

PATTERNS IN EXPORTS OF COTTON FIBER AND YARN

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Abstract

Examination of trends in production, consumption, and exports of raw cotton fiber and cotton yarn from Southwest Asia reveals some general indications as to the importance of this region in the world market. These trends, along with the underlying policy framework, indicate that U.S. cotton producers have benefitted from decreased exports of raw fiber from Pakistan and India, but U.S. textile manufacturers have lost in terms of increased imports of yarns and fabrics, and may be losing market share of those products in regions of the world where there is direct competition from Pakistan and India.

Introduction

Cotton fiber and yarn from Southwest Asian countries (Pakistan and India) are often over-looked in discussions of the world market because they tend to be overshadowed by the U.S. and China. However, policy and market outcomes in these countries can have an effect on the world market, which has implications for U.S. producers and consumers.

Cotton fiber production in Pakistan and India averaged about 20% of world production over the 1988-92 period, while U.S. production averaged about 18% over the same period (Townsend and Guitchouts). Thus, Southwest Asian countries have been at least as large in terms of total cotton fiber production as the United States. Pakistan and India had a 9% share of world exports in 1991, while the U.S. had a 29% share of the market (ICAC/FAO). Over the 1978-88 period, however, Pakistan and India had an average annual growth in cotton exports of 14.4%, while the U.S. exports were virtually flat. The quality of Pakistan's and much of India's cotton comparable to West Texas cotton (short to medium staple lengths) (Foreign Agricultural Service). This implies that exports of raw cotton from Pakistan and India are in direct competition with at least a portion of the U.S. crop.

The magnitude of cotton and cotton yarn production in Southwest Asia, and to some extent the size of the exports, assures that what happens in Southwest Asian cotton and yarn markets has direct implications on U.S. producers and consumers, as well as exporting countries around the world. The objectives of this paper are threefold: (1) examine the patterns of exports of cotton fiber and cotton yarn from

Pakistan and India, as well as some of the underlying patterns in production and consumption; (2) summarize the policy frameworks in Pakistan and India as they relate to the cotton fiber and cotton yarn production, consumption, and export; and (3) discuss the implications of the policies and patterns in exports for cotton and yarn producers in other countries, with a focus on the impacts in the U.S.

Patterns in Exports of Cotton Fiber and Yarn

Pakistan

Annual exports of raw cotton fiber from Pakistan since 1970 are shown in Figure 1. Exports averaged around 100,000 metric tons per year until about 1973. The government monopoly on exports of raw fiber began in 1972 (Hamid et al.), marking the beginning of more erratic exports from year to year and a declining trend in exports for about a five year period. The Government of Pakistan liberalized the ginning industry in 1977, which produced an increase in the production of cotton lint fostering rising trend in cotton exports. Also, 1976/77 was the first year of the price support policy, which may have bolstered production and cotton exports (ICAC).

The Government of Pakistan ended the monopoly on exports of cotton fiber in 1988 and instituted the "two-price" policy, which will be discussed later. The net effect of that policy was to reduce the internal price of cotton below world market levels in order to subsidize the textile industry in Pakistan. The implication was that production was reduced (or at least the growth in production was reduced), and the cotton produced was reserved for domestic spinners, with the residual available for export. Exports of cotton fiber from Pakistan decreased substantially after the implementation of this policy.

There were essentially no significant changes in exports of cotton yarn from Pakistan for the period 1970 through 1984 (Figure 2). Pakistan typically exported around 100,000 metric tons of cotton yarn over that period. Exports of cotton yarn increased from around 100,000 metric tons to 225,000 metric tons between 1984 and 1988. During this period, restrictions on imports of spinning machinery were lifted and financial incentives for yarn and textile production were given by the Government of Pakistan (ICAC). The "two-price" policy was implemented in the raw fiber sector in 1988, which held internal prices of cotton fiber below world market levels, giving an implicit subsidy to the spinner (ICAC; Ender; Hamid et al.). Exports of cotton yarn have increased from about 225,000 to about 575,000 metric tons since that time. The extent to which the policy in the raw fiber market affected this increase is not yet known; however, it is clear that it has had some effect, as will be discussed.

