

Global Consolidation: China, India and the Apparel Industry

Lecture #2

Gary Gereffi

Duke University
ggere@soc.duke.edu

International Labor Organization (ILO)
7th Nobel Peace Prize Social Policy Lectures
Kingston, Jamaica, December 5, 6 & 7, 2005

Global Consolidation: China, India and the Apparel Industry

Gary Gereffi
Duke University

To examine the employment implications of the trends toward consolidation in the global economy, we will examine the cases of China and India, as well as the shift from dispersion to impending consolidation in the global apparel industry.

1. China: the “Workshop of the World”

China stands at the center of the story of offshore production because it has advanced so rapidly as the supplier of choice in virtually all labor-intensive global value chains. Whereas China had concentrated in a limited number of industries in the 1990s, “by 2001 an increasing percentage of the jobs shifting to China were in higher-end manufacturing of goods such as bicycles, furniture, motors, compressors, generators, fiber optics, injection molding, and computer components” (Bronfenbrenner and Luce, 2004: 4). Furthermore, China had attained a virtually insurmountable cost advantage in most consumer goods industries.¹ China’s appeal is not merely to low-cost producers; it supplies all of the leading brand manufacturers that target the United States as well as global markets – Mattel Barbie Dolls, Levi jeans, Samsonite luggage, Rubbermaid kitchenware, Remington electric shavers, Carrier air conditions, and so on.

China’s rise to global prominence marks a new phase of global consolidation. However, a global value chain perspective adds several important dimensions to the China story. First, China’s emergence, like that of the other East Asian “miracle economies,” is inextricably intertwined with the role of global buyers; it is demand-pull more than supply-push. A telling example is China’s relationship with Wal-Mart, the world’s largest retailer with sales of more than \$245

¹ In furniture, for example, the vice president of marketing for a leading U.S. manufacturer headquartered in North Carolina testified before the U.S. Congress that a Chinese bedroom set comparable to his company’s \$22,750 offering was priced at \$7,070, a savings of 69% to the consumer (Shenkar, 2004: 106).

billion in 2003. More than 80% of the 6,000 factories in Wal-Mart's worldwide network of suppliers are in China. In 2003, Wal-Mart spent \$15 billion on Chinese-made products; this total accounted for nearly one-eighth of all Chinese exports to the United States. If Wal-Mart were a separate nation, it would have ranked as China's fifth-largest export market, ahead of Germany and Britain (Goodman and Pan, 2004).

A second feature of the China story is the role of global intermediaries. About two-thirds of China's exports are shipped from factories wholly or jointly owned by foreign investors, mainly from Hong Kong, Taiwan, and Japan. It is reported, for example, that foreign-invested enterprises account for more than 85% of China's high-technology exports, and for three-quarters of its sales of technology-related products abroad (Shenkar, 2005: 68). This is in striking contrast to India, where domestically owned firms are key to exports and offshore outsourcing in the information technology (IT) sector (Huang and Khanna, 2003).²

Third, China's reliance on global buyers and its "survival of the cheapest" approach has created a production glut that places enormous pressures on wages, working conditions, and profit margins at the factory level. A typical export factory in southern China pays a salary of \$40 per month, which is 40% less than the local minimum wage. Workers put in 18-hour days with poor workplace conditions, minimal training, and continual pressure to boost output (Wonacott, 2003).

Finally, China confronts a structural employment problem in consolidating its position atop the global manufacturing pyramid. In 2002, China's labor force of nearly 750 million people accounted for over one-quarter of the world's total. It is estimated that China will have to create around 10 to 30 million jobs per year during the coming decade to absorb a multitude of laid off workers and rural emigrants as it shifts from an agricultural to an industrial economy, and soon to a knowledge- and service-based economy (Zeng, 2005). Despite an effective unemployment

² The influence of global intermediaries extends well beyond China, however. In athletic footwear, for example, South Korean and Taiwanese manufacturers typically run the factories in Vietnam, Indonesia, Thailand, and China that supply shoes to Nike, Reebok, Adidas and all the other major brands. East Asian intermediaries play a similar role for export-oriented apparel suppliers in sub-Saharan Africa and the Caribbean Basin.

rate estimated to be at least 10%, which has been a major cause of urban poverty and worsening inequality, China is facing significant labor shortages, especially in the light manufacturing industries that have accounted for much of the country's export growth.

