

India's Trade Reform

Among developing countries, India's growth experience during the past five decades has been unique. Unlike many of its East and Southeast Asian neighbors, India did not grow at "miracle" rates that exceeded 6 percent and reached as high as 10 percent. Nor, unlike Africa and Latin America, did it suffer periods of prolonged stagnation or decline. For three of the five decades (1950–80), India's economy grew steadily at the so-called Hindu rate of 3½ percent a year in real terms, and during the next two decades it grew at annual rates between 5 and 6 percent.

Although the credit for this steady growth without prolonged stagnation or decline goes to the macroeconomic stability and policy credibility that the government provided, the blame for the relatively low rate of growth, especially during 1950–80, must be assigned to the myriad microeconomic distortions and heavy state intervention that straitjacketed India's entrepreneurs.¹ The government effectively stamped out domestic competition through strict investment licensing and eliminated foreign competition through strict import licensing. It was only during the second half of the 1980s that the government began to loosen its grip on investment and import licensing; this was followed by a more systematic and comprehensive opening up in the 1990s and after.

This paper discusses India's external sector policies, focusing especially on the past two decades; the impact of these policies on trade flows, efficiency, and growth; and the future direction trade policies must take. It begins with a discussion of the major policy developments in trade in both goods and services. This is followed by a discussion of the evolution of trade flows—their growth, composition, and direction. The next section describes the impact of trade liberalization on efficiency and growth.

The author thanks Pranab Bardhan, Suman Bery, Govinda Rao, Jagadeesh Sivadasan, and participants in the India Policy Forum 2004 in New Delhi for excellent comments on an earlier draft.

1. Policy changes, whether good or bad, have been largely predictable in India. Consultations with the relevant parties, extensive discussions, and special committee reports have usually preceded all major policy actions.

The penultimate section considers policy options available to India and the most appropriate course for the country. The final section concludes.

The Reforms to Date

The history of India's external sector policies since independence can be divided into three phases: 1950–75, when the trend was toward tighter controls, culminating in virtual autarky by the end of the period; 1976–91, when some liberalization took place, especially during the last five to seven years; and from 1992 onward, when deeper and more systematic liberalization was undertaken.

Toward Virtual Autarky, 1950–75

Although the history of tariff protection in India goes further back in time, quantitative import controls were introduced in May 1940 to conserve foreign exchange and shipping during World War II.² Starting in 1947, however, regulation of the balance of payments became the central concern, and the government introduced explicit restrictions on the rate at which foreign exchange could be run down. From then until the launch of the First Five Year Plan in 1951, India alternated between liberalization and tighter controls. But the period covered by the first plan was one of progressive liberalization. In particular, the India Tariff (Second Amendment) Act of 1954 stepped up tariff rates for thirty-two items and paved the way for the liberalization of import quotas through additional licenses over and above normal entitlements.

A balance-of-payments crisis in 1956–57 led to a major reversal of this liberalization, as India resorted to comprehensive import controls.³ The crisis left a sufficiently deep impression on the political leadership that it made the allocation of foreign exchange across various activities the central objective of trade and foreign exchange policy. The interaction of this objective with an ambitious, powerful, and self-interested bureaucracy produced a regime that was highly protectionist and without a clear sense of

2. This section draws heavily on part 7, especially chapters 15 and 22, of the most remarkable contribution by Jagdish Bhagwati and Padma Desai (1970), which foresaw the pitfalls of the license raj early on and offered a thorough analytical case for an open, pro-market policy regime, paying due attention to the political economy and institutional context of the time.

3. India's financial year starts on April 1 and ends on March 31. Therefore, 1956–57 covers the period from April 1, 1956, to March 31, 1957; it is also called fiscal year 1957.

economic priorities. The number of criteria to be taken into account was large—private versus public sector, small versus large enterprises, and capital versus intermediate versus consumer goods—and the number of industries across which foreign exchange had to be allocated even larger: within the machinery sector alone they included paper machinery, chemical machinery, mining machinery, tea machinery, and metallurgical machinery, to name just a few. Unsurprisingly, the process quickly degenerated into a system of ad hoc rules. As Bhagwati and Desai describe graphically, “The problem was Orwellian: all industries had priority and how was each sponsoring authority to argue that some industries had more priority than others?”⁴ They conclude, “It is not surprising, therefore, that the agencies involved in determining industry-wise allocation fell back on vague notions of ‘fairness,’ implying *pro rata* allocations with reference to capacity installed or employment, or shares defined by past import allocations and similar other rules of thumb without any clear rationale.”⁵

Under the regime that evolved, producers needed to make only minimal effort to get absolute protection against imports. The authorities applied the principle of indigenous availability, according to which the government denied the allocation of foreign exchange for importing a product if domestic import substitutes were available in sufficient quantity. Therefore all a producer needed to do to block the entry of imports of a product was to let the relevant agency know that the producer made a substitute for it in the requisite quantity. The quality of the substitute, the price at which it was supplied, and any delay in delivery were of secondary importance to the authorities.

An important switch in policy came in June 1966, when India undertook a major devaluation from 4.7 rupees to 7.5 rupees to the dollar and, alongside, took steps toward liberalization of import licensing, tariffs, and export subsidies.⁶ The liberalization measures gave fifty-nine industries, covering 80 percent of output in the formal (“organized”) sector, freedom to import

4. Bhagwati and Desai (1970, p. 288).

5. Bhagwati and Desai (1970, p. 290). The authors quote an unpublished doctoral thesis by Arun Shourie (1966), which offers systematic evidence supporting the hypothesis that, rather than devise a set of priorities based on proper economic criteria, the government agencies essentially fell back on simple rules of thumb. For example, the cuts imposed on various industries immediately following the Sino-Indian war in late 1962 and early 1963 were overwhelmingly uniform.

6. Some industrial de-licensing and limited decontrol of steel distribution on the recommendation of the Swaminathan Committee on Industries Development Procedures had taken place just before and after these steps on the external front. But the de-licensing was mainly aimed at reducing delays in the issuance of licenses. For details see Bhagwati and Desai (1970, p. 477).

their raw materials and components.⁷ Paradoxically, however, the need to obtain a license remained. Because the licensing procedures continued to apply the principle of “indigenous availability,” the actual liberalization turned out to be very limited *ex post*.⁸

The impetus for the devaluation and other measures had come from the World Bank, which promised a package of \$900 million annually for several years to help finance the expansion of imports that would result from the liberalizing measures.⁹ Unfortunately, this policy measure coincided with a second consecutive crop failure, which led to an industrial recession.¹⁰ As a result, a large proportion of the World Bank aid remained unutilized in 1966–67. More important, the timing of the recession gave credence to the widely held and popular view that the measures forced by the World Bank were the wrong prescription in the first place. Intense domestic criticism, a political leadership that was keen to distribute export subsidies, and an industry that had learned to profit from protection came together to reverse the policy in less than two years.¹¹ Bhagwati and Desai describe the political economy of the reversal:

In a very real sense, therefore, the timing of import liberalization was not ideal, in retrospect: a burgeoning economy would have increased the chances of making an effective dent in the practice of granting automatic protection to every activity. On the other hand, it was clear that it was quite naïve to expect industrialists . . . to agree to switch over to an efficient system involving competition . . . In this, the pressure groups were often in the company of disinterested politicians (such as the Finance Minister Morarji Desai) whose thinking had also been conditioned by the planning philosophy of the earlier period: that anything which could be produced and supplied from domestic capacity must automatically be protected from imports.¹²

7. The “organized” sector in India is defined as consisting of central, state, and local administrations and public and private firms with ten or more workers if using electrical power and twenty or more workers if not using power. Firms in the organized sector are required to register with an appropriate governmental agency.

8. Bhagwati and Desai (1970, p. 483).

9. The World Bank had acted on the recommendation of the Bell mission, which also advised a shift away from industry and toward agriculture. Starting in 1960–61, the performance of Indian agriculture had deteriorated rapidly, and the aid consortium had become concerned about an impending “quiet crisis.” The Bell mission was a response to that concern. For details see Joshi and Little (1994, chapter 4).

10. Industrial growth fell from 5.6 percent in 1965–66 to 2.6 percent in 1966–67 and 1.4 percent in the first three quarters of 1967–68.

11. Around this time, under pressure from the United States, the World Bank also went back on its promise of \$900 million in annual aid; this further strengthened the hands of the protectionist forces, which had more or less full control of the process in any case. See Joshi and Little (1994, chapter 4).

12. Bhagwati and Desai (1970, pp. 486–87).

The late 1960s and early 1970s saw a reversal of the 1966 liberalization measures and a further tightening of the import controls. The U.S. policy of isolating Prime Minister Indira Gandhi immediately before and after the Bangladesh war in 1971 drove her further toward economic isolationism. By the mid-1970s India's trade regime had become so repressive that the share of nonoil, noncereals imports in GDP fell from an already low 7 percent in 1957–58 to 3 percent in 1975–76.

Two factors paved the way for a return to liberalization in the late 1970s, however. First, industrialists came to feel the adverse effect of the tight import restrictions on their profitability and began to lobby for liberalization of imports of the raw materials and machinery for which domestically produced substitutes did not exist. Second, improved export performance and remittances from overseas workers in the Middle East led to the accumulation of a healthy foreign exchange reserve, raising the comfort level of policymakers with respect to the effect of liberalization on the balance of payments.

Ad Hoc Liberalization: 1976–91

The new phase of liberalization began in 1976 with the reintroduction of the Open General Licensing (OGL) list, which had been a part of the original wartime regime but had become defunct as controls were tightened in the wake of the 1966 devaluation. The system operated on a positive-list basis: unless an item was on the OGL list, its importation required a license from the Ministry of Commerce. Inclusion on the OGL list did not necessarily mean that the good could be imported freely, however, since the importer usually had to be the actual user and, in the case of machinery imports, could be subject to clearance from the industrial licensing authority if the sector in which the machinery was to be employed was subject to industrial licensing.

Upon its introduction in 1976, the OGL list contained only 79 capital goods items. But by April 1988 it had expanded to cover 1,170 capital goods items and 949 intermediate inputs. By April 1990 OGL imports had come to account for approximately 30 percent of total imports.¹³ Although tariff rates were raised substantially during this period, items on the OGL list were given large concessions on those rates through "exemptions," so that the tariffs did not significantly add to the restrictive effect of licensing. Mainly, they allowed the government to capture the quota rents, thus helping relieve the pressure on the budget. The government also introduced

13. See Pursell (1992).

several export incentives, especially after 1985, which partly neutralized the antitrade bias of import controls. Above all, during 1985–90 the rupee was devalued in nominal effective terms by a hefty 45 percent, leading to a real depreciation of 30 percent.

In addition, by 1990 thirty-one sectors had been freed from industrial licensing. This measure had a trade-liberalizing dimension as well, since it freed machinery imports in these sectors from industrial licensing clearance. Import flows were also helped by improved agricultural performance and by the discovery of oil, which made room for nonoil, nonfood imports, mainly machinery and intermediate inputs. As Garry Pursell, a long-time follower of India's trade regime, notes, "The available data on imports and import licensing are incomplete, out of date, and often inconsistent. Nevertheless, whichever way they are manipulated, they confirm very substantial and steady import liberalization that occurred after 1977–78 and during 1980s."¹⁴ During 1985–90, nonoil imports grew at an annual rate of 12.3 percent.

The liberalization, complemented by expansionary fiscal policy, raised India's growth rate from the Hindu rate of approximately 3.5 percent during 1950–80 to 5.6 percent during 1981–91. The jump in the average annual growth rate was particularly significant during 1988–91, when it reached 7.6 percent. Nevertheless, the external and internal borrowing that supported the fiscal expansion was unsustainable and culminated in a balance-of-payments crisis in June 1991. This time, however, the government turned the crisis into an opportunity: instead of reversing the course of liberalization, it launched a truly comprehensive, systematic, and systemic reform program that continues to be implemented today.

Deeper and Systematic Liberalization: 1992 to Date

The collapse of the Soviet Union, the phenomenal economic rise of China following its adoption of outward-oriented policies, and India's own experience, first with protectionist policies for three decades and then with liberalization in the 1980s, finally persuaded policymakers of the merits of the policy approach that pro-market and pro-free trade economists, most notably Jagdish Bhagwati, had advocated for nearly two decades. Starting with the July 1991 budget, there was a clear switch in favor of a move toward an outward-oriented, market-based economy. The trade liberalization program initiated in the 1991 budget was comprehensive, although the pace remained gradual and there were occasional hiccups.

14. Pursell (1992, p. 441).

MERCHANDISE TRADE LIBERALIZATION. The July 1991 reforms did away with import licensing on all but a handful of intermediate inputs and capital goods. Consumer goods, accounting for approximately 30 percent of tariff lines, remained under licensing. Only a decade later, after a successful challenge by India's trading partners at the World Trade Organization (WTO), were these goods freed of licensing. Today, except for a handful of goods that are disallowed on environmental or health and safety grounds, and a few (including fertilizer, cereals, edible oils, and petroleum products) that are "canalized" (meaning they can be imported by government only), all goods may be imported without a license or other restrictions. As called for under the Uruguay Round Agreement on Agriculture, all border measures on agricultural goods have been replaced by tariffs.

As noted earlier, tariff rates in India had been raised substantially during the 1980s, so as to turn quota rents for industry into tariff revenue for the government. Accordingly, tariff revenue as a proportion of imports rose from 20 percent in 1980–81 to 44 percent in 1989–90. In 1990–91 the highest tariff rate stood at 355 percent, the simple average of all tariff rates at 113 percent, and the import-weighted average of tariff rates at 87 percent.¹⁵ With the removal of licensing, these tariff rates became effective restrictions on imports. Therefore a major task of the reforms in the 1990s and since has been to lower tariffs.

Tariff reductions have been confined to nonagricultural, industrial goods, however. Therefore the liberalization described below applies strictly to these goods. The reduction in tariffs has been accomplished through a gradual compression of the top tariff rates, with a simultaneous rationalization of the tariff structure through a reduction in the number of tariff bands. The top rate fell to 85 percent in 1993–94 and to 50 percent in 1995–96. Despite some reversals along the way in the form of special duties and through unification of two successive bands at the higher rate, the general direction has been toward liberalization. Before the most recent elections in May 2004, the then finance minister announced that the top tariff rate would be lowered from 25 percent to 20 percent and that the Special Additional Duty (SAD), which could be as high as 4 percent, would be eliminated. The incoming government has approved this change, so that the top tariff rate on industrial goods now stands at 20 percent, with no other additional custom duties, such as the SAD, on top of this rate.

There remain exceptions to this rule, however, as evidenced by table 1, which is taken from the latest Trade Policy Review of India by the WTO.¹⁶

15. WTO (1998) and Panagariya (1999a).

16. WTO (2002)

TABLE 1. Tariff Structure and Average Tariff Rates by Product Type, India

<i>Product type</i>	<i>MFN tariff rates, 1997-98</i>				<i>MFN tariff rates, 2001-02</i>		
	<i>No. of lines</i>	<i>Average (percent)</i>	<i>Range (percent)</i>	<i>Coefficient of variation</i>	<i>Average (percent)</i>	<i>Range (percent)</i>	<i>Coefficient of variation</i>
All products							
<i>By WTO definition</i>							
Agricultural products	676	35.1	0-260	0.9	40.7	0-210	0.7
Live animals and products	81	25.4	15-45	0.6	39.8	35-100	0.4
Dairy products	20	31.5	0-35	0.3	38.0	35-60	0.2
Coffee and tea, cocoa, sugar, etc.	128	37.6	15-192	0.4	39.6	35-170	0.4
Cut flowers and plants	34	25.1	10-45	0.6	29.9	10-35	0.3
Fruit and vegetables	150	32.7	0-127	0.5	36.6	25-115	0.3
Grains	16	0.0	0-0	...	49.4	0-100	0.8
Oils, seeds, fats, and oil products	71	38.9	15-45	0.2	56.2	15-100	0.5
Beverages and spirits	31	114.8	15-260	0.8	96.9	35-210	0.8
Tobacco	9	45.0	45-45	...	35.0	35-35	...
Other agricultural products, n.e.s. ^a	136	27.8	0-45	0.5	28.1	0-50	0.4
Nonagricultural products (excl. petroleum)	4,435	35.4	0-192	0.3	31.1	0-170	0.3
Fish and fishery products	108	20.3	0-65	0.6	35.0	35-35	...
Mineral products, precious stones, etc.	335	37.5	0-45	0.3	30.6	0-55	0.3
Metals	588	32.5	10-45	0.2	32.0	5-35	0.2
Chemicals and photographic supplies	840	34.6	0-192	0.2	33.8	0-170	0.2
Leather, rubber, footwear, travel goods	146	39.8	0-45	0.3	32.1	0-35	0.2
Wood, pulp, paper, and furniture	248	30.1	0-45	0.4	29.3	0-35	0.4
Textiles and clothing	830	43.7	25-55	0.1	31.3	15-35	0.2
Transport equipment	122	41.7	3-45	0.2	40.5	3-105	0.6

Nonelectric machinery	525	27.1	10-45	0.2	25.9	0-35	0.2
Electric machinery	257	34.7	15-45	0.3	26.8	0-35	0.4
Nonagricultural products, n.e.s.	436	37.1	0-55	0.2	30.0	0-35	0.2
Petroleum	2	31.0	37-35	0.2	25.0	15-35	0.6
<i>By sector^b</i>							
Agriculture and fisheries	289	26.5	0-45	0.6	33.1	0-100	0.4
Mining	105	26.2	0-45	0.5	21.9	5-55	0.5
Manufacturing	4,718	36.1	0-260	0.4	32.5	0-210	0.4
<i>By stage of processing</i>							
First stage	628	25.7	0-127	0.6	29.4	0-115	0.5
Semi-processed products	1,673	35.7	0-192	0.2	32.3	0-170	0.2
Fully processed products	2,812	37.3	0-260	0.4	33.0	0-210	0.5

Source: World Trade Organization (2002).

a. n.e.s., not elsewhere specified.

b. International Standard Industrial Classification, Revision 2; excludes electricity, gas, and water (one tariff line).

