POLICY RESEARCH WORKING PAPER 1747

Protection and Trade in Services

A Survey

Bernard Hoekman
Carlos A. Primo Braga

In the past, international economists have ignored trade in services, but technological progress and international trade negotiations are likely to keep liberalization of trade in services a high-profile policy issue.

The World Bank
International Economics Department
International Trade Division
April 1997

Summary findings

Until recently, trade in services was mostly ignored by international economists, reflecting a perception that services were nontradable. This has never been true. Transportation and travel, for example, have always been important economic activities. In 1995, services trade had climbed to a 20-percent share of global trade — no doubt an underestimate, as the most dynamic component of trade in services is telecommunications, which is not being properly captured in conventional balance of payment statistics.

Hoekman and Braga survey the literature on trade in services, focusing on the policies used to restrict such trade, the gains from liberalization, and the institutional mechanisms adopted in pursuit of liberalization.

They argue that technological progress (which makes services more tradable) and international trade negotiations are likely to keep liberalization of trade in services a high-profile policy issue.

They suggest that research focus on developing better estimates of the welfare costs of protectionism in the service sector. This will require quantifying barriers to the international exchange of services.

This paper — a product of the International Trade Division, International Economics Department — was prepared for The Open Economies Review. Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Jennifer Ngaine, room N5-060, telephone 202-473-7947, fax 202-522-1159, Internet address trade@worldbank.org. April 1997. (36 pages)

Protection and Trade in Services: A Survey*

Bernard Hoekman and Carlos A. Primo Braga
The World Bank

JEL Classification: F13; F23

Keywords: trade in services, protectionism, World Trade Organization, trade negotiations

* Prepared for The Open Economies Review. We are grateful to constructive suggestions by a referee.

I. Introduction

Until recently, trade in services was mostly ignored by international economists, reflecting a perception that services were nontradable. This has never been accurate: transportation and travel, for example, have always been important economic activities. Since the early 1980s, however, international service transactions expanded rapidly as new modes of supply have materialized, as in the case of services transmitted over electronic networks. Trade in services grew faster than trade in merchandise throughout the 1980s. In 1990, global services trade (defined as non-factor services in the balance of payments minus government transactions) stood at US $ 0.8 trillion, or 20 percent of global trade (in contrast with a 17 percent share by 1980). By 1995, services trade had reached roughly US$1.2 trillion per year, maintaining a 20 percent share in global trade (WTO 1996). Given that the most dynamic component of trade in services -- services provided via telecommunications networks -- is not being properly captured in conventional balance of payments statistics, growth of services trade is most likely being underestimated.

Notwithstanding technological advances, many services remain difficult to trade. Producers of such services generally must supply foreign markets through commercial presence, especially foreign direct investment (FDI). FDI in services has also grown substantially over the last fifteen years. As of the early 1990s, some 50 percent of the global *stock* of FDI was in services activities. The share of services in annual FDI inflows into many countries has often been much higher in recent years.[1] The internationalization of services is therefore reflected in the growth of both trade and FDI flows. Both have been driven by innovations in information and communications technology that allowed increasing specialization and product

[1] See UNCTAD and World Bank (1994) for data on FDI in services; Sauvant and Zimny (1987), Blomstrom and Lipsey (1989), Li and Guisinger (1992) and Edvardsson et al. (1993) for discussion of service multinationals.

differentiation, as well as government policies such as deregulation and liberalization.

This paper surveys some of the literature on trade in services, focusing on the policies that are used to restrict such trade, the gains from liberalization, and the institutional mechanisms that are adopted in the pursuit of liberalization. The discussion is mostly policy and empirically oriented. The burgeoning theoretical literature is not discussed in detail here.[2] The plan of the paper is as follows. Section II discusses some of the technological developments that have fostered the growth in trade and investment in services, focusing on the "revolution" in telematics. Section III summarizes the main policy instruments that are used to restrain trade in services. Section IV surveys some of the work that has been done on the gains of liberalization. Section V turns to the various institutional options that may be used to open service markets to foreign competition. Section VI concludes.

II. Technology and Internationalization of Services

Service transactions often require direct interaction between providers and consumers. In other words, the time and space of the production and consumption of services cannot be separated in most circumstances (Sauvant 1990). Sampson and Snape (1985), for example, used the physical proximity of consumers and providers to classify service transactions.[3] Most international transactions in services require either the consumer to move to the location of the producer (e.g., tourism) or that factors of production move to the place of consumption (e.g., foreign direct investment to establish commercial presence or the temporary movement of labor). There are, however, services that can be exchanged internationally in a similar fashion to trade in goods via cross-border supply (i.e, without a movement either of consumers or producers). These services

---

[2] The theory literature has been surveyed in Sapir and Winter (1994) and Stibora and de Vaal (1995).

[3] See also Bhagwati (1994).

are sometimes characterized as "separated" or "long-distance" services.

International telephony provides a good example of a service for which cross-border supply is the dominant mode of delivery. International telephone traffic has been expanding at a two-digit growth rate over the last two decades fostered by a sustained decrease in the costs of communication.[4] Technological progress has been the key driver of this process, but the economics of the expansion of cross-border services is also shaped by existing barriers to trade, the influence of national regulatory regimes and the prevailing international rules that influence competition (and cooperation) in the telecommunications sector.

The merger of telecommunications networks and computers is expected to continue to foster dramatic shifts in the cost structure of the telecommunications industry. This process started with the transition to customer-initiated dialing in the 1970s which not only has significantly reduced the costs of international telephony, but also shifted the composition of costs toward capital outlays, diminishing the importance of labor-related (variable) costs (Ergas, 1996). In a parallel development, the costs of transmission have been falling on a continuous basis as the costs of production of fiber-optics cables fell by a factor of thirty over the last ten years (Forge 1995). And an even more dramatic decrease in the costs of computing has occurred over the last two decades with the cost of information processing falling by a factor of 10,000 (World Bank 1995). All these developments have increased the incentives for the internationalization of the industry, the proliferation of new services, not to mention the emergence of packet-switching networks (e.g., the Internet) as the costs of routers (computers) fall in relative terms to the costs of transmission (MacKie-Mason and Varian 1993).

Rapid technological change in the telecommunications industry has a dual impact on the economics of trade in services. First, as already noted, international telephony provides the

---

[4] The volume of international traffic grew from 4 billion minutes in 1975 to more than 60 billion minutes by 1995, averaging a growth rate of 15 per cent per year (ITU, 1997).

prime example of cross-border delivery of a service and technological progress is expected to continue to promote its rapid expansion. Second, these developments tend to increase the tradability of services to the extent that they make easier to unbundle the production and consumption of information-intensive service activities -- e.g., research and development, software development, data entry, inventory management, quality control, accounting, personnel, secretarial, marketing, advertising, distribution and legal services.[5]

As noted in Primo Braga (1996), the impact of information technology on the tradability of services is not limited, however, to increasing the feasibility of long-distance provision. The introduction of new products (e.g., financial derivatives, computer reservation systems for airlines, and telemedicine) and qualitative changes in the provision of existing services (e.g., distance education) are also being promoted by technological progress in information technology. Moreover, as communication links improve, the incentives for specialization and outsourcing of service activities expand. In this context, services are at the very core of the process of internationalization of economic activities by providing connections (e.g., via transportation and communication links) and by allowing the coordination (e.g., via "just-in-time" inventory-management practices) of separate production processes. [6]

In sum, technology is rapidly expanding the tradability of services. As the price-quality mix of producer services (i.e., services that serve as inputs into the production of other goods and services) improve this has a positive feedback effect in terms of the demand for services. It allows firms to specialize in their core competencies and outsource needed inputs (either goods or services), benefiting from improved communication and coordination links. At the same time,

---

[5] For a discussion of the tradability of information-intensive services see Apte (1994).

