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The Challenges and Potential of

Pakistan-India Trade

Zareen Fatima Naqvi and Philip Schuler, Editors
The World Bank

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Preface and Acknowledgements

Chapter 1
Pakistan–India Trade: Overview and Key Issues

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Over a half -decade into the launch of Pakistan's economic reforms, trade with India remains negligible. The share of total trade between Pakistan and India measured by the sum of the bilateral exports amounted in 2004 to only 0.9 percent of total exports between India and Pakistan. This is less than 40 percent of the equivalent measure for trade between Malaysia and China, two countries of comparable gross domestic product (GDP), and only 9 percent of the trade that occurs between Argentina and Brazil, two countries of comparable size and proximity.[1] Pakistan–India trade is not just low; it also falls short compared to what it could be. Recent estimates on trade potential range from $3 to $10 billion, while the annual official trade flows over the last six years averaged to no more than $400 million.[2] Since Pakistan and India account for almost 90 percent of South Asia's GDP, low bilateral trade is an important constraint for growth of South Asian exports to the rest of the world, as well as for an expansion of intraregional trade. South Asia's trade grew to only $126 billion in 2005 from $12 billion in 1980, while East Asia, a region of comparable size in population and GDP, saw its exports increase in the early 1980s to over $1 trillion from $48 billion.[3] Over the same period, intraregional trade as a share of total trade within South Asia rose to only 4 percent from 3 percent, whereas East Asia boosted its intraregional trade share to more than 14 percent from 6 percent.[4] South Asia remains the least-integrated region in the world. Intraregional trade amounts to a little more than one percent of the regional GDP in South Asia compared to almost 2.7 percent in the Middle East and North Africa, 3.7 percent in Sub-Saharan Africa, 7 percent each in Latin American and East Asia, and 16 percent in Europe and Central Asia (Figure 1.1).

This volume takes a fresh look at the old issue of Pakistan–India trade. It builds on a 1996 Ministry of Commerce report that was commissioned during a time of weak economic performance. The 1996 study endorsed closer trade ties with India and recommended that Pakistan reciprocate India's move of granting most-favored nation (MFN) status. One decade later, in an improved political and trade environment, the Ministry of Commerce requested the World Bank assemble a team of Pakistani and international trade experts to evaluate the options for expanding trade with India in the context of the South Asian Free Trade Area (SAFTA) agreement. This volume presents the team's findings. The analysis shows that the main conclusion of the 1996 report still applies. In view of the progress on political, economic, and trade reforms, the time has come for Pakistan to liberalize its trade relations with India. While much of the discussion is cast from the perspective of Pakistan, the findings show that India will equally benefit from trade. Indeed, improved bilateral trade would not only help the two largest economies in the region but also bolster South Asia's ambition to shed its status as one of the poorest regions in the world.

The introductory chapter traces the constraints and opportunities for Pakistan–India trade along three dimensions: the bilateral political relations, Pakistan's domestic trade regime, and regional trade integration. It begins by exploring how these factors have contributed to holding back Pakistan–India trade, then discusses the recent encouraging progress in each of these areas and highlights the main insights of the analysis presented in this volume. It concludes by proposing a three-pronged strategy for improving Pakistan's trade relations with India.

Three Roadblocks to Trade

Trade flows between India and Pakistan have been low over the course of the past half-century for three main reasons: political tensions, the use of import-substitution policies to promote industrialization, and, in contrast to other regions of the world, relatively little commitment to regional integration. This section briefly addresses these three roadblocks to trade. Although we focus here on Pakistan's policies, many of the same forces were at work in India as well.

Figure 1.1: South Asia's Intra-Regional Trade is the Lowest in the World
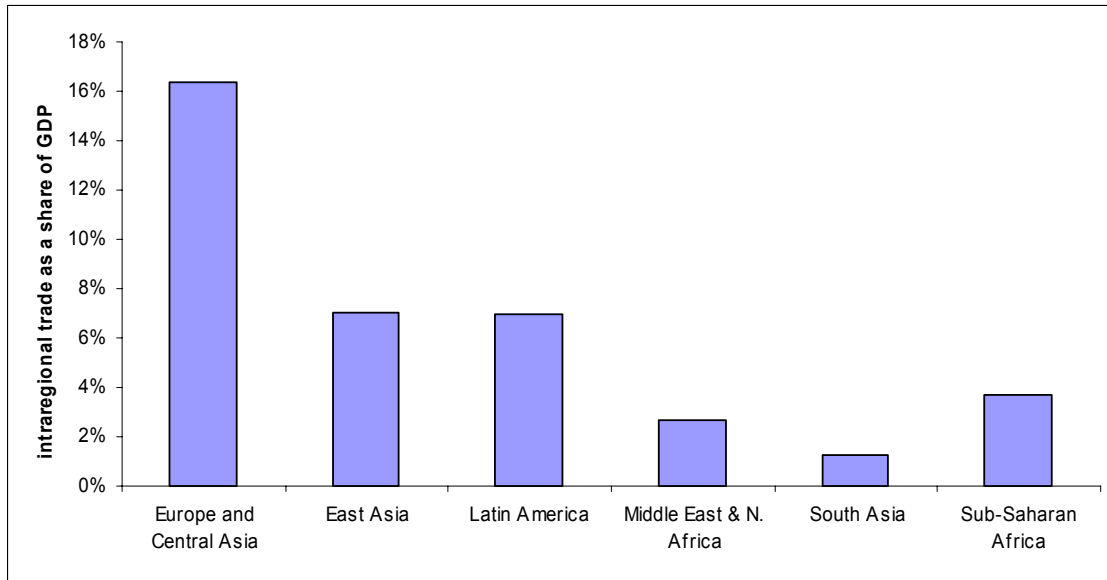
Source: World Development Indicators.
Note: Intra-regional trade as a share of the region's aggregate Gross Domestic Product (GDP) in 2004.

For a long time, discordant political relations between Pakistan and India obstructed bilateral trade. At the time of independence, almost three-fifths of Pakistan's total exports were directed to the Indian market, and one third of its imports came from India (Sangani and Schaffer 2003). The situation began to change when Pakistan refused to devalue its currency after India's devaluation in 1949 and later imposed import restrictions. Bilateral trade declined sharply during periods of conflict or heightened tensions. It increased only slowly as political relations improved. Trade between India and Pakistan almost ceased altogether from the mid-1960s to mid-1970s due to the 1965 India–Pakistan war and the 1971 East-Pakistan war, which led to the creation of Bangladesh. More recently, bilateral relations between the two countries became tense after the 1999 Kargil war, as well as after the attack on the Indian parliament building in December 2001 by allegedly Pakistan-trained Kashmiri terrorists. Overall, it took four long decades before trade volumes (measured in nominal terms) between the two countries exceeded the levels of the early 1950s (Figure 1.2).

Figure 1.2: Pakistan-India Trade Has Suffered from Political Tensions
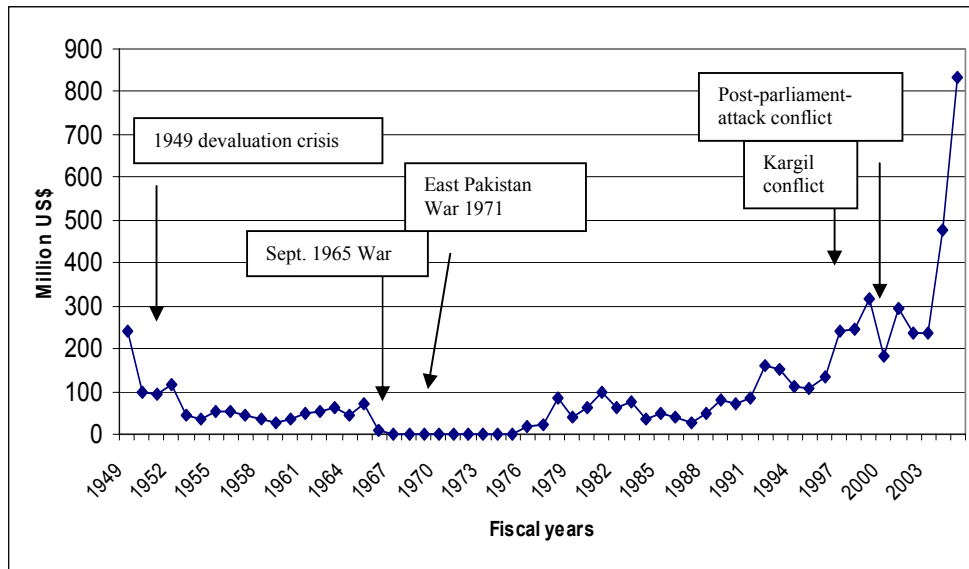
Source: 50 Years of Pakistan in Statistics, and Ministry of Commerce, Government of Pakistan.
Note: Trade is measured as the sum of exports and imports. Values have not been adjusted for inflation.

Second, Pakistan's international competitiveness suffered from inward-looking import substitution policies and the protection of domestic industries. The antiexport bias inherent in high import tariffs; a poor investment climate; high cost of doing business; low labor productivity, particularly in the manufacturing sector; shortages of skilled workers; distortions in the land markets; and excessive business regulations collectively restricted the ability of Pakistani companies to engage in trade. Despite the recent economic reforms, many of these factors continue to hamper Pakistan's economy. In 2006, Pakistan ranked 91st among 125 countries on the World Economic Forum's annual Global Growth and Competitiveness Index, which was 12 positions below Sri Lanka, 37 below China, and 48 below India (Table 1.1). New comprehensive evaluations of constraints to more rapid industrial growth and international competitiveness identify a number of urgent actions, such as strengthening economic governance; investing in energy, transport, and telecommunications infrastructure; providing incentives for technology diffusion and adaptation; building up a vibrant small and medium enterprise sector; focusing on provincial strategies to lower location costs; and opening up new vents for industrial growth (Government of Pakistan 2005 and World Bank 2006). Furthermore, these assessments recommend an expansion of regional trade and trade liberalization with India for improving Pakistan's international competitiveness.

Table 1.1. 2006 Global Competitiveness Index (GCI)—125 Countries

	Global Competitiveness	Basic	GCI Components Efficiency Enhancers	Innovation
Singapore	5	2	3	15
Malaysia	26	24	26	22
Thailand	35	38	43	36
India	43	60	41	26
Indonesia	50	68	50	41
China	54	44	71	57
Mexico	58	53	59	52
Turkey	59	72	54	30
Brazil	66	87	57	38
Philippines	71	84	63	66
Peru	74	76	67	68
Sri Lanka	79	80	79	30
Pakistan	**91**	**93**	**91**	**60**
Bangladesh	99	96	108	104

Source: World Economic Forum, *Global Competitiveness Report 2006–07.*

Due to the legacy of a weak political and trade competitiveness environment, the base of official trade between Pakistan and India has remained fairly narrow. The composition of exports from Pakistan to India is limited to about eight commodity groups, which on average account for around three-fourths of exports (Table 1.2). These include fresh and dried fruits and vegetables, molasses, crude vegetable materials (e.g., crude fertilizer), cotton yarn and fabrics, wool, and, more recently, petroleum products and chemicals. The composition of official imports from India is broader (see Table 1.3), reflecting India's more diversified industrial base. The biggest share in imports from India are of chemicals, followed by iron ore and steel products, animal feed, tires and tubes, etc. Periodically, agricultural products (e.g., raw cotton, wheat, and sugar) account for one-time imports or exports to meet domestic shortages. As discussed in Chapter 5, the composition of informal exports and imports show that a range of other products are defying official tariff and nontariff barriers to reach the other country, reflecting the potential for expanding trade. Indian and Pakistani business groups list a variety of other goods and services where there is considerable potential for trade between the two countries, such as pharmaceuticals; a range of textile products; iron ore and steel; electronics; sports and surgical goods; minerals; and health, education, entertainment, tourism, and information technology services.

Table 1.2. Composition of Pakistan's Official Exports to India (Percent)

Commodities	2001/02	2002/03	2003/04	2004/05	2005-06
Petroleum & its products	0	0	41.6	60.2	33
Chemical elements and compounds	0	0.1	0.2	1.4	12.8
Cotton fabrics (woven)	6.7	5.2	8.4	6.5	11.6
Fruits & vegetables	67.8	30.2	20.9	9.1	9.4
Cotton yarn	4.8	2	1.4	0.9	2.7
Crude vegetable materials	8.6	5.5	2	0.8	0.9
Wool (including wool tops)	1.6	1.8	1.9	0.5	0.9
Crude vegetable materials	8.6	5.5	2	0.8	0.9
All other exports	10.5	55.2	20.7	14.7	28.7

Source: Compiled from Table A1.9. Ministry of Commerce, Government of Pakistan.

Table 1.3. Composition of Pakistan's Official Imports from India (Percent)

	2001/02	2002/03	2003/04	2004/05	2005/06
Chemical elements & compounds	33.9	35.4	37.9	35.8	18.4
Chemical material & products	9.3	11.0	6.9	12.7	8.7
Concentrates of iron & steel	7.3	10.8	8.1	11.9	5.8
Feeding stuff for animals	4.1	0.6	7.3	7.1	9.1
Tires & tubes of rubber	7.2	11.0	5.0	6.0	5.0
Raw cotton	0	0	14.7	2.8	4.9
Dyeing, tanning, & coloring materials	4.9	6.3	2.8	2.5	2.6
Iron and steel manufacturers	0.5	0.3	1.8	2.4	3.9
Crude vegetable materials	3.6	3.7	1.4	1.5	1.9
Machinery & its parts	2.0	2.4	0.8	1.0	1.4
Manufactures of nonferrous metals	0.8	1.8	1.8	1.3	0.9
Tea & mate	1.2	2.8	1.8	1.1	1.3
Cotton yarn	0	0.5	2.2	0.9	1.3
Spices	2.4	1.4	0.7	1.1	0.5
Fruits & vegetables	2.7	0.5	0.1	0	0
Concentrates of nonferrous metals	1.7	1.2	0.1	0.1	0
All other imports	18.4	10.3	6.6	11.8	34.3

Source: Compiled from Table A1.10. Ministry of Commerce, Government of Pakistan.

Third, Pakistan paid little attention in the past to trade relations and regional integration in South Asia. Trade and economic integration within South Asia was not high on Pakistan's, or any of the other South Asian countries', agenda until recently. Pakistan took part in only few regional trade and economic arrangements, such as the Regional Cooperation for Development, which existed from 1964 to 1979, and the Economic Cooperation Organization initiated in 1985.[5] Initial attempts to create a regional trade arrangement through the South Asia Preferential Trade Agreement (SAPTA) failed largely due to the Pakistan–India political standoff and the lack of domestic economic reforms.

Clearing the Trade Path

Over the last few years, there has been encouraging movement along all three dimensions—political relations, trade competitiveness, and trade integration. First, the political environment for expanding trade with India has become more favorable. Pakistan and India have started the Composite Dialogue process on an eight-point agenda[6] covering a range of defense, political, and economic issues. Almost monthly announcements on measures agreed by Pakistan and India have built new confidence in their mutual relations. On the economic front, the two governments intend to tackle a broad agenda, ranging from improving trade logistics; easing visa restrictions; reducing nontariff barriers; facilitating trade via the sea, land, and rail routes; and opening-up the banking sectors. The rail service between Khokrapar and Monabao in the Sindh–Rajisthan border was revived after being closed since 1965. New bus services link the two Kashmirs between Srinagar and Muzaffarabad, as well as places of religious significance between Lahore and Amritsar and Amritsar and Nankana Sahib. During the third round of Composite Dialogue process discussions in March 2006, both countries agreed to discuss the new shipping protocol, the deregulations of air services, the joint registration of basmati rice, an increase in the size of Pakistan's positive list, proposals for information-technology-related medical services and export insurance by India, and work on a memorandum of understanding for cooperation in capital markets by Pakistan. Episodes of terrorism (e.g., the commuter train blast in Mumbai in July 2006) and insurgency (e.g., in Balochistan, Pakistan) in India or Pakistan have led to each country blaming the other and to periodic tensing of warming relations. Such hiatuses have been relatively short-lived, however. The fourth round of Composite Dialogue process talks are scheduled to begin in March 2007 to review progress thus far, and to continue to push forward the ongoing dialogue on the eight-point agenda. For the first time in decades, Pakistani cinemas will be allowed to show Indian films as part of the growing

exchange in the media and the film industry. Cricket and field hockey fans in the two countries greeted with much joy the revival of sporting events between Pakistan and India.

Figure 1.3: Pakistan-India Trade Has Increased Sharply over the Last Three Years
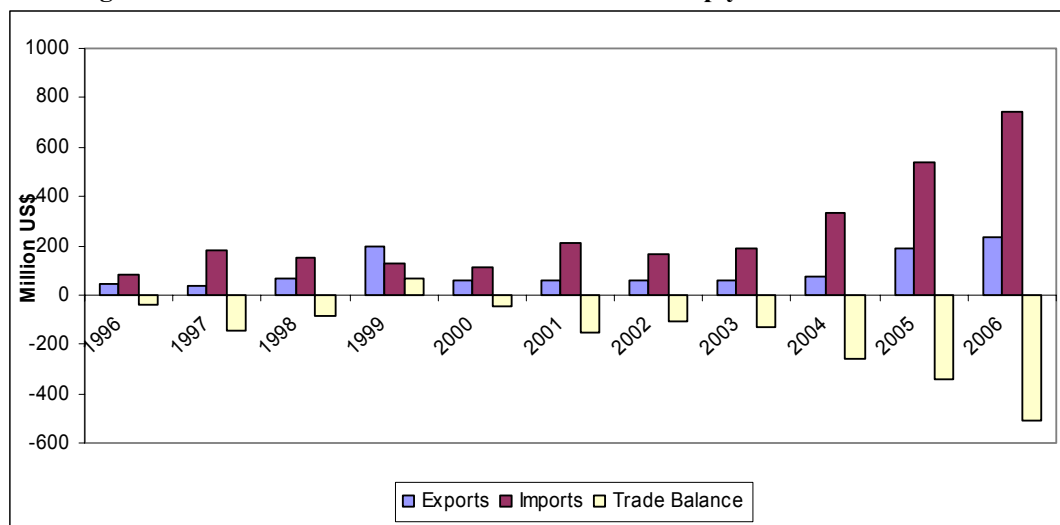
Source: Calculated from the average of Pakistan and India's bilateral trade statistics.
Note: The trade balance is presented as Pakistan's exports to India minus its imports from India.

The improved bilateral climate has paid dividends in terms of higher trade flows. While India granted Pakistan MFN status in 1995/96, Pakistan has not yet reciprocated this move. Instead, Pakistan has steadily increased the size of the positive list, which identifies goods that may be legally imported from India.[7] It expanded from 40 items in 1983 to 687 items in 2004/5, to 773 items in 2005/06 and, most recently, to 1,075 items as part of the SAFTA process. Despite these additions, the positive list remains restrictive. It includes approximately 45–50 percent of the tariff lines of importable items at the eight-digit level, but in its current form, the list is not very transparent.[8]

Nevertheless, the government's policy of gradually expanding the positive list is paying off. Official trade between India and Pakistan reached a record $982 million in 2005/06, almost three-fourths of which was Indian exports to Pakistan.[9] This compares to an average of less than $250 million during fiscal years 2001–03 and only $107–129 million a decade ago (Figure 1.3). Including $545 million for informal trade in 2004/5 as estimated in Chapter 5, and assuming similar values and volume of informal trade, total bilateral trade was $1.5 billion, or 3.4 percent of Pakistan's total trade in 2005/06.

It is often asked why, despite India granting MFN treatment to Pakistan more than a decade ago, the bilateral trade balance favors India? First, MFN treatment does not necessarily mean that the trade regime becomes preferential, open, or accessible. It only means that Indian trade policies formally afford Pakistan the same treatment, in terms of tariffs and trade regulations that it gives to other World Trade Organization (WTO) members. Despite its recent reforms, India continues to maintain a relatively restrictive trade regime by both global and regional standards: its tariffs are among the highest in the world, it is a leading user of antidumping measures, and its business regulations are widely regarded as unfriendly to trade and investment. International trade bodies and a recent study in Pakistan have documented a large number of non-tariff barriers that restrict imports from other countries, as well as from Pakistan.[10] Second, instability in political relations is an important factor inhibiting trade with India. Pakistan businesses feel that they can expand exports to India in a variety of products that would serve as inputs for India's fast-expanding export industry, but these require establishing regular business contracts and stable supply chains. They have shied away from building longer-term, durable trade relationships because of the unstable political relations as well as because of specific impediments to trade such as ability to honor letters of credit, travel

visas, etc. They feel that a more conducive political environment and reducing the impediments to trade would go a long way in building trust, leading to expansion of Pakistani exports to India. Finally, one should bear in mind that, although a country's overall trade balance may have important implications for growth and macroeconomic stability, its bilateral trade balance with any particular country does not—in this sense it is incorrect to say that a bilateral trade balance "favors" one partner or the other. Pakistan runs a trade deficit with India, just as it does with China, and surpluses with other major economies, notably the United Kingdom and the United States. Similarly, while India has trade surpluses with its neighbors in South Asia, it runs deficits with major East Asian countries, Australia, and others.[11] Given India's larger and more diversified economy, plus the fact that India is also a major producer of goods that Pakistan exports, it is no surprise that Pakistan has a trade deficit with India.

Second, Pakistan has made good progress on wide-ranging economic and institutional reforms. Pakistan abandoned the decades-old program of import substitution in 1998 and embarked on ambitious economic reforms designed to spur economic growth through greater integration with the world economy. These reforms leave Pakistan in a much better position to pursue preferential liberalization, whether in the context of SAFTA or through bilateral agreements. The reforms also allow the country to focus on the behind-the-border reforms needed to enhance the country's competitiveness.

Figure 1.4: Tariff Rates Have Declined Dramatically since 1995 (Percent)	**Figure 1.5: High tariff Rates are Much Less Common in 2006 than in 1995 (Percent)**
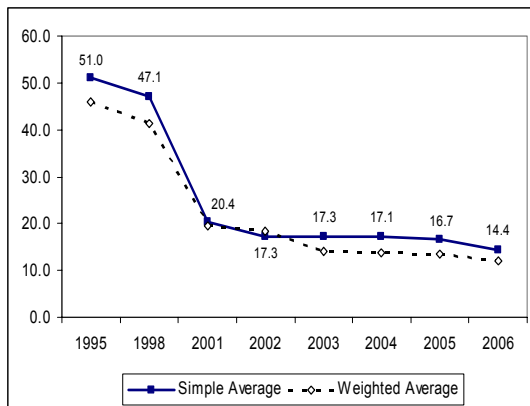
Source: World Bank staff calculations using UNCTAD Trains data for 1995–2002 and CBR data for 2003–2006. *Note*: The weighted average scales tariff rates by the product's share of imports.
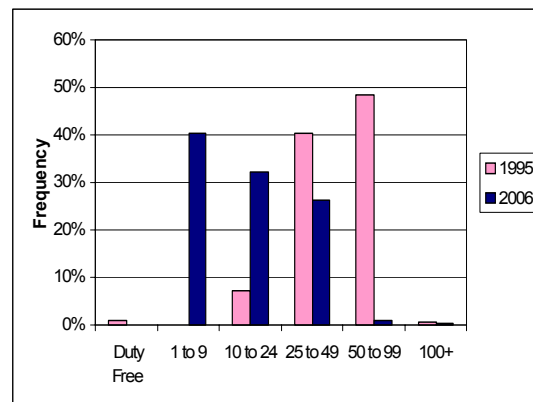
Source: World Bank staff calculations using data from UNCTAD Trains (for 1995) and CBR (for 2006). *Note:* Bars show the share of tariff lines in each group of tariff rates.

The government made substantial cuts in import tariff rates across all sectors of the economy and simplified the tariff structure by reducing the number of tariff bands. The average tariff rate fell to 20 percent in 2001 from over 50 percent in 1995, and stands now at around 14 percent (Figure 1.4). Pakistan now has the lowest applied average tariff rates of the three large South Asian economies (Bangladesh, India, and Pakistan). Where once most products faced customs duties of 50 percent or more, now the median tariff rate is 10 percent, and 40 percent of all tariff lines lie in the 5 percent band, as shown in Figure 1.5. In addition to cutting import tariff rates, the government eliminated quantitative restrictions, regulatory duties, and other para-tariffs, and several other measures that had restricted trade in the past. Many parastatal organizations with control over importing and exporting were abolished. Finally, the government reduced the number of firm- and product-specific exemptions granted under statutory regulatory orders. Ordinary customs duties are now the principal instrument of trade policy.

Pakistan's trade liberalization over the past decade has been deep as well as broad. All sectors of the economy have been part of the program. Table 1.4 contrasts the simple average tariff rates at the industry level in 1995 with the average rates under the 2006 tariff. Given that import tariffs introduce a bias against exporting, the large reductions in tariffs on textiles and apparel—a sector of the economy in which Pakistan has a clear comparative advantage—have played a role in improving the export competitiveness of this sector.

Table 1.4. Simple Average Tariff Levels by Industry, 1995 versus 2006

Industry	1995	2006	Decline
Agriculture	36.1	9.5	20%
Forestry and Logging	38.1	9.9	20%
Fishing	66.5	9.6	34%
Coal Mining	31.7	5.7	20%
Crude Petroleum and Natural Gas Production	60.0	5.0	34%
Metal Ore Mining	15.0	5.0	9%
Other Mining	46.5	10.1	25%
Manufactured Food, Beverages, and Tobacco	49.4	20.0	20%
Textile, Apparel, and Leather	65.4	18.9	28%
Manufactured Wood Products	61.5	24.4	23%
Paper, Printing, and Publishing	60.8	17.6	27%
Manufactured Chemicals, Petroleum, Coal, Rubber, Plastics	44.9	10.6	24%
Manufactured Nonmetallic Minerals (except petroleum)	62.5	21.3	25%
Basic Metal Industries; Manufactured Metal Products	49.7	11.1	26%
Machinery and Equipment	47.9	14.0	23%
Other Manufacturing	50.7	18.1	22%
Other Industries (excludes HS99)	48.2	6.3	28%
All Goods	51.0	14.4	24%

Source: World Bank calculations using tariff data from CBR (2006) and UNCTAD (1995).
Note: Percentage changes in tariffs rates (T) computed as ΔT/(1+T) to reflect the percentage change in influence of import tariffs on domestic prices.

Pakistan's average tariff now approaches those of Nepal's and Sri Lanka's—the low tariff leaders in South Asia. At the global level, however, Pakistan continues to rank somewhat low: 133 out of 170 in terms of the average tariff rate across all goods (1 = lowest tariff rate).[12] Table 1.5 shows average tariff rates for a number of countries comparable to Pakistan in size or level of development. At one extreme, countries such as the Philippines and Ukraine have average tariffs one-third to one-half the level of Pakistan, while Nigeria imposes customs duties that are about twice as high, on average, as Pakistan's. There are a number of areas where tariff reforms should be deepened and continued, such as reduction in tariff peaks (e.g., automobiles, edible oil) and tariff dispersion (particularly by reducing the extraordinary rates outside the regular tariff bands), eliminating protection to inefficient industries through tariff escalation, conversion of the remaining specific tariff rates into ad valorem rates, and closing loopholes created by special exemptions—e.g., reduce selectivity and discretion in granting exemptions, make all tax exemptions neutral with respect to the source of supply, and reduce tariffs in cases where virtually all goods enter under exemptions.

Table 1.5. Pakistan's Tariffs in Comparative Perspective

Reporter Name	Tariff Year	All Goods	Agriculture Products Narrow (ISIC)	Agriculture Products Broad (HS1–24)
Philippines	2003	5.1	8.2	10.5
Ukraine	2002	7.6	6.1	15.2
South Africa	2005	8.0	4.0	8.1
Russia	2005	9.7	7.4	10.6
Argentina	2005	9.7	6.6	10.1
Indonesia	2004	9.9	4.6	11.2
China	2004	10.4	12.3	15.2
Brazil	2005	10.8	6.7	10.3
Thailand	2005	12.0	23.4	24.5
Kenya	2005	12.9	17.0	22.0
Pakistan	*2005*	*14.4*	*9.5*	*15.6*
Cambodia	2003	17.3	10.5	20.6
Vietnam	2004	18.6	16.8	30.4
India	2005	18.9	37.5	42.7
Bangladesh	2004	18.9	19.0	22.8
Egypt	2002	20.5	18.5	22.2
Nigeria	2002	30.0	50.2	52.7
World Average	2005	8.7	10.1	13.0

Source: World Bank staff calculations using WITS with UNCTAD Trains data.
Note: Products with specific tariffs are excluded from calculations.

The government has also pursued complementary import tariff and fiscal reforms. Lowering and rationalizing import tariffs, as well as broadening the tax base and improving tax administration, are helping the government solve a fundamental problem with import duties: that they are collected on such a narrow base—only imports instead of all goods. Relying on trade taxes for revenue forces a government to impose a higher tariff rate to earn the same amount of revenue as a more broadly based tax levied on all sources of supply. Higher tax rates in turn generate greater efficiency losses for the economy and create incentives to smuggle. Furthermore, they impose higher prices on consumers and make exporters less competitive in world markets. Finally, reducing reliance on trade taxes makes it easier for the government to resist special-interest lobbying that promotes protectionist policies.

The government has taken great strides in recent years to broaden the tax base, replacing both customs duties and excise taxes with more broadly based direct taxes. Figure 1.6 shows that customs duties' share of federal tax revenue to under 20 percent of tax revenue in 2005/06 from over 45 percent in 1990. The share represented by federal excises has fallen to even lower levels. At the same time, the shares contributed by more broadly based taxes—sales and income taxes—has gone up.

Figure 1.6: Government Dependence on Import Duties has declined since 1990
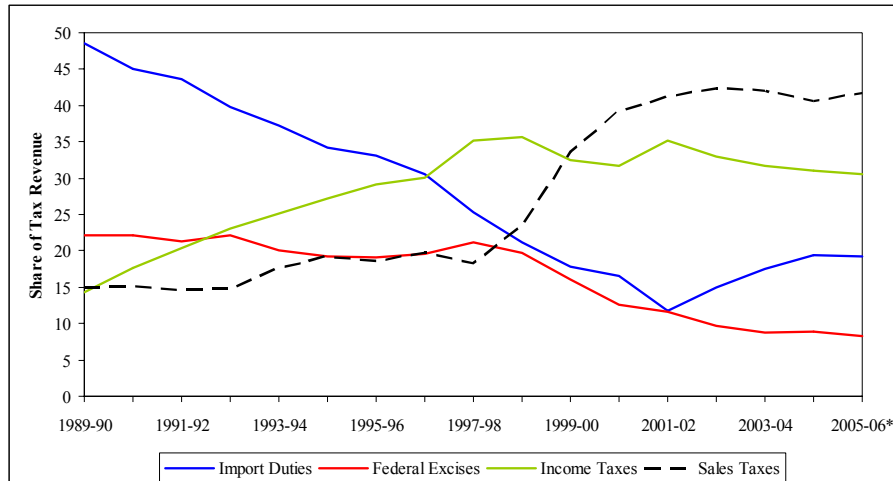
Source: World Bank staff calculations using CBR and State Bank of Pakistan data.

A number of institutional reforms in tax administration and trade facilitation have also accompanied reduction in tariffs. Over a decade, a number of major initiatives have reformed customs clearance. A single administrative document replacing 10 documents, the Pakistan Revenue Administration Limited, has brought computerization to a range of tax-administration activities; and preferred traders have gained a green channel to have fast-track goods clearance. An Internet-compatible Customs Administration Reform system is due to replace Pakistan Revenue Administration Limited, bringing in risk-assessment capabilities, reduce processing time, and improve channelization of trade. Due to these improvements, 95 percent of imports by value are cleared within four days, and exports are processed in one or two days. In the transportation sector, improved roads and port facilities, particularly the Peshawar–Lahore–Karachi transport corridor has substantially improved the transport network. With the exception of railways, there has been reduced public sector participation and increased competition.

The impact of the economic, fiscal, and trade reforms is showing. A sharp increase in demand for imports, rapid growth in exports and a boost in investments have contributed to an acceleration of growth. The GDP growth rate jumped to 6.4 percent in 2003/4 and 8.6 percent in 2004/5 and 6.6 percent in 2005/06, from around 4 percent during the 1990s, and is projected to stay at 6.5–7.2 percent over the medium term until 2008/9. Growth in exports in U.S. dollar terms averaged 16 percent during the last three fiscal years (FYs 03–06), compared to only 6.1 percent in the 1990s. Similarly, imports have been growing by 29 percent during the fiscal years 2003 to 2006, compared to only 4.8 percent during the 1990s. Pakistan's share of trade in GDP sharply increased to 36 percent by the end of 2005/6 from 26–27 percent in late 1990s.[13] (See Figure 1.7 for economic openness trends during FYs 91–06). Since the early 1990s, Pakistan's share in global trade has inched to close to 0.2 percent from 0.15 percent. Despite fears that Pakistan would be hurt by the end of world garment and textile quotas in January 2005, the Pakistani textile sector has done quite well in the year-and-a-half in a fiercely competitive international market. More efficient resource allocation and higher world market prices have allowed Pakistan to compensate for the loss in rents due to the abolition of quotas on its exports.

Figure 1.7: Pakistan's Trade Openness is Increasing
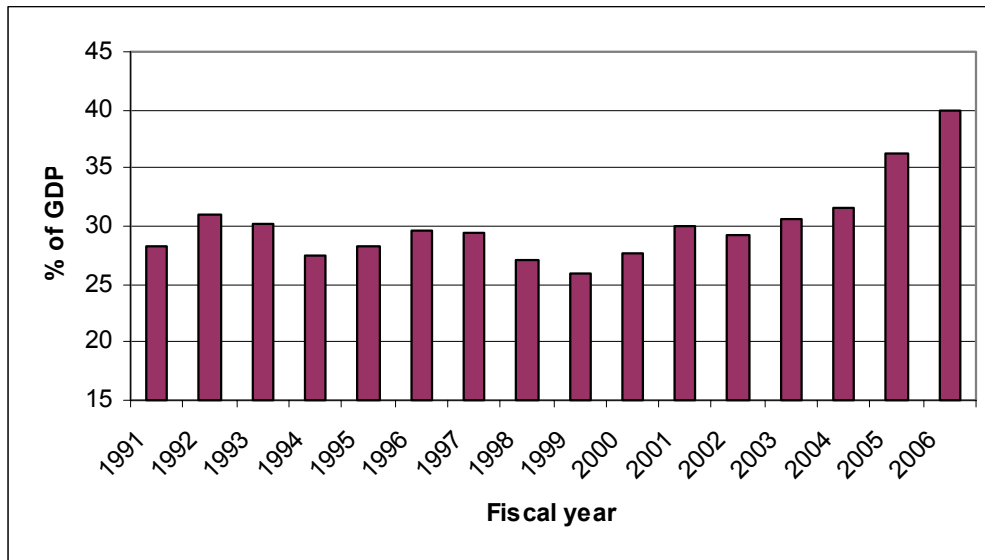
Source: World Bank Staff calculations from data in the *Pakistan Statistical Yearbook 2004.*
Note: Trade openness is defined as expenditures on exports plus imports of goods and non-factor
services as a share of GDP at current market prices.

**Third, there is some progress on regional trade and economic integration in the South
Asia region**. The signing of the SAFTA in January 2004 is perhaps the most visible sign of the push
toward greater regional integration. This landmark agreement replaces the unsuccessful SAPTA and
potentially establishes the largest free trade area in the world, covering more than 1.4 billion people.
It aims to boost trade among member countries by reducing and eventually eliminating tariff barriers,
facilitating cross-border movement of goods, promoting fair competition in the region, and creating
an effective framework for regional cooperation. All seven original member states of the South Asia
Association for Regional Cooperation (SAARC)[14] have ratified the agreement, which came into force
on January 1, 2006, and to date have made the first two round of tariff concessions starting in July
2006. The hope is that these steps would lead up to a fully liberalized free trade area by 2016 (Table
1.6). Good progress has been made in finalizing the four SAFTA components, i.e., on the list of
sensitive items, the rules of origin, and the technical assistance and revenue compensation for the
least developed countries[15]; however, compared to the initial optimism, recent analysis indicates that
SAFTA may have a rather limited impact on liberalizing trade in the region. This is because of the
fairly restrictive "sensitive lists" that member countries have put up, rather strict rules of origin, and a
slower time frame and scope of trade liberalization compared to the recent bilateral and regional trade
arrangements that SAARC members have signed or are considering.[16] Moreover, there have been a
few recent setbacks because of disputes between the two largest economies—Pakistan and India.
Pakistan has offered tariff concessions to India only on its "positive" list of importable goods from
India. This is contrary to the SAFTA agreement that stipulated that tariff concessions would be given
on all goods except those goods on the "sensitive" list that were to be identified by each country for
least-developed countries (LDCs) and non-LDCs. India has termed this move as a nontariff barrier by
Pakistan and it has hinted that it may review and, in the worse case, even possibly revoke the tariff
concessions given to Pakistan. There is a fear that if these issues are not resolved quickly, the
potential benefits from elimination of tariffs under SAFTA that hoped to boost intraregional trade and
enhance trade flows, especially of the smaller countries in South Asia,[17] would be rather limited. Any
setback on SAFTA would also imply that promoting trade through developing trade-related
infrastructure and promoting regional investments, which was intended to follow trade liberalization
by SAARC member states, may also be jeopardized.

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Table 1.6. Tariff Reductions Proposed Under SAFTA

Countries	Tariff Rates	Proposed SAFTA Reduction	Timeline
First Phase			
India, Pakistan, Sri Lanka[a]	> 20%	Reduce to 20%	2 years
	< 20%	Further annual reductions	2 years
Bangladesh, Bhutan, Maldives, Nepal[b]	> 30%	Reduce to 30%	2 years
	< 30%	Further annual reductions	2 years
Second Phase			
India, Pakistan, Sri Lanka[a]	<= 20%	Reduce to 0-5%	2 years
Bangladesh, Bhutan, Maldives, Nepal[b]	<= 30%	Reduce to 0-5%	3 years (primary products); 5 (other products)

Source: Asaduzzaman et.al. (2003).
Notes: a. non-least-developed countries; b. least-developed countries.

Pakistan–India Trade Reconsidered

In light of these encouraging changes, the time is ripe for Pakistan to reevaluate its trade regime with India. The progress on bilateral Composite Dialogue on political, defense, and economic issues continues to make good progress. Pakistan and India have opened up their economies and entered a period of high growth. The countries of the South Asia region have embraced regional trade and economic integration for economic growth and poverty reduction and have made some progress on the SAFTA agreement.

As previously mentioned, this volume is an update of a 1996 report commissioned by the Ministry of Commerce. The analysis in this report extends the 1996 study in three dimensions. The analysis is based on rigorous statistical analysis with up-to-date data. Further, the assessments draw on newly collected information regarding informal trade flows and trade impediments between Pakistan and India. Finally, the political dimension of bilateral trade is the topic of a separate study. The findings of the study suggest that the time has come for Pakistan to liberalize its trade relations with India in the context of the SAFTA.

When interpreting the findings, it is important to keep in mind four qualifications. First, the conclusions of the analysis are based on the economic realities of the last several years. As economic and trade reforms proceed, the allocation of resources and productivity of companies will change, possibly triggering adjustments in the relative competitiveness of Pakistani and Indian enterprises. As domestic prices, cost of production, or trade regimes evolve, the analysis of this volume will have to be updated. Second, the impact of trade liberalization is investigated in detail only for a few sectors, which were selected to illustrate the range of possible outcomes rather than to comprehensively cover all sectors. A number of sectors were considered, but due to limitation of time and the budget we have concentrated on a few, although a number of goods (e.g., pharmaceuticals, leather goods, sports and surgical goods, etc.) and services (e.g., tourism, information technology, health, etc.) have considerable scope for expanding trade. Since the welfare effects are specific to the industries investigated, there is no guarantee that the conclusions will apply in the same way to all other sectors as well. Third, the focus of this volume is very much on the trade of goods. Liberalization of Pakistan–India trade and implementation of SAFTA will very likely stimulate greater intraregional trade in services, flows of investment, and movement of workers. Business groups in Pakistan and India have already identified many areas for possible economic cooperation, ranging from joint ventures in manufacturing chemicals, petrochemicals, pharmaceuticals, automobiles, and agro-processing, to technology transfer arrangements among information technology firms, and to joint gas pipeline projects. Rigorous modeling of these effects is left for future research. Finally, the bulk of the discussion takes the perspective of Pakistan, although the contributors to this volume systematically trace the implications for India.

Chapter Overviews

The volume is organized around the three areas of trade integration, political relations, and economic competitiveness. Chapter 2 lays out the broader context of *trade integration* and draws lessons for SAFTA from global experiences with regional trade agreements (RTAs). Chapter 3 investigates one aspect of the *political* dimension. It quantifies the trade cost of bilateral animosities through a standard gravity model that predicts Pakistan–India trade flows under the scenario of cordial political relations. The remaining chapters focus on the *economic* dimension of Pakistan–India trade. Chapter 4 gives a broad overview of bilateral trade from the Indian side; Chapter 5 looks at issues of informal bilateral trade and estimates its size and composition; and Chapters 6 to 9 study the welfare implications of bilateral trade and free trade in the context of SAFTA in subsectors of agriculture, textiles, light engineering, and chemicals.[18]

In *"South Asia Free Trade Area—Promises and Pitfalls of Preferential Trade Arrangements,"* Richard Newfarmer and Martha Piérola draw lessons for SAFTA from the experiences of RTAs in other parts of the world. Their main message is that RTAs can spur growth and poverty reduction *but the results are by no means automatic.* In reviewing the effects of RTAs on growth, trade, technological diffusion, and foreign investment, the paper extracts six key lessons. First, signing a regional trade agreement did not always produce increased trade and growth, and agreements often fell short of their objectives either because policy makers allowed interest groups to exempt large segments of their economies from tariff reductions or because agreements kept in place high external-border barriers. Second, successful agreements were often preceded or accompanied by unilateral efforts among members to reduce external protection. Third, North–South agreements have shown more consistent success than South–South agreements. Fourth, regional integration was only successful because trade actually unleashed new competition that lowered domestic prices and provided new technology. Fifth, successful integration has usually been associated with new competition in not only goods but in services as well. Finally, integration was most successful when partners streamlined borders transactions through active trade-facilitation policies.

Newfarmer and Piérola argue that a successful pursuit of regional integration in the context of SAFTA has to integrate three policy domains of trade policy into a coherent strategy: unilateral policies, multilateral policies, and regional policies.

- Unilaterally, member countries should examine their own trade regimes for the impediments to effective import competition in the domestic market to drive domestic productivity and engender rapid growth. It is also important that countries' trade regimes be stable and predictable; frequent changes in trade policies tend to discourage trade and investment.
- A second domain is, of course, the *multilateral* trade negotiations, which are ongoing as part of the WTO. The Doha Development Agenda offers perhaps the biggest payoff for developing countries around the world. India and Pakistan have the opportunity to shape the policy positions of the G-20 and leverage more open markets around the world, particularly in the high-income countries. Bangladesh, as a leader in the LDC coalition, could help forge a compromise on many issues that would promote development and market access simultaneously.
- The final element is *South Asia's regional trade*. A four-track policy could capitalize on the SAFTA initiative. They include (a) early movement to conduct Indo-Pakistani trade on an MFN basis, (b) joint efforts to facilitate trade, (c) negotiation of trade agreements with larger markets such as China and/or Association of Southeast Asian Nationas (ASEAN) behind lower tariffs so as to widen trade and competition throughout the region, and (d) launching the SAFTA discussions with minimal exclusions (i.e., sensitive lists), simple rules of origin, and restrictions on antidumping measures. These tracks can be delinked from each other— since each will bring potential benefits and at the same time contribute positive synergies to the other area.

In ***"The 'Peace Dividend,' SAFTA, and Pakistan–India Trade,"*** Eugenia Baroncelli employs a standard gravity model to predict bilateral trade flows based on factors such as countries' income, proximity, country characteristics, and policy variables (e.g., WTO membership). Baroncelli's econometric results generally confirm findings from similar analyses: Pakistan–India trade flows fall far short of what one would expect. Her innovation is to introduce additional variables to measure interstate conflict and membership in RTAs. This allows her to estimate the relative importance (for Pakistan–India trade flows) of the peace dividend and SAFTA. Using data for the period 1948–2000, she finds that the Pakistan–India conflict has had a significant negative impact on bilateral trade flows. The model estimates that formal trade in 2000 could have reached $2.6 billion if Pakistan and India had ceased hostile relations. Total potential trade, including formal and informal trade, could have amounted to $3.2 billion, which is over 400 percent higher than the actual flows, due to enhanced cooperation in security and trade policies. Pakistan and India could potentially increase their bilateral trade by another 79 percent by entering an RTA such as SAFTA.

"Pakistan–India Trade - The view from the Indian Side" provides a refreshing view on Pakistan–India trade from the perspective of Indian academics and businesses. Nisha Taneja of the Indian Council for Research on International Economic Relations conducts a survey of India firms and finds that there are vast untapped trade and investment possibilities between the two countries both in goods and services. As natural trading partners with a common border, costs of trading with each other can be substantially lower than trading with the rest of the world. Taneja makes a strong case for India to be granted MFN status by Pakistan—a demand coming from private businesses as well as the Government of India. The chapter provides evidence on how Pakistan's positive list approach inhibits trade, lacks transparency, and leads to high transaction costs. It identifies a number of impediments to bilateral trade. They include barriers related to trade facilitation, visas, telecommunication, banking, standards, and technical regulations, some of which arising out of security considerations. Taneja highlights that there are still no Indo-Pakistan joint ventures despite strong business interest on both sides due to the absence of an enabling environment for such investment. For example, there are no institutional mechanisms for bilateral investment guarantees. Taneja's research shows that there is considerable lack of information and awareness in India about Pakistan's trade regime, commercial policies, and business and regulatory procedures. She encourages the two governments and the chambers of commerce to play an active role in disseminating trade-related information to improve transparency.

The Sustainable Policy and Development Institute's chapter, ***"Quantifying Informal Trade Between Pakistan and India,"*** finds that informal trade between India and Pakistan was around $545 million in 2005, a finding based on field research in border regions, Dubai, and major urban markets.[19] SDPI's research casts some doubt on some "guesstimates" of informal trade that range as high as $10 billion. Informal exports from Pakistan to India are no more than $10.4 million, consisting mostly of textiles and agricultural products. Informal imports were $535 million, covering products such as textiles, spices, medicines, machinery, tires, etc. The chapter identifies the various routes used for informal trade, including the circuitous routes via Dubai, Iran, and Afghanistan. It documents the commodity composition of trade and the transaction costs incurred by traders along each route.

Much of the informal trade takes place in goods that are either not on Pakistan's positive list (e.g., pharmaceuticals, cosmetics, jewelry), have high tariffs in Pakistan (e.g., betel leaves, tractor tires), or face high tariffs through specific taxes in India (e.g., Pakistani textile products). The authors point to the need to simplify and align the bilateral trade regime so that incentives for smuggling are reduced. This would expand trade through formal channels. Indeed, they find evidence that informal trade between India and Pakistan has declined in recent years, as both countries have liberalized their trade policies. The findings suggest that the government should pay special attention to economic development in the hubs of informal trade in North-West Frontier Province (NWFP), Sindh, and Balochistan, where smuggling often provides the only source of employment for the local population.

The final four chapters examine the effects of liberalization of Pakistan–India trade in four sectors: agriculture, chemicals, light engineering, and textiles. These sectors were selected through a consultative process and were based on a number of criteria. Since the World Bank was asked to update the 1996 study by the Ministry of Commerce, we took up agriculture, textiles, and light engineering sectors, which were analyzed in the earlier study. In our consultations with businesspersons and policy makers, a number of other sectors were identified that have potential for trade, such as chemicals, pharmaceuticals, automobiles, sports and surgical goods, leather goods, and textile and other types of machinery produced in India. The choice of sectors was also determined by the availability of comparable and reliable industry-level data in India and Pakistan. Finally, the time and budget for the study allowed us to take up only four industry studies. These industry cases should be considered as prototype studies laying down the framework for analysis that can be replicated in studying other sectors in the future.

The authors of these four chapters employ a common methodology to evaluate the likely effects of trade liberalization on the direction of trade and on national economic welfare. They use a partial equilibrium model to simulate trade liberalization. This model is useful for identifying the short-run impact on consumers, producers, and the government (through changes in tariff revenue) of changes in tariffs on a particular product.[20] They model two policy reforms:

i)   Pakistan grants MFN treatment to India. This is defined as the abolition of the positive list. Pakistan applies the same treatment to all Indian products as if they were imported from any other WTO member.
ii)   Pakistan and India eliminate tariffs on each other's products, in addition to the elimination of the positive list, but maintain MFN tariffs on imports from other countries. This is a simplification, for analytical purposes, of SAFTA.[21]

The case studies first determine the likely direction of trade under these two policy changes. This is based on a careful examination of ex-factory/farm-gate prices in the two countries, reported data on cost, insurance, and freight (CIF) prices of imports, and tariffs that the two governments impose. The authors use the following decision-making rule to determine the direction of trade.

If	Then
Indian CIF price < Pakistan ex-factory price	India exports to Pakistan
India ex-factory price > Pakistan CIF Price	Pakistan exports to India
India ex-factory price < Pakistan CIF Price or Indian CIF price > Pakistan ex-factory price	no change in trade

The authors then quantify the likely costs and benefits to different groups, using assumptions based on data about market structures, domestic prices, tariffs and other border taxes, and demand and supply elasticities in each country, and international prices. In a partial equilibrium model, an industry's contribution to national economic welfare is the sum of consumer surplus, producer surplus, and tariff revenue.[22] The authors measure the impact on consumers by looking at changes in consumer surplus, on producers by assessing changes in the producer surplus, and on the government by evaluating changes in tariff revenue. By adding up the net changes in consumer surplus, producer surplus, and tariff revenue, the authors determine whether liberalization makes Pakistan as a whole better or worse off.[23]

This simple partial equilibrium methodology has the advantage that it draws attention to *all* the likely winners and losers and to the extent of their winnings and losses. This information can help policy makers develop strategies to mitigate social costs of adjusting to trade liberalization. Public debate on trade reform is often dominated by politically powerful and vocal industry groups. Consumers are typically left without a voice in the debate, even though the benefits they receive from

trade liberalization (through lower prices) often outweigh the losses suffered by industries that compete with imports.

A partial equilibrium model is also useful for highlighting possible trade creation and trade diversion effects that arise from preferential liberalization. Economic theory shows that, in the absence of market failures, the economy as a whole is always better off when a government reduces tariffs on a nondiscriminatory (i.e., MFN) basis: the net gain to consumers exceeds the loss suffered by domestic producers and the reduction in tariff revenues, due to gains from greater allocative efficiency. But preferential liberalization can make a country worse off if the main effect is simply to divert trade to less-efficient suppliers (who now benefit from preferential tariff margins) from more efficient suppliers in the rest of the world (who continue to face MFN tariffs) without increasing the competitiveness in the local market. If on the other hand preferential liberalization's primary effect is to create new trade, then gains in efficiency and lower prices paid by consumers can outweigh reduced tariff revenue collected by the government and losses endured by local producers. As a general rule of thumb, a free trade agreement (FTA) reduces a country's economic welfare when the country maintains high MFN tariffs and its FTA partners are relatively less efficient suppliers, and it increases welfare when MFN tariffs are low and FTA partners are among the world's most efficient suppliers. The four sectoral studies conduct simulations to determine whether or not trade creation outweighs trade diversion.

The case studies simulate welfare outcomes at the product level. Within each sector, the authors examine two or three products: wheat and sugar in agriculture; raw cotton, polyester staple fiber, and cotton yarn in textiles; ceiling fans, pedestal fans, and bicycles in light engineering; and caustic soda in industrial chemicals. It is not possible to aggregate over the industry level results to derive country-level welfare outcomes for the economy as a whole, as the findings would be affected through general equilibrium effects such as the changes in relative prices on demand and exchange rates. Notwithstanding this disadvantage, the methodology helps to bring out in a simple way the main effects of liberalizing trade with India in the selected sectors.

The Lahore University of Management Sciences' chapter, ***"Pakistan and India: Possibilities and Implications for Trade in Agriculture Sectors, with Focus on Wheat and Sugar,"*** indicates that there are no significant comparative cost advantages in wheat and sugar production in India or Pakistan. As in many other countries, both governments have intervened in agriculture markets in ways that can mask underlying comparative advantage. The authors argue that input and export subsidies to Indian farmers are the primary reason for the apparent price advantage that Indian farmers currently have, but if their subsidies are removed their competitive edge disappears in favor of farmers in Pakistan. Granting MFN treatment would bring some gains to Pakistan; an FTA would generate larger benefits. They argue that bilateral trade could be useful for managing deficits in either country, particularly in Pakistan, which is more dependent on agricultural imports compared to India. The chapter recommends that Pakistan pursue the issue of agricultural subsidies with India as part of SAFTA negotiations to create a level playing field for two-way trade in agriculture products.

Based on an analysis of market conditions and trade policies in the two countries, Garry Pursell argues in the chapter **"*Pakistan–India Trade: Impact on the Textile Sector*"** that restoration of normal trade relations in textiles would likely have a beneficial, albeit small, impact on both India and Pakistan. Eliminating all barriers to intraregional textiles trade would likely induce some limited specialization and trade in intermediate inputs for use in exports of cotton textiles to high-income countries. Pursell argues that fully restoring land transportation routes could bring gains through lower transport costs and reducing delivery times. Preferential liberalization of textiles trade under SAFTA probably would not lead to trade diversion, since both Pakistan and India are already very competitive in cotton-based products. But he also argues that there is limited scope for penetrating each other's domestic-use markets (in contrast to supplying inputs to export industries). Despite high tariffs, both country's domestic markets are highly competitive (domestic prices are not substantially above world prices), so tariff reductions would not provide significant market access.

Polyester fibers represent a major exception to this finding. The chapter argues that, since the governments of both countries maintain barriers to trade in polyester fibers and their components, preferential liberalization would likely lead buyers to switch to less efficient regional suppliers and away from more efficient world suppliers. To prevent this trade diversion, both countries should gradually liberalize trade on a nondiscriminatory basis first, before liberalizing preferentially.

The Government College University (GCU) team unveils interesting possibilities for expanding trade for Pakistan's light engineering sector in *"Pakistan–India Trade: Prospects for Trade in the Light Engineering Sector—A Case Study of Fan and Bicycle Industries."* The authors conduct welfare analysis for three products—ceiling fans, pedestal fans, and standard bicycles—which are currently not on the positive list of imports from India. Based on comparisons of prices in the two countries, the authors find that Pakistani producers would have a comparative advantage in exporting fans to India. Both Pakistan and India are large producers and exporters of fans to the rest of the world. Free trade in the context of SAFTA is likely to bring down the prices of imported Pakistani fans in India and could expand exports to India. In contrast, Indian bicycle producers are likely to displace Pakistani producers. Opening trade to Indian standard bicycles would benefit Pakistani consumers, who largely belong to lower-income rural and urban households. The GCU team estimates that these benefits to consumers would outweigh losses to producers and the government. Although detailed welfare analysis for parts and components was not carried out, the paper suggests that there could be possibilities for intraindustry trade in parts and components for the bicycle and fans industries in the two countries. This area is suggested for further research. The GCU team recommends that Pakistan grant MFN status to India, or at least allow bilateral trade in bicycles and fans by putting these items on Pakistan's positive list. The authors also suggest that given the sizable potential for two-way trade in these products and their components, fans and bicycles should not be put on SAFTA's sensitive list.

The chapter *"Analyzing Potential Economic Costs and Benefits of Pak–India Trade: A Case Study of the Chemicals Industry,"* contributed by a team of researchers at the International Institute of Islamic Economics, investigates the prospects of trade with India in a selected industrial chemical product, namely caustic soda. Although they predict that an FTA would lower prices of caustic soda paid by domestic consumers, the loss of tariff revenue and reduced sales by local producers would outweigh the benefits to consumers. This result stems in part from the high MFN tariff that Pakistan levies on caustic soda (25 percent—presently the maximum ordinary tariff in Pakistan's tariff schedule). The authors point out that it would be in Pakistan's interest to lower the current MFN tariffs on industrial chemicals before implementing the FTA to reduce the possible costs of trade diversion. Given India's large and highly competitive chemical industry overall, the paper concludes that Pakistan would benefit under an FTA by getting cheaper chemicals from India for a range of export-oriented downstream industries, including textiles, leather, etc., which would enhance Pakistan's export competitiveness. The authors recommend that government should make efforts to expand trade with India by increasing the range of chemicals on the positive list or by granting MFN status to India.

The general conclusion that one can draw from these chapters is that Pakistan stands to gain from liberalization of trade with India. In many cases, net welfare would likely rise, either through increased exports (e.g., fans) or through lower prices for consumers (e.g., bicycles). Where it does not, as in the cases of polyester fibers and caustic soda under SAFTA, the government could mitigate losses from trade diversion by reducing MFN tariff rates as SAFTA preferences are introduced. In some cases, there may be little effect, one way or the other. Pursell's arguments about the potential for trade in cotton textiles illustrate this last possibility.

A Three-Pronged Strategy for Promoting Trade

Economic affluence is associated with prosperous enterprises, and leveraging trade opportunities is an essential ingredient for companies to stay profitable and create jobs.

Pakistan's trade integration with India requires lowering transaction costs by reducing structural, fiscal and institutional impediments to the movements of goods, people, and capital. This agenda would also help South Asia to follow the example of East Asia, which was transformed through stable macroeconomic environments, reliable and transparent investment rules, and foreign investment in internationally integrated production systems. But the success of these policies for raising living standards in Pakistan will depend on how well prepared Pakistani companies are to compete. Fostering a conducive climate will require government actions to upgrade the trade environment centered on three pillars: political normalization, trade integration, and trade competitiveness.

First, it is important for Pakistan and India to build on the recent gains from the Composite Dialogue Process. The dialogue process has already resulted in better political relations and defense cooperation between the two countries and has underpinned stronger trade ties. With an improved security and political environment and a resolution of the long-standing Kashmir conflict, citizens of both countries would be able to reap a large peace dividend. It would come not only through more trade in goods and services, but also from joint ventures and investments in each other's country, improved coordination of economic and financial policies, and—last but not least—from financing investments in human capital and economic infrastructure by releasing budget resources that are now committed to defense and security.[24]

Second, Pakistan would gain considerably by following a three-way strategy for enhancing its trade relations. This entails continuing with unilateral trade liberalization by lowering and rationalizing tariffs, using the existing SAFTA agreement to boost regional trade and economic cooperation; and expanding bilateral trade with India.

The preferred way of reducing the level and dispersion of tariffs is to lower tariff peaks and the maximum customs duty rates through the "tops down" approach. Instead, the government has announced repeatedly in its annual budgets selective duty exemptions in the name of supporting growth and exports of specific industries. Such measures are likely to be ineffective. First, these changes increase tariff dispersion. Second, without accompanying measures to improve the market access in the targeted industries, they tend to raise the effective rate of protection for the final products of industries that may not be competitive internationally. Ultimately, selective tariff reductions put bureaucrats in control of trade instead of the market.

A minimal use of product exemptions (i.e., sensitive lists) and progressive reductions in existing exemptions over time, liberal rules of origin, cooperation on trade facilitation measures, and a prohibition on tariff rate quotas would help Pakistan make the most out of SAFTA as well as support the least-developed member countries in the adjustment to a free trade area. Without such measures, SAFTA could encounter the same problems as SAPTA and fall short of promoting intraregional trade.

Strong economic relationships between Pakistan and India would go a long way to securing SAFTA's success. As the experience of European integration after the Second World War demonstrates, closer economic ties can become a resilient motor for improved political relations. Regional economic cooperation helped to end a long history of conflict between France and Germany.

With respect to granting MFN status to India, three policy options present themselves:

- gradually expanding the positive list,
- replacing the positive list with a short negative list, and
- eliminating the positive list entirely, thereby according India MFN status.

The first option continues Pakistan's current policy. As stated earlier, this policy is yielding impressive results by expanding official trade and reducing informal trade flows. Government

officials contend that, by the time the SAFTA tariff liberalization program has been fully implemented, this policy of gradually expanding the positive list will give India the same access to Pakistan's market as if the positive list had been eliminated altogether.[25] An incremental approach is often considered to be the optimal strategy for governments to address complex policy problems in highly uncertain environments.[26]

The second option has the advantage of simplifying the current trading regime and making it more transparent for the benefit of traders and industrialists in both India and Pakistan. This is the approach discussed by Taneja in Chapter 4. Using a negative list does not impose restrictions on the emergence of new tradables sectors, whereas a positive list tends to reinforce the existing structure of trade. In addition, switching to a negative list could convey a greater sense of forward momentum to the business community. Imposing a negative list solely on Indian imports would remain a deviation from MFN treatment, however.

