



REUTERS/SCOTT MALONE

# HIGH-TECH TEXTILE MILLS SIDESTEP ARMAGEDDON

STRUGGLING TO COMPETE ON COST, U.S. TEXTILE MILLS TAKE AN INNOVATIVE APPROACH TO SURVIVE

# TEXTILE FIRMS PROSPER BY CLIMBING THE VALUE CHAIN, BUT JOBS ARE SCARCER

SPECIAL REPORT

- Spending on automation spurs productivity
- Some survivors exporting to China, Latin America
- Core of 400,000 workers hang on as survivors
- Many focus on high-tech, high performance fabrics

BY SCOTT MALONE

WALNUT COVE, N.C. - To get an idea of how some U.S. textile mills can compete with developing-world rivals who pay far lower wages, roll a bowling ball down one of the production lines at Parkdale Mills' Walnut Cove yarn plant.

Chances are you won't hit anybody, though you may have to foot the bill for some pricey equipment repairs.

The 200,000-square-foot (18,580-sq-metre) plant runs 24 hours a day, seven days a week, turning out 1.5 million pounds (680,400 kg) of cotton yarn every week with a staff of just 71 people spread over three shifts. On the overnight shift, just 11 people run the plant, which sprawls over an area about the size of four football fields.



SCRAMBLING: Workers tailor and arrange clothing at a garment factory in Myanmar. Crowded mills are a thing of the past in the United States, March 10, 2010. REUTERS/SOE ZEYA TUN



FREE REELING: Machinery at a Parkdale Mills factory in Walnut Cove, North Carolina packs yarn for shipment, June, 15, 2010. REUTERS/SCOTT MALONE

What's the secret? Constant investment in automation equipment that allows the highly profitable plant to make more yarn with fewer skilled workers at a price low enough that it can export it to Honduras and the Dominican Republic, where it is knit into T-shirts to be sold by customers including Canada's Gildan Activewear Inc.

The environment, where hundreds of machines churn away with little human intervention, is worlds away from what plant manager B.B. McGuire saw when he started his first, part-time job in a textile factory in 1973.

"We used to have people running all over each other," recalled McGuire, 53.

The latest new equipment at the 19-year-old plant, located in a town of 1,465 people near North Carolina's rural northern border, automates a process of moving rough yarn into the final round of spinning, allowing the four workers to do a job that needed 15 to 20 people with the old gear.

"It wasn't bad equipment, it's just that the technology has been updated," said McGuire. "We couldn't be competitive without this type of technology."

The factory has reduced its staff by about 40 percent over the past five years, while boosting production, McGuire said.

While productivity improvement is a goal for pretty much every American manager, the drive is particularly zealous at textile companies like Parkdale, and with good reason. Mills have been falling like flies in this country. According to industry lobbying group the National Council of Textile Organizations, more than 200 have closed since 2005, when the nations of the World Trade Organization agreed to drop the quotas that once regulated the global trade in fabric and clothing.

## "IF SOMEBODY CAN DO IT CHEAPER SOMEWHERE ELSE, THEN FOR GOSH SAKES, LET THEM HAVE THE BUSINESS."

But if the industry has declined, it hasn't disappeared. About 410,000 Americans still worked in textile and apparel manufacturing as of May -- more than worked in broadcasting or making electric appliances -- according to government data. Still, that represents about one-quarter of the 1.6 million people who worked in apparel and textile factories back in 1990.

The common theme among the companies that have survived and thrived is technology: run high-speed, highly automated equipment or make specialized, highly engineered fabrics that cannot easily be copied at a lower cost.

The industry has long railed against what it describes as unfair Chinese trade practices and even with Beijing's recent move to allow the yuan to float more freely versus the U.S. dollar, it regards China as a major competitive threat.

### "LET THEM HAVE THE BUSINESS"

A decade ago, Allen Gant looked at Glen Raven mills and realized the company his grandfather founded in 1880 after serving in the U.S. Civil War had a problem.

About 90 percent of the fabric it produced was basic cotton twill and denim used in clothing, which could easily be produced at a lower price outside the United States. An even bigger problem was that his customers -- apparel factories -- were fleeing his home country and setting up shop in Mexico and China, where costs were far lower.

It was time for a change, Gant realized.

"We just said, 'I'm sorry, we're going to use our resources and assets only for markets in which we have an opportunity to compete on a global basis, and we're not going to follow cost as a competitive strategy. If somebody can do it cheaper somewhere else, then for gosh sakes, let them have the business,'" said Gant, 63, who serves as president of the Glen Raven, North Carolina-based mill.

The company turned its focus to its Sunbrella line, fabrics designed to stand up to prolonged exposure to sunshine or bleach without fading. It can cost about four times as much as some of its less highly engineered rivals, but lasts far longer when used in an awning, as the roof of a convertible car or on patio furniture that's exposed to the elements.