[6] See Jones and Kierzkowski (1990) for a discussion of the role of services in international trade.

as the feasibility and importance of trade in services expand, the binding nature of explicit and implicit barriers to trade becomes more evident. In the next section, we discuss the main characteristics of such barriers.

III. Barriers to Trade in Services

Most countries pursue policies of one kind or another that restrict the access of foreign services and service suppliers to domestic markets. Sometimes competition by foreign suppliers is prohibited. Alternatively, foreign suppliers may have to pay an "entry fee" or may be subjected to market share restrictions. In this respect there is little difference between trade in goods and trade in services. Indeed, the policy instruments that affect international trade in services are similar to those used in the goods context, and consist of measures such as subsidies, tariffs, taxes, quotas, and technical standards.[7] However, border measures in general, and ad valorem tariffs in particular, are often difficult to apply to trade in services for the simple reason that customs agents in many instances will not be able to observe the service as it "passes the frontier." Customs agents will only observe service suppliers or consumers as they pass the frontier. The value (or volume) of any service transactions that occur can not be known until after they have been produced/consumed, and are therefore not known to customs and immigration authorities.

The liberalization of trade in services entail measures that expand market access to foreign service providers and/or diminish discrimination against them vis-à-vis domestic suppliers. It is worth noting, however, that in the case of services, regulation can be an important indirect barrier to trade and regulatory reform is often a necessary complement to trade liberalization.

---

[7] See Hindley (1988) for a conceptual analysis of protection in service industries.

Quotas, local content and prohibitions

Quantitative restrictions (QRs) are often used to restrict international trade in services, although the intangibility and nonstorability of many services implies that quotas may be applied to providers of services rather than services per se. Prominent examples of QR-type policies are the bilateral air service agreements (ASAs) that regulate international trade in air transportation services and the cargo sharing arrangements administered by the United Nations Conference on Trade and Development (UNCTAD) Liner Code. The ASAs specify which airlines may fly on a given route, the capacity (number of seats/flights) that may be provided in a given time period by the airlines involved, and the amount of capacity that airlines from third countries are permitted to offer on that route. In general ASAs are based on strict reciprocity and are company specific, in that country A tends to grant landing rights to a specific airline originating in country B only if an airline from country A is offered reciprocal landing rights by country B. The UNCTAD Liner Code is somewhat similar in that it specifies that in liner trade between any two states that are signatories to the Code, the national shipping lines of those states shall have equal right to participate in the freight and volume of traffic generated by their mutual trade, subject to the condition that third-party shipping lines be given the right to acquire a "significant part, such as 20 percent" of such traffic.

In many instances trade is simply prohibited. Common examples where foreign access to service markets may be reserved exclusively for domestic suppliers are the transportation of goods within a country (whether by air, road, or water) and basic telecommunication service providers (e.g., voice telephony). Many countries also require that activities such as legal, insurance, educational, surveying or investment advisory services be provided by residents or citizens of the country concerned. Prohibitions may be conditional, in that a country may decide to prohibit trade in services for foreign policy reasons. For example, the U.S. government

retaliated against the USSR in 1982 for the imposition of martial law in Poland by suspending exports of technology and equipment used for construction of the trans-Siberian pipeline. The U.S. embargo on licensed technology and equipment was applied to affiliates of U.S. firms located in the EC as well to firms located in the U.S. One consequence was that crucial telecommunications traffic - largely consisting of database services and data processing - between a French affiliate involved in the pipeline project (Dresser Industrie) and its American parent was shut down, thereby greatly reducing the feasibility for the French firm to continue its design work and meet its contractual obligations.[8]

Restrictions on transborder data flows are by no means limited to such episodes of economic sanctions and have been pursued by numerous countries in the context of import-substitution industrialization policies (Sauvant, 1986a,b). More recently, this theme has gained an additional dimension with the expansion of computer-mediated networks (e.g., the Internet) and the proliferation of computer conferences or electronic bulletin boards with participants from different nations, operating under different legal regimes. Issues concerning privacy, control over pornography, protection of minors and intellectual property rights as they apply to cyberspace are being currently debated (Branscomb, 1995). Needless to say, these new regulations -- which are at the very core of the discussions focusing on national information infrastructures -- can evolve into indirect barriers to trade, generating significant transaction costs for private participants and curtailing the advantages of market access brought up by this new medium.

Price-based instruments

In the services context, tariffs are used primarily to affect trade that occurs via the cross-border

---

[8] See Griffin and Calabrese (1988) for a more detailed discussion as well as references to the literature on this case.

movement of natural persons, taking the form of visa fees and entry or exit taxes, or discriminatory airline landing fees and port taxes. All of these are analogous to specific tariffs. In most countries such "tariffs" are low, QRs and immigration policies constituting the primary means of restricting market access. Tariffs are potentially more important barriers to trade for services that are either embodied in goods or for goods that are necessary inputs into the production of services. Examples of the former include films, television programs, and computer software on disk or tape, while examples of the latter include computers, telecommunications equipment and specific advertising or promotional material.

Price controls may also be used. These involve either price-setting by government agencies or government-sanctioned industry bodies and/or price monitoring and approval procedures by government agencies for prices charged by industries for their products. Frequently such controls will involve service provision by a government-owned or sanctioned monopoly. Price controls frequently go hand in hand with capacity or quantitative restrictions, the intention usually being to ensure that prices are not set at either market clearing levels or at the monopoly level in cases where providers of specific services have substantial market power. Major examples of service sectors subject to price controls are air transportation, financial services and telecommunications, where government agencies frequently impose minimum or maximum prices, enforce a price setting rule or formula, or require uniform pricing.

Procedures agreed under auspices of the International Telecommunication Union (ITU) to share revenues between national post, telegraph, and telephone companies (PTTs) related to international telecommunications traffic provide another example of a price-related mechanism that distorts trade in services. In this case, an internationally agreed system of cooperation creates disincentives for further liberalization of international telephony. The origins of the international accounting rate system go back to 1865. It was designed as a mechanism to share revenues between origin, destination and transit countries at a time when international services

were provided in a "cooperative" manner by monopolistic carriers. The system relies on a dual price scheme in which the carrier from the country that originates the call charges a retail price (the collection charge) to the local consumer and agrees on a wholesale price (the accounting rate) with the carrier of the country where the call is terminated. If over time there is an imbalance in the outgoing and incoming traffic between the two countries, then the carrier that generates more traffic compensates the other by applying the settlement rate (usually half of the accounting rate) to the net imbalance.

The accounting rates provide a floor for retail prices in any given economy with respect to international telephony. As countries begin to liberalize their telecom industries, competition in the liberalized markets tends to drive collection prices down. To the extent that international telephony typically faces an elastic demand (Ergas, 1996), this increases the volume of outgoing calls in the liberalized market vis-à-vis incoming calls from monopolistic markets. And as the accounting rate does not reflect the true cost of the service (which typically has been falling as a consequence of technological progress), the size of the related distortions escalate. In this context, the cartelized arrangements for international price determination create barriers to further liberalization as they tend to bolster the producer surplus of monopolistic carriers by promoting rent transfers from liberalized to monopolistic markets.

Service industries are also sometimes supported through explicit or implicit subsidies--especially construction, communications, and transport. OECD data indicate that between two-fifths and three-fifths of budgetary subsidies are sector-specific, and that much of the support goes to declining non-service industries such as steel, shipbuilding, and mining (Ford and Suyker, 1990). Of the service sectors, available statistics show that rail transport is often highly subsidized, with rates of support varying between 15% and 180% of total value added produced in this sector. Support for rail transport in many EU members was close to or over 40% of sectoral value added in the 1980s.

