



"Global Value Chains, Industrial Upgrading and Jobs in Large Emerging Economies: A Comparison of China, India, and Mexico"

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Agenda

1. Global Value Chain Analysis and Industrial Upgrading
2. Comparing International Upgrading Trajectories
3. Case Studies: China Vs Mexico
4. IT in India
5. Challenges and Opportunities

1. Global Value Chain Analysis and Industrial Upgrading

North Carolina

IN THE GLOBAL ECONOMY



North Carolina, with its unique mix of industries, from information technology, biotech, and banking, to the traditional sectors of textiles & apparel, furniture, tobacco, and hog farming, is a microcosm of trends observed elsewhere in the United States. This website presents and analyzes up-to-date information about how industrial restructuring in an era of globalization is impacting North Carolina's key industries.

-  Banks & Finance
-  Biotechnology
-  Information Technology
-  Furniture
-  Textiles & Apparel
-  Tobacco
-  Hog Farming



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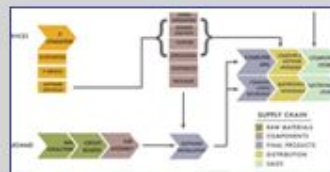
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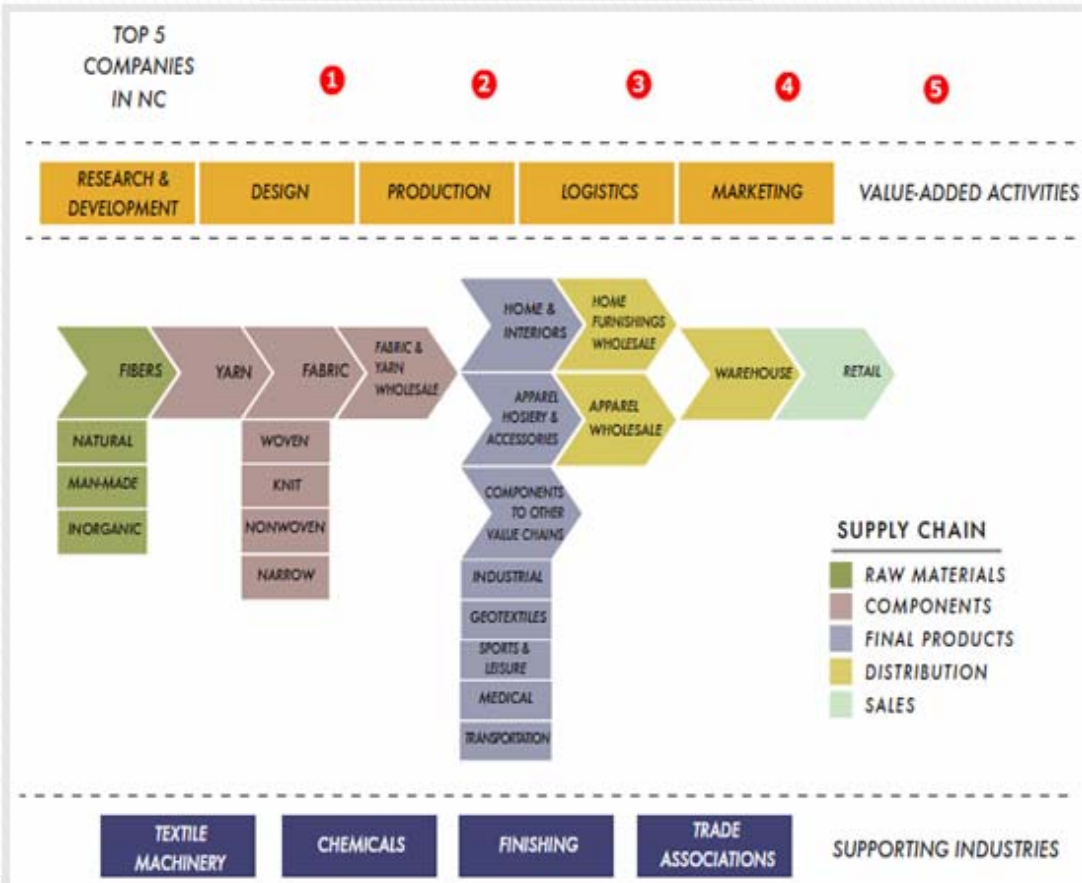


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What is a value chain?

Textile Industry



- ❖ 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.
- ❖ This includes activities such as design, production, marketing, distribution and support to the final consumer.
- ❖ The activities that comprise a value chain can be contained within a single firm or divided among different firms
- ❖ Value chain activities can produce goods or services, and can be contained within a single geographical location or spread over wider areas

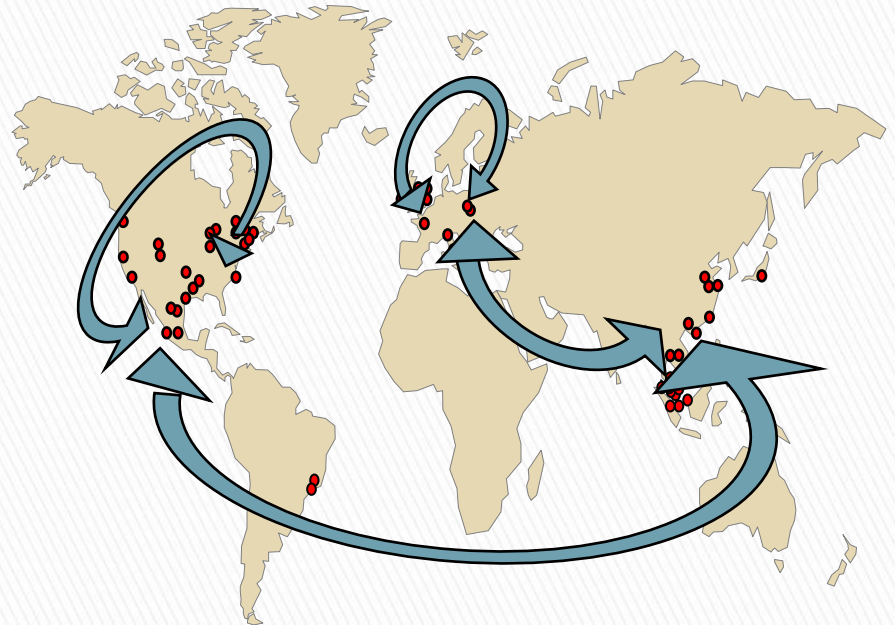
What is Global Value Chain Analysis?

- Actors in global industries, and how their roles are changing (lead firms plus supply chains)
- Power in the chain (brands, global buyers)
- Linkages – between GVC activities (firms, intra-firm, networks)
- Geography – locate domestic and national industries in their global context
- Institutions – Government, unions, trade associations, NGOs, multi-lateral agencies and regulations

Global Value Chains

- ▶ Global perspective – not just US-centric
- ▶ Organization of entire industries: raw materials to production to retail
- ▶ Linkages across firms and countries – coordination and integration
- ▶ Upgrading, especially for developing countries
- ▶ Power in the chain (drivers)

