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Reform in Basic Telecommunications and the WTO Negotiations: The Asian Experience

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by

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Abstract

This paper examines liberalization of the basic telecommunications sector in a number of Asian countries and the role of the General Agreement on Trade in Services (GATS) in this process. It begins by explaining the working of the GATS as a mechanism for multilateral liberalization efforts. It then presents a description of the reforms taking place in the telecom regimes of selected Asian countries, and of the commitments these countries made in the recent GATS negotiations. The paper explores the reasons why governments have taken advantage of the GATS negotiations to make multilateral market-opening commitments, even though they were not pursuing export interests. The paper also considers the limits to what was achieved by way of liberalization commitments in the negotiations. Allowing greater foreign equity participation without liberalizing the conditions of entry may raise national welfare concerns. Furthermore, certain governments could have taken greater advantage of the opportunity under GATS to precommit to future liberalization.

Key words: telecommunications, GATS, services, trade liberalization, investment.

JEL classification: F-13, K-33, L-43, L-51

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I. *Introduction*

In mid-February 1997, sixty-nine governments struck a far-reaching agreement on a series of market access commitments in the basic telecommunications sector, within the framework of the General Agreement on Trade in Services (GATS). The package of commitments emerging from these negotiations involved countries accounting for over 90 percent of the basic telecommunications market worldwide. The package comprised a range of benchmark commitments on terms and conditions of market access, based for the most part either on existing policies or future liberalization plans. In addition, most participants in the negotiations subscribed to a series of regulatory principles designed to constrain anti-competitive behaviour by market incumbents with a dominant position.

The purpose of this paper is to examine the interaction between the telecommunication policies of various countries in Asia and the participation of these countries in the WTO negotiations on basic telecommunications. Two questions are explored. First, what influence, if any, has involvement in the negotiations exerted on reform in the sector? Second, what benefits may be derived from participation in the negotiations, particularly in the case of countries with no obvious interest in export markets? The paper finds that some governments have used the negotiations to accelerate telecommunications reforms, and others have availed themselves of the opportunity to make binding international commitments to future liberalization. Other governments, however, have only bound their current policy regimes or, in some instances, made multilateral commitments representing lesser conditions of market access than those actually prevailing in practice. These differences in multilateral commitments of Asian countries reflect differing current approaches to policy reform, while the commitments are in turn likely to influence the evolution of future policy.

The paper is divided into five sections. The next section (Section II) explains briefly how commitments in the telecommunications sector fit within the structure and rules of GATS. This is followed in Section III by an overview of the basic telecommunications sector and the nature of the reform process under way in virtually every country. Section IV analyzes the market access commitments made by Asian countries in the WTO negotiations, and attempts to relate these commitments to the actual policies pursued by governments. It also discusses the way that different aspects of reform, particularly privatization and opening up to foreign investment, affect conditions of competition in liberalized markets. It is argued that neither the extent of privatization nor increased foreign investment are necessarily reliable barometers of the degree of competition in the market. Section V concludes.

II. *The GATS framework and reform in basic telecommunications*

No attempt is made here to provide a comprehensive picture of the GATS and how it works.[1] Rather, brief mention is made of those features of the agreement that are relevant to the discussion that follows. The GATS putatively covers all measures taken by Members affecting trade in services and all service sectors.[2] The Agreement is unusual in taking a wide view of what constitutes trade, and defines trade in services as the supply of a service through any of four modes. Mode 1 deals with cross-border supply of a service. This mode of delivery is analogous to international trade in goods, in that a product (service) crosses a frontier that divides jurisdictions. International telephone calls fall into this category. Mode 2 involves consumption abroad, including the movement of consumers to the jurisdiction of suppliers. Tourism is a good example of this mode, involving the movement of (mobile) tourists to (immobile) tourist facilities in another country. Some Members have covered calling card services in their telecoms schedules under Mode 2. Mode 3 is of crucial significance, and entails the commercial presence of a supplier of one Member in the jurisdiction of another Member. By defining trade to include sales through commercial presence, the Agreement includes in its domain foreign direct investment, which accounts for a large share of all services transactions, including in basic telecommunications. Mode 4 covers the movement of natural persons from one jurisdiction to another. This mode relates both to independent service suppliers and to employees of juridical persons supplying services.

Certain GATS obligations apply across-the-board, while others depend on the sector-specific commitments assumed by individual Members. The most important of the general obligations is the *most-favoured-nation* (MFN) principle.[3] The MFN principle prevents Members from discriminating among their trading partners. While governments generally attach importance to MFN as a fundamental principle of general application, certain sectoral sensitivities that emerged in the Uruguay Round raised the spectre of wholesale sectoral exclusions from GATS as a means of avoiding the MFN rule. In order to prevent this, governments agreed to permit limited exemptions to MFN under GATS. Such exemptions, however, had to be taken at the time the negotiations were concluded. In the case of basic telecommunications, relatively few MFN exemptions have been inscribed. Among them is the

[1]For fuller treatments of GATS, see Hoekman (1995), Low (1995) and Mattoo (1997).

[2]The only explicit sectoral exclusion from GATS is certain "hard" rights in the aviation sector.

[3]Other disciplines of general application relate to transparency, monopolies and exclusive service suppliers, business practices, the creation of economic integration agreements, and recognition of standards for the authorization , licensing or certification of service suppliers.

MFN exemption of the United States on one-way satellite transmission of DTH and DBS television services and of digital audio services, a similar exemption by Brazil, and an exemption taken by a number of countries, including the South Asian participants in the negotiations, with respect to accounting rate arrangements. Thus, the discipline of MFN has for the most part been preserved and is applicable to the entire telecoms sector, including those parts of it not covered by specific market-opening commitments in national schedules.

A particular application of the MFN requirement in the basic telecommunications sector, however, concerns accounting rates. To the extent that accounting rates may be deemed government measures, the significant degree of price discrimination typically encountered in the rates applying between pairs of countries would be hard to justify on MFN grounds, and accounting rate regimes may be susceptible to legal challenge. But to the extent that accounting rates are considered non-governmental measures, then differences in rates that cannot be defended in terms of cost differentials could be challenged under GATS Article VIII. Article VIII deals with monopolies and exclusive service suppliers and one of its requirements is that Members prevent monopoly or exclusive suppliers from discriminating against other suppliers in MFN terms, or in relation to a Member's specific commitments. Thus, accounting rate regimes might be challenged on the grounds that by maintaining monopolistic structures "formally or in effect," governments were permitting suppliers to practice price discrimination. Although there was general appreciation among most negotiators that competition resulting from liberalization would lead over time to the destruction of the accounting rate system, it was nevertheless decided to secure a shared understanding that Members would not challenge one another's accounting rate regimes under the WTO's dispute settlement provisions.[4] It was further agreed that the understanding would be reviewed no later than the commencement of new services negotiations, foreseen to begin by 1 January 2000 at the latest.

[4]Despite the understanding, several Asian countries, including Bangladesh, India, Pakistan and Sri Lanka listed exemptions to the MFN rule for their accounting rate systems.

Schedules of specific commitments

The liberalizing content of the GATS depends on the extent and nature of sector-specific commitments assumed by individual Members. The core provisions of the GATS in this context relate to *market access* (Article XVI), *national treatment* (Article XVII) and *additional commitments* (Article XVIII). These provisions only apply to sectors explicitly included by a Member in its schedule of commitments. Apart from the discussions that took place on the MFN question, the focus of attention in the basic telecommunications negotiations was the content of national schedules of specific commitments.

