

Should a U.S.-India FTA Be Part of India's Trade Strategy?

In the current political environment, it is an understatement to say that a U.S.-India Free Trade Agreement (FTA) does not appear to be an idea whose time has come. Slow employment growth in the United States has raised fears about the loss of high-paying jobs to outsourcing, and the jobs lost to India have borne the brunt of these concerns. Members of the U.S. Congress would surely not relish the opportunity to vote to endorse such trade. It is also unlikely that Indian politicians would relish the opportunity to cast their lot with the United States and abandon long-held positions on nonalignment, multilateralism, special and differential treatment, and domestic protection. Yet precisely because it challenges views held on these issues, the question posed by the title of this paper is important. It offers an opportunity to reflect on whether current trade rules and policies provide an adequate framework for realizing the full potential of India's global integration and domestic reforms. For example, do current arrangements suffice to ensure that one of the most dynamic global linkages—services outsourcing—will continue to flourish? Should India continue to rely primarily on unilateral trade liberalization? Could it reap even greater reform gains from a multitrack strategy in which the World Trade Organization (WTO) and regional free trade agreements play a greater role? And in such a multitrack strategy, what are the relative merits of multilateral and bilateral approaches? These are questions that this paper explores.

The topic is timely. For most of its existence as an independent country, India had highly protectionist and statist economic policies. Self-sufficiency was an important goal. The domestic market was protected by

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high tariffs and prohibitions on imports. Foreign investment was restricted. The government occupied the commanding heights of the economy by owning many firms and controlling the price, investment, layoff, and exit decisions made by private firms.

Since 1991, however, these policies have been radically changed.¹ Many nontariff barriers have been eliminated and average tariff rates have been dramatically reduced—indeed more than halved.² In addition, foreign investment has been liberalized, exports promoted through a host of special tax, zone, and importation privileges, and the government has privatized and reduced its equity positions in many state-owned enterprises. The permit system for domestic investment has been abandoned, and the number of sectors reserved for small-scale industry reduced.

The policy has been associated with positive outcomes. The acceleration in growth that began in the 1980s has been sustained. Both exports and imports have increased as a share of gross domestic product (GDP). As success stories have accumulated, a growing sense of confidence has burgeoned among Indian entrepreneurs in particular and the public at large.

Yet much remains to be done. On the basis of its tariff rates, which remain among the world's highest, India is still a relatively closed economy, and its domestic reforms are a work in progress. Foreign investment is by no means free, and the rules governing exports remain highly complex and interventionist. Likewise government ownership and controls remain fairly pervasive in the domestic market. In particular, the policies of reserving certain goods for production by the small-scale sector and a rigid regulatory system in the labor market remain in place. Indian competitiveness in manufactured goods, while improving, still has a long way to go to match its major Asian competitors and provide employment for millions of new entrants to the labor market. Indian infrastructure is sorely in need of major new investments. In addition, within India, there continues to be political resistance to liberalization and a widespread view that a highly interventionist strategy is appropriate for a nation at India's stage of economic development. Given the tasks yet to be accomplished, what is now the best trade and reform strategy for India?

One option is to follow the gradualist, unilateral approach that has been employed successfully since the early 1990s. India could continue, incre-

1. For more on these policies, see the paper by Arvind Panagariya in this volume.

2. Tariffs have declined from a weighted average duty of 72.5 percent in 1991–92 to 29 percent in 2002–03. Peak duties were reduced from 150 percent to 25 percent (Ahluwalia 2002, p. 74). On January 8, 2004, the Indian government reduced the peak duty on non-agricultural goods from 25 percent to 20 percent and abolished a 4 percent special additional duty that had been levied.

mentally, to open up trade and foreign investment and to introduce market-based mechanisms at home. As it has done over the 1990s, India would rely mainly on unilateral trade liberalization. Trade agreements would not play a leading role in reform, although India would participate actively in the WTO and perhaps sign additional free trade agreements with developing countries. At the WTO, India would continue to emphasize its need for special and differential treatment and do its best to avoid binding commitments that require significant changes in domestic policies. Similarly, the preferential arrangements would focus mainly on tariff reductions in goods.

For India this strategy is attractive. It maximizes domestic autonomy and control. It allows India to tailor its policies and institutions to fit its unique circumstances, and it provides the government with the flexibility to time its initiatives when political conditions are most favorable. But this flexibility comes with costs. Policies are less effective when they are not seen as permanent. When reforms confront obstacles, flexibility may encourage backsliding rather than persistence. Opportunities to gain reciprocal access to foreign markets and influence foreign policies may be lost, and the political support from those who have an interest in foreign liberalization may not be effectively mobilized behind domestic reform.

Perhaps, therefore, now that liberalization and reform have taken hold, it may be time to adopt a more radical and comprehensive reform strategy. India could use reciprocal liberalization through trade agreements more aggressively to deepen its global integration and bolster domestic economic changes. In this regard, however, an important question is which kinds of reciprocal agreements are best suited for this role.

One option would be to negotiate deeper bilateral free trade agreements as a complement to unilateral and WTO liberalization. This paper considers the role that a U.S.-India FTA could play as the cornerstone of such an approach. Such an agreement could boost Indian welfare by removing trade barriers and providing a stable framework for the growth of information technology (IT) outsourcing. It could also be an effective mechanism for locking in reform policies, mobilizing domestic political support for liberalization, and spurring additional trade liberalization both multilaterally and bilaterally.

Opposition to such an approach comes from some who support more aggressive liberalization but oppose preferential trade arrangements as a means for doing this.³ They view preferential arrangements as having several serious deficiencies. These include the efficiency costs of

3. For a review of these arguments, see Baldwin and Venables (1995), Bhagwati and Panagariya (1996), Frankel (1997), and Lawrence (1996).

discrimination—trade diversion;⁴ the administrative burdens and complexity of having different systems of rules—a phenomenon Jagdish Bhagwati disparagingly calls “spaghetti-bowl regionalism”; the diversion of both political and intellectual capital from attending to other aspects of trade policy, in particular multilateral liberalization under the WTO; the dangers that political pressures during bilateral negotiations would force adoption of inappropriate domestic policies, such as labor and environmental standards; the inability to deal with issues that have significant spillovers on third parties such as farm subsidies; and the obstacles such agreements could pose to additional multilateral liberalization by creating vested interests in the preferences. Proponents of this position see merit in reciprocal trade agreements, but they advocate exclusive reliance on WTO negotiations as the mechanism for undertaking such agreements.

In this paper the case for a U.S.-India FTA is evaluated in the context of these options. In particular, the paper examines how the multitrack approach compares with the multilateral and unilateral alternatives. *The paper’s central claim is that if India wishes to use trade agreements to spur reform, a multitrack approach centered on a U.S.-India FTA would be superior to an exclusive reliance on the WTO under a likely outcome in the Doha Round.*

The paper first focuses on the defensive case for such a free trade agreement—its potential role in securing U.S.-India trade in IT services. The rest of the paper then turns to the positive (or offensive) case for negotiating a U.S.-India FTA. The merits of removing trade barriers unilaterally are compared with reciprocal liberalization. The next section considers in some detail how the provisions of a U.S.-India FTA would affect India’s domestic policies and institutions. The FTA is then compared with the WTO as the appropriate mechanism for stimulating additional liberalization and reform. Finally, a general equilibrium model is presented to provide quantitative comparisons of unilateral, bilateral, and multilateral liberalization.

Playing Defense

There are defensive reasons for India to consider a free trade agreement with the United States. From this perspective, the key issue is establishing a legal and institutional framework for keeping trade in information

4. The paper by Arvind Panagariya in this volume, for example, emphasizes the dangers of trade diversion.

technology services free.⁵ IT services comprise high-end software and technology services on the one hand and low-end back-office and call center work on the other. Both activities have enjoyed explosive growth since the late 1990s. Technological advances and investments in telecommunications, computers, and software have enabled multinational firms to tap into a large supply of well-educated English-speaking workers in India who are prepared to work for much lower wages than their foreign competition. Because of these increased service export opportunities, the number of Indians engaged in the industry doubled between 2000 and 2004, and exports have soared.⁶

While this performance is impressive, most analysts believe these developments are still in their infancy. Studies by McKinsey Global Institute and others have emphasized the large cost savings from undertaking these activities in India.⁷ Forrester Associates projects that an additional 3 million U.S. jobs will be outsourced by 2015. McKinsey forecasts that IT services and back-office work in India will swell fivefold by 2008, to become a \$57 billion-a-year export industry, employing 4 million people and accounting for 7 percent of India's gross domestic product.⁸

Trade between the United States and India, therefore, has the potential to become one of the most dynamic global linkages in the next decade. But will it be allowed to take place? If the United States continues to account for two-thirds of the most dynamic component of India's exports (IT services), India's bilateral trade surplus with the United States will undoubtedly increase. Yet already, protectionist pressures in the United States are strong. At a time when the U.S. economy is recording large trade deficits and its economic recovery is marked by very sluggish employment growth, outsourcing is headline news in the United States. Concerns about the loss of skilled white-collar jobs have become the focus of increasing amounts of political attention. Many bills to protect U.S. jobs have been introduced in state legislatures and the U.S. Congress.⁹ On March 4, 2004, for example,

5. According to estimates made by the Indian National Association of Software and Services Companies (NASSCOM) in its annual strategy report, employment in information technology services in March 2004 stood at about 814,000, up from 284,000 in 1999.

6. According to NASSCOM, between 2003 and 2004, exports from the industry, whose main market is the United States, are expected to grow between 26 percent and 28 percent to around \$12 billion, up from \$9.5 billion in 2002–03 and three times greater than the exports of nearly \$4 billion in 1999–2000.

7. McKinsey Global Institute (2003).

8. "The Rise of India," *BusinessWeek*, December 8, 2003.

9. A provision in the federal government's omnibus fiscal 2005 spending bill would bar companies that bid for certain work done by government employees from moving work offshore. Another bill, backed by Democratic presidential contender John Kerry, would require

the Senate passed a bill, by a 70–26 vote, that barred companies from most federal contracts if they plan to carry out some or all of the work abroad. (It included exceptions only for national security and for countries that are members of the WTO procurement code, an agreement to which neither India nor China belong).¹⁰

These developments naturally raise questions about whether the current framework of the relationship is adequate to allow trade between the United States and India to realize its full potential. One response is simply to ignore the current protectionist threats in the United States and to hope they will fade away once the economic recovery leads to more robust employment growth. A second response is to try to use the current Doha Round of multilateral trade negotiations to secure U.S. commitments to avoid restraints on outsourcing. It is by no means clear, however, that the United States has yet bound, that is, agreed to liberalize or liberalized, its IT services imports through the WTO General Agreement on Trade in Services (GATS). The problem, according to Mattoo and Wunsch, relates to the basic architecture of the GATS by which countries make their commitments to liberalizing services by sector and by mode.¹¹ It stems partly from the use of a positive list approach in which explicit commitments must be made before a sector is liberalized, that is, bound. Suppose for example that the United States has bound banking services. Suppose an Indian firm wishes to provide U.S. banks with data processing of their human resource records. Is this activity covered by the commitment, or would it be necessary for the United States to have stipulated that it had bound data processing? There is considerable ambiguity in the current GATS system. Mattoo and Wunsch propose either changing the classification system to make these Business Process Outsourcing (BPO) service commitments explicit or—the option they prefer—moving to a negative list approach, in which trade is allowed unless it has been expressly prohibited. These are sensible proposals, but it is by no means clear that they will be adopted.

workers at telephone call centers to disclose their physical locations at the beginning of each call. According to the *Wall Street Journal*, “about 80 bills aimed at keeping jobs in the U.S. by limiting outsourcing have been introduced in about 30 states.” (*Wall Street Journal*, March 1, 2004, p. 1.)

10. At the same time, General Electric filed an alert with the Securities and Exchange commission claiming that the backlash to outsourcing poses a threat to its future profits because of the reliance of its insurance division on back-office operations in India. (*Financial Times*, March 5, 2002, p. 1.)

11. Mattoo and Wunsch (2004).

By contrast, services liberalization in U.S. bilateral agreements already uses a negative list approach. As long as an outsourcing service has not been listed, it is automatically permitted.

A free trade agreement that kept these sectors open would keep protection in check. Such an agreement would also fit into the broader strategy of “competitive liberalization” that the Bush administration has been pursuing.¹² While participating actively in the Doha Round and negotiations for a Free Trade Area of the Americas (FTAA), the Bush administration has dramatically stepped up the pace of negotiating bilateral free trade agreements. (The United States had moved away from exclusive reliance on multilateral liberalization in the 1980s, by signing FTAs with Israel, and Canada. The North America Free Trade Agreement, or NAFTA, implemented in 1993, was an even more powerful movement in this direction.) A large number of bilateral agreements have been signed, negotiated, or planned. Agreements with Chile, Jordan, and Singapore have been implemented; those with Australia and Morocco have been passed, and the agreement with CAFTA (Central American Free Trade Agreement involving Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) has been completed. In addition, bilateral negotiations have been launched with the Dominican Republic, the South African Customs Union, and three Andean Countries (Bolivia, Colombia and Peru) and commitments to begin bilateral negotiations have been reached with Bahrain, Panama, and Thailand.

India surely has much greater economic and strategic potential for the United States and the global trading system than many of these nations. An Indian willingness to sign an agreement with the United States could have an important impact not only on the bilateral trading relationship between the two countries but also in increasing the pressure on other countries to liberalize, both bilaterally and through the WTO. This could help advance America’s interest in global liberalization.

