

# Changing Patterns: Reshaping the Southeastern Textile - Apparel Complex

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Intense economic challenges, both in the domestic and foreign arenas, are taxing the U.S. textile industry's adaptability. The resourcefulness and flexibility of domestic textile firms may determine whether they will benefit from anticipated growth in the world textiles markets.

Recent economic developments have affected the U.S. textile and apparel industry's workers, employment, production location, equipment, and markets. One widely publicized factor in the industry's problems was the dollar's rise in value against foreign currencies, which lowered prices of imported goods and raised prices of domestic exports. Other influential forces included the increase in domestic labor costs relative to those in most competing countries; high real interest rates that increased the capital spending needed to modernize domestic manufacturing plants and thus reduce labor requirements; an expectation that domestic market growth would remain sluggish while world markets expand; and duty assessments that encouraged U.S. manufacturers to transfer labor-intensive operations abroad and employ low-cost foreign workers. These economic forces are transforming the U.S. textile and apparel industry just as earlier forces shifted

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**Table 1.** Textile Mill Products Employment

	1950 Employment (thousands)	1970 Employment (thousands)	Absolute Change (thousands)	Percent Change
<b>North</b>				
Pennsylvania	135.1	62.5	- 72.6	-53.7
Massachusetts	118.0	32.8	- 85.2	-72.2
New York	98.4	53.7	- 44.7	-45.4
Rhode Island	62.7	18.4	- 44.3	-70.6
New Jersey	58.2	29.6	- 28.6	-49.1
Connecticut	33.6	13.0	- 20.6	-61.3
Total	506.0	210.0	-296.0	-59.0
<b>South</b>				
North Carolina	230.7	280.7	50.0	21.7
South Carolina	134.4	148.8	14.4	10.7
Georgia	107.3	115.8	8.5	7.9
Alabama	52.9	44.6	- 8.3	-15.7
Tennessee	37.2	36.0	- 1.2	- 3.2
Mississippi	5.4	6.4	1.0	18.5
Total	567.9	632.3	64.4	11.3

Source: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, States and Areas, 1939-1982.

**Table 2.** Textile/Apparel Employment by Major Sector, 1982

Textile	Weaving Mills	Knitting Mills	Yarn, Thread Mills	Floor Covering	Finishing Plants
Region	188,454	114,523	95,446	31,517	26,831
Percent of U.S.	77.2	56.6	84.2	72.6	46.4
Apparel	Men's Boys Furnishings	Women's Misses' Outerwear	Children's Outerwear	Miscellaneous Apparel	Miscellaneous Fabricated Textile Products
Region	146,222	87,397	28,558	13,268	45,151
Percent of U.S.	47.8	21.6	43.8	25.2	25.9

Source: *County Business Patterns*, U.S. Department of Commerce, Bureau of the Census, various issues.

the industry from the Northeast to the Southeast during the past century.<sup>1</sup>

In the early 1900s, the textile industry began moving southward in search of reduced labor costs and less intense union activity. Although by 1950 textile employment was already larger in the southern states than in the North, employment trends from 1950 to 1970 clearly illustrate the industry's shift to the Southeast, as nearly 60 percent of all textile jobs in the Northeast's six major textile-producing states disappeared (see Table 1). Massachusetts was especially

hard-hit, losing over 70 percent of its textile employment, or 85,000 jobs. In contrast, North Carolina, which grew into the leading textile-producing state, picked up 50,000 textile jobs from 1950 to 1970 and accounted for the bulk of the increase in the Southeast.

Today, the southeastern region accounts for over 70 percent of all employment in the nation's weaving, yarn and thread, and carpet mills (see Table 2). Employment in southeastern knitting mills and finishing plants accounts for about half of the national total. In the apparel

**Table 3.** Southeast Textile/Apparel Share of Total Nonfarm Employment

	Textile			Apparel		
	1970	1980	1985	1970	1980	1985
<b>South</b>						
Alabama	4.5	3.2	2.7	4.5	4.0	3.7
Florida	N/A	0.1	0.1	1.1	1.0	0.8
Georgia	7.4	5.5	4.1	4.5	3.3	2.9
Mississippi	1.0	0.8	0.1	6.7	4.9	4.5
North Carolina	15.8	10.3	8.2	4.2	3.7	3.3
South Carolina	17.7	11.5	8.6	5.2	3.9	3.8
Tennessee	2.7	1.5	1.4	5.0	3.9	3.7
<b>Total</b>	<b>6.8</b>	<b>4.4</b>	<b>3.3</b>	<b>3.9</b>	<b>3.1</b>	<b>2.7</b>

Source: Federal Reserve Bank of Atlanta, computed from U.S. Department of Labor, Bureau of Labor statistics data.

sector, the region specializes in men's and boys' furnishings and children's outerwear, each with about 45 percent of the United States' output. Employment in regional firms manufacturing women's and misses' outerwear, miscellaneous apparel, and miscellaneous textile products, such as nonwovens, tire cord, and upholstery filling, makes up about 25 percent of the national total.

