



**Latin America/Caribbean and Asia/Pacific
Economics and Business Association**

An initiative of the Inter-American Development Bank and the Asian Development Bank Institute

Second LAEBA Annual Meeting
Buenos Aires, Argentina – November 28-29, 2005

Singapore Model of Industrial Policy –
Past and Present

*Chia Siow Yue, Singapore Institute of International
Affairs*

Sponsored by



IDB

Inter-American Development Bank
Integration and Trade Sector
Institute for the Integration of Latin
American and the Caribbean (INTAL)



SINGAPORE MODEL OF INDUSTRIAL POLICY- PAST AND PRESENT

Chia Siow Yue

Singapore Institute of International Affairs

Buenos Aires

28-29 November 2005

Economic structure

Sectors	1965 % of GDP	2004 % of GDP
Goods sectors	26.2	33.8
manufacturing	14.4	27.7
Services sectors	70.8	63.0
trade services	23.7	14.3
financial services	4.4	11.3
business services	9.4	12.7
transport& communications	11.5	11.0

Manufacturing Industries, 2004

	Output %	Workers %
Electronic products & components	38.55	25.51
Chemicals & chemical products	19.95	5.61
Refined petroleum products	15.44	0.87
Machinery & equipment	5.42	12.01
Transport equipment	5.17	14.37
Metals, metal products, recycled scrap	4.65	11.19
Food, beverages, tobacco	2.19	5.31
Wood, paper, rubber, plastics products,	2.01	7.18
Medical, precision, optical instruments	1.83	2.97
Printing & publishing	1.49	5.10
Electrical machinery & apparatus	1.15	2.32
Textiles, apparel, footwear	0.56	2.85
Miscellaneous industries	1.41	4.40
Total manufacturing	100.00	100.00

Trade in goods and services, 2004

	Value, S\$m	% distribution
Total goods&services	718,700	100
Goods exports	303,476	42
Dom. goods exports	166,503	23
Entrepot goods exports	136,974	19
Goods imports	276,894	39
Services exports	69,580	10
Services imports	68,750	10

Export Structure

	1965	2004
Total exports	S\$3.0 billion	S\$303.5billion
% distribution	100.0	100.0
Food	14.5	1.1
Beverages & tobacco	1.5	0.6
Crude materials	27.3	0.6
Mineral fuels	14.4	12.2
Animal & vegetable oils	2.0	0.2
Chemicals	3.6	11.7
Manufactures	13.2	3.7
Machinery & transport equipment	10.5	61.1
Miscellaneous	14.2	8.8

Domestic export structure 2004

Machinery & transport equipment	S\$82.3 billion
% distribution	
Electronic valves	32.5
Data processing machines	23.6
Parts for office and DP machines	15.8
Communications equipment	8.2
Electrical circuit apparatus	3.8
Electrical machinery	2.6

Singapore's Industrial Strategy

- Sectoral emphasis -- both manufacturing and services as growth engines
- Important role of government -- facilitation of dynamic comparative advantage
- Important role of exports – for both manufacturing and services
- Important role of foreign direct investment – in both manufacturing and services development and competitiveness

Changing industrial strategy and structure

- Pre-1960s – entrepot and British military base
- 1960-65 – industrialization via import substitution
- 1966-78 – industrialization via export orientation
- 1979-90s – emphasis on industrial upgrading
 - 1986 Economic Committee Report
 - 1991 Strategic Economic Plan: Manufacturing 2000 and International Business Hub 2000
 - 1998 Committee on Singapore's Competitiveness
- 2003 Economic Review Committee Report – emphasis on innovation and R&D

Industrial policies...1

- Government plays active role in industrial development. Promote key industries according to perceived dynamic comparative advantage
- Key instruments of industrial promotion
 - establish key institutions
 - promote inflow of FDI
 - no industry protection, no industry subsidies
 - provide industrial estates and parks, infrastructure, power and water supply (fully priced)
 - provide efficient public services
 - provide trained industrial manpower
 - promote access to export markets via trade agreements