The table compares in detail the structure of tariffs in 2001–02 with that in 1997–98, when the top tariff rate was still 35 percent. According to the table, chemicals and photographic supplies were subject to tariff rates as high as 170 percent, and transport equipment to rates reaching 105 percent, both well beyond the official “top” tariff rate applicable to industrial goods. Within transport equipment, automobiles constitute a major potential import and are currently subject to a 60 percent duty. In addition, numerous exemptions remain, based on end-user or other criteria.¹⁷

In agriculture, India took essentially the same approach as the member countries of the Organization for Economic Cooperation and Development, choosing excessively high tariff bindings, ranging from 100 to 300 percent, to replace border measures agreed to be discontinued under the Uruguay Round Agreement on Agriculture. On some agricultural products such as skimmed milk powder, rice, corn, wheat, and millet, India traditionally had zero or very low bound rates. These were renegotiated under Article XXXVIII of the General Agreement on Tariffs and Trade in December 1999 in return for concessions on other products.¹⁸ According to the WTO, India’s average bound rate in agriculture is 115.2 percent.¹⁹ For comparison, the applied most-favored-nation tariff rate was 35.1 percent in 1997–98 and 41.7 percent in 2001–02.

Traditionally, India has also restricted exports of several commodities. As part of its liberalization policy, the government began to reduce the number of products subject to export controls in 1989–90. But until the July 1991 reforms, exports of 439 items were still subject to controls, including (in declining order of severity) prohibition (185 items), licensing (55 items), quantitative ceilings (38 items), canalization (49 items), and prespecified terms and conditions (112 items). The March 1992 Export-Import Policy reduced the number of items subject to controls to 296, with prohibited items reduced to 16. The process continued thereafter, so that today export prohibitions apply to only a small number of items on health, environmental, or moral grounds, and export restrictions

17. According to the WTO (2002), there are more than 100 kinds of exemptions, each running into several pages. The general notification for exemptions has 378 entries. The WTO (2002, p. 35) notes, “The use of such exemptions not only increases the complexity of the tariff, it also reduces transparency and hampers efficiency-increasing tools such as computerization of customs.”

18. For example, in its negotiations with the United States, India gave market access in apples. It has been suggested that removing or reducing the exemptions and introducing a lower and uniform most-favored-nation duty structure would be more simple and transparent, with clear implications for governance.

19. WTO (2002, table III.1).

are maintained mainly on cattle, camels, fertilizers, cereals, groundnut oil, and pulses.

The lifting of exchange controls and the elimination of overvaluation of the rupee, both of which had served as additional barriers in the traded goods sector, also accompanied the 1990s reforms. As part of the 1991 reform, the government devalued the rupee by 22 percent, from 21.2 rupees to 25.8 rupees to the dollar. In February 1992, a dual exchange rate system was introduced, which allowed exporters to sell 60 percent of their foreign exchange receipts in the free market; the rest had to be sold to the government at the lower official price. Importers were authorized to purchase foreign exchange in the open market at the higher market price, effectively ending the exchange control regime. Within a year of establishing this market exchange rate, the official exchange rate was unified with it. Starting in February 1994, many current account transactions, including all current business transactions, education, medical expenses, and foreign travel, were also permitted at the market exchange rate. These steps culminated in India accepting the International Monetary Fund's Article VIII obligations, which made the rupee officially convertible on the current account. In recent years, bolstered by the accumulation of approximately \$120 billion worth of foreign exchange reserves, India has freed up many capital account transactions. Two provisions are of special significance: first, residents can remit up to \$25,000 abroad every year, and second, firms can borrow freely abroad as long as the maturity of the loan is five years or more.

LIBERALIZATION OF TRADE IN SERVICES. Since 1991, India has also substantially liberalized trade in services. Traditionally, the services sector has been subject to heavy government intervention. The public sector presence has been conspicuous in the key sectors of insurance, banking, and telecommunications. Nevertheless, considerable progress has been made toward opening the door wider to participation by the private sector, including foreign investors.

Until recently insurance was a state monopoly. On December 7, 1999, the Indian parliament passed a law establishing an Insurance Regulatory and Development Authority and opening the door to private entry, including entry by foreign investors. Up to 26 percent foreign ownership of a domestic firm was permitted, provided a license was obtained from the IRDA. In the 2004–05 budget this limit was raised to 49 percent.

Although public sector banks dominate the banking sector, private sector banks are permitted to operate. Foreign direct investment (FDI) in private sector banks, up to 74 percent of ownership, is permitted under the

automatic route. In addition, foreign banks are allowed to open a specified number of new branches every year. More than 25 foreign banks with full banking licenses and approximately 150 foreign bank branches are in operation today. Under the 1997 WTO Financial Services Agreement, India committed itself to permitting twelve foreign bank branches to be established each year.

The telecommunications sector has experienced much greater opening to the private sector, including foreign investors. Until the early 1990s the sector was a state monopoly. The 1994 National Telecommunications Policy provided for opening cellular as well as basic and value-added telephone services to the private sector, with foreign investors granted entry. Rapid changes in technology led to the adoption of the New Telecom Policy in 1999, which sets the current policy framework. Accordingly, in basic, cellular mobile, paging, and value-added services, and in global mobile personnel communications by satellite, FDI of up to 49 percent of ownership, subject to licensing by the Department of Telecommunications, was permitted until recently. The 2004–05 budget raised this limit to 74 percent. FDI of up to 100 percent ownership is allowed, with some conditions for Internet service providers not providing gateways (for both satellite and submarine cables), infrastructure providers providing dark fiber, electronic mail, and voice mail. Additionally, subject to licensing and security requirements and the restriction that proposals with FDI beyond 49 percent must be approved by the government, up to 74 percent foreign investment is permitted for Internet service providers with gateways, radio paging, and end-to-end bandwidth.

FDI of up to 100 percent of ownership is permitted in e-commerce. Automatic approval is available for foreign equity in software and almost all areas of electronics. Full foreign ownership is permitted in information technology units set up exclusively for exports. These units can be set up under several schemes including export-oriented units, export processing zones, special economic zones, software technology parks, and electronics hardware technology parks.

The infrastructure sector has also been opened to foreign investment. Full foreign ownership under the automatic route is permitted in projects for construction and maintenance of roads, highways, vehicular bridges, toll roads, vehicular tunnels, ports, and harbors. In projects for construction and maintenance of ports and harbors, automatic approval for foreign equity up to 100 percent is available. In projects providing support services to water transport, such as the operation and maintenance of piers and loading and the discharging of vehicles, no approval is required for foreign

equity up to 51 percent. FDI up to 100 percent ownership is permitted in airports, although FDI above 74 percent requires prior approval. Foreign equity up to 40 percent and investment by nonresident Indians up to 100 percent is permitted in domestic air transport services. Only railways remain off limits to private entry.

Since 1991, several attempts have been made to bring private sector investment, including FDI, into the power sector, but without perceptible success. The most recent attempt is the Electricity Act of 2003, which replaces the three existing laws on electric power dated 1910, 1948, and 1998. The act offers a comprehensive framework for restructuring of the power sector and builds on the experience in the telecommunications sector. It attempts to introduce competition through private sector entry side by side with public sector entities in generation, transmission, and distribution. The act completely eliminates licensing requirements in generation and freely permits captive generation. Only hydroelectric projects would henceforth require clearance from the Central Electricity Authority. Distribution licensees would be free to undertake generation, and generating companies would be free to enter the distribution business. Trading has been recognized as a distinct activity, with the regulatory commissions authorized to fix ceilings on trading margins, if necessary. FDI is permitted in all three activities.

Impact on Trade Flows

The policy changes discussed above have brought with them important changes in trade flows. These can be discussed under three headings: growth in trade, the composition of trade, and its direction.

Growth in Trade

India's share in world exports of goods and services, which had declined from 2 percent at independence to 0.5 percent by the mid-1980s, bounced back to 0.8 percent by 2002.²⁰ Thus, since the mid-1980s, India's exports of goods and services have grown faster than world exports. Table 2 offers an overview of the evolution of India's external sector during the 1980s and 1990s compared with that of China. The numbers leave little doubt that the liberalizations of the 1990s have had a more significant impact on India's trade than those of the 1980s. Although trade has performed less

20. Trade in services refers to nonfactor services and does not include remittances.

TABLE 2. Exports and Imports of India and China, 1980–2000

Category ^a	Billions of current dollars			Average growth (percent per year)	
	1980	1990	2000	1980–90	1990–2000
<i>India</i>					
Exports of goods and services	11.2	23.0	63.8	7.4	10.7
Merchandise, f.o.b.	8.5	18.5	44.9	8.1	9.3
Manufactures	5.1	13.0	34.5	9.8	10.3
Imports of goods and services	17.8	31.5	75.7	5.9	9.2
Merchandise, c.i.f.	15.9	27.9	59.3	5.8	7.8
Capital goods	2.4	5.8	8.8	9.2	4.2
Fuel and energy	6.7	6.0	15.7	-1.0	10.0
<i>China</i>					
Exports of goods and services	20.2	68.0	279.6	12.9	15.2
Merchandise, f.o.b.	18.3	62.1	249.2	13.0	14.9
Manufactures	9.0	46.2	223.8	17.8	17.1
Imports of goods and services	20.9	55.5	250.7	10.3	16.3
Merchandise, c.i.f.	20.0	53.4	225.1	10.3	15.5
Capital goods	5.1	16.9	91.9	12.6	18.5
Fuel and energy	0.2	1.3	26.0	20.1	35.2

Source: World Bank (2002).

a. f.o.b., free on board; c.i.f., cost including insurance and freight.

spectacularly in India than in China, the claim by some that the 1990s did not see a perceptible shift in the growth of exports and imports is simply wrong.

As table 2 shows, exports of goods and services grew 7.4 percent a year on average in the 1980s but 10.7 percent a year during the 1990s. The pace also picked up on the imports side, with growth rising from 5.9 percent a year in the 1980s to 9.2 percent a year in the 1990s. Thus the growth rates of both exports and imports rose by 3.3 percentage points. Nevertheless, these growth rates are substantially lower than those experienced by China since its opening to the world economy. China's exports of goods and services grew at a 12.9 percent average annual rate during the 1980s and at 15.2 percent a year during the 1990s, and its imports grew at an average annual rate of 10.3 percent during the 1980s and 16.3 percent during the 1990s. These higher growth rates are reflected in the higher degree of openness achieved by China in terms of its trade-to-GDP ratio.

According to table 3, the ratio of total exports of goods and services to GDP in India nearly doubled between 1990 and 2000, rising from 7.3 percent to 14 percent. The rise was less dramatic on the import side but still significant: from 9.9 percent in 1990 to 16.6 percent in 2000. Over these ten

TABLE 3. Indicators of Trade Openness for India and China, 1980, 1990, and 2000

Percent of GDP

<i>Indicator</i>	1980	1990	2000
<i>India</i>			
Merchandise exports	4.6	5.8	9.8
Merchandise imports	8.7	8.8	13.0
Goods and services exports	6.2	7.3	14.0
Goods and services imports	9.7	9.9	16.6
Total trade in goods and services ^a	15.9	17.2	30.6
<i>China</i>			
Merchandise exports	8.5	17.1	23.1
Merchandise imports	4.2	12.7	20.8
Goods and services exports	9.3	18.7	26.0
Goods and services imports	9.6	15.3	23.3
Total trade in goods and services	18.9	34.0	49.3

Source: World Bank (2002).

a. Exports plus imports.

years the ratio of total goods and services trade to GDP rose from 17.2 percent to 30.6 percent. Although this is substantially lower than the corresponding ratio of 49.3 percent for China over the same period, it is comparable to the ratio that China had achieved twelve years after its opening: 34.0 percent in 1990.

Composition of Trade

Tables 4 and 5 summarize the broad composition of merchandise exports and imports, respectively, in three periods—1987–88, 1992–93, and 2001–02—and table 6 provides details on the composition of services and transfers (“invisibles” in the official Indian terminology) for 1980–81, 1990–91, and 2001–02.²¹ Table 7 provides additional details on invisibles receipts for 2001–02 and 2002–03 that are not available for other years. One can draw five important conclusions from these tables together with table 2.

First, services exports have grown more rapidly than merchandise exports. As table 2 shows, the share of services in total exports of goods and services rose from 19.6 percent in 1990 to 29.6 percent in 2000. More

21. Changes in the classification system do not allow one to go farther back than 1987–88 on a comparable basis; 1992–93 has been chosen to represent the baseline at the beginning of the reform, instead of 1991–92, because the latter was off trend as a result of the June 1991 crisis.

TABLE 4. Composition of Merchandise Exports, India, 1987-88, 1992-93, and 2001-02

Percent of total exports except as indicated

	1987-88	1992-93	2001-02
Primary products	26.1	20.9	16.1
Agriculture and allied products	21.2	16.9	13.4
Tea	3.8	1.8	0.8
Coffee	1.7	0.7	0.5
Rice	2.2	1.8	1.5
Cotton raw including waste	0.7	0.3	0.0
Tobacco	0.9	0.9	0.4
Cashews including cashew nut shell liquid	2.0	1.4	0.9
Spices	2.1	0.7	0.7
Oil Meals	1.4	2.9	1.1
Fruits and vegetables	0.8	0.6	0.5
Processed fruits, juices, misc. processed items	1.1	0.4	0.7
Marine products	3.4	3.2	2.8
Sugar and molasses	0.1	0.7	0.9
Meat and meat preparations	0.6	0.5	0.6
Other	0.5	1.0	2.1
Ores and minerals	5.0	4.0	2.8
Iron ore	3.5	2.1	0.9
Mica	0.1	0.0	0.0
Other	1.3	1.9	1.8
Manufactured goods	67.8	75.7	75.6
Leather and manufactures	8.0	6.9	4.3
Chemicals and allied products	4.7	6.6	9.2
Drugs, pharmaceuticals, and fine chemicals	2.1	2.9	4.7
Other	2.6	3.8	4.6
Plastic and linoleum products	0.4	0.8	2.2
Rubber, glass, paints, enamels and products	1.4	2.1	2.2
Engineering goods	9.5	13.4	15.7
Readymade garments	11.6	12.9	11.4
Textile yarn, fabrics, made-ups, etc.	9.0	10.3	10.1
Cotton yarn, fabrics, made-ups, etc.	7.3	7.3	6.9
Natural silk yarn, fabrics, made-ups, etc.	0.9	0.7	0.6
Other	0.8	2.2	2.5
Jute manufactures	1.5	0.7	0.3
Coir and manufactures	0.2	0.2	0.1
Handicrafts	20.2	20.4	18.8
Gems and jewelry	16.7	16.6	16.7
Carpets (handmade exclusive silk)	2.1	2.3	0.8
Works of art (exclusive floor coverings)	1.4	1.5	1.3
Sports goods	0.4	0.2	0.2
Others	0.9	1.3	1.1
Petroleum products	4.1	2.6	4.8
Other	1.9	0.8	3.5
Total exports (billions of dollars)	12.1	18.5	43.8

Source: Author's calculations using data from Reserve Bank of India (2002, table 124).

TABLE 5. Composition of Merchandise Imports, India, 1987-88, 1992-93, and 2001-02

Percent of total imports except as indicated

	1987-88	1992-93	2001-02
Bulk imports	40.9	44.9	39.4
Petroleum, crude and products	18.2	27.9	27.2
Bulk consumption goods	6.6	2.3	4.0
Cereals and cereal preparations	0.3	1.5	0.0
Edible oils	4.4	0.3	2.6
Pulses	1.1	0.5	1.3
Sugar	0.9	0.0	0.0
Other bulk items	16.1	14.7	8.2
Fertilizers	2.3	4.5	1.3
Crude	0.6	0.7	0.3
Sulphur and unroasted iron pyrites	0.8	0.6	0.1
Manufactured	0.8	3.2	0.9
Nonferrous metals	2.9	1.8	1.3
Paper, paperboards, manufactures, including newsprint	1.2	0.8	0.9
Crude rubber, including synthetic and reclaimed	0.5	0.4	0.3
Pulp and waste paper	1.1	0.6	0.6
Metalliferous ores, metal scrap, etc.	2.2	3.0	2.2
Iron and steel	5.9	3.6	1.6
Non-bulk imports	59.1	55.1	60.6
Capital goods	29.5	20.7	18.1
Manufactures of metals	0.7	0.7	0.8
Machine tools	1.0	0.8	0.4
Machinery, except electrical and electronic	11.8	7.6	5.8
Electrical machinery, except electronic	4.9	3.8	1.2
Electronic goods			7.3
Computer goods			0.4
Transport equipment	3.4	2.1	1.2
Project goods	7.8	5.8	1.1
Mainly export related items	15.1	19.0	16.0
Pearls, precious and semi-precious stones	9.1	11.2	9.0
Organic and inorganic chemicals	4.9	6.5	5.4
Textile yarn, fabrics, made-ups, etc.	0.8	0.7	1.4
Cashew nuts	0.3	0.6	0.2
Other	14.5	15.4	26.5
Artificial resins and plastic materials, etc.	2.5	1.9	1.3
Professional, scientific, and controlling instruments ^a	2.2	2.3	2.0
Coal, coke, and briquettes, etc.	1.0	2.2	2.2
Medicinal and pharmaceutical products	0.8	1.3	0.8
Chemical materials and products	0.9	0.8	0.9
Nonmetallic mineral manufactures	0.5	0.4	0.8
Others	6.6	6.5	18.4
Total imports (billions of dollars)	17.2	21.9	51.4

Source: Author's calculations using data from Reserve Bank of India (2002, table 124).

a. Including photographic and optical goods.