### Shrinking Employment

But textile employment in the Southeast has changed direction again during the past decade, in a way that could reshape southeastern employment. Since 1980 more than 60,000 industry jobs have been lost in North Carolina and South Carolina, the two leading textile states. Combined with the apparel industry, textiles firms employ more people than any other industry in Alabama, Georgia, Mississippi, and the Carolinas. Even so, the industry's dominance has been shrinking in the Southeast. Since 1970, textile employment as a share of total nonfarm employment has slipped in every major southeastern textile-producing state (see Table 3). For the region, textile employment's share fell by more than half from 1970 to 1985, now accounting for just 3.3 percent of all nonfarm employment. The apparel sector registered a less severe decline but had shrunk to 2.7 percent of regional nonfarm employment by 1985. In absolute terms, the region's textile employment contracted by 155,000 workers or by 25 percent, from 1970 to 1985. Apparel employment grew by 31,000 workers, or by 8.7 percent, from 1970 to 1985; but the industry lost 16,200 jobs, or 4 percent, from 1980 to 1985. By

contrast, total nonfarm employment grew by over 27 percent during the same 15 year period.

### Shifting Employment Sectors

With its 206,000 textile workers, North Carolina remains the industry's largest employer despite recent cutbacks. For the first half of 1985, the state's unemployment rates have hovered around the 5 to 6 percent range, suggesting that the economy is rapidly absorbing displaced mill workers. Notwithstanding North Carolina's loss of 16,500 textile jobs and 4,500 apparel jobs from June, 1984 to June, 1985, the number of unemployed workers actually fell by nearly 21,000 over that period. In South Carolina, where unemployment rates also rank below the national average, the pattern is similar: 10,400 textile jobs and 3,600 apparel jobs were lost statewide over the year, while the total number of unemployed workers dipped by nearly 7,000. Over the same period each of the two states posted gains in construction and service employment totaling about 32,000 and a lift in trade employment of above 22,000. The pattern is similar for the other regional states except Alabama, as burgeoning employment increases in the trade, construction, and services sectors more than offset negative figures registered by apparel and textile firms (see Table 4).

The bankers we contacted in small towns where a large mill closed said that many former textile employees have been offered jobs in other plants owned by the same company. They added that other former mill workers found employment near their hometowns.

Unlike auto or steel workers, low-wage textile workers seldom lose much income when they shift to another job. Their communities, however, are likely to suffer. Textile mills usually are located in or near small towns where alternate employment opportunities are limited. Low-skilled workers often must seek new jobs in larger metropolitan areas. Since most of the displaced workers have to move elsewhere to find work, it compounds the mill community's economic loss through a drop in business activity. It is little comfort to a community that such an outmigration often removes people from its public assistance rolls.<sup>2</sup>

Former managerial employees in particular can have difficulty locating new jobs nearby, sometimes being forced to relocate. Production-

