

*Launch of the Asia Competitiveness Institute*

# **Singapore Competitiveness: A Nation in Transition**

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Harvard Business School

Singapore  
28 November 2006

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This presentation draws on ideas from Professor Porter's books and articles, in particular, "Building the Microeconomic Foundations of Prosperity," in *The Global Competitiveness Report 2006-07* (World Economic Forum, 2006); "Clusters and the New Competitive Agenda for Companies and Governments," in *On Competition* (Harvard Business School Press, 1998); *Clusters of Innovation Initiative* ([www.compete.org](http://www.compete.org)), a joint effort of the Council on Competitiveness, Monitor Group, and ongoing research. 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

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# Trends in the Global Economy

- Globalization of **markets**
- Globalization of **value chains**
- Globalization of **knowledge**
- **Innovation** and **skill** an increasing share of value added
- **Services** an increasing share of value added



- Competitiveness depends on **productivity**
- The bar for competitiveness is **rising**
- Competitiveness in the global economy is a **positive-sum game**

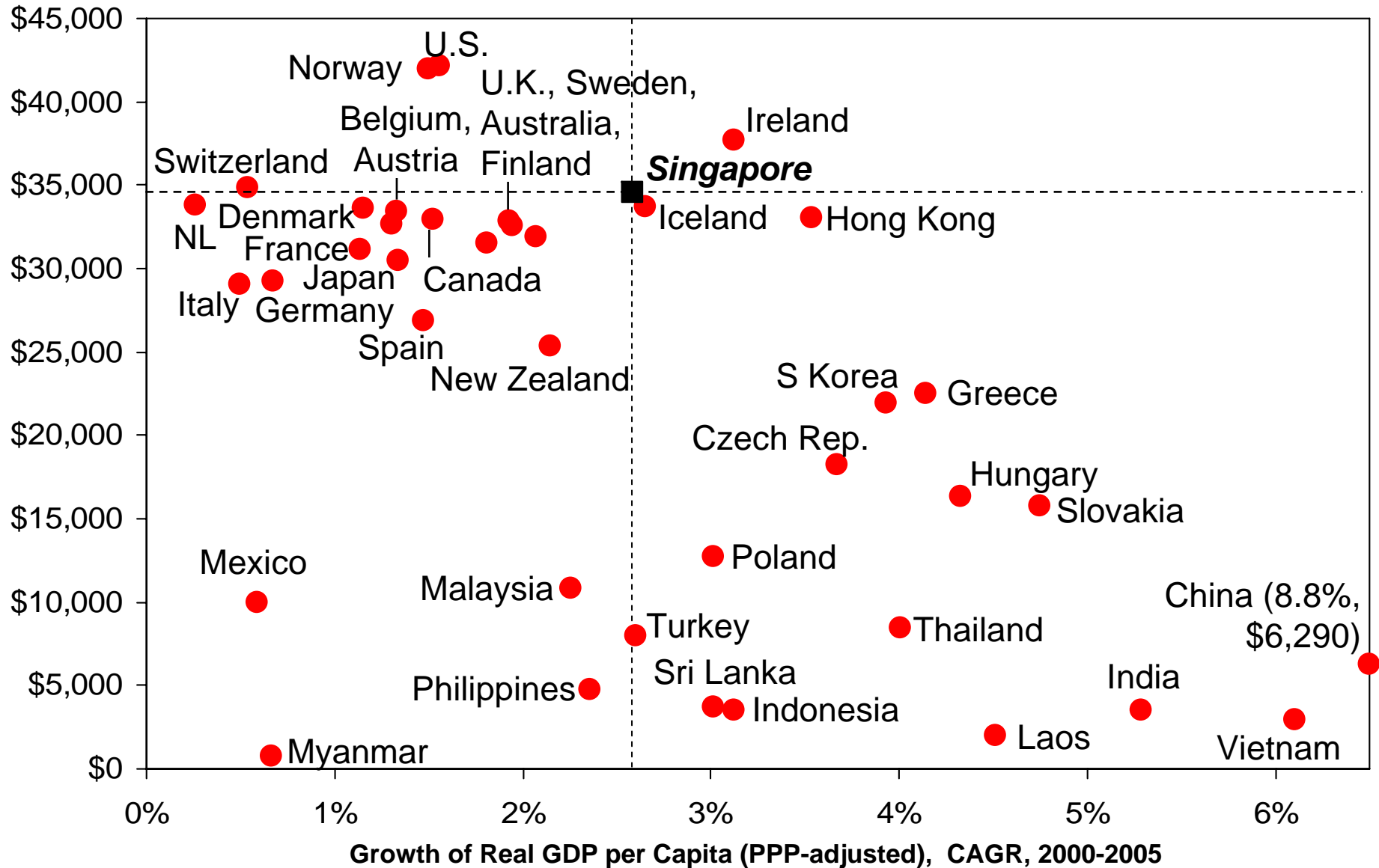
# Singapore Competitiveness in Transition

- Singapore is one of the most **impressive success stories** of economic growth in the 20<sup>th</sup> century
  - The country has successfully **weathered a series of external shocks** from the Asian crisis (1997-98) to the bursting of the IT bubble (2001) to SARS (2003)
  - It is now on a **challenging path** to move from an economy based on efficiency to one based on differentiation and innovation
  - The track record so far is **encouraging**, but much work lies ahead
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- An enduring strength of Singapore is its **willingness to question** whether the current sources of its economic success are sustainable

