The Soaring Trade in "Nontradables"

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In recent years international trade has flourished in a category heretofore considered largely nontradable. Services are being exchanged across national boundaries in unprecedented volumes, with growth rates exceeding those for trade in merchandise. The phenomenon has attracted growing attention both from impartial analysts and from government officials seeking to expand their countries' exports.

What is the nature of this trade, and what accounts for its growth? Which countries compete most effectively in the trade? What government barriers obstruct it, and are they to be significantly lowered under the Uruguay Round trade agreements? These are the primary questions addressed in this article, which gives special attention to the United States.

I. The Nature of Services

In economic theorizing, services, unlike goods, have commonly been treated as nontradable across national boundaries. The hackneyed illustration is the haircut; nobody has yet shipped one across a frontier (or, to our knowledge, across anything else). Yet services have long been included among the international, or "cross-border," transactions recorded in every nation's balance of payments.

This paradox arises from the differing concepts of services employed in elementary economic theory and in balance-of-payments accounting. The archetypal service of international economic theory—the haircut—does not flow across national borders. However, the providers or recipients of such services do cross the borders; and by the principles of standard balance-of-payments accounting, a cross-border, or international, transaction takes place if a resident of one country provides a service for someone whose residence is in another country, regardless of where the service is rendered. Thus, if a U.S. barber trims a Canadian's

Table 1
World Merchandise and Services Exports, 1986–87 to 1992–93[a]

	Value (Billions of Dollars)		Percentage Change	Ratio of Services to Merchandise	
	Average for 1986–87	Average for 1992–93	1986–87 to 1992–93	1986–87	1992–93
Total					
Merchandise	2,132.7	3,575.0	68		
Services	515.4	967.8	88	.24	.27
Industrial Countries					
Merchandise	1,570.2	2,547.3	62		
Services	407.1	742.6	82	.26	.29
Developing Countries					
Merchandise	562.4	1,027.8	83		
Services	107.0	224.0	109	.19	.22

[a]Excluding countries of the former Soviet Union, except Estonia in 1992–93.
Source: International Monetary Fund, *Balance of Payments Statistics Yearbook*, 1993 and 1994, Part 2, Table B-1.

hair, accurate balance-of-payments accounting would record an export of a U.S. service to Canada, whether the Canadian receives the haircut in the United States or gets it in Canada from a visiting U.S. barber.

Moreover, unlike the haircut of elementary economics, some services, such as telecommunications, actually do flow across national borders. These too, of course, are counted as balance-of-payments transactions.

A service is often distinguished from a good by its intangibility and nonstorability. A more precise, and oft-quoted, definition was offered by Professor T.P. Hill in 1977:

> A service may be defined as a change in the condition of a person, or of a good belonging to some economic unit, which is brought about as the result of the activity of some other economic unit . . . . Services are consumed as they are produced in the sense that the change in the condition of the consumer unit must occur simultaneously with the production of that change by the producer: they are one and the same change . . . . the fact that services must be acquired by consumers as they are produced means that they cannot be put into stock by producers.

Distinguishing a good from a service can be difficult, however. For example, legal work is generally considered a service, in both balance-of-payments and other economic accounting, but much legal effort can be condensed into a "brief," which may be viewed as a good. Similarly, architectural drafting is classified as a service, although blueprints surely are used as goods.

In practice, the analyst of international trade in services has little choice but to accept the definitions used in preparing balance-of-payments reports, the basic source of data. While some of these definitions seem questionable, they present much less of an obstacle to analysis than does the dearth of detailed data.

II. Growth and Composition of the Services Trade

Statistics on trade in services leave much to be desired. Because of their intangible and nonstorable qualities, services are less easily detected and measured than goods. To record "cross-border" haircuts, for example, would require a customs service of uncommon zeal. Moreover, current procedures for collecting and classifying trade data were designed primarily for goods rather than for services, which until recently had attracted much less attention. Still, the numbers that are available do permit considerable insight.