**Table 4.** Employment Change by Sector, Regional States (thousands of employees)

	Textile	Apparel	Trade	Construction	Service
<b>Alabama</b>					
June 1984	40.2	58.3	291.3	66.8	229.6
June 1985	36.5	49.9	294.6	67.1	232.6
Absolute change	-3.7	-8.4	3.3	0.3	3
Percent change	-9.2	-14.4	1.1	0.5	1.3
<b>Florida</b>					
June 1984	N/A	34.1	1107.2	321.1	1068.3
June 1985	N/A	33.9	1166.7	331.8	1144.9
Absolute Change	N/A	-0.2	59.5	10.7	76.6
Percent Change	N/A	-0.6	5.4	3.3	7.2
<b>Georgia</b>					
June 1984	106.8	75.8	600.4	133.4	441.3
June 1985	99.7	72.5	671	152	485.4
Absolute Change	-7.1	-3.3	70.6	18.6	44.1
Percent Change	-6.7	-4.4	11.8	13.9	10.0
<b>Mississippi</b>					
June 1984	6.1	39.8	176.1	39.7	124.3
June 1985	6	37.2	185.6	41.2	127
Absolute change	-0.1	-2.6	9.5	1.5	2.7
Percent change	-1.6	-6.5	5.4	3.8	2.2
<b>North Carolina</b>					
June 1984	222.2	93.4	549.4	136.2	399.9
June 1985	205.7	88.9	571.6	149.1	421.8
Absolute change	-16.5	-4.5	22.2	12.9	21.9
Percent change	-7.4	-4.8	4.0	9.5	5.5
<b>South Carolina</b>					
June 1984	114.2	50.2	264.8	84.3	198.6
June 1985	103.8	46.6	289	90.1	224.7
Absolute change	-10.4	-3.6	24.2	5.8	26.1
Percent change	-9.1	-7.2	9.1	6.9	13.1
<b>Tennessee</b>					
June 1984	26.1	70.9	415.7	82.4	348.1
June 1985	23.4	65.7	446.9	78.7	364.4
Absolute change	-2.7	-5.2	31.2	-3.7	16.3
Percent change	-10.3	-7.3	7.5	-4.5	4.7
<b>Region</b>					
June 1984	515.6	422.5	3404.9	863.9	2810.1
June 1985	475.1	394.7	3625.4	910	3000.8
Absolute change	-40.5	-27.8	220.5	46.1	190.7
Percent change	-7.9	-6.6	6.5	5.3	6.8

Source: Department of Labor for each regional state.

oriented firms appear more likely to hire lower level employees because such workers are relatively low-paid and seem to adapt more readily to new jobs than do managers whose different policies can cause conflicts.

## Employment

Certain characteristics of textile and apparel workers set them apart from the typical manufacturing employee (see Table 5). Women who

**Table 5.** Selected Characteristics of Employees in the Apparel and Textile Industries

	Median Age		High School Graduates (percent)	
	Male	Female	Male	Female
Manufacturing	37.1	35.9	71.6	66.3
Textile Mill Products	36.8	37.6	50.6	48.3
Apparel and Other Finished Textile Products	37.2	38.7	58.1	46.9

Source: U.S. Department of Commerce, 1980 *Census of Population*.

work in textile (and especially apparel) industries have a somewhat higher median age than women who work in manufacturing generally. Differences in educational levels are far greater. While nearly 70 percent of all manufacturing workers have earned high school diplomas, only about half of textile and apparel workers are high school graduates. Twenty-five percent of the total labor force 25 to 64 years of age is now made up of college graduates. The comparable portion 10 years ago was only 18 percent. Because of the rapidly rising educational levels, young job seekers probably will not be satisfied with typical operatives' wages, traditionally kept low by intense competition. Manufacturers in search of low-cost labor thus are given increased incentive to set up offshore operations to exploit lower wages.

One favorable trend for onshore manufacturing, however, has been the reduced proportion of production workers in the textile and apparel industries. In 1975, managers, professionals, and technical workers constituted only 11 percent of the textile work force and 8 percent of apparel workers. In 1985 the numbers rose to 15 percent and 12 percent, respectively, reflecting rapid change in the makeup of the mills' work force. Concurrently with that reshaping of the payroll, automated equipment has been replacing human operators. Automation obviously reduces labor costs, but it complicates managerial responsibilities and may increase the risk of loss. As capital investment per employee increases, equipment downtime becomes more costly. Operators must monitor machines more closely, for an error

can shut down an entire production line. Demand for textile school graduates, therefore, increasingly intensifies as companies bring more sophisticated equipment into their plants.<sup>3</sup>

### Changes in the Mill

Diverse technological changes are taking place in the textile/apparel industry. Changes include the installation of faster, more efficient machines, advanced auxiliary equipment for machine cleaning or materials handling, and computers for data processing and finishing.<sup>4</sup> In some cases a new plant must be constructed to integrate the whole process, since in older mills work typically was passed through several rooms located on different floors. New mills have only one floor, with machines arranged to minimize the potentially significant costs of moving materials from one operation to the next.