The final option listed above would provide, first and foremost, political mileage for Pakistan. India has been able to deflect pressure to liberalize trade with Pakistan by pointing to the absence of formal MFN treatment. Pakistan would be able to turn the tables, enabling negotiators raise more substantive issues, notably Indian nontariff barriers. The economic analysis presented in this volume suggests that granting India full MFN status would not cause significant harm. (One should bear in mind that Pakistan already gives MFN treatment to China, a far bigger exporter, and the economy has not suffered.) In fact, the evidence on informal trade indicates that Pakistan has already granted something close to de facto MFN status to India. Traders exploit market arbitrage and the poor enforcement of antismuggling measures to import banned Indian products into Pakistan, hence with the change in the trade regime there could be additional revenues for the government for items that are likely to switch from the informal trade to formal trade.[27]

Third, to reap the full benefits of Pakistan–India trade requires complementary economic and social reforms. First, trade liberalization with India would be even more successful if it is pursued in the context of a wider reform agenda that enhances domestic productivity, international competitiveness, and economic growth. Second, trade liberalization will work best with a level playing field. Pakistan and India would gain by continuing to discuss ways to streamline their domestic trade regimes to provide equal opportunity for producers and exporters in both countries to gain from expanding bilateral trade. The Government of Pakistan could negotiate, among other things, issues of agricultural subsidies, high specific tariffs on textile products, and protection to the small-scale sector in India. Third, investments in the hardware (transport and communication) as well as software (legal and regulatory trade framework) are required for effective trade integration. The bilateral economic discussions could focus on concrete steps to remove hindrances in logistics of trade, ease visa restrictions for business travel, improve trade facilitation, and strengthen infrastructure. Fourth, to cushion any negative impacts of trade liberalization, Pakistan may want to think about assistance strategies for workers and families in areas likely to be affected by growing trade. Some domestic industries are not competitive internationally due to outdated technology or a history of government protection. For example, the small-and-medium-enterprise vendor industry in the bicycle industry, smaller firms in the chemical industry, or farmers producing wheat or sugar could struggle to keep their customers in the new trade environment. Similarly, the hubs of informal trade with India have limited alternative employment opportunities and are likely to suffer economically initially from a move to expanded formal trade relations.

Overall, Pakistan could tap the enormous potential for closer economies ties by moving swiftly to liberalize trade with India. With a level playing field, businesses would be able to compete with Indian companies on equal terms in the domestic market and gain access to the huge Indian market next door. Downstream industries would benefit from cheaper inputs and greater competitiveness. Consumers would gain in terms of lower prices, higher purchasing power, and greater choice of traded goods. The government would compensate fiscal revenue losses from lower tariffs through the increase in trade volumes, including the bringing informal trade "on budget."

Ultimately, by sustaining high growth and rising living standards in the two largest economies in the region, Pakistan–India trade would help to bring stability and prosperity to South Asia as a whole.

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Annex 1. Composition and Direction of Trade, India and Pakistan

Table A1.1. India's Trade with Pakistan and the Rest of the World (Value in Million $)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Exports						
Exports to Pakistan	186.83	144.01	206.16	286.94	521.1	689.2
% Growth		-22.92	43.16	39.18	77.5	32.3
India's Total Exports	44,560.29	43,826.73	52,719.43	63,842.97	83,535.9	103,090.5
% Growth	21	-1.65	20.29	21.1	26.2	23.4
% Share of Pakistan	0.42	0.33	0.39	0.45	0.63	0.67
Imports						
Imports from Pakistan	64.03	64.76	44.85	57.65	95.0	179.6
% Growth		1.14	-30.74	28.54	60.9	89.1
India's Total Imports	50,536.46	51,413.29	61,412.13	78,149.61	111,517.4	149,165.7
% Growth	1.7	1.74	19.45	27.25	39.7	33.8
% Share of Pakistan	0.13	0.13	0.07	0.07	0.08	0.12
Total Trade						
Trade with Pakistan	250.86	208.76	251.01	344.59	616.0	868.8
% Growth		-16.78	20.24	37.28	74.7	41.0
India's Total Trade	95,096.75	95,240.01	114,131.56	141,992.58	195,053.4	252,256.3
% Growth		0.15	19.84	24.41	33.6	29.3
% Share of Pakistan	0.26	0.22	0.22	0.24	0.32	0.34
Exchange Rate	45.68	47.69	48.39	45.95	44.93	44.27

Source: Department of Commerce, Government of India. http://commerce.nic.in

Table A1.2. Pakistan's Trade with India and the Rest of the World (Value in Million $)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Exports						
Exports to India	55.4	49.2	70.7	93.7	288.1	293.3
% Growth		-11.19	43.70	32.53	207.5	1.8
Pakistan's Total Exports	9201.6	9134.6	11,160.20	12,313.30	14,391.0	16,451.2
% Growth		-0.73	22.18	10.33	16.9	14.3
% Share of India	0.6	0.54	0.63	0.74	2.0	1.8
Imports						
Imports from India	235.09	186.5	166.5	384.4	551.7	801.9
% Growth		-20.7	-10.7	-130.9	43.5	45.4
Pakistan's Total Imports	10,728.40	10,339.50	12,230.30	15,591.80	20,598.1	28,580.9
% Growth		-3.62	18.29	27.49	32.1	38.8
% Share of India	2.19	1.8	1.36	2.45	2.7	2.8
Total Trade						
Trade with India	290.49	235.7	237.2	478.1	839.8	1,095.2
% growth		-18.86	0.64	101.56	75.7	30.4
Pakistan's Total Trade	19,930.00	19,474.10	23,390.50	27,905.10	34,989.1	45,032.1
% Growth		-2.29	20.11	19.30	25.4	28.7
% Share of India	1.46	1.21	1.01	1.71	2.4	2.4

Sources: Ministry of Commerce, Government of Pakistan, and Economic Survey**.**

Table A1.3. India's Principal Exports (Value in Million $)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Engineering Goods	6,819	6,958	9,033	12,405	17,348	21,547
Gems and Jewelry	7,384	7,306	9,030	10,573	13,762	15,547
Chemicals & Pharmaceuticals	3,664	3,697	4,658	5,846	7,139	8,937
Petroleum Products	1,892	2,119	2,577	3,568	6,989	11,515
Ready-Made Garments	5,569	5,007	5,690	6,231	6,561	8,404
Cotton Textiles	3,461	3,073	3,351	3,395	3,450	3,863

Source: Department of Commerce, Government of India. http://commerce.nic.in

Table A1.4. India's Principal Imports (Value in Million $)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Petroleum Products	15,650	14,000	17,640	20,569	29,844	43,963
Electronic Goods and Software	3,695	3,999	6,093	7,889	10,659	14,087
Pearls and Gemstones	4,808	4,623	6,063	7,129	9,423	9,141
Gold and Silver	4,638	4,582	4,288	6,856	11,150	11,189
Machinery (except electronics)	2,709	2,971	3,566	4,744	6,818	9,894
Chemicals	2,444	2,800	3,025	4,032	5,700	6,889

Source: Department of Commerce, Government of India. http://commerce.nic.in

Table A1.5. Pakistan's Principal Exports (Value in Million $)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Cotton Fabrics	1,033	1,131	1,346	1,712	1,863	2,120
Knitwear	911	846	1,147	1,459	1,635	1,752
Bedwear	745	919	1,329	1,383	1,450	2,036
Cotton Yarn	1,074	930	928	1,127	1,057	1,398
Ready-Made Garments	827	875	1,093	993	1,088	1,315
Rice	526	448	556	635	933	1,130

Sources: Ministry of Commerce, Government of Pakistan, and Economic Survey.

Table A1.6. Pakistan's Principal Imports (Value in Million $

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Petroleum	3,361	2,807	3,066	3,167	4,000	6,675
Road-Motor Vehicles	321	330	501	653	1,069	1,687
Textile Machinery	370	407	532	598	929	817
Plastic Material	354	353	421	549	793	1,020
Iron and Steel	278	336	402	512	890	1,367
Palm Oil	284	380	539	613	703	717

Sources: Ministry of Commerce, Government of Pakistan, and Economic Survey.

Table A1.7. India's Principal Trading Partners (Value in Million $)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
U.S.A.	12,320	11,703	15,379	16,569	19,597	26,808
U.A.E.	3,256	3,418	4,296	7,204	11,704	12,946
China	2,334	2,999	4,780	7,027	11,356	17,627
U.K.	5,467	4,740	5,287	6,274	6,990	8,990
Belgium	4,341	4,168	5,388	5,797	7,023	7,596
Germany	3,667	3,829	4,523	5,478	6,526	9,610

Source: Department of Commerce, Government of India. http://commerce.nic.in

Table A1.8. Pakistan's Principal Trading Partners (Value in Million $)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
U.S.A.	2,809	2,946	3,351	4,273	4,212	4,795
U.A.E.	1,967	2,080	2,545	2,652	3,011	4,150
Saudi Arabia	1,528	1,531	1,778	2,128	2,025	2,942
U.K.	930	1,015	1,144	1,379	1,755	1,747
China	829	804	1,083	1,442	1,810	2,423
Kuwait	1,005	792	876	1,063	1,213	1,509

Sources: Ministry of Commerce, Government of Pakistan, and Economic Survey.

Table A1.9. Pakistan's Exports to India (Value in Million $)

Sr.#	Commodity Group	2001/02	2002/03	2003/04	2004/05	2005/06
1	Fish & fish preparations	0.1	0.0	0.0	1.5	0.4
2	Rice	0.2	0.0	0.0	0.2	1.2
3	Fruits & vegetables	33.4	21.3	19.5	26.2	27.5
4	Molasses	0.0	0.0	2.7	17.1	0.0
5	Spices	0.5	0.6	0.1	0.3	1.3
6	Misc. edible products	0.0	0.0	0.0	0.0	0.1
7	Hides, skins, & fur skins	0.0	0.4	0.9	0.1	0.0
8	Oilseeds & oleaginous fruit	0.0	0.1	0.1	0.1	0.0
9	Raw cotton	0.0	0.0	0.0	2.7	0.8
10	Cotton waste	0.0	0.1	0.0	0.0	0.0
11	Vegetable & synthetic textile fibers	0.0	0.2	0.0	0.0	0.0
12	Wool (incl. wool tops)	0.8	1.3	1.8	1.3	2.6
13	All crude minerals	0.5	0.6	0.3	0.3	0.4
14	Concentrates of iron & steel	0.0	0.0	0.1	0.8	2.1
15	Concentrates of nonferrous metals	0.1	0.0	0.1	0.1	4.3
16	Crude vegetable materials	4.2	3.9	1.9	2.4	2.6
17	Petroleum & its products	0.0	0.0	39.0	172.9	96.9
18	Chemical elements & compounds	0.0	0.1	0.2	4.1	37.5
19	Pigments & paints	0.0	0.0	0.0	0.0	0.0
20	Medical & pharmaceutical products	0.1	0.0	0.0	0.0	0.0
21	Essential oils, perfumes, cosmetics	0.0	0.0	0.0	0.0	0.0
22	Chemical material & products	0.2	0.1	0.1	2.0	0.9
23	Leather	0.4	0.0	0.0	3.5	2.1
24	Cork & wood	0.0	0.0	0.0	0.0	0.0
25	Cotton thread	0.0	0.0	0.0	0.0	0.0
26	Cotton yarn	2.4	1.4	1.3	2.7	8.1
27	Yarn & thread of synthetic fibers	0.1	0.0	0.0	0.1	0.1
28	Cotton fabrics (woven)	3.3	3.7	7.9	18.6	33.9
29	Synthetic fabrics—silk, woven, & flax	0.4	0.4	0.3	1.4	1.5
30	Special Textile fabrics	0.2	0.0	0.0	0.2	0.1
31	Knitted or crocheted fabrics	0.2		0.0	0.9	1.3
32	Made-up articles of textile materials	0.3	1.1	0.6	2.3	1.9
33	Carpets & rugs	0.0	0.0	0.4	0.5	0.7
34	Mineral manufacturers	0.1	0.1	0.2	0.2	0.2
35	Glass & glassware	0.0	0.0	0.0	0.0	0.1
36	Pearl & other precious stones	0.1	0.2	0.4	0.2	0.4
37	Iron & steel manufactures	0.0	0.0	0.0	0.0	0.2
38	Manufactures of nonferrous metals	0.0	0.1	0.0	1.0	1.1
39	Machinery & its parts	0.0	0.1	0.1	0.3	0.2
40	Manufactures of base metals	0.0	0.0	0.0	0.1	1.2
41	Road vehicles & their parts	0.0	0.0	0.0	0.0	0.1
42	Furniture	0.1	0.1	0.1	0.4	0.0
43	Apparel & clothing of textile	0.2	0.2	0.4	1.0	0.8
44	Hosiery	0.0	0.0	0.0	0.2	0.2
45	Apparel & clothing of nontextile	0.0	0.0	0.0	0.0	0.4

Sr.#	Commodity Group	2001/02	2002/03	2003/04	2004/05	2005/06
46	Medical/surgical instruments	0.2	0.2	0.4	0.7	1.4
47	Measuring & analyzing instruments	0.0	0.0	0.0	0.0	0.0
48	Articles of plastic	0.2	0.6	0.5	0.5	1.2
49	Printed matter	0.0	0.0	0.6	0.1	0.1
50	Sports goods	0.0	0.1	0.0	0.2	0.2
51	Musical instruments	0.1	0.0	0.0	0.0	0.0
52	Misc. manufactured articles	0.2	0.2	0.4	0.3	0.3
53	Special Transactions; not specified	0.0	32.8	12.6	19.7	56.3
54	Others	0.5	0.4	0.1	0.7	0.8
	Total:	**49.2**	**70.7**	**93.7**	**288.1**	**293.3**

Source: Compiled by Assistant Chief (Foreign Trade Wing) Ministry of Commerce

Table A1.10. Pakistan's Imports from India (Value in Million of $)

Sr.#	Commodity Group	2001/02	2002/03	2003/04	2004/05	2005/06
1	Meat and meat preparations	0.0	0.0	0.0	0.4	6.3
2	Dairy products: eggs	0.0	0.0	0.0	1.2	9.7
3	Cereals & cereal preparations	0.0	0.0	0.0	3.8	0.9
4	Fruits & vegetables	5.1	0.8	0.6	0.2	0.4
5	Sugar raw & refined	0.0	0.0	0.0	0.0	191.3
6	Sugar confectionery	0.0	0.0	0.0	0.0	0.0
7	Tea & mate	2.2	4.8	6.8	6.0	10.7
8	Spices	4.5	2.4	2.8	6.1	4.3
9	Feeding stuff for animals	7.6	1.1	28.0	39.0	73.2
10	Misc. edible products	0.0	0.0	0.1	0.2	0.4
11	Tobacco manufactured	0.0	0.0	0.0	0.0	0.0
12	Hides, skins, & fur skins	0.0	0.1	0.0	0.0	0.0
13	Oil seeds & oleaginous fruits	0.0	0.0	0.1	0.1	1.2
14	Crude rubber	0.0	0.0	0.2	0.6	1.6
15	Raw cotton	0.0	0.0	56.0	15.1	39.6
16	Vegetable & synthetic textile fibers	0.1	0.1	0.1	0.6	6.2
17	Wool (incl. wool tops)	0.0	0.0	0.5	0.2	0.5
18	All crude minerals	0.0	0.0	0.1	0.2	0.1
19	Concentrates of iron & steel	13.6	18.3	31.1	65.3	46.3
20	Concentrates of nonferrous metals	3.2	2.1	0.2	0.5	0.3
21	Material of animal origin	0.0	0.0	0.0	0.2	0.6
22	Crude vegetable materials	6.7	6.2	5.4	8.4	14.9
23	Coal, coke, & briquettes	0.1	2.5	1.2	1.1	1.0
24	Petroleum & its products	0.0	0.0	0.0	0.0	0.0
25	Fixed vegetables, fats, & oil	0.0	0.0	0.1	0.2	0.1
26	Animal & vegetable oils & fats	0.1	0.1	0.1	0.2	0.2
27	Chemical elements & compounds	63.2	59.5	145.0	195.9	147.9
28	Dyeing, tanning, & coloring material	9.1	10.6	10.8	13.7	20.4
29	Pigments & paints	0.1	0.2	0.4	1.0	1.5
30	Medical & pharmaceutical products	8.3	0.3	0.2	0.8	2.0
31	Essential oils, perfumes, cosmetics	0.4	0.5	0.9	1.1	1.5
32	Chemical material & products	17.4	18.4	26.4	69.3	69.4
33	Leather	0.3	0.0	0.2	0.0	0.3
34	Rubber manufactures	0.0	0.0	0.0	0.1	0.2
35	Tires & tubes of rubber	13.4	18.4	18.9	32.9	40.2
36	Cork & wood	0.0	0.1	0.4	0.3	0.1
37	Cotton thread	0.0	0.0	0.0	0.1	0.0
38	Cotton yarn	0.0	0.9	8.4	5.2	10.3
39	Paper & paper board	0.2	0.2	0.1	0.2	0.2

Sr.#	Commodity Group	2001/02	2002/03	2003/04	2004/05	2005/06
40	Yarn & thread of synthetic fibers	0.2	0.1	0.2	0.2	0.2
41	Cotton fabrics (woven)	0.0	0.1	0.4	0.3	1.0
42	Synthetic fabrics; silk, woolen & flax	0.0	0.0	0.1	0.0	0.1
43	Special Textile fabrics	0.2	0.1	0.2	0.4	0.7
44	Knitted or crocheted fabrics	0.0	0.1	0.0	0.1	0.0
45	Tarpaulins, sails, & tents	0.0	0.0	0.0	0.0	0.3
46	Traveling rugs & blankets	0.3	0.0	0.0	0.0	0.7
47	Made-up articles of textile materials	0.1	0.0	0.0	0.0	0.0
48	Carpets & rugs	0.0	0.0	0.0	0.0	0.1
49	Mineral manufactures	0.0	0.0	0.1	0.2	0.2
50	Construction materials	0.3	0.2	0.2	2.3	2.3
51	Glass & glassware	0.3	0.4	0.3	0.2	0.7
52	Iron & steel manufactures	1.1	0.6	6.9	13.4	31.3
53	Manufactures of nonferrous metals	1.5	3.1	6.9	6.9	7.2
54	Manufactures of base metals	0.0	0.0	0.0	0.1	0.1
55	Machinery & its parts	3.8	4.1	3.0	5.7	10.9
56	Road vehicles & their parts	0.0	0.2	0.0	0.4	1.5
57	Ships & boats	2.3	0.0	0.0	1.9	0.0
58	Medical/surgical instruments	0.0	0.0	0.0	0.0	0.1
59	Measuring & analyzing instruments	0.3	0.8	1.3	1.2	0.6
60	Photographic apparatus	0.2	0.3	0.2	0.1	0.5
61	Articles of plastic	0.1	0.0	0.1	0.1	0.8
62	Printer matter	0.6	1.0	1.7	2.3	4.3
63	Sports goods	0.0	0.0	0.1	0.1	0.9
64	Musical instruments	0.0	0.2	0.0	0.0	0.2
65	Misc. manufactured articles	0.3	0.0	0.1	0.0	0.2
66	Special Transactions; not specified	0.9	2.4	13.9	40.6	32.9
67	Others	18.4	5.2	1.3	4.6	0.4
	Total	186.5	166.5	384.4	551.7	801.9

Source: *Source*: Compiled by Assistant Chief (Foreign Trade Wing) Ministry of Commerce

Chapter 2
SAFTA: Promise and Pitfalls of Preferential Trade Arrangements

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The World Bank

With the slow progress of the multilateral trade talks in the WTO, countries are increasingly turning toward regional agreements and bilateral agreements in trade to facilitate growth. South Asia is no exception. On January 6, 2004, South Asian countries came together in Islamabad, Pakistan, to sign a new arrangement called the South Asian Free Trade Area (SAFTA). This paper takes up four questions of importance to policy makers in South Asia as they begin to design a SAFTA. First, why has South Asia lagged other regions in the pace of regional integration? Second, on the basis of experience in other regions, what conditions are necessary to ensure that SAFTA would spur trade and growth? Third, do South Asian trade agreements meet the conditions to spur growth in the region? Finally, what are the key elements for a strategy for policy makers in South Asia to move forward in designing a new South Asia FTA?

I. South Asia in Comparative Perspective

South Asian exports have generally lagged other developing countries around the world. South Asia's trade performance over the period 1980 to 2004 has languished or has barely grown from under $17 billion to roughly $120 billion in that 20-year period. East Asia, a region of comparable size in population and GDP in 1981, saw its exports grow from $80 billion to nearly $1 trillion in the same two-plus decades (Figure 2.1). In fact, all developing countries expanded their exports rapidly during this period, so that by 2004 all developing countries were producing about $2.8 trillion in exports.

Figure 2.1: South Asian exports have lagged other developing countries
Exports from developing countries, 1980–2004
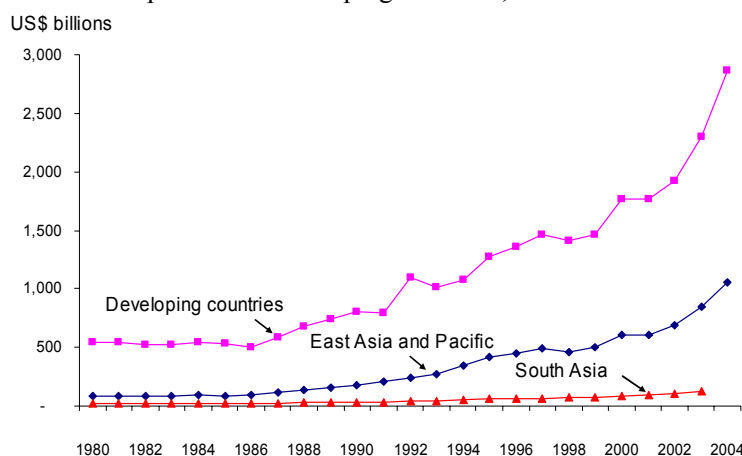
Source: WDI

One reason why exports from South Asia were largely stagnant in global market share was because trade within South Asia grew much slower than intraregional trade in other regions. In 1980, intraregional trade as a share of total trade within South Asia was less than 2 percent. Two-and-a-half decades later by 2004, almost that same ratio applied (3 percent): there had been virtually no change in South Asian intraregional trade as a share of total trade (Figure 2.2). This stands in sharp contrast

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by the way to its performance in the early 1950s when South Asian trade was exceeded 10 percent during the 1950s. Also, this poor performance stacks up poorly when compared to developing countries in East Asia, whose intraregional trade grew to over 14 percent by 2005,

Figure 2.2: …and so has intra-regional trade compared to East Asia
Intra-regional trade as a share of total trade, 1980–2005
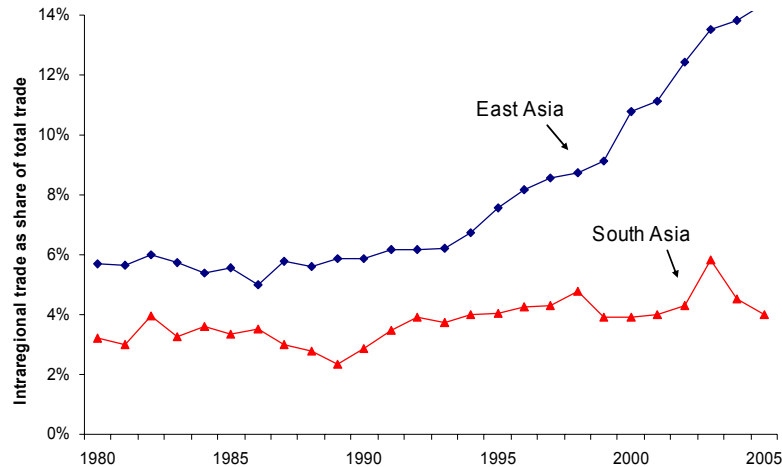
Source: COMTRADE
Note: Computed as exports and imports by developing countries in each region, divided by their total exports and imports with the world.

This was all the more remarkable because the trade was growing as a share of GDP. In fact, trade in East Asia was the most dynamic sector of its growth. Trade often grew at 2.5–3.5 times the pace of overall GDP growth during that same period. Today, South Asia is the least integrated of all six regions when measured as a share of GDP (Figure 2.3). Intraregional trade in South Asia is only 1.2 percent of GDP, and one-sixth of Latin America's and East Asia's. South Asia even lags behind Sub-Saharan Africa and the Middle East and North Africa.

Figure 2.3: …and so today South Asia is among the least integrated of all regions
Intra-regional trade as a share of GDP, 2004
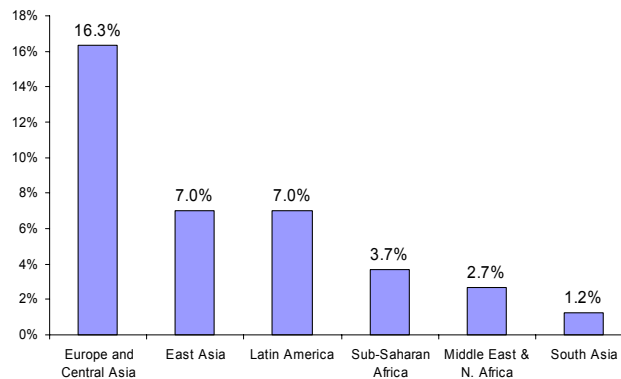
Source: WDI

Why is regional integration so much lower in South Asia? One reason is purely statistical. The region is the most concentrated in GDP. India is a large country and it makes up for 80 percent of the region's GDP; by comparison, China accounts for about 60 percent of East Asia. The region has the fewest number of countries, compared to more than 20 in East Asia and Latin America and more than 40 in Africa. Larger countries tend to trade less as a share of GDP; and the regional balance

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would imply that, on a GDP-weighted or trade-weighted basis there would be less trade. Even adjusting for these factors, however, South Asia's integration is low, and so let's look at the policy reasons for this outcome.

II. Policy Obstacles to Regional Integration

Border barriers

One policy reason for border barriers is that tariffs, though lower now, still remain high relative to other regions. Tariffs in South Asia in the mid-1980s, for example, were nearly 70 percent on an unweighted average basis (Figure 2.4). This compares with East Asia's 27 percent and Latin America's 32 percent during that period, so even in the 1980s era of import substitution, South Asia had trade barriers that were twice or more than those in these other two regions. Tariffs have come down in South Asia, from 70 percent to about 35 percent in the 1996–98 period and to 28 percent in 2005. Still, South Asia competitors were reducing tariffs barriers even more rapidly than did East Asia. So, today, South Asia's trade barriers remain stronger than in other regions.

Figure 2.4: Tariffs, though lower now, remain high relative to other regions
Unweighted average tariffs, 1986–2005
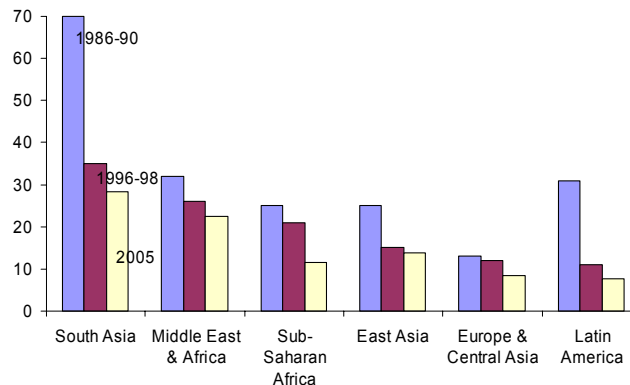
Source: World Bank, WTO, IMF

Other comparative studies have also highlighted the region's high border barriers to trade. Pursell and Sattar (2004) found that India and Bangladesh fell in the top 10 percent of the 139 countries they measured for protection, using unweighted tariffs as the measure. In a more sophisticated study that took into account all border barriers—specific duties, quotas, and agricultural subsidies—Kee et al. (2004) found India to be the most protected economy in the world in 2001 (with an overall trade restrictiveness index of 36 percent ad valorem equivalent), and Bangladesh the fifth-most protected (at 23.7 percent).

This puts South Asian exporters at a tremendous disadvantage as they face the rest of the world. Figure 2.5, using the latest available data, shows the share of tariffs paid on merchandise trade by South Asian exporters to developing countries. The share of tariffs paid for intraregional exports is almost a quarter of the total tariff burden spent by South Asian exporters in developing countries.

Figure 2.5 …and so South Asian exporters are at a disadvantage
Share of tariffs paid by South Asian exporters to developing countries – Merchandise trade
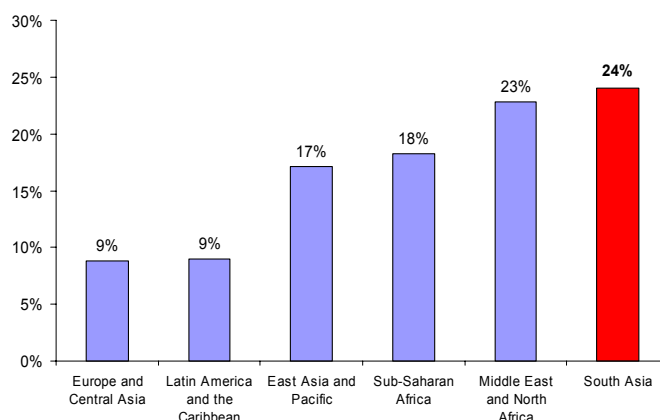
Source: GTAP 6

This compounds the problem that the region has all over the world. Because South Asia exports predominantly labor-intensive products, its exporters face the high tariff levels worldwide. Table 2.1 shows that South Asian exporters spend a larger share on their tariffs burden within their own region as a share of total payments (including both developed and developing countries). This is the case for the sector's agriculture and foods, and other manufacturing and merchandise trade. Even assuming that this burden is higher due to a larger volume of intraregional trade involved, these estimates highlight the importance of reducing protection rates so the region could benefit significantly from paying less.

Table 2.1 South Asian Exporters Face Among the Highest External Tariffs in Manufacturing and Agriculture
Share of tariffs paid by South Asian exporters to developing countries

	Importer region					
	EAP	ECA	LAC	MNA	SAS	SSA
Agriculture and food	13.0	8.6	1.4	12.1	22.8	7.0
Textile and wearing apparel	4.4	3.3	4.2	9.9	3.7	7.5
Other manufacturing	16.3	4.4	9.3	17.6	23.9	17.6
Merchandise trade	9.2	4.7	4.8	12.2	12.9	9.8

EAP: East Asia Pacific; ECA: Europe and Central Asia; LAC: Latin America and the Caribbean; MNA: Middle East and North Africa; SAS: South Asia; SSA: Sub-Saharan Africa.
Source: GTAP Version 6 Database (www.gtap.org).

Barriers to Foreign Direct Investment

A second policy reason for trade barriers is the fact that South Asia has not received foreign direct investment (FDI) at nearly the level of other regions. Worldwide, FDI boomed over the period 1980–82 to 2001–03, rising from $15 billion to $140 billion. But most has gone to destinations other than South Asia. In 2002–2003, for example, FDI flows into East Asia—mainly China—surpassed $50 billion; Latin America attracted on average $41 billion yearly in 2002 and 2003 (Figure 2.6).

Figure 2.6: FDI has spurred integration but less so in South Asia
FDI net inflows (BoP current $), 2002–2003
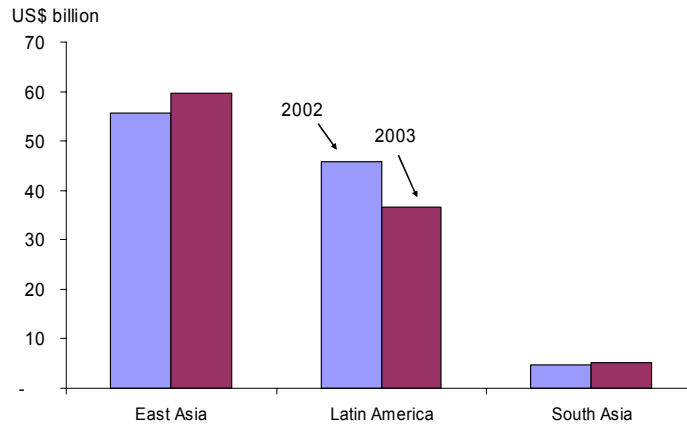
US$ billion

Source: WDI

South Asia, by contrast, received $5 billion in inflows and FDI. This reflects in large measure the policy stance of South Asia, particularly in India; proscriptions on FDI entry in several sectors, especially in services, have kept inflows to a trickle. South Asia, which accounts for about 11 percent of developing countries' GDP, receives only 3 percent of FDI, and this share has remained relatively stable since the mid-1980s.

FDI is an important force for integration through trade. To the extent that border barriers are burdensome, many multinational companies have set up supply chains and integrated production networks that tend to locate each stage of production in the country with the lowest cost. Affiliates of a multinational company in one country often export to affiliates in another for eventual sales in a third-country market. The effects on integration go beyond simply setting up integrated plants in different countries; they can include integrating forces such as pushing up efficient scales of production, dissemination standards, using transfer prices to overcome inefficient border barriers, and increasing competition in intermediate markets (Robson 1998).

There is an important corollary that goes with along with greater inflows of FDI, and that is outward flows of FDI arising from domestic investors. Multinational companies from Brazil, Argentina, Taiwan, Singapore, and Malaysia have become not inconsequential global players in some industries. One factor is the global perspective that foreign competition brings: it demands a response from national investors, and the inevitable search for market opportunities outside the national market. Often, the first steps toward investing are to follow a firms' exports into a neighboring country to extend the market (Kosacoff 2000).

In South Asia, outward investment has been miniscule. As a consequence, among the top 50 nonfinancial multinational corporations on UNCTAD's list for 2001, 31 were from East Asia, 13 were from Latin America, four were from Africa, and two were from Eastern Europe.[28] Not one based in South Asia appears on the list. The region is clearly missing out on this driver of trade—to say nothing of its implications for long-run competitiveness.

Absence of Effective Regional Integration

Finally, the absence of an effective regional agreement also probably contributes to the lack of integration—though care has to be taken to avoid overstating the importance of this gap, since many regional agreements are only marginally important in stimulating regional trade. South Asian trade has as a starkly different pattern than what we see in almost any other region (Figure 2.7). Indeed, despite having a preferential trading arrangement under the SAPTA agreement (in force since

1995) that covers all regional trade, South Asia's share of intraregional trade amounts to only 6 percent of its total trade. This stands out in comparison to the shares observed for intraregional trade in other regions such as East Asia and Pacific (over half of their total trade) and Eastern Europe and Central Asia and Sub-Saharan Africa (about a fifth of their total trade).

Figure 2.7: Absence of regional agreements probably contributes to lack of integration
Intra- and Extra-regional Trade, 2004
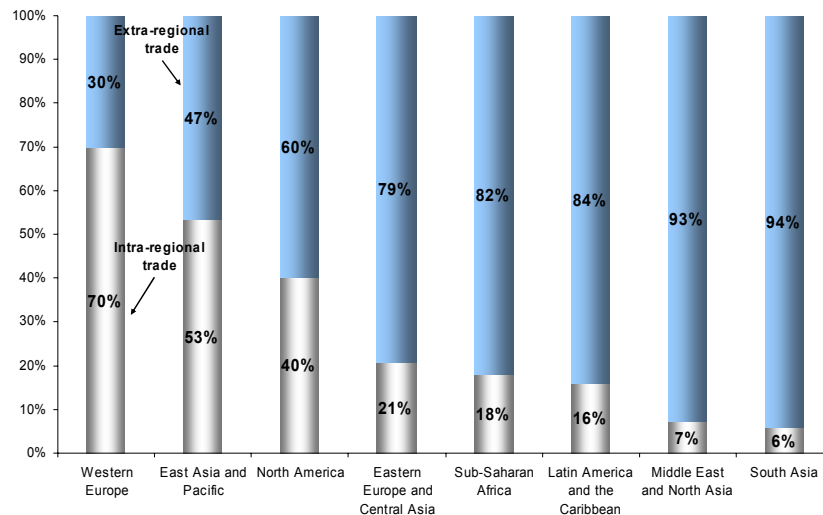
Source: COMTRADE

One of the reasons this has been the case in South Asia is that within the framework of the SAPTA agreement, countries were allowed to have "negative" lists, where they included all the "sensitive" products that were excluded from preferential treatment. This might have precluded more intraregional trade, since these lists were composed of products that represented most trade inside the region. As Kemal (2004) indicates, the number of items where concessions were granted was limited, and thus so was their impact. Most of the intraregional trade was not effectively liberalized. Although the number of items included in the concessions was almost 4,700, it took four rounds to reach this agreement, after starting with an original proposal of just 226 products.[29]

Informal Trade

Because high barriers and bans often prevent trade despite economic incentives, official trade statistics may significantly understate the degree of actual trade. In fact, CUTS (2004) argues that intraregional trade is not as low as it officially seems to be if informal trade is taken into account. According to their estimates, if informal trade is included, intraregional trade as a share of total trade represents 6.5 percent instead of the 4.5 percent that it would be without it.[30]

It is not clear, however, if this informal trade is merely a response to high tariffs or if there is an important share of it that reflects the existence of high transaction costs. Indeed, Taneja (2002) find that the transaction cost in formal trading in India as well as in Sri Lanka is significantly higher than in informal trading. Taneja (Chapter 4 in this volume) discusses the various types of transactions costs in Pakistan–India trade that further support the earlier studies. Therefore, they conclude that the presence of informal trade reflects excessive transaction costs of passing the goods across the border through formal channels. Informal trade would also respond to, for example, an evasion of taxes or burdensome procedures. In this case, as Baysan et al. (2006) argue, the solution to the problem of informality goes beyond SAFTA and a simple removal of tariffs. It requires domestic reforms aiming to reduce these transaction costs.

India–Pakistan Hostilities

A third reason why intraregional trade is being retarded in South Asia was the persistent hostility between India and Pakistan. Trade between these countries has been abnormally low. The share of total trade between Pakistan and India measured by the sum of the bilateral exports amounts only to 0.9 percent of total exports from India and Pakistan (Figure 2.8). This is only 40 percent of the equivalent measure of bilateral trade between Malaysia and China, two countries of comparable GDP and proximity, and it's only 9 percent of the equivalent measure of trade that occurs between Argentina and Brazil, other countries of comparable size.

Figure 2.8: Trade between India and Pakistan is abnormally low
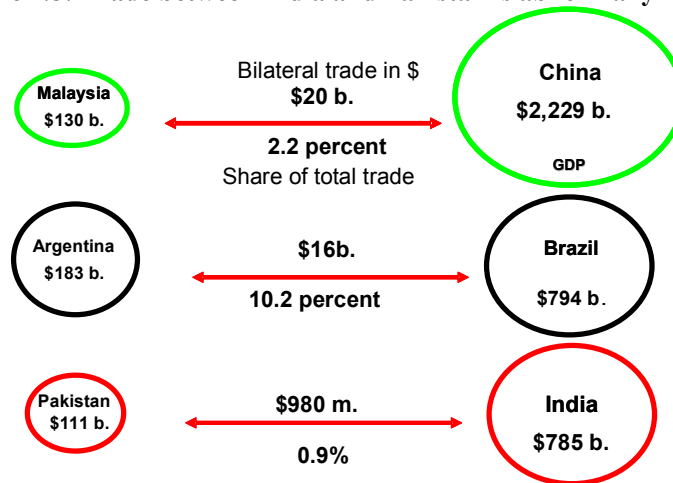
Values in USD millions, 2005. Total bilateral trade is calculated as the sum of bilateral exports, shares are ratios of total bilateral trade to the sum of each country's total exports.
Source: IMF Direction of Trade Statistics; World Bank World Development Indicators

To be sure, these countries have different growth rates, size, per capita incomes, and distances, so this might explain their much greater trade. To control for these factors, we estimated the trade that would be predicted to occur between India and Pakistan if they were to trade at the global averages. If normal relations had applied in 2001, by this measure, trade should have been $1.85 billion.[31] The gravity model in this volume predicts bilateral trade of $2.6 billion if political relations between India and Pakistan were to improve and normal trade ties are established. The secretariat of the South Asian SAARC estimates the trade between Pakistan and India could easily surpass $4 billion. A recent study by the State Bank of Pakistan (2006) estimates potential trade at $5.2 billion.

III. The Upside: Lessons from Other Regions

Can SAFTA provide stimuli for intraregional trade, investment, and growth? The short answer is "yes…provided that…." These provisions determine the success or failure of regional agreements, and the experience of other regions is illuminating.

The Pursuit of Deep Integration

The SAFTA, like other recent regional agreements (RTAs), seeks explicitly to establish "deeper integration" than what one would expect from simply lowering border barriers. Motivation for deeper integration often begins not with economic objectives, but political objectives. For example, the fathers of the European Community, Robert Schulman of Germany and Jean Monet of France, clearly believed that Franco–German integration through trade and investment would produce a new constellation of common economic interests that would dissipate historic military competition.

Similarly, in the mid-1980s, the newly established democracies of the Southern Cone of Latin America decided to establish the Mercosur arrangement, and one motivation among political leaders was that traditional military hostility between Argentina and Brazil might be quelled if the economies of the region were to become more economical integrated. RTAs do not automatically confer positive political outcomes, however.

A second political motivation often emerges in literature. Integration may provide a platform for collective bargaining with other actors in the global system. The EU established a common trade policy with a common trade minister in part to better negotiate with the United States in the General Agreement on Tariffs and Trade. Similarly, Mercosur has tried to establish a common trade policy to be negotiated under the leadership of one minister.

Deep integration also entails working on standards and regulations that might impede trade among countries in the region. Harmonization or mutual recognition of standards across the borders can make trade much easier. Similarly, improving customs and border crossings, and reducing transactions costs, the number of signatures for transaction costs can play a very important role. Bangladesh, for example, sought to reduce the number of signatures that are required in its customs from some 53 to three over the space of the last few years. This has helped foster international trade and trade within the region. Some RTAs contain provisions to generate investments across borders. These can take the form of allowing new market access to invest, or it can take the form of increasing investors' protections and offering special mechanisms for resolving disputes. For example, market access, investor protections, and dispute resolution are all features of the North American Free Trade Agreement (NAFTA), as well as the U.S. bilateral FTAs with Chile, Australia, and Central America. Finally, deep integration might also include special provisions for movement of labor; most commonly, agreements permit businesspeople to cross borders through special visa provisions. Member countries in the Asia-Pacific Economic Cooperation, for example, have a special line at the passport control marked for Asia-Pacific Economic Cooperation visitors.

Burfisher et al. (2003) provide a comprehensive list of policies commonly found in regional agreements:
- facilitating financial and FDI flows (real and financial capital mobility) by establishing investment protocols and protections;
- liberalizing movement of labor within the RTA;
- harmonizing domestic tax and subsidy policies, especially those that affect production and trade incentives;
- harmonizing macro policies, including fiscal and monetary policy, to achieve a stable macroeconomic environment within the RTA, including a coordinated exchange rate policy;
- establishing institutions to manage and facilitate integration (e.g., regional development funds, institutions to set standards, and dispute resolution mechanisms);
- improvements of communications and transportation infrastructure to facilitate increased trade and factor mobility;
- harmonizing legal regulation of product and factor markets (e.g., antitrust law, commercial law, labor relations, and financial institutions); and
- establishing a common currency and completely integrated monetary and exchange rate policy (monetary union).

Because of the multiplicity of RTA objectives, they require more than simple trade analysis to analyze the complex outcomes. The following section reviews the impact of RTAs on growth broadly, and then elaborates on some of the channels through which growth can be accelerated or slowed: trade creation or diversion, productivity effects, terms of trade, FDI, and trade facilitation.

Growth and Poverty

RTAs do not automatically lead to higher growth of member countries. Whether agreements accelerate growth depends on their associated costs. Schiff and Winters (2003) concluded that North–South agreements generally increased growth for developing country members. More recently, using cross-country regressions to estimate the effects of RTAs on growth in 1960–99, Berthelon (2004) found that RTAs that enlarged the market substantially had substantial positive effects over the period. The larger market permits wider competition, larger scales, and greater specialization, all of which increase productivity and growth. South-South agreements face an uphill struggle in two respects: they generally entail much smaller markets, and they have less scope for realizing the gains from comparative advantage that different factor intensities would otherwise bring.

The Lederman et al. study (2003) found that NAFTA indeed did lead to sustained improvements in income, though these were not evenly shared nor as large as they could have been had macroeconomic and other policies been more supportive. NAFTA increased trade by 25–30 percent and, because both parties had relatively low external trade barriers going into the agreement, trade diversion was minimal. Moreover, Mexico became a net exporter of capital goods, largely because of production chain links to the American market. NAFTA also increased FDI flows into Mexico, more so at the beginning of the period than in the later years. Finally, real wages, initially slammed by the Tequila crisis of 1994 (which was attributable to debt accumulated well before NAFTA and macroeconomic management after, and had virtually nothing to do with trade policy), recovered strongly after 1996, and unemployment fell to a 10-year low by 1998 until the U.S. recession of 2001. Moreover, wages in traded sectors are substantially above wages in the nontradable sectors—and they have increased most in states that have a greater degree of trade-integration.

Several studies show that RTA-induced growth generally increases the incomes of the poor by more than the average increases.[32] The reason is that the most common pattern of protection in developing countries is to protect capital-intensive goods, increasing demand for skilled labor, commonly to the detriment of agriculture and labor-intensive goods. Removing that protection invariably raises demand for unskilled labor, agricultural product, and wages in the poorest groups, and more so than increases in the returns to capital. The ability of poor households and consumers to generally substitute wage goods means that increases in incomes of the poorest households invariably swamp the effects of adverse price movements.

Burfisher et al. (2003:17) survey the extensive literature and arrive at two generalizations: "… the empirical work … indicates that RTAs are generally good for their members, [and] that they are not seriously detrimental to nonmembers ... With few exceptions, there is no convincing empirical evidence that trade diversion dominates in the RTAs considered." The exceptions are countries with high MFN barriers. They also find the potential benefits of RTAs are rather small. Schiff and Winters (2003), though more leery about trade diversion, agree that long-term benefits are likely to be positive, if small, and that countries can raise their incomes through participation in regional agreements, but most reliably so when external protection is low.

Do RTAs Create or Divert Trade?

One of the most important questions is whether the RTA creates new and additional trade that is internationally competitive, or does the agreement simply divert trade from a low-cost (international) source to a high-cost (member-country) source. This occurs when barriers are high to all partners, and then removed in preferential agreements for member countries; and when the member countries have a higher cost than international suppliers. In such circumstances, the importing country suffers loss of the tariff revenue and ends up with higher costs.[33] Should diversion occur, the productivity gains that potentially could come from regional agreements or trading arrangements generally are lost, and the RTA becomes a drag on the economy.

Historical experience is mixed, but the effects of RTAs on intraregional and extraregional trade offer some clues. The left panel of Figure 2.9 shows intrabloc imports as a share of GDP in several agreements one year before and five years after an agreement was signed. In virtually all of the arrangements trade within the region as a share of GDP expanded. The right panel of Figure 2.9 shows what happen during the same period to extrablock import as a share of GDP. In nearly all of the agreements, extrablock imports also increased during this period. Though not conclusive, the two together tend to suggest that trade creation tends to dominate trade diversion.[34]

Figure 2.9: RTAs can increase trade
Trade patterns before and after signing RTAs

Intrabloc imports as a share of GDP **Extrabloc imports as a share of GDP**
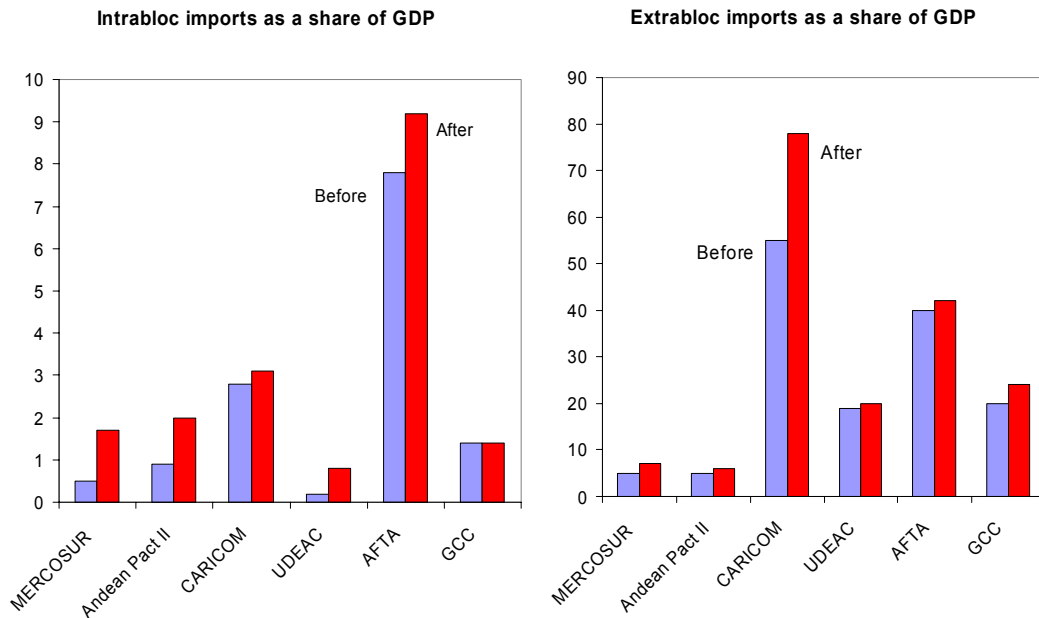
Note: For Mercosur, "before" is 1991 and "after" is 1996; for Andean Pact II, 1990 and 1996; for the Caribbean Community (CARICOM), 1972 and 1978; for Union Douanière des Etats de l'Afrique Centrale (UDEAC), 1965 and 1971; for the ASEAN Free Trade Area (AFTA), 1991 and 1996; and for the Gulf Cooperation Council (GCC), 1980 and 1986.
Source: Schiff and Winters 2003

An important axiom here is that the higher the MFN tariff the greater the risk that trade diversion will occur and that RTAs will slow growth. If, at the limit, the external tariff is zero, there can be *no* trade diversion because the government loses no revenue and the preferential agreement cannot channel demand to inefficient sources (Hoekman and Schiff 2002).

Effects on Terms of Trade

RTAs stimulate competition and technology transfer, and thus change relative prices over time and in ways not captured in static analysis. All of these can affect productivity by increasing the efficiency of capital and labor in production. RTAs can spur lower prices to the importing country. Consider the case, for example, of U.S. export prices to Brazil after the formation of the Mercosur in 1991. Because of the competition from Argentina in the Brazilian market, U.S. exporters of some 1,356 commodities were forced to cut their prices to Brazil by 5 percent to 10 percent over 1991–1996, despite the fact that these commodities actually increased around the world by some 10 percent to 15 percent (Figure 2.10).

Figure 2.10. RTAs Can Increase Competition, Improving Terms of Trade

U.S. export prices to Brazil post-Mercosur (1,356 commodities)
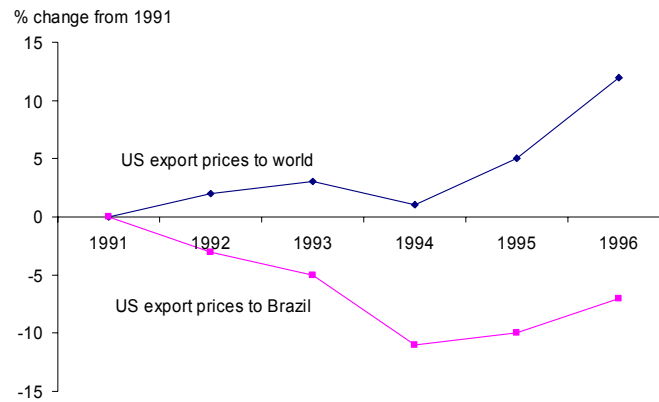
Source: Chang and Winters 1999

Productivity: Competition, Scales, and Technological Diffusion

Flores (1997) used a simulation model to calculate that Mercosur could increase incomes in the region by 1.1 percent to 2.3 percent of GDP. This occurred mainly because of increased competition that put pressure on markups and scale effects in concentrated industries. In several concentrated sectors, including steel machineries, vehicles, and chemical, most of the gains occurred because of lower trade cost and lower markups. Economies of scale and scope were such that they would allow firms to become bigger, more productive, and lower prices.

That regional trade integration can foster intraindustry specialization comes out of the experience of East Asia. As noted above, intraindustry production chains that allocate production segments to the lowest-cost country have proliferated, often associated with FDI. Such specialization can drive down margins and increase trade and productivity. Looking at exports of parts and components is one measure (albeit partial). East Asia has more than doubled its share of parts exports between 1980 and 2000 to 15 percent of its total exports, though RTAs played a small role (Figure 2.11). Latin America's parts exports have surged to more than 11 percent, driven in large measure by Mexico's experience in NAFTA. South Asia by this measure is the least affiliated with production chains.

Figure 2.11. Expanding Production Chains
Exports of parts and components as a share of total exports
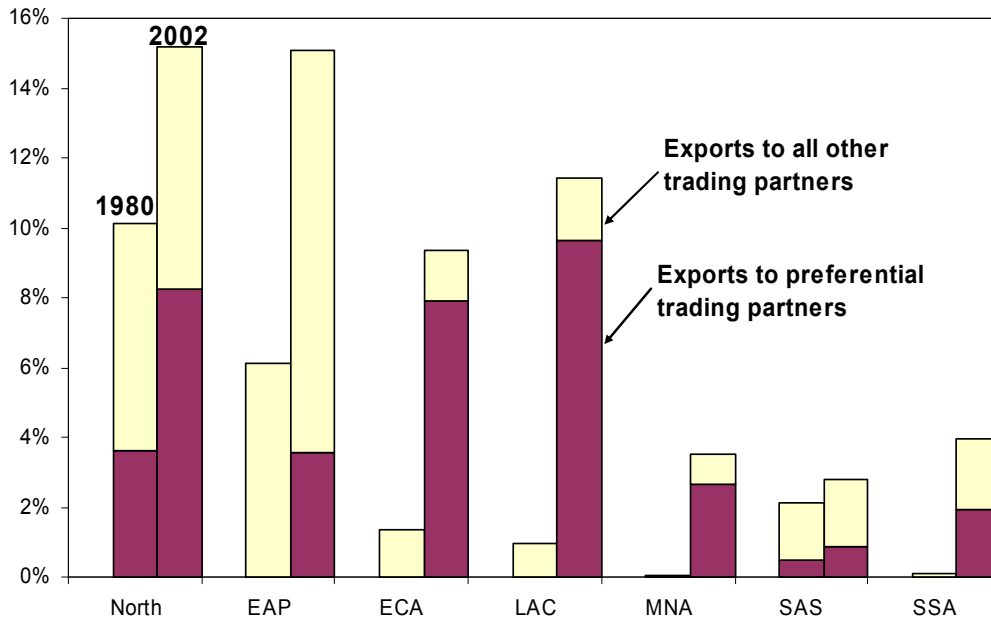
Source: COMTRADE

Note: North = industrial countries, EAP = East Asia and Pacific, ECA = Eastern Europe and Central Asia, LAC = Latin America and Caribbean, MNA = Middle East and North Africa, SAS = South Asia, SSA = Sub-Saharan Africa.

RTAs can also affect growth through technological transfer. Schiff and Wang (2003) looked at the effects of NAFTA on total factor productivity in Mexico through its impact on trade-related technological transfers from Organization for Economic Development and Co-operation and Development (OECD) countries. By calculating the embodied industry-specific research and development in foreign trade from the OECD and tracing its impact through changed OECD–Mexico trade patterns and input–output coefficients by industry in Mexico, they found that OECD trade had a large and positive impact on Mexico's total factor productivity, while trade with the rest of the world did not. They suggest this is because Mexico not only benefited from the content of trade with the NAFTA partners, but because the country experiences closer contact and more information exchanges, especially among subcontracting firms that are more integrated into production networks of their northern partners, than the rest of the OECD. They simulate the impact of NAFTA as a consequence and find that it has led to a permanent increase in total factor productivity (TFP) in Mexican manufacturing of between 5.5 percent and 7.5 percent.

Foreign Direct Investment

RTAs can in principle lead to more rapid growth by attracting foreign investment; however, the type of RTA—particularly whether the post-RTA market size is large—determines whether the RTA affects inflows. Lederman et al. (2003) found that RTAs that formed large markets attracted FDI, controlling for other factors that influence location, but that small markets had no effect. They also find positive effects for NAFTA, although the flow of FDI, even controlling for privatizations, appears to have surged in the first years but not to have been sustained. The Waldkirch (2001) study, with less complete annual data, found that NAFTA increased FDI substantially, mostly from the United States and from Canada; Chudnovsky and Lopez (2001—cited in Levy Yeyati et al. [2002]) finds that FDI increased in the Mercosur, largely from outside sources, but that it often entered via acquisition and displaced domestic investment, and was tariff-hopping-designed to produce for the local market.

Levy Yeyati et al. (2002) used a gravity model to analyze, among other things, the effects of RTAs on FDI inflows in 13 major agreements, and then applied this to a simulation for the Free Trade Area of the Americas (FTAA). They found that RTAs have a strong positive impact on inflows, and that if these average magnitudes hold after an FTAA signing, the results would be substantial increases in flows to FTAA countries. The distribution is uneven, however, and countries with larger post-RTA market size, low inflation rates, strong domestic institutions, and open trade regimes are likely to benefit disproportionately.

Trade Facilitation

Regional agreements often have provisions for improving ports, customs, and transportation. To the extent that these are nondiscriminatory, they can produce net benefits at no cost. This can be as important as cutting tariffs and creating regional trade. If a regional agreement is successful—as SAFTA intends to be—in improving customs and improving ports bilaterally, this can help goods move across borders with less friction and lower costs. This is a case where time is money. Hummels (2001) found that a one-day delay in delivering goods from the exporter to the final market on average increased the cost of those landed goods by 0.8 percent.

The importance of efficient customs is underscored in the relationship between days through customs and the ratio of total trade to GDP (Figure 2.12). If we correlate these two variables for 90 countries, we see that countries with a longer time to get through customs often have lower trade-to-GDP ratios. The direction of causality is not clear, of course, but we do know that making your customs more efficient, the policy variable, can lower costs and increase trade.

Figure 2.12. More Efficient Customs Are Associated with More Trade
Ratio of total trade to GDP, 90 countries
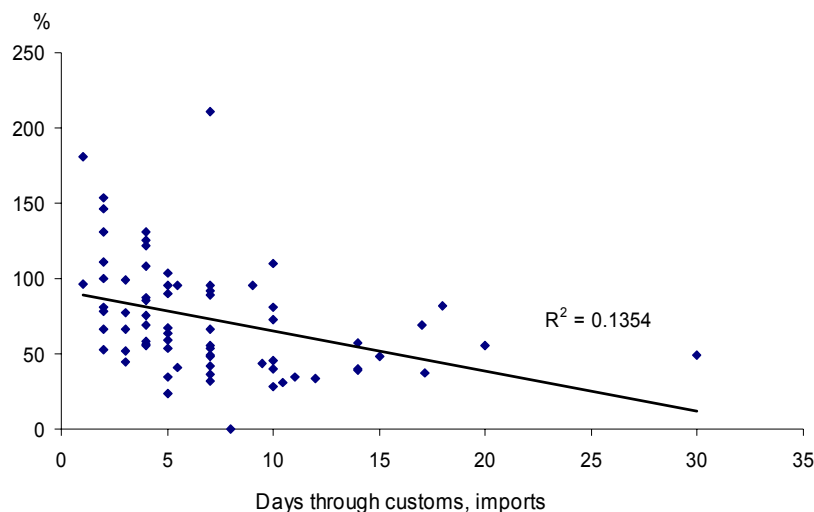
Source: World Business Environment Survey and global trends as cited in Subramanian et al. 2003

Summarizing Regional Experiences: Six Lessons for SAFTA

This brief review of the regional experiences around the world points to six broad conclusions that South Asian policymakers should consider as they design and implement the SAFTA.

First, *signing a regional trade agreement does not automatically produce positive results in increased trade and growth.* Two types of initial errors are painfully evident. History is littered with cases in which RTAs, once signed, have produced little because countries did not translate their good intentions into actual reductions in their border barriers, but instead allowed interest groups to exempt large segments of their economies from the accord. The early attempts to foster Latin American

integration in the 1960s produced little. Indeed, South Asia's first experience with SAPTA was disappointing for this reason. Moreover, agreements that kept in place high external border barriers— or in some cases raised them—often protected inefficient activities and undermined the competitiveness of all countries.

Second, *successful agreements were often preceded—or accompanied—by unilateral efforts among members to reduce external protection.* Reducing trade barriers vis-à-vis the rest of the world creates an incentive for all members to export, augments competition that drives domestic productivity (see Muendler 2002), and spurs all firms to look for new markets abroad. Moreover, low tariffs allow exporting firms to import necessary inputs at international prices, and permit them to be competitive in foreign markets.

This is critical for several reasons. When external protection is generally low, trade creation usually dominates trade diversion, and so the risks that regional agreements will be a drag on growth is substantially reduced. Indeed, regional agreements where members have had low external protection have enjoyed greatest success. Trade creation has dominated diversion in East Asia, in NAFTA and, though perhaps less conclusively, in Latin America (see Baldwin and Venables 1995; Burfisher et al. 2003). Chile reduced its external tariff from a peak of 30 percent in 1983 to 11 percent in the 1990s, and to 6 percent in 2004. This enabled it to sign more than a dozen trade agreements without concern that trade diversion would undermine growth.

Moreover, exports to nonmembers also tend to draw in imports from neighboring countries and regional trading partners, and eventually foster production chains. Growth of trade with the rest of the world is often correlated with intraregional integration; indeed, this is the secret for East Asia's very rapid economic integration. High border barriers are inconsistent with removing the bias against exports that is necessary to drive expansion of exports into global markets.

The opposite seems also generally true: regional agreements that provided for increases in external protection were a recipe for eventual failure (Panagariya 1996). The Andean Pact (1969), the East African Community, and the Central American Common Market in the 1960s all suffered because of this flaw.