Standards, licensing and procurement

To be able to provide services, suppliers often must obtain certification or licensing. This is the case in particular for professional and certain business services (e.g., financial). Examples of licensed professions include legal, accountancy, and medical services. The required licenses are often accorded by the government or by the professional bodies concerned. Environmental standards may also influence service activities, especially transportation and tourism. Thus, transport may be subjected to emission or energy efficiency standards, while tourism may be affected by environmentally-motivated zoning or land-use restrictions or limitations on the number of visitors allowed to access a certain area.

In many instances regulation has been used to severely restrict entry by foreigners and thus the supply of services, thereby allowing prices to be driven up. Thus, the licensing regime that affects trade in professional services often acts to restrict entry into the industry, be it by domestic or foreign persons. In the services context, the primary standards-type restrictions affecting international trade relates to issues such as nonrecognition of imported services or services procured abroad (e.g., diplomas obtained in foreign education or training programs) as well as nonrecognition of the certification or professional qualifications of foreign service providers. Alternatively, there may be discriminatory standards imposed upon foreign service providers that are more stringent or more costly to meet than those affecting domestic providers of similar services. A lack of uniform or mutually recognized standards and regulations may act to protect domestic industries and may therefore have a negative impact on consumer welfare.

Government procurement and sourcing policies may also be designed to discriminate in favor of domestic service providers. As government contracts comprise a large share of the market for a number of services, the impact of discriminatory procurement policies on trade in services may be large. For example, in the United Kingdom some 30% of billings of management consultants are from government work (Sowels, 1989). Similarly, government

accounts for a substantial share of construction contracts awarded in a given year in many countries. The use and transparency of procurement preference policies varies across countries. Under the Buy American Act, the U.S. government offers a six percent price preference to domestic suppliers of goods and services, a 12 percent preference to small businesses and firms located in regions with high unemployment, and a 50 percent preference for defense-related contracts. This is supplemented by outright bans on foreign sourcing for certain types of products.[9] Other countries do not employ specific, formal criteria such as price margins, but rely on less transparent methods to favor domestic firms. For example, many countries have "unwritten rules" under which accounting or advertising business go to local firms (Noyelle and Dutka, 1988).

Government procurement discrimination is particularly important in services as government entities frequently account for a significant share of total demand for some services. For example, a recent study of U.S. government procurement that combines detailed data on federal procurement with disaggregated input-output table and social accounting data concludes that the importance of discriminatory government procurement regulations as a barrier to trade is likely to be greatest for services such as education, data processing, and non-medical professional services (Francois, Nelson and Palmeter, 1997). This is the case especially at the state and local level, where entities have a significant presence in the construction and the maintenance and repair market.

---

[9] E.g., requirements that civil servants on official business fly national airlines whenever such airlines provide service to the relevant destination, that U.S. government property be transported by U.S. flag carriers, or a 50 percent cargo reservation requirement for transport of surplus food, military cargoes and Export-Import Bank financed cargoes (USITC, 1991).

Discriminatory access to distribution networks

In order to offer/provide many types of services, suppliers need to be able to use existing distribution and communications infrastructures, especially telecommunication networks. A dominant telecommunication carrier - whether public or private - may discriminate across users/demanders of their network services by imposing restrictions on the ability of new service providers to attach specific types of equipment to the network or by forcing newcomers to build additional infrastructure to reach interconnection points that are rationed by the incumbent. Regulatory intervention is often required in these cases to guarantee that the incumbent provides the needed information on the architecture of the network and allows for interconnection at any point of the existing network.

In the case of air transport, discrimination with respect to the availability and cost of ancillary services may substantially reduce the competitiveness of an airline in a particular market. Not being listed in the computer reservation systems used by local travel agents may result in an effective inability to compete; inadequate ground handling services may result in long delays and customer dissatisfaction. Mention can also be made of access to marketing channels. Restrictions on marketing (advertising) may have an analogous effect to limitations regarding access to telecommunication networks as far as the ability of a foreign provider to contest a market is concerned. For example, in the insurance industry limitations on advertising are a prevalent form of limiting the ability of foreign service suppliers to compete (Senti, 1986).

It is also worth noting that in the case of branded products (like automobiles), distribution arrangements (e.g., the establishment of a dealer network) may play the role of indirect barriers to market access. In the case of automobiles, for example, it has been shown that established dealers tend to be conservative in their willingness to switch franchises. Accordingly, market penetration by new manufacturers require significant investments in building-up dealer networks to contest existing markets (Audet, 1996).

IV. Gains From Liberalization

There is substantial evidence that policies that reduce competition in service industries are very costly. Producer services , in particular, play a crucial role in the development and growth prospects of any nation. Losses of agricultural output due to poor transportation and storage facilities and the impact of substandard communication networks on the costs of doing business are familiar examples in this context. In the case of manufacturing, access to global networks in communication and transportation is a necessary condition for international competitiveness. Products are becoming increasingly time sensitive, both because of shorter product life-cycles and because of the pervasive use of 'just-in-time' production management techniques. Foreign buyers must be assured that a supplier can deliver to specification and on time. This latter requirement in particular may be difficult to meet if producer services are of low quality or high-cost.

Experience illustrates that restrictions on services trade and investment is costly and that liberalization can bring large efficiency and welfare gains. Some examples are helpful to illustrate this point. In the U.S. foreign shipping firms are prohibited under the Jones Act from transporting goods or people from one U.S. location to another (White, 1988). The purported rationale for this restriction insofar as coastal shipping is concerned is the need to maintain an adequate marine capacity to meet defense needs. However, in this it has not proven to be very effective, as illustrated during the 1990 Gulf War, where "America's subsidized merchant fleet had directly contributed only six aging ships to the armada of more than 460 that transported military materials into Saudi ports" (Quartel, 1991). Estimates of the price increasing effect of the Jones Act range from a low of 100% (USITC, 1991) of the average world price to a high of 300% (White, 1988). Recent studies conclude that the welfare costs of this protection (assuming a conservative 100% price difference) comprise at least $3 billion a year (Francois et al., 1996). Abolishing the prohibition on trade would increase cabotage traffic and demand for services

incidental to water transport (port services, etc.), while the decline in domestic employment in the cabotage sector would be more than compensated by increased employment in other sectors (Ibid.).

A study of the effects of flag discrimination and cargo preference policies maintained by Chile until the late 1970s is representative of the qualitative effects of these restrictions. Although the policy expanded the size of the Chilean flag fleet, it was inefficient, imposing higher costs on shippers than would have been available in a competitive environment. Moreover, the restrictions limited the availability of efficient/specialized ships required to transport new products developed by Chilean industries during the 1970s such as fresh fruit and fish. Subsequent liberalization of flag discrimination (in part outright abolition, in part a shift from quota-type restrictions to taxes on the use of foreign shipping lines and price preferences for domestic suppliers)[10] led to substantial diversification of Chilean exporters away from domestic shipping lines, allowing products to be shipped at significantly lower cost. Many Chilean shipping lines shifted to flags of convenience, thereby eliminating the need to employ high-cost labor. As a result, most lines were able to adapt to the changed environment.[11]

Additional examples of the benefits of services liberalization and deregulation and their influence on international trade are provided by the experiences of Chile and Mexico with respect to port services. Elimination of barriers to competition in the provision of port services in Chile led to substantial reductions in operating costs (by about 50 percent over two years). The same occurred in Mexico when entry into the relevant service activities was made free,

---

[10] Under a price preference, local producers are allowed to exceed prices available on world market by a certain amount. As long as domestic prices do not exceed a specified maximum (relative to world prices), local suppliers are to be awarded a contract.