Production methods have improved significantly over the last decade with the introduction of high technology, such as robotics and computer-aided design and manufacturing. Manufacturers have made large capital expenditures in modern machinery to enhance productivity and competitiveness. Textile and apparel industries increased their capital outlays more than 28 percent last year to \$1.78 billion, following a small 4.2 percent rise in 1983. Outlays were constant at a lower level in 1981 and 1982.<sup>5</sup> By the end of the current decade, according to some estimates,

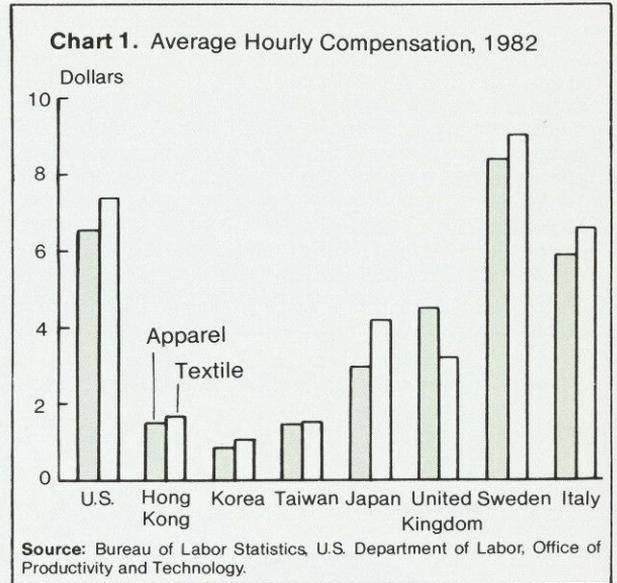
mills may require one-third fewer workers than they did in the 1970s.<sup>6</sup>

Although improved technology has increased productivity in the U.S. apparel industry, the improvement has not closed the price gap sufficiently between domestic and foreign producers. Apparel manufacturing still involves many manual operations. The sewing room remains highly labor intensive, with most employee time spent positioning and handling piece goods. The typical single-needle shirt produced in the United States still requires 14 to 16 minutes of direct labor. The industry's traditional structure of a large number of small producers limits the use of capital-intensive production methods because of inadequate capital. Limitations have forced firms to respond to import competition by turning to offshore facilities while reducing the output of domestic plants. A high proportion of apparel is now produced in low-wage countries either by American-owned plants or American-selected contractors.

U.S. firms also are using offshore processing under Item 807 of the U.S. tariff code to increase competitiveness. This stipulation permits domestically cut material to be shipped for sewing to countries with lower labor costs, then re-imported. Duty is paid only on the value-added portion of the commodity, and that value is modest because of the low-cost foreign labor used in the sewing operation. Some companies are cutting back their own domestic production and are concentrating on marketing apparel purchased from others. Therefore, marketing has taken on added significance in recent years.

### Demise of Domestic Firms

As a whole, the textile industry is "mature" in that its domestic growth potential is limited. From 1972 to 1983, mill shipments advanced at a compound annual rate of only 0.3 percent, expressed in 1972 dollars. During that span, many mills stopped serving markets that offered little or no potential for growth. Although the domestic textile industry has become highly efficient and productive, particularly in labor productivity, cost factors regarding labor and government regulation and outside economic forces are requiring changes. For example, the expectation that the dollar's value will remain high and that foreign labor costs will remain lower than U.S. costs has encouraged some



domestic companies to shift production abroad or to purchase fabrics from foreign suppliers. These same forces are discouraging U.S. exporters from competing in foreign markets. The relatively high value of the dollar makes foreign goods cheaper, since during the past five years the dollar has exchanged for an ever-growing volume of foreign currency. The dollar's strength correlates closely with fabric exports and imports.

The attrition of the U.S. apparel industry is due partly to its highly competitive environment and the abundance of small firms. Recent surges in import competition have depressed profit margins and hastened the departure of firms with scant financial reserves and limited means to adopt cost-reducing or market-enhancing technology. Changes of season and style necessitate adjustments in production that can be especially risky for small firms. In addition, just as firms may enter the industry easily when conditions are good, they may exit rapidly during periods of strong competitive pressure.

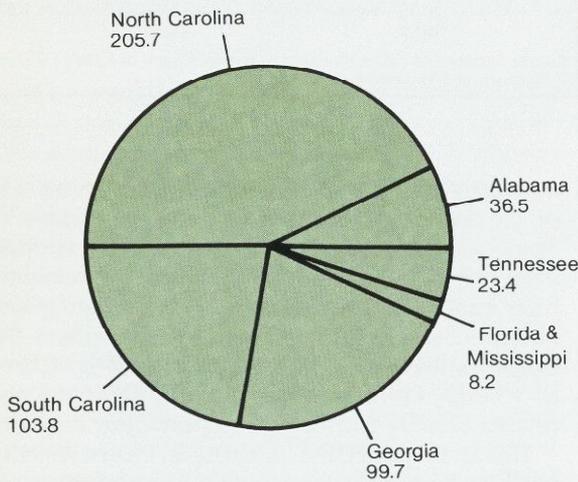
Low labor costs have been the key to foreign firms' effective penetration of U.S. markets. Domestic retailers find they can capture larger profit margins by purchasing low-cost foreign goods rather than the typically more expensive domestic goods. This is especially true in price-sensitive lines and staple items. In recent years, wages in major Far East exporting countries have increased more rapidly than in the United States, but the

**BOX**

Although the Southeast has more apparel establishments, the region's textile sector employs about 35 percent more workers and generates about twice the annual apparel payroll. Georgia, South Carolina, and North Carolina account for over 85 percent of the region's textile employment (see Chart 3). By contrast, apparel employment is much more dispersed, with each regional state accounting for no more than 22 percent of the region's total apparel employment (see Chart 3).