Third, *North-South agreements have shown more consistent success because of the opportunities to exploit different comparative wage rates, capital availability, and technological levels that give rise to differing factor proportions in production—and more faithful implementation* (Schiff and Winters 2003). This explains part of NAFTA's success (see Lederman et al. 2004). For SAFTA, it may well be that opening up India could offer substantial complementarities to the other smaller economies of the region that would, for many products, offer some of these same advantages compared to some South-South agreements in Africa.

Fourth, *regional integration can only be successful if trade actually unleashes new competition that lowers domestic prices and provides new technology.* As with all trade, this involves economic change, the process of creative destruction necessary to drive productivity (Hoekman and Schiff 2002). It is impossible to have the benefits of a regional agreement without exposing the member economies to new competition.

Fifth, *successful integration has usually been associated with new competition in services.* Because member countries usually will not have the full range of service providers, especially in the South-South agreements, opening up a particular service sector to competition from member countries may foreclose competition that would otherwise propel growth. Much of the FDI going to East Asia and Latin America has been in the service sectors, and competition in telecommunications, finance, business services, and retail and wholesale commerce can be a driving force of productivity gains. Because of the forward linkages these sectors have in the economy, it may be that this will have a positive productivity-increasing effect across the entire economy.

Finally, *integration is likely to be most successful when partners streamline border transactions by facilitating trade.* Here, as in service efforts to increase efficiency within the region, the efforts often spill over to trade outside the region as well, because improving customs or improving efficiency of ports necessarily applies as much to extraregional trade as it does to intraregional trade, but the RTAs need to be spurred toward facilitating trade. So these are six lessons that, if followed, can spell success for the SAFTA region.

IV. Trade Agreements in South Asia and Their Main Features

This section will review the trends in terms of trade policy in the region and then will evaluate the main characteristics considered in designing the SAFTA agreement. In particular, the objective of this section is to evaluate whether SAFTA contains at least some of the elements necessary to become an agreement that fosters growth and development within the region.

A Brief Review of the Current Trends in Trade Policy in South Asia

With the proliferation of preferential trade agreements (PTAs) around the globe in the last years, South Asian countries have, albeit belatedly in comparison with other regions, jumped on the bandwagon of bilateral and plurilateral PTAs. Governments have concluded or launched negotiations that constitute a new wave of agreements (Annex 2.1). As it can be seen from the majority of cases, most of the agreements have been implemented or negotiated in the last six years and there is a number of initiatives (either through informal talks, studies, or more formal proposals), especially by India and Pakistan, that involve future negotiations with countries outside the region, basically East Asian and North and Latin American countries. These latter negotiations are more related to negotiations of "pacts" and "frameworks," with the aim of engaging in FTA negotiations in the near future. For instance, in the case of the Early Harvest Program of Pakistan with China and Malaysia, both agreements have been recently signed, and the aim is to implement an FTA by 2008 and 2007, respectively. The first phase of the Pakistan–China FTA incorporating the Early Harvest Program, currently focusing only on trade in goods and investment, was signed during the visit of the Chinese president to Pakistan in November 2006.

Bilateral negotiations are not limited to initiatives outside the region, however. In fact, according to Baysan et al. (2006), discussions between India and Bangladesh, and between Bangladesh and Sri Lanka, are ongoing. In the case of Pakistan–Sri Lanka, the FTA entered into force since June 12, 2005.[35] In terms of the tariff concessions granted, 206 products from Sri Lanka to Pakistan will enjoy duty-free market access, whereas in the case of exports from Pakistan to Sri Lanka, 102 products from Pakistan to Sri Lanka will enjoy duty-free access. Both countries, however, have "negative" lists of 540 items (in the case of Pakistan) and 697 items (in the case of Sri Lanka) at the six-digit level. In addition to that, two main export products for both countries (rice, which represented 15 percent of the exports from Pakistan in 2004, and black tea, which represented 15 percent of the exports from Sri Lanka in 2004) are subject to quotas. Finally, rules of origin have been set at 35 percent value-added content plus a tariff heading at the six-digit level. All these elements seem to indicate that the liberalization arising from this agreement might prove to be limited.

This reorientation in the trade policy strategy of the South Asian countries toward bilateral or regional agreements respond to the proliferation of trade agreements around the globe, but also is a response to the slow pace at which the multilateral negotiations are progressing. In any case, given the past experience of integration in South Asia (SAPTA and also the FTAs between India and Sri Lanka—see Box 2.1—and Pakistan and Sri Lanka), the agreements have fallen well short of their potential because of product exemptions,[36] special arrangements for selected products, and restrictive rules of origin.

Box 2.1. The India–Sri Lanka Free Trade Area

The FTA between India and Sri Lanka can be characterized as an agreement where liberalization did not apply to the "sensitive" sectors in both countries. In fact, most of the products in these sectors were included in the negative list (list of products excluded from concessions) and tariff-rate quotas (MFN tariff is applied to imports below this quota-pay preferential tariff and above it) were applied on many others. Indeed, although India granted duty-free access to 81 percent of the items by the third year of the entry into force of the agreement, these concessions were not significant to the extent that the majority of the products exported by Sri Lanka were either included in the negative list presented by India (15 products out of their top 20 exports to India) or were subject to quotas. Likewise, in the case of Sri Lanka, seven of India's top 20 exports to the world (which accounted for 42 percent of total exports) were subject to the negative list exception, four are subject to zero MFN tariff, and one more product is subject to 5 percent MFN tariff. In particular, according to Weerakoon (2001), only three items out of the 319 on which Sri Lanka offered zero duty to India, were actually exported from India, and 68 out of 1,351 on which India offered zero duty to Sri Lanka were exported from the latter.

In addition to that, the agreement also had very strict rules of origin (40 percent local content, 30 percent for LDCs, plus substantial transformation at HS four-digit) that further handicapped the potential expansion of intraregional trade on a preferential basis.

Nevertheless, the India–Sri Lanka Free Trade Area led to a substantial expansion of bilateral trade between India and Sri Lanka. This was the result of an expansion of trade in products that were not traded or barely traded between the two countries before the agreements; therefore, they were not included in the negative lists. For example, in the case of the exports from Sri Lanka to India, the products that were not traded before the agreement reached a share of 38 percent only three years after it was implemented. Likewise, in the case of exports from India to Sri Lanka, those products that were at the bottom of the list and represented only 10 percent of the exports before the agreement increased their share to 39.5 percent two years later. Whether this expansion represents trade creation or diversion is not clear, however.

Source: Baysan et al. (2006)

Major Features of the SAFTA Agreement

The SAFTA agreement has its origin in the South Asian Preferential Trading Arrangement (SAPTA) that was signed by Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka and came into force in 1995 as part of their plan to move toward forming an Economic Union.[37] The SAFTA agreement aims at turning the SAPTA into an FTA. For that purpose, it covers tariff reductions, rules of origin, safeguards, institutional structures, and dispute settlement. It is a more sophisticated and comprehensive agreement than SAPTA to the extent that it also provides a framework to include measures regarding trade facilitation, harmonization of customs classification, investment, macroeconomic consultations, and development of communication systems and transportation infrastructure (Article 8—Additional Measures).

This agreement came into force on January 1, 2006, and is scheduled to be fully implemented by the end of 2015.[38] SAFTA's tariff reduction program calls for India, Pakistan, and Sri Lanka to reduce tariffs to 20 percent from existing (actual) levels by 2008. SAFTA's least-developed country members—Nepal, Bhutan, Bangladesh, and Maldives—receive preferential treatment and are required to reduce their actual tariffs to 30 percent in the same period. During the following five years (eight for LDC members and six for Sri Lanka), all members are committed to reduce their tariffs to a 0–5 percent level. India, Pakistan, and Sri Lanka, however, will reduce their tariffs on imports from the LDC members to this low level by January 1, 2009.

The agreement calls for elimination of all quantitative restrictions for products on the tariff liberalization list. Furthermore, the number of products on the sensitive list (list of products excluded from the preferential tariff) is to be reviewed at four-year intervals with the aim of reducing this list and expanding the free trade coverage of the agreement.

Another major feature of the SAFTA agreement is the establishment of a compensatory mechanism for LDCs. The aim of this mechanism is to compensate LDCs for the initial loss in their tariff revenue as a result of liberalization.

The agreement establishes the SAFTA Ministerial Council, the regional body's highest decision-making authority, and the SAFTA Committee of Experts, which is responsible for monitoring implementation and resolving disputes. The committee is required to update the ministerial council every six months on the progress of the agreement.

Recent Developments and Future Prospects for SAFTA

Before coming into force, the committee of experts reached agreement on key pending issues regarding the implementation of SAFTA.

- An agreement was reached on rules of origin. According to these, the products from non-LDCs will qualify for preferences in the twin criteria of change in tariff heading and 40 percent domestic value-added (30 percent for LDCs). Furthermore, regional cumulation will be accepted (50 percent of regional value in addition to 20 percent of domestic value added at the last stage of the processing). Product-specific rules for 191 tariff lines were agreed to accommodate the interests of LDCs because of their limited natural resource bases and small and undiversified industrial structures.

- Regarding the mechanism for compensation of revenue loss, it was established that compensation will be paid in U.S. dollars by the non-LDC countries to the LDCs in the region. The mechanism would be enforced one year after the implementation of the Trade Liberalization Program (starting in July 2007). It would be subject to a cap of 1 percent, 1 percent, 5 percent, and 3 percent of customs revenue collected in the first four years,[39] respectively, on nonsensitive items under bilateral trade in the base year (i.e., the average of 2004 and 2005).

- Areas for technical assistance to the LDCs was agreed to in September 2005, which include capacity building in standards, product certification, product development and marketing, trade analysis and computerization, trade-related institutions, and trade negotiation skills; improvement in tax policy and instruments, customs, and related procedures; legislative and policy measures such as sanitary and phyto-sanitary measures and technical barriers to trade; legislation on antidumping and safeguard measures; WTO agreements; export promotion; and market development.

- Each country finalized a list of "sensitive" products. The total number of tariff lines submitted for exclusion under the Trade Liberalization Policy by each country is the following: Bangladesh, 1,254 items for non-LDCs and 1,249 items for LDCs; Bhutan, single list of 157 items; India, 884 items for non-LDCs and 763 items for LDCs; Maldives, single list of 671 items; Nepal, 1,310 items for non-LDCs and 1,301 items for LDCs; Pakistan, single list of 1,183 items; and Sri Lanka, single list of 1,065 items.

The analysis to date—interpreted through its most protectionist lens—does not give rise to optimism about the amount of new trade that will be created. Table 2.2 presents a summary of the number of total tariff lines under the "sensitive list' by each country, these as share of the total tariff lines and estimation of what share of value of imports and exports would be affected by being included in the sensitive lists.[40] Although most countries have adhered to keeping the sensitive lists close to the 20 percent target they had agreed to, the estimated value of imports from the SAARC region protected under SAFTA is quite excessive. For instance, Bangladesh has protected 65 percent of its imports from the SAARC region through its 'sensitive list," while 22 percent of its exports to

the region would be affected by the sensitive lists of other countries. Paradoxically, Pakistan, which has the largest number of tariff lines among non-LDCs in its sensitive list, would only be protecting an estimated 17 percent of its imports from the region, while 34 percent of its exports (largely textile products) would not get concessional tariffs under SAFTA by other SAARC countries. Although SAFTA has a provision for reviewing the sensitive lists every four years with the aim of reducing them, since there is no well-defined time frame for reducing the list, it is feared that pruning of the sensitive list would not be binding on member states. Hence, there are concerns that the practice of exempting such a large number of "sensitive products" risks replicating the unfortunate history of SAPTA.

Table 2.2. Trade Restricted Under SAFTA

Country	Tariff Lines in Sensitive List[1]	As % of Total Tariff Lines[2/]	% of Trade Restricted Under SAFTA Sensitive List[3/]	
			Value of Imports	Value of Exports
Bangladesh	1,254	24%	65%	22%
Bhutan	157	3%	n.a.	n.a.
India	884	17%	38%	56%
Maldives	671	13%	75%	57%
Nepal	1,310	25%	64%	46%
Pakistan	1,183	23%	17%	34%
Sri Lanka	1,065	20%	52%	47%

[1] For non-LDCs only.
Sources: 2/ Ministry of Commerce, Pakistan and 3/ Weekakoon and Thennakoon (2006).

Taking into account the experience of the FTA between India and Sri Lanka, it could be possible that even under restrictive scenarios of liberalization, intraregional trade flows could increase in products that are currently not traded. Since, however, one of the important lessons learned from studies analyzing the impact of RTAs on growth is that the higher the MFN tariffs the greater the risk that trade diversion will occur, and given that, in the case of SAFTA, the region remains highly protected (by far above the protection levels observed in other regions),[41] the potential risk that this new trade comes from trade diversion is increased.

In addition, the rules of origin negotiated so far, although allowing regional cumulation, have been set at very restrictive levels (40 percent value content for non-LDCs, 30 percent value content for LDCs and tariff change at HS four-digit). A simpler and more transparent set of rules of origin that minimizes the restrictive character of these measures would be required to guarantee a more successful outcome from the implementation of this agreement. For example, in the case of textiles and clothing, a rule of origin of 10 percent value-added (with the alternative of satisfying either the value-added rule or a tariff change at the HS four-digit requirement) would widen the access of exports from LDCs to the European market.

Box 2.2. Quantitative Studies on the Potential Impact of SAFTA

RIS (2004) reports results of studies conducted in the framework of the gravity model. It suggests that complete elimination of tariffs under SAFTA may increase intraregional trade by 1.6 times. It further suggests that in the dynamic framework, the gains from liberalization are at least 25 percent higher than the static gains.

Srinivasan and Canonero (1995) and Sengupta and Banik (1997): Both studies predict that the impact of a South Asian FTA on trade flows will be small for India, but much larger on the smaller countries. Sengupta and Banik predict a 30 percent increase in the official intra-SAARC trade and as much as 60 percent if illegal trade, which is currently out of the official count, becomes a part of official trade. These results are intuitive: India being large, the impact on its trade of the FTA with the small neighbors cannot be proportionately large.

Using GTAP database and models by Pigato et al. (1997) and Bandara and Yu (2003), gains from SAFTA are found. Pigato et al. find that SAFTA produces benefits for member nations, though unilateral trade liberalization yields larger gains. Bandara and Yu (2003) find that SAFTA leads to a 0.21 percent gain in the real income of India and 0.03 percent gain for Sri Lanka. Bangladesh loses 0.10 percent while the rest of South Asia gains 0.08 percent in terms of the real income.

Govindan (1994) estimates the price elasticities of demand in food sector and uses them to estimate the effect of preferential liberalization within the region on intraregional trade. He concludes that such liberalization would yield welfare gains through increased trade in food within the region. DeRosa and Govindan (1995) extend the analysis to include unilateral liberalization and demonstrate that the gains are much larger when liberalization is on a nondiscriminatory basis. Pursell (2004) carefully studies the preferential liberalization of the cement industry between India and Bangladesh, and finds substantial gains from increased competition within the regional market.

Source: Baysan et al. (2006)

The recent proliferation of bilateral and other RTAs by the SAARC region countries may imply that SAFTA by itself may have a fairly limited impact on expanding regional trade. For instance, Sri Lanka signed bilateral agreements with both India and Pakistan that gives it access to two of the largest economies in South Asia well before SAFTA came into force.[42] All the LDCs in SAFTA—Nepal, Bhutan, Maldives, and Bangladesh—already have access to their largest trading partner—India—and the biggest regional economy through the bilateral process. Moreover, India seems to be entering a number of bilateral and regional arrangements in recent years, "demonstrating the enthusiasm of a recent convert."[43] India has negotiated a treaty with ASEAN, and trade agreements with China, Japan, South Korea, Malaysia, Indonesia, Israel, GCC, Mauritius, South Africa Customs Union, etc., are in the cards. India also has a comprehensive economic cooperation agreement with Singapore and an FTA with Thailand. All but two of the countries of SAFTA are part of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), which is scheduled to begin its implementation January 2007 and also includes fast-track liberalization and well as inclusion of FTA, including services and investment negotiations from July 2007.[44] Pakistan has already entered into an FTA with China and is considering FTAs with a number of Middle Eastern, African, and East Asian countries. All these developments do not bode well for SAFTA, which comparatively has a longer time frame for implementation, highly restrictive sensitive lists, and relatively stringent rules of origin.

Despite these shortcomings. it is important to emphasize that SAFTA still offers a great potential for having positive effects in the region if its trade is effectively liberalized. On the one hand, several studies have pointed out the positive gains on trade, competitiveness, and income that could arise from effective SAFTA liberalization (Box 2.2).

On the other hand, it is important to bear in mind that SAFTA is an agreement that provides a framework for taking measures to facilitate investment, improve the harmonization of standards in the

region, and facilitate customs and transit for efficient intra-SAFTA trade among others. Indeed, facilitating customs and intraregional transit is particularly important because the average numbers of days to clear customs in South Asia is one of the highest of all regions (Figure 2.13). The number of days for imports to clear customs in South Asia is 42, compared to 24 in East Asia and 28 in Latin America. For exports, the situation is similar, though the difference with respect to other regions is not as large as for imports. Only Sub-Saharan Africa has a worse performance that South Asia.[45]

Figure 2.13. Days Required to Clear Exports and Imports from Customs
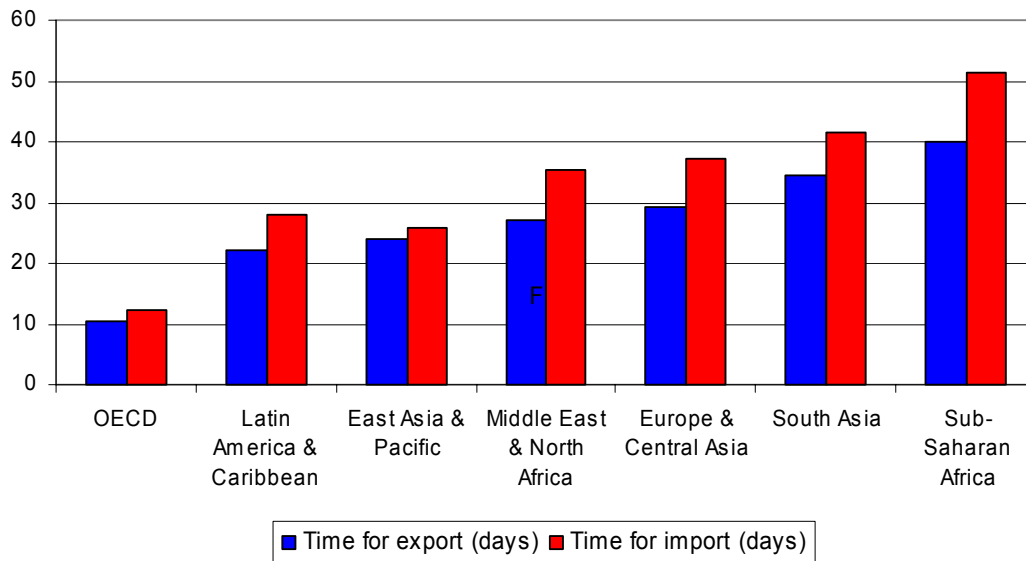
Source: World Bank and International Finance Corporation 2007

On the other hand, inadequate trade facilitation mechanisms create obstacles to the potential of intraregional trade. For example, Nepal's trade with other countries in the region depends on transit facilities provided by India. These facilities often involve high handling and transportation charges and delays in delivery, thus hampering the flow of trade between Nepal and its trading partners in the region.

The extent to which SAFTA will indeed provide the adequate mechanisms to deliver positive outcomes in terms of promoting investment and facilitating trade will depend basically on how the agreement is implemented. It is important to point out that just the mere fact that SAFTA contains a provision envisaging measures on these areas constitutes an important difference with respect to SAPTA. In this sense, the framework provided in the design of SAFTA has the elements that could allow the agreement to offer South Asia an opportunity to reap the benefits from liberalization through different channels (more investment, better terms of trade, increased productivity, lower prices, etc.). For this purpose, it is crucial that South Asian countries focus their efforts on delivering effective liberalization and reducing trade barriers in general so that trade creation dominates and, thus, the expansion of intraregional trade yields gains in production specialization, efficiency, and improved quality of exports, which will benefit all the member countries.

V. Moving Forward with SAFTA: Strategic Considerations

A strategy to pursue regional integration has to integrate three policy domains of trade—unilateral policies, multilateral policies, and regional policies—into a coherent strategy.

Unilateral Efforts

Unilaterally, member countries should examine their own MFN trade regimes for the impediments to effective import competition in the domestic market, import competition which, if increased, would drive domestic productivity and lead to more rapid growth. As seen above, lowering the external barriers sharply reduces the risk of costly trade diversion. A first step is to reduce the number of tariff categories, such as Pakistan did in the late 1990s and bringing down tariffs peaks toward a uniform tariff.[46] Peaks commonly protect special interests and distort incentives to engage in internationally competitive activities. Moreover, moving toward a uniform tariff reduces the special pleading for protection because all productive sectors are treated alike. India has made steady progress in recent years, even though it still has a ways to go to catch up with regional leaders Sri Lanka and Pakistan.

Second, replacing nontariff restrictions and para-tariffs with ad valorem duties introduces transparency into the trading system and can increase revenues to the government. Para-tariffs are particularly onerous in Bangladesh. Third, phasing in greater liberalization in services—particularly, telecommunications and financial services—can improve the competitiveness of the economy, provided regulatory frameworks are adequate to protect against systemic or market failures. These reforms should be accompanied by complimentary policies to ensure that whatever adjustments occur to these particular unilateral trade measures adequately protect workers and small businesses as they make the transition toward investment in internationally competitive activities. But unilateral trade reform is an important pillar of trade policy and cannot simply be ignored in favor of one of the other two domains.

Multilateral Trade: Accelerating the Doha Agenda

A second domain, of course, is the multilateral trade negotiations that are ongoing as part of the WTO. The Doha Development Agenda offers perhaps the biggest payoff for developing countries around the world. The world market is perhaps 20 times larger as SAFTA taken by itself. This underscores the importance of vigorous participation of countries like Pakistan, India, and Bangladesh in participating and leading their coalitions in the multilateral trade negotiations sponsored by the WTO.

Specifically, India and Pakistan have an opportunity to shape the policy of the new G-20 coalition of countries in the WTO talks that are committed to opening agricultural markets in the United States, EU, and other OECD countries. The G-20, under the leadership of Brazil, has been successful in moving the WTO discussions to a higher level of ambition than at the September 2003 meeting in Cancun. The response of the United States has been positive. To capitalize on the momentum, the G-20 could challenge opponents of agricultural liberalization by putting on the table new offers for reductions in protection at home. A more forthcoming position would contribute significantly to the willingness of all parties to reach a reciprocal deal that benefits South Asia, along with all other countries.

Similarly, Bangladesh, in its leadership position in the LDC/ACP/African Union coalition could help resolve the obstacles to an agreement on the Singapore issues. The coalition adamantly opposed negotiation of any of the four issues in Cancun.[47] As the negotiations have subsequently produced convergence on negotiating only trade facilitation, the coalition could usefully formulate a new LDC position that would allow forward movement consistent with domestic development priorities. Concessions in negotiating new disciplines in trade facilitation, properly framed, could actually promote development, and at the same time win movement on market access that would benefit all of South Asia.

The final element of the trade strategy is South Asia's trade. A four-track policy can help seize the moment borne of the initiative that created SAFTA. These tracks can be delinked from each other—since each will bring potential benefits and at the same time contribute positive synergies to the other area.

Indo–Pakistan trade. Agreement between India and Pakistan to renew direct cross-border trade would advance regional integration, build trust, and lay the foundation for progress in SAFTA. Early moves toward ending the prohibitions on trade could facilitate all movements of goods and services across the border, and would ease the adjustment to RTAs that might take effect in later years. This can be done on an MFN basis and requires no change in the trade code other than the trade-specific elements introduced vis-à-vis between India and Pakistan. Converting existing trade now routed through Dubai and formalizing trade now smuggled across the border will lower costs to both economies and promote growth.

Trade facilitation. A second track, independent of the first, is collaborative movements to improve trade facilitation customs, and ports. Pakistan is already making progress in its efforts vis-à-vis Afghanistan. Turning its attention to the ports and customs in Karachi and turning its attention to the potential border crossings with India would also facilitate expanded trade on both the MFN basis and any preferential basis that would follow. Bangladesh has significant delays and inefficiencies in its customs on both the export and import side, as well as in the ports. Moving forward with ideas currently in discussions would reduce the heavy implicit tax imposed on the competitiveness of the Bangladeshi economy. India, Nepal, Sri Lanka, and the other economies of the region likewise have considerable room for improvement in trade facilitation. Regional collaboration and unilateral initiatives could motivate reforms. All would benefit from regional trade and MFN trade.

Bilateral and plurilateral trade agreements with countries outside South Asia. India and Pakistan have embarked on a series of bilateral initiatives with other countries. While these cannot substitute for multilateral initiatives, they may—depending on design—offer some new market-widening opportunities. The risks should not be underestimated, however. First, they may fall victim to the same pressures to formulate a politically attractive agreement, if with only small-market liberalizing consequences. Second, if signed among small-market countries, they are unlikely to generate the volume of trade that would have a measurable development impact. And third, there is some risk that scarce negotiating capacity will be siphoned away from more promising regional and multilateral arrangements. Finally, the risk is great that multiple bilateral arrangements complicate customs administration, create added delays at ports and border crossings, and opens border transactions to ever-greater discretion for customs agents, a recipe for aggravating corruption. Still, if major players in South Asia were to negotiate bilateral or plurilateral arrangements with China or ASEAN behind lower tariffs, this could contribute to widening trade and competition throughout the region.

SAFTA. Beginning the SAFTA discussions with a clear objective of increasing cross-border trade and new import competition in national markets is paramount. While apparently obvious, the history in South Asia and other regions demonstrates that it is easy to lose the game before it is begun if defensive interests gain primacy at the outset.

This simple and obvious precept has nontrivial implications:
- All countries have to limit the number of excluded tariff lines to be included on the sensitive lists that are provided for in the SAFTA agreement.
- Keep rules of origin simple and transparent, so these do not become devices of protection and impediments to trade.
- Keep aspirations for investment and other ancillary protocols limited. Ambitious agreements to establish detailed investors' protections and separate dispute panel resolution systems have

delayed progress in other agreements and often for limited economic gain. This arguably is the case with the FTA of the Americas.

- Limit antidumping actions against regional partners could steer protectionist tendencies toward the preferred instrument of safeguard positions. If the private sector through the antidumping mechanisms are allowed to veto the benefits of the SAFTA arrangements, it will substantially weaken the positive growth effects that would otherwise come about. India, in particular, has taken frequent recourse in antidumping suits, and a proliferation of early cases could easily derail the regional trade. The SAFTA arrangement has clearly spelled out well-designed mechanisms to deal with surges and imports and disruptive trade patterns that may come about because of SAFTA.

In addition, more analytical work has to be done to ensure maximum economic benefits. The highest priority is to identify sources of trade diversion and its potential costs to participants. South Asia still has very high levels of tariffs, so the risk is higher than in East Asia or Latin America that trade diversion could undermine the efficiency of SAFTA and end in collapse.

It is also worthwhile to conduct studies that identify sectors where adjustments might occur so as to design effective policies that support workers and facilitate adjustments. This can take the form of targeted policies that help particular regions or particular areas. This may be critical to ensuring broad political support for the reforms in their early stages.

Finally, understanding the fiscal costs of reducing tariffs within the region and look for ways to efficiently replace that revenue with nontrade-based taxes is essential. This is particularly important for some of the smaller countries, such as Maldives and Bangladesh, because they are heavily reliant on trade taxes.

SAFTA can be a very important story if members work together on facilitating trade. The upside potential is great, but the task before policy makers will require relentless determination.

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Annex 2.1. List of Trade Agreements in South Asia

Agreement	Type	Year	Entry into force	Status	Type of agreement	Observations
Bangkok Agreement	Regional		1976	In force	Free Trade Agreement	Notified to WTO
BIMSTEC	Regional		2004	In force	Frameworks agreement for an FTA	FTA under negotiation
India–Nepal	Bilateral		1991	In force	Partial Scope Agreement	
India–Sri Lanka	Bilateral		2001	In force	Free Trade Agreement	Notified to WTO
Pakistan–China	Bilateral		2006	In force	Frameworks agreement for an FTA	Early Harvest Program signed. FTA under negotiation to enter into force in 2008.
Pakistan–Sri Lanka	Bilateral		2005	In force	Partial Scope Agreement	
India–ASEAN	Regional	2003		Signed	Partial Scope Agreement	FTA under negotiation
SAFTA	Regional	2006		Signed	Free Trade Agreement	
India–Afghanistan	Bilateral	2003		Signed	Partial Scope Agreement	
India–Bhutan	Bilateral	1995		Signed	Free Trade Agreement	
India–Chile	Bilateral	2005		Signed	Partial Scope Agreement	
Pakistan–Malaysia	Bilateral	2005		Signed	Frameworks agreement for an FTA	Early Harvest Program signed. FTA under negotiation to enter into force in 2007.
India–Mauritius	Bilateral	2005		Signed	Partial Scope Agreement	
India–Mercosur	Regional	2005		Signed	Partial Scope Agreement	
India–Singapore	Bilateral	2005		Signed	Comprehensive Economic Cooperation Agreement	Includes trade in goods, services, investment protections, and taxation
India–Thailand	Bilateral	2003		Signed	Partial Scope Agreement	FTA under negotiation.
Pakistan–Indonesia	Bilateral	2005		Under negotiation	Free Trade Agreement	
Pakistan–Singapore	Bilateral	2004		Under negotiation	Free Trade Agreement	
Pakistan–Turkey	Bilateral	2005		Under negotiation	Free Trade Agreement	
India–Bangladesh	Bilateral			Under discussion		
India–China	Bilateral			Under discussion		
India–Egypt	Bilateral			Under discussion		
India–GCC	Bilateral			Under discussion		
India–Malaysia	Bilateral			Under discussion		
India–SACU	Bilateral			Under discussion		
Pakistan–Afghanistan	Bilateral			Under discussion		
Pakistan–Egypt	Bilateral			Under discussion		
Pakistan–GCC	Bilateral			Under discussion		
Pakistan–Laos	Bilateral			Under discussion		
Pakistan–Morocco	Bilateral			Under discussion		
Pakistan–Thailand	Bilateral			Under discussion		
Pakistan–Tunisia	Bilateral			Under discussion		
Pakistan–Switzerland	Bilateral			Under discussion		
Pakistan–USA	Bilateral			Under discussion		
Pakistan–Mauritius	Bilateral			Under discussion		
Sri Lanka–Singapore	Bilateral			Under discussion		
Sri Lanka–USA	Bilateral			Under discussion		

In the case of the agreements under negotiation, year indicates when the negotiations were launched.

Sources: WTO (for the notified agreements) and Investment and Trade Promotion Division of the Ministry of External Affairs of India, Ministry of Commerce, Pakistan, Hufbauer and Wong (2005), United Nations Development Programme, and http://bilaterals.org (for the agreements signed, under negotiation and under discussion).

Chapter 3
The "Peace Dividend," SAFTA, and Pakistan–India Trade

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Historically, formal trade between Pakistan and India has been extraordinarily low—only about one percent of either country's global trade. In large part, this reflects the fact that relations between the two countries have been tense for most of the last 50 years. This situation is rapidly changing, however. The signing of the South Asia Free Trade Area (SAFTA) agreement on January 6, 2004, represents an important turning-point in the relationship between Pakistan and India. This chapter provides a first approximation of changes in overall trade flows that might result from improved relations within the region.

The chapter employs a gravity model, a standard analytical tool used by trade economists to estimate trade flows between countries based on factors such as countries' income, proximity, shared institutions, trade agreements, and the like. Gravity models are widely used to assess whether subsets of countries trade more or less than what one would expect, based on the "normal" trade that takes place within a larger set of countries. In particular, the chapter focuses on two factors: the reduction of conflict between India and Pakistan, and the elimination of barriers to trade between South Asian countries.[48] Pakistan–India conflict has had a significant negative impact on aggregate trade flows. Controlling for other variables, we estimate that trade between Pakistan and India would increase by 405 percent in the absence of conflict. We also estimate that Pakistan and India could further increase their bilateral trade by another 79 percent by entering into a preferential trade agreement (PTA) such as SAFTA.[49]

The paper recommends that policy makers from both sides "let geography work" and open the way to further dynamic gains by giving impetus to cooperation at a high political level, and by smoothing the tension in defense and security policies. It is our hope that the results of our analysis will add strength to this process and endow policy makers with yet another proof of the gains from peaceful proximity and trade.

Evolution of Pakistan–India Trade

Pakistan and India enjoyed a high level of trade immediately after independence, but trade suffered a marked drop in the early 1950s, and over the course of wars and military disputes, trade flows have decreased systematically. Until the past decade, both countries pursued policies of import substitution, which discouraged trade in general. More importantly for our purposes, both countries have at times imposed additional restrictions—even outright bans—on trade with each other. Consequently, Pakistan's trade with India as a share of its trade with the world fell to zero by the mid-1960s from 21 percent in 1950, as shown in Figure 3.1. Trade with India has never exceeded 2 percent of Pakistan's total trade in the past two decades. Given its larger economy, India's trade with Pakistan has always represented a somewhat smaller share of its trade with the world, but has followed a similar pattern over the past five decades.

This situation, however, is changing. The introduction to this volume enumerates many steps that both countries have undertaken to improve political and economic relations as part of the bilateral Composite Dialogue process. The signing of SAFTA in January 2004 represents an important turning-point in the relationship between Pakistan and India. The treaty came into force on January 1, 2006. It will be fully implemented by December 2015, when all the countries will have reduced tariffs to 0–5 percent. SAFTA is expected to promote intraregional trade, and to further regional cooperation in

investment and related economic matters, thus enabling South Asia to become a bigger player in world trade.

Figure 3.1. Pakistan and India Don't Trade with Each Other
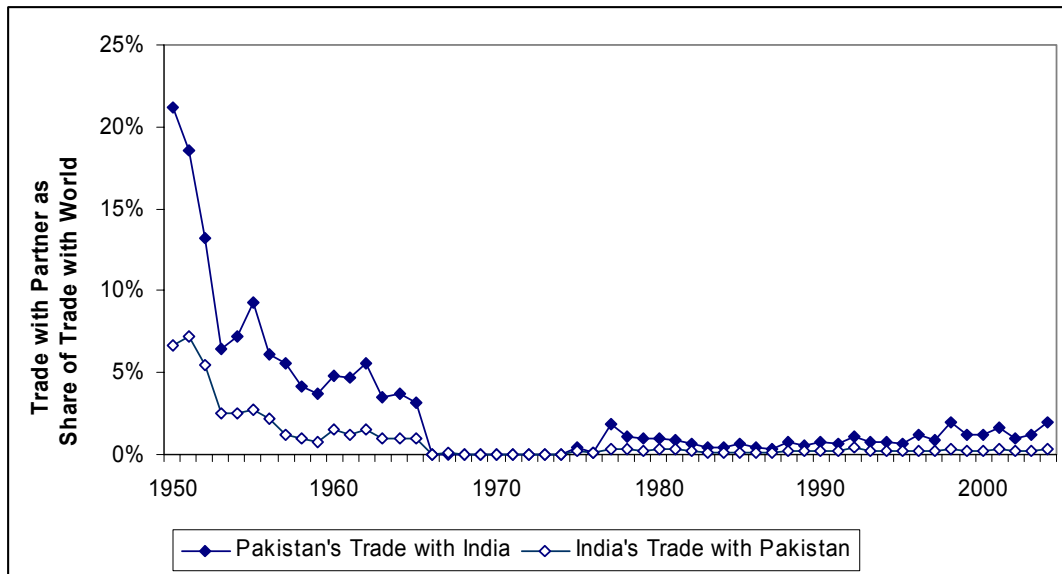
It is reasonable to expect that trade flows will increase as security concerns subside and as SAFTA is implemented. In this chapter we use a gravity model to estimate the relative magnitude of these factors.

Gravity Model Methodology

A gravity model is a standard analytical tool that trade economists use to estimate trade flows. It is based on the intuition that international trade between any two countries is directly related to the size of their economies and inversely related to the geographical distance between them.[50] Gravity models have been used to predict the direction and magnitude of trade flows among states. They estimate the extent of over- and undertrading, and they measure the impact of trade liberalization on bilateral trade flows. In addition, they have been employed to assess the impact of military alliances, conflict, and other political variables in trade.[51]

The most popular empirical formulation of the gravity model includes, along with variables such as gross domestic product, population, and distance, a number of other economic, geographical, and cultural variables, such as common currency, membership in the WTO, whether the country is landlocked, common language, or a shared colonial heritage, as well as dummy variables to reduce the bias from possible misspecification.[52] Trade flows between pairs of countries are regressed on these variables. One then examines the estimated coefficients for each variable to evaluate the different factors that shape trade. We augment this model by including a political variable representing the security relations between any two trading partners in a given year.[53] We also include a variable representing membership of any two trading partners in a PTA.

Recent research indicates that gravity model results may be biased upwards (i.e., they predict too much potential trade) if they omit data on exchange rate volatility and countries' industrial structures. Although data were not available for the countries and years included in our model, we

attempt here to evaluate the relevance of these new findings to our results. Baum and Caglayan (2006) find that exchange-rate volatility reduced trade flows among industrial countries, using data from 1980 to 1998. Their findings are silent on developing countries, however, which were more prone during the years covered by our model (1948–2000) to employ currency controls that suppressed trade, as well as exchange-rate volatility. We might not expect the absence of this variable to bias upwards our results. Baxter and Kouparitsas (2006) introduce an index of industrial similarity to distinguish between Krugman-Helpman and Ricardian trade theories. Assuming that similarity of industrial structures reduces trade (Ricardian hypothesis), by omitting that variable we would have overestimated the role of conflict for trade, as its negative impact may have taken up part of the effect of industrial similarity, given the largely similar industrial structures of Pakistan and India. If we assume, however, that the degree of similarity between Pakistani and Indian industrial structures has not varied greatly through time (which is quite possible, compared to other country pairs), we can safely think of its effect as being included in the country fixed effects.

Although gravity models are widely employed in the economic literature, one should exercise particular care in cases of countries that report engaging in very little trade with each other. Furthermore, the presence of large informal trade flows also undermines the reliability of gravity model predictions. Both circumstances apply to the case of Pakistan and India, which have engaged in low levels of trade and have also reported lower trade than what actually occurred, once one takes into account informal trade flows.

Using the estimated gravity coefficients, we can compute the percentage impact of trade and security policies on trade flows; however, the absolute magnitude of these impacts depends strictly on the benchmark that is used to calculate their size. When recorded trade for a country pair is fairly low, the predicted impact of a given trade policy, or of a change in foreign policy, as calculated with a gravity model, is also necessarily low. The result is that predicted trade gains tend to be "conservative" with respect to the status quo. In this paper we have obtained results on the magnitude of peace-dividend and tariff preferences on actual, recorded trade. In order to correct for such limitation, we have also deepened the inquiry and have estimated trade gains through the gravity framework, adjusting official reported imports with new data on Pakistan–India informal trade.[54]

Model Estimation and Results

We use bilateral trade data for 166 countries over the period between 1948 and 2000 to estimate potential trade flows between any two countries. This dataset includes all the major cases of regional preferences and interstate militarized disputes. Trade data are adjusted for inflation. The statistical model includes the variables and controls that are standard in the empirical trade literature. (See Annex 3.1 for details.)

To estimate the "peace dividend" from trade, we construct a counterfactual appropriate to the case of Pakistan–India relations, where military confrontation has been the norm for the past 50 years. We ask the question: What would have been the trade between Pakistan and India had they not been involved in military confrontation? We include a dummy variable in the statistical model to represent the presence or absence of a significant militarized dispute between a pair of countries in any given year.[55] Similarly, we use a dummy variable to indicate whether the two countries are members in a PTA. The coefficients estimated for these two variables tell us the average effect of war and trade agreements on trade flows between any two countries, after controlling for economic size, distance, etc. Table 3.1 below presents the regression results for these two variables of interest. Annex 3.2 presents the full results.

As is standard in this literature, we present the results as a percentage change in trade flows associated with being in a state of conflict compared to one of no conflict, in the case of the peace-dividend variable, and the percentage change in trade flows associated with membership in a trade agreement. The absolute magnitude of these impacts depends strictly on the benchmark that is used to

calculate their size. When recorded trade for a country pair is fairly low, the predicted impact of a given trade policy, or of a change in foreign policy, as calculated with a gravity model, is also necessarily low. The result is that predicted trade gains tend to be "conservative" with respect to the status quo. We find that, in the period between 1948 and 2000, conflict had an impact on aggregate trade between Pakistan and India that is negative, large, and statistically significant. **The trade gains from peace would have resulted in a 405 percent increase in bilateral trade between the two partners, which they have arguably forgone in each of the war years.** Equally, regional cooperation is likely to have a positive and statistically significant effect on total Pakistan–India bilateral trade. **The estimated trade gains from establishing a PTA amount of 79 percent of current trade.**[56]

Table 3.1 Principal Regression Results

	Peace Dividend	PTA Membership
Construction of dummy variable	1 = countries are engaged in conflict 0 = no conflict	1 = countries are members of a trade agreement 0 = not members
Estimated coefficient	–1.6205	0.5810
Standard error	0.2477	0.0370
Predicated impact on trade of variable	Trade flows between countries at peace are 405 percent higher than between countries at war.	Trade flows between members of preferential trade agreements are 79 percent higher than between nonmembers.

Source: Annex 3.1 presents full regression results.

Had their security relations been more peaceful, Pakistan and India could have reaped substantial gains from trade in all the years of tense security relations. Along the lines of our counterfactual experiment, we estimate the predicted increase in trade associated with lack of conflict. We then compare the prediction with recorded trade flows. For example, recorded trade flows were $117 million in 2000. The model predicts that, in the absence of war, trade would have been $591 million in that year—a peace dividend of $474 million. One might object to this result by pointing out that India–Pakistan trade flows in recent peace years is not 400 percent higher than in conflict years, as predicted by the model. From a purely technical standpoint, it is always quite possible that specific data points do not fall on the predicted regression line in any econometric exercise. One should also point out that trade flows at the time of independence were more than 400 percent higher in real terms than during the mid-1960s. On a more fundamental level, one must acknowledge that using a single dummy variable to represent the presence or absence of armed conflict does not fully capture the complexity of political tensions or dynamic effects. One might not expect symmetry in moving from peace to war versus from war to peace, for example.

In all our regressions, the link between conflict and trade is negative and significant. As predicted by the literature on economic interdependence and interstate security relations, our study confirms that the presence of a war or of a militarized dispute reduces bilateral trade flows. As anticipated above, this study does not claim to offer a final answer to the question about the direction of causality between trade and peace: Does peace promote trade or does increased trade lead to peace? We have checked our specification for endogeneity, however, and have obtained results that are consistent with the coefficients in our main regression.[57] This statistical analysis suggests that good political relations will induce greater trade flows. Ultimately, for most countries in the 1948–2000 period, security relations shaped trade interactions rather than the other way around.

Our other main policy variable, joint membership in a PTA, has also a significant positive effect on bilateral trade. The gravity model estimates that trade between two members of a PTA is 79 percent higher than trade between nonmembers, after controlling for other influences on trade. Consistent with other gravity models that assess the impact of FTAs (see Frankel 1997, for a general review), our study confirms that the presence of systems of regional preferences induces higher flows of imports among partner countries vis-à-vis nonmembers.[58] Looking at Pakistan–India trade in 2000, adding the peace dividend and RTA gains leads to potential trade of $683 million.

From a theoretical angle, one can argue that our results suffer from simultaneity between trade flows and trade agreements. We believe that, ultimately, determining whether it is trade that induces institutionalization of trade relations among countries or whether it is the establishment of trade agreements that eventually triggers an increase in the exchanges among partners is an empirical question. Cases such as NAFTA seem to prove that expectations play a relevant role in explaining how trade increases prior to the actual institutionalization of the system of preferences, yet confirm that the system of preferences did not merely formalize exchange patterns that were already in place. In order to check the robustness of our causal hypothesis, we have performed several endogeneity tests on the RTA variable. The results from our auxiliary regression confirm the findings from the main specification, and prove that regional agreements have a positive and significant impact on bilateral trade flows.

As noted above, the gravity model was estimated using officially reported trade flows. Estimates of informal trade in Chapter 5 show total informal trade flows at around $545 million, made up primarily of Pakistan's imports from India: $535 million in imports from India versus $10.4 million in exports.[59] Calculating trade gains from peace on total trade—both official and informal—reveals an even larger increase in potential trade flows. Assuming that informal trade in 2000 was at about the same level as estimated for 2005, total bilateral trade in 2000 may have been around $642 million. The peace dividend computed on this higher-base trade flow would also have been higher: an estimated $2.6 billion. Total potential trade in 2000 could therefore have amounted to $3.2 billion. When calculated on trade inclusive of informal flows, RTA gain increases to $506 million. Potential trade from peace and cooperation in trade policies reaches a total of $3.75 billion.

Conclusions

Asserting that countries that end conflict or sign regional FTAs enjoy higher levels of trade with each other has certain basic intuitive appeal. The econometrics presented in this chapter not only provide statistically significant evidence to support these assertions, but also indicate the magnitude of the effects. In percentage terms, smoothing political tensions in years of war or militarized disputes could have produced an increase of 405 percent in both countries' imports. We also provide a further check on the often-tested hypothesis that regional integration has a positive effect on trade. At the aggregate level, by entering a PTA such as SAFTA, Pakistan and India could increase their bilateral trade by 79 percent. Trade flows are therefore more heavily affected by security policies than by regional preferential agreements, whose effect appear smaller in magnitude and possibly mediated through political decision making at a high level (domestic and foreign).

Endogeneity checks on the preferential agreement variable have also confirmed the direction of causality, from regional trade institutions to bilateral trade flows. This result suggests that the system of regional preferences through SAFTA will bring new trade between India and Pakistan, and will not simply institutionalize an already existing situation. Robustness checks on the conflict–trade relation have also shown how, in a static setting, politics shapes the context in which trade relations occur. We leave open to future research the inquiry on dynamic effects of security and trade policies on trade.

The main policy implication of this result is that cooperation in trade matters needs to be solidly rooted in a sustained dialogue on major security issues. While SAFTA is expected to increase trade between Pakistan and India, these gains appear rather limited compared to the growth in trade that can stem from gradually improving political relations. Due to the high tension in their security relations, Pakistan and India have so far agreed to forgo substantial trade gains at the bilateral level. Pakistan and India have recently resumed their dialogue on security and trade issues as part of the Composite Dialogue process and have undertaken a number of confidence-building measures. It is our hope that the findings provided by our analysis will add strength to this process, and endow policy makers with yet another proof of the gains that can be made through peaceful proximity.

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Annex 3.1: Model Specification, Data Sources, and Estimation Results

The gravity model explains bilateral trade between a country (i), the importer and a trading partner (j), in any year (t), in terms of the following variables:

$$\text{Trade}_{ijt} = \beta_1 \, \text{Conflict}_{ijt} + \beta_2 \, \text{RTA}_{ijt} + Z_{(i,j,t)}\gamma + \sum\alpha_i M_i + \sum\theta_j X_j + \sum\lambda_t Y_t + e_{ijt}$$

Trade is the natural logarithm of real total bilateral trade flows between countries i and j. Country i's reported exports to country j are averaged with country j's reported imports from country i, and then added to the flow of trade moving in the opposite direction. Nominal trade flows are taken from the IMF Direction of Trade Statistics database and deflated by the U.S. consumer price index, as reported in the IMF International Finance Statistics database.

Conflict is a dummy variable that takes on the value of 1 if the two countries were at war or engaged in an intermediate militarized interstate dispute in year t. Data are drawn from the Armed Conflict Dataset, Version 2.1 (2004), elaborated on by Strand et al. (2004) for the International Peace Research Institute in Oslo, in collaboration with Wallensteen, Sollenberg, and Eriksson of the Department of Peace and Conflict Research at Uppsala University. The dataset is available at: http://www.prio.no/cwp/ArmedConflict/. Our data include observations for which intermediate armed conflicts (at least 25 battle-related deaths per year and an accumulated total of at least 1,000 deaths, but fewer than 1,000 per year) and interstate wars (at least 1,000 battle-related deaths per year) are recorded. As a robustness check, a dummy conflict variable with a lag of six periods is included.

RTA is a dummy that is equal to 1 if the countries were members of the same preferential agreement in year t and otherwise equal to 0. As a robustness check, an RTA dummy variable with a lag of one year is included.

Z_{ijt} is a list of standard gravity model variables that have proven to be significant in the gravity literature: the sum of the natural logarithms of the two partners' deflated gross domestic products and gross domestic products per capita; log of the distance in kilometers between their two capitals; log of the product of land areas; and dummy variables for common language, common borders, common colonial ties, common currency, status of landlocked and status of island country; membership in the WTO; and a generalized system of preferences (GSP) beneficiary (see Rose 2003). Nominal gross domestic product data from the World Bank World Development Indicators are deflated using the U.S. consumer price index. The data on distance is calculated with the method reported at http://mathworld.wolfram.com/Geodesic.html. We use the shorter surface distance between two points on a spherical surface. Although most recent gravity studies employ this method (great-circle distance) (Frankel 1997, Anderson and van Wincoop 2003, among others), the first gravity studies, as some other current analyses, use linear measures of distance in their gravity equations. Data on shared borders and language are drawn both from Rose (2003) and the World Bank's Development Economics Research Group. The other geographical, trade, and cultural variables (island, landlocked status, membership in the GATT/WTO, previous colonial ties) have been extracted from Rose (2003).

Fixed Effects: Dummy variables for each importer (M_i), exporter (X_j), and year (Y_t). This least squares dummy variable formulation is equivalent to a model with country and year fixed effects, which distinguishes between each specific effect (year t, importer i, partner j).[60]

Table A3.2.1. Regression Results

Variable	Basic model	Lagged conflict	Lagged RTA
Countries i and j in conflict	−1.6205	--	−1.6374
	(0.2477)	--	(0.2469)
Countries i and j are members of an RTA	0.581	0.6217	--
	(0.037)	(0.036)	--
Lagged RTA (t-1)	--	--	0.6308
	--	--	(0.0379)
Lagged conflict (t-6)	--	-1.3616	--
	--	(0.2187	--
GDP of country i	0.2818	0.2446	0.2991
	(0.0274)	(0.0317)	(0.0275)
GDP of country j	0.1379	0.1487	0.1642
	(0.031)	(0.0344)	(0.0312)
per capita GDP of i	0.7375	0.8231	0.7339
	(0.0263)	(0.0372)	(0.0265)
per capita GDP of j	0.7993	0.8625	0.7852
	(0.0289)	(0.0328)	(0.0292)
Distance between i and j	−1.297	−1.2565	−1.29
	(0.0074)	(0.00757)	(0.0073)
Common border	0.4276	0.3226	0.4103
	(0.0262)	(0.0268)	(0.0263)
Ever a colony	1.2728	1.2183	1.2674
	(0.0237)	(0.0234)	(0.0236)
Common colony	0.0223	0.6999	0.6785
	(0.0235)	(0.5571)	(0.0236)
Common language	0.266	0.266	0.2581
	(0.0135)	(0.0136)	(0.0135)
Currently a colony	−2.48	−3.88	−2.7106
	(0.2864)	(0.1258)	(0.17418)
Countries share a common currency	1.189	1.2061	1.2019
	(0.0422)	(0.0486)	(0.0429)
GSP beneficiary	0.6741	0.5287	0.6564
	(0.0101)	(0.0101)	(0.0101)
Country i in WTO	0.1874	0.1641	0.1923
	(0.0173)	(0.0173)	(0.0175)
Country j in WTO	0.0678	0.0338	0.0704
	(0.0179)	(0.0192)	(0.018)
Island country	0.4736	−18.06	−0.7373
	(58.1962)	***	***
Product of land area	3.25E-16	1.88E-15	8.16E-16
	(6.82E-16)	(7.34E-16)	(6.97E-16)
Landlocked country	-2.0631	-5.7969	-0.2569
	(0.0707)	***	(73.36)
Number of observations	214241	164333	206195
R-squared	0.7053	0.7356	0.7096

Note: White's heteroskedasticity-corrected standard errors are reported in parentheses.
*** Standard errors were not calculated for the "landlocked" variable in the specification with lagged conflict, and for the "island" variable in both regressions (2) and (3). As the magnitude and sign of the coefficient for the island-status varies considerably, such coefficients should be taken with a grain of salt. Their instability is most likely due to collinearity effects with countries and year dummies.

Chapter 4
India–Pakistan Trade: The View from the Indian Side

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This paper begins with a review of literature on India–Pakistan trade. It identifies areas of trade interest, spheres of possible joint ventures, and other forms of economic cooperation between the two countries, as seen from the Indian side. We find that there are numerous possibilities for enhancing trade and investment between the two countries. The paper identifies barriers related to transportation, banking, and visas that curtail bilateral trade. It discusses transport logistics and costs, payment mechanisms, and other nontariff barriers, based on a small survey. Our survey results show that costs of transportation are high for two countries located next to each other because of distortions in the trade regime, inadequate and underdeveloped transport logistics, and trade networks that make it difficult to use the closest land and sea routes. These factors also lead to high transactions costs. The paper also identifies other nontariff barriers that arise in applying measures related to technical and other barriers to trade. It ends with a detailed set of recommendations for improving bilateral trade ties.

Review of Research Studies

There are few academic studies on Pakistan–India trade. A review of the academic literature on India–Pakistan trade shows that researchers have used gravity models, computable general equilibrium models, and partial equilibrium models to predict trade flows in the South Asian region. (The summary of reviewed papers is presented in Table A4.1.1 in Annex 4.1). Most of these studies have either focused on predicting intra-SAARC trade or SAARC trade with other regions in the world. The literature review reveals considerable potential for expanding bilateral trade and intraindustry trade between India and Pakistan.

Batra (2004) uses a gravity model[61] to predict potential bilateral trade between India and Pakistan to be US$6.6 billion above existing levels of trade in the year 2000 ($254 million[62]). Even though the model focuses on natural factors and excludes economic variables such as openness, exchange rates, etc., the study indicates the vast untapped potential that India and Pakistan have as natural trading partners. Estimates on informal trade also give an indication of the trade potential between the two countries. The "guesstimates" of informal trade in India vary between $250 million to US$2 billion indicating the vast untapped potential.

Revealed comparative advantage indices show that India, being a larger economy, has comparative advantages in significantly more tradable items compared to Pakistan. These include food and beverages, chemicals, machine tools, household electronics, steel products, and transport equipment.[63] Pakistan has comparative advantage over India in a range of products, including cotton textiles, rice, leather and leather products, and surgical goods. Intraindustry trade indices show that there is intraindustry trade in basic manufactures, machinery and transport equipment, and miscellaneous manufactured goods. These indices also have limited applicability in the case of India–Pakistan trade because they are based on existing trade that occurs in a limited number of items because of the positive list approach followed by Pakistan. Another shortcoming of studies that use the revealed comparative indices and intraindustry trade indices is that they do not include trade in services.

In recent years, the private sector has played an active role in identifying areas of trade interest, areas of possible joint ventures, and other forms of cooperation between the two countries. The main sectors identified for trade (export and import) possibilities between the two countries are textiles, agriculture, engineering, chemicals, electronics, and metals and minerals. Sectors in which export possibilities for India exist are pharmaceuticals, rubber, and plastic. Unlike academic studies, research undertaken by the private sector see a large scope for trade in several service sectors such as health, entertainment services, information technology, energy, and tourism. Business research also identifies investment possibilities in Pakistan in sectors such as fish processing, chemicals and pharmaceuticals, automobile components, and information technology (see Tables A4.1.2 and A4.13 in Annex 4.1 for details).

Information from secondary sources on trade possibilities from Pakistan is inadequate. Similarly, information on investment possibilities is extremely limited. Currently, there are no India–Pakistan joint ventures. Recently, several companies, such as Dabur, Tata Steel, Reliance Industries, Spanco Telesystems, and Solutions Ltd., and some software companies, have evinced an interest in investing in the Pakistani market.

Given the limited literature available on India–Pakistan trade and scarce information on trade logistics and other issues, we did a small survey of traders and freight forwarders in January 2005 to get more details on the possibilities and constraints of bilateral trade.[64] The results from the survey are discussed below.

It should be noted that there have been a number of positive developments on reducing the restrictions on trade between India and Pakistan since the draft of the paper was completed in late 2005. Notably, these include the signing of the revised India–Pakistan shipping protocol in December 2006; expansion of Pakistan's positive list of imports from India from 687 items in 2004/5 to 773 items in 2005/06, and to 1,075 items in November 2006; an agreement to open bank branches of Pakistani-scheduled banks in India and vice versa; opening up of more road links between the two countries; opening up of the Monabao–Khokrapar rail link in February 2006; and progressive discussions on liberalizing the bilateral visa regime that is expected to remove the current reciprocal restrictions for business visas, police reporting, and visit restrictions on number of cities. We feel that drafts of this paper discussed with Pakistani policymakers served to highlight the restrictiveness of India–Pakistan trade regime that existed in the 2004/05 period, and hopefully helped in promoting the bilateral policy dialogue on these issues.

India–Pakistan Trade: Primary Evidence

Trade in potential sectors can be realized only if there is an understanding of the trading environment in which such trade takes place. It is important to examine the characteristics of firms engaged in India–Pakistan trade in terms of entry characteristics, information channels, aspects of risk, and the role of ethnic networks in trading and financing. It is also important to identify the nontariff barriers to trading, particularly those related to visas, trade logistics, and conventional nontariff barriers that arise in implementing measures such as technical regulations and safety standards for food, plants, and animals. The sampling and research methodology related to the survey is discussed in Annex 4.2.

Trading Characteristics

It is generally believed that firms trading with Pakistan have been in business for several years. It is also assumed that ethnic links between trading partners in both countries facilitate trade, minimize risk, and also serve as an important channel of information flows on quantities and commodities to be traded.

Our survey revealed interesting results. Contrary to our expectation, 35 percent of the firms had been trading with Pakistan for less than five years. Most of the new firms were located in Mumbai. Further, the survey revealed that 62 percent of the firms located their trading partner through friends and relatives and 35 percent of the firms located their trading partner through the Internet. The government and the chambers of commerce did not play any significant role in helping traders to identify partners. Thus, new firms trying to begin trade with Pakistan essentially relied on anonymous channels and were facilitated by modern modes, such as the Internet.

Financial Relations

Traders were also asked about the problems they faced in banking. Several firms pointed out that some Indian banks do not recognize letters of credit (L/Cs) from Pakistani banks. Also, firms have pointed out that confirmation of L/Cs can take up to a month. Sometimes, payments are delayed as the banks point out discrepancies in the L/Cs. Some firms also mentioned that they were trading without an L/C. Because of the problems related to accepting and confirming L/Cs, trade transactions are sometimes carried out through a contract offered by the bank that states the details of the trader and of the transaction; however, such contracts do not offer any guarantees, but trade is carried out on the basis of trust. An interesting finding in the survey was that 50 percent of the firms were settling their payments through the Asian Clearing Union (ACU).[65] Trading partners in both countries are required to have an ACU account with a bank in their respective countries. While payments through the ACU are ensured, there is often a delay. This is mainly because the ACU has weekly clearing tranches.

Pakistan's Positive List

Pakistan's positive-list approach itself poses a barrier to trade in myriad ways. A code-matching exercise carried out by the author between the eight-digit codes of the items exported by India, as recorded by the Directorate General of Foreign Trade (DGCT) and the HS codes published by Pakistan under the permissible list revealed that there were only three common codes. Since items in the permissible list are included at the eight-digit level, code matching has to be undertaken at that level of disaggregation. Government officials, when questioned on this issue, pointed out that the bills of entry were made on the basis of the description of the item and not on the basis of the code. Several codes mentioned in the positive list, however, do not have a corresponding description. This makes it extremely difficult for exporters to identify items that would fall under the purview of the permissible list. On the other hand, some items recorded by the DGCI & S are not listed in the positive list. These anomalies need to be addressed urgently by policy makers.

Nontariff Barriers in Pakistan

Firms were asked about nontariff barriers they faced in exporting to Pakistan. Barriers are often encountered in applying measures related to standards necessary to protect human, animal, or plant life or health, to protect the environment, and to ensure quality of goods. Firms were asked whether they faced any problems in meeting standards related to process, product specifications, labeling, testing, and certification. The survey revealed that the exporting firms in India did not face any problems. Interestingly, this was so because the application of standards in Pakistan for Indian goods was not very rigid. For instance, the chemical and pharmaceutical firms mentioned that sometimes they were asked to remove any labeling that indicated that the product was "made in India." Since 94 percent of the firms were exporting to other countries, importers in Pakistan accepted the Indian certifications used for other countries. Traders pointed out that, when Pakistani importers come to India for a visit, they do not carry out any serious inspections of certification of manufacturing plants, nor do they check on implementation of standards. While the importing firms in the survey did not face any nontariff barriers in implementing standards, at an India–Pakistan business meeting held by the Associated Chamber of Commerce (ASSOCHAM),[66] importers of molasses pointed out that they were facing barriers in importing. It was pointed out that Indian authorities insisted that molasses could be packaged in drums only and not in tankers, which raised the cost of transportation considerably. Indian authorities point out that the restriction is imposed for security reasons.

