



DIRECTIONS IN DEVELOPMENT
Poverty

Stitches to Riches?

*Apparel Employment, Trade, and Economic
Development in South Asia*

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Women working in a garment
factory in Faisalabad, Pakistan
Source: Marta Ramoneda/UNDP Pakistan

Overview

South Asia is in the midst of a demographic transition. For the next three decades, the growth of the region's working age population will far outpace the growth of dependents. This large, economically active population can increase the region's capacity to save and make crucial investments in physical capital, job training, and technological development. But for South Asia to realize these dividends, it must ensure that its working-age population is productively employed—with the emphasis on creating jobs in labor-intensive industries where it enjoys a comparative advantage.

As one of the most prominent labor-intensive industries in developing countries, apparel manufacturing is a prime contender. That is why it is vital for South Asian economies to address existing impediments and facilitate growth in apparel. If they fail to do so—and quickly—they risk losing out on a huge opportunity to create good jobs for development given China's rising apparel prices. In addition, the successful manufacturers will be those who can introduce new processes, work organization, technology, and respond to the fast changing apparel industry demands—not just offer low costs.



As developing countries explore ways to boost living standards and reduce poverty, they are increasingly focusing on policy options to create jobs that are “good for development.” For South Asia, this is a high priority, given that it must absorb close to one million individuals that will enter the workforce every month for the next three decades, and it continues to have a stubbornly low rate (30 percent) of female labor force participation.

Export-oriented apparel production—long a key industry in South Asia—displays characteristics of good jobs for development. With relatively low skill requirements, apparel manufacturing presents the poor with job opportunities. It also has a unique ability to attract female workers, with women’s share of total apparel employment being much higher than women’s share of the national labor force in nearly every country in the region. As apparel exports increase, the rising demand for female labor pulls women from agriculture and other informal sectors. Women employed in the formal sector tend to have fewer children, reducing population growth, and several studies have found that women are more likely to dedicate their income to the health and education of children. And apparel exports pay women higher wages than they could earn elsewhere. Further, the organization of the apparel sector in global value chains links producers in the region to international markets, facilitating knowledge spillovers and skill acquisition for workers.

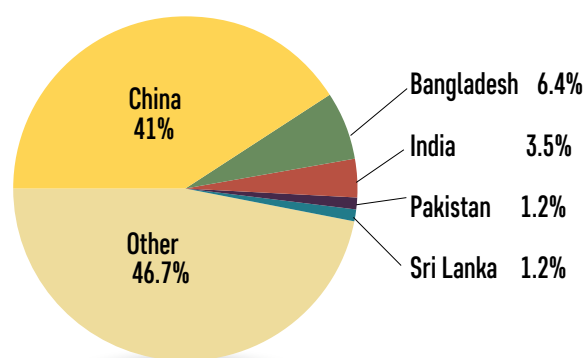
Already Bangladesh, India, Pakistan, and Sri Lanka have made substantial investments in world apparel trade—which is considered a gateway to globalized manufacturing exports. In 2012, apparel represented 83 percent of Bangladeshi exports, 45 percent of Sri Lankan exports, 19 percent

of Pakistani exports, and 5 percent of Indian exports. The share of female employment in apparel in South Asia is higher than in other manufacturing industries, ranging from 5 percent in Pakistan to 75 percent in Sri Lanka. Plus recent elections in India and Pakistan have featured energetic debates on the role of the apparel sector in development. At the same time, however, recent industrial disasters have attracted global attention, raising questions about whether some countries can overcome significant challenges in health, safety, and labor relations.

At this point, China holds by far the largest share of global apparel trade at 41 percent (figure 1), but that may change in the years ahead. Between 2000 and 2012, its share of global apparel exports increased from 25 percent to 41 percent. However, as China continues to develop, it is likely to either move up the value chain into higher-value goods (and out of apparel) or be subject to production shifts in response to its higher wages. A 2013 survey of leading global buyers in the United States and European Union (EU) found that 72 percent of respondents planned to decrease their share of sourcing from China over the next five years (2012-2016).