Table 1 about here

Table 1 shows that between 1994 and 2000, the number of manufacturing workers in China declined from 54.3 million to 32.4 million, in large part as a result of the state sector shedding jobs in large numbers. The workforce in light, labor-intensive industries was nearly halved from 18 million workers to just under 10 million workers (30.7% of manufacturing workers in 2000), while the much touted knowledge-intensive industries (electronics and telecommunications) do not generate many new jobs (just 8.7% of the manufacturing labor force in 2000). In response to this situation, China is adopting a range of policies, including encouraging private sector growth, expanding the service sector, reforming state-owned enterprises, and establishing mass retraining programs.

2. India: The Offshoring of Information Technology Services

Offshore outsourcing in India's IT sector is considered by many as a globalization success story. In 2002 India's IT service providers were the dominant offshore vendors, delivering an estimated \$10 billion in IT services (Karamouzis, 2003). India employs about 650,000 professionals in IT services, and this figure is expected to more than triple in the next five years³ (Roach, 2003: 6). The significance of India as an offshore site for IT services is perhaps best represented by General Electric's "70-70-70" outsourcing rule of thumb: General Electric has publicly stated its goals of outsourcing 70% of GE's work, moving 70% of this outsourcing offshore, and locating 70% of these IT jobs in India. Thus, about one-third of GE's IT work will be done in India.

While General Electric is a global pacesetter in India, lots of other big companies are moving in the same direction. The top five U.S. employers in India are: General Electric with 17,800

³ Of course, one or two million jobs, even if highly skilled and well paid, could appear insignificant in terms of India's total population of 1.2 billion people.

workers, which is about 5.6% of its global workforce of 315,000 people; Hewlett-Packard, 11,000 employees in India; IBM, 6,000 employees; American Express, 4,000 employees; and Dell, 3,800 employees (Pink, 2004: 13). While U.S. firms have created as many as 100,000 IT jobs in India, a strong nucleus of domestic IT service providers there have emerged to handle this demand, including: 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); and companies like Satyam Computer Services and HCL Technologies, with close to 10,000 employees each and \$460 million and over \$330 million in revenues, respectively (Karamouzis, 2003).⁴

From a global value chain perspective, many of the software and other IT jobs in India involve routine work on mainframe computers using relatively standardized or outmoded technology. However, the lure of the Indian subcontinent makes eminent sense for U.S. companies, who see this as a win-win situation in economic terms. In the United States, gross domestic product per capita in 2003 was just over \$35,000 and the typical salary for a programmer is \$70,000; in India, GDP per capita is \$480, and a typical programmer earns \$8,000 per year (Pink 2004: 13). Thus, an Indian programmer makes only one-ninth his or her U.S. counterpart, but in the domestic setting the Indian programmer is earning more than 16 times the minimum wage, while the average U.S. programmer earns only twice the minimum wage. Furthermore, India is already beginning to offer higher-level services, such as systems architecture, design, and technology strategy services (Chadwick, 2003).

While IT outsourcing is viewed in a positive light by many in India, it has become a highly politicized and emotional issue in the United States. According to Vivek Paul, vice-chairman of Wipro Technologies, “If three million jobs have been lost in the United States, and 100,000 created in India, every one of those three million thinks, ‘That’s my job’” (Waldman, 2004). Unemployment in India is at its highest level in decades: officially pegged at 7%, many economists believe the actual level is over 20%. According to commentators in both the United

⁴ By March 2004, Infosys Technologies and Wipro reportedly both topped \$1 billion in revenues for the first time (Rai 2004).

States and India, IT outsourcing reveals not only the asymmetries of globalization, but the incredibly high stakes for developing as well as developed countries.

3. Trade Rules and Global Consolidation in Apparel

International trade rules have an enormous influence on the creation and distribution of jobs in the global economy. One of the best examples is the Multifiber Arrangement (MFA) in the apparel value chain, which since the early 1970s until 1995 opened up the markets of the United States, Canada, and Western Europe to exports by a wide range of developing economies by placing quantitative limits (or quotas) on imports for a variety of textile and apparel products. As a result of these quotas, the North American and European textile and apparel markets received imports from 50 to 60 different developing economies (Gereffi and Memodovic, 2003).

