Textiles and Apparel: Made In USA . . . Again?
Kimberlie Freund, Mary Roop, Heidi Colby-Oizumi

Abstract

Is the U.S. textile and apparel industry on the road to recovery? This paper examines recent trends to determine whether data on trade, production, employment, and investment reflect the narrative surrounding revitalization of the industry. For the textiles sector, such data show mixed evidence of an industry in recovery. Nevertheless, numerous accounts indicate that U.S. or foreign-owned textile firms may be investing in the United States either to increase existing domestic capacity or to add new manufacturing operations. In the apparel sector, evidence suggests that in recent years reshoring has taken place, albeit on a modest scale. This information comes from accounts from U.S. apparel brands and retailers and, to some extent, from data on capital expenditures and shipments. The paper discusses the driving forces behind investment in the domestic industry, as well as strategies that industry players are prioritizing in order to stimulate the industry and remain competitive.
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Introduction

As manufacturing has become increasingly global, companies have numerous options for where to locate production. At one time, the United States boasted a large and robust textile and apparel industry. As with many U.S. manufacturing sectors, increased globalization and offshoring contributed to domestic production and employment declines. In particular, the phaseout of global textile and apparel quotas from 1995 to 2005 challenged U.S. apparel firms. The firms faced increased competition from lower-cost producers,¹ which contributed to the longer-term consolidation of the industry.² With sharply increased apparel imports, the U.S. textile sector’s downstream domestic apparel markets virtually disappeared. The progressive shift away from domestic production in the textiles and apparel sectors resulted in U.S. factory closures, an exodus of manufacturing jobs, severe contraction in the industry among both producers and suppliers, and increased reliance on imports to fulfill growing U.S. demand.

Recently, however, anecdotal information suggests an increase in new or expanded domestic manufacturing operations. Apparel manufacturers are seeing orders return to the United States, and there is some evidence of new investment in the sector. For textiles, there has been investment by U.S. firms—in order to increase existing domestic capacity or to start new manufacturing operations—as well as by foreign-owned textile firms. This paper first examines trends in the U.S. textile and apparel sectors to determine whether data on trade, production, employment, and investment reflect the narrative surrounding each sector’s revitalization. Second, it discusses the driving forces behind new investment and expansion of existing facilities, and provides highlights of some of the new investments. Finally, it points to certain strategies that firms and organizations are using to revitalize the textile and apparel sectors.

This discussion focuses first on the textile sector, followed by a discussion of the apparel sector.³ The textile sector, composed of fibers, yarns, and fabrics, is a key part of the apparel supply chain. Nonetheless, the domestic textile sector has increasingly focused on non-apparel markets, with end uses in construction, healthcare, logistics, manufacturing, automotive, and numerous other sectors. The apparel manufacturing sector (not to be confused with the broader apparel retail sector) manufactures garments through the cutting and sewing of pre-made fabric, as well as by knitting garment parts (or the entire garment) and assembling the parts into a finished garment.

¹ For example, workers earn as little as $63 per month in Bangladesh and $121–175 per month in Vietnam. Donaldson, “Sourcing Costs Climb,” January 2, 2018.
² The Agreement on Textiles and Clothing obligated the United States, the European Union, and Canada to phase out import quotas on textiles and apparel from member countries of the World Trade Organization in four stages ending January 1, 2005.
³ For the purposes of this paper, “textiles” includes North American Industry Classification System (NAICS) codes 313 (textile mills) and 32522 (artificial and synthetic fibers and filaments). The apparel sector is covered by NAICS 315 (apparel). This paper does not discuss the textile products sector (NAICS code 314), which covers finished non-apparel textile products such as towels, sheets, rugs, and backpacks.
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Textiles

Overview

Stories of revitalization in the textile sector abound. However, data on investment, shipments, trade, and employment provide only mixed evidence of an industry in recovery. Total capital expenditures in plants and equipment for the textile and textile product sectors increased by 36 percent in the 2013–16 period, rising from $1.6 billion in 2013 to $2.1 billion in 2016, the latest year for which data are available (figure 1 and annex A, table A1). The 2016 level was also well above the pre-recessionary level in 2008 ($1.4 billion), suggesting that these sectors are seeing a resurgence. Anecdotal evidence points to significant investment in the textiles sector. We reviewed reports of new or planned investments (those announced from January 2014 through December 2017), which showed 59 publicly announced new or planned investments in the U.S. textiles sector (a full list of the firms are shown in annex B). Much of the new investment is by foreign firms, including new investments by Chinese and Indian firms, as well as by firms from Mexico, Canada, Turkey, and Saudi Arabia, to name a few. The domestic industry has also announced investments to expand capacity, as well as to open new plants.

Figure 1. Total capital expenditures for structures and equipment for textile mills and textile product mills (NAICS 313 and 314), 2013–16


4 Official data on capital expenditures show investment in buildings and production capacity for the textiles and textile products sectors combined. Data are not available separately for artificial and synthetic fibers and filaments (NAICS 32522).


6 The informal survey reflects only publicly announced investments and thus likely significantly understates the number and value of investments actually made by the industry. The investments listed here typically reflect new plants or expansions of existing facilities/capacity.
The U.S. market for textiles is supplied primarily by domestic shipments, accounting for 58–60 percent of the domestic market during the 2013–16 period. Despite evidence of new investment in the textiles sector, data on U.S. shipments show mixed results. After four years of moderate decline, U.S. textile shipments increased in 2017 to $39.6 billion, but remained 3 percent below the 2013 level (figure 2 and annex A, table A2). At $10.6 billion, U.S. textile exports in 2017 were also below the five-year high of $12.1 billion in 2014. Rather than simply increasing capacity, some of the new investment is likely replacing existing equipment, as firms upgrade and modernize their manufacturing processes and/or focus their operations on different products. However, along with new investments, there have been closures and restructuring in some segments of the industry. For example, in late 2017, Cone Denim, an iconic domestic producer of denim, announced the closure of its U.S. denim plant.

Any growth in investment or shipments is not reflected in employment data. Employment in the textiles sector declined by 4 percent from 131,000 in 2013 to an estimated 126,000 in 2017. Although statements by industry experts suggest the industry has invested in technology to increase labor productivity, official data on labor productivity for yarns and fabrics—which accounts for most of the employment in the textiles sector—show steady declines during 2013–16.