# Prosperity Performance

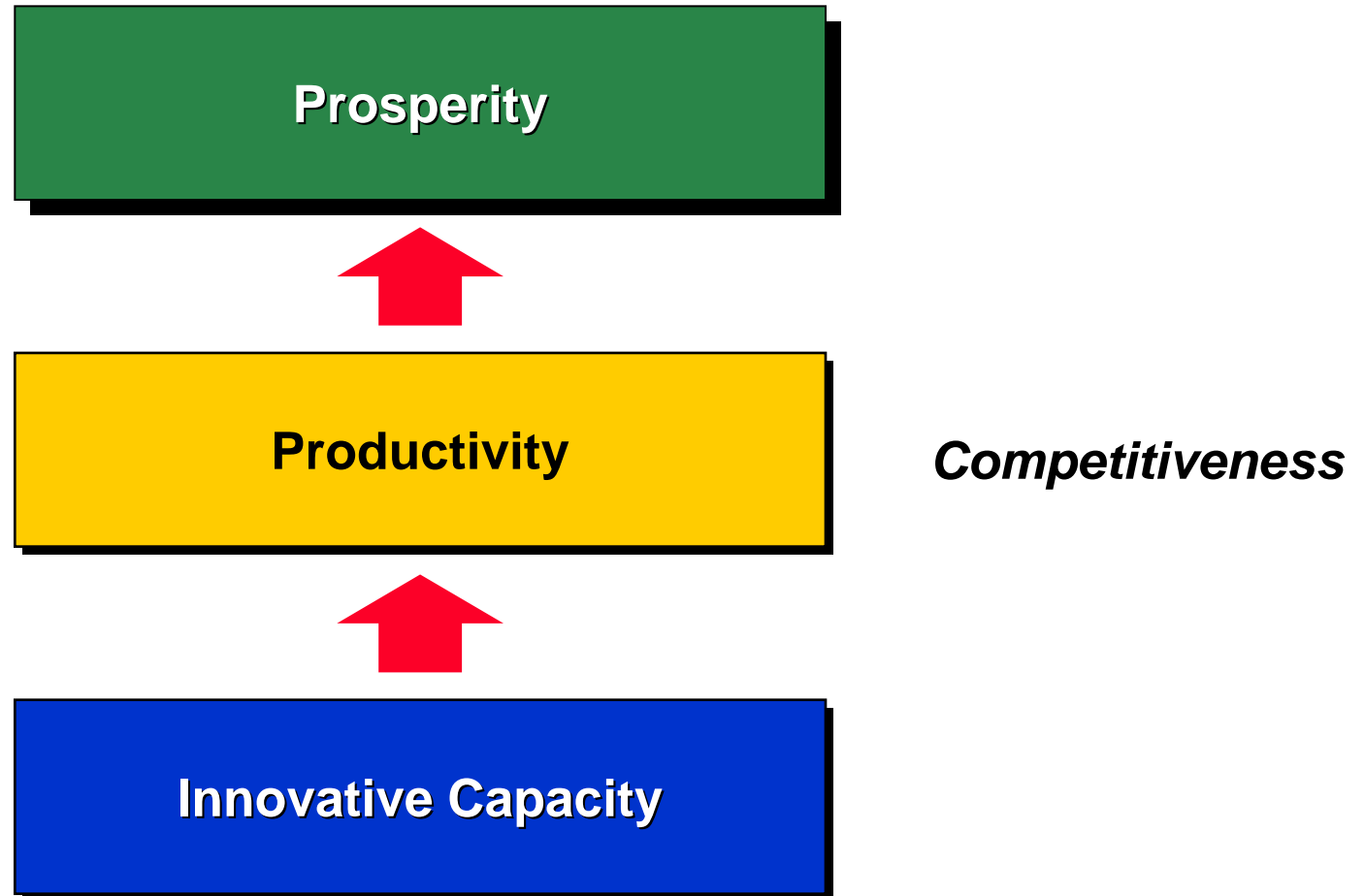
## Selected Countries

Real PPP-adjusted GDP per Capita, 2005



Source: EIU (2006), authors' calculations

# Innovation and Competitiveness

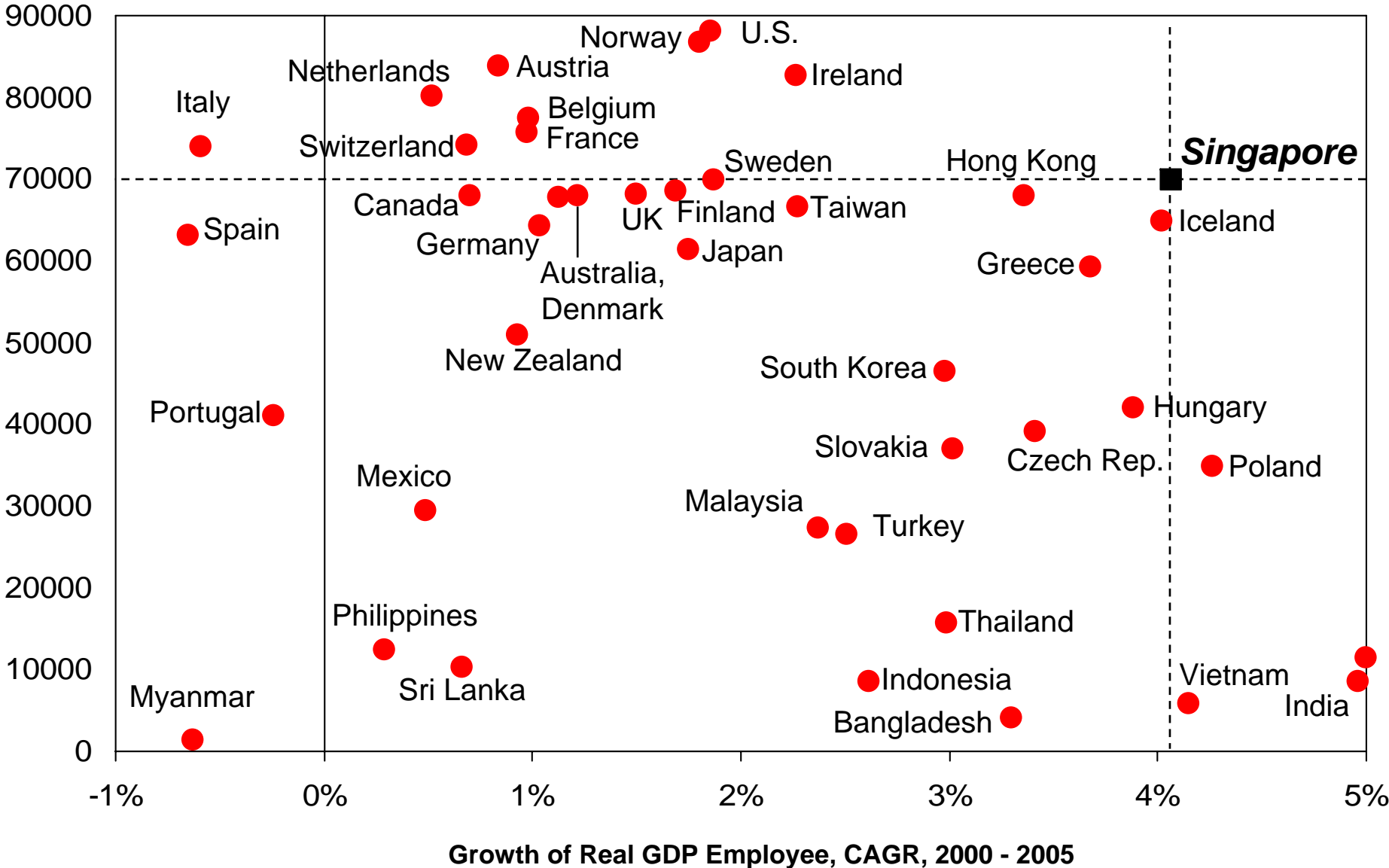


- Innovation is **more than just scientific discovery**
- There are **no low-tech industries**, only low-tech firms