Global Production Systems total geographic flexibility



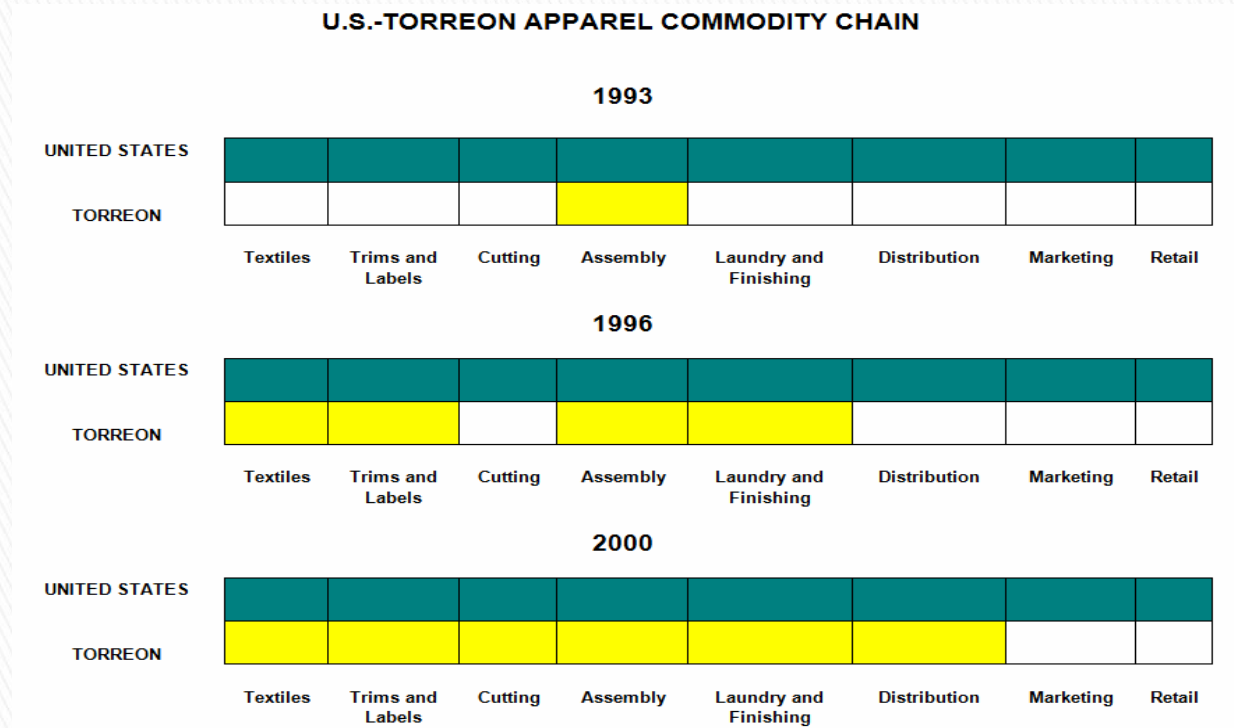
Upgrading

Upgrading refers to the acquisition of technological capabilities and market linkages that enable firms to improve their competitiveness and move into higher-value activities. Analyses of upgrading from a value chain perspective pay particular attention to the ways in which value chain linkages facilitate or obstruct upgrading.