Visas

A major barrier faced by the entire business community is related to visas. Visas can be obtained only for specific cities prior to entry into Pakistan (and vice versa). Also, police reporting on arrival is a major irritant. Traders have also pointed out that the restriction on exit from the city of entry curbs their business plans and adds to travel cost and time. In Amritsar, traders have pointed out that it is difficult for Pakistani traders to get visas for Amritsar; hence, they usually meet their trading partners in Delhi.

Communications

Telecommunications between the two countries are generally quite good. Traders in Amritsar can apparently communicate with their Pakistani counterparts in areas within accessible mobile (cell) phone frequency ranges; however, they pointed out that whenever there are disturbances at the India–Pakistan border, the mobile connections are not operational. This hinders communication with trading partners.

Trade Logistics

Goods move by air, sea, and rail between India and Pakistan. While road routes for trade are nonexistent, rail and air connectivity between the two countries has been erratic.[67] The land route (by rail) is operational through the Attari-Wagah border in Punjab. The closest commercial cities to the border stations are Amritsar in India and Lahore in Pakistan. The sea route between Mumbai and Karachi has operated unhindered and has been the only consistent operational link. Since Pakistan allows only a limited number of items to be imported from India, those not on the permissible list are being traded through Dubai. In other words, goods are transported by ship from Mumbai to Dubai and then to Karachi. Technically, this is an official route. Interestingly, in the course of the survey it was found that, sometimes, goods actually move from Mumbai to Karachi, but the bill of lading shows the origin of the goods as being from Dubai, Hong Kong, or Singapore. Such a bill of lading is illegal and in the shippers' jargon is called a "switch bill of lading" (SBL), which can be obtained at a cost or bribe.

Since there are only two main operational routes in which goods can be transported to and from Pakistan, traders are faced with a very limited choice of routes. For a trader based in Mumbai, trading by sea from Mumbai to Karachi is the most feasible route. Goods are also sourced from other cities in Maharashtra and Gujarat for the sea route. Similarly, the land route across the Attari-Wagah border is used by traders who source their goods from Amritsar or from other cities located in Punjab, Delhi, Haryana, Jammu, and Madhya Pradesh.

Due to bottlenecks in trading through the land route, exporters are forced to use the sea route even if they are located in far-off places. The sample indicated that while 15 percent of the firms in Amritsar traded across the Attari-Wagah land border, 3 percent of the firms used the land-cum-sea route. Thus, goods are first transported by the land route to Mumbai and then to Karachi by sea. In Delhi, 18 percent of the firms used the Attari-Wagah land route, while 8 percent of the firms based in Delhi used the land route to transport their goods to Mumbai and the sea route from Mumbai to Karachi.

Rail and Road Linkages

It should be mentioned that several rail links were operational prior to the India–Pakistan war in 1965. The Khokrapar–Munabao rail crossing linked Pakistan's largest city, Karachi, with India's largest city, Mumbai. In December 2004, the two countries agreed to reopen the line and rebuild the long-ruined infrastructure. This link was formally reopened in February 2006 after more than 40 years; the Thar Express initially ran a weekly train service between Munabao in Rajasthan (India) and Khokrapar in Sindh (Pakistan).[68]

Goods are transported by rail or by road to Amritsar, from where they go by train across the Attari-Wagah border. Goods move either by the goods wagon or by parcel wagons that are attached to the Samjhauta ("Agreement") Express—the passenger train.[69] The number of rakes and wagons[70] that can ply from Attari to Amritsar are usually determined on a monthly basis. There is no fixed timing for a goods train, but the trains do not move across the border after 5 p.m. due to security reasons.[71] Under a reciprocal arrangement between the two countries, the wagon balance has to be cleared every 10 days between the two countries. The Indian Railways crew and engine is allowed to carry the wagons to the Attari-Wagah border only (and vice versa), from which point the wagons are transported by Pakistani rail-engine head.[72] Goods that are transported by Samjhauta Express by parcel wagons move at fixed timings on a biweekly basis. A total of 10 parcel wagons move on every trip, whether loaded or unloaded.

The mechanism in place, particularly in the case of goods wagons, poses several problems for traders. First, there is a scarcity of wagons, since supply of wagons does not always match demand. Second, since the wagon balancing takes place only thrice a month, there is a scarcity of wagons till such time that there is a zero balance. The scarcity and availability of wagons leads to transaction costs in the form of bribes, which is as high as $2.5 per ton. Third, the frequency of the goods train is erratic. The uncertainty created in this manner translates into additional transaction costs for traders. Traders employ agents whose job is to get information on the departure and arrival timing of the goods train. Fourth, to deal with the demand for wagons, the railways are giving priority to perishables such as ginger, fresh vegetables, soy meal, and sugar, while high-value goods such as tires and books have to wait longer for wagons.[73] Exporters have mentioned that 75 percent of the available wagons are needed for tires alone.[74] While the average time to get wagons is nine days, for tires the wait has been reported to be up to 23 days. Some exporters have also mentioned that their L/Cs have expired due to a delay in wagon availability. On the other hand, railway authorities have stated that the number of wagons can be increased only if there are adequate handling capacities in Pakistan. Also, since wagon balancing takes place only thrice a month, the opportunity cost of having the wagons parked in Pakistan is very high.

Traders have pointed out that there is no provision for moving containerized rail cargo from Amritsar. This is in contrast to such facilities being available on major rail routes in the hinterland. The wagons that are used currently are also antiquated. Traders have also pointed out that unloading goods at Lahore can sometimes take several days.

It should be noted that till November 2004, there was no problem with wagon availability. Since then, there has been an acute problem due to increased demand.[75] As large exporters are able to book full rakes, and are also able to pay higher bribes, the burden falls on small exporters.

Since goods can be brought to Amritsar by road or by rail, a comparison between the two modes of transport is relevant. In India, for shorter distances, e.g., Delhi–Amritsar, road transport would be a preferred mode. In the absence of a road route across the Attari/Wagah border, the transshipment of goods from road to rail adds to transport and transaction costs.

Goods brought into Amritsar go through customs clearance at the Amritsar Customs House. Transaction costs in the form of bribes are incurred in getting customs clearances. Often, unnecessary queries are raised on the bill of entry or shipping bill to extract bribes.[76] It may be noted that there are no Electronic Data Interchange facilities available for filing a shipping bill or bill of entry. This is in contrast to such facilities being available at the India-Bangladesh and India-Nepal borders.[77] A disadvantage for traders sending their goods by rail or road from another city, e.g., Delhi, is that the bill of lading can be issued only from Amritsar and not from Delhi. It should be noted that this facility is available to traders when goods are transported on a main route such as Delhi–Mumbai–Karachi and involve intermodal transshipment.

Sea Linkages

The Nhava Sheva port in Mumbai, India's largest port, is considered to be a regional hub port; however, the port's efficiency continues to be low both because of ship waiting time and cargo dwell time, resulting in delays. Interestingly, the delays for shipments going to Pakistan are the same as that faced by those going to other countries. Bribes are common for port and custom clearance.

Maritime trade between India and Pakistan is governed by the 1975 protocol between the two countries on trade resumption. The protocol does not allow third-country flagships or vessels to lift India- and Pakistan-bound cargo. Also, it does not allow the flag carriers of both countries to lift cargo for a third country from each other's ports.[78] Despite these restrictions, at the current level of trade, traders do not face any additional problems on the Mumbai–Karachi route compared to other sea routes. In other words, trading with Pakistan does not imply additional inspections or clearances.

Transaction Costs

A key question posed in the study is: What are the transaction costs being incurred by traders on alternative routes? Five factors account for high transaction costs of trading: i) limited transportation routes, ii) shipping protocol between the two countries, iii) restriction on the number of items permitted into Pakistan from India, iv) limited availability of rail wagons and v) procedural clearances. Transaction costs are incurred both in terms of money and time.[79] Transport and other transaction costs have been calculated for a 20-foot ship-container load of 18 tons of soy meal. Costs related to transportation by rail and road were calculated for an equivalent amount (18 tons) of soy meal.[80] Transport and other transaction costs are presented in two forms: (i) costs per container, which allows cost comparisons in absolute terms, as traders often do not have the option of transporting goods through the most desirable or direct route (Table 4.1); and (ii) cost per container per kilometer, which is used as a performance and efficiency indicator for alternative routes and allows ranking of costs incurred on all possible routes (Table 4.2). The discussion of transaction costs is largely based on Table 4.2, because we are interested in a comparative cost analysis on alternative routes.

The key *land* routes under study are the Delhi-Attari rail route, Delhi-Attari road-rail route, and the Delhi-Mumbai-Karachi land-cum-sea route, which is used because the Delhi-Attari route is not always accessible. The main *sea* routes are the Mumbai-Karachi sea route and the Mumbai-Dubai-Karachi route. The latter is used to transport items not on the permissible list. The Mumbai-Karachi sea route, using a SBL, is also considered to illustrate the magnitude of transaction costs on an illegal or unofficial route.

Table 4.1. Routewise Transaction Cost (TC) per Container (US$)

		Transport (Tpt) Cost US$			Bribes US$			
		Rail/Road	*Sea*	*Total Tpt Cost*	*Bribes for Clearances*	*Other Bribes*	*Total Bribes*	*Total TC*
	(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)	(7)=(5)+(6)	(8)
Delhi–Attari	Rail	325		325	21	45[1]	66	391
Delhi–Attari	Road-Rail	338		338	32	45[2]	77	415
Delhi–Mumbai–Karachi	Rail-Sea	460	550	1,010	48		48	1,058
Mumbai–Karachi	Sea		550	550	26		26	576
Mumbai–Dubai–Karachi	Sea		750–950	750–950	26		26	776–976
Mumbai–Karachi (with SBL)	Sea		550	550	26	200[3]	226	776

Note: Estimates for transport and other transaction costs have been obtained for a 20-foot sea container load that can transport 18 tons of soy meal. Costs for land transport have been obtained for the same quantity. Information was elicited from freight forwarders.
[1,2] Other bribes include bribes paid for procuring rail wagons.
[3] Other bribes includes bribes paid for obtaining a SBL.
Source: Survey, January 2005.

Table 4.2. Routewise Comparison of Transaction Cost (TC) per Container-km

	Distance (km)	Total Tpt Cost US$ per Container	**Transport Cost US$/ Container-km**	Total TC Cost US$ per Container	**Transaction Cost US$/ Container-km**	Bribes as % of Transaction Costs	**Ranking of Transport Costs US$/Container–km**	**Ranking of Transaction Costs US$/ Container-km**
Land	(1)	(2)	**(3)**	(4)	**(5)**	(6)	**(7)**	**(8)**
Delhi–Attari (rail)	478	325	**0.68**	391	**0.82**	17.1	**5**	**4**
Delhi–Attari (road/rail)	479	338	**0.71**	415	**0.87**	18.4	**6**	**5**
Delhi–Mumbai–Karachi (land cum sea)	2274	1010	**0.44**	1058	**0.47**	6.4	**2**	**2**
Sea								
Mumbai–Karachi	885	550	**0.62**	576	**0.65**	4.6	**3**	**3**
Mumbai–Dubai–Karachi	3127	750–950	**0.24–0.30**	776–976	**0.25–0.31**	3.2	**1**	**1**
Mumbai–Karachi (with SBL)	885	550	**0.62**	776	**0.88**	29.5	**3**	**6**

Note: Estimates for transport and other transaction costs have been obtained for a 20-foot sea container load that can transport 18 tons of soy meal.
Costs for land transport have been obtained for the same quantity. Information was elicited from freight forwarders.
Source: Survey, January 2005.

Our January 2005 survey reveals that the Mumbai–Dubai–Karachi and the Delhi–Mumbai–Karachi routes are the most efficient routes in terms of transport and transaction costs incurred per container-kilometer (Column 7 and 8, Table 4.2). Both these routes are indirect routes. While the former is opted for instead of the direct Mumbai–Karachi sea route, the latter is used as an alternative to the choked land route. If, however, transport and transaction costs are not normalized over distance, costs per container on the indirect route are much higher than the direct routes. Thus, on the Mumbai–Dubai–Karachi route, transport costs could be 1.4 to 1.7 times the cost of transporting directly between Mumbai and Karachi, while transaction costs could be 1.3 to 1.7 times the cost.[81] The discrepancy is even more glaring in the case of the Delhi–Mumbai–Karachi route, where transport costs are 3.1 times, and transaction costs are 2.7 times, the direct route between Delhi and Attari (Columns 2 and 4, Table 4.2).

The ranking of the two indirect routes in terms of cost efficiency remains unaltered even if bribes are included in total transaction costs; however, inclusion of bribes changes the ranking of the Mumbai–Karachi route using a SBL to the lowest ranking (Columns 7 and 8, Table 4.2). Bribes as a proportion of total transaction cost are the highest on this route, accounting for 30 percent of total transaction cost. This is expected, since it is an illegal route and not officially available to traders. This route is also relatively unattractive to the Mumbai–Dubai–Karachi route users, as total transaction costs could sometimes be the same on both routes (Column 4, Table 4.2). Traders would therefore opt for the official route. All the other routes under consideration are legal routes. Bribes on the direct land routes account for 17 percent to 18 percent of total transaction cost, and on the Mumbai–Karachi and Mumbai–Dubai–Karachi route, bribes range between 3 percent and 5 percent (Column 6, Table 4.2).

Finally, it is possible to measure the extent of efficiency in terms of transaction cost incurred per container-kilometer between the direct and indirect official sea and land routes. The Mumbai–Dubai–Karachi is 2.6 times more efficient than the direct Mumbai–Karachi route, while the indirect Delhi–Mumbai–Karachi route is 1.9 times more efficient than the direct Delhi–Attari road-rail route.

Table 4.3. Transaction Cost on Alternative Routes: Time Taken

Route	Mode	Transportation Time (days)	Delay(days)	Total Time (days)
Delhi–Attari	Rail	1	12	13
Delhi–Attari	Road-Rail	1	12	13
Mumbai–Karachi	Sea	1.5	7	8.5
Mumbai–Dubai–Karachi	Sea	6	7	13
Delhi–Mumbai–Karachi	Rail-Sea	4	8	12
Delhi–Mumbai–Karachi	Road-Sea	6	10	16

Source: Survey, January 2005.

Transaction cost in terms of time taken for transporting goods on alternative routes are shown in Table 4.3. The actual transportation time on the Delhi–Attari route is one day, whereas if goods move by sea between Mumbai and Karachi, it takes 1.5 days, and through Dubai it takes six days; however, delays are caused by several factors. On the Delhi–Attari route, delays are caused by time taken to obtain clearances and time required for procuring wagons. On the Mumbai–Karachi sea route, delays are caused by time taken in getting clearances, ship waiting time, and cargo dwell time. On the Delhi–Mumbai road route, delays are caused by frequent vehicle breakdowns, and loaded trucks moving only for a limited number of hours in a day. Even though actual transportation time on alternative land and sea routes varies between one and six days, total time taken due to delays on various counts varies between 8.5 and 16 days.

Policy Suggestions to Enhance India–Pakistan Trade

The study provides useful insights for policy makers. The sequencing of policy implementation should be such that as a first step trade relations between the two countries should be normalized through trading on an MFN basis. As a second step, policy makers should address problems related to information exchange, trade facilitation, banking, nontariff barriers, visas, and communication. As a third step, an enabling environment for investment has to be created so that India and Pakistan can enter into joint ventures. The key policy suggestions are outlined as follows:

Trade on MFN Basis
- As a first step, and perhaps the most important one, India and Pakistan need to normalize trade with each other on an MFN basis. It is essential to move from a positive list approach to a negative list approach. It is important for the two countries to have a common harmonized system of codes and greater transparency.

Information Exchange
- As new firms enter into India–Pakistan trading, they need to be facilitated through better information exchange on commodities and quantities to be traded. Establishing Web portals toward this end would perhaps be the easiest method in terms of implementation.

- Information on domestic policy environments in India and Pakistan should be disseminated to traders. Such information should be made available on government Web sites. Improving information flows between the two countries will reduce the search costs for trading.

Transport Routes
- As there are only two operational routes for goods trade, the Mumbai–Karachi sea route and the Attari-Wagah rail link on the land border, new routes should be opened up. Opening the Attari-Wagah border to allow transportation of goods by road should be done at the earliest time possible, as the road link for movement of passengers is already operational.

- New road links, e.g., the Srinigar–Muzaffarabad link (for goods transportation), should be opened.

- Transport of goods services should be made available on the Munabao–Khokrapar rail link.

Transport Bottlenecks
- Abandoning the positive list approach would allow goods to move freely on the direct routes, thereby lowering transaction costs.

- The rail protocol should be amended so that restrictions on wagon balancing is removed and wagon availability is improved.

- Measures such as simplifying border procedures and introduction of Electronic Data Interchange facilities should be introduced at the land borders.

Banking
- As there is evidence of anonymous transacting between trading partners, payments through formal channels assume a greater role. Currently, the payments system is formalized through the ACU, which is inefficient because payments are often delayed. The two countries need to expedite the opening up of scheduled bank branches in each other's countries as has been agreed between them since late 2004.[82] This would promote financial efficiency, facilitate trade, and promote further economic interactions.

- There needs to be greater transparency to address problems related to confirmation of L/Cs and to payments.

Nontariff Barriers
- A more rigorous system of application of agricultural and industrial product standards by Pakistan needs to be put in place. India would need to address barriers related to security considerations so that transaction costs of importing from Pakistan are lowered.

Visas
- Visa restrictions should be eased by eliminating city-specific visas prior to entry and police reporting on arrival.[83]

Communication
- Uninterrupted telecommunication links would facilitate trade between the two countries.

Investment
- Currently, there are no India–Pakistan joint ventures. As several Indian companies are showing an interest in having joint ventures in Pakistan, it is important to understand the nature of such investment and provide timely facilitation.

- The governments of India and Pakistan should set up an institutional mechanism that would guarantee each other's investments.

- The two countries should work together to enhance and facilitate trade and investment. The suggested roadmap should serve as an important tool for the two countries' policy makers.

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Annex 4.1: Summary of Reviewed Literature
Table A4.1.1: Review of Academic Studies

Authors	Main results
Gravity Models	
Sriniavasan and Cananero (1993)	• India's trade with its regional partners would increase by 13 times, while that of Pakistan would increase by nine times under SAFTA. • The effect of removal of tariffs would lead to an increase in trade that is 3% of GNP for India, 7% for Pakistan, 21% for Bangladesh, 36% for Sri Lanka, and 59% for Nepal. • Unilateral trade liberalization would yield more gains for the region compared to preferential trade liberalization.
Batra (2004)	• Potential for India's trade with Pakistan is the highest in the SAARC region; model predicts that trade could expand by US$6.6 billion over and above the existing bilateral trade level of the year 2000. • Using GNP in purchasing power parity terms, the predicted trade flow between India and Pakistan is US$13.1 billion.
Computable General Equilibrium Models	
Sengupta and Banik (1997)	• Intra-SAARC trade would increase by 30%, and as much as 60% if illegal trade becomes part of the official channel.
Pigato et. al. (1997)	• India's gains are much larger under unilateral liberalization than under regional trade agreements (RTAs). In the case of RTAs, gains to the smaller countries are more than those for India.
Bandara and Yu (2003)	• Under SAFTA, largest gains would accrue to India, but these would be only a 0.21% gain in real income. Sri Lanka would gain 0.03%, while the rest of South Asia would gain 0.08% in terms of real income.
Partial Equilibrium Models	
Govindan (1994)	• Trade liberalization would yield welfare gains through increased trade in food within the region.
DeRosa and Govindan (1995 & 1997)	• South Asian countries are likely to achieve larger gains in trade and economic welfare by intensifying their efforts to integrate their economies with the world economy or with the Asia-Pacific region.
Pursell (2005)	• Preferential liberalization of cement industry between India and Bangladesh will lead to substantial gains from increased competition within regional markets.
Revealed Comparative Advantage (RCA) Models	
Kemal et. al. (2002)	• In 1995, India had comparative advantage in 49 three-digit products belonging to broad categories of food and beverages; crude materials; chemicals and related products; basic and miscellaneous goods, such as machine tools, household equipment, steel products, leather, and articles of textile and clothing; and transport equipment such as motor vehicles, motorcycles, and bicycles. • Pakistan's revealed comparative advantage was in 25 three-digit products in food; crude materials; the textile and clothing group; and other products such as leather, floor coverings, medical instruments, and baby carriages and toys. • Grubel Lloyd indices of intraindustry trade between India and Pakistan indicate potential in medicinal and pharmaceutical products and soap and cleansing preparations; basic manufactures such as leather, articles of paper and paperboard, embroidery, made-up articles of textile materials, floor coverings, lime, cement and fabricated construction materials, nails and screws, and manufactures of base metal.
GoP (1996) and Nabi and Nasim (2001)	• RCAs for Pakistan and India for 1992–94 show that Pakistan enjoys a strong revealed comparative advantage vis-à-vis India in cotton, cotton-based products, leather, and rice at the three-digit level. • At the four-digit SITC level for the textile sector, Pakistan is more competitive in cotton yarn, gray woven fabric, bleached woven cotton, and hand-knotted carpets, while India is more competitive in value-added clothing such as women's nonknit dresses and nonknit blouses and men's shirts.
Potential Trade Approach[84]	
Mukherjee (2002)	• Taking India as a market and Pakistan as a supplier, out of 50 items exported by Pakistan and imported by India, 20 items had an RCA > 1 in 1997, but only five of these items were exported to India.

Table A4.1.2. Review of Business Studies—Potential Items for Exports from India

	CII	FICCI	ASSOCHAM	PHDCCI
Engineering	Automobiles, auto components and spares, electrical equipment and machinery, machine tools, textile machinery	Transport equipment, textile machinery	Agricultural machinery, food machinery, textile and leather machinery, processed food machinery, tractors, passenger and road motor vehicles, trailers	Railway track material and equipment, construction machinery, engines, agricultural machinery, pump boiler and parts, power-generating and distribution equipment, oil-prospecting equipment, chemical machinery, fishing equipment
Textiles	Short staple cotton, textile design	Textiles		Cotton yarn, silk fabric
Rubber and Plastic		Tires and plastic	Tires and plastic materials	Tires and tubes
Food and Agriculture		Tea, coffee, and other agricultural items	Wheat, sugar, oil meals, tea	Coffee, tea
Metals and Minerals	Steel	Iron ore, steel	Coal, lignite and peat, copper, aluminum, iron, steel	Iron ore
Chemicals	Chemicals	Chemicals and dyes	Inorganic chemicals, dyes and intermediates, fertilizers	Organic and inorganic chemicals, dyes and dyestuffs
Pharmaceuticals	Pharmaceuticals	Pharmaceuticals		Pharmaceuticals
Electronics			Electro-medical equipment, television receivers, radio receivers, transistors, valves, etc.	Computers and drawing machines
Services	Health, education, entertainment, advertising, information technology, tourism	Information technology, energy		

Note:
CII: Confederation of Indian Industry
FICCI: Federation of Indian Chambers of Commerce and Industry
ASSOCHAM: Associated Chambers of Commerce
PHDCCI: Punjab Haryana and Delhi Chambers of Commerce and Industry

Table A4.1.3. Review of Business Studies—Potential Items for Import from Pakistan

	CII	FICCI	ASSOCHAM	PHDCCI
Engineering			Civil engineering equipment, mechanical hand equipment, nonelectrical machine parts	
Textiles	Long staple yarn and cotton fabric	Clothing accessories, ready-made garments, knotted carpets	Raw wool, yarn, fabric and other textile products	Raw cotton, raw wool, cotton fabric, machine-made carpets
Leather		Leather and leather goods	Hides and skins, leather, leather manufactures	
Food and Agriculture	Molasses, sugar	Fresh and dry fruits and vegetables, sugar, molasses	Fruits, nuts, fresh and dried, sugar, spices, processed fruit, manufactured tobacco	Dry fruits
Metals and Minerals		Limestone, rock salt, marble	Stone, sand, and gravel	
Precious and semiprecious stones		Precious and semiprecious stones		
Chemicals			Paints and miscellaneous chemical products, perfumes	Naphtha
Electronics			Automatic data processing machines	
Other Manufactured goods		Surgical instruments	Toys, sports goods, surgical instruments	

Note:
CII: Confederation of Indian Industry
FICCI: Federation of Indian Chambers of Commerce and Industry
ASSOCHAM: Associated Chambers of Commerce
PHDCCI: Punjab Haryana and Delhi Chambers of Commerce and Industry

Annex 4.2: Survey Methodology

The analysis was undertaken through a primary survey. To begin with, firms trading with Pakistan were identified for the study. Such firms were identified from Web sites that provide information on trading companies in India.[85] Three cities, Mumbai, Delhi, and Amritsar, were selected for the survey. Preliminary discussions with government and industry representatives revealed that Delhi and Amritsar have large populations of traders who had ethnic links with traders in Pakistan. Mumbai is an important center from where trading to Pakistan takes place, as the Mumbai–Karachi sea route is the most feasible route for trading. The survey included trading firms (exporters and importers) and freight forwarders. Trading firms were interviewed to understand the transacting environment. To understand the trade logistics and transaction costs incurred in trading with Pakistan, information was sought from both traders (exporters and importers) and freight forwarders.

The sample covered 19 trading firms in Mumbai, nine in Delhi, and six firms in Amritsar (Table A4.2.1). In addition, 13 freight forwarders were interviewed in the three cities to elicit information on transaction costs. It may be borne in mind that the sample size is small and the results are only indicative.

Table A4.2.1. Distribution of Firms in the Sample

	Number of Trading Firms	Number of Freight Forwarders
Mumbai	19	3
Delhi	9	8
Amritsar	6	2
Total	34	13

Source: Survey, January 2005.

An interesting feature observed while drawing the sample was that several firms that had posted themselves on the Internet as firms trading with Pakistan, when contacted, denied that they ever traded with Pakistan. A total of 60 percent of the firms contacted in Delhi, 29 percent in Mumbai, and 40 percent in Amritsar denied trading with Pakistan.[86] Information from larger companies, including some multinational companies, was more forthcoming than from small and medium companies. It was possible to elicit more information from newer firms (firms that had been trading with Pakistan for less than five years) than older firms.

Characteristics of the Sample

Of the 34 trading firms, four firms were importing, four were importing and exporting, and the rest were engaged in exporting alone (Table A4.2.2). The firms interviewed were found to be exporting food products (47 percent), chemicals (12 percent) and pharmaceuticals (29 percent). A total of 24 percent of the firms were exporting miscellaneous items. Another 21 percent of the firms were importing food items, mainly dry dates, and 3 percent of the firms were importing raw wool (Table A4.2.3). A total of 35 percent of the firms were exporting or importing less than Rs 10 million (Table 4.2.4). A total of 50 percent of the firms in the sample were exporting or importing less than 10 percent of their total trade to and from Pakistan (Table A4.2.5). A total of 94 per cent of the firms were trading with countries other than Pakistan.

Table A4.2.2. Distribution of Trading Firms by Trading Activity

No. of firms	Delhi	Mumbai	Amritsar	Total
Exporters	6	19	5	30
Importers	3	-	1	4
Exporters/importers	2	-	2	4
Total	11	19	8	38

Note: Total number of firms is 38 because there are four firms that are exporting and exporting.
Source: Survey, January 2005.

Table A4.2.3. Distribution of Firms by Product

	Percentage of Firms Exporting	Percentage of Firms Importing	Total
Food	9 (26)	7 (21)	16 (47)
Chemicals	4 (12)	0	4 (12)
Pharmaceuticals	10 (29)	0	10 (29)
Others	7 (21)	1 (3)	8 (24)
Total	30 (88)	8 (24)	38 (112)

Note: Firms were engaged in exporting and importing.
Source: Survey, January 2005.

Table A4.2.4. Distribution of Firms by Size

Range	Percentage of Trading Firms
<Rs 10 million	12 (35)
Rs 10 million–Rs. 100 million	16 (47)
> Rs 100 million	6 (18)
Total	34 (100)

Note: Figures in parantheses indicate percentages.
Source: Survey, January 2005.

Table A4.2.5: Proportion of Trade with Pakistan

	Exports/Imports with Pakistan as a Proportion of Total Firm Trade
	Number/(Percent) of Firms
<10%	17 (500)
10% to 20%	4 (12)
20% to 30%	5 (16)
> 30%	8 (24)
Total	34 (100)

Note: Figures in parentheses indicate percentages.
Source: Survey, January 2005.

Chapter 5
Quantifying Informal Trade Between Pakistan and India

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Against the backdrop of the recent Pakistan–India trade liberalization initiatives, it is important to get a more accurate handle on the informal trade between Pakistan and India. "Guesstimates" of this trade range between $500 million and $10 billion.[87] The magnitude of informal trade has a bearing on government policies with respect to the speed of liberalization, as well as its sector focus. In this chapter, we estimate the value of informal trade between India and Pakistan and its size and composition. We also assess whether such trade would be rerouted through official channels if trade barriers between India and Pakistan were removed under two alternative trade regimes, i.e., if Pakistan would grant India most-favored nation (MFN) status and if there is a free trade regime as envisioned under the South Asia Free Trade Agreement (SAFTA). We also estimate the potential revenue impact on Pakistan of switching from informal to formal trade.

Value of Informal Trade

We estimate the value of total informal trade between Pakistan and India at $545 million in 2005. This estimate falls in the lower range of prevailing "guesstimates" mentioned above. By our estimates, total informal exports from Pakistan to India were approximately $10.4 million, and informal imports were $534.5 million. The balance of informal trade is even more overwhelmingly in India's favor in absolute terms, as well as in terms of share of total trade compared to the formal trade.[88] Tables 5.1 and 5.2 provide estimates of informal exports and imports by major commodities and by various informal trade routes.

Table 5.1. Sources, Destinations, and Value of Informal Exports to India in 2005 ($ '000)

Items	Dubai–Karachi–Third Country	Sindh Cross-Border	Delhi–Lahore	Total by Item
Cloth	6,800	1,775	520	9,095
Cigarettes			100	100
Dry fruit		375	52	427
Video games, CDs			100	
Footwear			52	52
Prayer mats			52	52
Bedsheets			135	135
Others		375	30	405
Total Value	**6,800**	**2,525**	**1,041**	
Sigma Total	10,366			

Source: SDPI Survey, January–May 2005
Note: "Other items" include surma, hardware used in drills, rexene, and cigarettes. Edible oil and wheat were once considered "hot ticket" export items; however, the price differentials for edible oil suggest that this should be coming into Pakistan rather than the other way around. Recently, India has become self-sufficient in wheat. Also, there are large outflows via the Afghan Transit Trade (ATT) to Afghanistan under various aid and relief programs.

Table 5.2. Sources, Destinations, and Value of Informal Imports from India in 2005 ('000 $)

Items	Dubai– Bandar Abbas– Bara	Dubai– Bandar Abbas– Chaman	Dubai– Karachi– Informal	Dubai– Karachi– Third Country	Sindh Cross- Border	Delhi– Lahore	Singapore– Karachi	Total Value by Item
Cloth	128,000	1,066	45,350	2,500	7,800	1,280		185,996
Livestock					33,340			33,340
Medicines	1,600	18,250			10,400	500	2,000	32,750
Pharmaceutical and textile machinery				75,000				75,000
Electroplating chemicals				15,000				15,000
Cosmetics and jewelry	20,000		40,280		2,600	960		63,840
Herbs and spices	6,250				1,300	800		8,350
Ispaghol (husk)[89]		1,350						1,350
Big elachi cardamom		8,500						8,500
Black hareer[90]		3,825						3,825
Betel						2,880		2,880
Blankets			5,000					5,000
Rickshaw/motorbike parts				5,000		250		5,250
Tires	1,000	72,282						73,282
Paan ghutka, Paan parag[91]		3,306						3,306
Indian razor blades		2,225						2,225
Biri (local cigarette)		8,572						8,572
Others			5,070			480	500	6,050
Total Value	**156,850**	**119,376**	**95,700**	**97,500**	**55,440**	**7,150**	**2,500**	
Sigma Total	534,516							

Source: SDPI Survey, January–May 2005

Note: "Other items" include surma (eyeliner), hardware used in drills, rexene, and cigarettes. Edible oil and wheat were once considered "hot ticket" export items; however, the price differentials for edible oil suggest that this should be coming into Pakistan rather than the other way around. Recently, India has become self-sufficient in wheat. Also, there are large outflows via the Afghan Transit Trade (ATT) to Afghanistan under various aid and relief programs.

These figures have been estimated after thorough cross-checking and validation of data collected through different sources. (A brief description of the data validation exercise conducted for each informal trade route is presented in Annex 5.1). The first set of cross-checks was inserted in the various stakeholder surveys and interviews, where we asked the different respondents identical questions on the value of informal trade, both aggregate and across items. In addition, we also compared data collected from the source with that collected at the point of entry and at destination points. The team carried out a similar exercise for transaction costs. Finally, we surveyed retail markets for specific items to get an estimate of the value of the item available in the market. Despite these data validation exercises, it should be recognized that arriving at an accurate figure for informal trade is a difficult exercise. The nature of the information demands that estimates be treated with some degree of caution. It would be reasonable to assume, on average, a 10 percent variation in all figures provided in this report. The total value of informal trade could therefore fall between $490 and $599 million (plus or minus 10 percent).

This study provides only a point estimate for a single year, but our fieldwork indicated that informal trade between Pakistan and India has been declining over the years. This can be attributed to manifold factors: a) Government of Pakistan (GoP) has reduced tariffs substantially, which has reduced incentives for smuggling and which has also affected its informal trade with India;[92] b) there seems to be a switch from informal Pakistan–India trade to informal Pakistan–China trade in recent years; c) government regulations against the use of certain products (e.g., auto-rickshaws) has led to a decline in smuggling of related items (e.g., auto-rickshaw and scooter parts); and d) there are signs that the recently signed Pakistan–Sri Lanka Free Trade Agreement may have led to diversion from informal Pakistan–India trade to formal Pakistan–Sri Lanka trade in certain products (e.g., betel leaves and betel nuts).

The shift from Pakistan–India informal trade to Pakistan–China informal trade is important because it undermines the potential for a switch to legal Pakistan–India trade. Even if trade ties between Pakistan and India are liberalized, our informants suggest that informal Pakistan–China trade would still be more profitable than formal Pakistan–India trade. A number of informally traded Indian items have been partially or completely replaced by smuggled Chinese goods in recent years. These include bicycles, electronics goods, tires, cosmetics, cloth, jewelry, and razor blades. The estimated value of this substitution is around $0.5–1 billion. As in the Pakistan–India case, the direction of informal Pakistan–China trade is overwhelmingly in China's favor. We also found evidence of products of famous European brands (French cosmetics giant L'Oreal, for example) being imitated by Chinese manufacturers and being smuggled into Pakistan and sold as authentic French products. These findings are based on anecdotal evidence from Pakistan's informal trade with China. We recommend that comprehensive study of Pakistan's informal trade should be undertaken so that the connections between formal and informal trade, as well as informal trade with various countries, can be seen more explicitly.

Informal Trade Routes

Pakistan–India informal trade takes place via five major and six minor routes as shown in Figure 5.1.

Major routes: The five major routes of informal trade are
    i.   Dubai–Bandar Abbas–Herat–Kabul–Jalalabad–Bara[93]
    ii.   Dubai–Bandar Abbas–Herat–Kandahar–Wesh–Chaman
    iii.   Dubai–Bandar Abbas–Herat–Kandahar–Wesh–Noshki–Chaman[94]–Quetta
    iv.   Sindh Cross-Border
    v.   India–Dubai–Karachi.

Trade through the first three channels is containerized. The containers are shipped to Dubai and from Dubai to Bandar Abbas, then transported overland by truck to Jalalabad, and from Jalalabad to Bara. Here, they are unloaded and carried across the border by pack animals

and human carriers. On the Jalalabad route, about 4,000 to 8,000 mules and donkeys are used to bring goods across the border. These are then reloaded onto trucks and finally stored in large godowns in Bara. Occasionally, the routes get blocked as a result of tribal infighting over control of the smuggling routes. The second overland route to Chaman and Noshki in Balochistan transverses Bandar Abbas–Herat–Wesh.

Dubai-Karachi is the main channel for quasi-legal trade. Dubai–Karachi is the main channel for quasi-legal trade. The term refers to trade in Indian goods, which are stamped with a certificate of origin other than India. These goods are rerouted through Dubai, an act that validates the new origin. In effect, the trade shows up in official trade statistics as exports from the country (whose origin is stamped) to Pakistan. In a minority of cases, trade shipments are conducted through what is known as the SBL. In such an arrangement, ships containing items banned in Pakistan, are supposed to travel to Karachi via a third port (e.g., Dubai). In reality, however, the ships travel directly from an Indian port to Karachi. The bill of lading of that ship, which shows its origin, is switched in the documentation to Dubai. This process is completed even before the ship has left the Indian port. The documents are prepared by agents and provided to the concerned party within 24–48 hours of the request. While the cost of obtaining a SBL in Karachi is low—approximately $50—we were informed that it varies by both the location where it is obtained, and the port to which the origin is to be changed on the certificate. Karachi is the cheapest port for obtaining a bill of lading. The cost from Indian ports such as Mumbai is reportedly as high as $200. For the SBL to work, in effect, the shipment needs to consist primarily of banned Indian items. If the vessel carries consignments destined for many countries, it is not viable for it to dock in Karachi.

On the Sindh cross-border route, informal trade is not containerized and takes place in three ways. The bulk of the trade takes place in areas where the border is not fenced; the rest is conducted through trenches dug by the local population and on "Kekras," which travel weekly across the border.[95] The border security forces on both sides are fully aware of the trade and are bribed on a regular basis to allow the trade to continue.

Minor Routes: The six minor routes of informal trade are
- Delhi–Amritsar–Lahore
- Mumbai–Karachi (boats, launches)
- India–Singapore–Karachi
- India–Hong Kong–Karachi
- Mumbai–Kabul–Bara
- Afghan Transit Trade
  - Karachi–Chaman–Afghanistan
  - Karachi–Peshawar–Afghanistan

Trade through the Amritsar–Lahore route is noncontainerized. On the Lahore route, informal trade is conducted via the "Samjhauta Express" train, which operates twice a week. Informally traded items are brought by genuine passengers looking to cover the cost of their trip or by professional informal traders (called "Khepias"), who travel on the train on a frequent basis and carry large quantities of goods from India to Pakistan and vice versa. The goods are taken to established wholesale markets in Lahore from where they are distributed to retail markets within Lahore or transported to other cities.

The dynamics of the India–Singapore–Karachi and the India–Hong Kong–Karachi routes are identical to the India–Dubai–Karachi route. Indian goods travel to Pakistan via Singapore or Hong Kong, with their origins changed to the respective ports. These items then show up as official trade between Pakistan and Singapore and Pakistan and Hong Kong, respectively. In an extreme minority of cases, the bill of lading is switched, as in the case of ships scheduled to

travel from Mumbai to Karachi via Dubai. The incidence of SBL on the Singapore and Hong Kong routes is even lower than on the Dubai route.

Figure 5.1: Pakistan-India Informal Trade Routes

Legend: Routes

- ■ Mumbai–Dubai–Karachi
- ■ Dubai–Bandar Abbas–Herat–Kabul–Jalalabad–Bara
- ■ Dubai–Bandar Abbas–Herat–Kandahar–Wesh–Chamman
- ■ Dubai–Bandar Abbas–Herat–Kandahar–Wesh–Noshki
- ■ Sindh Cross-Border
- ■ Delhi–Amritsar–Lahore
- ■ Afghan Transit Trade (Chamman)
- ■ Afghan Transit Trade (Peshawar)
- ■ Mumbai – Karachi (SBL)

The outreach map in Figure 5.2 tracks the internal routes within Pakistan from origin to destination—basically to the wholesalers and retailers. For instance, goods unloaded at Peshawar and Nowshera are shipped onwards to Lahore and southern Punjab. The circular areas represent the

outreach (extension), while the numbers rank-order the size of the retail market within the numbered location. So Lahore is the largest retail market for informally traded Indian goods.

. Figure 5.2. Flow of Informally Imported Goods Within Pakistan
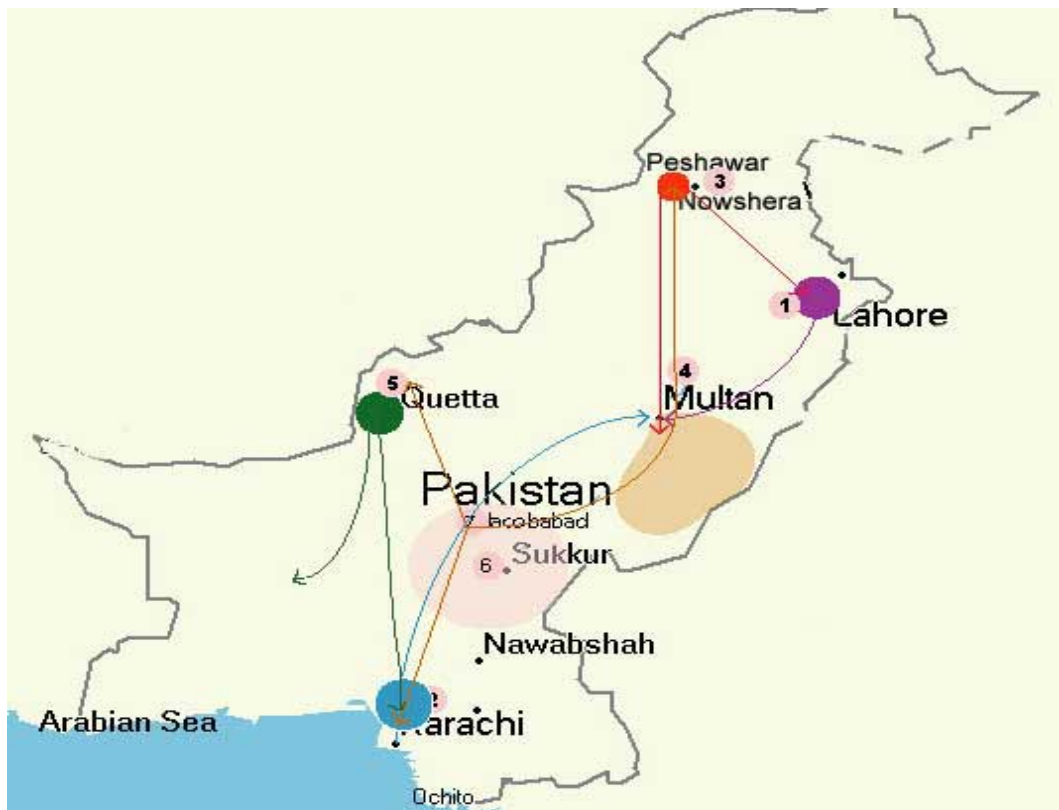
Commodity Composition of Informal Trade

Informal exports from Pakistan mainly consist of textile products (cloth and bedsheets) and dry fruits. Pakistani-made "bareeze" (embroidered cotton or blended fabric) is a popular item for informal exports to India. Informal imports from India consist of a range of products. Cloth, machinery, tires, cosmetics and jewelry, livestock, herbs and spices, and medicines comprise around 90 percent of informal imports from India.

Synthetic and silk-based fabrics (e.g., chiffon, georgette,[96] and Banarasi silk[97]) that are fashioned into women's formal wear and Indian sarees[98] are smuggled into Pakistan. Indian-made chiffon and georgette sell well from August to March in Pakistan. Summer is the slack season, because consumers prefer Pakistani cotton-based summer clothing, such as bareeze. Fabric for men's suiting is also a popular informally traded item from India. In terms of design, quality, and cost, Indian winter fabrics have an advantage over comparable Pakistani materials and garments. Indian cosmetics are also very popular and are preferred both for their better quality and affordability, compared to the Pakistani and foreign cosmetic products.

About six to seven Indian brands of truck and tractor tires are smuggled to Pakistan largely from the Chaman-Noshki borders. Even though trade in Indian tires is legal, purchasing them directly from India is not cost-effective, since the cost, insurance, and freight price includes Indian sales and excise tax and Pakistani tariffs and postentry sales tax. Dubai-based companies have regional agency rights that allow them to purchase these tires free of domestic taxes. Informal trade in tires allows traders to avoid local Pakistani taxation, which makes illegal trade via Dubai profitable in North-West

Frontier Province (NWFP) and Balochistan; however, the formally imported tires are cheaper for consumers in Sindh. Competition from China has reduced smuggling in Indian tires by at least tenfold over the past year or so.

Indian medicines are smuggled via the Balochistan and Sindh borders. On average, three containers of medicines enter Afghanistan daily; half this amount is smuggled into Pakistan via Balochistan. Reportedly, about 50 percent of the medicines purchased in Balochistan consist of Indian medicines because they are cheaper and more efficacious. For example, Methorexito, an anticancer drug, is in widespread use because it is much cheaper than the Pakistani version. The dealers in drugs and medicines are Afghans who have easy access to Pakistani passports and also do not face visa restrictions to India. A number of medicines are also brought in in powdered form, packaged in Pakistan, and sold under Pakistani brand names.

The largest smuggled item from the Sindh border is livestock. These are mostly bulls that are smuggled in large numbers across the border in Tharparkar.[99] The animals are then taken to the Larkana Jacobabad or Bahawalpur market. On average, 200 animals cross the border daily. Most of the animals eventually reach Balochistan and are consumed; some even cross over to Iran and Afghanistan. A small number of animals are taken to Karachi.

A substantial amount of pharmaceutical and textile machinery comes from India via Dubai. The value of the machinery is reported to be much higher than that of pharmaceutical end products, which come in small volume through the quasi-legal route. The estimated value of the machinery and spare parts is $75 million per year. Chemicals used for electroplating also enter Pakistan via Dubai. The import of these chemicals has increased tremendously in the recent past due to price advantages.

Impact of Bans and Tariffs on Informal Trade

The configuration of bans, tariffs and duties, and transaction costs, both in the formal and informal sectors, determine the likelihood of informal trade being converted to formal trade. Comparing the composition of informally trade items in Tables 5.1 and 5.2 with the composition of formally traded goods in Tables 1.2 and 1.3 (in Chapter 1 of this volume), we find that the composition of the two types of trade is quite dissimilar. The main items of informal exports from Pakistan are textiles (cloth, bedsheets, and prayer mats comprise 90 percent of informal exports), whereas textile products comprise only 8–13 percent of formal exports. Similarly, three-fourths of informal imports from India are made up of cloth, machinery, jewelry and cosmetics, and tires, whereas the bulk of formal imports from India consist of chemicals. Table 5.3 provides details of trade restrictions on items that are traded informally, suggesting that restrictions on formal trade may be a major reason for informal trade with India.

Transactions Costs of Informal Trade

Table 5.4 gives the summary of the various transactions and financing costs for the indicated trade routes and compares these with costs related to formal trade. There is both a cost and a time dimension to transaction costs. Both need to be taken into account in determining total costs and the feasibility of switching to informal trade. We discuss here details of two important informal trade routes—Dubai–Bandar Abbas–Bara and India–Dubai–Karachi—to give a flavor for the processes and the various costs involved.

Table 5.3. Banned and Dutiable Items

Items	Duty (%)	Sales Tax (%)	Total Tariff (%)	Advance Income Tax (%)
Cosmetics and jewelery	Banned	-	0	
Medicines	Banned	-	0	
Blankets	Banned	-	0	
Electroplating chemicals	Banned	-	0	
Cloth	Banned	-	0	
Rickshaw and motorbike parts	Banned	-	0	
Paan ghutka, Paan parag	Banned	-	0	
Indian blade	Banned	-	0	
Biri (cigarette)	Banned	-	0	
Paan	100(Rs.150/kg)	15	130	6
Spices and herbs	5	15	38	6
Cattle	5	15	21	6
Pharmaceutical machinery	5	15	21	6
Truck tires	5	15	21	6
Tractor tires	20	15	44	6

Source: Information compiled from customs and Central Board of Revenue data for the period 2004/05.

The Dubai–Bandar Abbas–Bara Route*:* Total informal cloth imports on this route comprises $128 million (30 percent) out of the $534 million total informal trade, so we take the example of the cost involved in informally trading a 40-foot container of cloth. Cloth containers are purchased in Dubai and the payment is made in U.A.E. dirhams, the cost depending on the quality of the cloth. The containers are trucked from Bandar Abbas to Bara.[100] They are off-loaded at Islam Qila, where Afghan customs officials charge Gumruk (custom duty).[101] The custom varies, according to cloth quality, from $0.01–0.03 per meter. From Islam Qila, they are reloaded and trucked to Door Baba.[102]

Costs: The cost of transporting a 40-foot container from Mumbai to Dubai is $850, including insurance costs of $50–100. On the next leg, from Dubai to Bander Abbas, the cost is another $800, broken down into warehouse-to-port fare, ocean freight, insurance, documents-processing fee, bill of lading, inspection fees, and loading costs. On the stretch from Bander Abbas to Islam Qila, the transport charge per container is $1,800, largely including customs (Gumruk) in Afghanistan. From Islam Qila to Bara, the cost is $6,300, including transportation costs of trucks, animal and human carriers, and bribes per consignment. Thus, the total transaction and transportation costs come to around $9,800. Gandamars (the local name in NWFP for carriers of smuggled goods) charge both daily and piece rates to move items from Bara to various destinations in the NWFP.[103] Bribes for police and customs officials at the checkpoints range from $0.33 to $3.33. Women and paraplegics used as carriers invoke sympathy and reduce bribes and interdictions. The cloth-commission agent charges $0.03 per meter for Nowshera and $0.08 per meter for Lahore. For onward delivery to the Punjab, the carrier charges $0.10 per meter.

Table 5.4. Consolidated Data on Costs and Financing of Pakistan–India Informal Trade

Nature of Cost	Formal Trade	Informal Trade					
		Dubai–Bandar Abbas–Bara	Dubai–Bandar Abbas –Chaman	Dubai–Karachi – Informal	Dubai–Karachi– Third Country)	Sindh cross-border	Delhi – Lahore
Procedural costs							
Cost of purchase	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clearing charges	0.5% of total value	2% of total value	2% of total value	None	4.5% of total value	None	None
Average bribe as percent of total consignment value	1–5%	1–5%	1–5%	3–5%	Same as formal trade	5–10%	5–15%
Volume per consignment		Same as formal trade	Same as formal trade	Much lower than formal trade	Same as formal trade	Much lower than formal trade	Much lower than formal trade
Frequency of consignments		Higher than formal trade	Higher than formal trade	Much higher than formal trade	Lower than formal trade	Much higher than formal trade	Much higher than formal trade
Risk	Low	Low/medium	Low/medium	Medium/high	Low	Low	Low
Handling charges	Lahore: $1–16 Karachi: $75 (20 ft) $112 (40 ft)	$149 (40 ft.)	$149 (40 ft.)	None	$75 (20 ft) $112 (40 ft)	None	None
Insurance	$50–100	$150	$150	None	$100–200	None	None
Financing	LC, TT: High procedural costs	Orgai: Low procedural costs	Orgai: Low procedural costs	Self, Hundi, financed by other contacts: Low procedural costs	LC, TT: High procedural costs	Hundi: Minimal procedural costs	Own finances: Minimal procedural costs
Ethnic/cultural factors	None	Help to reduce transaction costs	Help to reduce transaction costs	None	None	Yes	Help to reduce transaction costs

Nature of Cost	Formal Trade	Informal Trade					
		Dubai–Bandar Abbas–Bara	**Dubai–Bandar Abbas–Chaman**	**Dubai–Karachi –Informal**	**Dubai–Karachi– Third Country**	**Sindh cross-border**	**Delhi–Lahore**
Transport Costs							
Sea	Mumbai–Karachi: $550 to 600 (20 ft) $800–900 (40 ft)	$1,135/40 ft	$1,135/40 ft		$1,100 (40 ft.)		
Rail	$7/tonne (for Lahore)						$7.24 per one-way trip
Road		$6,300/40 ft	$3,600/40 ft			$7.50 per one-way trip	
Air				$85–117.50 per one-way trip			
Tariff-/Tax-Related Cost							
Duty	Yes	None	None	None	Yes	None	None
Adv. income tax	6%	None	None	None	6%	None	None
Sales tax at import	15%	None	None	None	15%	None	None

Source: Field survey, January–May 2005

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Communications (Internet, telephones) are beginning to replace face-to-face transactions. This has reduced both costs (transport) and bureaucracy (visa requirements). Timewise, it takes a container 35 to 45 days to reach Bara from Dubai. About 90 percent of the fabric smuggling is transported on this route, while the remaining 10 percent comes in via Karachi.

Financing: "Orgai" payments both to importers and wholesalers are the traditional financing mode, and it is based on client credibility. Bank financing is both difficult and involves interest.[104] Instead, business capital is raised from family members or their own savings are used. Payments for consignments are done through interbank transfers to Dubai.

The India–Karachi–Dubai route: The transaction costs for the Karachi–Dubai route vary by mode. For the Khepias, transaction costs differ between short-term and long-term (multiple-entry) Khepias. For short-term visas, Khepias have to bear the cost every time. The process is relatively system-driven. Documents are forwarded to wholesalers or shopkeepers in Dubai who have direct connections with the Khepias. Whenever visas are needed, they communicate the need to their contacts, who arrange the visa. The visa fee is $50. Table 5.5 gives a breakdown of transaction costs for the two types of Khepias.

Table 5:5. Transaction Costs for Khepias

Type of Cost	Long-Term Visa Holder ($)	Short-Term Visa Holder ($)
Taxi charges in Karachi	4.20	4.20
Taxi charges in Dubai	2.50	5.30
Return ticket	166	225
Visa fee	3,300*	50**
**Hotel charges	0	6.60/day
Food	5/day	7.50/day
Time	Less time	More time

Source: SDPI Survey, January–May 2005
Note: * This is only a one-time cost; ** This cost is incurred for each trip

Costs: Technically, in the case of quasi-legal trade—since items flowing through this route are processed through the formal channel—all transaction costs involved are the sum of existing formal trade transaction costs in Dubai and Karachi. These include freight costs from Mumbai–Dubai ($850/40-foot container); freight from Dubai–Karachi ($200/40-foot container); insurance costs ($100–200); and additional costs in Dubai (loading, unloading, change of certificate of origin, and agents' fees), storage, and clearing-agent fees (4 percent of the value of consignment).

Formal transaction costs at Karachi are the same for any country. Consignments brought in through this route are processed by customs authorities at the port of entry. The costs for a 20-foot container from the time a consignment enters the port to its delivery to the importer or his agents at the port include wharf charges, custom examiner reports, bribes to the appraiser and principal appraiser, gate fees, and miscellaneous agency charges. The total cost of this procedure ranges between $70–75.

Financing: Financing of informal trade through Khepias takes four forms. First, Khepias use their own money. Hundi is the second form of financing. Khepias have close relations with money changers involved in the Hundi business.[105] The system is inherently based on trust and closely intertwined with modes of sending labor remittances home. The third mode of financing is through Karachi-based shopkeepers who have close relations with wholesalers in Dubai and Khepias in Karachi. Funds are then transferred through the National Bank of Pakistan or through multinational banks with branches in Karachi and Dubai. In the fourth mode, large Khepias finance their smaller counterparts, who earn commission for acting as carriers. Each large Khepia has a group of three to six small Khepias, which, in effect, increases his trade volume. Financing for the quasi-legal trade is the same as for any formal trade transaction based in Pakistan.

Formal trade: The transaction costs in formal trade come out to be much higher than for informal trade. The single-biggest complaint from formal exporters was about customs procedures. An overwhelming majority of formal traders interviewed complained that bribes were demanded to expedite formal consignments; however, there was a consensus that the amount of bribe paid was low and did not affect the profit margin significantly. If a bribe is not paid, customs officials retaliate by slowing down the clearing process. Consequently, demurrage charges can became extremely high. Almost all interviews revealed that demurrage was a major hurdle in trade as the excessive amount reduced the profit margins substantially. In a few cases, high demurrage costs were even cited as one of the reasons for low formal trade volume.

Would Trade Liberalization Switch Informal Trade into Formal Channels?

Our overall impression is that it will require a significant reduction in tariffs to change the informal trade to formal trade for almost four-fifths of the existing informal trade flows. We base this qualitative assessment on a comparison of informal transaction costs adjusted for formal transaction costs and current tariff rates.

For instance, on the Bara route, the total transaction costs are about 10 percent of the value of a container of chiffon. The duty and sales tax comes to about 40 percent. In addition, formal trade would incur a 1–2 percent transport cost from India to Pakistan. If the ban were removed, it would require approximately a 32 percent reduction in tariffs to divert informal to formal trade channels. Thus, trade liberalization, by giving India MFN status, is a *necessary but not a sufficient condition* for affecting a substantive change. Existing tariffs should be reduced substantially, and procedural impediments should be eased considerably to achieve this change. This finding was also borne out in interviews with stakeholders. In particular, in the northern Bara market, where transport costs are high, importers were not unduly concerned. Their sense was that the combination of tariffs and procedural requirements would more than offset the high transport costs they needed to factor into their prices. Further, the Delhi–Amritsar–Lahore and the Sindh cross-border routes have extremely low transaction costs. Informal trade through these routes is unlikely to switch, because even zero tariffs would not be enough to compensate for the formal procedural requirements and transaction costs. On the other hand, for smuggled goods on the Dubai–Karachi route, which accounts for about 20 percent of the informal trade, moving to MFN status is likely to switch trade from informal to formal channels.

Table 5.6. Likelihood of Switching from Informal to Formal Trade

Type of Transaction Cost	Dubai–Bandar Abbas–Bara	Dubai–Bandar Abbas–Chaman border	Dubai–Karachi–Informal	Dubai–Karachi–Third Country	Sindh cross-border	Lahore–Delhi	Karachi ATT
Tariffs/taxes	None	None	None	Same as formal trade	None	None	None
Procedural	Much less than formal trade	Much less than formal trade	Much less than formal trade	Same as formal trade	Much less than formal trade	Much less than formal trade	More than formal trade
Transport	More than formal trade	More than formal trade	More than formal trade	More than formal trade	Much less than formal trade	Much less than formal trade	More than formal trade
Expected outcome	Will switch if duties reduced substantially	Will switch if duties reduced substantially	Will switch if duties reduced substantially	Likely to switch to formal trade	Unlikely to switch to formal trade	Unlikely to switch to formal trade	Will revert to a smuggling route if predictability can be assured

Source: Author's assessment.

There is another unexpected aspect of informal trade that should be considered that is related to secondary effects of trade liberalization. There is a specific and a general context to this. The specific context relates to drugs and medicines through the ATT route. It is likely that the prevailing three-tier price structure can induce an increase in informal trade if trade is liberalized. The general context relates to opening more proximate access routes, such as cross-border trade between the two countries. This may induce an increase in smuggling, because of the combined effect of high tariffs and low transportation costs. Ultimately, it leads us to the conclusion that providing MFN status to India may not be enough of a stimulus to divert informal to formal trade. For it to happen, we need to move into a free trade regime such as SAFTA.

Revenue Impact of Trade Liberalization

The revenue impacts are likely to be insignificant, because we argue that 80 percent of the informal trade is likely to continue even if Pakistan were to grant MFN status to India. As Table 5.6 indicates, the switch is most likely to take place on the Dubai–Karachi route, where the assessed value of third-country trade is only around $97 million. Additional tariff realization would depend on whether Indian tariffs are higher than those in "substitute" countries. Invoicing of Indian goods entering Pakistan via third-country trade can potentially lead to increased revenue realizations once such imports are legalized, provided Pakistan customs maintains a detailed price list of these imports.

Redirecting illegal trade into formal channels is not likely to have much of an impact on domestic industry per se. It would merely change the modality of imports rather than their magnitude; however, a price comparison of certain smuggled items indicates that there may be a potential for contraction in certain local industries, especially in cosmetics, drugs and medicines, and engineering goods. For example, drugs and medicines coming into Pakistan via illegal channels are valued at $34.4 million, and cosmetics at $63.8 million. The large price difference for medicines and drugs reflects the subsidy on ATT consignments to Afghanistan. The illegal trade is valued at $1.6 million; however, nonsubsidized Indian medicines and drugs, which make up the remaining $34.4 million in illegal trade, are also priced much lower than in Pakistan, and are of a better quality. At present, there are internal checks on their sales, which prevent a large influx of these medicines—an influx warranted by the price difference. Trade liberalization would remove these checks and, as long as tariffs remain and informal transaction costs are not high, there would be an incentive to smuggle goods triggered by the opening of the more proximate routes (Delhi–Lahore, Mumbai–Karachi). So, we may have an interesting situation where liberalization leads to an impact on this industry, not only through the larger quantum of formal trade, but through the induced increase in informal trade as well.

Conclusions and Recommendations

A priori, trade liberalization between India and Pakistan offers prospects of directing informal trade into formal channels. At present, while tariff rates and quantitative restrictions are coming down under various bilateral, regional, and global (i.e., WTO) initiatives, Pakistan has not granted India MFN status. Similarly, India continues to maintain a host of hidden restrictions against imports from Pakistan. As a result, trade between the two countries continues to remain much below its potential; however, discernible momentum is building up to lower the remaining restrictions, which should not only increase cross-border trade but also lower the incidence of smuggling.

Compared to our ex ante expectations, the ex post findings were quite surprising. Our estimates showed that informal trade between Pakistan and India in 2005 was around $545 million—in the lower range of "guesstimates" of $0.5–10 billion. A total of six items (of a total of 17) constitute 80 percent of the total import value ($534 million). These are, in order of priority, cloth, tires, pharmaceutical and textile machinery, cosmetics, livestock, and medicines. Exports from Pakistan, at $10.37 million, are a fraction of imports of $534.5 million. Exports may be understated, however; textile products constitute 90 percent of total informal exports. Our fieldwork indicated that the volume of informal trade with India has been declining over the years. India seems to have lost a share of its informal trade market to China.

