Chapter 7
Gary Gerth and Mei-Lin Pan
"The Globalization of Taiwan's Garment Industry"

Global Production

The Apparel Industry in the Pacific Rim

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Chapter 7

The Globalization of Taiwan’s Garment Industry

Gary Gereffi and Mei-Lin Pan

Since embarking on the path of export-oriented industrialization in the mid-1960s, Taiwan has been firmly entrenched as one of the leading textile and apparel exporters in the Pacific Rim. Currently, Taiwan ranks behind Hong Kong and the People’s Republic of China and before South Korea among the “Big Four” Asian exporters; the Big Four accounted for more than half of U.S. apparel imports from the Pacific Rim by volume and nearly three-fifths by value in 1991 (see Chapter 2). Taiwan’s role in the global garment industry is changing dramatically, however. Like Japan, Korea, and Hong Kong, Taiwan has confronted rising wage rates, labor shortages, and sharp currency appreciations that have diminished its international competitiveness as an exporter of low-wage, labor-intensive consumer goods. Taiwan’s aggressive move toward a more diversified and industrially upgraded export profile has had a profound impact on the thousands of workers and myriad firms that make up the island’s declining apparel sector.

Taiwan is part of a new international division of labor in the Pacific Rim: Taiwan’s garment shipments to developed countries are being replaced by its exports of textile inputs to successive waves of new Third World apparel producers, especially China. These trade patterns are linked to the multifaceted role of foreign capital in Taiwan’s apparel industry. Although there has been some foreign direct investment in the garment industry in Taiwan, a far more important trend in recent years has been the rapid growth of outward investments by Taiwanese firms busily establishing production and export platforms in a multitude of Asian countries (as well as in various nations in the Caribbean Basin). These transnational “triangle manufacturing” networks are an essential feature of today’s global apparel industry. Taiwan’s erstwhile exporters are being transformed into intermediaries between foreign buyers and new producers in low-wage nations that have sufficient quotas to supply protected developed-country markets.

Overseas investments by Taiwan’s manufacturers are only half the story of foreign capital in the apparel industry. Foreign buyers provide the vital link between Taiwan’s highly efficient manufacturers and their ability to penetrate export markets. Taiwan’s retail buying offices spread the country’s triangle sourcing networks throughout the Pacific Rim. We found that China is surprisingly unimportant as a sourcing site for the apparel orders that come into Taiwan, because most retailers channel their China trade through their Hong Kong buying offices.

Globalization has had a significant impact on workers and industrial districts in Taiwan. As local production networks are dismantled because of the internationalization of Taiwan’s apparel industry, employment patterns and working conditions in the industry have changed. This trend has had major implications not only for the kinds of jobs that will be available in the future but also for Taiwan’s long-term development prospects.

The Growth and Shifting International Role of the Garment Industry in Taiwan

The expansion of the garment industry mirrors the evolution of economic development in Taiwan in the postwar era. Import-substitution industrialization (ISI) prepared the way for subsequent phases of export-oriented industrialization (EOI), in which exports evolved from simple, labor-intensive items to more sophisticated, high-quality consumer and intermediate goods (Gereffi and Wyman 1990). The industrial development of Taiwan’s garment industry, and the corresponding changes in its international trade position, can be categorized into four periods.
The U.S. market grew in importance during this period. In 1980, 61 percent (US$527 million) of Taiwan’s total apparel exports went to the U.S. market, a substantial increase from 47 percent in 1970 (Moon 1987, 111–12). Labor costs in Taiwan began to rise sharply in the 1980s, however. State legislation known as the Labor Standards Law, dealing with workers’ wages, health, and safety, was enacted in 1984, along with other policies to regulate business activities. To confront these changes, the garment industry extended its domestic subcontracting networks to sustain profits (Shieh 1990).

Expanding Overseas Investments, 1989–Present

The factors favoring Taiwan’s garment industry have deteriorated steadily in recent years. Taiwan’s exchange rate vis-à-vis the U.S. dollar plummeted from forty in 1983 to twenty-six in 1990. In the late 1980s the problem with quotas was not the limits placed on garment production, but rather the fact that total output in Taiwan fell short of the quota levels set in previous years (because the cost of apparel exported from Taiwan was becoming too high). Given the appreciation of the New Taiwan (NT) dollar, labor shortages, international protectionism, and competition from other developing countries, Taiwan’s garment industry faced three alternatives in this period (the first two of which are not mutually exclusive): internationalization, industrial upgrading, or exit from the industry (bankruptcy or disinvestment). Extensive outward investments by Taiwanese garment entrepreneurs spread from China and Southeast Asia to Caribbean Basin countries (Mexico, the Caribbean islands, and Central America). Because of its cheap labor and geographical proximity, investments in China were well under way (usually passing through Hong Kong as a financial intermediary) before Taiwanese political officials approved these capital transfers in 1989.

