
Linking with GVCs – Manufacturing Investment from Hong Kong, China and Taipei, China to the Pearl River Delta, PRC: Lessons for Central Asia

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Outline of Presentation

- Introduction
- GVCs and GPNs as analytical frameworks in studies of national/regional development in the era of globalization
- Linking with GVC through FDI: Insights from Hong Kong, China and Taipei, China's cross-border investment in the Pearl River Delta, China
- Lessons for Central Asia
- Conclusion and discussion

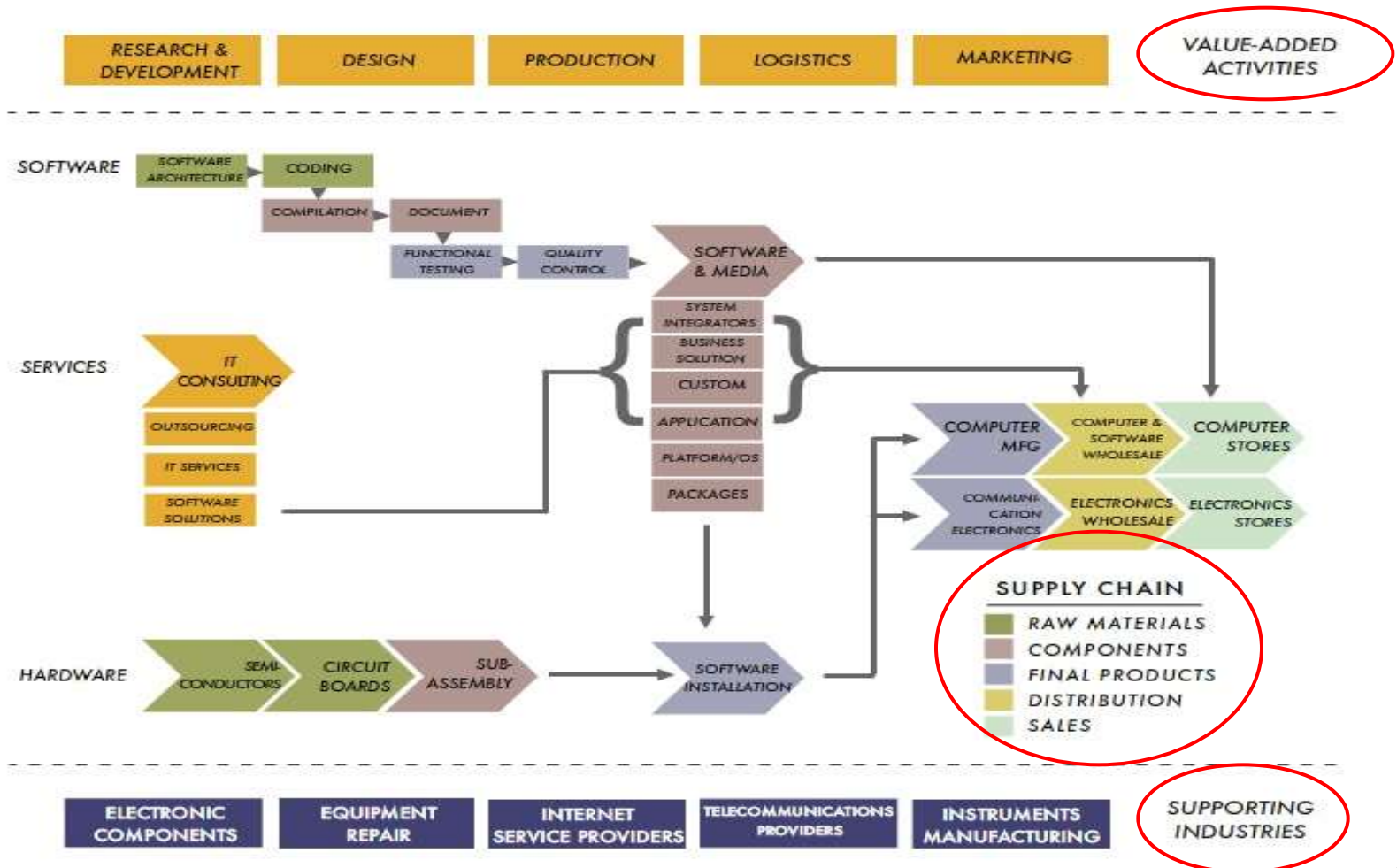


Global value chain framework developed over the past decade by a diverse **interdisciplinary and international group of researchers who have tracked the global spread of industries and their implications for both corporations and countries**

- Global value chain analysis provides both conceptual and methodological tools for looking at the global economy
 - ◆ **Top down** – a focus on lead firms and inter-firm networks, using varied typologies of industrial “governance”
 - ◆ **Bottom up** – a focus on countries and regions, which are analyzed in terms of various trajectories of economic and social “upgrading” or “downgrading”

What is a value chain?

A value chain describes the full range of activities that firms and workers carry out to bring a product from its conception to its end use and beyond.





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OECD Trade Policy Papers No. 159

Mapping Global Value Chains

Koen D. Backer, Sébastien Miroudot

JEL Classification: F14, F23, L16, L23



1) The World Bank
2010

2) WTO and Fung
Global Institute, 2013

3) UNCTAD 2013

4) OECD 2013



Global Production Networks (GPN) Approach

(Dicken et al, 2001; Henderson et al, 2002; Coe et al, 2004)

- Global production networks is defined “the globally organized nexus of interconnected functions and operations by **firms and non-firm institutions** through which goods, and services are produced and distributed” (Coe et al, 2004, 471).
- GPNs framework attempts to “**hold down**” globalization to regional/sub-national development, i.e. ‘**globalizing**’ **regional development**’

Strategic coupling: 'globalizing' regional development (Coe *et al*, 2004)