The *market access* provision prohibits six types of limitations, unless they have been inscribed by a Member in its schedule. These are: (a) limitations on the number of suppliers; (b) limitations on the total value of service transactions or assets; (c) limitations on the total number of service operations or on the total quantity of service output; (d) limitations on the total number of natural persons that may be employed; (e) measures which restrict or require specific types of legal entity or joint venture; and (f) limitations on the participation of foreign capital. The existence of any of these limitations has to be indicated with respect to each of the four modes of supply, described above. As discussed in more detail below with respect to the results of the negotiations in basic telecommunications, the use made of these limitations is one of the most important elements determining the value of commitments.[5]

National treatment is defined under Article XVII in the traditional GATT manner, as treatment no less favourable than that accorded to domestic homologues, in this case services or service suppliers. In contrast to the GATT approach, however, Members may inscribe limitations on national treatment in their schedules - with respect to each of the four modes of supply, as in the case of the market access provision. The main reason why negotiators eschewed the GATT approach of making national treatment an overarching principle of general application, as they did with MFN, is that granting market access with full national treatment under the commercial presence mode (Mode 3) is the equivalent of establishing free trade. Governments wanted the option of adopting a more gradual and conditioned approach to opening up their markets, by making national treatment something to be granted, denied or qualified, depending on the sector and signatory concerned.

[5]It should, of course, be remembered that governments also have the right not to inscribe a sector at all in their schedules of specific commitments, so the quality of the market access commitment only becomes important once a government has decided to make an entry in its schedule.

An interpretative note issued by the Chairman of the negotiating group (Group on Basic Telecommunications) sought to develop understandings in relation to the precise sectoral and activity coverage of the schedules. This was intended to ensure that Members would fully identify the extent and nature of their partners' commitments. The notion of "neutrality" was developed in four dimensions. These dimensions are: (i) local, long distance and international services; (ii) public and non-public services; (iii) supply on a facilities basis or through resale; and (iv) technology-neutrality with respect to supply by cable, radio, satellites, stationary and non-stationary means, etc. The scheduling default was that unless otherwise specified, commitments were neutral, and therefore covered all the relevant dimensions.

Article XVIII offers the possibility for signatories to negotiate *additional commitments* not dealt with under the market access and national treatment provisions of Article XVI and Article XVII. Additional commitments must offer more open access. They cannot establish additional market barriers by detracting from MFN or from market access or national treatment commitments. Additional commitments could apply to such matters as qualifications, standards and licensing, and would be inscribed in Members' schedules. Limited use was made of this option in the Uruguay Round negotiations. In the basic telecommunications negotiations, however, many governments have used the additional commitments facility to subscribe to certain regulatory principles discussed below.

Once sectoral commitments are made, various other obligations take effect. These include Article VI, in particular, dealing with *domestic regulations* on qualification requirements and procedures, technical standards and licensing requirements. Article VI seeks to ensure that such regulations are framed and used in a non-discriminatory, transparent and objective manner, and that they do not restrict trade to any extent greater than necessary to attain their underlying purpose - in other words, that they are not applied as a surrogate means of protection. These provisions are particularly relevant to telecommunications in relation to the allocation of scarce resources, such as frequencies and rights of way.[6]

[6]Other provisions that only take effect in the context of specific commitments contained in Members' schedules include provisions relating to notification requirements, monopolies and exclusive service suppliers, business practices, and emergency measures taken for balance-of-payments purposes.

Annex on Telecommunications

One other aspect of GATS that specifically deals with telecommunications deserves mention. The Annex on Telecommunications contains special provisions designed to protect the users of telecommunication services.[7] The provisions were drawn up in recognition of the fact that telecommunications services represent an important input into the supply of other services, and that adequate conditions of access to and use of public telecommunications transport networks and services (PTTNS) were essential to guarantee the rights of market access commitments inscribed in schedules. The core provision of the Annex is that:

> "Each Member shall ensure that service suppliers of any other Member have access to and use of any PTTNS on reasonable and non-discriminatory terms and conditions, for the supply of a service included in its Schedule." (Paragraph 5(a))

A footnote to this provision indicates that the term "non-discriminatory" refers both to MFN and national treatment. In practical terms, the Annex obliges suppliers of PTTNS to grant access to and use of PTTNS offered within or across the border, including private leased circuits, to service suppliers with market access rights under GATS. The core obligation of the Annex is conditioned by various provisions, including in relation to confidentiality of transmissions, safeguarding universal service and other public obligations, and protection of the technical integrity of the networks.

In view of the fact that the obligations of the Annex relate to all service sectors in respect of which specific commitments have been undertaken, suppliers of PTTNS are obliged to offer the same treatment to other telecommunications suppliers that enter the market as the treatment that a commercial bank, for example, would expect. That means an established PTTNS supplier is not entitled to frustrate competition within the telecommunications sector by denying network access to competing suppliers protected by market access rights under GATS. Thus, the Annex can be in seen in part as a pro-competitive instrument within the telecommunications sector.

The Reference Paper on Regulatory Principles

[7]See Bronckers and Larouche (1997) and Tuthill (1996, 1997) for a more detailed discussion of GATS provisions relevant to basic telecommunications.

It had been apparent at the outset to negotiators that the existence of monopolies and very high levels of concentration in the basic telecommunications sector would render commitments by governments to open markets an inadequate guarantor of real access - monopolistic suppliers could frustrate competition from new entrants in a multitude of ways. And the problem was made more acute by the fact that effective participation by new entrants in the market would require that incumbents allow competitors to gain access to their networks on commercial terms.

A number of provisions already existed in GATS relevant to the question of anti-competitive behaviour in this sector. These include Article VIII on monopolies and exclusive service suppliers, the Annex on Telecommunications, and the definition of "measures by Members" in Article XXVIII(c)(ii) to cover "the access to and use of, in connection with the supply of a service, services which are required by those Members to be offered to the public generally." Some governments nevertheless felt that explicit regulatory principles should be drawn up for basic telecommunications, which would lay down the obligations Members assumed to guard against anti-competitive behaviour by major incumbent suppliers.

The regulatory principles apply in situations involving major suppliers who exercise control over essential facilities or who are capable of abusing a dominant position in the market. Essential facilities refer to those facilities exclusively or predominantly provided by a single or limited number of suppliers, and which cannot feasibly be economically or technically substituted in order to provide a service. Competitive safeguards are established to prevent anti-competitive behaviour, and specific mention is made of cross-subsidy practices, and the misuse of information. Major suppliers are obliged to provide interconnection on non-discriminatory terms, conditions and rates and of a quality no less favourable than that provided to all other suppliers of like services. Interconnection must also be granted in a timely manner, on terms and conditions and at cost-oriented rates that are transparent and reasonable. The legitimacy of universal service obligations is recognized, provided these do not act as a surrogate form of protection. Licensing criteria must be made publicly available, regulators must be impartial and independent of suppliers, and the allocation of scarce resources such as frequencies and rights of way must be timely, objective, transparent and non-discriminatory.

III. *Basic telecommunications: Performance and Policy*

In virtually every country, reform of the telecommunications sector, principally through the introduction of competition, is on the policy agenda. Three main factors explain this trend. First, increased economic integration through trade and factor mobility at both national and international levels has intensified reliance on telecommunications services, heightening sensitivity to questions of cost and efficiency. As telecommunications services have become a larger cost element in production, concerns have grown about the competitive effects of poor quality and high-priced services. For the most part, traditional state-owned monopoly suppliers have not been successful in providing low-cost, efficient, or even widely available services in many countries.

Secondly, technological developments have made it increasingly difficult for governments to defend monopolies from competition, even if they are inclined to do so. Modern switching technology, for example, has brought call-back services. Call-back allows consumers in a high-price country to bypass the pricing structure in their home markets and pay the lower prices prevailing in more competitive foreign markets. Similarly, Internet connections can now be used for voice telephony around the world at the price of a local call. In short, technology is becoming ever more adept at outwitting the regulators.

Third, technological advances have challenged the assumption that the supply of basic telecommunications services was a natural monopoly, requiring the establishment of a single, large wire-based network that was most easily and appropriately placed in the hands of a single operator - usually the government. New technologies have lowered costs and facilitated entry into the industry, augmenting the pressure upon governments to introduce competition, despite the loss this implies in revenues from the high profits typically taken by the state-owned monopolies. These technologies include fibre-optics, with vast carrying capacity, and both mobile and fixed radio-based communication systems.

