

Innovation and investment in textiles

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Textile and apparel manufacturing not only serves as a creator of jobs, but also delineates a sustainable path to industrialization, and enables value chain relationships that modernize economies and add complexity. As stated in IFC's publication "Innovation, investment and emerging opportunities in today's textile and apparel value chain," value chains that support the textile and apparel industries are rapidly evolving – by integrating new technologies, embracing workplace innovations, adopting sustainable efficiencies, and inventing products and processes to meet the changing demands of global consumers and markets. The findings from IFC are referenced and analyzed in this article.

As IFC authors Manchanda, Schlorke and Schmitt pointed out, countries with an abundance of low-wage, minimally skilled workers enter the industry to conduct heavy manual labor and, with time and learned experience, build skills that enable them to progress towards complex products, integrating them into more important value chains and steadily advancing standards of living.

Today, the global textile and apparel manufacturing sector employs about 60 million workers — 80 percent of them in Asia, and mostly female — and employment is not expected to shrink anytime soon. At the same time, working conditions in the industry have been improving as a result of a more widespread and diversified value chain. Furthermore, public-private partnerships are key to leveraging policies that encourage value chain diversification.

Pakistan, with a developing economy that has established an industrial base, now needs to focus on developing supply chains, particularly by looking after its cotton sector. The lack of investment in cotton seed research and the failure to adopt new technology have led to heavily importing cotton to meet our industry's requirements.

In contrast, Brazil has laid the foundations for a strong cotton sector that can effectively respond to advantageous shifts in world markets. Their broad macroeconomic policy has encouraged investment in cotton, and their agricultural policies provide a safety net during periods of low prices. The Brazilian cotton industry is an excellent success story for us to emulate, as their struggles and triumph over adversity correspond to the struggles of the global industry in these current trying times. One can appreciate that the production of high volume, high quality cotton in Brazil is no small feat, but rather one that came about as a result of perseverance.

Uzbekistan's model of cotton production and the use of clusters in recent years has reaped positive results, and Pakistan may do well to emulate it. Every year the Government of Uzbekistan assigns the area to grow cotton for textile companies under the crop placement system. The reforms in the cotton sector have led to backward and forward integration, and improved productivity and sustainability manifold.

Cotton production in Pakistan has unfortunately plunged 34% to 5.57 million bales (of 155 kg per bale) in the current fiscal year 2020-21, compared to the same period of last year. Considering our current shortfall of 2.9 million bales, poor productivity in the cotton sector puts the viability of the export-oriented textile sector at risk, and therefore threatens an industry that has a 60 percent contribution to overall

exports of the country. We are facing our lowest cotton production in 30 years, which is alarming. The production shortfall has forced the value chain to rely on imported cotton, with import expenditures of over 5 billion dollars (from FY16 to FY20) on cotton imports to meet the demands of the domestic textile industry.

Issues in Pakistan's cotton sector include the failure of cotton seed which is substandard and not resistant to pests and diseases. The world has shifted to genetically modified seeds and improved their cotton production and yield per acre but Pakistan still faces inferior seed quality. There is also a need to facilitate entry of international seed companies with transgenic technologies into the Pakistani market. The adoption of local varieties must also be fast-tracked.

Measures are necessary for the production of long staple cotton for value-added products and to meet domestic demand for high quality fabrics, including introduction of BT cotton on priority basis. Furthermore, the currently available pesticides have failed to yield results against major cotton pests.

We must cultivate backward and forward integration and diversification into global value chains through enduring connections with brands, technology, skill-building, and investments in base-material industries. There is also a dire need to support the production of complex materials such as synthetic fibers and encourage the upgrading of process technologies to improve sustainability. Therefore, we will be able to expand and diversify the manufacturing base through textiles and apparel-based activities.

Productivity in Pakistan has been stagnant and aggregate gains have been mostly driven by more productive firms gaining market shares. This situation is likely to persist if timely efforts are not made to ease import conditions, rationalize tariffs, value competition and markets and modernize education in the country. It is about time the government, academia and industry linkages were strengthened in order to stimulate R&D and innovation, thereby paving the way for enhanced productivity. Policies should target and facilitate young innovative companies in order to build them up and help modernize Pakistan's business environment.

Apparel factories, unlike highly automated car plants or semiconductor assembly lines, continue to be labor-intensive enterprises despite technological advancement, requiring armies of low-wage workers to sew, dye, stitch, and handle hundreds of millions of pieces of fabric and apparel in every conceivable size and color, to produce a near-endless selection of clothing. As a result, big brands seek low-wage assembly workers, providing opportunities for the cheaper workforce to enter the industry.

"China, Bangladesh, Pakistan and Indonesia experienced surges in textile and apparel industry employment between 1980 and 2017, just as robotics and automation were booming in many industries." Now other countries that are geographically well positioned and that have low-wage workers are motivated geared to take their place in the industry. This is a recurring pattern. When Japan's workforce became too expensive in the late 1960s, South Korean manufacturers took their place. When South Korea grew too expensive, China, India, and Bangladesh filled the void. Pakistan with its youth bulge and abundant workforce entering the employment arena each year, is centrally placed to avail the opportunity provided by China moving out of labor-intensive industries.

Technology that once presented barriers to entry for developing economies has become affordable and transferable and is creating opportunities to integrate into increasingly important value chains and markets. The trends of the new industrial revolution are driven by technological innovations that trickle

down from the most advanced economies to developing economies through dynamic value chains that span the globe. It is a pattern that has been repeated for hundreds of years but is now accelerated by textile and apparel value chains.

For Pakistan's exporters, the TERF scheme has led to a substantial increase in investment levels at a time where capacity was already full, presenting a golden opportunity for expansion. In this leap towards technological advancement and capacity development at a scale never seen before, aggressive policy support from the government will play a critical role.