□ Product and
Process Upgrading

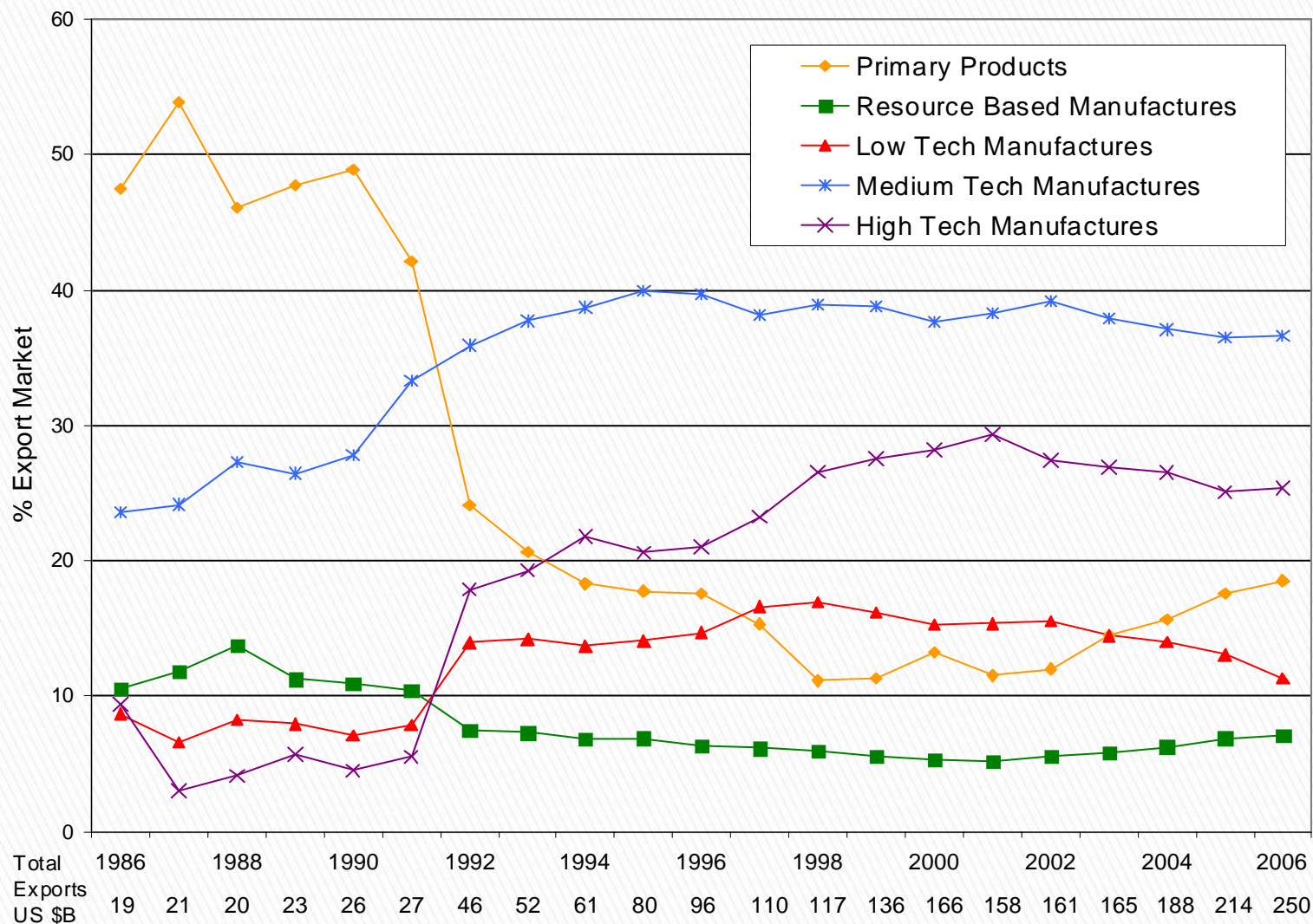
□ Functional
Upgrading

□ Inter-Chain
Upgrading



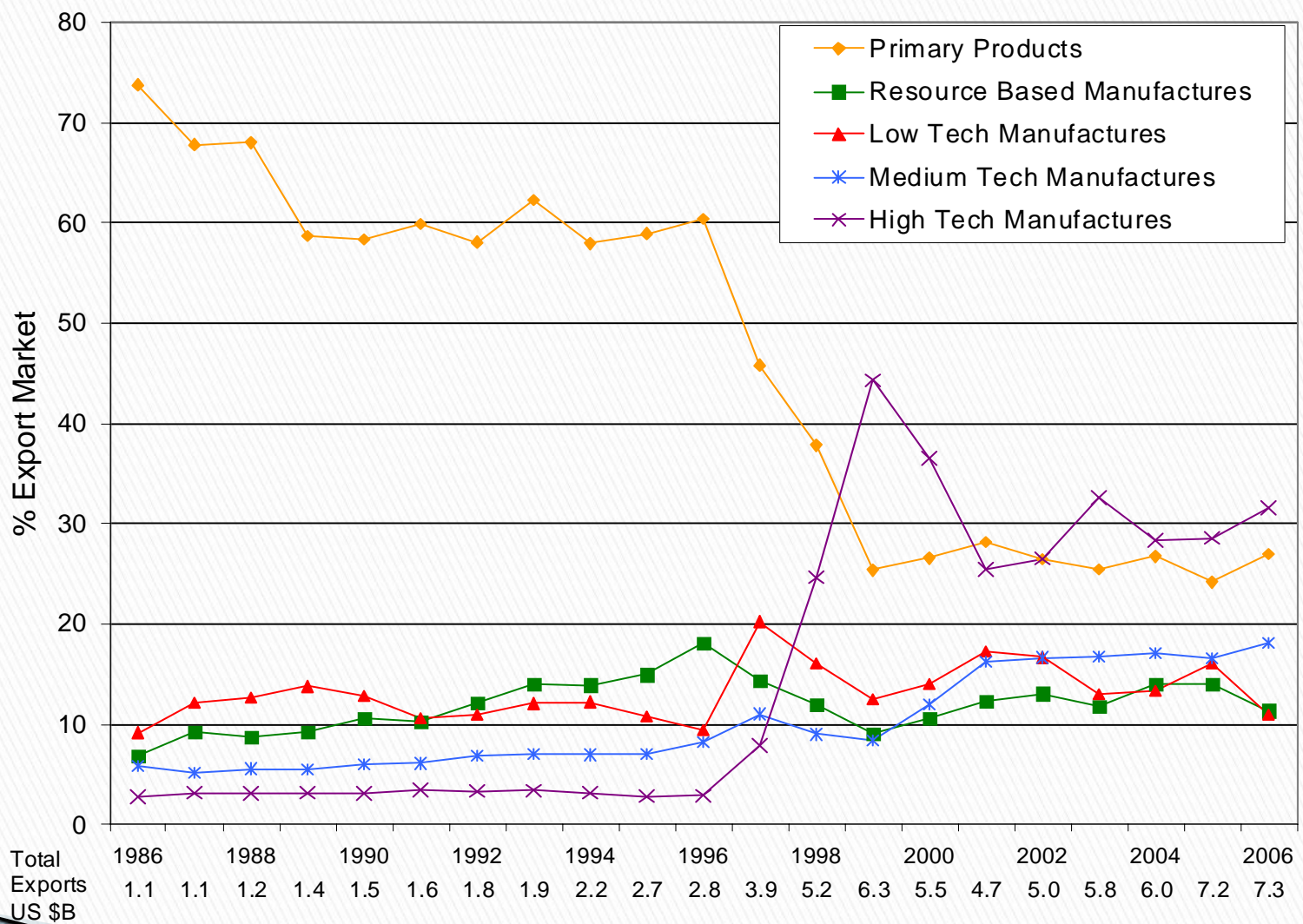
2. Comparing International Upgrading Trajectories

Composition of Mexico's Exports to the World Market, 1986–2006



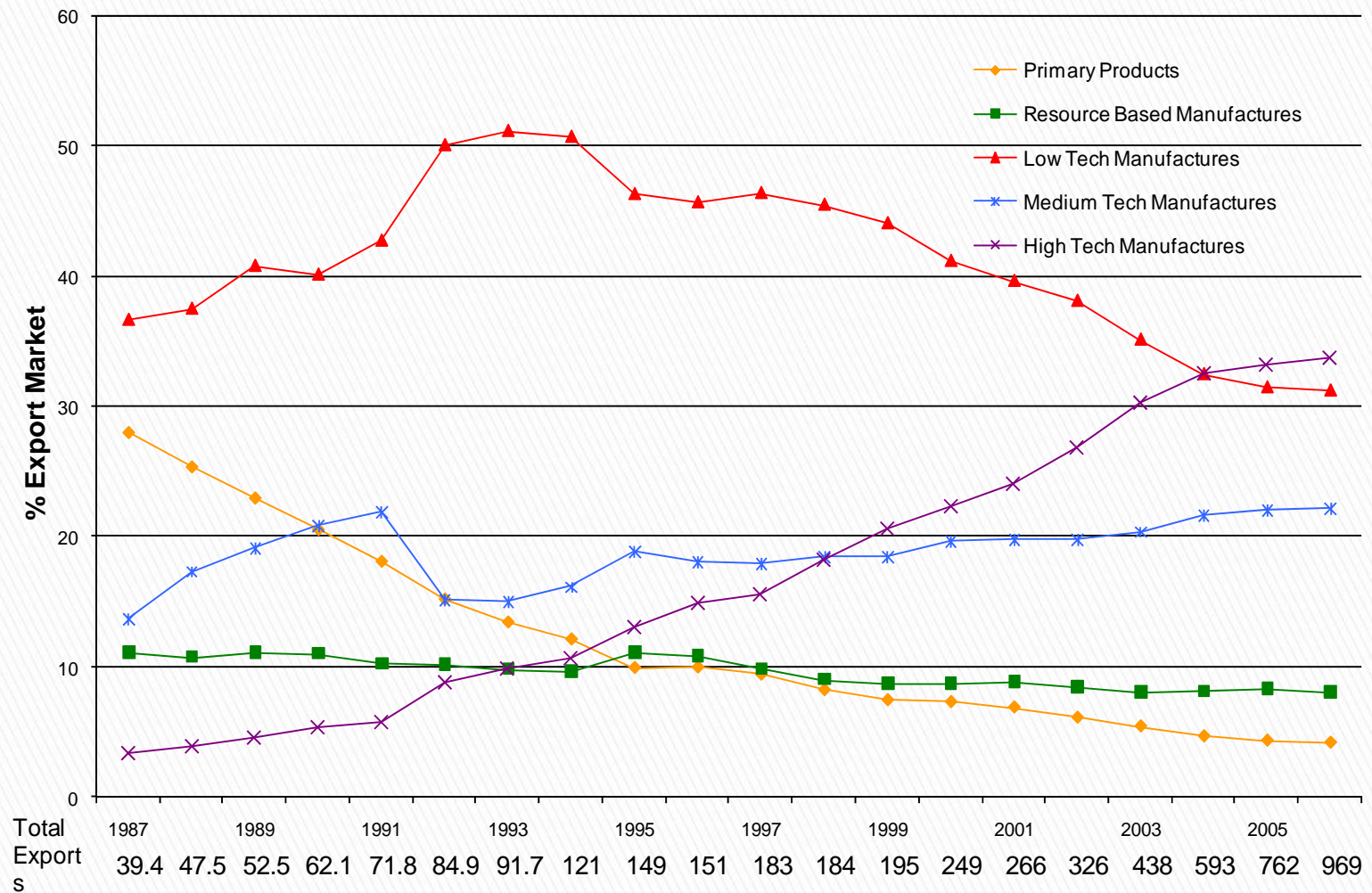
Source: UN Comtrade.