The likelihood of diverting informal trade to legal channels is low under an MFN regime because existing tariffs are likely to more than offset the net transaction costs on the circuitous but important informal trade routes. It would take a substantial tariff reduction and a lowering of formal transaction costs to redirect informal trade to the more direct routes between India and Pakistan. With existing tariffs or even with somewhat lower tariffs, it is likely that opening up more proximate and direct legal routes may trigger more informal trade. Revenue generation for the government under this scenario is also not likely to be significant. The policy implication is that free trade, such as provided by SAFTA, is likely to yield higher gains from trade liberalization; however, it would also constitute a threat to certain types of local industries, e.g., cosmetics, drugs and medicines, and the engineering industry. A comparison of prices of a few cosmetics and drugs and medicines indicate that India has a significant comparative advantage in these items, and suggest that tariff reductions may need to be staggered to cushion the adverse impact of trade liberalization.

Finally, trade policies need to consider the socioeconomic consequences of disrupting practices in smuggling-prone areas. These are both historically entrenched and generate employment in areas with few other alternatives. In fact, they cushion the effects of government neglect in marginalized and politically volatile areas along the western border with Afghanistan and, to some extent, along the eastern border with India in Sindh. So, complementary policies that provide alternative livelihoods and establish social and physical infrastructure become key to trade liberalization with India.

Annex 5.1
Survey Methodology

Geographical Scope of the Study

The field work was conducted in

- *NWFP*: Bara, Peshawar, Nowshera
- *Punjab*: Lahore, Multan
- *Balochistan*: Chaman, Quetta
- *Sindh*: Karachi, Sukkur, Khairpur, Ghotki, and Jacobabad

Sampling Methodology

We collected the data and information through secondary as well as primary sources. Primary data was collected through surveys and personal interviews with stakeholders and public officials. The respondents are profiled as follows:
- Formal and informal importers and exporters. Informal traders fall into three categories (large, small Khepias, and irregular carriers).
- Retailers
- Members of the chambers of commerce and industry
- Customs officials
- Forwarding agents
- Border rangers and security officials
- Wholesalers
- Transporters (ships, by air, trucks, buses, cars, motorcycles, cycles [gandamars, laghris[106]], pack animals, women, paraplegics); the truck and bus drivers also act as agents for retailers and wholesalers in Punjab. They both order and transport goods.

Table A5.1.1 below provides details of the types of data collected and key information solicited from the various categories of respondents.

Table A5.1.1: Type of Surveys and Information Collected

Type of Survey	Information Collected	# of Surveys	Respondents						
			Importers	*Exporters*	*Retailers/ wholesalers*	*Business stakeholders*	*Transporter*	*Customs/ Clearing agents*	*Rangers/ Security personnel*
Review of trade/customs statistics	Indian export volume to Dubai and Singapore Indian imports reaching Pakistan officially or quasi-legally	Secondary data collection							
Structured survey of formal traders	Identification of formally traded items between India and Pakistan Qualitative and quantitative assessment of transaction costs in formal trade Prices of traded items and profit margins	13	8	5					
Semistructured interviews of formal traders	Pros and cons of trading with India Potential impact of trade liberalization on local industries	13	8	5					
Structured survey of informal traders	Type and value of informal trade between Pakistan and India Financing mechanisms and risks involved in informal trade Transactions costs in informal trade Prices of smuggled items Competition with China and local substitutes	7	6	1					
Semistructured interviews of informal traders	Same information as in structured surveys of informal traders (we abandoned the structured surveys due to lack of willingness of respondents to provide information)	40	35	5					

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Type of Survey	Information Collected	# of Surveys	Respondents						
			Importers	*Exporters*	*Retailers/ wholesalers*	*Business stakeholders*	*Transporter*	*Customs/ Clearing agents*	*Rangers/ Security personnel*
Survey of domestic markets/interviews with wholesalers	Type of items traded informally Supply chain of informally traded items Price of informal goods and retailers' profit margins Reflections on competition from Pakistan–China informal trade	71			71				
Semistructured interviews and literature review on transport issues	Quantification of transport costs from various routes Modes of transport of informal goods, by route Bottlenecks in the transport infrastructure	9					9		
Interviews with business stakeholders/ chambers of commerce	Potential impacts of liberalizing trade on domestic industry	8				8			
Interviews with customs officials/ port authorities and clearing/ forwarding agents	Approximate value of informal trade leakage of Indian goods at entry points Customs procedures, costs, and bottlenecks	15						15	
Interviews with security agents/rangers	Modalities of transport of consignments across the border Approximate value of informal trade leakage at borders	2							2

Data Reliability

The following section provides an overview of the cross-checking and data validation exercise conducted to come up with accurate estimates. The information is provided for various informal trade routes.

Quasi-legal trade from Dubai: We collected disaggregated data on Indian exports to Dubai from official statistics, focusing on those items that we found from primary surveys are imported illegally into Pakistan. From international databases such as the UNCOM and IMF-DOTS, we collected data on exports from Dubai to Pakistan, again focusing on items we assessed as having originated in India. These items are stamped with a certificate of origin other than India and constitute quasi-legal trade. We cross-checked this information with data on imports from Dubai, which we obtained from the Central Bureau of Revenue. Data on Indian exports to Dubai and Pakistan's imports from Dubai were then analyzed, and items assessed as being of Indian origin highlighted. The difference in value of Indian exports to Dubai and the same items imported into Pakistan provided us with an estimate and a ceiling for the value of the particular item that probably originated in India and reached Pakistan via Dubai. The information provided a guide for primary data collection, which helped to firm up estimates provided by this analysis.

Smuggled items from Dubai: We collected information on informal trade at the points of entry in Pakistan—namely, Bara, Chaman, and Karachi—and cross-checked this information with data collected at the source in Dubai. Formal reexports from Dubai to Pakistan, for instance, from China and the Republic of Korea and Singapore blur the comparison. Indian items are inserted into containers from these countries and, in this manner, smuggled into Karachi.

Cross-border imports from India: The entry points for the significant cross-border informal trade are Lahore, Ghotki, Tharparkar, and Sukkur. A low volume of trade also goes on across bridges in the Neelam valley, Azad Jammu, and Kashmir, and across the border near Sialkot in Punjab. We did not have time to investigate these smaller informal trade routes.

Chapter 6
Pakistan and India: Possibilities and Implications for
Trade in Agriculture Sectors with Focus on Wheat and Sugar

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This paper addresses how opening up wheat and sugar trade between two nuclear neighbors, India and Pakistan, would affect welfare in the two countries. Food grain production in general, and production of wheat in particular, carries great significance in the agriculture sectors of India and Pakistan. Similarly, sugar industries make an important contribution in the gross domestic product (GDP) in the respective countries. Currently, India not only is the second-largest producer and the second-largest consumer of wheat in the world, but is also the world's leading producer of sugar and second-largest producer of sugarcane, after Brazil. Seemingly, both India and Pakistan are expected to benefit from trading with each other in these commodities.

We conduct a partial equilibrium analysis to simulate welfare implications of trade between the two countries under three alternative regimes: a) under a free trade agreement (FTA) between India and Pakistan, b) under the South Asian Free Trade Area (SAFTA), and c) by granting most-favored nation (MFN) status to India by Pakistan. We conduct simple welfare analysis for wheat on the basis of real-world data from fiscal year (FY) 2005, and for sugar based on data from FY2000/01. In both these years, India had a net surplus and Pakistan had a net deficit for both wheat and sugar.[107] Among other things, public policy plays a critical role in generating these surpluses. While we find there would be net gains from trade to both countries, the highest welfare gains accrue to both countries under FTA. Our analysis reveals that if subsidies to Indian wheat farmers are removed, their competitive edge disappears in favor of wheat farmers in Pakistan.

Overview of Wheat and Sugar Sectors

The agriculture sector is a major contributor to the economies of India and Pakistan, accounting for nearly a 23 percent and a more than 24 percent share in GDP, respectively. It provides employment to 42 percent of the labor force in Pakistan and 60 percent in India. Wheat and cotton occupy a dominant position in agricultural production in Pakistan, accounting for a 37 percent and a 28 percent share, respectively, followed by shares of rice (15 percent) and sugarcane (10 percent). Even though the volume of agricultural exports from India at $6.7 billion is about seven times larger than Pakistan's export of $0.99 billion, the two countries are equally dependent on their agriculture sectors for export earning. The share of agricultural exports in total exports accounts for 13 percent in India and 10 percent in Pakistan. By contrast, the share of agricultural imports in Pakistan at 14 percent is much larger than only a 5 percent share in agricultural imports in India. Rice was the largest share (46 percent) in Pakistan's agricultural exports, followed by wheat and wheat flour (13 percent). The major agricultural sector exports from India consist of marine products (22 percent), rice (19 percent), sugar and molasses (6 percent), and wheat (5 percent).

Wheat

Since wheat is a temperate-zone crop that needs low temperature, it is not surprising that its production in India and Pakistan has a narrow geographical base. The major wheat-growing provinces of Pakistan (Punjab and Sindh)[108] share much in common with major wheat-growing states in India

(Punjab, Haryana, and Uttar Pradesh [UP]).[109] They have similar agroclimatic zones, farm technologies, and consumption habits. India's wheat production is 3.6–3.8 times higher than Pakistan's, which hovers around 19–21 million metric tons (MT) (see Table A6.1.1 in Annex 6.1 for details). Just one state in India—Punjab—produces about 22 million MT of wheat annually, which is equal to Pakistan's total wheat production. In India, wheat yields substantially vary across states, with Punjab and Haryana having the highest per hectare yields, comparable with wheat yields in developed countries, and about 55 percent higher than the national average yield in Pakistan.

Wheat is a major food item in Pakistan. Per capita wheat consumption in Pakistan is 126 kilograms (kg),[110] which is more than twice the per capita wheat consumption in India (58 kg).[111] Hence, maintaining stable wheat supplies and stocks is relatively more important for Pakistan, and it is comparatively more dependent on imported wheat than India. Wheat imports have averaged 2.3 percent of production in Pakistan over the past five years, whereas they were negligible as a share of total production in India. With a population that is seven times higher than Pakistan's, India's wheat demand is 3.3 times greater, and with higher production and yields, India has been generating wheat surpluses, a limited amount of which are exported, while the rest are used to maintain government wheat stocks.

Pakistan has moved further in reforming policies related to wheat production, procurement, and trade compared to India. As part of commodity liberalization policies in Pakistan, wheat prices have gradually moved closer to the border parity prices. Input subsidies to farmers have been eliminated.[112] Rising support price of wheat have generated incentives for Pakistani farmers, leading to production growth of 2.6 percent per annum (1998/99 to 2004/05), reducing dependence on imports over time and even leading to surplus wheat production and exports in certain years.[113] In 2001/02, the Government of Pakistan (GoP) introduced institutional reforms in the wheat market, such as deciding to reduce procurement of wheat to one million tons in five years; providing incentives to the private sector for storing wheat; and phasing out involvement of government departments in procurement and sale import and export of wheat, except those needed for procuring strategic reserves. The tariff rate on imported wheat has remained at 25 percent since 2002, although much of the wheat imported to Pakistan enters duty-free through exemptions.[114] Initial evidence shows that these reforms have brought about significant incentives for private traders to procure and market wheat.[115] Private traders are now actively involved in import and export of wheat. In another important policy reform, the government, starting in FY2006, allowed private traders to import wheat at zero duty. In the past, wheat has solely been imported by the public-sector Trading Corporation of Pakistan, but now the market has also opened up for the private sector.

By contrast, India still maintains a number of policy controls on wheat procurement, distribution, and trade. Like Pakistan, it applies a minimum support price for wheat and an issue price to wheat mills; however, since the mid-1990s, these have been aligned with the cost of production and international prices, but wheat prices in Pakistan have generally remained above wheat prices in India. Quantitative restrictions on cereal import were phased out in India in 2002 and replaced with tariffs. India's applied duty customs rates are higher than Pakistan's rates.[116] Wheat exports are allowed against a license, subject to quantitative ceilings announced by the government from time to time. Since 1999, roller flour mills have been allowed to import wheat for milling purposes at zero duty, whereas wheat imports were canalized and permitted only through state trading agencies earlier. India still provides input subsidies for major crops that result in significant production-cost differentials between the two countries. Indian wheat exports have been at significantly subsidized prices, at about half of the cost price to the Food Corporation of India, and have led to losses on wheat exports[117] One of the reasons for India to dispose of massive wheat stocks at below-market prices in the export market is the lack of trading opportunities in neighboring countries and other alternative channels for selling wheat. If India releases these stocks domestically, they would negatively impact the supply response of growers, depress marketing margins of private wheat traders, and affect the long-run sustainability of the Indian wheat economy. Hence, the possibility of selling wheat to Pakistan could be quite attractive for India—a proposition that we discuss below.

Wheat: Cost of Production and Relative Price Competitiveness of India and Pakistan

To evaluate the relative price competitiveness in wheat trade, we examine cost of production of wheat in the two countries without factoring in government subsidies. For Pakistan, we use official cost of production estimates provided by the Agricultural Prices Commission (APCom) for Punjab and Sindh,[118] which are supplemented by estimates from the Government of Punjab,[119] and an independent survey of wheat producers in Punjab conducted by LUMS.[120] For India, we use the estimates of the Commission on Agricultural Costs and Prices (CACP).[121] The estimated costs of production for Pakistan and India are summarized in Tables 6.1 and 6.2.

Table 6.1. Cost of Production of Wheat in Pakistan, 2003/04

	Punjab Government Estimates (Punjab)[a]	APCom Cost Estimates (Punjab)[b]	APCom Cost Estimates (Sindh)[b]	LUMS Farmer Survey Estimates (Punjab)[c]
Net cultivation cost, including land rent (Rs)	7,341.85	8,380.92	7,078.31	8,453.00
Yield per acre (kg)	24.46	25.20	23.40	32.05
Cost at farm level (Rs per 40 kg)	300.17	332.85	302.49	263.74
Marketing expenses (Rs per 40 kg)	10.00	14.00	14.00	5.13
Cost (Rs per 40 kg) at Mandi gate	310.17	346.85	316.49	268.87

Note: We subtract markup on investment from cost-of-production estimates provided by the Government of Punjab and APCom to make them comparable with the LUMS Survey of Wheat Farmers 2003–04 and CACP Cost of Production Estimates (reported in Table 6.2) for wheat in India.
Sources: a) Government of Punjab, personal communications; b)Agricultural Prices Commission (APCom), Islamabad; c) Khan et al. (2006), for details on LUMS Survey of Wheat Farmers 2003–04.

The cost of production of wheat in Pakistan ranges from Rs 269 per 40 kg (LUMS Survey) to Rs 347 per 40 kg (APCom survey) for Punjab (Table 6.1). The cost in India varies across states mainly due to productivity differentials. This cost is lowest in the major wheat-producing Indian states of Rajasthan, Haryana, Punjab, and UP, ranging from Pak Rs 206 to Rs 235 per 40 kg. The average cost of wheat production in India is significantly lower than the estimates of APCom and the Punjab government. The LUMS Survey shows that wheat production in Pakistani Punjab is more cost-efficient than in the main wheat-producing Indian states, except in Rajasthan, Haryana, Punjab, and UP.

A completely different picture emerges of the relative competitiveness of the two countries, however, when Indian farm subsidies implicit in the cost of production are excluded. India gave subsidies to the tune of Pak Rs 180 billion in 2002/03 to the wheat farmers in the form of farm inputs such as electricity, fertilizer, and irrigation. These subsidies amounted to approximately Pak Rs 110.58 per 40 kg of wheat. If these subsidies are phased out in India, we expect the Pakistani wheat to be more cost-efficient. For the simulation analysis, we assume that the status quo will remain and Indian farm subsidies would continue in the foreseeable future.

Table 6.2. Cost of Production Estimates for Wheat in India, 2003/04

Indian State	Cost in Indian Rs (per 40 kg)	Cost in Pak Rs (per 40 kg)
Bihar	231.38	290.33
Chhattisgarh	272.00	341.31
Gujarat	228.65	286.91
Haryana	170.63	214.11
Himachal Pradesh	235.30	295.25
Jharkhand	230.48	289.21
Madhya Pradesh	218.82	274.58
Punjab	176.12	221.00
Rajasthan	164.30	206.16
Uttaranchal	221.24	277.61
Uttar Pradesh	187.75	235.59
Average	212.42	266.55

Note: The cost of production estimates reported in this table is based on C2 cost per quintal obtained from CACP reports (converted to cost per 40 kg), which includes interest on value of owned capital assets (excluding land). To make these numbers consistent with the cost of production estimates from Pakistan, C2 cost is adjusted by subtracting interest on value of owned capital assets obtained from Government of India (2003). In CACP's cost methodology, C2 cost includes all actual expenditures in cash and kind incurred in production by the actual owner plus rent paid for leased land, the imputed value of family labor, interest on owned capital assets other than land, and rental value of land (net of land revenue).

Source: Government of India (2003)

Figure 6.1 Net Exports of Wheat by India and Pakistan

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
NET EXPORTS (IND)	624228	533219	-1485781	-1802266	-1367452	809268	2648030	3671254	4092624	1480000
NET EXPORTS (PK)	-2616581	-1965637	-2500203	-2516071	-3235759	-1025031	204167	375403	990368	-1494000
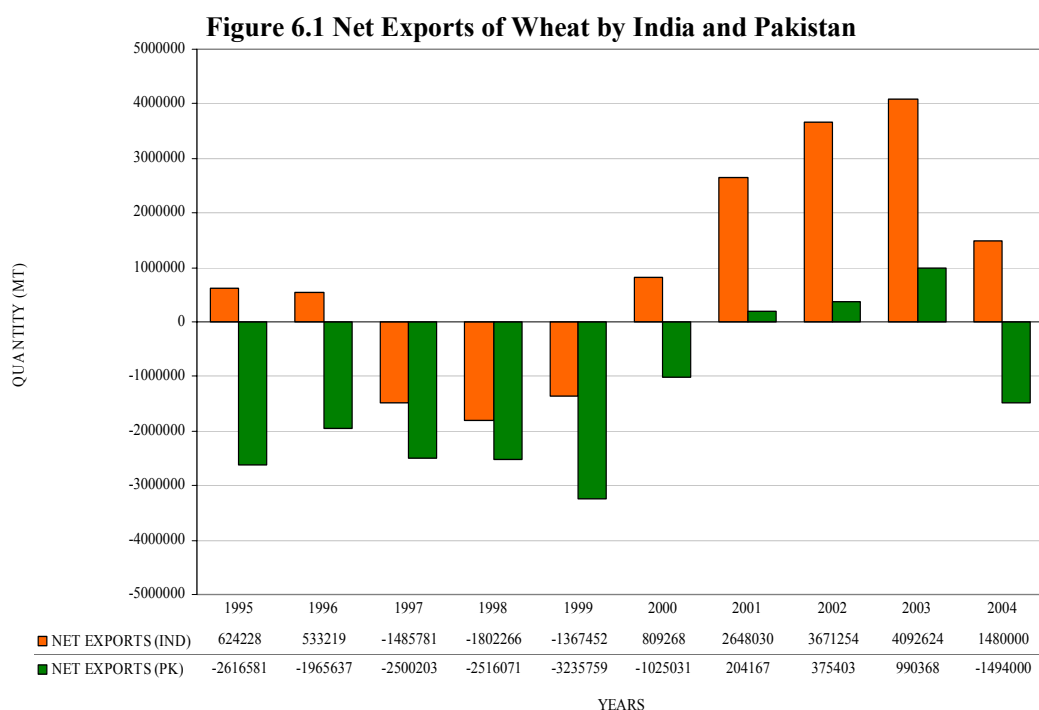
YEARS

Wheat: Welfare Analysis

The real possibility of wheat trade between the two countries is limited to the years when one country is importing and the other is exporting. Net exports from India and Pakistan have remained unidirectional during the last six of eight years (Figure 6.1). We therefore simulate net welfare implications of a free trade arrangement between India and Pakistan by taking the years 2004–05, when Pakistan was a net importer of wheat while India was a net exporter.

A. Initial Equilibrium

Wheat production in Pakistan in 2004/05 was 21 million MT, while domestic consumption was 21.5 million MT (Table 6.3). The deficit of 0.5 million was met by imports. The Trading Corporation of Pakistan imported wheat at $205 per MT.[122] Since the market price of wheat was Pak Rs 410 per 40 kg in FY2005, this implies that effective government subsidy on imported wheat amounted to Pak Rs 80 per 40 kg. During the same year, the exportable surplus of wheat in India was 4.6 million MT at the prevailing wholesale price of Pak Rs 393 per 40 kg.[123] Some of the wheat surplus in India was exported to countries such as Bangladesh and Iraq, at an approximate price of $140 per MT, which amounts to Pak Rs 335 per 40 kg at the exchange rate of Rs 59.82.[124] In the wake of trade policy reforms in the 1990s, India, while lifting export controls, introduced a range of export subsidies to provide incentives to private traders, such as internal transport and freight subsidies and handling and marketing charges.

Table 6.3: Impact of Opening-up of Wheat Trade with India, 2004/05

	Before Trade	After Trade
Production (million MT)	21.00	20.80
Consumption (million MT)	21.50	21.93
Imports (million MT)	0.50	1.13
Wholesale price (Rs per kg)	410	393
Δ in consumer surplus (Pak Rs million)	--	14,710.5
Δ in producer surplus (Pak Rs million)	--	−14,212.0
Saving of subsidy to GoP (Pak Rs million)	--	1600
Δ in net welfare (Pak Rs million)	--	2,098.5
Saving of subsidy to Government of India (Pak Rs million)	--	10,672.5

Note: The numbers in this table are based on a supply elasticity of 0.228 computed by Ali (1990) and demand elasticity of −0.447 taken from Chaudhary et al. (1999).

We depict a state of no wheat trade between India and Pakistan in Figure A6.1.1, where we start at the equilibrium market price of Pak Rs 410 per 40 kg with 0.5 million tons of imports in Pakistan from the rest of the world at a cost, insurance, and freight price of Pak Rs 490 per 40 kg. For food security concerns, the government does not want the market price of wheat to go up because of the prevailing deficit. Therefore, the government imports wheat from the rest of the world and sells it through the flour mills at subsidized prices. In this situation, the government provides an import subsidy of Rs 1.6 billion to consumers in Pakistan. At the initial equilibrium, the market price in India is Pak Rs 393 per 40 kg, which is higher than the export price of Pak Rs 335 per 40 kg for India.[125] To make wheat export possible through private exporters, the Government of India gives an export subsidy equal to Rs 10.6 billion. It is interesting to note that the wholesale price of wheat in India and Pakistan lies between the importable and exportable price, indicating that there are significant fiscal implications in the form of subsidies for both countries in the case of both imports and exports.

B. Free Trade Agreement Between India and Pakistan

An FTA between the two countries would allow duty-free import of wheat into Pakistan. Exports from India to Pakistan are not expected to influence the market price of wheat in India because import demand from Pakistan would be much smaller relative to the size of the Indian wheat economy. Due to smaller size of imports (to Pakistan) and exports (from India), both the countries are assumed to be small countries or price takers in trade with the rest of the world.

Both countries would have an incentive to trade in wheat if prices range between Pak Rs 335 per 40 kg (India's export price) and Pak Rs 490 per 40 kg (Pakistan's import price from the rest of the world). If trade between India and Pakistan takes place at a price between Pak Rs 335 per 40 kg and Rs 393 per 40 kg, India would require an export subsidy to its private exporters, while Pakistan would still benefit from this arrangement. On the other hand, at any price between Rs 393–Rs 490 per 40 kg,

India would not require an export subsidy while Pakistan would still benefit. If trade takes place through private traders in India and Pakistan, however, then wheat imports would be feasible only when the import price is less than Pak Rs 410 per 40 kg. At what price would trade transactions take place? This would depend on the bargaining power of traders in the two countries. It is likely that trade would occur at a price in the neighborhood of the wholesale price of wheat in India (i.e., Pak Rs 393 per 40 kg), assuming that transportation costs are negligible.[126]

Free trade between India and Pakistan would affect three categories of economic agents; namely, consumers, producers, and the government in Pakistan. Due to a fall in wheat prices in Pakistan, consumer surplus would increase by Pak Rs 14.7 billion, while loss in producer surplus would be Pak Rs 14.2 billion (Table 6.3); however, the government will save Pak Rs 1.6 billion in subsidies, resulting in a total welfare gain of Pak Rs 2.1 billion to Pakistan's economy. The Indian government would save Pak Rs 10.7 billion in export subsidies. If we also include incentives to private traders in the form of profits, the prevailing price in Pakistan would be in the neighborhood of Rs 410 per 40 kg. In this case, there would be no impact on consumer or producer surplus, and the saving in the form of subsidies to the two governments would remain the same.

C. South Asian Free Trade Agreement (SAFTA)

Under SAFTA arrangements, the import tariff on wheat from India would be set at a maximum of 5 percent. In this situation, a 5 percent tariff on wheat would make wheat imports by private traders infeasible at an import price of Pak Rs 393 per 40 kg. Hence, to make this trade happen the two parties would need to set tariffs on wheat at zero rates. This case has been discussed above.

D. Most-Favored Nation (MFN) Scenario

By granting MFN status to India, Pakistan would not be able to discriminate against India while importing wheat from the rest of the world. While the bound tariff on wheat is 100 percent, the state trading corporation imports wheat at zero tariff rates. If private wheat traders are allowed to import from India at a 100 percent bound rate as the rest of the world is, no wheat trade would take place because high levels of domestic protection would not make trade feasible. If private-sector imports are allowed at zero tariffs, the results would be the same as was discussed for the free-trade scenario.

E. Impact of Wheat Subsidy on Direction of Trade

The simulations do not take into account the impact of distortions prevailing in the Indian agriculture sector, such as input subsidies in the wheat trade. These subsidies amount to Pak Rs 110.6 per 40 kg of wheat. If these subsidies are phased out, the relative competitiveness of India disappears in favor of Pakistan. More specifically, the present average cost of production worked out for Indian states at Pak Rs 266.5 per 40 kg would shoot up to Pak Rs 377 per 40 kg, which is higher than all the estimates on the cost of wheat production in Pakistan. Hence, if input subsidies to wheat farmers in India are phased out, the higher cost of production would imply that the supply function of wheat would shift upward, possibly resulting in production deficits in India. Under this scenario, there is a possibility that India may become an importer rather than an exporter of wheat and, in the long run, farmers in Pakistan may have a clear comparative advantage in bilateral wheat trade.

Policy Implications for Wheat Trade for Pakistan

The following major points emerge from our analysis.
- Firstly, it appears that there is no clear comparative advantage to either India or Pakistan in wheat trade. Favorable weather conditions and public policies such as input subsidies, support prices, and protective tariffs play a critical role in generating exportable surpluses from both of the countries to the rest of the world.
- Secondly, trade under an FTA would be beneficial to both countries. Under this arrangement, there would be a net gain to both countries, mainly coming from savings in

the form of subsidies (export and import subsidies). Our analysis also shows that there are limited trading possibilities under SAFTA or if Pakistan grants MFN status to India. From the above analysis, it is clear that trade between the two countries can best be used for deficit or surplus management in either country.

- Finally, unlike Pakistan, India maintains huge input subsidies for its farmers. Our analysis shows that if India removes these subsidies, the current competitive edge to Indian wheat farmers, even in most cost-effective wheat-producing states of Rajisthan, Punjab, and Haryana, would disappear. Therefore, as part of SAFTA negotiations, the GoP should negotiate the phasing out of distortions in Indian agriculture to create a level playing field for trade in agricultural products.

Sugar

Sugarcane and sugar production contribute significantly to the economy of Pakistan. Sugarcane occupies approximately 5 percent of the total cropped area and accounts for 17 percent of gross value added by all crops. Average sugarcane yield per hectare in Pakistan is around 50 tonnes/hectare (ha), well below the world average of 64.4 tonnes/ha, largely due to inefficient irrigation use, poor seed quality, and a distorted and suboptimal regional pattern of sugarcane cultivation.[127]

The sugar industry is the second-largest industry in Pakistan after textiles, accounting for 8 percent of total value added in large-scale manufacturing industries. There are a total of 78 sugar mills in the country, out of which 65 are operating. Total sugar production across the country stood at 3.5 million MT (2003–04), whereas the installed capacity of sugar production in Pakistan is around 5.5 million MT. The industry has been running with an excess capacity of almost 45–55 percent, as a result of shortages in sugarcane supply due to a) recent drought conditions; b) competition with noncentrifugal sugar, or *gur*, which diverts substantial sugarcane supply from the mills; c) the deterioration of sugarcane quality, which results in low extraction rates; and d) after de-zoning, farmers have tended to market their sugar through middlemen who seek out the highest bidder regardless of the distance and time of transportation, thus adversely affecting extraction rates. The industry is considered relatively inefficient because it has grown through financial incentives, such as concessional loans from the public-sector commercial banks, and has not been guided by serious economic criteria, such as optimal sugarcane-producing areas for locating units. Until recently, the industry was protected by high tariffs of the maximum tariff range of 25 percent; however, despite strong opposition by the industry, the statutory tariff rate was reduced to 10 percent in FY05 and, essentially, all import sugar entered duty-free under special exemptions.

Sugar is considered an essential commodity in Pakistan, with a sizeable share in the consumption basket, especially of low-income households.[128] Shortages and price hikes in the past have provoked strong consumer reaction; hence, maintaining adequate supplies and stable domestic prices are key considerations of public policy. The government, especially in the past couple of years of shortages in sugar production, has resorted to imports of both raw and refined sugar in order to meet domestic demand and to regulate retail sugar prices.[129] Although Pakistan has become more or less self-sufficient in sugar since the 1990s, the periodic sugar surpluses have not been used effectively for exports, partly because exports require a government subsidy and partly because the mills and private traders stock excess reserves to release in periods of shortages. In the past two years, a subsidy of $100 to $120 per MT has allowed sugar exports to Afghanistan and Central Asia ranging between 100,000–300,000 MT. The export subsidy remains among the few distortions in an otherwise liberal trade regime in this sector. Since the early 1980s, the GoP abandoned the formal maintenance of buffer stocks; however, the Trading Corporation of Pakistan procures sugar from the manufacturers for export purposes, and at the direction of the government releases strategic stock periodically to regulate sugar prices. There has been a complete removal of price and distributional controls by the GoP on refined sugar, accompanied by the abolishment of input subsidies to sugarcane farmers.

India by far is the world's largest producer of sugar, and the second-largest producer of sugarcane after Brazil. Sugarcane contributes around 7.5 percent of the gross value of agricultural

production.[130] There are an estimated 50 million farmers in India whose livelihoods depend on sugarcane cultivation, while another 50 million agricultural laborers are involved in the cultivation process. Across India, about 60 percent of all sugarcane produced is used for producing refined sugar, while 30 percent is used for producing *gur* and Khandsari (varieties of brown sugar). India on average has both a relatively higher yield per ha and a higher recovery rate than Pakistan.

The level of sugar production in India is approximately six times higher than that of Pakistan. Compared to Pakistan's privately owned sugar industry, the ownership structure of the sugar industry is much more diverse in India.[131] The larger share of the public- and semipublic-sector companies (cooperatives) entails that "sick" or bankrupt units are kept afloat through continued lending from public-sector banks and state government subsidies.[132] The level of per capita consumption of sugar at 15.5 kg in India is still substantially lower than 22 kg in Pakistan. Table A6.1.4 in Annex 6.1 captures the differences in scale of this sector in the two countries.

Strong domestic production and lower domestic prices (though still relatively higher than world prices) have led India to explore export markets in recent years. There have been periodic exports of sugar to neighboring counties such as Bangladesh and Sri Lanka, and also to the Middle East and Africa. The estimated sugar exports of India for the year 2002/03 were around 1.7 million MT. The sugar sector in India is heavily protected, as sugar imports are blocked by a tariff of 60 percent plus a countervailing duty of Indian Rs 850 per ton. On top of this, a range of export incentives and subsidies have been provided by the Indian government. The principal input subsidies for agriculture, and therefore also for sugarcane farming, are fertilizer, canal irrigation, electricity for pump sets, and credit.[133] As sugarcane cultivation is highly water-intensive, the underpricing of canal irrigation water (below its opportunity cost) is by far the largest indirect subsidy.[134] There are a range of export subsidies for the sugar industry, including the Duty Exemption Passbook at 4 percent of the FOB value of the exported sugar, an internal transport and freight subsidy of Indian Rs 1,000 per MT, a further Rs 350 per t for ocean freight, and, finally, Rs 500 per ton for handling and marketing charges.[135]

Comparison of Cost Competitiveness in the Sugar Sector

A. Sugarcane Cultivation Stage

Tables 6.4 and 6.5 give estimates of production costs at the sugarcane cultivation stage in the largest sugarcane-growing province of Pakistan—the Punjab[136]—and selected sugarcane-growing states of India.[137] We have used the seemingly more reliable costs estimated by APCom and LUMS for our cost comparisons.[138] All Indian states have a relative cost advantage if compared with APCom estimates. Although the difference in cost advantage of Maharashtra, Karnataka, and Tamil Nadu is quite large relative to Pakistan, Uttar Pradesh, which contributes 42 percent of Indian sugarcane production, has a smaller margin in cost of production if compared with the APCom cost estimates for Pakistan. It has a slightly higher cost of production if compared with LUMS estimates for Punjab, Pakistan. The first obvious reason behind the cost advantage in Indian states can be attributed to the nested production and input subsidies, which are still prevalent in the Indian agricultural sector. The second might be because of higher sugarcane productivity in India, which is reflected by both a greater average yield per ha and also a higher sugar recovery rate.

Table 6.4. Cost of Production of Sugarcane in Pakistan, 2003/04

	Punjab Government Estimates (Punjab)[a]	APCom Cost Estimates (Punjab)[b]	APCom Cost Estimates (Sindh)[b]	LUMS Farmer Survey Estimates (Punjab)[c]
Net cultivation cost, including land rent (Rs)	23,125.04	18,122.29	20,194.47	18,250.43
Yield per acre (40 kg)	550	565.15	676.02	679.92
Cost at farm level (Rs per 40 kg)	42.05	32.07	29.87	26.84
Marketing expenses (Rs per 40 kg)	2.00	4.75	4.82	4.38
Cost (Rs per 40 kg) at factory gate	44.05 (41.15)*	36.82 (34.39)*	34.69 (32.41)*	31.22 (29.16)*

Note: We subtract markup on investment from cost of production estimates provided by the Government of Punjab and APCom to make them comparable with the LUMS Survey of Wheat Farmers 2003–04 and CACP Cost of Production Estimates for sugarcane in India, reported in Table 5.I in Annex I.
*Adjusted for 8.5 percent recovery rate.

Sources: a) Government of Punjab, personal communications; b) APCom, Islamabad, Pakistan;
c) Khan et al. (2006) for details on LUMS Survey of Wheat Farmers 2003–04.

Table 6.5. Cost of Production Estimates for Sugarcane in India, 2003/04

Indian State	Cost in Indian Rs per 40 kg	Cost in Pak Rs per 40 kg
Andhra Pradesh	25.95	32.57
Karnataka	18.57	23.30
Maharashtra	18.53	23.25
Haryana	22.12	27.76
Tamil Nadu	19.36	24.30
Uttar Pradesh	24.05	30.19

Note: The cost of production estimates reported in this table are based on C2 cost per quintal obtained from the reports of the CACPs (converted into cost per 40kg), which includes interest on value of owned capital assets (excluding land). To make these numbers consistent with cost-of-production estimates from Pakistan, C2 cost is adjusted by subtracting interest on the value of owned capital assets obtained from Government of India (2003).
Source: Government of India (2003).

B. Sugar Production Stage

Table 6.6 gives a comparison of production cost for sugar manufacturing in India and Pakistan. On average, the total cost of production in Pakistan is lower than in India. The items in which Pakistan seems to have an advantage are raw and packaging materials, labor, and overhead. The major component in the production cost of sugar is the raw material—sugarcane. In India, the support price of sugarcane has consistently been lower than in Pakistan.[139] In times of domestic shortages, the Government of India allows duty-free raw sugar import in order to keep the production and price of refined sugar stable. Therefore, compared to Pakistan the manufacturing sector, the Indian sugar industry should be, at least in theory, purchasing sugar at a relatively lower cost. The minimum support price in India, however, is lower than the state-advised prices, the rate at which sugarcane is procured by the mills (Figure 2).[140] Thus, the higher state-advised prices might be the reason behind this rather unexpected cost differential for raw materials; i.e., sugarcane. Higher labor costs in India can be attributed to the large share of the public sector in the sugar industry,[141] with binding minimum wage laws, bargaining power for labor unions, and the general problem of overemployment in public corporations.[142] The Pakistani sugar industry is predominantly privately owned, and labor laws such as minimum wages are not binding and hiring is fairly optimum.

Table 6.6. Production Cost of Sugar, 2002

	Pakistan		India	
	Pak Rs/tonne	Percent	Pak Rs/tonne	Percent
Raw and packaging material	11,645	85.0	14,007	83.4
Stores and spares	594	4.3	569	3.4
Fuel and power	203	1.5	191	1.1
Labor	1,082	7.9	1,426	8.5
Other overhead	171	1.3	601	3.6
Total	13,695	100.0	16,794	100.0

Source: Industrial Research Services (2002)

Figure 6.2: Comparison of Sugarcane and Sugar Prices for India and Pakistan
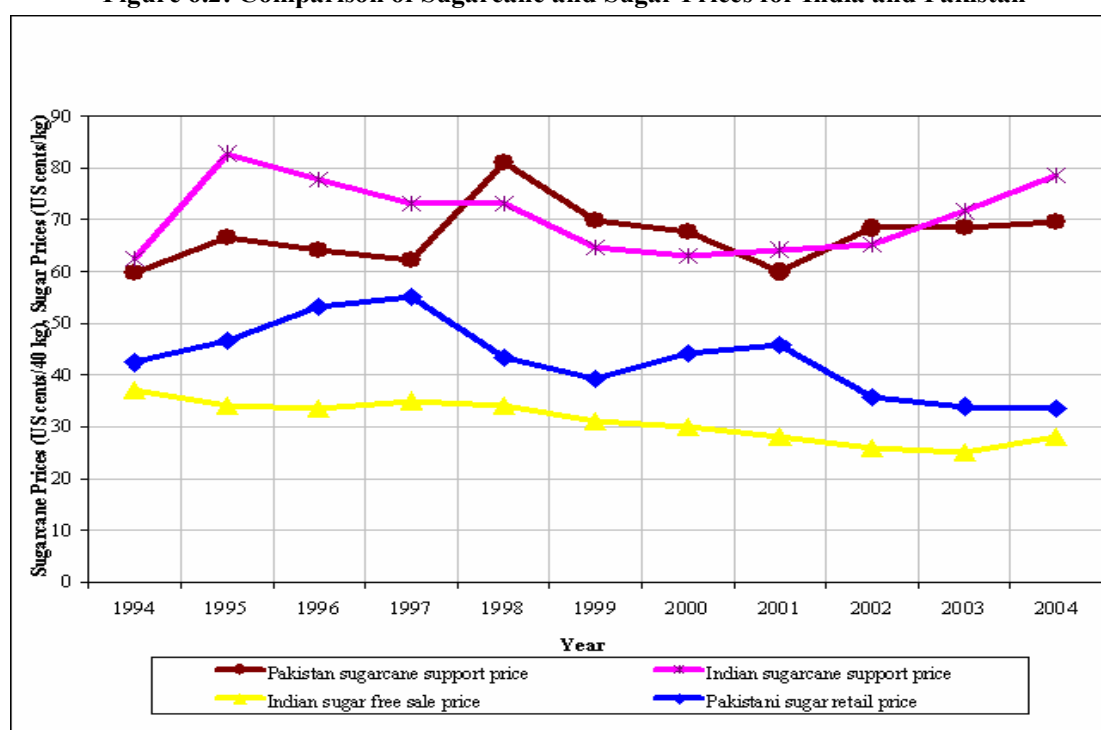
Source: PSMA (2005), ISMA (2004)

The "free sale" price of Indian sugar has been consistently lower than the retail price of sugar in Pakistan (except in 1999 and 2004), which is in apparent contradiction to the cost estimates (Figure 6.2). The reason could be that in Pakistan, the private sugar-manufacturing sector has formed a cartel (the Pakistan Sugar Mills Association) which keeps the domestic sugar prices high and maximizes profit margins. In comparison, the Indian sugar industry consists of private, public, and cooperative firms. This reduces the incentive for forming any significant cartels. Moreover, the dominance of cooperative firms (60 percent of total mills) are individually too small to have any market power, and being semipublic are not entirely driven by the profit motive.[143] The industry structure in the two countries results in relatively lower "free sale" prices and profit margins in India compared to Pakistan. Therefore, given the consistent price differential of sugar, we can safely assume that India has a comparative advantage over Pakistan at the manufactured-sugar-price end.

Simulating Welfare Analysis of Sugar Trade Between India and Pakistan

India and Pakistan have both been net exporters and net importers of refined sugar (Figure 6.3). The ability of both the countries to export sugar in a particular year rests primarily on total yield of sugarcane, and hence the level of sugar production in that year. As sugarcane is a water-intensive crop, the monsoons in the subcontinent play a vital role in production of sugarcane and, consequently, in sugar production. In the years 1998/99 to 2002/03, Indian sugar production benefited from good monsoons resulting in high sugar production, accumulation of stocks, and exportable surpluses. In Pakistan, however, 2000–02 were drought years resulting in low sugar production and deficits, which were met by sugar imports from Brazil and the European Union. We simulate the net welfare impact on Pakistan if the deficit in the year 2000/01 was met by import of sugar from India. The choice of 2000/01 as the year for which we conduct the simulation exercise rests upon the fact that, in this particular year, Pakistan was a net importer of sugar while India was a net exporter.

Figure 6.3: Net Exports of Refined Sugar by India and Pakistan

Net Exports of Refined Sugar

Quantity in metric tonnes

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
Pakistan	310698	-248866	-340000	705374	885602	-747858	-319158	-81884	23842
India	106885	389521	-41254	-544617	-696550	126872	1046571	1433293	882298
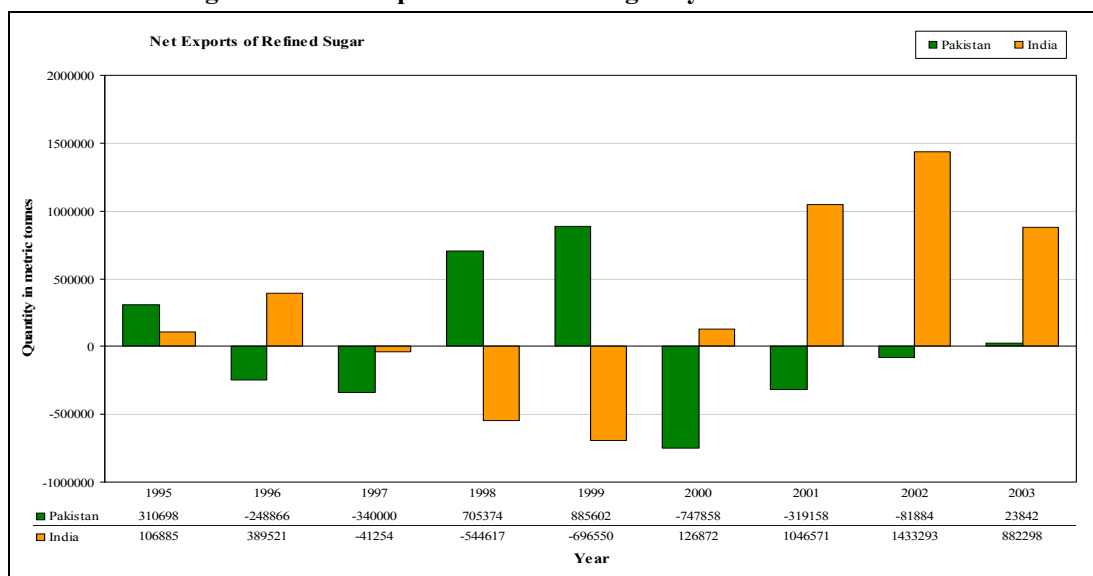
Source: Food and Agriculture FAOSTAT database

A. The Initial Equilibrium

In the year 2000/01, sugar production in Pakistan, given a domestic price of Rs 24.4 per kg, was 3.156 million MT, while consumption was around 4.02 million MT. The resultant deficit of 0.864 million MT was met by imports. The import price that year was $270.20 per million MT , which in Pakistani rupees comes to Rs 15.57 per kg.[144] With the 25 percent custom duty (which was subsequently reduced to zero in FY05), traders' premium, and local taxes plus domestic transportation costs, the import price approximates the domestic price of Pak Rs 24.4 per kg. In India, during that year, there was a large exportable surplus of 3.476 million MT at the prevailing wholesale price of Pak Rs 17.17 per kg. A large portion of the surplus was kept as stock by the government, while 1.087 million MT was exported at an approximate price of Pak Rs 14.1 per kg. The difference in the wholesale price and the export price in India is accounted for by the wide range of export subsidies provided in India, which had the effect of increasing the exportable surplus.

As the sugar economy in Pakistan is relatively much smaller than that in India, the import demand (or excess demand) of sugar in Pakistan, which is just a fraction of the Indian exportable surplus, is likely to have a negligible effect on the Indian wholesale and export price. Therefore, Pakistan is treated as a small country, and hence a price taker in trade with both the rest of the world

and vis-à-vis India. On the other hand, although India is the highest producer of sugar in the world, its high level of total domestic consumption entails a small fraction of exports compared to the aggregate world exports. In the year 2000/01, Indian exports as a share of world exports was a mere 4 percent. Thus, we can safely assume that because Indian sugar exports are small compared to the rest of the world, its export supply function is unlikely to have any effect on the world sugar prices, making India a world price taker. To evaluate the impact of the opening up of trade on Pakistan, we use sugarcane demand and supply elasticity of −0.495 and 0.487, respectively, estimated by Chaudhary et al. (1999).[145]

B. Free Trade Agreement (FTA)

We now assume an FTA between the two countries, which allows duty-free imports from India to cater to the entire sugar deficit in the Pakistani market. India would have an incentive to export to Pakistan if it exports sugar at a price greater than Pak Rs 14.1 per kg—the export price in 2000–01 to the rest of the world. On the other hand, if Pakistan is assumed to maintain its duty structure on imports from the rest of the world such that the relevant domestic price is the prevailing price of Pak Rs 24.4 per kg, then it would be willing to import from India at any price less than that.[146] We assume that the price of the imported sugar in Pakistan would be approximately the same as the prevailing domestic Indian price of Pak Rs 17.7 per kg under an FTA.[147]

Duty-free imports from India are at a lower price than the domestic price (import price plus tariff and other charges) in Pakistan before the opening of trade with India. This results in an increase in trade (import) volume from 0.864 million MT to 1.915 million MT. The lower-price imports from India would generate an increase in consumer surplus of Pak Rs 31.2 billion and a decrease in producer surplus by Pak Rs 21.2 billion in Pakistan.[148] There would also be a complete loss in the tariff revenue generated by the government and the rents earned by traders of Pak Rs 7.6 billion. The net gain in welfare in Pakistan under an FTA regime with India is Pak Rs 2.42 billion.

C. South Asian Free Trade Agreement (SAFTA)

Under SAFTA, the import tariff on commodities from member countries would be reduced to 5 percent. The 5 percent tariff on Indian sugar would result in the domestic prices in Pakistan being equal to Pak Rs18.03 per kg, with imports from India at 1.785 million MT. The gain in consumers' surplus in this case would be Pak Rs 27.26 billion, while the loss in producer surplus would be Pak Rs 18.82 billion. As the domestic price would be higher due to the 5 percent tariff, the producer-surplus loss is not as much as in the FTA scenario; however, the higher-than-FTA prices also reduce the consumer gain. The government and traders lose revenue, but the government would be partially compensated through the revenue generated from the increase in imports at the 5 percent tariff rate. The net loss in revenues would be, therefore, much less than the FTA case, and would approximate Pak Rs 590 million. The net welfare gain from SAFTA would be Pak Rs 2.3 billion, which is slightly less than the gain under the FTA regime.

D. Most-Favored Nation (MFN)

If Pakistan were to grant MFN status to India, it would have to impose the same duty as it does on other trading partners. In 2000/01, Pakistan would have imposed a 25 percent custom duty on imported sugar from India. This would entail an import price of Indian sugar of around Pak Rs 21.46 per kg, which is still lower than the price at which Pakistan was importing from the rest of the world. Hence, we simulate that at this price there would be an increase in import volumes relative to the initial equilibrium to 1.237 million MT, but this increase would be lower than the previous two trade scenarios because of a higher tariff rate. The resultant increase in consumer surplus would be only Rs12.1 billion because of the marginal difference in price from the initial equilibrium. Likewise, the producer surplus loss is also of a lower magnitude—around Rs 9 billion. The interesting effect would be on government revenue, which unlike the two previous cases would register an increase of Rs 218 million. This would be due to the relatively higher import volumes compared to the initial

equilibrium, which bear a tariff rate of 25 percent. The net increase in welfare under the MFN scenario (Pak Rs 766 million) would be lower than the two other scenarios, primarily due to the marginal difference in prices before and after trade with India. These results are summarized in Table 6.7.

Table 6.7. Welfare Effect of Trade Under Three Regimes—Summary

Effect on Welfare of Pakistan	FTA	SAFTA	MFN
Increase in consumer surplus (Pak Rs)	Rs 31.22 billion (gain)	Rs 27.26 billion (gain)	Rs 12.1 billion (gain)
Loss in producer surplus (Pak Rs)	Rs 21.17 billion (loss)	Rs 18.83 billion (loss)	Rs 9 billion (loss)
Change in revenue (government and traders, etc.) (Pak Rs)	Rs 7.6 billion (loss)	Rs 590 million (loss)	Rs 218 million (gain)
Net welfare change (Pak Rs)	Rs. 2.42 billion (gain)	Rs 2.3 billion (gain)	Rs 766 million (gain)

Policy Lessons and Implication of the Welfare Analysis for Sugar Trade Policy in Pakistan

If Pakistan had a sugar deficit and sugar imports from India were allowed, then there would have been a net welfare gain for Pakistan. Our results show that the highest welfare gain would accrue under an FTA with India, followed by gains under SAFTA, and then finally by granting MFN status to India.

- As in the case of wheat, we find no clear cost advantages to either India or Pakistan at both the cultivation stage of sugarcane and the manufacturing stage of sugar. For the period of our analysis (2000/01), Indian wholesale and "free sale" prices of sugar were lower than the retail price of sugar in Pakistan. Over the years, however, prices in both countries have tended to converge, thus casting doubts on the presence of a definite comparative advantage for India and also suggesting that Pakistan could gain by exporting sugar to India in periods when it has surpluses. Thus, mutually beneficial sugar trade is possible for domestic deficit and surplus management by both countries. Moreover, the two countries could also meet their sugarcane or raw sugar shortages through bilateral trade.
- In times of domestic shortages, Pakistan could increase domestic welfare by importing cheaper sugar from India instead of importing from international markets.[149] Positive welfare effects are possible for India, however, only if it reduces its prohibitive tariffs on sugar imports from Pakistan.
- Another important factor that can potentially impact the pattern of sugar trade between India and Pakistan over time is subsidies for the sugarcane growers and sugar manufacturers in India. Total subsidy on sugar, according to the estimates of Mullen et al. (2005) in 2002, was about Indian Rs 24.4 billion.[150]. Removing subsides in India is likely to increase domestic sugar prices in India, and there may be a reversal of competitiveness in favor of Pakistan. Thus, Pakistan should negotiate a reduction in domestic subsidies with India as part of SAFTA negotiations to improve prospects for agricultural trade.

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Annex 6.1. Data Tables

Table A6.1.1. Patterns of Wheat Production in India and Pakistan

	India			Pakistan		
	Area (million ha)	Production (million MT)	Yield (kg/ha)	Area (million ha)	Production (million MT)	Yield (kg/ha)
1950–51	9.8	6.5	663	--	--	--
1960–61	12.92	10.99	851	4.63	3.81	823
1970–71	18.24	23.83	1,307	5.97	6.47	1,084
1980–81	22.27	36.31	1,630	6.98	11.47	1,643
1990–91	24.16	55.13	2,282	7.91	14.56	1,841
2000–01	25.73	69.68	2,708	8.18	19.02	2,326
2001–02	26.34	72.76	2,762	8.05	18.22	2,263
2003–03	24.88	65.12	2,617	8.03	19.18	2,389
2003–04	27.30	72.06	2,640	8.17	19.76	2,419
Annual Growth Rates						
1966/67–2000/01	1.57	4.54	2.96	1.26	3.70	2.45
1980/81–2000/01	0.89	3.42	2.53	0.87	2.95	2.08
1990/91–2000/01	1.32	3.05	1.73	0.46	2.92	2.46

Sources: Government of Pakistan (2005) and Government of India (2005)

Table A6.1.2. Pakistan's Trade in Wheat, 1987/88–2004/05

Year	Production (million MT)	Export (million MT)	Import (million MT)	Net Export (million MT)	Procurement (million MT)	Procurement Price (Pak Rs/40 kg)
1987/88	12.67	0.006	0.601	−0.595	3.98	82.50
1988/89	14.42	0.002	2.171	−2.169	3.49	85
1989/90	14.32	0.002	2.047	−2.045	4.14	96
1990/91	14.56	0.002	0.972	−0.97	4.41	112
1991/92	15.68	0.003	2.018	−2.015	3.16	124
1992/93	16.16	0.004	2.868	−2.864	3.25	130
1993/94	15.21	0.008	1.902	−1.894	4.12	160
1994/95	17.00	0.004	2.717	−2.713	3.64	160
1995/96	16.91	0.008	1.968	−1.96	3.74	173
1996/97	16.65	0.005	2.500	−2.495	3.45	240
1997/98	18.69	0.009	4.088	−4.079	2.73	240
1998/99	17.86	0.009	3.240	−3.231	3.98	240
1999/00	21.01	0.061	1.048	−0.987	4.07	300
2000/01	19.02	0.835	0.149	0.686	8.58	300
2001/02	18.23	1.280	0.267	1.013	4.08	300
2002/03	19.18	0.64	0.267	0.373	4.04	300
2003/04	19.50	1.14	0.148	0.992	3.51	350
2004/05	21.11	0.006*	1.50*	-1.494	4.73	400

Sources: Government of Pakistan (2005) and Food Balance Sheets, FAOSTAT, electronic data files.
* Indicates data was obtained from USDA electronic database.

Table A.6.1.3. India's Trade in Wheat, 1987/88–2004/05

Year	Production (million MT)	Export (million MT)	Import (million MT)	Net Export (million MT)	Procurement (million MT)	Procurement Price (IRs/40 kg)
1987/88	46.17	0.275	0.021	0.253	7.9	--
1988/89	54.11	0.016	1.792	−1.777	6.6	--
1989/90	49.85	0.012	0.033	−0.021	8.9	86
1990/91	55.14	0.14	0.064	0.076	11.1	90
1991/92	55.69	0.66	0	0.660	7.8	110
1992/93	57.21	0.038	1.364	−1.326	6.4	132
1993/94	59.84	0.004	0.242	−0.238	12.80	140
1994/95	65.77	0.092	0.001	0.091	11.90	144
1995/96	62.10	1.091	0.009	1.082	12.33	152
1996/97	69.35	1.848	0.613	1.235	8.16	190
1997/98	66.35	0.022	1.486	−1.464	9.30	204
1998/99	71.30	0.004	1.804	−1.800	12.65	220
1999/00	76.38	0	1.366	−1.366	14.14	232
2000/01	69.69	0.813	0.004	0.809	16.35	244
2001/02	72.80	2.649	0.001	2.648	20.63	248
2002/03	65.10	3.671	0	3.671	19.05	248
2003/04	72.06	4.093	0.004	4.089	15.80	252
2004/05*	73.5	1.50	0.02	1.48	16.79	256

Source: Government of India (2005), various issues.
* Indicates data was obtained from USDA electronic database

Table A6.1.4. The Sugar Industry in India and Pakistan: Some Comparisons in 2002/03

(million metric tonnes)

	India	Pakistan
Sugarcane production	285	52
Sugar production	20.1	3.6
Sugar consumption	18.2	3.4
Number of operating sugar mills	453	65

Source: PSMA (2005) and Pursell (2004)

Table A6.1.5. Impact of Opening Up to Trade of Sugar with India (FTA), 2000/01

Pakistan	Before FTA	After FTA
Production (000 MT)	3,156	2,701
Consumption (000 MT)	4,020	4,616
Imports (000 MT)	864	1,915
Wholesale price (Rs per kg)	24.40	17.17
Δ in consumer surplus (Pak Rs)	--	Rs 31.22 billion
Δ in producer surplus (Pak Rs)	--	− Rs 21.17 billion
Δ in revenue (govt + trader) (Pak Rs)	--	−Rs 7.6 billion
Δ in net welfare (Pak Rs)	--	Rs. 2.42 billion

TableA.6.1.6. Impact of Opening-up of Free-Trade of Sugar with India (SAFTA), 2000/01

Pakistan	Before SAFTA	After SAFTA
Production (000 MT)	3,156	2,755
Consumption (000 MT)	4,020	4,540
Imports (000' MT)	864	1,785
Wholesale price (Rs per kg)	24.40	18.03
Δ in consumer surplus (Pak Rs)	--	27,263.60(Rs 27.26 billion)
Δ in producer surplus (Pak Rs)	--	18,826.54 (Rs 18.83 billion)
Δ in revenue (govt. + trader) (Pak Rs)	--	-590.34(Rs 590 million)
Δ in net welfare (Pak Rs)	--	2,343.05 (Rs 2.3 billion)

Table A6.1.7. Impact of Opening-up Free Trade of Sugar with India (MFN), 2000/01

Pakistan	Before MFN	After MFN
Production (000 MT)	3,156	2,971
Consumption (000 MT)	4,020	4,208
Imports (000 MT)	864	1,237
Wholesale price (Rs per kg)	24.40	21.46
Δ in consumer surplus (Pak Rs)	--	12,095.16 (Rs 12.1 billion)
Δ in producer surplus (Pak Rs)	--	-9,006.69 (Rs 9 billion)
Δ in revenue (govt + trader) (Pak Rs)	--	217.77 (Rs 218 million)
Δ in net welfare (Pak Rs)	--	766.08 (Rs 766 million)

Chapter 7
Pakistan–India Trade: Impact on the Textile Sector

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The textiles and clothing industries are by far the largest manufacturing industries in both Pakistan and India, in terms of their share of gross domestic product (GDP), employment, exports, and many other indicators. For example, after China they are the world's largest producers of textile yarns and fabrics and largest consumers of cotton. Trade in textiles and clothing products between them, however, has been tiny compared to both countries' exports to the rest of the world. To what extent is the minimal level of this two-way trade in textiles and clothing products the outcome of the two countries' very restrictive trade policies toward each other? Would this change very much if these restrictive policies were removed? What are the likely economic welfare consequences? This chapter attempts to answer these questions in a qualitative manner, following the logic of a simple partial equilibrium trade model.[151] In considering these questions, this study distinguishes two basic scenarios of more open policies affecting bilateral trade:

- restoration of normal trade relations, also known as "most-favored nation" (MFN) status, between the two countries, and
- preferential elimination of trade barriers between the two countries, such as in the context of a regional free trade agreement (FTA).

Based on an analysis of market conditions and trade policies in the two countries, this chapter argues that restoration of normal trade relations in textiles and clothing would likely have a small but beneficial impact on both India and Pakistan. Eliminating all barriers to intraregional textiles and clothing trade would likely induce some limited specialization and trade in intermediate inputs for use in exports to high-income countries. In most cases, preferential liberalization of textiles and clothing trade under the South Asian Free Trade Area (SAFTA) would increase overall economic welfare. It probably would not lead to trade diversion, since both Pakistan and India are already very competitive. Polyester fibers represent the big exception. Since the governments of both countries maintain barriers to trade in polyester fibers and their components, preferential liberalization would likely lead buyers to switch to less efficient regional suppliers and away from more efficient world suppliers. To prevent this, both countries should gradually liberalize this trade on a nondiscriminatory basis first, before liberalizing preferentially.

This chapter first reviews conditions in different textiles and clothing sectors. It then describes current trade policies. A qualitative analysis of the welfare effects of trade liberalization is then presented. The chapter concludes with implications for policy makers.

Economic Context of Textiles and Clothing

Both India and Pakistan benefit from highly competitive textiles and clothing markets. The textiles and clothing sectors of India and Pakistan are very large both in absolute terms and relative to the two economies, as measured by shares of GDP and total exports (Table 7.1). The sector is much more important for Pakistan than it is for India, accounting for about 9 percent of GDP and 68 percent of total exports, versus 2.6 percent of GDP and 21 percent of exports in India. In both countries, textiles and clothing imports are very small in relation to total imports and also in relation to domestic production.

