



Dynamic Change in the Garment Industry:

How Firms and Workers Can Survive and Thrive

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Overview

It has been argued that the continued existence of sweatshops in the garment industry is due to a combination of unscrupulous manufacturers and increased competition from low-wage workers abroad. However, this view greatly oversimplifies the problem. The garment industry is undergoing enormous change, and with this change comes increased pressures on retailers and apparel manufacturers. Both retailers and manufacturers are challenged to compete, not just in terms of price, but also in delivery times and services offered.

However, the transformation of the industry provides an opportunity for U.S. manufacturers who can provide quality goods more quickly than their overseas competitors. Changes in the garment industry provide incentive for firms to invest in new technology and improve workers' training. The adjustment process is costly, but adaptation in the garment industry can result in competitive manufacturing in the United States without having to resort to sweatshop labor.

Forces of Change

The growth of large retail stores, proliferation of new technology to track and distribute inventory quickly, and an increase in the choice of products available to consumers have changed the retail sector dramatically in the last decade.

The rise of mass marketing stores and discount retailers with low overhead costs and low prices, an increase in retail space, and increasing competition among a declining number of national market leaders have led some industry analysts to express concerns about overcapacity in the retail sector. Mergers and acquisitions in the retail industry in the 1980's have resulted in larger firms and higher debt levels.

- The 20 largest firms accounted for 33.3% of sales in all apparel and accessory stores in 1987. By 1992, according to Census Bureau statistics, the share of the 20 largest firms had risen to 41.3%. (See [Figure 1](#).) For family clothing stores, the degree of concentration was higher than the apparel retailing average: in 1992, the top 20 retailers sold 67% of the goods.

The success of leaner retailers has changed the environment in which apparel manufacturers operate.

- Between 1988 and 1992, apparel shipments headed to mass merchants and national chains rose from a quarter to a third of the total volume shipped. [Figure 2](#) shows the distribution of apparel shipments by type of retailer.

Lean retailers are increasingly employing new technology to facilitate communication with suppliers and speed the distribution of goods. Bar-code scanning equipment, other types of information technology, and highly automated distribution centers are important elements to lean retailing.

- In 1988, 7% of shipping containers were labeled with bar-codes on the outside of the container so that they could

be rapidly shuffled through the distribution center. By 1992, 32% of shipping containers were marked with outside bar codes (Abernathy, Dunlop, Hammond, and Weil, 1995).

With closer links between lean retailers and manufacturers, more inventory risk has been shifted onto manufacturers. Instead of making big before-season orders, retailers are moving towards almost continuous restocking. Economists and sociologists point towards an increasing number of new products, an infiltration of the notion of fashion into even the lowest-cost apparel goods, and a rise in the number of selling seasons as signs that demand itself has become more volatile.

- Daily or weekly replenishment shipment constituted more than 66% of 1992 shipments. [Figure 3](#) shows the percentage of shipments to different types of retailers done in one week or less (Abernathy, Dunlop, Hammond, and Weil, 1995). The type of stores that replenish the most frequently are those that have been gaining market share -- national chains and mass merchants.
- Fast delivery, high quality, and other services such as attaching the price to a garment, have become as important as cost for U.S. retailers.
- The number of separate detailed stock keeping units (SKUs) handled by stores has almost doubled from 1988 to 1992 to 6,304 SKUs. The number of products introduced in the line each year and the number of products retired both increased rapidly, implying that many products had very short life spans (Abernathy, Dunlop, Hammond, and Weil, 1995).

These forces of change mean increased pressure on manufacturers to respond quickly to restocking orders or style changes. Manufacturers now share the burden of inventory risk that was once borne by retailers.

How Firms Survive

The changes in the retail sector, coupled with a large increase in apparel imports, have had a dramatic impact on the U.S. garment industry.

- Employment in the apparel manufacturing industry reached its peak of 1.45 million in 1973. In 1991, apparel employment dropped below 1 million, and as of May, 1996, the industry supported 853,000 jobs.
- Over 70% of the workers are women and the average hourly earnings in the industry (\$7.94) are well below the average hourly wage in manufacturing of \$12.71.
- New York, once the mainstay of garment firms, has been supplanted by California as the largest garment-producing state. Florida and North Carolina are also large producers of apparel products.

Traveling the Low Road: The Problem of Sweatshops

One response to the increasing competitive pressures within the garment industry is to turn to subcontracting to firms that use sweatshop labor.

- According to Lora Jo Foo (1994), subcontracting allows manufacturers to decrease overhead, meet fluctuating demand without constantly hiring and laying off workers, discipline organized labor by bypassing unionized firms, and avoid responsibility by blaming workmanship and any workplace violations on the subcontracting firm.
- Immigrant women are particularly vulnerable to sweatshop conditions because of their limited English skills and lack of knowledge of U.S. labor law. As Foo (1994) puts it,

"There is no trade-off in job training, experience, improvement of English skills, or the possibility of future advancement, that might justify low wages or deplorable working conditions. Rather, sweatshops represent a life-long dehumanizing exploitation..."