[11] Indeed, only one shipping line went out of business. See Bennethan et al. (1989) for an extensive discussion of this case. See also Bohme (1989) on the UNCTAD Liner code and maritime transport.

service market segmentation was eliminated, and firms were allowed to subcontract freely and set prices according to market forces. In one year the cost of services in the port of Veracruz declined by some 30 percent, while container turnover went up by almost 50 percent. As noted by the World Bank, "the deregulation of transport services in Chile and Mexico has had an important effect on those countries' ability to compete internationally. By reducing the costs of shipping by almost 50 percent, small and medium sized firms that would otherwise be marginal, have been able to expand their export activities" (World Bank, 1993, p. 90).

Labor productivity at AEROMEXICO more than doubled following privatization and the introduction of foreign equity, while MEXICANA, the second airline, registered labor productivity gains of some 50 percent.[12] In Argentina privatization and the introduction of foreign equity in the two telecommunications companies in the early 1990s, had significant impacts on investment in upgrading infrastructure with a view of improving the quantity and quality of services. Telefonica added some 66,000 lines to its network in the eleven months up to September 1991, and another 276,000 lines in 1992. Telecom, the other company created in the privatization of the telephone monopoly ENTel, added 51,000 and 222,000 lines, respectively. This greatly exceeded the investment level required under the terms of the operating licenses granted to the two firms. In addition to this net expansion of their networks, both firms also upgraded their technology, moving towards digital systems. Telecom installed some 420,000 lines in 1992 alone, of which 95 percent were digital. The rival company also expanded the share of its lines that were digital. For purposes of comparison, ENTel had only added 98,000 lines a year in the five years before privatization.[13] Many other examples can be

---

[12] What follows draws on World Bank (1993).

[13] See Hill and Abdala (1993).

given.[14]

Foreign direct investment in certain intermediation services, and financial services in particular, can make a significant contribution to a country's economic growth. Such investment is likely to have positive effects in terms of transfer of technology, introduction of new products, price reductions, and quality improvements. Moreover, intersectoral linkages will usually be large, as finance and insurance are important components of developing and maintaining a competitive export sector. Examples of the beneficial effect of financial sector liberalization abound. For example, an empirical investigation of the determinants of agricultural output in India found that expansion of commercial bank networks and availability of services had a very substantial positive effect on private agricultural investment.[15] Australia provides an example of the effects of banking liberalization in an industrialized country.[16] Liberalization led to large financial inflows and a transformation of the market for financial services. The entry of foreign banks increased competitive pressures and led to a reduction in profit margins, fees and lending rates. Foreign entry did not result in the elimination of domestic incumbents: after two years, foreign firms accounted for only 10 percent of the market. In part this reflects the costs of establishing a broad-based network of retail outlets (or alternatively, the costs of mergers/takeovers), but it also reflected the adaptation of local firms to competition.

General equilibrium aspects

The foregoing examples were anecdotal. Unfortunately, limited empirical work has been done in

---

[14] See e.g., Kessides (1993), Kaspar (1988), Wellenius et al. (1989), World Bank (1993), Galal (1994), Pipe (1994), Taylor and Vidal (1994), Schware and Hume (1994), Smith and Staple (1994), and Hanna (1994).

[15] See Binswanger et al. (1993).

[16] What follows draws upon UNCTAD and World Bank (1994, 108-109).

this area. In principle, such work should focus on the general equilibrium impact of services liberalization. As services are an input into production of most industries, an inefficient service sector can be very costly to the economy as a whole. Such general equilibrium implications of service sector protection have tended to be neglected in both academic analyses (theoretical and empirical) and in practical policy reform programs. For example, even if a country were to engage in a reform program that would reduce tariffs of goods to zero, if this program did not include the service sector, distortions would continue to persist and resource allocation would be affected. Indeed, as nations move to reduce tariffs and other barriers to trade substantially, effective rates of protection may become negative for manufacturing industries as they lose protection on their goods but continue to be confronted with input prices that are higher than they would be if services markets were contestable. From this perspective it is therefore not surprising that liberalization and deregulation of service markets began to emerge as high profile policy reform issues--manufacturing industries needed to have access to low cost, high quality service inputs in order to be competitive on both the domestic and world markets. Standard mercantilist pressures to increase access to export markets were a factor in bringing services on the agenda of a GATT trade round (the Uruguay Round, 1986-94), but it must be recognized that the potential economic gains from unilateral (autonomous) liberalization are also significant.

How important are different services in the economy? What matters in this connection is not only the share of services in GDP--which is about 70 percent in high-income OECD countries and as low as 26 percent in some low-income economies--but the service intensity of production. Measures of the value of the services provided to (bought by) all other sectors of the economy in principle can be obtained from input-output tables. While this source of information has a number of inadequacies--e.g. the nontradability of many services ensures that they are often provided in-house, so that they are not measured correctly--analysis of input-output tables provides some insights regarding the inter-sectoral relationships that exist in different economies.

An analysis of input-output tables for 26 countries at varying levels of economic development by Park and Chan (1989) reveals that the relative importance of producer (or business) services--as measured by the dependence of the manufacturing sector on such service inputs--increases with per capita incomes.[17] Indeed, the relative importance of producer services in developed countries was three times higher on average than for low income countries. Conversely, the relative importance of distribution -- retail and wholesale trade -- tends to be greater in developing countries than in developed ones. A more recent analysis of the role of services in the structure of production and trade of 15 countries by Francois and Reinert (1996) confirms Park and Chan's results. Any analysis of the relative importance of services for output, employment and trade creation in an economy must take into account the in-house provision of services by manufacturing establishments. Francois and Reinert (1996) conclude that as per capita income increases, the share of services in total trade increases. Indeed, for high income countries, services (both arms-length and intra-firm/in-house) account for 60 to 80 percent of all exports, as compared to some 20 percent or so for low income economies.[18]

A number of attempts have recently been made to undertake computer general equilibrium (CGE) analyses that incorporate services liberalization. The problem affecting all

---

[17] See also Uno (1989).

[18] Consumption-induced feedback effects may also be important. These consist of indirect and direct demand effects resulting from the expansion of a given sector. The demand for various information-intensive services--whether provided in-house or through markets--is increasingly driven by households as well as businesses. Examples include financial services, insurance, telecommunications, legal services, real estate, travel services, education, and so forth. If an attempt is made to take into account not only in-house provision of services by manufacturing establishments but also consumption-induced feedback effects, the relative importance of service sectors increases further. See Englebrecht (1990) for an analysis of Japanese input-output tables that incorporates both in-house provision of information services and consumption effects. He concludes that the dependence of services on manufacturing (and vice versa) is approximately equal, and that the indirect employment effects of expansion of the manufacturing sector are to a large extent realized in service sectors.

such attempts is that there are no reliable data on the impact of the policies that restrict trade and investment. They are therefore useful primarily as devices to illustrate the possible economy-wide impact of services barriers, and the inter-sectoral re-allocation of factors of production that might follow opening up the service sectors to greater foreign competition. For example, Brown et al. (1996) conclude that welfare gains associated with the Uruguay Round cuts in industrial tariffs might have been three times higher if services barriers had been cut by 25 percent as well. In the absence of CGE studies of services liberalization (or protection), a second-best approach to exploring the impact of an inefficient service sector is to calculate how protection in services affects effective rates of protection (ERPs). These are a measure of the extent to which trade barriers protect domestic value added in production.[19] It is important to recognize that the ERP is not a measure of the cost of protection, since all it does is to provide information on differences in the level of protection across industries without taking into account the quantity of output that is protected (industry size) or divergence between private and social costs for each marginal unit of output. Still some interesting insights can be derived from such analyses.