Composition of Costa Rica's Exports to the World Market, 1986–2006



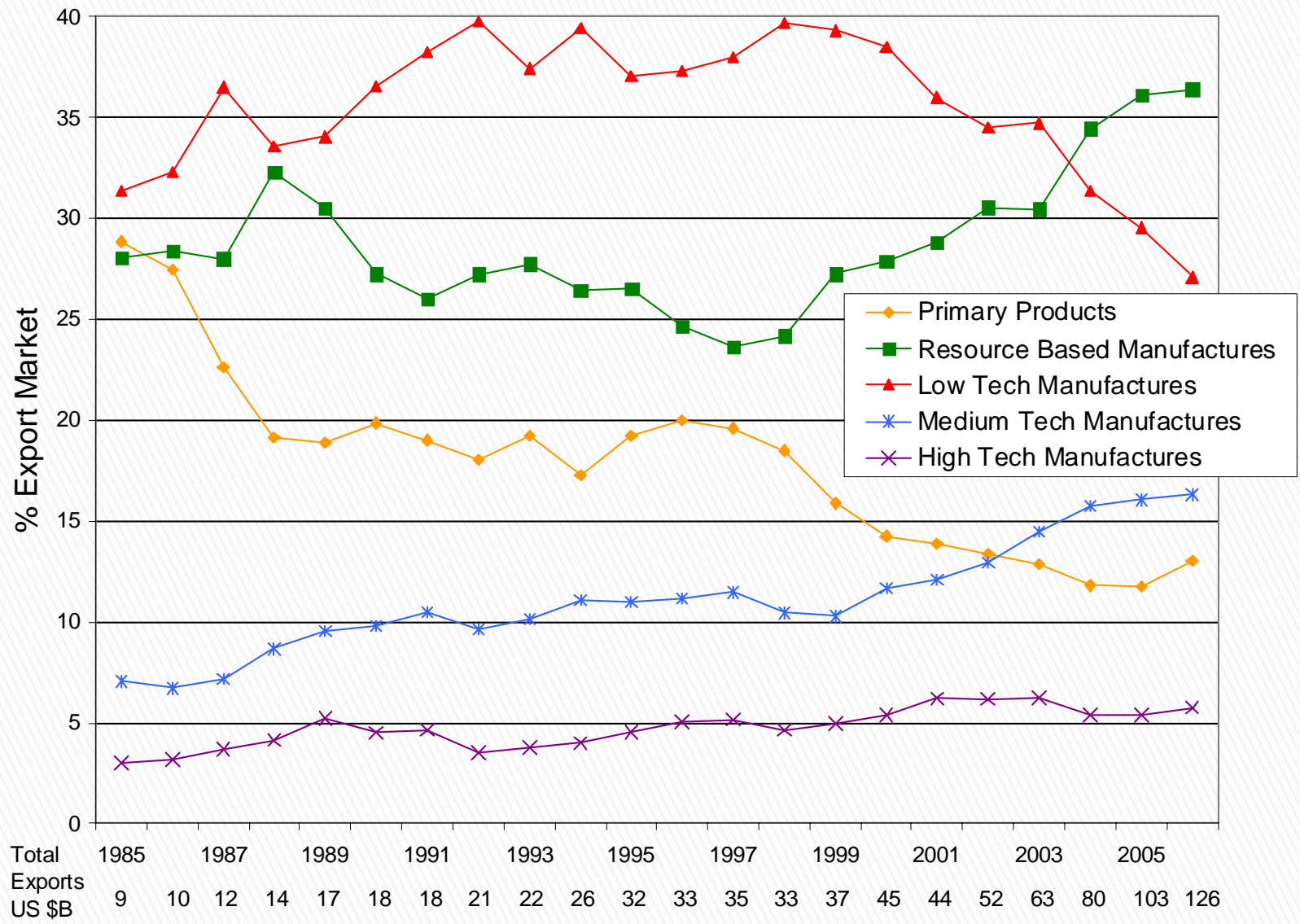
Source: UN Comtrade.

Composition of China's Exports to the World Market, 1987–2006



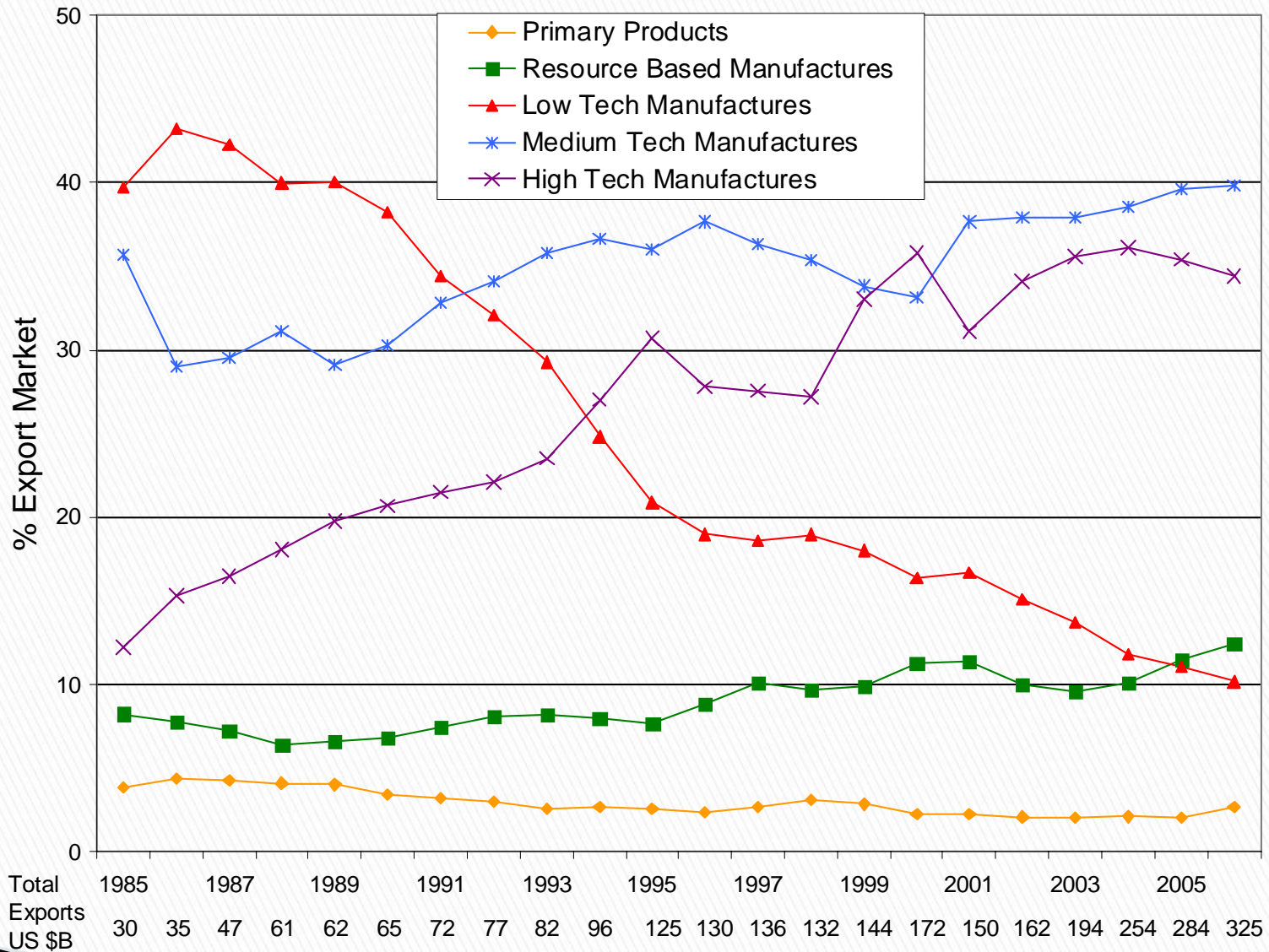
Source: UN Comtrade.

Composition of India's Exports to the World Market, 1985–2006



Source: UN Comtrade.

Composition of South Korea's Exports to the World Market, 1985–2006



Source: UN Comtrade.