Table 7.1. The Textiles and Clothing (T&C) Sectors in India and Pakistan

	India	Pakistan
Share of GDP (percentage)	2.6	9
Value of T&C exports (million $) in 2003/04	13,479	8,351
Value of T&C imports (million $) in 2003/04	1,191	482
T&C exports as share of total exports (percentage)	21.1	67.8
T&C imports as share of total imports (percentage)	1.5	3.1

Source: Indian trade data from export-import data bank. Pakistan trade data from Central Board of Revenue and Textile Commission's Organization. Indian GDP share as estimated by Jatinder S. Bedi, *Economic Reforms in the Textile Industry* (Delhi: Commonwealth Publishers, 2002) for 1999/2000. Pakistan GDP share as given in *Economic Survey 2003/04*.

A large share of production in both countries is oriented toward exporting to the world market, principally to high-income countries. As a general rule, if an export-oriented segment of the economy is competitive, there is limited potential for imports into that market from other countries even if there are no tariffs or other barriers to imports. This is because competition tends to equalize gross margins in the different markets in which the firms sell, so that gross margins in direct export markets, indirect export markets, and domestic markets will be about the same. Otherwise, if margins and overall profitability are higher in one of these markets, firms will tend to shift production to it, thereby reducing margins in that market and raising margins in the markets from which sales have been shifted. For domestic sales, ex-factory prices approximate free-on-board export prices plus input tariffs. Hence, it would be difficult for imports to compete in the domestic market even with free trade, e.g., under an FTA.

Although India's total textiles and clothing exports are about 70 percent greater than Pakistan's, the broad product composition is very similar. Exports from both countries of cotton textiles, synthetic textiles, carpets and floor coverings, knitted garments, woven garments, and made-ups are competing in international markets, to a large extent in the same countries. Insofar as the value of total exports of these product groups is an indication of relative competitiveness, India is outcompeting Pakistan in synthetic textiles, carpets, knitted garments, and woven garments, and Pakistan is more competitive than India in cotton textiles and made-ups. We turn now to more detailed descriptions of various textiles and clothing markets.

The Market for Fibers

India and Pakistan are respectively the world's third- and fourth-largest cotton producers, after China and the United States. During the 1980s and before, both countries were large cotton exporters. Since the mid-1990s, Pakistan has been a net importer in most years, and India has consistently been a net importer since 1999. Most of Pakistan's cotton is short staple and is best suited for low-count (coarse) yarns. India has a much higher proportion of medium- and long-staple cottons, which can be used to produce higher-count yarns. Both countries removed their cotton export controls during the 1990s and since then have drastically reduced synthetic fiber tariffs. So this additional source of discrimination, while it still exists, is quite moderate by past standards.[152]

Table 7.2 Fiber Production and Trade in Pakistan and India 2003/04 ('000 MT)

Type of Fiber	Production	Exports	Imports	Domestic Supply	Exports as % of Production	Imports as % of Domestic Supply	Fiber Type as % of Supply
India							
Cotton	3,009	177	242	3,074	5.9	7.9	76.6
Synthetic fibers	965	55	28	938	5.7	2.9	23.4
Total	3,974	232	270	4,012	5.8	6.7	100.0
Pakistan							
Cotton	1,708	37	393	2,064	2.2	19.0	69.1
Synthetic fibers	951	52	24	923	5.5	2.6	30.9
Total	2,659	89	417	2,987	3.3	14.0	100.0

Source: For Pakistan, calculated from data in APTMA, *Annual Review 2003–04*; for India, calculated from Textile Commissioner, *Compendium of Textile Statistics, 2004*.

The Market for Yarns

As noted previously, the textiles and clothing sector in Pakistan is much larger relative to Pakistan's economy than the textiles and clothing sector in India. This is apparent from estimates of total yarn production. Table 7.3 indicates that Pakistan's total production in 2003/04 was about 37 percent of India's. Pakistan specializes in cotton and cotton-synthetic blended spun yarns, of which its production is about 64 percent of India's. Pakistan's production of filament yarns and jute and other vegetable-fiber yarns, however, were respectively only about 10 and 7 percent of India's production, less than the respective sizes of the two country's population and economies.

Table 7.3. Yarns Production and Trade in India and Pakistan 2003/04 ('000 MT)

Type of Yarn	Production	Exports	Imports	Domestic Supply	Exports as % of Production	Imports as % of Domestic Supply
India						
Spun	3,052	623	15	2,445	20.4	0.6
Filament	1,118	118	142	1,142	10.6	12.4
Subtotal	*4,170*	*741*	*157*	*3,587*	*10.6*	*12.4*
Jute, etc.	1,571	97	5	1,479	6.2	0.3
Silk, wool, shoddy	103	4	2	101	4.2	2.4
Total	***5,844***	***842***	***165***	***5,167***	***14.4***	***3.2***
Pakistan						
Spun	1,939	514	6	1,431	26.5	0.4
Filament	110	8	111	212	8	52.3
Subtotal	*2,049*	*522*	*117*	*1,643*	*25.5*	*7.1*
Jute, etc.	110	0	0	110	0.0	0.0
Silk, wool, shoddy	n.a.	0	2	n.a.	n.a.	n.a.
Total	***2,159***	***598***	***117***	***1,678***	***27.7***	***7.0***

Source: APTMA for Pakistan; Textile Commissioner for India.

In both countries polyester filament yarn is around 90 percent of total filament yarn production. In India, polyester filament yarn production has grown at an average rate of about 14 percent a year since 1990/91, and is currently growing at about 8 percent a year. Pakistan production has grown very slowly and increased demand has principally been met by imports. In contrast to the spun-yarn industry, in both countries production of filament yarns is concentrated in relatively few firms with links to the chemical and petrochemical industries.

The Market for Fabrics

Indian fabric markets: While precise data on fabric production and use are lacking, it is estimated that, in terms of quantities, about 23 percent of fabric production was exported either directly or indirectly, and 77 percent is supplied to the domestic market (Table 7.4).[153] As on average, textile fabrics that are exported are of higher value than the fabrics sold domestically, the export share of total value of production is higher (26 percent). Most exports are indirect—in the form of fabric inputs into garment exports and fabric inputs into made-up exports. Although they have been growing faster than exports in recent years, fabric imports constitute only 1.5 percent of the quantity and 2.2 percent of the value of domestic production, mostly for use as inputs into exported garments.

Recent years have seen a shift to synthetic and blended fabrics and a decline in 100 percent cotton fabrics production. This decline is especially rapid in domestic markets, where synthetic textiles are now dominant, especially in rural and lower-income urban markets. The reasons for the increasing dominance of synthetics is not only the steady reduction in the previously prohibitive indirect taxes but also the fact that, once prices fell enough to allow low-income Indian households to buy synthetics, the strong underlying preference for several characteristics was revealed, notably, ease of washing and durability.

Table 7.4. Indian Fabric Production and Trade 2003/04 (Million m^2 and $ million)

		Million m^2	% of Prod	$ Million	Ave. Price $/m^2	% of Total Prod
1	Cotton and synthetic: domestic availability from production	26,457	75.9	23,282	0.88	68.0
2	Direct exports—woven cotton & synthetics	1,401	4.0	1,918	1.37	5.5
3	Direct exports—carpets, industrial and knitted,etc.	476	1.4	957	2.01	2.8
4	Direct exports—silk	40	0.1	330	8.25	1.0
5	Direct exports—wool	3	0.0	17	5.67	0.0
6	Indirect exports—inputs into garments exports	3,190	9.2	4,370	1.37	12.8
7	Indirect exports—inputs into made-up exports	2,754	7.9	1,300	0.47	3.8
8	Production—cottons & synthetics	34,278	98.4	31,827	0.93	92.9
9	Production—silk, wool, and shoddy	572	1.6	2418	4.23	7.1
10	Total production	34,850	100.0	34,245	0.98	100.0
11	Imports	513	1.5	769	1.50	2.2
12	Household purchases	19,112	54.8	19,112	1.00	55.8
13	Institutional and industrial purchases	8,387	24.1	7,010	0.84	20.5
14	Total domestic market purchases	27,499	78.9	26,122	0.95	76.3

Source: Author's calculations using data in Bedi (2002), Ministry of Commerce export-import data bank, *Compendium of Textile Statistics* 2004.

Pakistan's fabric markets: As in India, there are no comprehensive statistics for Pakistan fabric production.[154] Although there are many statistical uncertainties, two findings clearly come through. Firstly, fabric production in Pakistan is heavily export-oriented, with roughly 75 percent of production directly or indirectly exported and 25 percent sold domestically (Table 7.5). These shares are the reverse of India's, where direct and indirect exports are about 25 percent of production, but the domestic market is much larger both in absolute terms and relative to total production. Hence, preferential access to each other's fabric markets under SAFTA is a priori of more interest to Pakistani than to Indian textile firms.

Secondly, as in India, the import share of the fabric market in Pakistan is very low: only about 2 percent. About half the very small volume of imports in 2003/04 entered duty-free, imported as inputs for exported garments or made-ups.[155] The fact that exports to this market from other countries were only about $74 million in a total market of roughly $4.2 billion suggests that there would not be any clear formal advantages for Indian textile exporters to access this part of the Pakistan market under a bilateral FTA or SAFTA.

Table 7.5. Pakistan Fabric Production and Trade 2003/04 (Million m^2 and $ million)

		Million m^2	% of Total Prod	$ million	Ave. Price $/m^2	% of Total Prod
1	Cotton cloth exports	2379	19.6	1,742	0.73	21.9
2	Synthetic fabric exports	653	5.4	468	0.72	5.9
3	Bedwear exports	1,968	16.2	1,110	0.56	14.0
4	Other made-up exports	463	3.8	336	0.73	4.2
5	Tent and canvas exports	188	1.6	59	0.31	0.7
6	Towel exports	805	6.6	300	0.37	3.8
7	Carpet exports	4	0	220	55.28	2.8
8	Estimated fabric content of garment exports (HS 62)	970	8.0	702	0.72	8.8
9	Est. knitted fabric content of hosiery exports (HS 61)	1,623	13.4	1,177	0.73	14.8
10	Subtotal: Direct and indirect exports	*9,054*	*74.6*	*6,115*	*0.68*	*76.9*
11	Est. domestic household consumption	2,500	20.6	1,500	0.60	18.9
12	Est. domestic institutional & industrial consumption	819	6.8	491	0.60	6.2
13	Est. total production & demand	**12,128**	**100**	**7,952**	**0.66**	**100**
14	Imports for domestic market	123	1.0	74	0.60	0.9
15	Imports of inputs for exports	122	1.0	80	0.65	1.0
16	Total imports	245	2.0	154	0.63	1.9

Source: Author's calculations using data from the Textile Commission's Organization and APTMA.

The Markets for Garments and Final Products

The total Indian domestic market for cotton household products is substantial: about $7.6 billion at retail prices in 2002. The size of the potential markets for Pakistan suppliers, however, is much less than this. Firstly, the value of household purchases of cotton products at ex-factory prices, which would approximate export prices, is probably 20–30 percent lower than at retail prices: say $5 to $6 billion.[156] Secondly, many of these household products are entirely or predominantly made from medium- to high-count yarns, not from fabrics incorporating low-count yarns in which Pakistan producers consider that they may have an advantage. Of the 67 products included in the textile committee survey, there are only three products where 100 percent cotton varieties have substantial sales, and which are known to be produced—all of them, or at least a substantial proportion, from low-count cotton yarns. This is the market segment where Pakistani exporters would have a comparative advantage.

In recent years, the demand for cotton garments has been increasing. For Pakistan exporters to take advantage of this trend, however, they would need to export the knitted finished cotton products to India, since worldwide the economics of knitted-garment production are such that the fabric-knitting operations are typically housed in the same factory as the sewing, finishing, and packaging operations, and as a result there is minimal international trade in knitted fabrics.

Those interviewed expressed skepticism that the Pakistan knitted-garment industry would be able to compete with Indian producers in the Indian market for products such as T-shirts and polo shirts, and in fact the predominant view seemed to be that with an FTA, trade in these products would mostly go in the other direction: from India to small higher-income and fashion-conscious markets in Pakistan. This would leave cotton wovens as the only products in which Pakistan might have an advantage in Indian household markets, but the share of these products in the total market was only around 17 percent in 1999/2000 and was on a rapidly declining trend that probably brought that share and the absolute size of the market considerably lower by 2005.

Competition in the domestic Indian market is likely to be intense, with domestic gross margins roughly equivalent to or below export gross margins, since many garment producers are supplying both the export and the domestic markets and there are low entry barriers to both. This

suggests that Pakistan garment firms would have difficulty penetrating the Indian domestic ready-made garment (RMG) market even if they were to benefit from a bilateral FTA or from the inclusion of garments in SAFTA. In addition, if the duty-free access were via SAFTA, Pakistan exporters to India would have to compete with RMG exporters in Bangladesh, Sri Lanka, and Nepal.

Table 7.6. India Purchases and Trade of Final Products: Ready-Made Garments, 2002

Domestic Purchases, Imports, and Exports in $ Millions	Knitted	Woven	Total
Domestic household purchases (D)	1,471	5,635	7,106
Other (institutional, etc.) domestic purchases (O)	n.a.	n.a.	n.a.
Imports new (Mn)	11	25	36
Imports used (Mu)	n.a.	n.a.	15
Exports (X)	1,864	3,143	5,007
(D-Mn-X)	3,324	8,778	12,113
Percentage shares			
X/(D-Mn+X) %	56.1	35.8	41.3
Mn/(D+Mn) %	0.7	0.4	0.5
(Mn+Mu)/(D+Mn+Mu) %	n.a.	n.a.	0.7

Source: Trade data from Ministry of Commerce export-import data bank;
Note: n.a. = not applicable

From the perspective of Indian textiles and clothing firms considering whether to export textile products to Pakistan's domestic final-consumer markets, these estimates first of all indicate that in the aggregate and individually these markets are quite small: only about $2.5 billion in total, and considerably smaller, as Pakistan's per capita household consumption is lower than India's. Secondly, they would have to consider that they would be competing with Pakistani textiles and clothing producers, who are exporting most of their output, for whom the domestic markets are largely residual, and in which gross margins are likely to be about equal to or lower than gross margins in export markets. This is particularly the case for knitted and woven ready-made garments, but also for consumer fabrics and made-ups.

Despite this pessimistic view, during discussions in India and Pakistan, it was considered that with normal trading relationships and an FTA there would be some possibilities for Indian exports to higher-income Pakistan consumers based on the Indian advantages in finer fabrics using higher-count cotton yarns and in design, and to low-income Pakistan markets based on Indian advantages in synthetic textiles, especially filament consumer fabrics. It was also considered that there would be markets in Pakistan for products of which there is not much Pakistan production; specifically, high-value silk, wool, and wool-acrylic products, and also jute and other vegetable-fiber products.

Table 7.7. Pakistan Purchases and Trade of Final Products 2001/02 ($ Millions)

	Household Purchases		Exports	Imports	Prod-uction	Exports as % of Prod	Imports as % of Domestic Market
	At retail prices	At ex-plant prices					
Textiles in piece length	695	556	n.a.	n.a.	n.a.	n.a.	n.a.
Garments in piece length	1,205	964	n.a.	n.a.	n.a.	n.a.	n.a.
Woven ready-made garments	879	703	842	1	1,543	54.5	0.2
Knitted varieties (garments)	222	178	882	2	1,057	83.4	1.3
Woven household varieties (made-ups)	169	135	1,807	36	1,907	94.8	21.1
Total	3,169	2,536	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Author's calculations using trade data from Central Board of Revenue;
*Note:* n.a. = not applicable

Trade Flows

The level of bilateral trade is microscopic relative to both countries' textiles and clothing exports to the rest of the world and to their domestic textiles and clothing markets. It is also tiny in

relation to their total textiles and clothing imports, which are already small relative to domestic production and exports. In 2004/05, India's textiles and clothing imports from Pakistan were around one percent of its total textiles and clothing imports, and Pakistan's textiles and clothing imports from India were about 1.4 percent of its total textiles and clothing imports. Nevertheless, over the past six years two-way textiles and clothing trade has been increasing rapidly from an almost invisible level in 1999/2000 and before.

Most Indian exports to Pakistan are cotton yarns: about 65 percent in 2004/05. Most (about 70 percent of the total during 2003/04) were duty-free in Pakistan, indicating that they were probably imported by Pakistan exporters using duty drawback on customs and sales taxes. Indian imports of textiles and clothing products from Pakistan are mostly cotton yarns and cotton fabrics. Cotton fabric imports jumped very sharply in 2004/05, and according to Pakistan data the increase was continuing at least through June 2005.[157] Figure 7.1 illustrates the level of and trends in total bilateral textiles and clothing trade over the six years from 1999/2000 to 2004/05.

Figure 7.1 India-Pakistan Trade in Textiles and Clothing
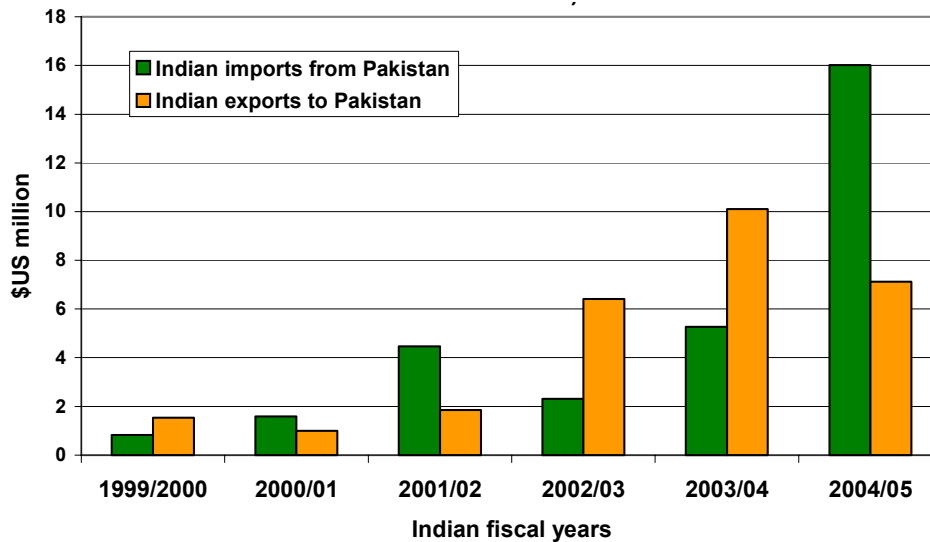
Source: India, Ministry of Commerce, Export-Import Database.

India and Pakistan are also importing the same kinds of textiles and clothing products in similar proportions. The largest single group of imports is filament textiles, mainly consisting of filament yarns. As both countries are importing similar products from the rest of the world, this suggests that neither country is well placed to export these products to the other, subject to the important qualification that there may be product types or specifications suited for bilateral, intraindustry-type trade.

Trade Policies in Pakistan and India

We turn now to a review of trade policies in both countries.

Pakistan's Trade Policies
In Pakistan, there are no explicit quantitative restrictions affecting textiles and clothing imports, with the very important exception that *only products listed on a "positive list" can be imported from India.* Since July 2004, Pakistani exporters have been able to import otherwise banned intermediate inputs from India. As the Pakistan textiles and clothing sector is so strongly export-oriented, this was a major liberalizing reform of the trade policies affecting Pakistan–India trade in textiles and clothing products.

The scope of the positive list system is apparent from Figure 7.2, which shows the percentage of products in each of the 14 textile and clothing chapters of the harmonized system that are not on the list and which therefore cannot be legally imported from India if they are for sale in the Pakistan domestic market.

Figure 7.2 Coverage of the Positive List
Percentage of lines not allowed to be imported from India
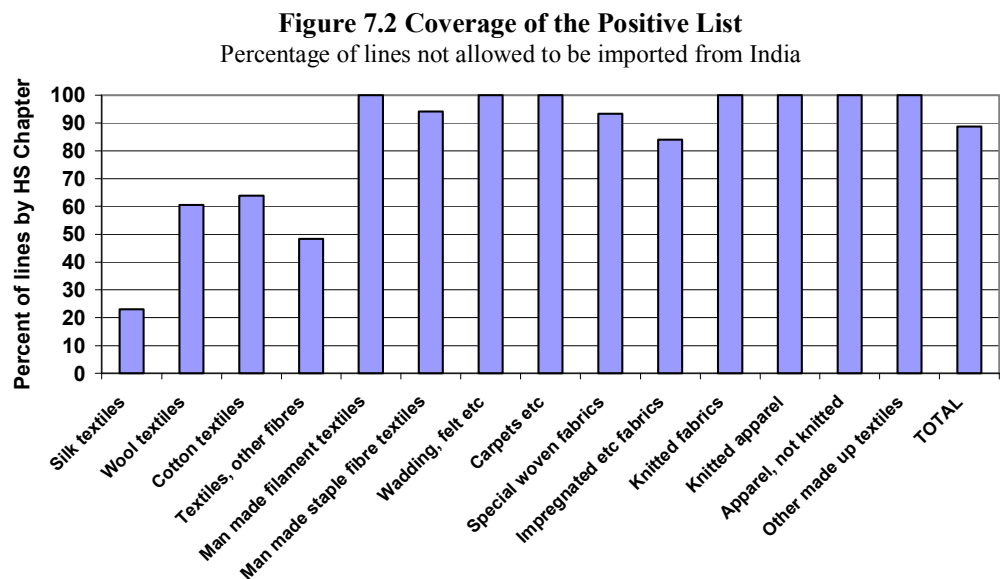
Source: Author's calculations using information from the Central Board of Revenue

On the Pakistan side, the restoration of normal trading relations with India would mean abandoning the positive list system. Indian exports to Pakistan's domestic markets, however, would still have to surmount Pakistan's tariffs. Textile and clothing tariffs in Pakistan were reduced as part of a general tariff-reduction program between 1996/97 and 2002/03. Both the level and structure of textile and clothing tariffs have remained almost the same since then, with the exception of an important reform in the 2005/06 budget that sharply cut tariffs on synthetic, silk, and wool textiles. The tariff on used clothing is 15 percent, as it is in India. Therefore, used clothing imports over this relatively low tariff would provide strong competition for domestic suppliers of new ready-made garments to low-income consumers, and would presumably limit the ability and interest of Indian suppliers competing successfully in the low-end segments of Pakistan's RMG markets, even if access were duty-free under an FTA. The basic structure is fairly simple and follows a cascading pattern, as shown in Table 7.8.[158]

Table 7.8. Pakistan's Tariff Rates

Product	Tariff Rate
Natural fibers	5
Artificial fibers	6.5
Natural fiber yarns	5
Filament yarns and staple-fiber yarns	7
Fabrics of silk, wool, and cotton-synthetic blends <25 percent cotton, filament, and synthetic yarns	14
Cotton fabrics and nearly all other fabrics and finished products	25

Source: Central Board of Revenue

Pakistan's textiles and clothing sector has, for all practical purposes, been kept out of SAPTA.[159] Only one negligible tariff concession on one product (coir yarn) has been given to the other "developed" SAPTA members (India and Sri Lanka).[160] There are some modest concessions—mostly 30 percent-for the least-developed country (LDC) South Asia Preferential Trade Agreement (SAPTA) members Bangladesh, Nepal, Maldives, and Bhutan—on silk and silk textiles, cotton yarns

and some cotton fabrics, and jute and other vegetable fibers and yarns.[161] But except for raw jute, which is exported by Bangladesh, all of these countries are net importers of these products and are certainly not able to export them to Pakistan.

There is a complex trade regime owing to a government commitment to guarantee the Pakistan market for pure terephthalic acid (PTA), the principal petrochemical input for polyester staple fiber (PSF), to Pakistan PTA, an affiliate of ICI Pakistan Ltd., through a fixed 20 percent protective tariff. The commitment continues until 2008. Pakistan PTA supplies the PTA to a number of PSF producers, including ICI Pakistan. Until August 2005, PSF was also protected by a 20 percent tariff. There is no duty drawback or duty-free import allowed for PSF purchased as an input by exporters. Like domestic market suppliers, they also have to either pay the import duty or buy from the local PSF producers. In August 2005, this system was changed by cutting the PSF tariff to 6.5 percent and introducing a 15 percent "rebate" (effectively a subsidy) on PSF sales.

India's Trade Policies
At present, there are no explicit nontariff restrictions applicable to Indian imports of textiles and clothing products. In the past, nearly all textiles and clothing products were treated as "consumer goods" and were subject to India's general import licensing system, which effectively banned all imports unless they were to be used as inputs into exports under the various schemes for exporters. These restrictions were abolished for the SAPTA countries in 1998 and were then phased out for the rest of the world, with the final batch of restricted products that included textiles and clothing products going in April 2001. India also does not explicitly restrict imports from Pakistan: there is no equivalent to Pakistan's "positive list" system; however, government officials, manufacturers, traders, and other businesspeople in both India and Pakistan all confirm that the many constraints on normal commercial relations between the two countries—on travel, communication, banking, etc.—as well as a pervasive "mind-set" of bureaucratic obstacles on both sides, have amounted to an informal set of nontariff barriers.

India's industrial tariffs—including its ad valorem textiles and clothing tariffs—have been cut by about 70 percent during the past five years. The general maximum ad valorem industrial tariff is now 12.5 percent.[162] The liberalization of Indian textiles and clothing imports resulting from the abolition of explicit quotas and the drastic cuts in ad valorem tariffs is also subject to another major qualification. In 2000, before the final phase-out of the import licensing system, large numbers of textile fabrics and many garments were made subject to compound tariffs; i.e., tariffs that are the greater of the amount calculated by applying the ad valorem rate and the specific amount.[163] They were cut in 2001 to still very high levels and have remained the same in nominal rupees since then.

The ad valorem equivalents of the Indian-specific duties depend on import prices. In most cases, they have been carefully set so as to be prohibitive or nearly prohibitive for lower-value, mass-market fabrics and garments with big domestic markets in India. Altogether, 41 percent of the 642 six-digit fabric, clothing, and made-up tariff lines in India's textiles and clothing HS chapters are subject to specific tariffs. Hence, there is evidence of considerable tariff redundancy with respect to the ad valorem rates before even considering the ad valorem equivalents of the specific duties.

The very high to prohibitive levels of India's specific textiles and clothing tariffs provide one apparent explanation for the very low level of India's textiles and clothing imports. It is not obvious, however, that imports would be much greater in the absence of the specific tariffs, since imports of textiles and clothing products subject only to ad valorem tariffs have also been quite low. Nevertheless, Figure 7.3 shows that total cotton-fabric imports have been highly responsive to the decline in the ad valorem tariff, increasing from about $44 million to $179 million, while the tariff came down from 41.3 percent to 20 percent. This suggests that some of the imports are for the domestic market, although lower tariffs are also associated with lower transaction costs for exporters using the various duty neutralization schemes.

Figure 7.3. Cotton Fabrics: Indian Tariffs and Imports
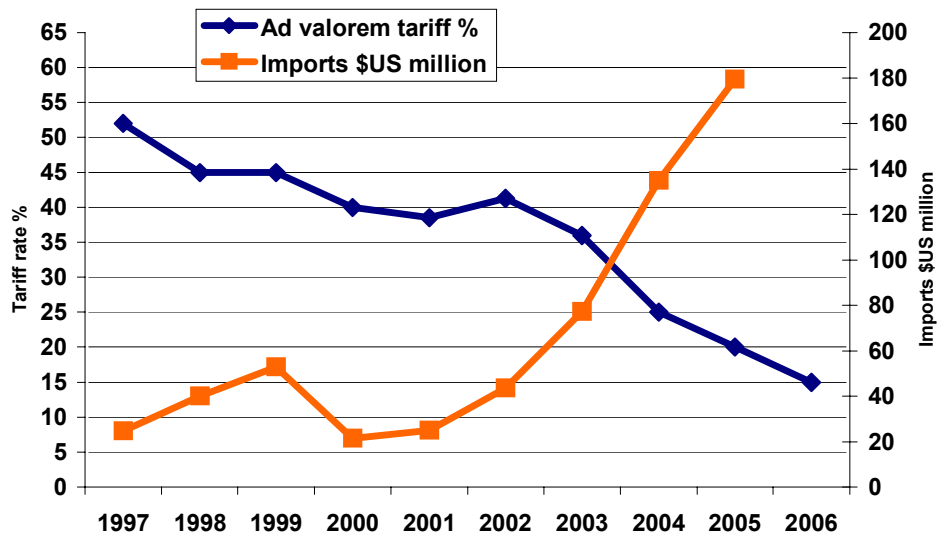
Source: India, Ministry of Commerce, export-import database.

Before 2004/05, the structure of excise taxes on textiles and clothing products (and the equivalent "additional" duties on imported textiles and clothing products) was extremely complex and was frequently changed, reflecting a number of objectives, in particular the desire to favor the hand-loom sector and other small-scale producers over larger producers, and natural fibers—especially cotton—over synthetics. In the 2004/05 budget, this system was drastically changed by (1) making the payment of excise taxes optional for all domestically produced textiles and clothing products, except synthetic fibers and yarns; and (2) greatly simplifying the excise tax structure.

Indian exporters use a number of duty-exemption or duty-neutralization schemes for their imported inputs, of which the most important for textiles and clothing exporters are[164]

- Duty-exempt ("advance") import licenses
- Bonded warehouses ("100 percent export-oriented units,")
- Special economic zones, which are replacing export processing zones
- Duty drawback
- Duty Exemption Passbook

In addition to its duty neutralization schemes, India operates a variety of export promotion schemes that are used by textiles and clothing exporters.[165] These include

- Subsidized export credit, under which the reserve bank sets maximum interest rates for export financing at announced margins below the prime lending rates of the nationalized and private banks[166];
- The provision of export credit insurance[167];
- Exemption from profit taxes of firms in special economic zones and export processing zones and of 100 percent export-oriented-unit (bonded warehouse) firms; however, a formula-based general scheme which previously exempted all exports from profit taxes was phased out in the late 1990s;
- General support for exporters through a large number of industry-specific export promotion councils, which come under the Ministry of Commerce and Industry. Among other activities, these councils have a role in channeling financial assistance for export market development to individual firms; and
- Special preferential treatment of large exporters ("star export houses") by exempting them from various rules that apply to other exporters and by making them eligible for import-duty credits based on export growth rates.

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Just as Pakistan's export promotion measures would be of concern in India under a bilateral FTA or under SAFTA, many, if not all, of India's export-promotion activities are also effectively export subsidies, which would be of concern in Pakistan. Therefore, some kind of agreement on how they would be treated would be needed as part of bilateral or multicountry SAFTA negotiations.

Do these protective measures produce a bias against exports? The evidence gathered from discussions with firms in both countries is that domestic prices of most textiles and clothing products are not elevated above world prices, despite the existence of trade barriers. In other words, many of these current protections are redundant—tariffs could be reduced without much effect on domestic prices and production levels. With a few notable exceptions, in both countries *domestic sales are considered to be less profitable than export sales*. Reasons given included the following:

- Nearly all export sales are paid for by irrevocable letters of credit, whereas domestic sales are on credit with a high incidence of non- or delayed payments. Typical payment terms for fabrics in India (Mumbai) were said to be 45–60 days, and for garments (jeans) in Pakistan (Lahore), 30–60 days. Prices for exported fabrics are sometimes lower than domestic prices of similar fabrics, but this is more than compensated by larger orders and secure payments under letters of credit.
- In both India and Pakistan, fabric producers (including power-loom operators in Bhiwandi) said that most domestic fabrics are generally of different specifications and lower quality than exported fabrics.[168]
- In both countries, when the same or similar fabrics are exported and also sold domestically, yarn prices paid are generally about the same.
- Exporters usually produce slightly more than the quantities ordered by foreign buyers—3 to 5 percent was said to be typical—which is sold in domestic markets at substantial discounts from the contracted export price. These "stock-loss" sales push down domestic prices, particularly in Pakistan, given the relatively smaller size of its domestic market.[169]

What are the implications of tariff redundancy for trade liberalization? If it turns out that there is considerable tariff redundancy and domestic prices are not far above or even below cost, insurance, and freight prices, there may be very little potential to export to such a market, even if imports from the FTA partner country are exempted from tariffs. On the other hand, the potential for exports could be considerable if the general MFN tariffs are high and domestic prices are not far below import prices plus these tariffs.

Case Studies of Liberalization

We turn now to the likely effects of liberalization on economic welfare. As stated earlier, we examine two scenarios:

1. *The restoration of "normal trading relationships."* On Pakistan's side, this would involve granting MFN status to India; abolishing Pakistan's "positive list"; and restoring normal commercial, financial, and other relations. In particular, it would mean reopening land transport.
2. *The likely additional economic welfare consequences of adding preferential free trade to the restoration of normal trading relations.* This second scenario is envisaged as the restoration of normal trading relationships as described above *plus* the removal of protective tariffs on all India–Pakistan bilateral trade. These tariffs would still apply to trade with other countries and could be part of a bilateral India–Pakistan FTA or—as already agreed in principle—an outcome of SAFTA, in which the SAFTA signatories would have duty-free access to each other's markets.

Hypothesis

The basic working hypotheses are that in both Pakistan and India, most segments of the textiles and clothing industries are export-oriented or nontraded. This implies that domestic prices in both cases are close to or even below border prices. These conclusions have a number of implications that are relevant for the trade policies that affect the textiles and clothing sectors in both countries, including preferential trade policies under SAFTA or under a bilateral FTA:

- Pakistan's positive list system, which bans the import of many textiles and clothing products from India, is redundant. Abandoning it would not result in many textiles and clothing imports from India.

- Likewise, the restoration of normal commercial relationships (with respect to land-border transport links, customs facilities, visas, travel, etc.) between the two countries will not greatly affect textiles and clothing trade between the two countries.

- Tariffs are redundant in most textiles and clothing segments in both countries. Even removing them altogether on a multilateral basis would not greatly increase textiles and clothing imports, provided tariffs on important textiles and clothing inputs such as dyes and chemicals were also removed.

- Bilateral trade in textiles and clothing products following an FTA (or SAFTA) would increase, but not substantially relative to the textiles and clothing exports of both countries to developed countries or relative to their total production.

- The principal factor driving bilateral trade with more open policies would be product differentiation, especially in consumer fabrics, garments, and made-ups.

The principal exceptions to this pattern in both countries are synthetic fibers and filament yarns, for which domestic-use prices are said to exceed import prices by approximately the prevailing import tariffs.

Case 1: Trade in Cotton Fibers

Both Pakistan and India are large net importers of cotton. In both countries, essentially all imports used for exports either enter duty-free or benefit from an eventual duty drawback. In addition, there is very little difference between the price of cotton used to produce goods for the domestic markets and cotton used in export-oriented industries. The import tariffs (5 percent in Pakistan and 10 percent in India) are redundant.

Restoration of normal trading relations: Cotton appears on Pakistan's positive list, so the principal nontariff barrier to India–Pakistan trade in cotton is that all shipments must move by sea. In this case, therefore, restoration of normal trade relations potentially affects only the cost of transporting cotton, measured both in monetary terms and in terms of delivery times. This additional bilateral trade would mainly be exports of medium- and long-staple cottons from India to the Pakistan textile centers in Lahore and Faisalabad, and exports of short-staple cottons from the Pakistan Punjab cotton areas to northwest India. In Pakistan, the new imports would principally substitute for some of the imports of medium- and longer-staple cottons from the rest of the world. They would have a minor impact on domestic cotton producers, who mainly produce short-staple cottons. In India, the new imports would principally affect domestic cotton producers of short-staple cottons, since short-staple cottons are seldom imported, and if they are it is in small quantities. How large this impact would be would require a detailed study, taking account of, among many other considerations, relative farm, ginning, and other costs in India and Pakistan, and the cross-border transport compared with the present distribution network in India.[170]

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Table 7.9. Welfare Effects of Liberalizing Cotton Trade

Changes in Economic Welfare			
	India	Pakistan	India + Pakistan
With restoration of normal trading relationships			
CS	+	+	+
PS	?	+	+
GR	0	0	0
Net	+	+	+
With preferential free trade (SAFTA case)			
CS	+	+	+
PS	?	+ ?	+
GR	0	0	0
Net	+	+	+

Note: + = welfare increase, - = welfare decrease, 0 = no change, ? = ambiguous effect
Source: Author's estimates.

The matrix summarizes the following changes.

- Consumer surplus (CS) increases in both Pakistan and India as a result of benefits to exporting textiles and clothing producers in terms of greater variety, faster delivery, and, to a minor extent, lower prices of their cotton inputs.
- Producer surplus (PS) of Pakistani cotton growers, ginners, and traders increases as a result of the new exports of short-staple cottons to India. This is assumed to exceed losses of producers in Pakistan resulting from the new imports of longer-staple cottons from India, as these imports principally substitute for longer-staple cottons imported by Pakistan from the rest of the world.
- The net effect on producer surplus in India is uncertain (denoted by a question mark). It could be positive or negative depending on whether losses of cotton producers due to the new imports from Pakistan exceed their gains from the new exports of long-staple cottons to Pakistan.
- No changes in government revenue (GR), as all the new imports are of cotton inputs used by textiles and clothing exporters, which are either imported, duty-free, or have the import duties refunded by the various duty-neutralization schemes. In addition, cotton imports from the rest of the world that are displaced are also duty-free.
- Positive net welfare effects in Pakistan and India, since in Pakistan there are increases in both consumer and producer surplus and no changes to government revenue, while in India, CS benefits of textiles and clothing exporters by definition must exceed the net PS loss of cotton producers (if there is a net loss), and government revenue effects are zero.[171]
- Positive net benefits for India and Pakistan combined, since there is a positive net welfare change in each of them individually.

Preferential free trade (SAFTA case). The matrix shows what additional changes in economic welfare would result if there was free trade in the context of SAFTA. India and Pakistan are the only South Asian countries with internationally competitive cotton and textile industries, so SAFTA in this instance effectively means bilateral free trade in cotton between India and Pakistan; i.e., the abolition of the 10 percent and 5 percent tariffs for imports from each other, but keeping these tariffs for imports from the rest of the world.

CS rises in both countries. Domestic-use buyers of cotton in both countries benefit from their new ability to buy a wider variety of cottons as a result of importing across the border without paying import duties. The change in PS is uncertain in both countries. For cotton producers in India, the net welfare outcome is uncertain (indicated by a ?); however, since this depends on whether the benefit from increased cotton exports to Pakistan (probably mainly long-staple cottons) exceeds the losses from reduced production of cottons (probably mainly short-staple cottons) displaced by the new imports from Pakistan. The effect on producer surplus in Pakistan is also ambiguous for the reverse

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reason, since it depends on whether the benefit from exports to India exceeds the losses of production displaced by Indian imports. The net *joint* producer surplus for both countries together must be positive, however, since more-efficient production in India has replaced some less-efficient production in Pakistan, and vice versa. There are no changes in government revenue (GR), since no trade would be subject to duties, either before or after an FTA is introduced. *Net welfare* rises in both countries.

Case 2: Trade in Polyester Staple Fiber (PSF)

Simulating the likely consequences of more open India–Pakistan trade in PSF is especially difficult because of the complex protection regime for PTA and PSF in Pakistan.[172] In the discussion below, we assume that (1) the monopoly on PTA in Pakistan remains in place, as does the PSF subsidy; (2) Pakistan does not export PTA to India following the FTA; (3) PTA remains on Pakistan's negative list, so there are no PTA exports from India to Pakistan following the FTA, even though PTA prices are lower in India than in Pakistan; (4) There are no exports of PSF inputs from India to Pakistan following the FTA, so the FTA has no impact on PSF production costs in Pakistan through reductions in raw material prices.

(1) *Restoration of normal trading relations.* Following the lifting of Pakistan's import ban and the possibility of trade by the land border, it is plausible that there would be some Indian PSF exports to Pakistan over Pakistan's 6.5 percent tariff (taking advantage of proximity and shorter delivery times), and also duty-free exports to Pakistan textile exporters.[173] These exports would create some producer-surplus benefits for the exporting firms in India. Some of the new exports would be switched from Indian exports to the rest of the world and others would be from increased production responding to the new market. It is unlikely that supplies would be switched from the Indian domestic market, which remains protected by the 10 percent Indian tariff plus possible additional protection from India's 2004 policies on the central excise tax. The resulting Indian protection rate (from 10 percent up to 18.8 percent) would also be too high to allow Indian imports from Pakistan, despite the proximity advantage. Therefore, it is plausible that there would be no change in consumer surplus in India. Also, there would be no change in government revenue in India since there would be no change in PSF imports or the domestic PSF price level. On balance, therefore, there would be a modest net economic welfare benefit to India equal to the producer-surplus benefits of the increased exports.

Table 7.10. Welfare Effects of Liberalizing PSF Trade

Changes in economic welfare			
	India	Pakistan	India + Pakistan
(1) With restoration of normal trading relationships			
CS	0	+	+
PS	+	-	+
GR	0	+	+
Net	+	+	+
(2) With preferential free trade (SAFTA case), no change in domestic-use price levels following intercountry trade			
CS	0	0	0
PS	+	+	+
GR	-	-	-
Net	?	?	-
(3) With preferential free trade (SAFTA case), lower domestic-use price levels following intercountry trade			
CS	+	+	+
PS	?	?	?
GR	-	-?	- ?
Net	?	?	?

Note: + = welfare increase, - = welfare decrease, 0 = no change, ? = ambiguous effect
Source: Author's estimates.

In Pakistan, it is most likely that the new imports from India would substitute for Pakistan PSF imports from the rest of the world, principally in Punjab, where there would be savings in transport costs and delivery times in importing from India rather than from other countries through Karachi. The competition from the Indian imports would require price reductions and/or other adjustments by Pakistan PSF producers. These effects are indicated in the matrix by increases in consumer surplus and reductions in producer surplus.

There is no change in customs revenue since the new imports from India pay the normal 6.5 percent tariff. To the extent that Pakistan PSF production declines, there would be a fiscal benefit resulting from the consequent reduction in the PSF subsidy.

There is a net economic welfare benefit to Pakistan, since the benefits to buyers of PSF by definition must exceed the decline in producer surpluses, and this net gain is supplemented by the reduction in PSF subsidy payments. Overall, there is a net positive welfare change for the two countries taken together, which is to be expected, since the basic policy change has been to remove artificial barriers to trade, including, especially, trade by the land route.

(2) *Preferential free trade under SAFTA, but no change in domestic-use price levels.*[174] The implementation of free trade under SAFTA is first considered assuming that the tariff exemption generates some PSF exports in both directions, but the new exports are not sufficient to change PSF prices in either Pakistan or India, and hence consumer surplus remains unchanged in both countries.

Under this bilateral free-trade scenario, Indian PSF exporters have an advantage in the Pakistan domestic-use market, since, directly or indirectly, they buy their PTA inputs at world prices and are supplying a market where prevailing PSF prices are 6.5 percent above world prices.[175] In the matrix, it is assumed that the additional duties do not provide any extra protection in this way, either because PSF importers would be able to fully offset them against their excise tax liabilities, or because the additional duties would be exempted for SAFTA members as part of the SAFTA negotiations. In that case, Pakistani PSF producers, while obtaining their PTA at world prices, would be able to export duty-free to India, where local producers selling in the domestic market are paying a protected price for their PTA inputs and (according to textile stakeholders in India) selling in the domestic-use market at prices that reflect the tariff protection rate on imported PSF.

The new exports from India to Pakistan substitute for Pakistan imports that were previously coming from the rest of the world. There is no impact on Pakistan production for the domestic market, since prices of these products remain unchanged. Likewise, the new exports from Pakistan to India substitute for imports that were previously coming from the rest of the world, and there is no impact on Indian domestic-use prices or Indian production for the domestic market. Hence, as indicated in the matrix, in each country there is a producer-surplus benefit to PSF producers from the new bilateral exports, and a reduction in government revenue resulting from the customs duties no longer collected on the imports from the rest of the world that have been replaced. In Pakistan, however, this fiscal loss is supplemented by a further fiscal loss from the 15 percent subsidy on PSF sales, as the Pakistan PSF producers increase their production to supply the new protected market they have obtained in India.

How does net economic welfare change in each country? One can determine that the net effect on the combined welfare of India plus Pakistan must be negative. Since buyers in both countries have switched from more-efficient world producers to less-efficient producers, the loss of customs revenue in Pakistan on the trade diverted from the rest of the world must exceed the increased producer surplus on the Indian preferential exports that are the cause of the diverted trade. The same holds for Indian customs-revenue losses and gains enjoyed by Pakistani producers. Since the aggregate welfare effect is negative, it follows that either (1) the net welfare effect in both countries is negative, or (2) if the net welfare effect in one country is positive, there must be a larger negative effect in the other country.[176]

(3) *Preferential free trade under SAFTA, which reduces domestic-use prices in both countries.* This simulation assumes that PSF suppliers in each country completely replace the other country's imports from the rest of the world, leading to lower prices for consumers. That this new trade in PSF goes in both directions is made possible by the asymmetrical treatment of tariffs, which affect the cost of material inputs, one of the inherent inefficiencies of all PTAs.

Consumer surplus now increases in both countries, unlike in the previous example, due to the increased competition. The change in producer surplus is uncertain. This is because PSF trade flows in both directions, but without knowing the parameters needed to estimate the relative quantities and the impact on domestic use prices, the net effect on producers cannot be predicted.

Government revenue falls in India, since intraregional trade under the FTA is exempt from the 10 percent duty. In Pakistan, however, the effect on government revenue is uncertain. To be sure, the government loses the revenue from the 6.5 percent duty, since imports from India displace imports from the rest of the world. But if Indian imports also displace domestic production, the government's obligation to pay a 15 percent subsidy is also diminished. This fiscal saving may or may not exceed the customs-revenue loss, so the total net fiscal effect could be positive or negative. Finally, the net government revenue effect in both countries taken together (again using equal weights) could be positive or negative. A positive outcome would require the FTA to cause substantial cuts in Pakistan's PSF production and a correspondingly large fiscal deficit in Pakistan, which would outweigh the customs-revenue loss in India.

Case 3: Trade in Cotton Yarn
Indian and Pakistani markets for cotton yarn are both closely integrated into the world economy. Although both countries maintain tariffs on imported cotton yarn, interviews with buyers and sellers revealed that competition and the operation of duty neutralization schemes has pushed domestic prices down to world levels. The tariffs are redundant and if reduced, they would not likely stimulate new imports. In the discussion below, we consider two alternative scenarios: (1) a simple case, where the effects of liberalization within the region are so small that prices are unaffected; and (2) liberalization increases regional efficiencies to the extent that the price of cotton yarn falls. The second approach is more nuanced and realistic, but also considerably more complex in allowing for repercussions of the policy changes on domestic and world prices and selling conditions.

Exogenous price case. The principal likely effect of the opening of normal trading relations would be to generate some exports of Indian high-count, fine cotton yarns across the land border to Pakistan and some exports of Pakistan coarser-count yarns across the land border to India. In both cases, these yarns are destined ultimately for world fabric and garment markets, so the buyers either pay no duties or are reimbursed through a duty drawback. By assumption, prices do not fall, so there are no changes to consumer surplus in either country. Indian exporters of high-count cotton yarn displace some Pakistani production. The reverse occurs in the low-count market, so coarser-count yarn producer surplus rises in Pakistan and falls in India. Since these changes take place due to lower transportation costs, trade theory tells us that, in both cases, the producer surplus gains in one country outweigh the producer surplus losses in the other. Government revenue remains unchanged.

The net welfare effect of the increased trade in fine yarns is positive, and the net welfare effect of the increased trade in coarser yarns is also positive. This is entirely consistent with common sense, since the ban on trade across the land border obviously precludes cheaper and cost-effective ways of supplying markets in both countries, especially up-country markets near the land border (e.g., the Lahore-Faisalabad region in Pakistan and the Amritsar-Ludhiana region in India) that are very long distances from each country's seaports.

The net economic welfare effect in the individual countries is ambiguous, however: that would depend on the relative size of the new bilateral trade in cotton yarn that is generated. If the resulting expansion of fine-yarn exports from India to Pakistan were to substantially exceed the reverse expansion of coarse-yarn exports from Pakistan to India, the net producer surplus effect in

Pakistan could be negative, and conversely it could be negative in India if the new coarse-yarn exports from Pakistan to India were to substantially exceed Indian exports of finer-count yarns to Pakistan. In between, it is possible that the net producer-surplus effect in each country would be positive, but negative outcomes in both countries are excluded, since that would imply a negative joint outcome.

Under an FTA, the economic welfare effects would be almost identical in nature and direction to the effects of restoring normal trading relations. Some Indian fine yarns would be supplied to Pakistan domestic-use markets and some Pakistan coarser, low-count yarns supplied to Indian domestic-use markets. As was the case with the new supplies to the indirect export markets, there is an additional joint net economic benefit to India and Pakistan considered together, since part of their domestic markets are now being supplied more efficiently.

Table 7.11. Welfare Effects of Liberalizing Yarn Trade with Constant Prices

	India			Pakistan			Joint India + Pakistan		
	Fine	**Coarse**	**Total**	**Fine**	**Coarse**	**Total**	**Fine**	**Coarse**	**Total**
CS	0	0	0	0	0	0	0	0	0
PS	+	−	?	−	+	?	+	+	+
GR	0	0	0	0	0	0	0	0	0
Net	+	−	?	−	+	?	+	+	+

Note: + = welfare increase, - = welfare decrease, 0 = no change, ? = ambiguous effect
Source: Author's estimates.

Case of falling world prices. We now drop the assumption that the changes in bilateral trade policies for yarn would not affect prices, and recognize that new fine-yarn exports over the land border from India to Pakistan will have some price-reducing effects that will benefit buyers in Pakistan, and that a reverse flow of coarse-count yarns from Pakistan to India would have some price-reducing effects that would benefit buyers in India.[177] Beyond this, since both India and Pakistan are large suppliers in the worldwide markets for both fine and coarse cotton yarns, this section also takes account of the economic welfare effects of lower world prices resulting from what are in effect productivity improvements in India and Pakistan.

The principal qualitative difference between this and the exogenous price case is that fabric and garment producers gain across the board from the lower prices they pay for cotton yarn. Yarn exporters from both countries benefit, and domestic producers competing with imports lose unless the effects of the lower prices are offset by productivity or other improvements. Given the assumptions about comparative advantage, Indian exporters of fine yarn and Pakistani exporters of coarse yarn are the winners. As before, trade theory leads one to conclude that the increased producer surplus enjoyed by the winners outweighs the producer surplus losses suffered by import-competing firms. One should expect no change in government revenue, as imports currently benefit from duty-neutralization schemes.

In the aggregate, for both countries net joint welfare must increase, since it increases for the fine-yarn case and also increases for the coarse-yarn case. On the basis of opinions expressed during field interviews, it is most likely that both countries would benefit on balance, since in quantitative terms India's specialization in fine yarns would create larger net welfare gains in fine-yarn markets. This would likely exceed its welfare losses in its coarse-yarn markets, which are considerably smaller. Conversely, because of its specialization in coarse-yarn production, Pakistan would gain more in quantitative terms from these markets than it would lose on balance in the fine-yarn markets.

Table 7.12. Welfare Effects of Liberalizing Yarn Trade When World Prices Fall

	India			Pakistan			Joint India + Pakistan		
	Fine	Coarse	Total	Fine	Coarse	Total	Fine	Coarse	Total
CS	+	+	+	+	+	+	+	+	+
PS	+	−	?	−	+	?	+	+	+
GR	0	0	0	0	0	0	0	0	0
Net	+	−	?	−	+	?	+	+	+

Note: + = welfare increase, - = welfare decrease, 0 = no change, ? = ambiguous effect
Source: Author's estimates.

The qualitative outcomes are the same under an FTA as in the case of restored normal trade relations. One should expect the magnitudes of the changes to be larger, since the trade flows created would be in the same direction but be somewhat larger than those following the restoration of normal trading relations alone. Bilateral free trade under SAFTA would further expand the joint economic benefits of restoring normal trading relations and would also benefit the rest of the world. There would be no trade-diversion issues and customs-revenue losses to consider, for the simple reason that (according to textiles and clothing stakeholders) neither India or Pakistan are importing cotton yarns in significant quantities from the rest of the world for their domestic-use markets.

Policy Recommendations

First, considering the restoration of normal trading relations, i.e., abolition of Pakistan's "positive list" system, and the restoration of trade across the land borders, would have clear economic benefits for India and Pakistan, especially in the Punjab-Faisalabad region of Pakistan and in northwest India. This would lower transport costs and reduce delivery times by comparison with the trade through the seaports, which are the only permitted routes at present. But these benefits are conditional upon investments in both countries to expand transport and other facilities at the Wagah crossing, and to revive other land-border transport links that have been unused for many years. The two governments should invest in the provision of physical and administrative infrastructures such as customs posts and truck and warehousing facilities at these places.

The predominance of domestic market prices in most textiles and clothing segments, which are about the same as or below border prices, means that the corresponding import tariffs and other protective measures are redundant. This means in particular that both India and Pakistan could drastically liberalize the protection of their textiles and clothing sectors with minimal impact on domestic production. The following key redundant protective measures could be removed, phased out, or reduced:

- India's specific duties on most fabrics and garments;
- India's antidumping duties on various synthetic fibers and yarns;
- Pakistan's "positive list" system, which bans the import of nearly all fabrics, garments, and made-ups from India; and
- Pakistan's 25 percent tariff on cotton and other fabrics, garments, made-ups, and other finished textile products.

The principal exceptions to this pattern in both countries are synthetic fibers and filament yarns, for which domestic-use prices exceed import prices by approximately the prevailing import tariffs, currently 6.5 percent and 7 percent in Pakistan and 10 percent in India. Our case study concludes that the welfare outcome is most likely to be negative for India and Pakistan considered together, and also for the rest of the world. This is essentially because PSF is being imported in India and Pakistan over their tariffs, and abolishing the tariff for each other while leaving it in place for the rest of the world leads to higher-priced Indian supplies supplanting supplies from the rest of the world in Pakistan, and higher-priced Pakistan supplies supplanting imports from the rest of the world in India. In both cases, there is a corresponding loss of customs revenue from the diverted trade. Hence, we recommend that the governments consider multilateral liberalization of PSF tariffs in India and Pakistan because it would be more economically efficient and would deliver larger and more secure

economic welfare benefits than preferential free trade. This is because reducing or eliminating tariffs on a multilateral basis does not involve trade diversion risks.

The range of export promotion measures in India should be a cause for concern for Pakistani exporters, who do not get similar types of explicit or implicit export subsidies. The Government of Pakistan should discuss the issue of export subsidies as part of bilateral negotiations or multicountry negotiations in the context of SAFTA to ensure a level playing field for trade.

One important finding of the study is *the urgent need for improvements in the scope and reliability of government statistics, especially in Pakistan*. Availability of reliable data, particularly on production and domestic consumption of fabrics and made-ups, would go a long way in improving our understanding of these sectors and for strengthening the analysis of trade issues.

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In preparing this report, I had many useful meetings with producers, traders, trade association officials, and others associated with the textile and clothing sectors in Pakistan and India. These meetings were held and some factory visits made during April and August 2005 in Lahore, Faisalabad, Karachi, Delhi, Bhiwandi, and Mumbai. I am extremely grateful for the time these busy people were willing to spend with me to respond to my questions. A list of individuals is included in the full report on which this chapter is based: Gary Pursell, *Free Trade Between Pakistan and India? A Case Study of the Textiles and Clothing Sector*, World Bank, April 2006.

Chapter 8
Prospects for Trade in the Light Engineering Sector:
A Case Study of Fan and Bicycle Industries

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This chapter investigates the possible impact of trade between India and Pakistan on Pakistan's light engineering sector. We carry out detailed price comparison for *ceiling and pedestal fans* and, in addition, partial equilibrium welfare analysis for *standard bicycles*. The selection of fans is interesting, because both Pakistan and India are large domestic producers and export fans to the rest of the world. Therefore, Pakistan can potentially export fans to India. Bicycles are largely produced domestically or imported, and it would be interesting to analyze the potential for trade in bicycles with India. Both fans and bicycles are not currently included in the positive list of importable goods from India. Our results show that Pakistani producers have a comparative advantage in exporting fans to India. Free trade in the context of SAFTA would bring down the prices of imported Pakistani fans in India and could enable expanding exports of fans. On the other hand, trade liberalization under SAFTA is expected to increase imports of Indian bicycles, largely benefiting Pakistani consumers belonging to lower-income rural and urban households. We predict that trade liberalization with India would lead to net overall welfare gains in the region, which could be shared by all the main stakeholders, including consumers, producers, and the government. There may be good prospects for intraindustry trade in parts and components in the two industries. The paper recommends that Pakistan grant MFN status to India or allow bilateral trade in bicycles and fans by putting these items on the positive list of goods that are allowed to be imported from India. We also urge the government not to put bicycles and fans on SAFTA's "sensitive" list.[178]

Overview of the Fans and Bicycles Industry

The engineering industry in India is quite large and diverse with a number of distinctive sectors and subsectors, namely machinery, iron and steel, transport equipment, and other engineering items. The engineering contributes around $2 billion to the gross domestic product (GDP) of the country and provides employment to more than 600,000 individuals.[179] India is also a major exporter of engineering goods, with exports of $14.45 billion in 2004/05, and showing a rapid increase of almost 50 percent over the previous year.[180] Machinery forms the biggest segment in terms of Indian engineering exports. Fans belong to the machinery and equipment tools segment, whose exports stood at $3.4 billion in 2004/05, with an increase of 24.4 percent over the previous year. Bicycles fall under the transport equipment subsector, constituting the fourth-largest component of the Indian engineering sector, with current exports of $2.7 billion (2004/05) and showing a rapid growth of 37 percent over the previous year.

Pakistan's engineering goods sector is considerably smaller than India's. It contributes around $2 billion to the GDP of the country (1.8 percent of GDP) and provides employment to more than 600,000 individuals.[181] The major engineering goods produced in Pakistan are surgical goods and medical instruments, cutlery, electric fans, transport equipment, electric machinery, machinery specialized for particular industries, auto parts, and other machinery. The industry is extremely dependent on imports, with a capacity to meet only 25 percent of the domestic demand requirements. The share of engineering goods in Pakistan's total exports is around 2.2 percent, but it is a growing export sector. The value of exports has gone up from $194.4 million in 2000/01 to $262.4 million in 2003/04, showing an increase of 35 percent over the last four years. Surgical goods and medical instruments have the largest share of exports, amounting to $132.6 million in 2003/04.

Table 8.1. Exports of Engineering Goods from Pakistan 2000/01 to 2003/04 (Million $)

Item	2000/01	2001/02	2002/03	2003/04
Surgical goods/medical instruments	124.1	145.0	150.0	132.6
Cutlery	26.4	24.5	29.6	29.7
Electric fans	3.9	6.9	10.1	11.8
Transport equipment	4.6	3.8	4.3	10.1
Electric machinery	9.6	15.2	16.1	19.4
Machinery specialized for particular industries	14.7	12.2	14.5	17.2
Auto parts	4.3	5.6	6.3	14.7
Other machinery	6.8	7.3	22.8	26.9
Total (Engineering Goods)	**194.4**	**220.5**	**253.7**	**262.4**

Source: Ministry of Commerce, Government of Pakistan 2003/04

Fans

Pakistan has been a manufacturer of good-quality fans since 1947. The fan industry currently contributes Rs 1.5 billion to the GDP of the country. The total capital investment in this sector is Rs 3–3.5 billion, with an installed capacity of 5–6 million fans per year and current capacity utilization of around 50 percent.[182] The industry is mainly clustered in two major cities, namely, Gujrat and Gujranwala (comprising 65–70 percent of production), with some units operating in Lahore and Karachi. These clusters meet the domestic demand and produce a variety of product types and designs, including ceiling fans, pedestal fans, exhaust fans, table fans, blowers, and industrial fans (above 125 watts). There are about 1,700 fan producers and vendors spread over the large-, medium-, and small-scale units. The six to eight firms that dominate the market are globally competitive and are International Standards Organization (ISO-) certified.

Although fans are a tiny segment of total exports, export of Pakistani fans have quadrupled from $3.9 million to $15.9 million during 2000/01 to 2004/05; at an average annual growth rate of above 40 percent. Ceiling fans have a 46 percent share in exports followed by pedestal fans (18–19 percent). Pedestal fans are typically used to gain access to the international market, after which the exporters generally market their ceiling fans. Pakistan's major export destinations include South Asia and the Middle East countries, namely Dubai, Bangladesh, Saudi Arabia, Yemen, and Afghanistan. Recently, some Pakistani companies have started exploring the possibilities of exporting fans to the United States, and have started implementing the quality standards for entering the U.S. market.

In India, the electric fan is the second-most-wanted consumer durable good after bicycles.[183] The annual production of fans is more than 10 million units per year, spread over large, medium and small units.[184] Like Pakistan, India is also a major exporter of fans. The value of Indian exports of fans stood at $18.9 million in 2004/05, but exports have been fairly stagnant over the past few years.[185] India's major export destinations include mostly Asian and African countries, such as United Arab Emirates, Sri Lanka, Jordan, Sudan, Nigeria, and Ghana. Recently, the government imposed an excise duty on fans, which is likely to push production in the unorganized sector and may affect India's export competitiveness.[186] Unlike bicycle parts, fans are not protected under the Reservation Policy (discussed below), though a few items such as fan regulators, do fall in this category.

Bicycles

The bicycle industry is one of India's most established industries, with an annual turnover of more than 15 million units.[187] The industry falls within India's Reservation Policy,[188] which reserves certain items, based on their economically viability and technically feasibility, for exclusive manufacture in the small-scale sector.[189] As a result, most bicycles components and bicycle spare parts, except for free wheels and single-piece bicycle hubs, are manufactured by the small-scale industry. The total number of units producing bicycles and bicycle parts are more than 4,000, out of which less than 700 operate in the organized sector, whereas the majority of the units operate in the small-scale sector.[190] The market leaders in the bicycle industry are Hero Honda, Tube Investment of India, Atlas Cycles, and Avon Cycles, which together account for 95 percent of the market share in India. Most of the factories manufacturing bicycles and parts are located in Punjab and Tamil Nadu.