The decline in Taiwan’s garment sector is evident in production and trade data. In contrast to Taiwan’s light manufacturing production index—which increased by more than 50 percent during the first half of the 1980s and remained stable in the latter half of the decade—the textile index fell by nearly 10 percent from 1986 to 1990, while the wearing apparel production index plummeted by 25 percent (CEPD 1991, 90). This decline coincides with the sharp appreciation of the NT dollar after 1986.
Trade statistics are even more revealing. Textile and clothing exports, as a share of Taiwan's total merchandise exports, fell from 25 percent in 1965 to 15 percent in 1990. The other members of Asia's Big Four experienced relatively smaller declines in the relative importance of their textile and clothing exports. These trends do not necessarily reflect the peak years of textile and apparel exports in these countries, because they became major participants in the global industry at different times. The apogee for textile and apparel exports in Hong Kong was during the 1960s; for Korea and Taiwan it occurred in the mid-1970s; and in China the upswing has extended from the late 1980s into the 1990s. The new role of Taiwan's textile and apparel industry in the Pacific Rim is highlighted by the changing composition of its exports since 1975 (see Table 7.1). From 1975 to 1986 Taiwan's exports of apparel and accessories represented more than 55 percent of overall textile product exports, yarn and fabrics comprised slightly more than 40 percent, and textile fibers made up 1 to 4 percent of the total. In the next six years, however, the stable export profile of the preceding twelve years was radically transformed. By 1992 Taiwan's apparel and accessory exports had fallen to one-third the total for textile products, while yarn and fabrics had soared to 61 percent and textile fiber exports stood at 6 percent. In absolute terms, Taiwan's apparel and accessory exports reached their peak value of US$5 billion in 1987; this total fell to US$4.3 billion by 1991. Intermediate exports of yarn and fabrics pulled nearly even with overseas sales of finished apparel by 1988, and since that year textile intermediates have surged well ahead of finished apparel to lead Taiwan's exports of textile products.

In the international division of labor of the Pacific Rim's textile and apparel complex, Taiwan thus has shifted from exporting finished apparel for developed-country markets (mainly the United States) to supplying intermediate textile products to China and, to a much smaller but increasing degree, emerging Southeast Asian garment exporters. In 1991 63 percent of Taiwan's declining apparel exports (totaling US$2.2 billion) and 44 percent of its accessories (US$347 million) were still destined for the United States. In that same year, however, Hong Kong received the bulk of Taiwan's growing exports of fabrics (46%, or US$2.4 billion), yarns (43%, or US$756 million), and fibers (36%, or US$235 million) (TTF 1992). Because Hong Kong is the primary trade conduit to China, Taiwan was indirectly supplying China's booming garment-export industry with these textile inputs. This impression is confirmed by Hong Kong trade figures, which show that reexports of textiles shipped from Taiwan to China via Hong Kong increased more than sixfold, from US$415 million in 1986 to US$2.6 billion in 1991 (TTF 1992, 64). Taiwan's new role as an intermediate goods exporter is clearly established by the fact that in 1991 Taiwan's US$2.6 billion of textile reexports to China through Hong Kong exceeded the country's US$2.2 billion of finished apparel exports to the United States.

