Globalization and International Trade: The Changing Role of Hong Kong

Michael Fung

Director, Economic Education Program,
HKIAPS, CUHK

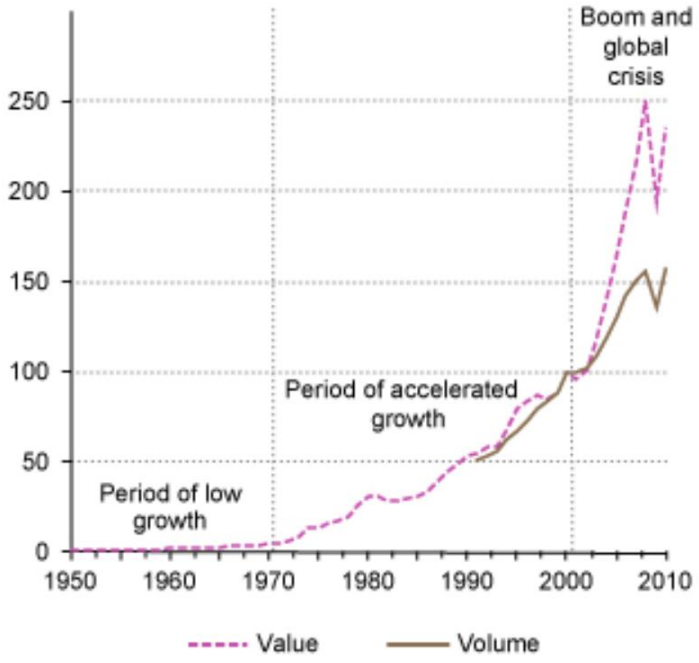
Globalization and International Trade

- Trade Patterns in the Process of Globalization
- Economics of Global Supply Chain Management (GSCM)
- Hong Kong: From Entrepôt Trade to GSCM
- Company Case: Li & Fung

World Exports from 1950 to 2010

Long-term trends in value and volume of merchandise exports, 1950-2010

(Index numbers, 2000=100)



Source: UNCTAD secretariat calculations, based on *UNCTADstat* and CPB Netherlands Bureau of Economic Policy Analysis, *World trade database*

http://dgff.unctad.org/chapter1/1.1.html

Comparative Advantage

- David Ricardo (1817): On the Principles of Political Economy and Taxation
- Two countries: England and Portugal
- Two goods: wine and cloth

Comparative Advantage

- In Portugal it is possible to produce both wine and cloth with less labor than it would take to produce the same quantities in England.
- In England it is very hard to produce wine, and only moderately difficult to produce cloth.
- In Portugal both are easy to produce.
- Each country can gain by specializing in the good where it has comparative advantage, and trading that good for the other.

http://en.wikipedia.org/wiki/Comparative_advantage

Comparative Advantage

Explain in opportunity cost:

- Hong Kong exports human capital intensive services
- China exports land intensive agricultural goods

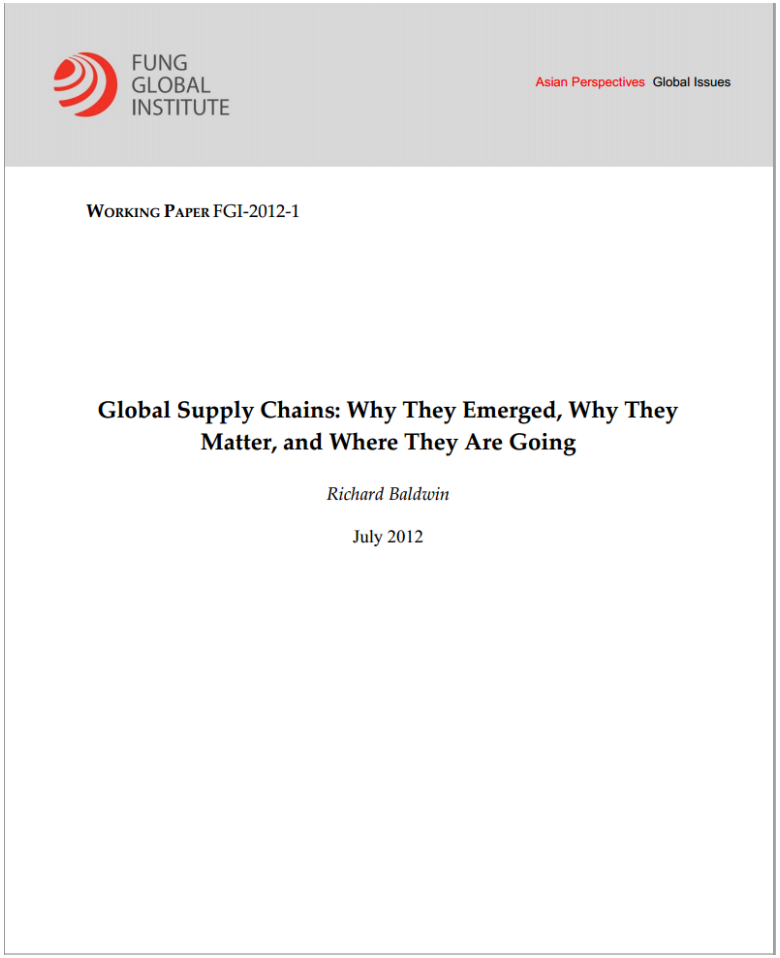
Economics of Global Supply Chain Management (GSCM)

Richard Baldwin

Global Supply Chains: Why They Emerged, Why They Matter, and Where They are Going

Fung Global Institute WP FGI-2012-1

Baldwin (2012)



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WORKING PAPER FGI-2012-1

Global Supply Chains: Why They Emerged, Why They Matter, and Where They Are Going

Richard Baldwin

July 2012

Economics of Global Supply Chain Management (GSCM)

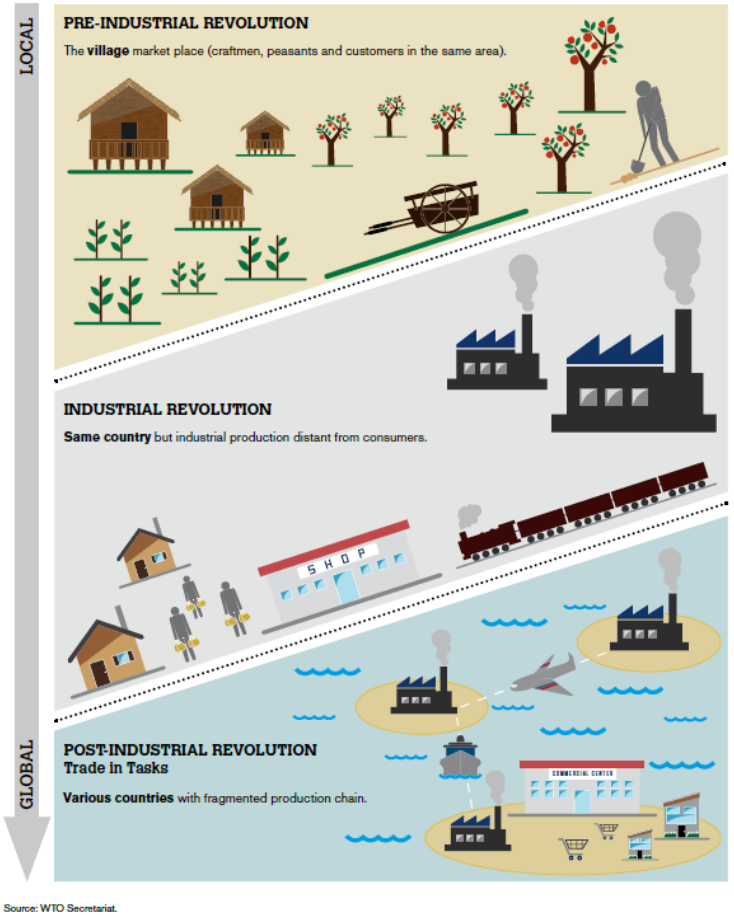
Globalization has been driven by advances in two very different types of 'connective' technologies: transportation and transmission.

Economics of Global Supply Chain Management
1st Unbundling (1830 – 1980)

Economics of Global Supply Chain Management
1st Unbundling (1830 – 1980)

The steam revolution, especially railroads and steamships, made it feasible to spatially separate production and consumption.

From Local to Global Production and Markets



WTO (2011): Trade Patterns and Global Value Chains in East Asia

Economics of Global Supply Chain Management
1st Unbundling (1830 – 1980)

Globalization's first unbundling was marked by five top-line facts:

International trade in goods exploded during the first unbundling.

The 'North' (Europe, North America and Japan) industrialized while South de-industrialized, especially India and China.

Economics of Global Supply Chain Management
1st Unbundling (1830 – 1980)

Globalization's first unbundling was marked by five top-line facts:

Growth "Take-off"

The first unbundling saw North and South incomes diverge massively.

Economics of Global Supply Chain Management
1st Unbundling (1830 – 1980)

Globalization's first unbundling was marked by five top-line facts:

Production clustered locally as it dispersed globally .

Economics of Global Supply Chain Management
1st Unbundling (1830 – 1980)

The first globalization paradox: freer trade led production to cluster locally in factories and industrial districts:

- cheap transport favors large-scale production
- such production is complex
- extreme proximity lowers the cost of coordinating the complexity

By removing one constraint (transport costs), the 1st unbundling brought forward another – coordination costs. Proximity became more important in many ways, not less.

Economics of Global Supply Chain Management
2nd Unbundling (1980 -)

Economics of Global Supply Chain Management

2nd Unbundling (1980 -)

Coordinating production requires a complex exchange of information.

Economics of Global Supply Chain Management

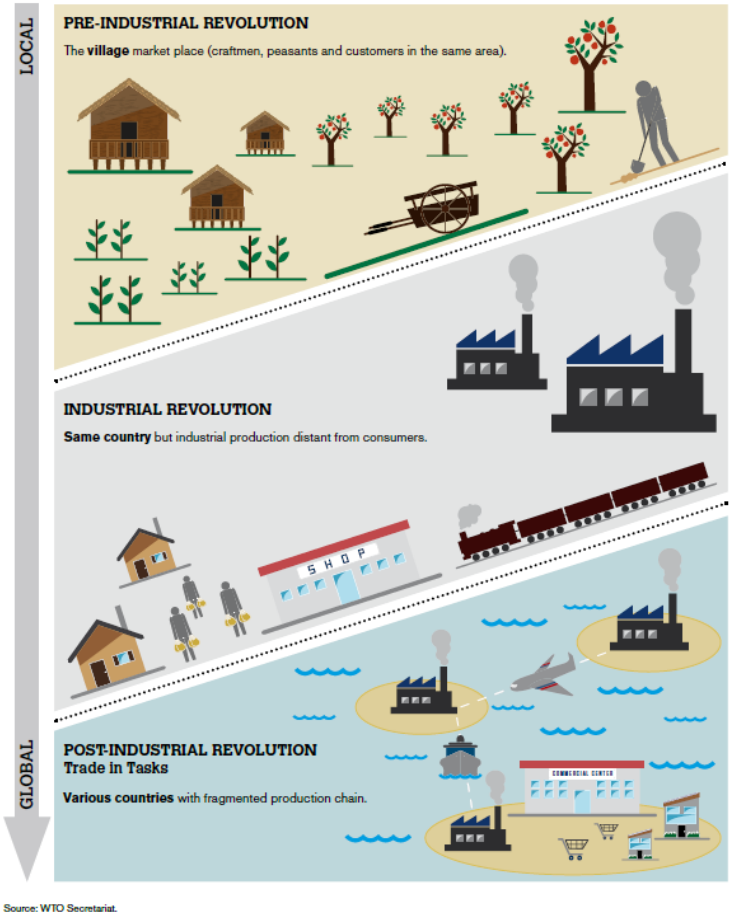
2nd Unbundling (1980 -)

Since the advancement of ICT starting from the mid-1980s, the coordination cost has been substantially reduced:

- The vast wage differences between developed and developing nations made separation profitable.
- The ICT revolution made it possible to coordinate complexity at distance.

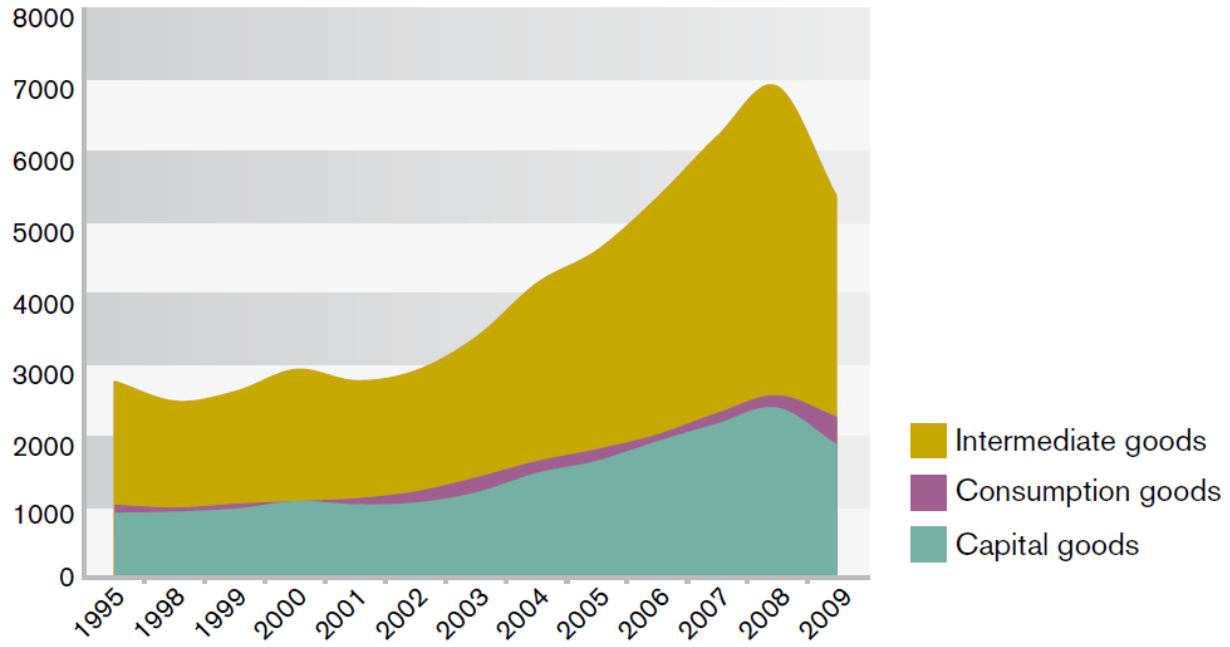
This was globalization's 2nd unbundling – some production stages previously performed in close proximity were dispersed geographically.

From local to global production and markets



WTO (2011): Trade Patterns and Global Value Chains in East Asia

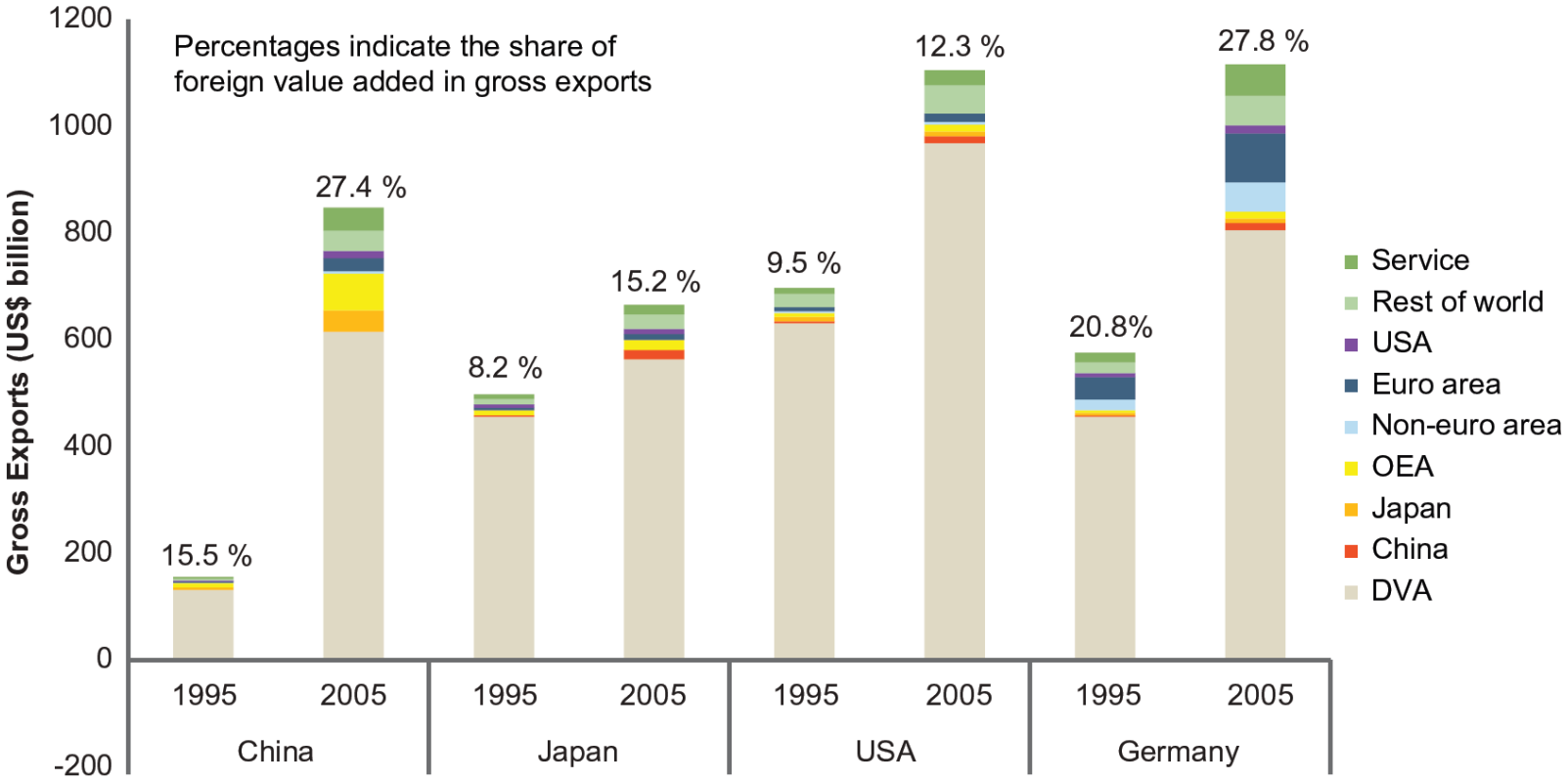
World Non-fuel Merchandise Exports by Type of Good, 1995-2009 (in billions of US$)



Sources: UN Comtrade Database and WTO estimates.

