

# Horizons

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## The Textile-Apparel Complex in Rural Virginia

Eluned C. Jones and Judith I. Stallmann

There is a perception, based on a few high-profile cases, that manufacturing in the U.S. is dying, and that's not true.  
--J. Alexander Doyle, president of Micro-Machining, Inc., Baltimore, November 1992

Virginia may seem a long way from either the Canadian or Mexican borders. Yet concerns over jobs, and over the possible impact on jobs from both the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), is bringing the concepts of free trade and open markets into the homes of many Virginians. Various organizations and policy makers have predicted the disappearance of the U.S. textile and apparel industries--vital industries in many parts of rural Virginia--if these trade agreements are ratified. Indeed, plant closures and buy-outs already occurring increase concerns that the predictions are coming true, even before the trade agreements are final.

Are these fears about trade well-founded? Further, are trade agreements the only forces influencing the viability of U.S. textile and apparel firms? In this article, we consider the relative impact of several influences on these industries and on the communities where textile or apparel firms are located.

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### Economic Importance of the Textile-Apparel Complex

The textile industry processes raw fiber into yarn, fabric, and some finished items, such as carpeting. The apparel industry turns fabrics into finished garments. In 1989, the U.S. textile and apparel industries accounted for nearly 9 percent of all manufacturing employment. Seventy-five percent of U.S. textile workers, and 32 percent of apparel workers, work in plants in rural communities of six states--Alabama, Georgia, North Carolina, South Carolina, Tennessee, and Virginia. Virginia's textile and apparel industries are located in 23 counties, primarily along Interstate-81 and in "Southside" (Figure 1). In these counties, the textile and apparel industries account for nearly 68,000 jobs, about 4 percent of the U.S. total in these industries.

Figure 1. Virginia counties (cross-hatched) with textile or apparel firms, 1987.



Source: U.S. Bureau of the Census.

The textile and apparel industries have major impacts on the economy of the regions and of the rural communities where firms and plants are located. Changes in employment at a local facility--whether

due to international market influences, technological changes, or other factors--directly affect employees' incomes and indirectly affect local communities. Increasing employment and incomes in one industry often creates other new jobs in a community; conversely, a loss of industrial jobs and income can decrease other employment in the community.

### The Changing Industries

The proposed international trade agreements undoubtedly will affect Virginia's textile and apparel industries, but predicting that effect precisely is not so easy. One difficulty in determining the impact of trade changes is that the industries--textiles in particular--are also undertaking technological changes. U.S. textile and apparel industries are moving from labor-intensive production to capital- and technology-intensive production in order to remain competitive with imports of yarn, fabric, and assembled garments. Thus, issues of trade, international competition, and technological change are intertwined, and the combination of these factors is leading to industries that are substantially changed, or "restructured."

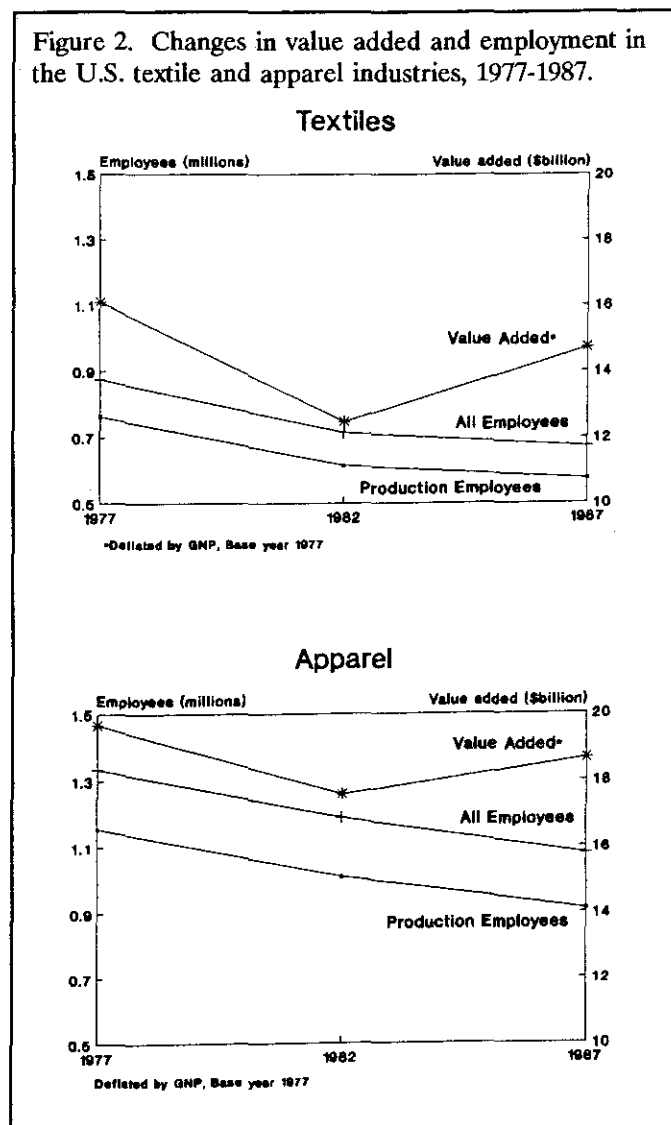
**Trade.** Since 1816, the U.S. textile and apparel industries have received more comprehensive and persistent trade protection than many other industries. More recently, attempts to restrict imports led foreign manufacturers to upgrade their products' quality and add value to their products, thereby circumventing restrictions on specific categories of textiles and apparel. (It should be noted that Japanese car manufacturers responded similarly when car imports were restricted.) Despite trade restrictions, U.S. textile and apparel industries have not maintained their position in the domestic market. In 1982, the textile trade balance was negative for the first time.