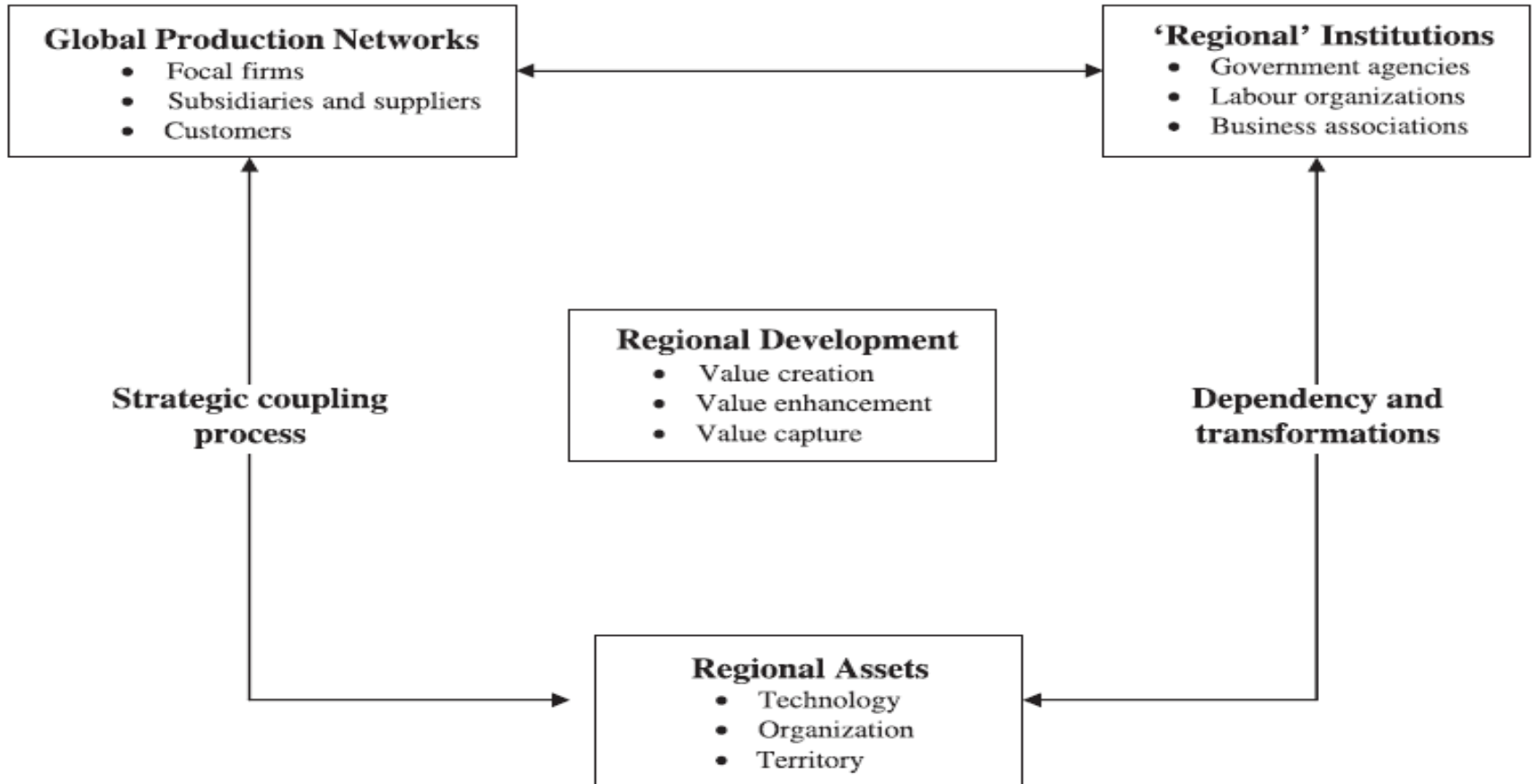


Figure 1 A framework for analysing regional development and global production networks

Strategic coupling of GPNs and local assets: an interface that is mediated by a range of institutional activities across different spatial scales (Coe *et al*, 2004: 104)



Convergence of GVCs and GPNs perspectives (Ponte and Sturgeon, 2014)

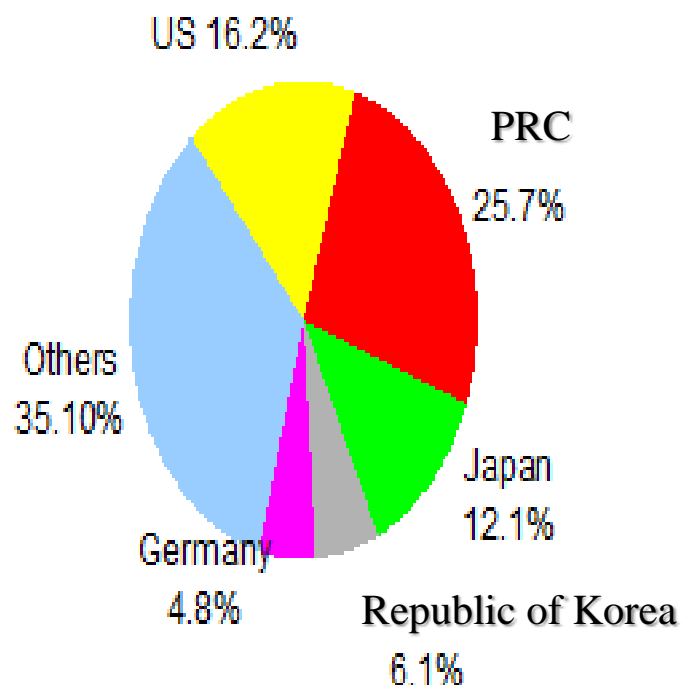
- The more recent GVC literature has in a way been more GPN-like by paying increased attention to institutional, regulatory and standard-making processes.
- Both sets of literature approach the 'global' in 'bottom-up' fashion, through generalization from field research on product- and firm-specific experiences.
- Similar interests in mapping the spatial and organizational division of labour and understanding the industries and locations.
- They share a normative interest in the upgrading trajectories of less developed places and how value-creation processes and learning dynamics can benefit or exclude disadvantaged regions and actors.

Changing dynamics of GVCs/GPNs in the post-crisis world

- Transformation of GVCs/GPNs in the post-crisis world economy (Gereffi, 2014)
 - ◆ The end of the Washington Consensus and the rise of contending centers of economic and political power in Global South, e.g. PRC and India
 - ◆ A shift in the end markets and regionalization of value chains/production networks accelerated by the 2008 global economic crisis
 - ◆ Changing dynamics of GPNs: from strategic coupling to recoupling and decoupling

PRC's rise as the "Factory of the World": the case of electronics products

Major world producers of electronic products
(by production value in 2008)



Source: The Yearbook of World Electronics Data

	2009 PRC's outputs volume (% of the world production)
Mobile phones	49.9%
Computer sets	60.9%
Colour TV sets	48.3%
Digital cameras	80.0%
Laser disc players	85.0%

Source: Statistical Yearbook of China
Electronics Information Industry

The Pearl River Delta: “One Step Ahead” in PRC’s Opening and Reform initiated in 1978



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-
- 1979: four Special Economic Zones (Shenzhen, Zhuhai, Xiamen, Shantou)
 - 1984: Fourteen Coastal Open Cities
 - 1985: Three Economic Development Zones (Pearl River Delta; Yangtze River Delta; Southern Fujian Golden Triangle), plus Bohai Rim Region (1988)
 - 1988: Hainan Special Economic Zones

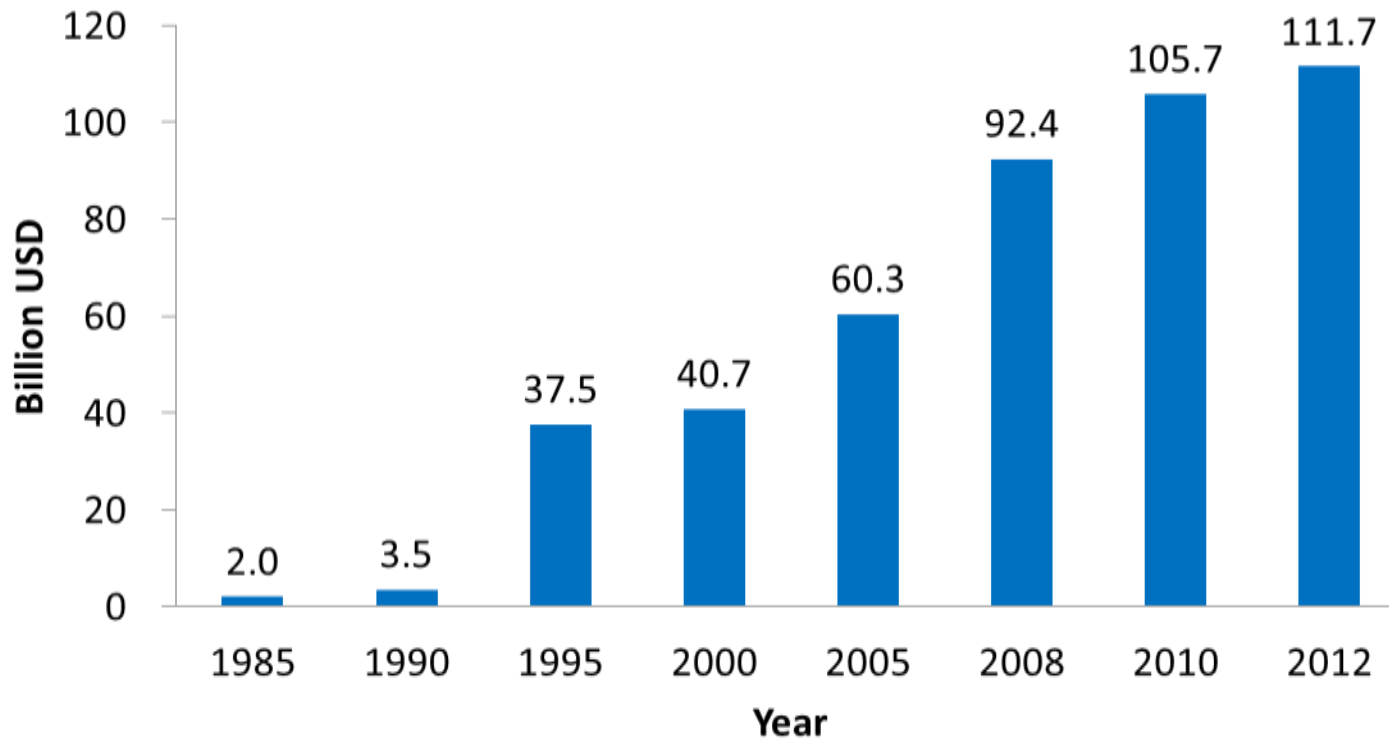
● Special Economic Zone (SEZ)
▲ Economic and Technical Development Zone
■ Key economic hub