WTO (2011): Trade Patterns and Global Value Chains in East Asia

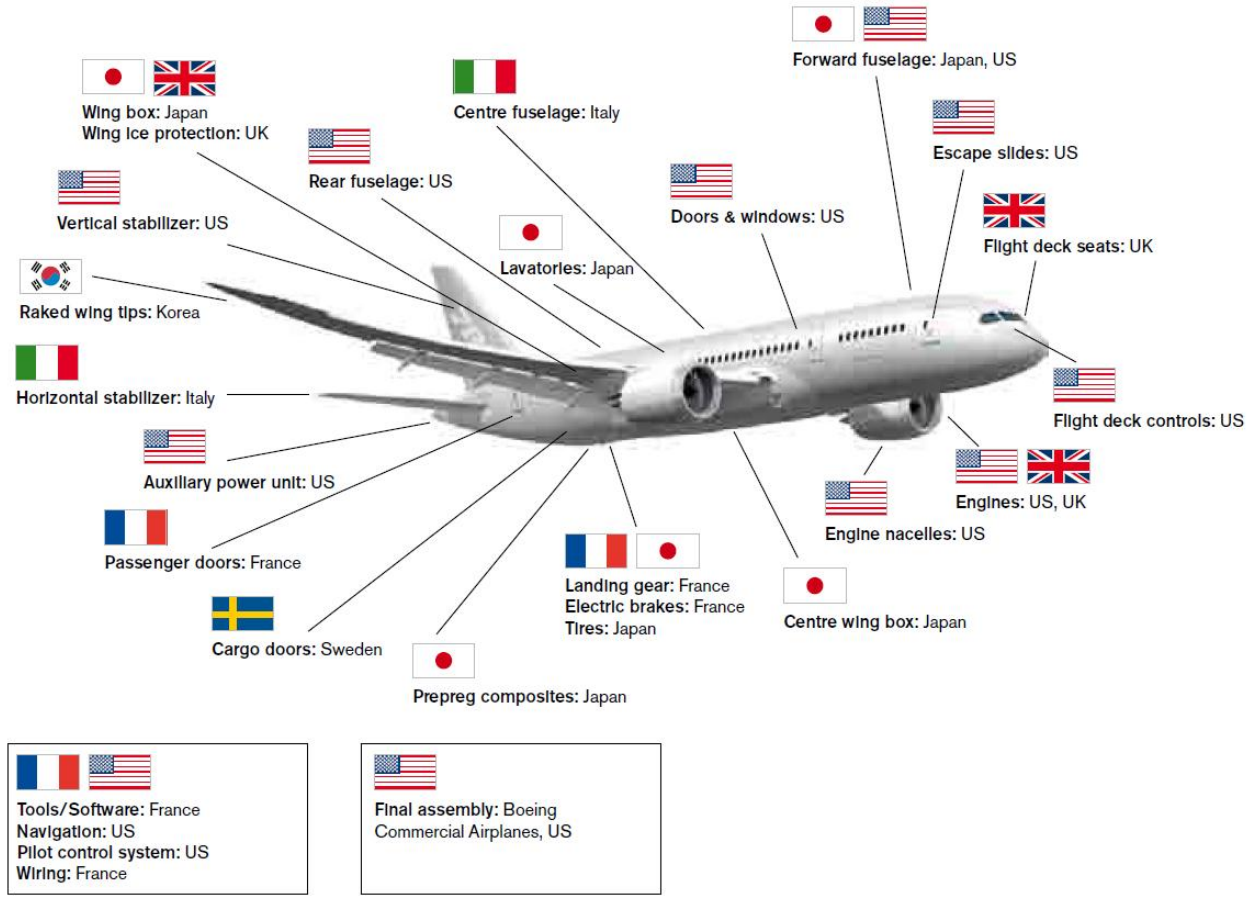
Foreign Content in Gross Exports



Source: IMF staff estimates using OECD Input-Output Tables, UN Comtrade, and OECD STAN data.

IMF (2012): Changing Patterns of Global Trade

The Fragmentation of Production: The Example of the Boeing 787 Dreamliner



Source: Meng and Miroudot (2011).

WTO (2011): Trade Patterns and Global Value Chains in East Asia

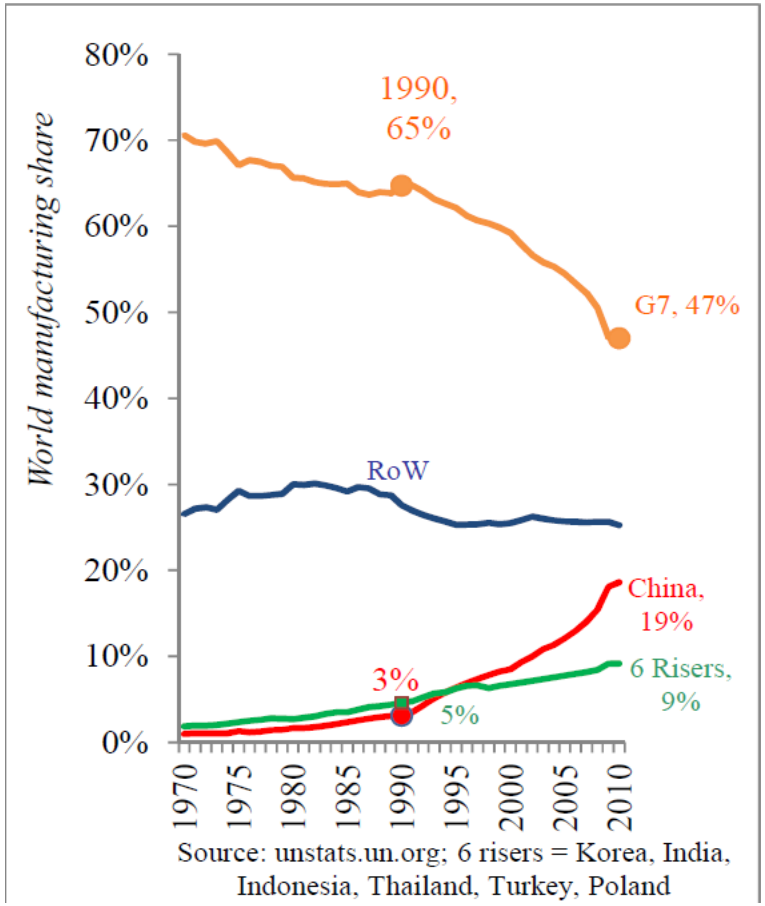
Economics of Global Supply Chain Management

2nd Unbundling (1980 -)

Globalization's 2nd unbundling was marked by five top-line facts:

South industrialization & North de-industrialization

Seven Risers and Seven Losers: Manufacturing Reversal of Fortunes



Richard Baldwin and Javier Lopez-Gonzalez 2013, Supply-Chain Trade: A Portrait of Global Patterns and Several Testable Hypotheses, NBER WP 18957

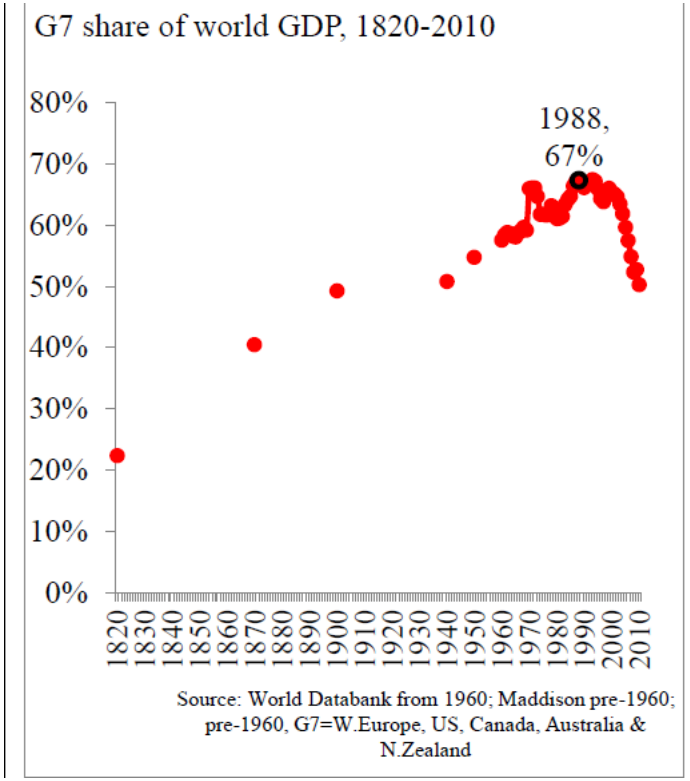
Economics of Global Supply Chain Management

2nd Unbundling (1980 -)

Globalization's 2nd unbundling was marked by five top-line facts:

Reversal of the big income divergence

Reversal of the Big Divergence



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Economics of Global Supply Chain Management

2nd Unbundling (1980 -)

Globalization's 2nd unbundling was marked by five top-line facts:

New industrialization path: joining rather than building industrial supply chains

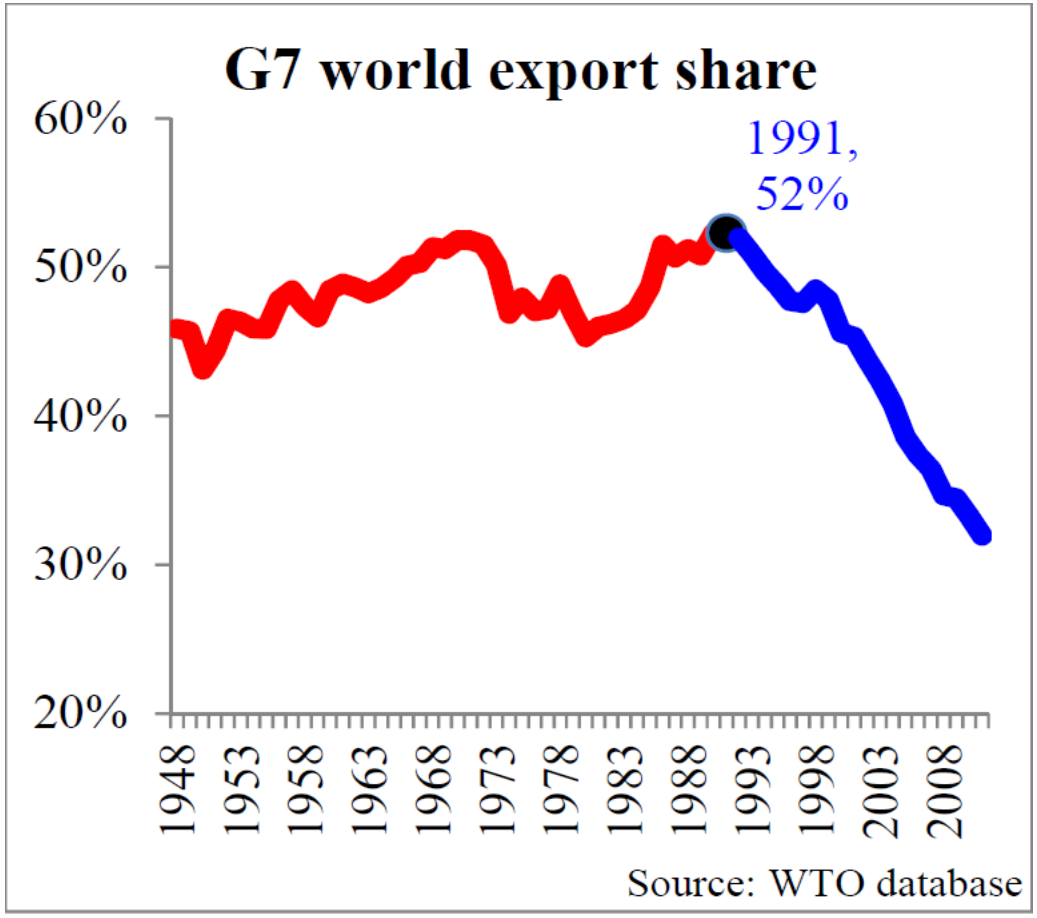
Economics of Global Supply Chain Management

2nd Unbundling (1980 -)

Globalization's 2nd unbundling was marked by five top-line facts:

Rise of 21st century trade: the trade-investment-services-IP nexus

G7 Share of Trade



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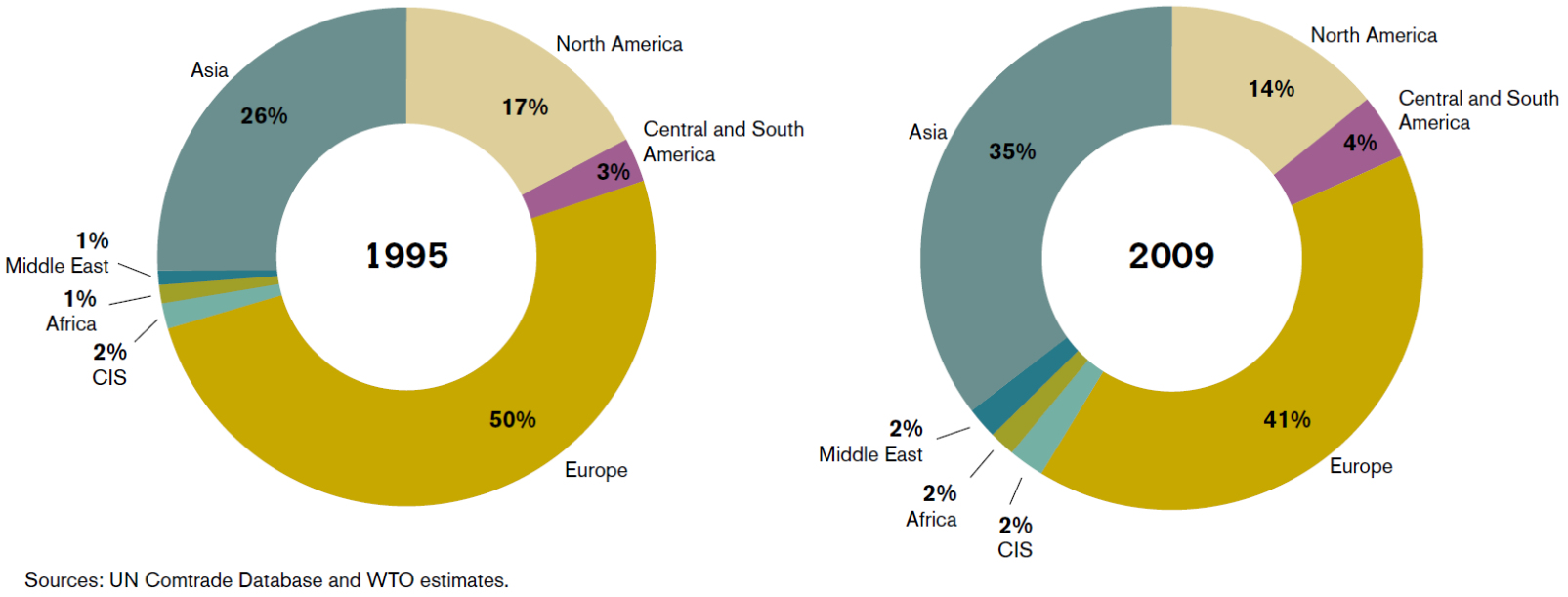
Economics of Global Supply Chain Management

2nd Unbundling (1980 -)

Special feature of GSC:

- The global supply chain is really not very global – it's regional.

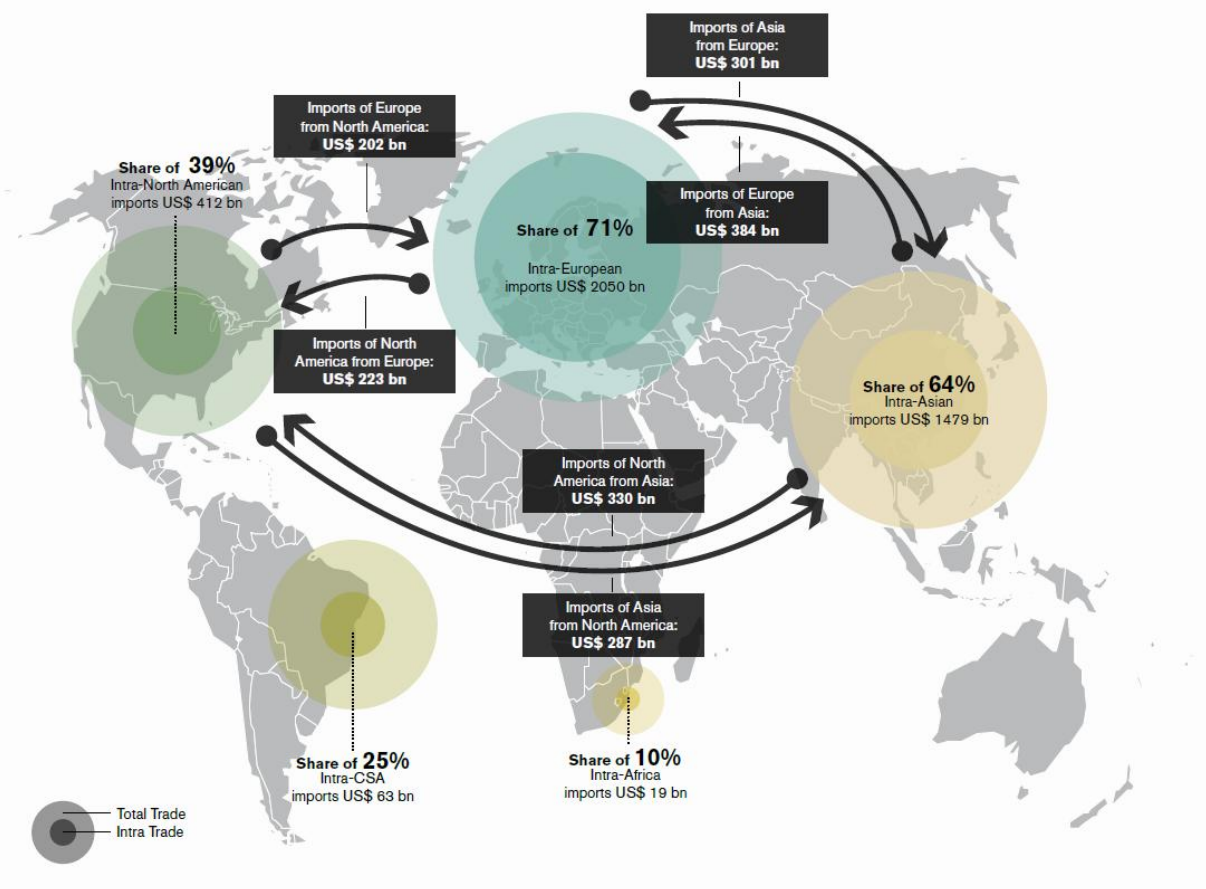
Regional Shares in World Exports of Intermediate Goods (Percentage)



Sources: UN Comtrade Database and WTO estimates.