For concreteness, the example of Egypt is used in what follows. The import-weighted average tariff in Egypt is currently 30 percent (Table 1). At 70 percent (Table 1, last column), the average ERP is significantly higher than the average nominal rate. Effective rates are higher than nominal ones for 17 industries, all of which are final goods sectors. The structure of protection in Egypt is therefore skewed towards final goods. The service intensity of Egyptian industries varies substantially, ranging from a high of almost 90 percent for crude petroleum/gas

---

[19] What follows draws on Hoekman and Djankov (1997). The basic formula for calculating the ERP is $(V-V^*)/V^*$, where V is the domestic value added per unit of the a good at domestic (tariff inclusive) prices, and V^* is valued added at world prices (zero tariffs). Value added per unit is defined as the gross value of output minus the cost of inputs used in production, i.e., $V=t_f P_f - t_i P_i X$, where t_f and t_i are the tariffs on a good and its inputs, P_f and P_i are the prices, and X is the amount of inputs used to produce a unit of the good. Value added at world prices is $V^*=P_f - P_i X$, as tariffs do not apply.

extraction to a low of 12 percent for cotton ginning and pressing (Table 1, column 3). Industries that are particularly dependent on services include "other" manufacturing, extractive activities, paper and printing, clothing, transport equipment, wood products, and rubber/plastics. If account is taken of the fact that service inputs used by Egyptian industry are less efficient and more costly than they might be (because of lack of competition), the magnitude of the ERP for most manufacturing industries falls significantly -- from an average of 70 to 51 percent (Table 1, column 4).[20] Analogous to tariffs on traded inputs, the higher the tariff-equivalent of regulatory policies for services, the lower the effective protection for industries that use the service inputs involved. Indeed, for some industries it becomes negative, implying that the tariffs on intermediates combined with the implicit tariffs on service inputs outweigh the tariff protection applying to the goods produced. That is, the regulatory regime results in the effective taxation of Egyptian industry. The costs associated with service protection are not limited to direct price-increasing effects. Insofar as their effect is to reduce quality of services, users are also confronted with an implicit tax.

Egypt is in the process of negotiating a free trade agreement with the European Union (EU). Table 2 reports calculations of the ERP that will apply in Egypt once free trade in merchandise with the EU has been achieved. It is assumed that the cost inefficiency of the services industry is addressed to varying degrees (ranging from a 25 to 100 percent reduction in the assumed tariff equivalents). It can be seen that the manufacturing average ERP becomes positive only if these price wedges are reduced by at least 40 percent. In short, in the absence of a significant program of services liberalization, free-trade in goods with the EU will translate into a much greater shift in the terms of protection under which the Egyptian manufacturing industry

---

[20] The tariff equivalent for services is assumed to be 15 percent. This is a quite conservative estimate given studies that have been undertaken of the Egyptian service industries. See Hoekman and Djankov (1996) for details.

is operating than what is suggested by its current structure of nominal protection.

V. Unilateral, Regional, and Multilateral Liberalization

Many countries have been pursuing unilateral liberalization and competition-increasing policies in services. Examples abound involving both industrialized high-income countries and developing economies.[21] The political economy of liberalization of trade in services is analogous to merchandise trade liberalization in that export-oriented industries and consumers will tend to support it, while import-competing firms can be expected to oppose it.[22] Notwithstanding this basic similarity, there are some important differences.

First, as many services are not tradable in the standard sense of the term, foreign service providers that desire to contest a market must be able to establish a physical presence in that market - be it temporarily or on a longer-term basis. Liberalization then requires the reduction/elimination of both barriers to cross-border trade flows *and* to the movement of foreign service providers or consumers. Thus, establishment/commercial presence (e.g., via FDI) appears on the negotiating agenda. This has potential consequences for the political economy of liberalization. In the short run, it is generally assumed that sector-specific factors of production employed in inefficient protected industries will oppose liberalization of market access. In the services-context this may not be the case. To the extent that establishment is the most efficient mode of contesting a service market, sector-specific labor may be less opposed to liberalization, insofar as it is expected that net employment in the sector concerned will not change much upon liberalization due to the establishment of foreign-owned firms. This is likely to be the case in

---

[21] For a detailed analysis of unilateral liberalization efforts see UNCTAD and World Bank (1994).

[22] What follows draws on Hoekman (1994; 1995).

particular when natural barriers to trade are prohibitive, as establishment is then the only feasible mode.

Second, as barriers to trade in services often take the form of regulations, regulatory agencies enter into the picture as players more prominently than in the case of trade in goods. Regulators may have objections to liberalization of cross-border trade, as it is generally more difficult to control industries that are located in foreign jurisdictions. Indeed, regulators may prefer that establishment by foreign firms is *required*, as this ensures that they will maintain their control of the activity involved (insurance is an example).

Regionalism, discrimination and services liberalization

Regional or preferential agreements to liberalize both trade in goods and international transactions in services have been prominent in the late 1980s and early 1990s. Examples include the United States-Israel Free Trade Area, the Canada-United States Free Trade Agreement (CUSFTA), the Australia-New Zealand Closer Economic Relations trade agreement (CER), the EC-1992 program, numerous agreements between the EU and neighboring countries, the North American Free Trade Agreement (NAFTA) and Mercosur (the Southern Cone Common Market). All of these agreements are recent, the oldest having been negotiated in the mid 1980s. In 1994, regional agreements to liberalize trade in services were complemented by a new multilateral agreement to liberalize trade in services, the General Agreement on Trade in Services (GATS).

What might explain the prevalence of preferential agreements? In regional talks, governments may be more like-minded with respect to the general objectives underlying at least a subset of the regulatory regimes applying to service industries, especially if - as is often the case - the countries involved have similar cultures and per capita incomes and are in geographic proximity. Negotiation of mutual recognition agreements for standards and qualifications, for

example, may be easier, facilitating liberalization of access to service markets in a regional context. Tradeoffs across issues may be more feasible as well, as the countries involved may have concerns in areas such as foreign or environmental policy that may be linked to market access (Hughes Hallet and Primo Braga 1994). Issue linkage or "sidepayments" also may be more feasible, facilitating agreement. In a regional setting there may also be less uncertainty confronting interest groups regarding the valuation of the set of policy packages. The closer are the regulatory objectives and specific regimes of countries for individual sectors, the smaller may be concerns regarding free riding of competitors in potential partner countries. The smaller the required changes in regulatory regimes and the greater the confidence that regulations will be enforced in all jurisdictions, the more certain are the conditions of competition *ex post.* Geographic proximity may also imply that firms have more information on existing and potential competitors located in neighboring countries, making monitoring of regional integration agreements less costly than multilateral efforts.

An implication of the foregoing is that the benefits of regional services integration may be more easily internalized. More interestingly, a number of service activities may generate network externalities, or be associated with agglomeration and other scale effects. If these effects are regional in scope this may strengthen preferences for regional liberalization efforts. There is some reason to think this may be the case in practice. For example, various distribution-related activities are subject to scale economies (e.g., multi-modal transport, warehousing, marketing), and, for small countries in particular, these may be regional. Agglomeration externalities may be important for tradable services that are not highly tied to specific manufacturing activities (e.g., financial intermediation or consulting). Network externalities are particularly important for telecommunications and information services.

These are just some of the possible arguments that might make preferential agreements to liberalize services more attractive than multilateral efforts. It is not clear at all, however, how

significant these conceptual considerations are in practice. What matters from an economic perspective is to what extent preferential arrangements actually result in significant liberalization. Here the evidence to date is mixed. In the case of the EEC, where liberalization of services was to be achieved under the provisions of the 1957 Treaty of Rome, little progress was made for decades. Indeed, the Single Market or "1992" initiative was to a large extent about achieving liberalization of services. Many of the recent regional agreements that include services do very little, if anything, to liberalize trade and investment. An example are the Euro-Mediterranean Partnership agreements that have been concluded between the EU and a number of Mediterranean countries. These simply make reference to the multilateral obligations embodied in the WTO's General Agreement on Trade in Services (GATS).