People's Republic of China

Linking to GVCs through FDI (1)

Growth of FDI in PRC, 1985-2012 (Billion USD)



Source: China Statistical Yearbook 2013.

Linking to GVCs through FDI (2)

Major sources of FDI inflows to PRC 1995-2013 (% of total)

	1995	2000	2005	2008	2013
Total (Billion USD)	37.81	40.71	60.32	92.40	117.59
Hong Kong, China	53.39	38.07	29.75	44.41	66.59
Singapore	4.92	5.34	3.65	4.80	6.23
Japan	8.50	7.16	10.82	3.95	6.01
Taipei, China	8.37	5.64	3.57	2.06	4.46
United States of America	8.16	10.77	5.07	3.19	2.85
Republic of Korea	2.77	3.66	8.57	3.39	2.60
Federal Republic of Germany	1.03	2.56	2.54	0.97	1.78
Netherlands	0.30	1.94	1.73	0.93	1.09
United Kingdom	2.42	2.86	1.60	0.99	0.88
France	0.76	2.10	1.02	0.64	0.65
Macao, China	1.16	0.85	1.00	0.63	—

Source: China Statistical Yearbook 1996, 2001, 2006, 2009 and 2013

Linking to GVCs through FDI (3)

Spatial distribution of FDI inflows to PRC, 1995-2012 (% of total)

Region	1995	2000	2005	2008	2012
East	85.90	84.77	84.79	84.07	81.80
Central	9.06	8.98	9.26	8.87	10.03
West	5.04	6.25	5.94	7.06	8.17
Total (100 million USD)	372.15	8041.98	14638.00	22616.95	31405.95

Source: China Statistical Yearbook 1996, 2001, 2006, 2009 and 2013



Linking to GVCs through FDI (4)

Regional distribution of FDI inflows in the eastern PRC, 1995-2012(% of total)

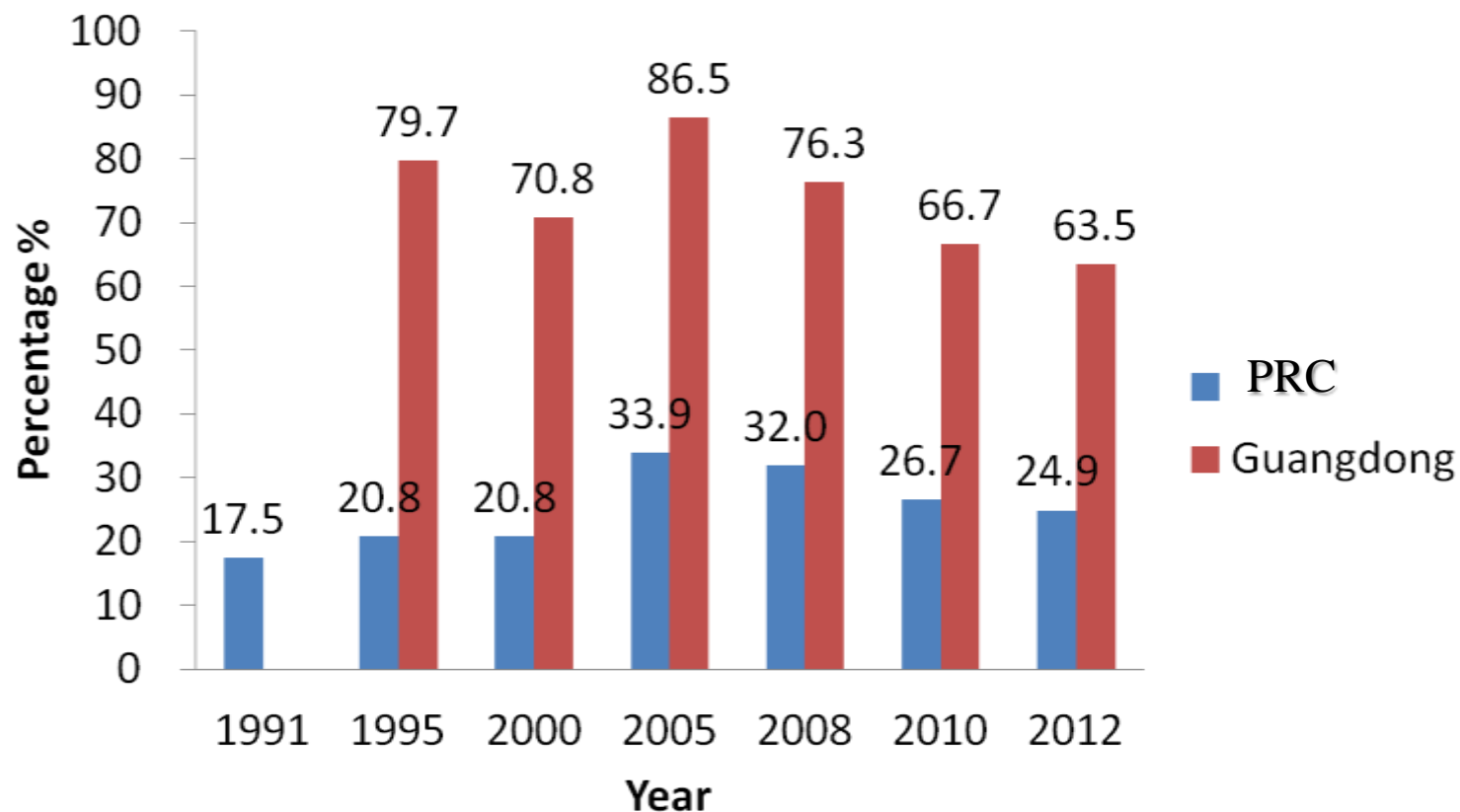
Region	1995	2000	2005	2008	2012
East	85.90	84.7704	84.793	84.0731	81.79802
PRD (Guangdong)	27.57	26.92	19.74	16.48	15.24
YRD:	25.10	25.22	38.82	38.39	40.01
Jiangsu	13.95	9.33	18.15	18.39	19.90
Shanghai	7.77	12.25	13.71	13.00	13.17
Zhejiang	3.38	3.64	6.96	7.00	6.94
Beijing	2.90	5.00	4.15	4.35	4.76
Tianjin	4.09	4.11	3.88	4.15	3.79
Liaoning	3.83	8.15	5.57	5.52	5.91
Shandong	7.23	4.84	5.37	4.47	5.03
Fujian	10.87	5.85	5.14	4.96	4.64
Hebei	1.47	1.74	1.50	1.50	1.56
Hainan	2.85	2.91	0.63	4.27	0.86

Source: China Statistical Yearbook 1996, 2001, 2006, 2009 and 2013



Linking to GVCs through FDI (6)

Export/GDP in PRC and Guangdong, 1991-2012 (%)



Source: China Statistical Yearbook 1992, 1996, 2001, 2006, 2009, 2011 and 2013;
Guangdong Statistical Yearbook 1996, 2009, 2013.