WTO (2011): Trade Patterns and Global Value Chains in East Asia

Intra-regional and Major Inter-regional Imports of Intermediate Goods, 2008 (in billions of US$)



Sources: UN Comtrade Database and WTO estimates.

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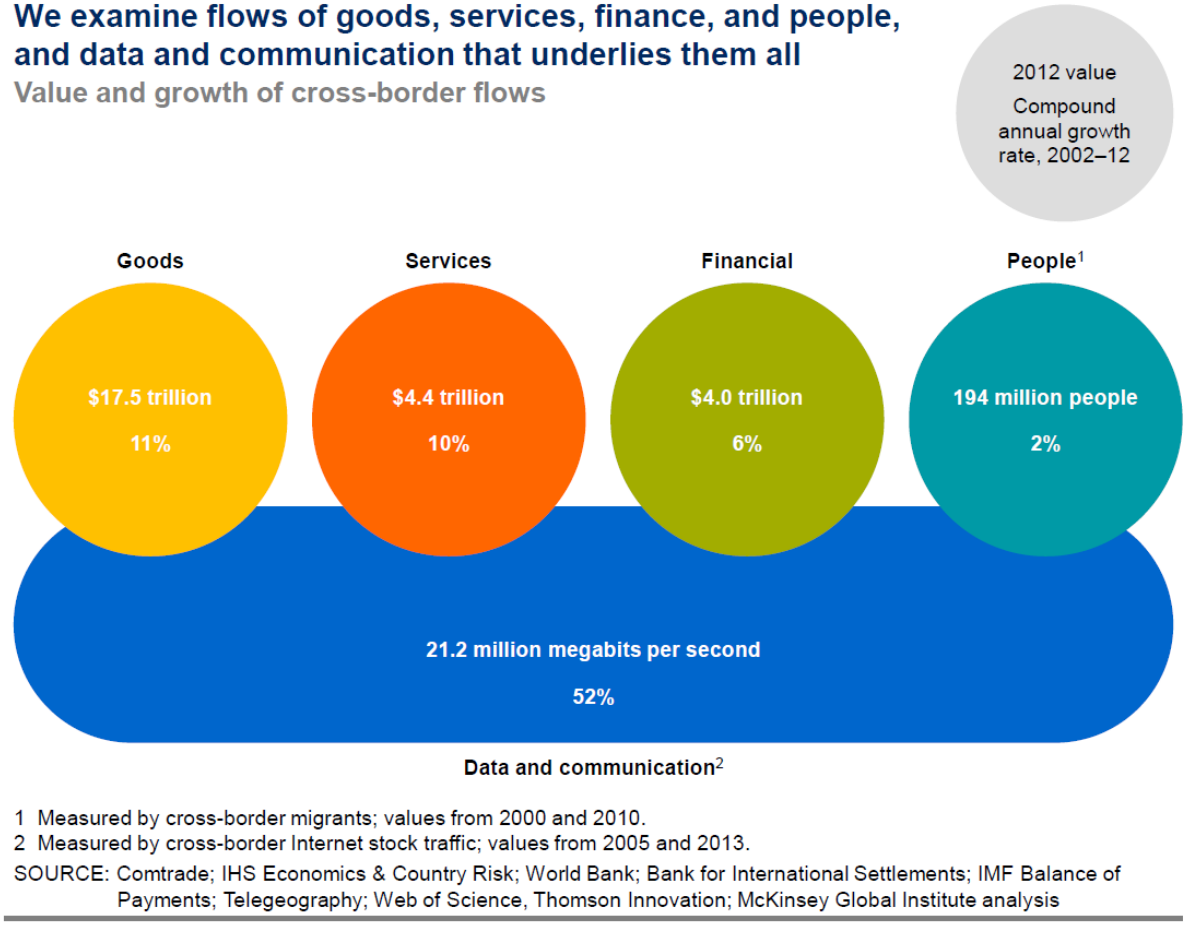
McKinsey&Company

McKinsey Global Institute

April 2014

Global flows in a digital age: How trade, finance, people, and data connect the world economy

McKinsey (2014)



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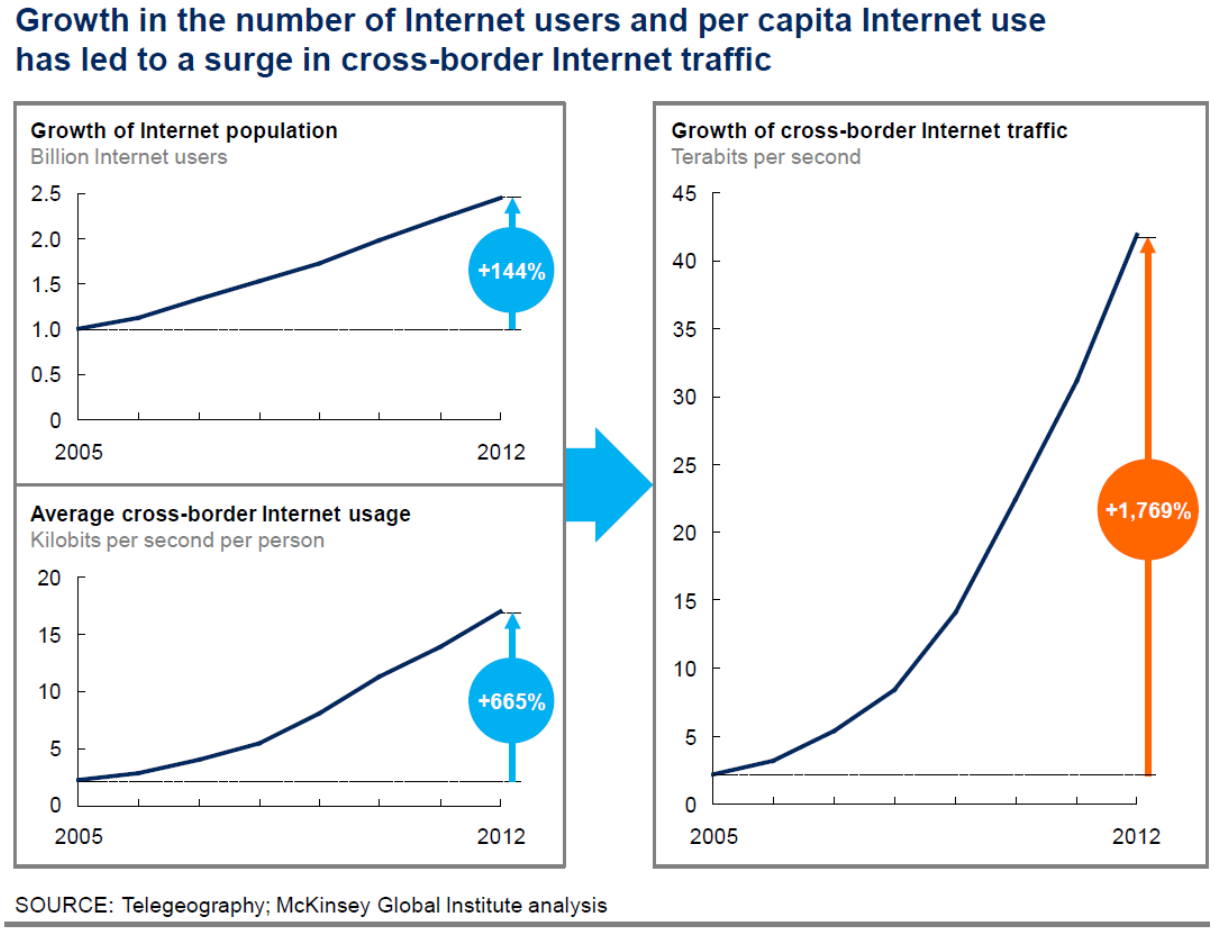

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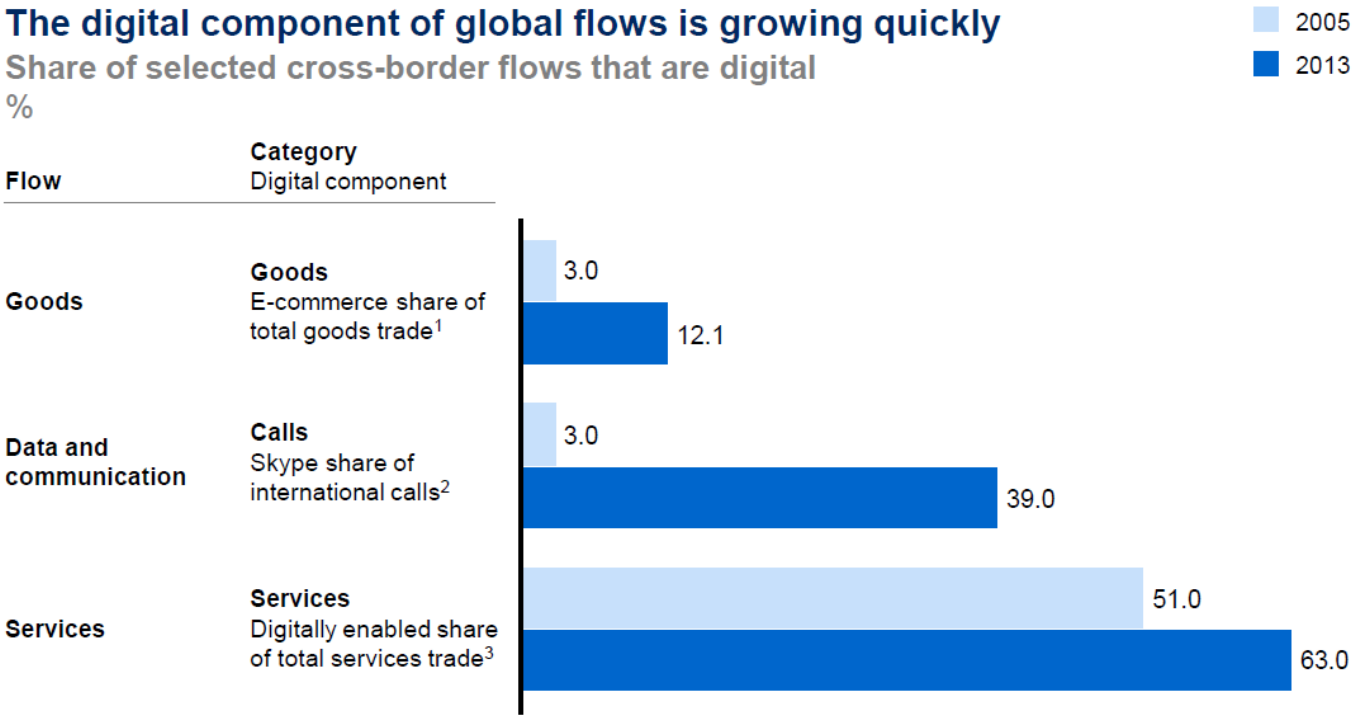

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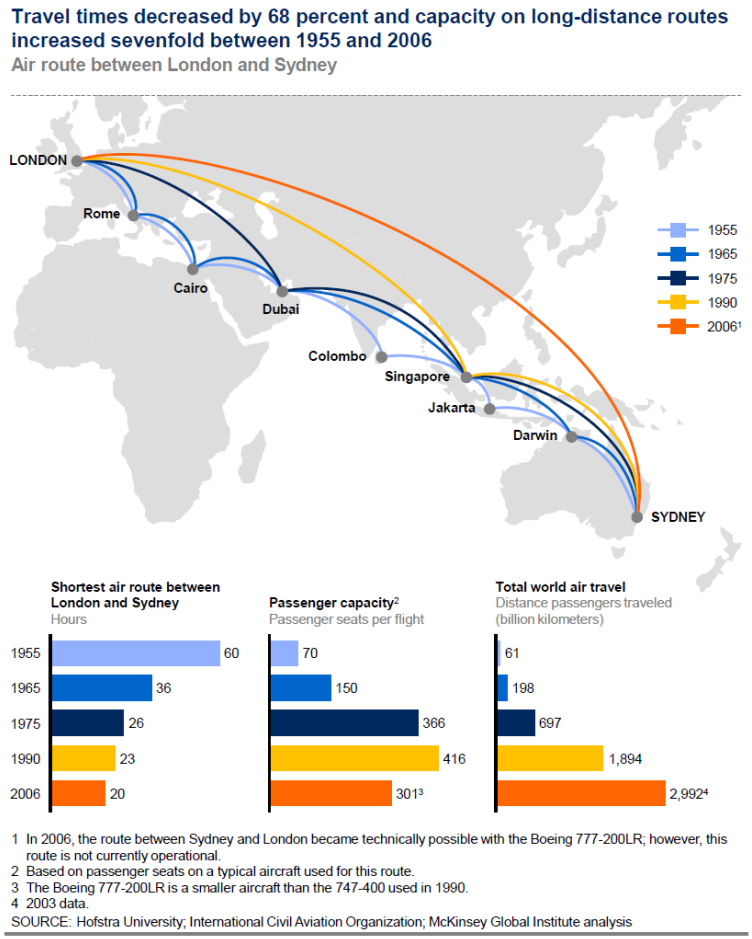


Global flows in a digital age: How trade, finance, people and data connect the world economy, McKinsey Global Institute, 2014.

Economics of Global Supply Chain Management: Future of GSCs

Major Factors

- Wage Gap
- Reduction of transportation and communication costs

Additional Factors

- A sequential task can be performed during normal day shifts in different time zones to ensure a continuous 24-hour operation
- Foreign tax and investment conditions also affect offshoring decisions
- Diversifying operational locations to different countries may be a way to hedge against the risk of currency movements

Winston Chang, “The Economics of Offshoring,” Working Paper 2012.

Economics of Global Supply Chain Management (GSCM)

Future of GSC

The future of global supply chains will be molded by the answers to the following questions:

- Will stages of production be further dispersed and interconnected internationally?
- Will stages of production become more polarized in terms of skill-, capital- and technology-intensity?

Economics of Global Supply Chain Management (GSCM)

Functional unbundling: Specialization versus coordination and risk

Some ICT improvements reduce the costs of specialization while others reduce the benefits of specialization.

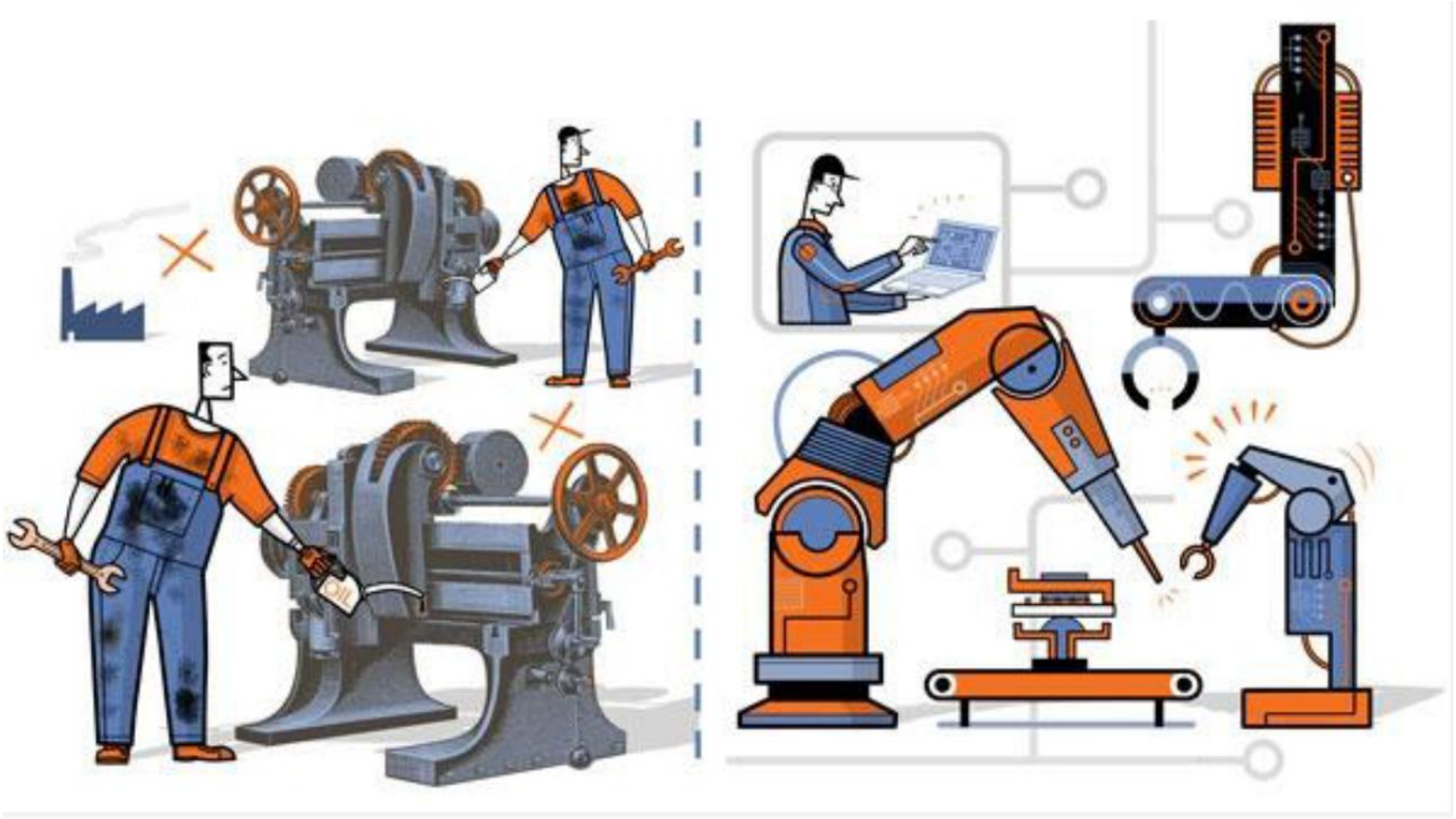
Economics of Global Supply Chain Management (GSCM)

Future of GSC

Information vs coordination technology

- Rapid improvement in coordination/communication technology favors supply chain unbundling functionally and geographically.
- Better information technology, by contrast, favors bundling of many tasks into the ambit of individual workers. This will typically result broader occupations and few separate stages of production.

