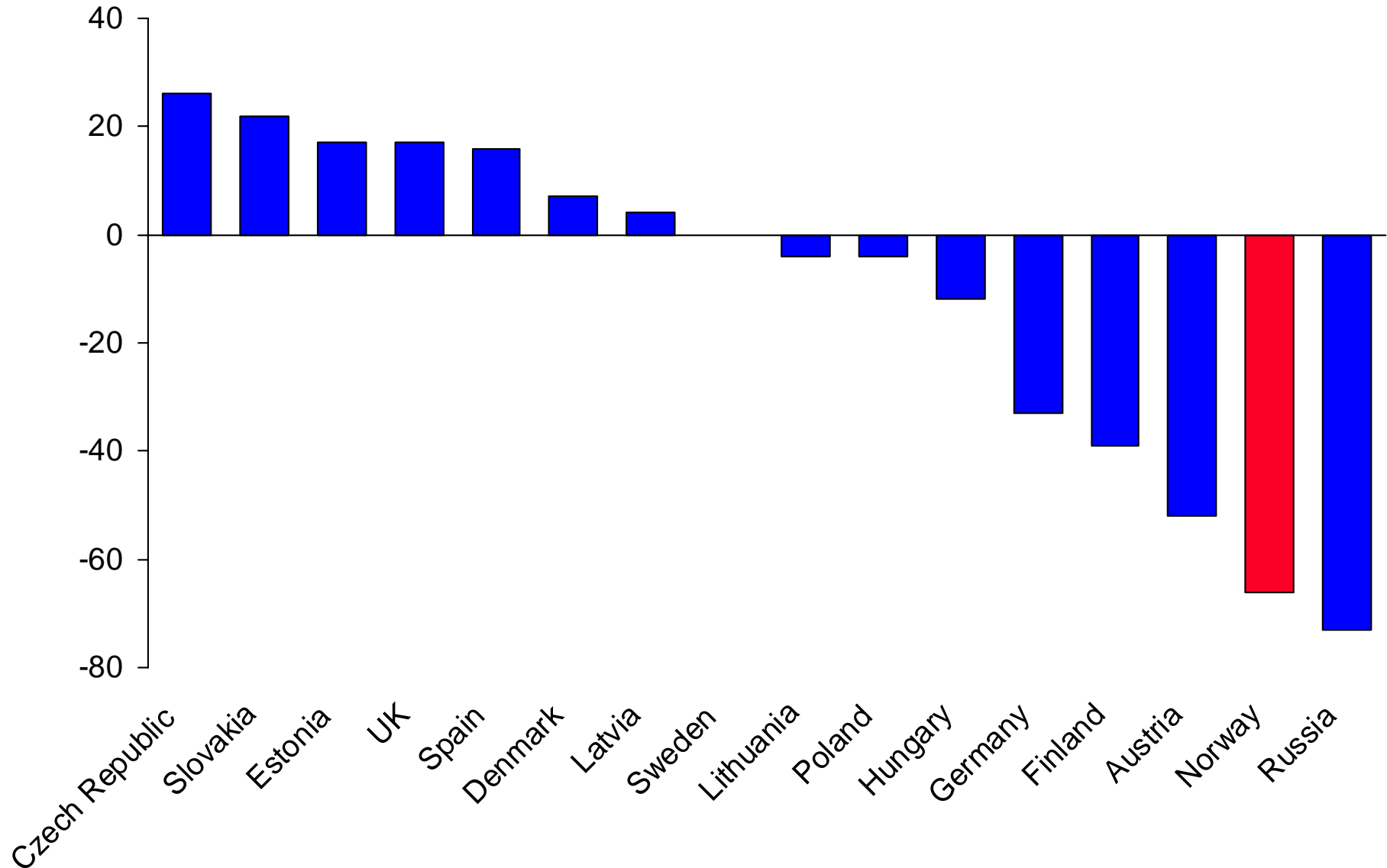
FDI Stocks as % of GDP,
Average 2000-2002



Comparative Inward Foreign Investment

FDI Performance versus Potential

Rank Difference:
FDI Performance – FDI Potential,
2001



Source: UNCTAD (2004), author's analysis.

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Multinational Companies' Home Base

Business Week 1000


• United States	423
• United Kingdom	73
• Canada	37
• Germany	35
• Sweden	15
• Spain	10
• Finland	5
• Norway	5
• Denmark	4
• Ireland	4
• Austria	3
• Portugal	3
• Poland	2
• Hungary	1

Rank	Company	Industry
172	Statoil	Oil & Gas
317	Norsk Hydro	Oil & Gas
410	Telenor	Telecom
670	DnB NOR	Finance
986	Orkla	Conglomerate

Note: Business Week ranks by Market Value, the three leading Norwegian companies are in majority government ownership
 Source: Business Week (2004), author's analysis.

Sources of Prosperity

Inherited Prosperity

- Prosperity is derived from selling **inherited** natural resources or real estate
 - Prosperity is **limited** by the amount of resources available, and is ultimately **temporary**
 - Focus gravitates towards the **distribution** of wealth as interest groups seek a bigger share of the pie
 - E.g. regions, public employees, powerful sectors
- 
- **Government** is the central actor in the economy as the owner and distributor of wealth
 - Resource revenues allow unproductive policies and practices to **persist**

Created Prosperity

- Prosperity is derived from **creating valuable products and services**
 - Prosperity is created by **firms**
 - Prosperity is **unlimited**, based only by the innovativeness and productivity of companies in the economy
 - Creating the **conditions** for productivity and innovation are the central policy question
- 
- **Companies** are the central actors in the economy
 - The **government's** role is to create the enabling conditions

Determinants of Productivity and Productivity Growth

Macroeconomic, Political, Legal, and Social
Context for Competitiveness

Microeconomic Foundations of Competitiveness

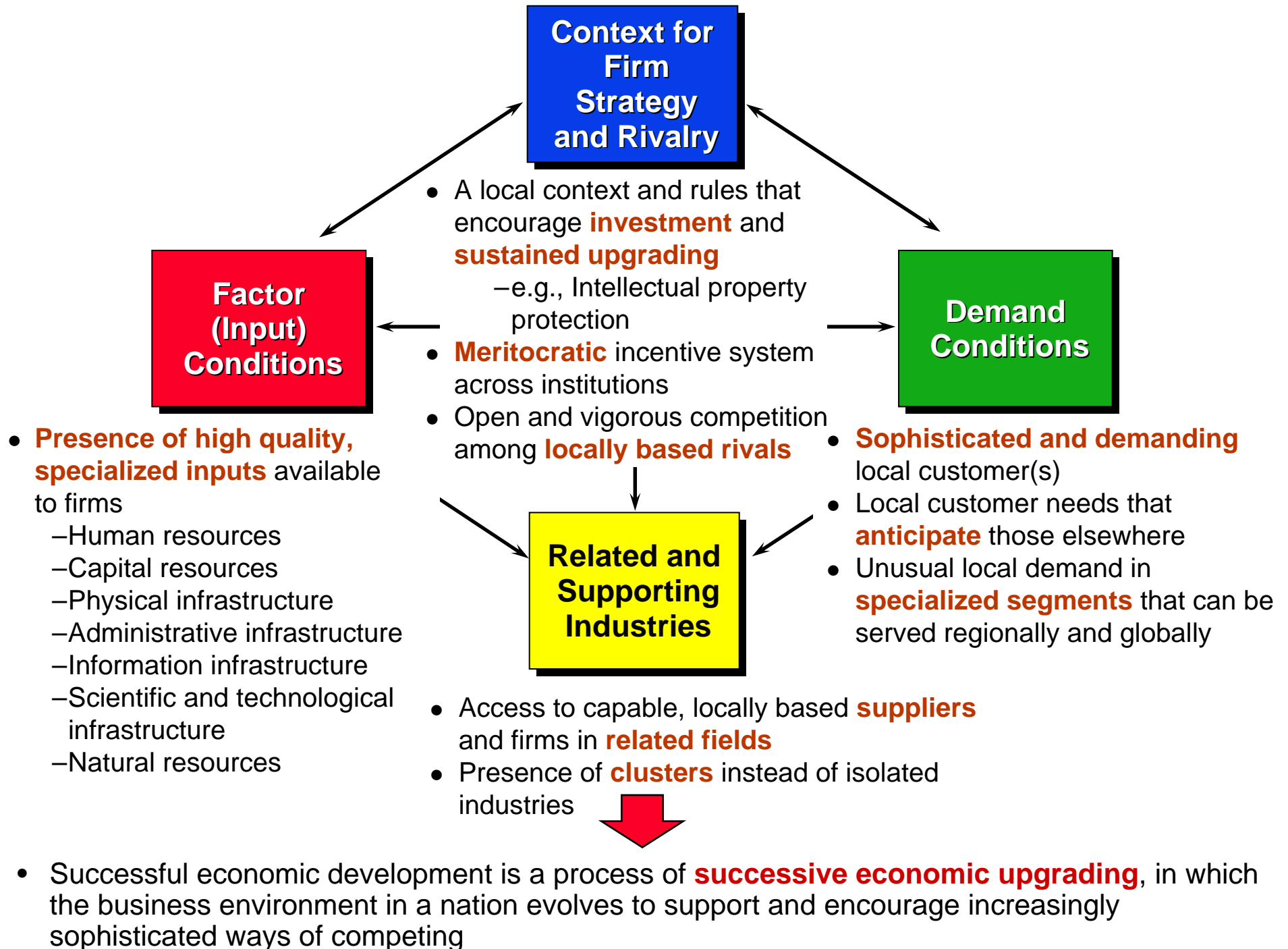
The Sophistication
of Company
Operations and
Strategy



The Quality of the
Microeconomic
Business
Environment

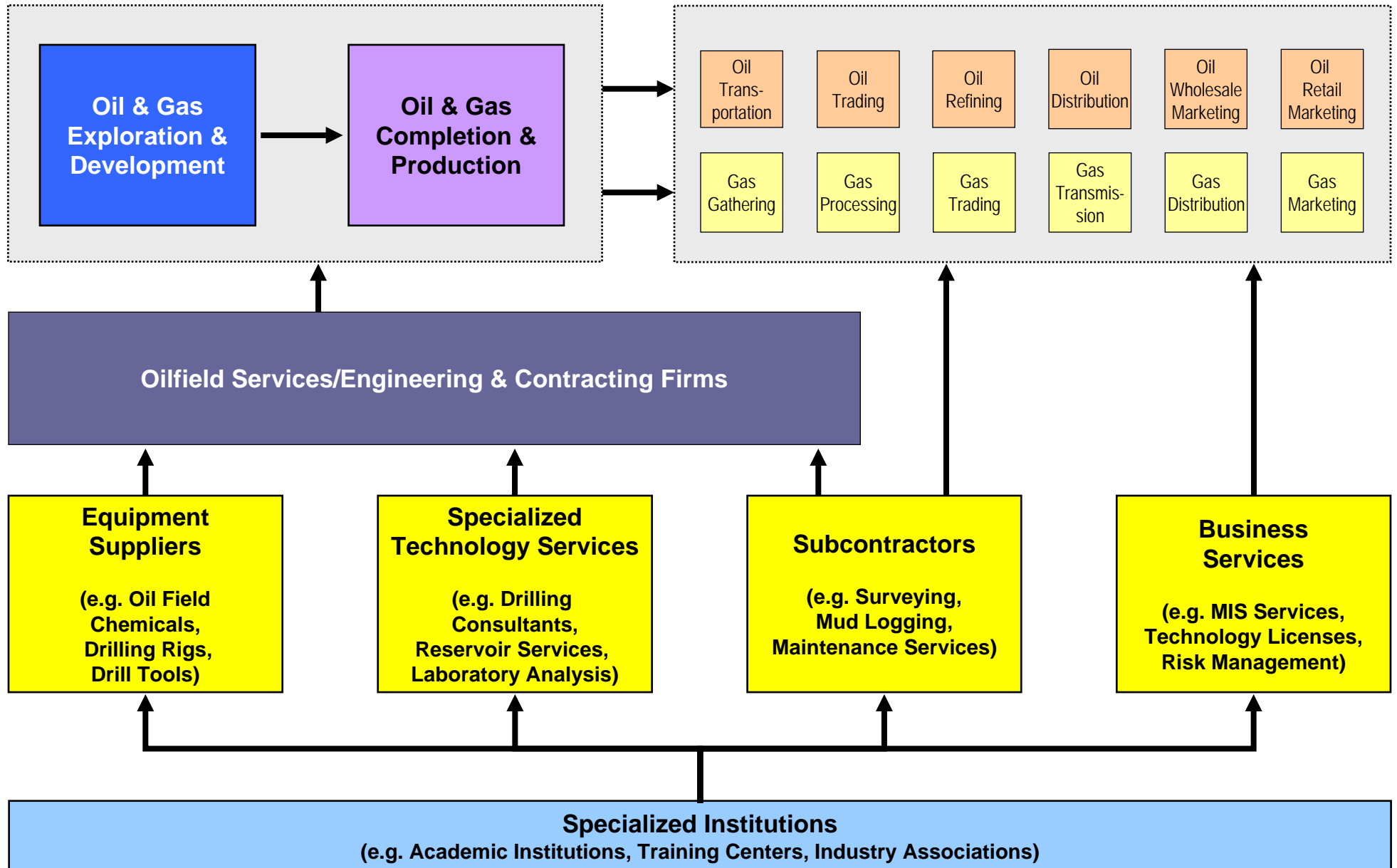
- A sound macroeconomic, political, legal, and social context creates the potential for competitiveness, **but is not sufficient**
- Competitiveness ultimately depends on improving the **microeconomic capability** of the economy and the **sophistication of local companies and local competition**