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7 For example, one industry official stated that new investment in weaving equipment is primarily replacing older machines. NCTO, “NCTO Roundtable: Challenges and Opportunities,” 2018.
10 The Bureau of Labor Statistics (BLS) labor productivity index for textile mills declined from 133.9 in 2013 to 107.9 in 2016, the latest data available as of February 21, 2017. The index is based on a base year of 1997 = 100. USDOL, BLS, "Annual Index of Labor Productivity."
Advantages of Producing Textiles in the United States

Although a resurgence in the domestic textile sector may not be manifest in the data, many domestic and foreign firms have commented on the attractiveness of producing domestically, and solid reasons companies might take a second look at the United States as a manufacturing base (see box 1 and annex B for additional information on specific examples). Advantages to producing in the United States include local and state incentives for investment, and the benefits afforded by free trade agreement (FTA) preferences that encourage the use of U.S.-produced inputs in downstream production in FTA partner countries. Other key factors are reportedly making a major difference with respect to textiles production, particularly in the yarn subsector; these include access to reliable and competitively priced energy in the United States compared to that of other major producing countries, and access to high-quality, competitively priced cotton.
Box 1. Notable Investments and Expansions in the U.S. Textile Sector

An informal staff survey of reports of new or planned investments in the U.S. textile sector, announced from January 2014 through December 2017, reveals 59 publicly announced new or planned investments in the textiles and textiles products sectors totaling over $2.3 billion (see annex B, table B1). Much of the new investment is by foreign firms, including Chinese and Indian firms, as well as firms from Mexico, Canada, Turkey, and Saudi Arabia, to name a few. The domestic industry has also announced investments to expand capacity, as well as to open new plants. More than two-thirds of the announced investments are in North Carolina and South Carolina, which are traditional textile-manufacturing states. Although new investments cover a wide variety of products, a few products—cotton yarn and nonwoven fabrics (nonwovens)—are notable for the large number of investments made by foreign firms in particular. Not all announced investments have come to fruition: at least two planned investments, one by an Indian firm and the other a Mexican firm, appear to have fallen through.

The cotton yarn subsector includes several instances of new or planned investment in the U.S. textile industry. Foreign investment includes two Chinese firms. The first, China’s Keer Group, in 2013 founded Keer America Corporation and announced plans for a $218 million investment for two cotton yarn production facilities in Indian Land, South Carolina. When fully completed, they are expected to generate a total of 500 new jobs in the production of industrial cotton yarns. The first facility opened in February 2015; the second is expected to be in 2018. Keer stated that it chose South Carolina as a manufacturing location for its proximity to raw materials suppliers, as well as consumers; the trainability of its workforce; the state’s stable business environment; the low costs of land, electricity, and raw goods; and access to the Port of Charleston.

The second, Shandong Ruyi Technology Group of China, in May 2017 announced plans to convert a former Sanyo television plant into a cotton yarn manufacturing facility. The company reported it will invest $410 million and create up to 800 new jobs in that state. Other foreign firms announcing investments include Gildan Activewear, a Canadian apparel company, which has made a substantial investment in new and upgraded cotton yarn-spinning facilities in North Carolina. Domestic investment by U.S. firms includes that by Parkdale Mill, the largest U.S. producer of spun yarn, which recently invested $145 million to add ring spinning capacity at its yarn plant in Mountain City, Tennessee.

Nonwoven textiles (nonwovens) is another sector that has seen a number of investments in new plants and expanded capacity by both domestic and foreign firms. Nonwovens are used in a large variety of end-use markets, including personal hygiene, healthcare, automotive, industrial, and landscaping. Mogul Co. Ltd., a Turkish nonwovens company, recently opened its first U.S. facility in South Carolina, with a $17.6 million investment to make nonwovens for wipes. The company stated that the new facility will focus on increasing sales of wipes in the U.S. market and will “act as a support platform for penetration into the Central and South American, China and Asia-Pacific markets.” In October 2017, Sandler AG, a German manufacturer of nonwovens with various hygienic uses, opened a plant in Georgia, the result of a $30 million investment. The plant, its first outside of Europe, is intended to serve the North American market and the “growing demand outside of Europe.” Two other foreign firms—from China and Denmark—chose North Carolina for production of nonwovens. In 2016, Uniquetex, a joint venture of multiple Chinese companies, announced its intent to invest $31.6 million and hire 150 employees to establish new production of nonwovens for the healthcare and industrial markets. Fibertex Personal Care, a Danish firm, also recently announced that it is investing in its first U.S. nonwovens manufacturing plant.

There have been numerous other investments by both domestic and foreign firms in a variety of other textile subsectors, including polyester staple fibers; carpet fibers, yarns, and carpet backing; and knit and woven fabrics. Annex B shows a table of investments by U.S. and foreign firms compiled from public sources.
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The informal survey reflects only publicly announced investments and thus likely understates the number and value of investments actually made by the industry. The investments listed here typically reflect new plants or expansions of existing facilities/capacity.

In October 2013, Shrivallabh Pittie Groups, an Indian-based textile manufacturer, announced plans to invest $70 million to set up a yarn spinning facility in Georgia. Gulf Coast Spinning, owned by Zags, a Mexican firm, appears to have abandoned plans to invest in a new yarn mill in Louisiana. These investments are not included in the table of investments presented in appendix B. State of Georgia, Georgia Department of Economic Development, “Shrivallabh Pittie Group to Create,” October 15, 2013; Gunn, “Weary of Constantly Being Left at Economic Development Altar,” June 19, 2016.

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Energy Costs

Energy costs are an important consideration in deciding where to locate energy-intensive textile production. Low U.S. energy costs are considered a competitive advantage for the domestic industry, particularly in the Southeast, where industrial rates in some states are lower than the national average. According to the International Textile Machinery Federation (ITMF), on average, the cost of electric power to manufacture one kilogram of rotor yarn in the United States in 2016 was $0.08, compared with $0.17, $0.14, and $0.13 in China, South Korea, and India, respectively. As a result, despite significantly higher labor costs in the United States (see “Automation for Greater Efficiency” below), the total cost to spin one kilogram of cotton yarn in the United States was lower than that for China, India, and South Korea. Keer America Corp., a Chinese textile producer that has invested in cotton yarn production in the United States, stated that electricity prices are as much as 40 percent

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11 The industrial electricity service costs in South Carolina, Arkansas, and Georgia were 90.1 percent, 89.9 percent, and 86.4 percent of the national average, respectively, in 2016. USEIA, “Average Price of Electricity,” Electric Power Annual, 2016. Multiple U.S. industry representatives also cited the relatively low wages in the Southeastern states as an attractive characteristic of the region for investment. U.S. industry representatives, interview by USITC staff, October 4, 2017, October 5, 2017, and March 9, 2015.

12 One study showed that the average cost of electricity in China was 34–49 percent higher than in the United States, and sometimes as much as 70 percent higher, depending on the region. Comerford et al., “A Comparison of U.S. and China,” 2016, 17; ITMF, International Production Cost Comparison 2016, January 2017, 26.