# Labor Productivity Level and Growth

## Selected Countries

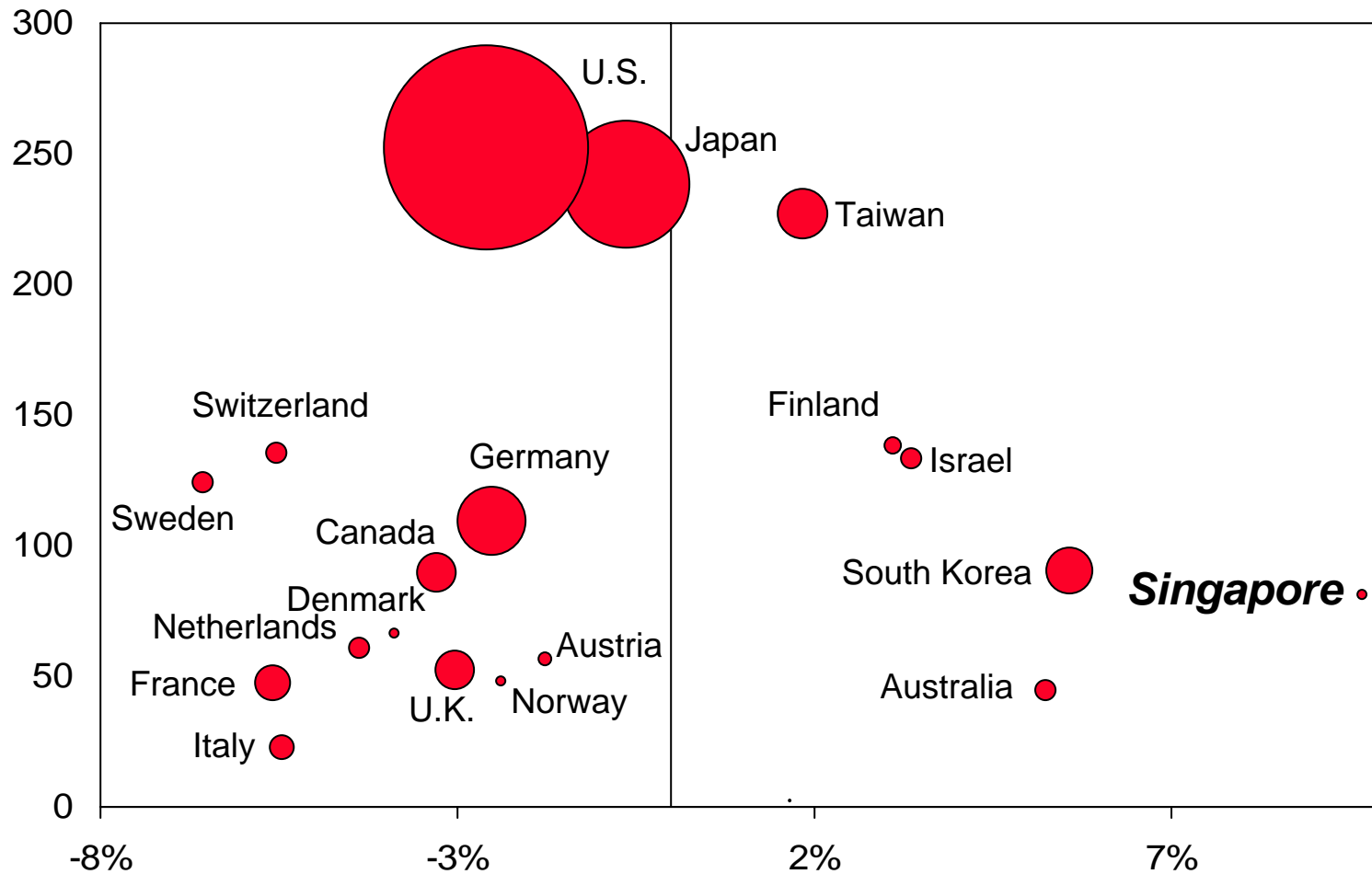
GDP per Employee, US-\$, 2005



Source: Groningen Growth and Development Centre and The Conference Board, 2006.

# International Patenting Output Selected Countries

Annual U.S. patents per 1 million population, 2005



Compound annual growth rate of US-registered patents, 2000 – 2005

# Determinants of Competitiveness

Macroeconomic, Political, Legal, and Social Context

## Microeconomic Foundations

The Sophistication  
of Company  
Operations and  
Strategy



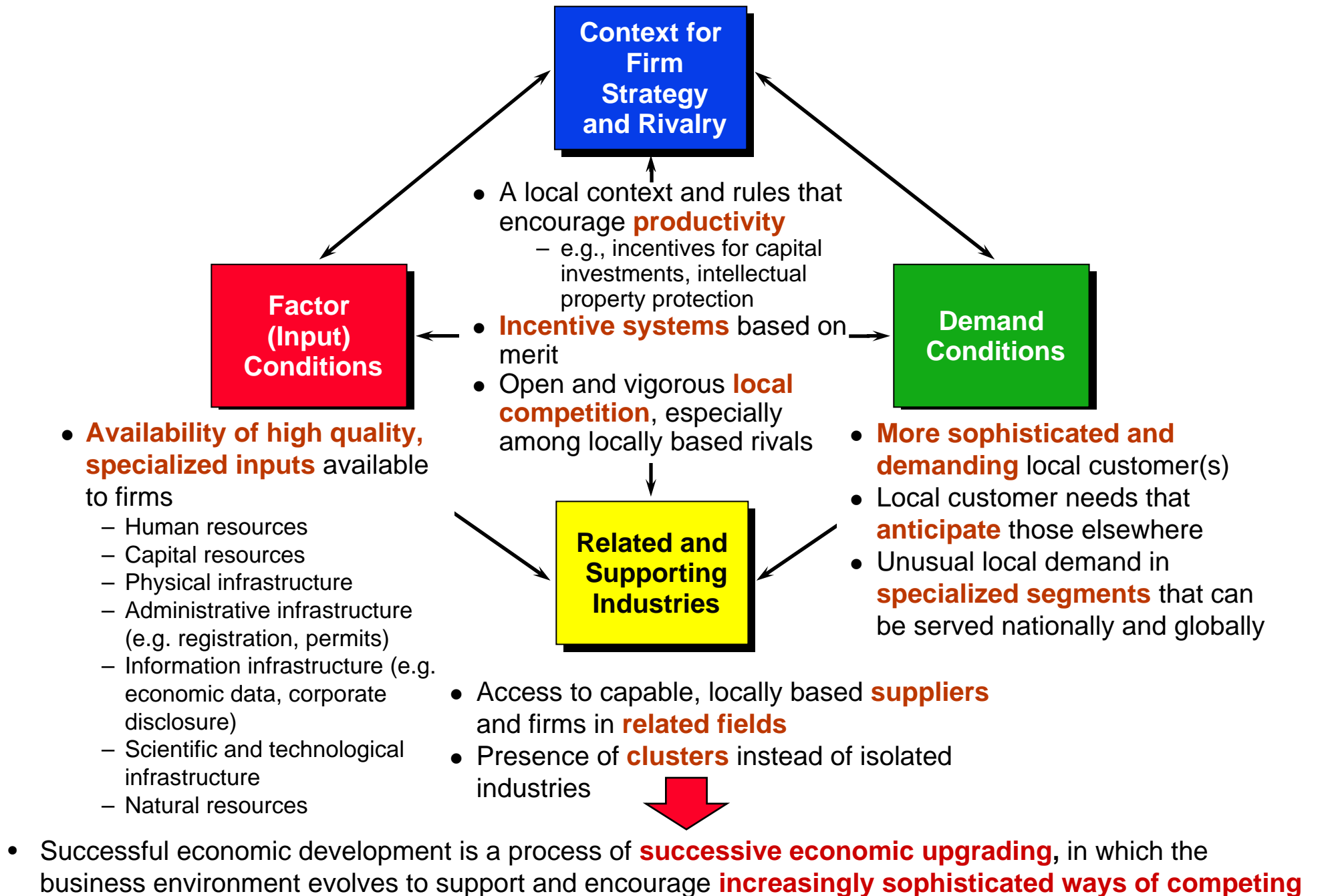
The Quality of the  
Microeconomic  
Business  
Environment