TABLE 6. Composition of Invisibles Receipts and Payments, India, 1980-81, 1990-91, and 2001-02

Percent of total except as indicated

Item	Receipts			Payments		
	1980-81	1990-91	2001-02	1980-81	1990-91	2001-02
Nonfactor services	39.0	61.0	57.0	71.2	46.3	74.6
Travel	17.0	19.5	8.2	5.4	5.1	10.6
Transportation	6.4	13.2	5.5	21.2	14.2	11.0
Insurance	0.9	1.5	0.7	2.0	1.1	1.2
Government, not included elsewhere	1.5	0.2	1.3	2.8	2.2	1.3
Miscellaneous	13.2	26.6	41.2	39.7	23.7	50.5
Investment income	12.8	4.9	7.7	28.0	53.5	25.1
Transfers						
Private	37.7	27.9	34.2	0.7	0.2	0.3
Official	10.5	6.2	1.1	0.2	0.0	0.0
Total (billions of dollars)	7.2	7.5	35.6	2.1	7.7	21.6

Source: Author's calculations using data from Reserve Bank of India (2002, table 137).

TABLE 7. Composition of Invisibles Receipts, India, 2001-02 and 2002-03

Percent of total except as indicated

Item	2001-02	2002-03
Transfers	34.3	35.4
Software services	20.6	22.3
Miscellaneous services other than software	20.4	21.2
Travel	7.9	7.0
Transportation	5.4	5.9
Income	9.4	6.6
Insurance and GNIE ^a	2.0	1.6
Total receipts (billions of dollars)	36.7	43

Source: Reserve Bank of India (2003, table 6.4).

a. GNIE: Government, not included elsewhere

recent data from the World Bank show that this ratio rose further, to 33.1 percent, in 2001.²² H. A. C. Prasad places India's share of world services exports in 2002 at 1.3 percent.²³

Second, at the relatively broad level of aggregation shown in table 4, the commodity composition of India's trade has changed only modestly.²⁴

22. World Bank (2003).

23. H. A. C. Prasad, *Business Line*, August 27, 2003.

24. The next section will show that in the more finely disaggregated data, changes in the composition of both exports and imports are quite dramatic. Products with no or very low trade initially have grown very rapidly.

During 1992–2002 the share of manufactures in total commodity exports remained unchanged at approximately 75 percent. Within manufactures the sectors that have grown more rapidly than the average for all merchandise exports are the capital- and skilled labor-intensive sectors, including chemicals and allied products and engineering goods. Within the former category, drugs, other pharmaceuticals, and fine chemicals have done especially well; within engineering goods, automobiles and auto parts have lately shown impressive growth. The key unskilled labor-intensive sectors have grown at best at the average pace of all merchandise exports. For example, leather manufactures have grown at rates well below the average, whereas ready-made garments and textiles, yarn, fabrics, and made-up goods have grown at approximately the average rate of all merchandise exports.

Third, on the import side, perhaps the most remarkable observation is that the share of capital goods imports declined drastically during the 1990s (table 5). From 29.5 percent in 1987–88, this share fell to 18.1 percent in 2001–02. In part this decline reflects a bias in liberalization in the 1980s in favor of capital goods over intermediate inputs, whereas in the 1990s both capital and intermediate goods (but not consumer goods) were freed from licensing. But the decline also reflects the general slowdown in private investment activity during the 1990s relative to the late 1980s.

Fourth, on the invisibles account, two key items that have shown very rapid growth are remittances from Indians residing overseas and software exports. The former are reported under “private transfers” in tables 6 and 7. The latter are subsumed within the category “miscellaneous” in table 6 but are reported separately for the last two years in table 7. Software exports (including business process outsourcing) accounts for the greater part of the growth in the miscellaneous category during the 1990s. According to table 7, software exports have risen from \$7.6 billion in 2001–02 to \$9.6 billion in 2002–03. Interestingly, a substantial part of the growth in remittances has also come from the software industry, since these remittances include the repatriation of earnings by temporary Indian workers in the United States (mainly H1B visa holders). This component rose from \$2.1 billion in 1990–91 to \$12.2 billion in 2001–02.

Finally, it comes as no surprise that India is far from achieving its potential in tourism. After reaching \$3.2 billion in 2000–01, tourism receipts fell to \$2.9 billion in 2001–02 in the wake of the September 11 tragedy and recovered only slightly to \$3.0 billion in 2002–03. Given

India's attractiveness as a tourist destination and its low costs, this level of tourism is well below what the country could achieve.

Direction of Trade

Table 8 summarizes the direction of India's merchandise trade for 1987–88, 1992–93, and 2001–02. On the export side the major shift has been away from Russia and Japan toward developing Asia. The share of India's exports going to Japan declined from 10.3 percent in 1987–88 to 3.4 percent in 2001–02. The share taken by Russia declined from 12.5 percent to a paltry 1.8 percent over the same period. The share of developing countries as a whole grew from 14.2 percent to 30.9 percent, with each major region—Asia, Africa, and Latin America—absorbing a larger share of India's total exports than before. The share taken by developing Asia rose from 11.9 percent to 23.6 percent. The United States meanwhile has remained a steady trading partner, accounting for approximately one-fifth of India's merchandise exports throughout the period.

On the import side, the major shift has been away from the industrial countries and Russia to the OPEC nations and other developing countries. India's imports from the European Union declined from 33.3 percent of the total in 1987–88 to 22.1 percent in 1999–2000.²⁵ The decline in the U.S. share over the same years was from 9.0 percent to 7.2 percent, and that in the Japanese share from 9.6 percent to 5.1 percent. Russia also lost share, with imports from that country declining from 7.5 percent to 1.3 percent of India's total imports. OPEC and the other developing countries meanwhile gained share. The share of imports coming from OPEC rose from 13.3 percent to 25.9 percent, and that from developing countries from 17.3 percent to 29.2 percent.

An interesting ongoing development is the rapid expansion of India's trade with China. From just \$18 million in 1990–91, India's exports to China rose to approximately \$2 billion in 2002–03. India's imports from China similarly expanded from \$35 million to \$2.8 billion over the same period. India's exports to China have consisted of medium- to high-technology products. In 2002–03 three product groups—engineering goods, iron ore, and chemicals—accounted for more than 70 percent of India's exports to China. On the import side, electronic goods, chemicals, and textiles, yarn, fabric, and made-up articles together accounted for approximately half of the total value of India's imports from China.

25. The available direction-of-trade data on imports for years 2000–01 and after are not consistent with those for the earlier years.

TABLE 8. Direction of Trade, India, Selected Years

Percent of total exports or imports except as indicated

<i>Country or group</i>	<i>1987-88</i>		<i>1992-93</i>		<i>2001-02</i>	<i>1999-2000</i>
	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>	<i>Imports^a</i>
OECD countries	58.9	59.8	60.5	56.1	49.3	43.0
European Union	25.1	33.3	28.3	30.2	22.5	22.1
Germany	6.8	9.7	7.7	7.6	4.1	3.7
United Kingdom	6.5	8.2	6.5	6.5	4.9	5.4
North America	19.7	10.3	20.0	11.7	20.8	7.9
Canada	1.1	1.3	1.0	1.9	1.3	0.8
United States	18.6	9.0	19.0	9.8	19.4	7.2
Asia and Oceania	11.6	12.0	9.1	10.6	4.5	7.5
Australia	1.1	2.3	1.2	3.8	1.0	2.2
Japan	10.3	9.6	7.7	6.5	3.4	5.1
Other OECD countries	2.5	4.2	3.0	3.6	1.6	5.5
Switzerland	1.3	1.1	1.1	1.7	0.9	5.2
OPEC	6.1	13.3	9.6	21.8	11.9	25.9
United Arab Emirates	2.0	3.4	4.4	5.1	5.7	4.7
Eastern Europe	16.5	9.6	4.4	2.5	2.9	2.0
Russia	12.5	7.2	3.3	1.2	1.8	1.3
Developing countries	14.2	17.3	22.9	19.6	30.9	29.2
Asia	11.9	12.1	18.8	14.6	23.6	20.0
SAARC members ^b	2.6	0.4	4.0	0.8	4.6	0.8
Other	9.3	11.7	14.8	13.8	19.0	19.2
Hong Kong	2.8	0.5	4.1	0.8	5.4	1.6
South Korea	0.9	1.5	0.9	1.6	1.1	2.6
Malaysia	0.6	3.8	1.0	1.9	1.8	4.1
Singapore	1.7	1.9	3.2	2.9	2.2	3.1
Thailand	0.5	0.3	1.4	0.3	1.4	0.7
Africa	2.0	2.9	3.1	3.5	5.2	7.3
Latin America	0.3	2.3	1.0	1.5	2.1	1.9
Other	0.0	0.0	0.1	0.0	0.2	0.0
Total trade (billions of dollars)	12.1	17.2	18.5	21.9	43.8	49.7

Source: Author's calculations from Reserve Bank of India (2002, table 130).

a. Available direction of trade data on imports for 2000-01 and beyond are not consistent with those for earlier years.

b. In addition to India, members of the South Asian Association for Regional Cooperation include Bangladesh, Bhutan, Maldives, Nepal, Pakistan, and Sri Lanka.

Impact on Efficiency and Growth

The benefits of liberalization may be measured in terms of static efficiency gains and economic growth.²⁶ This section will discuss each of these approaches briefly.

Static Efficiency

Measurements of efficiency gains inevitably rely on simulations using partial- or general-equilibrium models.²⁷ The dominant approach today is to construct a general-equilibrium model and parameterize it such that it reproduces the equilibrium in the base year with the existing policy distortion in place. The model is then subjected to a comparative statics exercise by removing specific distortions and solved for the changes in various endogenous variables, including consumption, output, net imports of various goods, and real income. The results of these exercises critically depend on the choice of the model, functional forms, and parameter values.²⁸ Moreover, the effects on sectoral consumption, output, and trade predicted by these models do a very poor job of tracking the actual outcomes.²⁹ For these reasons estimates based on these studies must be taken with a grain of salt.

With this caveat, the only comprehensive study that quantitatively measures the impact of India's liberalization on welfare is that by Rajesh Chadha and others.³⁰ Using the Michigan Computable General Equilibrium model, this study concludes that trade liberalization corresponding approximately to what has been accomplished to date had the potential to raise GDP permanently by approximately 2 percent. If the same liberalization were done after a competitive regime replaced the existing regime, however, the gain from trade liberalization would rise to as much as 5 percent of GDP.

The traditional analyses of the static gains from trade liberalization fail to emphasize some key sources of such gains: specialization in production that eliminates certain sectors entirely and gives rise to new ones; reduced costs due to the availability of higher-quality inputs; and the

26. An examination of the effects on poverty reduction is beyond the scope of this paper.

27. See Panagariya (2002a).

28. Panagariya and Duttagupta (2001) demonstrate this fact in the context of computable general-equilibrium models of preferential trading.

29. See Kehoe (2003).

30. Chadha and others (1998).

availability of new and higher-quality products to consumers.³¹ Because these sources are particularly relevant for India, given its regime of across-the-board protection, it is useful here to consider briefly each of these sources of gains.

When a country's production structure is excessively diversified as a result of a policy of wholesale, indiscriminate import substitution, as was the case in India, opening to trade is likely to lead to the disappearance of certain activities and sectors altogether. Conversely, the availability of new inputs and higher-quality substitutes for low-quality inputs produced domestically will likely give rise to new products and sectors capable of competing in world markets. Benefits from these changes can potentially give rise to gains much larger than the traditional triangular efficiency gains from the expansion or contraction of existing activities that are relatively small.

Even in the case of products that continue to be produced domestically, the availability of newer and higher-quality inputs is likely to yield large savings. For years India prohibited imports of machinery and intermediate inputs whenever domestic substitutes were available, even if the latter were of dubious quality. This resulted in low efficiency as well as poor quality of the final product. Vijay Kelkar makes this point forcefully:

In the manufacturing sector we opted for an across-the-board import substitution strategy where we sought to produce everything in a production chain whether the product was a commercial vehicle or a steel mill. And by this, the weakest link decided the fate of the strength of the whole production chain. We entered into production of a number of activities in which we just did not possess the competitive edge. It resulted in a loss of efficiency for the entire industry. For instance, forcing the Indian fertilizer industry to use only Indian designed catalyst, the entire fertilizer industry's productivity suffered. Same was the case for electronics sector where our software industry took time to take off because of the insistence on the use of domestic computer hardware.³²

Pursell expresses a similar sentiment when describing India's trade regime until the mid-1970s:

During this period, import-substitution policies were followed with little or no regard to costs. They resulted in an extremely diverse industrial structure and high degree of self-sufficiency, but many industries had high production costs. In addition, there was a general problem of poor quality and technological backwardness, which beset even low-cost sectors with comparative advantage such

31. Chadha and others (1998) do allow for economies of scale and are thus able to capture some of the pro-competitive effects of reduced protection on production costs. But they apparently hold the numbers of domestic and foreign products fixed.

32. Kelkar (2001, p. 5).

as the textiles, garment, leather goods, many light industries, and primary industries such as cotton.³³

A final source of static welfare gains is the availability of new and perhaps higher-quality variants of existing products. As Paul Romer has emphasized using an elegant analytical model, when new products become available, the benefits are not limited to the traditional welfare triangles but the entire area under the demand curve.³⁴ For many years India either prohibited imports of consumer goods or allowed them only under very stringent conditions. As a result, products that were readily available elsewhere commanded a very large premium in India. In addition, the quality of domestically produced counterparts of foreign goods was often extremely poor.³⁵ This situation changed drastically after the liberalization of consumer goods imports, first through the easing of baggage rules and the issuance of tradable special import licenses for specified consumer goods, and subsequently, in April 2001, through an end to all licensing.³⁶ The *availability of high-quality products has contributed to consumer welfare* not only directly but also indirectly, by making consumers more discriminating and therefore forcing domestic manufacturers to upgrade the quality of their products.

Two sectors in which the impact of opening up on the quality and availability of new products is highly visible are automobiles and telecommunications. Indian consumers had long suffered the 1950s models sold by Ambassador and Fiat, and even then they had to wait in queues that were several years long. Today virtually all of the world's major car manufacturers are represented in the Indian market, and consumers have immediate access to a wide variety of models. Continued high tariffs on automobile imports notwithstanding, consumers have reaped large benefits because automobile manufacturers have been able to enter the market through tariff-jumping investments.

33. Pursell (1992, pp. 433–34).

34. Romer (1994).

35. Bhagwati tells an anecdote that aptly captures the deleterious impact that protectionist policies had on the quality of the Indian products. Upon his return from study abroad in the early 1960s, Bhagwati initially shared the intellectual attitudes that helped India turn inward, although he quickly changed his mind in light of the realities on the ground. In a letter to Harry Johnson written during his tenure at the Indian Statistical Institute in the early 1960s, Bhagwati happened to complain about the craze he observed in India for everything foreign. Harry Johnson promptly responded that if the quality of the paper on which Bhagwati had written his letter was any indication of the quality of homemade products, the craze for the foreign seemed perfectly rational to him.

36. "Baggage rules" are those applicable to imports entering India as a part of passengers' baggage.

In the same vein, not too long ago, telephone service was considered a luxury even among upper-middle-class Indians in urban areas, and they had to wait in long queues to obtain it. The few “lucky” ones who did manage to get a telephone usually found that half the time they could not get a dial tone, and the other half of the time they got a wrong number.³⁷ In contrast, telephone service today, whether it be fixed line or cellular, is available on demand in most regions, and absence of a dial tone and inability to connect to the number dialed are no longer at issue. India has made full use of the rapid advances in technology in this sector, with benefits to consumers that many now take for granted. Had it not freed imports of information technology products (and undertaken other reforms in the telecommunications sector), India could not have taken advantage of these advances.

The benefits of new imported inputs and final products are not limited to these obvious, highly visible examples. In her doctoral thesis, Purba Mukerji analyzes the changes in trade flows during the 1990s at a highly disaggregated level.³⁸ She finds that, at the five-digit SITC classification, the total number of products imported jumped from 2,120 in 1991 to 2,611 in 1999, or 23 percent, and that of exports from 2,273 to 2,549, or 12 percent, over the same period.

More important, following Timothy Kehoe and Kim Ruhl, Mukerji studies the change in the share of new goods in total merchandise imports and exports using the five-digit SITC data.³⁹ Contrary to the impression of relatively minor changes in the composition of imports and exports conveyed by the aggregate data, she finds movements in the composition of imports and exports that could not be more dramatic. The available data span the years 1988 to 1999. Mukerji first sorts products in ascending order of the value of their imports. She then divides them into ten categories, with each category accounting for 10 percent of the total imports in 1988. By construction, the first category consists of products that individually

37. Prompted by his unhappy experience with the Indian telephone system, Bhagwati once quipped that one way to distinguish between a developed and a developing country is that in the former one gets tired of *receiving* phone calls, whereas in the latter one is exasperated *making* them. Tharoor (1997, p. 167) offers a more direct indictment of the telecommunications sector in India in the early 1980s and the government’s attitude toward it: “The government’s indifferent attitude to the needs to improve India’s communications infrastructure was epitomized by Prime Minister Indira Gandhi’s communications minister, C. M. Stephens, who declared in Parliament, in response to questions decrying the rampant telephone breakdowns in the country, that telephones were a luxury, not a right, and that any Indian who was not satisfied with his telephone service could return his phone—since there was an eight-year waiting list of people seeking this supposedly inadequate product.”