FIGURE 1: China dominates global apparel trade

(Country share of global apparel exports)



Source: *Stitches to Riches?*

In addition, rising prices in China are encouraging investors to seek out apparel firms in countries like Cambodia and Vietnam. There is also evidence that China is looking to shift production to higher value-added industries like electronics. Although it remains the world's largest apparel exporter, apparel as a share of its total exports in 2012 accounted for only 7.1 percent—about half of the 15.6 percent in 1990. The potential decrease in Chinese exports presents a huge opportunity for South Asian countries—which currently account for 12 percent of total exports—prompting a lot of debate about how best to position the region and generate good jobs. And the recently completed Trans Pacific Partnership (TPP)—a trade agreement between 12 Pacific Rim countries including the United States—will likely have far-reaching impacts for key sectors in South Asia including apparel. Indeed, a reduction in tariff and nontariff barriers could lead to trade diversion for South Asia including in the textiles and apparel sector.

This report is aimed at demystifying the global and South Asian apparel markets, estimating the potential gains in exports and jobs (including for women), and identifying policies that can unleash South Asia's export and job potential.

Moving Up the Global Value Chain in Apparel

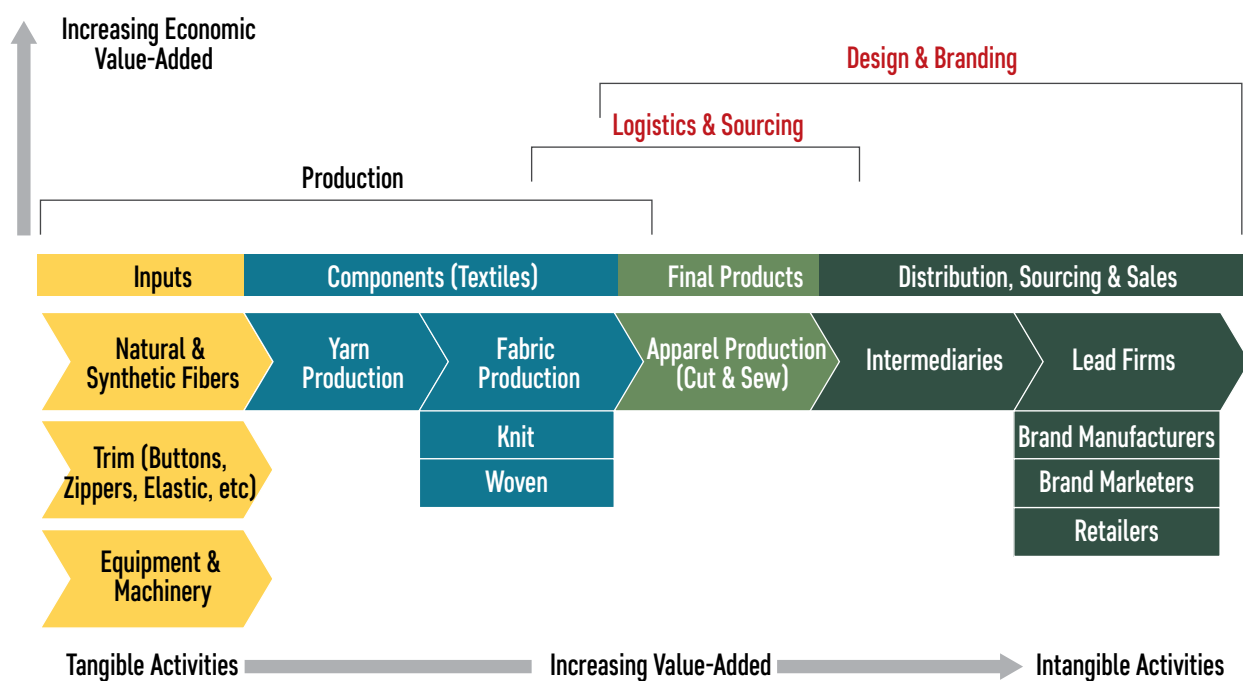
The production of apparel for the international market is organized in "global value chains"—which include the full range of activities that are required to bring a product from its conception to its end use and can be driven by producers or buyers. Apparel is a classic example of a buyer-driven chain. It is characterized by decentralized, globally dispersed production networks and coordinated

by lead firms that control the highest-value activities related to retailing, marketing, branding, and design. The buyers outsource most of the manufacturing process to a global network of suppliers; for apparel, typically to low-income countries. We can visualize the various activities involved in apparel production by looking at figure 2. Each activity is associated with different levels of value addition, with values increasing from left to right, as we move from tangible to intangible activities. The main segments of the supply chain include apparel manufacturing, textile components (yarn and fabric) and trim, and fiber production.