Schematic Illustration of Computer Integrated Manufacturing



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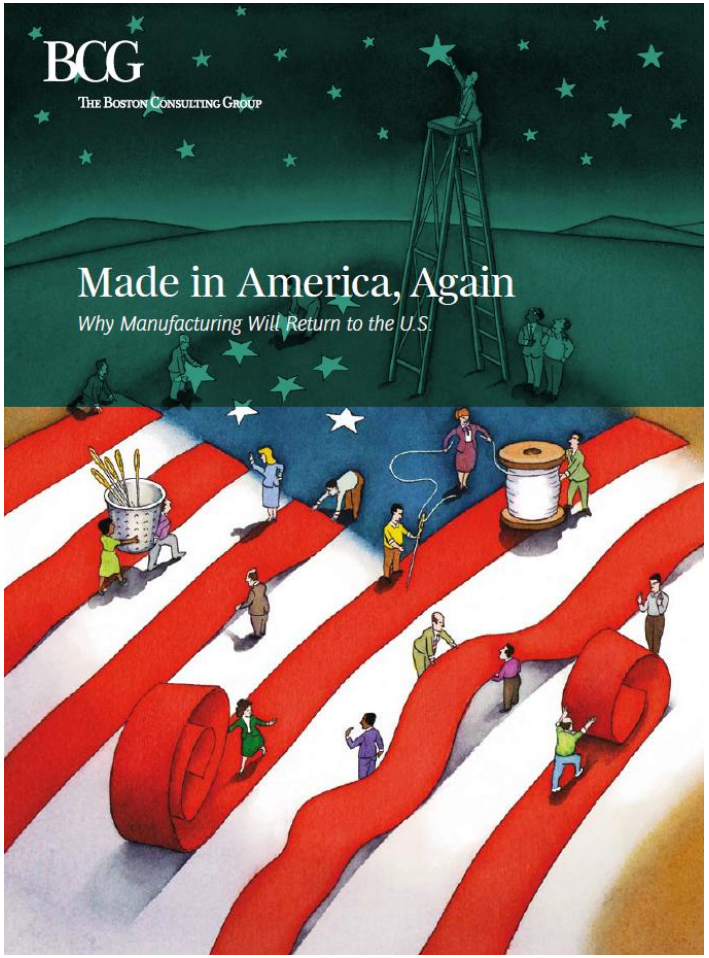
Economics of Global Supply Chain Management (GSCM)

Future of GSC

Wage gap convergence may increase supply-chain trade

One of the most remarkable trends in recent years has been a narrowing of wage differences between developed and developing nations. This trend is having, and will continue to have, two distinct effects on international supply chains.

- First, wage convergence changes the nature of trade between the converging nations. Specifically, developing nations like China are producing sophisticated intermediate goods that previously were imported.
- Second, as wages rise in China, Mexico, Poland, etc, the geographically extent of supply chains widens to include new low-wage nations like Vietnam.



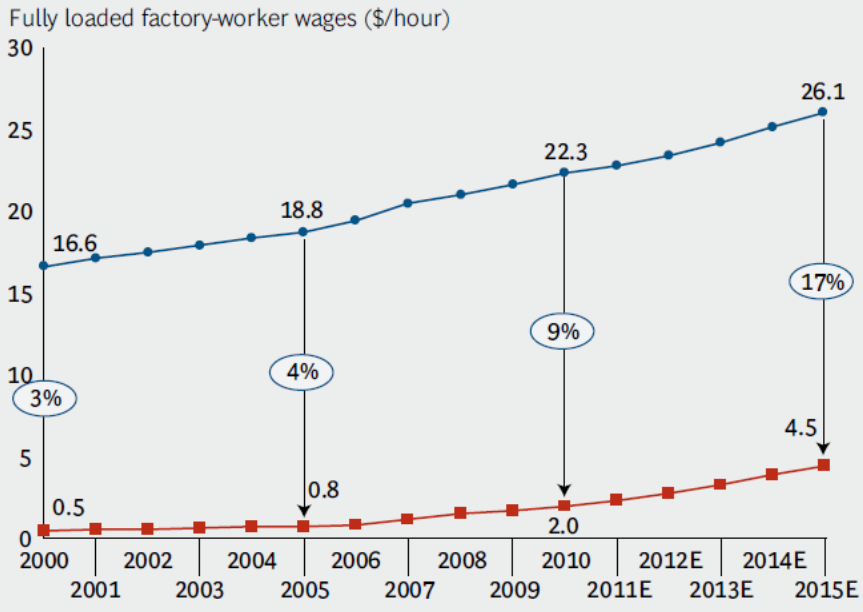
Boston Consulting Group, 2011, Made in America, Again

BCG (2011)

China's Rising Wages

EXHIBIT 1 | China's Wage Rates Are Growing Rapidly

Average wages could approach 17 percent of those in the U.S. by 2015, up from 3 percent in 2000



	CAGR 2000–2005 (%)	CAGR 2005–2010 (%)	CAGR 2010–2015 (%)
U.S.	2	4	3
Ratio of average Chinese to average U.S. wage rates			
China	10	19	17

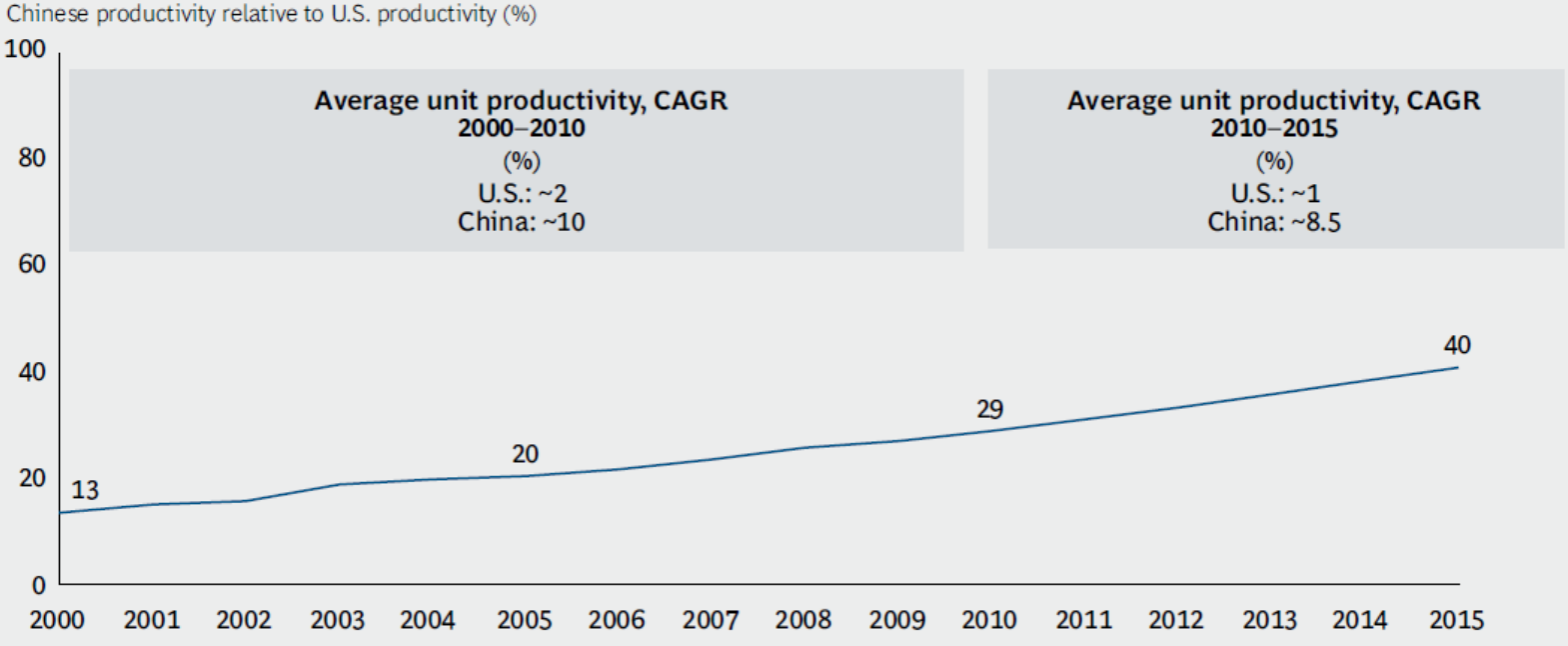
Sources: Economist Intelligence Unit; U.S. Bureau of Labor Statistics; selected company data; BCG analysis.

BCG (2011)

Productivity Insufficient to Offset Wage Increases

EXHIBIT 2 | China's Productivity Gains Will Lag Behind Wage Increases

Growing at nearly 10 percent per year, China's productivity could reach 40 percent of U.S. productivity by 2015



Sources: Economist Intelligence Unit; U.S. Bureau of Labor Statistics; BCG analysis.
Note: All figures are based on real units.

BCG (2011)

Labor Share

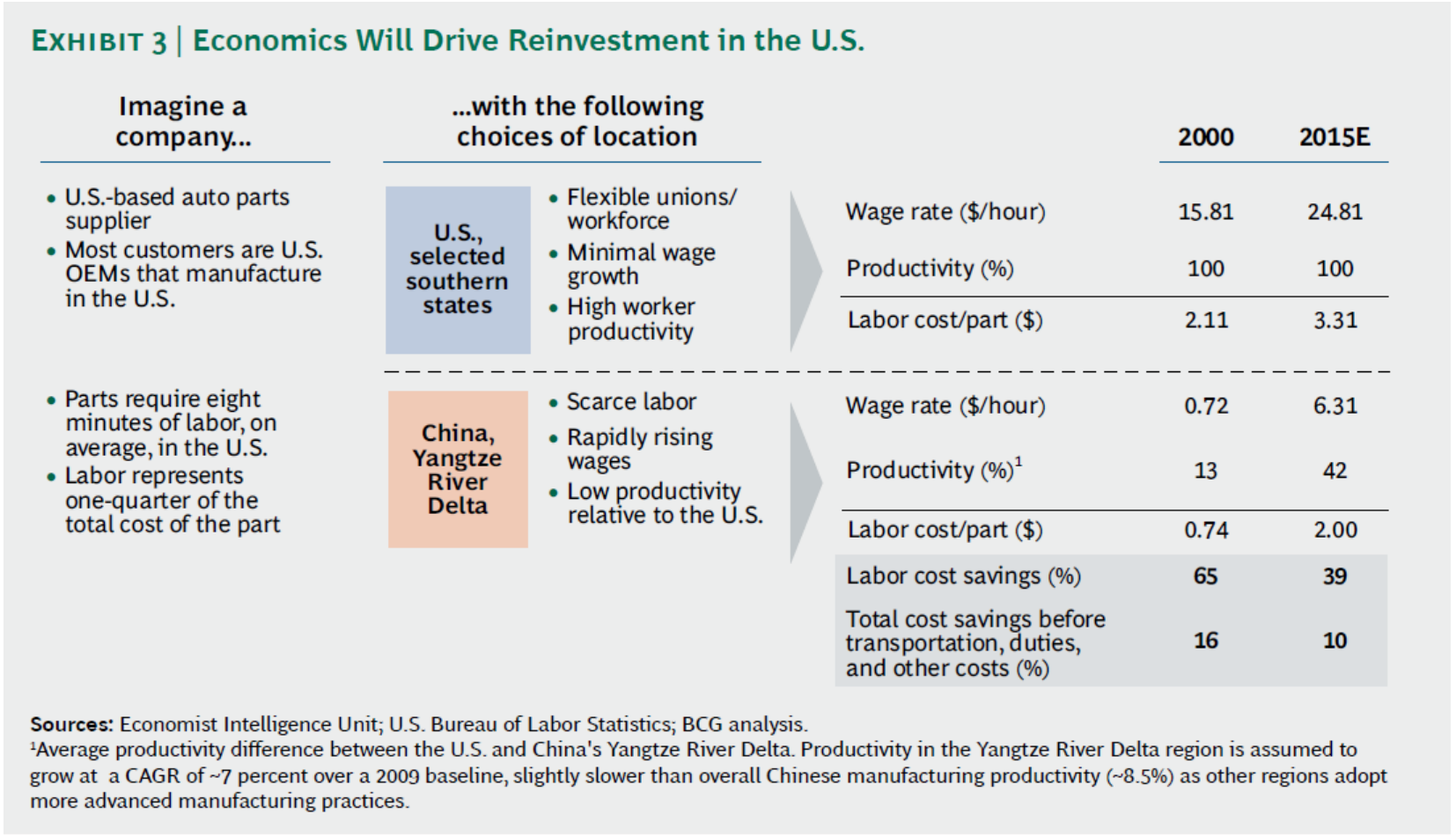


EXHIBIT 3 | Economics Will Drive Reinvestment in the U.S.

Imagine a company...	...with the following choices of location			2000	2015E
• U.S.-based auto parts supplier • Most customers are U.S. OEMs that manufacture in the U.S.	U.S., selected southern states	• Flexible unions/ workforce • Minimal wage growth • High worker productivity	Wage rate ($/hour)	15.81	24.81
			Productivity (%)	100	100
			Labor cost/part ($)	2.11	3.31
• Parts require eight minutes of labor, on average, in the U.S. • Labor represents one-quarter of the total cost of the part	China, Yangtze River Delta	• Scarce labor • Rapidly rising wages • Low productivity relative to the U.S.	Wage rate ($/hour)	0.72	6.31
			Productivity (%)[1]	13	42
			Labor cost/part ($)	0.74	2.00
			Labor cost savings (%)	**65**	**39**
			Total cost savings before transportation, duties, and other costs (%)	**16**	**10**

Sources: Economist Intelligence Unit; U.S. Bureau of Labor Statistics; BCG analysis.
[1]Average productivity difference between the U.S. and China's Yangtze River Delta. Productivity in the Yangtze River Delta region is assumed to grow at a CAGR of ~7 percent over a 2009 baseline, slightly slower than overall Chinese manufacturing productivity (~8.5%) as other regions adopt more advanced manufacturing practices.

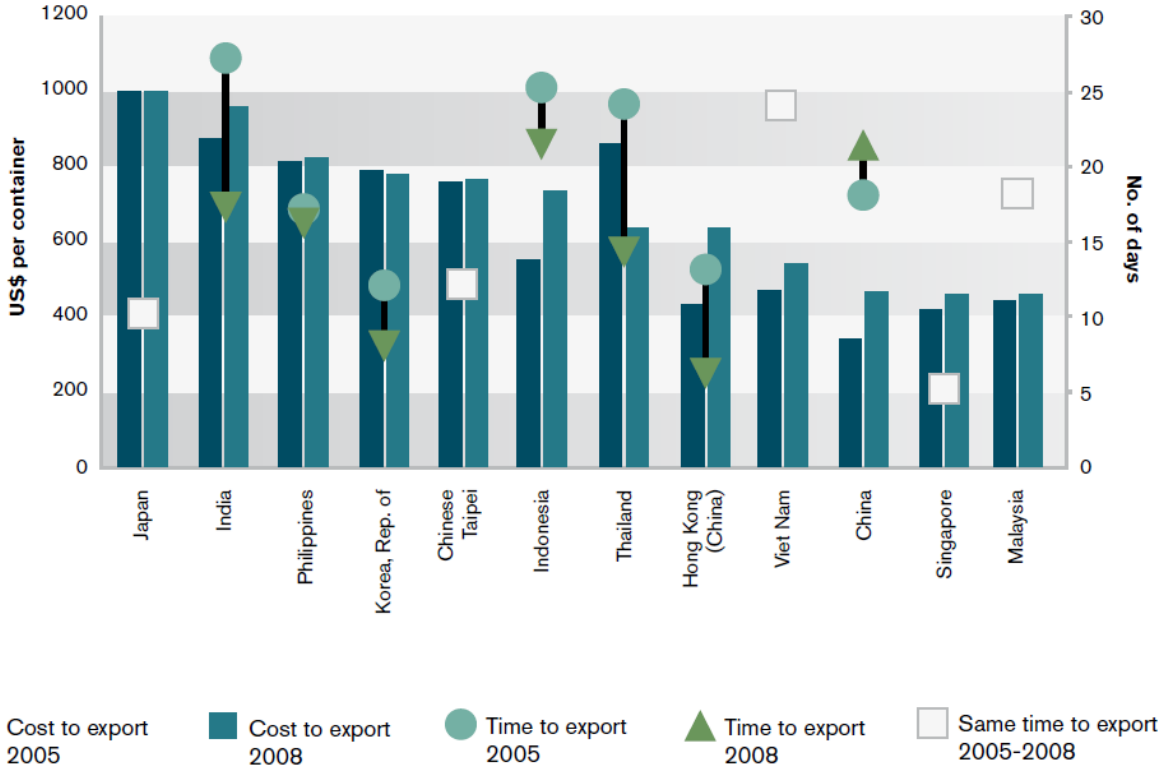
Economics of Global Supply Chain Management (GSCM)

Future of GSC

Trade barriers and transportation costs

The 2nd unbundling has been accompanied by a remarkable reduction in policy barriers to trade in goods – tariffs, port delays, red-tape, etc. Trade costs, however, could still rise with oil prices.

Cost to Export and Time to Export, 2005 and 2008



Source: World Bank, Doing Business Database.