38. Mukerji (2004).

39. Kehoe and Ruhl (2002).

contributed little or nothing to the volume of imports in 1988 and therefore contains the largest number of products. By the same token, the last category contains products that individually contributed the largest volume of imports in 1988 and hence contains the fewest products.⁴⁰ Mukerji then fixes the categories and computes the change in the share of each category in the following years. She does a similar exercise for exports.

Mukerji's results for imports are reproduced in the top panel of table 9. Because so many products were allowed to be imported only in tiny quantities, or not at all, in 1988, as many as 2,312 out of 2,742 importable items accounted for 10 percent of imports in the first category. That is to say, the remaining 429 products, or just 15.6 percent of all importable items, accounted for 90 percent of India's merchandise imports. In the following years, especially after the major liberalization in July 1991, the proportions shifted dramatically. By 1999, products in the first category had increased their share in total imports from 10 percent to 35 percent, with products in most other categories experiencing a declining trend.

A similar if slightly less dramatic story emerges on the export side. According to the bottom panel of table 9, in 1988 only 8.4 percent of all products accounted for 90 percent of India's exports, with the remaining 91.6 percent of products accounting for the remaining 10 percent. By 1999 the share of the products in the latter category had climbed to 27 percent. Again, the pattern is one in which products with zero or minuscule shares initially are the ones that grew fastest. Only the first two categories in table 9, which contain those products with the smallest initial shares, show gains, with the rest experiencing either a decline or no change in 1999.

Growth and Productivity

The bulk of the benefits from liberalization has evidently come from faster growth. Although India has seen a clear shift in its growth rate during the last two decades, its connection to liberalization has been questioned. Bradford DeLong argues that since the shift in the growth rate took place during the 1980s whereas the reforms began only in 1991, reforms cannot be credited with the shift.⁴¹ Dani Rodrik endorses DeLong's view, asserting that "the change in official attitudes in the 1980s, towards encouraging rather than discouraging entrepreneurial activities and integration into the world economy, and a belief that the rules of the economic game had

40. The last category contains 20 percent of the imports initially, to overcome a problem posed by a switch in classification in 1992.

41. DeLong (2003).

TABLE 9. Composition of Trade According to New versus Old Products

Percent of total imports or exports

Category ^a	No. of products	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<i>Imports</i>													
9	2,312	10	13	15	15	17	20	28	26	28	32	38	35
8	211	10	10	11	9	9	11	11	11	11	11	9	10
7	97	10	10	11	10	11	13	13	14	12	11	10	8
6	49	10	9	9	8	8	7	7	7	6	5	5	4
5	29	10	8	9	9	8	8	9	9	8	7	6	6
4	19	10	9	9	8	7	6	5	5	4	5	3	2
3	13	10	8	7	6	5	5	7	8	8	7	8	8
2	8	10	12	11	10	9	6	6	6	5	5	3	6
1	3	20	21	18	25	26	24	14	14	18	17	18	21
<i>Exports</i>													
9	2,533	10	13	14	18	20	22	23	24	26	27	25	27
8	132	10	10	11	10	10	11	11	12	12	12	12	11
7	52	10	11	10	11	11	8	9	7	8	8	7	8
6	23	10	10	11	10	8	7	7	7	7	7	7	7
5	11	10	10	10	11	10	11	11	11	12	12	11	10
4	7	10	11	11	10	11	10	9	8	9	8	8	7
3	5	11	9	10	11	10	10	11	12	10	10	11	8
2	1	3	3	3	2	2	1	1	1	1	1	1	1
1	1	26	23	20	17	18	20	18	18	15	15	18	21

Source: Mukerji (2004).

a. Products are ranked according to quantities imported or exported and then divided into categories according to import or export quantity in 1988, with the first category including the products accounting for the most imports or exports, and the ninth category the least (the latter including products in which there was no trade in 1988). Thus an increase in the share of trade accounted for by products in a given category indicates an expansion of trade in products in that category or (in the ninth category) the introduction of trade in formerly nontraded products. Category 1 contains 20 percent of imports in 1988 to overcome a problem posed by a switch in classification in 1992.

changed for good may have had a bigger impact on growth than any specific policy reforms."⁴²

Elsewhere I have subjected this view to a systematic critique, offering four counterarguments.⁴³ First, growth during the 1980s was fragile, exhibiting significantly higher variance than in the 1990s. It was the super-high growth rate of 7.6 percent a year during the last three years of 1980s that makes overall growth in the 1980s look comparable to that in the 1990s. Second, growth in the 1980s, especially the extremely rapid growth of the last three years of the decade, took place in the presence of significant liberalization of both investment and import licensing, notably during the second half of the decade. Third, growth during the 1980s was also fueled by fiscal expansion. As such, it was unsustainable, with the result that the economy crash-landed in 1991. Finally, even if DeLong were right that changes in attitudes rather than in policies led to the shift in the growth rate in the 1980s, without further liberalization that growth would not have been sustained. It is on the strength of continued liberalization that India sustained a 6 percent annual growth rate from 1992–93 onward. It is also because of the 1990s liberalization that India has been able to build a foreign exchange reserve of \$120 billion, putting it beyond the immediate reach of another macro-economic crisis despite fiscal deficits that are currently as large as those in the late 1980s.⁴⁴

In assessing the contribution of liberalization to growth more directly, one may ask whether liberalization was accompanied by increased growth in total factor productivity (TFP). Before reviewing the evidence from India in this area, however, it is important to recall that the literature on productivity has been, in general, controversial and inconclusive on the role of policy in stimulating growth. In the context of East Asia, Alwyn Young set off a major debate with his conclusion that the super-high growth rates of the Asian miracle economies were almost entirely due to capital accumulation, and that policies—whether outward-oriented and pro-market, or inward-oriented and interventionist—played no role.⁴⁵ Later findings by Jong-II Kim and Lawrence Lau, Susan Collins and Barry Bosworth, and Ishaq Nadiri and Wanpyo Son have reinforced Young's conclusions, leading Paul Krugman to colorfully describe the East Asian

42. Rodrik (2003).

43. Panagariya (2004).

44. Nevertheless, the deficits are not sustainable in the long run and impose a short-term cost by crowding out private investment.

45. See Young (1992, 1995).

growth experience as one of Soviet-style perspiration rather than policy-induced inspiration.⁴⁶

Bhagwati argues forcefully, however, that the traditional measures of TFP fail to capture the effect that policies have on capital accumulation itself.⁴⁷ Good policies can raise the rate of saving and therefore of investment. Approaching the issue from the productivity perspective, Charles Hulten has long argued that increased productivity due to innovation raises the return to capital and induces greater capital accumulation.⁴⁸ The conventional productivity measures do not take this innovation-induced accumulation into account. For example, Hulten and Mieko Nishimizu study the direct and indirect effects of innovation on growth in nine industrialized countries for the period 1960–73 and find that the conventional TFP measure accounts for 45 percent of output growth, but that when innovation-induced capital accumulation is taken into account, the contribution of innovation jumps to 84 percent.⁴⁹

Empirical studies aimed at measuring TFP in India focus virtually exclusively on manufacturing and may be divided into two categories, those relying on industry-level data and those relying on firm-level data. Their findings are not unambiguous, because of differences in methodology, the unit of analysis, and the quality of the data, but the weight of the evidence is in favor of trade liberalization leading to productivity gains.

Among studies based on industry-level data, the key source of the differences in results is the manner in which gross output and intermediate inputs are deflated. Isher Ahluwalia initially looked for effects of the early reforms on productivity using industry data from 1959–60 to 1985–86.⁵⁰ She concluded that although there was no net TFP growth during the entire period, a mildly accelerating pattern of productivity growth did emerge after liberalization began in the late 1970s.

P. Balakrishnan and K. Pushpangandan and J. Mohan Rao rejected this finding, however, on the ground that Ahluwalia had used a “single-deflation” procedure that assumes that prices of output and intermediate inputs grow at the same rate.⁵¹ Instead they used a “double-deflation”

46. See Kim and Lau (1994), Collins and Bosworth (1996), Nadiri and Son (1998), and Krugman (1994).

47. Bhagwati (1999).

48. Hulten (1975).

49. Hulten and Nishimizu (1980).

50. See Ahluwalia (1991). For a discussion of the earlier literature on productivity growth in India, see Bhagwati and Srinivasan (1975).

51. See Balakrishnan and Pushpangandan (1994) and Rao (1996).

method, with separate estimates of prices for final output and for intermediate goods, and found the opposite pattern of TFP growth, with TFP growth collapsing during 1985–92.

More recently, Hulten and Syleja Srinivasan have taken a fresh look at the data for 1973–92.⁵² They begin by noting that the finding by Balakrishnan and Pushpangandan and by Rao, that TFP increased rapidly until 1982–83 and then plummeted 35 percent by the end of the period, is rather implausible, and they share the skepticism expressed subsequently by Ahluwalia and by B. H. Dholakia and R. H. Dholakia about the Balakrishnan-Pushpangandan-Rao double-deflation method.⁵³ They then proceed to recalculate productivity growth applying different and, in their view, superior methods of measurement of output and intermediate input prices. Their price indexes lead to the same results as in the Balakrishnan-Pushpangandan-Rao papers for the entire sample period (1973–92) but yield major differences for the subperiods 1973–82 and 1983–92. In particular, whereas the output price index used by Rao accelerates from the first half of the sample period to the second, the output price index used by Hulten and Srinivasan decelerates. In the same vein, the Hulten and Srinivasan input price index shows a less rapid deceleration between the two subperiods than the Rao index.

These differences in price indexes lead to different productivity outcomes in the two subperiods. They smooth out the TFP path, and the sudden collapse found in the Balakrishnan-Pushpangandan-Rao papers disappears. At the same time, no pickup in TFP growth in the second period is found: the growth rates are 2.2 percent and 2.1 percent in the two subperiods, respectively.

Hulten and Srinivasan argue, however, that the lack of pickup in TFP growth still leaves open the possibility that the surge in investment in the second subperiod reflected an improved investment climate due to reform. Therefore they proceed to make the process of capital accumulation itself endogenous and calculate the total growth in productivity (direct productivity growth plus that through productivity-induced capital accumulation). This leads to estimates of 5.0 percent and 5.7 percent growth in productivity in the two subperiods, respectively, indicating at least a small pickup in productivity growth.

In a more recent study, Satish Chand and Kunal Sen break up the time period more finely and use a different methodology, one that incorporates

52. Hulten and Srinivasan (1999).

53. Ahluwalia (1994) and Dholakia and Dholakia (1994).

TABLE 10. Change in Protection and Growth in Total Factor Productivity, India, 1974–88

Percent

	<i>Industry classification</i>		
	<i>Consumer goods</i>	<i>Intermediate goods</i>	<i>Capital goods</i>
<i>Change in protection</i>			
1974–78	4.5	0.4	-1.8
1979–83	-1.1	1.4	1.7
1984–88	-0.4	-5.4	-4.3
<i>Growth in TFP</i>			
1974–78	-0.5	-1.2	-1.6
1979–83	-1.2	-3.1	-1.5
1984–88	5.1	4.8	3.7

Source: Chand and Sen (2002).

the productivity effects of new inputs made available by trade liberalization.⁵⁴ They use three-digit industry data covering thirty industries that account for 53 percent of gross value added and 45 percent of employment in manufacturing over the period under study, 1973–88. The industries are divided approximately equally among consumer, intermediate, and capital goods. Chand and Sen measure protection by the proportionate wedge between the Indian and the U.S. price and estimate TFP growth in the three industry groups averaged over three nonoverlapping periods: 1974–78, 1979–83, and 1984–88. They then relate this productivity growth to liberalization.

Table 10 presents Chand and Sen's findings.⁵⁵ By their measure, protection declines over the sample period in the intermediate and capital goods sectors but not in the consumer goods sector. Moreover, all three sectors see a significant improvement in TFP growth in 1984–88 compared with the two earlier periods. Thus the jump in TFP growth coincides with the liberalization of capital and intermediate goods.

Chand and Sen perform further tests by pooling their sample and employing fixed-effects estimators to allow for intrinsic differences across industries with respect to the rate of technological progress. Their estimates show that, on average, a 1 percentage point reduction in the price wedge leads to a 0.1 percent rise in TFP. For the intermediate goods sector, the effect is twice as large. The impact of liberalization of the intermediate

54. Chand and Sen (2002).

55. See Chand and Sen (2002, table 3).

goods sector on productivity turns out to be statistically significant in all of their regressions.⁵⁶

Several studies focus principally on the impact of the 1990s reforms on productivity growth using firm- or plant-level data; these include the contributions by Pravin Krishna and Devashish Mitra; Balakrishna, Pushpangandan, and M. Babu; Petia Topalova; and Jagadeesh Sivadasan.⁵⁷ The first three of these studies employ the PROWESS firm-level database maintained by the Center for Monitoring the Indian Economy (CMIE), whereas the last one uses, for the first time, the plant-level data underlying the industry-level data used by earlier researchers, which come from the Annual Survey of the Industries (ASI). The three papers using the PROWESS/CMIE data reach conflicting conclusions, perhaps because they employ different subsets of the dataset or different techniques, but possibly also because of the same differences in price deflators that have been at the heart of the conflict between industry-level studies.

The PROWESS database includes information on a number of variables on an annual basis for all of the roughly 4,000 industrial firms listed on the Bombay Stock Exchange. Krishna and Mitra choose firms in four sectors: electronics (90 firms), electrical machinery (90 firms), nonelectrical machinery (72 firms), and transport equipment (111 firms). They allow for scale economies and imperfect competition and find strong evidence of a pro-competitive effect, as reflected in a decline in the price-cost margin, as well as some evidence of an increase in productivity growth following the 1991 reform. Balakrishna, Pushpangandan, and Babu employ essentially the same methodology as Krishna and Mitra but apply it to a much larger sample of 2,300 firms spanning the period 1988–89 to 1997–98. They fail to find any acceleration in productivity growth following the 1991 reform, however.

Topalova carries out a more comprehensive analysis, with a sample that covers 1989–2001 and includes the largest number of firms (which varies across years) of the three studies using the CMIE/PROWESS database. She

56. Two recent studies by Das (2003) and Unel (2003) extend the industry-level analysis to the 1990s. The results of these two studies contradict each other, however. Whereas Unel finds substantial growth in productivity in the 1980s and 1990s (with the growth rate higher in the latter decade), Das finds the opposite: TFP growth accounts for only 7 percent of the manufacturing growth during the 1980s and almost none of that in the 1990s. Once again, the differences arise from the deflators used. Whereas Unel effectively uses a common deflator for output and intermediate inputs, Das uses separate deflators for each of them.

57. Krishna and Mitra (1998); Balakrishnan, Pushpangandan, and Babu (2000); Topalova (2003); Sivadasan (2003).

finds very strong evidence that tariff reductions have a positive effect on both the level of productivity and its growth rate. The results are highly statistically significant and robust to different specifications.

A criticism applicable to all three of these firm-level studies is that the CMIE/PROWESS data are of poor quality. Often the totals and mean values of several variables do not match those available from other, more reliable sources. There is also the possibility that since firms file the information to the stock exchange as a part of their profit-loss statements, they may misrepresent it in order to influence investors. Most important, however, the CMIE data do not report the number of a firm's employees. This makes it difficult to measure labor input. The usual way around this (as, for example, in Krishna and Mitra, 1998) is to use the deflated wage bill as the labor input, but this suffers from the problem that if TFP growth is shared by workers through higher wages, the change in TFP would be underestimated. These deficiencies of the data make the recent, carefully executed study by Sivadasan using the ASI data particularly important.

Sivadasan estimates the effects of tariff liberalization, FDI, and the removal of investment licensing at the plant level on aggregate productivity, using annual data on 40,000 plants from 1986–87 to 1994–95. A key appeal of his analysis, among many, is that he applies the double-deflation method advocated by Hulten and Srinivasan and experiments with several aggregations for the deflation of inputs, finding the results to be robust across the different deflators.

Sivadasan finds a 30 to 35 percent increase in mean intraplant productivity in those industries subject to tariff liberalization. He also finds a 25 percent increase in aggregate output growth and a 20 percent increase in aggregate productivity growth following tariff liberalization. The change in intraplant productivity growth turns out to be the biggest component of the change in aggregate productivity and output growth. He finds similar results for de-licensing and for liberalization of FDI.