The top three globally traded apparel product categories by export value include trousers, knit shirts, and sweaters/sweatshirts, which together account for 46 percent of traded apparel. Given the relevance of these products, a country needs to be a key player in these categories to account for a sizeable share of the global industry. It also must have the capabilities to produce products that are growing in terms of global market share such as fashion products and apparel made from manmade fiber, and of course diversify markets.

As the competition in the global apparel sector continues to intensify (buyers' consolidation process), successful manufacturers will need to have the ability to introduce new processes, work organization, and technology—all of which improve operational performance and productivity—not just offer low costs. They can do so through vertical or horizontal upgrading. One example would be setting up backward manufacturing linkages, especially to the textile industry. Another would be shifting to more sophisticated products with higher unit prices. Yet another would be increasing the range of functions or shifting or changing the mix of activities to higher-value tasks.

FIGURE 2: Structure of the global value chain for apparel



Activities in red indicate highest value added activities + control/power over the chain

Source: Stitches to Riches?

South Asia's Potential to Expand Apparel Exports

As South Asian countries look for ways to step up their apparel exports, it is important to establish how they fare compared to global competitors. In our report, our sample South Asian countries (hereafter, the SAR group) are the largest apparel exporters: Bangladesh, India, Pakistan, and Sri

Lanka. Our sample Southeast Asian benchmark countries (hereafter the SEAB group) are: Cambodia, Indonesia, and Vietnam. Given that the extent to which these countries will be able to create more jobs will depend on the individual decisions of their firms and workers, we concentrate on how changes in the global market (like rising apparel prices in China) could affect exports, wages, and employment in the apparel sector in other countries (see Box 1).

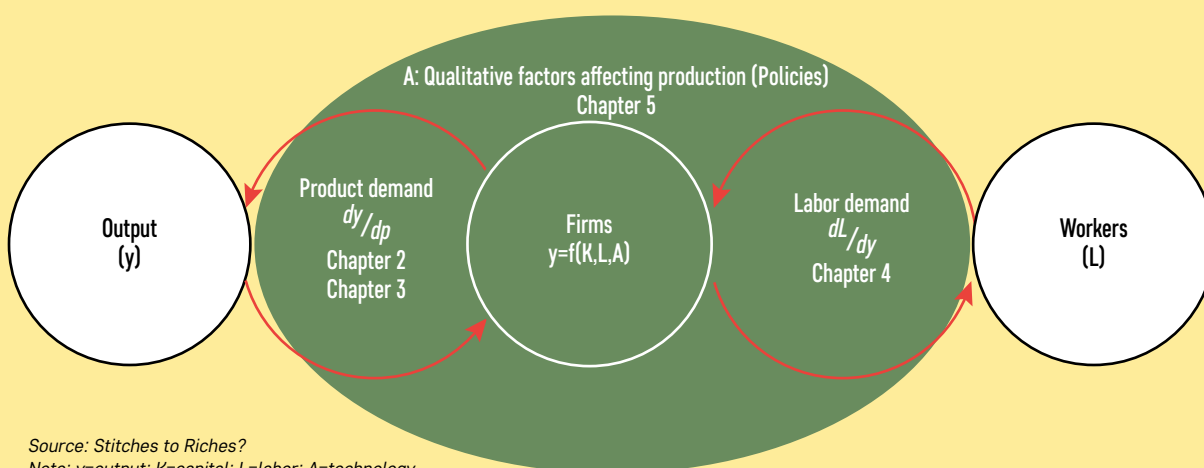
Our analysis on global benchmarking finds that in terms of value and global market share, SAR countries have steadily increased their share of global apparel trade above the world average and greater than China but lower than that of the SEAB countries. At the country level, however, some have done a lot better than others—with export growth rising in Bangladesh (the top performer), and to a lesser extent in Pakistan, while slowing in India and Sri Lanka.