The international spread of the apparel value chain has been well documented in various sources (Gereffi, 1999; UNCTAD, 2005). As seen in Table 2, the leading apparel exporters in 1990 were concentrated in East Asia: China, Hong Kong, South Korea, and Taiwan. During the early 1990s, Thailand, Indonesia, Turkey, and India grew rapidly as apparel exporters, and after the passage of the North American Free Trade Agreement in 1994, Mexico became a star performer because of its rapid expansion of exports to the U.S. market. The biggest exporters of apparel tend to be relatively diversified economies, where apparel as a share of total national exports ranges from around 10% (China, Hong Kong, India) to less than 5% (Mexico, South Korea, Taiwan). However, the reliance on apparel exports is very high in some of the least developed economies, like Bangladesh (77%), Sri Lanka (52%), and about one-third of total exports in Tunisia and Morocco.⁵

Table 2 about here

⁵ There is a strong, but far from perfect, correlation between high levels of apparel exports and low wages. The reason for the disparity is that some countries with relatively high wages (Hong Kong, South Korea, and Taiwan) play a major role because they still have access to large apparel quotas primarily issued by the United States and Western Europe.

However, in 1995 the World Trade Organization (WTO) issued an Agreement on Textiles and Clothing that mandated a 10-year phase out period for all MFA quotas.⁶ There is great consternation among developing economies that the de-regulation of apparel will contribute mightily to global consolidation in one of the world's most diversified export industries by allowing China in particular, along with other major suppliers like India, Indonesia, Pakistan, and Vietnam, to dominate U.S. and European apparel markets. In the words of a definitive study by the U.S. International Trade Commission on the impact of quota elimination in 2005: "China is expected to become the 'supplier of choice' for most U.S. importers (the large apparel companies and retailers) because of its ability to make almost any type of textile and apparel product at any quality level at a competitive price" (USITC, 2004: xi).

The removal of apparel quotas is of grave concern to apparel and textile manufacturers in advanced industrial and developing countries alike. The main reason for concern in both cases is China. Estimates have been made of the impact of MFA quota elimination on the main sources of U.S. apparel imports. Before quota elimination (in 2003), China had a 16% share of the U.S. apparel market, Mexico 10%, the rest of Americas 16%, Hong Kong 9%, and India 4%. After quota removal (2008), China's U.S. apparel market share is expected to jump to 50%, India to 15%, Mexico to 3%, and the rest of the Americas to 5% (Nordås, 2004: 30).

Current U.S. trade data from 2000 through July 2005 show that these projections are not far off the mark. China increased its share of U.S. apparel imports from 18.8% in 2004 to 29.6% in just the first six months of 2005, while Mexico's market share slipped from its top spot with 13.6% of the total in 2000, down to 9.6% in July 2005 (see Table 3).

Table 3 about here

⁶ Under specified cases of market disruption, the U.S. market access agreement with China regarding its entry into the World Trade Organization allows the United States to apply selective safeguards (or quotas) on imports of Chinese textiles and apparel for four additional years beyond the termination of textile and apparel quotas for WTO members – that is, from Jan. 1, 2005 through Dec. 31, 2008. However, the agreement also states that no safeguards established during this four-year period will remain in effect beyond one year, without reapplication, unless both countries agree.

In its report on the impact of quota elimination on developing countries, the USITC (2004) identified those countries whose apparel exports to the United States are highly concentrated in products most vulnerable to tight quota categories (i.e., knit shirts, pants, underwear, and pajamas). These “highly concentrated producers” include: Lesotho (95%), Jamaica (90%), Honduras (86%), Haiti (80%), El Salvador (80%), Kenya (77%), and Nicaragua (76%), with the percentages referring to the share of their total U.S. apparel exports concentrated in the product categories most affected by quotas. Now that quotas have been removed in 2005, these countries—among the poorest in the world—are the most vulnerable to precipitous job declines.

The apparel case shows another side of the competition for jobs in global value chains. Previously we have emphasized how offshore production shifts to large developing countries, like China and India, affects labor markets in the developed economies. In the apparel value chain, however, the most serious impact of China’s and India’s gains won’t be felt in the United States or Europe, but in the developing economies that have relied on low wages and special access to developed country markets to sustain jobs and foreign exchange in what for many is their main export industry. Between 70% and 80% of workers in the apparel sector today are women in the poorest of countries (Nordås, 2004: 30). Without their jobs in the apparel industry, they are unlikely to find work in the formal sector of their economies. However, a return to protection is not likely to be the best option for improving the role of developing economies in global value chains. In the concluding section, we look at several sources of change in the global economy.