The dilution of monopoly rights has also allowed other sectors to compete in the industry, including cable-television operators, utility suppliers such as railways and water companies, banks and software manufacturers. In addition to allowing competing infrastructures to enter the market, and new ones to be developed, some governments have seen resale as another useful mechanism for promoting competition. But the absence of parallel infrastructure requires that the owners of existing infrastructure must make it available to competing suppliers on commercial terms and conditions - hence the importance of pro-competitive regulation in this sector, at least in a transitionary phase.[8] The combination

[8]It is, of course, true that even when the emphasis is upon facilities-based competition, access to alternative networks is essential in order to offer full service.

of lower entry barriers and greater technological sophistication offers the promise of competition in all market segments, including the local loop, where the need to supply thousands or even millions of connections to final consumers makes this the most infrastructure-intensive part of the market.

Telecommunications Performance in Asia

Table 1 provides an indication of the situation in the basic telecommunications sector in fourteen Asian countries that were examined in the context of this study. The countries concerned are at very different levels of development and offer a wide spectrum of contrasts. They are divided in the table into the categories of low income, lower middle income, upper middle income and high income countries, according to the designations used by the International Telecommunications Union. Columns 1 and 2 of Table 1, which record GDP per capita and telephone line intensity respectively, seek to characterize base-line conditions in each country. At one extreme, Bangladesh had a per capita income of US$219, and only one telephone line for every 400 inhabitants, while at the other, Japan had a per capita income level of US$37,563 and virtually every second person had a telephone line. These figures show very clearly how much more infrastructural investment is needed in many developing countries before telecommunication services become readily available to the population at large.

Table 1: DEVELOPMENT INDICATORS IN THE BASIC TELECOMMUNICATIONS SECTOR

Country (1)	GDP per capita 1994 ($US) (2)	Main lines per 100 inhabitants 1995 (3)	Growth in number of main lines per year 1990-95 (%) (4)	Investment in telecoms per inhabitant 1995 ($US) (5)	Growth in cellular subscribers per year 1990-95 (%) (6)	Cost of local calls 1995 ($US) (7)	Subscription as share of GDP per capita 1994 (%) (8)	Waiting time for telephone line in years 1995 (9)	Faults per 100 main lines per year 1995 (10)
Bangladesh (LI)	219	0.25	4.0	1.0	N/A	0.04	20.5	10.0	N/A
India (LI)	287	1.29	18.7	1.9	N/A	0.06	5.2	1.3	195.6
Pakistan (LI)	407	1.64	20.3	4.4	84.7	0.05	4.8	0.7	110.0
Sri Lanka (LI)	591	1.11	11.0	13.1	120.9	0.05	3.3	10.0	192.0
Indonesia (LMI)	920	1.69	25.3	8.5	64.6	0.05	12.4	0.2	32.0
Papua New Guinea (LMI)	1,227	0.95	7.3	24.5	N/A	0.17	N/A	0.1	N/A
Philippines (LMI)	968	2.09	18.2	10.2	119.3	N/A	11.7	3.6	131.6
Thailand (LMI)	2,439	5.86	21.3	6.5	76.6	0.12	2.0	1.9	45.0
Korea (UMI)	8,449	41.47	7.0	81.6	83.0	0.04	0.5	---	12.5
Malaysia (UMI)	3,622	16.56	16.0	62.2	58.7	0.05	2.5	0.3	60.0
Brunei Darussalam (HI)	22,766	23.99	14.2	N/A	82.5	0.20	0.8	0.2	48.0
Hong Kong (HI)	22,970	52.96	5.8	187.9	42.9	N/A	0.4	---	21.6
Japan (HI)	37,563	48.72	2.3	226.0	63.7	0.10	0.5	---	1.7
Singapore (HI)	23,724	38.50	6.3	146.0	41.8	0.01	0.3	---	5.5

Low Income	366	1.98	27.4	5.7	174.9	0.14	18.0	0.7	166.5
Lower middle income	1,522	9.09	8.2	8.8	92.8	0.05	22.2	4.2	60.3
Upper middle income	4,757	14.52	8.2	36.4	83.0	0.09	2.1	0.9	32.1
High income	24,495	53.15	3.5	123.0	47.4	0.10	0.7	---	8.6
World	4,646	12.14	5.9	27.2	51.3	0.10	13.7	1.1	28.8

LI = Low income; LMI = Lower middle income; UMI = Upper middle income; HI = High income.

Source: World Telecommunications Development Report 1996/97

Columns 4, 5 and 6 provide indicators of progress in the development of telecoms infrastructure and services. Column 4 shows that low income countries such as India and Pakistan have been expanding infrastructure by way of the installation of new lines at an impressive rate of some 20 percent per year from 1990 to 1995. Indonesia and Thailand have been doing even better than that (25.3 percent and 21.3 percent respectively). Significant variance exists among countries in the sample with respect to this indicator, including within the income groupings, but it is not surprising to see that overall, poorer countries record higher rates of growth of basic network infrastructure (in the form of main lines) than do richer ones. On the other hand, when it comes to overall per capita investment in the telecoms sector, the high income countries are clearly able to invest far more than lower income countries (column 5). Given the lesser infrastructural requirements of cellular services compared to wire-based services, it is not surprising to see that growth in the use of cellular services bears an inverse relation to income levels (column 6). An additional factor explaining in many cases the rapid increase in the use of cellular services in developing countries - reaching an astonishing annual growth rate of some 175 percent in low income countries between 1990 and 1995 - is that infrastructural bottlenecks and poor services over the traditional network have pushed consumers towards the alternative of cellular services.

Columns 7 and 8 provide a static picture of the costs of services. It is notable that the costs of local calls ranged from 1 US cent (Singapore) to 20 US cents (Brunei Darussalam) for three minutes among the countries in the table, and there was significant variance within the different income groups. The relatively low cost of local calls in the low income countries, ranging from 4 US cents to 6 US cents for three minutes, almost certainly reflects cross-subsidies from other geographical segments of the market, especially international services. Rebalancing of rates in the context of liberalization may lead to increases in some of these prices, although competition would subsequently be expected to exert a downward pressure on prices. As far as subscription costs for access to the public-switched network is concerned (column 8), annualized fees reach an extremely high share of GDP per capita for some countries - 20 percent in Bangladesh, for example, and 12 percent in each case for Indonesia and the Philippines. For all low income and lower middle income countries, which amount to 128 countries out of the 200 in the ITU's data base, the average cost of securing access to the network is around one-fifth of GDP per capita. Whatever this statistic might be interpreted to say about income distribution in these countries, it is a dramatic indicator of how much needs to be done before ready access to telecommunications services will be available to the population at large in many developing countries.

Finally, columns 8 and 9 provide indicators of the quality of service. Some of the low income countries in the sample, notably Bangladesh and Sri Lanka, register very long waiting times, although the average for this group of countries as a whole is 0.7 years. This overall average has been pulled down by China, which in the ITU data base reports a waiting time for a new line of only 0.2 years. The waiting time statistic is influenced by both supply and demand factors - the supply bottleneck reflecting inefficiencies or limited capacity on the part of providers and the demand side reflecting the ability of consumers to pay. For this reason, it is perhaps not surprising to see that the lower middle income category is the worst affected by waiting times, which average 4.2 years for the group as a whole. Here, demand has risen faster than the ability of providers to keep up. It is reasonable to expect that as the sector develops and competition plays a greater role in the market, these waiting times will fall to zero, as they have already for most high income countries. As far as faults per line per year are concerned (column 10), it is not surprising to see a negative correlation between the number of reported faults and income levels. This relation will no doubt persist for some time, as developing countries place emphasis on extending their networks, while higher income countries invest more in the continual improvement of existing infrastructure.

Telecommunications Policy Reform in Asia

The above statistics offer a useful overall picture of the challenges that remain in many countries to develop basic telecommunications infrastructure. Governments have chosen different approaches, emphases, and time-frames as they face up to these challenges. But as noted earlier, governments have without exception assigned a role to market liberalization and competition in their modernization efforts.[9] Annex 1 contains brief descriptions of the approach taken to liberalization by a range of Asian countries. Significant differences are apparent, although it must be noted that a description of this nature is not easy because telecommunication regimes are typically in a state of transition. Moreover, in certain cases the regime is not clearly defined, although inferences can be made on the basis of the existing market structure. It should also be noted that the material presented in the annex focuses on voice telephony, on the grounds that this is by far the largest segment of the market, and a good barometer of policy change.