Productivity and the Business Environment



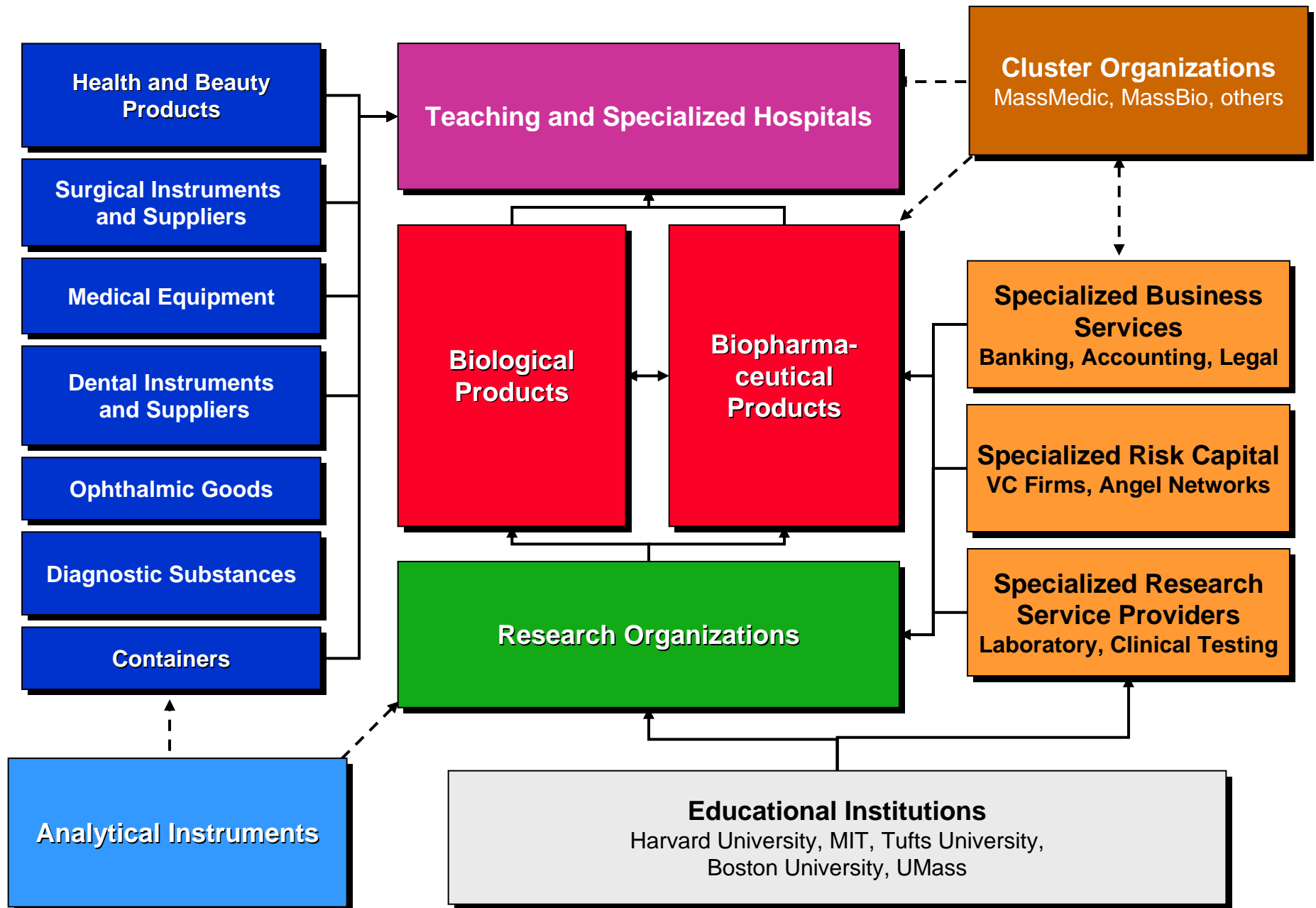
Clusters and Competitiveness

The Houston Oil and Gas Products and Services Cluster



Clusters and Competitiveness

The Boston Life Sciences Cluster



Institutions for Collaboration

Selected Massachusetts Organizations, Life Sciences

Life Sciences Industry Associations

- Massachusetts Biotechnology Council
- Massachusetts Medical Device Industry Council
- Massachusetts Hospital Association

General Industry Associations

- Associated Industries of Massachusetts
- Greater Boston Chamber of Commerce
- High Tech Council of Massachusetts

Economic Development Initiatives

- Massachusetts Technology Collaborative
- Mass Biomedical Initiatives
- Mass Development
- Massachusetts Alliance for Economic Development

University Initiatives

- Harvard Biomedical Community
- MIT Enterprise Forum
- Biotech Club at Harvard Medical School
- Technology Transfer offices

Informal networks

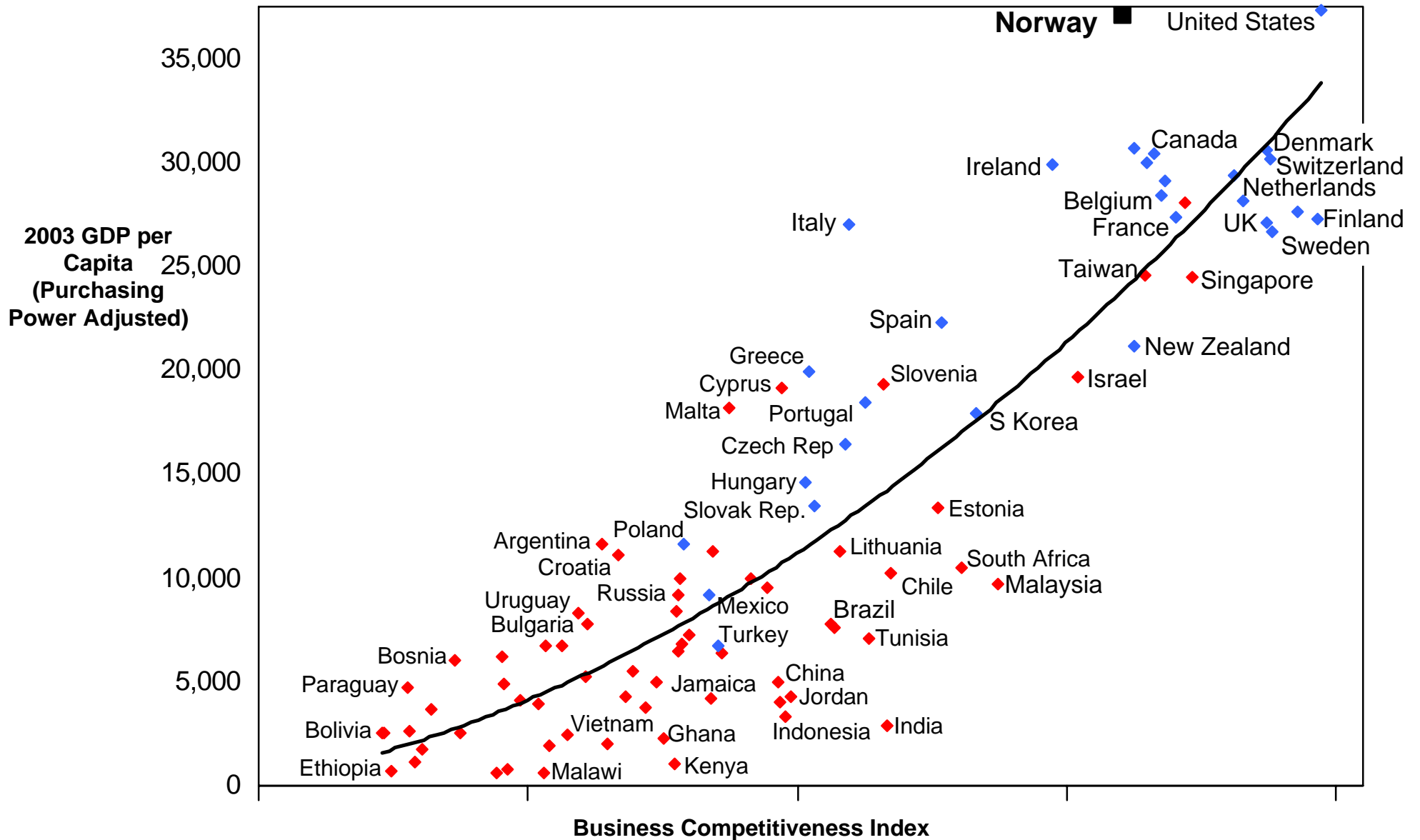
- Company alumni groups
- Venture capital community
- University alumni groups

Joint Research Initiatives

- New England Healthcare Institute
- Whitehead Institute For Biomedical Research
- Center for Integration of Medicine and Innovative Technology (CIMIT)

Global Competitiveness Report 2004

The Relationship Between Business Competitiveness and GDP Per Capita

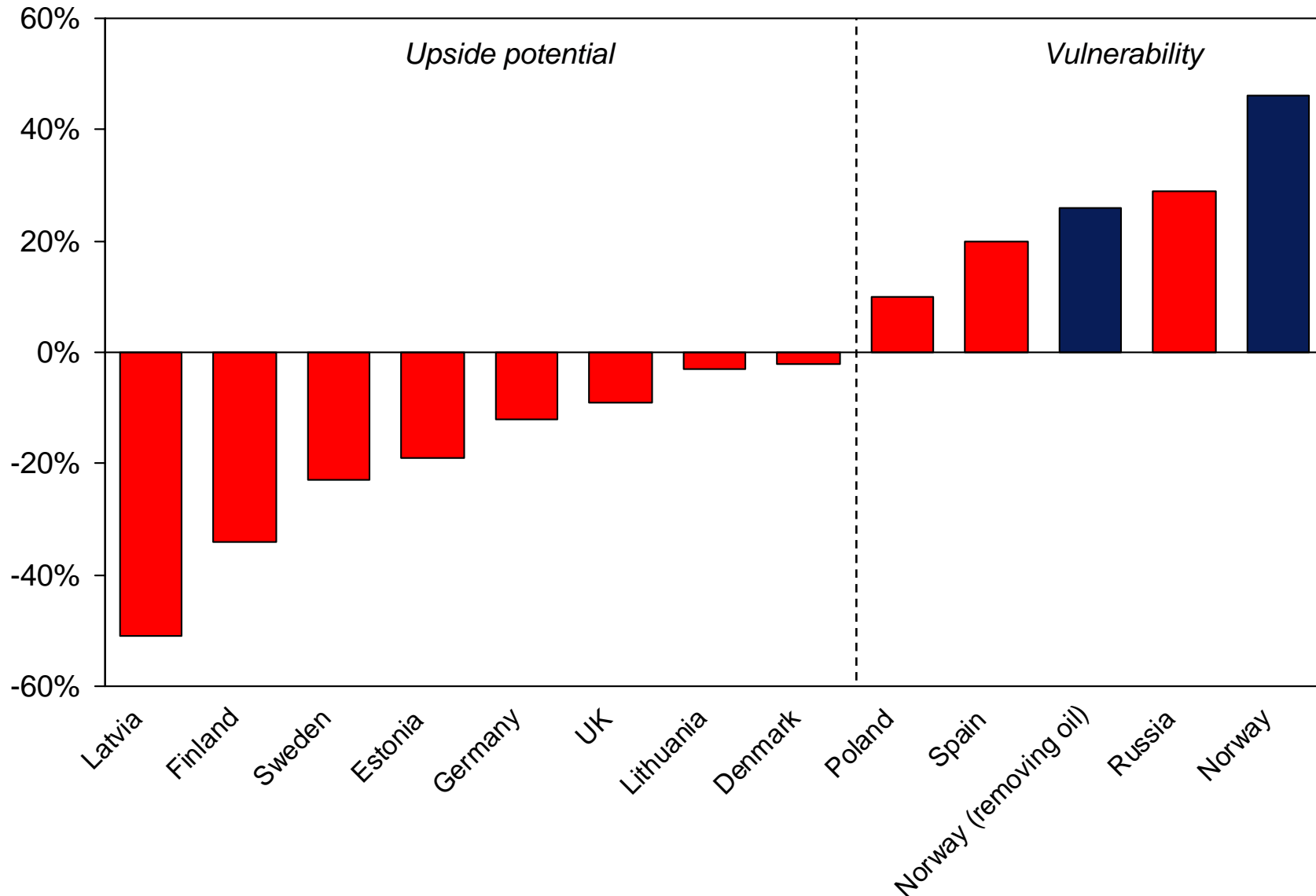


Note: OECD countries marked in blue
 Source: Global Competitiveness Report 2004
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Business Competitiveness Index

Over- and Underperformance

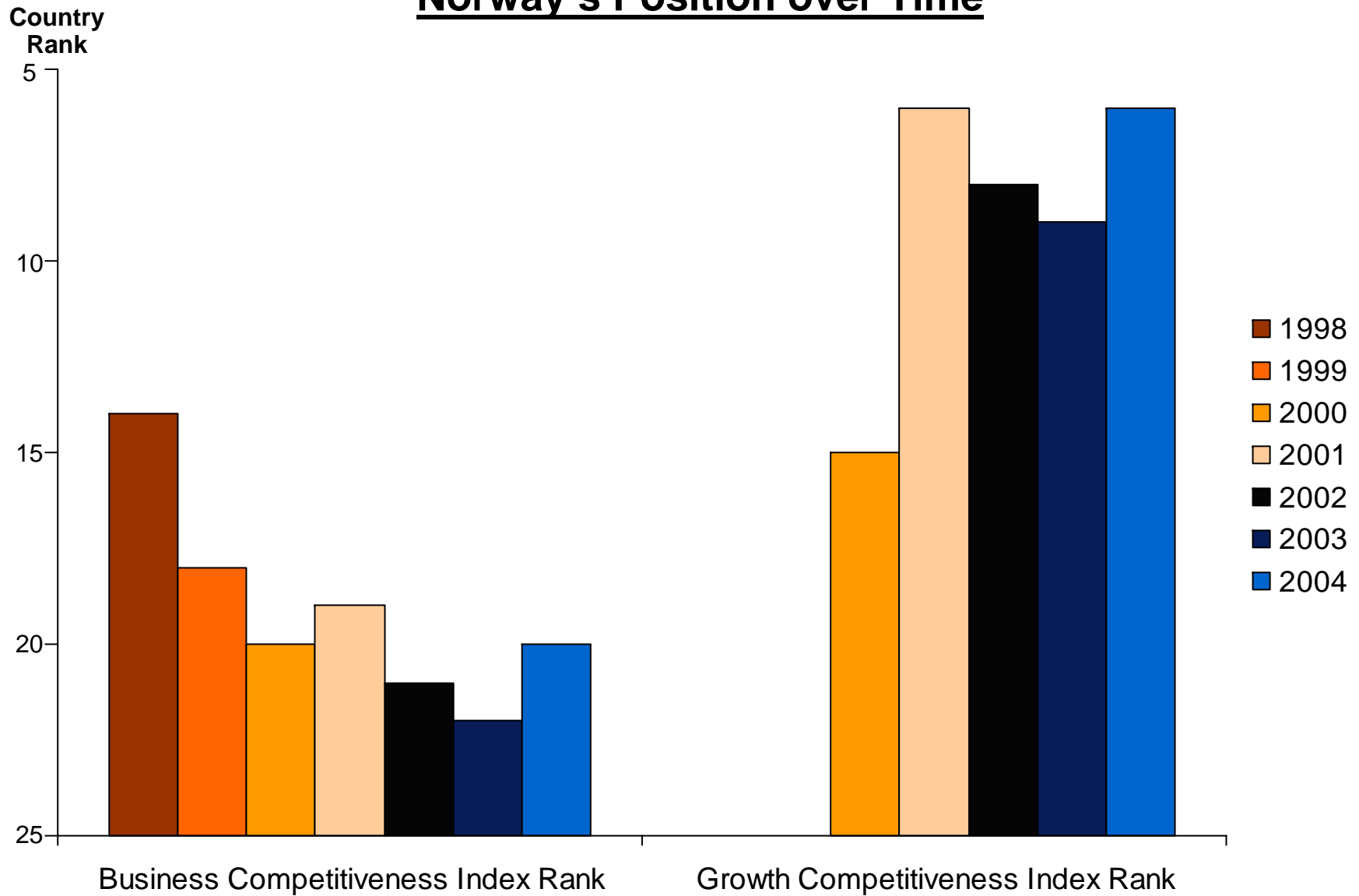
Gap between actual and predicted
GDP per capita, % of actual GDP per capita, 2003



Source: GCR (2004), Institute for Strategy and Competitiveness, author's analysis.