3. Case Studies: China Vs Mexico



Mexico vs. China



- Head-to-head competition in U.S. market
- China is world's leading exporter of many manufactures, esp. consumer goods
- China and Mexico are typically among the top three exporters to the U.S. market in many product categories
- China is moving ahead of Mexico with dominant market shares in the United States, especially in 2000–2005 period

Top US Imports in which Mexico and/or China hold 40% or more of the US market, 2007

Mexico				China			
Product	(SITC categories)	% Market Share in USA	Change in % Market Share 2000-2007	Product	(SITC categories)	% Market Share in USA	Change in % Market Share 2000-2007
054	Vegetables, fresh, chilled, frozen; roots, tubers and other edible vegs	59.9	-1.0	894	Baby carriages, toys, games and sporting goods	83.9	19.3
773	Equipment for distributing electricity, n.e.s.	50.8	-9.9	763	Sound recorders; television image and sound recorders	76.1	53.9
761	TV receivers (including video monitors & projectors)	48.0	-15.5	831	Trunks, suitcases, vanity cases, binocular, camera cases, handbags, wallets, etc.	74.2	24.3
782	Motor vehicles for the transport of goods	46.6	15.0	851	Footwear	72.8	10.9
772	Electrical apparatus for switching or protecting electrical circuits	28.3	3.9	697	Household equipment of base metal, n.e.s.	66.4	30.7
872	Instruments and appliances for medical, surgical, dental or veterinary purposes	26.9	6.7	813	Lighting fixtures and fittings, n.e.s.	65.5	7.1
741	Heating and cooling equipment and parts thereof, n.e.s	25.8	1.5	848	Articles of apparel and clothing accessories; non-textile fabrics	56.2	11.4
775	Household type electrical and nonelectrical equip.	25.6	5.9	752	Automatic data processing machines; magnetic or optical readers;	49.3	38.0
				658	Made-up articles of textile	48.8	24.7
				821	Furniture and parts; bedding, mattresses, supports, cushions	47.7	24.1
				762	Radio-broadcast receivers	45.4	10.0
				759	Parts and accessories for use office machines	44.5	33.0
				775	Household type electrical and nonelectrical equip.	44.2	7.0
				893	Articles, n.e.s. of plastics	42.8	11.9
				842	Women's or girls' coats, capes, jackets, suits, trousers, dresses, skirts, underwear, etc. of woven textiles	42.4	26.6
				751	Office machines	41.9	12.7
				761	TV receivers (including video monitors & projectors)	38.7	36.2
				764	Telecommunications equipment, n.e.s. and telecommunications accessories	37.3	27.0
				771	Electric power machinery	32.6	10.8
				899	Miscellaneous manufactured articles	31.8	-11.0
				699	Manufactures of base metal, n.e.s.	31.2	17.6
				845	Articles of apparel, of textile fabrics, whether or not knitted or crocheted	31.2	20.4
				778	Electrical machinery and apparatus	26.6	14.7
				844	Women's or Girls' Coats, Capes, Jackets, Suits, Trousers, Dresses, Underwear, etc. (except swimwear and coated etc. apparel), knitted or crocheted	29.3	25.3
				625	Rubber Tires, Interchangeable Tire Treads, Tire Flaps and Inner Tubes	26.0	19.4

Source: United States International Trade Commission and US Department of Commerce. (<http://dataweb.usitc.gov>) downloaded Feb. '08

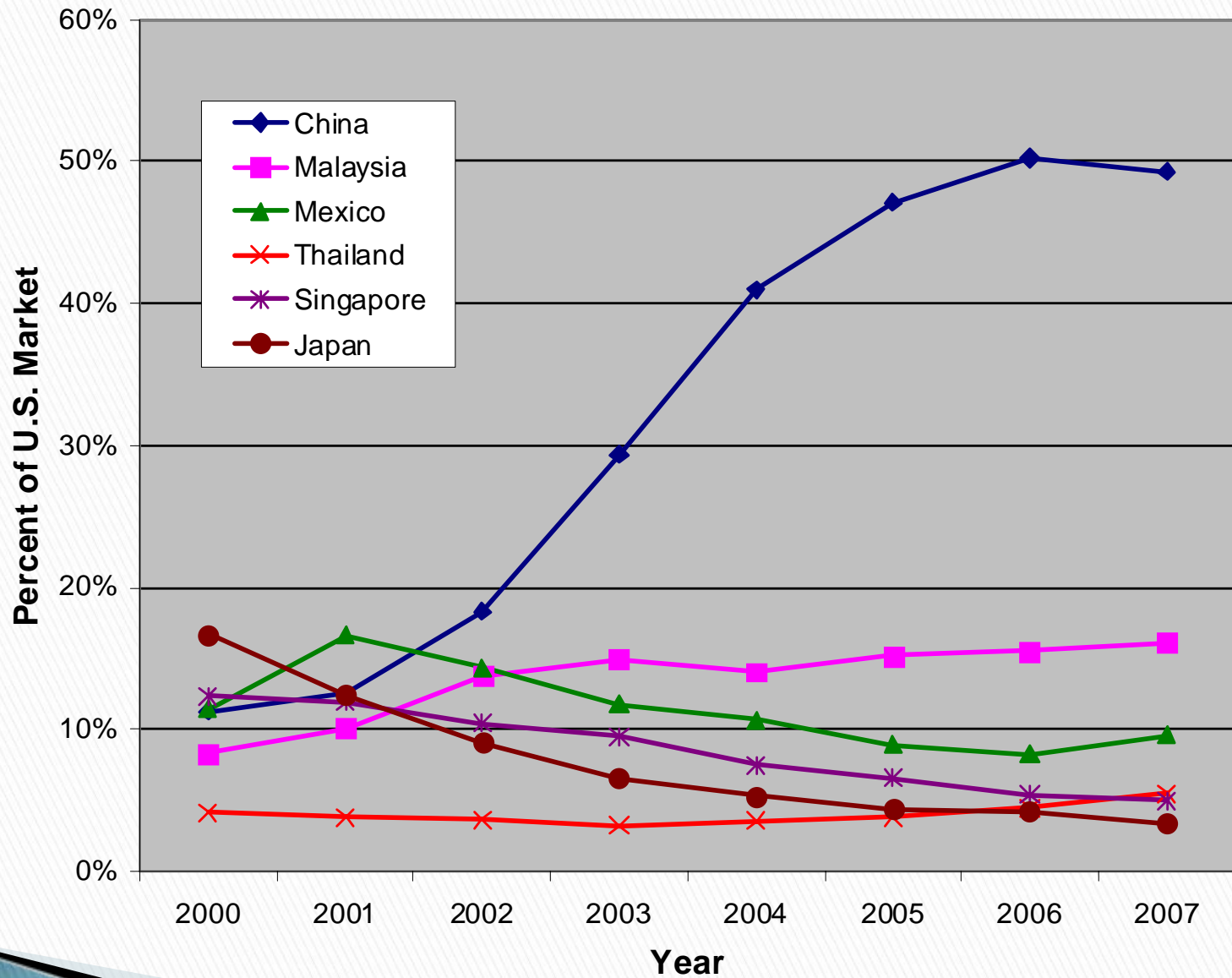
¹Criteria: Over 2 Billion in US Imports from China or Mexico in 2007 at the 3 digit SITC level