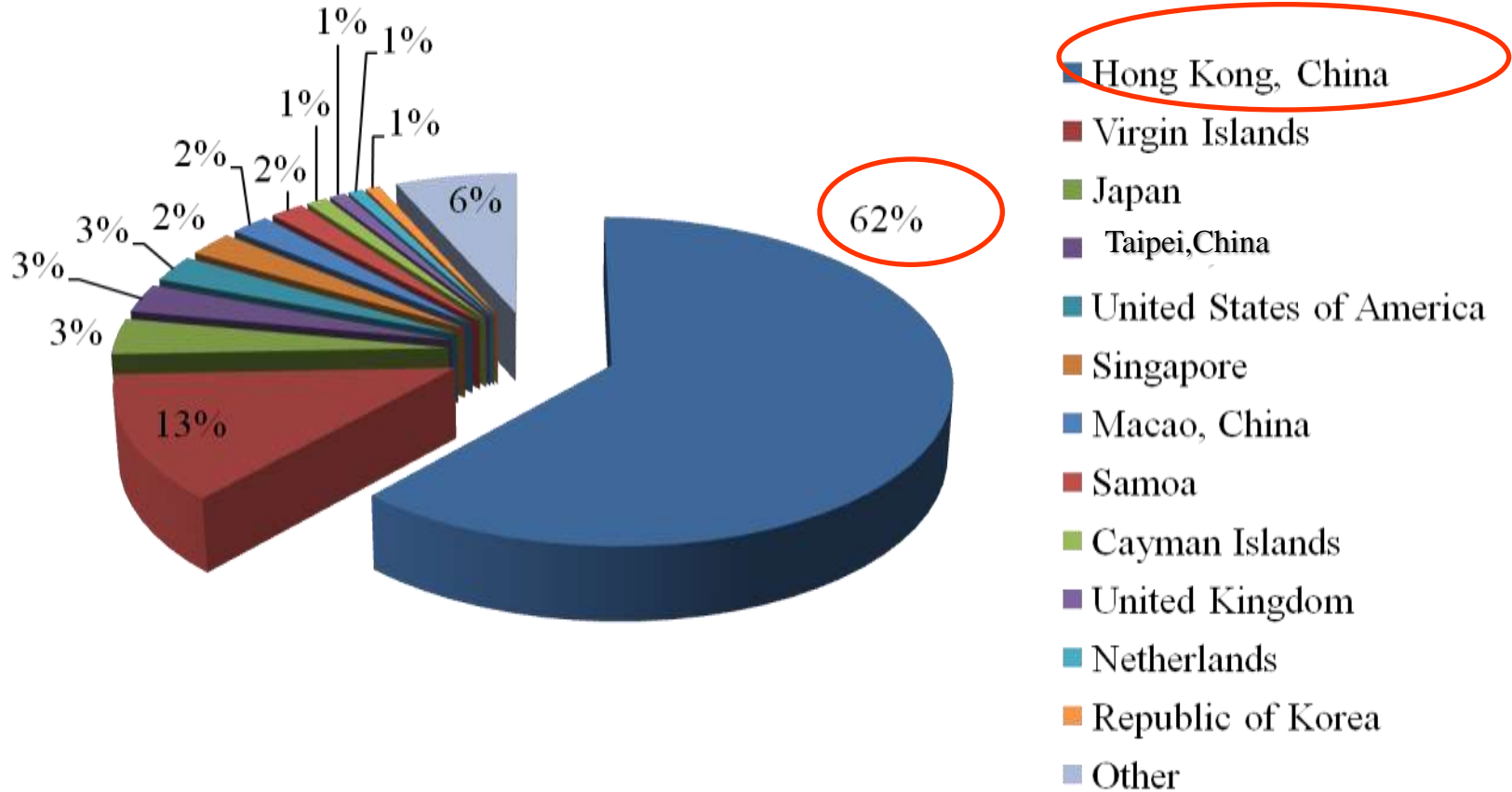


Hong Kong and Taipei, China's cross-border Investment In the Pearl River Delta



Major sources of origins of FDI to the PRD, 1979-2011 (%)

Foreign Capital Actually Utilized (%)



Source: Guangdong Statistical Yearbook 2013

The PRD: Regional Powerhouse in PRC



- Real GDP of the PRD grew by an average of 8.1% (1980-2012)
- The PRD: 4.2% of PRC's total population (2012)
- The PRD: 9.3% of PRC's GDP (2012)
- The PRD: 26.7% of PRC's total export (2012)

Sectoral composition change of GDP in the PRD, 1980-2012

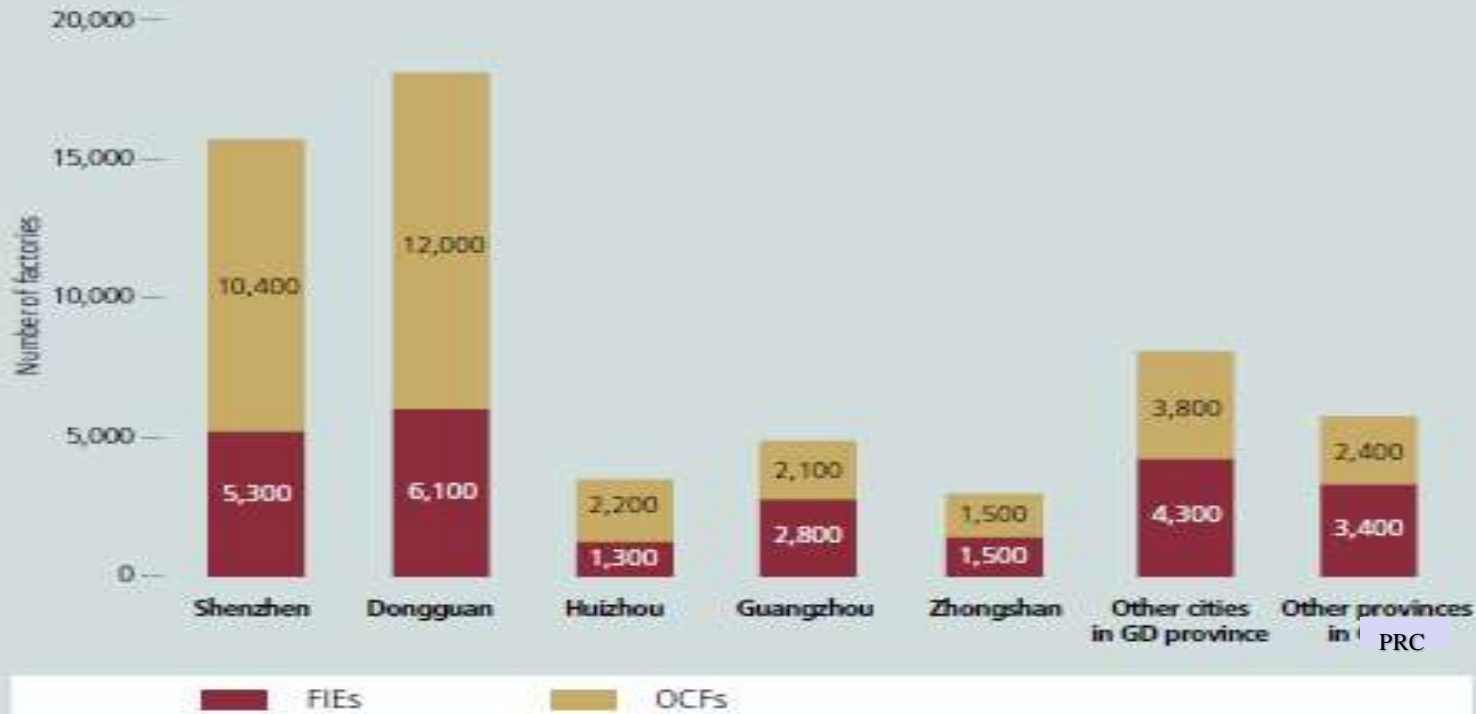
	1980	2008	2012
Primary Industry (%)	25.8	2.4	2.1
Second Industry (%)	45.3	49.9	46.2
Tertiary Industry (%)	28.9	47.7	51.7