Today, Glen Raven ships fabric made at its Anderson, South Carolina factory to Chinese furniture manufacturers, who use it to cover sofas and lawn chairs that they then ship back to the United States. Recognizing that nation's growing importance as a furniture manufacturing center, Glen Raven in 2006 opened a factory in Suzhou, outside Shanghai, where it makes some of the fabric it sells in China. About half of its 2,500-plus employees are based outside the United States, mainly at plants in China and France.

It sells the Chinese-made fabrics at prices comparable to what it charges for U.S.-produced goods.

It also makes a range of engineered fabrics used in everything from lining the ceilings of cars to producing camouflage netting the U.S. military uses to hide troops and vehicles from enemy radar.

The common theme among all these products, Gant said, is that they cannot be easily copied, which means the company faces little direct competition from rivals in low-wage nations. Apparel fabrics today represent about 1 percent of production.

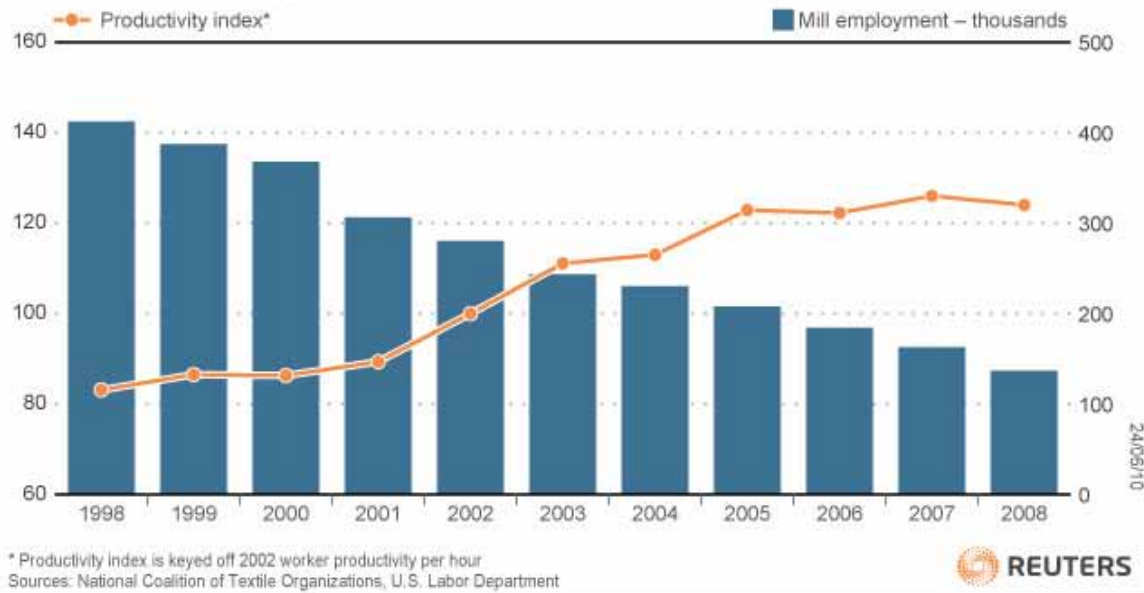
"Costs are important -- don't get me wrong, we work hard on our costs -- but it's really the innovation that makes a difference," Gant said. "Would we like to find a penny (of cost savings) a yard somewhere? Yeah, absolutely. Does that keep us from doing business? Absolutely not. And quite frankly, if a penny a yard keeps you from doing business, you're in the wrong business."



WINDING UP: An employee at a textile factory in Xiangfan, Hubei province, March 30, 2010. REUTERS/STRINGER SHANGHAI

## U.S. textile productivity and employment

Productivity is increasing as mill employment continues to fall



ECONOMIZING: Mills are vastly more productive than they were a decade ago, despite having shed more than 250,000 employees, June 26, 2010.

REUTERS/STEPHEN CULP

### MORE WITH LESS

Parkdale and Glen Raven's focus on technology has made them survivors in an industry littered with stories of failure.

Industry giants including Burlington Industries, J.P. Stevens and Avondale Mills have all sought bankruptcy protection or closed outright over the past decade, though portions of Burlington live on in International Textile Group Inc, a company created by private equity investor Wilbur Ross in the early 2000s out of the wreckage of several bankrupt companies.

The companies that have survived have found ways to do more with less. Through automation and cost cutting, U.S. textile mills boosted their output per hour of work by about 49 percent from 1998 through 2008, according to Labor Department data.

"When you walk into these plants, it's hard to find people," said Blanton Godfrey, dean of North Carolina State University's College of Textiles in Raleigh. "A lot of times, you go to these textile companies and people think they're not doing well because their parking lots are half full. Well, the parking lots were built 20 years ago when you needed lots of people. You don't need as many people today."

While improved productivity may be good news for the surviving mills, it holds a downside -- fewer jobs.

Overall employment in the industry is down about 40 percent over the past five years, a trend that reflects mill closures, higher productivity and the closing of many apparel factories in the region. Garment manufacturing remains far more labor-intensive, with factories still featuring rows of hundreds of workers manning sewing machines in configurations that would be familiar to the European immigrants who flocked to New York City dress factories almost a century ago.