Business and Growth Competitiveness Index

Norway's Position over Time



Norway's Relative Position 2003

Company Operations and Strategy

Competitive Advantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 1998

Willingness to delegate authority	6
Extent of staff training	10
Reliance on professional management	11 ↓
Production process sophistication	13
Extent of marketing	18 ↑

Competitive Disadvantages Relative to GDP per Capita

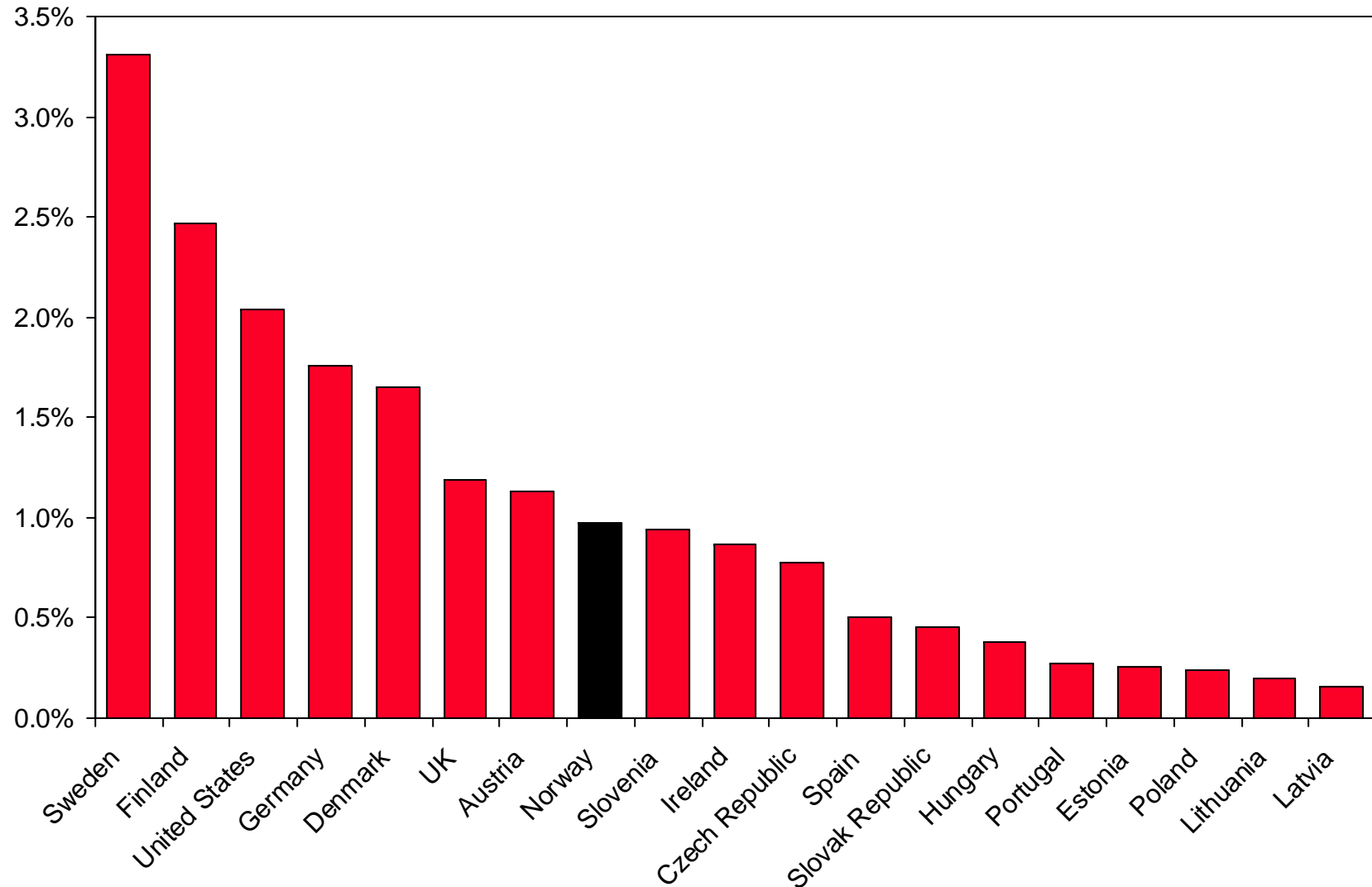
Country Ranking, Arrows
indicate a change of 5 or more
ranks since 1998

Value chain presence	50 ↓
Extent of regional sales	42 ↓
Breadth of international markets	40
Extent of incentive compensation	38
Extent of branding	34 ↓

Note: Rank by countries; overall Norway ranks 20 (23 on Company Operations and Strategy, 2 on GDP pc 2003)
Source: Global Competitiveness Report 2004

Private Sector R&D Investments

Private Sector R&D Expenditure as
% of GDP, 2001 or latest



Innovation Performance

Top Norwegian Organizations in Terms of U.S. Patents

<i>Company</i>	<i>U.S. Patents, 1997-2001</i>	<i>Rank Among Patentors from the Baltic Sea Region*</i>
NYCOMED IMAGING AS	69	19
NORSK HYDRO	64	20
STATOIL	52	22
TANDBERG DATA A/S	19	77
ALVERN NORWAY A/S	17	87
ALCATEL	16	91
KVERNELAND KLEPP AS	14	102
SINVENT AS	12	112
ERICSSON NORWAY	11	118
BAKER HUGHES INC.	10	125
ELKEM ASA	10	125
PETROLEUM GEO-SERVICES A/S	10	125
KVAERNER MARITIME AS	9	143
WEATHERFORD/LAMB, INC.	9	143
ABB OFFSHORE TECHNOLOGY AS	8	159
AXIS BIOCHEMICALS AS	7	186
BOREALIS HOLDING A/S	7	186
GECO A.S.	7	186
KVAERNER ASA	7	186

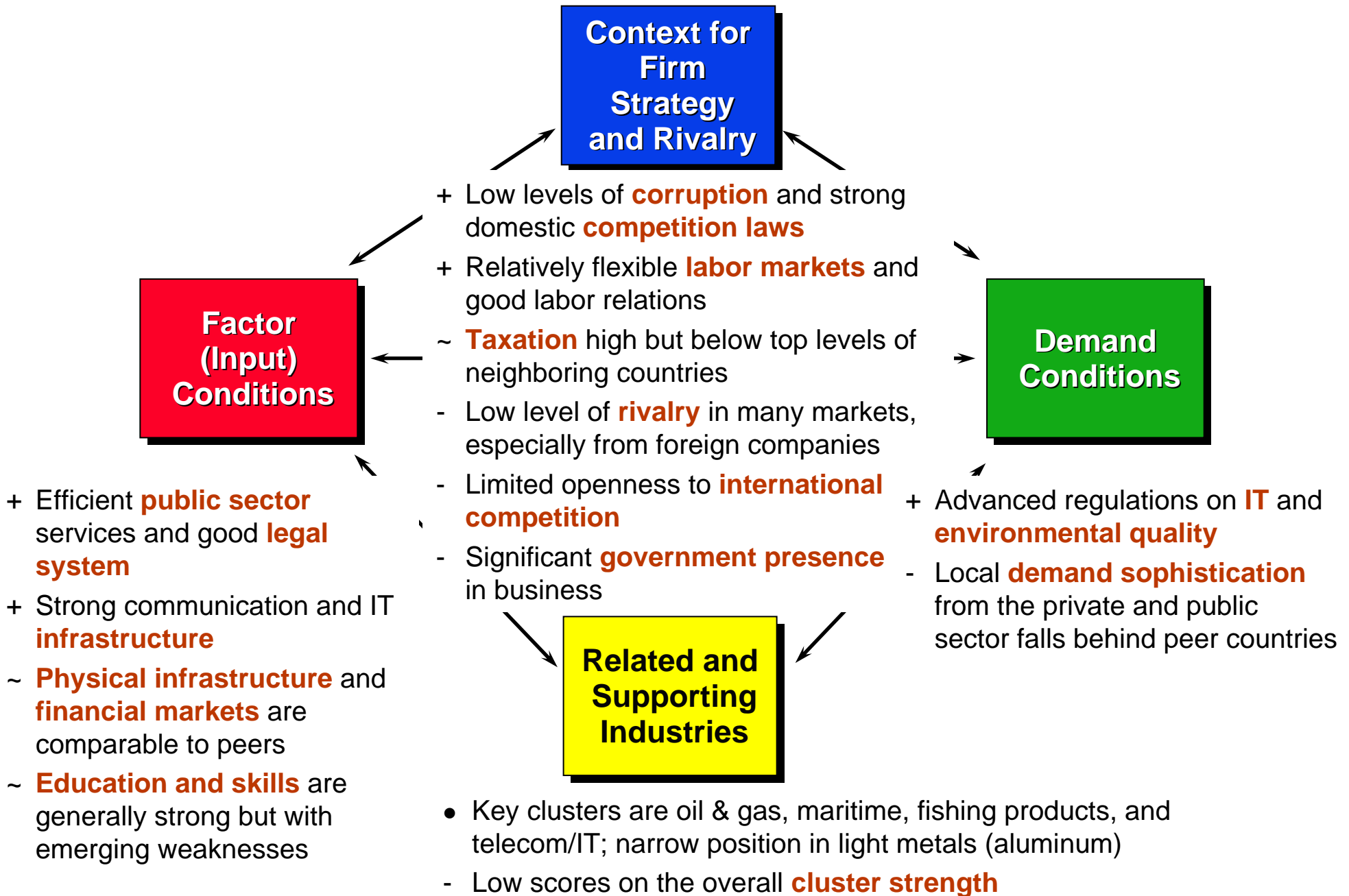
Note: Baltic Sea Region includes Nordic countries, Baltic countries, Northwestern Russia, Northern Poland, and Northern Germany
Source: USPTO (2004), author's analysis

Company Operations and Strategy

Key Observations

- Norwegian companies have **strengths** in employing modern management techniques and staff training
- However, they have **limited presence in the value chain** relative to peers
- While Norwegian companies employ a relatively high share of researchers, they fall **behind** other Nordic countries on R&D spending and international patenting
- Norway is home to **few internationally active** companies
- Norwegian companies lag in terms of **breadth of international positions**

The Norwegian Business Environment



Norwegian Business Environment

Core Strengths

Factor Conditions

Country Ranking, Arrows indicate a change of 5 or more ranks since 1998

Extent of bureaucratic red tape	3	↑
Efficiency of legal framework	4	
Judicial independence	4	
Cell phones per 100 people (2003)	8	↑
Telephone/fax infrastructure quality	11	↓
Internet users per 10,000 people (2003)	11	

Context for Firm Strategy and Rivalry

Country Ranking, Arrows indicate a change of 5 or more ranks since 1998

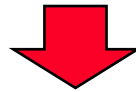
Independence of decisions by government officials	1	↑
Protection of minority shareholders' interests	4	
Business costs of corruption	5	
Intellectual property protection	7	↑
Effectiveness of anti-trust policy	7	
Effectiveness of bankruptcy law	10	
Cooperation in labor-employer relations	10	
Hidden trade barrier liberalization	14	↓

Note: Rank by countries; overall Norway ranks 20 (14 on National Business Environment, 2 on GDP pc 2003)
Source: Global Competitiveness Report 2004

Norwegian Business Environment

Misleading Perceptions of Strengths

- In some areas presumed to be Norwegian strengths, the country is either **not significantly different** from competing locations or shows **signs of emerging weakness**



Education and skills

- There is a high ratio of scientists and engineers in the workforce and a high share of labor market entrants with secondary education
- However, the share of graduates in science and technology is low and declining, test scores in assessments of educational attainment are only average despite high expenditures, and companies voice concerns about the quality of math & science education

Infrastructure

- Overall infrastructure quality is only on par or even below peers, especially in terms of rail and air transport infrastructure