In terms of product categories, most competitors are adequately producing and selling basic items that match global trends in current demand in these areas. However, India and Sri Lanka concentrate on higher value exports in relatively smaller runs, focusing on value addition and more complex and differentiated items, something all the SAR countries will need to think about as they try to hold on to their competitive edge. As for fiber type, SAR is heavily focused on cotton-based apparel products (75 percent of apparel exports), which fits current demand, although this is well above

BOX 1: How apparel exports can create more jobs

Our analytical framework centers on the production function of a typical firm, where output is a function of technology (A), capital (K), and labor (L). This approach is particularly useful for three reasons. First, output (y) is modeled as the production sold in international markets, which is greatly affected by the kinds of conditions that motivate our study. Second, the production function represents an implicit demand for labor. As is well-known, the demand for labor is a derived demand that is directly affected by changes in output markets. Third, the familiar technology term often represents those factors in the production function that are not easily quantifiable. In our analysis, we acknowledge these qualitative aspects that affect both the outputs and inputs with a careful discussion of the economic and policy environment, which is often lacking in purely quantitative studies.

Our framework can be visualized in the figure below, which shows the production function in the center with two key relationships: (i) the output market and how changes in the international market affect the demand for the firm's product (left-hand side); and (ii) the input market (right-hand side). The input market is affected by the demand for output, the structure of the production function, and the supply of inputs. Surrounding the core production function (represented by the areas above and below the production function and its implied output and input relationships) are the qualitative dimensions.



the world average (46 percent). Such a large deviation from the world average—which reflects the growing role of manmade fiber exports—will pose problems for satisfying future demand and product diversity.

Given the significant variation in export patterns, this report also sought to find out how apparel buyers' preferences fit in. Our analysis shows that SEAB countries and China are outperforming the SAR countries in terms of overall apparel export performance, product diversity, and non-cost related factors important to global buyers. SAR countries—with the exception of Sri Lanka—generally appear to be cost competitive in apparel but fare less well on other factors important to global buyers such as quality, lead times, reliability, and social compliance (table 1).

TABLE 1: Room for SAR to diversify products and better meet buyers' preferences

(Global benchmarking analysis)

| Key Results | Bangladesh | India | Pakistan | Sri Lanka |
|--|--|---|---|--|
| Increasing market share | Largest increase in global market share within SAR | Exports increased, but at a lower rate than the world average | Exports increased at a higher rate than the world average | Exports increased, but at a lower rate than the world average |
| Product diversity and availability is a key concern: | Lack of MMF-based products | Lack of MMF-based products Limited MMF availability Barriers to MMF textile imports | Lack of MMF-based products Limited MMF availability Barriers to MMF textile imports | Lack of diversity across product categories outside of intimate apparel and activewear |
| All SAR countries have substantially diversified their end markets away from the dominant EU-15 (and to a lesser extent U.S.), but compared to China there is still room to diversify. | | | | |
| Mostly strong performance on factors buyers care about | Cost competitive Compliance is an issue | Cost Competitive Non-cost issues present a hurdle | Cost Competitive Reliability and compliance are issues | Not cost competitive |
| Limited foreign investment and participation in global production networks | | | | |

Source: *Stitches to Riches?*

Note: MMF stands for manmade fiber.

Much of the pressure on social compliance comes from corporate social responsibility campaigns by nongovernmental organizations, compliance-conscious consumers, and more recently, the higher number of disasters in apparel factories. We know that working conditions in apparel manufacturing establishments in many developing countries are characterized by low wages, long hours, high temperatures, excessive noise, poor air quality, unsanitary environments, and abuse (both verbal and physical). Yet we lack consistent and quantitative evidence that is comparable across countries, which would help inform the policy debate.

Further complicating matters, apparel is not only labor-intensive but also one of the easiest manufacturing sectors for women to enter given that it requires only basic skills (and thus relatively low levels of education) and typically does not involve working with machines. In addition, the apparel sector offers a promising and realistic entry point for women into the formal labor force, thanks to a high wage premium compared to agriculture. Plus, in developing countries, working conditions often depend on what the country can afford—such as providing reliable electricity—and sometimes just providing a job is a life-changing event for an individual.