- A sound macroeconomic, political, legal, and social context creates the potential for competitiveness, **but is not sufficient**
- Only **firms** can create wealth, not government

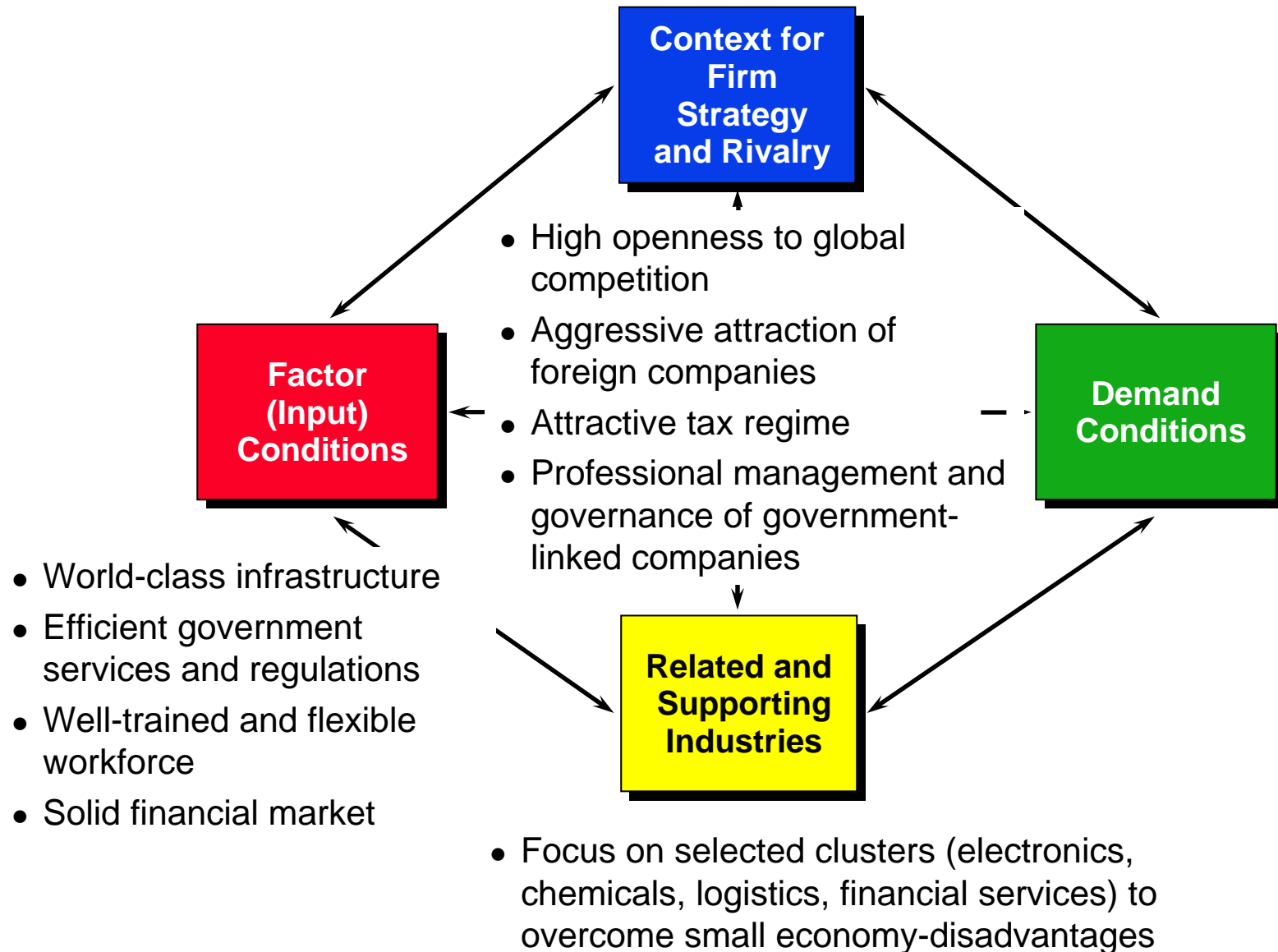


# Determinants of Competitiveness

## Enhancing the Business Environment



# Traditional Strengths of the Singaporean Business Environment

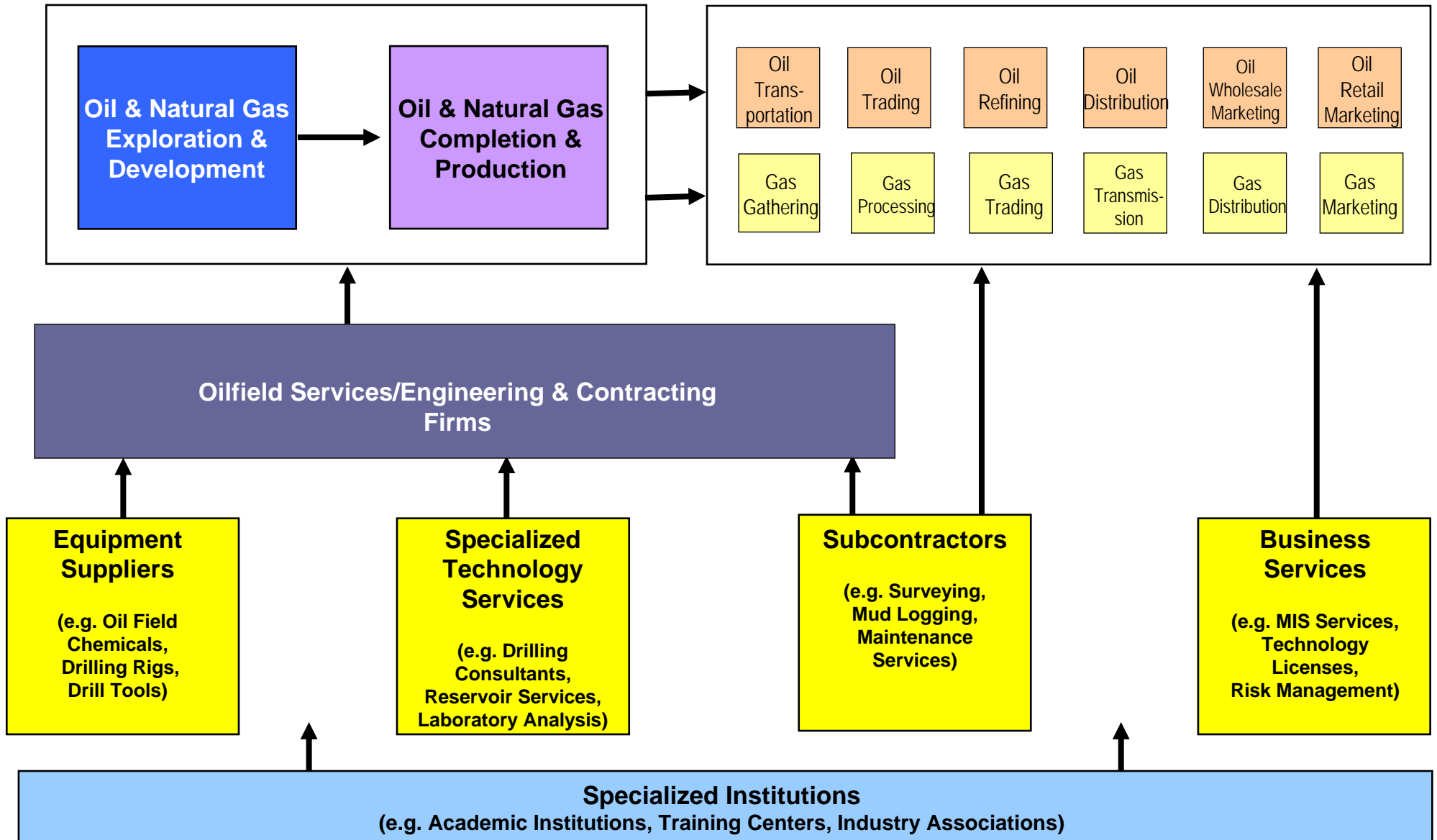