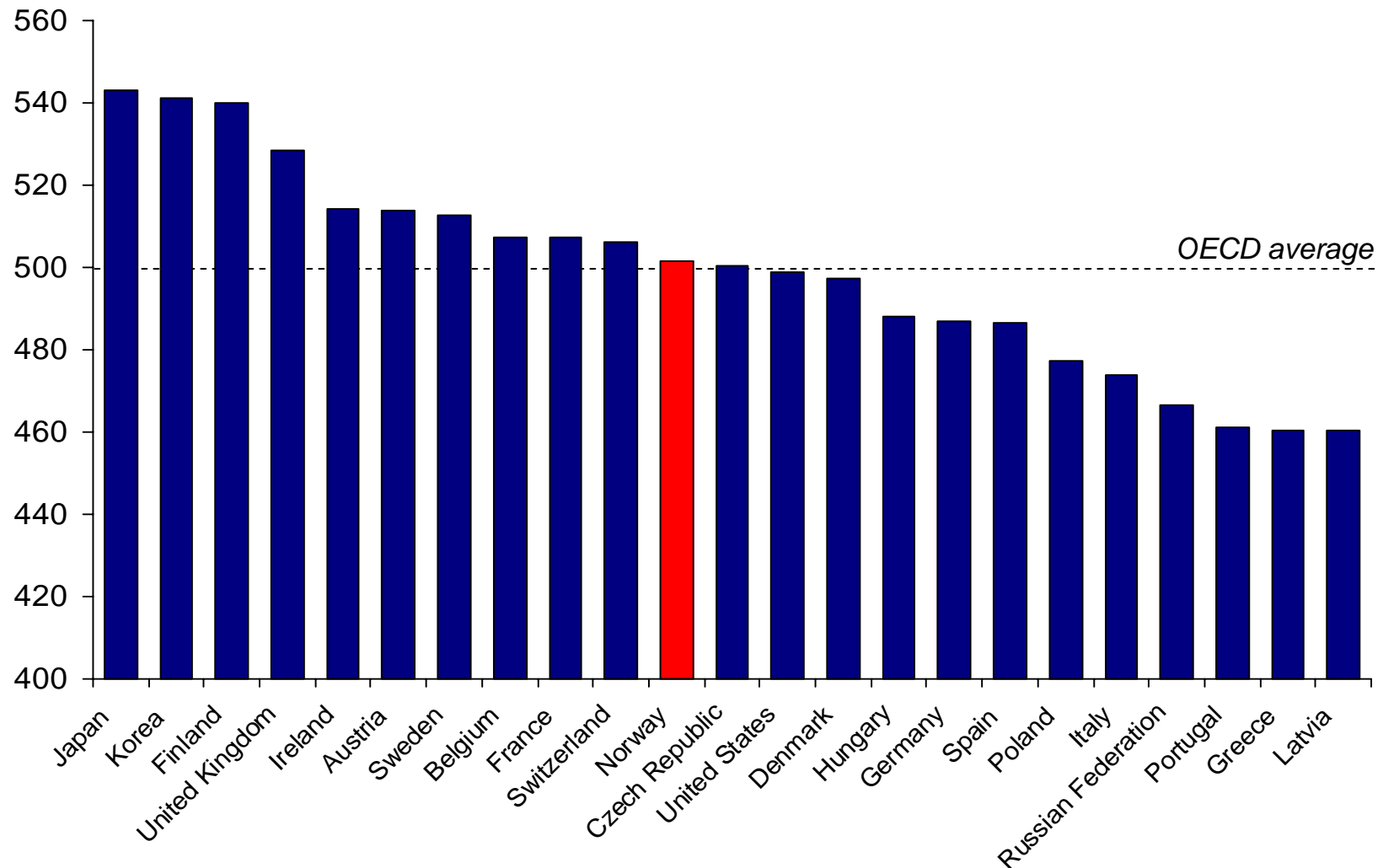
Financial markets

- There is ample availability of debt capital but low level of financial market sophistication and limited equity market access

Norwegian Human Resources

Average of Reading, Scientific, and Mathematical Literacy

Average Educational Attainment, 2000



Source: OECD PISA-Study (2003), author's calculation

Norwegian Business Environment

Misleading Perceptions of Weakness

- Other areas of the business environment which are presumed, at least abroad, to be Norwegian weaknesses are actually **not major disadvantages** versus competing locations



Labor market regulations

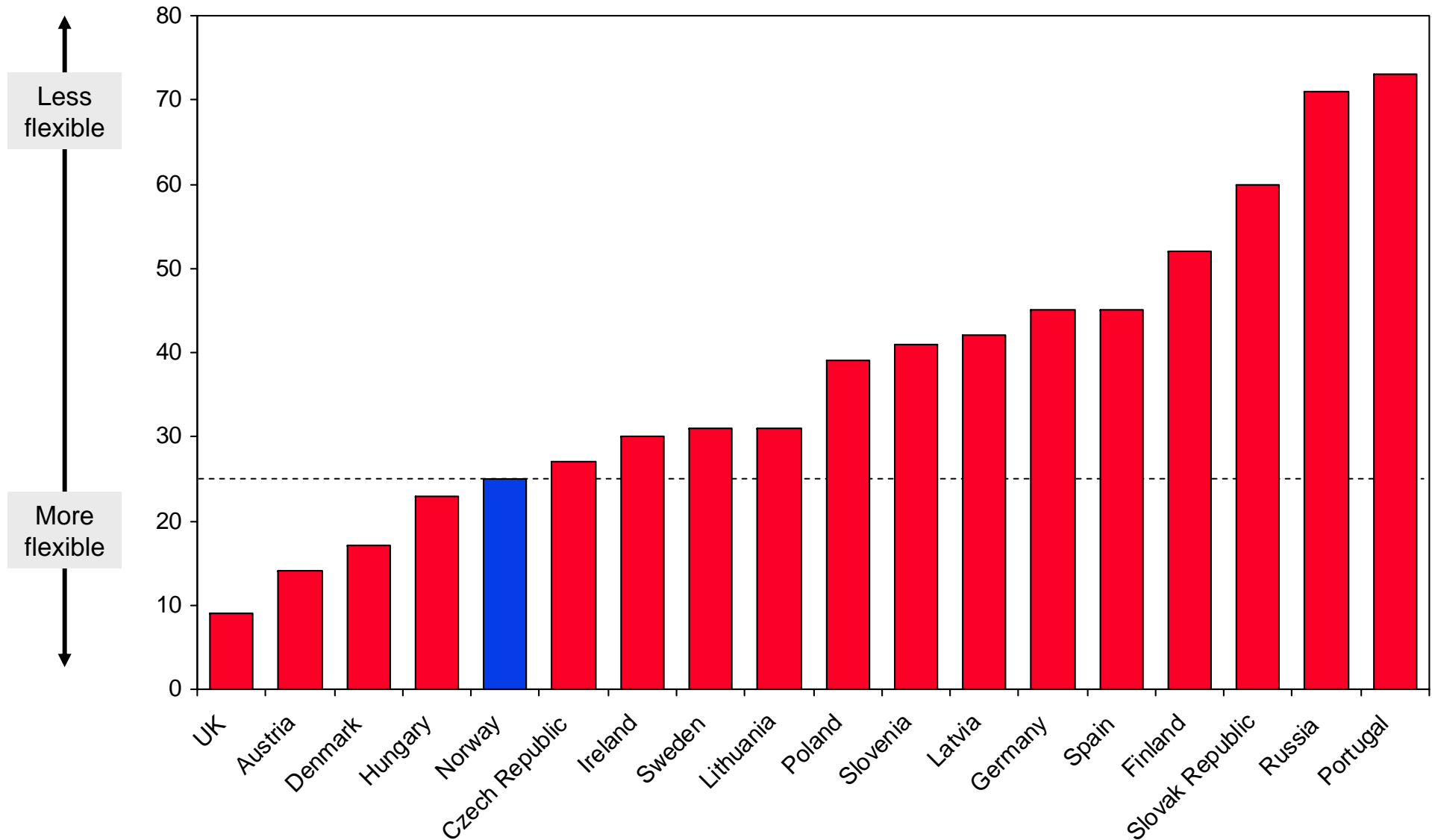
- While Norway has some regulatory barriers to hiring, it is rated as more flexible in terms of firing employees than many of other locations

Taxation

- While the overall tax burden on Norwegian is high, its incentive effects are rated as less negative than in many other European countries

Context for Strategy and Rivalry

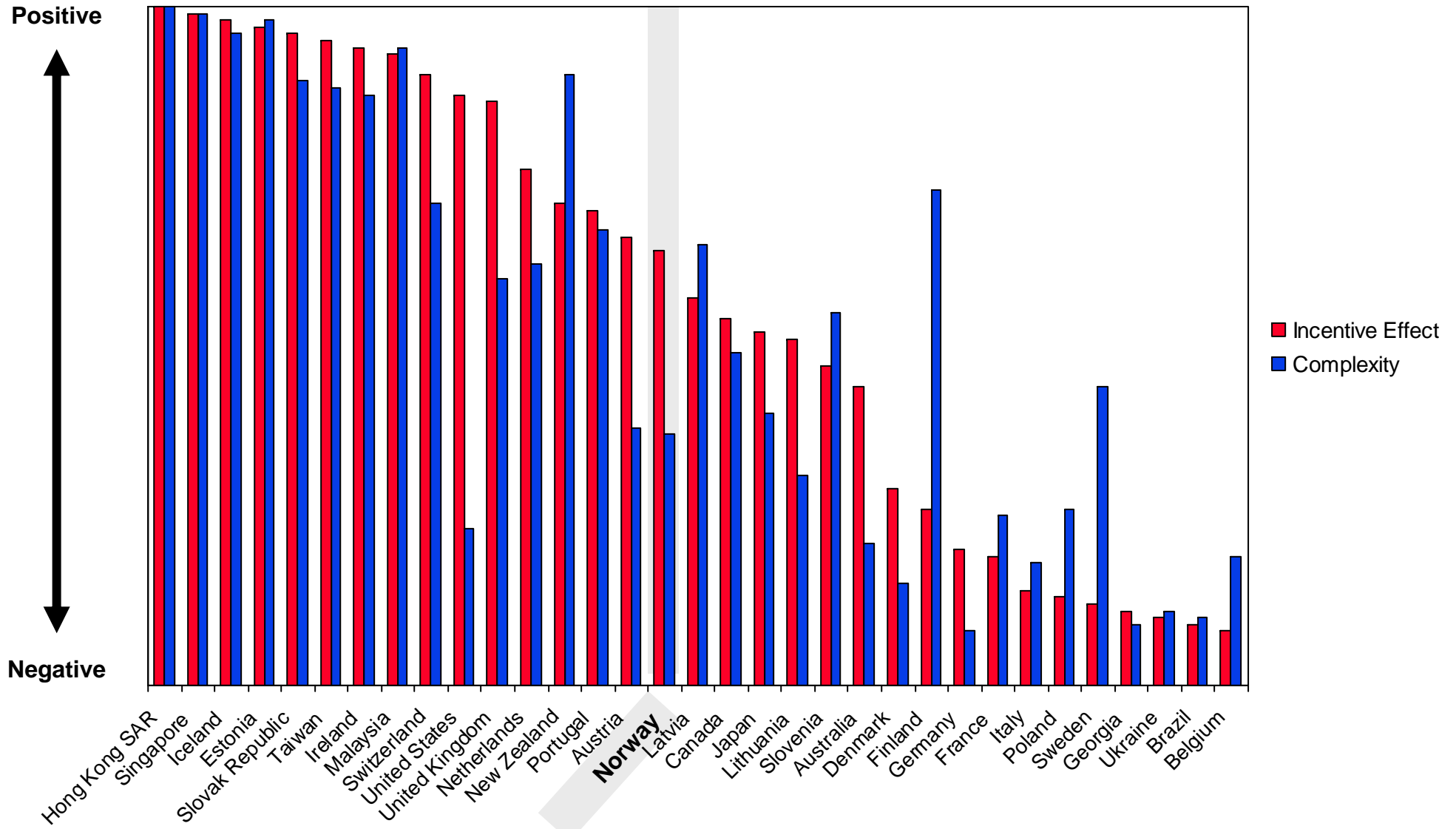
Labor Market Flexibility*



Note: Score for the flexibility of regulations on labor contract termination
Source: World Bank (2004), author's analysis.

Context for Strategy and Rivalry

Taxation System



Norway's Relative Position

Context for Firm Strategy and Rivalry

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 1998

Foreign ownership restrictions	46	
Centralization of economic policy-making	31	
Intensity of local competition	28	
Tariff liberalization	26	↓
Decentralization of corporate activity	25	
Efficacy of corporate boards	22	↓
Regulation of securities exchanges	19	
Prevalence of mergers and acquisitions	16	
Extent of locally based competitors	16	↑

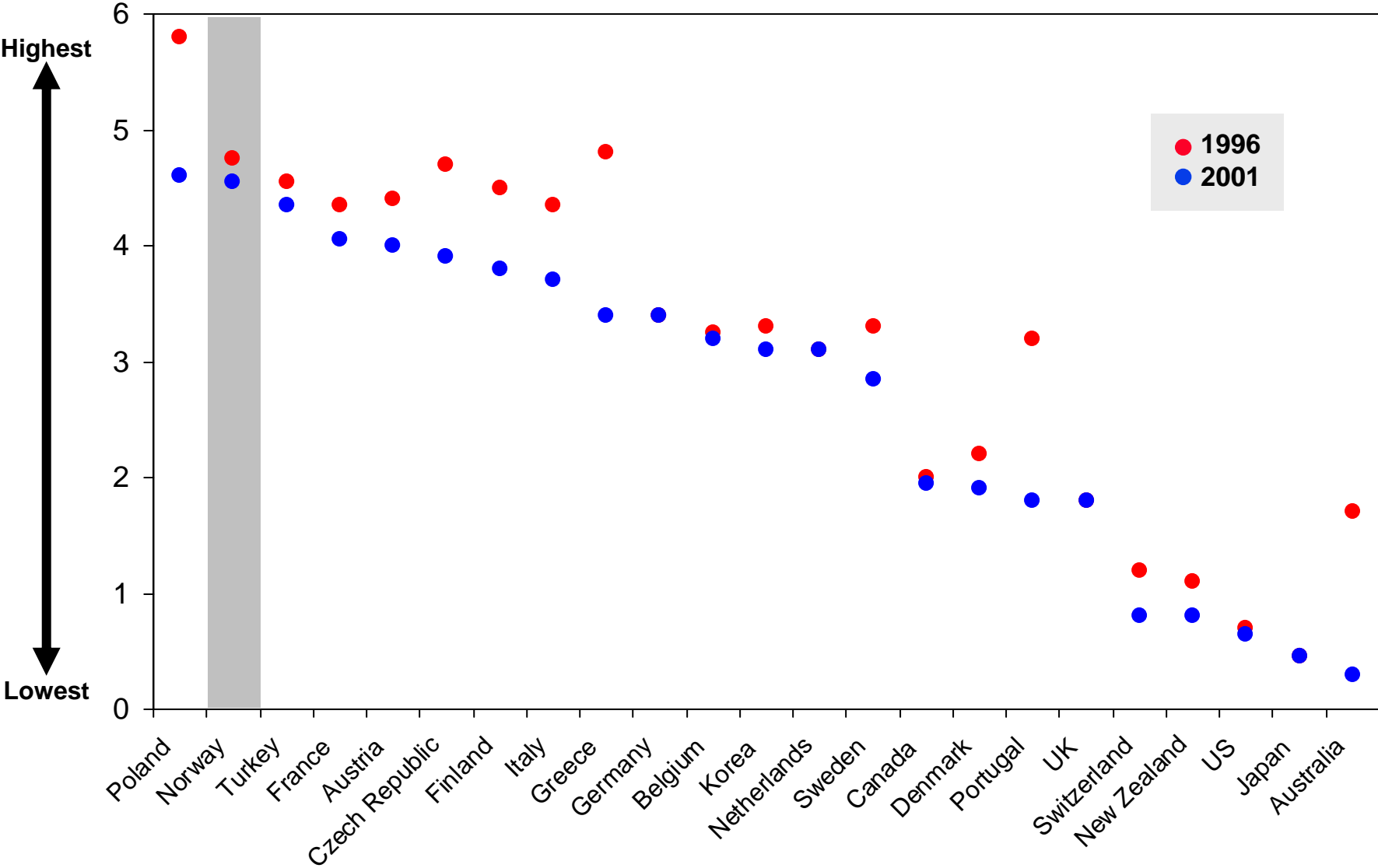
Note: Rank by countries; overall Norway ranks 20 (14 on National Business Environment, 2 on GDP pc 2003)