Nonetheless, obtaining an agreement in the current U.S. political environment would not be easy. The U.S. Constitution requires congressional approval for all trade agreements. Currently, even when it comes to votes on the less controversial free trade measures, the House of Representatives is fairly evenly divided, split basically along partisan lines, with most Republicans in favor and most Democrats opposed. To be sure, India is not without friends in the current U.S. debate; its most important allies are the U.S. companies that have used outsourcing to boost their bottom line. Few free-trade members of Congress would welcome the opportunity to cast a

12. For an extensive analysis of these agreements, see Schott (2004).

vote on outsourcing in the current political atmosphere, however, and the failure to pass such an agreement could strengthen the hand of those who would seek to impede such trade.

But the merits of an FTA are still worth considering on two grounds. First, by offering to sign an FTA, India might be able to strengthen its political position in the current U.S. debate. Second, political conditions could well change. It would have been far easier to endorse such an FTA a few years ago, when the U.S. economy was enjoying high levels of employment and growth, and skilled high-tech employees were in short supply. It is quite possible that the economic environment could again improve.

From an Indian perspective, secure access to the U.S. market for services is surely desirable. Many Indians might therefore agree to such negotiations in the hope that India would obtain such access without having to do much on the domestic front, particularly in the goods area.¹³ In his paper in this volume, for example, Arvind Panagariya argues that a case can be made in favor of “a mutually beneficial and politically acceptable FTA between the two countries in services.” He correctly notes that such an agreement is not likely to entail much trade diversion, particularly in sectors where the Indian market is currently closed. He would also favor such an agreement in order to establish an FTA template that did not include labor and environmental provisions. But an agreement that is confined to services is not likely to happen. The United States is unlikely to forgo the opportunity of obtaining preferential access for its goods exports to the Indian market. In particular, the U.S. farm and high-tech lobbies play an important role in securing political support for U.S. FTAs. In addition, although the United States made an exception recently when it dropped sugar from the U.S.-Australia FTA, it has generally resisted making sectoral exceptions in its FTAs. Even though it might be legal under GATS, dropping all goods trade would surely create difficult precedents in other FTA negotiations. Moreover, given political realities in the United States regarding issues like labor and environment, any agreement the United States signs would have to include some provisions on these issues.

India has recently agreed to several free trade agreements with Asian countries, but they are not comprehensive even with respect to trade in goods. By contrast, judged on the precedent of other FTAs involving the United States, the range and extent of commitments relates to far more than goods trade. A U.S.-India FTA, therefore, is likely to have binding commitments through the use of a negative list for services and to contain

13. This view is presented in the paper by Panagariya in this volume and also by the Council on Foreign Relations Task Force on New Priorities in South Asia.

investment provisions with few sectoral exclusions. It would possibly grant full national treatment for U.S.-owned companies. It could also contain intellectual property rules that are more comprehensive than those in the WTO, and it would also almost definitely have additional provisions relating to labor, environment, standards, technical barriers, and government procurement. While it would probably provide India with more time to phase in its commitments, once the agreement was fully implemented—generally fifteen years—as with other U.S. FTAs, it would most likely entail symmetrical obligations by the developed and the developing country signatories.

For India, accepting an agreement with a developed country that was broad, deep, and symmetrical would represent a radical departure from its current policies and positions on foreign trade and investment. India has been a strong advocate of multilateral trading rules (first under the General Agreement on Tariffs and Trade, or GATT, and later the WTO), which concentrate mainly on developed-country trade barriers to goods and exempt developing countries from its disciplines by granting them special and differential treatment. India, however, has generally resisted new WTO commitments. India has not signed the WTO government procurement code. It strongly opposed the introduction of new agreements on intellectual property (Trade-Related Aspects of Intellectual Property Rights, or TRIPS) and services in the Uruguay Round of trade negotiations. Later it strongly opposed U.S. efforts to introduce labor standards into the WTO. Indian representatives also expended considerable effort resisting the launching of the Doha Round in 2001 on the grounds that developing countries required more time and assistance to implement their Uruguay Round commitments. Although this stance did not succeed, India was more effective in thwarting negotiations on the Singapore issues (particularly investment and competition policy) at Doha and later at Cancún.¹⁴

Laying out these Indian positions makes it clear that a willingness to sign a free trade agreement with the United States would have major implications for both India's trade and domestic economic policies. This takes us to an evaluation of the offensive case for an agreement—the topic discussed in the rest of the paper.

14. Even where it has accepted obligations, India has had some trouble ensuring compliance. In particular, it continued to maintain quantitative restrictions until losing a challenge at the WTO. Likewise, it applied requirements on foreign investors in automobiles until this was found in violation of the Trade-Related Investment Measures (TRIMs) Agreement.

Liberalization Strategies: Unilateral versus Reciprocal

In his review of Indian reforms during the 1990s, Montek Ahluwalia emphasizes their incremental nature. His views are worth quoting at some length:

The goals [of reform] were often indicated only as a broad direction, with the precise end point and the pace of transition left unstated to minimize political opposition—and possibly to leave room to retreat, if necessary. . . . The result was a process of change that was not so much gradualist as fitful and opportunistic. . . . Progress was made as and when politically feasible, but since the end point was not always clearly indicated, many participants were unclear about how much change would have to be accepted, and this might have led to less adjustment than was otherwise feasible. . . . The alternative would have been a more thorough debate with the objective of bringing about a clearer realization on the part of all concerned of the full extent of change needed, thereby permitting more purposeful implementation. However, it is difficult to say whether this approach would indeed have yielded better results, or whether it would have created gridlock in India's highly pluralist democracy.¹⁵

As these comments indicate, the dominant approach used by India has been unilateral and incremental. Although India moved further and faster than required by its WTO commitments, it moved at its own pace, without committing itself to full liberalization. This allowed India to control the process itself and proceed in a manner that met the needs of its own policymakers. It also allowed the government to adopt partial measures and to steer the debate away from the doctrinal issue of “free trade versus protection” to one concerning the right level of protection.

One reason for adopting an incremental approach, particularly when reform is in its early stages, is that initially the constituents for reform are weak. The winners from trade liberalization, for example—those who will succeed in export markets or obtain jobs from increased foreign investment—are not yet known. Yet the losers—those who are vulnerable to international competition—are only too aware of who they are. Once the process gets going, however, winners start to emerge, and politically, implementing additional measures may well become easier.

The adjustment process itself may also build up the constituency for liberalization and weaken the constituency seeking protection.¹⁶ At the start, majority support for *full* liberalization might not exist, but it might be possible to obtain agreement for a partial measure that then reduces the number of people in import-competing activities and builds up the size of

15. Ahluwalia (2002, pp. 86–87).

16. For a more general application of these ideas to reform, see Fernandez and Rodrik (1991).

the export sector. Once this has happened, additional liberalization might be possible. The key to this approach is ensuring at each stage that the liberalization will expand the sectors with comparative advantage under free trade and contract the sectors that are not.¹⁷

Another reason is that the attitudes toward liberalization may shift as a country experiences improvements in its competitiveness. This seems to have been India's experience. In a highly protectionist regime, such as prevailed in India before 1991, import barriers raise input costs and place firms at a disadvantage in world markets. Under these circumstances, since they feel uncompetitive, domestic firms with export potential are unlikely to be enthusiastic about trade liberalization. But once liberalization proceeds and equipment and inputs become cheaper, their attitudes could change. As they begin to experience success in exporting, their interests in foreign markets and additional reforms may grow. Conversely, when import barriers are very high, there are likely to be many domestic firms that require protection in order to compete, and they will defend this protection strongly. However, as barriers are brought down, the least competitive firms will exit, while others will become more efficient and thus, over time, opposition to liberalization could subside.

These considerations suggest that over the past decade, India's piecemeal approach to reform in general and to trade liberalization in particular probably had considerable merit.¹⁸ But a key question is whether the time has now ripened for India to shift from an approach that is "fitful and opportunistic" to one that has clearer end-point goals and commitments. While moving in such a direction could entail some short-term political costs, it could also yield greater long-term economic payoffs. Let us consider these economic effects first before turning to politics.

Credible Commitments

The purpose of trade liberalization is to improve resource allocation and enhance welfare. For this to occur, private actors must be prepared to

17. Frankel (1997, p. 219); Wei and Frankel (1995); Levy (1994) establishes that in a median voter model, bilateral agreements will not undermine political support for multilateral liberalization if trade occurs in a standard Heckscher-Ohlin framework but could reduce such support when there are increasing returns and greater product variety.

18. This discussion brings to mind the work of Lindblom (1995), who contrasted the paradigm of comprehensive decisionmaking with a more incremental approach. One paradigm of moving toward full free trade would simply be to announce a program and implement it. An alternative, however, is simply to seize opportunities as they arise. India's economic reform has not reflected an overt commitment to liberal free-market ideology. Instead it has entailed reform by stealth.

undertake investment and adjustment: those who can succeed in exporting should undertake the necessary investments in specific capital required to produce and service foreign markets. Those who will meet increased competition from imports must undertake the necessary steps either to adjust away from these activities or to develop strategies that will make them competitive. If the government can effectively put the private sector on notice that all tariff barriers will be eliminated by a certain date, and if these commitments are viewed as credible, then firms, workers, and farmers can immediately begin to undertake these adjustment strategies. From an economic standpoint, clear final goals thus make it more likely that liberalization will be successful.¹⁹

Governments, particularly those with a record of policy reversals, need to work to make clear that their plans will actually be implemented. Economic theorists have pointed out that trade policymakers with complete domestic autonomy may face a “time consistency” problem.²⁰ At some time in the future, after firms have sunk costs, it could be politically advantageous to reverse liberalization. If firms anticipate such reversals, however, they will be less inclined to act on expectations that the market will be opened, and thus the gains from trade could be smaller.

The payoffs from liberalization are likely to be highest, therefore, if the policy is locked in. To be sure, India could simply vote a fifteen-year plan for the elimination of all trade barriers and it could unilaterally relax its rules on foreign investment, but doubts would remain about the sustainability and permanence of these policies. Sovereign governments can, after all, simply change their policies and in democracies, governments can change. There are domestic measures, such as writing the policies into a constitution, that could serve to make them more permanent, but doing so can be cumbersome.

Such doubts could be greatly diminished, however, by signing binding trade agreements that entail reciprocal commitments. To be sure, no government would give up its right to withdraw from an agreement that proved to be a failure. Nonetheless, the prospects of future deviations will be kept in check by the discipline of losing the reciprocal benefits gained from the

19. If the intention is to liberalize fully, economists commonly advocate eliminating trade barriers as fast as possible. As shown by Mussa (1984), the presence of adjustment costs is not a reason for incrementalism. While private actors may choose to adjust slowly, in the absence of considerations relating to income distribution and other market imperfections, the government should eliminate barriers immediately. Externalities associated with adjustment could warrant a slower approach, although in this case, there may be more efficient instruments than tariffs to achieve this goal.

20. For a review of the literature, see Staiger (1995), especially pp. 1516–19.

agreement. This greater lock-in will in turn make policies more credible and hence more effective.

Complete and Comprehensive Agreements

Obtaining political support for a comprehensive agreement, that is, one that requires full free trade, may not be easy. Even when an agreement is implemented over a long period of time, for example “free trade by the year 2020,” comprehensive trade agreements telescope all the political battles into the present. Thus while comprehensive liberalization may maximize the economic benefits, it may also increase the political costs.

It is noteworthy that the General Agreement on Tariffs and Trade, for example, did not require its contracting parties to commit to complete free trade by a certain date. Instead the parties moved toward free trade in a series of steps, ratcheting the process up by undertaking measures that were feasible at each point in time. As might be expected, momentum was maintained by reducing barriers most radically in sectors with the least political resistance. Over half a century, the results of this approach were remarkable—tariffs on industrial products in developed countries were brought down from about 40 percent to 4 percent. But the process has also been very protracted and incomplete: there has been far less liberalization, for example, in sectors of interest to developing countries, such as agriculture and textiles and far less formal liberalization by developing countries themselves at the WTO.²¹

Reciprocity

Nonetheless, if the political conditions allow, it could be worthwhile having the political battles up front in the context of ratifying a trade agreement. In addition to enhanced credibility, reciprocal trade agreements can bring both economic and political benefits. Economically, the advantages come from improved access to foreign markets. If a country can use the opportunity of reducing its own trade barriers to persuade others to reduce theirs, it could add to its welfare.

Politically, the prospect of increased access to foreign markets can help stimulate support from export interests. If they understand general equilibrium economics, exporters should also support unilateral trade liberalization since, as Lerner first pointed out, a tax on imports is a tax on exports

21. Developing countries have engaged in considerable liberalization since the late 1980s, but much of it has been unilateral. Bound rates at the WTO remain far higher than those actually applied.

and reducing tariffs is like subsidizing exports.²² But this relationship is not transparent. Instead, exporters are more aware of the particular tariffs they pay on their imports and, absent a trade agreement, generally devote their efforts to obtaining relief from these costs through duty drawbacks or access to export-processing zones. However, the benefits they can enjoy from access abroad in a reciprocal agreement provide additional incentives for their support. A government could therefore find it easier to liberalize through agreements than it would if it tried to act alone.