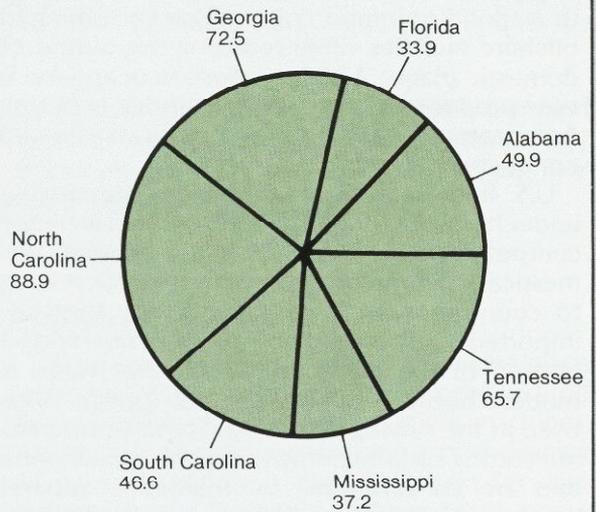
Textile and apparel employment is concentrated in east-central Alabama, northwestern Georgia, northwestern South Carolina, and central North Carolina (see map). Over 80 percent of the counties in each regional state except Florida produce textiles, apparel, or both. About half of Florida's counties produce apparel or textiles.

**Chart 2. Textile Employment by State, June 1985**  
(Thousands)



Source: Federal Reserve Bank of Atlanta.

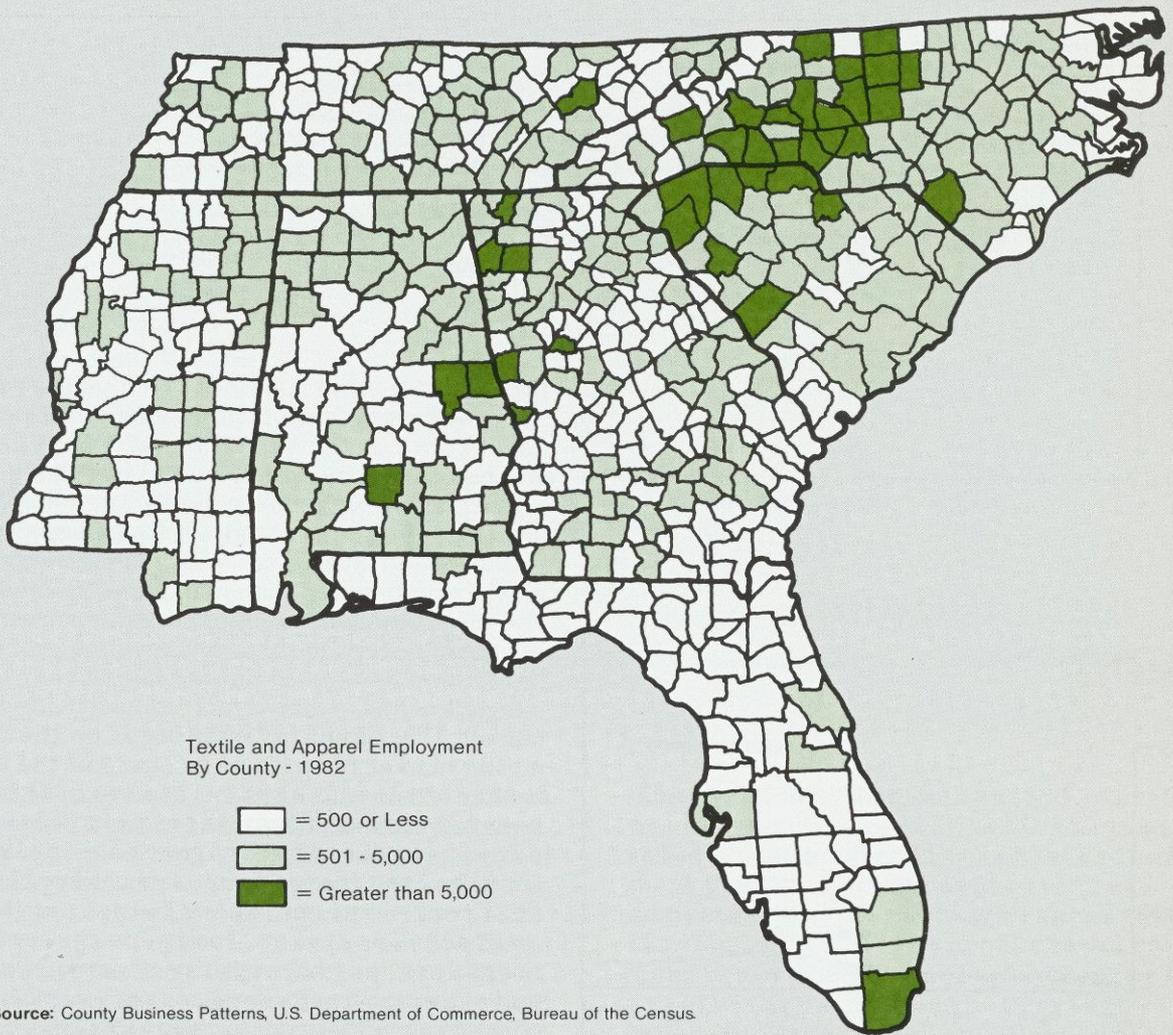
**Chart 3. Apparel Employment by State, June 1985**  
(Thousands)