India constitutes around 6 percent of the world's bicycle exports.[191] Despite the large size of its market, and considerable scope for expansion in terms of exports, however, the value of Indian bicycles exports declined from $43.7 million in 2003/04 to $36.5 million in 2004/05. This fall is partly attributable to the steadily rising steel prices—one of the key inputs used in the production of the bicycles. The bulk of the Indian bicycles are exported to African countries such as Mozambique, the Democratic Republic of Congo, Kenya, Nigeria, and Malawi.

Annual production of bicycles in Pakistan stands at around 700,000 units, which is only 5 percent of Indian annual production. The Pakistani industry has the capacity to produce one million units per year and has an estimated investment of one billion rupees.[192] More than 80 percent of units are produced by one key bicycle producer—Sohrab—the first domestic bicycle manufacturer in the country.[193] Besides the large manufacturers there are around 3,500 vendors, and the industry employs approximately 250,000 workers.[194]

Pakistan's bicycle industry has expanded and improved over the years, but it is still a relatively inefficient industry, protected by high tariffs.[195] The industry has started exporting bicycles in recent years, but exports are quite small.[196] The export market for bicycle remains uncompetitive due to the high prices of basic raw materials (e.g., steel), and dependence on imported parts and components that make Pakistani bicycles expensive vis-à-vis their competitors. The industry is currently facing an influx of Chinese bicycles, largely smuggled into Pakistan under the umbrella of Afghan Transit Trade. According to industry sources, smuggling has led to loss in market share of 25–30 percent.[197] In addition to smuggling, Pakistan's bicycle industry is beset with problems such as a low level of research and development, a limited capacity to produce bicycles of international design and quality, and a low level of specialization in the vendor industry.

Welfare Analysis of Selected Engineering Products

The applied methodology is the standard partial equilibrium welfare analysis for which product-specific modifications have been made.[198] We look at price comparisons and welfare effects under two scenarios: a) if Pakistan granted MFN status to India, and b) under an FTA between India and Pakistan in the context of SAFTA. At present, Pakistan restricts imports of these products from India, as bicycles and fans are not on the positive list of importable items from India. In India, there are also restrictions related to standards and certification requirements for manufactured goods that act as nontariff barriers to trade. We were able to address only tariff barriers to trade in our model, so our results represent a best-case scenario if all other barriers were eliminated.

Modelling Assumptions
This study makes the following assumptions for analyzing the fans and bicycles sector in the two countries.
- The model assumes competitive behavior as a good benchmark and for the sake of simplicity.
- We assume that the free trade area under SAFTA would involve minimum tariffs of zero percent (no tariff) and no quantity restrictions on trade between India and Pakistan. For non-SAFTA member countries, MFN tariffs would apply.
- To simplify the presentation and empirical estimation of welfare changes, we use the linear demand and supply functions. The slope of the demand function for bicycles in Pakistan is assumed to be normal on the basis of a market price and a willingness-to-pay survey. The average price elasticity is about –0.98, or –1.0.[199]
- The slope of the supply function for fans in Pakistan is assumed to be relatively elastic because producers are producing at about 50 percent of their capacity, so a small increase in price is expected to bring a large change in quantity supplied. The slope of the bicycles supply curve is also relatively elastic due to 70 percent capacity utilization.

- The level and slope of the Indian fan-export supply curve to Pakistan is relatively inelastic because, as the initial estimates of price differentials between India and Pakistani fans suggests, a larger price change in Indian fans will cause a relatively smaller change in quantity supplied, depending on the market conditions.
- We assume that the present level of sales taxes in Pakistan of 15 percent and in key Indian locations, i.e. Punjab, Delhi, and Mumbai, of 12.5 percent, will remain even after SAFTA is established.
- The domestic transportation cost is assumed to be 1.5 percent of the wholesale price. This estimate has been based on information collected from the retailer and distributors during the field survey.
- The production cost and export-supply conditions, and other factors affecting the market structure, are assumed to be constant. Our analysis is based on prices and other information collected during a market survey in April 2005.[200]

The decision criterion for bilateral trade is given in Table 8.2.

Table 8.2: Decision Criterion

If	Then
Indian CIF price<Pakistan ex-factory price	India exports to Pakistan
India ex-factory price>Pakistan CIF price	Pakistan exports to India
India ex-factory price<Pakistan CIF price or Indian CIF price> Pakistan ex-factory price	No trade

Table 8.2 shows that if the cost, insurance and freight (CIF) of Indian products is less than the ex-factory price of Pakistani products, then Indian imports are likely. Alternatively, if CIF prices of Indian products are greater than the ex-factory prices of the Pakistani product, then imports are not likely to take place.

Results: Ceiling and Pedestal Fans

There are good opportunities for Pakistani ceiling fans to be exported to India
Our price comparison shows that the average CIF price of a 56-inch Pakistani ceiling fan in India would be Rs 758 (Indian), whereas the average ex-factory price of the comparable Indian ceiling fan is Rs 812 (Indian). According to our decision criteria, this implies that Pakistani fans can potentially be exported to India. We estimate that the average domestic market price of an imported Pakistani ceiling fan, including Indian tariffs and sales taxes, would be 18 percent lower than the local market prices in India.[201] Moreover, the prices of imported Pakistani fans are expected to fall sharply once tariffs are removed under SAFTA. Imported Pakistani ceiling fans are expected to be 38 percent cheaper than comparable domestically produced fans in India. Our results are quite robust in a comparison of a range of prices as part of the sensitivity analysis.[202] Based on the price comparison, we conclude that with current MFN tariffs in India or under a zero-tariff situation under SAFTA, the Pakistani fan industry could gain from bilateral trade, provided there are no other nontariff barriers in India, such as stringent standards and certification requirements. According to industry sources, Pakistani fans are considered to be of better quality compared to Indian fans in export markets. Therefore, both the quality and price aspects seem to be favorable for Pakistani domestic ceiling-fan producers to export fans to India, particularly under SAFTA, where they can expand exports drawing on the excess capacity existing in the industry.

Indian ceiling fans are not likely to be price competitive in the Pakistani market ...
Even if the current ban is lifted and ceiling fans are allowed to be imported from India, their CIF prices are anticipated to be higher than the average ex-factory prices in Pakistan.[203] Comparing the expected market prices of imported Indian and domestic Pakistani ceiling fans in the Pakistani market, we find that the average market price of the tariff-paid Indian fans in Pakistan would be 22 percent higher than the market prices of Pakistani fans.[204] The price of imported Indian fans are

expected to come down in a zero-tariff situation under an FTA, making Indian fans slightly cheaper (by 7 percent) compared to locally produced pedestal fans. This price reduction, however, may not be enough to make Indian ceiling fans attractive for consumers in Pakistan, who are likely to prefer local fans for their quality and the availability of after-sale service. Therefore, we feel that there may be limited scope for Indian ceiling fans to be imported in Pakistan on the basis of price competitiveness. Our conclusion is that the Pakistani fan industry is likely to remain price-competitive if India is granted MFN status and would continue to provide economical and better-quality fans for consumers in Pakistan under SAFTA. Our analysis remains valid under the sensitivity analysis for a range of ceiling-fan prices.[205]

… nor are Indian pedestal fans likely to be price competitive in the Pakistani market
The ex-factory price of the average Pakistani pedestal fan was Rs 1,588 (Pak) in April 2005, which was lower than the estimated CIF price of the average Indian pedestal fan (Rs 1,876.78 [Pak]) in Pakistan (Table A8.2.2 in Annex 8.2). According to our decision criterion, there would be limited opportunities for Indian pedestal fans to be imported into Pakistan. Similarly, the average prices of imported Indian pedestal fans with MFN tariffs and with zero tariffs under an FTA would be 39 percent and 5 percent higher, respectively, compared to market prices in Pakistan.[206] So if Pakistan grants MFN status to India or includes pedestal fans on the positive list of imports from India, there would be no significant threat to domestic producers of pedestal fans in Pakistan. Even under SAFTA, the imported Indian pedestal fans would be somewhat price-uncompetitive. Industry sources in Pakistan believe that Indian pedestal fans are of somewhat poorer quality, so it is quite likely that the Pakistani consumers may not prefer them over locally produced fans even under the FTA scenario.

We were not able to conduct a detailed welfare analysis for fans because of our inability, despite our efforts, to get the relevant data from India. The price analysis of the Pakistani fans market suggests that under the current cost of production and prices, the market would be favorable for the domestic producers of ceiling and pedestal fans to export to India. Some have asked why Pakistan does not presently export fans to India in greater numbers, given that Pakistan appears to have a comparative advantage in fans and India has granted Pakistan MFN treatment.[207] Our discussions with the Pakistani fan producers highlight that granting MFN status to India could not only improve the mindset of the Indian consumers but would also open a new window of opportunity for Pakistani fan producers to explore a new market at a shorter distance.[208] Here we assume that granting MFN status is combined with measures to improve land transportation: Pakistani fans producers would be able to take advantage of reduced transportation costs, both in terms of rail and road, and by drawing on the excess capacity that they have at present.

In our discussions with the Pakistani fan manufacturers, we found them to be excited about the prospect of liberalizing trade with India. The general feeling is that there are good prospects of trade in finished products as well as intraindustry trade in parts and components between the two countries. How much trade actually takes place will depend on the policy environment in the two countries, the application of manufacturing standards and certification requirements in India, availability of parts and components, and consumer preferences.

Results: Standard bicycles[209]

Current tariffs in Pakistan provide sufficient protection to the local bicycle industry, and Indian bicycles are likely to become price-competitive only under an FTA.
Our analysis shows that there are potentially good opportunities for Indian producers to sell bicycles in Pakistan, but only if high Pakistani tariffs are reduced or removed. The CIF prices of a standard Indian bicycle are 4–14 percent lower, depending on its quality and make, than the ex-factory prices of a comparable bicycle produced in Pakistan (Table A8.2.3, Annex 8.2).[210] But current Pakistani tariffs of 30 percent and withholding income taxes on imports (6 percent) provide substantial protection to the local bicycle industry, making Indian bicycles uncompetitive in terms of local market prices. Hence, if bicycles are allowed on the positive list of imports from India at MFN tariff rates or if India is granted MFN status, we expect very little change in the status quo. Indian

standard bicycles are likely to become price-competitive under an FTA, with estimated 21 percent, 19 percent, and 28 percent lower prices for the average high-end and low-end standard bicycles, respectively, compared to their Pakistani counterparts.[211]

Pakistani bicycles would not be price-competitive in India even under an FTA

Our estimates show that the ex-factory prices of bicycles produced in India are 17–30 percent lower than the CIF prices of comparable bicycles made in Pakistan.[212] Hence, under current cost and market conditions, Pakistani bicycles would not be price-competitive vis-à-vis Indian bicycles. With Indian tariffs of 15 percent and local sales taxes included, the market prices of various types of imported Pakistani bicycles would be 37–53 percent higher than the comparable Indian bicycles. Even with zero tariffs under an FTA, Pakistani bicycles are not likely to gain access to the Indian market due to their higher prices. The lower bicycle prices in India are partly due to the small-scale industry (SSI) reservation policy, which provides an implicit protection to the bicycle parts industry; relatively lower steel prices in India even though the explicit steel subsidy has been removed;[213] and the benefits of economies of scale in the bicycle industry in India.[214]

The Indian producers and Pakistani consumers would be the main beneficiaries when trade is conducted under SAFTA, as high MFN tariffs levied on bicycles are removed.

The combination of removing the ban on the import of bicycles from India and the elimination of currently high tariffs under SAFTA is expected to result in Indian bicycles capturing about half of the market at prices that are 19–28 percent lower than comparable Pakistani bicycles (the details of the welfare analysis are discussed in Annex 8.1). Table 8.3 shows that there would be a combined net welfare gain of $3.8 million (Pak Rs 227.6 million) in the two countries with free trade in the bicycle industry under SAFTA. This gain largely accrues to low-income households in rural areas (e.g., farmers, nonagricultural workers, rural service workers, and students) and in urban areas (e.g., lower-grade government workers, students, and lower-level service-sector workers) who are the major consumers of standard bicycles in Pakistan. The loss in the producer's surplus in Pakistan is calculated to be around $4.92 million (Pak Rs 293.64 million), while there is a gain of $0.96 million (Pak Rs 57.38 million) to Indian producers. The Pakistani government loses $0.44 million (Pak Rs 26.25 million) in customs revenues.

Table 8.3. Net Effects of the Trade Without Tariffs in 2005 ($ Millions)[215]

	Pakistan	India	Pakistan + India
Consumer Surplus	8.21 (490.119 Pak Rs)	0	8.21 (490.119 Pak Rs)
Producer Surplus	-4.92 (-293.64 Pak Rs)	0.96 (57.38 Pak Rs)	-3.96 (-236.26 Pak Rs)
Customs Revenue	-0.44 (-26.25 Pak Rs)	0	-0.44 (-26.25 Pak Rs)
Net Welfare	2.85 (170.23 Pak Rs)	0.96 (57.38 Pak Rs)	3.81 (227.61 Pak Rs)

Source: Author's estimates.

We feel that our calculations are reasonable estimates if conditions of trade at zero tariffs are fulfilled, the Pakistani consumers are willing to avail themselves of the opportunity to purchase a bicycle at a lower price from India, and sales and service networks are available for the Indian bicycles in Pakistan. Our analysis does not take into account the general equilibrium effects such as wages of the laborers affected due to a loss in producer surplus in Pakistan; the possible fall in investment in the industry due to cheap availability of imported Indian bicycles; and the income, balance of payment, and growth effects, among others. Nonetheless, Pakistani bicycle producers generally support trade with India. One of the major bicycle producers in Pakistan (Sohrab) strongly believes that despite the price advantage, Pakistani bicycles can compete with Indian bicycles. They have recently started exporting their own brand of bicycle to international markets and are competing well with various brands, including Indian bicycles.

Intraindustry Trade

Although we have not looked at the issue of trade in bicycles parts, there may be possibilities for intraindustry trade as well. The parts and components for standard bicycles in India are produced by the small-scale sector, which is protected under the Reservation Policy, which partially results in lower prices of standard bicycles in India. On the other hand, the Pakistan bicycle industry purchases 70–75 percent parts locally, and only one-third of local inputs used in producing the bicycles reportedly fulfill international standards. Pakistan imports bicycles parts such as chains, steel tubes, steel balls, and strips from Hungry, Belgium, China, and Taiwan. Hence, trade in inputs and raw materials from the Indian bicycle industry could potentially have a number of additional effects, such as lowering the cost of production and the prices of bicycles produced in Pakistan, presumably generating additional surplus for the Pakistani consumer through lower domestic prices, some reduction in producer surplus in Pakistan, some possible contraction in the local vendor industry producing parts in Pakistan, and additional gain in producer surplus in India. The precise estimates of these developments need to be worked out in a detailed welfare analysis of intraindustry trade in bicycle parts and components. This is an area that we recommend for future research.

Policy Recommendations

The main policy recommendations of this paper are the following:

1.   **The two items—fans and bicycles—should be considered for placement on the positive list of imports from India and should be not included in the negative list of tradable goods under SAFTA.** Our analysis shows that trade without tariffs under SAFTA offers a good window of opportunity for the domestic fan producers of Pakistan to gain entry into the Indian market by capitalizing on their excess capacity. Trade without tariffs in the bicycle industry is likely to create a large consumer surplus in Pakistan that offsets the fall in producer surplus and government revenues.

2.   **Intraindustry trade in both the countries should be encouraged**. Opening up intraindustry trade in parts and components related to both industries is expected to reduce costs, ensure easy availability of critical parts, and provide benefits in both India and Pakistan.

3.   **Policy issues identified in the analysis and industry problems should be addressed as quickly as possible**. The government should take steps to improve the overall investment climate and help to deal with genuine problems facing the bicycle industry. Addressing these policy issues will help to enhance the efficiency and productivity of the domestic industry and create a more enabling environment for trade.

4.   **A more concerted campaign is required to create awareness among producers of the advantages of opening trade with India.** More information regarding the Indian markets, the composition of the industry, and the trade and economic policy environment in India is needed to enable producers to equip themselves both strategically and technically for competing with India. This will ensure that both the industry and the people of the region benefit.

References

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Annex 8.1: Welfare Analysis of Bicycles

Figure 8.1.1 below explains the standard bicycle market of Pakistan with tariffs under an MFN regime and without tariffs under the proposed SAFTA agreement. P_{w+t} is the world price with tariff.[216] S_p is the supply curve of the Pakistani bicycle market and D_p is the domestic demand curve in Pakistan. S_{i+T} is the Indian supply curve if bicycles are allowed to be imported with MFN tariffs. This lies above the world market price including tariffs, and hence we see no Indian supply coming to Pakistan. S_i is the supply curve when Indian bicycles are imported into Pakistan without tariffs under full implementation of SAFTA.

Direct trade between Pakistan and India without tariff would shift the supply curve of India down and to the right. As a result, we expect that the Indian producers would be able to supply almost half of the domestic market, while Pakistani producers will be supplying the remaining half.[217] Thus, the removal of tariffs would result in a sharp increase in Indian imports because we expect that the 19–28 percent lower prices of the Indian bicycle will attract lower-income Pakistani consumers to buy this product. We expect that the standard Indian bicycles would completely replace formal-sector imports from China and Dubai.

As a result of this fall in market prices of Indian bicycles, there will be a gain in consumer surplus for Pakistani consumers (Table 8.3). The value of the estimated consumer surplus under SAFTA would be Pak Rs 490 million, or $8.21 million (the sum of the areas ABGF and triangle GFE). On the other hand, the producer surplus in Pakistan will fall by Pak Rs 293.6 million or $4.9 million (the area IDA-IKB). The new producer surplus in Pakistan resulting from the price reduction due to the import of standard Indian bicycles amounts to the area BIE. We assume that initially this area will be jointly shared by the Indian (BJH) and Pakistani (BKI) producers. The Indian producers will gain a producer surplus equal to $0.96 million (Pak Rs 57.38 million) because of market access in Pakistan. But this could change in the future depending upon the emerging trade patterns, establishment of domestic sales networks, etc. The customs revenue of the government in Pakistan will fall from Pak Rs 26.25 million to zero, as there will be no tariffs on Indian bicycles imported under SAFTA.[218]

Figure 8.1.1: Pakistani Bicycle Market with and without Tariffs with India
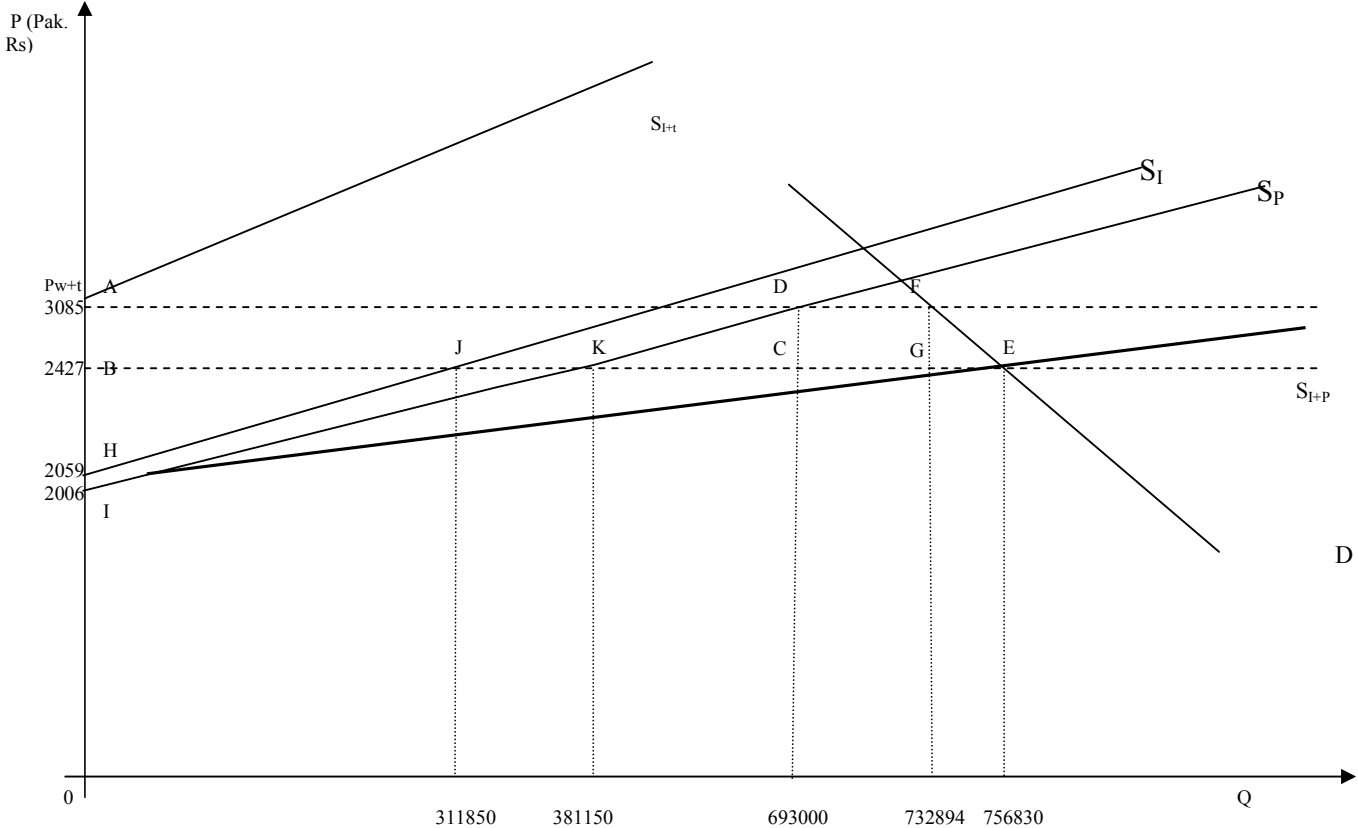
Annex 8.2. Price Comparison of Fans and Bicycles

Table 8.2.1. Elements of the Ceiling-Fan Price Calculations 2005 (Amount in Rs[219])

Calculation for Pakistani Fans	Average	Maximum	Minimum
FOB Price of Pakistani Fan[220]	1,020.00	1,271.00	825.00
Add Freight @ 1% of FOB	10.20	12.71	8.25
Add Unloading @ 2%	20.40	25.42	16.50
Add Insurance	10.20	12.71	8.25
CIF of Pakistani Fan at Indian Border[221]	**1,060.80**	**1,321.84**	**858.00**
CIF of the Pakistani Fan at the OER[222]	**757.71**	**994.17**	**612.86**
Add Customs Duty @ 34.48%	261.26	325.55	211.31
Add Port Charges @ 1% of the CIF	7.58	9.44	6.13
Add Transportation Cost @ 1.5% of the CIF	11.37	14.16	9.19
Wholesale Price of Pakistani Fan in India with Tariff[223]	**1,037.92**	**1,293.33**	**839.49**
Add Sales Tax @ 12.5% [224]	129.74	161.67	104.94
Market Price of the Pakistani Fan in India with Tariff	**1,167.67**	**1,454.99**	**944.43**
Calculations for Market Price of the Pakistani Fan in India Without Tariff			
CIF of Pakistani Fan at India Border	**757.71**	**944.17**	**612.86**
Add Port Charges @ 1% of the CIF	7.58	9.44	6.13
Add Transportation Cost @ 1.5% of the CIF	11.37	14.16	9.19
Wholesale Price of Pakistani Fan in India Without Tariff	**776.66**	**967.78**	**628.18**
Add Sales Tax @ 12.5%	97.08	120.97	78.52
Market Price of the Pakistani Fan in India Without Tariff[225]	**873.74**	**1088.75**	**706.70**
Calculation for Indian Fans			
FOB price of Indian Fan[226]	828.00	1,026.00	807
Add Freight @ 1% of the FOB	8.28	10.26	8.07
Add Insurance @ 1% of the FOB	8.28	10.26	8.07
Add Unloading Charges @ 2% of the FOB	16.56	20.52	16.14
CIF in Indian Currency[227]	**861.12**	**1,067.04**	**839.28**
CIF of Indian Fan at OER in Pakistan[228]	**1,205.57**	**1,493.86**	**1,174.99**
Add Port Charges at 1% of the CIF	12.06	14.94	11.75
Add Import Duty at 25%[229]	301.39	373.46	293.75
Add Domestic Transportation Cost @ 1.5%	18.08	22.41	17.62
Wholesale Price of Indian Fan in Pakistan with Tariff	**1,537.10**	**1,904.67**	**1,498.11**
Add Sales Tax of 15%[230]	230.56	285.70	224.72
Wholesale Price + Sales Tax	1,767.66	2,190.37	1,722.83
Add Withholding Tax of 6%[231]	**106.06**	131.42	103.37
Market Price of Indian Fan in Pakistan with Tariff	**1,873.72**	**2,321.79**	**1,826.2**
Calculation for Market Price of Indian Fan Without Tariff			
CIF Pakistan	1,205.57	1,493.86	1,174.99
Add Port Handling Charges @ 1% of CIF	12.06	14.94	11.75
Add Transportation Cost to Market @ 1.5%	18.08	22.41	17.62
CIF of Indian Fans in Pakistan Without Tariff	**1,235.71**	**1,531.20**	**1,204.37**
Add Sales Tax at 15%	185.36	229.68	180.66
Market Price of Indian Fan in Pakistan Without Tariff[232]	**1,421.06**	**1,760.88**	**1,385.02**

Table A8.2.2. Elements of the Pedestal Fan Average Price Calculations 2005[233]

Calculation for Pakistani Fans	Amount in Rs[234]
FOB Price of Pakistani Fan[235]	1,610.00
Add Freight @ 1% of FOB	16.10
Add Unloading @ 2%	32.20
Add Insurance	16.10
CIF of Pakistani Fan at India Border[236]	**1,674.40**
CIF of the Pakistan Fan at the OER [237]	**1,196.00**
Add Customs Duty @ 34.48%	239.20
Add Port Charges @ 1% of the CIF	11.96
Add Transportation Cost @ 1.5% of the CIF	17.94
Wholesale Price of Pakistani Fan in India with Tariff[238]	**1,465.10**
Add Sales Tax @ 12.5% [239]	175.81
Market Price of the Pakistani Fan in India with Tariff	**1,640.91**
Market Price Of the Pakistani Fan in India Without Tariff	
CIF of Pakistani Fan at India Border	**1,196.00**
Add Port Charges @ 1% of the CIF	11.96
Add Transportation Cost @ 1.5% of the CIF	17.94
Wholesale Price of Pakistani Fan in India Without Tariff	**1,225.90**
Add Sales Tax @ 12.5%	147.11
Market Price of the Pakistani Fan in India Without Tariff[240]	**1,373.01**
Calculation for Indian Fans	
FOB Price of Indian Fan[241]	**1,289.00**
Add Freight @ 1% of the FOB	12.89
Add Insurance @1% of the FOB	12.89
Add Unloading Charges @ 2% of the FOB	25.78
CIF in Indian Currency[242]	1,340.56
CIF at OER of Indian Fan in Pakistan[243]	1,876.78
Add Port Charges at 1% of the CIF	18.77
Add Import Duty at 25%[244]	469.20
Add Domestic Transportation Cost @ 1.5%	28.15
Wholesale Price of Indian Fan in Pakistan with Tariff	2,392.90
Add Sales Tax of 15%[245]	358.93
Wholesale Price + Sales Tax	2,751.83
Add Withholding Tax of 6%[246]	165.11
Market Price of Indian Fan in Pakistan with Tariff	2,916.94
Market Price of Indian Fan Without Tariff	
CIF Pakistan	1,876.78
Add Port Handling Charges @ 1% CIF	18.77
Add Transportation Cost to Market @ 1.5%	28.15
CIF of Indian Fans in Pakistan Without Tariff	**1,923.70**
Add Sales Tax at 15%	288.56
Market Price of Indian Fan in Pakistan Without Tariff[247]	**2,212.26**

Table A8.2.3. Elements of the Bicycle Price Calculations 2005 *(Amount in Rupees[248])*

Calculation for Pakistani Bicycles	Average	Maximum	Minimum
FOB Price of Pakistani Bicycles[249]	**2,124.00**	**2,336**	**2,018.00**
Add Freight @ 1% of FOB	21.24	23.36	20.18
Add Insurance @ 1% of the FOB	21.24	23.36	20.18
Add Unloading @ 2% of FOB	42.48	46.72	40.36
CIF of Pakistani Bicycle at India Border[250]	**2,208.96**	**2,429.44**	**2,098.72**
CIF of the Pakistani Bicycle at the OER of India[251]	**1,577.83**	**1,735.31**	**1,499.09**
Add Customs Duty @ 15.3%	241.41	265.50	229.36
Add Port Charges at 1% of the CIF	15.78	17.35	14.99
Add Transportation Cost at @ 1.5% of the CIF	23.67	26.02	22.49
Wholesale Price of Pakistani Bicycle in India with Tariff [252]	**1,858.68**	**2,044.20**	**1,765.92**
Add Sales Tax @ 4% in Punjab, Delhi, and Mumbai[253]	74.35	81.76	70.64
Market Price of Pakistani Bicycle in India with Tariff	**1,933.03**	**2,125.96**	**1,836.56**
Market Price of Pakistani Bicycle in India Without Tariff			
CIF of Pakistani Bicycle at India Border	1,577.83	1,735.31	1,499.09
Add Port Charges at 1% of the CIF	15.78	17.35	14.99
Add Transportation Cost @ 1.5% of the CIF	23.67	26.02	22.49
Wholesale Price of Pakistani Bicycle Without Tariff	**1,617.27**	**1,778.69**	**1,536.56**
Add Sales Tax @ 4% in Punjab, Delhi, and Mumbai	64.69	71.14	61.46
Market Price of Pakistani Bicycle in India Without Tariff	**1,681.97**	**1,849.84**	**1,598.03**
Calculations for Indian Bicycles			
FOB Price of Indian Bicycle[254]	**1,414.40**	**1,517.76**	**1,175.04**
Add Freight @ 1% of FOB	**14.14**	**15.18**	11.75
Add Insurance	**14.14**	**15.18**	11.75
Add Unloading Charges @ 2% of FOB	**28.29**	**30.36**	23.50
CIF Price of Indian Bicycle[255]	**1,470.98**	**1,578.47**	**1,222.04**
CIF of Indian Bicycle at the OER in Pakistan[256]	**2,059.37**	**2,209.86**	**1,710.86**
Add Import Duty of Pakistan @ 30 %	617.81	662.96	513.26
Add Port Handling @ 1% of CIF	20.59	22.10	17.11
Add Transportation Cost at 1.5% of CIF	41.19	33.15	25.66
Wholesale Price of Indian Bicycle in Pakistan with Tariff[257]	**2,738.96**	**2,928.06**	**2,266.89**
Add Sales Tax of 15%[258]	410.84	439.21	340.03
Wholesale Price + Sales Tax		3,367.27	2,606.92
Add Withholding Tax at 6% of the CIF[259]	189	202.04	156.42
Market of Indian Bicycle in Pakistan with Tariff	**3,338.79**	**3,569.31**	**2,763.34**
Market Price of Indian Bicycle in Pakistan Without Tariff			
CIF of Indian Bicycle in Pakistan	2,059.37	2,209.86	1,710.86
Add Port Handling Charges @ 1% CIF	20.59	22.10	17.11
Add Transportation Cost to Market @	30.89	33.15	25.66

Calculation for Pakistani Bicycles	Average	Maximum	Minimum
1.5% of the CIF			
Wholesale Price of Indian Bicycle in Pakistan Without Tariff	2,110.85	2,265.11	1,753.63
Add Sales Tax of 15%	316.63	339.77	263.04
Market Price of Indian Bicycle in Pakistan Without Tariff[260]	**2,427.48**	**2,604.87**	**2,016.67**

Annex 8.3: Data Sources

The information on the two products was collected from published documents of the Indian Ministry of Commerce and Industry, published industry reports in India, and the domestic excise duty structure by the Ministry of Commerce and Industry of India. Moreover, additional information was obtained from published volumes of the customs tariff schedule of India for calculating the CIF and FOB values for these products.

For Pakistan, the information about fans was made available from the Small and Medium Enterprises Development Authority (SMEDA) reports, Ministry of Commerce, Federal Bureau of Statistics, survey of fan markets, Pakistan Electric Fans Manufactures Association (PEFMA), and the Fans Development Institute of Gujarat.[261] The information about the bicycles was collected through a market survey and structured interviews with major bicycle producers in the country.

Chapter 9
Analyzing Potential Economic Costs and Benefits of Pakistan–India Trade:
A Case Study of the Chemical Industry[*]

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This chapter analyses the potential economic costs and benefits for consumers, producers, and government of trade with India in the caustic soda industry. We analyze welfare gains under two scenarios. The first scenario assumes normal trading relations, i.e., if Pakistan were to grant most-favored nation (MFN) status to India. The second scenario assumes that the South Asia Free Trade Agreement (SAFTA) will be fully operative: there would be free trade between India and Pakistan and both countries will remove all tariffs and custom duties from each other's imports. We show that Pakistani consumers would benefit under a free trade arrangement by getting cheaper caustic soda from India for a range of export-oriented downstream industries, including textiles, food and beverages, soaps, vegetable oil, fertilizer, etc., which would enhance its export competitiveness. We recommend that the government make efforts to expand trade with India by putting caustic soda on the positive list and reduce MFN tariffs on industrial chemicals before implementing the FTA to reduce the possible costs of trade diversion.

Overview of the Chemical Industry[262]

World

The global chemical industry is a major contributor to world gross domestic product (GDP) and the manufacturing sector, with an annual turnover of approximately $1.5 trillion. The industry produces more than 8,000 products, supplied to virtually to all sectors, particularly to industries such as textile, paints, leather, ceramics, glass, soap, paper, pharmaceutical, petroleum, and petrochemicals, etc. Western Europe is the world leader in the chemical market and constitutes about 43 percent of total chemical production. The Asian market has transformed from a net importer to a net exporter of raw materials used to make polyester, fertilizers, and specialty chemicals. It now captures 26 percent of the world production. China's petrochemicals and plastic markets capture a significant share of the global industry; its trade in chemicals is about $400 billion. North America is the third-largest producer of chemicals and constitutes 22 percent of the global chemical market. South America and all other countries make up around 9 percent of the world market.

Pakistan

The chemical industry in Pakistan contributes approximately 3–4 percent to GDP and about 21 percent to value added in the total manufacturing sector. It has grown from a very small base at an compound average growth rate of 10 percent from 1955/56 to 2000/01 (Table A9.2.1 in Annex 9.2). The Pakistani chemical sector, however, is heavily import-dependent. In 2003/04, Pakistan's imports of chemicals amounted to $2.2 billion; the share of imports during the 2000s has been about 17 percent of the total imports (see Table A9.2.3 for trade trends of types of chemicals). Imports of industrial chemicals have been growing sharply over the last decade,[263] indicating a growing demand in Pakistan's manufacturing sector. Two major subgroups—industrial chemicals and organic

chemicals—make up almost 97 percent of chemical imports, with a very small share of dyes and extracts (less than one percent). Exports of chemicals from Pakistan stood at $264 million in 2003/04, an average of around 1 percent of total exports, which is quite low.

The industry comprises small and medium-sized enterprises, and it is highly fragmented geographically. There are few large-scale efficient units. With reduction in tariffs over the years, a number of smaller chemical units have closed down.[264] Although the production of industrial chemicals has been increasing during the last decade, it is still largely confined to producing a few types of chemicals (e.g., soda ash, caustic soda, sulfuric and hydrochloric acid, sodium bicarbonate, chlorine, aluminum sulfate, carbon black, paints and varnishes, acetone, and acetic acid).[265] The most promising subsectors (estimated market size in the year 2000 in parentheses) are organic chemicals ($130 million); inorganic chemicals ($70 million); dyeing, tanning, and coloring materials ($105 million); oils, perfumes, and flavors ($30 million); and resins and plastic materials ($240 million).

India

Although a small player in the world market, the $28 billion Indian chemical industry is well established locally. It contributes about 6.7 percent to the Indian GDP, 12.5 percent to the manufacturing sector's GDP, 19 percent to the excise and customs revenues, and 10 percent to total exports. The chemical industry recorded an average annual growth rate of 12 percent from 1997/98 to 2002/03. Highly heterogeneous, the chemical industry in India encompasses many sectors, such as organic and inorganic chemicals, dyestuffs, paints, pesticides, and specialty chemicals.[266] The industry consists of multinational companies such as Unilever, ICI, Hoechst, Dupont, BASF, Bayer, and Glaxo, and also thousands of large-, medium-, and small-scale units. Most of the small and medium-sized plants operate on batch processes, whereas some of the large producers have highly automated continuous-process plants. The industry is concentrated in the western region of India, particularly in the states of Gujarat and Maharashtra.

Welfare Analysis of Caustic Soda

We employ the simplified static analysis for individual industries to investigate the welfare gains or losses between Pakistan and India following the analytical framework discussed by Panagariya (1995).[267] We have selected *caustic soda* for our analysis.[268] This is an interesting case study because caustic soda is an essential raw material in Pakistan's major industries, it is one of the major domestically produced industrial chemicals in Pakistan, and it is currently not on the positive list of goods that are allowed to be imported from India. Hence, it will be exciting to analyze the likely welfare benefits and costs of this product in different scenarios, i.e., under MFN trade and under SAFTA. This selection was partly determined by the availability of comparable data on market size and structure, tariffs, prices, etc., for both India and Pakistan. Our analysis is for the period 2003, because comparable data and information on both India and Pakistan was available for that year while we were conducting our study in 2005.

Caustic soda is an essential chemical known as sodium hydroxide.[269] It is used as raw material in producing textiles, soap, oil and vegetable ghee, fertilizers, paper and board, and food and beverages—the key industries in Pakistan. The total production capacity of caustic soda in the country is about 188 metric tons (MT) per year.[270] India produces 2,018,000 MT of caustic soda annually, which is more than 10 times the production in Pakistan.[271] Indian units use about 68 percent of their installed capacity, with an annual turnover of about $4 billion.[272] There is excess demand for caustic soda in Pakistan. The country imports caustic soda from China, Iran, Kuwait, Saudi Arabia, and Indonesia, but not from India.[273] India is largely self-sufficient in caustic soda; it exports or imports depending on domestic demand conditions. We now discuss the welfare analysis for caustic soda if Pakistan were to grant MFN status to India and if there is free trade in the SAFTA context.

Modelling Assumptions

- Indian caustic soda export prices are slightly higher than prices in international markets. Under the MFN scenario, Indian caustic soda imports are expected to be limited. Indian exports of caustic soda are likely to displace the rest of the world's exports to Pakistan only under an FTA.
- Unless there is an increase in Pakistan's production capacity, there is almost no chance of caustic soda being exported to India because of high excess domestic demand and insignificant exportable surpluses.
- Indian exports of caustic soda to Pakistan could have some impact on production costs in India if it becomes a significant supplier of caustic soda to Pakistan due to proximity and low transport costs. The costs of Indian exports could go up slightly as exports to Pakistan expand in the future.
- After the FTA, the demand for Indian caustic soda is estimated to grow. The FTA will not only divert trade from the rest of the world to India but will also cause trade creation.
- Cost, insurance, and freight (CIF) prices of Indian caustic soda in Pakistan have been used to draw the Indian supply curve, because it was difficult to determine per unit prices for a large number of geographically diverse Indian producers.
- We assume competitive markets and free-on-board (FOB) prices equal to the ex-factory price in India because of the large number of producers in India.
- Rules of origin constraints are not applicable on Indian exports to Pakistan under the FTA or possible Pakistani exports to India because both countries use locally available raw materials.
- Elasticity of demand for caustic soda is calculated by assuming a linear relationship in price and quantity produced.[274]

Table 9.1. Prices of the Caustic Soda Used in the Simulation Analysis

ROW Caustic Soda Price in Pakistan	Pak Rs/kg	Indian Caustic Soda Price in Pakistan	Pak Rs/kg
ROW CIF Price in Pakistan[a]	14.00	Indian FOB Price[b]	11.60
Port Charges	0.50	Freight Charges	1.45
Custom Duty @ 25%	3.50	Port Charges	0.50
Row CIF Price After Custom Duty and Port Charges	18.00	Indian CIF in Pakistan	13.55
		Custom Duty @ 25%	3.39
		Row CIF price After Custom Duty	16.94
	FOB Price of Pakistan Caustic Soda[c]		12.00

Source: Authors' estimates.

[a] Rest of the World (ROW) CIF price is obtained by dividing the import value by its quantity from different countries from *Foreign Trade Statistics* data.

[b] Indian FOB price was obtained from the Center for Monitoring the Indian Economy (CMIE) (India) by dividing export value of Indian caustic soda by its quantity exported to different countries.

[c] FOB price of caustic soda of Pakistan is derived from export statistics. Pakistan exported a small amount of caustic soda to Afghanistan.

Key Results

Since Pakistan bans the import of caustic soda from India, Pakistan's source of import of caustic soda is ROW. At the moment, the Pakistani producers are supplying 188,000 MT of caustic soda in the domestic market, while 22,000 MT are being imported from ROW. If India gets MFN status, Pakistan's total domestic production and domestic demand is expected to remain the same as before trade with India. We assume that the excess of demand over domestic supply would be met by one-fourth imports from ROW and three-fourth imports from India. In this situation, there will be no change in the producer surplus of Pakistan (estimated to be Rs 564 million), while Indian producers will enjoy a producer surplus equal to Pak Rs 9.4 million (Table 9.2). The customs revenue of the Pakistan government will remain at Rs 66 million and will not change, because the Indian exporters

will pay the MFN custom duties and will be replacing ROW producers. (See Annex 9.1 for details of our calculations and the graphical analysis).

Table 9.2. Change in Economic Welfare for Caustic Soda After MFN with India
(Pak Rs Million)

	Pakistan	India	Total
Consumer Surplus	0	0	0
Producer Surplus	0	9.40	9.40
Custom Revenue	0	0	0
Net Welfare	0	9.40	9.40

Source: Authors' estimates.

After the FTA, we expect that Indian imports of caustic soda would not only displace all imports from the rest of the world but also capture some of Pakistan's domestic supply of caustic soda. As a result, there would be a reduction in the produce surplus in Pakistan. Overall, there would be a drop in domestic prices that will boost domestic demand by an additional 3–4 percent. Indian producers will also gain from free trade and their producer surplus is likely to increase even further compared to the MFN situation. The Government of Pakistan would lose custom revenues that it was getting from caustic soda trade. As estimated in Table 9.3, if Pakistan and India have an FTA, the total net economic welfare change for Pakistan (Rs -28.5 million) is slightly negative, as the consumer surplus benefits (Rs. 214 million) are not enough to offset the custom revenue loss (Rs. 66 million) plus the Pakistani producers' losses (Rs. 176 million), given that the same weights are assigned to consumer and producer surpluses and custom revenues. India will be gaining from this bilateral trade, however. The total welfare gain for India will be around Rs 70 million if trade occurs between the two countries. The results also indicate that the net welfare of India and Pakistan of this trade is welfare-increasing.

Table 9.3. Changes in Economic Welfare for Caustic Soda Under an FTA with India
(Pak Rs Million)

	Pakistan	India	Total
Consumer Surplus	214.00	0.00	214.00
Producer Surplus	-176.50	69.60	-106.90
Custom Revenue	-66.00	0.00	-66.00
Net Welfare	-28.50	69.60	41.10

Source: Authors' estimates.
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Trade would shift, however, from low-cost industry (ROW) to high-cost industry, as prices of caustic soda in India are relatively high compared to the rest of the world. This trade diversion is due to the FTA, which makes it feasible to import from even somewhat higher cost locations, because the reduction in tariffs counter the relatively higher import prices. There is another possibility that after the FTA, Pakistan will export chlorine gas to India, which might decrease the per-unit cost of domestically produced caustic soda. Currently, the existing plants have limited production capacity, and setting up a new plant requires a large investment.

Conclusions and Policy Implications

If Pakistan were to grant MFN status to India, Indian producers of caustic soda would be likely to compete with ROW producers and may capture some of Pakistan's caustic soda imports. After SAFTA implementation, there could be a reduction in the domestic equilibrium price of caustic soda, which could result in some trade creation. Pakistani producers could be hurt under more open trade with India, but producers in India are likely to gain significantly. The Pakistani government will lose custom revenues from the import of caustic soda under an FTA. Consumers in Pakistan, on the

other hand, would enjoy an increase in their surplus with more open trade. As caustic soda is an intermediate product, which is further used in producing many finished products, an increase in consumer surplus is likely to have positive multiplier effects on the economy. The downstream effects, however, have not been explicitly modelled. Given the importance of these multiplier effects, we recommend an in-depth analysis of forward linkages be done to get a better handle on the expected total welfare gains from trade.

The conclusions drawn on the basis of these products cannot be generalized for the large and diversified chemical industry in India and the smaller chemical industry in Pakistan. Nevertheless, our overview of the chemical industries of India and Pakistan indicates that the Indian chemical industry would benefit significantly from trade liberalization. Pakistan would benefit from an FTA by getting cheaper raw materials for downstream industries, which is likely to enhance its export competitiveness.

The findings suggest the following policy implications.

- Industrial chemicals are important inputs in the manufacturing sector of Pakistan, particularly for its largest industry: the export-oriented textile industry. By opening up trade with India, either by expanding the positive list or by granting MFN status to India, it would be possible to import these chemicals from the most proximate and cheapest source, which would help in increasing the competitiveness of a range of industries in Pakistan.
- In the case of caustic soda, granting MFN status would displace some of the existing imports from ROW, but there would be negligible effects on domestic producer surplus and consumer surplus. Hence, the study recommends either granting general MFN status to India or putting caustic soda on the positive list of imports from India.
- Pakistan is a net importer of almost all chemicals, including caustic soda, and it will continue to import these chemicals even after the FTA. The investment and business environment should therefore be improved to encourage increasing caustic soda production capacity and productivity to reduce the huge import burden.
- After the FTA, there would be some trade creation in caustic soda, but there could be some trade diversion as well. To reduce the costs of trade diversion, the government should reduce MFN tariffs on industrial chemicals before implementing the FTA.

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Annex 9.1: Welfare Effects

Caustic Soda

Figure 9.1.1 shows the before-and-after free trade situation for the caustic soda market in Pakistan. The S_P curve is Pakistan's supply curve, while the D_p curve represents the domestic demand of caustic soda, which includes, among other things, the effect of the rebate earned on the use of caustic soda in exports. At the moment, the Pakistani producers are supplying 188,000 MT of caustic soda in the domestic market, while 22,000 MT is being imported from ROW. The producer surplus in this situation can be measured by the area AGF, which is equivalent to Pak Rs 564 million. The government is earning customs revenue equal to the area FDHK, or Rs 66 million.

The Indian supply curve S_{I+t} is relatively elastic, which implies that expansion in Indian exports will result in only a slight increase in per unit cost of caustic soda. The S_{I+t} curve is effective before the FTA when the normal trading relation with India begins, while S_I is the same curve after the FTA, when Indian exports are exempted from the custom duty.

If India gets MFN status, Pakistan's total domestic production is expected to remain at 188,000 MT, and the total estimated demand is likely to be at the current levels of about 210,000 MT (at ROW CIF prices of Rs 18,000 per MT). The excess of demand over domestic supply is matched by imports of caustic soda from ROW (5,000 MT) and from India (17,000 MT). In this situation, there will be no change in the producer surplus of Pakistan, while Indian producers will enjoy a surplus of Rs 9.4 million (area ABC). The customs revenue of the Pakistan government will also remain unchanged, as the Indian exporter would be paying the MFN custom duties and would be replacing ROW producers.

After the implementation of an FTA, the Indian supply curve will shift downward from S_{I+t} to $S_{I,}$ as Indian producers no longer pay any custom duty. The horizontal summation of the Pakistani and Indian supply curve will result in an S_{I+P} curve—the effective supply curve that the domestic economy will face. This curve intersects the Pakistani demand curve at a new equilibrium price of Rs 17,000 per MT. The Indian producers will compete with the domestic producers as well as with the ROW producers. As a result, they are likely to displace all imports from ROW but also capture some of Pakistan's domestic supply of caustic soda. In this competition, the domestic price is expected to come down from Rs 18,000 per MT to Rs 17,000 per MT, making the tariff redundant. The drop in prices will boost the domestic demand for caustic soda from 210,000 MT to around 217,000 MT, increasing imports by 7,000 MT.

After the FTA, the Government of Pakistan would lose custom revenues equal to Rs 66 million (area FDHK in Figure 1). The Pakistani producers' surplus is trimmed from Rs 564 million to around Rs 387 million, making them worse off by Rs 176 million. The consumer surplus in Pakistan, on the other hand, increases by Rs 213.5 million (area AJVD shown in Figure 1). Indian producers will also gain from free trade, and their surplus will increase from Rs 9.4 million to Rs 79 million (measured by the area LJT). The total increase in the Indian producer surplus would be Rs 69.6 million as a result of the FTA. If Pakistan and India have an FTA, the total net economic welfare change for Pakistan (Rs -28.5 million) is slightly negative, as the consumer surplus benefits (Rs 214 million) are not enough to offset the custom revenue loss (Rs 66 million) plus the Pakistani producers' losses (Rs 156 million), given that the same weights are assigned to consumer and producer surpluses and custom revenues. India will be gaining from this bilateral trade, however. The total welfare gain for India will be Rs 79 million if trade occurs between the two countries. The results also indicate that the net welfare of India and Pakistan of this trade is increasing.

Figure A9.1.1 Caustic Soda Market
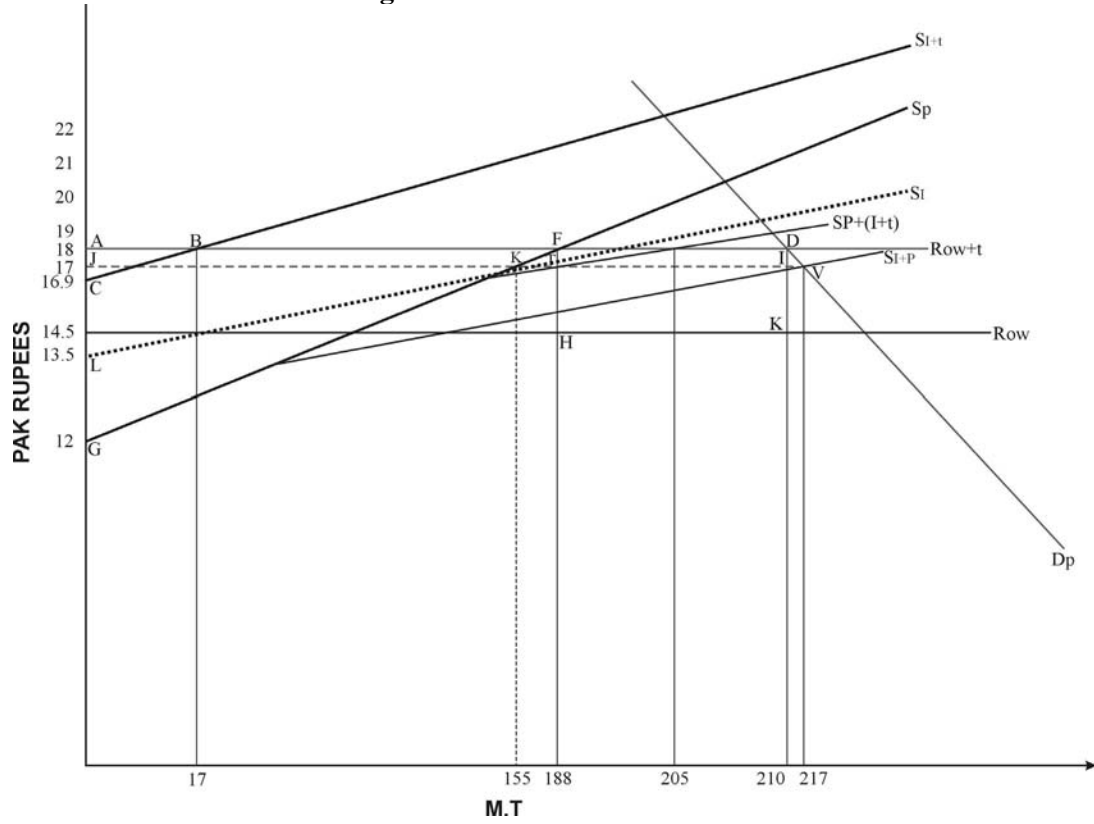
Table A9.2.1. Value-Added Share of Chemicals in Manufacturing Sector

Year	Chemicals	Industrial Chemicals
1955/56	6.65	--
1959/60	8.68	--
1964/65	12.79	--
1970/71	10.99	--
1975/76	9.92	--
1980/81	12.31	5.54
1985/86	16.11	8.31
1987/88	14.25	6.98
1990/91	15.04	7.85
1995/96	16.26	8.53
2000/01	21.1	10.80

Source: Census of Manufacturing Industries (CMI), various issues, FBS, Pakistan.

Table A9.2.2. Production Trends of Selected Industrial Chemicals

Year	Soda Ash	Sulphuric Acid	Caustic Soda	Chlorine Gas	Total Industrial Chemicals
	000 M.T.	000 M.T.	000 M.T.	000 M.T.	000 M.T.
1990/91	147.2	93.5	78.5	6.7	325.9
199192	185.9	97.6	82.0	6.1	371.6
1992/93	196.2	99.8	81.5	5.9	383.4
1993/94	197.0	102.3	89.0	5.8	394.1
1994/95	196.1	80.4	92.7	7.8	377.0
1995/96	221.2	69.2	109.0	9.1	408.5
1996/97	247.0	30.8	118.2	9.4	405.4
1997/98	240.3	28.1	115.7	9.7	393.8
1998/99	239.4	27.0	120.4	11.3	398.1
199900	245.7	57.7	141.3	14.2	458.9
2000/01	217.9	57.1	145.5	14.5	435.0
2001/02	215.2	59.4	150.3	15.1	440.0
2002/03	280.2	55.9	164.3	15.9	516.3
2003/04	286.5	64.6	187.5	17.2	555.8

Source: Economic Survey of Pakistan (various issues).

Table A9.2.3. Pakistan's Trade in Industrial Chemicals ($ Million)

Year	Industrial Chemicals		Organic Chemicals		Inorganic Chemicals		Dyeing & Tanning Extracts	
	Exports	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*	*Exports*	*Imports*
1993/94	4.91	160.51	4.25	345.11	0.33	21.92	0.33	18.65
1994/95	3.16	99.89	2.53	426.36	0.32	23.70	0.32	20.23
1995/96	3.05	84.50	2.77	510.53	0.28	30.76	0.28	19.96
1996/97	3.16	76.92	2.68	460.47	0.24	27.73	0.24	18.49
1997/98	2.89	64.06	2.22	518.76	0.00	22.42	0.44	18.20
1998/99	3.84	77.54	3.43	466.26	0.00	27.07	0.20	17.58
1999/00	16.40	305.73	16.03	573.16	0.19	30.38	0.19	16.22
2000/01	61.36	990.79	60.55	616.02	0.81	29.87	0.16	17.60
2001/02	63.46	1,062.67	62.12	617.72	1.34	32.48	0.17	17.58
2002/03	78.96	1,367.29	77.40	757.06	1.39	49.00	0.17	17.84

Source: Statistical Year Book, various issues, FBS, Pakistan.

Table A9.2.4. Growth in Value and Output of Chemicals in India

Year	Growth (%) Value of Output			Growth in Net Value Added (%)	
	Chemicals	Inorganic Chemicals	Alkalies	Chemicals	Alkalies
1996/97	15.2	12.6	3.9	6.6	-3.2
1997/98	0.8	1.2	-4.0	6.6	-29.4
1998/99	21.6	13.2	14.9	13.6	8.4
1999/00	26.0	7.0	16.0	2.0	-18.3
2000/01	30.2	-1.2	9.1	15.1	24.2
2001/02	-4.3	-5.3	0.4	8.4	9.7
2002/03	16.8	10.2	5.1	26.3	17.4
CAGR	15.2	5.4	6.5	11.2	1.3

Source: CMIE, India 2004
Note: CAGR = compound annual growth rate

Table A9.2.5. Exports and Imports of Indian Chemicals Sector ($ Million)

Year	Chemicals		Inorganic		Organic	
	Exports	Imports	Exports	Imports	Exports	Imports
1996/97	5,489.95	4,415.02	234.29	916	993.08	1973.9
1997/98	5,002.1	5,068.82	207.76	1,207.61	1,214.94	1,989.68
1998/99	3,875.21	4,850.88	158.11	1,287.32	1,141.69	1,625.96
1999/00	4,541.78	5,330.89	159.48	1,335.6	1,368.95	1,745.58
2000/01	5,452.58	4,118.73	235.6	1,086.2	1,729.76	1,599.65
2001/02	5,495.83	4,719.75	263.98	1,201.42	1,609.06	1,844.14
2002/03	6,868.68	4,924.54	402.13	1,149.48	2,105.59	2,209.92
2003/04	8,247.33	6,433.86	424.11	1,284.39	2,823.56	3,125.73
CAGR	5.22	4.82	7.7	4.32	13.95	5.91

Source: Directorate General of Foreign Trade, India
Note: CAGR = compound annual growth rate

Table A9.2.6. Caustic Soda Production Comparison

Year	India	Pakistan
Unit	000 MT	000 MT
1990	987	78.5
1991	1,027	82
1992	1,078	81.5
1993	1,109	89
1994	1,121	92.7
1995	1,357	109
1996	1,456	118.2
1997	1,426	115.7
1998	1,431	120.4
1999	1,425	141.3
2000	1,722	145.6
2001	1,870	150.3
2002	1,943	164.4
2003	2,018	187.1

Source: FBS, Pakistan; CMIE, India

Table A9.2.7. Pakistan's Imports of Caustic Soda as a Percentage of Production

Year	India	Pakistan
1998	7.0	1.1
1999	5.8	3.1
2000	4.4	6.0
2001	3.7	2.8
2002	2.0	13.4
2003	5.7	11.5

Source: FBS, Pakistan; CMIE, India

Table A9.2.8. Tariff and Tax Structure of Selected Commodities (2004/05)

Commodity	HS Code	Unit	Pakistan (Pak Rs)			India (Indian Rs)		
			Custom Duty	Sales Tax	Total Duty	Basic Duty	Additional Duty	Total Duty
Caustic Soda (Solid)	28151100	kg	20	15	35	20	16.32	40.38
Caustic Soda (Liquid)	28151200	MT*	7,200	15		20	16.32	40.38
Acid Dyes	32041200	kg	20	15	35	20	16.32	40.38
Reactive Dyes	32041600	kg	20	15	35	20	16.32	40.38

*Unit of measurement of liquid caustic soda from India in kg.
Source: Pakistan Customs and Tariffs Book 2004/05; Central Board of Revenue, Pakistan; *Easy Reference Customs Tariffs 2004/05,* New Delhi, India

Annex 9.3: Data Description and Sources

Data on the production of chemicals sector and its subsectors, i.e., organic and inorganic chemicals, was collected from various issues of *Economic Survey of Pakistan*. Similarly, production of selected commodities was obtained from *Economic Survey* and *Monthly Statistical Bulletin*. Data on Indian production of selected commodities was taken from C*enter for Monitoring the Indian Economy (CMIE), Corporate Sector* publications.

Monthly imports and exports from Pakistan were collected from various issues of *Foreign Trade Statistics*. Monthly prices of selected chemicals are published by the Federal Bureau of Statistics, which include value-added tax and other transportation costs. Ex-factory prices were obtained directly from the producers to construct the final prices required for the simulation analysis. Similarly, landed (CIF) prices of imported commodities are obtained from raw data at the time of port clearance, obtained from the Central Board of Revenue. Data on India trade is available online from the DGFT, India.

The tariff structure and other taxes at the commodity level are available in the *Pakistan Customs and Tariffs Book* published by the Central Board of Revenue, while information on the Indian custom and tariff structure was obtained from the customs and tariffs yearbook published in India, as well as the Indian Ministry of Commerce. All the required variables used in the analysis were constructed carefully and verified using alternative sources of available information.

Some information on prices was obtained directly from stakeholders. Structured interviews were conducted both with producers and importers of the selected products. Information was also collected from the end-user industries through questionnaire responses, as well as by asking them directly about product usage, their price variation, and other related information.

We have selected 2003 as the year of analysis because data in all required variables are available for this year. All the currency units are in Pak Rs, unless otherwise specified. Details of prices used in the analysis is given in Table 9.1. The comparison of Pakistani and Indian tariffs on selected chemicals is given in Table A9.2.8 in Annex 9.2.

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[1] See Chapter 2 for more details on these statistics.

[2] The State Bank of Pakistan (2006) estimates a trade potential of $5.2 billion. Baroncelli (2006) in Chapter 3 derives a trade potential, including unofficial trade, of $3.2 billion, and Batra (2004) obtains $6.6 billion. The Federation of Indian Chambers of Commerce and Industry (2003) estimates potential trade of around $6 billion to $8 billion. The Karachi Chamber of Commerce and Industry predicts that trade could be as high as $5 to $10 billion.

[3] Data are gross exports from developing countries in East and South Asia in current U.S. dollars, taken from the UN Comtrade database.