So how much would a SAR country's apparel exports increase for a given increase in Chinese apparel prices? Our report tries to answer this by computing the responsiveness of apparel exports



A young female worker in the Wool Tex Sweaters Limited in Dhaka, Bangladesh
Source: Asian Development Bank

to prices in China, what economists call the “elasticity of substitution.” These estimates are then compared with the elasticity of substitution for the potential competitors. The target markets are the two largest apparel buyers: the United States and the EU. Our results suggest that a 10 percent increase in Chinese apparel prices will result in a 13–25 percent (depending on country) rise in South Asian countries’ apparel exports to the United States (table 2), although this is below the 37–51 percent increase in Southeast Asian countries. This underscores that apparel producers face intense international competition in the sense that apparel production is very responsive to price changes. It also suggests SEAB countries (such as Vietnam and Cambodia) stand to gain much more than the SAR countries. This becomes even more relevant since the apparel industry is undergoing a consolidation process with global buyers looking for fewer places and firms for outsourcing.

TABLE 2: Some SAR countries will capture more global market share than others

| Key Results | Bangladesh | | India | | Pakistan | | Sri Lanka | |
|--|--------------|--------------------------------------|--------------|------------|--------------|--------------------------------------|---------------|------------|
| | U.S. exports | EU exports | U.S. exports | EU Exports | U.S. exports | EU exports | U.S. exports | EU exports |
| Export Elasticity: effect of a 10% rise in Chinese prices on exports | 13.58% | Change not statistically significant | 14.62% | 18.95% | 25.31% | Change not statistically significant | Less than 1 % | 22.49% |

Source: Stitches to Riches?

How Higher Exports Would Affect SAR's Labor Market

What would occur at the firm and worker level if South Asia is able to capture a larger share of the apparel market? Given that apparel exports represent a major share of total exports in most SAR countries, and exports represent a major share of their apparel production—in Bangladesh, 75 percent of apparel output is exported—one could expect that labor demand in the apparel sector would be mainly driven by exports.

On the demand side, we explore by how much the expansion in the textile and apparel sector would increase labor demand in the region—that is, how many new jobs firms would create in response to higher exports. Our main results show that a 1 percent increase in apparel output (which is used as a proxy for exports) is associated with a 0.3–0.4-percent increase in employment (for both men and women) in Bangladesh, Pakistan, and Sri Lanka; India's values are lower, at a 0.14-percent increase in demand for male workers and a 0.08-percent increase in demand for female workers. These results suggest that the sector has a larger potential for job generation in South Asia in response to an increase in exports than other industries, especially for women.

On the supply side, we investigate how more jobs or higher wages would reshape the labor pool. In other words, to what extent (the labor supply “elasticity”) higher expected labor income would draw more women into the labor force. Our results show that female labor, especially low-skilled labor, is very responsive to higher wages. A 1 percent increase in the expected wage increases the likelihood of women joining the labor force by between 16 percent in Pakistan to 89 percent in Sri Lanka. We also find that a wage premium exists in the apparel sector compared to agriculture that ranges from 8 to 27 percent, depending on the country—a premium that is even higher when only women are considered. However, this premium has stopped rising in all SAR countries besides Bangladesh with the end of the Multifibre Arrangement (MFA) in 2005.

South Asia's Potential to Create Jobs

So how many new jobs will the increased demand translate into? Keep in mind that we have assumed that higher Chinese prices will boost the demand for apparel from South Asia and that firms in South Asia will respond by creating jobs. We have also assumed that more jobs will enhance welfare (as opposed to simply leave the level of welfare unchanged) because workers will be drawn from either the informal sector or agriculture, both of which pay lower wages than apparel exporting firms.