WTO (2011): Trade Patterns and Global Value Chains in East Asia

Globalization and International Trade

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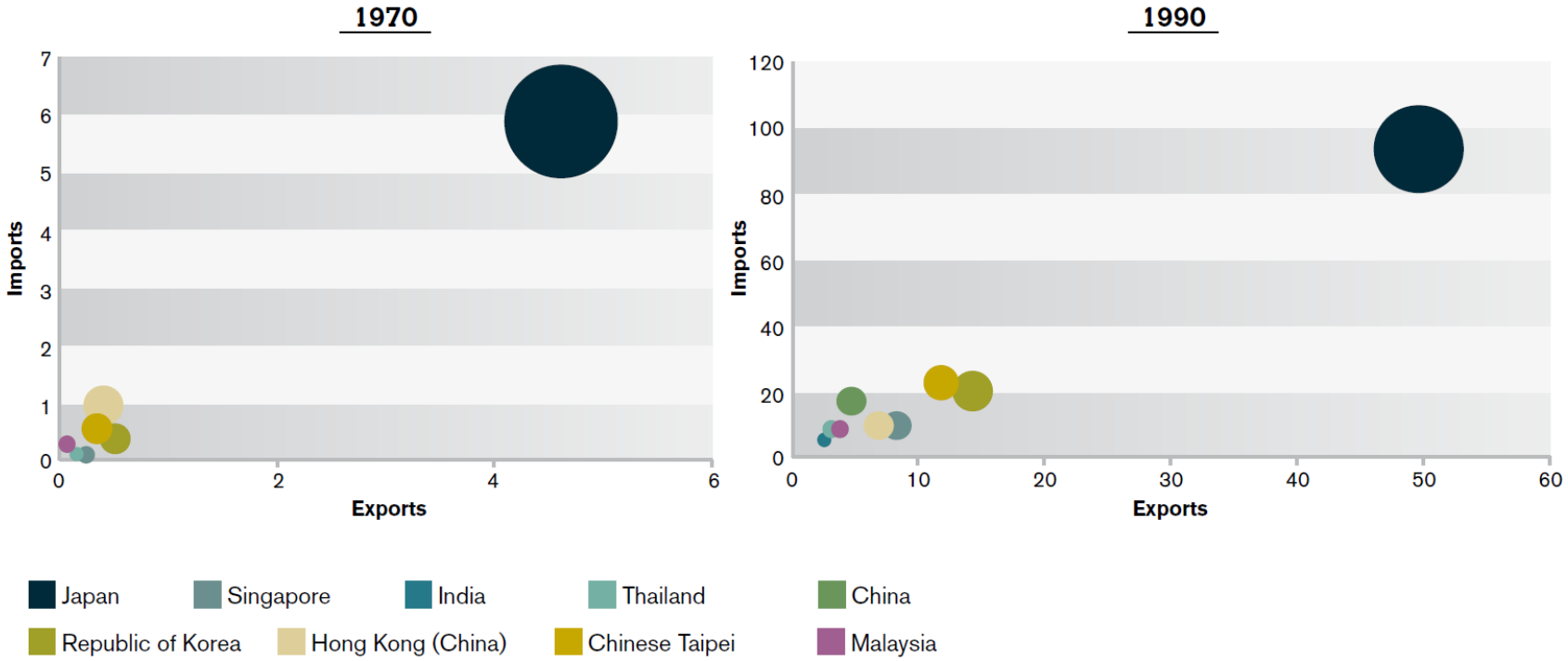
- Company Case: Li & Fung

China and Global Supply Chains

Total US Trade with Selected Asian Partners, 1970 and 1990 (in billions of US$)

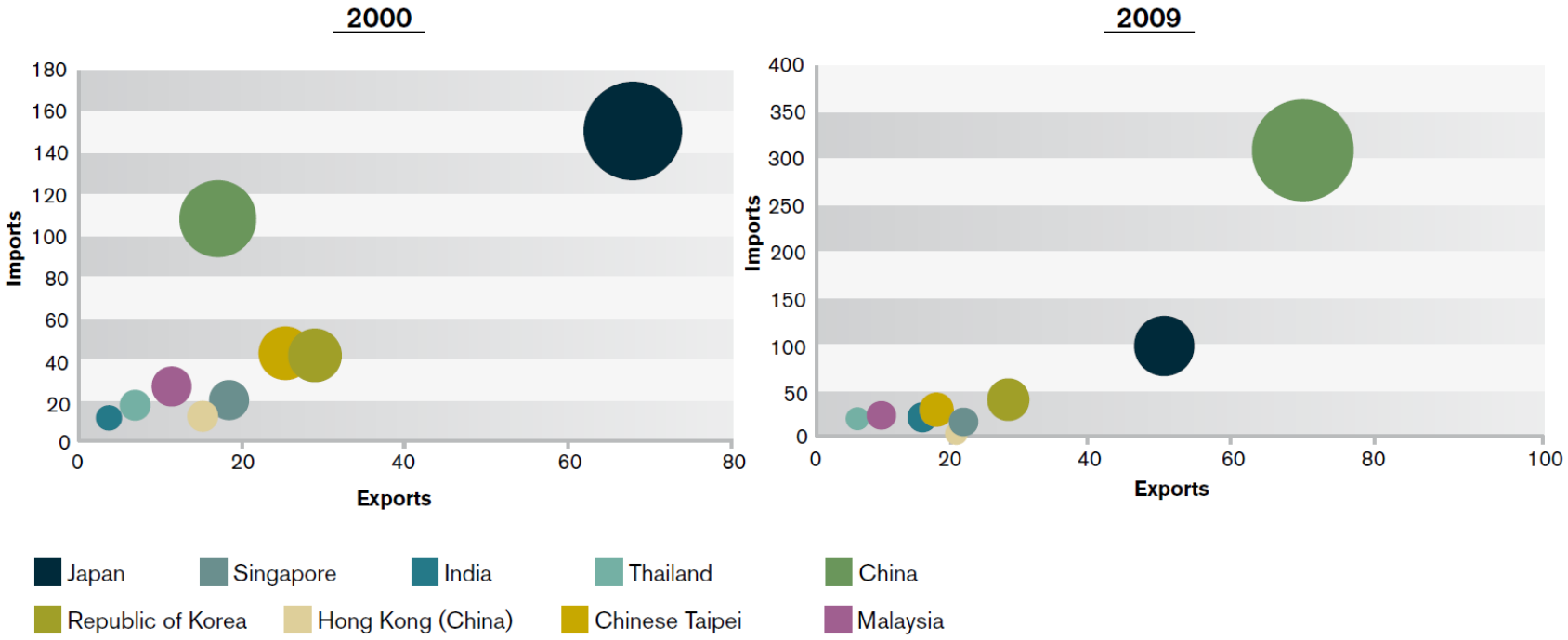


Note: The size of the bubbles represents the sum of US exports and imports to/from its Asian partner.

Source: Based on UN Comtrade Database.

WTO (2011): Trade Patterns and Global Value Chains in East Asia

Total US Trade with Selected Asian Partners, 2000 and 2009 (in billions of US$)

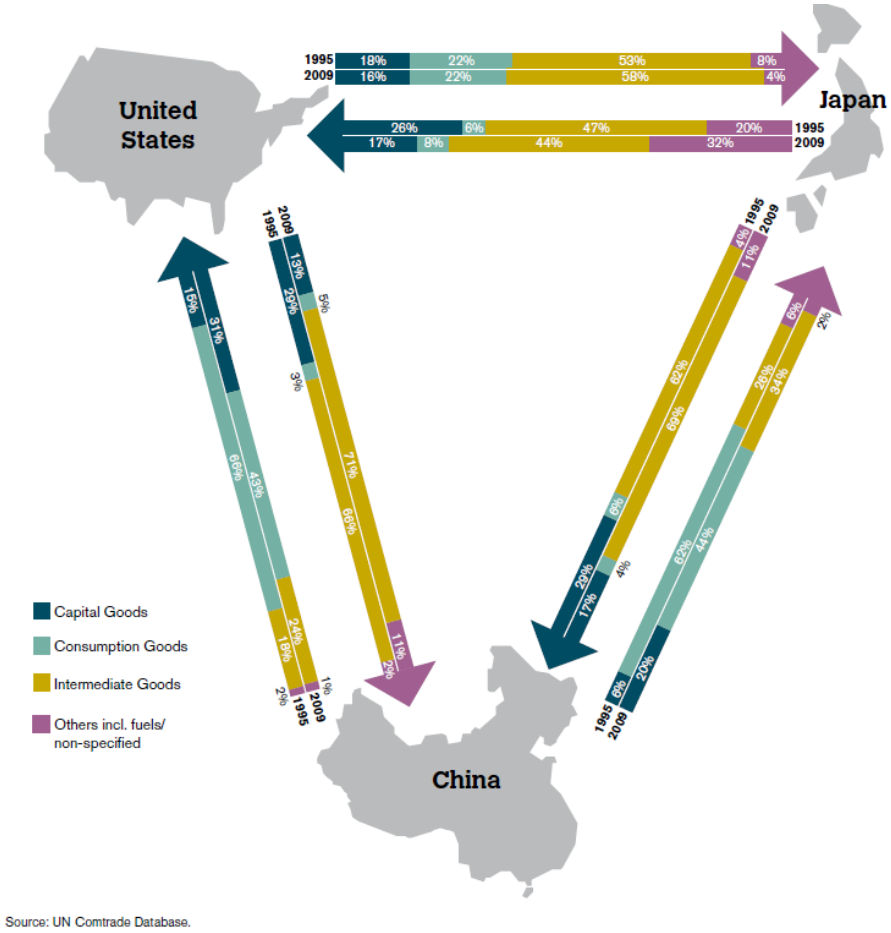


Note: The size of the bubbles represents the sum of US exports and imports to/from its Asian partner.

Source: Based on UN Comtrade Database.

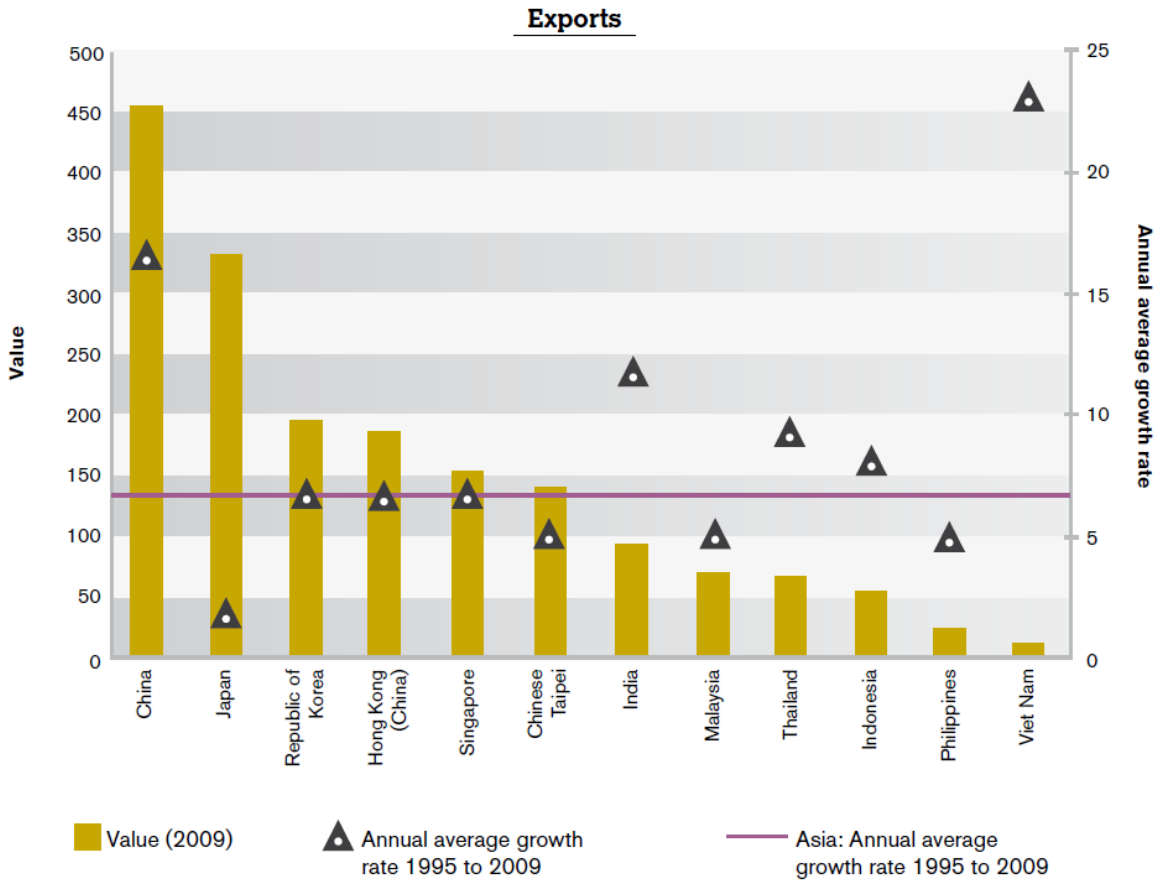
WTO (2011): Trade Patterns and Global Value Chains in East Asia

Bilateral Trade Flows between China, the United States and Japan, 1995 versus 2009, by Type of Good (Percentage)



WTO (2011): Trade Patterns and Global Value Chains in East Asia

Exports of Intermediate Goods of Major Asian Traders, 1995-2009 (in billions of US$ and percentage)



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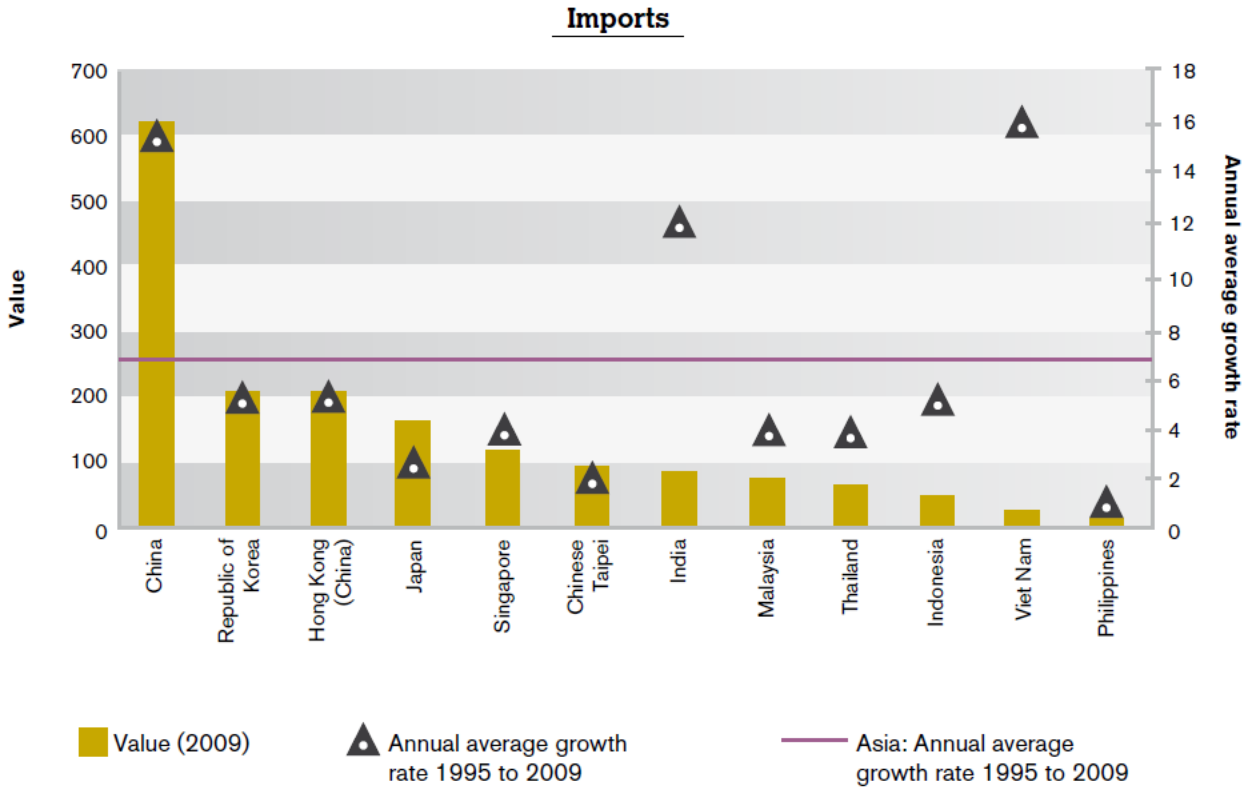
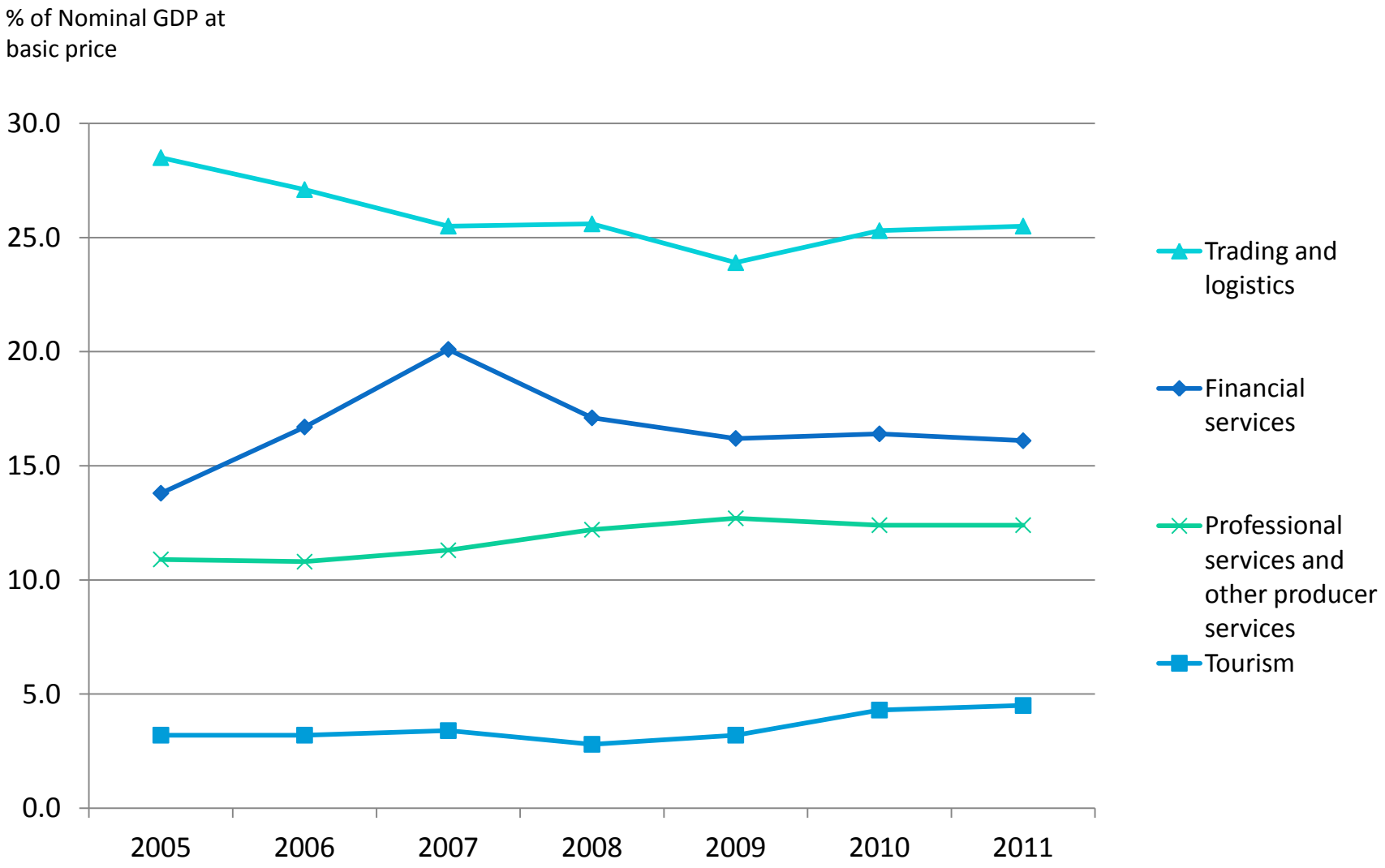


Sources: UN Comtrade Database and WTO estimates.