Most sweatshops are unregistered manufacturers who seek to remain out of the public eye. The General Accounting Office defines a sweatshop as "an employer that violates more than one federal or state labor law governing minimum wage and overtime, child labor, industrial homework, occupational safety and health, workers' compensation, or industry registration" (U.S. General Accounting Office, 1994).

Many industry analysts perceive a rise in the number of sweatshops in the United States.

- In late 1994, the General Accounting Office looked at the prevalence of sweatshops and concluded that

"Sweatshop working conditions remain a major problem in the U.S. garment industry, according to the experts contacted. They say working conditions, in many cases, have worsened over the last few years. In general, the description of today's sweatshops differs little from that at the turn of the century." (U.S. General Accounting Office, 1994).

- A random sample of apparel manufacturers in Southern California in 1996 showed that 43 % of sampled firms had failed to pay some of their workers the minimum wage, 55% of firms had overtime liabilities, and one third were not registered with the state of California (U.S. Department of Labor, Press Release USDL: 96-181, May 9, 1996).

How Firms and Workers Can Survive and Thrive

While some firms have responded to dynamic change in the garment industry by using sweatshop labor, other apparel manufacturers have responded in quite a different way. They have adopted information technologies that allow them to tighten the ties with retailers and textile suppliers. Some firms have taken further innovative steps and have instituted new workplace organization and human resource practices to increase flexibility and improve the skills of workers. Quick-response manufacturing has become an important way for these manufacturers to minimize inventories, maximize flexibility, and improve profitability.

To work with lean retailers, manufacturers are investing in information technology. Abernathy, Dunlop, Hammond, and Weil (1995) found that in 1988, 24% of manufacturers were using new information technologies for shipments and orders. By 1992, 64% were shipping out electronically coded goods and receiving orders electronically. In addition, 15% of their sample of apparel firms were electronically monitoring point-of-sale information from individual retail stores, up from 6% in 1988. Electronic point-of-sale information has allowed retailers and manufacturers to better track consumer preferences. The ability to forecast demand is an important tool for time-pressured manufacturers.

New workplace organization and human resource innovations are additional steps in successful firms' response to a highly competitive environment.

- The traditional organization of production in the industry is the progressive bundle system. This system fragments production into many operations and is designed to minimize the direct labor required in each garment. It isolates individual workers who each specialize in a only a few operations. To sew a dress shirt under the bundle system involves 20 to 40 operations requiring, in total, less than 20 minutes of sewing time. However, to minimize disruptions and allow maximum productivity of workers, the bundle system has large work-in-progress inventories. High inventories means that it is more difficult for manufacturers to respond quickly to style changes. Berg, Appelbaum, Bailey, and Kalleberg (1994) find that "maximizing the productivity of individual workers may not maximize the productivity of the system".
- Innovative manufacturers are replacing the traditional system by a modular production system: a team-based strategy in which groups of operators work together to assemble a garment. Each operator performs multiple tasks and workers become involved in the pace and quality of the team's work. Work-in-progress inventories are greatly reduced.

The move to modular production implies strategic complementarities among employment security, training, flexibility in job assignments, and participation in problem solving. A change in the method of production is the most advanced innovation in the whole array of advances adopted by forward-looking firms.

The firms that adopt new practices are more successful than firms that do not.

Abernathy, Dunlop, Hammond and Weil (1995) find that innovation boosts performance.

- It took approximately 5 times as long to produce a completed garment in the progressive bundle system versus the modular system.
- The most innovative firms in their sample fulfilled replenishment orders twice as fast as the control group.
- The most innovative firms earned 4.3% more operating profits as a percent of sales than non-innovators, even after controlling for firm size and fashion content. With average operating profits in the industry of 8.7%, this amounts to 50% higher operating profits for innovative firms.

Dunlop and Weil also report increased performance for innovative firms.

- Business units using information technology in 1992 earned 6.5% higher average operating profits as a percent of sales than those businesses that did not invest in information technology (Dunlop and Weil, 1996).

- 94% of workers in firms using modular production were trained at more than one job in 1992, versus 41% in firms using traditional methods of production (Dunlop and Weil, 1994).
- Compensation practices in the modular system allow firms to reward workers for quality work.

Berg, Appelbaum, Bailey, and Kalleberg (1994) also report impressive performance gains from adopting human resource innovations.

- One company they examined experimented with outsourcing production abroad, but was unable to meet demanding delivery schedules. Therefore, the firm switched from the bundle system to modular production and found itself able to compete for orders from mass retailers. Overhead costs were reduced by 20 percent, and direct labor costs fell as well. However, the most important changes were the the reduction in turnaround time and the flexibility of the modular production system.
- Their surveys of workers reveal that learning and problem solving are much higher for team workers who rotate through jobs and who must continuously communicate with each other.

Training workers to prosper in a new workplace adds to the workers' human capital and allows them a greater role in decision making. These investments in workers complement investments in technology and appear to be paying off for innovative firms.

Conclusions

The pressures placed on firms in the garment industry from international competition and dynamic change in the retail sector have been enormous. Some firms have responded by resorting to sweatshop labor. But other firms have chosen to compete by using a combination of new investment in information technology, implementing new workplace practices such as team work, and increasing the training of their employees. While these investments have large up front costs, research suggests that they pay off in increased responsiveness to market demands and higher profits.

References

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