Source: Federal Reserve Bank of Atlanta.

strength of the dollar has offset the effect of wage adjustments.<sup>7</sup> The average hourly compensation for workers in the major textile/apparel producing countries clearly illustrates the disparity of compensation levels (see Chart 1). While U.S. apparel workers earn \$6.52 per hour on average, their counterparts in Taiwan and Korea earn \$1.43 and \$1.00, respectively. Chinese workers earn about 26 cents an hour, which suggests why American manufacturers are so apprehensive about unrestrained imports from that nation.<sup>8</sup>

Foreign firms enjoy additional comparative strength because the apparel segment of the textile complex is by far the most labor-intensive, and foreign producers' labor cost advantages are considerably more pronounced. Furthermore, the entry requirements for capital equipment and technical knowledge are significantly less stringent for apparel than for textile manufacturers. And, because foreign efficiency has improved as firms advanced along the learning curve, foreign competitors are shifting production from low-

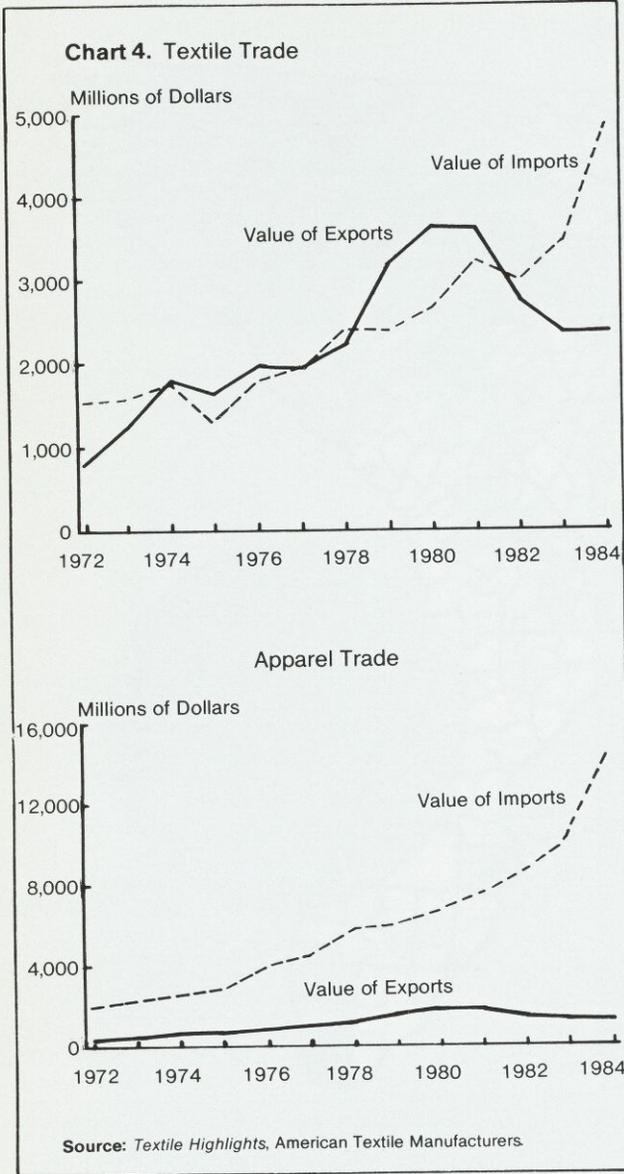


priced standard apparel to newer, more sophisticated products. The results have been predictable: imports doubled their 15 percent share of the domestic apparel business in 1973 to 30 percent in 1983.