# Cluster Development

## Oil and Gas, Houston

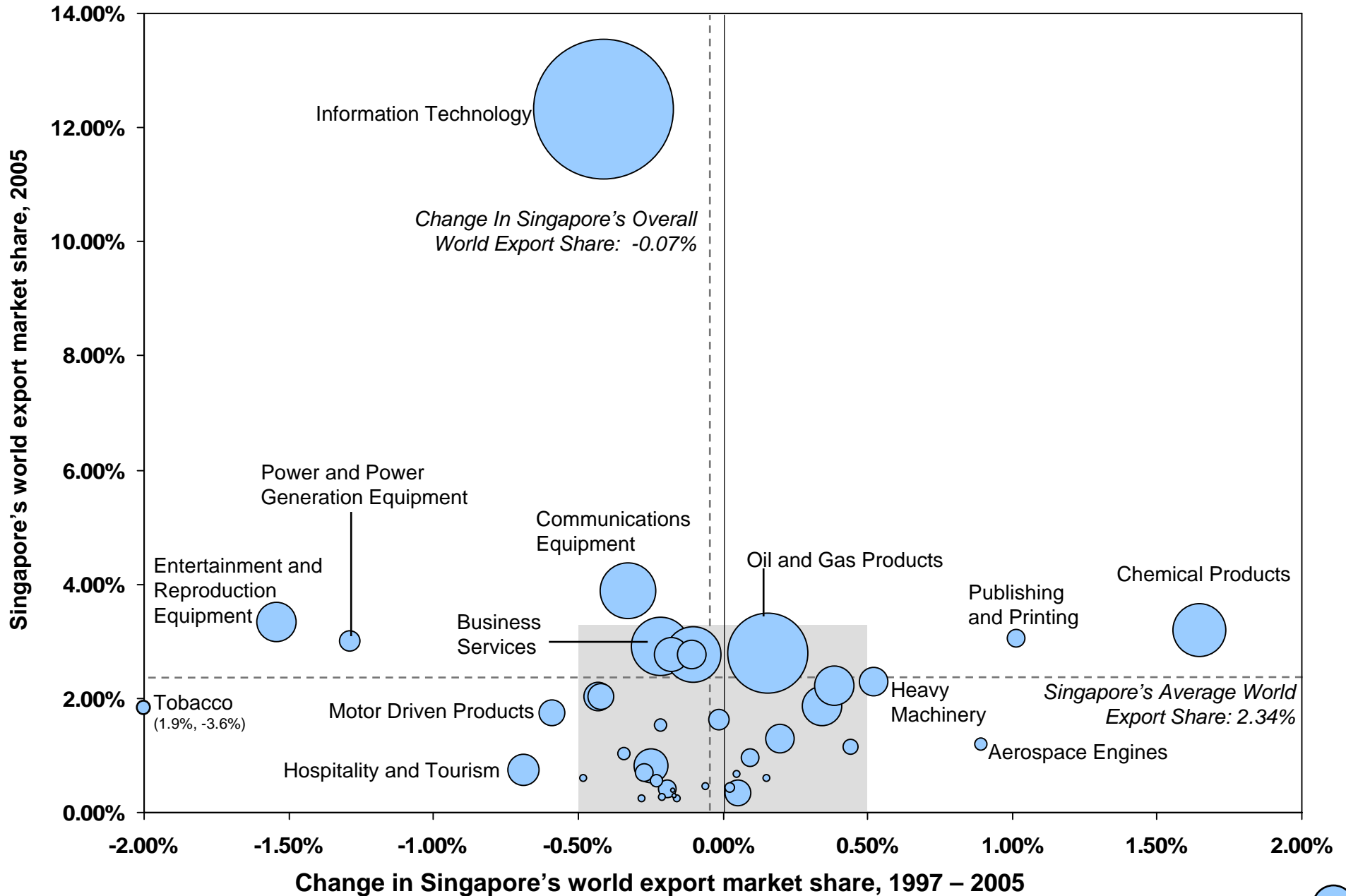
Upstream

Downstream



# Singapore

## Export Portfolio by Cluster, 1997-2005

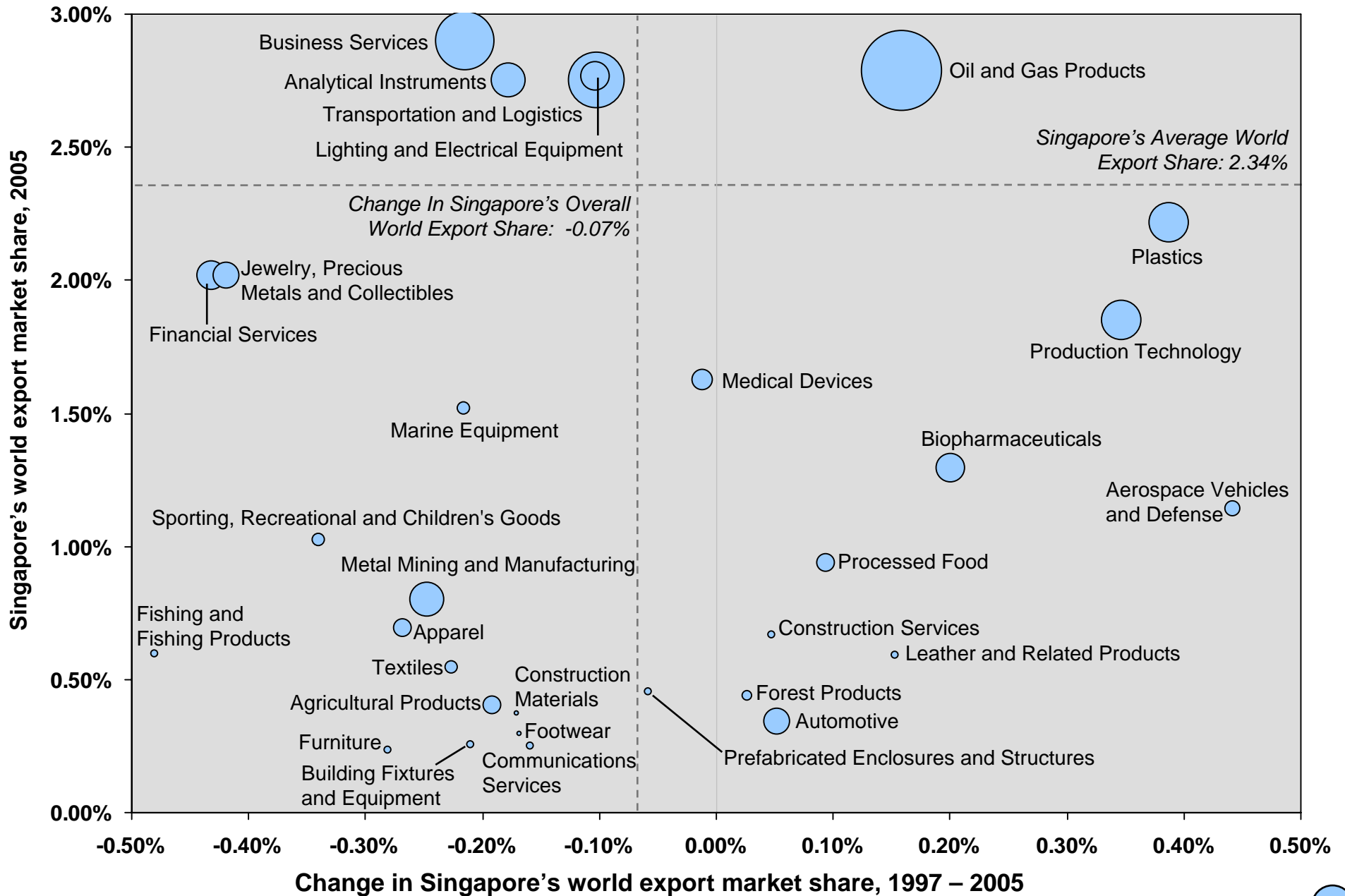


Source: Prof. Michael E. Porter, International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director. Underlying data drawn from the UN Commodity Trade Statistics Database and the IMF BOP statistics.