Hong Kong, China investment in the PRD (1)

Figure A: Estimated Number of Factories in Guangdong and Other Mainland Provinces/Cities, 2003

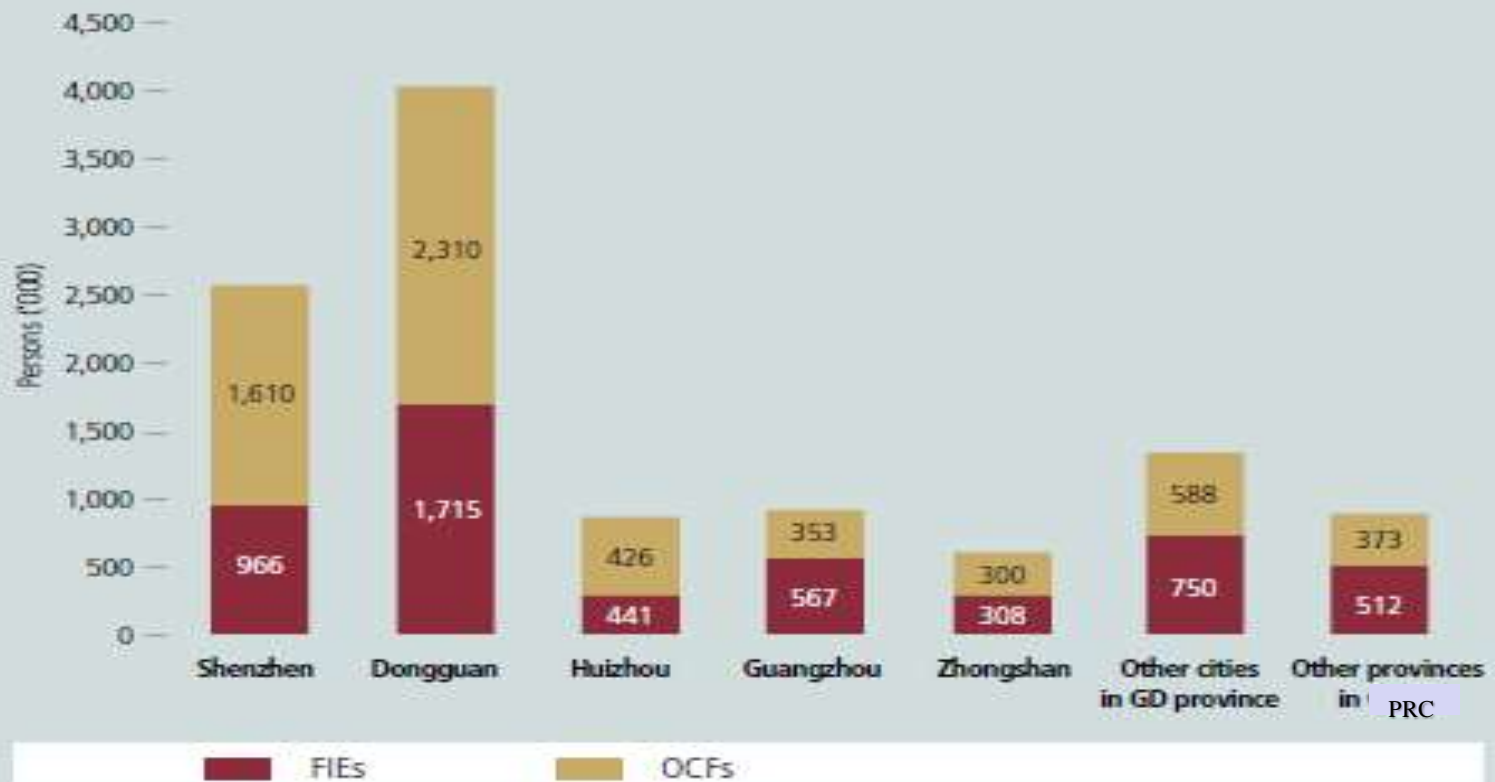


Source: Federation of Hong Kong Industries (2007)



Hong Kong, China investment in the PRD (2)

Figure B: Estimated Number of Mainland Workers, 2003



Source: Federation of Hong Kong Industries (2007)



Hong Kong, China investment in the PRD (3)

Figure 5.2: Five Major Reasons for Establishing Factories in Guangdong



Source: Federation of Hong Kong Industries (2007)