WTO (2011): Trade Patterns and Global Value Chains in East Asia

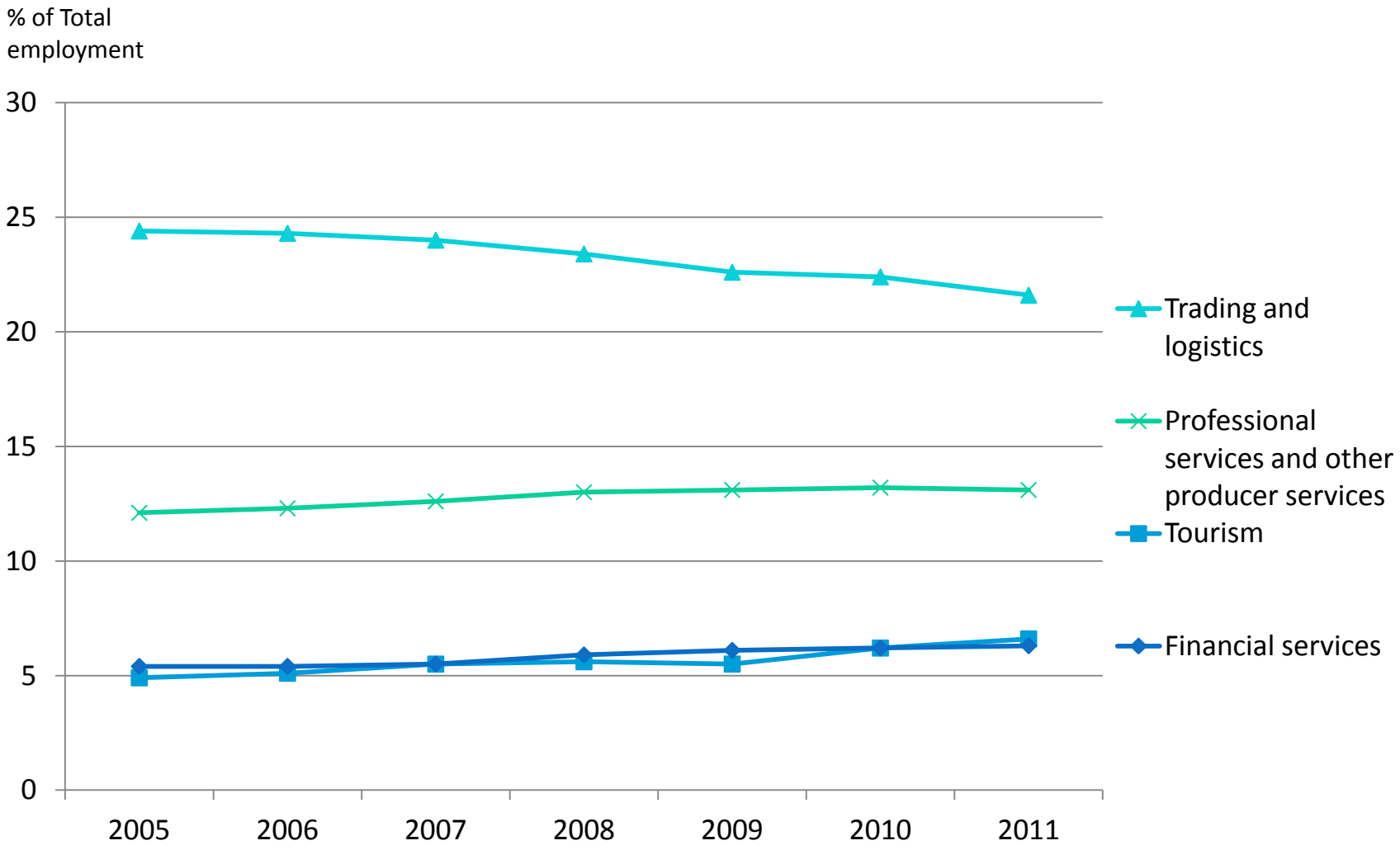
Economic Contribution of International Trade to HK

Value Added as Percentage of Nominal GDP at Basic Price for 4 Major Pillars in HK from 2005 to 2011



Source: HK Census and Statistics Department

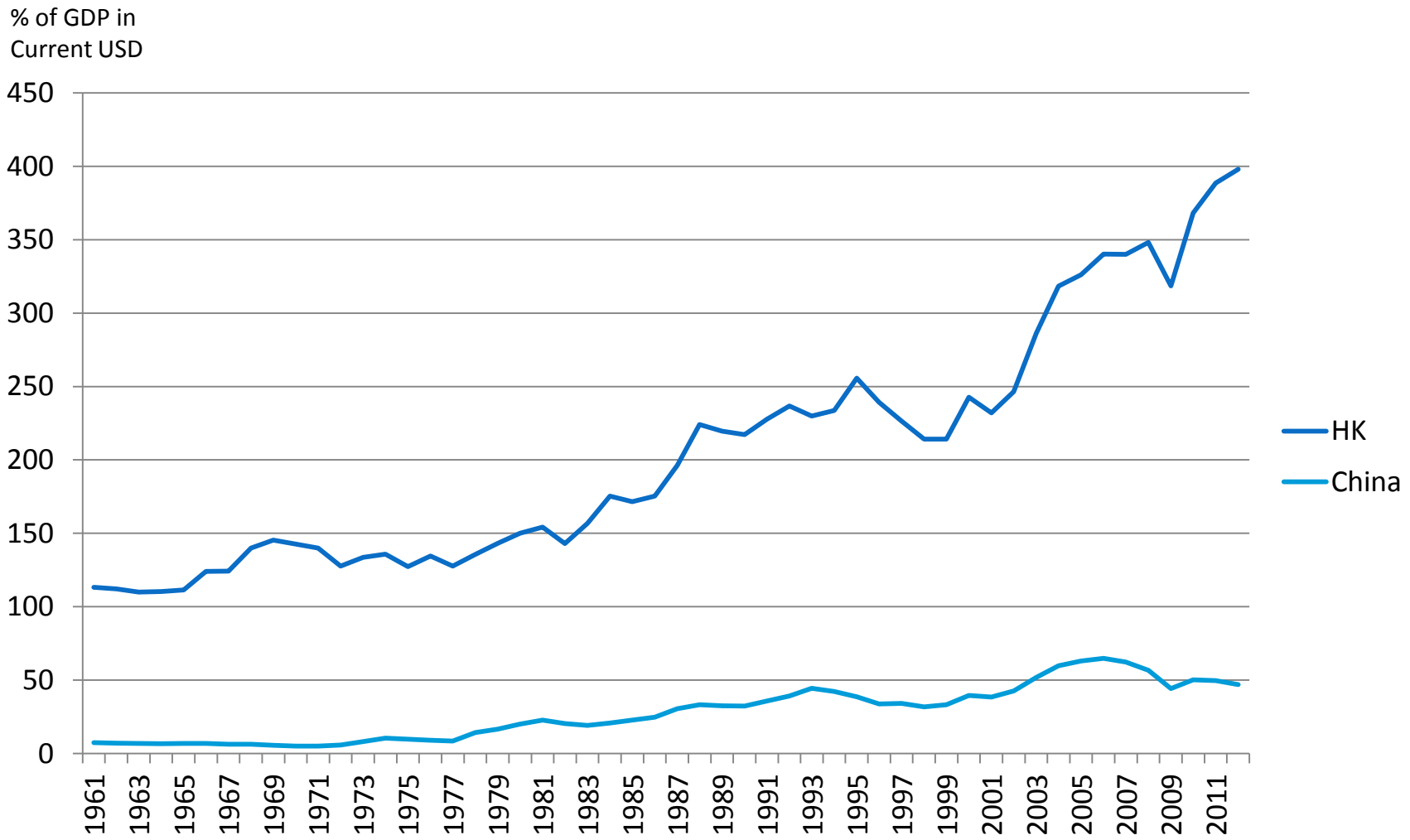
Employment as Percentage of HK Total Employment for 4 Major Pillars in HK from 2005 to 2011



Source: HK Census and Statistics Department

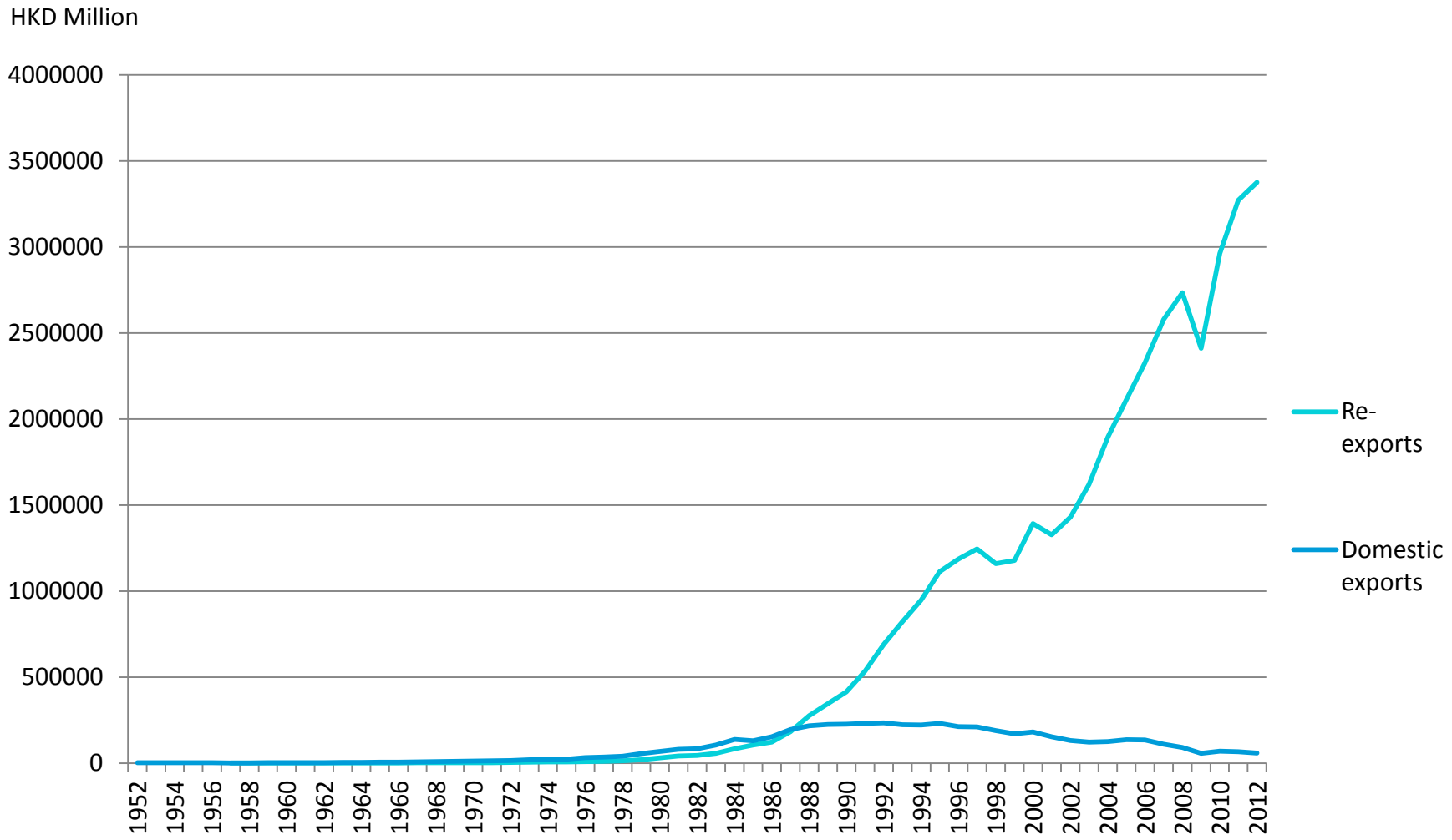
Hong Kong and Global Supply Chains

Merchandise Trade as Percentage of GDP in Current USD of HK and China from 1961 to 2012



Source: World Bank Development Indicators

Values of Merchandise Trade for HK from 1952 to 2012



Source: HK Census and Statistics Department

Value and Decomposition of HK's Total Exports and Percentage as Share of Total Exports

HKD Million	1980	1985	1990	1995	2000	2005	2010	2012
Re-exports	30,072	105,270	413,999	1,112,470	1,391,722	2,114,143	2,961,507	3,375,516
	30.6%	44.8%	64.7%	82.8%	88.5%	94.0%	97.7%	98.3%
Domestic exports	68,171	129,882	225,875	231,657	180,967	136,030	69,512	58,830
	69.4%	55.2%	35.3%	17.2%	11.5%	6.0%	2.29%	1.7%
Total exports	98,242	235,152	639,874	1,344,127	1,572,689	2,250,174	3,031,019	3,434,346

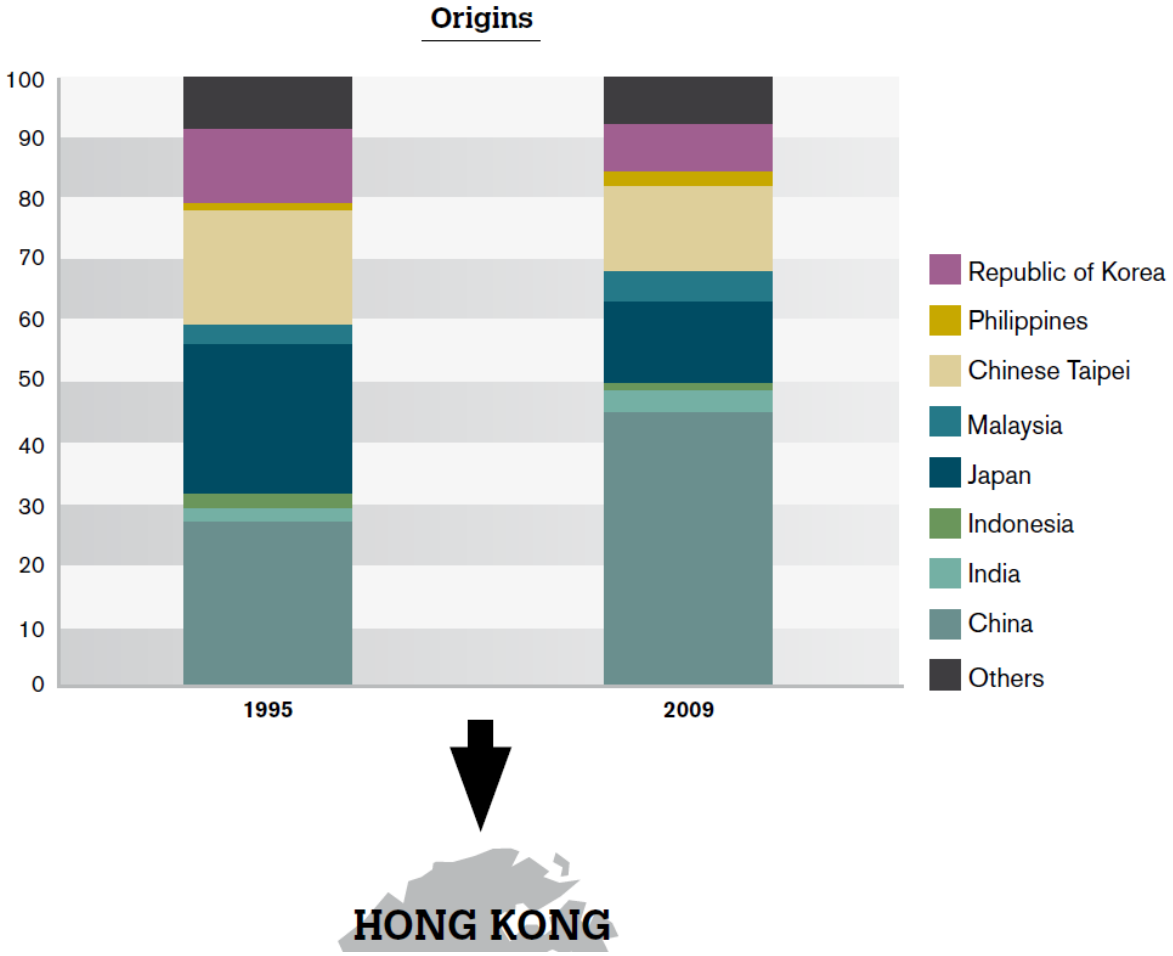
Source: HK Census and Statistics Department