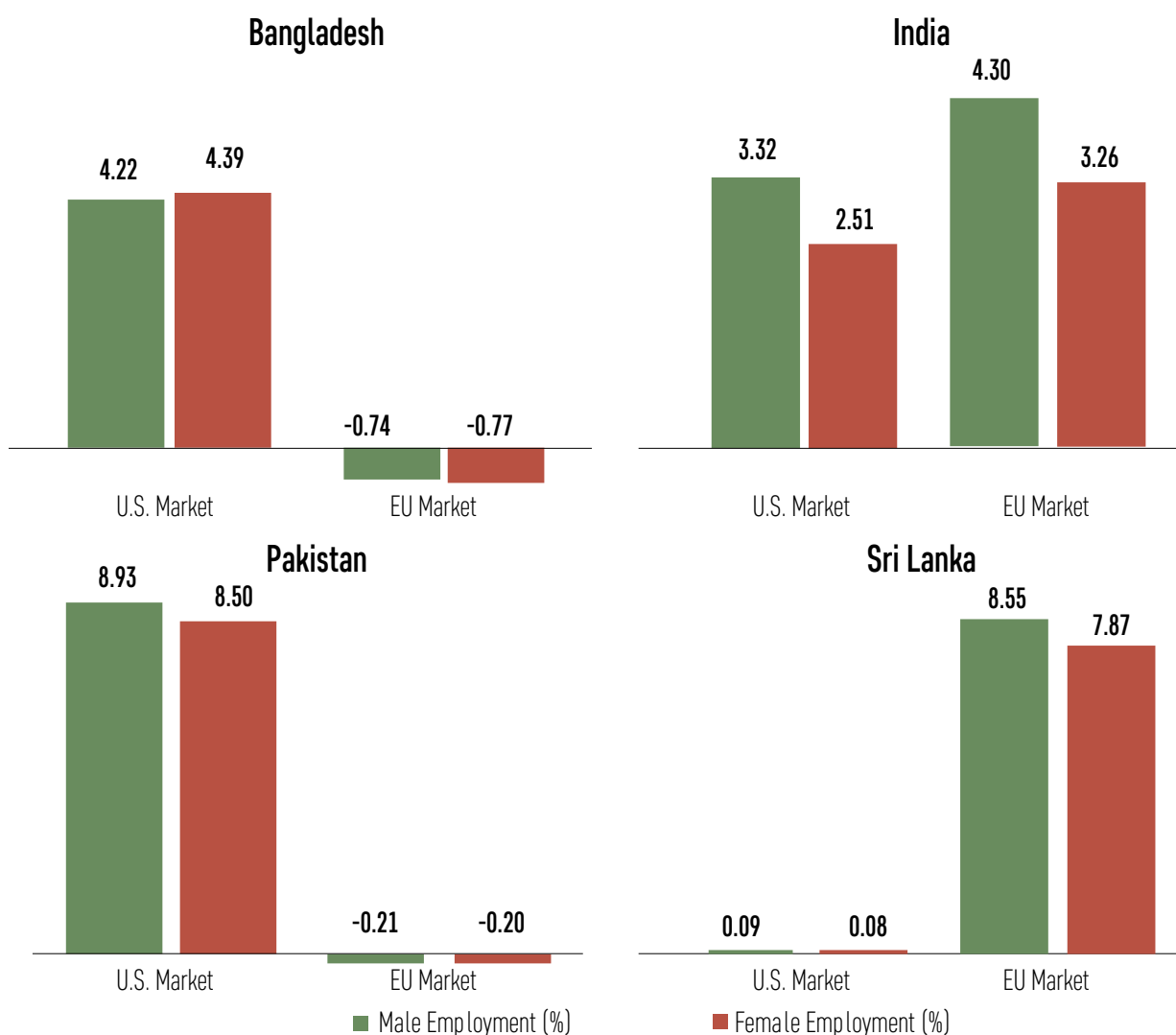
Our results show that all four of the sample South Asian countries exhibit significant employment generation potential for both males and females (figure 3). Bangladesh and Pakistan have the greatest potential to increase jobs (in percentage terms) for exports to the U.S. markets, and Sri Lanka is the big winner with respect to EU markets.

For the U.S. market, we find that a 10 percent increase in Chinese apparel prices would increase apparel employment in Pakistan for males by about 8.93 percent, followed by Bangladesh (4.22 percent), India (3.32 percent), and Sri Lanka (less than 1 percent). For the EU market, a 10 percent increase in Chinese apparel prices would increase apparel employment in Sri Lanka for males by 8.55 percent, followed by India (4.30 percent), with Bangladesh and Pakistan experiencing small decreases. In both markets, the story is much the same for females as males.

Although the estimates for the U.S. and EU markets—which together account for about half of global apparel imports—are not necessarily small, they are smaller than those predicted for Southeast Asian countries.

FIGURE 3: Link between more exports and employment demand

(Elasticities of jobs to prices)



Thoughts on a New Strategic Approach

South Asia has put in place a number of policies to support the textile and apparel sector but there is still significant room for improvement in a number of key areas—product concentration, quality, input availability, lead times, reliability, and compliance—that are relevant to boost exports and create good jobs for development. This matters greatly because our report finds that under the status quo (that is, even without reforming these areas), South Asia exhibits significant potential to capture displaced apparel production as a result of rising costs in China.