Source: Global Competitiveness Report 2004

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Government Role in the Economy

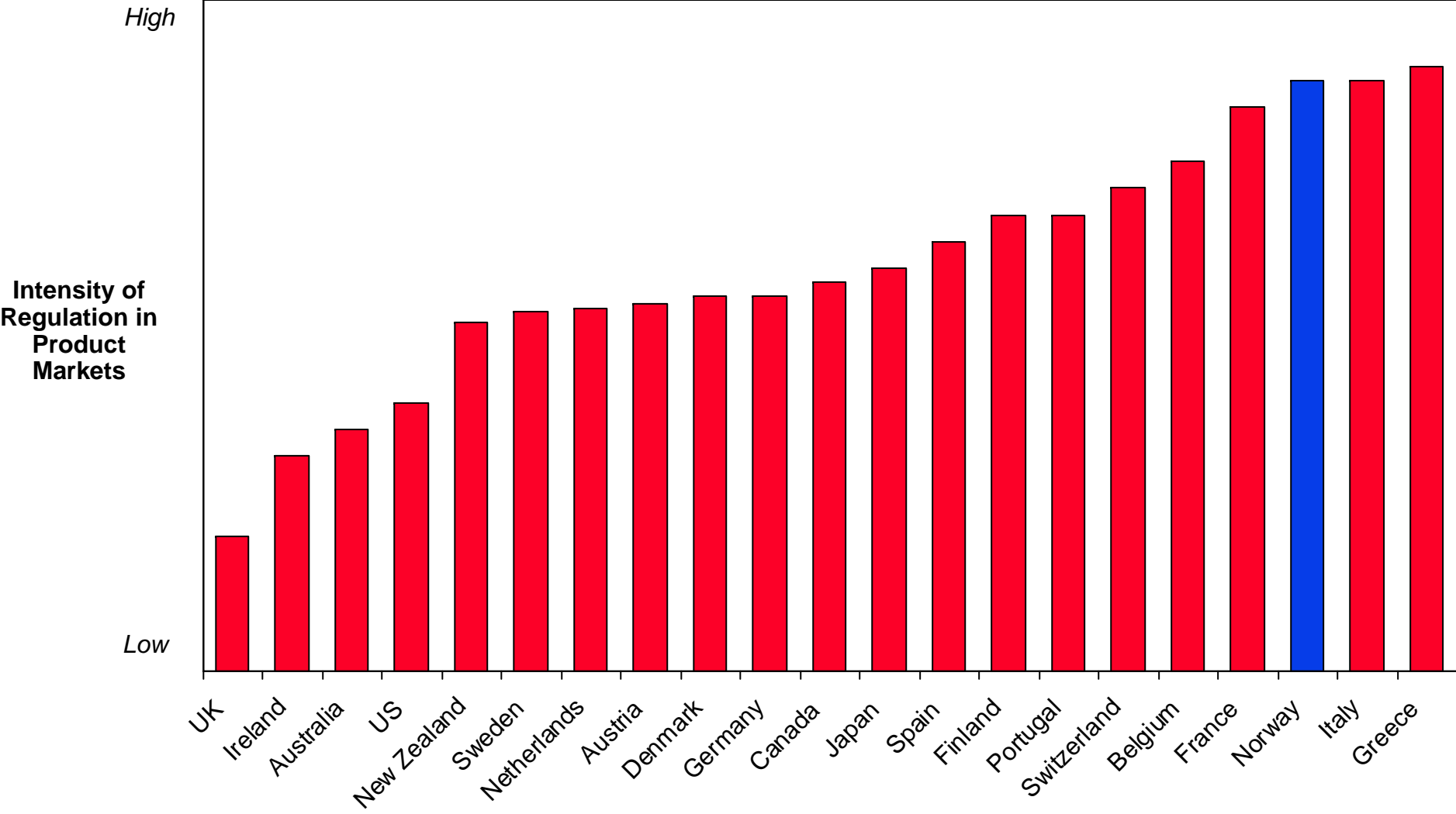
Relative Size of the Public Enterprise Sector



Source: OECD (2004)

Regulation of Product Markets

Selected OECD Countries



Source: Nicoletti/Scarpetta (2001)

Norway's Relative Position

Demand Conditions


Competitive Advantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 1998

Laws relating to ICT	2
Stringency of environmental regulations	8

Competitive Disadvantages Relative to GDP per Capita

Country Ranking, Arrows
indicate a change of 5 or more
ranks since 1998

Government procurement of advanced technology products	25
Presence of demanding regulatory standards	18 
Sophistication of local buyers' products and processes	18
Buyer sophistication	17

Note: Rank by countries; overall Norway ranks 20 (14 on National Business Environment, 2 on GDP pc 2003)

Source: Global Competitiveness Report 2004

Norway's Relative Position Related and Supporting Industries

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 1998

Local availability of components and parts	36	
Local supplier quantity	31	↓
Local availability of process machinery	26	
Local supplier quality	25	
Extent of collaboration among clusters	24	
State of cluster development	22	
Local availability of specialized research and training services	18	

Note: Rank by countries; overall Norway ranks 20 (14 on National Business Environment, 2 on GDP pc 2003)

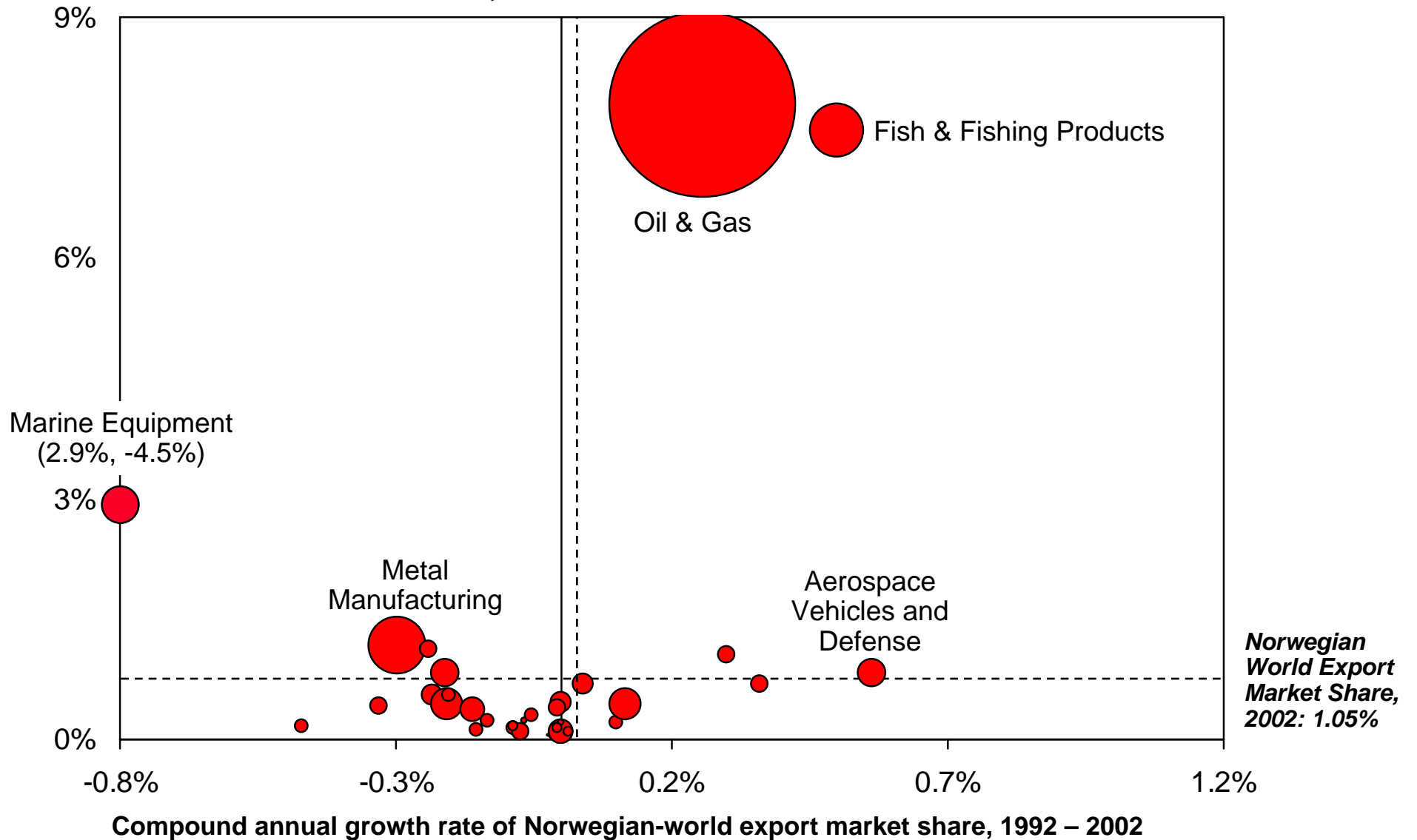
Source: Global Competitiveness Report 2004

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Norwegian Cluster Portfolio

Goods Exports, 1992-2002

Change in Norwegian World Export Market Share, 1992 - 2002: +0.05%



Source: UNCTAD Trade Data. Author's analysis.

Norwegian Business Environment

Core Weaknesses

Rivalry

- The extent of **competitive pressure** in many Norwegian markets is low
- **Foreign companies** face barriers and limited incentives to enter the Norwegian market
- **Government** continues to have a major role in the Norwegian economy, crowding out private investment

Clusters

- Despite strong positions in a few clusters which outperform the economy as a whole, the overall level of cluster development is **low**
- Norwegian **regional policy** and **barriers to foreign investors** have worked against cluster development

Demand Conditions

- Despite advanced regulations in IT and environmental quality, Norwegian demand conditions lag peer countries in stimulating **innovation**

Norwegian Competitiveness

Key Observations

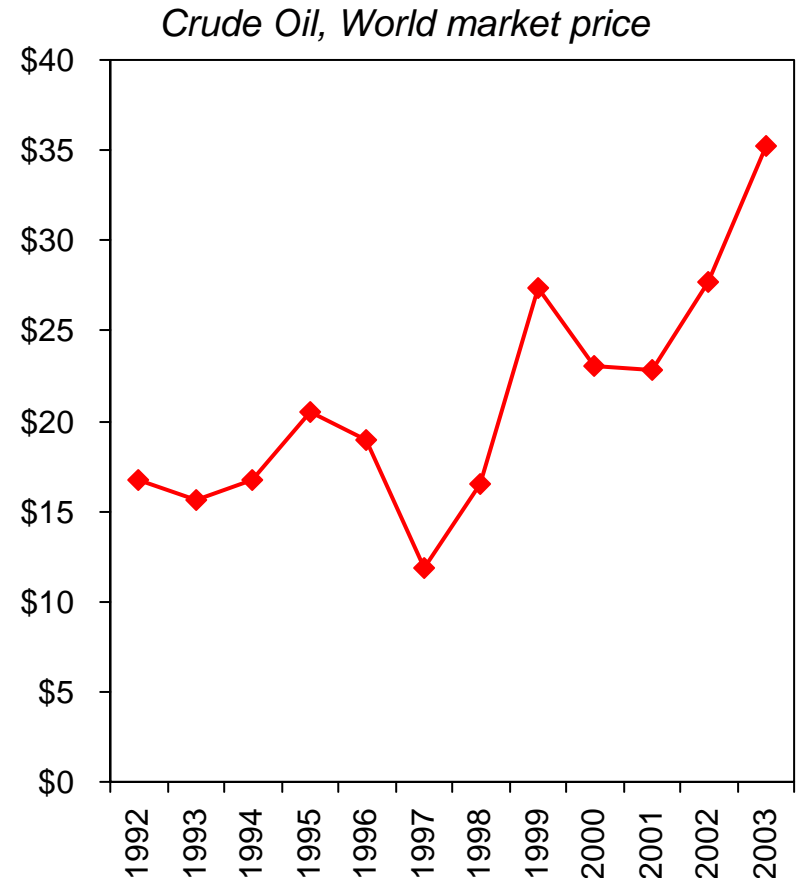
- Norway's high level of current prosperity **masks** serious weaknesses in important economic performance indicators
- The fundamental competitiveness of Norway **lags peer countries** and is insufficient to support even the current level of prosperity
- Norway's competitiveness has **deteriorated** over recent years
 - It is too early to say whether the latest reforms signal a trend change
- Key **weaknesses** exist in the following areas, among others
 - Companies have insufficient presence on **foreign markets** and fail to compete on innovation
 - There is **little effective rivalry**, especially from foreign companies
 - **Government** is overly involved in business, limiting private initiative and investment
 - **Clusters** are mostly weak, which hurts productivity and dynamism
 - The quality of the education system, physical infrastructure, and the financial system are **insufficient** to attain the level of productivity and innovation needed to support current prosperity
 - Demand conditions retard **innovation**
- There is not a clear consensus that Norway has a **problem**, much yet on new directions for change

Back-Up

The Norwegian Oil Sector

Size* of Norway's Oil Sector

- 55% of Norwegian exports (2002)
- 50% of U.S. patents by major Norwegian institutions (1997 – 2002)
- 42% of the growth in nominal GDP between 1998 and 2003 came from the oil & gas sector
 - 60% of the growth in the oil & gas sector resulted from the increase in the world market price of oil
- 20% of Norwegian GDP (2003)
- 1% of Norwegian employment (2002)



Note: Narrow definition of the "Mining and Extraction Sector" as well as unprocessed gas and oil exports

Source: Statistics Norway (2004), WTO (2004), Institute for Strategy and Competitiveness (2004), USPTO (2004), IOGA (2004), author's analysis

Norwegian Competitiveness: Towards An Action Agenda

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

Norway's Competitiveness Agenda

- **Address key barriers to productivity and innovation in the Norwegian business environment**
 - Competition
 - Internationalization
 - Financial markets
 - Innovative capacity
- **Embrace a cluster-based approach to economic development**
- **Modify the strategy for regional and rural development**
- **Shift the roles of government, business, and other institutions in economic development**

Address Weaknesses in the Norwegian Business Environment

Competition

- Address the adverse impact of **government ownership** on competition and productivity
- To overcome the disadvantages of a small market outside of the EU, government policy needs to be even **more aggressive** in creating a pro-competitive context
 - Strengthening the Competition Act alone will not be enough
- At the minimum, Norway must be **completely open** to international competition