Multilateral liberalization efforts

As mentioned, at the same time that many nations began to pursue services liberalization in a plurilateral context, efforts were also initiated to agree to multilateral rules of the game. After almost 8 years of intensive discussions, the Uruguay Round of multilateral trade negotiations were concluded in April 1994. Participating countries agreed to establish a new World Trade Organization (WTO), which, among other things, is to administer three multilateral trade agreements: the already existing General Agreement on Tariffs and Trade (GATT), as amended during the negotiations (the so-called GATT 1994), as well as the new General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Intellectual Property Rights (TRIPs). Under the GATT, recurring rounds of negotiations during the last five decades have helped to gradually bring down average tariffs to very low levels and discipline the use of nontariff measures. With the creation of the GATS, nations are starting down a similar path.

The GATS contains two sets of obligations: (1) a set of *general* concepts, principles and rules that apply to *all* measures affecting trade in services; and (2) *specific* negotiated obligations

that constitute commitments that apply to those service sectors and subsectors that are listed in a member country's schedule. The Agreement applies to four "modes of supply:" (1) cross-border supply of a service (that is, not requiring the physical movement of supplier or consumer); (2) provision implying movement of the consumer to the location of the supplier; (3) services sold in the territory of a Member by (legal) entities that have established a presence there but originate in the territory of another Member; and (4) provision of services requiring the *temporary* movement of *natural* persons (service suppliers or persons employed by a service supplier who is a national of a country that is a party to the agreement).

Unconditional MFN is a core general obligation of the Agreement: each service or service supplier from a Member must be treated no less favorably than any other foreign service or service supplier. MFN applies to all trade in services, except if a member has invoked an exemption for a specific measure. Such exemptions are in principle time-bound (lasting no longer than ten years) and are subject to periodic review and negotiation in subsequent trade liberalizing rounds. MFN exemptions may be invoked only once, upon joining the agreement. The general obligations of the GATS, of which MFN is the most important, are complemented by specific commitments on market access and national treatment. *Market access* is not defined in the GATS. Instead, agreement was reached on a list of six measures that in principle are prohibited. These consist of limitations on: (i) the number of service suppliers allowed, (ii) the value of transactions or assets, (iii) the total quantity of service output, (iv) the number of natural persons that may be employed, (v) the type of legal entity through which a service supplier is permitted to supply a service (e.g., branches vs. subsidiaries for banking), and (vi) participation of foreign capital in terms of a maximum percentage limit of foreign share holding or the absolute value of foreign investment. *National treatment* for foreign services and service suppliers is defined conventionally as treatment no less favorable than that accorded to like domestic services and service suppliers. Specific commitments apply *only* to listed service

sectors and subsectors, and then only to the extent that sector-specific qualifications, conditions and limitations are not maintained. Any or all of the six types of measures that are prohibited in the market access article may continue to be applied to a sector that is listed by a country as long as these measures are also listed. Moreover, these measures can pertain to any or all of the four modes of supply.

The impact of the GATS very much depends on the content of the specific commitments made by countries. Analyses of these commitments conclude that most countries scheduled only a part of their service sector--often a small part--and continue to maintain numerous measures that violate national treatment or market access (as defined in the GATS). High-income countries (HICs) made commitments of some kind for 47.3 percent of the total possible, as compared to 16.2 percent for developing countries (Hoekman, 1996). This largely reflects the fact that many developing countries made very limited commitments. Indeed, over one-quarter of developing countries scheduled less than 3 percent of all services (i.e., 22 out of 78 countries). Commitments made by large developing countries, arbitrarily defined as those with GDP of US $40 billion or more, were substantially higher than the developing country average, accounting for 38.6 percent of the maximum possible. If commitments are weighted so as to discount the "value" of sector-specific commitments where restrictions on national treatment or market access continue to apply, the average weighted coverage of commitments for the HIC group is 35.9 percent; that for developing countries 10.3 percent; and that for large developing countries 22.9 percent. Perhaps the best measure of the state of liberalization that is embodied in the specific commitments is the share of commitments where no restrictions are maintained on either market access or national treatment. The figure for HICs is 24.8 percent of all services, and that for the other countries, 6.9 percent. These numbers vividly illustrate how far away GATS members are from attaining "free trade" in services, and the magnitude of the task that remains. Market access commitments by OECD countries tend be restrictive with respect to activities where developing

countries have a comparative advantage -- i.e., both low- and high-skill labor-intensive activities that require either temporary entry or establishment/work permits.[23]

Comparing the GATS to Preferential Arrangements

The GATS extends multilateral disciplines to the area of trade in services. The immediate implications in terms of services liberalization are limited as much remains to be done to expand its coverage. The main impact of the agreement is that it involves a standstill promise with respect to protectionist policies toward services (i.e., a commitment not to introduce new distortions). In evaluating the GATS, it is helpful to compare it to regional liberalization efforts such as the NAFTA.[24] There are fairly significant differences between the GATS and NAFTA. In the GATS national treatment, market access or the right of non-establishment (i.e. the right to provide cross-border services without an established presence) are not general obligations, whereas they are under the NAFTA. Moreover, no distinction is made regarding modes of supply as far as rights and obligations are concerned in the NAFTA. The NAFTA employs a negative list approach to coverage (i.e. all services are covered unless they are explicitly excluded in an annex); the GATS employs positive lists (i.e., obligations apply only to listed services). A negative list is significantly more transparent because it forces governments to reveal all non-conforming measures and excluded sectors.

NAFTA also goes beyond the GATS as far as government procurement is concerned. GATS does not cover government procurement of services, simply calling for negotiations on

---

[23] See Hoekman (1996) for a detailed discussion of the methodology used to derive the numbers reported above. Hoekman and Primo Braga (1996) discuss the explanatory role of levels of development, size of the domestic market and FDI stock with respect to market access commitments under the GATS.

[24] See Hoekman and Sauvé (1994) for an in-depth comparison.

this issue to be initiated within three years of the entry into force of the agreement.[25] NAFTA requires covered entities to open public contracts to North America-wide tendering. Disciplines of openness, transparency and competitive bidding are to apply to the purchases by public entities of goods *and* services, including construction services. This is significant in that procurement typically represents the most direct and immediate means of liberalizing the provision of many services -- such as computer services, consulting engineering, or construction -- that are otherwise subject to few or no cross-border impediments.

The NAFTA illustrates that regional arrangements to liberalize trade and investment in services have the potential to go significantly beyond the GATS. In addition to NAFTA, the EU is of course the foremost example. At the same time, there is quite a lot of overlap between the GATS and "deeper integration" regional schemes. With the exception of the EU, regional arrangements invariably embody many exceptions and loopholes. Indeed, in terms of sectoral coverage the "sensitive" sectors (such as transport) tend to be the same. It can also be recalled that the GATS is just the first step taken on services in the multilateral context. Over time, the coverage of the agreement can be expected to expand, and greater liberalization will hopefully be pursued.

VI. Concluding Remarks

Liberalization of trade in services has become an important policy issue over the last ten years. Pressure from export-oriented service industries, regional experiments with *deep integration* and the inclusion of services in the Uruguay Round of multilateral trade negotiations contributed to increasing the profile of services trade as a policy issue. This trend is likely to be maintained as

---

[25] It should be noted that the GATT Government Procurement Agreement (GPA) was expanded to include services as of 1997. However, the GPA is a plurilateral agreement that binds only signatories (mostly OECD countries).

technological progress further promotes the tradability of services.