These higher exports, in turn, would potentially translate into more good jobs for development. Moreover, female workers are expected to benefit the most—including through higher expected wages than in agriculture, which would have positive ripple effects both for the overall economies and individual households.

Thus, it is important for South Asian economies to design and implement policies to improve competitiveness in apparel. Top priorities include easing barriers to the import of inputs, facilitating market access, and encouraging foreign investment. The successful manufacturers will be those who can introduce new processes, work organization, technology, and respond to the fast changing apparel industry demands—not just offer low costs.

Country Highlights



Bangladesh

Bangladesh has the largest apparel export industry of the four South Asian sample countries (\$22.8 billion) and the largest market share of global apparel exports (6.4 percent). Its apparel firms produce large quantities of apparel at low costs, largely due to its low wage rates. Firms mostly specialize in low-value and mid-market price segment apparel and have not penetrated the high-end apparel segments. Along almost every apparel product category, the benchmarking highlights that Bangladesh has the lowest prices. However, it performs poorly in the areas of compliance, quality, and reliability, which are important in attracting foreign investment.

Bangladesh has many policy options to increase exports. Policymakers could attract more foreign investment through additional incentives and transparency to ensure access to buyers and additional capital. They could ensure policies to improve compliance are enforced (such as better safety conditions in EPZs), which will help make Bangladesh a more attractive destination for foreign investors. And they could reduce the import barriers faced by firms in importing manmade fibers to improve quality and produce more higher-value-added apparel.



India

India ranks second in terms of apparel export value (\$12.5 billion) and global market share (3.5 percent). Its apparel firms mainly produce cotton garments and have yet to make inroads into the market for synthetic apparel, although the country does enjoy a well-developed fiber (cotton), textile, and apparel manufacturing base. As the benchmarking reveals, India currently has mid-range unit values but low productivity, product diversity, and lead times.

As for policy options for product diversity, policymakers could reduce tariffs and import barriers to ease access to manmade fibers—such as more transparency for duty drawback schemes and bonded warehouses, and removing anti-dumping duties on manmade fibers. They could also lower excise taxes or provide other incentives to develop a domestic manmade fiber industry. To improve productivity, they could help firms enter the formal sector and take advantage of economies of scale with less complex labor policies. They could also promote foreign investment for apparel by adopting clear and transparent policies on foreign ownership (already in place for textiles) and within EPZs. Plus India could diversify markets by taking advantage of market access to emerging markets. And it could shorten lead times by using industrial parks to provide better infrastructure in a concentrated way.



The active production line at Nordtex (Pvt) Ltd of Weliveriya, Sri Lanka
Source: Asian Development Bank



Sri Lanka

Sri Lanka ranks third in terms of apparel export value (\$4.4 billion) and global market share (1.2 percent). Its apparel sector is largely made up of higher-value, niche products, and exports are equally divided between cotton and manmade fiber products. But the benchmarking reveals that its apparel prices are higher than competitors in all major product categories (driven at least partly by relatively high and rising labor costs), and there is room for improvement on lead times and product range and availability.

To help firms diversify end markets and export destinations for existing products (such as active wear and intimate apparel), policymakers could enter into more trade agreements and adopt clear investment policies. To capitalize on its skills advantage, firms could expand into new products (such as formal wear and high-end outerwear) that require higher skills. And to relieve labor shortages, policymakers could promote industrial relocation and attract more female workers.



Pakistan

Pakistan ranks fourth in terms of apparel export value (\$4.2 billion), with the same global market share as Sri Lanka (1.2 percent). It has a fast growing apparel sector that accounts for 19 percent of its apparel exports. The benchmarking highlights that this sector is competitive in terms of prices with global exporters, although it lags competitors in reliability and political stability—and remains highly concentrated in cotton products.

For policymakers, one way to increase product diversity and move away from cotton-based apparel is to reduce barriers on imports to ease access to manmade fibers. They could attract global buyers and investors by adopting policies to reduce red tape and increase transparency. They could diversify markets by taking advantage of market access to emerging markets. And they could shorten lead times by improving road infrastructure to facilitate access to ports.

Stitches
to Riches?