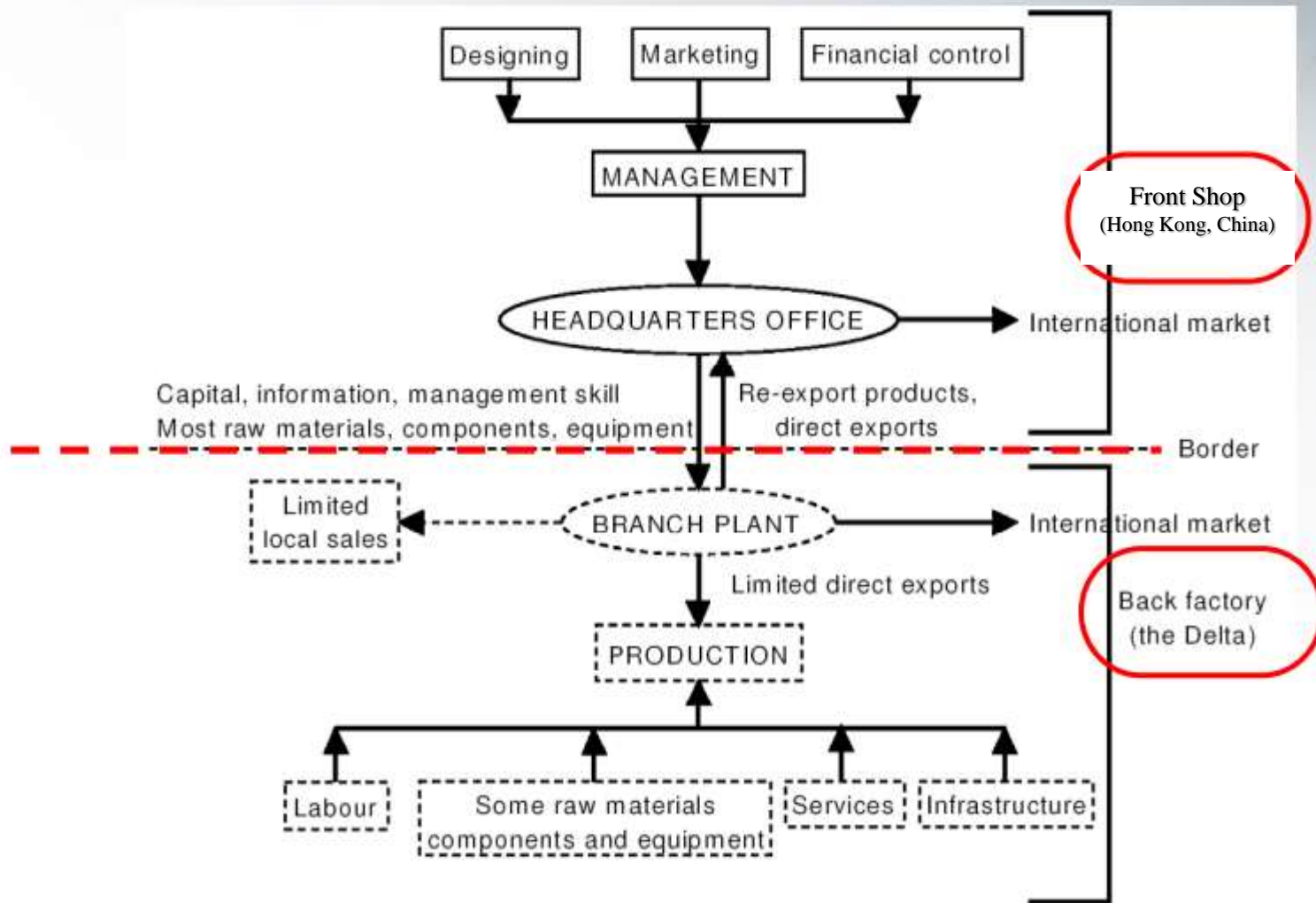


Export-oriented industrialization in the PRD

- Strategic coupling of regional assets in the GPNs (Yang, 2007)
 - Cheap labour and land
 - Geographical proximity
 - Cultural affinity and *guanxi* (inter-personal relations)
 - Local initiatives
- Flexible institutions: “relaxed inspection on import materials and export products in customs, half-hearted implementation of environmental and labour regulations, more flexible tax policies; a higher percentage of products allowed to be sold in the domestic market, quick approval of an expansion plan for the factory” (Hsing, 1998).



Hong Kong-PRD “Front shop, back factory” model



Source: Victor F. S. Sit and C. Yang, "Foreign-investment-induced Exo-urbanization in the Pearl River Delta, China," *Urban Studies* 34:4 (1997), pp. 647-77.

Taipei,China investment in the People's Republic of China

Changes in share (%) of electronics in Taipei,China cross-border investment in the People's Republic of China

	1991- 1995	1996- 2000	2001- 2005	2006	2007	2008	2009
Total investment in manufacturing (US\$ million)	5261	10404	26976	6649	8766	8761	5892
Computers, electronic and optical products (% of the total)	4.2	15.3	14.9	17.2	19.3	20.4	17.3
Electronic parts and components (% of the total)	5	11.7	17.9	24.3	27.7	23.4	30.6

Source: Taipei,China's Investment Commission.



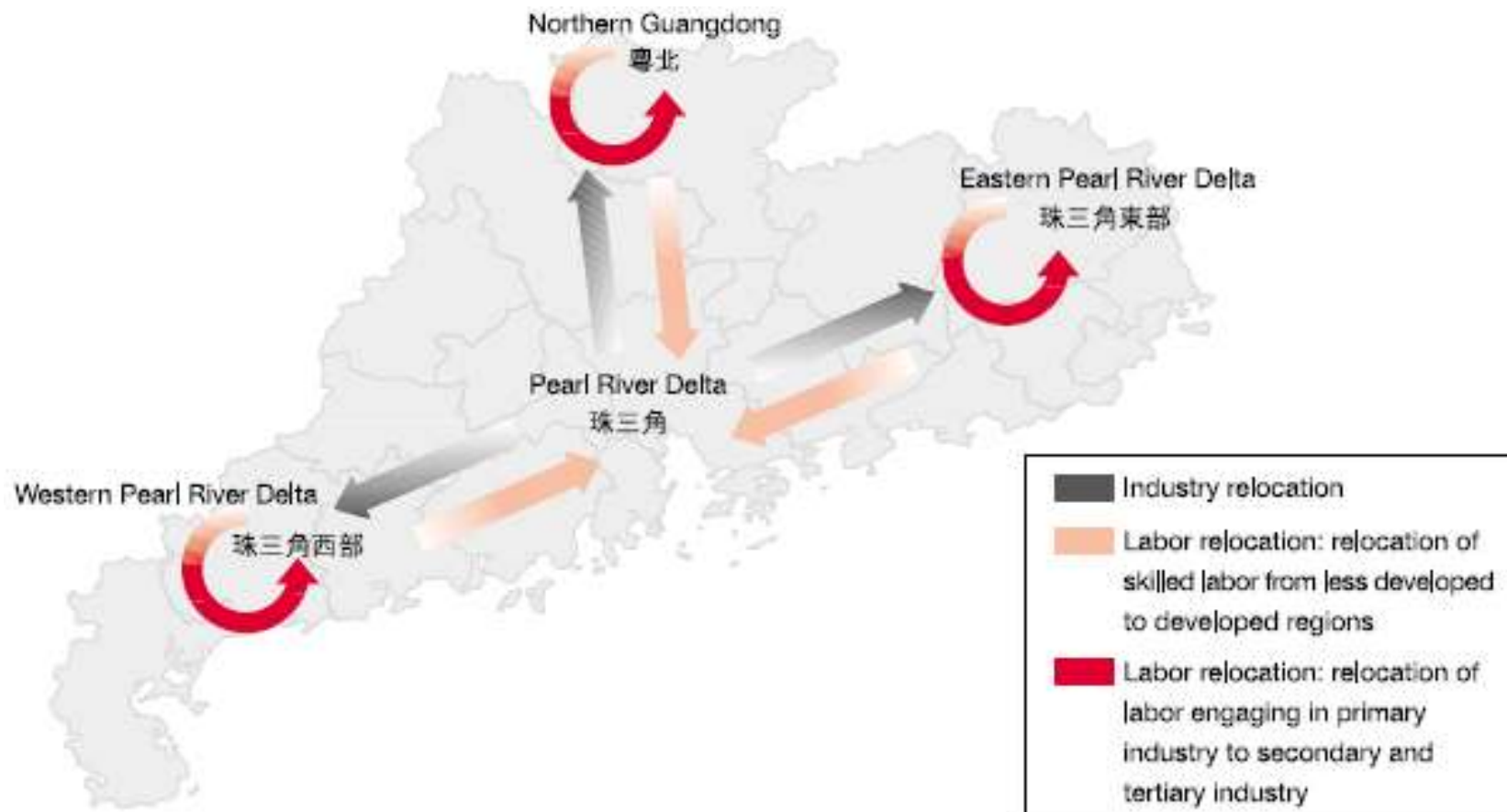
Changing business environment in the PRD since 2008