Mexico's and China's Competing Exports to the United States, 2000–2007

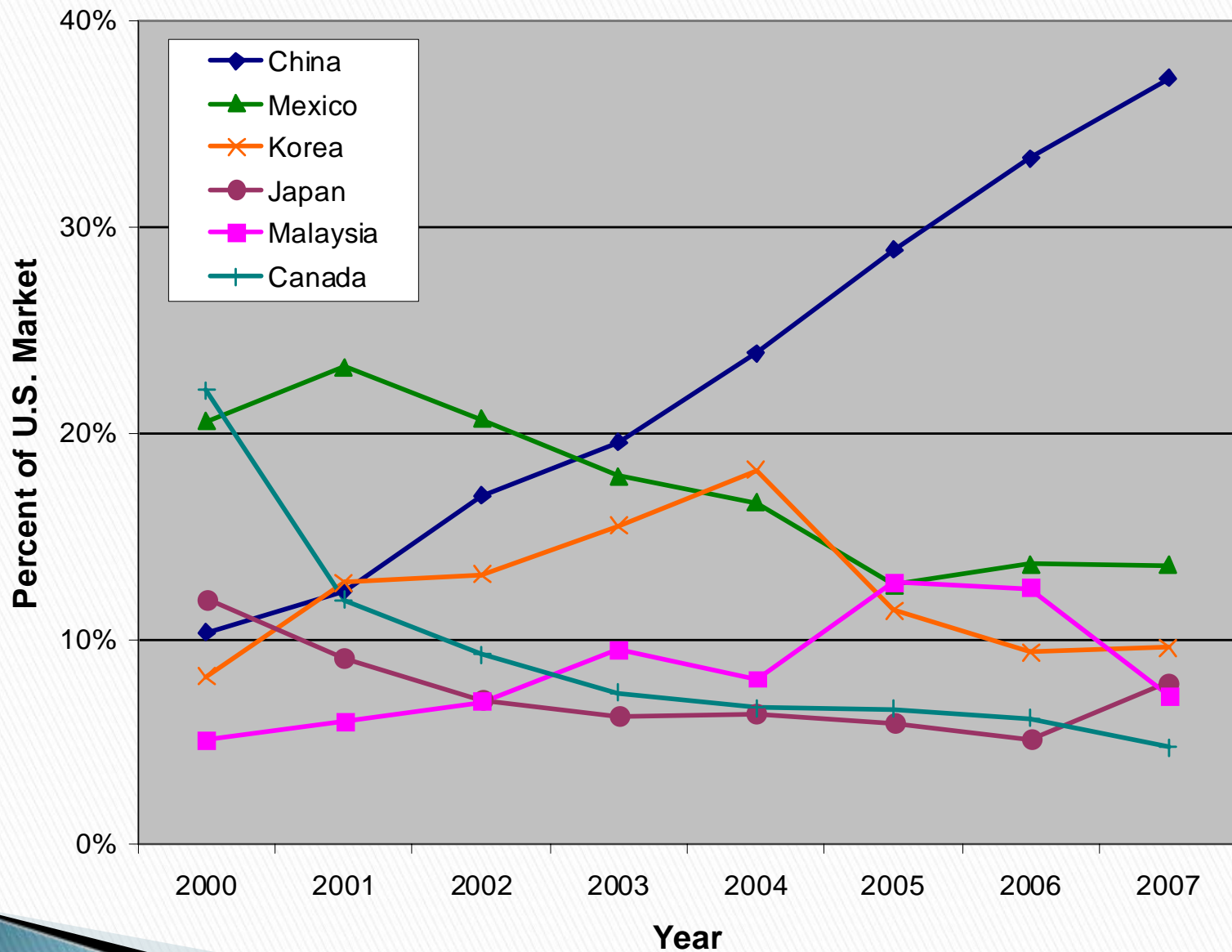
SITC category	Product		2000		2007		Change in Market Share 2000-2007
			Value (billions)	Share of US market	Value (billions)	Share of US market	
752	Automatic Data Processing Machines and Units	Mexico	6.4	11.5	5.6	9.6	-1.9
		China	6.3	11.3	28.6	49.3	38.0
		US Total	55.9		57.9		
764	Telecommunications Equipments and Parts	Mexico	9.1	20.6	10.8	13.6	-7.0
		China	4.6	10.3	29.6	37.3	26.9
		US Total	44.3		79.5		
778	Electrical Machinery and Apparatus	Mexico	3.1	18.3	5.0	21.8	3.5
		China	2.0	11.9	6.1	26.6	14.7
		US Total	17.1		23.1		
784	Auto Parts and Accessories	Mexico	4.6	16.3	10.2	22.2	5.8
		China	0.4	1.5	3.6	7.8	6.2
		US Total	28.4		46.2		
821	Furniture	Mexico	3.2	16.9	4.6	13.6	-3.3
		China	4.5	23.6	16.2	47.7	24.1
		US Total	18.9		33.9		
84	Articles of Apparel and Clothing	Mexico	8.7	13.6	4.7	5.8	-7.8
		China	8.5	13.2	27.1	33.4	20.2
		US Total	64.3		81.2		

Source: US Department of Commerce (<http://dataweb.usitc.gov>), Downloaded Feb 21, 2008

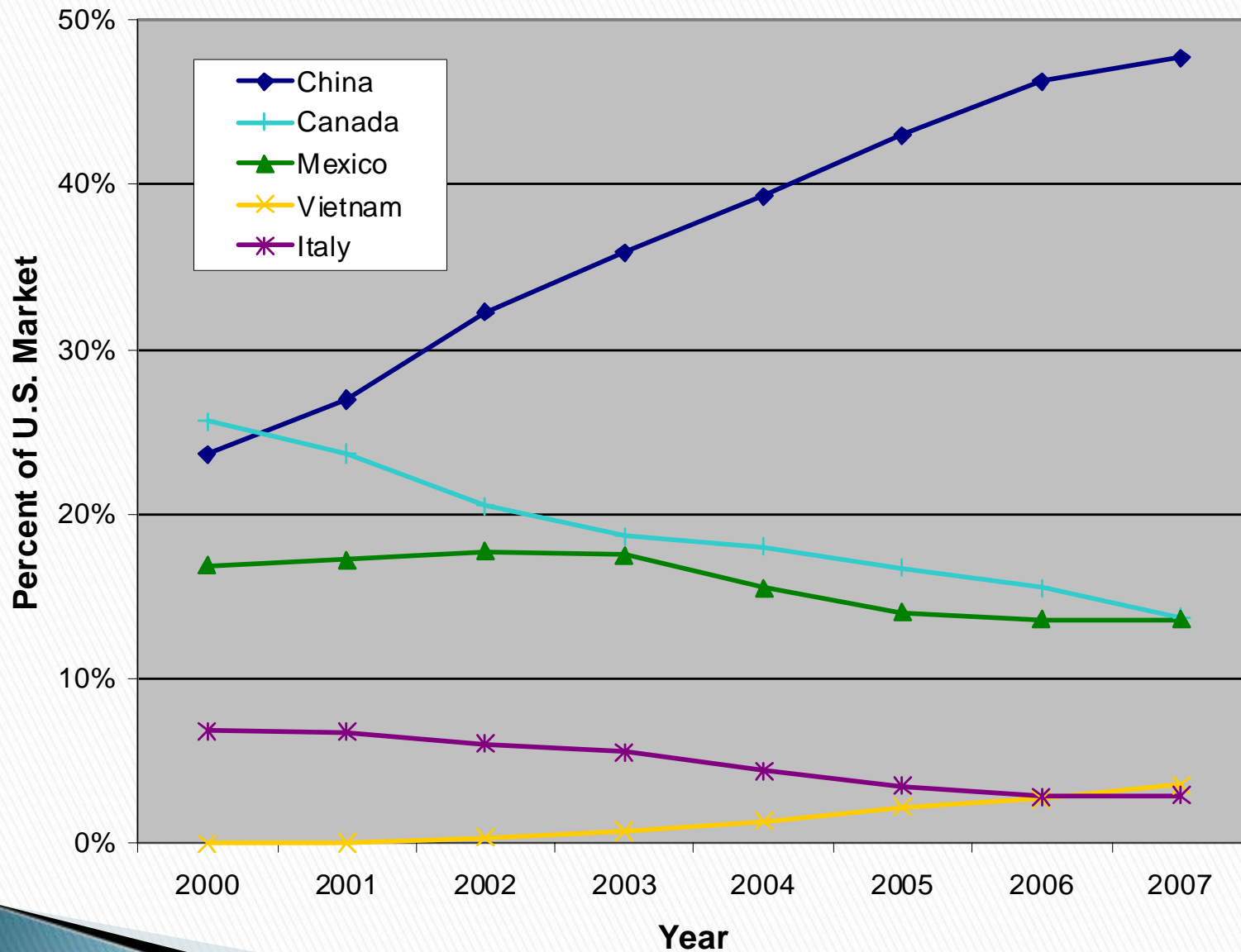
**Main Competitors in the U.S. Market for Automatic Data Processing Machines and Units
(SITC 752)**