13 The cost was $1.82 in the United States, $2.40 in China, $1.83 in India, and $2.00 in South Korea. The costs were calculated for rotor (open-end) spun yarn. ITMF, International Production Cost Comparison 2016, January 2017, 26.
lower in Lancaster County, South Carolina, than in Hangzhou, China, and thus were a contributing factor in its decision to invest in the United States.\textsuperscript{14}

**Availability and Reliability of High-Quality Cotton**

The availability and reliability of high-quality cotton is also a factor influencing investment in the cotton yarn sector in the United States. For example, the Chinese firm Shandong Ruyi is investing in a new cotton yarn production facility in Arkansas that is expected to use 200,000 tons of locally grown cotton annually.\textsuperscript{15} In 2017, the United States was the third-largest producer of cotton after China and India.\textsuperscript{16} Cotton grown in the United States is known for its consistent quality and reliability thanks in large measure to the USDA’s cotton grading system.\textsuperscript{17} Moreover, U.S. farmers and distributors have established reputations for honoring their cotton contracts, which reportedly has been a challenge in the past with countries such as China.\textsuperscript{18}

**State and Local Incentives**

State and other local government incentives are another important factor in attracting new investment in textiles, especially by foreign firms. South Carolina, North Carolina, Georgia, and Arkansas, in particular, have provided substantial financial incentives including tax credits, training assistance, and help with infrastructure development, among other incentives.\textsuperscript{19} For example, the state of Georgia’s Department of Economic Development offers tax credits to encourage positive economic business practices such as the creation of high-paying jobs and the increase of trade through Georgia’s ports.\textsuperscript{20} The state also offers tax exemptions, small business incentives, and financial assistance to new

\textsuperscript{14} Trentmann, “For More Chinese Firms, It Pays to Make It,” February 26, 2017.
\textsuperscript{15} Shandong Ruyi is expected to begin operations at its Forrest City, Arkansas-operations in mid-2018. Monsen, “Cotton Woos Chinese Textile Giant to Arkansas,” November 9, 2017.
\textsuperscript{16} In 2016 the India, China, and the United States produced 27,000, 22,750, and 17,170 bales of cotton, respectively. USDA, FAS, PSD Online database (accessed February 9, 2018).
\textsuperscript{17} In 2017 Cotton Council International focused the promotion of U.S. cotton on its sustainability, quality, transparency, premium value, and innovation. The regulatory system surrounding the industry prescribes strict environment and workplace protections enforced by federal and state agencies. *Textile World*, “The Cotton the World Trusts,” November 28, 2017; Cotton USA, “U.S. Cotton: Classification Systems Insures Consistent Quality”; U.S. industry representative, interview by USITC staff, October 4, 2017.
investors,\textsuperscript{21} as well as workforce initiatives, such as Quick Start, offered through the Technical College System of Georgia.\textsuperscript{22}

North Carolina, too, offers numerous incentives. One example is the $3 million Job Development Investment Grant (JDIG) awarded to Everest Textile, a Taiwanese textile company, as part of its investment in the construction of a new textiles factory that will weave, dye, and finish nonwoven fabrics for high-performance sportswear.\textsuperscript{23} The grant is contingent upon the company’s ability to meet job creation and investment goals over a 12-year period.\textsuperscript{24} Similarly, Shri Govindaraja Textiles, an Indian textile manufacturer with a facility in Eden, North Carolina, reported touring nine different U.S. states before choosing North Carolina. That state awarded the company a $750,000 Community Development Block Grant to assist with initial building maintenance costs.\textsuperscript{25}

The state governments of Arkansas and South Carolina offer similar incentives. For example, Shandong Ruyi Technology Group, a textile manufacturer with the potential to create 800 new jobs, received up to $4 million in grants (contingent upon job creation), cash rebates equal to 5 percent of the total payroll associated with new jobs for 10 years, and sales tax refunds on building materials associated with the investment.\textsuperscript{26} In South Carolina, to encourage China-based Suzhou Glacier Import & Export Company’s $24 million investment in a manufacturing facility in the state, the state Coordinating Council for Economic Development approved job development credits that allowed the company to obtain a refund to use for approved business expenditures.\textsuperscript{27}

**Free Trade Agreements**

Another factor influencing production decisions and reshoring that is important to the textiles sector is free trade agreements (FTAs), specifically the rules of origin of such agreements. The United States currently has bilateral or multilateral FTAs in place with Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Jordan, South Korea, Mexico,
Morocco, Nicaragua, Oman, Panama, Peru, and Singapore. Duty-free access for apparel items under these agreements is spelled out in the rules of origin of the agreement.28

In most cases duty-free access to the U.S. market for apparel items is tied to the origin of the yarns and fabrics used in production. Most U.S. FTAs include a “yarn forward” rule of origin, which dictates that all yarn and fabric used to produce apparel in an FTA partner country must come from either the United States or the partner country. Such conditions are designed to encourage production of yarns and fabrics in the United States or the partner country; therefore, they are an inducement in the maintenance and/or expansion of U.S. textile manufacturing. The impact of the “yarn forward” rule of origin is especially apparent in U.S. exports to Western Hemisphere FTA partners, which accounted for 74 percent of the total value of U.S. textile exports in 2017.

Industry Efforts to Improve Competitiveness

Aside from the external factors discussed above, U.S. textile producers are making internal changes to maintain and build their competitiveness, enhancing the attractiveness of the United States as a manufacturing location. The industry is investing in new technology to improve efficiencies in order to supply the latest innovations that will maintain and grow domestic and global market share. As stated by one U.S. specialty yarn producer, “We must innovate to survive”; and according to this producer, the domestic industry’s knowledge and expertise is its “biggest advantage over textile companies from other parts of the world.”29

Innovation and Diversification

Innovation is an important part of the textile sector’s competitiveness strategy: the sector must both develop new products to stay ahead of the competition and diversify in order to enter new markets.30 Research and development occurs in all stages of the supply chain, from the manufacturing of fibers and yarns to woven and knit fabrics, nonwovens, and finished goods. Innovation in the industry feeds into every downstream market, including the traditional apparel, military, medical, infrastructure, landscaping, transportation, and industrial markets. Patents and trademarks are important for this industry, and innovation, coupled with branding, is one of the ways the industry tries to differentiate itself from overseas competitors. For example, Milliken & Company states it has one of the largest textile research facilities in the world and boasts over 2,200 U.S. patents.31 The importance of branding can be seen with the Sunbrella line of fabrics made by Glen Raven and the Polartec line of fabrics made by Polartec, both of which are now household names.