Exports of US\$10 Billion =

# Singapore

## Export Portfolio by Cluster, 1997-2005 (continued)

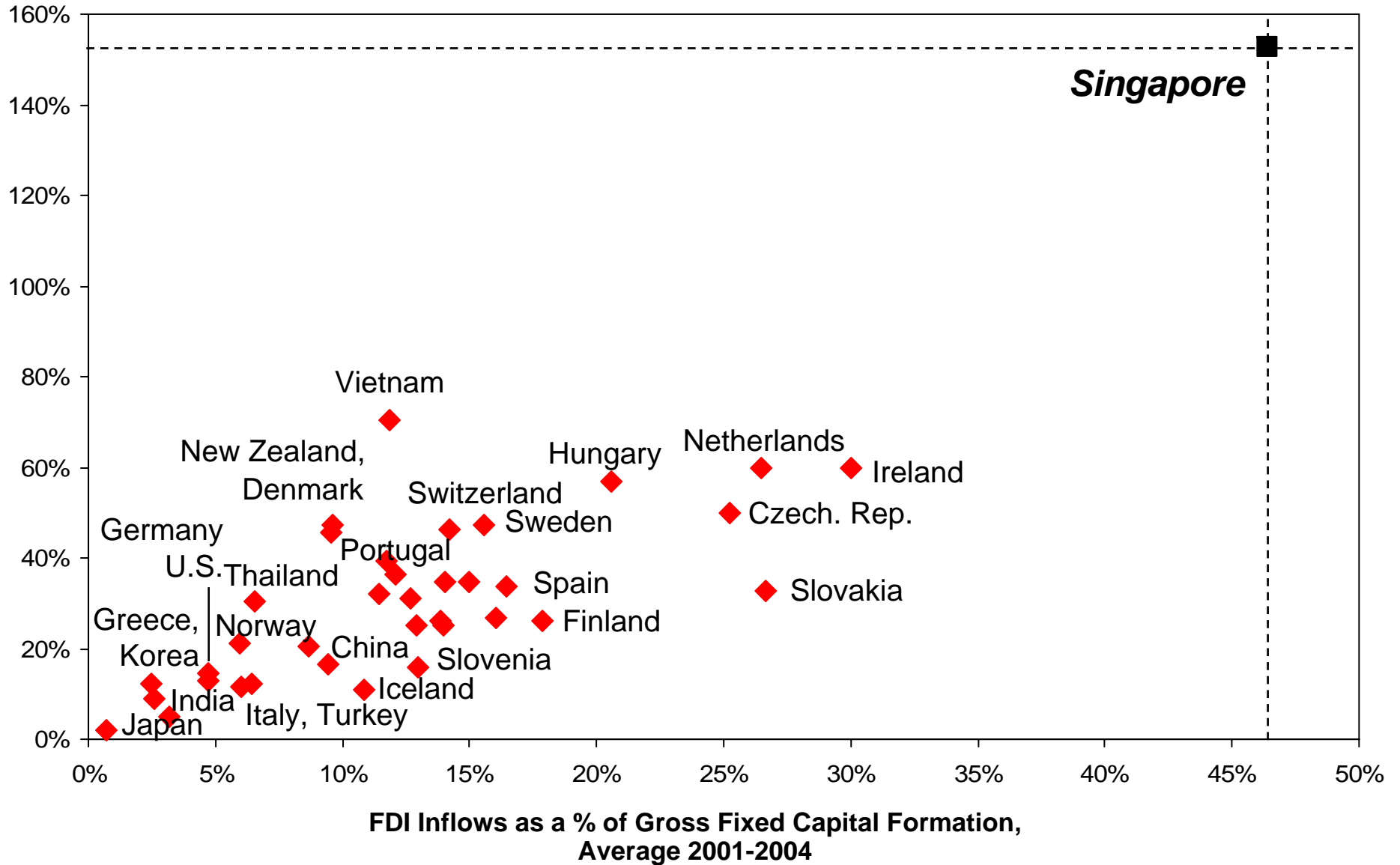


Source: Prof. Michael E. Porter, International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director. Underlying data drawn from the UN Commodity Trade Statistics Database and the IMF BOP statistics.  
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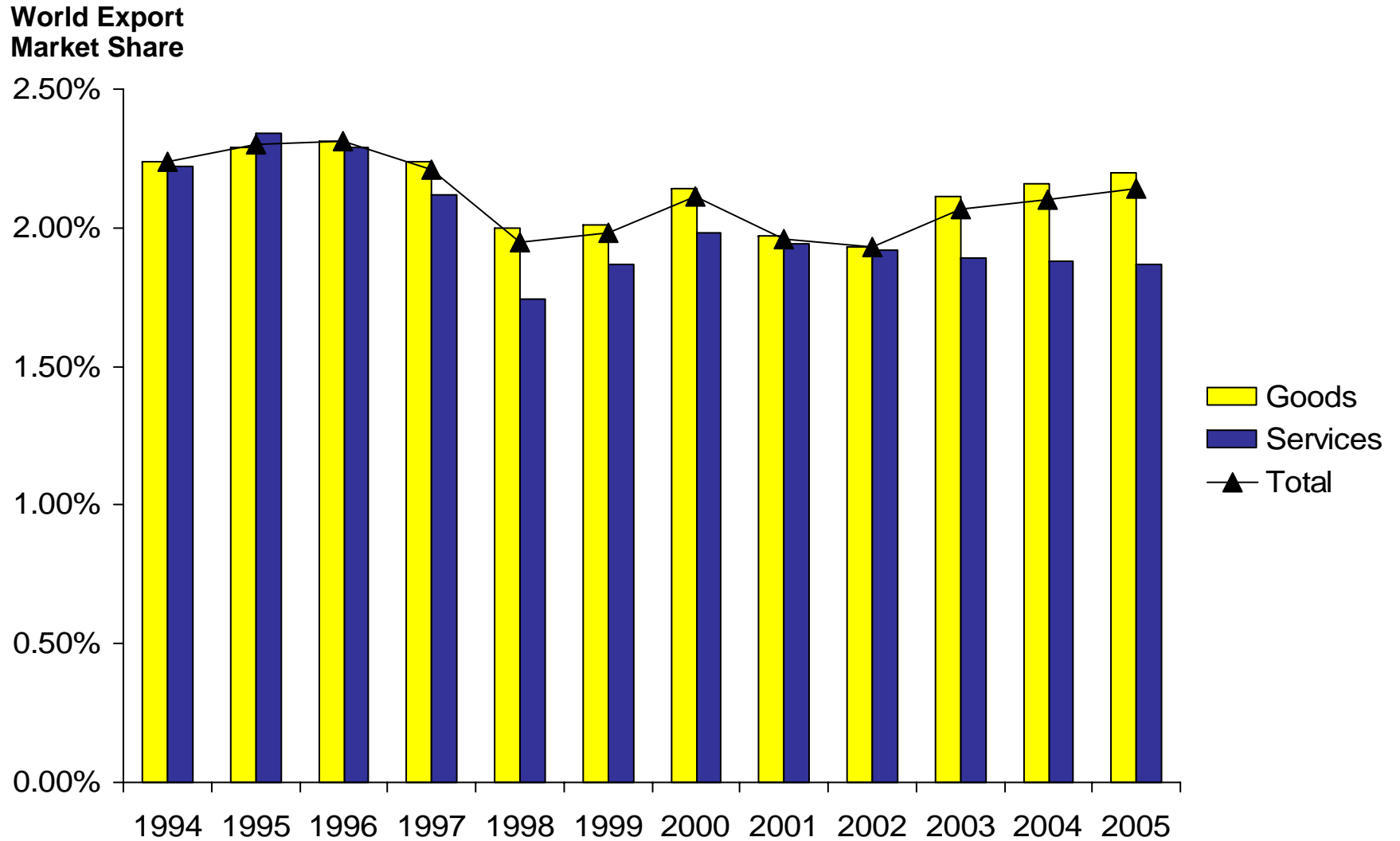
# Foreign Investment Stocks and Flows

## Selected Countries

Stock of FDI as a % of GDP,  
Average 2001-2004

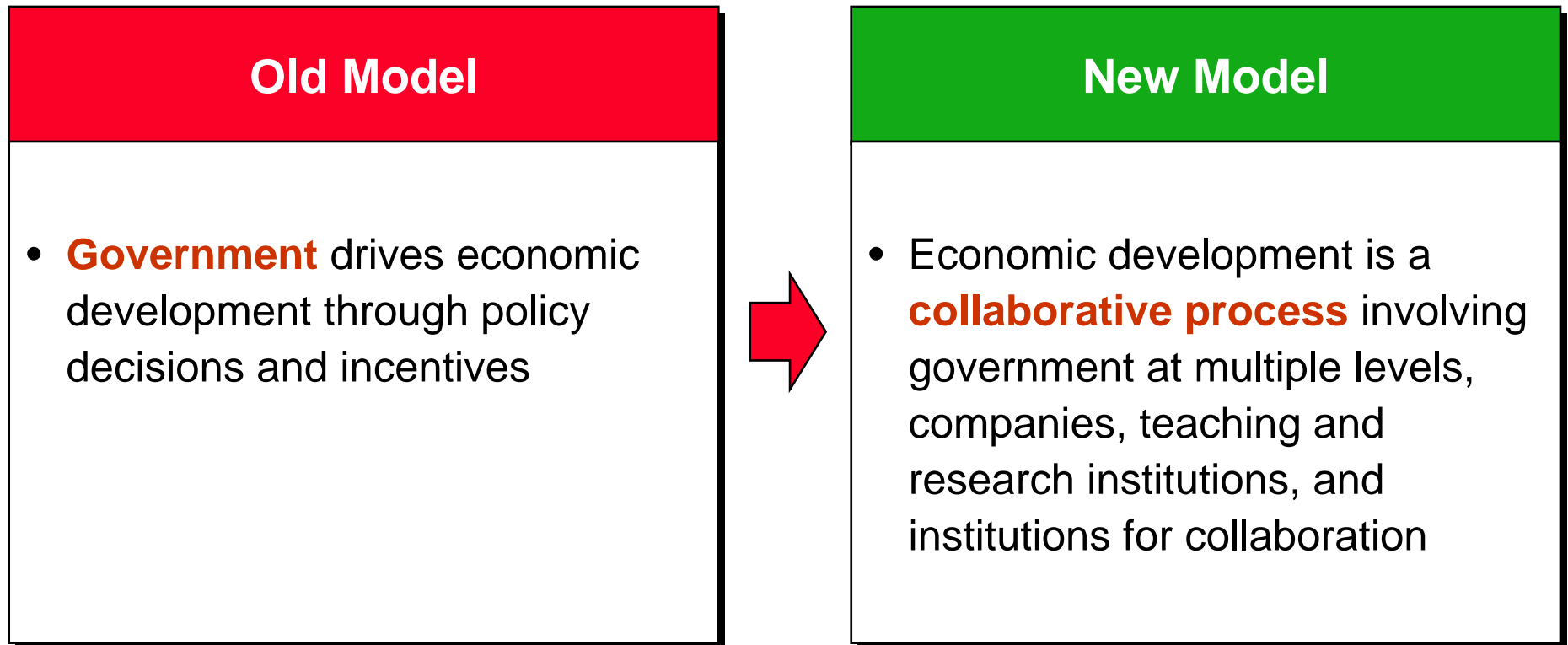


# Singapore Export Share Trends



# The Process of Economic Development

## Shifting Roles and Responsibilities



- Competitiveness must become a **bottom-up process** in which many individuals, companies, and institutions take responsibility
- **Every** community and cluster can take steps to enhance competitiveness



# 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)

# Singapore in Transition: Focus of Current Economic Policies

## Innovation

*Create new competitive advantages for Singapore*

- Investments in universities
- R&D fund for companies / clusters
- Reform of school system
- Focus on more 'creative environment'

## Entrepreneurship

*Address existing competitive disadvantages of Singapore*

- Support internationalization of Singaporean companies
- Liberalization of domestic markets, e.g. telecom
- FTAs with US, ASEAN, etc.