Between 1980 and 1989, the value of textile products imported into the United States more than doubled, accounting for approximately one-third of the domestic market, while the value of U.S. textile exports remained relatively constant. The value of apparel imports quadrupled, accounting for roughly half of the domestic market. The result was an 80-percent negative balance in textile and apparel trade by 1989 (U.S. Office of Technology Assessment).

**Technological Change.** The declining balance in both textile and apparel trade was already apparent in the late 1970s. Until the 1980s, however, the industries lacked the technological means and, because of trade protection, sufficient incentives to respond to the

decline. In the late 1970s, the textile industry attempted to maintain profitability through reduced expenditures, including reduced capital investment. In the early 1980s, several new technologies became commercially available and helped provide the impetus for revitalizing the industry. Capital investment increased in the early 1980s, leading to the implementation of handling, spinning, and weaving technologies that greatly increased labor productivity. More recently, the use of robotics and computer control of inventory, production planning, and quality have streamlined the textile-production process. For its part, the apparel industry adopted knitting technology and computerized finishing, cutting, and sewing. The net result was a reversal of the decline in real value of both textile and apparel output, most noticeably in textiles (Figure 2).

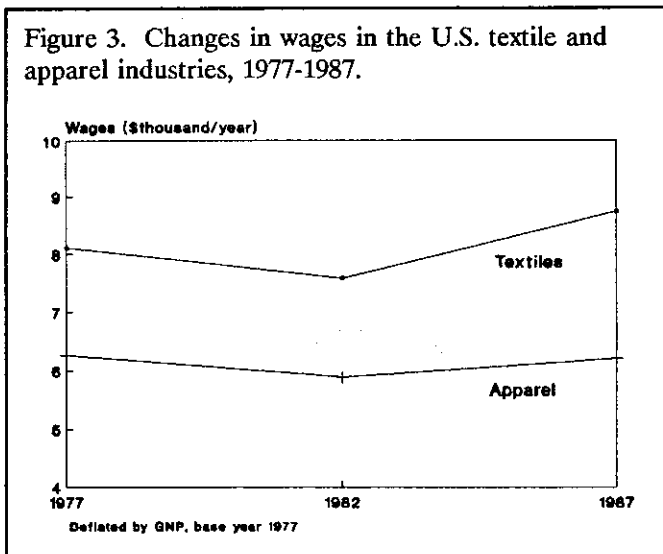
Figure 2. Changes in value added and employment in the U.S. textile and apparel industries, 1977-1987.



**Restructuring.** Greater efficiency and productivity are commonly cited as long-run benefits of freer trade and technological change. On the other hand, as automation in manufacturing requires greater job skills, it can also reduce overall employment. Such impacts may depend on one's location. Automation may increase higher-skilled jobs in the particular plant that is automated, but output at that plant may increase so much that it results in closing of plants in other areas (Rosenfeld, Malizia, and Dugan). This results further in jobs being moved or concentrated in a certain area, and many workers may have to move to where their skills are in demand.

Restructuring and concentration in the textile and apparel industries have eliminated management positions, while more-productive technology has eliminated production positions (see Figure 2). As seen in Figure 3, however, real wages increased in the 1980s, indicating that higher skills were demanded in the jobs that remained, particularly in textiles.