Industrial policies...2

- Promote restructuring away from labor intensive and technologically simple towards technology intensive knowledge-based industries
 - education and manpower policies
 - fiscal incentives, co-investment funds, venture capital funds
- Build key clusters of industries and services
 - electronics cluster, chemicals cluster (including petroleum refining), shipbuilding, shiprepair and oil rig construction, biomedical sciences cluster
 - ICT, financial services, health services, education services, media and creative services

Foreign investment policies...1

- Inward stock of FDI ---1.5 times GDP
- Factors in attracting FDI:
 - political , financial, and labor market stability
 - no xenophobia or ultra-nationalism
 - role of EDB in investment promotion
 - transparent legal and regulatory framework, minimum red tape, efficient public services
 - no restrictions on foreign ownership, no performance requirements, generous tax incentives
 - availability of facilities, infrastructure, skilled labour, supporting industries
 - policy stability and consistency

Foreign investment policies...2

- Perceived benefits from FDI:
 - provide capital, technology, managerial/marketing expertise
 - jump-start export manufacturing and high value added services. Over 80% of manufactures exported by MNCs and joint ventures
 - join in global and regional production networks and supply chains
- “Negatives” of FDI:
 - initial policy neglect of local enterprises and R&D
- Growing outward FDI since early 1990s, by MNCs, local enterprises and public enterprises

Source of inward FDI	2003 stock, S\$billion	% distribution
Total	244.4	100
Asia	53.3	22
Japan	33.0	13
Europe	104.1	43
EU	88.3	36
US	37.6	15

Sectoral distribution of FDI	2003 stock, S\$million	% distribution
Total	244,391	100
Manufacturing	91,915	38
Finance	83,069	34
Commerce	39,511	16
Other services	21,742	9
Construction, real estate	7,664	3

Government-MNC partnership

- Harmonious mutually beneficial relationship in past 40 years – some reasons
 - Singapore is an open economy and society, no xenophobia or resentment of foreign ownership and presence
 - Singapore had little choice
 - FDI mainly in export activities, not in resource development or competing with domestic producers
 - Emphasis on export competitiveness ensures technology transfer
- Partnership with MNCs in Local Industry Upgrading Program, development of local suppliers, local industrial training, co-R&D projects
- MNCs represented in major policy making bodies in Singapore

Trade policy

- Trade is more than 3 times GDP
- Promote free trade in goods
 - free port since 19th century
 - no import restrictions or tariffs (except on alcohol)
 - no export restrictions or subsidies (except under CITES)
- Recent years, rapid liberalization of services
- Provision of efficient trade infrastructure
 - port and shipping services, airport and air services, logistics services, customs services
- Tax incentives for trading activities
- Since mid-1990s, signing of bilateral FTAs to improve market access

Human resource policy

- To increase labor supply
 - female labor force participation, delayed retirement age, inflow of foreign labor (25% of workforce)

To increase supply of skills

- revamp of educational institutions, from primary to tertiary
- rapid expansion of tertiary education, to cover 60% of each age cohort
- expansion of training facilities and programs
- encourage inflow of skills and talents

Innovation and R&D policies

- Technopreneurship initiatives announced in 1999
 - physical environment --- creation of science hub
 - technopreneurship investment fund
- Development of IT industry as growth industry and an enabler
- R&D promotion and expenditures
 - establishment of R&D institutions, promotion of R&D activities by MNCs, training of R&D personnel, tightening of intellectual property protection, provision of R&D financing
 - GERD rose to 2.25% of GDP in 2004, targeted to at least 3% within 5 years. Government funding for R&D raised to S\$12 billion
 - encourage more private sector R&D and collaboration between research institutions and private sector companies

Challenges

- Maturing Singapore economy and intensified regional and global competition is pressuring Singapore to move towards a knowledge-based economy
- Free trade and free FDI model has served Singapore well in the past 40 years, but the model is increasingly copied by developing countries. Singapore's export-led and FDI-led model has lost its uniqueness
- Singapore economy has to “re-invent” itself, to find new niches and be internationally and regionally competitive.
- Development of 3 capabilities crucial
 - a more educated and skilled workforce
 - more dynamic and innovative domestic entrepreneurship
 - more indigenous innovation and R&D
- Role of the government in partnership with private sector is crucial in the next phase of Singapore's development