To sum up, the four studies do not uniformly demonstrate an acceleration in productivity growth following the reforms, but the more careful of them, using reliable data, clearly point in that direction. At the industry level, the careful study by Chand and Sen offers clear evidence of the acceleration in productivity that coincided with the reforms in the second half of the 1980s. At the plant level, the careful study by Sivadasan, who is able to exploit the variation within plants over time as well as across plants during a given year, is particularly persuasive. His findings are robust and uniform in the expected direction for the level as well as the growth rate of

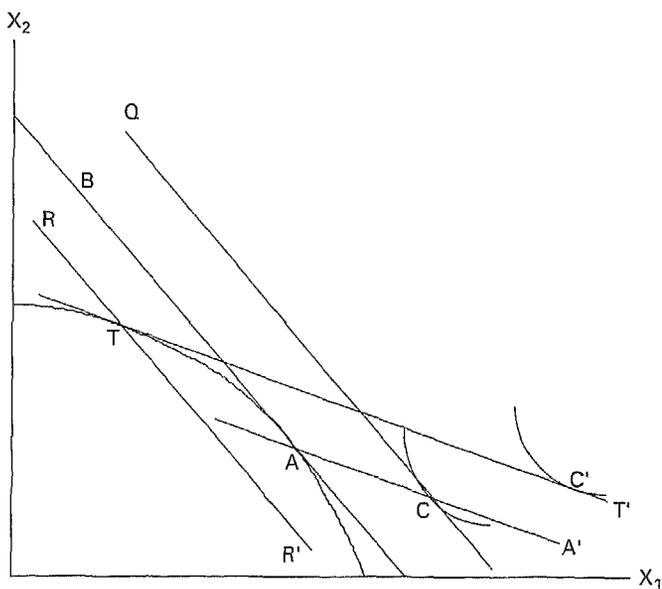
productivity, and not just for tariff liberalization but also for investment de-licensing and FDI.

Three additional points are worth noting. First, for reasons discussed briefly in the next section, Indian industry was not a stellar performer during either the 1980s or the 1990s, despite the reforms. Average annual growth in this sector was only 6.8 percent during 1981–91 and 6.4 percent during 1991–2001. Therefore, regardless of what view one takes on the productivity story, the bigger puzzle to solve is why industry has grown relatively slowly.

Second, to a considerable degree, the rapid growth during the 1990s was driven by services, which today account for approximately half of India's GDP. In the aggregate, services grew at a 6.9 percent annual rate during 1981–91 and 8.1 percent during 1991–2001. Because of a lack of data, there are no studies on productivity growth in this important sector. But the record of some of the services sectors clearly looks sparkling. According to Jim Gordon and Poonam Gupta, the faster growth in services during the 1990s than during the 1980s was driven mainly by fast growth in communications services, financial services, business services (which include the information technology sector), and community services.⁵⁸ Trade liberalization has played a direct role in the growth of at least some of these sectors, namely, telecommunications and business services.

Finally, insofar as output is measured at prereform domestic relative prices, it is likely to be undervalued in a liberalizing environment. The point is readily made with the help of figure 1, which shows the production possibilities frontier between two goods, with good 1 imported. Lines AA' and TT' give the world price. Initially, a tariff keeps the domestic price at AB , with production and consumption taking place at A and C , respectively. Elimination of the tariff changes the domestic price to TT' and moves the output and consumption points to T and C' . If output is measured at prereform domestic prices, however, income is given by line RR' , suggesting a *decline* in income. Insofar as a movement toward exportables and away from importables accompanies the growth process, this undervaluation of output will be observed with a changing level of the capital stock as well. Thus the growth rate is likely to be understated in an environment in which domestic prices are being progressively realigned with world prices. In view of the much smaller realignment of the prices during the 1980s than during the 1990s, this fact suggests that the growth rate in the latter period relative to that in the former is understated.

58. Gordon and Gupta (2003).

FIGURE 1. GDP at Domestic and World Prices

Future Policy

Although this paper focuses only on trade policy, the discussion cannot be totally divorced from some key domestic policy issues that necessarily impinge on trade flows and patterns of specialization. This section is therefore divided into five parts. The first part discusses some key domestic policy reforms necessary to allow the Indian economy to specialize in sectors where India has comparative advantage. The second takes up the issue of autonomous trade policy reform—also called unilateral trade reform—arguing in favor of adopting a uniform tariff regime and lowering the single tariff rate to below 10 percent in the next three years. The third part discusses the reforms necessary in the area of contingent protection—antidumping and safeguards. The fourth part takes up the issue of bilateral trade arrangements, and, the fifth the state of play in the ongoing Doha Round of multilateral trade negotiations under the auspices of the WTO.

Domestic Policy Reforms

Two important related facts emerge from our review of trade flows and growth from the viewpoint of domestic policy reform: the overall response

of trade to India's opening up has been weaker than in countries such as China, and the economy has failed to move rapidly into the manufacturing of labor-intensive products. Both facts point to the need for some key domestic policy reforms.

The response of trade to liberalization has been an order of magnitude weaker in India than in China. In China, exports of goods and services grew at annual rates of 12.9 and 15.2 percent during the 1980s and the 1990s, respectively. Imports performed similarly. Consequently, China's ratio of total trade to GDP rose from 18.9 percent in 1980 to 34 percent in 1990 and to 49.3 percent in 2000.

Although foreign investment is not the subject of this paper, it may be noted that the differences between India and China on this front are even starker. FDI into China rose from \$60 million in 1980 to \$3.5 billion in 1990 and then to a whopping \$42.1 billion in 2000. China was slower to open its market to portfolio investment, but once it did, inflows quickly surpassed those into India, reaching \$7.8 billion in 2000. Even if one allows for an upward bias in these figures, as some China specialists suggest, and a downward bias in the figures for India, there is little doubt that foreign investment flows into China are several times those into India.

Part of the difference in performance between India and China can be attributed to the presence of Chinese entrepreneurs in Hong Kong and Taiwan, who have been eager to escape rising wages in their home economies by moving to China. However, a more central explanation lies in differences in the composition of GDP in the two countries and the asymmetric responses of their industries to opening up. Among developing countries, India is unique in having a very large share of its GDP in the mostly informal part of the services sector. Whereas in other countries a decline in the share of agriculture in GDP has been accompanied by a substantial expansion of industry in the early stages of development, in India this has not happened. For example, in 1980 the proportion of GDP originating in industry was already 48.5 percent in China, whereas in India it was only 24.2 percent. Services, on the other hand, contributed only 21.4 percent to GDP in China, but as much as 37.2 percent in India.

In the following twenty years, despite considerable growth, the share of industry did not rise in India. Instead the entire decline in the share of agriculture was absorbed by services. In China, in contrast, the share of industry started out very high in 1980, fell to 41.6 percent in 1990, but went back up to 50.9 percent in 2000. Correspondingly, services rose from its low

1980 level of 21.4 percent to 31.3 percent in 1990 and just 33.2 percent in 2000. The key point is that industry already accounted for a large share of GDP in China in 1980, and what it lost during the 1980s it more than recovered in the 1990s.⁵⁹

Why does this matter? Because under liberal trade policies, developing countries are much more likely to be able to expand exports and imports if a large proportion of their output originates in industry. Not only is the scope for expanding labor-intensive manufactures greater in a labor-abundant country, but a larger industrial sector also requires more imported inputs, thereby offering greater scope for the expansion of imports. In India, not only have exports failed to grow rapidly, but the response of imports has been just as muted. Consequently, in recent years the Reserve Bank of India has had to purchase large volumes of foreign exchange to keep the rupee from appreciating. Even then it was unsuccessful and had to let the currency appreciate by 5 to 7 percent against the dollar during 2003. Given the poor performance of industry, imports have simply failed to absorb the foreign exchange generated by remittances and relatively modest foreign investment flows.

This same factor is also at work in explaining the relatively modest response of FDI to more liberal policies. Investment in industry, whether domestic or foreign, has been sluggish. Foreign investors have been hesitant to invest in industry for much the same reasons as domestic investors. At the same time, the capacity of the formal services sector to absorb foreign investment is limited.

Therefore the solution to both trade and FDI expansion in India lies in stimulating growth in industry. Here again this paper's review of the composition of trade flows gives some clear clues. On the export side, as noted above, unskilled labor-intensive sectors such as apparel and footwear have grown at no more than the average rate for total exports, whereas the capital- and skilled labor-intensive sectors have shown above-average growth. This pattern clearly points to bottlenecks facing the labor-intensive sectors. On the import side, machinery imports have seen their share of the total decline during the 1990s relative to the 1980s. Given the removal of trade barriers on both capital goods and intermediate inputs, this fact is also explained by relatively sluggish growth in industry.

If industrial growth is to pick up, three key domestic reforms are essential. First, the fiscal deficit must be brought down, to release funds for investment in the private sector. A major surge in industrial growth

59. These data are taken from World Bank (2002).

will have to come from increased investment, and that will require the availability of savings to the private sector. Because the productivity of private investment depends crucially on public investment in infrastructure, the fiscal deficit cannot be contained at the expense of public investment. Therefore containing the revenue deficit is the only choice. This means cutting and streamlining current expenditure and raising more revenue.

Second, a large majority of labor-intensive manufacturing products still remain on the small-scale industries reservation list. Without an end to this reservation, there is little hope that industry will begin to grow rapidly. The large multinationals that, in China, have driven the growth of labor-intensive industry in sectors ranging from toys to apparel can hardly be expected to enter manufacturing in India on a small scale. Nor can India count on sustained rapid growth of industry on the back of the capital- and skilled labor-intensive sectors, because the scarcity of skilled labor places an automatic limit on the potential growth of these sectors. If India is to transform itself from a primarily agricultural to a primarily industrial economy, rapid growth of labor-intensive industry is essential.

Finally, the end to the small-scale industries reservation is also insufficient by itself to ensure rapid industrial growth. Current labor laws that virtually prohibit even the reassignment of workers, let alone their dismissal, must be reformed as well. The virtual ban on the exit of firms with 100 or more workers is a major disincentive to firms interested in entering the market on a large scale. Reliance on contract labor, the use of capital-intensive techniques, and the concentration of production activity in skilled labor-intensive industries—practices that get around the hiring and firing regulations relating to unskilled workers—have been deployed by many manufacturers. But this solution exacts a heavy toll in terms of drastically reduced employment opportunities or (in the case of contract labor) low worker morale, resulting in low productivity and poor product quality.

The effect of these twin regulations—the small-scale industries reservation and stringent labor laws—is best illustrated by a comparison of the apparel industry in India with that in China. According to a 2001 McKinsey Global Institute report,⁶⁰ India's share in apparel imports of the top ten importing countries not constrained by Multifibre Arrangement (MFA) quotas, at 1.6 percent, is less than its share of 3.2 percent among the MFA quota-constrained countries. The reverse holds true for the more competitive China: its share in apparel imports of the top ten non-quota-constrained

60. McKinsey Global Institute (2001).

countries is 38.1 percent, and that among the top quota-constrained countries is 11.3 percent. This difference in performance derives to a large degree from the vastly different organization of apparel factories in the two countries. Whereas the average clothing plant in India employs 50 machines, the average Chinese plant employs 500. Without reform of the small-scale industries reservation and of labor law, this organizational difference and the accompanying differences in the cost and quality of production cannot be eliminated.

Some leading economists in India question the importance of reforming the Industrial Disputes Act and related labor laws to give firms the power to retrench workers, subject to appropriate compensation, on the ground that these laws impact less than 10 percent of the labor force that is employed in firms with 100 workers or more. This is a nonsensical argument. The reason the number of firms with 100 or more workers in India is so small is precisely that labor laws remain a major barrier to the entry of firms with 100 or more workers. If India wishes to create a large number of jobs that pay decent wages, it must make the business environment friendly to labor-intensive industries. Labor law reform is a necessary condition for the creation of that environment.

Autonomous Trade Reform

Turning back to trade policy, India's autonomous trade reform program must continue until all tariffs have fallen well below 10 percent. In addition, India must address the issue of its tariff structure, which, despite substantial compression and rationalization, remains complex.

For example, the peak tariff on nonagricultural goods is ostensibly 20 percent. But nearly 10 percent of nonagricultural tariff rates are still not subject to this peak. With respect to complexity, the situation is even grimmer: approximately twenty tariff bands currently exist. As was shown in table 1, tariff rates on chemicals and photographic supplies ranged from 0 to 170 percent in 2001–02, and those on transport equipment from 3 to 105 percent.⁶¹ The situation is not much different today, with the multi-billion-dollar automobile industry receiving nominal protection at the ad valorem rate of 60 percent. With lower input tariff rates, the effective rate of protection is even higher.

This tariff structure has little economic rationale but is rather the result of two sets of forces. First, some politically powerful sectors such as chemicals and automobiles have managed to evade the tariff compression

61. WTO (2002).

applied to other sectors during the past decade. Second, the misconception remains among policymakers that somehow final goods must be protected at tariff rates higher than those applied to raw materials and intermediate inputs. As a result, tariffs on final goods have been compressed less than those on inputs. The process has been slowed recently, however: tariff reductions have been largely limited to products subject to the “peak” tariff rate, which happen to be final goods, and some of the lower tariff rates applying to intermediate inputs have been raised as a part of the rationalization process.

As part of further reform, it will be best for India to move to a single uniform tariff of 15 percent for nonagricultural goods starting in financial year 2005–06. This will involve ending the plethora of exemptions and raising tariffs on approximately 5 percent of tariff lines currently subject to tariffs below 15 percent. The uniform tariff should then be lowered to 10 percent and by a further 2 to 3 percentage points in each of the subsequent two years, to achieve a 5 percent uniform tariff rate by the beginning of 2008–09.

The adoption of a uniform tariff has the major advantage that it will take politics out of trade policy. When the government is willing to offer protection at different rates, industrial lobbies have a field day. Politically more powerful sectors such as the automobile and chemical sectors can lobby for sweetheart deals at the expense of the consumer. But once the rule is that all will receive equal protection, the incentive for any single industry to lobby diminishes dramatically. Simultaneously, the government has a logical defense against the demands of specific industries for higher protection: because it must raise the tariff for all if it does so for one, its hands are tied.⁶²

The single tariff rate also has the advantage of transparency and administrative simplicity. It eliminates the prospect of industries getting a higher tariff by classifying their product as a finished rather than an intermediate good. It also does away with all kinds of exemptions. As noted earlier, according to the WTO, India’s current tariff code has more than 100 kinds of exemptions, each of which runs to several pages. In addition to creating distortions, these exemptions hamper the deployment of efficiency-increasing tools such as computerization of customs.

62. Panagariya and Rodrik (1993) present a number of formal models that yield the uniform tariff rule as the optimal outcome. In these models tariffs are determined by lobbying. The adoption of a uniform tariff rule then creates a free rider problem in the lobbying activity, since the protection granted to one industry is automatically granted to all industries. This feature of the uniform tariff rule has a strong dampening effect on incentives to lobby.

A single uniform tariff of 15 percent would also be superior to the two-part structure proposed by the Indian government in a previous budget, with rates of 10 percent on inputs and 20 percent on final goods. A tariff structure that levies a 10 percent tariff on inputs and a 20 percent tariff on final goods grants excessively high effective protection to the latter. For example, suppose the world price of a cell phone is \$100 and that its components cost \$80. The proposed two-part tariff would raise the prices of the cell phone and its components to \$120 and \$88, respectively. This would allow domestic value added in cell phone assembly to rise from \$20 to \$32, thus providing effective protection of 60 percent.

Critics of the uniform tariff may argue that it would fail to minimize the distortion cost of raising revenue. In a strict sense, this is correct. The theory of optimal taxation states that, under certain technical assumptions, goods with inelastic import demand should be subject to higher tariffs than those with elastic demand. The problem, however, is that India's actual tariff structure bears little relationship to this theoretical ideal. The relevant counterfactual is not some optimal tariff structure based on various elasticities about which information is lacking, but rather the one actually in place. Compared with that structure, the uniform tariff is a vastly superior alternative.

A key issue concerning the progressive reduction in tariffs is its connection to government revenue and therefore to domestic tax reform. Even if tariff reductions initially increased tariff revenue as imports rose or compliance improved, eventually tariff revenue must fall. In the extreme case, a zero tariff rate raises no tariff revenue at all.

In India, tariff revenue has been declining for some time, as a proportion both of imports and of GDP. Tariff revenue fell as a proportion of imports from 40 percent to 17.5 percent between 1991 and 2001, and as a proportion of GDP from 3.3 percent to 1.6 percent. On the one hand, this loss of revenue may share some of the blame for the increased fiscal deficit, but, on the other, it may be credited with having forced the government's hand on reforming the domestic tax system, a process that is ongoing. Optimal efficiency dictates that revenue be raised through domestic taxes. This implies that tariff liberalization and domestic tax reform must go hand in hand. Here China provides an interesting contrast to India: tariff revenue in China is currently less than 3 percent of total imports.

India can also achieve—and benefit from—considerable compression of agricultural tariffs through autonomous liberalization. India has export potential in agriculture, but that potential will not be fully exploited without the liberalization of India's own agricultural trade regime. The World

Bank and several influential nongovernmental organizations such as Oxfam have repeatedly asserted in recent years that agricultural protection is a problem of the rich countries, and that it is wrong to ask poor countries to liberalize when rich countries maintain high protection. Their position, however, effectively ties the hands of Indian politicians in this area, who now routinely express the view that, without an end to agricultural subsidies and considerable liberalization by the rich countries, India cannot risk liberalizing its agriculture, which employs 65 percent of its work force. Given this state of political play, liberalization in agriculture will have to be left to multilateral negotiations.⁶³

Fortunately, politics is less of a constraint on the autonomous liberalization of services trade. India has the potential to become a major exporter not just of information technology-related services but of health and education services and tourism as well. India's costs in these sectors are relatively low, but in the education sector, considerable internal liberalization will be required. Currently, India does not permit private universities, but without them India cannot hope to become an education hub of Asia. In the health care and tourism sectors, it will be essential to improve the country's infrastructure, including its aviation infrastructure.

On the import side, India will benefit further through liberalization of its FDI rules. Sectoral caps on FDI remain in such areas as insurance, effectively denying foreign investors control of firms. These caps should be simply abolished, to allow foreign investors 100 percent ownership. There also seems little justification in many cases for the requirement that the Foreign Investment Promotion Board approve foreign investments. Indeed, the board should also be disbanded.