## Efficiency

*Defend Singapore's core competitive advantages*

- Tax reductions

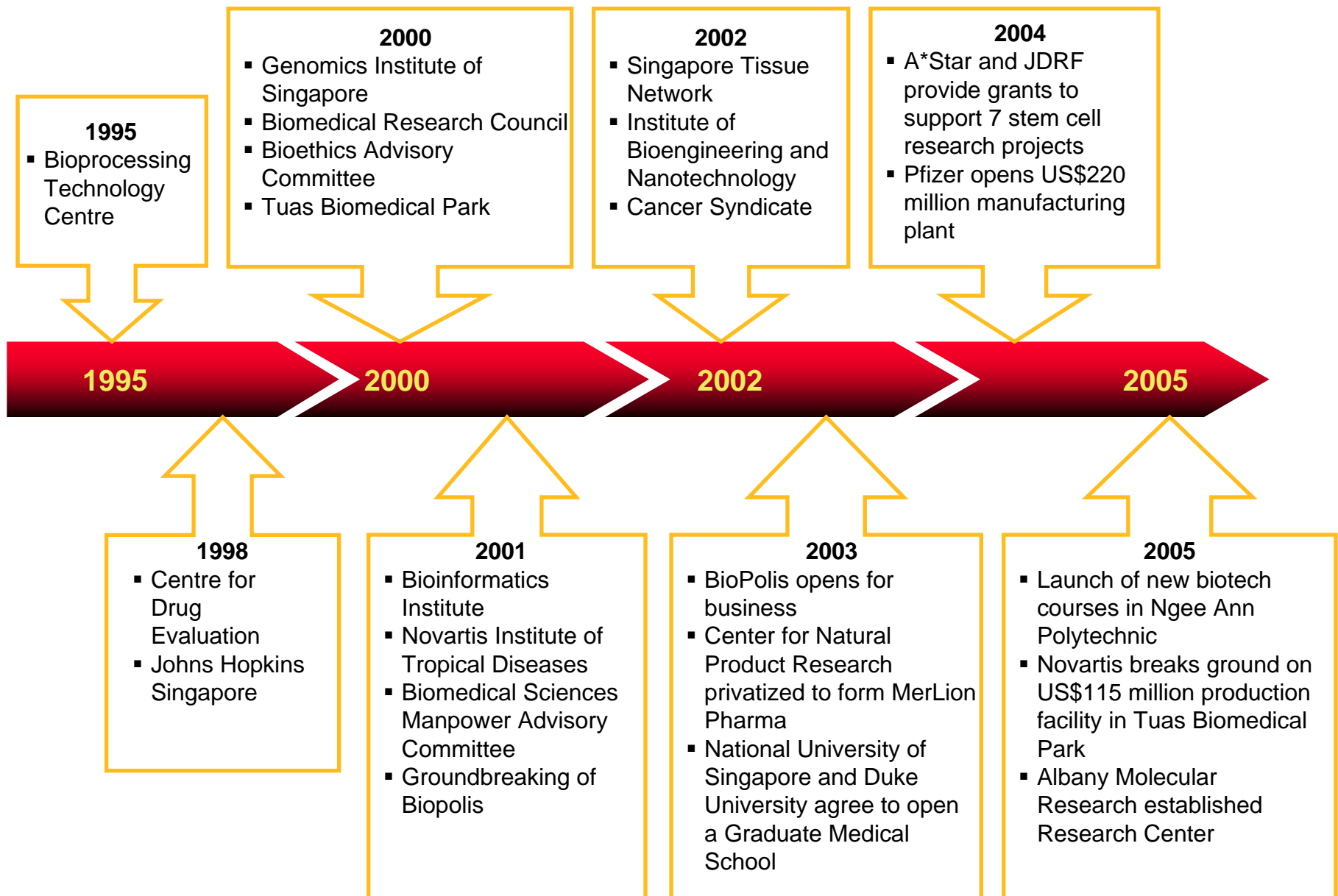
## Social policy

*Defend Singapore's social fabric*

- 'Progress Package' of spending for low-income citizens

# Singapore Biotech Cluster

## Evolution Over Time



Source: Research by HBS student teams in 2005 – Li-Mei Chee, Kola Luu, Gopal Raman, Hwee Yee Yong

# National Economic Strategy

## Value Proposition

- What is the **unique competitive position of the nation**?
  - What roles in the world and regional economies?
  - What unique value as a business location?
  - For what range or types of businesses and functions can the nation be competitive?

## Developing Unique Strengths

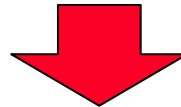
- What **elements of the business environment** are essential to the national value proposition?
- What **existing and emerging clusters** must be mobilized?

## Achieving and Maintaining Parity with Peers

- What **macro/political/legal/social improvements** are necessary to maintain parity with peer countries or regions?
- What areas of the **general business environment** must improve to maintain parity with peer countries or regions?

# Asia Competitiveness Institute

- Barriers to competitiveness improvement:
  - The **lack of objective, relevant microeconomic data** to analyze competitiveness and track the impact of competitiveness efforts
  - The **lack of an independent research organization** separate from the government
  - The **individuals** with advanced training in the concepts and practice of competitiveness



- The **Asia Competitiveness Institute (ACI)** will have an important impact on all three dimensions
- As the node in an emerging network of professionals and institutions throughout the ASEAN region, ACI will also become a central facilitator of more effective **regional co-operation** on competitiveness

# Asia Competitiveness Institute

## Action Priorities 2006-2007

### Organizational launch

- Strategic plan for ACI
- Official ACI launch
- Recruitment of 2 Senior Research Fellows and 2 Research Fellows or equivalent

### Initial research projects

- HBS case study on Singaporean competitiveness
- Singapore Competitiveness Report
- Assembly of Singapore competitiveness data and development of competitiveness research database
- Projects on Indonesia and Vietnam

### Network building

- Stakeholders
- Related Institutes, universities and government bodies
- Regional media

### Education and training

- Microeconomic of Competitiveness course as an elective in LKY SPP
- 5-day executive program
- Explore customized programs for ASEAN governments

# Asia Competitiveness Institute

## Conditions for Success

- Independence
- Permanence
- Inclusiveness
- Clear intellectual framework
- World class research
- Strong leadership