Promoting Domestic Reforms

Trade agreements can also help domestic reforms. The politics of reform is often difficult. Reformers who believe their policies will bring benefits domestically may strengthen their hand if they can argue that implementing such policies will also confer the benefits of increased access to international markets. One of the best examples of this was the conditions to which China agreed to upon its accession to the WTO. By using the demands of the United States for introducing market-based measures as a condition for accession, reformers in China were able to gain the upper hand. Many in the outside world complained that the agreement with the United States was a painful price imposed by outsiders; in fact, for the most part it was a means by which the Chinese leadership effectively signaled their commitments to an open, market-based system in which private firms would play a major role.

There are many other examples. Currently, Europeans (and Americans) are debating reform of their costly and very inefficient agricultural policies. The negotiations in the Doha Round may help those seeking to reduce the market distortions such policies entail. This use of agreements is not simply practiced by the political right. In the European context, the introduction of a European Social Clause has been used to bolster left-wing policies, and in the United States, unions have tried to use trade agreements to improve their rights domestically.²³

The fact that trade agreements come as packages may also have disadvantages, however. Countries could find themselves adopting policies that

22. Lerner (1936).

23. Indeed, while many view American efforts to include labor standards in trade agreements as a protectionist measure to be used against foreigners, the history of these standards in the United States suggests that an important motivation was to raise these standards in the United States itself. Organized labor in the United States is not very strong politically, and in particular many U.S. states have rules that actually contradict core labor standards promulgated by the International Labor Organization.

they might not otherwise desire. In the Uruguay Round, for example, India was particularly opposed to the agreement on intellectual property. Nonetheless, because the Uruguay Round was presented as a single undertaking, India agreed to the TRIPS measures, presumably because it viewed the package as a whole as in its interest. Similarly, countries acceding to the European Union, such as the Baltic States, may find themselves having to accept higher levels of trade protection as a condition of membership.

In sum, the unilateral incremental liberalization employed by India since the early 1990s has been effective in engineering change. But the use of a binding trade agreement could bring additional benefits. Locking in the policies and making them more credible could lead to larger behavioral responses. This would be particularly true of policies that made commitments to comprehensive liberalization. Undertaking such commitments in the context of a reciprocal trade agreement could provide additional benefits to exporters and help mobilize additional domestic support for reform and liberalization. To be sure, these benefits would depend on the ability to obtain enough domestic support to negotiate an agreement that actually promoted the right kinds of domestic policies and to allow passage of the agreement.

The argument in this section has been couched in general terms. We have considered the general merits of conducting liberalization and reforms unilaterally or in the context of reciprocal agreements. *But the question of what type of reciprocal agreements remains.* In particular, should it be bilateral or multilateral? There are those who claim that the only desirable mechanism for reaping these benefits is through multilateral liberalization through the World Trade Organization and that a preferential agreement with the United States, for example, would provide no additional benefits. To deal adequately with such arguments, it is necessary to present a better idea of the likely contents of a free trade agreement. In addition, it is necessary to consider the feasible role a WTO agreement could play in providing such benefits.

Developing or Constraining the Domestic Policy Space

“By imaginatively using these external commitments and pressures as levers, as China is apparently doing successfully, it is to be hoped that the government, whatever its party affiliation, will be able to push the reforms further”

T. N. Srinivasan and Suresh Tendulkar

“The yardstick that matters is the degree to which trade reform contributes to the construction of a high-quality institutional environment at home.”

Dani Rodrik

A trade agreement is not simply about changing relative prices to achieve a more efficient outcome. Particularly for developing countries, it is also about achieving institutional reforms. The key question in the offensive case for a U.S.-India FTA is its likely impact on domestic institutional arrangements. To what degree will an agreement require India to undertake changes that are in its own interest and to what extent will it impose new constraints that could actually damage India's welfare? A complete answer to these questions will depend on the precise terms of the agreement, but it is possible to give some idea of the major opportunities and risks.

The list of areas for Indian reform is long. It includes the need for additional liberalization of trade and services; customs reform; measures to attract foreign investment; privatization and reform of public sector enterprises; adoption of competition and regulatory policies; liberalization of small-scale sector reservation policies; labor market reforms; reforms of policies for sick industries; reform of relations between the central and state governments; changes in the investment environment for power, telecommunications, and transportation; tax reform; and agricultural sector reform. Aside from specific actions in each area, there is a need to improve government performance by reducing corruption, increasing transparency, and providing opportunities for judicial review.

The preferential arrangements India has, or is in the process of negotiating with its Asian neighbors, are fairly shallow in the sense that the binding commitments focus mainly on border barriers to merchandise trade and are unlikely to make a major contribution to these internal reforms. In fact, even with respect to goods trade, these arrangements will have exceptions that will only be removed gradually. While they may include hortatory language covering services, investment, and cooperation, it is not clear to what extent these agreements will achieve full national treatment and rights of establishment for foreign investment and liberalization of services.²⁴ By

24. According to the Economist Intelligence Unit (EIU 2003, p. 36), Indian Prime Minister Atal Behari Vajpayee signed two free trade agreements in October 2003, one with ASEAN and the other with Thailand. The agreements divided commodities into three groups: a small list liberalized by 2004; another group on which tariff reductions will begin in 2007, and a third group for which tariffs are to come down by 2007. Some members of ASEAN were given more time to make the required reductions. India signed FTAs with Bhutan and Nepal in the early 1990s and with Sri Lanka in 1998 (that agreement took effect in 2000). It was also announced in October 2003 that an existing trade agreement with

contrast, the obligations in an U.S.-India FTA would be extensive and require action by a date certain. To illustrate this, we select some of the provisions from the recent FTAs the United States has negotiated and consider how these provisions might affect Indian domestic reforms. We draw examples from recent free trade agreements the United States has negotiated with countries or regions such as Central America, Chile, and Morocco.

Tariff Reductions

Tariffs are generally removed on a large percentage of trade as soon as the agreement is implemented. Most of rest are eliminated in the following ten or fifteen years. For example, more than 95 percent of the bilateral trade will become duty free when the U.S.-Morocco agreement enters into force and almost all tariffs between the two countries will be eliminated within nine years.²⁵ Similarly, when the agreement with Chile was implemented in January 2004, tariffs on 90 percent of U.S. exports to Chile and 95 percent of Chilean exports to the United States were eliminated.²⁶

For India similar undertakings would add to the pressures for tax reform and the adoption of a value added tax system that could replace the revenues lost on tariffs on U.S. goods. An agreement would also allow access to U.S. capital equipment and other products duty free, thereby reducing and possibly eliminating the need for the complex set of duty exemptions currently granted to firms producing for export markets.

Textiles and Apparel

When the Multifiber Arrangement expires in 2005, the United States will eliminate the quotas that currently restrain competition in its market. But products from China and other countries without preferences will continue to be subject to fairly high U.S. tariffs. Under these circumstances, duty-free

Bangladesh would be converted into an FTA. In addition, a comprehensive economic cooperation agreement was signed with Singapore in 2003, laying a road map for an eventual preferential trade agreement or FTA. India was also discussing possible FTAs with Afghanistan, Myanmar, South Africa, and Mercosur.

25. United States Trade Representative, "Trade Facts: Free Trade with Morocco," March 2, 2004 (www.ustr.gov).

26. United States Trade Representative, "Trade Facts, The US-Chile Free Trade Agreement: An Early Record of Success," June 2004 (www.ustr.gov). No tariffs will be applied to 80 percent of U.S. exports to Central America as soon as CAFTA is implemented, and the remaining tariffs are to be eliminated over ten years. United States Trade Representative, "Trade Facts: Free Trade with Central America," May 25, 2004 (www.ustr.gov).

access to the U.S. market will provide an important competitive advantage. The FTAs with Morocco, Chile, and Central America all allow for immediate duty-free trade in textiles and apparel for products meeting the agreements' rules of origin. A similar agreement would therefore give Indian producers a competitive advantage in the U.S. market.

In recent years Mexico, Central America, and others have taken advantage of the opportunity afforded by such preferences, and their clothing exports to the United States have enjoyed explosive growth. Because of such an agreement, Jordanian textile exports to the United States have increased from \$30 million to \$674 million in just four years.

This opportunity could similarly be used to stimulate further reforms of the reservation policies, which restrict certain sectors to small firms that have hindered Indian competitiveness in this sector. To be sure, the need to administer similar rules of origin for U.S. clothing sold in India would add complexity to Indian customs procedures, but India could, of course, choose simply not to require or enforce them.

Agriculture

The Moroccan FTA requires the phaseout of all agricultural tariffs under the agreement, most in fifteen years. The Central American agreement (CAFTA) adopts a similar approach, although a few very sensitive sectors retain their protection for longer periods and indeed in some cases liberalization only begins after the agreement has been in effect for ten years. Both agreements also contain special agricultural safeguards.

A similar agreement would create additional export opportunities for Indian farmers. Indian producers of sugar, rice, and dairy, among other crops could all increase their exports. Nonetheless there are precedents for excluding particularly sensitive sectors or for giving long periods of transition. The agreement with Morocco keeps restrictions on some especially sensitive sectors for as long as 25 years.²⁷ In NAFTA, Canada insisted on maintaining some of its agricultural protection, and in the recently signed U.S.-Australia FTA, sugar was actually exempted.

The United States continues to subsidize farmers in ways that distort trade and production, and some argue that until these subsidies are removed, it will not be possible to include agriculture in an FTA. But it is

27. For two poultry products, the agreement sets up two Moroccan tariff rate quotas (TRQs) under which out-of-quota tariffs would be eliminated over nineteen and twenty-five years respectively. A nineteen-year TRQ has been created for U.S. exports of whole birds, and a twenty-five-year TRQ for exports of U.S. leg quarters, which are the two most sensitive products for Morocco, a U.S. official said.

important to understand that for the most part, American farm products that are exported are sold at world prices. While farmers sometimes receive additional payments, these subsidies only affect the prices to the extent that they lower the world price. Studies suggest that U.S. payments do reduce world prices, but the effects are smaller than many discussions imply. For example, Bruce Gardener of the University of Maryland has estimated that the 2002 farm bill reduced world prices 6 percent overall compared with the prices that would have been in place if the farm bill had not been enacted. The U.S. Economic Research Service has estimated price effects of 1.5 to 4 percent for grain and soybean and up to 10 percent for cotton.²⁸

Thus for Indian farmers who are protected with tariffs that are orders of magnitude larger than these effects, the challenge of adjusting to world agricultural prices is far greater than that of dealing with the marginal impact of U.S. subsidies. Nonetheless, both sides could make it clear that they would continue to apply the basic principles of the WTO subsidies and countervailing duties code to all trade.²⁹ Aside from export subsidies, which the code forbids, the code allows for goods that have been subsidized to be traded unless they cause injury. Where subsidies are injurious, each side would apply countervailing duties commensurate with the subsidies. This would serve to level the playing field.

Services

The free trade agreements the United States has recently negotiated include broad commitments to open services markets. They use a “negative list” list approach, meaning that all service sectors are covered unless specifically excluded. Key services covered include audiovisual, telecommunications, computer and related services, distribution, construction, and engineering. They generally include significant market opening measures for opening up financial services such as banks, insurance, and securities and for an open and competitive telecommunications market. These reforms would introduce new competitors and new ideas and technologies into India.

The agreements also provide benefits for businesses wishing to supply cross-border services, for example, by electronic means as well as businesses wishing to establish a presence locally. The secure market access that would be given to these dynamic Indian sectors would help stimulate investments by both Indian and foreign firms. India would also be able to

28. These studies are cited by Hathaway (2002).

29. Under the FTAs signed by the United States, countries continue to apply their antidumping and countervailing duty laws.

secure greater access to visas (such as H1B) for supply of services in the United States.

Many Indian service sectors remain closed, and an agreement would help open them to foreign competition and investment. In these cases, opening up to the United States does not give rise to trade diversion because there is no trade to start off with. Moreover, in sectors in which there already is a foreign presence, if regulations that curtail competition are lifted, all who compete will benefit.

Regulatory Transparency

The Moroccan agreement contains “strong and detailed disciplines” for regulatory transparency. Improving transparency in the Indian governmental regulatory system would be beneficial not only for U.S. exporters and firms but for all domestic and international firms subject to these regulations.

Foreign Investment

Foreign investors bring much-needed capital. The domestic rates of Indian investment, on the order of 23 percent of GDP, are not compatible with a growth rate on the order of 8 percent. In 1998, for example, the economies in the Asia Pacific Region as a whole and in China in particular and China invested 37 and 38 percent of GDP, respectively. A key priority therefore must be to stimulate domestic and foreign investment.

The recent FTAs give U.S. investors, in almost all circumstances, the right to establish, acquire, and operate investments on an equal footing with local investors and investors from other countries. These rights are to be reinforced by a transparent, impartial procedure for dispute settlement.³⁰

Similar rules changes resulting from a U.S.-India FTA could help India attract much-needed foreign direct investment. In response to the liberalization that has already taken place, foreign investment has increased in

30. In its WTO accession agreement with the United States, with respect to foreign investment, “China agreed to eliminate export performance, local content and foreign exchange balancing requirements from its laws, regulations and other measures, and China also will not enforce the terms of any contracts imposing these requirements. China has also agreed that it will no longer condition importation or investment approvals on these requirements or on requirements such as technology transfer and offsets. China has further agreed that it will only impose, apply or enforce laws, regulations or other measures relating to the transfer of technology that are not inconsistent with the TRIMs Agreement (or the TRIPS Agreement).” See <http://ustr.gov/regions/china-hk-mongolia-taiwan/accession.shtml>.

recent years, but its aggregate level is remarkably small.³¹ Foreign investors have faced numerous discriminatory obstacles in addition to those that confront Indian firms. A binding agreement and a permanent commitment to provide national treatment in most sectors could go a long way to eliminating these disadvantages. With secure access to the U.S. market and an improved operating environment, India would begin to be viewed by U.S. firms as a far more attractive base for serving the world market. Having implemented such changes for U.S. investors, India could provide similar benefits to firms and investors from other foreign countries.