Contingent Protection

The WTO permits temporary protection of domestic industry through two main measures: antidumping and safeguard duties. In WTO terminology, dumping is said to occur when one or more foreign firms sell a product for less than fair value, where "fair value" is measured, for example, by the price the exporting firm charges in its home market. If such dumping causes injury to the domestic industry, the country can subject the dumping firms to antidumping duties equal to the dumping margin, measured as the difference between the "fair value" and the price actually charged. Safeguard

63. For reasons to be explained below in the section on a possible India-U.S. Free Trade Agreement, bilateral trade agreements also do not offer an effective channel for the liberalization of agriculture.

duties are permitted if import competition resulting from trade liberalization causes serious injury to the domestic industry. Whereas antidumping duties are applied only to the firms found to be dumping and other firms from the same countries, safeguard duties are applied to all trading partners on a nondiscriminatory basis.

Traditionally, Indian industry enjoyed sufficient permanent protection through tariffs and licensing that it did not require protection through antidumping measures and safeguards. But the end to licensing and the liberalization of tariffs led India to institute administrative mechanisms for these measures. India's first three antidumping cases were initiated in 1992–93. Since then the number of cases has risen steadily, especially following the Asian financial crises in 1997–98 and the end to the Indian licensing regime in 2001. According to the WTO, from July 2001 through June 2002, India was the largest initiator of antidumping cases, with seventy-six, followed by the United States with fifty-eight.⁶⁴ In terms of cumulative measures in force, the United States topped the list, followed by the European Union and India, in that order. By far the country most frequently targeted by India has been China. In contrast, India has made only limited use of safeguard measures, having initiated only six cases as of March 1999.

Many of the antidumping measures have been imposed with a clear protectionist intent, hurting buyers of the product subject to the duties. Moreover, insofar as antidumping measures tend to target the most competitive firms, the potential losses from higher domestic prices are likely to be large. It is critical that the use of antidumping measures be restrained considerably if India is to reap the benefits of its liberalization. It makes little sense to replace one instrument of protection with another. An effective remedy to limit the use of antidumping measures would be to make the injury criteria more demanding.

India also needs to streamline its antidumping procedures. Currently, the same agency carries out both the investigation to establish the dumping margin and the investigation to determine injury to the domestic industry. In other countries, such as the United States, the dumping investigation is carried out by the Department of Commerce and the injury investigation by the International Trade Commission. To ensure the independence of the two investigations, it is important that they be carried out by different agencies. The natural agency to be entrusted with the injury investigation in India is the Tariff Commission, which needs to be strengthened and made more independent.

64. WTO (2003).

A final important reform in the area of contingent protection is to encourage the use of safeguard rather than antidumping duties. Because the former are applied on a nondiscriminatory basis to all trading partners, they are inherently more efficient. Moreover, since they cover all potential sources of imports, duty rates can be much lower than the duty rates in antidumping cases, which are often very high.

Replacing antidumping with safeguard duties will require a key change in India's safeguards legislation, however. Currently, unlike the antidumping mechanism, the safeguard mechanism can be invoked only if the domestic industry can provide persuasive evidence that it is capable of restructuring itself during the period when safeguard duties are in force. This requirement is an entirely Indian invention and is not required by the WTO rules. Therefore it would be best to drop it.

Regional Arrangements

Recently, India has embarked upon an ambitious program of regional trade arrangements.⁶⁵ It has signed free trade area (FTA) agreements with Sri Lanka and Thailand and is in the advanced stages of negotiating an agreement with Singapore. India has also signed a framework agreement for an FTA with the members of the Association of South East Asian Nations (ASEAN) and an agreement to create a South Asian Free Trade Area (SAFTA). Recently, it has also approached more distant trading partners such as South Africa and Brazil to negotiate FTA arrangements.

A number of mutually reinforcing factors have contributed to this upsurge in FTA activity on India's part. First, the proliferation of regional trade arrangements around the world has made India feel that it is being left behind in this area. In the wake of the failure to make progress in multilateral talks at Cancún in September 2003, the U.S. Trade Representative announced that the United States would now aggressively move to free up trade preferentially with those countries willing to liberalize. This announcement prompted Indian leaders to seek to respond in kind. The framework agreement with the ASEAN members, SAFTA, and the offers for FTA negotiations with Brazil and South Africa are all post-Cancún developments.

65. The usefulness of regional trade agreements is a vast and controversial topic, and the discussion here is highly selective. Bhagwati and Panagariya (1996) and Panagariya (1999b, 2000) discuss various analytical and policy issues surrounding these agreements in greater detail.

Second, having seen the Indian economy adjust relatively painlessly to very substantial trade liberalization over the last two decades, Indian leaders have acquired greater confidence in their country's ability to withstand the competition that would result from the complete elimination of trade barriers even against selected trading partners.

Third, India's rising economic strength has made other countries keen to gain preferential access to the potentially large Indian market. This was clearly a factor in the ASEAN members' decision to accept the framework agreement, which India had sought for some time.

Fourth, political factors have been clearly dominant in the decision by India and Pakistan—and perhaps other countries in the region—to sign the SAFTA agreement. Regardless of the economic implications, the leaders foresaw a major payoff to such an agreement in terms of easing tensions between the two rivals.

Finally, during the last year of the National Democratic Alliance government, India had an external affairs minister who had previously served as finance minister for several years and whose heart was more in economic diplomacy than in political diplomacy. In contrast to Jaswant Singh, his predecessor, Yashwant Sinha demonstrated much less interest in political diplomacy and much greater keenness in seeking trade agreements abroad.

The critical question is whether this aggressive pursuit of FTAs is a good idea from the Indian perspective and, if so, what kinds of agreements should be pursued and with which countries. This subsection will consider first the potential downside of these arrangements and then the potential benefits. It will then outline what may be the best and most pragmatic strategy for India.

THE DOWNSIDE. At least three important factors weigh against India proceeding along the route toward preferential trade agreements. First, given its own high external trade barriers, India faces the obvious risk of losses due to trade diversion that preferential liberalization brings with it. Although economists have long recognized and stressed this risk, it continues to be underestimated in policy discussions and is worth spelling out explicitly here.

To make the point most dramatically, consider the proposed India-Singapore FTA. Suppose for the sake of argument that India's tariff on steel imports is 20 percent. If the world price of steel is \$500 a ton, the tariff-inclusive price in India would be \$600 a ton. An FTA with Singapore would give that country's steel exporters tariff-free access to the Indian market, allowing them to displace some of the steel previously imported from third countries such as South Korea and Russia. A perhaps surprising

point is that, despite this "liberalization," as long as some steel continues to be imported from those third countries, the internal price of steel would remain unchanged at \$600. The third countries would continue to receive \$500 per ton of steel, and the Indian customs authorities would collect \$100 in duties on each ton. Since Singaporean steel would be exempt from the duty, however, their exporters would now receive an extra \$100 a ton in revenue. What used to be tariff revenue collected by India would now become extra revenue for Singaporean firms.

One might ask why the price of steel in India would not drop to \$500 a ton as a result of the FTA. This could happen, but only if Singapore produced enough steel to supply all of India's steel imports at \$500 a ton. But as long as even a small quantity of steel continued to be imported from non-members, it would have to be sold at \$600, and thus the price would not change.

One way around this outcome would be for Singaporean firms to buy steel from Korean and Russian suppliers for \$500 a ton and then resell it in India at the higher internal Indian price. If enough Singaporean exporters did this, the price of steel in India would drop to \$500. The outcome would be the same as if India removed the duty not just on Singapore but on all its trading partners. However, this type of transshipment is prohibited under most FTA arrangements through what are called rules of origin. For example, to claim duty-free status, Singaporean exporters would have to prove to the satisfaction of a commerce ministry bureaucrat that a minimum, prespecified percentage of value added in each ton of steel being brought into India originated in Singapore. This regulation would eliminate transshipments from third countries.

It is tempting to conjecture that although India might lose on the goods it imports from Singapore, the losses might be offset by tariff preferences received on exports to Singapore. The catch, however, is that Singapore is already a free-trading country. The FTA gives Indian exporters no tariff preference whatsoever in the Singaporean market. More generally, in an FTA, a high-tariff member is likely to lose, since it gives up more in preferences to its partner than it receives in return. The lesson is that it is best to have low external tariffs, as does Singapore, if a country wants to benefit from FTAs.

The second risk of FTAs is their likely adverse effect on autonomous, nondiscriminatory liberalization, as illustrated by the Latin American experience. Several countries in Latin America had already been liberalizing their external trade barriers aggressively before the North American Free Trade Agreement (NAFTA) went into effect in 1994. Following NAFTA,

however, they all turned to FTAs with a vengeance, and the move toward nondiscriminatory liberalization came to a standstill. These countries felt they had a better chance of forming FTAs if they kept their external tariffs as a bargaining chip to be exchanged for preferential access to partner-country markets.

Finally, the move toward FTAs may also undermine the Doha WTO negotiations aimed at multilateral liberalization. Because FTAs give exporters of a member country preferential access to the partner country's market, exporters prefer them to multilateral liberalization. This constituency's incentive to push for multilateral liberalization declines even more once preferential agreements with major trading partners are in place. For example, Mexico, which has preferential access to the U.S. and EU markets, is unlikely to push hard for multilateral liberalization, because such liberalization would result in the loss of its preferential access. For India's part, it can scarcely afford to let the multilateral route close. Because of the numerous FTAs that already exist in the Americas and Europe, India faces considerable discrimination against its products in those markets. The only way to end this discrimination is to bring tariffs down to near zero on a multilateral basis in the Doha negotiations.

POTENTIAL BENEFITS. On the benefits side of the equation, two main factors may be noted. First, the strategic issue is of paramount importance: The proliferation of FTAs in the Americas and in Europe and its neighbors has led to increasing discrimination against Asian goods. The countries of Asia have two options: either they can either try to persuade these other countries to put an end to the preferences through a multilateral bargain in the near future, or they can form their own FTAs in an attempt to create discrimination against European and American goods and thereby raise their bargaining power in a future negotiation. The first option is clearly superior, but the second can serve as insurance against failure to end discrimination in the near future. It is also a good way of demonstrating to the Americas and Europe that discrimination is a two-way street.

Second, through its FTAs, the United States is systematically creating an FTA template that makes labor and environmental standards, WTO-plus intellectual property protection, and even restrictions on the use of capital controls a part of the agreements. The eventual objective of such a template is to apply it to a future multilateral agreement. For countries such as India that oppose the inclusion of these nontrade issues in trade agreements, FTAs provide an opportunity to create an alternative template. Confronted by U.S. assertions that nontrade issues already exist in the bilateral trade

agreements, and that therefore their inclusion in multilateral agreements is justified, India and other developing countries can point to their own template that does not admit their inclusion.

Some analysts view FTAs as an additional instrument for promoting liberalization. The argument is that a country may find it politically difficult to eliminate tariffs against all trading partners as part of its autonomous liberalization program, but that it may be able to do so against a handful of trading partners on a reciprocal basis. Once this is accomplished, it may find that the pressure against liberalization for the remainder has become muted. This argument is unpersuasive. Logically, the incentive for autonomous liberalization will instead decline, because the existing FTA partners will see such liberalization as an assault on their preferences, and the potential future FTA partners will become reluctant to enter an agreement when they see that the potential preferences to be won are minimal. As noted above, the available evidence from Latin America points in the same direction.

THE PRAGMATIC COURSE. Given the incentives and the pressures they face today, governments find it difficult to restrain the move toward FTAs. If all the big players are chasing every FTA they see, how can smaller players resist the temptation? It is as though the alternative to opt out of such agreements no longer exists. Given this reality, the right question to ask is, How should India approach the FTAs it chooses to seek?

The first point to note is that if India stays the course on its autonomous liberalization program, the risks of preferential liberalization will be considerably ameliorated. After some hiccups during the second half of the 1990s, India has recently been remarkably steady in bringing its external tariffs down. If this process is continued, with the external tariff on industrial goods unified and brought down to between 5 and 10 percent by 2007-08, India will be well positioned to take advantage of the regional approach to liberalization, just as Singapore is today.

In addition, if India wishes to maximize the strategic advantage from FTAs, it must work toward the creation of an Asia-wide FTA. At present, India and China both have separate framework agreements with the ASEAN members to forge FTAs with them. But if India's strategic advantage vis-à-vis the Americas and Europe is to be maximized, India must eventually form an FTA with China, thereby creating pressure for Japan, Korea, and Taiwan to join to create an Asia-wide FTA.

To keep a clean FTA template, India should also be careful to keep non-trade issues, whatever they may be, out of its FTA agreements. For example, the recent SAFTA agreement incorporates many issues that are of

mutual interest—infrastructure projects and rules for competition and the promotion of venture capital—but that are unrelated to trade.⁶⁶ This practice creates a bad precedent. It also risks making valuable projects of mutual benefit hostage to trade negotiations and trade disputes. The appropriate forum for pursuing these nontrade issues in South Asia is the South Asian Association for Regional Cooperation (SAARC), of which SAFTA should be a distinct part that focuses only on trade.

Because theoretical analysis does not give an unambiguous answer to the question of whether FTAs improve or worsen economic welfare, it is useful to subject any such agreements to quantitative empirical analysis. Unfortunately, much of this type of analysis relies on computable general-equilibrium (CGE) models, which, as mentioned above, have rather poor predictive power. As Kehoe demonstrates, not one of the numerous CGE models of NAFTA came even close to predicting the actual outcome.⁶⁷ A key reason, Kehoe notes, is that in reality the most pronounced trade effects of the agreement are in products that are initially traded in small quantities or not at all. The models, in contrast, focus on products that are already extensively traded.

Therefore my own inclination is to encourage future researchers to carry out sectoral studies that are much more deeply grounded in actual data than the CGE models. The benefits from an FTA are likely to arise in sectors where trade with third countries is minimal and the scope for increasing trade with the partner is large. Likewise, the losses are likely to be seen in sectors where trade with third countries is large and may be displaced by the partner. Such studies should focus on identifying these two types of sectors and assessing how the proposed FTA will alter the picture in them.

AN INDIA-U.S. FTA. Many observers, including the Confederation of Indian Industry, have proposed negotiations toward an India-U.S. FTA. Given that India now faces considerable actual or potential discrimination in the North American market vis-à-vis Mexico, Canada, Chile, Central America, Australia, and other countries, the affirmative case for such a move from the Indian perspective is straightforward. I will argue, however, that, so far as an FTA in goods is concerned, the overall case is weak and the political impediments are insurmountable.

First, at current levels of tariffs on industrial goods in India, there is considerable scope for trade diversion and the losses that accompany it. Tariffs in India are still very high compared with U.S. tariffs, so that India stands to experience the tariff revenue loss noted above in the context of

66. Panagariya (2003) discusses the economics of SAFTA.

67. Kehoe (2003).

the India-Singapore FTA. Of course, if India carries out the liberalization outlined above, this objection will lose its force.

Second, in the area of agriculture, even though India stands to benefit from increased imports as well as increased exports, political pressures preclude the inclusion of this sector in a potential India-U.S. FTA. On the import side, benefits arise simply because Indian imports from third countries are currently limited, so that the scope for trade diversion is likewise limited. Moreover, because the United States is a globally efficient producer of agricultural products, opening to it will open India to competition against the world's most efficient producers in many sectors. The difficulty, however, is that with large domestic and export subsidies in place in the United States, which cannot be negotiated within the FTA but only in a multilateral context, any liberalization by India in agriculture is a pipedream. India's position on agriculture even in the multilateral context, with possibilities of substantial reductions in export subsidies and some reductions in domestic subsidies by the rich countries, has been squarely protectionist. The dominant view in the government is that, with 650 million people living on farm income, India cannot afford to open its agriculture to foreign competition.

Finally, the emerging U.S. FTA template, which requires the inclusion of labor and environmental standards and WTO-plus intellectual property rights in its agreements, is yet another insurmountable barrier. The U.S. Congress insists on the inclusion of these provisions in FTA agreements to which the United States is a party. India, on the other hand, is squarely opposed to them. Neither side is likely to compromise: the United States wants to establish as many precedents as possible, so as to make the linkage acceptable in the multilateral WTO agreements, whereas India has the diametrically opposite objective.

A limited case can be made, however, in favor of a mutually beneficial and politically acceptable FTA in *services* between the two countries, although even here the recent acrimonious debate on outsourcing in the United States points to potentially serious political barriers. The WTO General Agreement on Trade in Services (GATS) provides for such agreements, and there are already several precedents. Although a detailed analysis is beyond the scope of this paper, three preliminary points favoring the proposal can be made.

First, looking at the issue from the Indian perspective, to the extent the two countries' barriers in services take the form of anticompetitive regulations that cannot be eliminated on a discriminatory basis, preferential liberalization effectively becomes nondiscriminatory. Moreover, in sectors

where no external liberalization has yet taken place, there is no possibility of trade diversion. In many services the United States may well be the most efficient supplier, in which case preferential liberalization will mimic multilateral liberalization.