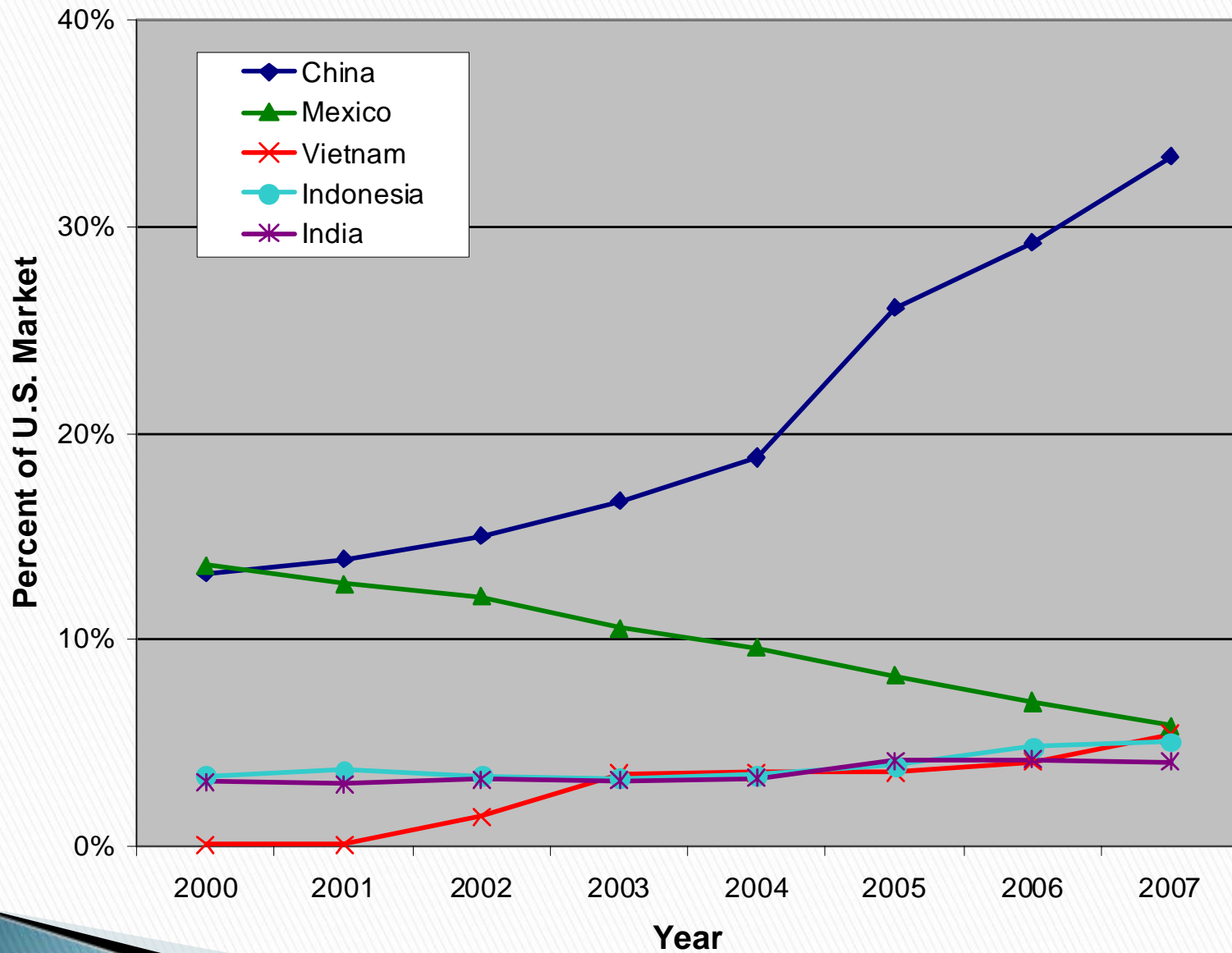
Main Competitors in the U.S. Market for Telecommunication Equipment and Parts (SITC 764)



Main Competitors in the U.S. Market for Furniture and Parts (SITC 821)



Main Competitors in the U.S. Market for Articles of Apparel and Clothing (SITC 84)



Why is China gaining U.S. market share over Mexico?

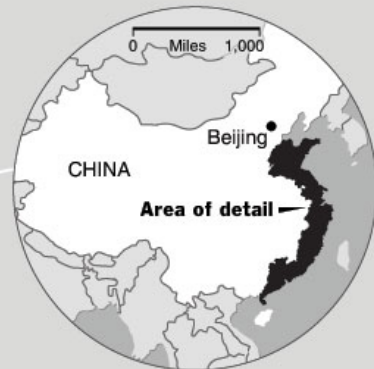
- China is a lower-cost producer overall (labor costs lower, but not transport & tariffs)
- China has huge scale economies
- China has a coherent and multidimensional upgrading strategy – diversify and add high value activities
- China is using direct foreign investment to promote “fast learning” in new industries
- China uses access to its domestic market to attract TNCs and promote knowledge spillovers



China's Supply Chain Cities in Apparel

Made in China, Shipped Worldwide

The factory towns on the coast of China manufacture clothing to keep America's closets full, making everything to wear from head to toe.



	Factory orders, 2003	PRODUCTION	TOTAL SALES	U.S. EXPORTS
SHANGDONG	MEN'S WEAR <i>Zhucheng</i>	100 MILLION PIECES	\$600 MILLION	\$100 MILLION
JIANGSU	CASUAL WEAR <i>Haiyu, Changshu</i>	160 MILLION PIECES	\$260 MILLION	\$ 58 MILLION
YANGTZE RIVER	DOWN-FILLED PRODUCTS <i>Xintang, Hangzhou, Xiaoshan</i>	26 MILLION PIECES	\$470 MILLION	\$290 MILLION
ZHEJIANG	TIES <i>Shengzhou</i>	300 MILLION PIECES	\$1.21 BILLION	\$384 MILLION
ZHEJIANG	SOCKS <i>Datang, Zhuji</i>	9 billion PAIRS	\$1.57 BILLION	\$240 MILLION
FUJIAN	UNDERWEAR <i>Jinjiang, Shenhu</i>	969 million PIECES	\$360 MILLION	\$290 MILLION
GUANGDONG	WEDDING DRESSES, EVENING GOWNS <i>Chaozhou</i>	510 million PIECES	\$950 MILLION*	\$640 MILLION†
GUANGDONG	JEANS <i>Xintang, Zengcheng</i>	225 million PIECES	\$1.04 BILLION	\$480 MILLION

*Includes all textiles made in the city.

†Wedding dress and evening gown exports only.

Sources: China National Textile Council; Shenhu Underwear Association; Datang Town Government

The New York Times

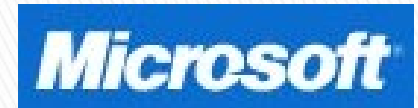
Source: David Barboza, "In roaring China, sweaters are west of socks city," *New York Times*, Dec. 24, 2004.

□ What kinds of work are Chinese, Indian, and American engineers actually doing?

