



909 | 42

Views | CrossRef citations to date | 3

Altmetric

Original Articles

# Adapting a foreign direct investment strategy to the knowledge economy: the case of Singapore's emerging biotechnology cluster

David Finegold, Poh-Kam Wong <sup>2</sup> & Tsui-Chern Cheah <sup>3</sup>

Pages 921-941 | Received 01 Sep 2003, Published online: 19 Jan 2007

Cite this article <https://doi.org/10.1080/0965431042000267830>

Sample our  
Built Environment  
Journals



>> [Sign in here](#) to start your access  
to the latest two volumes for 14 days

Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

Read this article

Share

## Abstract

The Singapore Government has identified biotechnology as one of the four pillars of the economy for the twenty-first century. For the last forty years, Singapore has pursued a very successful economic growth strategy of attracting investment from leading multinationals through a combination of financial incentives, world-class infrastructure, a highly literate workforce and a business-friendly regulatory environment. In the biotechnology industry worldwide, however, the typical development pattern has been very different: new start-up companies backed by venture capitalists clustered around leading research universities. This article examines the development of the biotechnology cluster in Singapore, showing how a modified version of Singapore's traditional growth model is co-existing with a more typical biotechnology development pattern.

---

# Notes

Entrepreneurship Centre, National University of Singapore, Singapore 118412,  
bizwpk@nus.edu.sg

Keck Graduate Institute, Strategy & Organization Studies, 535 Watson Dr., Claremont,  
CA 91711, (909) 607-9651, tccheah@kgi.edu

These include Gilead, Affymetrix, and Lynx. Interview. Dr. Beh Swan Gin.

Date established in Singapore

Sources are from company websites or the US Securities and Exchange Commission  
unless otherwise indicated.

<http://www.schering-plough.com.sg/spsingapore.htm>. Accessed Jun 1, 2003.

<http://www.asiabiototechnology.com.sg/kh-biototechnology/readmore/vol6/v6n08/wyeth.html>. Accessed Jun 1, 2003

Establishment date of Sales and Marketing arm

Approximately 150 employees in manufacturing while the remaining are employed in  
sales, marketing and administration. [http://www.biomed-singapore.com/bms/browse\\_print.jsp?artid=79](http://www.biomed-singapore.com/bms/browse_print.jsp?artid=79). Accessed Jun 1, 2003.

On April 16, 2003 Pharmacia was acquired by Pfizer.

<http://www.noonanrusso.com/news/surromed/01news/surro09.24.html>. Accessed June 7, 2003

---

## Additional information

Notes on contributors

David Finegold

Entrepreneurship Centre, National University of Singapore, Singapore

118412, bizwpk@nus.edu.sg Keck Graduate Institute, Strategy &

Organization Studies, 535 Watson Dr., Claremont, CA 91711, (909) 607-

9651, tcheah@kgi.edu

---

## Related Research Data

### [The Dynamics Of Industrial Clustering](#)

Source: Unknown Repository

### [Institutional Adaptiveness, Technology Policy, and the Diffusion of New Business Models: The Case of German Biotechnology](#)

Source: Organization Studies

### [The Evolution of Biotechnology in Three Continents: Schumpeterian or Penrosian?](#)

Source: European Planning Studies

### [Star scientists and institutional transformation: Patterns of invention and innovation in the formation of the biotechnology industry](#)

Source: Proceedings of the National Academy of Sciences

### [Biotechnology Megacentres: Montreal and Toronto Regional Systems of Innovation](#)

Source: European Planning Studies

### [Creating self-sustaining, high-skill ecosystems](#)

Source: Oxford Review of Economic Policy

### [Social Capital and Capital Gains in Silicon Valley](#)

Source: California Management Review

### [The Role of Location and Regional Networks for Biotechnology Firms in Israel](#)

Source: European Planning Studies

### [Skills and the Limits of Neo-Liberalism: The Enterprise of the Future as a Place of Learning](#)

Source: Work Employment and Society

### [A catalytic and evolutionary approach to horizontal technology policies \(HTPs\)](#)

Source: Research Policy

### [Commercializing Science in Europe: The Cambridge Biotechnology Cluster](#)

Source: European Planning Studies

### [Multi-level Science Policy and Regional Innovation: The Case of the Munich Cluster for Pharmaceutical Biotechnology](#)

Source: European Planning Studies

### [Co-operation in Regional Innovation Systems](#)

Source: Regional Studies

Globalisation of US, European and Japanese production networks and the growth of Singapore's electronics industry

Source: International Journal of Technology Management

Sticky Places in Slippery Space: A Typology of Industrial Districts\*

Source: Unknown Repository

Are Skills the Answer?

Source: Unknown Repository

European Policy and the Regions: A Review and Analysis of Tensions

Source: European Planning Studies

Competing Technologies, Increasing Returns, and Lock-In by Historical Events

Source: The Economic Journal

Social Capital: Prospects for a New Concept

Source: Academy of Management Review

Is Population Ecology a Useful Paradigm for the Study of Organizations?

Source: American Journal of Sociology

Fortune Favours the Prepared Region: The Case of Entrepreneurship and the Capitol Region Biotechnology Cluster

Source: European Planning Studies

Leveraging multinational corporations, fostering technopreneurship: the changing role of S&T policy in Singapore

Source: International Journal of Technology Management

The Population Ecology of Organizations

Source: American Journal of Sociology

Linking provided by 

## Related research

People also read

Recommended articles

Cited by  
42

## Information for

[Authors](#)

[R&D professionals](#)

[Editors](#)

[Librarians](#)

[Societies](#)

## Opportunities

[Reprints and e-prints](#)

[Advertising solutions](#)

[Accelerated publication](#)

[Corporate access solutions](#)

## Open access

[Overview](#)

[Open journals](#)

[Open Select](#)

[Dove Medical Press](#)

[F1000Research](#)

## Help and information

[Help and contact](#)

[Newsroom](#)

[All journals](#)

[Books](#)

## Keep up to date

Register to receive personalised research and resources by email



Sign me up



Copyright © 2025 Informa UK Limited [Privacy policy](#) [Cookies](#) [Terms & conditions](#)

[Accessibility](#)



Taylor & Francis Group  
an informa business

Registered in England & Wales No. 01072954  
5 Howick Place | London | SW1P 1WG