Against these arguments one must consider that trade diversion of at least two forms cannot be ruled out. In cases where liberalization has already taken place under the GATS, trade from more efficient suppliers could be diverted. For example, India is committed to allowing twelve foreign bank branches to be opened annually as a part of its current GATS obligations. Should U.S. banks, as a result of an FTA, decide to open additional branches in India, India could count these toward fulfilling its GATS obligations. In the extreme case, if U.S. banks opened twelve or more branches a year, other countries would effectively be barred from entry into the Indian market, even if they were more efficient. Trade diversion may also happen in the potential sense in sectors that start from a position of autarky. If an FTA precedes multilateral liberalization, the U.S. firms would acquire an incumbency advantage. This would give rise to a different and inferior outcome than would have prevailed if the FTA had not preceded multilateral liberalization.⁶⁸

Second, within these qualifications, there are several sectors in which the United States and India could benefit from an FTA in services. The U.S. comparative advantage in such sectors as telecommunications, banking, and insurance is well known. Indian firms in these sectors remain inefficient and would benefit from competition from the U.S. firms. An FTA might also spur further reforms, including privatization and the lifting of sectoral caps on FDI on a nondiscriminatory basis.

But there are other, less obvious sectors in which U.S. suppliers might benefit from market access in India. One of these is the "hospitality" sector of the tourism industry. On the one hand, India is beginning to emerge as a major attraction for foreign tourists, while, on the other, rapidly rising incomes are expanding the demand for tourism by the local population. This market could prove lucrative for U.S. suppliers of tourist services. For example, members of the Asian American Hotel Owners Association, most of whom are Americans of Indian origin, own 20,000 U.S. hotels with a total of 1 million rooms, accounting for 37 percent of all hotel properties in the United States, with a market value placed at \$40 billion. These Indian American hoteliers could benefit greatly from setting up middle-tier motels

68. Mattoo and Fink (2002) offer a detailed and thoughtful discussion of potential benefits and costs of preferential trade liberalization in services and how they differ from preferential liberalization in goods.

along the national highways being constructed to link India's four major metropolises.⁶⁹

In the same vein, the U.S. hospital and education sectors may benefit from market access in India. India can offer relatively cheap nursing and mid-level medical services, whereas Americans can bring excellent hospital management and top-tier medical skills. Similarly, there may be scope for cooperation in higher education if the FTA can serve to open the Indian market to the entry of private universities.

For its part, India would benefit not only from imports in the areas just described but also from increased exports. The provision of various services to U.S. firms under the broad rubric of "outsourcing" has emerged as a major export area for India. A services FTA could be a useful instrument for cementing market access in this important area. India may also benefit from an increased share of temporary worker visas in the United States. At present India is losing share because the United States is using the fixed number of H1B visas to first make good on its commitments to countries such as Mexico and Chile that already have services FTAs with it. In addition to the workers it provides in the information technology sector, India can offer many professional workers in such sectors as nursing and hospitality.

Finally, in a services FTA it may be possible to set aside the divisive issue of labor standards. In goods trade the United States faces the prospect of increased competition in unskilled labor-intensive sectors such as footwear and apparel. The "fair trade" argument for linking market access to labor standards has greater political salience in these sectors than in the skilled labor-intensive activities likely to be opened up to Indian services suppliers in the U.S. market.

Multilateral Negotiations

This paper would be incomplete without some discussion of the ongoing multilateral trade negotiations at Doha. Perhaps the single most important objective for India in the trade domain is to bring the Doha negotiations to a conclusion. It would be unrealistic to expect the round to close by the end of 2004 as originally planned, but a conclusion by the end of 2006 is both feasible and in India's interest.⁷⁰

69. "Indian-American Hotel Owners See Prospects in Hospitality Industry," *News India-Times*, January 23, 2004, p. 16.

70. As discussed in detail in Panagariya (2002b), India has approached the Doha negotiations with great suspicion, which has not served its own best interests. The case for why and how India must support the liberalization agenda of the Doha negotiations is outlined in Bhagwati and Panagariya (2003).

After the failure to make progress in Cancún, the United States has revised its position in favor of a narrower round. India can readily make common cause with the United States around this position. Thus, in a letter dated January 11, 2004, and addressed to the trade ministers of the WTO member countries, U.S. Trade Representative Robert Zoellick expressed willingness to drop all Singapore issues from the agenda except for trade facilitation.⁷¹ India has been willing to negotiate on trade facilitation, so that there is no more disagreement with the United States in this area. Moreover, Zoellick's proposal would considerably narrow the scope of the round, focusing it on trade liberalization just as India had sought originally. And India surely stands to benefit from liberalization in all areas: industry, agriculture, and services.

INDUSTRIAL TARIFFS. In his letter to the trade ministers, Zoellick renewed his proposal to achieve zero tariffs on industrial goods by 2015. Given its own autonomous trade liberalization program, this is a feasible goal for India. But if India wants more of a cushion, it can surely ask for a more relaxed deadline for developing countries, until 2020 or even 2025. The benefits to India from accepting this proposal as is or in modified form are quite unambiguous.

India has long sought to eliminate tariff peaks against labor-intensive products in developed countries. Top World Bank officials and many nongovernmental organizations have recently raised hopes that repeated public exhortations to the effect that developed country barriers cost developing countries more than what they give the latter in aid might shame them into dismantling these barriers unilaterally. But the experience of the last forty years leads to a different conclusion. The U.N. Conference on Trade and Development, the leaders of developing countries, trade and development experts, and even World Bank reports have condemned the barriers against developing country exports for decades. As early as 1965, developing countries successfully deployed moral suasion to add Part IV to the General Agreement on Tariffs and Trade, explicitly committing the developed countries to "accord high priority to the reduction and elimination of barriers to products currently or potentially of particular export interest to less developed contracting parties" and to "refrain from introducing, or increasing the incidence of customs duties or non-tariff barriers on products currently or potentially of particular export interest" to them.

71. The first WTO ministerial meeting in 1996, held in Singapore, introduced four new issues into the WTO study agenda: investment, competition policy, government procurement, and trade facilitation. New issues are initially taken up as study issues, and if there is enough support for them, they may be turned into negotiating issues.

Yet because developing countries insisted on one-way concessions, little progress was actually made. On the contrary, textiles and apparel imports by developed countries came under severe restrictions through no fewer than 3,000 bilateral treaties under the MFA. Likewise, footwear and steel were frequently subject to the imposition of “orderly market arrangements” by the United States, and tariff peaks systematically discriminated against developing country exports. The only “concession” that the developing countries received was the Generalized System of Preferences, which now even Oxfam correctly cites as evidence against the United States’ sincerity about opening its markets to developing countries.

The main substantive break that developing countries received in gaining improved market access for themselves in the last forty years was the agreement in the Uruguay Round to end the MFA. India would be deluding itself if it hung onto the notion that hard-core developed country barriers can be eliminated through moral suasion alone, without reciprocity.

India also gains a tactical advantage through the proposed initiative. In one stroke it would knock down its image as an “obstructionist” in the negotiations and announce its emergence as a truly confident player on the world economic stage, as it already has on the world political stage. Indeed, such a move would put the United States on the defensive, since, according to some, the U.S. government put forward the zero-tariff proposal, despite immense political pressure against it from domestic lobbies, precisely in the hope that developing countries would refuse to go along. India can call this bluff and turn the U.S. tactical advantage into its own.

There are two more reasons why India stands to benefit big from the proposed initiative. First, India’s own liberalization, to which it would commit itself as a part of the deal, benefits India. India has now fully recognized this fact in its economic reforms program, with the Kelkar task force (the Task Force on Indirect Taxes) recommending that virtually all tariffs be lowered to 10 percent or less by 2006–07.⁷² All that India will be doing under the proposed initiative is to bind this liberalization at the WTO and push it to its logical conclusion of zero tariffs by 2025. Second, as noted above, with NAFTA, the European Union, and numerous other preferential trade areas both between the European Union and its neighbors and within Latin America, Africa, and even East Asia already in existence, India’s products today face discrimination in virtually every major market. Through the zero-tariff option, India would eliminate this discrimination in one stroke.

72. Government of India (2002).

AGRICULTURE. Effectively admitting his mistake in trying to make common cause with the European Union on agriculture at Cancún, Zoellick made the elimination of agricultural export subsidies a priority in his letter to the trade ministers. This is something India has sought as well. Nevertheless, India remains defensive in this area. India's main concern, as already noted, is that with 650 million or more Indians living on farm income, India cannot afford to open its agriculture.

Agriculture is indeed a politically charged issue in India, but the story is not altogether different in other parts of the world. Therefore, if India seeks agricultural liberalization, including substantial cuts in domestic subsidies by the rich countries, it has to be willing to place its own agricultural barriers on the table. This is not a particularly risky course for two reasons. First, like many rich countries, India has bound its agricultural tariffs at very high levels ranging from 100 to 300 percent. Bringing these bindings down to even 50 percent would lead to minimal effective opening up. All India would be doing is to eliminate the existing headroom in its tariffs. But if, in return, India could win additional market access in rich country markets, it could only contribute to boosting agricultural incomes in India. Second, according to available studies, if the developed country subsidies were substantially reduced, Indian agriculture would be competitive in a large majority of commodities. Thus any loss of market at home could be substantially made up by the market access achieved in the partner countries.

SERVICES. Services negotiations have been relatively less controversial. The discussion above of a possible services FTA between India and the United States illustrates the potential benefits to India from negotiating actively in this area. One priority for India ought to be to seek binding commitments from its trading partners, especially the United States, in those business services that fall under the heading of business process outsourcing. But India can also benefit from negotiations in areas in which it can offer low-cost services, such as health and accounting services. In return, India can offer binding commitments in areas such as banking, insurance, and telecommunications. Many of India's liberalizing measures in services are unbound and therefore can be used as bargaining chips.

Conclusions

This paper has discussed India's record on trade liberalization; its impact on trade flows, efficiency, and growth; and future choices for India's trade policy. It has demonstrated that liberalization has had a major impact on

both the volume of trade and its composition. In particular, if one looks at India's trade at a highly disaggregated level, India's opening has led to the emergence of many new products on the imports and exports lists.

Trade liberalization has led to improved static efficiency in production as well as consumption. According to the calculations done by Chadha and others discussed above, total annual gains from these sources may have been as much as 5 percent of India's GDP. Liberalization was a key ingredient in sustaining India's growth rate of nearly 6 percent a year on average during the last two decades. The studies dealing with productivity have produced mixed evidence, but on balance they suggest that a considerable increase in both the level and the growth rate of productivity has accompanied liberalization. Specifically, the recent study by Sivadasan based on plant-level data offers robust evidence of tariff liberalization leading to increased productivity.⁷³

To date, liberalization has failed to stimulate India's labor-intensive industries to any great degree. The industries that have shown the fastest export growth are typically capital- or skilled labor-intensive industries. This paper has identified the policy of small-scale industry reservation and stringent labor laws as the key reasons why labor-intensive exports have failed to grow rapidly. Reform in these areas is a necessary condition for the transformation of India from a primarily agricultural to a primarily industrial economy.

This paper has also argued that, by 2004–05, India should adopt a uniform 15 percent tariff rate on industrial goods and then gradually bring this rate down to 5 percent by the beginning of 2008–09. This reform would allow the country to end the plethora of exemptions that currently afflict the tariff regime and would help bring administrative costs down. In agriculture, although unilateral liberalization would still be beneficial, the current political climate seems against it. Therefore the best course is to take a more flexible approach in the Doha negotiations, which may help bring the level of subsidies and protection in the rich countries down quite substantially. Liberalization by India within the context of this rich country liberalization would provide considerable scope for the expansion of agricultural exports.

This paper has taken a generally cautious view on regional arrangements. If India must pursue these arrangements, it should work toward an Asia-wide FTA that includes China. Such an FTA would have strategic value in attracting attention to the diversion of Asian exports from the

73. Sivadasan (2003).

North American and European markets caused by NAFTA and the European Union, respectively. The desirability of smaller arrangements such as the SAFTA rests primarily on their political value. Economically, given the high tariffs in the region, trade diversion is likely to dominate. But the arrangement may prove to be a useful instrument for eventually establishing better political ties between India and Pakistan. All such FTA arrangements, however, should be limited to trade issues. Issues of cooperation in other areas, such as infrastructure projects of common interest, are better handled in the context of the SAARC rather than the SAFTA.

Finally, should India seek an FTA with the United States? A conventional India-U.S. FTA that focuses on goods trade is politically a nonstarter. Such an FTA would have to include agriculture but could not be expected to end agricultural subsidies in the United States (since these subsidies can only be eliminated in the multilateral context), and this would be unacceptable to India. This same issue has marred the current negotiations on the Free Trade Area of the Americas, with Brazil and the United States finding themselves at odds. The United States would also insist on the inclusion of labor and environmental standards and WTO-plus intellectual property protection in such an FTA, which would likewise be unacceptable to India. Therefore this paper has argued for studying the benefits and feasibility of an India-U.S. FTA limited to services trade. Evidence suggests that an FTA in this area could be mutually beneficial and politically feasible, but more work is required before a definitive conclusion can be reached.

Comments and Discussion

M. Govinda Rao: In this paper, Arvind Panagariya provides a comprehensive account of the evolution of India's trade policy in the context of the public sector-dominated, heavy industry-based, import-substituting industrialization strategy that the country followed in the initial phase of planned development and explores its impact on the productivity and growth of the Indian economy. The author shows how the strategy, pursued with vigor during the first twenty-five years of planning, evolved into an autarkic foreign trade and investment regime marked by tight export controls and culminated in economic isolationism. The next phase, which was characterized by ad hoc liberalization (1976-91), saw acceleration in economic growth, but expansionary fiscal policy created an unstable macroeconomic environment. The "progressive liberalization" phase, which began in 1991, has seen the increasing globalization of the Indian economy. The paper analyzes the broadening and deepening process of trade liberalization in terms of commodity composition and the direction of trade; it also reviews available evidence on the impact of liberalization on the efficiency and growth of the economy. The paper explores various policy options and charts an appropriate course for India to follow.

This is a well-researched paper. There can be hardly any disagreement on the various phases of trade policy analyzed, on the asserted impact of trade policy on the productivity and growth of India's economy, or on the policy options recommended. This comment attempts instead to supplement the analysis with some additional issues and argues for greater emphasis with respect to some of the issues discussed.

The author deals with the ill effects of India's autarkic trade policy as well as several microlevel distortions in considerable detail. The important issue, however, is that the country's protectionist trade policy and interventionist domestic policy combine to create adverse growth consequences that are much more than the sum of the impact of the two policies implemented separately. Combined, the two have created havoc with the economic system and the structure of incentives in the economy. Indeed, as the author notes, "the myriad microeconomic distortions and heavy state intervention straightjacketed the entrepreneurs." I would like to add that the ill effects

were even more far-reaching. The combination of these policies led to “structural stagnation” by creating powerful special interest groups, a large rent-seeking society, in every sphere of economic activity.

The issue is important because India’s autarkic international trade regime was closely followed by total central control of the banking and financial system in 1969, with the nationalization of fourteen major commercial banks. This, the single most important act of centralization of the financial system, has been, in combination with other dirigistic policies, a cause of several microeconomic distortions and inequities.

While the paper devotes considerable space to the discussion of the microlevel distortions created by various domestic policies, the analysis of total factor productivity (TFP) seems to attribute its growth entirely to trade liberalization. In particular, the evidence cited from the Chand and Sen paper covers only the phase in which trade policies were tinkered with. It may well be difficult to attribute the growth of TFP in 1984–88 to trade liberalization per se because it was a period of significant liberalization of both trade and internal regulation.

The importance of the Panagariya paper lies in highlighting the emerging policy issues. To be sure, tariffs have to be lowered within the next few years to the levels prevailing in the Southeast Asian economies, but it is important to phase out fiscal imbalances before significant external liberalization can be attempted. The task force chaired by Kelkar to achieve the targets set out in the Fiscal Responsibility and Budget Management Act 2003 has laid out a roadmap for augmenting revenues, primarily by levying a national goods and services tax.¹ However, the “grand bargain” required for such a levy is unlikely to materialize in the short, and even in the medium, terms. If containing the fiscal deficit is vigorously pursued, deficit reduction may be achieved at the cost of infrastructure investments. The paper, therefore, emphasizes the need to focus on reducing the revenue deficit in the near term.

Indeed, infrastructure development—particularly of ports, roads, railways, and most of all power facilities—is a critical determinant of the competitiveness of domestic producers. It is also important to provide adequate funds for maintaining physical infrastructure, which is considered as revenue expenditure. In the absence of infrastructure development, a tariff reduction could result in a flood of imports of finished consumer goods from neighboring countries such as China, Thailand, Malaysia, and Singapore. At the same time, it is important that the outlay on education and health care be increased, both to accelerate growth and to reduce poverty.

1. Government of India (2004).

Therefore the focus of fiscal restructuring should shift to the primary deficit rather than to either the revenue or the fiscal deficit.

The paper refers to the need to complement reductions in tariffs with domestic trade tax reforms. In particular, freeing internal trade from impediments to the movement of factors and products is critical in order to take advantage of the large common market. Equally, at the micro level there is too much protection (through exemption from various labor laws and freedom from the plethora of inspectors who implement them) of small-scale industry, which hinders its growth into medium- and large-scale enterprises. Small-scale industry also is exempt from domestic taxes, particularly the central excise duty. Panagariya rightly refers to the distortions and inefficiency created by the policy of reserving items for manufacture in small-scale industries. However, by merely de-reserving the items in the small-scale sector we may not be able to solve the problem, unless there is an incentive for small enterprises to grow into medium- and large-scale industries.

To conclude, the Panagariya paper makes a valuable contribution to the debate on trade policy. Its most important contribution lies in its recommendation for a future course of action, and one hopes that policymakers will heed its sound advice.

Pranab Bardhan: I found the Panagariya paper to be a lucid and fairly comprehensive survey of the main trends and issues of India's trade policy. I also agree with the main thrust of the paper in terms of policy recommendations. I would endorse the author's ideas on trade reform—in particular, on uniform and low tariffs—and I find his thoughts on the regional trade agreements sensible and pragmatic. A few suggestions that I had for the earlier version of the paper have been largely incorporated, so I have very little to say now, except for one minor and one quasi-major point.