Governance

The Moroccan agreement requires publication of laws and regulations governing trade and investment, and publication of proposed regulations in advance to provide an opportunity for public comment. Governments agree to establish criminal penalties for bribery. Combating corruption is also an Indian priority. Again, success in this area would benefit both domestic and foreign participants in the economy.

Government Procurement

The agreement with Morocco imposes disciplines on most government purchases, including requiring national treatment of firms for purchases in excess of certain monetary thresholds. In addition there are strong and transparent disciplines on procurement procedures, such as a timely and effective bid review process and requirements for advance public notice of purchases. By signing such an agreement, India would be able not only to rationalize its own public procurement system, but also to avoid the U.S. government's use of government procurement to discriminate against outsourced services.

State-owned Enterprises

A crucial area for India's economic reforms relates to "public sector undertakings." The key challenge is to free these state-owned firms from being politically accountable and allow them to operate on a commercial basis.

31. The gross product of U.S. majority-owned foreign affiliates amounted to 0.1 percent of GDP in 1994 and 0.4 percent in 2001. According to its most recent survey, the U.S. Bureau of Economic Analysis (2003) reports that in 2001 U.S. firms had majority-owned foreign affiliates with assets of \$33.4 billion in China and \$13.5 billion in India, sales of \$32.5 billion and \$7.6 billion, net income of \$1.8 billion and \$265 million, respectively. The Chinese firms shipped \$2.9 billion in exports to the United States, whereas India shipped only \$140 million. The Chinese firms employed 273,000; the Indian firms, 77,000.

Privatization is one way to do this, but even in the absence of a change in ownership, these enterprises need to be transformed.³² A commitment to do this could readily be introduced into the FTA. When the United States negotiated the agreement for China's accession to the WTO, for example, it was forced to deal with the extensive role played by state-owned enterprises in that economy. Accordingly, in its accession agreement, China agreed that laws, regulations, and other measures relating to the purchase and commercial sale and production of goods or supply of services for commercial sale by state-owned (and state-invested) enterprises or for use in nongovernmental purposes would be subject to WTO rules. China also agreed that "state-owned enterprises must make purchases and sales based solely on commercial considerations, such as price, quality, marketability, and availability, and that the government will not influence the commercial decisions of state-owned enterprises."³³

Standards

The recently negotiated FTAs include provisions for technical standards and sanitary and phytosanitary standards (SPS). Developing countries often view such standards as creating barriers to their exports. But for the most part, meeting such standards is a prerequisite for international competitiveness since developed countries will not relax them for imports. International experience also suggests that deep integration agreements can provide opportunities for major improvements in standards and product quality. Mexico, for example, has been extremely successful in using NAFTA to its advantage in raising domestic standards and improving regulation. Sen emphasizes the extent to which the trilateral Free Trade Commission formed as a result of NAFTA and various other NAFTA committees adopted a problem-solving approach to regulatory issues, obviating the need for using dispute settlement mechanisms. NAFTA established an SPS committee along with nine technical working groups and a Committee on Standards-Related Measures with associated subcommittees that meet regularly to discuss implementation issues. "The mechanism, which has a strong problem-solving ethos, works to support improving the application of SPS provisions and in reducing regulatory discretion," Sen wrote.³⁴ Similarly, as Salazar-Xirinachs and Granados note, "NAFTA's environmental institutions have been partly responsible for the deepening

32. According to Ahluwalia (2002), privatization is essential because "autonomous commercial operation in the Indian political and bureaucratic culture does not seem possible."

33. See <http://ustr.gov/regions/china-hk-mongolia-taiwan/accession.shtml>.

34. Sen (2002).

level of technical cooperation on environmental protection between the U.S. and Mexico.”³⁵

Intellectual Property

The recent agreements require protection for trademarks, copyrights, and patents and call for strict enforcement of these provisions including criminalizing end-user piracy and providing for both statutory and actual damages under law. Governments commit to using only legitimate computer software. Some of these provisions would go further than the WTO TRIPS and could increase Indian obligations in a controversial area that does not necessarily accord with Indian interests or enforcement capabilities.

Labor and Environment

There are many misconceptions about what the labor and environmental provisions of a free trade agreement would include. It is important to emphasize first that none of the agreements signed by the United States require adherence to *specific* environmental and labor standards.³⁶ Instead, while the agreements generally commit countries to “strive to” promote core workers rights and protect the environment, the emphasis is placed on each government *enforcing its own domestic environmental and labor laws* and on not weakening environmental laws or reducing domestic labor protections in order to encourage trade or investment.³⁷

Moreover when it comes to enforcement, the agreements stress that “the parties retain the right to make decisions regarding the allocation of resources to enforcement with respect to labor (or environmental) matters determined to have higher priorities.”³⁸ To be sure, these obligations are backed by the agreements’ dispute settlement procedures, and cases can be brought where enforcement failures affect trade.³⁹ If one party is found guilty of such infractions and fails to come into compliance, however, the

35. Salazar and Granados (2004, p. 255).

36. The Singapore agreement, for example states that each party “shall strive to ensure” that its labor laws are enforced and consistent with the right of association, the right to organize and bargain collectively, the prohibition on forced labor, a minimum age of employment, and acceptable work conditions.

37. The CAFTA states, for example, that “a Party shall not fail to effectively enforce its labor laws, through a sustained or recurring course of action or inaction, in a manner affecting trade between the parties.” Article 16.2. Par 1 (a).

38. CAFTA Chapter 16, Article 16.2 1 (b).

39. The Singapore agreement requires each party to “not fail to effectively enforce its environmental laws, through a sustained or recurring course of action or inaction, in a manner affecting trade between the Parties. . . .”

other side may not be entitled to retaliate using trade protection. In the CAFTA agreement for example, a country found to be in violation of its enforcement obligations can be subject to a monetary assessment, but the assessment cannot exceed \$15 million and the funds are not necessarily paid to other party but may instead be used to help improve compliance.

The introduction of labor and environmental standards into trade agreements is extremely controversial. Basic principles of fiscal federalism indicate that the scope of governance should match the scope of the problem and thus that national rather than international rules are best suited to deal with environmental problems that are confined to one nation. This is particularly important when countries at very different levels of economic development might wish to make very different choices regarding standards and rules.⁴⁰ Efforts to harmonize or raise such standards could unfairly penalize poor countries with limited means. Moreover, even when environmental problems are international or global in scope, they are better dealt with through explicit environmental agreements, such as the Kyoto Protocols, rather than through trade agreements. Similarly, labor standards are better determined nationally, particularly when these standards only affect domestic workers. Some standards, of course, are so fundamental that they should be matters of international concern, for example, those that relate to genocide, but it may be better to deal with such core labor standards through the International Labor Organization rather than through the WTO.

Nonetheless, there is political support in the United States for introducing labor and environmental rules into bilateral trade agreements. Given these pressures, the particular formulation described above has some virtues. First, it encourages but does not require adherence to specific environmental or labor standards and therefore accommodates diverse national circumstances. Second, it allows action when a signatory fails to enforce the standards but only when nonenforcement affects trade, and it provides countries with room to argue that they have limited resources and that they place different priorities on their enforcement efforts. Third, in the event of a breach, it does not lead to trade sanctions and should therefore not become a disguised form of protectionism. Fourth, the monetary assessments are capped and not necessarily paid to the complaining country. Finally there are usually provisions for cooperation and aid to help improve

40. Ironically, according to Srinivasan and Tendulkar (2003 p. 124), "PC Mahalanobis, the architect of India's development strategy pointed out long ago that India's labor laws imitated those in advanced industrial countries and were out of tune with Indian labor market realities."

domestic enforcement capacity. On balance, therefore, the costs of signing such an agreement are unlikely to be large, and it could help win political support from (and provide cover for) members of Congress with strong labor and environmental constituencies.

Even this partial listing of the essential elements of an FTA with the United States makes clear that India could use an agreement to bolster and accelerate many dimensions of economic reform. These include tariffs, taxes, agriculture, foreign investment, government procurement, regulatory policy, competition policy, and public sector enterprises. In addition, however, India would probably have to accept obligations regarding intellectual property, labor, and environmental standards that it might not welcome. These obligations, however, are likely to relate primarily to enforcement, not to specific rules, and in the event of breach would not give rise to trade sanctions.

We close with two words of caution. The first relates to the importance of complementary action. Signing a trade agreement is not sufficient to ensure that the institutions that are necessary to capitalize on reform will be in place. An agreement can provide an opportunity and stimulus, but domestic policy must follow through. In fact, a failure to do so could lead to conditions that are worse than they were before the agreement was reached. Thus an agreement to place public sector undertakings on a commercial basis must be accompanied by the creation of appropriate institutions and policies to regulate and police competition; an agreement to eliminate small-scale reservations must be accompanied by programs to help small producers become more competitive; an agreement to eliminate or reduce tariffs must be coupled with the implementation of offsetting taxes. Enactment of all these accompanying measures will take time and require financial, political, and intellectual resources. Absent these types of responses, the agreement is unlikely to be implemented effectively. Accordingly, the use of trade agreements as an instrument for reform requires particular preconditions and may not be appropriate for all countries. Even if most of the changes called for in an FTA with the United States are desirable, a crucial issue is whether an agreement requires these changes at the appropriate time. In particular, is sufficient time given to adequately prepare for the required changes. Sometimes, as they say, a kick in the pants gets you going—at other times, it just hurts.

The second type of complementary action that is crucial relates to extending the benefits accorded to the United States to other foreigners. In a free trade agreement, nothing constrains India from avoiding excessive dependence on the United States by additional liberalization. A U.S.-India

FTA should be but one component of a broader strategy to immerse India in the global economy. Opening to the United States should be accompanied by similar measures both unilaterally and through negotiations with other countries.

This second note of caution comes back to the basic issue. Trade agreements may provide benefits, but they also entail constraints on domestic policy action. Only if there is sufficient overlap with the measures India needs to take anyway, will an FTA be beneficial.

FTA vs. WTO: Which Is a Better Commitment Mechanism for Indian Reforms?

“It has been claimed that contemporary RTAs [regional trade agreements] provide benefits from deeper integration such as greater national security, greater bargaining power in international negotiations, and the possibility of locking in domestic reforms by invoking commitments undertaken in an RTA. However, no convincing case or evidence has been offered why preferential trading is a prerequisite for these benefits. . . .

The argument that preferential liberalization on a discriminatory regional basis and non-discriminatory multilateral liberalization are reinforcing is utterly (un)[sic] convincing.”

T. N. Srinivasan and Suresh Tendulkar

In this section, we dispute these claims. The outcome of the Doha Round could improve Indian access to foreign markets, but it may not be particularly effective in helping India reduce its domestic trade and investment barriers or in promoting domestic structural reforms. India's bound rates, that is, the tariffs ceilings to which it is legally committed, at the WTO are so high that they do not constrain its policies. Even a very successful Doha Round would not require much additional liberalization on India's part. With investment and competition policy apparently off the table, additional opportunities for spurring reform are limited. India could, and should, make bold offers to secure the elimination of tariffs on and the free flow of IT services. But, thus far in the talks, it has emphasized reductions in agricultural subsidies, and in any case, as just one of 148 participants, India cannot exert a dominant influence on a WTO agreement.

Those who argue for an exclusive reliance on multilateral liberalization often compare *actual* free trade agreements with an *idealized* version of multilateral liberalization. To be fair, however, today's FTAs should be

compared with today's liberalization through the WTO in the Doha Round. This is important, because such a comparison highlights the serious possibility that even with a successful round, multilateral liberalization will almost surely remain incomplete. Indeed, a country like India might not have to undertake any additional liberalization at all!

The multilateral system has enjoyed considerable success in reducing trade barriers. In the late 1940s the world was fragmented by tariff and non-tariff barriers; by the end of the Uruguay Round in 1994, the applied and bound tariffs rates of the industrial economies were just 2.6 and 3.7 percent, respectively.⁴¹ However, liberalization has been slow and undertaken in relatively small steps.⁴² The Kennedy (1963–67), Tokyo (1973–79), and Uruguay Rounds (1986–94) took successively longer to complete, and they achieved average tariff reductions of just 35, 33, and 33 percent, respectively.⁴³

On the basis of this record, it is reasonable to expect that the Doha Round negotiations, which began in 2001 could be protracted, and in the end again reduce average tariffs by about a third. It is also striking that while GATT and WTO have brought average tariffs down, many developed countries maintain high tariff peaks for certain products, while many developing countries retain substantial protection.

These outcomes are the predictable consequences of the way the multilateral system works. In particular, negotiations reflect the ability of countries to win concessions from each other by agreeing to reduce barriers on a reciprocal basis.⁴⁴ Once concessions are made, they are extended under the most-favored-nation (MFN) principle to all members unconditionally. This has the great virtue of nondiscrimination between members, and it leverages the strengths of the powerful to provide benefits for all. But in a system in which participants view opening markets as a concession, it also creates an incentive for free riding.⁴⁵

A key notion in the WTO system is that concessions are made on a reciprocal basis.⁴⁶ What exactly does "reciprocity" mean? According to Kyle

41. Laird (2002, p. 98).

42. As Robert Staiger (1995, p. 1528) observes "A striking feature of the multilateral trade liberalization that has occurred since 1947 is just how long it has taken."