Value and Decomposition of HK's Imports and Percentage as Share of Total Imports

HKD Million	1990	1995	2000	2005	2010	2012
For Re-exports	352,602	928,912	1,098,069	1,744,168	2,490,124	2,855,552
	54.8%	62.3%	66.2%	74.9%	74.0%	73%
Retained imports	289,928	562,209	559,893	585,301	874,716	1,056,611
	45.1%	37.7%	33.8%	25.1%	26.0%	27.0%
Total imports	642,530	1,491,121	1,657,962	2,329,469	3,364,840	3,912,163

Source: HK Census and Statistics Department

Hong Kong's (China) Imports and Re-exports of Intermediate Goods, by Origin and Destination (Percentage)



WTO (2011): Trade Patterns and Global Value Chains in East Asia

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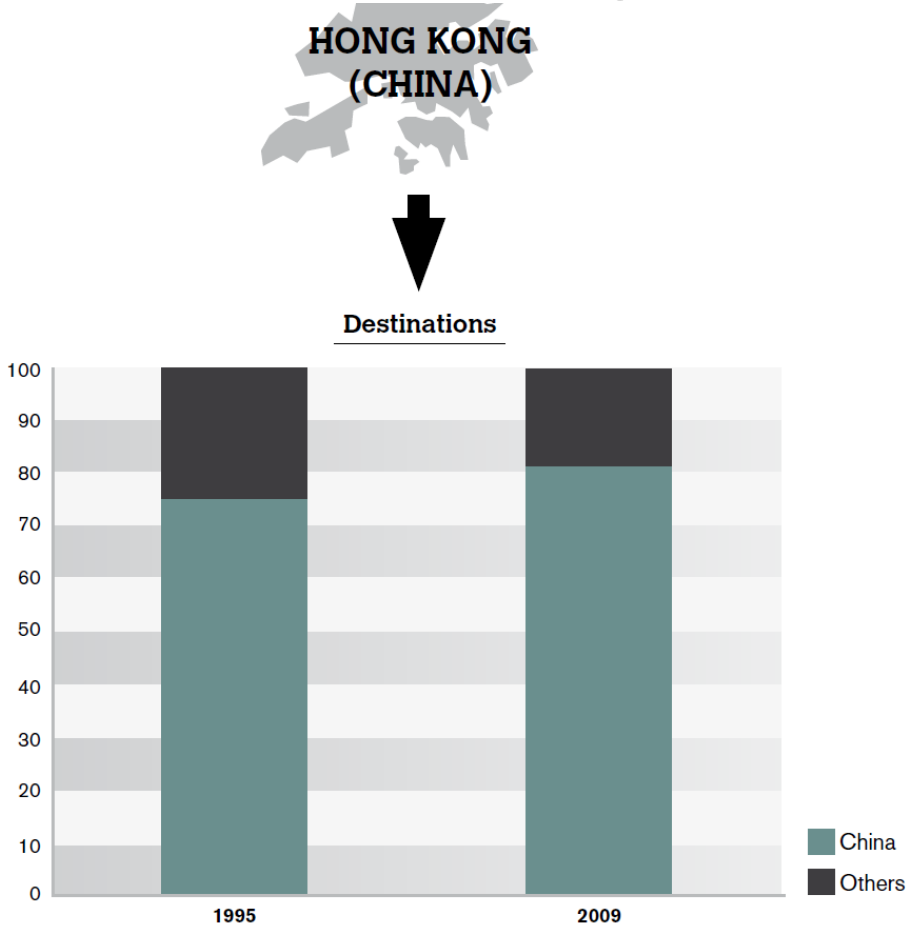
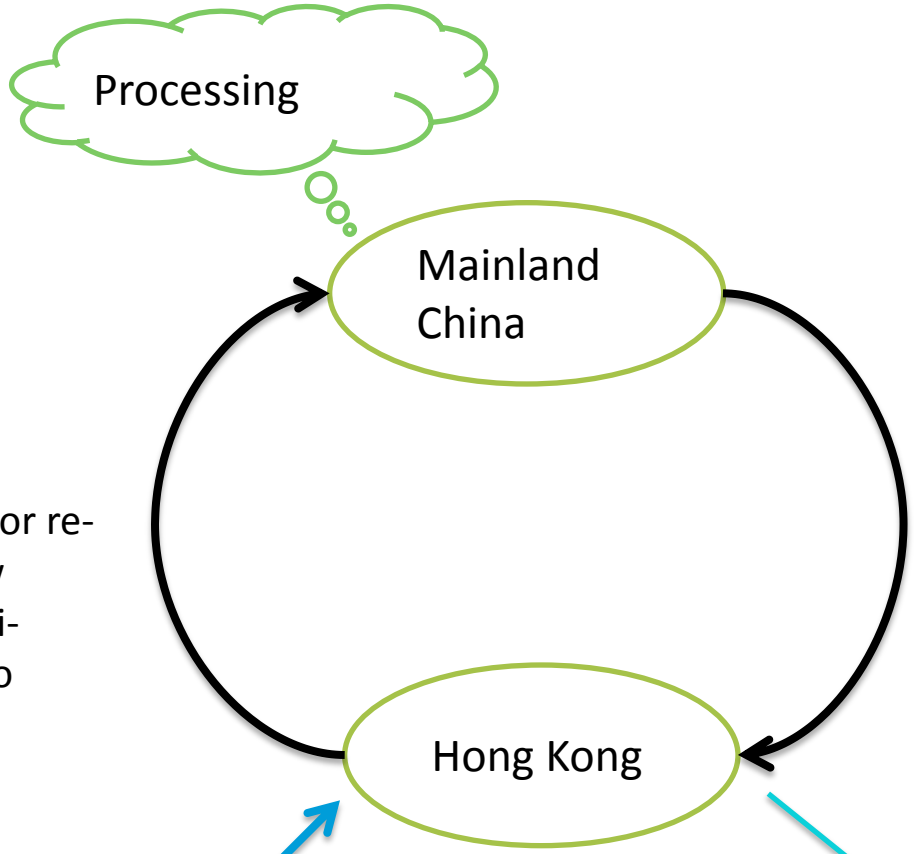


WTO (2011): Trade Patterns and Global Value Chains in East Asia

What is Outward Processing Arrangement?



Stage 3: Re-import the processed goods into HK

Stage 2: Export or re-export such raw materials / semi-manufactures to Mainland

Stage 4: Through a contractual arrangement, the processed goods are imported back to HK and re-exported to other places.

Stage 1:
A) Raw materials / semi-manufactures are in HK
B) Import raw materials / semi-manufactures from overseas

Remark: The directions of arrow heads represent flows of goods.

表一　涉及外發加工貿易的估計貨值及所佔比重
Table 1　Estimated Value and Proportion of Outward Processing Trade

百萬港元
HK$ million

貿易類別 Trade type	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
輸往中國內地（簡稱「內地」）的整體出口貨品 Total exports to the mainland of China (the Mainland)	**259,553** (47.5%)	**277,650** (45.3%)	**326,147** (43.9%)	**386,435** (43.5%)	**388,482** (38.4%)	**409,941** (35.5%)	**451,533** (34.5%)	**470,964** (34.4%)	**425,243** (33.7%)	**519139** (32.5%)	**556,100** (31.8%)
輸往內地的港產出口貨品 Domestic exports to the Mainland	**35,172** (71.0%)	**28,848** (69.8%)	**24,924** (68.0%)	**24,825** (65.7%)	**25,080** (56.3%)	**20,717** (51.6%)	**19,162** (47.3%)	**13,232** (38.1%)	**7,333** (27.3%)	**5,789** (18.6%)	**4,764** (15.5%)
輸往內地的轉口貨品 Re-exports to the Mainland	**224,381** (45.2%)	**248,801** (43.5%)	**301,223** (42.7%)	**361,610** (42.5%)	**363,402** (37.6%)	**389,224** (34.9%)	**432,371** (34.1%)	**457,732** (34.3%)	**417,910** (33.8%)	**513,350** (32.8%)	**551,335** (32.1%)
從內地進口的貨品 Imports from the Mainland	**531,960** (78.0%)	**531,034** (74.0%)	**564,933** (71.7%)	**661,543** (72.0%)	**691,979** (65.9%)	**769,317** (64.5%)	**779,994** (58.6%)	**789,039** (55.9%)	**623,155** (49.9%)	**762,410** (49.8%)	**803,975** (47.4%)

Remark: Figures in bold type refer to the estimated values of outward processing trade and figures in brackets are the corresponding estimated proportions of outward processing trade.

Source: HK Census and Statistics Department 2012, Hong Kong's Trade Involving Outward Processing in the Mainland of China, 2001 to 2011

What is Offshore Trade?

- The goods involved in offshore trade activities are shipped directly from a party outside Hong Kong to another party outside Hong Kong without the goods passing through Hong Kong.

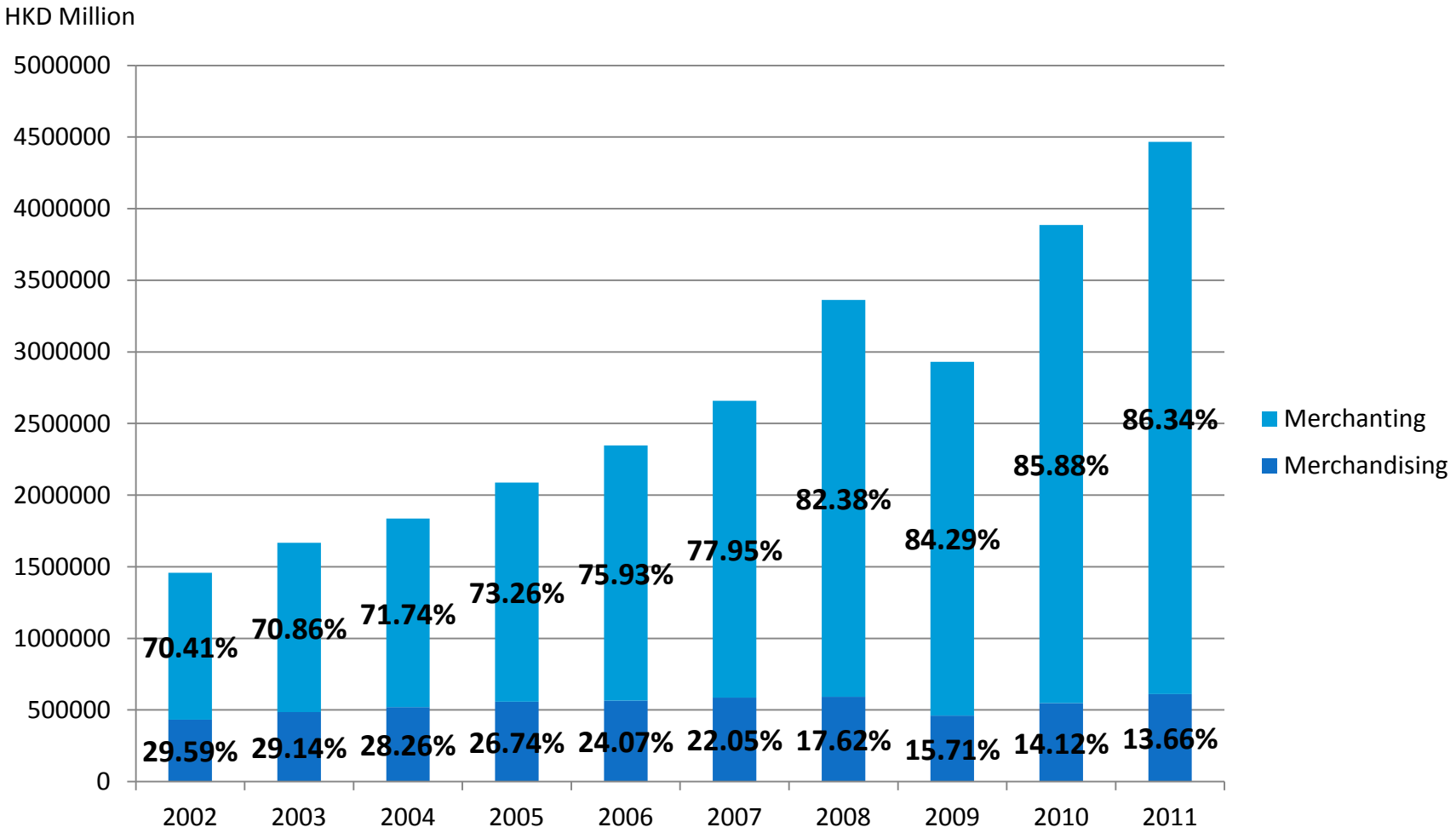
Source: HK Census and Statistics Department

What is Offshore Trade?

- Merchanting – Hong Kong traders buy goods outside Hong Kong for export elsewhere, and such goods do not go through Hong Kong customs.
- Merchandising – Hong Kong traders arrange on behalf of buyers/sellers outside Hong Kong the purchases/sales of goods without taking ownership of the goods involved , and such goods do not go through Hong Kong customs.

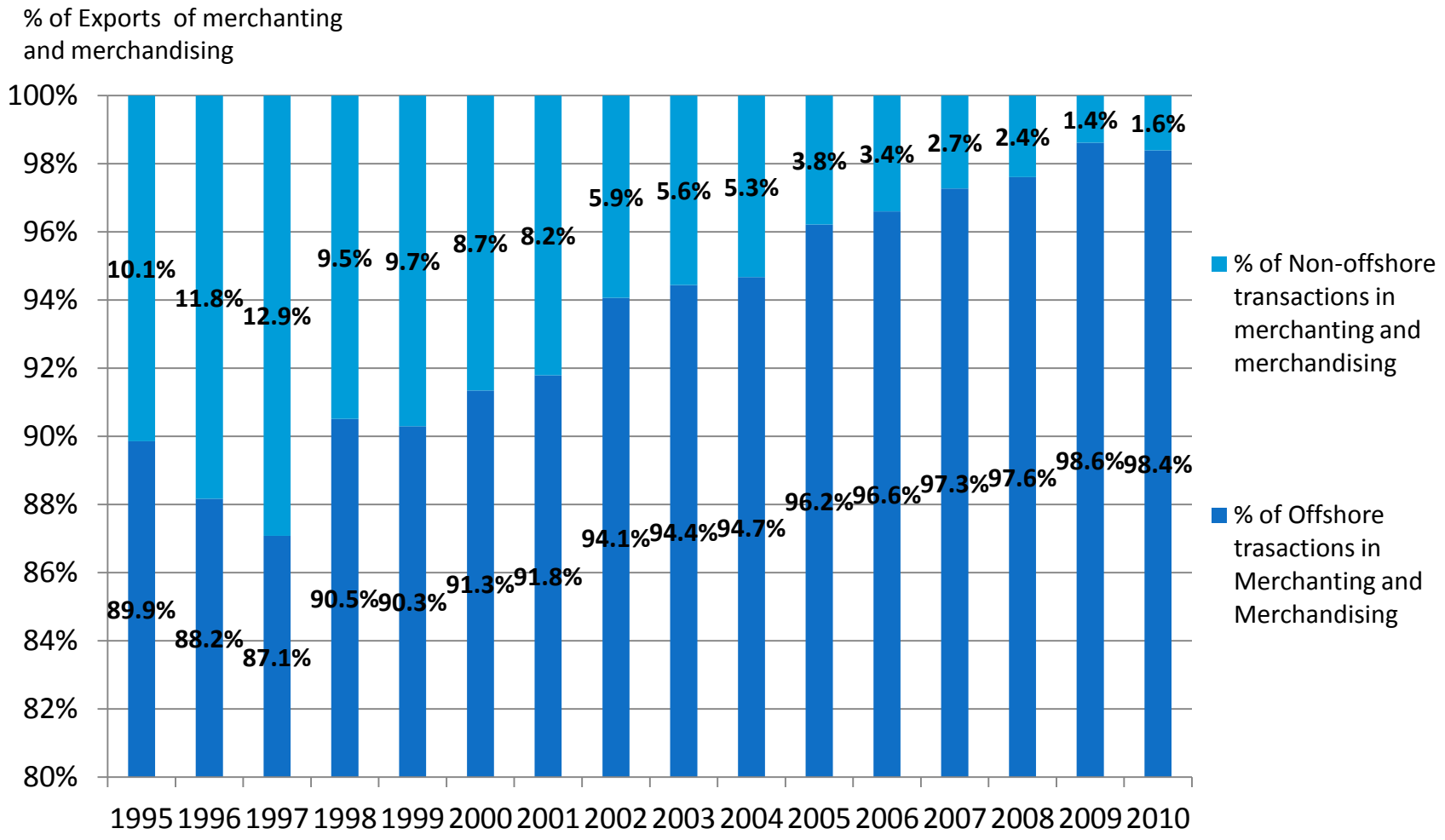
Source: Y.W. Sung, 2005, The Evolving Role of Hong Kong as China's Middleman

Value of Goods in Merchanting and Merchandising for Offshore Transactions in HK from 2002 to 2011