	2008	2009	2010	2011
Rising labour cost	3.52	3.04	3.61	3.31
RMB appreciation	3.49	2.89	3.20	3.03
Upsurge of raw materials	3.52	2.73	3.45	3.28
New Labour Contract Law	3.46	3.22	3.44	3.08
Labour shortage	3.05	-	3.09	2.73
Decrease/unstable of order	-	3.08	2.39	2.32
Limited supply of water/electricity	3.27	-	-	2.46
Keen market competition	-	-	3.03	2.60
Strict environment protection	2.68	-	2.69	2.40

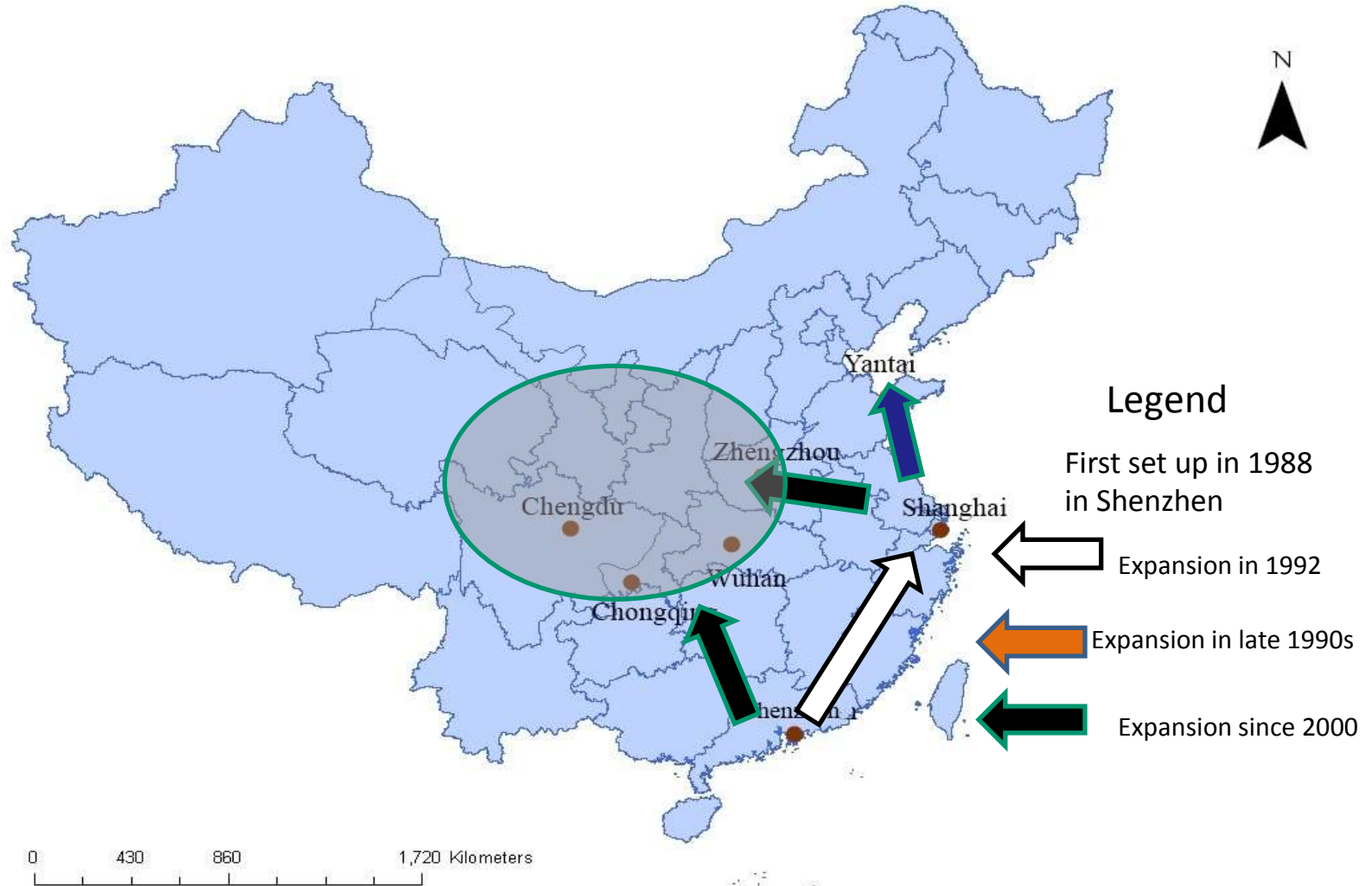
Notes: 4 indicates the most severe impacts, 1 represents no impacts, 2 and 3 are between the two categories.

Source: Compiled based on HKCMA (2011).

Guangdong provincial government-initiated industrial upgrading strategy: “empty the cage for new birds” (June 2008)

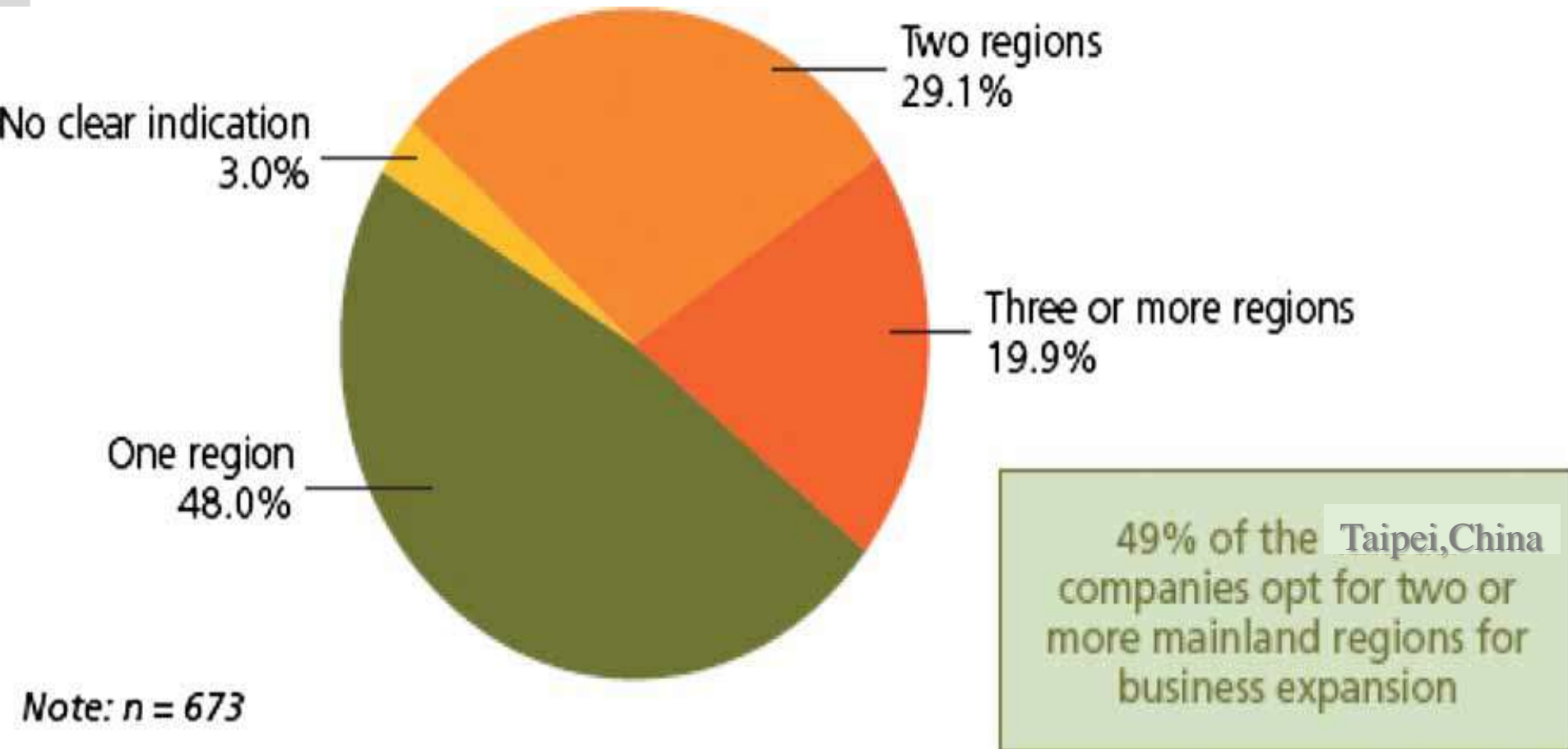


Foxconn's Expansion and Relocation



Source: Yang, C. (2013) From Strategic Coupling to Recoupling and Decoupling: Restructuring of Global Production Networks and Regional Evolution in China. *European Planning Studies*, 21(7): 1046-1063.