43. Hoekman and Kostecki (2001, p. 101).

44. For an extensive consideration of the role of concessions and reciprocity in the WTO, see Lawrence (2003).

45. Caplin and Krishna (1988) formally illustrate this problem.

46. Kenneth Dam (1970, pp. 58, 59) recalls that the Havana Charter, the precedent to the GATT, emphasized that "no Member shall be required to grant unilateral concessions." He later notes: "From the formal legal principle that a country need make concessions only

Bagwell and Robert Staiger, “the principle of reciprocity in GATT refers to the ‘ideal’ of mutual changes in trade policy that bring about changes in the volume of each country’s imports that are of equal value to changes in the volume of each country’s exports.”⁴⁷ Although it is nowhere defined explicitly, implicitly reciprocity in the WTO is used in a specific sense. WTO members are not required to remove their trade barriers completely, nor are they generally required to have the same tariff levels, either on average or for the most part, on specific commodities. Instead, as a result of each negotiation, members are expected to give, in value, the same *new* trading opportunities as they receive. This is a system based on what Jagdish Bhagwati has termed “first difference” reciprocity.

However, full reciprocity is not required of developing countries. They are provided with “special and differential treatment.” The GATT states that the “developed contracting parties do not expect reciprocity for commitments made by them in trade negotiations to reduce or remove tariff and other barriers to the trade of less-developed contracting partners.”⁴⁸

The combination of special and differential treatment and MFN status creates a very permissive system for developing countries. Under MFN they obtain market access automatically, but they remain free to keep their own barriers high. For most of the postwar period, India with its very high domestic tariffs was a perfect example.

The predictable result of combining a system based on negotiating power with special and differential treatment is that the barriers that remain today—particularly those in labor-intensive manufacturing and agriculture—happen to be highest in sectors that are of particular interest to developing countries. As the saying goes, “You don’t get what you deserve, you get what you negotiate,” and because developing countries have smaller markets and incentives not to reciprocate, protection in developed countries remains higher on the products developing countries are particularly interested in exporting.

Consider the U.S. and Indian perspectives on the Doha negotiations on Non-Agricultural Market Access (NAMA). For the United States, whose tariff levels are for the most part very low (see the simulations below), the

when other contracting parties offer reciprocal concessions considered to be mutually advantageous has been derived the informal principle that exchanges of concessions must entail reciprocity.” Thus while the GATT does not formally require that negotiations produce balanced concessions, it is implicitly assumed that they have done so.

47. Bagwell and Staiger (2000, p. 37).

48. GATT Article XXXVI.8

principle of “first difference” reciprocity is now a problem, since it could leave the United States without anything to bargain with. The United States has therefore offered to eliminate all its remaining tariffs on non-agricultural products, but only if other countries do the same (although with different phaseout periods for developing countries). For other WTO members, however, this offer violates the principle of (first difference) reciprocity; in addition, from the viewpoint of developing countries, it also violates the provisions for special and differential treatment.⁴⁹As a result, developing countries are likely to reject the U.S. offer and propose something less radical. In response, the United States will seek to keep some of its tariffs.

The result is that if the Doha is concluded successfully, it will probably reach a NAMA agreement that looks like the previous rounds. On the basis of the three previous WTO agreements, we should expect that a successful Doha Round will succeed in persuading countries to agree to an average cut in tariffs of around 33 percent, with developing countries agreeing to reductions that are about two-thirds that average, or around 22 percent. A more ambitious 45 percent reduction overall would result in 30 percent average reductions by developing countries.

So how much *additional* liberalization would such an agreement require from a country like India? Not much. Perhaps not any at all. The parameters of any agreement would relate not to the rates that India actually applies now but to those that it has bound. According to WTO estimates, by 2005, India’s bound average tariff rate will be 50.6 percent, with an average of 115.7 percent on agricultural and 37.7 percent on nonagricultural products.⁵⁰ Compare these average bound rates with Indian applied rates averaging 32.3 percent in 2002.⁵¹ India could thus simply bind its current applied rates today and take credit for a 36 percent reduction. But it is unlikely to do this because it would entail an unreciprocated concession. Moreover, if the developed countries were willing to provide only a 33 percent reduction, a 36 percent reduction by India would be incompatible with special and differential treatment. The result

49. According to Laird and others (2003), the Quad countries (Canada, European Union, Japan, and the United States) agreed in the Uruguay Round to ten “zero-for-zero” initiatives (beer, brown spirits, pulp and paper, furniture, pharmaceuticals, steel, construction equipment, medical equipment, agricultural equipment, and toys) and one “harmonization” initiative—chemical products. After the Uruguay Round, the Information Technology Agreement (ITA) used a zero-for-zero approach, by which a critical mass of countries agreed to reduce all tariffs to zero on the selected range of products.

50. WTO (2002).

51. WTO (2002, p. 31).

is that in response to a 33 percent average reduction by developed countries, India's bound rates would be more likely to fall by 22 percent to 44 percent. They would remain far out of line with applied rates that are actually scheduled to be between 10 and 20 percent for nonagricultural products by 2005.

Suppose India wanted to use the WTO to really lock in its tariff reductions. India would have to propose (or at least accept) a variant of the U.S. proposal and agree to eliminate all (or almost all) tariff barriers by a date certain. To be sure, in this case, the WTO would become a far more effective lock-in mechanism than an FTA. But consider the implications. Either all developed countries and most developing countries would have to make similar commitments, or India would find itself in the same position as the United States—it would have eliminated all its bargaining chips without ensuring that others had removed all their tariffs. There may be no harm, and considerable benefit, to India for making such a proposal, but its acceptance certainly should not be counted upon.

The current WTO system generally stands in the way of a developing country such as India, using WTO agreements to bring about really meaningful liberalization. At the time of accession, when countries such as China have to obtain the agreement of all other members, countries have been forced to make commitments that go further than commitments made by existing members at similar stages of development. The United States, for example, refused generally to treat China as a developing country and insisted that it join on commercial terms. This allowed China to use the WTO as a device for committing to major reforms.

For those that already have membership, therefore, the leniency embodied in special and differential treatment seriously undermines the use of the WTO as a mechanism for mobilizing the support of export interests for trade liberalization. It is hard to rally export interests to support liberalization in the context of a WTO agreement unless one can argue that the liberalization is required to receive the market access benefits others are offering. To be sure, India could simply announce that it was willing to bind its tariffs at the new applied rates. But again, politically, this would be a hard sell within India, where it would be seen as giving up something for nothing.

One response would be to try to remedy the problems with the WTO system, by eliminating the principle of special and differential treatment or requiring developing countries to bind their applied rates. But this is not politically feasible, and in any case, not desirable for countries that are simply not ready to make such commitments. Even if it felt capable

of undertaking such commitments for itself, India would feel the need to protect other developing countries that are not ready to make similar concessions.

How about investment? India could certainly be more forthcoming in liberalizing services investment by making offers under GATS (General Agreement on Trade in Services) mode 3, which relates to services requiring the establishment of firms in the foreign market, presumably in return for liberalization by others under modes 1 and 4, which relate to cross-border services and those requiring labor in the foreign market, respectively. But such liberalization would apply only to certain sectors in services. A more comprehensive commitment to foreign investment through the WTO does not seem possible because efforts at Cancún appear to have succeeded in keeping investment and competition off the agenda.

The argument here should not be misinterpreted. India's participation in the WTO makes eminent sense. India derives considerable benefit from a trading system based on the rule of law. Moreover, its unilateral liberalization places it in a strong position to play an active role in moving the global talks forward. In addition, there is considerable merit for an organization with a membership as diverse as the WTO to focus heavily on market access and rules that outlaw discrimination against foreign goods and services. Other international institutions with more select membership may be better suited to deal with deeper integration relating to issues such as labor standards, the environment, and competition policy. At the same time, however, there is merit in allowing those countries that are prepared to make binding commitments in such areas to negotiate bilateral or plurilateral agreements.

By contrast to the WTO's special and differential treatment, the FTAs signed by the United States *are* based on full reciprocity. Special and differential treatment comes into play only in the length of time required for the agreement to be phased in and not the nature of the commitments assumed by each side. FTAs provide considerable incentives for the support of export interests. For exporters, the carrot is not simply being able to compete free of tariff hindrance against firms in the partner country, but also gaining preferential access to that foreign market and thus an advantage over firms outside the agreement. The connection between liberalization at home and foreign market access is more diffused at the WTO. It depends not only on the actions India takes but also upon those undertaken by the other 147 members of the organization. In a bilateral FTA, the links are direct.

In addition, because they have more comprehensive coverage than the WTO, these FTAs provide greater scope for locking in policies that are not

covered in WTO agreements. This more comprehensive coverage may also facilitate agreements. Broad agendas may help to create winners on both sides.⁵²

The FTAs' deeper integration gives them advantages in signaling changes in policy direction. This applies particularly to investment. Mexico was spectacularly successful in using its partnership in NAFTA to attract foreign direct investment. India's willingness to sign a binding agreement with the United States would likewise send a powerful signal that it was really open for business.

How would a free trade agreement with the United States affect India's ability and willingness to bargain for reciprocal liberalization through other FTAs and at the WTO? Let us deal with ability first and willingness second.

A U.S.-India FTA would surely make India a more attractive negotiating partner for third countries. The need to remain competitive with U.S. products, services, and investment in India would motivate others to sign similar agreements. Thus the FTA would broaden participation in global integration. It is not a coincidence, for example, that, in the aftermath of NAFTA, Mexico has been able to conclude a large number of FTAs with other nations. The EU, for example, has been eager to eliminate the advantage given to U.S. products by NAFTA and in return has provided Mexican exports with preferential access to its markets. Both the EU and Japan would seek to emulate the U.S.-India agreement.

To bargain effectively in complex negotiations, parties need to tread a fine line between being too eager or too reluctant to conclude a deal. If the other side believes you are very eager, it will take advantage and offer you little; if it believes you are very reluctant, it may also be unwilling to make its best offer, particularly if that offer could be politically costly. India currently has a reputation for being extremely reluctant to make concessions at the WTO, partly because of its long history of protectionist policies. Indicating a willingness to sign an agreement with the United States would change these perceptions. Indications that India was also prepared to make reciprocal concessions in the WTO would be taken far more seriously. At the same time, hints that India was not totally dependent on the WTO and had bilateral options as well could also improve its bargaining ability. India

52. To be sure, the greater diversity of WTO membership may offset this advantage. Just as money is superior to barter because it does not require the double coincidence of wants, so the diversity of WTO membership may make it possible to find deals when two countries alone cannot. B might want something from A but have nothing to give in return. But B might have something C wants and C might have something A wants. Thus a deal can be struck between the three of them (A gives to B, B gives to C, and C gives to A) when bilaterally no trade is possible.

could then credibly challenge developed countries to improve their own offers dramatically by suggesting, on a contingent basis, its willingness to engage in extensive multilateral liberalization of its own.⁵³

Moreover, U.S. negotiators would see an FTA with India as the jewel in their crown. It would represent the major achievement in the current policy of competitive liberalization. A free trade agreement with India would have important strategic benefits for the United States. This fact would strengthen India's hand in its bilateral negotiations with the United States. Although the United States already has agreements with a large number of countries, many of them are very small and of little strategic importance. This would not be true of India. An FTA with India would put considerable pressure on other countries to try to regain their relative positions, either by negotiating similar agreements with the United States or by supporting more extensive liberalization at the WTO.

But would entering into a bilateral agreement make either India or the United States more reluctant to liberalize multilaterally or unilaterally? The beauty of an FTA—as opposed to a customs union—is that India would retain control of its trade policy. Nothing could stop India from extending its commitments to the United States to other countries. India could unilaterally eliminate the trade-diverting aspects of rules of origin and preferential tariffs. Similarly, having made its environment more attractive for foreign investors from the United States, India could simply give similar treatment to investors from other countries. Some Americans might try to object to the dilution of their preferences, but the United States has put no pressure on its other FTA partners to avoid other agreements, as the large number of free trade agreements Mexico has signed illustrates.

Preferential access to the U.S. market could make India less eager for the United States to reduce its MFN textiles tariffs. India might be less willing to provide the United States with concessions at the WTO in order to preserve its privileged access. There were rumors for example, that the Common Agricultural Policy (CAP) countries, motivated by the desire to keep their preferences, used their opposition to the Singapore issues (that is, competition, investment, transparency in government procurement and trade facilitation) to prevent success at Cancún. This kind of behavior might nonetheless be in India's interest even if it did have negative implications for the system.

In this section, we have challenged the idea that an FTA with the United States has no particular advantage over Indian liberalization at the WTO.

53. Mattoo and Subramanian (2003).

On the contrary, we have pointed out that features such as special and differential treatment and MFN status have led to a situation in which India's commitments at the WTO are not particularly relevant for its domestic liberalization. In addition, areas such as investment and competition are not on the WTO agenda. As a result India's ability to use the need for reciprocal concessions to mobilize domestic political support for liberalization and reform has been weakened. By contrast, a free trade agreement with the United States would require virtually complete elimination of barriers and much deeper international integration. As such, it would be more effective as a mechanism for mustering domestic support.