[9]For a comparison of the Asian experience with the Latin American experience, see Petrazzini and Lovelock (1996)

The annex material shows that virtually all thirteen countries identified there have already taken liberalization steps, and that those which have so far done little have plans to move ahead. Countries like Japan, the Philippines and Malaysia have already substantially opened their markets to competition. Others, such as Bangladesh, Brunei Darussalam, India, Pakistan and Thailand are proceeding more slowly. A certain pattern emerges with respect to the segment of the market that is liberalized first - generally it is domestic markets, with the international market reserved for later. This is true of Hong Kong, India, and Sri Lanka, for example, while Indonesia appears to be moving in parallel in both market segments, and Korea has proceeded in reverse order. One significant influence on sequencing and timing decisions is the question of tariff rebalancing. Monopolists in many countries have typically cross-subsidized between market segments, charging higher prices for international service, and governments have considered it necessary to adjust the pricing structure before submitting a monopoly supplier to competition. Sri Lanka provides a good example of this.

Telecommunications reform and foreign equity participation

The telecommunications policy reforms undertaken by Asian governments combine, with some variations, three elements: a shift from public to private ownership, increased scope for foreign ownership (and/or control), and liberalization of entry into the industry. Governments have taken different views as to the degree of equity participation that they wish to maintain in the former state monopolies. With the exception of Hong Kong, the governments of the countries identified in Annex 1 have all maintained an equity stake in the telecommunications sector. Full privatization may be contemplated at a later stage in some of these countries, but it seems that many governments consider it prudent to maintain a certain level of equity participation in the sector for strategic reasons.

Absent monopoly, or the maintenance of monopolistic market structures that frustrate competition, equity participation by a government in the market should not be a significant determinant of competitive conditions. However, the pace of liberalization may be influenced by the desire to secure a high price for the partial sell-off of the enterprise - strategic partners will pay more for guaranteed rents in a closed market. If governments design auctions well or negotiate effectively, they should be able to appropriate the rents associated with exclusive service supply through the price paid by the strategic partner.

Many governments have limited the degree of foreign ownership permitted in the sector, usually to an equity share of less than 50 percent. This is true, for example, of India, Malaysia, and Pakistan. In some cases, such as Sri Lanka and Pakistan, the government has

initially sought a strategic foreign partner to take a minority shareholding of the government-owned monopoly in exchange for new technology and a commitment to modernize the network. Others, such as Bangladesh, Hong Kong and to some extent Korea in the future, do not impose foreign equity limits. Japan allows full foreign ownership with respect to new entrants, but limits it for certain incumbent suppliers. Apart from economic considerations, these differences in policy reflect differences in political attitudes to foreign direct investment, and varying degrees of concern about the prospect of foreign ownership and control in basic telecommunications.

As with government participation, the degree of foreign ownership permitted is not necessarily an important determinant of the extent of actual or potential competition in a market. One reason for this is that no simple correspondence can be assumed between market structure and the behaviour of established suppliers in the market - if a market is contestable, monopolistic behaviour on the part of incumbents is likely to be constrained. In addition, a preponderance of foreign capital does not necessarily mean that a market will be competitive.

The absence of a straightforward link between foreign ownership and the degree of competition in the market is illustrated in Table 2, which indicates foreign equity commitments under the GATS agreements and briefly characterizes the competitive situation with respect to fixed networks. At one end is the Philippines, where a high degree of competition exists with limitations on foreign capital. Only Bangladesh and Hong Kong have no limitations on foreign direct investment, but both have monopolies in the international segment and oligopolies in other segments. Pakistan and Sri Lanka have allowed limited foreign equity participation in monopolies to strategic investors, and deferred the introduction of competition for several years. Korea, however, is allowing increased foreign equity participation more gradually than competition.

Considerable emphasis was placed upon increasing permitted levels of foreign equity participation in the GATS negotiations. In light of this emphasis, it is interesting to consider the implications of a situation in which increased foreign participation has been permitted, but unmatched by an increase in the degree of competition allowed to occur in the market. In other words, what are the welfare consequences of foreign ownership without competition? To begin with, consider the consequences of a shift from public to private ownership, regardless of whether it is national or foreign. It is widely acknowledged that private ownership is most efficient in markets where there is effective competition. As well as its direct benefit in promoting allocative efficiency, competition between firms also

has the advantage of improving internal efficiency. Where monopoly exists, the case for preferring private ownership to public ownership weakens considerably. Privately efficient profit-seeking behind protective barriers, whether on the part of domestically or foreign-owned firms, cannot be expected to lead to socially efficient results. Restrictions on entry benefit producers at the expense of consumers. The earnings of producers are then greater than the social productivity of the inputs because there is a component which is a transfer from consumers. It is therefore desirable from a national welfare stance for privatization to be accompanied by adequate measures to reduce market power. The scope for more competition can be enhanced by the effective removal of barriers to entry, and/or by breaking up the dominant enterprise.

What happens when foreign direct investment enters the picture? If foreign investment comes simply because the returns to investment are artificially raised by restrictions on competition, then the cost to the host country may exceed the benefits, because the returns to the investor will be greater than the true social productivity of the investment. The argument may be presented in an alternative form. Aggregate national welfare in a particular sector can be seen as the sum of consumers' surplus and national producers' profits (plus government revenue). In competitive markets, welfare is greatest because marginal social benefit is equated to marginal social cost. In imperfectly competitive markets, welfare is reduced because output is restricted to a level where marginal social benefit exceeds marginal social cost. Producers gain at the expense of consumers. Now if foreign participation enhances competition, welfare may increase, but if foreign participation takes place with no change in competition, then there is a further reduction in national welfare because of the transfer of rents from national producers to foreign producers.

TABLE 2: Foreign equity participation and degree of competition in fixed networks.

Country	Limitations on FDI	Degree of Competition in fixed networks
Hong Kong	None	Oligopoly of 5 in domestic, monopoly in international
Indonesia	GATS: 35 per cent	Regional monopolies with scope for joint operating schemes
Japan	20 % in NTT and KDD	Full competition
Korea	*Variable:* Facilities-based: 33% (49% in 2001) Korea Telecom: 20% (33% in 2001) Resale-based: 0% (49% in 1999, 100% in 2001)	Full competition, phased in over several years
Malaysia	GATS: 30 %	Increasing competition; discretionary licensing
Philippines	GATS: 40 %	Full competition; discretionary licensing
Singapore	GATS: 73.99% (direct: 49 %, indirect: 24.99%)	Monopoly now, oligopoly of 3 or more after 2000
Thailand	Limited, in BTO arrangements	Monopoly, with some BTO arrangements
Bangladesh	None	Regional duopolies in local and domestic; monopoly in international
India	National: 49%, GATS: 25 %	Regional duopolies in local ad domestic; monopoly in international
Pakistan	GATS: 26 %	Monopoly, with bypass permitted after 2004
Sri Lanka	GATS: 35% in SLT	Oligopoly of 3 in local guaranteed for 5 years, monopoly in international, with duopoly possible after 2000.

But against these concerns must be counter-posed the benefits that foreign investment may bring even in situations where it does not lead to enhanced competition. First, allowing foreign equity participation may relax a capital constraint which could otherwise result in socially suboptimal levels of investment in the sector.[10] Second, foreign equity participation may serve as a vehicle for transferring technology and know-how. Indeed, this is clearly the intention of governments when they seek out strategic partners at the early stages of (partial) privatization. The strategic partners often undertake specific types of technology or knowledge transfer in part-exchange for the right to invest. This is not the only way of seeking technology and know-how, however, as illustrated by Thailand's use of build-transfer-operate (BTO) arrangements for developing the sector (see Annex 1).