[4] Percentages are calculated as exports plus imports of developing countries in each region as shares of their total exports plus imports.

[5] The Regional Cooperation for Development was founded by Pakistan, Iran, and Turkey. The Economic Cooperation Organization is an organization formed for the purpose of promoting economic, technical, and cultural cooperation among the member states of Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan, and Uzbekistan.

[6] The India–Pakistan Composite Dialogue process began in January 2004 after a meeting of the Indian Prime Minister Atal Bihari Vajpayee and Pakistani President Pervez Musharraf. The eight-point agenda covers peace and security, including confidence-building measures; Jammu and Kashmir; Siachen; Sir Creek, Wullar Barrage, terrorism and drug trafficking, economic and commercial cooperation, and promotion of friendly exchanges in various fields.

[7] Under a "positive list" approach, only those items on the list may be imported. In contrast, items on a "negative list" are banned, and any item that is not on the list may be imported.

[8] The 773 items corresponded to around 1,650 tariff lines at the eight-digit level, and with the latest addition of 320 items in November 2006, the list covers around 2,000 tariff lines at the eight-digit level. A number of aggregated categories are also included that cover a large number of tariff lines, such as laboratory equipment, pharmaceuticals, and human immunodeficiency virus/acquired immune deficiency syndrome drugs. In addition, a few regulations cover additional items that are allowed for exports under bonded warehouses, export houses, duty neutralization schemes, etc. Chapter 4 of this volume presents additional information on the lack of transparency of the positive list.

[9] These figures are based on the average of the bilateral trade date reported by Pakistan and India. It must be noted there are considerable discrepancies between the trade data of the two countries partly because of differences in the fiscal years. The consistent trend over the last 10 years is that Pakistan's trade data underreports exports to India compared to Pakistan's imports in the Indian data and overreports imports from India compared to what Indian data shows as exports to Pakistan. It would be useful to sort out these discrepancies as part of Pakistan–India trade discussions, particularly as the differences are higher compared to normal discrepancies in bilateral trade statistics.

[10] WTO statistics indicate that India has initiated more antidumping investigations than any other country over the history of the WTO: 425 cases in 1995–2005, exceeding the number of cases initiated by either the United States (366) or the European Community (327) (statistics on www.wto.org). A January 2005 study by the Pakistan–India CEOs' Business Forum suggests that Pakistani businesses face a number of restrictions in exporting their products to India, and also identifies a few Pakistan-specific barriers related to security concerns. The U.S. National Trade Estimate for 2006 enumerates many Indian nontariff barriers, including nonautomatic import licensing, overly restrictive standards and certification requirements, customs valuation procedures that violate WTO rules, and others (www.ustr.gov). A recent issue of *The Economist* devotes a special survey to the challenges of doing business in India (*The Economist,* June 1, 2006).

[11] Calculations based on 2004 data from IMF Direction of Trade Statistics database. China's long-standing and sizeable trade surplus with the United States garners considerable attention in the media, but many forget that China simultaneously runs large deficits with Japan, Korea, Malaysia, Thailand, and other major partners.

[12] Pakistan ranks moderately better in terms of the average tariff rate on agricultural products only: 75th out of 170 countries using an industry-level definition of "agriculture" and 99th out of 170 countries using a broader definition—all products in HS Chapters 1 through 24. All calculations were made using UNCTAD Trains data for the years 2002 to 2005. The calculations include only ad valorem tariff rates.

[13] These figures are based on the share of merchandise trade (in millions of $) to GDP at current market prices (using the new GDP series beginning in 1999–2000). The new GDP series was converted into $ at the average annual exchange rates. We have compared the share of trade to GDP over a longer time period in Figure 1.7. Since the older GDP series was discontinued after 2002/03 we have estimated the data for the last four years. This has been done by projecting the 2002/03 figures using the current growth rates of nominal exports, imports, and GDP at market prices in the new series. The indicator of openness in Figure 1.7 has been calculated using the share of expenditures on exports and imports in goods and nonfactor services to the GDP at current market prices in the national accounts.

[14] These include India, Pakistan, and Sri Lanka as non-least-developed countries (non-LDCs), and Bangladesh, Maldives, Nepal, and Bhutan as least-developed countries (LDCs). Recently Afghanistan has been accepted as a new member of SAARC and an LDC member of SAFTA. China, Japan, Korea, Iran, the European Union, and the United States have been granted observer status in SAARC.

[15] These agreements can be viewed on the SAARC Web site: http://www.saarc-sec.org/main.php.

[16] These issues are discussed in detail in Chapter 2.

[17] Srinavasan and Canonero (1993) and Sengupta and Banik (1997).

[18] Chapters 2–9 are condensed and nontechnical versions of longer reports that the World Bank has delivered to the Ministry of Commerce in 2004–2006.

[19] "Informal trade" here refers to bilateral trade that is not recorded as such in official statistics, because it moves through third countries (e.g., United Arab Emirates, Afghanistan, or Singapore), is smuggled, or is carried out by individuals carrying tradable items as personal baggage.

[20] A general equilibrium approach would take into account the indirect effects on all sectors of the economy transmitted through changes in factor markets. Such an approach demands significantly more data than a partial equilibrium model, and is not feasible at the level of disaggregation used in this study.

[21] One should note that the text of SAFTA does not require that Pakistan eliminate its ban on certain imports from India. Government of Pakistan officials have indicated that they expect to gradually expand the positive list so that, by the time the SAFTA tariff liberalization program is complete, India will have essentially the same access to Pakistan's market as other non-LDC SAFTA members. As an analytical convenience, the simulations treat this policy as equivalent to abolishing the positive list. The simulations also abstract from transaction costs, such as those caused by weaknesses in customs clearance, as well as nontariff barriers, including restrictive rules of origin and technical barriers to trade.

[22] Consumer and producer surplus refer to the economic gains that accrue to buyers and sellers when they engage in trade. In a partial equilibrium model, which looks at all buyers and sellers of a particular product, consumer surplus is measured as the sum of differences between what each consumer would be willing to pay for a product and the price paid. Producer surplus is the sum of the difference between the price received and the marginal costs of producing all units sold. A tax raises the price that consumers pay above what producers receive. This results in a transfer of income to the government, which the model assumes benefits the society as a whole. But a tax also imposes a welfare cost on society by preventing some mutually beneficial exchanges from taking place, thus reducing the efficiency with which markets allocate resources.

[23] In essence, this assumes that a rupee going to consumers has equal value to society as a rupee going to the government or to producers.

[24] During 2004/5, Pakistan spent 3.1–3.5 percent of GDP, and India 1.5–1.7 percent, on defense.

[25] This conclusion comes from the expectation that any Indian exportables not on the positive list would be included in Pakistan's list of products exempted from SAFTA. The latest revision of the positive list was done in November 2006; 320 new items were added in the list of legally importable items from India.

[26] The seminal formulation of incremental policy reform is Charles E. Lindblom, "The Science of 'Muddling Through,'" *Public Administration Review* 19 (1959):79–88.

[27] As Chapter 5 points out, however, granting MFN status to India would not be a sufficient condition to switch trade from informal to formal channels.

[28] UNCTAD considers transition economies separately from developing countries in two separate lists. For purposes of this count, I have therefore amalgamated the two lists and added the two ECA firms that would qualify for the top 50 list by foreign assets. See UNCTAD 2003: 189–191.

[29] The concessions by country are in the following order: Bangladesh, 521 products; Bhutan, 233 products; India, 2,554 products; Maldives, 178 products; Nepal, 491 products; Pakistan, 491 products; and Sri Lanka, 199 products.

[30] These estimates are based on information on informal trade available for different years in the 1990s, however, the official trade numbers are from 1999.

[31] The model used was a fixed-effects gravity model of bilateral trade for 2001. The explanatory variables include importer's and exporter's GDP and per capita income, distance, and dummies for adjacency, common language, and membership in a major RTA.

[32] These include Bussolo and Lay (2003) and, at the global level, World Bank 2003 (GEP 2002).

[33] Suppose Pakistan signs an agreement with India to cover products that have a tariff of 20 percent. If the international price is 100, and the Indian price is 110. Before the agreement, the domestic selling price is 120; after the agreement, the domestic selling price is 110, but the government (and country) has lost the value of the tariff, so ends up paying more. See Hoekman and Schiff 2002, for more extended, but still understandable, discussion.

[34] Consider the case of Mercosur intrablock imports increasing from about 0.5 percent of total GDP to nearly 2 percent and during the same period. Mercosur imports from the rest of the world also increased from perhaps 7 percent to 10 percent. The fact that both intraregional trade and the trade share of the GDP increased offers partial evidence that trade creation dominated trade diversion. The same patterns pertain to the CARICOM arrangement for Central America, the AFTA agreements, and, to a lesser extent, the second Andean agreement.

[35] Details of the Pakistan–Sri Lanka FTA are available at: http://www.commerce.gov.pk/PSFTA.asp.

[36] According to preliminary estimates, in the case of the agreement between Pakistan and Malaysia, liberalization seems to be limited: the 125 products Pakistan is liberalizing represent only 5.5 percent of their imports from Malaysia. Likewise, the 114 products Malaysia is liberalizing represent 11 percent of their total imports from Pakistan. http://www.bilaterals.org /article.php3?id_article=2847.

[37] Agreement on South Asia Free Trade Area (SAFTA). 12th South Asian Association for Regional Cooperation (SAARC) Summit. January 2004.

[38] The notification was issued by the SAARC Secretariat on March 22, 2006, that SAFTA had been ratified by all the seven original member states and hence retroactively entered into force on January 1, 2006.

[39] The compensation would be available for four years for all LDCs, except Maldives, for which compensation would be available for six years.

[40] The estimates of trade affected by the sensitive list is based on UN Comtrade data for 2004 for Bangladesh, India, Maldives, Pakistan, and Sri Lanka; and for 2003 for Nepal. http://www.saag.org /%5Cpapers17%5Cpaper1653.html.

[41] According to estimates using the latest information available from GTAP 6, South Asia is one of the most protected regions after Sub-Saharan Africa. South Asia is the second region with the highest protection rates (16 percent) followed by Latin America (16 percent), European and Central Asia (11.5 percent), Middle East and North Africa (9.8 percent) and East Asia Pacific (8.1 percent). Only Sub-Saharan Africa shows higher rates of protection (20 percent).

[42] The India–Sri Lanka FTA was signed in December 1999, while the Pakistan–Sri Lanka FTA came into force in June 2005.

[43] Quoted from the *Economic and Political Weekly* (2007), editorial, January 7, 2006.

[44] BIMSTEC includes India, Sri Lanka, Bhutan, Nepal, Bangladesh, and Sri Lanka, which are also SAFTA members, and Thailand and Myanmar, which are ASEAN members. The framework

agreement for BIMSTEC FTA was signed in February 2004 and includes provisions for trade in goods, services, and investment.

[45] World Bank and International Finance Corporation 2007. *Doing Business in 2007*. IBRD.

[46] Pursell and Sattar (2004) present numerous specific suggestions for reforming border barriers; see also Schuler (2004) for detailed recommendations in the case of Pakistan.

[47] The four Singapore issues are transparency in government procurement, investment policy, competition policy, and trade facilitation. For a discussion of their role in derailing the meeting in Cancun, see Hoekman and Newfarmer (2003).

[48] This study does not predict the welfare impact of trade liberalization, nor does it seek to estimate the expected effects of SAFTA on the two governments' trade revenues, and on the other main stakeholders, producers, and consumers, at the sector level.

[49] See Table I in the appendix for the coefficients on the "conflict" and "RTA" (Regional Trade Agreement) variable. Also see Figures 1 and 3 and Tables 1 and 2 in the text below.

[50] See Leamer and Stern (1970), Leamer (1974), Anderson (1979), Bergstrand (1985 and 1989), Helpman and Krugman (1985), Helpman (1987), Hummels and Levinson (1995), Deardorff (1984 and 1998), and Anderson and van Wincoop, (2003).

[51] Gowa and Mansfield (1993), Gowa (1994), Mansfield and Bronson (1997a), Long (2003), Dixon and Moon (1993), Bliss and Russett (1998), Morrow et al. (1998, 1999), O'Neal and Russett (1997, 2001), and Mansfield et al. (2000).

[52] Such geographical and cultural variables include the existence of shared borders, island or landlocked status, common language, previous colonial ties, and currency ties.

[53] "An armed conflict is a contested incompatibility that concerns government or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths." (Strand et al., *Armed Conflict Dataset Codebook*, Version 2.1, 11 March 2004, p. 3). In our dataset, only intermediate armed conflicts (at least 25 battle-related deaths per year and an accumulated total of at least 1,000 deaths, but fewer than 1,000 per year) and interstate wars (at least 1,000 battle-related deaths per year) appear. Minor armed conflicts (at least 25 battle-related deaths during the entire course of the conflict) do not appear in our dataset.

[54] Data have been taken from Khan et. al., "Quantifying Informal Trade Between Pakistan and India," Chapter 5 in this volume. The field survey to estimate informal trade between India and Pakistan was done by the Sustainable Development Institute for the World Bank during January–May 2005.

[55] Ideally, one should use an indicator that better reflects the intensity and duration of conflict. As in Strand et al., *quot.*, for the purpose of our analysis both years of war (Intensity Level 3 in the Uppsala PRIO Dataset) and years of militarized disputes (Intensity Level 2) are labeled as conflict years in our sample. Therefore, for the case of Pakistan–India relations, the conflict dummy takes on the value of 1 for the following years: 1948, 1964, 1965, 1971, 1984, 1987, 1989, 1990, 1992, 1996, 1997, 1998, 1999, and 2000.

[56] Percentage increases are computed using the coefficients on conflict and RTAs estimated in the regression. We follow the standard approach of computing the percentage increase associated with an estimated coefficient, β, as $(e^{\beta} - 1)$. The estimated coefficient the conflict dummy variable is -1.6205, which implies that trade flows are $e^{-1.6205} - 1 = -0.8022$; in other words, 80 percent lower in years with conflict than in peace. The model therefore predicts that peacetime trade would have been 405 percent higher than recorded flows experienced in a conflict year. The estimated coefficient for the RTA dummy variable is 0.581 (see Annex III, Table I), the percentage increase in trade associated with membership in an RTA is computed as $e^{0.581} - 1 = 0.788$.

[57] Table I in Annex III reports the coefficients that have been used to predict these flows. In column two, we have reported the coefficients of a specification with a lagged conflict variable (six years) to provide a robustness check of our coefficients on reverse causality between trade and war. The coefficient of lagged conflict is not significantly different from the coefficient of the contemporaneous conflict dummy, indicating that our main specificationis robust to reverse causality checks. We have run additional tests and verified that the coefficients on lagged conflict are still negative and significant until the tenth lag. Therefore, the results of our auxiliary regression show that relative to our sample and for the purpose of this study, the direction of causality runs from conflict to

trade. For a contending view, see Barbieri and Schneider (1999) and Barbieri (2002) and, under a more comprehensive analytical framework, Martin et al. (2005).

[58] For a contending view on cases of reduction in intrabloc trade as a result of the formation of an RTA, see Soloaga and Winters (1999) and Frankel (1997). We checked for robustness and ran other endogeneity checks (two-stages least square regression with instrumented RTA), using ln (mean distance between Cty1 from all partners, by RTA)+ln (mean distance between Cty2 and all partners, by RTA). Our instrument captures the incentives that a country has to enter an RTA, depending on his distance from all his RTA and non-RTA partners. The assumption is that the larger the distance between each partner and all the other countries (RTA partners and non-RTA partners, respectively), the lower the incentive for it to enter an RTA with nonpartners. The results from the 2SLS confirm sign, magnitude, and significance of our coefficient on the RTA variable (by construction, the instrument is correlated with RTA [corr=-0.6493]). It is also correlated with distance (corr=0.5306). However, short of comparing such instrument with another possible instrument, there is no direct way to test the correlation between it and the errors from the main regression.

[59] Chapter 5 in this volume.

[60] For a theoretical justification of the need to estimate gravity models of trade with terms that incorporate the effect of "multilateral resistance" (in essence, the effect on bilateral trade that is ascribable to the specificities that each of the two partner countries show with respect to trade with the rest of the world), and for a suggestion of the "country dummy" strategy as a relatively easy way to proxy for these parameters, see Anderson and van Wincoop (2003). Another empirical application of this operationalization of multilateral resistance in a gravity framework is in Subramanian and Wei (2003).

[61] The use of gravity models to predict trade flows in South Asia suffer from one major weakness: even though the countries in the region are geographically contiguous, transportation and other transaction costs of trading in the region are very high, hence the results are possibly overestimated.

[62] Using COMTRADE data.

[63] See Kemal et al. (2002), GoP (1996), and Nabi and Nasim (2001). It must be noted that these indices do not give much indication of trade possibilities.

[64] The survey covered 47 exporters, importers, and freight forwarders in three cities, namely, Delhi, Mumbai, and Amritsar. Discussions were also held with a number of policy makers and academicians. This was a small, nonrepresentative survey and hence the results should be generalized with caution. Annex 4.2 has details on the survey methodology and key results.

[65] The ACU was set up in 1974. It has seven members—Iran, Nepal, Pakistan, Sri Lanka, Bangladesh, Myanmar, and Bhutan.

[66] India–Pak Business Meet held on 9 December, 2004, organized by ASSOCHAM .

[67] Following the attack on the Indian Parliament in December 2001, air and rail links between the two countries were suspended. Amid a peace process begun in April 2003, passenger air links were restored at the end of 2003. In January 2004, rail service reopened between the two countries.

[68] This study was completed before the opening up of the Khokrapar–Monabao rail link, and hence this route has not been discussed. The rail link between Monabao and Khokrapar in Sindh that was reopened in February 2005 after being suspended in 1965, but was again suspended after the flooding of tracks in India in the summer of 2006. Although Pakistan and India have agreed to use this service for both freight and passenger traffic, the service was only used for passenger traffic until now.

[69] The capacity of a goods wagon is 24 tons, whereas that of a parcel wagon is 55.5 tons.

[70] One rake carries 1,750 tons.

[71] This is similar to movement of a goods train through the India–Bangladesh border.

[72] The Indian crew and engine does not move into the Pakistani territory and vice versa. Only the wagons are allowed to move from one country to another with the respective country's engine and crew.

[73] Arun Goyal, http://economictimes.indiatimes.com/articleshow/msid-993403,prtpage-1.cms

[74] The Amritsar Exporters Chamber of Commerce.

[75] This situation was reported during the field survey in January–February 2005 and has continued.

[76] For instance, a shipping bill or bill of entry can be stalled because of a spelling error.

[77] There are only two border points, Raxaul at the India-Nepal border and Petrapole at the India-Bangladesh border, at which Electronic Data Interchange facilities are available.

[78] This shipping protocol was revised on December 14, 2006, allowing ships of the two countries to lift third-country cargo from each other's ports. The revised protocol would also allow ships of third countries to lift Indian and Pakistani cargo. It is expected that the new protocol would encourage the shipping business in the region and would facilitate trade flows between India and Pakistan.

[79] For the purpose of the study, transaction costs (in monetary terms) include the cost of transportation and bribes to rail authorities, police, port authorities, and customs for various procedural clearances.

[80] The value of 18 tons of soy meal is US$4,000. This item was selected because it is a homogenous commodity. Also, at the time of the survey, it was easier to locate freight forwarders and traders dealing with soy meal.

[81] Freight costs on the Mumbai–Dubai–Karachi route are around US$950, but could be as low as $750 per container because of low freight rates for goods moving from Dubai to Karachi. The price advantage usually accrues to agents operating from Dubai, but may sometimes be shared with Indian exporters. Freight costs are often determined by the freight trade balance between two countries. Since Pakistan has a trade surplus with Dubai, containers moving back from Dubai to Karachi are not fully loaded and are therefore offered to Indian exporters at concessional rates. Further, if the same freight rule is applied to goods moving between India and Pakistan, then given that India has a trade surplus with Pakistan, freight costs of transporting goods from Pakistan to India should be less than the cost of transporting goods from India to Pakistan. Freight forwarders, when questioned about the freight rates on the Mumbai–Karachi route, pointed out that the costs in both directions is the same. This is because the shipping protocol between India and Pakistan allows only Indian and Pakistani flagships to operate between the two countries. Lack of competition leads to high freight costs.

[82] The two countries have agreed to open branches of two banks from each country on a reciprocal basis. To date, both India and Pakistan have identified the banks and are reviewing the applications and regulatory measures for opening branches.

[83] There have been discussions about easing visa restriction between India and Pakistan as part of the bilateral dialogue process. The proposals that are being considered include increasing the visa counters from two to three, increasing the number of visas granted to tourists and businesspersons, and a seven-day open visa with no restrictions on visiting a particular city or place, etc.

[84] Member countries are positioned as suppliers and markets. Products of member countries that are being traded are first identified. The existing trade between the two countries (if any) is then deducted from the minimum of the two values of world exports of the supplier country and the world imports of the market country to arrive at potential bilateral trade.

[85] www.trade-india.com and www.indiamart.com The Web sites provide information on exporters and importers and service providers such as freight forwarders and customs-clearing agents.

[86] Two companies mentioned that they had queries from the police in Pakistan, which caused them to stop dealing with Pakistan.

[87] For the purposes of this paper, informal trade is defined as trade between India and Pakistan that takes place either through smuggling or through quasi-legal channels. The latter implies trade between the two countries that is recorded in official trade statistics as trade between Pakistan and a country other than India.

[88] The trade imbalance in official trade was $259 million in FY05, compared to $534 million in 2005 for informal trade. Pakistan's exports formed close to one-third of total official trade, whereas informal exports from Pakistan to India were only 2 percent of total informal trade. It is probable that informal exports have been underestimated, as we did not have access to information from India; however, even if the correct figure were higher by a factor of five, it would not make much of a dent in the imbalance.

[89] Herbal medicine used as a laxative.

[90] An herbal medicine.

[91] Items used as condiments in making traditional betel leaves ("paan") or as substitutes.

[92] One example is car tires, a smuggling-prone item, which has now almost completely switched to formal India–Pakistan trade channels; however, such a switch has only been seen in cases where the transaction costs for informal trade were high and the duty reduction made formal trade more cost-effective.

[93] A smuggling center in the tribal area adjoining Peshawar, and which falls under the Federally Administered Tribal Areas.

[94] Noshki and Chaman are border cities in Balochistan and transit points for smuggling into the province.

[95] Open bus used for traveling in the Thar Desert, originally converted from a truck and used to carry smuggled items.

[96] Chiffon and georgette are varieties of silk-based blended fabric that are fashioned into women's formal wear.

[97] Originally hand-loom silk fabrics made in Banaras (now Varanasi) are known as Banarasi silk.

[98] Dress worn by women in South Asia which is typically a 6–6.5 feet long fabric tied around the body.

[99] Although only bull smuggling has been reported here, our impression is that goats and sheep are also smuggled. We have planned to conduct a follow-up visit to confirm the livestock estimates. For now, the figure is underestimated, as it excludes trade in goats and sheep.

[100] A port in the Persian Gulf in Iran.

[101] Border town between Iran and Afghanistan.

[102] A border town between Afghanistan and Pakistan.

[103] The daily rate for a cyclist was $1.66, while the piece rate was $0.02 to $0.06 per meter in January–May 2005, depending on the value of the cloth. They charge a higher rate for taking responsibility of the smuggled items (on average, $4.16).

[104] An informal loan arrangement where retailers get goods in advance from wholesalers and stagger payments in the future on a mutually agreed basis.

[105] A system of informal international currency transactions. Also know as "Hawala."

[106] Carrier of smuggled goods in Balochistan.

[107] For this reason, the analysis and data that we present in this paper covers up to 2004/05.

[108] Wheat production in Pakistan is concentrated in Punjab, with an 80 percent share of total production, while the rest is being shared by Sindh (11 percent), NWFP (6 percent), and Balochistan (3 percent).

[109] Major wheat-growing states in India are Uttar Pradesh (35 percent of production), Punjab (20 percent) ,and Haryana (13 percent); the Indian states of Chhatisgarh, Himachal Pradesh, Rajasthan, and Bihar are also wheat-producing states.

[110] The share of wheat in total calories consumed in Pakistan is 40 percent. Food consumption in Pakistan is dominated by three vegetable products (namely, wheat, rice, and sugar and sweeteners), along with animal products accounting for 60 percent of total calories consumed (FAO 2002).

[111] Calories consumed from vegetable products in India account for 92 percent (wheat, rice, sugar and sweeteners, and pulses) of total calories. Rice, with a 34 percent share in calories, is the dominant food grain in India, as compared with only an 8 percent share for rice in Pakistan. Wheat accounts for only a 20 percent share of calories in India. Wheat consumption in India has been declining partly due to changing consumption patterns toward high-value agricultural goods (FAO 2002).

[112] Imports of fertilizer represent one caveat to the elimination of input subsidies. In his budget speech of June 5, 2006, the Minister of State for Finance announced that the government would subsidize imports of fertilizer.

[113] The highest wheat import by Pakistan in recent years was 4.1 million MT in 1997/98. The magnitude of Pakistan's wheat export has remained much smaller; 1.3 million and 1.1 million MT of wheat was exported (mostly to Afghanistan) in 2001/02 and 2003/04, respectively. In subsequent periods, falling wheat stocks and rising market wheat prices forced the government to import wheat.

[114] Around 20 percent of the wheat imported in 2002/03 entered duty-free, based on calculations using CBR data. This share rose to 100 percent in 2004/05.

[115] See Khan and Burki (2005).

[116] Until recently, the customs duty rates in India were at 50 percent, compared to 25 percent in Pakistan..

[117] Chand (2001) has argued that "wheat exports exceeding 0.5 percent of domestic production led to massive imports in the immediate succeeding year," which he attributes to the "transitory nature of export surpluses" requiring imports to stabilize domestic prices. Moreover, for all exports exceeding 100,000 t, the export price received by India has always remained lower than the international price of wheat.

[118] The APCom estimates are based on periodically conducted farmer surveys in Punjab and Sindh to evaluate the cost of production of wheat producers to determine the support price of wheat.

[119] The estimates of the Punjab Agriculture Department of the Punjab government are not based on a survey of farmers. Instead, these are based on best-guess or approximations of trends of various cost components under average conditions and resources.

[120] The LUMS Survey of Wheat Producers in Punjab was conducted in July–September 2004. It is based on a random sample of 440 wheat-growing farmers from four agroclimatic zones in Punjab. For further details, see Khan et al. (2006).

[121] CACP regularly evaluates the cost of wheat production by conducting a survey of farmers to determine support prices for wheat growers.

[122] The July–March 2005 price of unmilled imported wheat was $205 [State Bank of Pakistan (2005), third quarterly report for FY2005, Table 6.8]. This translates into Pak Rs 490 per 40 kg at the market exchange rate of Pak Rs 59.82 for a U.S. dollar.

[123] The wholesale price of wheat in India is based on the wholesale price prevailing in Delhi in 2004–05, as reported in Government of India (2005).

[124] It is sometime argued that wheat exports from India (and Pakistan) receive lower prices than other wheat exporters due to quality differences; however, what is valued most by wheat consumers in India and Pakistan is the bread- and chapati-making quality of wheat determined by molecular-weight glutenin subunit composition. Recent experiments conducted by Ram (2003) and Anwar et al. (2003) on various wheat varieties show a presence of high molecular-weight glutenin subunit composition in Indian and Pakistani wheat. For the same reason, imported wheat varieties often fetch lower prices than the domestic wheat in the open market of these countries.

[125] It is pertinent to note that there is a wedge between wheat export prices in India and the wheat import prices in Pakistan due to international-freight and other transaction costs.

[126] According to our estimates, the transportation cost between Atari (India) and Lahore (Pakistan) is close to Pak Rs five per 40 kg.

[127] Within Pakistan, a comparison of sugarcane yields and recovery rates over time shows Sindh to be the more productive region, but in terms of aggregate acreage it is far behind Punjab. Sugarcane is a water-intensive crop, and its yield per ha is highly sensitive to optimal water allocation, along with appropriate weather conditions. The agroecological conditions in Sindh, such as a longer growing season and a humid climate, are better suited for sugarcane plantation; however, government agricultural policy over the years has prioritized Sindh as a cotton-growing region and has not created the incentive structures for sugarcane cultivation.

[128] The estimated per capita consumption of white sugar in Pakistan is 22 kg per annum, and it comprises an average of 5.4 percent of consumption expenditure on food of an average Pakistani consumer.

[129] In FY2005–06, the GoP allowed duty-free import of refined and raw sugar from India in order to stabilize the market price of sugar, which had registered an upward trend due to domestic shortages. The Minister of State for Finance announced a package of subsidies on sugar imports in his budget speech on June 5, 2006; the government has imported seven lakh tons of sugar (compared to five lakh tons imported by the private sector), and it is releasing sugar to utility stores at a reduced rate.

[130] The cultivation of sugarcane in India is divided into two agroclimatic regions: a) the subtropical belt, including areas of Uttar Pradesh, Uttaranchal, Bihar, Punjab, and Haryana; and b) the tropical zone, including the states of Maharashtra, Andhra Pradesh, Tamil Nadu, and Gujarat.

[131] Presently, there are about 507 sugar mills in India, of which 174 are in the private sector and 33 in the public. There are 300 cooperatives, which are owned by farmers but managed by the government.

[132] In India, the licensing controls over expansion and the setting up of new factories were abolished in the 1990s, and since then there have been mergers and acquisitions. Unlike Pakistan, industrial concentration in this sector is fairly low. The market share of the company with the largest sales among 126 companies analyzed by CMIE in 2002/03 was only 2.5 percent (Pursell 2004).

[133] The central government fiscal expenditures in India include a range of input subsidies to the farmers, with an aggregate disbursement of approximately Indian Rs 455 billion in 2003/04.

[134] See Pursell (2004).

[135] Meant to compensate exporters for import duties on raw material; e.g., sugarcane required for producing refined sugar exports.

[136] For Pakistan, three sources of data have been used: Department of Agriculture, Government of Punjab, APCom, and LUMS Survey of Wheat Farmers, conducted in 2003–04.

[137] The cost estimates for India in Table 6.5 have been taken from the CACP, which regularly evaluates costs of sugarcane production in order to determine the minimum guaranteed support price. As the costs of sugarcane at the state level in India have been estimated at a base recovery rate of 8.5 percent, the cost in Pakistan with an average recovery rate of 9.01 percent was adjusted downwards for comparison with the Indian data. It should be noted that input subsidies given to the Indian farmer are nested in these estimates. These artificially lower the Indian costs of production.

[138] According to the Punjab government estimates, the cost of cultivating sugarcane per 40 kg is Pak Rs 44.05, which is significantly higher than the estimates ranging from Pak Rs 31 per 40 kg to Rs 37 per 40 kg for Punjab coming from LUMS and APCom, respectively, and Rs 35 per 40 kg estimated by APCom for Sindh. We feel that the Government of Punjab estimates are too high. The sugarcane support price for the year 2003–04 was Pak Rs 40 per 40 kg, so it would be highly unlikely that the farmers in Pakistan would have cultivated sugarcane at all if the actual cost of production per 40 kg was Pak Rs 44.05 as the Government of Punjab estimates show.

[139] The Government of Pakistan has a price-support mechanism in place for sugarcane, as it does for other major crops in the country. The support price is announced prior to cultivation and the millers are legally bound to pay the farmer the announced price at the factory gate. The support price in the past three years has remained at Pak Rs 42.50 per 40 kg, which comes to around $1.8 per quintile. In principal, the price support is meant to provide a cushion to the farmer from production-led price shocks and resultant income volatility. In the absence of any input subsidies to the farmers, the support price is currently the only prevalent distortion at the sugarcane cultivation stage.

[140] In India, there is also a price-support mechanism similar to that of Pakistan. These statutory minimum prices for cane has to be paid by the mills, but the major cane-producing states set their own minimum state-advised prices, which on average have been 30 to 50 percent higher than the statutory minimum prices. Another important difference between pricing policies in India and Pakistan is that the statutory minimum price in India is based on a sucrose recovery rate of 8.5 percent, with a premium for higher recovery or extraction rates. This has the effect of creating incentives for the farmer to adopt production technologies that raise the quality of sugarcane.

[141] This is in the form of both government- or state-owned sugar mills, and government and grower partnerships in the cooperatives. In India, 60 percent of the sugar mills are cooperatives, 35 percent are in the private sector, and 5 percent are in the public sector.

[142] Also, there is substantial literature in India that explicitly mentions the cooperatives as being largely inefficient production units and recommends their closure. The large public-sector involvement in sugar production and the resultant inefficiencies, especially within the cooperative sector, might well be the reason behind the burden of higher labor and overhead costs in India relative to those in Pakistan.

[143] The highest market share within the sugar manufacturing sector in India in the year 2001 was 2.48 percent.

[144] The conversion has been done using the 2000/01 exchange rate of Pakistani Rs 58.4378 per U.S. dollar.

[145] The sugar supply function in the study has been derived from the input demand or sugarcane demand function of mills in Pakistan, assuming a fixed-proportion technology in sugar production. The demand function was estimated using time-series data on prices and consumption of sugar in Pakistan.

[146] If we assume that Pakistan were to lift the 25 percent duty on imported sugar from the rest of the world, the domestic price would be Pak Rs 20.5 per kg, which is still greater than Pak Rs 17.17 per kg, the price at which it could alternatively import from India. Therefore, opening trade with India would not cause trade diversion.

[147] Given that India exports sugar to Pakistan at a price greater than Pak Rs 14.1 per kg, we are assuming here that the costs of premiums for handling, transportation, and importers in Pakistan result in the import price of sugar being equal to Pak Rs 17.17 per kg, the same as the Indian wholesale prices. This assumption is fairly consistent with actual current events. It is interesting to note that with the recent opening of sugar trade with India, the import price of Indian sugar is Pak Rs 24 per kg in Pakistan, which is the same as the prevailing wholesale price in India of Pak Rs 24 per kg.

[148] In the year 2000/01, Pakistan had to import 800,000 tons of sugar from India, which depressed local prices and had a negative impact on the local industry (a decrease in producer surplus). However, according to a recent press report, traders are of the opinion that "sooner or later Pakistan will buy from India because the alternatives are costly. Cargoes from Brazil take 45 days to arrive and come with high freight charges, which would do nothing to contain domestic prices" (*Dawn*, July 7, 2005).

[149] Currently, this is precisely the situation, as Pakistan has allowed duty-free sugar import in order to stabilize the surging domestic sugar prices.

[150] This would be approximately Indian Rs 1,214 per ton or Pak Rs 1.59 per kg.

[151] Most of the data for our analysis is for the period 2003/04. This was the latest year for which comparable data on India and Pakistan was available, as the study was being done in 2005; however, detailed cost and price data were not available for conducting a quantitative simulation similar to what other chapters in this volume have done.

[152] For many years, India subjected synthetic textiles to very high indirect taxes that heavily discriminated against them in favor of cotton textiles. These were reduced gradually during the 1990s, which has contributed to faster growth in domestic consumption of synthetic textiles than of textiles made from cotton and other natural fibers. Pakistan has not used its indirect tax system to favor cotton and cotton textiles, but like India, in the past it restricted cotton exports in order to suppress domestic cotton prices, whereas synthetic textile fibers and their chemical inputs were subject to high import duties.

[153] For a large number of small-scale units responsible for 90 percent or more of Indian fabric production, *there are effectively no directly collected statistics of production, either of quantities, prices, or values*. Because of this basic data deficiency, official fabric production and sales are estimated from three sources: (1) by inferring fabric production by applying conversion rates to reported deliveries of yarns; (2) from an annual survey of household purchases of textile products carried out by the textile committee in the Ministry of Textiles and from data published annually in a *Compendium of Textile Statistics* by the office of the Textile Commissioner, and also in the Ministry of Textiles; and (3) from import and export data available on the Ministry of Commerce Web site.

[154] According to the APTMA statistics, in 2003/04 the "mill sector," i.e., larger organized firms that presumably provide reasonably reliable production and other statistics, was responsible for only about 10 percent of total fabric production. The rest came from the "nonmill sector," from which less data are available.

[155] The import share was low despite the fact that most imports for use by exporters are free of tariffs or formal import restrictions under Pakistan's provisions for duty drawback and duty exemption. In 2003/04, around 65 percent of Pakistan textiles imports were free of tariff protection and other formal protective instruments.

[156] Detailed estimates of distribution margins of textiles and clothing products seem to be lacking. According to Bedi (2002), p.315, the textile committee survey data gives a much more reliable estimate of the share of household textiles and clothing expenditure (10.1 percent) in total private-

consumption expenditure in the national accounts, but there are no comprehensive, reliable estimates of the deflators needed to express this expenditure in ex-factory prices.

[157] According to Pakistan's Export Promotion Board (http://www.epb.gov.pk), textile and clothing exports to India in FY04 and FY05 were, respectively, $14.4 million and $27.5 million. In FY05, about two-thirds of these exports were cotton fabrics ($18.6 million).

[158] The main exceptions to this general pattern are a 25 percent tariff on cotton sewing thread, low tariffs (5 percent or 10 percent) on some industrial fabrics, a 25 percent tariff on some filament yarns, and a 10 percent tariff on imported worn clothing.

[159] Pakistan's SAPTA preferences are listed in regulation number SRO 370 (I) 2002.

[160] The preference is 10 percent, which means that the preferential tariff would be 9 percent instead of 10 percent.

[161] There is also a preference for one woolen product in LDCs. There are no preferences—for "developed" or LDC SAPTA members—in any of the HS T&C chapters 54–63.

[162] There are a few exceptions. Raw silk and cocoons face 30 percent tariffs; raw cotton, artificial fiber, and yarns face 10 percent.

[163] For example, the cotton-shirt tariff is the greater of 12.5 percent of the dutiable value or Rs 85 per shirt. The specific component of the compound fabric tariffs are either in Rs per m^2 or Rs per kg. The specific rates were initially set at exceptionally high levels in 2000.

[164] For a description of India's duty neutralization and other export policies, see World Bank (2004, September) Vol. II, Chapter 4. More detail is in the government's Foreign Trade Policy 2004–09 statement at http://dgft.delhi.nic.in.

[165] India's export policies are described in World Bank (2004, September) Vol. II, Chapter 4. For more detail, see the government's Foreign Trade Policy Statement 2004-09 at http://dgft.delhi.nic.in.

[166] During October 2005, the rate for preshipment and postshipment export credit was 2.5 percent below the prime lending rates of the individual banks. Details are on the Reserve Bank of India's Web site at http://rbidocs.rbi.org.in.

[167] Through the Export Credit Guarantee Corporation of India. Web site at www.ecgcindia.com.

[168] Fabric producers in both countries report that the sizeable investment they have made in new machinery to penetrate high-income markets will not help them serve markets in South Asia. The lower costs of operating older equipment, combined with greater tolerance for lower-quality outputs in regional markets, make power looms more efficient to operate.

[169] For example, if the estimates that export sales of knitted ready-made garments are about 56 percent of production in India and about 83 percent of production in Pakistan are roughly correct, then stock-loss sales of between 2 percent to 4 percent of exports in India would be equivalent to 2.5–5 percent of the domestic market, but in Pakistan they would be equivalent to between 9.8 and 19.6 percent of the domestic market. According to the estimated 95 percent export share of total Pakistan production of made-ups, stock-loss sales of between 2 percent and 4 percent of exports would be equivalent to between 38 and 76 percent of the domestic market!

[170] Such a study would also need to look at prices and policies affecting cottonseed and cottonseed oil, which are joint products of cotton ginning. It would also need to consider the possibility that seed cotton would also be traded across the border in some contiguous areas.

[171] India buyers of short-staple cottons get the full benefit of the improved terms on which they buy it from the Pakistan suppliers, and this benefit must exceed the excess of the receipts of the displaced Indian suppliers over their production costs. Put another way, if the supply curve of the displaced Indian supply is upward sloping, the lost PS must exceed the gain in CS to the Indian cotton buyers. Therefore, the net welfare effect in India of the new imports of short-staple cotton must be positive, and since the new Indian exports of fine cottons to Pakistan generate PS benefits in India, the net total welfare effect of the two-way trade in India must be positive.

[172] In the background, there is also the possibility of cross-border investments in petrochemicals and PTA and PSF production. For example, according to recent press reports, the Indian Reliance group is interested in purchasing Pakistan PTA.

[173] There is insufficient information on the Pakistan government's PTA policies and their consequences to work through the likely consequences of including PTA in "normal" trading relations with India.

[174] As discussed in the cotton case study, these simulations assume that SAFTA-style free trade is superimposed on the restoration of normal trading relations, so this and the following matrix are meant to indicate the likely *incremental* welfare changes from this additional policy change, not the aggregate welfare change of both new policies occurring together.

[175] For example, they could import their PTA inputs duty-free or alternatively import, paying the 15 percent PTA import duty, or buy PTA from local suppliers, in both the latter two cases selling their Duty Entitlement Passbook Scheme (DEPB) entitlement, which is equivalent to 10 percent of the free-on-board price of the exported PSF.

[176] This is the standard trade theory result when there are no changes in domestic prices resulting from the preferential trade agreement. Suppose that before an FTA with India, Pakistan imports $1 million worth of PSF from the rest of the world on which the Pakistan government collects import duties of $65,000. After the FTA, this $1 million worth of PSF is instead imported duty-free from India. Since the imports from India did not occur prior to the FTA, it did not pay the Indian PSF producers to compete with the rest of the world suppliers in order to obtain a share of the $1 million of PSF imported by Pakistan. This in turn implies that either (a) the costs to the Indian producers of manufacturing the PSF and getting it to the Pakistan border were higher than the price at which the PSF was being supplied by the rest of the world (ROW), or (2) the Indian suppliers could have undersold the rest of the world suppliers to Pakistan, but did not do so because they could earn more by supplying the same quantity to another market: perhaps a domestic market, or an export market other than Pakistan. In both cases, the opportunity cost of the PSF to the Indian producers exceeds $1 million, and therefore the additional benefit to them (i.e., the increased producer surplus) of the PSF now supplied under the FTA must be less than the $66,000 reduction in Pakistan's customs revenue. Hence, if the customs-revenue loss to Pakistan and the producer-surplus gain to India are weighted equally and valued (for example) in U.S. dollars, the FTA has caused a welfare loss in Pakistan (equivalent to the customs-revenue loss), a smaller welfare gain in India (equal to the producer-surplus gain), and a net welfare loss in Pakistan and India considered together. In addition, it will have caused a net welfare loss in the rest of the world resulting from the exports that have now been excluded from the Pakistan market.

[177] In interpreting this, "price" is understood in a broad sense to include factors such as quality, quality consistency, supply reliability, delivery times, and other selling conditions such as credit terms. In particular, the opening of trade over the land border obviously improves cross-border delivery times and on its own may be sufficient to induce yarn buyers to shift sources of supply, even if there is no advantage in the rupee prices offered.

[178] Both bicycles and fans are currently included in Pakistan's sensitive list for SAFTA. The sensitive lists presented by each member of SAFTA can be seen on http://www.saarc-sec.org/main.php.

[179] Nasir and Musleh ud Din (2005).

[180] Indian exports of engineering goods stood at $9.64 billion in 2003/04. *Source:* Ministry of Commerce and Industry, Government of India (2004/05).

[181] Nasir and Musleh ud Din (2005).

[182] The main source of information on the Pakistani fans industry is the Pakistan Electric Fans Manufacturer Association (PEFMA), Gujrat.

[183] Indian Fan Manufacturers Association (2004).

[184] The major producers and exporters of the Indian fan industry are Bajaj Electricals, Orient Fans, Kedia Fans, Crompton Greeves, Impex Trading, and Kathran Fans.

[185] Ministry of Commerce, Government of India (2004/05).

[186] These fears have been expressed by the Indian Fan Manufacturers Association (2004).

[187] *Trade India* 2004.

[188] The Reservation Policy started in 1967 primarily as a promotional and protective measure vis-à-vis the large-scale sector. It grants protection to the small-scale sector, the only exception being the case of large units that undertake a minimum 75 percent of their total production for exports. Reservation and de-reservation of items for manufacture in the small-scale sector is a continuing process regularly monitored by an advisory committee on reservation constituted under the Industries Development and Regulation Act. Initially, 47 items were reserved in 1967, which increased to 873 in

1984 and which currently stands at 675 items. The reserved sectors fall under broad categories of food and allied industries; textile products, including hosiery; wood and wood products; paper products; leather and leather products, including footwear; rubber products; plastic products; chemical and chemical products; glass and ceramics; mechanical engineering; electrical machines; appliances; electronic equipment and components; transport equipment, auto parts and bicycle parts; and miscellaneous (sporting goods, stationery items, etc.).

[189] These are defined as firms with investments in plant and machinery of less than Indian Rs 10 million, with higher ceilings of Indian Rs 50 million for high-technology and export-oriented units. See Balasubramanyam (2002) and the WTO Trade Policy Review for India.

[190] The large-scale units are permitted to manufacture bicycle frames, chains, and rims for captive consumption. Manufacture of complete bicycles falls within the purview of the organized sector.

[191] The source of information on Indian bicycles trade is from the Ministry of Commerce, Government of India 2004/05.

[192] Information from All Pakistan Bicycle and Spare Parts Manufacturers Association.

[193] In addition to Sohrab, the other main bicycle producers include Eagles, Lords, BECO, Sony, and Falcon.

[194] Information from All Pakistan Bicycle and Spare Parts Manufacturers Association.

[195] Currently, the tariff rate on bicycles is 30 percent.

[196] In 2003/04, the industry exported more than 7,000 units of bicycles worth $0.12 million; however, in 2004/05 the export volume had fallen to 1,248 units worth US$0.039 million. Bicycles were exported to Abu Dhabi, Afghanistan, Bangladesh, Dubai, and Saudi Arabia.

[197] Our market survey revealed that more than 60 percent of market share in Pakistan is for standard bicycles. The quality and price of smuggled Chinese standard bicycle is higher at market prices of around Rs 3,500–3,600, whereas the domestically produced standard bicycles are available at approximately Rs 3,100. Although customers consider the standard Chinese bicycle to be of higher quality, they face difficulties in purchasing spare parts for these bicycles. On the other hand, the Pakistani standard bicycle, though considered somewhat inferior in quality, has the advantage of its spare parts being easily available. The second type of bicycles that are smuggled from China are fancy sports bicycles, speed-gear bicycles, and children's bicycles, which are popular in upper-income urban areas. The prices of fancy Chinese bicycle ranges from Rs 4,500 to Rs 11,000 (Pak). Around 60 percent of the smuggled bicycles are fancy bicycles and 40 percent are standard bicycles.

[198] Pursell (2004).

[199] This is based on the information collected from consumers in the market. We asked consumers what will happen to the quantity demanded of bicycles if its prices fall. We were not able to find any empirical evidence on the elasticity of demand in the Pakistani literature to verify our estimates.

[200] It has been reported (*Dawn,* March 14, 2006) that retail prices of Pakistani fans recently rose by 20 percent due to an increase in the prices of raw materials. Reportedly, the price of pedestal fans has increased by Rs 250 per unit and that of ceiling fans by Rs 200 per unit. The industry is asking the government to give it zero-rated status for the purpose of exports. These changes came about after the paper was completed and hence have not been included in our analysis.

[201] Rs 1,168 (Indian) tariff-paid market price of Pakistani fan versus Rs 1,417 (Indian) average market prices in India.

[202] Detailed price comparisons and sensitivity analysis for ceiling fans are shown in Annex Table A8.2.1. The maximum CIF price of a top-of-the-line Pakistani ceiling fan in India is likely to be Rs 944.17 (Indian), whereas the ex-factory price of a similar-quality Indian ceiling fan would be Rs 1,005 (Indian). For the lower-end Pakistani ceiling fan, the CIF price would be Rs 612.86 (Indian), which is lower than cheapest ex-factory price of an Indian ceiling fan of Rs 790.86 (Indian). Moreover, both the top-end and the low-end Pakistani ceiling fans are likely to be available at relatively cheaper prices to Indian consumers under SAFTA. The market price of the high-end Pakistani ceiling fan in India would be Rs 1,088.75 (Indian) and that of the low-end fan would be Rs 706.70 (Indian). Market prices of the high-end and low-end Pakistani ceiling fans are expected to be lower than the market prices of fans being produced in India.

[203] The CIF prices of Indian fans in Pakistan are estimated to be Rs 1,205.57 (Pak), which is higher than the average ex-factory price of Rs 1,000. These estimates were obtained from the Pakistan

Electric Fans Manufacturers Association (PEFMA), Gujrat, during the field survey conducted in April 2005.

[204] The average market price of the Pakistani ceiling fan is Rs 1,534 (Pak), whereas the tariff-paid market price of imported Indian fans would be Rs 1,873.72 (Pak).

[205] The highest ex-factory price of a ceiling fan in Pakistan is Rs 1,245.00 (Pak). The CIF. price of an Indian ceiling fan that is produced at the high end of the market is Rs 1,493.86 (Pak). The high-end CIF prices of Indian ceiling fans again would continue to keep Pakistan fans competitive vis-à-vis higher-end Indian ceiling fans. A similar situation prevails when calculations are done for the minimum range of ceiling fan prices in the two countries. At the lower end, the ex-factory price of a Pakistan ceiling fan is Rs 808 (Pak). This is less than the CIF price of Rs 1,175 (Pak) for the least-cost Indian ceiling fans in Pakistan.

[206] The domestic average market price of pedestal fans in Pakistan is Rs 2,100 (Pak), whereas an Indian pedestal fan would be available at Rs 2,916.94 (Pak) with normal 25 percent MFN tariffs, and at Rs 2,212 (Pak) if 25 percent tariffs were removed under an FTA.

[207] See Chapter 1 for a discussion of why India's granting of MFN status to Pakistan has not necessarily opened India's market to Pakistani products.

[208] This is based on meetings with representatives of the Pakistan Electric Fans Manufacturers Association and other individual fan companies.

[209] The bicycle chosen for the study is a standard 24-inch bicycle that is used by the bulk of the population in both the countries. We have not considered the issue of smuggled Chinese bicycles in this analysis because the bulk of Chinese bicycles coming into Pakistan are fancy bicycles that are used by upper-income groups. The smuggled Chinese standard bicycles are of better quality and are higher-priced than the standard Pakistani bicycles, and they have a limited market because spare parts are note available. Hence, due to visible product differences, we have not included Chinese bicycles in our analysis.

[210] The average ex-factory price of the bicycle produced in Pakistan is around 3 percent lower (at Rs 2,006 [Pak]) than the CIF price of an Indian bicycle in Pakistan (at Rs 2,059 [Pak]). At the upper end, the Indian CIF price would be Rs 2,209 (Pak) versus a Rs 2,296 (Pak) ex-factory price. At the lower end, the Indian CIF price would be Rs 1,710 (Pak) versus Rs. 1,978 Pakistani ex-factory price.

[211] The average market price of the Pakistani standard bicycle is Rs 3,085 (Pak). The market price of the Indian standard bicycle with tariff would be Rs 3,338 (Pak). It falls considerably, however, to Rs 2,427 (Pak) when an import duty of 30 percent and the withholding tax of 6 percent is removed under SAFTA. Similarly, the market price of a high-end imported Indian bicycle would be Rs 2,605 with no tariffs versus Rs 3,250 in Pakistan.

[212] The average ex-factory price of a bicycle produced in India is Rs 1,340 (Indian), while the CIF price of an average Pakistani bicycle when it is exported to India is Rs 1,577.83 (Indian). The CIF price of an upper-end Pakistani manufactured bicycle in India is Rs 1,735 (Indian), and a lower-end one is Rs 1,499 (Indian). On the other hand, the ex-factory price of an Indian upper-end bicycle is Rs 1,488 (Indian), and the ex-factory price of the low-cost Indian standard bicycle is Rs 1,152 (Indian).

[213] There is conflicting evidence regarding the issue of a steel subsidy used for producing bicycles in India. According to some Indian bicycle manufacturers, this subsidy has been coming down over the years and does not exist anymore. According to Pakistani bicycle producers, the prices of steel in India are still quite low compared to Pakistan, which they attribute to an implicit steel subsidy in India.

[214] Nasim and Ghani (1998) found that about 50 percent of the price differential between bicycles in India and Pakistan can be attributed to differences in steel prices, and the rest can be attributed to the scale economies.

[215] At $ equal to Pak Rs 59.72.

[216] The world market price, including 30 percent custom duty and other local taxes, is assumed to be Rs 3,085, the same as the current market price of the average bicycle in Pakistan. The price would fall to Rs 2,427 when tariffs are removed under an FTA.

[217] The Indian supply is expected to be 311,850 units and the Pakistani supply 381,150 units.

[218] The government, however, will continue to collect sales tax from the sale of the bicycles. This amount has not been calculated, as it will be uniform for both types of bicycles (Indian and Pakistani).

[219] The figures calculated below are in Pak Rs when calculations are done before the conversion at the official Indian exchange rate, and in Indian Rs when calculations are done before the conversion at the official Pakistani exchange rate.

[220] This figure has been obtained from the PEFMA Gujrat.

[221] The freight, insurance, and unloading charges of 1 percent used in calculating the CIF price have been assumed and were corroborated by the fans industry sources.

[222] This CIF price has been calculated by dividing the CIF value by the official exchange rate (OER) of India with Pakistan.

[223] The customs duty figure used in estimating the wholesale price has been obtained from *Easy Reference Customs Tariffs 2005/06,* and port and transport charges are assumed to be 1 percent and 1.5 percent of the CIF, respectively.

[224] The sales tax figure has also been obtained from the *All India Sales Tax Manual 2005*. It varies across states in India, and it is the same for the three states of Punjab, Delhi, and Mumbai.

[225] The market price of a Pakistani fan in India has been calculated without any import duty.

[226] This figure has been obtained from the PEFMA Gujrat.

[227] The freight, insurance, and unloading charges included in the CIF price have been assumed based on information received from PEFMA.

[228] This price has been obtained by multiplying the CIF price of the Indian fan by the official exchange rate of Pakistani Rs with India.

[229] The import duty figure used in the estimation has been obtained from the *Pakistan Customs and Tariffs Book 2005/06*, whereas the port handling and transportation cost have been assumed to be 1 percent and 1.5 percent of the CIF price.

[230] The sales tax figure has been taken from the *Pakistan Customs and Tariffs Book 2005/06*.

[231] The income withholding tax of 6 percent has been added to the CIF price + customs duty + sales tax.

[232] This price has been calculated by removing the import duty of 30 percent and the withholding tax of 6 percent on imports.

[233] Sensitivity analysis for the higher and lower ranges of prices for the pedestal fans could not be done because of nonavailability of information about pedestal fans produced in India.

[234] The figures calculated below are in Pak Rs when calculations are done before the conversion at the official Indian exchange rate, and in Indian Rs when calculation are done before the conversion at the official Pakistani exchange rate.

[235] This figure has been obtained as the unit value of exports of pedestal fans from Pakistan for the year 2003/04.

[236] The freight, insurance, and unloading charges of 1 percent used in calculating the CIF price have been assumed and were corroborated by the fans industry sources.

[237] This CIF price has been calculated by dividing the CIF value by the official exchange rate of India with Pakistan.

[238] The customs-duty figure used in estimating the wholesale price has been obtained from *Easy Reference Customs Tariffs 2005/06*, and port and transport charges are assumed to be 1 percent and 1.5 percent of the CIF, respectively.

[239] The sales tax figure has also been obtained from the *All India Sales Tax Manual 2005*. It varies across states in India, and it is the same for the three states of Punjab, Delhi, and Mumbai.

[240] The market price of a Pakistani fan in India has been calculated without including any import duty.

[241] This figure has been obtained from the PEFMA Gujrat.

[242] The freight, insurance, and unloading charges included in the CIF price have been assumed based on the information received from PEFMA.

[243] This price has been obtained by multiplying the CIF of the Indian fan by the exchange rate of Pakistani Rs with India.

[244] The import duty figure used in the estimation has been obtained from the *Pakistan Customs and Tariffs Book 2005/06*, whereas the port handling and transportation costs have been assumed to be 1 percent and 1.5 percent of the CIF price.

[245] The sales tax figure has been taken from the *Pakistan Customs and Tariffs Book 2005/06*.

[246] The income withholding tax of 6 percent has been added to the CIF price+ customs duty +sales tax.

[247] This price has been calculated by removing the import duty of 30 percent and the withholding tax of 6 percent on imports.

[248] The figures calculated below are in Pak Rs when calculations are done before the conversion at the official Indian exchange rate, and in Indian Rs when calculations are done before the conversion at the official Pakistani exchange rate.

[249] The FOB price of the bicycle has been obtained from the domestic bicycle industry through interviews with industry representatives.

[250] The freight, insurance, and unloading estimates are provided by the leading domestic producers and exporters of bicycles.

[251] This estimate has been obtained by dividing the CIF price at the border by the official exchange rate of India.

[252] The customs duty figure used in estimating the wholesale price has been obtained from *Easy Reference Customs Tariffs 2005/06,* and port and transport charges are assumed to be 1 percent and 1.5 percent of the CIF, respectively.

[253] The sales tax figure has also been obtained from the *All India Sales Tax Manual 2005*. It varies across states in India and it is the same for the three states of Punjab, Delhi, and Mumbai.

[254] This figure has been provided by the leading domestic bicycle producer of Pakistan.

[255] Ibid.

[256] This price has been obtained by multiplying the CIF of an Indian bicycle by the Pakistani Rs exchange rate.

[257] The Import duty figure used in estimating the wholesale price has been obtained from the *Pakistan Customs and Tariffs Book 2005/06,* whereas the port handling and transportation costs have been assumed to be 1 percent and 1.5 percent of the CIF price.

[258] The sales tax figure has been taken from the *Pakistan Customs and Tariffs Book 2005/06.*

[259] The income withholding tax of 6 percent has been added on the CIF price + customs duty + sales tax.

[260] This price has been calculated by removing the import duty of 30 percent and the withholding tax of 6 percent on imports.

[261] A city of central Punjab that is famous for the production and export of quality fans to foreign countries.

[262] There is no standard classification for the chemical industry. A loose classification of the industry, however, into three segments can be made: i) basic chemicals such as acids, salts, alkalies, and organic chemicals—high-volume products with limited product differentiation and high entry barriers because of capital investment and stringent regulations; ii) speciality chemicals, including adhesives, catalysts, dyes, and industrial gases—these chemicals have typically smaller production units and require low capital investments; and iii) knowledge chemicals, which are differentiated chemicals and biological substances, including agrochemicals, pharmaceuticals, and biotechnology, and that require significant investments in research and development.

[263] The value of imports increased sharply from $160.5 million in 1993/94 to $ 1.3 billion in 2003/04. See Table A9.2.3 in Annex 9.2 for details.

[264] For example, there were five manufacturers of caustic soda in the late 1980s, but, currently, there are only two units of caustic soda under operation, which meet, more or less, 89 percent of the country's domestic demand of caustic soda. Similarly, there were other chemical processing units that closed down because they were based on noneconomical and poor technologies, the limited availability of basic raw materials, and lack of a strong research and development base.

[265] Production trends of selected industrial chemicals are presented in Table A9.2.2 in Annex 9.2. In 1990/91, Pakistan was producing only 326,000 metric tons (MT) of selected chemicals, including soda ash, caustic soda, sulphuric acid, and paints and varnishes, a number which rose to 556,000 MT in 2003/04.

[266] Some of its more prominent individual chemical industries are caustic soda, soda ash, carbon black, phenol, acetic acid, methanol, and dyes. The largest segment of the Indian chemical industry comprises basic chemicals, which makes 57 percent of the Indian chemicals, followed by specialty

chemicals and knowledge chemicals with a share of 25 percent and 18 percent, respectively (source: KPMG India).

[267] This analytical framework is discussed by Pursell (2004a, 2004b) in draft papers presented during the World Bank workshop held in September 2004.

[268] We also analysed acid and reactive dyes in an earlier and longer version of this paper. Although we have not presented those results, our conclusions take into account insights from that analysis as well.

[269] It is generally supplied to other industries in the form of a solution of sodium hydroxide, with 50 percent concentration or solid flakes. Electricity and rock salt are its major raw material components, constituting more than 60 percent of the product cost. Caustic soda is coproduced with chlorine by electrolysis at a ratio of 1 MT of caustic soda for every 0.9 MT of chlorine.

[270] Currently, two plants are producing about 680 MT of caustic soda per day, which meets about 88 percent of local demand with full-capacity utilization. Sitara Chemicals captures the major share of the production and meets about 60 percent of the local demand of caustic soda. Chlorine, which is coproduced with caustic soda, is not fully utilized due to inadequate demand by end-user industries. Angro Asahi Chemicals has recently started a project for producing chlorine by using the vinyl chloride monomer technology, which would enhance consumption of chlorine in the country.

[271] A comparison of caustic soda production from different years in both Pakistan and India is presented in Table A9.2.6 in Annex 9.2.

[272] The largest six producers have an annual turnover of $1.8 million. Gujarat Alkalies & Chemicals is the industry leader. More than 45 percent of the capacity is located in India's western region.

[273] Pakistan started importing caustic soda in 1998, and its imports amounted to only 1 percent of its total demand that year. Subsequently, imports have increased to 11–12 percent of total demand. See Table A9.2.7 for details.

[274] To avoid complexity we will use the linear demand and supply functions. Though the market conditions in the two countries are not close to perfect competition, it is useful to look at the results based on the assumption that firm behavior is competitive. The outcome can be considered as a point of reference that can be varied by adopting different assumptions of noncompetitive firm behavior.