**Table 7.1**  
Composition of Taiwan's Textile and Apparel Exports, 1975–1992

<table>
<thead>
<tr>
<th>Year</th>
<th>Textile Fibers</th>
<th>Yarn and Fabrics</th>
<th>Apparel and Accessories</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% US$ millions</td>
<td>% US$ millions</td>
<td>% US$ millions</td>
<td>% US$ millions</td>
</tr>
<tr>
<td>1975</td>
<td>1.1</td>
<td>17</td>
<td>41.7</td>
<td>649</td>
</tr>
<tr>
<td>1980</td>
<td>2.5</td>
<td>109</td>
<td>41.4</td>
<td>1,791</td>
</tr>
<tr>
<td>1985</td>
<td>3.7</td>
<td>232</td>
<td>40.2</td>
<td>2,516</td>
</tr>
<tr>
<td>1986</td>
<td>3.6</td>
<td>278</td>
<td>40.6</td>
<td>3,102</td>
</tr>
<tr>
<td>1987</td>
<td>3.5</td>
<td>299</td>
<td>43.8</td>
<td>4,452</td>
</tr>
<tr>
<td>1988</td>
<td>4.0</td>
<td>448</td>
<td>47.4</td>
<td>4,638</td>
</tr>
<tr>
<td>1989</td>
<td>5.9</td>
<td>615</td>
<td>50.5</td>
<td>5,216</td>
</tr>
<tr>
<td>1990</td>
<td>5.9</td>
<td>603</td>
<td>57.5</td>
<td>5,612</td>
</tr>
<tr>
<td>1991</td>
<td>5.5</td>
<td>654</td>
<td>58.6</td>
<td>7,030</td>
</tr>
<tr>
<td>1992*</td>
<td>5.9</td>
<td>470</td>
<td>81.2</td>
<td>4,878</td>
</tr>
</tbody>
</table>

Source: Taiwan Textile Federation, *Statistics on Taiwan Textile and Apparel Industries*, various years.

*January through August.

Recent Trends in Foreign Direct Investment

Foreign capital in the garment industry in Taiwan comes from both overseas Chinese and foreign national investors. According to the Investment Commission of Taiwan's Ministry of Economic Affairs,
there were 208 cases of inward foreign investment in the garment and footwear industries from 1952 to 1992, totaling US$82.3 million (MOEA 1992, 5). Overseas Chinese investors, almost exclusively from Hong Kong, comprise 62 percent of the cases but only 35 percent of the value of foreign capital in these industries. Japan accounts for the majority of the foreign national investments, by both volume and value. Although foreign direct investment in Taiwan’s apparel and footwear industries grew by US$25.7 million between 1968 and 1992—virtually all of which came from foreign nationals—it remains an insignificant portion (far less than 1%) of all foreign direct investment coming into the economy. Furthermore, although 90 percent of the foreign-owned garment firms in Taiwan were set up to supply overseas markets, their export total accounted for only 4 to 7 percent of garment exports from Taiwan in the 1980s (MOEA 1990, 12, 60).

In terms of foreign capital, the most significant trend for Taiwan’s garment industry has been the rapid expansion of outward flows of foreign direct investment in recent years. Overseas investment in low-wage countries is one of the main alternatives for Taiwanese apparel companies in dealing with high labor costs, an appreciating currency, quota restrictions, and shrinking profits. Overseas investment by Taiwanese capital is not a new story, although before the late 1980s most of these investments were disguised to escape Taiwan’s strict controls on outflows of foreign exchange.

Asia has been the most popular location for Taiwan’s manufacturers. According to official data, Hong Kong, Singapore, and Southeast Asian nations such as the Philippines, Indonesia, Thailand, and Malaysia accounted for more than 80 percent of the cases of foreign direct investment by Taiwanese garment and footwear firms from 1959 to 1991. Central American and African countries made up the remaining investments (MOEA 1992). Besides ample cheap labor to reduce production costs, these Asian countries also possessed the garment quotas needed to export to the United States and other developed countries adhering to the protectionist policies of the MFA.

China has become the top priority for Taiwanese overseas investors since 1988. The garment and footwear industries ranked third in popularity for Taiwanese investors in mainland China (behind plastic and rubber products and electronic and electrical appliances). In 1991 the number of cases and the value of Taiwan’s outward investments in China exceeded the total amount of Taiwanese foreign direct investment in the rest of the world combined; in the first quarter of 1992 Taiwan’s investments in China were twice the total for all other countries (MOEA 1992, 57–62). Abundant cheap labor is one of the main reasons for locating in China; the average wage rate there was only one-tenth that of Taiwan (Huang 1990, 21). When other production costs, such as raw materials, machinery, transportation charges, and taxes, are considered, a garment made in China costs about one-fourth as much as an equivalent item made in Taiwan. Net profits for Taiwanese garment manufacturers that export from China are around 15 percent, a rate much higher than what typically can be obtained by similar firms in Taiwan. If political relations between Taiwan and the mainland remain cordial, the importance of China for Taiwan’s garment industry seems destined to be even greater in the future.