Figure 3. Changes in wages in the U.S. textile and apparel industries, 1977-1987.



An American Textile Manufacturers Institute survey of its own membership estimated that 44 plants closed in 1981, 100 in 1982, 49 in 1983, and 38 in 1984 in the United States. Many of these plants were in small communities where the plant closures seriously affected the local and regional economic base. While the number of large firms decreased in both the textile and apparel industries, the number of small apparel firms (fewer than 20 employees) has increased. The expansion of small firms has been mainly in specialized, fabricated apparel products, in which 75 percent of all firms have less than 20 employees (U.S. Commerce Department).

### Untangling the Impacts

Several studies have attempted to estimate the separate influences of imports and of productivity growth on industry employment. In general, the studies conclude that labor productivity growth from

technological change has the larger impact on employment. But the adoption of new technology, with the associated productivity increases, may itself be a response to import competition. An additional factor is that the textile and apparel industries vary in their rate of technological change: technology in the textile industry is changing much more rapidly than in the apparel industry. The more-complex technology of the textile industry requires higher skills and makes U.S. workers who learn those skills more competitive. The labor-intensive technology of apparel, and its lower productivity, make this industry more vulnerable to wage competition from other countries.

Increasing the skills required for jobs in these industries should increase wages and incomes for those who continue to hold jobs, but a large pool of skilled, but unemployed, workers could keep real wages low. This pool of labor may be international if the technology is easily transferrable. In addition, wages may remain low in communities dependent on a single large firm, if that firm cuts its labor force.

The impacts of the NAFTA and the GATT will ultimately depend upon specific regulations to implement the agreements. For example, if the NAFTA requires that finished products be composed mainly, or completely, of materials of North American origin, firms currently in other countries may move to North America. They may also change their suppliers to meet the North American content requirement. Apparel firms currently located in Southeast Asia may move to Mexico and buy their textile inputs from the United States.

Forces that influence the long-run viability of the textile-apparel complex are typical of those facing all manufacturing. Changes in these industries associated with innovation and technology adoption have put pressure on the workforce to retrain. Where industry has survived, there has been capital investment to take advantage of new technology, along with investment in workers to develop new skills.

### How Can Virginia's Communities Respond?

The effects of changes in the textile and apparel industries are felt acutely in Virginia's rural communities. Of the 23 counties that had textile or apparel firms in 1987, eleven had an unemployment rate exceeding 8 percent, and twelve had more than 14 percent of families with household incomes below the poverty level. Attempts to increase employment and income in these counties are complicated by the increasing skill demands on a workforce where, in 20 of the 23 textile/apparel counties, over 50 percent of the adult population lacks a high school diploma.

More positively, however, some communities and firms are finding ways of working together to

surmount such problems. Fieldcrest-Cannon, a textile manufacturer in Danville, Virginia, is a good example. The company has upgraded its equipment and retrained its existing workforce as part of a comprehensive effort to remain competitive. Now the company is working with Danville Community College to identify required entry-level job skills. The community college, in turn, is working with local schools to help develop these identified skills in their students. The key elements of this example--adoption of improved technology, continuing training for workers, and cooperation with the community, including the schools--will greatly improve the potential for continued success in Virginia's textile and apparel industries.

#### References and Further Reading

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## NOTICES

\*Virginia Tech's Department of Agricultural Economics (which administers REAP) has a new name: the Department of Agricultural and Applied Economics. All departmental addresses and phone numbers remain the same.

\*REAP Report #13, *Educational Performance in Virginia's Rural Schools* by David Broomhall, is now available. The report discusses economic factors that can influence academic performance and motivation. Included is a useful reading list on the economics of education, access to education, and factors that influence academic achievement. For a copy, contact Extension Distribution, 112 Landsdowne Street, Blacksburg, VA 24061-0512; (703) 231-6192; please request Publication 448-212/REAP R013.

\**Better Local Government: A Resource Guide* is a 52-page catalog of publications and videos available to assist local governments. The materials listed originate from nine locally oriented organizations, such as the National Association of Counties. To obtain a free catalog, write Better Local Government, 1522 K Street NW, Washington, D.C. 20005-1202.

For more information, please contact REAP at Hutcheson Hall, Rm. 216, Virginia Tech, Blacksburg, VA 24061-0401; telephone (703) 231-9443.

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