According to the latest data, nominal growth in world trade in services has substantially outpaced that in merchandise in recent years, as illustrated in Table 1. This observation applies to both developing and industrial countries. For the world, exports of services now are more than one-fourth the size of merchandise exports. To what extent the faster increase in services reflects swifter price rises rather than volume growth is unknown, since price data are unavailable.

The increase in services exports has been far greater for some countries than for others. Among the "Big Seven" industrial countries, the United Kingdom experienced the lowest increase—36 percent—over the period from 1986–87 to 1992–93, while Italy had the largest—125 percent (Table 2). Considerable variation also occurs in the relative importance of services exports, with services being only about one-tenth as great as merchandise exports in Canada and nearly half as great in France. For countries that specialize in

Table 2
Merchandise and Services Exports: Percentage Changes and Relative Size, by Selected Countries, 1986–87 to 1992–93[a]

	Percentage Change 1986–87 to 1992–93	Ratio of Services to Merchandise 1986–87	1992–93
United States			
Merchandise	89		
Services	93	.35	.36
Canada			
Merchandise	48		
Services	55	.12	.12
Japan			
Merchandise	59		
Services	91	.12	.15
France			
Merchandise	61		
Services	108	.36	.47
Germany			
Merchandise	51		
Services	49	.19	.18
Italy			
Merchandise	62		
Services	125	.24	.33
United Kingdom			
Merchandise	56		
Services	36	.34	.29
Oil-Exporting Countries			
Merchandise	71		
Services	144	.05	.07
Non-Oil Developing Countries			
Merchandise	85		
Services	107	.22	.25

[a]Excluding countries of the former Soviet Union, except Estonia in 1992–93.
Source: International Monetary Fund, *Balance of Payments Statistics Yearbook*, 1993 and 1994, Part 2, Tables C-1, C-2.

exporting oil, services provide only a small fraction of total export receipts.

For all countries combined, nearly all categories of services exports have increased by very large percentages in recent years (Table 3). The one exception is the smallest category, "Other official services," which includes such transactions as the provision of housing, office space, rental cars, and other items to foreign diplomatic and military personnel stationed within a country. The most rapid growth has occurred in the largest category, "Other private services," which embraces a variety of transactions. Prominent among these transactions are incomes earned by the residents of a country from the following sources: employment in a foreign country; leases of equipment, films, and other tangible assets to residents of a foreign country; royalties and license fees from foreign residents in return for the use of patents and copyrights; and communications services, advertising, brokerage, banking, insurance, accounting, and other technical,

Table 3
Exports of Services: Percentage Changes and Composition, by Selected Country Groupings, 1986–87 to 1992–93[a]

	Percentage Change 1986–87 to 1992–93	Ratio of Each Category to Total 1986–87	1992–93
All Countries			
Shipment	60	.13	.11
Other transportation	73	.16	.15
Travel	92	.28	.29
Other official services	21	.09	.05
Other private services	117	.35	.40
Total	88		
Industrial Countries			
Shipment	61	.12	.11
Other transportation	73	.16	.15
Travel	91	.27	.28
Other official services	18	.09	.06
Other private services	104	.36	.40
Total	82		
Oil-Exporting Countries			
Shipment	85	.12	.09
Other transportation	38	.19	.11
Travel	183	.27	.31
Other official services	43	.06	.04
Other private services	207	.37	.46
Total	145		
Non-Oil Developing Countries			
Shipment	59	.14	.11
Other transportation	77	.16	.14
Travel	93	.33	.31
Other official services	42	.06	.04
Other private services	173	.31	.41
Total	108		

[a]Excluding countries of the former Soviet Union, except Estonia in 1992–93.
Source: International Monetary Fund, *Balance of Payments Statistics Yearbook*, 1994 and 1993, Part 2, Table B-2.