References

Bronfenbrenner, Kate, and Stephanie Luce. 2004. "The Changing Nature of Corporate Global Restructuring: The Impact of Production Shifts on Jobs in the U.S., China, and Around the Globe." Submitted to the U.S.-China Economic and Security Review Commission, October 14.

Chadwick, William, Jr. 2003. "Global Trends in the Information Technology Outsourcing Services Market." *Industry Trade and Technology Review*, USITC Office of Industries, November: 1-9.

Gereffi, Gary. 1999. "International Trade and Industrial Upgrading in the Apparel Commodity Chain." *Journal of International Economics* 48, 1: 37-70.

Gereffi, Gary, and Olga Memodovic. 2003. "The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries?" Vienna, UNIDO: Strategic Research and Economy Branch. <http://www.soc.duke.edu/~ggere/web/UNIDO-Global%20Apparel_2003.pdf>

Goodman, Peter S., and Philip P. Pan. 2004. "Wal-Mart and China Leading the Race to the Bottom." *Washington Post*, February 8.

Huang, Yasheng, and Tarun Khanna. 2003. "Can India Overtake China?" *Foreign Policy* (July-August): 74-81.

Karamouzis, Frances. 2003. "A Look at India for Offshore Sourcing Options." Gartner Research, AV-18-8057, July 29.

Nordås, Hildegunn Kyvik. 2004. "The Global Textile and Clothing Industry post the Agreement on Textiles and Clothing." Geneva: World Trade Organization.

Pink, Daniel H. 2004. "The New Face of the Silicon Age: How India Became the Capital of the Computing Revolution." *Wired Magazine*, Issue 12.02, February, pp. 1-14.

Rai, Saritha. 2004. "Indian Services Giant Hits \$1 Billion in Annual Sales." *New York Times*, April 14.

Roach, Stephen. 2003. "Outsourcing, Protectionism, and the Global Labor Arbitrage." Morgan Stanley, Special Economic Study, November 11.

Shenkar, Oded. 2005. *The Chinese Century*. Upper Saddle River, NJ: Wharton School Publishing.

UNCTAD (United Nations Conference on Trade and Development). 2005. *TNCs and the Removal of Textiles and Clothing Quotas*. New York and Geneva: UNCTAD.

USITC (United States International Trade Commission). 2004. *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market*. USITC Publication 3671, January.

Waldman, Amy. 2004. "India Takes Economic Spotlight, and Critics Are Unkind." nytimes.com, March 7.

Wonacott, Peter. 2003. "Behind China's Export Boom, Heated Battle Among Factories." *Wall Street Journal*, November 13.

Zeng, Douglas Zhihua. 2005. "China's Employment Challenges and Strategies after the WTO Accession." World Bank, Policy Research Working Paper 3522, February.

Table 1

Number and Share of Workers in China's Manufacturing Industries (1994-2000)*

	1994		1996		1998		2000	
Category	Number of workers (1,000)	Share (percent)	Number of workers (1,000)	Share (percent)	Number of workers (1,000)	Share (percent)	Number of workers (1,000)	Share (percent)
Manufacturing industry	54,320	100	52,930	100	37,690	100	32,400	100
Light industry	18,060	33.3	17,280	32.7	11,650	30.9	9,950	30.7
Chemical products	7,960	14.7	8,140	15.4	6,220	16.5	5,350	16.5
Metal products	10,440	19.2	10,260	19.4	7,430	19.7	6,380	19.7
Machinery	10,810	19.9	10,560	20.0	7,510	19.9	6,290	19.4
Electronics and telecommunications	3,960	7.3	3,990	7.5	3,040	8.1	2,830	8.7
Miscellaneous	3,610	6.7	2,110	4.0	1,390	3.7	1,220	3.8

* Includes only state-owned industrial enterprises and non-state enterprises with annual sales greater than 5 million yuan.

Note: Industries were grouped according to six categories: light industry, chemical products, metal products, machinery and transport equipment, electronic and telecommunications equipment, and miscellaneous.

Source: National Bureau of Statistics: *China Statistical Yearbook 2002*. Cited in Douglas Zhihua Zeng, "China's Employment Challenges and Strategies after the WTO Accession," World Bank Policy Research Working Paper 3522, February 2005, p. 6.