There is, however, no reason why India should have to choose between these approaches. They can be used in a complementary manner to reinforce one another. Deeper integration can be achieved through the FTA route, but at the same time, India could be more forthcoming in the Doha Round. Both these approaches are quite compatible with additional unilateral liberalization. As we show in the next section, for India an even better outcome than eventually eliminating its barriers at home would be simultaneously to have no domestic barriers and preferential access to foreign markets.

Comparative Static and Dynamic Considerations

"In our judgment the discriminatory and trade-diverting aspects of preferential trading arrangements, regardless of whether they are open or not, far outweigh any benefits to be reaped."

T. N. Srinivasan and S. D. Tendulkar

Again, this section challenges the skeptical voices quoted above. The traditional thinking about preferential trading arrangements is often couched in Viner's terms of "trade creation" and "trade diversion."⁵⁴ While these terms are somewhat imprecise, they do convey the basic idea that compared with multilateral free trade, preferential trading arrangements are something of a mixed bag. Under competitive market conditions, full free trade creates a market in which price signals lead to an efficient allocation of resources. By contrast, with a preferential system, prices do not necessarily give the right signals, because they are influenced by the barriers that

54. Viner (1950). Trade diversion and creation refer to the impact on production, but as Lipsey (1957) showed, if the consumption benefits are sufficiently large, welfare may be improved even when trade is diverted.

remain on outsiders. The result is that, a priori, a preferential trade arrangement's impact on welfare is ambiguous: it could improve welfare by providing the participants with production and consumption gains attributable to reducing tariff distortions; it could also reduce welfare by inducing members to buy from less-efficient suppliers in partner countries rather than from outsiders. Considerable theoretical effort has gone into establishing criteria for predicting the characteristics that make partners suitable for preferential arrangements. For example, Lipsey argued that preferential systems are likely to be beneficial if the partners initially accounted for a large share of each other's imports.⁵⁵ But in the final analysis, in most cases, a definitive answer requires an explicit empirical investigation.

In reality, moreover, markets are not perfectly competitive and firms are not all subject to constant returns to scale. Indeed, imperfect competition and scale economies are quite common. In these circumstances, estimating the impact of trade liberalization becomes even more complicated. There are additional changes brought about by changes in competitive conditions, scale economies, and the number of product varieties that need to be incorporated. These features make the theoretical effects of removing trade barriers (both preferentially and multilaterally) ambiguous and again indicate that empirical evaluation is required. Indeed, empirical studies incorporating these considerations suggest that the welfare effects of a preferential trade arrangement can be many times larger than those considering only competitive effects.⁵⁶

Despite this basic ambiguity, many economists who are predisposed to free trade oppose preferential systems and advocate exclusive reliance on nondiscriminatory liberalization. In India's case, for example, the quote from Srinivasan and Tendulkar at the start of this section and the writings of Panagariya (see his paper in this volume) reflect the view that preferential trade arrangements are undesirable, particularly because of the dangers of trade diversion. But for the most part, their views are based on theoretical and a priori reasoning rather than detailed empirical analysis.

Forswearing preferential trade arrangements under all circumstances may not be the wisest advice. Three sets of considerations merit attention. First, how does a specific agreement affect welfare? As noted this question requires a detailed empirical investigation. Second, what additional policies will the country take? Countries may have the ability to combine their membership in preferential arrangements with additional liberalization. For example, if trade diversion is a problem, a country that participates in

55. Lipsey (1957).

56. See Baldwin and Venables (1995).

a free trade agreement (rather than a customs union) could lower its external tariffs on the products where there is trade diversion and end up only with trade creation. *Moreover, for a small country, even better than having no trade barrier is having no barriers along with preferential access to all other markets.*⁵⁷ This makes the country a hub and its preferential partners all spokes.⁵⁸ Thus complementing full free trade at home with untrammelled access to the rest of the world is surely the best of all worlds. (In fact, this may well be the objective of Singapore's drive to conclude FTAs with almost every country it can find, even though it is almost completely open.) Third, what are other countries doing? The appropriate policy on membership in preferential trade arrangements is surely not independent of the actions of other countries. If the trading system breaks up into trading blocks, or if their most important competitors gain preferential access to major markets, countries may be better off seeking refuge in one or more blocks, rather than trying to go it alone.

In this section, we explore these considerations to understand the impact of a free trade agreement between India and the United States. We provide several simulations, using the NCAER-University of Michigan computable general equilibrium model of world production and trade (see appendix). Our purpose is not to provide an estimate of the aggregate benefits of an FTA that takes into account the gains that would result from improved resource allocation attributable to removing tariffs on goods, liberalizing and securing trade in services, enhancing foreign direct investment, and bolstering Indian domestic reforms.⁵⁹ Instead, our purpose is the more modest one of considering the liberalization of trade in goods, precisely because this issue appears to be the major concern of FTA critics.

The model, described in detail in the appendix, is designed to capture the long-run impact of an agreement. It is a real model that holds employment and the trade balance constant. It therefore captures not only the initial impact of the FTA on trade and employment but the additional adjustments that would be required to restore equilibrium. For example, the initial

57. Kowalczyk (2000).

58. Cooper and Massell (1965) said that for a small country, unilateral tariff reduction was always preferable to joining a customs union since trade creation alone was better than trade creation combined with some diversion. But the simplicity of this argument is destroyed once intraunion terms of trade effects are allowed for, even when the assumption of a union of small countries is retained. "If A unilaterally reduced its tariffs . . . it would avoid the trade diversion loss, but would forgo the gain to be had from B reducing its tariffs. When they reciprocally reduce tariffs, the intra-union terms of trade may turn in favor of A and, in spite of the trade diversion loss, joining a union may then be better for A than unilateral tariff reduction by it" (Corden 1984, p. 121).

59. Chadha and others (2003).

impact of removing U.S. and Indian tariffs could be to leave India with a trade deficit. Additional shifts in the relative price of Indian products could then be required to increase Indian exports or reduce imports (or both) to restore the trade balance to its original position. Likewise the agreement could increase or decrease the aggregate demand for labor, requiring wage and employment adjustments to restore labor market equilibrium. Because it is based on full employment and a constant capital stock, the real income changes captured by the model reflect the effects of resource allocation rather than changes in the aggregate level of inputs.

It should be emphasized, therefore, that the simulations reported here relate only to the removal of barriers to trade in goods. Including services and investment would lead to far larger numbers and indicate large benefits. Nonetheless, since the problem of trade diversion is likely to be mainly, although not exclusively, an issue relating to goods trade, the simulations do provide some useful insights on this question.

We first simulate a free trade agreement between India and the United States. We then consider how the impact of such an agreement would be affected if in addition to the FTA, India, the United States, or both removed their remaining barriers. We also present scenarios that allow us to compare the U.S.-India FTA with unilateral liberalization by India, unilateral liberalization by the United States, and multilateral global liberalization.

Finally, we consider the FTA as a response to regional blocks. We simulate the breakup of the world trade system into three large regional trading blocks; and in this world explore the effects of a U.S.-India FTA, Indian membership in the Asian block, and Indian unilateral liberalization.

Results of Liberalization under an FTA

As reported in table 1, trade between India and the United States is relatively small and fairly concentrated. In 2002–03 almost 30 percent of Indian exports to the United States were cut gems and 17 percent were cotton textiles and apparel. Indian imports from the United States were concentrated in electronic goods (23 percent), transportation equipment (12 percent), and nonelectrical machinery (11 percent).

As table 2 shows, a free trade agreement between India and the United States would confer benefits to both sides. Indian welfare improves by \$2.4 billion (0.61 percent of GDP) and the United States by \$3.3 billion (0.04 percent of GDP). These effects may appear small relative to the incomes of both countries, but the gains are significant given the value of trade (see table 1). Although the model does not provide a separate esti-

TABLE 1 . India-U.S. Trade, 2002-03

<i>India's exports to U.S.</i>	<i>Millions of U.S. \$</i>	<i>Share (percent)</i>	<i>India's imports from U.S.</i>	<i>Millions of U.S. \$</i>	<i>Share (percent)</i>
All commodities	10,883.76	100.00	All commodities	4,429.00	100.00
Gems and jewelry	3,251.72	29.9	Electronic goods	1,004.89	22.7
Readymade garments of cotton including accessories	1,267.22	11.6	Transportation equipment	530.07	12.0
Cotton yarn fabric, madeups	602.47	5.5	Nonelectrical machinery	470.99	10.6
Drugs, pharmaceuticals and fine chemicals	419.18	3.9	Professional instruments, optical goods	243.79	5.5
Manufacturers of metals	413.56	3.80	Organic chemicals	213.76	4.8
Marine products	386.51	3.6	Pearls, precious and semiprecious stones	167.74	3.8
Handicrafts excluding handmade carpets	298.77	2.8	Chemical material and products	125.60	2.8
Electronic goods	262.55	2.4	Pulp and waste paper	113.44	2.6
Readymade garments of man-made fibers	254.21	2.3	Artificial resins, plastic materials	105.74	2.4
Machinery and instruments	253.29	2.3	Electrical machinery	82.45	1.9
Primary and semifinished iron and steel	238.77	2.2	Metalliferous ores and metal scrap	70.94	1.6
Cashew	222.76	2.0	Computer software	69.38	1.6
Carpets, handmade	195.45	1.8	Cotton, raw and waste	68.50	1.5
Transportation equipment	187.61	1.7	Manufactures of metals	62.84	1.4
Plastic and linoleum products	131.44	1.2	Vegetable oils (edible)	53.88	1.2

Source: Centre for Monitoring Indian Economy, *Foreign Trade and Balance of Payments*, various issues.

TABLE 2. Liberalization Simulations

Type of liberalization	Impact on		
	India	United States	Rest of world
1 India unilateral	4,882	4,171	19,471
2 U.S. unilateral	696	6,655	22,664
3 U.S.-India free trade agreement	2,429	3,296	-108
4 Multilateral	7,832	44,567	422,823
5 1 + 3	5,890	5,149	18,351

mate of the negative impact of trade diversion associated with a free trade agreement between the United States and India, *it does suggest that whatever these effects may be, they are more than offset by trade creation and the other benefits such as scale economies and the increased competition that the agreement would induce.*

The impact of the FTA on the rest of the world is relatively small, and trade diversion appears to be minimal for other countries. Welfare in the rest of the world declines by just \$108 million. By contrast, Indian imports rise by \$1.5 billion and U.S. imports by \$1.7 billion. All told, the scenario certainly does not support those who claim such an agreement would reduce Indian welfare. Indian labor and capital both gain.

Table 3 provides a more detailed breakdown of the sector impact of a U.S.-India FTA. As a general equilibrium model designed to estimate impacts over the long run, the model appropriately keeps employment constant, but it does capture shifts in the composition of employment and thus gives an idea of the labor market adjustments a free trade agreement would require. For India the employment gains are largest for agriculture (56,111 workers), textiles (140,000) and apparel (59,926), while employment is reduced in other manufactured goods, trade and transportation, and public administration. The expansion of Indian agriculture is interesting because it suggests that despite U.S. agricultural subsidies, the marginal impact of eliminating trade barriers in both countries is to expand agricultural production in India and reduce it in the United States. Given higher productivity levels, the effects on U.S. employment are considerably smaller. All told, displacement is less than 10,000 jobs and would be imperceptible in the U.S. labor force of 138 million. Sectors losing jobs include agriculture (1,990 jobs), textiles (2,804), apparel (3,959) and leather, wood and paper products (543).⁶⁰

60. The Indian labor force numbers about 450 million. The U.S. labor force is about 138 million.

TABLE 3. U.S.-India Free Trade Agreement: Sectoral Impacts in India

<i>Sector</i>	<i>Exports (percent)</i>	<i>Imports (percent)</i>	<i>Output (percent)</i>	<i>Employment (number)</i>
Agriculture	5.0	1.9	0.0	56,111
Mining and quarrying	-0.2	-0.2	-0.4	-8,083
Food, beverages, and tobacco	3.0	7.5	0.2	7,985
Textiles	4.4	2.2	1.5	140,107
Wearing apparel	15.6	4.6	8.5	59,926
Leather, wood and paper products	3.3	2.7	0.2	6,365
Chemicals, rubber, and plastics	1.9	4.1	-0.5	-8,112
Nonmetallic mineral products	1.8	12.9	-0.8	-28,478
Metal and metal products	1.8	1.7	-0.6	-22,234
Transportation and machinery equipment and parts	1.0	7.5	-1.1	-14,796
Manufactures including electronic equipment	1.9	3.8	-0.4	-37,669
Electricity, gas, and water	0.0	-0.2	-0.2	-1,973
Construction	0.1	-0.3	-0.2	-19,166
Trade and transportation	0.1	-0.2	-0.1	-46,395
Financial, business, and recreational services	0.2	-0.3	0.0	-917
Public administration, defense, education, health, and housing	-0.2	-0.1	-0.3	-82,671
Total	3.5	3.2	-0.0	0

The overall impression is that for the United States, the economic impact of an agreement would be positive but small relative to gross national product. For India, the gains are comparatively larger. But the absolute gains are larger for the United States. Moreover this analysis neglects the additional gains that India would reap through increased investment and services liberalization. It also fails to capture the benefits that could accrue from placing outsourcing activities and IT services in a framework that reduced the possibilities of protectionist responses.