Table 4
U.S. Merchandise and Private Services Trade, by Area, 1986–87 to 1993–94

	Percent of Total, 1993-94				Percentage Change, 1986–87 to 1993–94			
	Exports		Imports		Exports		Imports	
Area	Merchandise	Private Services	Merchandise	Private Services	Merchandise	Private Services	Merchandise	Private Services
All Countries					102.6	118.9	61.7	71.9
Europe	24.8	36.3	20.9	41.0	78.7	133.4	39.3	88.7
Canada	22.5	9.7	19.4	9.2	82.3	92.5	70.6	66.5
Latin America and Other Western Hemisphere	17.7	16.2	13.0	19.0	159.1	111.8	83.3	56.5
Japan	10.3	15.8	18.0	11.1	82.5	141.2	36.9	88.4
Other Countries in Asia and Africa	24.6	19.4	28.6	18.3	131.3	120.0	88.4	61.2

Source: Merchandise trade from *Survey of Current Business*, vol. 75 (June 1995), pp. 92–4. Private services trade from *Survey of Current Business*, vol. 75 (September 1995), p. 77.

professional, or managerial services supplied to foreign residents.[1]

In Table 3 the pattern for world services exports closely parallels the pattern for industrial country exports, since the latter comprise three-quarters of world exports. While the pattern differs in some respects for the exports of developing countries (both oil-exporting and non-oil), the salient feature remains the same: other private services dominate their services exports in both magnitude and growth, just as for the industrial countries.

Narrowing the focus to the United States, one can see in Table 4 that, with all countries collectively, U.S. private services trade has outpaced U.S. merchandise trade in both the export and import categories. This pattern does not hold with every area, however. The exceptions are "Latin America and Other Western Hemisphere" and "Other Countries in Asia and Africa," both of which consist almost entirely of developing countries, and also imports from Canada. The most rapid increases have occurred in exports to Japan and in imports from Europe and Japan.

As reported in Table 5, travel is easily the largest component of U.S. private services exports as well as imports. Included in travel exports are expenditures in the United States by visiting private foreign residents for food, lodging, entertainment, transportation within the United States, and so forth, while imports include corresponding expenditures by private U.S. residents visiting abroad.[2] The most rapid growth in both U.S. exports and imports has occurred among categories that are still relatively small, including, on the export side, management of health care, legal services, agricultural services, as well as accounting, auditing, and bookkeeping services, and, on the import side, training services, legal services, advertising, and computer and data processing services.

Why has trade in services increased so rapidly? For one thing, technological advances have both improved the quality and lowered the costs of transportation and communication. Deregulatory measures in many countries have provided another stimulus.

As one example of the impact of technology, computers and high-capacity undersea telephone cables can now be used to coordinate networks serving hosts of customers distributed around the world (including a company's affiliated firms abroad), in industries such as banking, insurance, advertising, marketing, inventory management, and accounting. Previously, managing such activities efficiently across great distances had been much more difficult.

[1] The category, "shipment," covers freight, insurance, and other distributive services in moving goods, while "other transportation" covers mainly the transportation of passengers (and any goods accompanying them) as well as other services associated with transportation that are not included in shipment, such as port services. For precise definitions of the categories in Table 3, see International Monetary Fund, *Balance of Payments Manual*, 4th ed. (Washington, D.C.: IMF, 1977).

[2] For detailed definitions of the various services categories, see U.S. Bureau of Economic Analysis, *The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures* (Washington, D.C.: U.S. Government Printing Office, 1990). Some differences exist between the U.S. definitions and those underlying the IMF data published in the sources cited in Tables 1, 2, 3, and 8.