The Taiwanese firms in China retain strong links with Taiwan. As we already have seen in the discussion of trade flows, Taiwan’s exports of textile products (fabrics, yarns, and fibers) to China via Hong Kong have skyrocketed in recent years. Many of Taiwan’s exports to China are being used by Taiwanese firms located on the mainland. A survey of Taiwanese investments in China commissioned by Taiwan’s Ministry of Economic Affairs found that 70 percent of the raw materials and 66 percent of the machinery used by Taiwanese garment companies located in China were imported by third parties from Taiwan. Furthermore, Taiwanese investors in the mainland are given special concessions by the Chinese government not offered to other foreign investors. Enterprises from Taiwan can be 100 percent Taiwanese-owned, 50 percent of their output can be sold in China’s domestic market, and the firms are granted a discount for the usage of land in setting up factories (Huang 1990, 14–15; Liou and Chen 1992, 140). The privilege of selling one-half of their output to China’s giant domestic market is especially important, because it increases the likelihood that Taiwanese entrepreneurs will make profits. Thus, China has become a critical offshore production base for Taiwan’s textile exporters as well as for the garment entrepreneurs that have transferred many of their factories to the other side of the Taiwan Straits.
Overseas Buying Offices and Triangle Sourcing Networks

Although outward investments by Taiwanese manufacturers and the emergence of China as one of the world’s biggest export platforms are central features in the globalization of the garment industry, the key role of commercial capital in the Pacific Rim has been relatively ignored. Today’s integrated system of global production and trade initially led to a focus on the increased importance of international subcontracting in the world economy. As traditionally defined, international subcontracting is “the strategy whereby transnational corporations assign the most labor-intensive phases of production of a shirt, a car, or a semiconductor to countries where the labor costs are lowest” (Gereffi 1993, 69). This conception of a “new international division of labor,” however, is to a large extent already outdated in East Asia (Pröbel, Heinrichs, and Kreye 1980). It mainly applied to the early stage of EOI, in which there was an emphasis on low-wage, assembly-oriented production in foreign-owned factories located in specially designated export-processing zones.

By contrast, one of the most distinctive traits of contemporary East Asian EOI is that local private firms (not transnational corporations) are the main exporters of finished consumer goods. The Asian factories that make these products are involved in contract-manufacturing relationships with the foreign buyers who place the orders. In this form of “specification contracting,” local firms carry out production according to complete instructions issued by the buyers and branded companies that design the goods; the output is then distributed and marketed abroad by trading companies, brand-name merchandisers, large retailers, or their agents. This type of production system, which has been called a “buyer-driven global commodity chain,” is common in a wide range of labor-intensive, consumer-goods industries such as garments, footwear, toys, and consumer electronics (Gereffi 1994). Whereas domestic firms are in charge of the decentralized manufacturing stages, foreign capital tends to control the more profitable export and marketing networks.

The garment industry is an ideal case for studying the dynamics of East Asian EOI and buyer-driven commodity chains. The fact that the textile and apparel industries are the first step in the industrialization process of most nations, coupled with the prevalence of developed-country protectionism in this sector, has led to the unparalleled diversity of garment exporters in the Third World. In the mid-1980s clothing accounted for more than one-fifth of all Third World manufactured exports, with East Asian economies dominating the field. Together East Asia’s Big Four accounted for nearly 75 percent of all clothing imports by value to the United States in 1980 and 60 percent in 1998, compared with a total share for Latin America (excluding Central America and the Caribbean) of less than 10 percent in both years (Gereffi 1993, 75). Why have East Asian nations been so much more successful than other garment producers in penetrating the world’s largest market, the United States? The answer rests in large part on the effectiveness with which East Asian exporters have mastered the art of “specification contracting” by meeting (and anticipating) the needs of U.S. buyers.

Our analysis of this process in Taiwan focuses on the main companies that coordinate buyer-driven commodity chains: large U.S. retailers. In the early 1960s U.S. retailers bought almost all their merchandise from domestic manufacturers. With the growing availability of low-cost apparel from Third World producers, however, the ratio of imported to domestically made garments in the United States began to rise. Although the figures vary by product, the general trend is the same: from less than 10 percent of U.S. consumption in 1965, the share of imported apparel rose to 25 percent in 1975, 30 percent in 1980, more than 40 percent by 1985, and 50 percent by 1991. Given the growth of low-priced and increasingly high-quality garment imports, most of the larger U.S. retailers began to develop global sourcing strategies, especially for the fashion-oriented segment of the apparel industry.