Many specific examples illustrate the pursuit of innovation in the domestic textile sector. American & Efird, a global industrial and consumer thread company is collaborating with Applied DNA Sciences to

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28 Rules of origin are the criteria used to determine the country in which a product was made (i.e., country of origin).
develop a new anti-counterfeiting sewing thread.\textsuperscript{32} Other examples of textiles that go beyond the traditional markets include Milliken’s ResQ\textsuperscript{TM} fabric for the military and fire and rescue services sectors, which self-extinguishes when removed from a flame, and Glen Raven’s GlenFlow, a water-filtration fabric that removes salt from seawater.\textsuperscript{33} These and other U.S. firms use their research and manufacturing capabilities to work closely with end users to develop new products. For example, Highland Industries has worked with the military and the National Air and Space Administration (NASA) to design heat shields for rockets, as well as with the global food industry to develop lightweight, readily sterilized, and flexible “bladders” to transport liquids.\textsuperscript{34}

Targeted innovation in the textile sector occurs across disciplines and organizations. The Advanced Functional Fabrics of America (AFFOA) initiative is a notable example of a collaborative effort between government, industry, academia, and nonprofit organizations.\textsuperscript{35} AFFOA’s purpose is to integrate technologies—from fibers and yarns to integrated circuits, solar cells, light-emitting diodes (LEDs), and other capabilities—in order to create textiles that can “see, hear, sense, communicate, store energy, regulate temperature, monitor health, change color, and more.”\textsuperscript{36} For example, one team formed under the auspices of AFFOA created “sensing fabrics” that can monitor strain or detect cracks in the integrity of infrastructure when applied to buildings, roadways, bridges, dams, and pipelines.\textsuperscript{37}

Diversification is another strategy that textile producers are using to remain competitive. Many firms have diversified production into different products and/or markets in order to expand their market opportunities or transition into new businesses. The president of Champion Thread, a domestic producer of industrial sewing thread, stated that several capital investment projects in 2018 will “further enhance our ability . . . to diversify our product mix into new markets.”\textsuperscript{38} Similarly, National Spinning Company, a domestic yarn producer since 1921, has diversified into nonwoven fabrics production for the automotive, home appliance, construction, bedding, and other markets.\textsuperscript{39} In 2016, it opened a new nonwoven fabric plant in South Carolina.\textsuperscript{40} Polartec (formerly Malden Mills) invented the first synthetic fleece that was used by an outdoor apparel company, Patagonia, in 1981. Since then, Polartec has expanded its product line to include insulating, protective, and flame-resistant textiles for the active, work, military, and athleisure markets.\textsuperscript{41}

\textsuperscript{35} Established with a $75 million grant from the U.S. Department of Defense and led by the Massachusetts Institute of Technology, the Advanced Functional Fabrics of America (AFFOA) initiative is a consortium with over 100 members from industry, academia, and nonprofit organizations. USDOD, “DoD Announces Award of New Revolutionary Fibers and Textiles Manufacturing,” April 1, 2016; U.S. industry representative, email to USITC staff, April 5, 2018.
\textsuperscript{36} USDOD, “DoD Announces Award of New Revolutionary Fibers and Textiles,” April 1, 2016.
\textsuperscript{40} NCTO, “Annual Capital Investments by U.S. Textile Mills Surge,” 2017.
\textsuperscript{41} Polartec, About Us, \url{https://www.polartec.com/about_us} (accessed March 16, 2018).
Some firms in the industry have also diversified by manufacturing downstream products to provide a full service product to their customers. Kentwool Manufacturing, for example, a domestic producer of wool yarn, has expanded its product offerings to include wool golf socks and men’s briefs and loungewear. The company partners with other domestic firms, such as Wigwam, to have socks made under the “Kentwool” name.

### Automation for Greater Efficiency

Automation plays a critical role in the competitiveness of the textile industry. The industry’s continued efforts to maintain a competitive advantage using automation are particularly evident in its investment in new machinery for open-end spinning. According to the International Textile Manufacturers Federation (ITMF), nearly one-half of all open-end rotors installed in the United States in 2015 were less than nine years old, compared with 27 percent in 2013. In comparison, while this figure was only 28 percent for India in 2015, in China it was 79 percent. The large share of open-end rotors installed in China in the last nine years shows why other factors, in addition to investment in new machinery, such as innovation, service and quality, are so important to the competitiveness of the U.S. textile industry.

In addition to investing in machinery that operates more efficiently, the U.S. textile industry has worked to minimize labor costs. Wages are significantly higher in the United States than in many textile-producing countries, although automation in the industry has helped level the playing field. In 2016, the average hourly wages for skilled and unskilled personnel in U.S. cotton yarn spinning were $18.10 and $12.05, respectively; in China, they were $2.45 and $1.83, respectively. Although these labor cost differences are considerable, U.S. firms have been able to reduce costs by incorporating automation into traditionally labor-intensive tasks such as quality control, especially in fabric inspection, and other non-value-added areas, including basic packaging, material handling, and inventory tracking. In addition, integrating digital connectivity at the manufacturing level allows for greater transparency and control of the production process. For example, digital technologies applied to textile machinery can detect flaws in textile production and notify an operator to correct the defect before its incorporation into the final product.

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44 Open-end spinning, also known as rotor spinning, is a type of spinning used to make spun yarn. It omits a step used in traditional ring spinning and therefore is faster than ring spinning.
47 Wage costs were calculated on the basis of the wages paid to operatives and to skilled and unskilled labor for maintenance work. All social and shift-work premiums were included. ITMF, *International Production Cost Comparison*, 2016, 9.
49 U.S. industry representatives, interview by USITC staff, October 4, 2017 and October 5, 2017.
Overview

There is some evidence to suggest that reshoring has taken place in recent years in the apparel sector, although on a modest scale. This impression is supported not only by accounts from U.S. apparel brands and retailers, but also to some extent by data on capital expenditures and shipments. For the 2013–16 period, capital expenditures were up 5 percent to $301 million (figure 3, annex A, table A1). Recent reports on new investment also suggest capital investment in the apparel sector may be increasing, as the industry begins to adopt more labor-saving technologies. Although domestic shipments of apparel reached a record low of $11.5 billion in 2014 and remained at that low level in 2015, they showed modest increases the following two years, reaching $12.0 billion in 2016 and $12.5 billion in 2017 (figure 4, annex A, table A3)—the first positive trend since 1998. The American Apparel & Footwear Association (AAFA) estimates that the domestic industry produced 603.8 million garments in 2016, representing 2.8 percent of total apparel consumed in the United States in 2016. This total was up from an all-time low of 2.0 percent in 2010.

Any evidence of an uptick in the apparel sector, however, is not reflected in employment data. Employment in the apparel sector steadily declined during 2013–17, down 21 percent from 145,000 workers in 2013 to 120,000 workers in 2017. Official data on labor productivity also showed steady declines during 2013–16.