It is not central to Panagariya's main empirical discussion on growth and productivity, but it seems to me that the brief discussion of the general literature on the role of total factor productivity growth (with particular reference to East Asia) vis-à-vis capital accumulation is somewhat incomplete. I have always found this literature to be unnecessarily controversial, particularly when much of the technological progress in developing countries (including that in East Asia) results from improved technologies that are embodied in imported capital goods, so that the distinction between TFP growth and investment is necessarily blurred. Also, before deriding

East Asian growth as “Soviet-style perspiration,” American commentators should keep in mind that almost all countries, including the United States in large parts of the nineteenth century, have shown a similar pattern in the early stages of industrialization.²

I agree with Panagariya on the importance of two key domestic reforms if trade reform is to stimulate industrial growth: containing the public revenue deficit in order to release funds for public investment in infrastructure and dismantling the existing small-scale industries reservation program. But the practical importance of labor reform for industrial growth is a substantive point on which I and the author somewhat disagree. It is clear that the labor laws that are now on the books can hamper flexibility and ultimately harm the unemployed and workers who have to crowd the informal sector, but I would like to see more convincing evidence on how much of a hindrance to business investment they really are. Beyond repeated assertions by pro-reform economists and the “pink” (financial) press in India, there is very little hard evidence to go by.

Most of the anecdotes one hears about inefficient job secure workers in India are based on common encounters with lazy public sector, white-collar workers protected by their unions. However, there are counter-anecdotes that suggest that labor laws are commonly flouted by industrial employers in many states (particularly in west and south India) while the state government looks the other way. Jenkins (2000) has described this as “reform by stealth.”

Nagaraj (2004) has raised the question of why, if labor laws made sacking workers and closing plants so difficult, Annual Survey of Industries data show that between 1995–96 and 2000–01 about 15 percent of workers in the organized manufacturing sector (about 1.1 million workers) lost their jobs. This loss of jobs was spread across industries and states in India.

Let me refer now to two careful microeconomic studies that I have seen that may also be relevant to the question of job security laws. One is by Dutta Roy (2004), who fits dynamic labor demand functions for sixteen industry groups (separately for production and nonproduction workers) for the period from 1960–61 to 1994–95. She shows that the impact of job security regulations in India is statistically insignificant, except in the cement industry. The rigidities in the adjustment of labor were about the same even before the introduction of stringent job security clauses in the

2. See Eichengreen (2002).

1976 and 1982 amendments to the Industrial Disputes Act. This suggests there are other reasons for any rigidities in the labor market.

The second study, by Daveri, Manasse, and Serra (2003), was part of a joint project with the World Bank on the impact of globalization on industrial labor market outcomes in India. Using a new dataset from a World Bank survey of 895 Indian firms in 1997–99, covering five manufacturing sectors, they find that employees of firms subject to foreign competition face much more uncertainty with regard to their earnings and employment prospects (there is, of course, a positive incentive effect—they are more likely to be involved in training and skill-upgrading programs).

All of this suggests that it is not socially responsible to talk about the beneficial effects of trade reform without at the same time making concrete suggestions for creating social adjustment programs for displaced workers. In a country where social safety nets for poor workers are either nonexistent or extremely inadequate and where authorities often renege on their compensation promises, academic demonstrations of the long-run benefits of trade reform are not going to be convincing. In this respect the attempt, though small scale, of the Department of International Development of the U.K. government in collaboration with a local NGO to financially assist and retrain displaced industrial workers in some bankrupt public sector firms in West Bengal is a step in the right direction. Social protection should be part of a comprehensive trade and labor reform package if reform is to be desirable as well as feasible.

General Discussion

Surjit Bhalla believed that the role of labor reform in explaining India's disappointing industrial performance was overstated. Instead, he felt that macroeconomic policies, particularly tight monetary policy, were more important. As evidence for this view he pointed out that the 1991 reforms had indeed led to a growth spurt in industry in the years immediately following, but that it had petered out in 1996, not to revive until 2002–03. He also felt that India's exchange rate policy had led to a loss of competitiveness, particularly with respect to China. Rajesh Chadha felt that policy uncertainty had been important in depressing industrial activity. He cited the sudden reduction in the customs duty on certain capital goods as an example of policy uncertainty that might dampen the investment intentions of other potential investors. John Williamson noted that there was a tendency to focus on the rupee-dollar rate, while even over 2003 the rupee

had continued to depreciate in effective terms. He also queried the concept of the "capital intensity" of Indian exports, citing a recent McKinsey study that found that India's auto industry was much less capital intensive than China's, in part because of the greater skill level and flexibility of the Indian labor force.

Suman Bery asked whether there were any studies on the political economy of trade reforms that could explain both the liberalization episodes and the occasional backtracking. He also asked what the international experience was with a uniform tariff rate: If it is so pure, why is it not adopted more widely? Are the forces that determine more complex tariff structures revenue-driven or the result of lobbying for effective protection? Rajnish Mehra tended to agree with political explanations of industrial sluggishness, attributing it to the power of existing interests to prevent competition and extract rents. Noting Panagariya's caution on free trade agreements, Anil Sharma asked whether there was really any alternative, given the difficulties faced during the Doha Round of trade talks and the reduced appeal of unilateral action. Vijay Kelkar asked how realistic it is to impose a uniform tariff when the taxation of domestic inputs is not properly offset by drawback schemes. A uniform customs tariff would lead to negative rates of protection in a number of activities because the incidence of domestic indirect taxes is not uniform. Given the realities, he believed that a uniform low rate of custom duties in an environment of exchange rate appreciation would lead to a backlash from Indian industry and a possible reversal of the progress made. He agreed with Panagariya that the special and differential treatment provisions of GATT had outlived their utility for India and also that India's antidumping machinery needed review. Montek Ahluwalia and Vijay Joshi both pursued the issue, raised by Bardhan, of the link between India's intellectual property regime and the rise of India's pharmaceutical industry. Ahluwalia believed that the export orientation of the big Indian pharmaceutical firms in the past had as much to do with domestic price controls as with the intellectual property regime. Since these controls affected primarily the large players, these firms found foreign markets more lucrative than the domestic market.

Ahluwalia also concurred that the emphasis on labor reform might be overdone. He noted that import restrictions on labor-intensive sectors had been lifted only recently, as was the case with the liberalization of the small-scale industry regime. He believed that competition in product markets would be reflected in the behavior of the labor force, which would adjust to ensure company survival. Barry Bosworth noted, though, that labor legislation could have a major impact on foreign firms, which do not have the

option of entering the informal sector. This could be one reason for the disappointing response of foreign direct investment to India's liberalization. Panagariya disagreed with the points made on labor reform and on uniform customs duties, indicating that both industry's stagnant share of GDP and the low share of organized sector employment in the labor force were indicators of serious obstacles to the expansion of modern industrial employment. He also rejected the view that the existing (and proposed) differential customs duty structure had anything to do with distortions in domestic taxation; in his view this structure reflects attempts by lobbies to secure effective protection and would lead only to further rent-seeking behavior and difficulties in implementation.

References

- Ahluwalia, Isher J. 1991. *Productivity and Growth in Indian Manufacturing*. Delhi: Oxford University Press.
- _____. 1994. "TFPG in Manufacturing Industry." *Economic and Political Weekly*, October 22, p. 2836.
- Balakrishnan, P., and K. Pushpangandan. 1994. "Total Factor Productivity Growth in Manufacturing Industry: A Fresh Look." *Economic and Political Weekly*, July 30, pp. 2028–35.
- Balakrishnan, P., K. Pushpangandan, and M. S. Babu. 2000. "Trade Liberalization and Productivity Growth in Manufacturing: Evidence from Firm-Level Panel Data." *Economic and Political Weekly*, October 7, pp. 3679–82.
- Bhagwati, Jagdish. 1999. "The 'Miracle' That Did Happen: Understanding East Asia in Comparative Perspective." In *Taiwan's Development Experience: Lessons on Roles of Government and Market*, edited by Erik Thorbecke and Henry Wan. Boston: Kluwer Academic Publishers.
- Bhagwati, Jagdish, and Padma Desai. 1970. *India: Planning for Industrialization*. London: Oxford University Press.
- Bhagwati, Jagdish, and Arvind Panagariya. 1996. "Preferential Trading Areas and Multilateralism: Strangers, Friends or Foes?" In *The Economics of Preferential Trading*, edited by Jagdish Bhagwati and Arvind Panagariya. Washington: AEI Press. Reproduced as chapter 2 in *Trading Blocs: Alternative Approaches to Analyzing Preferential Trade Agreements*, edited by Jagdish Bhagwati, P. Krishna, and Arvind Panagariya. MIT Press, 1999.
- _____. 2003. "Defensive Play Simply Won't Work." *Economic Times*, August 29, p. 15.
- Bhagwati, Jagdish, and T. N. Srinivasan. 1975. *Foreign Trade Regimes and Economic Development: India*. New York: National Bureau of Economic Research.
- Chadha, Rajesh, Alan Deardorff, Sanjib Pohit, and Robert Stern. 1998. *The Impact of Trade and Domestic Policy Reforms in India: A CGE Modeling Approach*. University of Michigan Press.
- Chand, Satish, and Kunal Sen. 2002. "Trade Liberalization and Productivity Growth: Evidence from Indian Manufacturing." *Review of Development Economics* 6, no. 1: 120–32.
- Collins, Susan M., and Barry P. Bosworth. 1996. "Economic Growth in East Asia: Accumulation versus Assimilation." *Brookings Papers on Economic Activity*, no. 2, pp. 135–91.
- Das, Deb Kusum. 2003. "Manufacturing Productivity under Varying Trade Regimes: India in the 1980s and 1990s." Working Paper 107. New Delhi: Indian Council for Research on International Economic Relations.
- Daveri, F., P. Manasse, and D. Serra. 2003. "The Twin Effects of Globalization." Turin, Italy: Luca d'Agliano Foundation.

- DeLong, J. Bradford. 2003. "India Since Independence: An Analytic Growth Narrative." In *In Search of Prosperity: Analytic Narratives on Economic Growth*, edited by Dani Rodrik. Princeton University Press.
- Dholakia, B. H., and R. H. Dholakia. 1994. "Total Factor Productivity Growth in Manufacturing Industry." *Economic and Political Weekly*, December 31, pp. 3342-44.
- Dutta Roy, S. 2004. "Employment Dynamics in Indian Industry: Adjustment Lags and the Impact of Job Security Regulations." *Journal of Development Economics* 73, no. 1: 233-56.
- Eichengreen, B. 2002. "Capitalizing on Globalization." *Asian Development Review* 19, no. 1: 17-69.
- Gordon, Jim, and Poonam Gupta. 2003. "Understanding India's Services Revolution." Paper presented at the IMF-NCAER Conference, "A Tale of Two Giants: India's and China's Experience with Reform," New Delhi, November 14-16.
- Government of India. 2002. "Reports of the Task Force on Indirect Taxes." Chairman, Vijay L. Kelkar. New Delhi: Ministry of Finance and Company Affairs.
- _____. 2004. "Report of the Task Force on Implementation of the Fiscal Responsibility and Budget Management Act, 2003." Chairman, Vijay L. Kelkar. New Delhi: Ministry of Finance.
- Hulten, Charles R. 1975. "Technical Change and the Reproducibility of Capital." *American Economic Review* 65, no. 5: 956-65.
- Hulten, Charles R., and Mieko Nishimizu. 1980. "The Importance of Productivity Change in the Economic Growth of Nine Industrialized Countries." In *Lagging Productivity Growth: Causes and Remedies*, edited by Shlomo Maital and Noah M. Meltz. Cambridge, Mass.: Ballinger.
- Hulten, Charles, and Syleja Srinivasan. 1999. "Indian Manufacturing Industry: Elephant or Tiger? New Evidence on the Asian Miracle." Working Paper 7441. Cambridge, Mass.: National Bureau of Economic Research.
- Jenkins, R. S. 2000. *Democratic Politics and Economic Reform in India*. Cambridge University Press.
- Joshi, Vijay, and Ian M. D. Little. 1994. *India: Macroeconomics and Political Economy: 1961-91*. Washington: World Bank.
- Kehoe, Timothy J. 2003. "An Evaluation of the Performance of Applied General Equilibrium Models of the Impact of NAFTA." Research Department Staff Report 320. Federal Reserve Bank of Minneapolis.
- Kehoe, Timothy J., and Kim J. Ruhl. 2002. "How Important is the New Goods Margin in International Trade?" University of Minnesota.
- Kelkar, Vijay. 2001. "India's Reform Agenda: Micro, Meso and Macro Economic Reforms." Fourth Annual Fellows Lecture, Center for the Advanced Study of India, University of Pennsylvania.
- Kim, Jong-Il, and Lawrence J. Lau. 1994. "The Sources of Economic Growth of the East Asian Newly Industrialized Countries." *Journal of Japanese and International Economics* 8: 235-27.

- Krishna, Pravin, and Devashish Mitra. 1998. "Trade Liberalization, Market Discipline and Productivity Growth: New Evidence from India." *Journal of Development Economics* 56: 447–62.
- Krugman, Paul. 1994. "The Myth of Asia's Miracle." *Foreign Affairs* 73, no. 6: 62–77.
- Mattoo, Aaditya, and Carsten Fink. 2002. "Regional Agreements and Trade in Services: Policy Issues." Policy Research Working Paper 2852. Washington: World Bank.
- McKinsey Global Institute. 2001. *India: The Growth Imperative*. San Francisco.
- Mukerji, Purba. 2004. "Essays in International Trade." Ph.D. dissertation, University of Maryland.
- Nadiri, M. Ishaq, and Wanpyo Son. 1998. "Sources of Growth in East Asian Economies." New York University (July).
- Nagaraj, R. 2004. "Fall in Organized Manufacturing Employment: A Brief Note." *Economic and Political Weekly* 39, no. 30.
- Panagariya, Arvind. 1999a. "WTO Trade Policy Review of India, 1998." *World Economy* 22, no. 6: 799–824.
- _____. 1999b. "The Regionalism Debate: An Overview." *World Economy* 22, no. 4: 477–511.
- _____. 2000. "Preferential Trade Liberalization: The Traditional Theory and New Developments." *Journal of Economic Literature* 38: 287–331.
- _____. 2002a. "Cost of Protection: Where Do We Stand?" *American Economic Review, Papers and Proceedings* 92, no. 2: 175–79.
- _____. 2002b. "India at Doha: Retrospect and Prospect." *Economic and Political Weekly*, January 26, pp. 279–84.
- _____. 2003. "South Asia: Does Preferential Trade Liberalization Make Sense?" *World Economy* 26, no. 9 (special issue on Global Trade Policy): 1279–91.
- _____. 2004. "Growth and Reforms During 1980s and 1990s." *Economic and Political Weekly*, June 19, pp. 2581–94.
- Panagariya, Arvind, and Rupa Duttagupta. 2001. "The 'Gains' from Preferential Trade Liberalization in the CGEs: Where Do They Come From?" In *Regionalism and Globalization: Theory and Practice*, edited by Sajal Lahiri. London: Routledge.
- Panagariya, Arvind, and Dani Rodrik. 1993. "Political Economy Arguments for a Uniform Tariff." *International Economic Review*, August, pp. 685–703.
- Pursell, Garry. 1992. "Trade Policy in India." In *National Trade Policies*, edited by Dominick Salvatore. New York: Greenwood Press.
- Rao, J. Mohan. 1996. "Manufacturing Productivity Growth, Method and Measurement." *Economic and Political Weekly*, November 2, pp. 2927–36.
- Reserve Bank of India. 2002. *Handbook of Statistics on Indian Economy*. Mumbai.
- _____. 2003. *Annual Report 2002-2003*. Mumbai.
- Rodrik, Dani. 2003. "Institutions, Integration, and Geography: In Search of the Deep Determinants of Economic Growth." In *In Search of Prosperity: Analytic*

- Narratives on Economic Growth*, edited by Dani Rodrik. Princeton University Press.
- Romer, Paul. 1994. "New Goods, Old Theory, and the Welfare Costs of Trade Restrictions." *Journal of Development Economics* 43: 5–38.
- Shourie, Arun. 1966. "Allocation of Foreign Exchange in India." Ph.D. dissertation, Syracuse University.
- Sivadasan, Jagadeesh. 2003. "Barriers to Entry and Productivity: Micro-Evidence from Indian Manufacturing Sector Reforms." Graduate School of Business, University of Chicago.
- Tharoor, Shashi. 1997. *From Midnight to the Millennium*. New York: Harper Perennial.
- Topalova, Petia. 2003. "Trade Liberalization and Firm Productivity: the Case of India." Massachusetts Institute of Technology.
- Unel, Bulent. 2003. "Productivity Trends in India's Manufacturing Sectors in the Last Two Decades." IMF Working Paper WP/03/22. Washington: International Monetary Fund.
- World Bank. 2002. *World Development Indicators 2002*. Washington.
- _____. 2003. *World Development Indicators 2003*. Washington.
- World Trade Organization (WTO). 1998. "Trade Policy Review—India." Geneva.
- _____. 2002. "Trade Policy Review—India." Geneva.
- _____. 2003. *Annual Report*. Geneva.
- Young, Alwyn. 1992. "A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore." In *NBER Macroeconomics Annual*, edited by Olivier J. Blanchard and Stanley Fischer. MIT Press.
- _____. 1995. "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Experience." *Quarterly Journal of Economics* 110, no. 3: 641–80.