Since the rent-appropriation concerns about foreign direct investment arise in imperfectly competitive situations, it is necessary to consider whether such market structures are inevitable in basic telecommunications. It is true that fully competitive markets are unlikely to exist for some time despite the emergence of new technologies which have reduced the optimal scale of production and lowered market entry costs. But the high degree of concentration in certain countries is primarily a consequence of the policy barriers to entry. These barriers reflect, first, the perceived need to protect the incumbent public/national supplier from immediate competition - either because of the infant industry type of argument or to facilitate "orderly exit". This is an issue we consider in the next section. Secondly, there is in some cases a form of "investment pessimism", which gives rise to the belief that the promise of oligopoly rents is necessary to attract new investment. However, it is not clear why the market structure needs to be determined by policy rather than emerge independently, given the state of technology.[11] Finally, there may be the temptation to raise revenue by auctioning of monopoly or oligopoly rights. The rents would then accrue to the government rather than to any supplier, which would amount to the government indirectly appropriating consumers' surplus. But the static and dynamic inefficiencies consequent upon lack of competition would still exist.

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[10]Seen from an economy-wide perspective, however, the notion of a capital constraint would need to be analyzed in terms of imperfections in the capital market, which could include restrictions on foreign capital, as well as a variety of other market impediments such as controls on interest rates, forced lending and capital rationing.

[11]Normally, government intervention, in the form of competition policy, would seem necessary where the market is likely to produce *more* rather than *less* concentrated market structures.

IV. *The role of GATS in the domestic reform process*

Why do governments participate in multilateral liberalization negotiations, exchanging legally binding commitments with respect to their present or future policy regimes? This is a complex question, only some aspects of which are addressed here. A basic distinction can be made between external and internal factors.

Unilateral liberalization versus reciprocity

In the first category falls the question whether a government seeks to use its own liberalization commitments as bargaining leverage for more open foreign markets. Economists have tended to stress that the primary benefits of liberalization are located firmly in the domestic gains that accrue -that is, in the efficiency and consequent income gains flowing from liberalization. This emphasis on gains to the liberalizing country is solidly backed up by empirical studies,[12] and they imply that governments should worry primarily about what they are doing, and not whether others are doing the same.

It is from this vantage point that mercantilistic bargaining alleged to underlie WTO negotiations, and concern with reciprocity, are judged inappropriate and damaging. On the other hand, countries would benefit additionally if their trading partners were also to liberalize, so a scenario can be constructed under which it would make sense to defer the benefits of unilateral liberalization up to the point where the benefits foregone would outweigh the extra benefits accruing from reciprocal action by trading partners induced through negotiation. Of course, such choices rest on delicate assumptions and judgements about the relative size of the domestic market, the discount rates of governments, and beliefs about other governments' objectives, and they may not be a very good guide to policy. Another relevant factor, however, is that from a political standpoint, governments may be able to garner greater domestic support for liberalization, including through building cross-sectoral coalitions, if other governments are also moving in the same direction at the same time.[13]

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[12]See, for instance, Francois et al. (1995).

[13]For an analytical exploration of some of these issues, see Bagwell and Staiger (1996).

A notable feature of the WTO negotiations in basic telecommunications is that they did not take place in the usual context of a multi-sectoral and multi-issue round of negotiations. Although this had, of course, been the original intention, failure to complete the negotiations before the end of the Uruguay Round effectively turned basic telecommunications into a single-sector negotiation. This tended to divide countries into those that looked for export gains and those whose focus could only be the conditions of competition in the domestic market. Despite the absence of any possibility for cross-sectoral trade-offs, or for improvements in the policy environment facing exports for those without export potential in the telecommunications sector, many governments made significant new commitments.

Before examining the internal factors which motivated these commitments more closely, it is perhaps worth considering whether any lessons from telecommunications can be drawn for future WTO negotiations. Specifically, does the telecommunications experience presage a future in which single-sector negotiations will work, the diminished scope for trade-offs notwithstanding? Have governments begun to eschew mercantilist temptation and dispense with reciprocity demands? Perhaps there was an element of this in telecommunications, at least as far as non-exporting countries were concerned, but it is doubtful that any such enlightenment will find general expression in trade policy in the foreseeable future. This implies that telecommunications is different, and such a claim rests on two arguments. Firstly, because of a strong tide of reform in the telecommunications sector, the WTO process was able to build on an already entrenched tendency. Secondly, it is doubtful that momentum for negotiations could be built in a single sector unless the major trading countries were in support of the idea. Following this reasoning, it is difficult to imagine that single-sector negotiations could be launched in the agriculture or textiles and clothing sectors. Progress in these areas requires a broader-based approach.

Domestic factors and the role of GATS negotiations

One reason for the willingness of governments to make liberalization commitments, even where the only question at issue was how much foreign competition to invite into the domestic market, may well have been the realization not only that liberalization was a good idea, but that the WTO offered a useful instrument for consolidating and promoting liberalization, as well as defining and tying down future liberalization plans in a legal sense. Smaller developing countries also doubtless saw WTO commitments as a way of signalling their seriousness to potential foreign investors and strategic partners.

In broad terms, governments could have adopted four different approaches to the telecommunication negotiations, assuming that they participated at all. These are: (i) to make binding commitments that represent less than the *status quo* in policy terms; (ii) to bind the *status quo*; (iii) to liberalize further in the context of the negotiations and to bind the new situation; and (iv) to promise future liberalization, which may or may not have been planned prior to the negotiations. These categories are not necessarily mutually exclusive when the set of a country's commitments is taken as a whole, nor is it always easy to determine the precise category in which a policy position should fall. The distinctions are useful, however, in thinking about the relationship between WTO negotiations and domestic liberalization processes. Annex 2 presents brief summaries of commitments made by thirteen Asian countries in the negotiations.

Several countries bound at less than *status quo*, at least with respect to certain aspects of their regimes. India and Indonesia, for example, did so with respect to foreign equity participation. The Philippines did so with respect to Modes 1 and 2, and Thailand has not bound any commitments so far. The value of a binding at below *status quo* is attenuated by the scope it gives a government to worsen existing conditions of market access without violating a GATS commitment. On the other hand, any binding at all provides an identifiable measure of security of market access.[14] Given the arguments made above, it seems doubtful that small countries can gain much by withholding commitments in the hope of extracting additional liberalization measures from other countries, particularly because the MFN principle would apply to any liberalization that might be induced in this fashion. The only other reason for holding back would appear to be the belief that existing levels of liberalization are unsustainable and may need to be reversed. It is beyond the scope of this paper to evaluate how far such concerns might be legitimate in the context of basic telecommunications.

A further consideration is worth mentioning with respect to bindings involving foreign equity limitations. Where a binding is less than the level actually allowed to any investor subsequent to the entry into force of the commitments, the MFN principle will have the practical effect of "ratcheting up" the equity limitation commitment. This is because a new entrant could demand the same level of equity participation on MFN grounds as that granted to another supplier.

Governments binding at the *status quo* are signalling that existing market conditions are guaranteed. A number of the commitments made by Asian countries covered in this paper

[14]See Francois and Martin (1996) for a formal development of this argument in relation to tariff bindings.

were of the *status quo* variety. Brunei Darussalam, Hong Kong, Malaysia, Bangladesh, Pakistan and Sri Lanka were among those whose schedules essentially represented the *status quo*. Indeed, commitments of this nature are probably the most common to have been made in GATS so far, and not only in the basic telecommunications sector. Consolidation of the *status quo* clearly has positive value, and it is the easiest thing for governments to do while signalling a positive intent and a commitment to the trading system. In a fast-changing sector like telecommunications, however, it is likely that *status quo* commitments will become obsolete well before a new multilateral negotiation takes place.

Three Asian countries covered in the present paper made significant liberalization decisions on the altar of the negotiations. Singapore brought forward its commitment to introduce competition by seven years. Japan raised foreign equity limits to 100 percent for suppliers other than NTT and KDD. Korea raised foreign equity limits and brought forward the liberalization timetable. It is also noteworthy that the European Union accelerated liberalization timetables in several Member States during the negotiations, including most notably, Belgium and Spain. The telecommunications negotiations are probably the first under the GATS where liberalization has been accelerated to such a degree as a result of a multilateral process. Governments apparently felt able to go further than otherwise because their decisions were taken in the context of an international negotiation.