Overseas buying offices were established by major U.S. retailers to purchase a wide assortment of products, typically grouped into “soft goods” (such as garments and shoes) and “hard goods” (such as furniture, lighting fixtures, appliances, kitchenware, and toys). Before the existence of direct buying offices overseas, importers were the key intermediaries between U.S. retailers and foreign factories. Sears, Montgomery Ward, and Macy’s were the first American companies to establish buying offices in Hong Kong in the 1960s, mainly for hard goods. The really big apparel orders came when Kmart and J. C. Penney set up their Hong Kong buying offices in 1970, quickly followed by additional branch offices in Taiwan, Korea, and Singapore. By the mid-1970s many other retailers, such as the May Depart-
ment Stores Company, Associated Merchandising Corporation (AMC), and Woolworth, had jumped on the direct-buying bandwagon in the Far East (Gereffi 1994).

Table 7.2 lists the top ten retail buying offices in Taiwan in 1992. Kmart and Wal-Mart, the two biggest U.S. retailers today, do the largest volume of business in Taiwan, with annual orders of US$500 million and US$300 million, respectively. J. C. Penney, AMC (a member-owned group buying office for forty different U.S. stores), Mast Industries (the major overseas sourcing arm of The Limited), Montgomery Ward, and Woolworth all purchase between US$100 and US$200 million in merchandise through their Taiwan offices, while Sears, May Department Stores, and Macy's do US$50 to US$75 million in business from Taiwan. Note that these amounts refer to the value of orders placed with the retail buying offices in Taiwan, not to the volume of shipments from Taiwan. Almost all the major retailers with buying offices in the newly industrialized countries (NICs) of East Asia (Taiwan, Hong Kong, Korea, and Singapore) split their orders into two categories: those they source domestically and those they source offshore. Offshore sourcing raises the issue of triangle manufacturing, a key feature of buyer-driven commodity chains in East Asia.

In triangle manufacturing, foreign buyers place their orders with Taiwanese or other East Asian NIC manufacturers from whom they have sourced in the past, who in turn shift some or all of the requested production to affiliated offshore factories in one or more low-wage countries (e.g., China, Indonesia, or Vietnam). These offshore factories can be wholly owned subsidiaries or joint-venture partners of the East Asian NIC manufacturers, or simply independent overseas contractors. The triangle is completed when the finished goods are shipped directly to the foreign buyer, under the import quotas issued to the exporting nation. Payments to the non-NIC garment factories flow through the NIC intermediary firm, usually via back-to-back letters of credit. Triangle manufacturing thus changes the status of the NIC manufacturer from an erstwhile production contractor for the U.S. buyer to a middleman in the buyer-driven commodity chain. The key asset possessed by East Asian NIC manufacturers is the trust they have established with foreign buyers, generated by numerous successful export transactions over the years (Gereffi 1994). These middlemen often have an ethnic or cultural
linkage with the offshore factory owners that actually make and export the goods in triangle manufacturing arrangements. For example, Hong Kong and Taiwanese firms frequently hook up with overseas Chinese businessmen in Southeast Asia, a fact that hinders their Korean competitors, who lack this social network.

Table 7.2 indicates the degree to which U.S. retailers source from Taiwanese or offshore factories. All the top ten retailers, with the exception of Kmart, source the majority of the orders placed with their Taiwan buying offices from local factories. The merchandise managers in Taiwan’s buying offices are responsible for monitoring the quality and delivery schedules of all orders filled in offshore as well as Taiwanese plants. That can be a monumental task, because the larger retailers work with two to four hundred different factories spread across Asia, Africa, and Latin America. Orders typically are placed three to six months in advance of the scheduled delivery date. Longer lead times are needed for countries that do not have the capability to manufacture their own piece goods (i.e., fabrics).