Table 5
U.S. Private Services Transactions, Composition and Growth

	Exports				Imports			
	Percent of Total 1993–94		Percentage Change 1986–87 to 1993–94		Percent of Total 1993–94		Percentage Change 1986–87 to 1993–94	
Description	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Total private services			118.90				71.89	
Travel	32.89	1	169.14	14	34.92	1	52.61	19
Overseas	26.28		180.53		27.53		52.31	
Canada	3.81		128.10		3.15		27.31	
Mexico	2.79		136.78		4.24		81.78	
Passenger fares	9.48	4	170.86	13	9.95	3	74.13	17
Other transportation	13.92	2	50.54	21	22.76	2	48.97	20
Freight	5.17		88.63		12.96		31.02	
Port services	8.18		32.90		9.04		87.43	
Other	.57		62.59		.75		34.67	
Royalties and license fees	11.98	3	135.42	15	4.36	7	223.17	10
Other private services	31.73		103.06		28.01		116.20	
Affiliated services[a]	9.29	5	97.91	17	9.20	4	139.52	14
Unaffiliated services	22.44		105.27		18.81		106.37	
Education	3.86	6	89.61	19	.64	10	74.46	16
Financial services	3.77	7	92.95	18	5.13	6	222.23	11
Insurance, net	.84	12.5	−19.77	24	2.70	8	19.66	23
Telecommunications	1.54	9	40.71	22	5.40	5	86.31	15
Business, professional, and technical services	7.82		222.77		3.43		221.66	
Advertising	.20	18	263.05	7	.57	11	573.17	3
Computer and data processing services	1.35	11	196.94	11	.29	13	550.94	4
Data base and other information services	.42	16	490.27	5	.08	21	279.17	7
Research, development, and testing services	.27	17	113.51	16	.22	16	177.89	13
Management, consulting, and public relations services	.51	14	189.89	12	.23	15	343.31	6
Legal services	.84	12.5	1131.15	2	.31	12	676.04	2
Construction, engineering, architectural, and mining services	1.41	10	254.73	8	.26	14	36.21	22
Industrial engineering	.14	20	29.60	23	.10	18.5	37.64	21
Installation, maintenance, and repair of equipment	1.78	8	201.13	10	.65	9	63.66	18
Other	.89		142.06		.72		796.37	
Accounting, auditing, and bookkeeping services	.09	21	537.50	4	.09	20	216.67	12
Agricultural services	.03	24	754.55	3	.02	23	233.33	9
Mailing, reproduction, and commercial art*	.01	25.5			.03	22	238.10	8
Management of health care facilities*	.01	25.5	3700.00	1	.01	24.5		
Medical services*	.43	15	53.48	20				
Personnel supply services*	.06	22			.01	24.5	−12.50	24
Sports and performing arts	.04	23	253.49	9	.12	17	539.13	5
Training services	.19	19	416.54	6	.10	18.5	1375.00	1
Miscellaneous disbursements*	.04				.34			
Other unaffiliated services[b]	4.62		93.93		1.51		61.31	

*Data incomplete or unavailable.

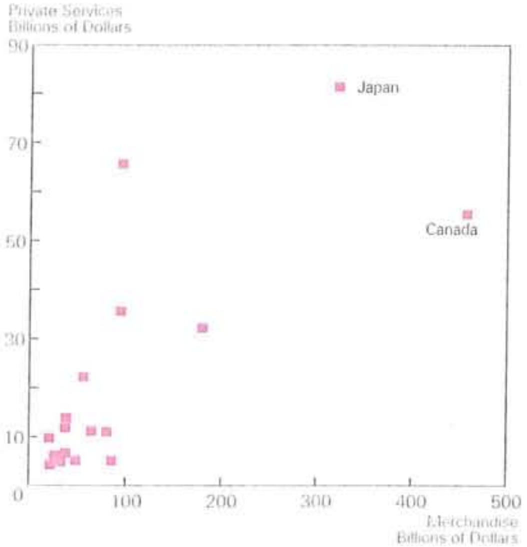
[a]Affiliated cross-border services transactions are those between parent companies in the United States and their affiliates abroad or between foreign parents and their U.S. affiliates.

[b]Exports include mainly expenditures of foreign governments and international organizations in the United States. Imports include mainly wages of foreign residents temporarily employed in the United States and of Canadian and Mexican commuters in the U.S. border area.

Source: *Survey of Current Business*, vol. 75 (September 1995), p. 76.

Figure 1

U.S. Aggregate Trade in Merchandise and Private Services with Selected Countries 1993-1994



Source: *Survey of Current Business,* vol. 75, September 1995, p. 77, and June 1995, pp. 92-94.