Finally, there is the question of the role of the WTO as a vehicle for promoting future liberalization. As noted in the previous Section, one of the reasons why Governments are unwilling to liberalize their telecommunications sectors immediately can be seen as a variant of the traditional "infant industry" argument. This is based on considerations of potential comparative advantage, whereby currently disadvantaged national suppliers, if provided with protected markets, are expected to learn-by-doing and eventually become internationally competitive. The failure of these policies in the past, and the innumerable examples of perpetual infancy, may well be attributed to the inability of a government to threaten credibly to liberalize at some future date - either because it has a stake in the national firm's continued operation, or because it is vulnerable to pressure from interest groups which benefit from protection.[15]

[15]National firms often behave as if they prefer to operate as high cost, poor quality producers in protected markets than as low cost/high quality producers facing international competition. This may be because of the profitability of protection, or the greater utility that managers and workers derive from operating in sheltered environments. In any case, when the Government cannot credibly threaten to liberalize, then national firms may have an incentive to precommit to high costs or poor quality, in an environment of slow learning and under investment in research and development. Such behaviour by the firm, either for strategic reasons or on account of inertia, forces Governments to prolong socially costly protection. See Staiger and Tabellini (1987) for a variant of this argument.

The GATS offers a valuable mechanism to overcome the difficulty of making credible commitments to liberalize. Commitments to provide market access and national treatment at a future date are binding under WTO law. Failure to honour these commitments would create an obligation to compensate those who are deprived of benefits. This need to compensate does in fact make the commitment more credible than a mere announcement of liberalizing intent in the national context.

Several Asian governments have taken advantage of this mechanism to strike a balance between, on the one hand, their reluctance immediately to unleash competition on protected national suppliers, and, on the other hand, their desire not to be held hostage to these suppliers in perpetuity. As Table 3 indicates, only Japan,[16] Malaysia and the Philippines of the countries covered have not made any future commitments. The other countries can be divided between those who have made strong legally binding commitments and those who have made weaker commitments to review policy at a future date. In the first category are Korea, Pakistan and Singapore, while in the second are India, Indonesia, Hong Kong, Singapore, Sri Lanka and Thailand.

[16]As previously noted, Japan undertook additional liberalization measures to be implemented as part of the negotiated package.

TABLE 3: Precommitments to liberalize under the GATS

Strong commitment	**Weak commitment**
Pakistan: committed to phase out the exclusivity on cross border supply of voice telephony as of 2004. Proposes to disinvest 26% of the PTCL stake to a strategic investor through international competitive bidding who will have an exclusive licence for the operation of basic telephonic services for seven years.	*Indonesia*: commitment to a policy review to determine whether to admit additional suppliers upon the expiry of the exclusive rights: exclusivity expires in 2011 for local service, in 2006 for long distance services, and in 2005 for international service.
Singapore: committed to phasing-in competition of facilities-based telecommunications services in April 2000 when up to two additional operators will be licensed. Additional licences will be granted thereafter. More licences will also be granted in April 2002 to public cellular mobile.	*Thailand*: commitments to introduce revised commitments for voice telephone and several other services in 2006, conditional upon the passage and coming into force of new communication acts.
Korea: committed to raising foreign equity participation in facilities based suppliers from current 33% to 49%, and in the national supplier (Korea Telecom) from 20% to 33% from 2001. Market access for domestic voice resale to be allowed as of 1999 with foreign equity participation up to 49 %, to be raised to 100% after 2001.	*Sri Lanka*: proposes to issue an additional license in the year 2000, depending on satisfactory progress by the monopoly on tariff rebalancing. Number of operators licensed for local and domestic long distance mobile cellular services to be reviewed in the year 2000.
	Bangladesh: proposes to review the possibility of adding regulatory principles in the future.
	India: commitment to review the subject of opening up of national long-distance service beyond the defined service area to competition in 1999, and international services in 2004.
	Brunei: committed to a review of policy and consider whether to allow additional suppliers 10 years after privatisation (at an unspecified date) of JTB for local services, and in 2010 for international services and cellular mobile services.
	Hong Kong: will consider issuing more than the existing four licences for local fixed network services in June 1998.

The value of the weaker commitments may be questioned by some, but they are not worthless. First, a country is obliged to carry out the review. Secondly, trading partners may argue, on the basis of GATS Article VI:2(a) dealing with domestic regulations, that the review must be "objective and impartial." Thailand's commitments are particularly interesting, as they have been made contingent on parliamentary approval of new legislation. This approval is not certain, but the current commitment has value because there is an obligation immediately to translate future domestic law into an international commitment.

Commitments to the regulatory principles

Notwithstanding agreement among negotiators that these regulatory principles were to be adopted on a voluntary basis, the only country examined here that did not adopt any of them was Bangladesh - but even there the creation of such disciplines is under review. All other countries adopted them in full, except India, Malaysia, Pakistan and the Philippines, who made certain modification to the template set of principles, and Thailand, who promised to adopt the principles after new domestic legislation entered into force. Much of the earlier discussion of how WTO commitments can help in the context of domestic reform applies in a similar manner to the regulatory principles. Any government serious about opening up the telecommunications sector would have to develop domestic regulations along the lines of the GATS regulatory principles, and subscribing to such principles internationally is a way both of providing guarantees to foreign service suppliers, and making clear to incumbent firms in the industry the full extent of a commitment to reform.

Some who were close to the negotiations have expressed the view that the regulatory principles may prove to be the most important single aspect of the results of the telecommunications negotiations, in terms of real guarantees of market access. It is important to note, however, that few governments have any experience or institutional context for this kind of regulatory activity. Those who have accumulated regulatory experience have taken a number of years to acquire it, and there remain many contentious issues about the best approach. For these reasons, it is likely that governments will have to contend with significant "teething" problems as they attempt to put their regulatory machinery in place, and such difficulties may spill over into the dispute procedures of the WTO. Disputes in some areas will prove hard to adjudicate, owing to a lack of specific detail in the principles - an inevitable outcome of the first foray of a multilateral institution into the domain of industry-specific pro-competitive regulation.

V. *Conclusions*

This paper has focused primarily upon the relationship between the domestic liberalization process in basic telecommunications and participation in the GATS negotiations. In considering how the negotiations might have influenced liberalization outcomes, it was suggested that both external and internal factors come into play. The external factors relate to the interaction between negotiating governments and the impact of such interaction on liberalization decisions. The economic case for slowing the pace of liberalization in order to seek reciprocal action on the part of trading partners is weak and can only be narrowly drawn. For small countries, it is probably non-existent, unless effective multi-country coalitions can be established.

But the political case for joint action can be stronger, provided governments are determined to push ahead with liberalization, and they can more effectively harness a pro-liberalization coalition in the context of a broad-based international negotiation. The fact that a single-sector negotiation was successful in basic telecommunications is attributable to special factors, and is unlikely to point to the way of the future in multilateral negotiations in many other sectors or areas of rule-making. One special factor was that a strong liberalizing momentum already existed in the sector, making it easier for the many governments without export interests to undertake market-opening obligations in the absence of any *quid pro quo* in terms of new export opportunities in other sectors. Some of these governments may also have wanted to emphasize their commitment to liberalization in order to attract foreign investors into the sector.[17]

As far as internal factors are concerned, four different approaches to making commitments were identified - below *status quo* commitments, *status quo* commitments, actual liberalization, and future liberalization commitments. In the countries covered in the paper, relatively few took the modest approach of committing to market access conditions that had already been bettered in practice. Commitments reflecting the *status quo* were more commonplace, as they have proven to be in much of what has been done in other sectors under the GATS. Three countries in the region improved upon the *status quo* and undertook

[17]Furthermore, it was large and influential countries that wanted the telecommunications negotiations to succeed, the same countries that would have great difficulty in dealing with a negotiation that focused only on textiles and clothing, or on agriculture. In short, it probably remains the case that for good reasons or bad, successful multilateral negotiations in the future will generally need to involve a multiplicity of sectors and issues.

additional liberalization in the context of the negotiations. What is most remarkable of all, however, is that ten out of the thirteen countries examined made pre-commitments of one kind or another to future liberalization, thereby sending a clear signal of intent, and reducing the likelihood of policy reversals. Even though some of the pre-commitments are quite weak, they exemplify a significant element in the interplay between liberalization and multilateral negotiations. Very similar arguments apply in the case of the regulatory principles, to which most governments made commitments.