India

Changes in cotton exports from India have not been as variable as in Pakistan. India consistently exported around

50,000 metric tons of cotton from 1960 through 1972 (Figure 3). Exports from India became more variable beginning in 1973, which may be due to internal changes, but is more likely directly related to the increasing world price variability during the 1970s. Exports ranged from as much as 300,000 metric tons to none through the 1970s and 1980s, which may be due in part to the policies toward the raw fiber production sector during this period. The policies in India are similar to those in Pakistan, and over approximately the same time periods (Foreign Agricultural Service; ICAC).

The same general relationship for yarn exports occurred in India as in Pakistan (Figure 4). This may be related to the similarities of the types and timing of the policies in these countries. India exported small quantities of cotton yarn from 1970 through 1985. India experienced substantial increases, however, in the export of cotton yarn between 1986 and 1993. The magnitudes are much smaller when compared to Pakistan, but the direction and rate of change in exports are comparable.

Underlying Trends in Production and Mill-Use

One important consideration when examining exports is the underlying trends in production and mill-use. Figure 5 shows the trends in production of cotton in Pakistan and India. Both countries have experienced growth in the production of cotton, especially since 1983. India has consistently produced more cotton than Pakistan in terms of absolute quantities, but Pakistan appears to have experienced a larger rate of growth in production than has India. The increase in both countries is largely attributable to varietal developments and adoption of progressive cultural practices (Foreign Agricultural Service). More aggressive research and development programs in Pakistan may help explain the larger growth in cotton production in that country (Hamid et al.). The sharp decline in production in Pakistan after 1990 may be attributed in part to the outbreak of the “leaf-curl” virus (ICAC), but may also result from the policies discussed in the next section.

Figure 6 shows the patterns in domestic consumption (mill-use) for Pakistan and India over the same period as in Figure 5. Mill-use has clearly followed the trends in cotton production, although mill-use has been much less variable. The proportion of cotton being used by domestic mills grew in the late 1980s and 1990s (at least in Pakistan), partially explaining the declining cotton exports.

The Policy Framework in Southwest Asia

Pakistan and India have similar, but not identical, policy frameworks in place in the raw fiber and cotton yarn sectors. The primary policy components in the raw fiber sector in Pakistan consist of production input subsidies and export taxes (Quershi; ICAC; Ender). India has a similar set of policies, but tends to rely more on a price support similar to the Commodity Credit Corporation’s loan for

subsidizing the production of raw fiber (Bell and Gillam) and tends to be more heavily controlled by the government. Pakistan also uses a price support system, but it has been largely symbolic since the market price is rarely below to support price (ICAC; Ender). The fact that the price support was in place, however, may have served to bolster producer confidence and production (ICAC).

Pakistani cotton farmers receive an implicit subsidy from government price controls on fertilizer prices, and pay a lower rate for electricity (Ender). The input subsidies, along with the introduction of higher yielding varieties, has fostered increasing yields. This may help explain the increasing production of raw fiber in Pakistan and India during the 1980s, in spite of generally unfavorable price conditions given by government policy. The slower rate of growth in raw fiber production, however, may be an indication that the effects of pricing policies are beginning to show. Those negative price policies are discussed below.

A major component of the policy framework in both India and Pakistan is the export tax on raw fiber. The export tax works off of a “two-price” system (ICAC; Townsend and Guitchounts). The first price is a “benchmark” price, which is set by the government once a year (ICAC). The second price is the Minimum Export Price (MEP), which is set daily by a Government committee and tends to be correlated to the Cotlook “B” Index. The difference between the MEP and the benchmark is collected by the government as an export tax. When the benchmark is below the internal market price, exports are not feasible because the revenues from buying internally and selling at world prices does not cover the export tax. However, when the benchmark is above the internal market price, the exporter may be able to pay the export tax and still make a profit. The situation where the benchmark is set above the internal market price is illustrated in Figure 7, which shows the domestic market (labeled “Indistan” to represent both Pakistan and India), the trade market, and the Rest of the World (ROW). The benchmark price (P_b) is above the internal “market” price, which is given by the intersection of S_c and D_c in the “Indistan” (Figure 7).

This “two-price” policy has two general implications. First, it gives the government the power to reserve all domestic raw fiber production for domestic mills. Second, it suppresses the internal price of raw fiber, which becomes an implicit subsidy to domestic spinners. Furthermore, the export tax from the “two-price” policy has the effect of reducing exports (Figure 7, center panel). Since Pakistan and India are large cotton producers, this causes a marginal raising of world prices. This tends to benefit cotton producers in other exporting nations such as the U.S. However, it negatively impacts consumers of raw fiber in the rest of the world; i.e., it raises the price of raw materials (cotton) to spinners in the rest of the world.