Research with respect to the welfare implications of services liberalization is still in its infancy. In the same vein, the routes (unilateral, regional and multilateral) toward liberalization have only recently began to be trailed. As suggested by this review, however, the benefits of such a journey can be substantial and the challenges ahead are to further document the costs of protectionism in the services sector and to improve the available estimates of the welfare effects of services liberalization.

References

Audet, Denis. 1996. "Market Access in Automobile Distribution," *The OECD Observer*, Special Edition: 11-12.

Apte, Uday. 1994. "Global Disaggregation of Services: Growth Engine for Developing Countries?," Southern Methodist University Business School, mimeo.

Bennethan, Esra, Luis Escobar and George Panagakos. 1989. "Deregulation of Shipping: What Is to Be Learned from Chile?," World Bank Discussion Paper 67, Washington.

Bhagwati, Jagdish N. 1984. "Splintering and Disembodiment of Services and Developing Nations, *The World Economy* 7, 133-144.

Binswanger, Hans, S. Khandker and Mark Rosenzweig. 1993. "Infrastructure and Financial Institutions Affect Agricultural Output and Investment in India," *Journal of Development Economics*, 41:337-66.

Blomstrom, Magnus, and Robert Lipsey. 1989. "US Multinationals in Latin American Service Industries," *World Development*, 17, 1769-76.

Böhme, Hans. 1989. "The Economic Consequences of Restraints on Transportation in the International Market for Shipping Services," in George Yannopoulos (ed.), *Shipping Policies for an Open World Economy*. London: Routledge.

Branscomb, Anne W. 1995. "Common Law for the Electronic Frontier," *Scientific American*, Special Issue, 160-63.

Brown, Druscilla, Alan Deardorff, Alan Fox and Robert Stern. 1996. "Computational Analysis of Goods and Services Liberalization in the Uruguay Round," in Will Martin and Alan Winters (eds.), *The Uruguay Round and the Developing Economies*. Cambridge: Cambridge University Press.

Edvardsson, B, L. Edvinsson and H. Nystrom. 1993. "Internationalization in Service Companies," *The Service Industries Journal*, 13, 80-97.

Engelbrecht, J. 1990. "New Perspectives on Intersectoral Relationships Between Manufacturing and Services," (Massey University, New Zealand, mimeo).

Ergas, Henry. 1996. "International Trade in Telecommunications Services: An Economic Perspective," mimeo.

Ford, Robert and Wim Suyker. 1990. "Industrial Subsidies in the OECD Economies," Working

Paper No. 74, Paris: OECD.

Forge, Simon. 1995. "The Consequences of Current Telecommunications Trends for the Competitiveness of Developing Countries," paper prepared for the Information for Development Program, The World Bank.

Francois, Joe and Kenneth Reinert. 1996. "The role of Services in the Structure of Production and Trade: Stylized facts from a Cross-Country Analysis," *Asia-Pacific Economic* Review, 2:35-43.

Francois, Joseph, Hugh Arce, Kenneth Reinert and Joseph Flynn. 1996. "Commercial Policy and the Domestic Carrying Trade; A General Equilibrium Assessment of the Jones Act," *Canadian Journal of Economics*.

Francois, Joe, Douglas Nelson and N. David Palmeter. 1997. "Public Procurement in the United States: A Post-Uruguay Round Perspective," in B. Hoekman and P. Mavroidis (eds.), *Law and Policy in Public Purchasing.* Ann Arbor: University of Michigan Press.

Galal, Ahmed. 1993. "Regulation and Commitment in the Development of Telecommunications in Chile," Policy Research paper 1278, World Bank.

Griffin, Joseph and Michael Calabrese. 1988. "Coping with Extraterritoriality Disputes," *Journal of World Trade*, 22, 5-26.

Hanna, Nagy. 1994. *Exploiting Information Technology for Development: A Case Study of India.* World Bank.

Hill, Alice and Manuel Abdala. 1993. "Regulation, Institutions and Commitment: Privatization and Regulation in the Argentine Telecommunications Sector," Policy Research Working Paper 1216, The World Bank.

Hindley, Brian. 1988. "Service Sector Protection: Considerations for Developing Countries," *World Bank Economic Review*, 2, 205-24.

Hoekman, Bernard. 1994. "Conceptual and Political Economy Issues in Liberalizing International Transactions in Services," in Alan Deardorff and Robert Stern (eds.), *Analytical and Negotiating Issues in the Global Trading System.* Ann Arbor: University of Michigan Press.

Hoekman, Bernard. 1995. "Trading Blocs and the Trading System: The Services Dimension," *Journal of Economic Integration*, 10:1-31.

Hoekman, Bernard. 1996. "An Assessment of the General Agreement on Trade in Services," in Will Martin and L. Alan Winters (eds.), *The Uruguay Round and the Developing Economies.*

Cambridge: Cambridge University Press.

Hoekman, Bernard and Simeon Djankov. 1997. "Towards a Free Trade Agreement with the European Union: Issues and Policy Options for Egypt," in Ahmed Galal and Bernard Hoekman (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*. London: CEPR.

Hoekman, Bernard and Carlos A. Primo Braga. 1996. "Trade in Services, the GATS and Asia," *Asia-Pacific Economic Review*, 2:5-20.

Hoekman, Bernard and Pierre Sauvé. 1994. *Liberalizing Trade in Services*. Discussion Paper No. 243. Washington D.C.: The World Bank.

Hughes Hallett, Andrew and Carlos A. Primo Braga. 1994. "The New Regionalism and the Threat of Protectionism," *Journal of the Japanese and International Economies* 8: 388-421.

ITU. 1997. *World Telecommunication Development Report*. Geneva: International Telecommunication Union, forthcoming.

Jones, Ronald W. and Henryk Kierzkowski. 1990. "The role of services in production and international trade: a theoretical framework,"in R.W. Jones and A.D. Krueger, eds., *The Political Economy of International Trade: Essays in Honor of Robert E. Baldwin*. Cambridge: Basil Blackwell, pp. 31-48.

Kaspar, Daniel. 1988. *Deregulation and Globalization: Liberalizing International Trade in Air Services*. Cambridge, MA: Ballinger.

Kessides, Christine. 1993. "Institutional Options for the Provision of Infrastructure," World Bank Discussion Paper 212.

Li, Jiato and Stephen Guisinger. 1992. "Globalization of Service Multinationals in the "triad" regions," *Journal of International Business Studies*, 23(4), 675-96.

MacKie-Mason, Jeffrey K. and Hal R. Varian. 1993. "Pricing the Internet," paper presented at the conference "Public Access to the Internet," JFK School of Government, mimeo.

Noyelle, Thierry and Anna Dutka. 1988. *International Trade in Business Services*. Cambridge MA: Ballinger.

Park, Se-Hark, and Kenneth Chan. 1989. "A Cross-country Input-Output Analysis of Intersectoral Relationships between Manufacturing and Services," *World Development*, 17, 199-212.

Pipe, Russell. 1994. "Services Trade Growth in Asia and the Pacific Through Telecommunications," UNCTAD, mimeo.

Primo Braga, Carlos A. 1996. "The Impact of the Internationalization of Services on Developing Countries," *Finance & Development* (March), 34-37.

Quartel, R. 1991. "America's Welfare Fleet: The Need for Maritime Policy Reform," *Regulation*, 14, 58-67.

Sampson, Gary and Richard Snape. 1985. "Identifying the Issues in Trade in Services," *World Economy*, 8:171-81.

Sapir, André and Chantal Winter. 1992. "Services Trade," in David Greenaway and L. Alan Winters (eds.), *Surveys in International Trade*. Oxford: Basil Blackwell.

Sauvant, Karl and Zbigniew Zimny. 1987. "Foreign Direct Investment in Services: The Neglected Dimension in International Service Negotiations, *World Competition*, 31, (October), 27-55.