In many countries, market-opening has been accompanied by the withdrawal, at least partially, of government from direct participation in the sector. But the extent of state ownership of enterprises in the telecommunications market is not necessarily a reliable indicator of the degree of liberalization that has occurred, especially if impediments to competition have been removed. Similar observations may be made with respect to foreign direct investment (FDI). No simple correspondence was found in the paper between the degree to which FDI had occurred and the degree of openness of markets. This was in part because domestically-owned firms can also offer competition to established incumbents. It was also because foreign firms might enjoy monopolist market positions just as privately-owned national firms and government-owned firms might.[18] The Asian experience emphasizes that while trade liberalization under GATS, from which foreign services and service suppliers are expected to benefit, and the removal of barriers to competition in the domestic market may often amount to one and the same thing, they are not always identical. The degree of competition prevailing in a market cannot always be well judged by the degree to which foreign market penetration has occurred.

The increasingly liberal attitude to FDI reflects a recognition of its positive effects, including the supply of additional capital, and the transfer of technology and know-how. However, the possibility that demands for increased market access are being accommodated by allowing equity participation in existing suppliers rather than by permitting new entry and hence increased competition, does raise concerns. Increased FDI in the face of continued obstacles to market entry could be damaging from a national welfare perspective because monopolistic rents may be siphoned off by foreign investors. To some extent this can be prevented by profit taxation, and by holding competitive auctions of licenses or equity. But the full benefits of efficient production as well as allocative efficiency can only be realised in

[18]The general point about market structure and contestability also applies - namely that the influence of potential market entry on the behaviour of incumbents may break any direct link between market structure and the conditions of competition in a market.

competitive markets. Moreover, there is also less justification for political concerns about the dominance of a single foreign supplier in competitive markets.

A key question for this paper is whether the Asian countries studied have made the most of the scope for undertaking liberalization commitments in the GATS. Even if we accept the need for temporary protection, based on infant industry or adjustment cost grounds, the GATS offers governments a unique mechanism to precommit to *future* liberalization and thus to make credible promises to remove protection. This paper has argued that such precommitment provides a valuable means to avert situations where economies must indefinitely bear the cost of protected domestic firms which fail to improve performance. Even after making allowance for reciprocity-based arguments for holding back on multilateral liberalization commitments, it may be concluded from the analysis of this paper that not all governments have adequately exploited the institutional mechanisms offered by GATS in support of liberalization.

Annex 1

Summary of Reforms in the Telecommunications Sector in Selected Asian Countries

Bangladesh

The public operator Bangladesh Telegraph and Telephone Board (BTTB) was split in 1990 into an autonomous operating company and a regulatory board. The operating company has monopoly for provision of urban domestic and international telecommunication services. The country has been divided into two regions in each of which one private operator competes with BTTB. Four licences have been issued to private operators to provide terrestrial cellular mobile voiced telephone services.

Brunei Darussalam

Local public switched voice telephone services are provided exclusively by Jabatan Telekom Brunei (JTB), a wholly Government-owned state company operated by the Telecommunications Department. International public switched voice telephone services are provided exclusively by JTB and DSTCom, a private company. Public cellular mobile telephone services are exclusively provided by DSTCom.

Hong Kong

Hong Kong Telecom Ltd. is the privately owned (by Cable and Wireless) holding company for Hong Kong Telephone Company (HKTC) and Hong Kong Telecom International (HKTI). HKTC had a monopoly on domestic telephone services until 1995 when four additional licences were issued. HKTI has an exclusive licence to provide public international services. Vigorous competition exists in cellular services where four licences operate five networks. There are no foreign ownership restrictions.

India

Until recently there was monopoly provision of basic services in local, domestic and international long-distance. Department of Telecommunication (DOT) provided local network and domestic long distance services everywhere except in metropolitan Bombay and New Delhi where Mahanagar Telephone Nigam Ltd. (MTNL) operated the local network. International long distance services are provided by Videsh Sanchar Nigam Ltd. (VSNL) which is 85% government owned and 15% privately held. Recently, the whole country was divided into 20 fixed and mobile telecom service "circles". One fixed operator, other than the DOT/MTNL, is allowed in each circle for a period of 10 years, after which the situation will be reviewed. The private operator is permitted to provide long distance service within the licensed service area only. In each service area, two service operators are licensed to provide cellular mobile telephone services for a period of 10 years, after which the situation will be reviewed. By early 1996, licenses had been granted to 34 private companies to operate in 18 of the 20 circles opened for bidding. Foreign firms are allowed to hold up to 49 per cent of shares in the private consortiums.

Indonesia

Until recently, the telecom sector in Indonesia was characterized by the monopoly of fully state owned enterprises. Until 1995, domestic services were provided by PT Telekomunikasi (PT Telkom), and international services predominantly provided by PT Indosat. While both have been partially privatized, they are still majority controlled by Indonesian Government. In June 1995, PT Telekom's operations were divided into 5 geographical areas, with each operating company free to enter into a Joint Operating Scheme (JOS) with private companies. Several companies have been authorized to build domestic mobile telephone systems. In 1993, PT Satelindo was formed to provide cellular, international and satellite services. It is 60 per cent privately owned, with the rest of the 40 per cent state-owned by PT Indosat and PT Telekom.

Japan

Since 1985, all segments of the market have been open to competition. The absence of tariff rebalancing and huge deficits in the local service market meant that few competitors emerged in the local market, but several entered the long distance and international markets. The facilities based market (Type I) is divided between domestic and international, with carriers in one not allowed to enter the other segment. Foreign ownership in Type I carriers was generally limited to 33 per cent, but only to 20 per cent in two carriers, Nippon Telegraph and Telephone Corporation (NTT), which provides local and domestic services, and Kokusai Denshin Denwa Company Ltd. (KDD), which provides international services.

Korea

Korea Telecom which is 100% government owned provides domestic voice services on a monopoly basis. DACOM, owned by Korea Telecom (33%) and 27 privately owned corporations, has been allowed to offer international voice services since 1991. Korea Mobile Telecommunications Corporation (KMTC) is designated as an independent common carrier for mobile services. No foreign ownership was allowed for general service providers. Competition is developing in mobile services from which both Korea Telecom and DACOM are excluded

Malaysia

No telecommunications monopoly exists under Malaysian law. The main facilities based operator, Telekom Malaysia Bhd (TMB) was corporatized in 1987 and partially privatized (25 per cent) in 1990. Two private companies, Technology Resource Industries (TRI) and Binairang Sdn Bhd were given international licenses. In 1994, the latter was awarded a license to provide local public networks and services, thus ending Telekom's monopoly as a basic service provider. In 1993, Time Telecommunications was given the license to provide both long-distance and international services. Foreign ownership restrictions were not clearly defined. By 1996, there were seven basic network operators.

Pakistan

Basic services are performed by a wholly state owned company, the Pakistan Telecommunications Corporation Ltd. (PTCL), on a monopoly basis. The cellular mobile service has been opened to competition. The government intends to privatize PTC with foreign participation. A twelve percent stake in PTC was sold to international and national buyers in 1994-95.

Philippines

The Philippines now has the most liberalized and privatized telecom market among Asia's emerging economies. There are as many as 52 operators providing domestic telephone services, though many of them are small private firms which provide basic local services, and coordinate their operations through the Philippines Association of Private Telephone Companies (PAPTELCO). The dominant supplier is clearly the Philippines Long Distance Telephone Company (PLDT) which controls 93 per cent of all telephones. Telecommunications Office (TELOF) is a government network serving rural areas. More recently, Telecommunications Infrastructure Corporation (Telic) has been created by a consortia of carriers to build an alternative national network to bypass PLDT's network. The PLDT had a de facto monopoly for international telephone service until 1990. In 1990, Eastern Telecommunications Philippines Inc. (ETPI) was licensed and installed its own international gateway. At the beginning of 1994, Philippines Global Communications Corporation (Philcom) was the third international gateway operator. More recently as many as five other international gateway operators have been licensed, each with a specific universal service obligation mixing rural and urban areas. The cellular market, characterized by a duopoly until 1993, now has five companies competing for a growing market. The Philippines Communications Satellite Corporation (Philcomsat) provides international satellite services.