As indicated in table 2 (see also the table appendix), India would gain more from unilateral liberalization than from a free trade agreement with the United States. Under unilateral liberalization, Indian welfare would rise by \$4.9 billion, or about 1.2 percent of GDP. Unilateral liberalization and a free trade agreement with the United States are not necessarily mutually exclusive, however. *In fact, India would do even better to combine these approaches.* If instead of liberalizing unilaterally, India first signed a free trade agreement with the United States and *then* liberalized with all its other trading partners, it would boost its income by \$5.9 billion, or 20 percent more than under simple unilateral liberalization.

One of the major concerns voiced about preferential trading arrangements is that they could reduce the incentives for additional liberalization. In this case, for example, a preferential agreement between the United States and India could provide incentives for the United States to try to preserve its preferences by preventing India from liberalizing further. To be sure, this concern is less acute for a free trade agreement in which India retains discretion over its trade policy than it would be for a customs union. It is also less likely that India would be able to exert much influence over U.S. policy. But the question of U.S. pressures on India remains.

A free trade agreement with India would raise U.S. income by \$3.3 billion. If India then responded with unilateral liberalization, U.S. income would increase by an additional \$1.9 billion to \$5.2 billion. *The United States therefore has an interest in having India become more open even after the two countries conclude a free trade agreement.* The United States apparently gains more from the improvement in its terms of trade when India liberalizes to the rest of the world than it loses from the erosion of its preferential access to the Indian market. India, by contrast would have a marginal interest in keeping the United States from additional liberalization. If both countries are open, India's gains would be \$5.6 billion, just \$312 million less than they would be if the United States did not liberalize. If both India and the United States opened to the world, American gains would total \$10.8 billion—62 percent more than if the United States simply liberalized unilaterally.

Results of a Multilateral Liberalization

Indeed, this is just one example of why the United States, as a very open economy, has much to gain by encouraging other countries to liberalize. The scenario with global multilateral liberalization provides some fascinating insights in the different interests countries may have in multilateral liberalization. For the United States, these interests are considerable. The gains to the United States from unilateral liberalization would be just \$6.7 billion—an amount equal to one tenth of one percent .1 percent of U.S. gross national product. By contrast the United States would gain seven times as much—\$44.6 billion—from global multilateral liberalization. India's gains from global multilateral liberalization would be smaller: \$7.8 billion, just 60 percent more than from unilateral liberalization. This finding helps explain why the United States chooses never to liberalize unilaterally, whereas India has emphasized this approach. It may also explain India's comparative lack of enthusiasm for multilateral liberalization.

At the same time, while it has a comparatively greater interest in global liberalization, the United States has comparatively little to bargain with, since its barriers are low. Indeed, closed economies have more to offer the world from liberalization than do open ones. *Remarkably, the rest of the world gains about as much from unilateral liberalization by India (\$19.5 billion) as it does from unilateral liberalization by the United States (\$22.7 billion).* Thus even though it is small, India's relatively closed market gives it quite a lot of bargaining power because by opening it has much to confer on the rest of the world. Those that need the world more have comparatively less to offer.⁶¹

Results of Increased Regionalization

What impact would increased regionalization have on these conclusions? We have simulated the formation of three blocks, one in Europe, one in Asia, and one in the Western Hemisphere. These simulations are reported in table 1A in the appendix. The major result is that if India is excluded from all three blocks, it is hurt by such a development. Its welfare would be reduced by \$900 million (−0.23 percent of GDP) in response. If India were to liberalize unilaterally in such a scenario, its (net) benefits would be just under \$4 billion. India could also more than offset this loss by forging a free trade agreement with the United States. In a world of blocks, if it joined an FTA with the US, India would enjoy net benefits of \$1.5 billion. (This compares with Indian benefits of \$7.8 billion when there is multilateral global liberalization). By joining the Western Hemisphere block, India's welfare could be raised by \$2.1 billion. (0.5 percent of GDP). Membership in the Asian block, however, presents India with the largest benefits—being part of an Asian block in this regional scenario gives India welfare gains of \$3.0 billion (0.8 percent of GDP). Joining the European block would be distinctly inferior and do little to offset the effects of the other blocks; India's GDP would decline by 0.2 percent. The most important implication of these regional scenarios is that India can always do better than opening unilaterally by combining its unilateral opening with membership in a regional agreement.

In a world of three blocks, the United States would gain far more than it would through unilateral liberalization. The United States would capture 58 percent of the benefits of global free trade. The EU would enjoy 84 per-

61. In their study of the gains from eliminating the remaining barriers in developed countries, Bradford and Lawrence (2004) find that Japan would capture most of the benefits from liberalization by itself while the rest of the world has a great interest in seeing Japan liberalize.

cent of the benefits it would gain from global free trade and Japan 83 percent of its benefits with global free trade. For several major global actors, therefore, a world of blocks comes close to providing gains that are equivalent to full global liberalization.

Attention Diversion

Opponents of preferential free trade agreements voice several concerns in addition to worrying about the possibilities of trade diversion. One is that preferential arrangements could prevent or reduce the possibility of full multilateral liberalization by diverting relatively scarce policymaker attention. Trade officials with limited time and attention will find it difficult to negotiate simultaneously in several forums. Likewise, policymakers may be less willing to devote their scarce political capital to promoting multilateral liberalization if they have to spend it on the passage of preferential trade arrangements. These points may indeed be valid, but the real issue is surely the relationship between these administrative and political costs and the benefits of these preferential measures. When critics decry the attention devoted to preferential agreements, their implicit assumption is that the benefits of such agreements are likely to be much smaller than those from multilateral liberalization. This could well be the case if separate agreements are negotiated with small trading partners. But our simulations suggest that for India, the impact of a U.S.-India FTA is not small. We find that complete multilateral liberalization would boost Indian welfare by just over three times the gain India would have from a U.S.-India FTA and that full unilateral liberalization would provide twice the benefits. On the basis of achievements in previous rounds, we could expect a successful Doha Round to reduce global barriers by a third (see discussion below). If the model is basically linear, this suggests that for India, the payoff from the FTA would be similar to the results of a typical WTO negotiation and equal to a 50 percent unilateral reduction in Indian trade barriers. Moreover, bilateral FTA negotiations are much simpler and less time-consuming than WTO rounds.

To be sure, when *global* benefits in the simulations are compared, the conclusions are quite different. The participants in preferential trade arrangements may well capture more than all the benefits and outsiders would be hurt. By contrast, outsiders will gain from unilateral and multilateral liberalization. A U.S.- India FTA *reduces* foreign incomes by \$108 million. By contrast, unilateral Indian liberalization raises incomes in the rest of the world by \$19 billion, while the global gains from multilateral

liberalization are \$475 billion! From a systemic viewpoint, it is clear where attention should be paid. But our focus here is bilateral.

In sum, India benefits from trade liberalization in goods. Unilaterally removing Indian trade barriers would enhance Indian welfare. A U.S.-India FTA would also benefit both countries. India would become more specialized in agriculture and labor-intensive manufactures—areas in which its long-run comparative advantage lies. Even if it could, the United States would not have an interest in preventing additional Indian liberalization. India has an interest in following an approach that combines the FTA with additional unilateral (and multilateral) liberalization. If it did so, its welfare would improve, even in a world that split into regional trading blocks.

Conclusions

This paper raises two basic questions. Should India depart from its strategy of liberalizing trade incrementally and unilaterally to embrace full trade liberalization and reform? And if the answer is yes, should a new policy be exclusively centered on the WTO, or should it be supplemented with a U.S.-India FTA and perhaps other FTAs seeking deeper integration?

The paper has examined both the benefits and the costs from a change in strategy. The unilateral incremental approach has suited a country in the early stages of reform with strong institutions and interest groups that have vested interests in the status quo. The approach provided the maximum scope for molding institutional changes to fit domestic needs and capabilities. The framework was sufficiently flexible to allow policymakers to take advantage of opportunities and retreat in the face of obstacles. Politically, some opponents of full liberalization could be co-opted by promising limited changes; others could be defeated by proceeding in a piecemeal fashion. Over time, as the policies showed benefits and created new beneficiaries, more could be done. The unilateral approach also suits a country with high trade barriers, since the simulations indicate that by simply removing its own barriers, India would obtain almost two-thirds of what it would gain if all countries eliminated all their trade barriers multilaterally.

But the current approach also has costs. It lacks credibility. By failing to obtain a political commitment to comprehensive change, the payoffs have been reduced. Investors at home and abroad retain doubts that the policy direction will be sustained. In addition, the benefits that might have been

obtained by reciprocal liberalization have been lost. Economically, these would come from increased and more secure access to foreign markets; politically, they would come from mobilizing export interests to pressure for reforms. The time may now be ripe for a change in approach that could avoid these costs.

Considering a free trade agreement with the United States helps sharpen these distinctions. An FTA would be attractive for defensive reasons if it could secure an open market for the explosive growth in India's exports of information technology (and its bilateral trade surplus) that is expected to emerge in the coming decade. To be sure, obtaining such an agreement could be difficult in the current U.S. political environment. But circumstances could change, and in any case, this is not an issue that can be kept out of the U.S. public eye.

The simulations indicate that as a relatively open economy, the United States has a great interest in liberalization by its trading partners. This helps explain its almost exclusive reliance on reciprocal liberalization as revealed by its WTO proposals and the large number of FTAs it is seeking. For Americans, a U.S.-India FTA would have the appeal of being probably the most important addition to the strategy of "competitive liberalization."

India also has positive reasons to enter into an FTA, namely, the role the FTA can play in stimulating Indian liberalization and reform. The agreement could be used to propel change in a host of areas including trade policy, tax reform, services, industrial policy, foreign direct investment, regulatory policy, competition policy, customs administration, public sector enterprises, agricultural policy, public procurement, governmental transparency, and technical and sanitary standards.

The prospect of an agreement does raise numerous concerns, however. One is that India could be forced to adopt policies that are not in its interests. Rules for labor and environmental standards are viewed with particular alarm. If a U.S.-India FTA follows recent U.S.-FTA agreements, however, it would require no changes in current Indian labor and environmental rules. The binding part of the agreement would relate only to enforcement, and violations would result not in trade retaliation but in the violating party devoting more money to improving enforcement.

FTA opponents raise other concerns. They claim that the WTO offers superior mechanisms for locking in reforms and promoting liberalization. But for a country like India, the WTO is poorly suited to this task for four reasons: India's bound tariff rates are far higher than its applied rates; it is given special and differential treatment; the WTO agreements

are far less comprehensive than U.S. free trade agreements have been; and an agreement in the Doha Round to phase out all tariffs is highly unlikely and certainly not something India, as just one of 148 members, can count on.

Opponents also claim that an FTA would result in trade diversion. Our simulations show, however, that the gains from an agreement are positive, suggesting that on balance the agreement is trade creating. Moreover, these gains are about as large as can reasonably be expected to result from a successful Doha Round. For India the return to investing intellectual and political capital in an FTA with the United States would be as rewarding as investing in negotiating a successful Doha Round. And the negotiations would be far quicker.

The simulations clearly demonstrate the benefits of complete unilateral liberalization. But they also show that India would gain even more with an open home market *and* preferential access to the United States. Moreover, even with a U.S.-India FTA in place, the United States still benefits from additional Indian liberalization. Thus the United States has an interest in promoting additional Indian unilateral liberalization, not blocking it. This supports the idea of building blocks rather than stumbling blocks. A U.S.-India agreement would also provide India with protection against a world of trading blocks.

At the end of the day, India's choice is complicated. There appears to be greater uncertainty about the answer to the first question (unilateral versus reciprocal approaches) than to the second (multitrack vs. multilateral). If India should use trade agreements to bolster its reforms, a U.S.-India FTA appears to be the strongest avenue because of its likely comprehensive and deep character. It would provide significant welfare benefits through both trade and investment and strengthen India's bargaining positions, both bilaterally and multilaterally. It also offers the best chance for combating U.S. resistance to outsourcing. By contrast, the WTO is likely to be less effective even if India is prepared to depart radically from the principles, such as special and differential treatment and first-difference reciprocity, that have been such an important part of its positions in the past.

Moreover, departing from a trade strategy that has worked well for more than a decade would entail more risks and more constraints on the domestic policy front. The trade agreement by itself would not suffice to fully realize the potential economic payoffs from more radical reform. Success would ultimately depend on India's ability to adopt complementary policies and institutions.

Appendix: Overview of the Michigan BDS-CGE Model

We provide a brief introduction to the Brown-Deardorff-Stern (BDS) computable general equilibrium (CGE) Michigan Model in the following paragraphs.⁶² The distinguishing feature of the Michigan Model is that it incorporates some aspects of the New Trade Theory (New Trade Theory is different from the Traditional Trade Theory, which assumes, among other assumptions, constant returns to scale, perfect competition, and product homogeneity), including increasing returns to scale, monopolistic competition, and product heterogeneity.

Sectors and Market Structure

The main data source is the GTAP-5 database of the Purdue University Centre for Global Trade Analysis Project.⁶³ The reference year for this database is 1997. It has sixty-five countries and regions, and fifty-seven sectors of production including fourteen in agriculture, four in minerals and metals, twenty-four in manufacturing, and fifteen in services. We have condensed these into sixteen sectors. The fourteen sectors of agriculture have been grouped into one agricultural sector, as have the four sectors of mineral products. Fifteen service sectors have been condensed into five sectoral categories. The twenty-four manufacturing sectors have been grouped into nine sectors. These nine sectors include food, beverages and tobacco; textiles; wearing apparel; leather, wood and paper products; chemicals, rubber, plastic and petroleum products; nonmetallic mineral products; metal and metal products; transportation and machinery equipment and parts; and other manufactures including electronic equipment.