Table 2

World's Top non-EU Apparel Exporters, 1990-2004

Region/Country	Apparel exports to the world market (US\$ billions)				Apparel as percent of total national exports		Hourly apparel labor costs (wages & fringe benefits) US\$, 2002 ^c
	1990	1995	2000*	2004	1995	2004	
Northeast Asia							
China	10.2*	24.0	36.1	61.9	16.2%	10.4%	0.68 / 0.88 ^d
Hong Kong	15.7*	21.3	24.6	25.1	12.2%	9.5%	5.10 ^f
South Korea	7.9	5.0	5.0	3.4	4.0%	1.3%	3.77 ^g
Taiwan*	4.2*	3.5*	3.5*	na	2.8%*	na	4.44 ^f
Southeast Asia							
Indonesia	1.6	3.4	4.7	4.5	7.4%	6.9%	0.27
Thailand	2.8	5.0	3.8	3.6 ^a	8.9%	4.5% ^a	0.91
Viet Nam	0.1*	0.9*	1.8	2.6 ^b	14.9%*	15.8% ^b	0.22 ^e
Philippines	0.7*	1.1	2.5	2.3 ^a	6.1%	6.2% ^a	0.76
South Asia							
India	2.5	4.1	6.2	6.6 ^a	13.0%	10.5% ^a	0.38
Bangladesh	0.6	2.0	3.9	4.4	57.8%	76.6%	0.39
Pakistan	1.0	1.6	2.1	3.0	19.8%	22.6%	0.41
Sri Lanka	0.6	1.1*	2.6*	2.5 ^a	47.8%*	51.6% ^a	0.48
Central and Eastern Europe							
Turkey	3.3	6.1	6.5	11.2	28.3%	17.7%	2.52 ^f
Romania	0.4	1.4	2.3	4.7	17.2%	20.1%	1.04 ^e
Africa							
Tunisia	1.1	2.3	2.2	3.3	42.4%	34.0%	0.88 ^g
Morocco	0.7*	0.8	2.4	3.0	16.9%	31.0%	1.33 ^g
North America							
Mexico	0.0	2.7	8.6	7.3 ^a	3.4%	4.4% ^a	2.45
World Totals*	110.6*	168.7*	215.3*	na	3.2%*	na	

Source: UN Comtrade. Apparel is defined as SITC 84.

*World Trade Analyzer (WTA), based on United Nations trade data. Apparel is defined as SITC 84.

NA = Not Available

^a 2003 UN Comtrade data^b 2002 UN Comtrade data^c US International Trade Commission, Textiles and Apparel, USITC Publication 3671, January 2004, p. 3-7.^d Reflects labor compensation for factories in China producing moderate to better apparel.^e 1998^f 2000^g 2001

Table 3

Top 7 Apparel Exporters to the United States, 2000-2005*

	2000		2001		2002		2003		2004		2005 Jan-July	
	Export Value (US\$ mill)	% of Total	Export Value (US\$ mill)	% of Total	Export Value (US\$ mill)	% of Total	Export Value (US\$ mill)	% of Total	Export Value (US\$ mill)	% of Total	Export Value (US\$ mill)	% of Total
China	8,483	13.2%	8,866	13.9%	9,565	15.0%	11,381	16.7%	13,607	18.8%	11,660	29.6%
Mexico	8,731	13.6%	8,128	12.7%	7,733	12.1%	7,199	10.6%	6,945	9.6%	3,776	9.6%
Hong Kong	4,587	7.1%	4,309	6.7%	3,960	6.2%	3,785	5.6%	3,936	5.4%	1,476	3.7%
Honduras	2,417	3.8%	2,439	3.8%	2,504	3.9%	2,568	3.8%	2,744	3.8%	1,568	4.0%
Vietnam	47	0.1%	48	0.1%	900	1.4%	2,380	3.5%	2,571	3.6%	1,446	3.7%
Indonesia	2,191	3.4%	2,356	3.7%	2,156	3.4%	2,236	3.3%	2,486	3.4%	1,661	4.2%
India	2,002	3.1%	1,934	3.0%	2,064	3.2%	2,156	3.2%	2,378	3.3%	1,866	4.7%
Total	64,296		63,862		63,810		68,162		72,311		39,424	

Source: Compiled from official statistics of the U.S. Department of Commerce, U.S. General Imports, customs value. Accessed Sept. 20, 2005.

* Through July, 2005.