Address Weaknesses in the Norwegian Business Environment

Internationalization

- Reduce tariff and non-tariff **barriers to imports**
- Change the impression that **foreign companies** are not welcomed as owners in Norway
 - E.g. limit interventions and public statements that oppose foreign company investments and acquisitions in Norway
- Improve **attractiveness** of Norway for foreign entrepreneurs, managers, investors, and researchers
 - E.g. review and address barriers in taxation, work permits, and other regulations

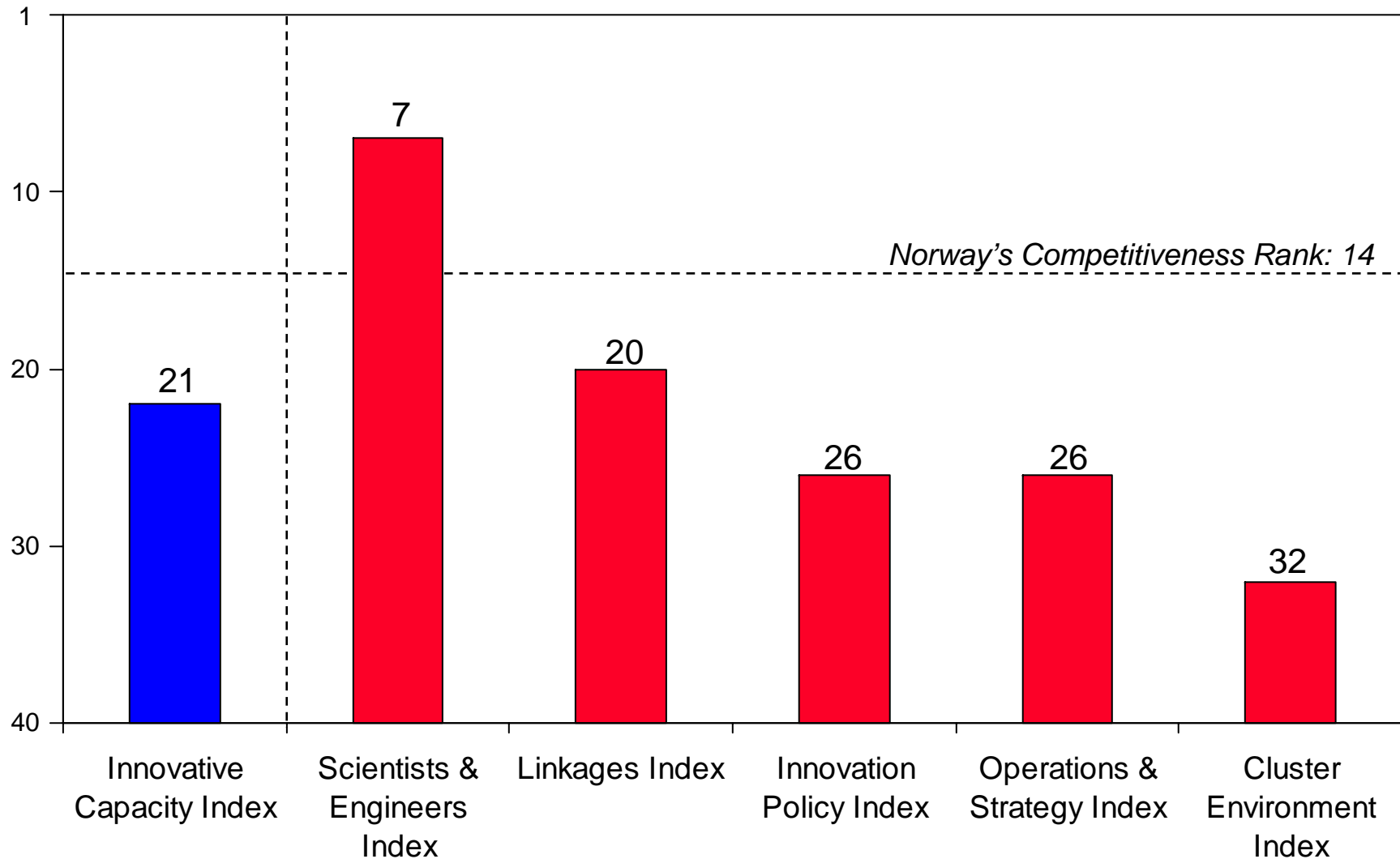
Address Weaknesses in the Norwegian Business Environment

Financial Markets

- Upgrade the quality of **financial market regulation**, including transparency and the rights of minority owners
- Aggressively open the market to leading **foreign** financial services firms
- Manage government capital invested in the domestic market to stimulate greater sophistication and competition
 - Government as a demanding customer
 - E.g. create competition among domestic and foreign funds for the administration of government equity funds

Address Weaknesses in the Norwegian Business Environment

Innovative Capacity



Norwegian Innovation Policy

Recent Initiatives

- A new **innovation policy** was launched in late 2003
 - Driven by a cross-ministerial group led by the Department of Industry and Trade
 - Six key action areas were defined:
 - General conditions for trade and industry
 - Knowledge and competence
 - Research, development, and commercialization
 - Entrepreneurship
 - Electronic and physical infrastructure
 - New administrative structures to define innovation policy
- Key agencies in the Norwegian innovation system are being restructured
 - Reorganization of the **Norwegian Research Council** in September 2003 to create three instead of six divisions: Science, Innovation, and Strategic Efforts
 - Creation of **Innovation Norway** in January 2004 replacing the Norwegian Tourist Board, the Norwegian Trade Council, the Norwegian Industrial and Regional Development Fund (SND), and the Government Consultative Office for Inventors (SVO)
 - Creation of an **Innovation Council** with members from private and the public sector under the leadership of the Minister for Trade and Industry



- These initiatives are **positive**
- The critical task will be to **deliver** on their potential

Norwegian Innovation Policy

Recent Initiatives (Continued)

- Change of the **intellectual property rights** regime to encourage patenting of academic research
- Creation of “**Centers of Excellence**” in scientific research
- **R&D tax credit** scheme (SkatteFUNN) extended to larger businesses
- Launch of government-financed **seed capital** funds, operated by the cities of Oslo, Bergen, and Trondheim

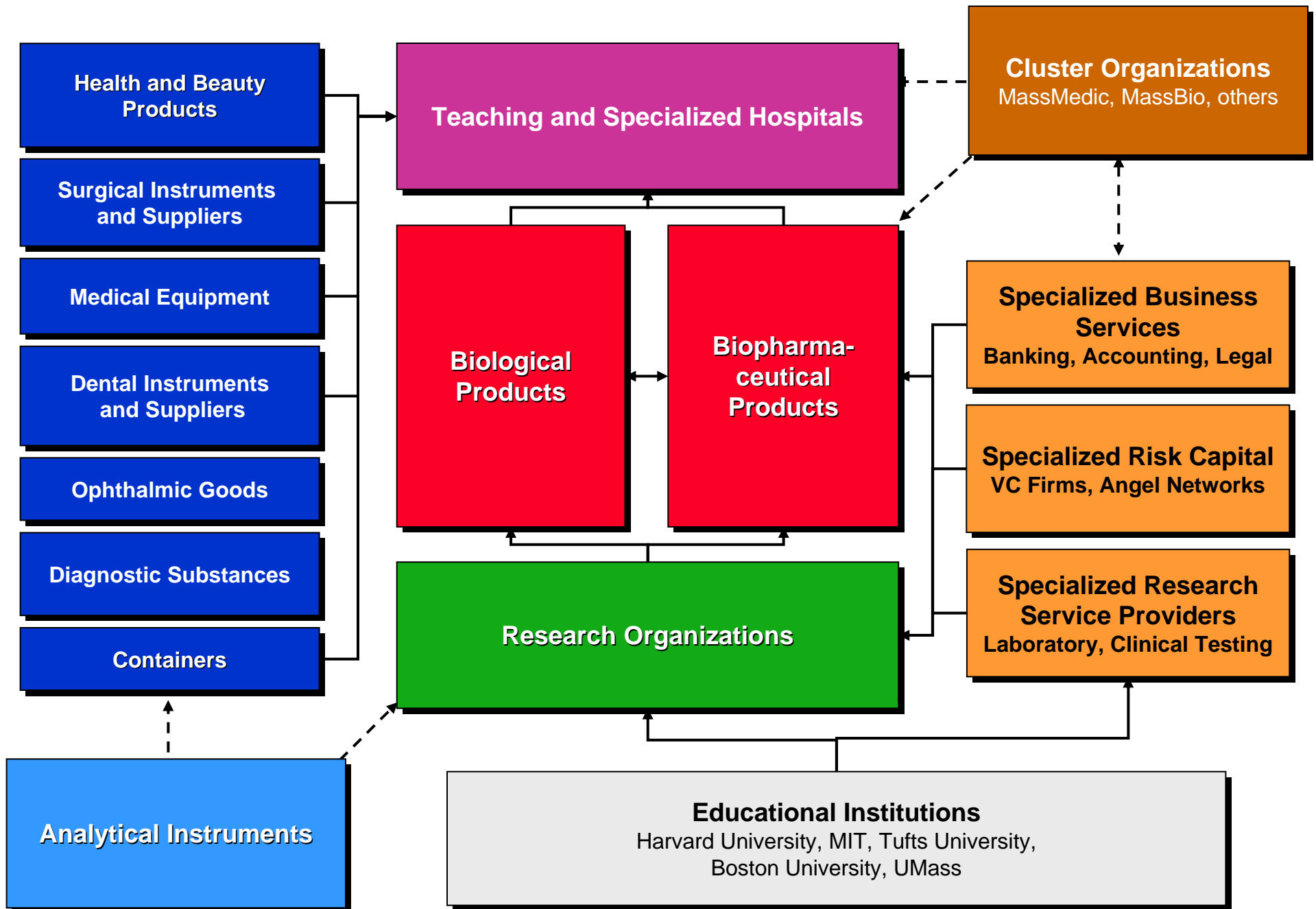


- It is critically important that the seed capital funds are operated by **private operators**, selected in open competition
- The innovation policy also needs to have a strong focus on **entrepreneurship**, including university programs, business plan contests, etc.

Norway's Competitiveness Agenda

- Address key barriers to productivity and innovation in the Norwegian business environment
- **Embrace a cluster-based approach to economic development**
- Modify the strategy for regional and rural development
- Shift the roles of government, business, and other institutions in economic development

The Boston Life Sciences Cluster



Clusters and Competitiveness

- **Clusters Increase Productivity / Efficiency**

- Efficient **access** to specialized inputs, services, employees, information, institutions, and “public goods” (e.g. training programs)
- Ease of **coordination** and transactions across firms
- Rapid **diffusion** of best practices
- Ongoing, visible **performance comparisons** and strong incentives to improve vs. local rivals

- **Clusters Stimulate and Enable Innovations**

- Enhanced ability to **perceive innovation opportunities**
- Presence of multiple suppliers and institutions to assist in **knowledge creation**
- Ease of **experimentation** given locally available resources

- **Clusters Facilitate Commercialization**

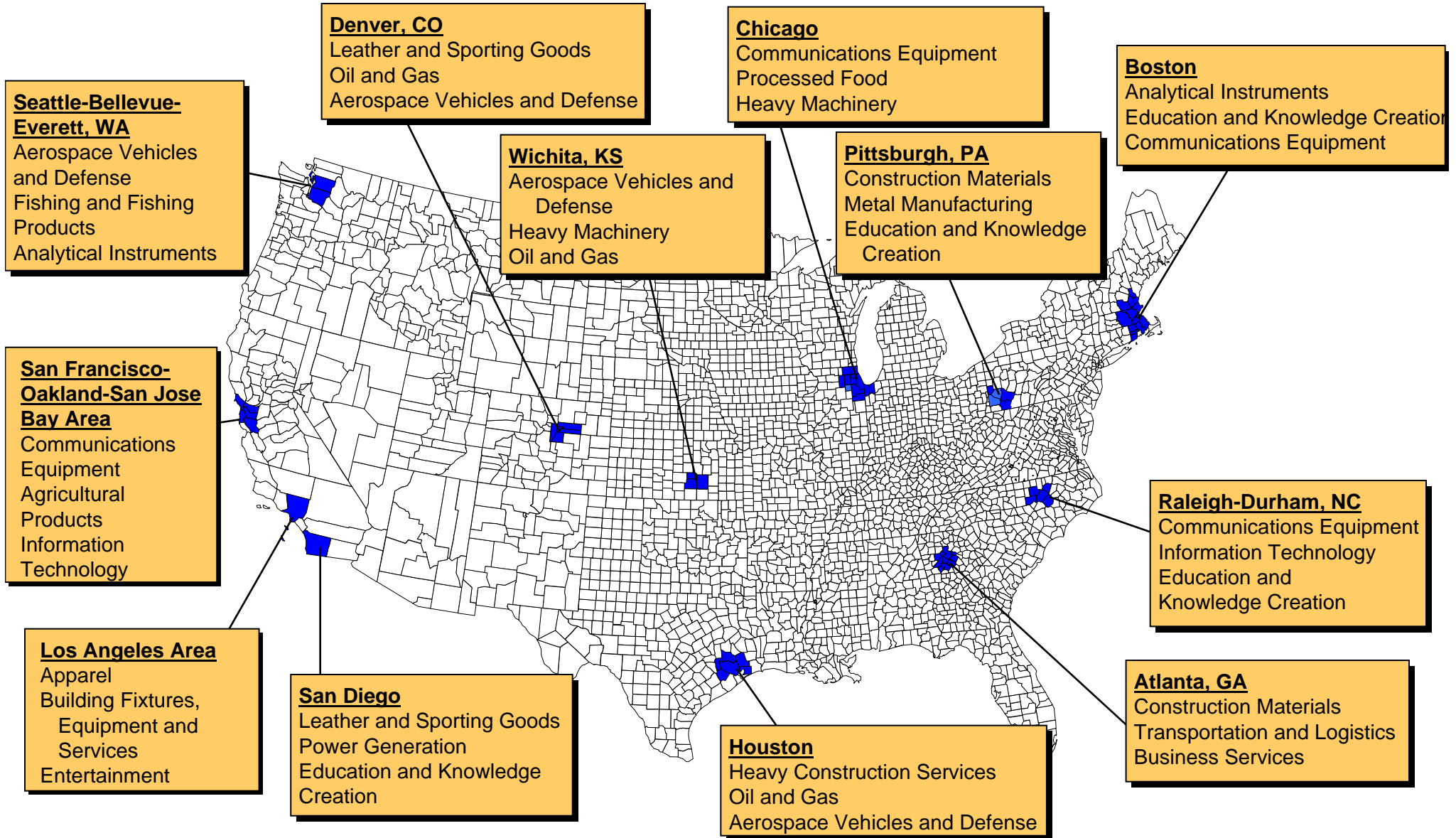
- Opportunities for **new companies** and **new lines of established business** are more apparent
- **Commercializing** new products and starting new companies is easier because of available skills, suppliers, etc.