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50 Domestic shipments of apparel reached a peak in 1997, valued at $68.0 billion. U.S. Census, “Manufacturers' Shipments, Inventories, and Orders” (accessed August 9 and December 5, 2017).
51 It is difficult to compare domestic shipments of apparel with imports because the vast majority of imports are generally much lower value than U.S.-produced items. To eliminate this discrepancy, the American Apparel and Footwear Association (AAFA) estimates import market share in terms of quantity. AAFA, “ApparelStats 2017,” June 2017, 6.
52 The BLS labor productivity index for apparel declined from 144.7 in 2013 to 119.8 in 2016, the latest data available as of February 21, 2017. The index is based on a base year of 1997 = 100. USDOL, BLS, "Annual Index of Labor Productivity."
Figure 3. Total capital expenditures for structures and equipment for apparel manufacturing, 2013–16


Figure 4. Apparel: U.S. imports for consumption, domestic exports, and domestic shipments, 2013–17

Industry survey data suggest that U.S. fashion companies will continue to source apparel from the United States, although increases in new domestic sourcing may be slowing and the amount sourced domestically on average is relatively small. A 2017 United States Fashion Industry Association (USFIA) benchmarking study revealed that 61 percent of survey respondents indicated that they sourced at least some goods from the United States, with most sourcing 10 percent or less of their total volume/value in the United States. The benchmarking study also indicated that 21 percent of respondents would increase sourcing from the United States in the next two years, compared with 10 percent of respondents who indicated they might reduce sourcing in the United States.

However, the 2017 survey results were less promising for U.S. industry than the results in 2014, when 82 percent of retailers and 55 percent of U.S. importers/wholesalers indicated they would increase sourcing from the United States in the next two years. This drop suggests that any major increases in domestic sourcing may have already taken place and further increases may be smaller. A 2017 survey conducted by McKinsey and Company indicated a slightly more optimistic view on reshoring in the apparel sector: more than one-third of chief purchasing officers in the apparel industry predicted a greater use of reshoring by their companies.

Most reshoring by the apparel sector does not appear to reflect a large-scale movement of production from one country back to the United States. Instead, reshoring has been part of a strategic realignment of many firms’ overall supply chains. Domestic production can be part of a firm’s strategy to reduce supply chain risk. According to a 2014 USFIA benchmarking study, companies that source from a diverse group of countries were “more likely to commit to sourcing in the United States as part of their overall strategy to diversify sourcing,” rather than cutting back on imports.

China is still the largest source of all apparel sold in the U.S. market, accounting for 41.9 percent of the quantity of U.S. apparel imports in 2017. Nevertheless, rising costs in China have led many firms to reassess their global sourcing strategies. While the cost of U.S. production is still significantly higher than that of China, when combined with other factors, sourcing domestically may be competitive for some products. This applies particularly to products that require customization, have shorter lead times, are luxury items, and/or are capable of being produced using high levels of automation. New and developing technology that allows for more automation of the apparel production process will also make production in the United States more cost-competitive with offshore production. For example, the “Sewbot” technology developed by Softwear Automation Inc. allows machines to replace much of the labor-intensive sewing process (see “Role of Technology” below).
Advantages of Sourcing Domestically

Numerous reports indicate that brands are increasing their U.S. sourcing and that manufacturing firms are reshoring or starting new production in the United States (box 2). Among the reasons given for producing in the United States are improved lead times, better quality control, and more flexible production. For products with frequent, short selling seasons, it makes sense to produce closer to market, including within the United States. The number of retail apparel sales seasons has increased from a traditional 2 main seasons, to 6–12 seasons (or up to 26 seasons for some fast-fashion brands). Such frequent change—and within shortened time periods—means that quick service and turnaround times are important for brands and manufacturers. In addition, the role of e-commerce and a more demanding consumer is pushing fashion into both increased customization and faster turnaround times. As stated by the president of the Sourcing Journal, “As the need for speed continues to become more important, nearshoring and onshoring is going to be become more relevant.”

Shorter lead times are also important because retailers and apparel brands prefer to finalize purchase orders later in the development process to improve forecasting and reduce errors that lead to markdowns or shortages. An official from Under Armour said the gap between projected and actual demand is often too wide to safely place orders six months in advance. Boathouse Sports, a designer and manufacturer of performance apparel, reshored production from China largely to shorten lead times; orders from China required at least six months lead time, whereas U.S. factory orders required less than one month from order to ship date.

Along with more frequent orders, as discussed above, order sizes are often smaller as well and U.S. production can fill a gap by handling orders that are too small for overseas production. Small orders may be used to test the market, with the option to reorder or adjust the product as needed. Start-ups and firms that have more customized business may also have smaller orders. Boathouse Sports, for example, stated that it has an average order of just 17 garments. Ziel, Inc., which caters to firms that custom-order activewear apparel in the United States, requires no minimum order size at all.

Many domestically made products use “Made in USA” branding to capitalize on the buy-American trend and the appeal of “Made in USA.” Some reasons for purchasing domestically produced apparel include perception of quality, contribution to job creation and the overall U.S. economy, supply-chain transparency, environmental stewardship, and workplace conditions. The variety of clothing brands

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63 MAM, “Made In USA and Apparel Reshoring,” March 16, 2016, 6, 9.
66 Donaldson, “Publisher’s Predictions,” February 8, 2018.
67 Hoover, Under Amour, presentation at Texprocess Americas Symposium, Atlanta, GA. May 4, 2016.
72 Livingston, “Products Made in the USA,” undated.
that use “Made in USA” labeling as part of their brand identity range from producers of work clothes and uniforms to denim and contemporary fashion. Online vendors and independent organizations make it easier for consumers to find clothing made in the United States through websites such as “Still Made in the USA” and “American Made Clothing Directory.”

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Box 2. Examples of Production in the United States and Reshoring

Numerous anecdotal reports indicate that apparel companies are starting production or increasing production in the United States, or that brands are contracting out production to domestic firms. The Reshoring Initiative—a nonprofit organization that offers free tools to advance its mission to bring jobs back to the United States—lists a number of firms that have reshored or increased production of apparel in the United States. Examples include Brooks Brothers (men’s tailored clothing), American Giant (activewear), Karen Kane (women’s apparel), and Kenai Sports (uniforms and sportswear). Four reasons given for producing in the United States (versus offshore) are rising costs overseas, a need for better quality control, more nimble production, and reduced lead times. Brooks Brothers, for instance, reshored trouser production from Mexico and Malaysia, and is producing up to 50 percent of its tailored clothing in the United States.