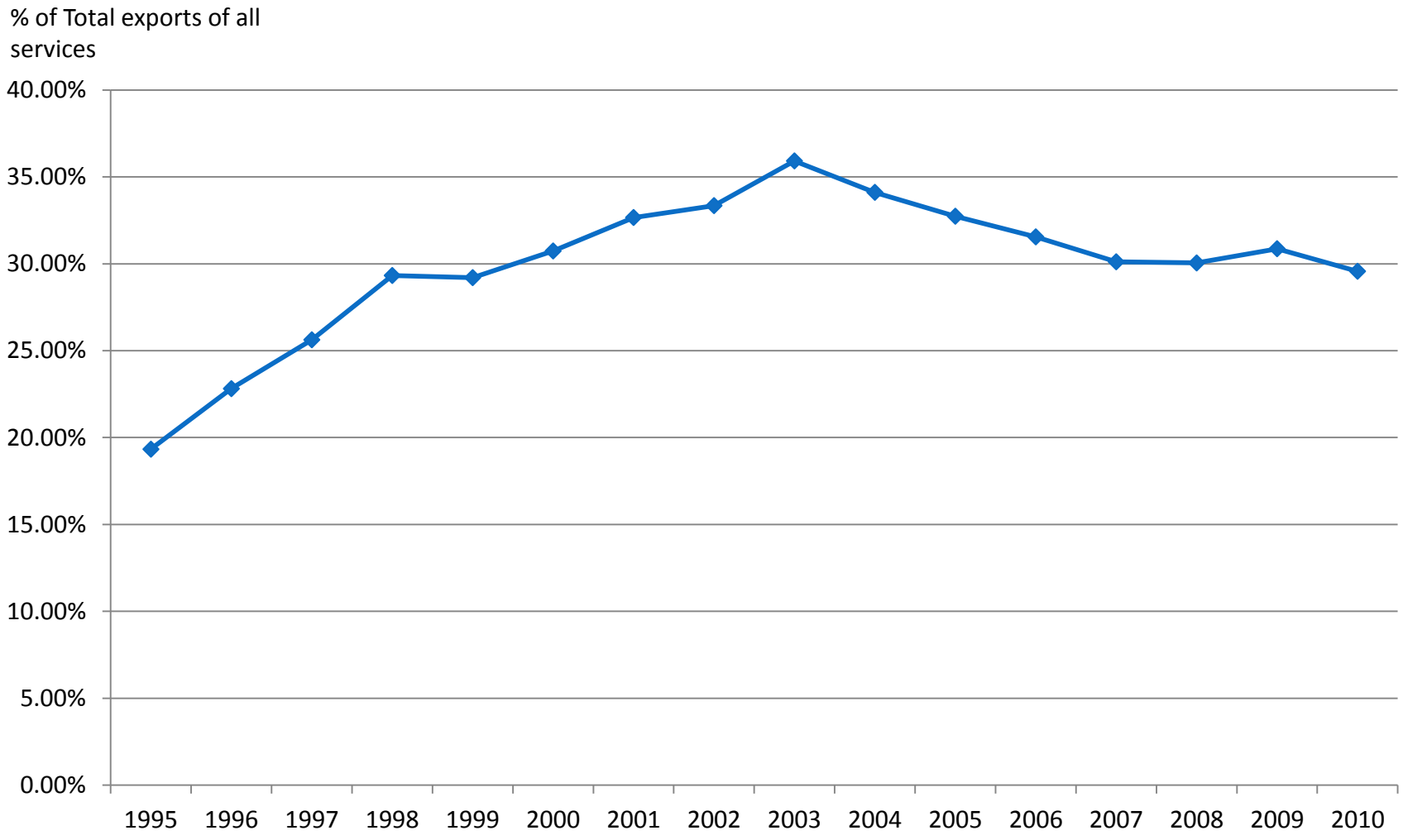
Source: HK Census and Statistics Department

Proportion of Offshore and Non-offshore Transactions in Merchanting and Merchandising of HK (Value of Exports) from 1995 to 2010



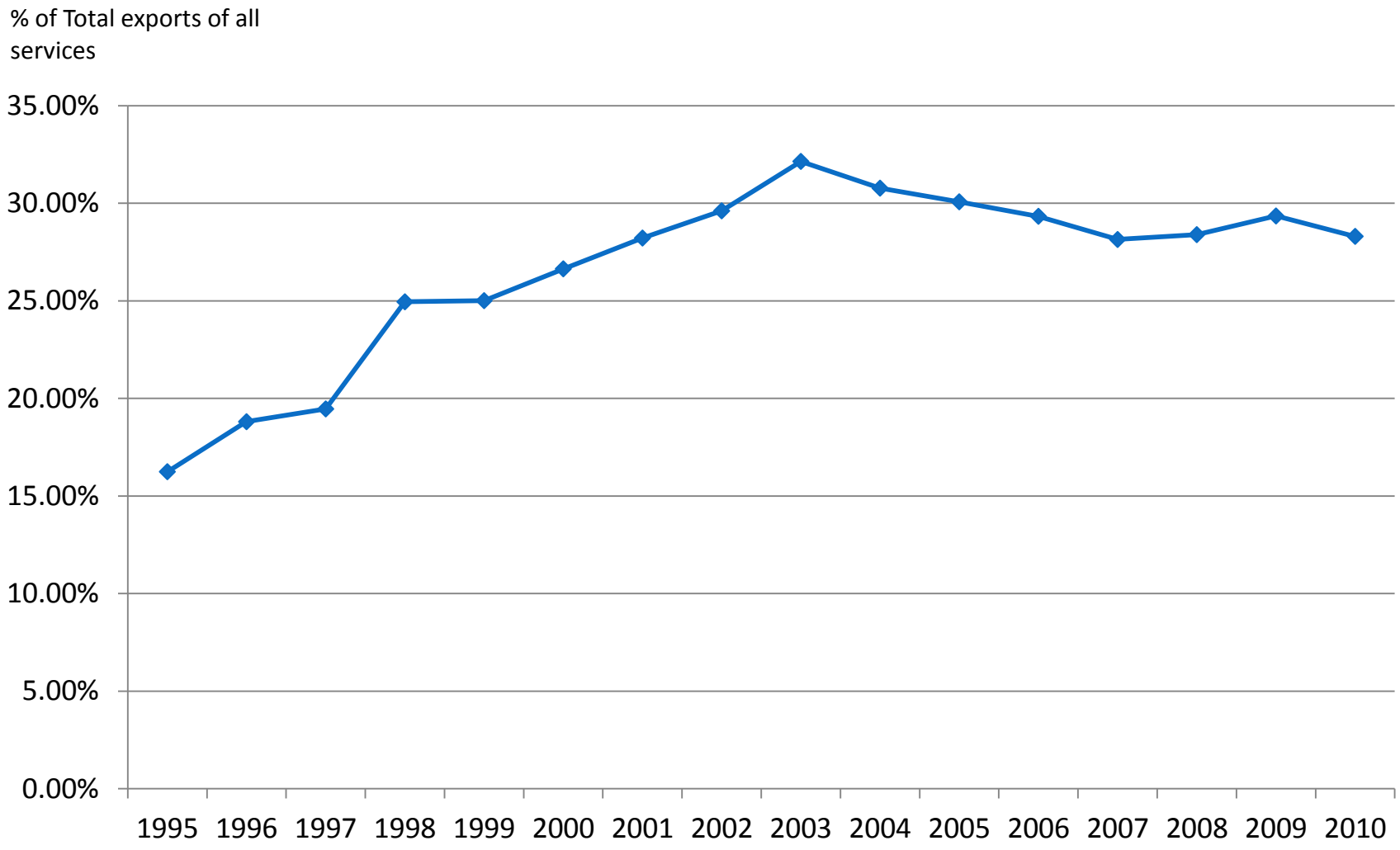
Source: HK Census and Statistics Department, Hong Kong Trade in Services Statistics in varied years, Hong Kong Annual Digest of Statistics in varied years

Percentage of Merchanting and Other Trade-related Services as Total Exports of All Services from 1995 to 2010



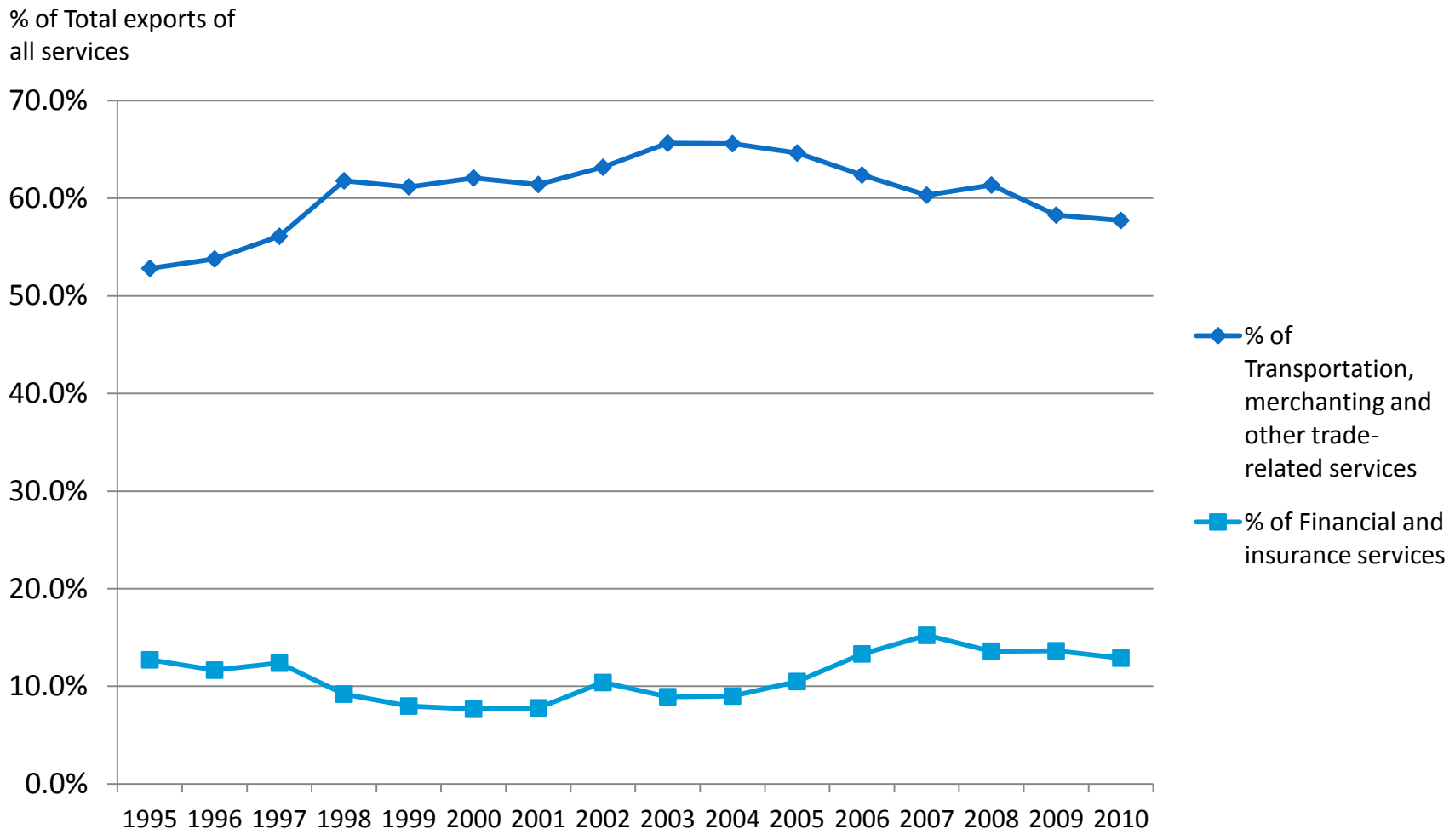
Source: HK Census and Statistics Department, Hong Kong Trade in Services Statistics in varied years, Hong Kong Annual Digest of Statistics in varied years

Percentage of Offshore Merchanting and Trade-related Services as Total Exports of All Services from 1995 to 2010



Source: HK Census and Statistics Department, Hong Kong Trade in Services Statistics in varied years, Hong Kong Annual Digest of Statistics in varied years

Percentage of Transportation and Merchanting and Other Trade-related Services, Financial and Insurance Services as Total Exports of Services for HK from 2000 to 2010



Source: HK Census and Statistics Department, Hong Kong Trade in Services Statistics in varied years, Hong Kong Annual Digest of Statistics in varied years

Globalization and International Trade

- Trade Patterns in the Process of Globalization
- Economics of Global Supply Chain Management (GSCM)
- Hong Kong: From Entrepôt Trade to GSCM
- Company Case: Li & Fung

Li & Fung

馮邦彥《百年利豐：從傳統商號到現代跨國集團》三聯書店(香港)有限公司

Dr. Victor Fung

Global Supply Chains – Past Developments, Emerging Trends

24 November 2011

— SINCE 1906 —

百年利豐

A HUNDRED YEARS OF LI & FUNG

馮邦彥 著

跨國集團亞洲再出發

增訂版

Li & Fung

- Li & Fung was founded in southern China in 1906 and moved to HK after the Second World War.
- It was the first Chinese trading company: Chinese porcelain, silk, rattan wear and bamboo.

Li & Fung

- 1949: 2 million refugees and entrepreneurs from Shanghai, with money, technology and know-how.
- HK became a manufacturing base: low-end consumer products, like flip-flops, plastic flowers and transistor radios.
- Li & Fung was an exporter of these Hong Kong-manufactured products to the Western world.

Li & Fung

- The next big stage in the development of Li & Fung began in 1979 - the year when China started its economic opening.
- Shenzhen became one of the four economic zones.

Li & Fung

- Hong Kong's production base had become increasingly uncompetitive.
- What HK manufacturers did was retain the high value-added front end (product design, engineering and marketing) and back end (logistics, quality control and distribution) in Hong Kong, and then move the labour-intensive middle portion across the border into southern China.

Li & Fung

- Why not go to the northern China or Southeast Asia? Why not break the supply chain into bigger pieces?

Li & Fung

- 100,000 shirts
- Old day approach: “Which is the best factory?”

Li & Fung

- 100,000 shirts
- SCM approach: First question - “Where do we outsource the yarn from?” Korea

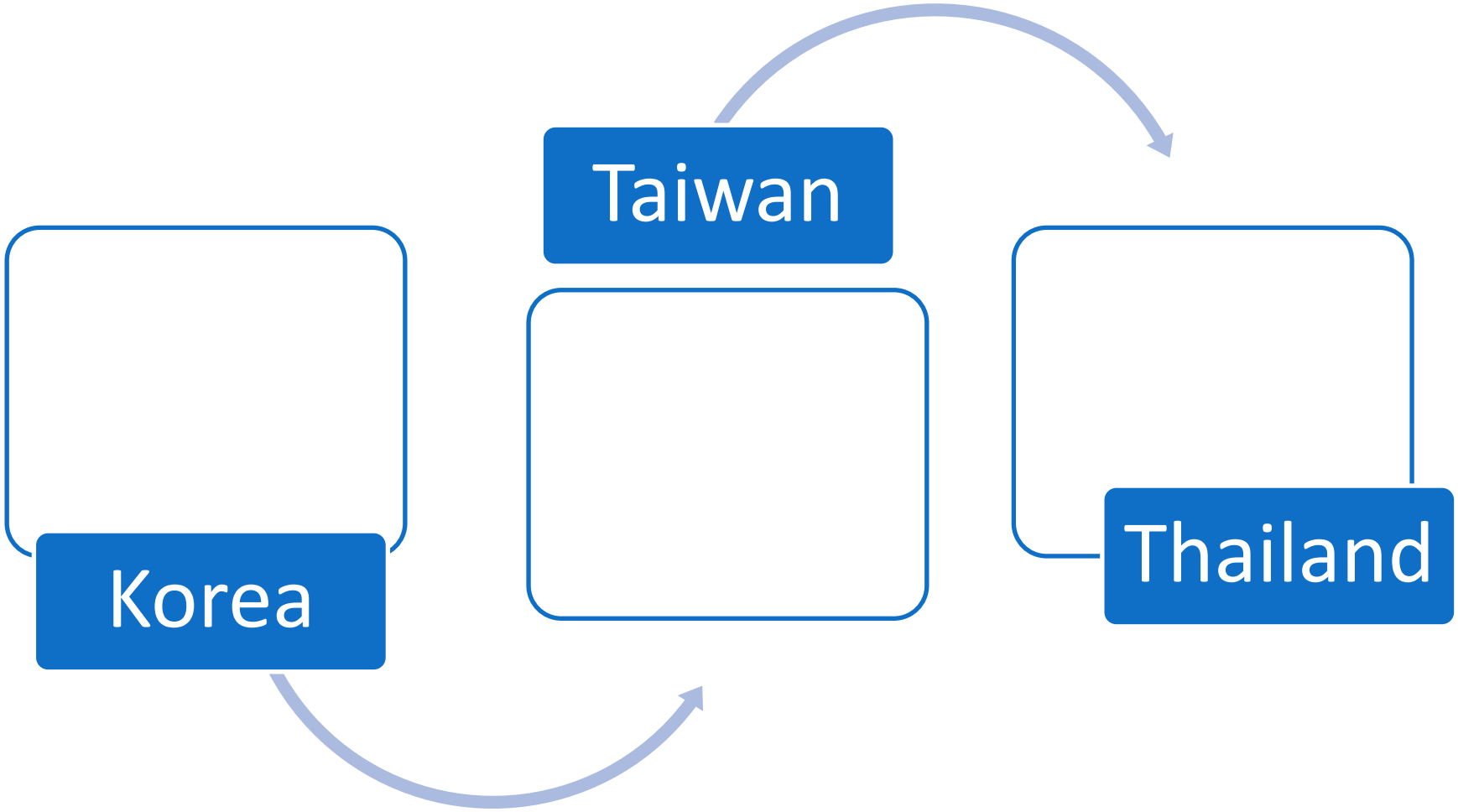
Li & Fung

- 100,000 shirts
- SCM approach: Second question – “Where do we outsource weaving and dyeing to produce the fabric?” Two factories in Taiwan

Li & Fung

- 100,000 shirts
- SCM approach: Third question – “Where do we want to finish the garment?” Three factories in Thailand.

Li & Fung



Li & Fung

- It takes a great deal of coordination to make a product in six factories in three different economies, instead of in just one factory in one country.
- Why do go through this whole complicated process? It boils down to two reasons. One is cost, and the other very importantly is turnaround time.

Hummels amd Schaur (2013)

- Time sensitivity: inventory holding costs, perishability, rapid technological obsolence, and uncertain demand
- Each day in transit is worth 0.6 to 2 percent of the value of the good

David L. Hummels & Georg Schaur, 2013. "Time as a Trade Barrier," American Economic Review, American Economic Association, vol. 103(7), pages 2935-59.

Li & Fung

- Now, when your company wants to compete, you are actually one team doing a given part of the supply chain against another team. These companies form what we at Li & Fung call a “network”’.
- Li & Fung’s network: 15,000 suppliers globally, in over 40 economies.

Automation

Bring on the personal trainers

Probability that computerisation will lead to job losses within the next two decades, 2013
(1=certain)

Job	Probability
Recreational therapists	0.003
Dentists	0.004
Athletic trainers	0.007
Clergy	0.008
Chemical engineers	0.02
Editors	0.06
Firefighters	0.17
Actors	0.37
Health technologists	0.40
Economists	0.43
Commercial pilots	0.55
Machinists	0.65
Word processors and typists	0.81
Real estate sales agents	0.86
Technical writers	0.89
Retail salespersons	0.92
Accountants and auditors	0.94
Telemarketers	0.99

Source: "The Future of Employment: How Susceptible are Jobs to Computerisation?" by C.Frey and M.Osborne (2013)

Economist, The Future of Jobs, Jan 18th 2014.