The decline in the number of jobs available has even prompted some institutions that were once closely allied with the industry to pull away from it. For instance, Philadelphia University, which for most of its history was known as the Philadelphia College of Textiles and Science, in recent years has dropped its undergraduate major in textile engineering.

"You do not want to take a 17- or 18-year-old person and give them such a narrow focus," said David Brookstein, dean of the School of Engineering and Textiles, which still offers graduate level specialization in textiles. Even in southern towns that were once dominated by textile mills, some have grown wary of working for the industry.

**"WE WORK HARD ON COSTS – BUT IT'S REALLY INNOVATION THAT MAKES A DIFFERENCE."**

Jack Woodson, director of operations at Glen Raven's 1 million square foot (92,900 sq metre) plant in Anderson, South Carolina, said when skilled jobs come open at the plant, it can be difficult to lure experienced textile workers, who have experienced a layoff or two at prior jobs, to return.

"The middle aged, experienced worker says, 'I don't know if I want to go back to textiles,'" said Woodson, 43, who followed his father and grandfather to work in the mills. "It is a staffing challenge for us."

Rather, experienced manufacturing workers gravitate toward the cluster of automotive parts suppliers that have sprung up nearby to serve BMW's U.S. plant in Spartanburg, about 60 miles (100 km) to the northeast.

## PRIVACY POLICY

Another common trait of both Glen Raven and Parkdale is that both have been family owned throughout their history, which has allowed them to invest in new equipment even during the recent brutal recession and make decisions like Glen Raven's to pull out of the apparel business.

The heads of both companies said they were highly profitable and growing, but declined to discuss dollar amounts.

"We have the opportunity to invest for the long term," said Anderson Warlick, president of Parkdale, which has its headquarters in Gastonia, North Carolina. "We don't have to worry about a bad quarter or making an irrational decision based on some knee-jerk reaction to a share price. It gives us a little bit of a longer-term view, and I think that is starting to pay off."

At a time when most other U.S. textile companies are cutting back production, Parkdale is reopening some idle plants, including a facility in Graniteville, South Carolina, that reopened recently and another in Gaffney, South Carolina, that it plans to reopen later this year.

All told it employs some 4,000 people today in 36 mills spread across the United States, as well as Mexico, Honduras, Colombia, Canada and Thailand. Its constant investment in automation equipment allows it, like Glen Raven, to export U.S.-made yarn to China.

"We have quite a bit of yarn going from Rabun Gap, Georgia, to China," said Warlick, 53.

Still, success hasn't been limited to private companies. Unifi Inc, which makes polyester and nylon yarn, has recently returned to a profit, posting three straight quarters of earnings after a four-year streak of losses.

That Charlotte, North Carolina-based company, which has \$178.7 million in publicly traded bonds, regards access to the public capital markets as critical given the high cost of financing its heavy equipment.

"There is a downside to being a public versus a private company. Being public, you obviously have much more accounting and reporting and regulatory standards ... and you provide information to the rest of the marketplace," said Chief Financial Officer Ron Smith. "But at the end of the day, our ability to access the capital markets and the high-yield market to refinance our debt is our biggest advantage."

## NEXT STEPS

At North Carolina's College of Textiles, meanwhile, researchers are focused on probing the frontiers of fabric technology, finding uses for mill products in everything from the stents that doctors use to prop open blood vessels



SOLE SURVIVOR: An employee at Glen Raven's Anderson, South Carolina textile mill checks the quality of completed fabric, June 14, 2010. REUTERS/SCOTT MALONE

in patients with heart disease, to ways of using nano-scale carbon fibers in lithium-ion batteries for hybrid cars.

Scientists at the school's Raleigh, North Carolina campus are also working on developing cutting-edge protective equipment for firefighters and other emergency response personnel.

There, Professor Donald Thompson spends his days putting protective jackets, gloves and other garments through a barrage of tests including one chamber where sensor-loaded dummies are dressed up in protective gear and blasted with flames to test fireproofing. Actual people test the comfort of clothing in a climate controlled room where they face temperatures ranging from -20 degrees Fahrenheit (-10 degrees Centigrade) to 120 degrees Fahrenheit (49 degrees Centigrade).

"In order to understand comfort, you have to make people uncomfortable," Thompson said of the barrage of tests. "It's hard to make someone feel more comfortable. So we make them uncomfortable first and then they can perceive being less uncomfortable."

The undergraduates entering the school also seem to be more interested in testing their own comfort zones in their careers.

"Traditionally, a lot of the students came to the college because they didn't want to leave North Carolina and they could get a good textile job in North Carolina," said Godfrey, the school's dean. "Now a lot of the graduates want to go work in the world or work in Wisconsin or California or New York. A lot of them are going because the opportunities are everywhere."

(Reporting by Scott Malone, editing by Jim Impoco and Claudia Parsons)

COVER PHOTO: A worker tends yarn-spinning equipment at a Parkdale Mills plant in Walnut Cove, North Carolina, June 15, 2010. REUTERS/SCOTT MALONE

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