Retailers’ commitment to increase purchases in the United States reportedly has also spurred some new investment by foreign firms in U.S. production. For example, in 2015, the Canadian firm Peds Legwear (later acquired by Gildan Corporation) made a $16 million investment in a facility in North Carolina to produce socks for retail by Walmart. Another notable new investment announced recently is that of Chinese firm Tianyuan Garments Company to make T-shirts for Adidas in Arkansas using robots (see “Role of Technology”). To encourage the investment, the state of Arkansas is providing financial assistance with infrastructure and training, as well property tax incentives.

Among the products being produced successfully in the United States for commercial sale are those that require customized and often smaller orders, test market products or reorders, and fast-fashion items. The uniform and workwear market is an important sector for domestic apparel manufacturers. They serve many sectors, including health care; police and firefighters; private security; corporate image wear (e.g., rental car agencies); foreign military; and utility workers. A few examples of U.S. firms producing work clothes and uniforms in the United States are Carhartt, Suuchi, and Uniform Express.

Other trends that are helping fuel U.S. production include niche “farm to user” scenarios, in which clothing is made entirely in the United States. Duckworth Company, for example, sources wool from Montana that is then spun into yarn, knit into fabric, and assembled into finished garments in North Carolina. Similarly, Nester Hosiery has a brand called “Farm to Feet,” which makes wool socks entirely sourced in the United States from the raw fiber through the finished product.

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\( ^{a} \) Reshoring Initiative, Case Studies slides, February 18, 2015, http://www.reshorenow.org/content/companies_reshoring/Cases_only_2-20.pdf.

\( ^{b} \) Reshoring Initiative, Case Studies slides, February 18, 2015, http://www.reshorenow.org/content/companies_reshoring/Cases_only_2-20.pdf.

\( ^{c} \) Martynec, “Re-Shoring. Is It For Real or Still Just Talk?” May 4, 2016.

\( ^{d} \) Walmart Corporation has committed to source an additional $250 billion in products “made, assembled, or grown” in the United States by 2023. Marsiglio, ”Walmart’s Investment in U.S. Manufacturing, Explained,” June 16, 2016.


\( ^{g} \) Hamlin, “China Snaps Up America’s Cheap Robot Labor,” August 30, 2017.


Industry Actions to Improve Industry Competitiveness

Role of Technology

Despite the modest uptick in U.S. production, there are still obstacles to manufacturing apparel in the United States. Labor costs and availability are major concerns for those looking to manufacture in or source from the United States. As a result, automation is important throughout all stages of manufacturing—including designing, cutting, sewing, and moving the product during production process—to help improve production efficiency, minimize labor requirements, and reduce costs. Automation can take the place of many individual processes required in the completion of a garment, such as an “autonomous pocket setter” in which a pocket is sewn onto a piece of a garment without being touched by human hands. The technology not only helps reduce the cost, but it also helps reduce the need for skilled sewing operators, for which there is a shortage in the United States.

Automation can also play a much larger role in the manufacturing process. As highlighted earlier, one notable example is Tianyuan Garments Company, which plans to open a $20 million garment factory in Little Rock, Arkansas, by the end of 2018. Its factory will use 330 machines from Georgia-based Softwear Automation, which combine fabric visualization technology and robotics (“Sewbots”) to control fabric during the sewing process. The factory will be capable of making 23 million T-shirts per year at a cost of about 33 cents per shirt.

Automated sewing has not been widely adopted, however, because fabric is difficult to control during the sewing process. Seattle-based Sewbo is addressing that challenge by adding a water-soluble stiffener to the fabric, improving the ability to control fabric as it is moved through the stages of the automated sewing process. A garment that is stiffened in this way can be sewn by standard machines and handled like “sheet metal.” The stiffener can be rinsed from the hardened fabric, rendering the garment soft and ready-to-wear, while the stiffener itself can be reused. Although there are challenges to translating the technology to more complex apparel, Softwear Automation reportedly would like to apply the technology to make jeans, uniforms, and dress shirts.

Technology is also helping domestic firms meet the need for on-demand and customized orders. Nimbly and On Point Manufacturing (OPM) are two domestic apparel firms that use technology to allow them to produce customized orders in the United States on a quick-turnaround basis. Nimbly uses a 3-D

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whole-garment knitting process to produce custom-knit garments in 30 minutes or less. According to OPM, it “automates and integrates almost every piece of the process from order entry to delivery yet keeps the fine skills of the seamstresses.”

It states it can produce any number of garments and any size, with a goal to ship directly to the customer in 72 hours. Taylar Leigh Apparel, an online women’s apparel brand that has contracted with OPM to make its clothing, highlights its custom-made apparel that is produced to order. A key aspect of OPM is its software system, developed by partner firm, “Purchase Activated Apparel Technologies (PAAT), which is developing a “global technology network” to “connect apparel software development programs, manufacturing systems, and related value-added applications.” Separately, Amazon has recently received a patent for an on-demand apparel manufacturing system, which, if implemented, automates most of the production process. A customer order is automatically translated to a cutting pattern on fabric or other material, which is then cut and transferred to a sewing station, inspected, and packaged for delivery. The sewing is either automated or done by an attendant.

The industry is also adopting technology to accelerate the process of product development and to improve the fit of the final product. Li & Fung, for example, is using 3-D virtual sampling and fitting to speed up the product development process from four to six weeks to four to six days. The use of 3-D virtual prototyping helps to speed up the product development process by eliminating the need to produce as many samples and to improve the fit of the garment. As online sales grow, the importance of correct fit becomes increasingly important because consumers do not have the opportunity to try garments on before buying them.

Increased demand for customization and shorter lead times has made digitization and connectivity a critical tool to help speed the design, planning, production, and delivery of products. Digitization and connectivity can improve the efficiencies within and between each stage of the product design and manufacturing process. For example, one U.S. company developed a software that documents broken needles in cut-and-sew apparel machinery. Over time, this program identifies machines that have systematic problems allowing operators to preemptively resolve malfunctions. Industry representatives state that efficiencies created by improved communication technologies are essential to the future of the industry’s competitiveness. Nevertheless, even with the shortage of skilled labor, the domestic apparel industry is lagging behind other sewn product industries in manufacturing automation.

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Industry Groups that Promote U.S. Production

In addition to actions taken by firms to improve their competitiveness, a number of local groups are helping to promote fashion design and clothing production in the United States. Industry groups can help smaller businesses to connect with the necessary resources for all parts of the production process; in addition, they help them attract clients, improve business processes, and develop talent to prepare local workforces with the skills required by the industry. They can also serve as a venue for sharing best practices and developing innovative ideas.