Imports of textiles and apparel for 1984 reached a record level, up 32 percent from the previous high a year earlier. The 1984 textile and apparel trade deficit of \$16 billion also hit a new high, 52 percent above 1983's previous record of \$10.5 billion. Historically, exports have been important

for domestic textile producers, and therefore comparative dollar valuations are significant. The less capital-intensive apparel industry has been affected more severely by comparative labor costs. U.S. apparel exports have not shown as great a downturn as have textiles, but imports have surged (see Chart 2).

Textiles and apparel accounted for 13 percent of the nation's overall trade deficit in 1984, as imports continued to erode the competitive position of the U.S. industry. Table 6 shows a



**Table 6.** Percent Change in Profits at Major Southeastern Textile Companies, First Half 1984 to First Half 1985

Rank	Company	State	Percent Change
1	Burlington Industries	North Carolina	-81
2	West Point-Pepperell	Georgia	-58
3	Springs Industries	South Carolina	-73
4	Oxford Industries	Georgia	-91
5	Shaw Industries	Georgia	-3

Source: *Business Week*, "Corporate Scoreboard."

Imports from these countries continue growing, along with rising imports from several European nations such as the United Kingdom and Italy, and others not covered by quotas (see Table 7).

In contrast with the typically large foreign firms, domestic firms historically have been small, family-owned businesses with managers more production-oriented than marketing-oriented.<sup>10</sup> The dispersion among independent companies of separate steps in the manufacturing process has tended to keep all but the largest vertically integrated mills from direct contact with the market. U.S. producers often focus on the domestic market because of its size and the enhanced costs and risks of exporting. This is especially significant because per capita domestic consumption is expected to grow only 1 percent annually. Most foreign firms, on the other hand, must concentrate on exports because of their small domestic markets. Foreign producers frequently rely on the expertise of international trading companies for assistance in establishing contacts, securing financing, and identifying market opportunities.

Typical of the more aggressive foreign producers is South Korea's textile/apparel industry, a world leader that operates primarily as an export industry—earning about one-third of that country's foreign exchange.<sup>11</sup> The industry (in contrast to most domestic producers) is virtually self-sufficient, being vertically structured from petrochemical production through apparel manufacturing. Taiwan and Hong Kong also owe a large share of their foreign exchange earnings to the textile industry. China, reportedly unhampered by environmental standards for clean air and water, has a competitive advantage in manufacturing cotton textiles and apparel. The country's cotton complex (from growing cotton to producing

bleak profit picture for major southeastern textile companies compared with a year ago. Profit reductions of 58 percent or more for the top four companies indicate the pressures imports are placing on the domestic industry.<sup>9</sup>

### Market Problems

Major foreign suppliers of textiles and apparel to U.S. markets are Taiwan, South Korea, Hong Kong, China, and Japan, all of which have signed bilateral trade agreements with this country.

**Table 7.** Growth of Textile and Apparel Exports to the United States by Leading Exporting Countries (Value in Millions of Dollars)

	1982	1983	1984	Percent Change 1982-1984
<b>Textiles</b>				
Japan	528	582	641	21.4
China	238	249	391	64.3
Taiwan	199	246	336	68.8
Italy	235	251	419	78.3
United Kingdom	115	130	180	56.5
Brazil	78	103	157	101.3
				<b>Percent Change 1982-1984</b>
<b>Apparel</b>				
Hong Kong	1983	2246	2963	49.4
Taiwan	1523	1756	2269	49.0
Korea	1394	1597	2253	61.6
Italy	207	268	552	166.7
Mexico	176	189	257	46.0
France	91	106	167	83.5

Source: U.S. Department of Commerce, "U.S. General Imports, World Area and Country of Origin by Commodity Groupings," Various Issues.

\*The Price Actually Paid or Payable for Merchandise When Sold for Exportation to the United States Excluding U.S. Import Duties, Freight, Insurance, and Other Charges Incurred in Bringing the Merchandise to the United States.

finished garments) employs over 200 million people.<sup>12</sup> Nations such as China that are attempting to expand their manufacturing sectors find they can introduce textile production easily to a newly industrialized work force.