Sauvant, Karl. 1986a. *Trade and Foreign Direct Investment in Data Services*. Boulder: Westview Press.

Sauvant, Karl. 1986b. *International Transactions in Services: The Politics of Transborder Data Flows*. Boulder: Westview Press.

Sauvant, Karl. 1990. "The Tradability of Services," in P.A. Messerlin and K. Sauvant, eds., *The Uruguay Round: Services in the World Economy*. Washington, D.C.: The World Bank and New York: United Nations Centre on Transnational Corporations.

Schware, Robert and Susan Hume. 1994. "The Global Information Industry and the Eastern Caribbean," *Viewpoint* No. 17, The World Bank (July).

Senti, Richard. 1986. "Protectionism in International Insurance Transactions," *Intereconomics*, September/October, 246-50.

Smith, Peter and Gregory Staple. 1994. *Telecommunications Sector Reform in Asia*. World Bank.

Stibora, Joachim and Albert de Vaal. 1995. *Services and Services Trade: A Theoretical Inquiry*. Rotterdam: Netherlands Economic Institute.

UNCTAD and World Bank. 1994. *Liberalizing International Transactions in Services: A Handbook*. Geneva: United Nations.

United States International Trade Commission. 1991. *The Economic Effects of Significant U.S. Import Restraints, Phase III: Services*. USITC Publication 2442, Washington.

Uno, K. 1989. *Measurement of Services in an Input-Output Framework.* Amsterdam: North Holland.

Wellenius, Bjorn et al. (ed.). 1989. *Restructuring and Managing the Telecommunications Sector*. Washington D.C.: The World Bank.

White, 1988. *International Trade in Ocean Shipping Services*. Cambridge, MA: Ballinger.

World Bank. 1993. *Latin America and the Caribbean: A Decade after the Debt Crisis*. Washington D.C.: The World Bank, 1993.

World Bank. 1995. *Global Economic Prospects and the Developing Countries*. Washington D.C.: The World Bank.

WTO. 1996. *Annual Report*. Geneva: World Trade Organization.

Table 1 : Protection in Egypt, 1994

	Nominal tariff	Share of services in total inputs	Current ERP, with tariff equivalents for services	Current ERP, without tariff equivalents for services
Chemicals and products, excl. petroleum	15	32	-12	21
Clothing	68	44	147	162
Cotton ginning and pressing	7	12	9	14
Cotton spinning and weaving	29	22	38	51
Crude petroleum and natural gas	9	89	-21	7
Food processing	36	23	59	72
Furniture	56	26	107	118
Glass and products	34	26	91	109
Iron, steel, other base metals	28	25	9	14
Leather products excl. shoes	35	28	13	28
Machinery and appliances	27	27	20	38
Mineral products, n.i.e.	19	19	21	33
Other extractive industries	13	54	-25	-3
Other manufacturing	30	62	23	34
Paper and printing	31	52	52	90
Petroleum refining	13	32	45	83
Porcelain, china, pottery	37	34	98	115
Rubber, plastic and products	24	37	16	33
Footwear	56	24	267	301
Transportation equipment	40	43	65	90
Wood, wood products, excl. furniture	33	37	54	66
AVERAGE	31	36	51	70

Source: Hoekman and Djankov (1997).

Table 2: Impact on ERPs in Egypt of Reducing Tariff Equivalents for Services (Assuming Full Elimination of Tariffs on Imports From EU)

SECTOR	Service Share	0% Cut	25% Cut	50% Cut	75% Cut	100% Cut
Chemicals and products excl. petroleum	32	-64	-56	-48	-40	-32
Clothing: assembled and pieces	44	77	81	84	88	92
Cotton ginning and pressing	12	-23	-22	-20	-19	-18
Cotton spinning and weaving	22	-24	-20	-17	-14	-11
Crude petroleum and natural gas	89	-29	-22	-15	-8	-1
Food processing	23	-11	-8	-4	-1	2
Furniture	26	-10	-7	-4	-1	2
Glass and products	26	4	9	13	18	22
Iron steel other base metals	25	2	3	4	5	7
Leather products excl. footwear	28	-22	-18	-14	-10	-6
Machinery and appliances	27	-28	-24	-19	-15	-10
Mineral products n.i.e.	19	-10	-7	-4	-2	1
Other extractive industries	54	-25	-19	-14	-8	-2
Other manufacturing	62	-8	-5	-2	0	3
Paper and printing	52	-29	-20	-10	-1	9
Petroleum refining	32	-25	-15	-6	4	13
Porcelain china pottery	34	36	40	44	48	52
Rubber plastic and products	37	-10	-6	-2	2	6
Footwear	24	33	42	50	59	67
Transportation equipment	43	-10	-4	2	8	15
Wood, wood products excl. furniture	37	-10	-7	-4	-1	2
Mean	33	-9	-4	1	5	10
Standard Deviation	17	29	28	28	28	28

Source: Hoekman and Djankov (1997).

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS1732	Agricultural Trade and Rural Development in the Middle East and North Africa: Recent Developments and Prospects	Dean A. DeRosa	February 1997	J. Ngaine 37959
WPS1733	The Usefulness of Private and Public Information for Foreign Investment Decisions	Yuko Konoshita Ashoka Mody	February 1997	R. Reff 34815
WPS1734	Are Markets Learning? Behavior in the Secondary Market for Brady Bonds	Luca Barbone Lorenzo Forni	February 1997	L. Barbone 32556
WPS1735	*Competition Policy and the Global* Trading System: A Developing-Country Perspective	Bernard Hoekman	March 1997	J. Ngaine 37949
WPS1736	Creating Incentives for Private Infrastructure Companies to Become More Efficient	Ian Alexander Colin Mayer	March 1997	R. Schneiderman 30191
WPS1737	Ownership and Corporate Governance: Evidence from the Czech Republic	Stijn Claessens Simeon Djankov Gernard Pohl	March 1997	F. Hatab 35835
WPS1738	Some Aspects of Poverty in Sri Lanka: 1985–90	Gaurav Datt Dileni Gunewardena	March 1997	A. Ramirez 85734
WPS1739	Safe and Sound Banking in Developing Countries: We're Not in Kansas Anymore	Gerard Caprio, Jr.	March 1997	B. Moore 38526
WPS1740	When is Foreign Aid Policy Credible? Aid Dependence and Conditionality	Jakob Svensson	March 1997	R. Martin 39026
WPS1741	Privatization, Public Investment, and Capital Income Taxation	Harry Huizinga Søren Bo Nielsen	March 1997	P. Sintim-Aboagye 38526
WPS1742	Transport Costs and "Natural" Integration in Mercosur	Azita Amjadi L. Alan Winters	March 1997	J. Ngaine 37947
WPS1743	How China's Government and State Enterprises Partitioned Property and Control Rights	Lixin Colin Xu	March 1997	P. Sintim-Aboagye 37644
WPS1744	Moving to Greener Pastures? Multinationals and the Pollution-haven Hypothesis	Gunnar S. Eskeland Ann E. Harrison	March 1997	C. Bernardo 31148
WPS1745	How Foreign Investment Affects Host Countries	Magnus Blömstrom Ari Kokko	March 1997	J. Ngaine 37947

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS1746	The Role of Long-Term Finance: Theory and Evidence	Gerard Caprio, Jr. Asli Demirgüç-Kunt	April 1997	P. Sintim-Aboagye 38526
WPS1747	Protection and Trade in Services: A Survey	Bernard Hoekman Carlos A. Primo Braga	April 1997	J. Ngaine 37947
WPS1748	Has Agricultural Trade Liberalization Improved Welfare in the Least-Developed Countries? Yes	Merlinda D. Ingco	April 1997	J. Ngaine 37947