There are a number of examples of local initiatives to support apparel manufacturing in the United States. In New York, the Brooklyn Fashion + Design Accelerator (BF + DA), established in 2013, gives designers access to mentoring, small-run apparel production, knitting services, digital fabrication services, showroom space, and retail sites. In another example, the Manufacturing Solutions Center is a not-for-profit center that is part of the North Carolina University System and helps businesses in a large variety of ways, including start up help for entrepreneurs, helping with product development, prototyping, testing, training, and consulting to help improve factory efficiencies. Its goal is to promote jobs in the United States. It is also a member of the Carolina Textile District, which is a network of companies with designers, patternmakers, printers, fabric suppliers and manufacturers, tag and label providers, and cut-and-sew facilities.

The Carolina Textile District offers a number of services to help startup companies, existing companies getting ready to launch a new product, and firms looking to manufacture domestically. Other examples include local initiatives in Saint Louis and Detroit. Saint Louis Fashion Fund was established to grow the fashion industry through the creation of new companies in downtown St. Louis. Among other things, the fund supports a fashion incubator and internships. Detroit, too, offers some initiatives to assist and develop the garment industry (box 3).

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Box 3. Initiatives to Promote Garment Production in Detroit

Two initiatives in Detroit are helping to develop a fashion industry in that city. The Detroit Garment Group, a nonprofit group founded in 2012, has three programs to help promote the Detroit fashion sector. It holds an annual education and networking conference for local fashion companies; it is participating in a program to create a “Garment District” by co-locating fashion companies; and it has partnered with colleges in the state to create a “Michigan Industrial Sewing Consortium.” The sewing consortium trains future workers in entry-level jobs in the industrial sewing industry; the sectors include clothing, as well as automotive, boats, awnings, and upholstery. The second initiative is spearheaded by the mayor of Detroit, who brought in Jeffry Aronsson, former CEO at Donna Karan Company in New York, to develop a plan for Detroit to become a design and production hub. The hub would help grow existing companies, such as VS Everybody (Detroit Vs Everybody) and Detroit Denim, and attract new companies to Detroit. In his vision for the future, Aronsson envisions a hub that will encompass flexible production (the ability to produce a small or large number of garments) and customization.

Conclusion

“Made in America is back, and it’s likely to stay” according to a 2016 article by the National Council of Textile Organizations. The industry is still optimistic in 2018, stating “Thanks to productivity, flexibility, and innovation, the U.S. textile industry has cemented its position in the global market.” There are reasons for optimism in the apparel industry, too. According to the Reshoring Initiative, apparel ranks sixth among industries that have reshored jobs since 2010. After years of decline, the domestic apparel sector has seen recent growth in both new investment and shipments.

It is true that the vast majority of the U.S. apparel market is still supplied by imports, a trend that is likely to continue in the foreseeable future. In the textile sector, official data on shipments and investment show mixed results—shipments were up in 2017, but remained below 2013 levels. Nevertheless, investment levels in the United States were up, and numerous accounts speak of new investment in the sector by both U.S. and foreign firms. Both the textiles and apparel sectors point to innovation as a key part of their strategies for success. Innovation is vital for the development of new products, as well as for upgrading existing products, reducing costs, and improving flexibility in manufacturing operations.

Based on this research, there are a number of areas that might warrant further exploration. As much of the new investment in the industry is not yet operational, the authors believe it would be useful to revisit data on trade and production in the next three years, to see if the trends show further growth in the industry. It might also be useful to look at other downstream sectors, such as home furnishings and

102 NCTO, “By the Numbers,” 2016.
footwear, to see if they show similar trends. Finally, opportunities for future research may include a more in-depth analysis of the role e-commerce plays in the textile-apparel value chain, particularly how it affects production in the United States, as well as “near-shoring” production of finished goods in the Western Hemisphere for the U.S. market.
Bibliography


Textiles and Apparel: Made In USA . . . Again?


Textiles and Apparel: Made In USA . . . Again?


Textiles and Apparel: Made In USA . . . Again?


Textiles and Apparel: Made In USA . . . Again?


## Annex A. Industry Data

### Table A1. Total capital expenditures for structures and equipment, 2013–16 (millions of dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile Mills and Textile Product Mills</td>
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<td>1,798.0</td>
<td>1,678.0</td>
<td>2,123.0</td>
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<td>Apparel Manufacturing</td>
<td>287.0</td>
<td>248.0</td>
<td>282.0</td>
<td>301.0</td>
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</tbody>
</table>

Note: Includes data for NAICS 313 and 314 (Textile Mills and Textile Product Mills) and NAICS 314 (Apparel).

### Table A2. Textiles: U.S. imports for consumption, domestic exports, and domestic shipments, 2012–16 (billions of dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports</th>
<th>Exports</th>
<th>Shipments</th>
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<tbody>
<tr>
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<td>10.5</td>
<td>11.8</td>
<td>41.0</td>
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<tr>
<td>2014</td>
<td>10.9</td>
<td>12.1</td>
<td>40.7</td>
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<td>2015</td>
<td>11.0</td>
<td>11.4</td>
<td>39.0</td>
</tr>
<tr>
<td>2016</td>
<td>10.4</td>
<td>10.5</td>
<td>37.9</td>
</tr>
<tr>
<td>2017</td>
<td>10.4</td>
<td>10.6</td>
<td>39.6</td>
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</table>

Note: Includes data for NAICS 313 (Textile Mills) and NAICS 32522 (Artificial and Synthetic Fibers and Filaments).

### Table A3. Apparel: U.S. imports for consumption, domestic exports, and domestic shipments, 2012–16 (billions of dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports</th>
<th>Exports</th>
<th>Shipments</th>
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</thead>
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<tr>
<td>2013</td>
<td>83.8</td>
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<td>12.1</td>
</tr>
<tr>
<td>2014</td>
<td>86.3</td>
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<td>2015</td>
<td>89.3</td>
<td>3.1</td>
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</tr>
<tr>
<td>2016</td>
<td>84.3</td>
<td>2.9</td>
<td>12.0</td>
</tr>
<tr>
<td>2017</td>
<td>84.2</td>
<td>2.8</td>
<td>12.5</td>
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</table>

Source: USITC DataWeb/USDOC (accessed February 20, 2018); U.S. Census Bureau, Manufacturers’ Shipments, Inventories and Orders (accessed February 16, 2018).
Note: Includes data for NAICS 314 (Apparel).
**Annex B. Examples of Investment in the Production of Textiles and Textile Articles in the United States**

Table B1. Examples of Investment in the Production of Textiles and Textile Articles in the United States, 2014–17