A primary objective of the “two-price” system in the raw fiber market is to suppress the price of fiber to the benefit of the domestic yarn spinners (Townsend and Guitchouts). The ability to purchase cotton below world market levels confers a competitive advantage on Pakistani and Indian yarn spinners. The cost of acquiring cotton lint accounts for approximately 50% of the total cost of yarn production (Townsend and Guitchouts). Pakistan, for example, enjoyed an average cost advantage over spinners in other countries of approximately 24% in the purchase of raw materials in the 1980s (Ender; Townsend and Guitchouts; ICAC; Hamid et al.). This translates into about a 12% cost advantage for Pakistani cotton spinners -- a decisive advantage because the production of cotton yarn is a high volume/low margin industry.

Both Pakistan and India have an export tax on cotton yarn. However, the tax is minimal compared to the subsidy given by the “two-price” policy, and serves primarily as a means for the government to capture part of the subsidy before it is exported in the form of lower world prices of yarn. The expected effect of the “two-price” policy on world markets in cotton yarn is to increase exports of yarn from Pakistan and India and lower world prices. This has a negative impact on producers of cotton yarn in the rest of the world, but benefits consumers of cotton yarn through lower world prices.

Implications

An analysis of the patterns of exports and the underlying policy frameworks of the Southwest Asian cotton and yarn producing countries suggests some general implications for the U.S. and other exporting nations. First, the direct effects of policies in these countries, as they stand today, are positive for cotton producers in other countries. This is because the “two-price” policy is decreasing exports of raw fiber from Pakistan and India, which means less competition in export markets and higher world prices.

The direct effect of the “two-price” policy is negative for producers and exporters of cotton yarn in the rest of the world, resulting from increased exports of cotton yarn from Pakistan and India and lower world prices. Since Pakistan alone accounts for about 1/3 of the yarn exports in the world, the “two-price” policy could be having a significant negative impact on the rest of the world’s yarn producers. One implication for the U.S. is that the price policies in Pakistan and India may be decreasing mill-use in the United States. Lower world prices of cotton yarn could cause increased imports of yarns from Pakistan and India, and may also cause losses in exports of yarns from the U.S. This hypothesis is supported by the analysis provided by Myers, which shows increased imports of all cotton products (yarns, fabrics, etc.) with only marginal increases in exports of those products from the U.S. Further analysis on this point is needed. In the long-run, the decreased mill-use in the U.S. negates some of the gain received by

U.S. cotton producers by decreasing U.S. mill-use of U.S. cotton. Whether the decreased mill-use in the U.S. offsets gains in exports of raw fiber is unclear. Given the relative world market shares of raw fiber and cotton yarn that the U.S. holds, however, the increases in exports could offset the decreased mill-use, leaving the overall impact on the U.S. cotton producer positive. Further analysis on this question is needed before final conclusions can be drawn.

The General Agreement on Tariffs and Trade (GATT) is not designed to directly address the internal policies of the Southwest Asian countries, and thus, may not have a substantial impact (Ingco). However, gradual phase-out of the Multi-Fiber Agreements (MFAs) may have a more important impact (Varangis and Thigpen). Any liberalization of the internal policies in Pakistan and India will likely lead to increased raw fiber production and exports, and decreased yarn production and exports from Pakistan and India. This will have a negative impact on U.S. cotton producers, though the magnitude is not known. It will have a positive impact on yarn producers in the rest of the world, due to higher world yarn prices and decreased export competition from Pakistan and India.

Conclusions

In general, policy and market outcomes in Southwest Asian cotton markets do have an impact on the U.S. cotton producer and textile manufacturer. The trends discussed in this paper point to some general implications for the U.S. First, the policies in place in Pakistan and India tended to decrease exports of cotton fiber and increase world prices of cotton fiber to the benefit of the U.S. cotton producer. Second, the increasing trend in cotton yarn exports tended to displace some U.S. mill-use. The comparative advantage of U.S. mills may be increased by distortions in Pakistani and Indian cotton markets, but may be decreased by distorted yarn prices.

The magnitudes of these effects are not yet known, but research is currently in progress to quantify the effects of the policies in Pakistan and India on world trade in cotton fiber and cotton yarn. As discussed, the policies are expected to increase the world price of cotton fiber. Therefore, they may have benefitted U.S. cotton producers since the U.S. generally holds between 20 and 30% of world trade in cotton fiber. However, since the U.S. only held about a 1% share of world trade in cotton yarn, direct adverse effects from the lower world price of cotton yarn may be relatively small. The indirect effects of these policies are less clear.