Because they do not want to be responsible for 100 percent of any supplier’s output, most retailers eschew “exclusive factories.” That is particularly relevant for seasonal goods such as apparel, for which orders may according to consumer buying cycles (e.g., lightweight clothes for spring and summer versus heavier outerwear sold only in the winter), because factories specialize in different types of merchandise. Nevertheless, retailers try to retain a relatively small number of core contractors that receive the bulk of their orders. One of the biggest retail buying offices in Taiwan, for example, deals directly with 250 factories, which in turn may use their own subcontractors. Of this total, there are thirty key vendors (i.e., factories) with an annual order volume of US$500,000 or more, while each of the top ten vendors supplies the retailer with over US$1 million worth of goods per year. All 250 companies are evaluated annually using a sophisticated vendor matrix that incorporates a variety of criteria, including on-time delivery and product quality (including styling). These vendor profiles inform decisions by the retailer’s merchandise manager as to who will receive future orders.

Taiwan’s top ten retail buying offices are about evenly split in terms of the predominance of hard goods versus soft goods in their sourcing activities (see Table 7.2). The discount chains and mass merchandisers (Kmart, Wal-Mart, Montgomery Ward, Woolworth, and Sears) give more emphasis to hard goods, while buying offices responsible for sourcing for department stores and apparel retailers (AMC, Mast Industries, May Department Stores, and Macy’s) focus on soft goods, which are exclusively apparel. J. C. Penney gives equal weight to both kinds of merchandise.

Table 7.3 focuses on Taiwan’s triangle sourcing networks just for apparel. There is a much wider range in the percentage of apparel orders that are sourced domestically versus offshore, compared with the combined figures for the hard-goods and soft-goods retailer sourcing channels found in Table 7.2. Whereas three retail buying offices (Kmart, Montgomery Ward, J. C. Penney) gave just 25 to 35 percent of their orders to local factories, six other retailers sourced 70 percent or more of their apparel orders in Taiwan. Mast Industries is exceptional because it places 100 percent of its apparel orders with

### Table 7.3
Taiwan’s Triangle Sourcing Networks in Apparel, 1992

<table>
<thead>
<tr>
<th>Retail Buying Office</th>
<th>Source of Apparel Shipments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Taiwan (%)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Kmart</td>
<td>35</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>50</td>
</tr>
<tr>
<td>J. C. Penney</td>
<td>25</td>
</tr>
<tr>
<td>Associated Merchanising Corporation (AMC)</td>
<td>70</td>
</tr>
<tr>
<td>Mast Industries</td>
<td>100</td>
</tr>
<tr>
<td>Montgomery Ward</td>
<td>33</td>
</tr>
<tr>
<td>Woolworth</td>
<td>75</td>
</tr>
<tr>
<td>Sears</td>
<td>92</td>
</tr>
<tr>
<td>May Department Stores</td>
<td>80</td>
</tr>
<tr>
<td>R. H. Macy &amp; Co.</td>
<td>85</td>
</tr>
</tbody>
</table>

<sup>a</sup> The Taiwan percentage refers to the proportion of each retail buying office’s orders made in and shipped from Taiwan.

<sup>b</sup> Offshore shipments refer to orders received and processed by Taiwan’s retail buying offices but transferred to Taiwanese-affiliated offshore factories for production and export under the quota of the designated countries. Offshore sources are listed in their relative order of importance to the buying offices in Taiwan.
Taiwanese factories and also is the largest apparel exporter from Taiwan. This case merits a more detailed analysis.

Mast Industries is the overseas sourcing arm for The Limited, the largest retailer of women's apparel in the world. Mast specializes in "speed sourcing." It is reputed to have the fastest turnaround time for garment sourcing in the business (thirty to forty days from order to shipment). According to Jack Welch, president of Mast Industries Far East Ltd., "Mast doesn't do anything different than anyone else, except that we keep the pressure on the factories to meet their deadlines and we ship by air" (personal interview, October 30, 1992). Whereas all the other leading retail buying offices do triangle manufacturing from Taiwan, Mast Industries in Taiwan does not utilize offshore production. "If we are going to make our shorter lead times," explained Beatriz Mi, vice-president of the Taiwan Branch of Mast Industries, "then we have to produce locally. We have no other choice" (personal interview, November 13, 1992). Although air shipping is four to five times more expensive than sea transport, air transport takes just two days instead of twenty. "The buyer decides whether he wants to ship by air versus by sea," said Welch. "Everything price-wise is done by percentages up." Taiwanese factories also are noted for their craftsmanship, an important selling point for fashion-oriented apparel companies. "Taiwan's garment industry has to do production involving very short lead times because it's higher quality work," said Lawrence Chu, sales manager of the Garment Division of the Tuntex Group, a large, vertically integrated textile and apparel firm in Taiwan. "This is the only way Taiwan can compete with Sri Lanka, Indonesia, and the Philippines" (personal interview, November 21, 1992).