<table>
<thead>
<tr>
<th>Firm</th>
<th>Product</th>
<th>Investment (millions $)</th>
<th>New Jobs</th>
<th>State</th>
<th>Country</th>
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<td></td>
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<td>Hamrick Mills, Inc.</td>
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<td>*</td>
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<td>Parkdale Inc.</td>
<td>Cotton yarn</td>
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<td>United States</td>
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<td>WTP Corp.</td>
<td>Nonwovens</td>
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<td>KY</td>
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<td>Thrace-LINQ (Thrace Group)</td>
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<td>Greece</td>
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<td>Fiber Industries LLC</td>
<td>Polyester stable fiber</td>
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<td>Fibertex Personal Care A/S</td>
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<td>Product</td>
<td>Investment (millions $)</td>
<td>New Jobs</td>
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<tr>
<td>Huesker Inc. (subsidiary of HUESKER Synthetic GmbH)</td>
<td>Geosynthetics</td>
<td>9</td>
<td>20</td>
<td>NC</td>
<td>Germany</td>
</tr>
<tr>
<td>Auriga Polymers, Inc. (subsidiary of Indorama Ventures)</td>
<td>Polyester staple fiber</td>
<td>35</td>
<td>*</td>
<td>SC</td>
<td>Thailand</td>
</tr>
<tr>
<td>Aurora Specialty Textiles Group, Inc. (a division of Meridian Industries, Inc.)</td>
<td>Finishing, coating, and dyeing</td>
<td>*</td>
<td>5</td>
<td>IL</td>
<td>United States</td>
</tr>
<tr>
<td>Avgol Ltd.</td>
<td>Nonwovens</td>
<td>40</td>
<td>50</td>
<td>NC</td>
<td>Israel</td>
</tr>
<tr>
<td>Aquafil USA (Gruppo Bonazzi)</td>
<td>Carpet fibers</td>
<td>*</td>
<td></td>
<td>GA</td>
<td>Italy</td>
</tr>
<tr>
<td>Shaw Industries Group, Inc.</td>
<td>Carpet fibers</td>
<td>45</td>
<td>50</td>
<td>SC</td>
<td>United States</td>
</tr>
<tr>
<td>Suominen Corporation</td>
<td>Nonwovens</td>
<td>55</td>
<td>25</td>
<td>SC</td>
<td>Finland</td>
</tr>
<tr>
<td>DAK Americas (subsidiary of Alpek S.A. de C.V)</td>
<td>Polyester staple fiber</td>
<td>*</td>
<td>86</td>
<td>MS</td>
<td>Mexico</td>
</tr>
<tr>
<td>Shalag Nonwovens</td>
<td>Nonwovens</td>
<td>16</td>
<td>40</td>
<td>NC</td>
<td>Israel</td>
</tr>
<tr>
<td>National Spinning Co., Inc.</td>
<td>Yarn, nonwovens, consumer craft items</td>
<td>2</td>
<td>50</td>
<td>NC</td>
<td>United States</td>
</tr>
<tr>
<td>Sandler Nonwoven Corp. (Sandler AG)</td>
<td>Nonwovens</td>
<td>30</td>
<td>140</td>
<td>GA</td>
<td>Germany</td>
</tr>
<tr>
<td>AR Textiles (Sunflag)</td>
<td>Cotton yarn</td>
<td>12</td>
<td>38</td>
<td>NC</td>
<td>India</td>
</tr>
<tr>
<td>International Textile Group, Inc. (ITG)</td>
<td>Textile</td>
<td>*</td>
<td></td>
<td>NC</td>
<td>United States</td>
</tr>
<tr>
<td><strong>2014</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAK Americas (subsidiary of Alpek S.A. de C.V)</td>
<td>Polyester staple fiber</td>
<td>24</td>
<td>58</td>
<td>SC</td>
<td>Mexico</td>
</tr>
<tr>
<td>PolyTech Fibers, LLC</td>
<td>Recycled polyester staple fibers</td>
<td>12</td>
<td>114</td>
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<td>United States</td>
</tr>
<tr>
<td>Keer Group</td>
<td>Cotton yarn</td>
<td>218</td>
<td>500</td>
<td>SC</td>
<td>China</td>
</tr>
<tr>
<td>Shri Govindaraja Textiles Pvt Ltd. (SGT)</td>
<td>Cotton yarn</td>
<td>40</td>
<td>84</td>
<td>NC</td>
<td>India</td>
</tr>
<tr>
<td>Gildan Activewear, Inc.</td>
<td>Cotton yarn</td>
<td>200</td>
<td>500</td>
<td>NC</td>
<td>Canada</td>
</tr>
<tr>
<td>Glen Raven, Inc.</td>
<td>Awning, marine, and upholstery fabrics</td>
<td>14</td>
<td>10</td>
<td>SC</td>
<td>United States</td>
</tr>
<tr>
<td>Highland Industries, Inc.</td>
<td>Tubular and flat braids, woven tapes and fabric of carbon, glass, aramid, polyester and other polymeric yarns</td>
<td>8</td>
<td>29</td>
<td>NC</td>
<td>United States</td>
</tr>
<tr>
<td>Firm</td>
<td>Product</td>
<td>Investment (millions $)</td>
<td>New Jobs</td>
<td>State</td>
<td>Country</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------</td>
<td>----------</td>
<td>-------</td>
<td>------------------</td>
</tr>
<tr>
<td>Mattex Group</td>
<td>Carpet backing</td>
<td>60</td>
<td>200</td>
<td>GA</td>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>Monterey Mills (Glenoit)</td>
<td>Sliver knit fabric (for paint rolls)</td>
<td>0</td>
<td>*</td>
<td>NC</td>
<td>United States</td>
</tr>
<tr>
<td>Martex Fiber Southern Corp.</td>
<td>Reclaimed fibers</td>
<td>*</td>
<td>*</td>
<td>SC</td>
<td>United States</td>
</tr>
<tr>
<td>Unifi, Inc.</td>
<td>Recycled polyester fiber</td>
<td>5</td>
<td>10</td>
<td>NC</td>
<td>United States</td>
</tr>
<tr>
<td>Polymer Group, Inc. (PGI)</td>
<td>Nonwovens</td>
<td>8</td>
<td>20</td>
<td>VA</td>
<td>United States</td>
</tr>
<tr>
<td>CT Nassau</td>
<td>Mattress tape and mattress ticking fabric</td>
<td>4</td>
<td>*</td>
<td>NC</td>
<td>United States</td>
</tr>
<tr>
<td>Culp, Inc.</td>
<td>Mattress fabric</td>
<td>10</td>
<td>*</td>
<td></td>
<td>United States</td>
</tr>
<tr>
<td>Auburn Manufacturing, Inc.</td>
<td>Textile products for extreme temperature industrial applications</td>
<td>*</td>
<td>1.4</td>
<td>ME</td>
<td>United States</td>
</tr>
</tbody>
</table>

Sources: Compiled by Commission staff from public sources, including company websites, news releases, and public press articles.

Note: Information in this table is based on publicly available information that may not reflect actual circumstances. The table is not inclusive of all investments made in the textiles and apparel sector, particularly those investments that were not publicly announced.

* Not available.