- Answer: Not just product adaptation, but cutting-edge research & commercialization

□ China: More than 1,000 MNC R&D Centers

- GE's China Technology Center: Advanced research in energy storage, environmental management
- Microsoft Research Asia: Cutting-edge graphics & multimedia research



4. Textiles & Apparel and IT in India

Tiruppur Knitwear Cluster

- ❖ Dramatic increase in sales & employment
- ❖ 85% of India's cotton knitwear exports, ~ 4% of total exports
- ❖ Transformed from basic knit garments for lower end of domestic market to a diversified production range, especially fashion basics/casual wear for exports
- ❖ 5,000 firms (few lead firms directly linked to global buyers)
- ❖ 15 active industry associations, Knit Fair Complex, logistics, fashion institute in collaboration with NIFT

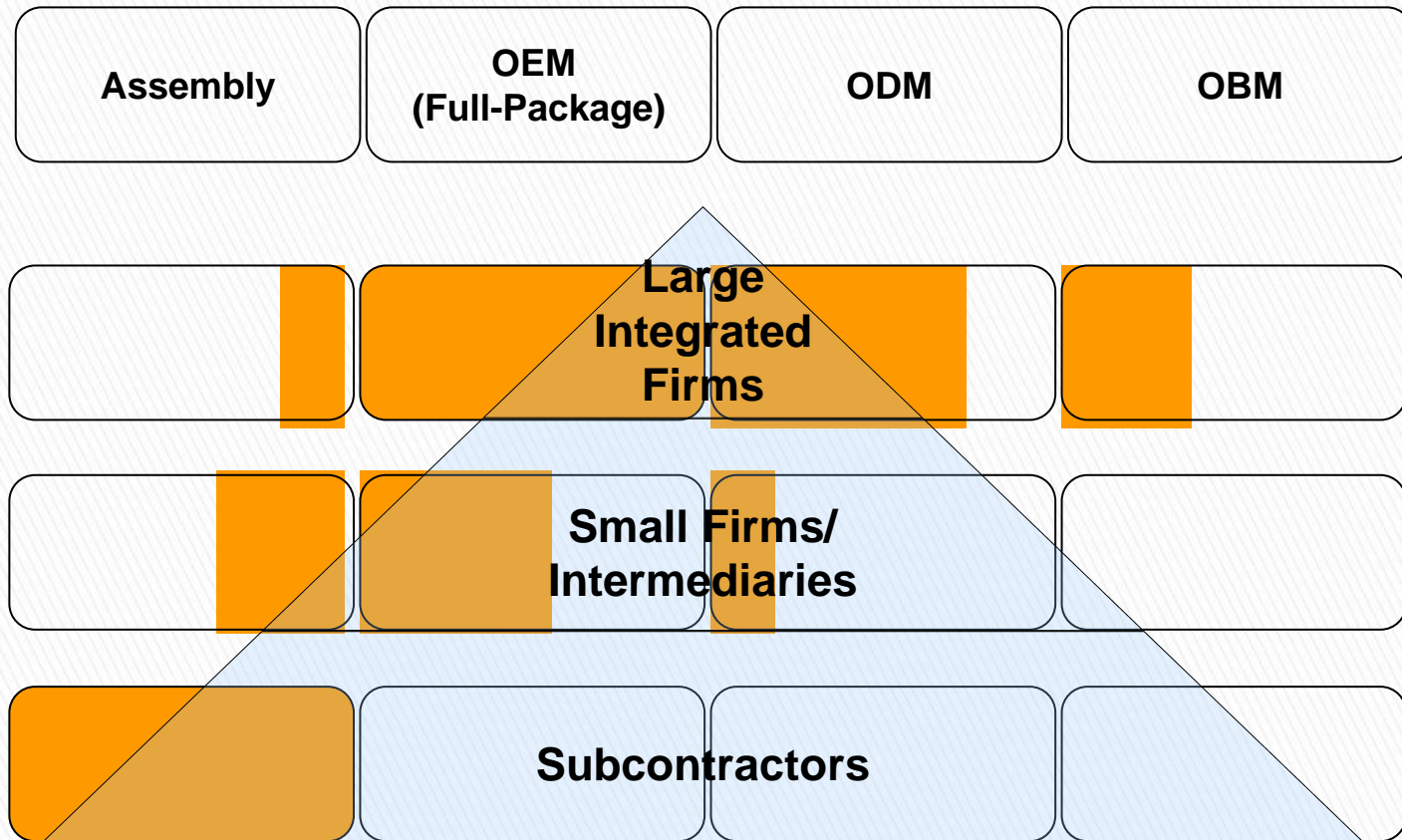
Labor Market Conditions*:

- 96% of workers are casual employees
- Mostly migrant women from backward castes
- Vast majority of women are 'flexible' seasonal workers
- 92% of women surveyed were paid on piece-rate (though time-rate is increasing)



* Neetha, N (2002), 'Flexible Production, Feminisation and Disorganisation: Evidence from the Tiruppur Knitwear Industry', Economic and Political Weekly, May 25th.

Textiles & Apparel Value Chain Upgrading Categories



↑
+
Internationalization
Domestic vs. Exports
-
↓

↑
+
Decent Work (Quality of Work)
-
↓

Employment Relationship

Informality

India: The Offshoring of IT Services

- ❑ India employs about 650,000 professionals in IT services, and this figure is expected to more than triple in the next five years
- ❑ General Electric's "70-70-70" outsourcing rule of thumb: about one-third of GE's IT work will be done in India
- ❑ A strong nucleus of domestic IT service providers has emerged:
 - ❑ Tata Consultancy Services – 23,400 employees and over \$1 billion in revenues (as of March 2003)
 - ❑ Wipro Technologies – 19,800 employees and \$690 million in revenues
 - ❑ Infosys Technologies – 15,500 workers, over \$750 million in revenues
 - ❑ Satyam Computer Services and HCL Technologies – close to 10,000 employees each and \$460 million and over \$330 million in revenues
- ❑ Indian programmers make only 1 / 9 of their US counterparts, but in the domestic setting the Indian programmers are earning more than 16 times the min wage, while the average US programmer earns only twice the min wage

Bangalore Software Cluster: 'India's Silicon City'

- ❑ Tremendous growth in software exports since the late 1980s
- ❑ Largest centre for software exports in India – 40% of India's total exports
- ❑ 140 TNC development centers, 750 large and small domestic IT firms
- ❑ Movement from on-site to offshore projects, increasing customized services
- ❑ A degree of upgrading from labor-intensive (*coding, testing and maintenance*) to skill-intensive & high value-adding (*design and requirement analyses*)



The Next Wave of Globalization in India

- ❑ India as a center of research, design and innovation
- ❑ Pharmaceutical
 - ❑ Drug discovery, specialty pharmaceuticals, biologics, high value, bulk manufacturing, advanced intermediate manufacturing
- ❑ Aerospace
 - ❑ In-flight entertainment, airline seat design, collision control systems, navigation control systems, fuel inverting controls, first-class cabin design
- ❑ Consumer Appliances/Semiconductors, etc.
 - ❑ Design of next generation washing machines, dryers, refrigerators, digital TV, cell phones – base stations, automobiles, tractors, locomotive motors

5. Challenges and Opportunities

Where we are today

- ▶ New actors (global buyers, global suppliers, and global intermediaries)
- ▶ Rapid rise of new production centers (Taiwan, Korea, China, Mexico, India)
- ▶ Higher capabilities required to enter chains (health and safety, speed, quality, responsiveness, IT)
- ▶ Widening gap between connected and disconnected in developing world
- ▶ Growing global consolidation (supply chains, countries)

Challenges and Opportunities

- ▶ Commodity export boom (L. America, Africa)
- ▶ Find GVC niches (specialization, high value products, local sourcing, fresh produce)
- ▶ Take advantage of regional integration
- ▶ Differentiated global services (tourism, finance, IT)
- ▶ Invest in R&D
- ▶ Go “green” with environmentally friendly goods and services (corporate sustainability)

***Thank you
for your attention!***

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