Sixty-five countries of the GTAP database have been condensed into fourteen countries or regions. Asian countries or regions have been distributed among seven countries or regions, namely India, Rest-of-South Asia, China, ASEAN (Indonesia, Malaysia, the Philippines and Thailand), NIES (Hong Kong, South Korea, Singapore and Taiwan), Japan and Australia-New Zealand. USA, Canada and Mexico have been taken as separate countries. The remaining four regions include Central and South America (Central America and the Caribbean; Columbia; Peru; Venezuela; Rest-of-Andean Pact; Argentina; Brazil; Chile; Uruguay; Rest-of-South America);

62. A complete description of the formal structure and equations of the model can be found on line at www.Fordschool.umich.edu/rsie/model/. Also see Brown, Deardorff, and Stern (2001).

63. Dimaranan and McDougall (2002).

TABLE A - 1. Percent Change in Welfare under Various Trade Scenarios: Computational Scenarios

Countries or Regions	Code	Simulation											
		1	2	3	4	5	6	7	8	9	10	11	12
India	Ind	0.61	-0.23	0.4	1.2	1.0	1.3	1.4	2.0	1.5	0.8	0.5	-0.2
Rest of South Asia	Rsa	0.00	3.99	4.0	0.3	4.3	2.9	1.0	5.3	0.2	4.6	4.0	4.0
China	Chn	0.00	1.80	1.8	0.1	1.9	0.2	0.6	2.9	0.1	1.9	1.8	1.8
ASEAN	Asn	0.00	3.15	3.1	0.2	3.4	0.3	0.4	4.1	0.2	3.4	3.1	3.2
NIEs	Nie	0.00	3.11	3.1	0.2	3.3	0.3	0.2	3.8	0.2	3.3	3.1	3.1
Japan	Jpn	0.00	2.95	3.0	0.1	3.0	0.2	0.3	3.6	0.1	3.1	3.0	3.0
Australia & New Zealand	Anz	0.00	0.00	0.0	0.1	0.1	0.1	0.2	1.8	0.1	0.0	0.0	0.0
United States	Usa	0.04	0.33	0.4	0.1	0.4	0.1	0.1	0.6	0.1	0.3	0.4	0.3
Canada	can	0.01	1.23	1.2	0.1	1.3	0.1	-0.6	1.6	0.1	1.2	1.3	1.2
Mexico	mex	0.00	1.68	1.7	0.1	1.7	0.1	-0.6	2.5	0.0	1.7	1.7	1.7
Central & South America	a_n	0.00	-0.07	-0.1	0.1	0.0	0.1	0.3	0.8	0.1	-0.1	-0.1	-0.1
European Union	eun	0.00	1.12	1.1	0.1	1.2	0.2	0.2	1.3	0.1	1.1	1.1	1.3
EU accession candidates	eua	0.00	1.72	1.7	0.1	1.8	0.1	0.1	3.0	0.1	1.7	1.7	1.9
Rest of EFTA	eft	0.00	3.63	3.6	0.4	4.0	0.5	0.5	4.8	0.4	3.6	3.6	4.1

Note: The twelve simulations are as follows:

1. The United States and India eliminate all tariffs against each other.
2. Asia (excluding India), Free Trade Area of Americas (FTAA), that is, USA, Canada and Mexico, and Central and South America and Europe (European Union, EU Accession candidates plus Rest of European Free Trade Area, or EFTA, form a free trade area.
3. Simulation 2 plus India and the United States also form an FTA.
4. India unilaterally eliminates all import tariffs.
5. Simulation 2, plus simulation 4.
6. India and Rest of South Asia form an FTA and eliminate import tariffs against rest of the world.
7. India and the United States form an FTA and adopt a policy of extending the same benefits to all other countries on MFN basis.
8. Multilateral liberalization: All the countries and regions eliminate import tariffs against each other.
9. India and the United States form an FTA with India adopting open regionalism through extending the same benefits to all other countries on MFN basis India's open liberalization.
10. Simulation 2 plus India also joins the rest of South Asia in an FTA.
11. Simulation 2 plus India also joins the Free Trade Area of the Americas.
12. Simulation 2 plus India also joins European free trade agreements (EUN, EUA, and EFT).

European Union - Fifteen; EU accession countries (Hungary; Poland and Rest-of-Central European Associates).

Agriculture and service sectors are modeled as perfectly competitive, and all the manufacturing sectors as monopolistically competitive with free entry and exit of firms.

Expenditure

Consumers and producers are assumed to use a two-stage procedure to allocate expenditure across differentiated products. In the first stage, expenditure is allocated across goods without regard to the country of origin or producing firm. At this stage, the utility function is Cobb-Douglas, and the production function requires intermediate inputs in fixed proportions. In the second stage, expenditure on monopolistically competitive goods is allocated across the competing varieties supplied by each firm from all countries. In the case of sectors that are perfectly competitive and individual firm supply is indeterminate, expenditure is allocated over each country's industry as a whole, with imperfect substitution between products of different countries. The aggregation function in the second stage is a constant elasticity of substitution (CES) function.

Production

The production function is separated into two stages. In the first stage, intermediate inputs and a primary composite of capital and labor are used in fixed proportion to output.⁶⁴ In the second stage, capital and labor are combined through a CES function to form the primary composite. In the monopolistically competitive sectors, additional fixed inputs of capital and labor are required. It is assumed that fixed capital and fixed labor are used in the same proportion as variable capital and variable labor so that production functions are homothetic.

Supply Prices

To determine equilibrium prices, perfectly competitive firms operate so that price is equal to marginal cost, while monopolistically competitive firms maximize profits by setting price as an optimal markup over marginal cost. The numbers of firms in sectors under monopolistic competition are determined by the condition that there are zero profits.

64. Intermediate inputs include both domestic and imported varieties.

Capital and Labor Markets

Capital and labor are assumed to be perfectly mobile across sectors within each country. Returns to capital and labor are determined so as to equate factor demand to an exogenous supply of each factor. The aggregate supplies of capital and labor in each country are assumed to remain fixed so as to abstract from macroeconomic considerations (such as the determination of investment), since our microeconomic focus is on the intersectoral allocation of resources.

World Market and Trade Balance

The world market determines equilibrium prices so that all markets clear. Total demand for each firm or sector's product must equal total supply of that product. It is also assumed that trade remains balanced for each country or region, that is, that the initial trade imbalance, remains constant as trade barriers are changed. This assumption reflects the reality of mostly flexible exchange rates among the countries involved. Moreover, this is a way of abstracting from the macroeconomic forces and policies that are the main determinants of trade imbalances.

Trade Policies and Rent or Revenues

We have incorporated into the model the import tariff rates as policy inputs that are applicable to the bilateral trade of the various countries and regions with respect to one another. These have been computed using the GTAP-5 database provided in Dimaranan and McDougall.⁶⁵ We assume that revenues from import tariffs are redistributed to consumers in the tariff- or tax-levying country and are spent like any other income. When tariffs are reduced, income available to purchase imports falls along with their prices, and there is no bias toward expanding or contracting overall demand.

Model Closure and Implementation

We assume in the model that aggregate expenditure varies endogenously to hold aggregate employment constant. This closure is analogous to the Johansen closure rule.⁶⁶ The Johansen closure rule consists of keeping the requirement of full employment while dropping the consumption function. Consumption can thus be thought of as adjusting endogenously to ensure

65. Dimaranan and McDougall (2002).

66. Deardorff and Stern (1990).

full employment. In the current model, however, we do not distinguish consumption from other sources of final demand. That is, we assume instead that total expenditure adjusts to maintain full employment.

The model is solved using GEMPACK.⁶⁷ When policy changes are introduced into the model, the method of solution yields percentage changes in sectoral employment and certain other variables of interest.

Salient Features

It is useful first to review the features of the model that serve to identify the various economic effects that are being captured in the different scenarios.⁶⁸ This helps us explain and interpret the results of this exercise. Although the model includes the aforementioned features (New Trade Theory features, viz. increasing returns to scale, monopolistic competition, and product heterogeneity) of the New Trade Theory, it remains the case that markets respond to trade liberalization in much the same way that they would with perfect competition. That is, when tariffs or other trade barriers are reduced in a sector, domestic buyers (both final and intermediate) substitute toward imports and the domestic competing industry contracts production while foreign exporters expand. With multilateral liberalization reducing tariffs and other trade barriers simultaneously in most sectors and countries, each country's industries share in both of these effects, expanding or contracting depending primarily on whether their protection is reduced more or less than in other sectors and countries. At the same time, countries with larger average tariff reductions than their trading partners tend to experience a real depreciation of their currencies in order to maintain a constant trade balance, so that all countries therefore experience mixtures of both expanding and contracting sectors.

The effects on the welfare of countries arise from a mixture of these terms-of-trade effects, together with the standard efficiency gains from trade and also from additional benefits resulting from elements of the New Trade Theory. Thus, we expect on average that the member countries (countries participating in the liberalisation process) would gain from mutual liberalization, as resources are reallocated to those sectors in each country where there is a comparative advantage. In the absence of terms-of-trade effects, these efficiency gains should raise national welfare measured by the equivalent variation for every country, although some factor owners within a country may lose, as is noted below. However, it is possible for a particular

67. Harrison and Pearson (1996).

68. See Brown, Deardorff, and Stern (2001) for details.

country whose net imports are concentrated in sectors with the greatest liberalization to lose overall, if the worsening of its terms of trade swamps these efficiency gains.

At the same time, although the New Trade Theory is perhaps best known for introducing new reasons why countries may lose from trade, in fact its greatest contribution is to expand the list of reasons for gains from trade. It is these that are the dominant contribution of the New Trade Theory in our model. That is, trade liberalization permits all countries to expand their export sectors at the same time that all sectors compete more closely with a larger number of competing varieties from abroad, resulting from import liberalisation. As a result, countries as a whole gain from lower costs due to increasing returns to scale, lower monopoly distortions due to greater competition, and reduced costs and increased utility due to greater product variety. All of these effects make it more likely that countries will gain from liberalization in ways that are shared across the entire population.

In perfectly competitive trade models such as the Heckscher-Ohlin model, one expects countries as a whole to gain from trade, but the owners of one factor—the “scarce factor”—to lose through the mechanism first explored by Stolper and Samuelson.⁶⁹ The additional sources of gain from trade attributable to increasing returns to scale, competition, and product variety, however, are shared across factors, and we routinely find in our CGE modeling that both labor and capital gain from liberalization. That is often the case here.

In the real world, all of these effects occur over time, and some of them occur more quickly than do others. This model is static, however, based upon a single set of equilibrium conditions rather than on relationships that vary over time. Our results therefore refer to a time horizon that is somewhat uncertain, depending on the assumptions that have been made about which variables do and do not adjust to changing market conditions, and on the short- or long-run nature of these adjustments. Because our elasticities of supply and demand reflect relatively long-run adjustments and because we assume that markets for both labor and capital clear within countries, our results are appropriate for a relatively long time horizon of several years—two or three at a minimum.

Nonetheless, this model does not allow for the very long-run adjustments that could occur through capital accumulation, population growth, and technological change. Our results should therefore be thought of as being superimposed upon longer-run growth paths of the economies

69. Stolper and Samuelson (1941).

involved. To the extent that these growth paths themselves may be influenced by trade liberalization, therefore, our model does not capture that.

As a result of trade liberalization, there are changes in member and non-member (non-participating) countries' terms of trade that can be positive or negative. Those countries that are net exporters of goods with the greatest degree of liberalization will experience increases in their terms of trade, as the world prices of their export rise relative to their imports. The reverse occurs for net exporters in industries where liberalization is slight, perhaps because most liberalization already happened in previous trade rounds.

The Data

Needless to say, the data needs of this model are immense. Apart from numerous share parameters, the model requires various types of elasticity measures. Like other CGE models, most of our data come from published sources.

The main data source, the GTAP-5 database, provides us with an approximate picture of what the world looked like in 1997, that is about three years down the time of commencement of the Uruguay Round (UR) negotiations. The reference year for this database is 1997. From this source, we have extracted the following data, aggregated to our sectors and regions:

- Bilateral trade flows among fourteen countries or regions, decomposed into sixteen sectors. Trade with the rest-of-world (ROW) is included to close the model.

- Input-output tables for the fourteen countries and regions, excluding ROW.

- Components of final demand along with sectoral contributions for the fourteen countries and regions, excluding ROW.

- Gross value of output and value added at the sectoral level for the fourteen countries and regions, excluding ROW.

- Bilateral import tariffs by sector among the countries and regions, including ROW.

- Elasticity of substitution between capital and labor by sector.

- Bilateral export-tariff equivalents among all fourteen countries and regions, decomposed into sixteen sectors.

The monopolistically competitive market structure in the manufacturing sectors of the model imposes an additional data requirement of the number of firms at the sectoral level. These data have been drawn from the United

Nations Industrial Development Organization (UNIDO), *International Yearbook of Industrial Statistics, 1998*. We also need estimates of sectoral employment for the countries and regions of the model. These data have been drawn from UNIDO, *International Yearbook of Industrial Statistics, 1998* and the ILO-Year Book of Labor Statistics, 2000. The employment data have been aggregated according to our sectoral and regional aggregations to obtain sectoral estimates of workers employed in manufactures. The *World Development Report* was used to obtain data for the other sectors.

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