Multi-regional strategy of firms from Taipei,China



Source: Yang (2013) based on Hong Kong Trade Development Council (2012).

Lessons for Central Asia

Commonwealth of Independent States



Lessons for Central Asia

Economic indicators of Central Asia

Indicator Name	Tajikistan			Kyrgyz Republic		
	2005	2008	2012	2005	2008	2012
Population (million)	6.81	7.28	8.01	5.16	5.32	5.61
Land area (sq. km)	139960	139960	139960	191800	191800	191800
GDP (current US\$ million)	2312.3	5161.3	7633.0	2459.9	5140.0	6605.1
Agriculture, value added (% of GDP)	24.0	22.7	26.6	31.9	27.0	19.7
Manufacturing, value added (% of GDP)	23.7	14.4	10.8	14.4	15.2	14.1
Industry, value added (% of GDP)	31.3	28.3	22.5	22.4	23.5	25.4
Foreign direct investment, net inflows (% of GDP)	2.4	7.3	2.6	1.7	7.3	4.4
Exports of goods and services (BoP, current US\$ million)	1254.4	1756.3	1643.9	946.3	2770.4	3150.7
Exports of goods and services (% of GDP)	26.0	16.8	21.5	38.7	53.5	48.5
Goods exports (BoP, current US\$)	1108.1	1574.9	825.9	686.8	1874.4	1920.6
Service exports (BoP, current US\$)	146.3	181.4	818.0	259.4	896.1	1230.1
Import of goods and services (% of GDP)	52.8	71.8	69.1	57.7	92.6	97.7
Imports of goods and services (BoP, current US\$ million)	1682.4	4154.6	5273.1	1395.8	4747.3	6498.3
Goods imports (BoP, current US\$ million)	1430.9	3699.0	4382.7	1105.5	3753.5	4966.5
Service imports (BoP, current US\$ million)	251.5	455.5	890.4	290.3	993.8	1531.8
Manufactures exports (% of merchandise exports)				28.1	31.9	38.5
Manufactures imports (% of merchandise imports)				51.7	43.3	60.5

Source: The World Bank.

Lessons for Central Asia (2)

Economic indicators of Central Asia

Indicator Name	Kazakhstan			Turkmenistan			Uzbekistan		
	2005	2008	2012	2005	2008	2012	2005	2008	2012
Population (million)	15.15	15.67	16.79	4.75	4.92	5.17	26.17	27.30	29.77
Land area (sq. km)	2699700	2699700	2699700	469930	469930	469930	425400	425400	425400
GDP (current US\$ million)	57123.7	133441.6	203517.2	8104.4	19271.5	35164.2	14307.5	27934.0	51183.4
Agriculture, value added (% of GDP)	6.8	5.7	4.7	18.8	12.3	14.5	28.0	21.4	18.9
Manufacturing, value added (% of GDP)	12.8	12.7	12.1				9.1	12.1	12.7
Industry, value added (% of GDP)	40.1	43.3	39.5	37.6	53.7	48.4	23.2	30.8	32.3
Foreign direct investment, net inflows (% of GDP)	0.7	2.8	1.0	5.2	6.6	8.9	1.3	2.5	1.3
Exports of goods and services (BoP, current US\$ million)	30585.4	76395.2	96882.6						
Exports of goods and services (% of GDP)	53.5	57.2	47.6	65.0	64.1	73.3	37.9	43.5	27.8
Goods exports (BoP, current US\$)	28299.2	71964.2	86929.8						
Service exports (BoP, current US\$)	2087.3	4292.4	4828.2						
Import of goods and services (% of GDP)	44.7	37.1	30.3	47.8	40.4	44.4	28.7	40.8	29.8
Imports of goods and services (BoP, current US\$ million)	25549.1	49565.0	61731.2						
Goods imports (BoP, current US\$ million)	17946.4	38354.7	50637.3						
Service imports (BoP, current US\$ million)	7507.6	11205.2	12862.2						
Manufactures exports (% of merchandise exports)	13.4	14.5	12.9						
Manufactures imports (% of merchandise imports)	78.2	73.5	76.7						

Source: The World Bank

Lessons for Central Asia (1)

- Comparative advantages of Central Asia
 - ◆ resource-rich economies (Kazakhstan, Turkmenistan, and Uzbekistan)
 - ◆ non-resource-rich economies (Kyrgyz Republic and Tajikistan)
- FDI in Central Asia
 - ◆ FDI has facilitated the exploration of Central Asia's oil and gas extraction industries and transport infrastructure which led to rapid export growth in hydrocarbon-rich countries, but not yet generated positive spillovers to other sectors.
 - ◆ The employment impacts of FDI are insignificant

Lessons for Central Asia (1)

■ Research agenda

- ◆ Studies on extraction industry-based GVCs/GPNs

■ Linking with GVCs

- ◆ Backward/upstream linkages, which relate to industries that supply inputs to the extractive sector
- ◆ Forward/downstream linkages, which consist of industries that use the inputs from the extractive sector into other activities
- ◆ Horizontal linkages, which consist of developing activities that may not be directly linked to the extractive sector, but have potential of unlocking indirect business and employment opportunities in other sectors of the economy.

■ Policy suggestions

Conclusion

- Linking with GVCs through FDI: opportunities for developing countries/regions
- Hong Kong, China and Taipei, China cross-border investment in Mainland China: evidence from the Pearl River Delta
- Lessons for Central Asia
- Discussion

Relevant publications

- Yang, C. (2014) Market Rebalancing of Global Production Networks in the Post-Washington Consensus Globalizing Era: Transformation of Export-oriented Development in China. *Review of International Political Economy*, 21(1): 130-156.
- Yang, C. (2013) From Strategic Coupling to Recoupling and Decoupling: Restructuring of Global Production Networks and Regional Evolution in China. *European Planning Studies*, 21 (7): 1046-1063.
- Yang, C. (2012) Restructuring the Export-oriented Industrialization in the Pearl River Delta, China: Institutional Evolution and Emerging Tension. *Applied Geography*, 32 (1): 143-157.
- Yang, C. (2009) Strategic Coupling of Regional Development in Global Production Networks: Redistribution of Taiwanese Personal Computer Investment from the Pearl River Delta to the Yangtze River Delta. *Regional Studies*, 43(3): 385-407.
- Yang, C. (2007) Divergent Hybrid Capitalisms in China: Hong Kong and Taiwanese Electronics Clusters in Dongguan. *Economic Geography*, 83(4): 395-420.

Thank you for your attention!

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