The main countries where Taiwanese vendors have offshore sourcing networks are located in Southeast Asia (Indonesia, the Philippines, Singapore, Malaysia, and Thailand) and South Asia (Sri Lanka and Bangladesh) (Table 7.3). China is a major apparel supplier for only two of the top ten retail buying offices in Taiwan: Wal-Mart and Woolworth. That is in striking contrast to the importance of China both for Taiwanese garment entrepreneurs who moved offshore and for Taiwan's textile exporters. This apparent anomaly is accounted for by the fact that most large retailers centralize their sourcing of goods from China through their Hong Kong offices. As Jack Welch noted, "Hong Kong business is easy, and Guangdong province [in southern China] is too. There are ten thousand factories a taxi ride away." Another factor limiting the role of Taiwanese garment firms in China is the limited availability of quotas. Taiwanese companies were relatively late entrants into China, compared to Hong Kong businesses; therefore, they have not been able to get sufficient quota for exporting to the United States.

It is difficult to determine the total amount of Taiwan's apparel exports channeled through its retail buying offices. One of the few empirical studies of overseas buying offices estimated that about 20 percent of Third World-manufactured exports flow through this channel (ESCAP/UNCTC 1985, 35-36). The total value of orders placed by Taiwan's top ten retail buying offices in 1992 is US$1,760 million, of which approximately US$855 million was for apparel (Table 7.2). Taking the share of these apparel orders that actually were filled in Taiwan (see Table 7.3), we find that the total value of apparel shipments from Taiwan comes to nearly US$510 million. If we divide this figure by Taiwan's 1992 estimated apparel exports to the United States, US$2,115 million, we see that 24 percent of Taiwan's apparel exports were channeled through its ten biggest retail buying offices. Adding the smaller retailers with direct buying offices in Taiwan, plus the brand-named companies that do not own any factories but engage in substantial amounts of specification contracting (such as Liz Claiborne, whose 1992 apparel exports from Taiwan were in excess of US$50 million), it is likely that 35 to 40 percent of Taiwan's apparel trade with the United States is controlled by foreign buyers—that is, U.S. retailers and branded merchandisers.

Labor Conditions in Taiwan's Garment Industry

Taiwan's garment industry is characterized by three common working conditions: piece-rate wage labor, overtime hours, and an overwhelming preponderance of women in the labor force. The piece-rate wage paid to a garment worker in Taiwan is calculated by the amount of work completed; even if the wages are paid monthly, workers receive different sums according to the total hours put in and their productivity. The level of orders received from buyers is decisive in determining how long a worker is employed each month;
garment factories try to employ their in-house workers at least eight hours per day.

Overtime work is the typical means of coping with fluctuating demand in high seasons. If the orders cannot be finished in-house in a certain time period, they are subcontracted out to workshops or homeworkers. Thus, the fluctuation in monthly wages for an in-house worker depends not only on the individual's skill level, but also on the amount of overtime received. The earnings of subcontracted workers, on the other hand, are dependent on how much work they are given by the principal factories. The regular work schedule set by the Labor Standards Law is eight hours per day, not to exceed forty-eight hours per week. Workers in Taiwan's garment industry commonly are employed an average of ten overtime hours per month (DGBAS 1990, 523, 530).

The gender division of labor in garment production follows the principle that men are engaged in nonsewing jobs and women do the sewing. The sewing workshops tend to be established by married women who previously were employed in a garment factory. The nonsewing jobs are mostly done by men, although the dividing line here is not so rigid. Most of the bosses of principal firms or workshops doing nonsewing tasks are male. Although women account for the majority of the labor force in Taiwan's garment industry, they earn less than men in every functional category. In a survey of garment workers conducted in 1990, it was found that the average hourly pay of a female wage earner was only four-fifths that of a male worker (US$2.53 and US$3.09, respectively) (DGBAS 1990, 199, 523). The differences were even larger for the salaries workers in management and administrative positions. Homeworkers are usually paid lower wages than in-house workers.