Clusters reflect the fundamental influence of **externalities / linkages** across firms and associated institutions in competition

Specialization of Regional Economies

Select U.S. Geographic Areas



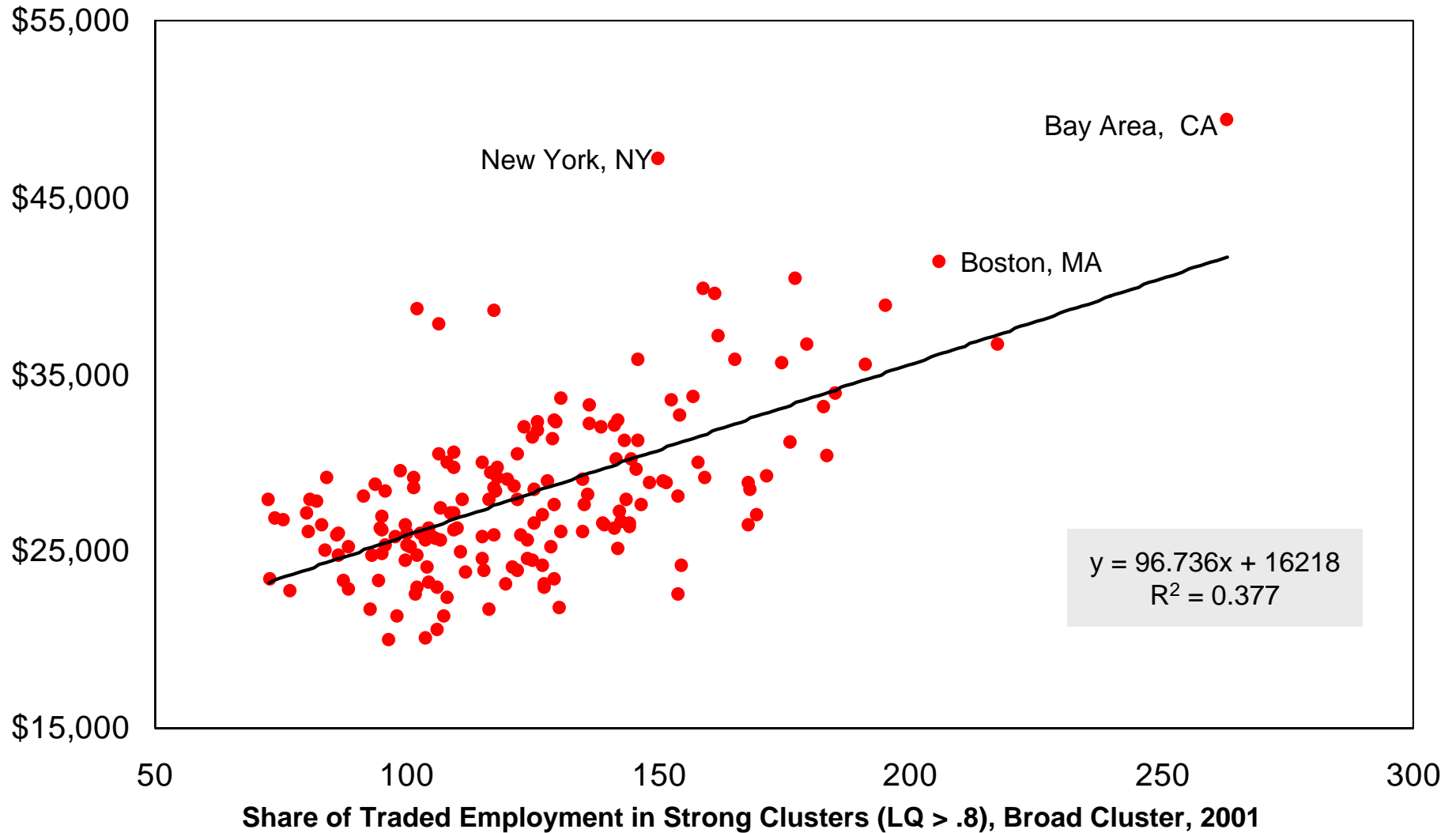
Note: Clusters listed are the three highest ranking clusters in terms of share of national employment

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

Determinants of Regional Prosperity

Cluster Strength and Wage Levels, U.S. Regions

Average Regional
Wage, 2001

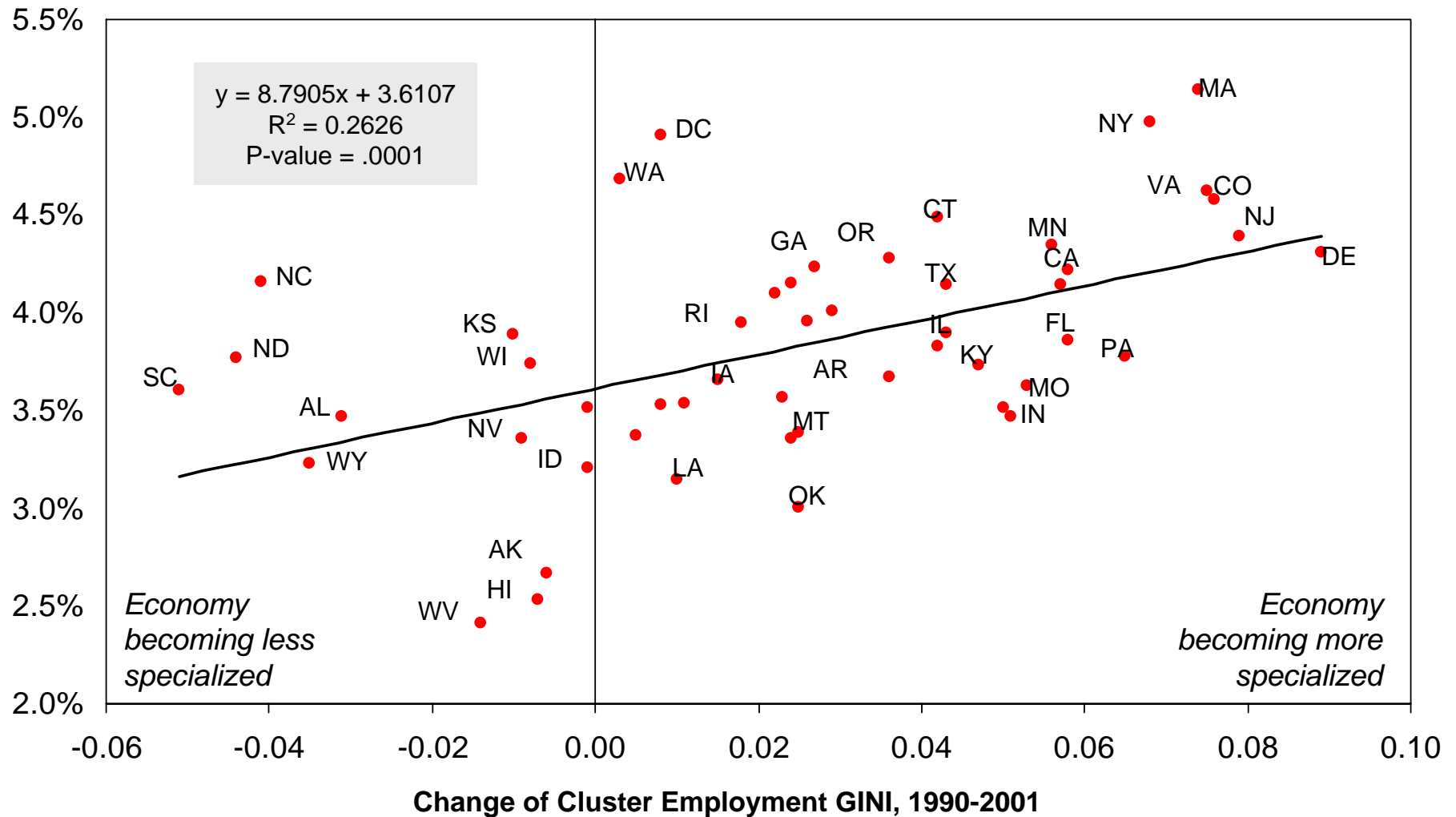


Source: County Business Patterns; Michael E. Porter, "The Economic Performance of Regions", *Regional Studies*, Vol. 37, 2003

Determinants of Regional Prosperity

Change in Cluster Specialization and Wage Growth, U.S. States

Annual Regional Wage
Growth Rate, 1990-2001



Source: County Business Patterns; Michael E. Porter, "The Economic Performance of Regions", *Regional Studies*, Vol. 37, 2003

Role of Clusters in Economic Development

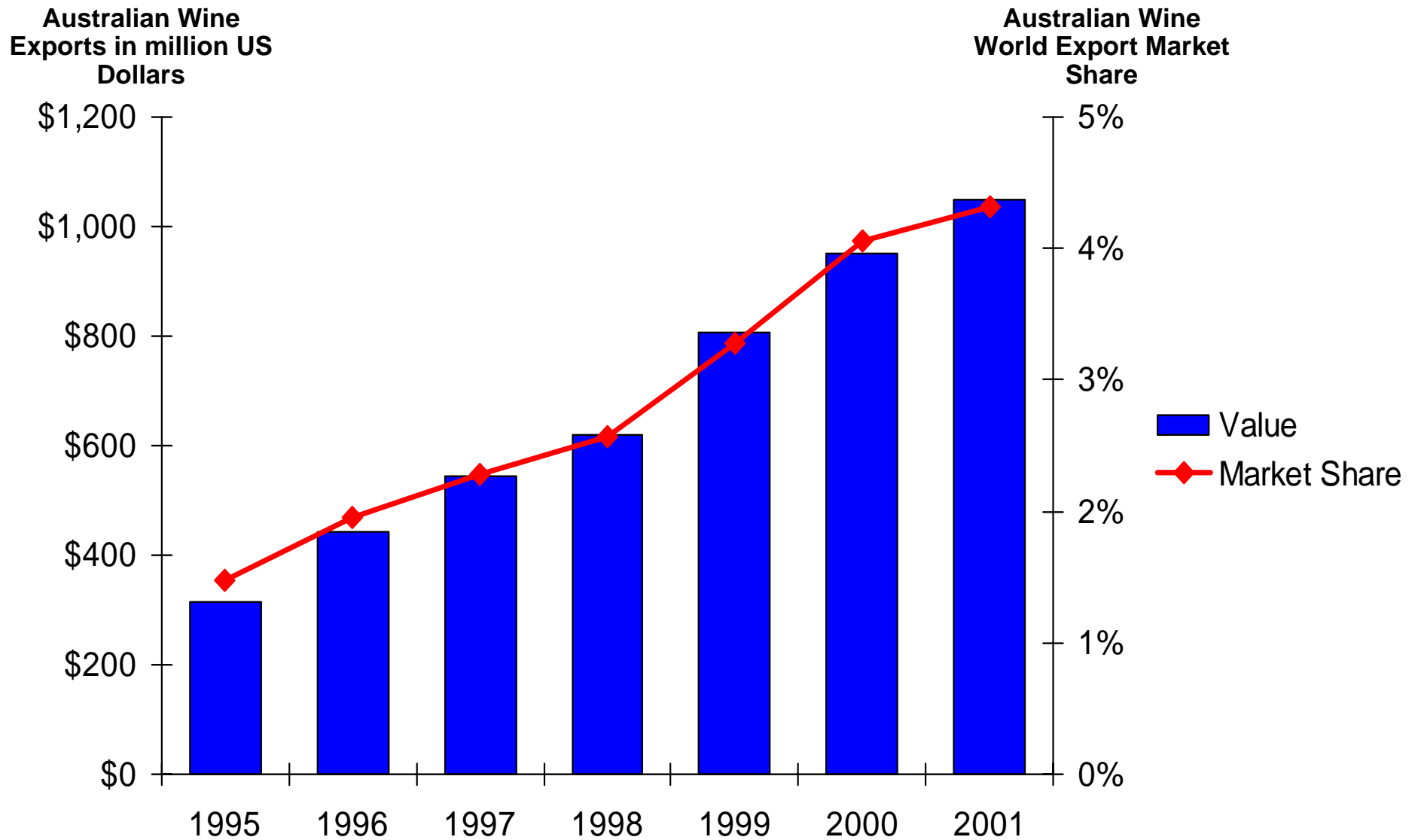
- Clusters are **critical engines** of economic development
 - Clusters are especially important for fostering **innovation**
- Clusters are a forum to identify **important challenges** in the business environment
- Clusters provide an opportunity for government, companies, and other institutions to work constructively together and learn **new roles** in economic development