The recent growth in imports of selected commodities important to the Southeast is dramatized by Table 8. Imported products from cotton weaving mills increased by over 75 percent from 1983 to 1984, and imported men's and boys' suits and coats grew by more than one-third over the period.

## Slow Growth Ahead

The long-term outlook for the textile/apparel industry is for slow growth. Textile employment levels may continue to contract, as automated equipment is substituted for low-skilled workers. Well-financed companies will hurry to adopt new technology to increase productivity. More mergers are likely, since concentration will provide finances to modernize equipment and form

more innovative management and marketing teams. Workers necessarily will become more skilled to operate increasingly sophisticated equipment, and, as a result, wages eventually will compare more favorably with other manufacturing sectors. Professional and technical workers will comprise a greater share of the textile workforce. At the same time, larger companies also are likely to turn to offshore production for a greater share of product mix, contributing to shrinking domestic textile job rolls.

Over the longer term, if the dollar reaches more favorable exchange rates against foreign currencies, the United States may be able to sell more of its products in export markets around the world. Many emerging nations will require more textiles for their own populations; the domestic industry's export potential could expand significantly. Yet organizations that lack the resources to improve manufacturing productivity and marketing may find themselves unable to compete. Many small, inflexible firms fit this category. Without major changes they are likely to face extinction over the longer term. Thus,

**Table 8.** Value of U.S. Textile Imports: Selected Leading Items (millions of dollars)

	1982	1983	1984 <sup>1</sup>	Percent Change	
				1982-1983	1983-1984
Men's and Boy's Suits and Coats (SIC 2311)	613	660	888	7.6	34.5
Weaving Mills - Cotton (SIC 2211)	475	559	979	17.8	75.1
Weaving Mills - Manmade Fibers (SIC 2221)	655	733	953	12.0	30.0

<sup>1</sup> estimated

Source: U. S. Department of Commerce: Bureau of Census, Bureau of Economic Analysis, and International Trade Administration.

despite growing world markets, the outlook for the domestic textile and apparel industry appears to include a sharp reduction in the number of

individual companies and low-skilled employees in an environment of toughening international competition.

**NOTES**

<sup>1</sup>For this study, the Southeast includes Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee.

<sup>2</sup>See G. Glenday and G. P. Jenkins, "Industrial Dislocation and the Private Cost of Labor Adjustment," *Contemporary Policy Issues*, no. 4 (January 1984), p. 23, for further discussion of this issue.

<sup>3</sup>S. Killman, "To Attract Kids, Trade Schools Hype Low-Tech," *Wall Street Journal*, February 15, 1985.

<sup>4</sup>See D. Avery and G. Sullivan, "Textiles, Why Some Firms Will Prosper," *Economic Review*, Federal Reserve Bank of Atlanta, vo. 68 (December 1983), pp. 11-20.

<sup>5</sup>*Standard and Poor's Industry Surveys*, vol. 2, (April 1985), pp. T76-T84.

<sup>6</sup>"The Dependency of the U.S. Economy on the Fiber/Textile/Apparel Industrial Complex," a study prepared by Economic Consulting Services, Inc. for the American Textile Manufacturing Institute, November 12, 1981, p. 2.

<sup>7</sup>"Where a Strong Dollar Has Cost American Jobs," *U.S. News and World Report*, January 16, 1984, p.76.

<sup>8</sup>The compensation measures were computed in national currency units and converted into U.S. dollars at commercial market currency exchange rates.

<sup>9</sup>See J. Kotkin, "Made in the U.S.A. The Case for Manufacturing in America," *Inc.*, March 1985, pp. 51-52, and Daniel Webster and others, "Free Trade: Four American Voices," vol 7 (January-February 1983), pp. 39-42, for references on free trade and the case for domestic manufacturing.

<sup>10</sup>B. Toyne and others, *The U.S. Textile Mill Industry: Strategies for the 1980s and Beyond*, University of South Carolina Press, 1983, pp. 8-30-33-37.

<sup>11</sup>W. Freeston and J. Arpay, *The Competitive Status of the U.S. Fibers, Textile, and Apparel Complex*, National Academy Press, 1983, pp. 19-20.

<sup>12</sup>S. Hester and D. Hinkle, "Balancing U.S. Trade Interest: The Impact of Chinese Textile Imports on the Market Share of American Manufacturers," *Business Economics*, vol. 19 (April 1984), pp. 27-34.