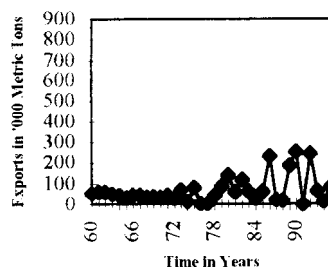
Acknowledgments

The authors would like to thank Dean Ethridge, Kary Mathis, and T.R. Owens, for their comments and suggestions on the manuscript. The authors also acknowledge the contributions of Terry Townsend and

Panos Varangis for their input and assistance on collecting data. This research is supported by a USDA\CSRS NRI grant. Texas Tech College of Agricultural Sciences and Natural Resources Manuscript Number T-1-425.

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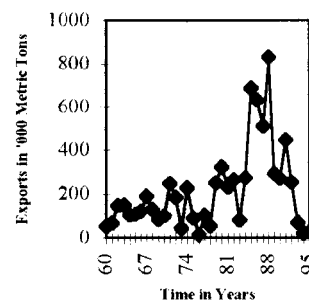


Figure 1. Exports of Raw Cotton from Pakistan Over 1960-95
Source: ICAC. Cotton World Statistics, Various Issues.

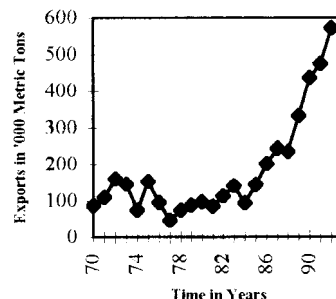


Figure 2. Exports of Cotton Yarn from Pakistan Over 1970-93 Period.
Source: ICAC. Cotton World Statistics, Various Issues.
Figure 3. Exports of Raw Cotton from India Over the 1960-95 Period.
Source: ICAC. Cotton World Statistics, Various Issues.

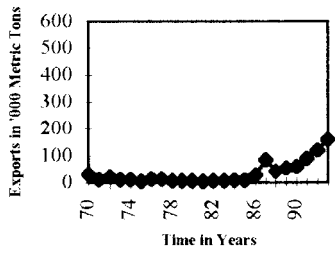


Figure 4. Exports of Cotton Yarn from India Over the 1970-93 Period.
Source: ICAC. Cotton World Statistics, Various Issues.

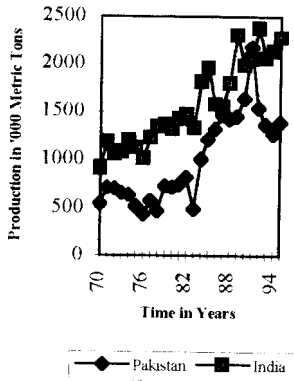


Figure 5. Production of Cotton in Pakistan and India Over the 1970-95 Period.
Source: ICAC. Cotton World Statistics, Various Issues.

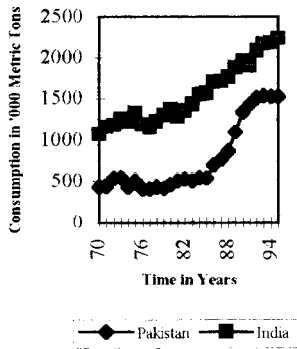


Figure 6. Domestic Consumption of Cotton Over the 1970-95 Period.
Source: ICAC. Cotton World Statistics, Various Issues.

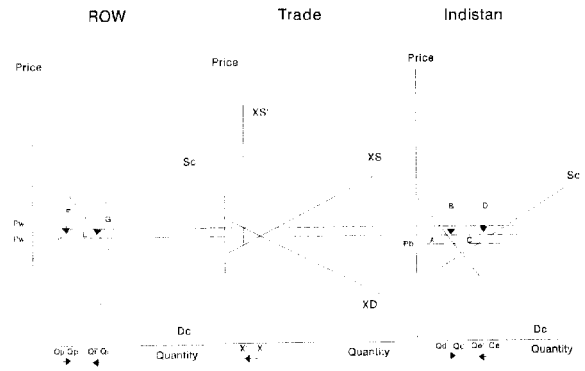


Figure 7. Hypothetical Raw Fiber Market with the "Two-Price" Policy.