- Clusters need to be a **core element** of any competitiveness effort

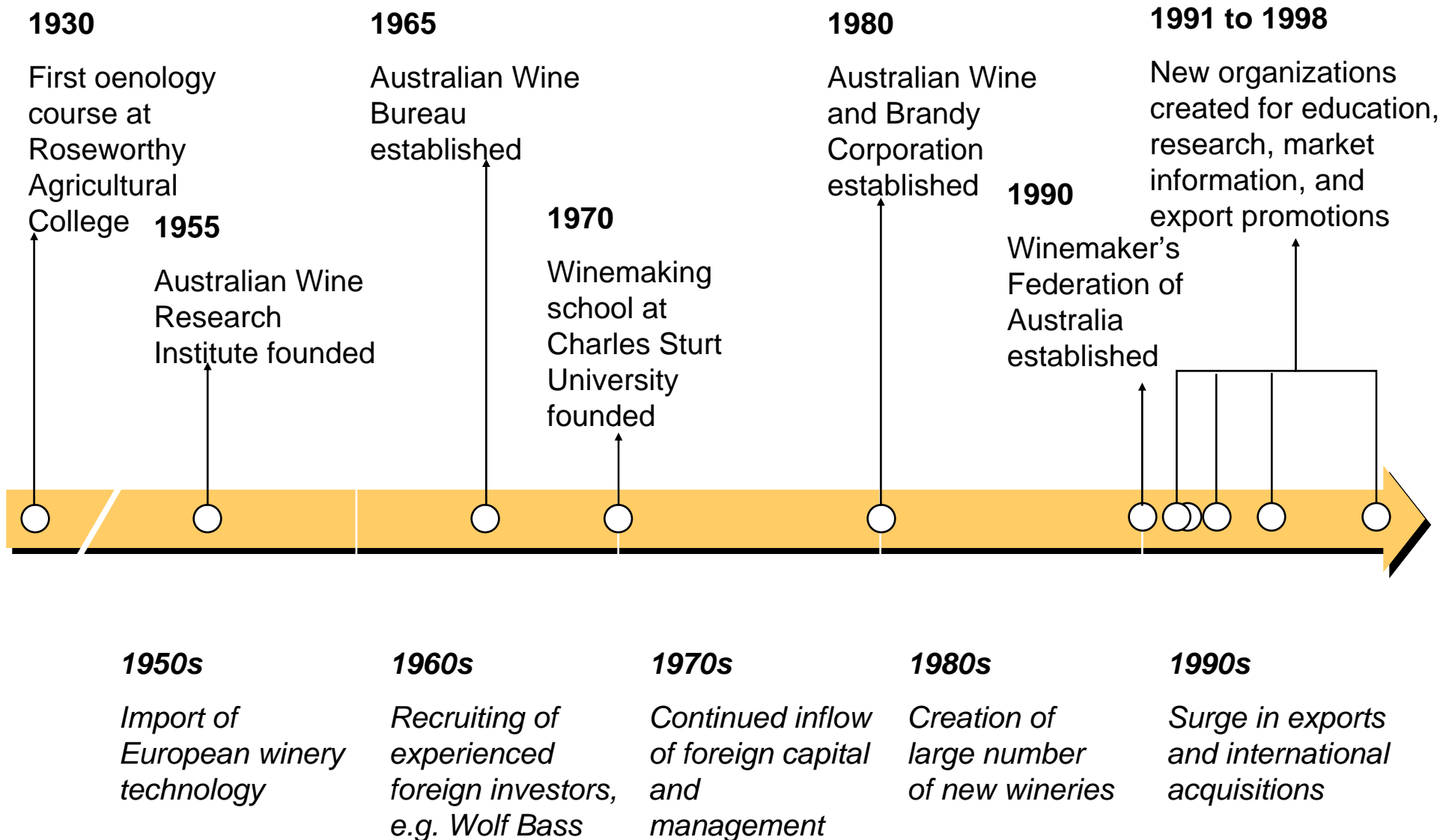
The Australian Wine Cluster

Trade Performance



Source: UN Trade Statistics

The Australian Wine Cluster History



Source: Michael E. Porter and Örjan Sölvell, The Australian Wine Cluster – Supplement, Harvard Business School Case Study, 2002

Industrial Policy versus Cluster-Based Policy

Industrial Policy

- Targets areas of perceived **market demand** or **attractive technology**
- **Intervenes** in competition (subsidies, protection, etc.)
- Favors **domestic** companies
- Requires sustained **financial commitment** by the public sector
- Centralizes decisions at the **national level**
- Has a high **failure rate**; short term impact but low sustainability



Distort and impede competition

Cluster-Based Policy

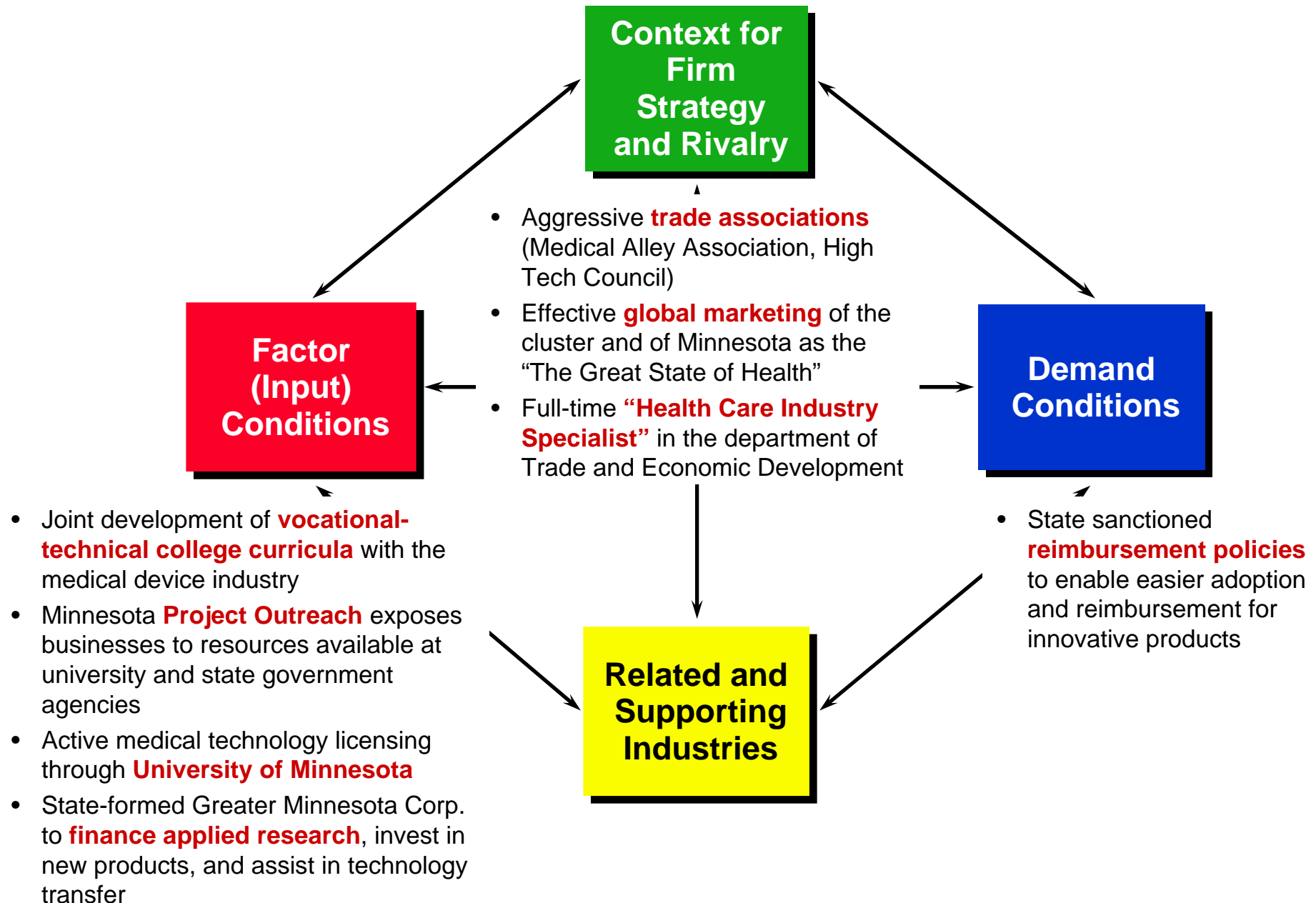
- Leverages **existing assets**, history, and geographic location
- **All** clusters are good
- Enables competition to be more **sophisticated**
- **Neutral** on ownership
- Requires sustained **participation** by all actors
- Encourage initiative at **all** geographic levels
- Has increasing impact over **time**; some quick returns are possible



Enhance and upgrade competition

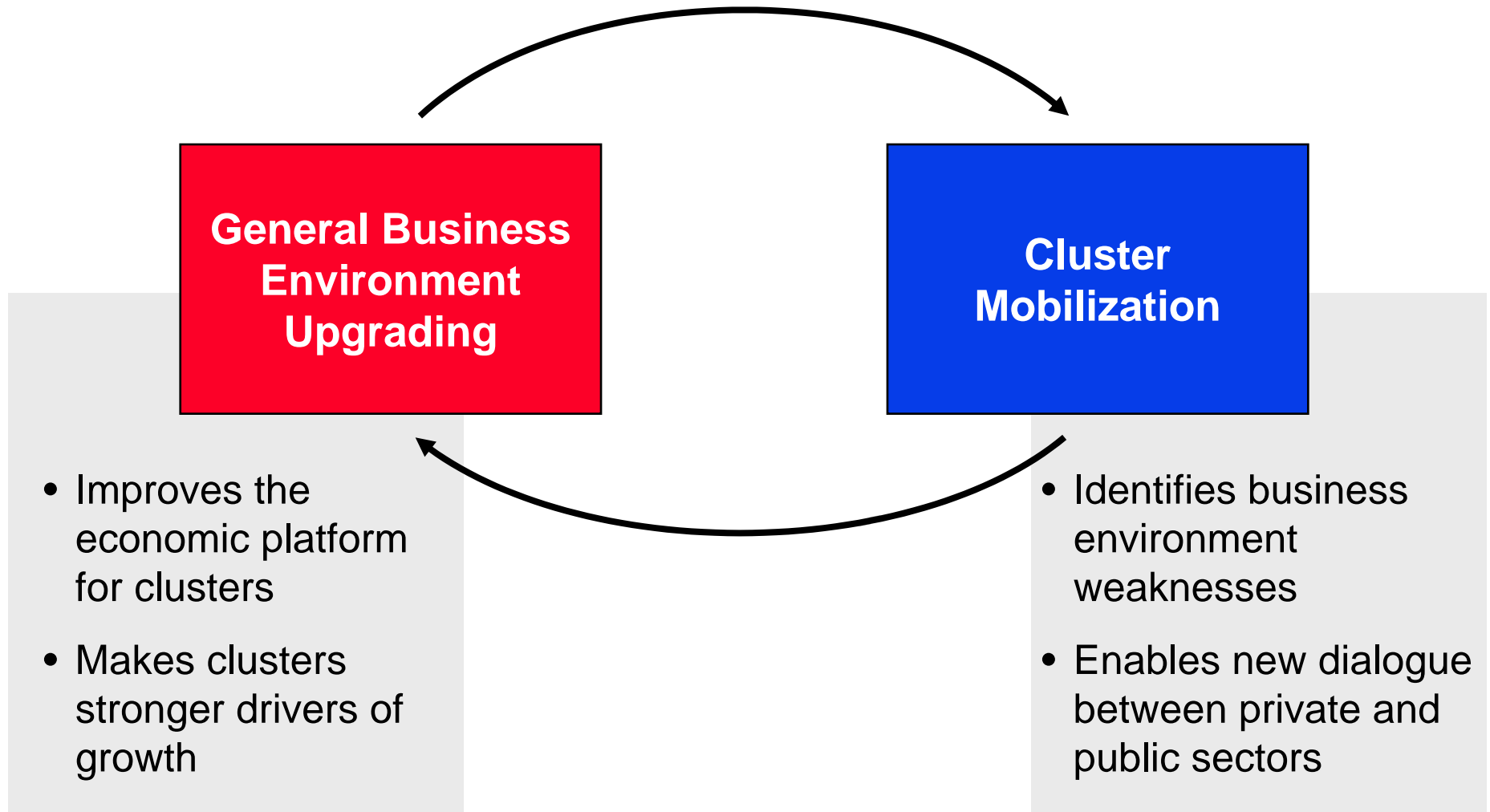
Public / Private Cooperation in Cluster Upgrading

Minnesota's Medical Device Cluster



Upgrading Competitiveness

A Two-Pronged Approach

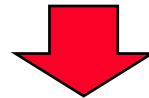


Norway's Competitiveness Agenda

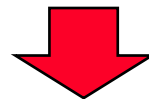
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Regional Policy in Norway

- While supporting peripheral regions is a **legitimate political goal**, Norway has gone about it the **wrong way**



- Norway has for years followed an active policy of **subsidizing** residents and economic activity in peripheral regions
- Financial incentives to locate in distant regions work against **cluster formation**, limit efficient **regional specialization**, and undermine **competitiveness**



- Regional policy needs to enable communities to take responsibility for their own economic destiny leveraging their own **unique strengths**
- This requires **accountable regional authorities** with real political decision rights

Rural Regional Economies in the United States

- The economic performance of U.S. rural regions is **lagging** metropolitan regions, despite significant efforts to enhance economic developments
 - However, the performance of rural regions is extremely heterogeneous and overall better than the perception
- Virtually all observers in the U.S. agree that there is a clear need to **rethink** the policy for rural regions



Selected Recommendations of a Recent Research Report:

- Rural economic development should focus on the **unique** strengths of each area, rather than concentrating on ameliorating generic weaknesses
 - Rural areas will never match urban infrastructure, services, and amenities
- The appropriate economic unit for strategy purposes must include not only rural areas but also **adjacent urban centers**
- Rural economic development should **address and harness the efficient spatial distribution** of economic activity rather than attempt to replicate urban economies
- The central government needs to provide rural regions with the necessary **tools** and **financing mechanisms** to develop and execute an effective strategy

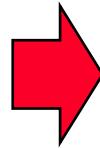
Norway's Competitiveness Agenda

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Shifting Responsibilities for Economic Development

Old Model

- **Government** drives economic development through policy decisions and incentives

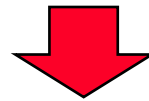


New Model

- Economic development is a **collaborative process** involving government at multiple levels, companies, teaching and research institutions, and institutions for collaboration

Roles of Government in Economic Development

- Government **inevitably** plays an important role in shaping the business environment in which companies operate
 - A general discussion of “more” or “less” government is misguided
 - Government needs to be active in improving the quality of the business environment while reducing activities that limit competition or otherwise hurt competitiveness



- Improve the macroeconomic, political, legal, and social context
 - Establish a **stable and predictable** macroeconomic, legal, and political environment
 - Improve the **social conditions** of citizens
- Upgrade the general business environment
 - Improve the availability, quality, and efficiency of **cross-cutting or general purpose inputs, infrastructure, and institutions**
 - Set **overall rules and incentives** governing competition that encourage productivity growth
- Facilitate cluster formation and upgrading
 - Identify **existing and emerging clusters**
 - Convene and participate in the identification of **cluster constraints** and **action plans** to address them
- Lead a collaborative process of economic change
 - Create institutions and **processes for upgrading competitiveness** that inform citizens and mobilize the private sector, government at all levels, educational and other institutions, and civil society to take action

Role of the Private Sector in Economic Development

- Take an **active role** in upgrading the local infrastructure
- Nurture **local suppliers** and attract new supplier investments
- Work closely with local **educational and research institutions** to upgrade **quality and create specialized programs addressing cluster needs**
- Provide government with **information** and **substantive input** on regulatory issues and constraints bearing on cluster development
- Focus **corporate philanthropy** on enhancing the local business environment



- An important role for **trade associations**
 - Greater influence
 - Cost sharing

Norway's Competitiveness Agenda

- **Address key barriers to productivity and innovation in the Norwegian business environment**
 - Competition
 - Internationalization
 - Financial markets
 - Innovative Capacity
- **Embrace a cluster-based approach to economic development**
- **Modify the strategy for regional and rural development**
- **Shift the roles of government, business, and other institutions in economic development**



- **Creating the microeconomic foundations for a prosperous Norway in the post-natural resource era**