Singapore

Singapore Telecom (ST) originally had a monopoly for domestic services for an indefinite period, for international services until 2007 and for mobile until 1997. About 11% of the government's share in the ST was sold in 1993. Half the shares were reserved for Singaporeans. The government will retain majority control but plans to sell an additional 25% within the next few years. Liberalization plans have been accelerated to the year 2000.

Sri Lanka

Basic services (local, long-distance, and international voice) have been provided by Sri Lanka Telecom Ltd. (SLT) on a monopoly basis. It is a wholly Government-owned corporation, but there are privatization plans. Full monopoly rights no longer exist for SLT, as cellular licenses have been granted to four operators - all joint ventures with foreign companies. Moreover, at least one company is building wireless local loop capacity and will be an additional source of competition in the domestic market.

Thailand

Telephone Organization of Thailand (TOT) operates the domestic network. International services are provided by the Communications Authority of Thailand (CAT). Both TOT and CAT are wholly owned by the Government. Shinawatra Satellite Co. has a 30-year concession to operate the domestic satellite system (operational since 1994). TOT has sought private (including foreign) financing of domestic infrastructure projects through build-transfer-operate (BTO) arrangements for Bangkok (2 million lines) and rural areas (1 million lines). It is intended to competitively restructure TOT and CAT, and eventually to end their monopolies.

Annex 2

Commitments by selected Asian countries in the WTO negotiations on basic telecommunications

Bangladesh

Bangladesh's commitments under the GATS bind the status quo but indicate that it will review the possibility of adding commitments on regulatory principles in the future.

Brunei Darussalam

Brunei binds the status quo but has committed to a review of policy and to consider whether to allow additional suppliers 10 years after the privatization (at an unspecified date) of JTB for local services, and in 2010 for international services and cellular mobile services. It also commits to the Reference Paper on regulatory principles.

Hong Kong

Hong Kong has committed to providing access to the local market for the basic telecommunication services. Four licences for local fixed network services are already issued. Issuing of further licences will be considered in June 1998. In international services, commitments relate only to resale-based provisions subject to certain restrictions. It has committed to the reference paper on regulatory principles.

India

India's commitments cover local and long distance, but not international, voice telephony for public use over fixed networks. The commitments essentially bind the *status quo*, but there is a commitment to review the subject of opening up of national long-distance service beyond the defined service areas to competition in 1999, and international services in 2004. Furthermore, for both fixed and mobile telephony, it is required that the private operator should be a company registered in India in which total foreign equity does not exceed 25 per cent. There is also a commitment to a slightly modified version of the Reference Paper on regulatory principles.

Indonesia

Indonesia has made commitments on public voice telephony and a number of other services. In each segment there are a number of suppliers with exclusive rights. Local service is to be provided by PT Telkom and five regional joint operators, domestic long distance by PT Telkom exclusively; and international services by a duopoly of PT Indosat and PT Satelindo. There is a commitment to a policy review to determine whether to admit additional suppliers upon the expiry of the exclusive rights: exclusivity expires in 2011 for local service, in 2006 for long distance services, and in 2005 for international service. Competition is allowed in domestic mobile cellular telephone services. The general requirement is that foreigners can enter the market as joint ventures with a maximum foreign equity participation of 35 per cent. It has committed to the Reference Paper on regulatory principles.

Japan

Japan committed to provide full market access in all market segments, but maintained the 20 per cent foreign equity limitations in NTT and KDD. It committed to the Reference Paper on regulatory principles.

Korea

Korea has committed to providing market access in facilities-based services never before opened to full competition. Foreign equity participation is, however, limited to 33%, to be raised to 49% in 2001. A foreign equity limit of 20 percent has been imposed on the national supplier, Korea Telecom, to be raised to 33 percent in 2001. Market access for domestic voice resale is permitted as of 1999, when foreign equity participation up to 49 percent will be allowed. After 2001, 100 percent foreign share holding will be permitted. Korea also committed to the reference paper on regulatory principles.

Malaysia

Malaysia has committed to the full range of services, but foreign participation is possible only through acquisition of equity, up to a maximum of 30 per cent, in *existing* licensed public telecommunications operators. Malaysia made a partial commitment to the regulatory principles.

Pakistan

Pakistan has committed to phase out exclusivity on cross-boarder supply of voice telephony as of 2004, but has made no commitment on commercial presence. It has also noted that it proposes to disinvest 26 percent of the PTCL stake through international competitive bidding to a strategic investor, who will have an exclusive licence for the operation of basic telephone services for seven years. It has also committed to the Reference Paper on regulatory principles with certain modifications.

Philippines

The Philippines committed to a full range of services with the following limitations:

(I) Restricted technological domain of commitments by excluding cable television and satellite.
(ii)Included the requirement of a "Certificate of Public Convenience and Necessity" (CPCN) from the National
Telecommunications Commission.
(iii) Foreign equity limited to 40 per cent.
(iv) Modes 1 and 2 unbound for market access.

Regulatory principles were included, but not fully.

Singapore

Under the GATS Singapore has committed to phasing-in competition of facilities-based telecommunications services in April 2000 when up to two additional operators will be

licensed. Additional licences will be granted thereafter. More licences will also be granted in April 2002 for public cellular mobile services. Foreign share holding is limited to a cumulative total of 73.99 percent, based on 49 percent direct investment and 24.99 percent indirect investment. Singapore committed fully to the regulatory principles.

Sri Lanka

Sri Lanka has maintained a monopoly for Sri Lanka Telecom Ltd. (SLT) until 31 December 1999. However, foreign equity participation of up to 35 per cent involving a strategic partner is permitted in SLT. Furthermore, it is proposed to issue an additional license in the year 2000, depending on satisfactory progress by the monopoly on tariff rebalancing. Two operators (in addition to SLT) are licensed to supply basic voice telephony by wireless local loop (WLL), with a duopoly guaranteed for five years in exchange for specific infrastructure development commitments. Four operators are licensed for local and domestic long distance mobile cellular services, with the number to be reviewed in the year 2000. Sri Lanka adopted the regulatory principles.

Thailand

Thailand's only undertaking is to introduce revised commitments for voice telephony and several other services in 2006, including commitments to regulatory principles, conditional upon the passage and coming into force of new legislation.

References

Bagwell, K., and Staiger, R.W. (1996), Reciprocal Trade Liberalization, National Bureau of Economic Research Working Paper, 5488, Cambridge, MA.

Bronckers, M.C.E.J., and Larouche, P., (1997) Telecommunications Services and the World Trade Organization, Journal of World Trade, vol. 31, 5-48.

Francois, J.F., McDonald, B., and Nordstrom, H., (1995), Assessing the Uruguay Round, in W. Marting and L.A. Winters (eds.), The Uruguay Round and the Developing Economies, World Bank Discussion Paper 307, Washington, D.C.

Francois, J.F., and Martin, W., (1996), Multilateral Trade Rules and the Expected Cost of Protection, mimeo.

Hoekman, B. (1995), Tentative First Steps: An Assessment of the Uruguay Round Agreement on Services, paper presented at the World Bank Conference on The Uruguay Round and the Developing Economies, Washington, D.C.

Low, P. (1995), Impact of the Uruguay Round on Asia: Trade in Services and Trade- Related Investment Measures, paper presented at the Asian Development Bank Conference on the Impact of the Uruguay Round on Asia, Manila.

Mattoo, A. (1997), National Treatment in the GATS: Corner Stone or Pandora's Box?, Journal of World Trade, vol. 31, 107-35.

Petrazzini, B.A., and Lovelock, P., (1996), Telecommunications in the Region: Comparative Case Studies, paper presented at the International Institute for Communication Telecommunications Forum, Sydney, Australia, 22-23 April.

Staiger, R.W., and Tabellini, G., (1987), Discretionary Trade Policy and Excessive Protection, American Economic Review, vol. 77, 823-37.

Tuthill (1996), L., (1996), Users' Rights? The multilateral rules on access to telecommunications, Telecommunications Policy, vol. 20, 89-99.

Tuthill, L., (1997), The GATS and New Rules for Regulators, forthcoming, Telecommunications Policy, November.