The average monthly earnings of garment workers rank among the lowest of all manufacturing sectors in Taiwan. This situation has not changed in more than thirty years (DGBAS 1991, 146–47). In 1990 the average monthly earnings of garment workers in Taiwan were US$573, which was only 70 percent of the average wage for all manufacturing establishments in that year. Compared to earnings in other Third World countries, however, the wage rate for garment workers in Taiwan is relatively high.

The contrast between Taiwan and Indonesia is highlighted by

Sandra Lee, sales manager of Cannontex Industrial Company, a leading Taiwanese apparel manufacturer that closed three of its factories in Taiwan between 1990 and 1992 and now has a wholly owned subsidiary in Indonesia that exports 90 percent of its garment production to the United States: "Indonesia is an ideal place for garment manufacturing. It has lots of land and a huge population. The wage rates are much lower than in Taiwan. The minimum wage in Taiwan is $600 per month, but you can't find workers for under $600 per month. In Indonesia, the monthly wage rate is $100, which includes a 20 percent increase over last year's wage. Inflation is growing in Indonesia because the economy has been booming" (personal interview, November 17, 1992). As in Taiwan, the official work week in Indonesia is forty-eight hours (Monday through Saturday, with Saturday afternoons off), but the employer is allowed three hours of overtime per day on weekdays. Thus the length of the actual work week is sixty-three hours. The down side of Indonesia from the manufacturer's point of view is its productivity. "The productivity of the Indonesian workers is much lower than in Taiwan," observed Lee. "In Cannontex's three Taiwanese factories, 1,000 workers produced 24,000 dozen woven garments per month. In Indonesia, 2,600 workers also make 24,000 dozen garments per month with the very same machinery as used in Taiwan."

Taiwan's garment industry began to confront the problem of labor shortages when the work force stopped growing. In the late 1980s the labor shortage rate was estimated at 20 to 35 percent, and the problem has become more acute since then. According to one estimate, the garment industry in Taiwan needs more than twenty thousand additional workers (Wu and Chang 1991, 39–41). Immigrant workers are considered one possible solution, and garment employers are looking to the government for help (Wu and Chang 1991, 73). But the Taiwanese government has been quite cautious on this issue. According to official figures, only 3,423 foreign workers were allowed in the textile industry in 1992, including in dyeing and ironing jobs for garment manufacturers. Moreover, this policy made it illegal for foreign immigrants to be hired as sewing workers. Thus the immigration of foreign workers does not appear to be a politically viable option in Taiwan.
Conclusion

The globalization of Taiwan's garment industry has brought with it not only new international roles, but also dramatic changes for the local economy. It has disrupted many communities that were organized around apparel factories and their dense domestic subcontracting networks. The real problem faced by this industry in Taiwan and other rapidly industrializing nations is that garment factories are not able to attract sufficient numbers of workers, given the low wages and difficult working conditions in the sector. Young workers are not entering the industry, and those that remain confront an unstable future. Apparel firms are cutting back their local manufacturing operations and setting up new production complexes in low-wage countries. Some of the more ambitious companies are trying to establish their own brand names to allow forward integration from manufacturing into retailing, with an eye on the booming China market. The jobs created by this kind of expansion require advanced skills and pay high wages, but they are few in number.

Overseas production by Taiwanese manufacturers has created a vertical division of labor in the Pacific Rim. Taiwan supplies the raw materials, machinery, and, most important, orders from foreign buyers. The workers in China and other low-wage Asian nations make the finished garments. Globalization of the garment industry in Taiwan helps to relieve some of the acute pressures felt by the textile and apparel companies, but it does nothing for the thousands of local workers who were employed in the industry. According to a recent survey of manufacturers (including garment firms), one-fourth of Taiwanese businesses investing in China have reduced or closed down their production at home (cited in Taiwan's United Daily News, April 5, 1992). China has become a strong competitor to Taiwan by copying its manufacturing methods but with lower production costs. The threat faced by Taiwan's garment industry is a hollowing out of its industrial base, while Taiwanese manufacturers become intermediaries for aggressive exporters elsewhere. As production levels in China and Southeast Asian nations grow, however, foreign buyers will be inclined to cut out the Taiwanese middlemen and deal directly with their major overseas producers. When that happens, employers as well as workers in Taiwan's garment companies will be looking for new jobs.

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