III. The Pattern of U.S. Bilateral Trade Flows

A case can be made that the geographic pattern of a country's trade in services should resemble that of its trade in goods. Previous research has established that the volume of merchandise trade between two countries is positively related to the size of their economies and their per capita incomes and negatively related to the distance between them, and the same factors seem likely to influence trade in services.[3] Moreover, some trade in services is stimulated by that in goods. For example, the greater the merchandise trade between two countries, the greater the likelihood that their transportation companies will carry goods between them, or that sellers and buyers will travel between them, or hold cross-border telephone conversations, or arrange for cross-border financing of the merchandise transactions.

In Figure 1, U.S. trade (exports plus imports) in merchandise has been plotted along with U.S. trade in private services for 17 countries that account for the preponderance of U.S. trade. As expected, trade in services clearly rises from country to country with trade in merchandise. However, the rise in services trade is less than proportionate; a line drawn through the midst of the points in the left half of the diagram would, if extended, lie above the point for Japan and well above that for Canada, the two countries with which U.S. merchandise trade is greatest.

It is striking that for Canada the ratio of services to merchandise trade with the United States is comparatively so low, because geographic and cultural proximity, which the two countries share, would seem even more important for trade in services than in merchandise. Even more arresting, detailed data reveal that this phenomenon pervades all the major private services categories; only in two subcategories—in insurance and in installation, maintenance and repair of equipment—does Canada's percentage share of U.S. exports or imports exceed its share of total U.S. merchandise exports or imports. Part of the explanation may lie in the trade policies that have been followed. Specifically, by comparison with their trade with the rest of the world, the two countries seem to have promoted their bilateral trade in goods more vigorously than in services, especially through their automobile agreement and then their general free trade agreement.

Although this explanation may help to account for the very low ratio of services to merchandise trade in the case of Canada, the relatively low ratio for Japan would remain to be explained. Whatever the explanation, the general pattern in Figure 1 is that U.S. private services trade increases with U.S. merchandise trade from country to country, but less than proportionally. A standard statistical test offers support for this generalization; a logarithmic regression reproduces fairly closely the general relationship between the data observable in the figure.[4]

This finding might seem to conflict with the observation that total U.S. private services trade has been growing more rapidly than U.S. merchandise trade. However, Figure 1 provides only a snapshot of the relationship between merchandise and services trade across countries at a particular time; as time passes, all points in the figure tend to shift upward, with the ratio of U.S. services to merchandise trade rising with most, if not all, countries.

[3] For such research on trade flows, see, for example, Frankel, Stein, and Wei (1995).

[4] See the appendix.

Services Provided through Foreign Affiliates

Travel is one of the few services that requires the movement of the consumer to the location of the provider. For a number of other services, such as banking or consulting, competition induces many suppliers to locate near the consumers, either intermittently or continuously. Suppliers with a continuous presence abroad, such as the foreign affiliates of U.S. firms, are generally considered to be residents of the countries where they locate, and their sales of services to residents of the same countries are, therefore, treated as domestic, rather than international, transactions. Nonetheless, services supplied within a country by an affiliate there of a foreign firm have an international flavor, as they are supplied with the aid of foreign managerial oversight and foreign capital. Such affiliates have become major service providers, so their activity constitutes a noteworthy alternative to the cross-border provision of services.

What are the relative magnitudes of these alternative modes of supply? Only one country, the United States, has published detailed data on both its trade in services and sales of services by foreign affiliates. As indicated in Table 6, foreign sales by U.S. affiliates abroad were somewhat smaller than U.S. exports in 1993, the latest year for which data are available, although the percentage increases since 1987 are comparable. By contrast, U.S. purchases from U.S. affiliates of foreign companies not only exceeded U.S. imports in 1993, but have increased much faster than imports.

For which services do affiliates deliver the largest volumes relative to the volumes delivered by trade? U.S. data permit only a rough answer for only a few services. Most notably, sales by affiliates surely predominate in insurance; advertising; computer and data processing services; motion pictures; engineering, architectural, and surveying services; and in accounting, research, management, and related services.

By contrast with the limited data on foreign affiliate sales, fairly comprehensive data are published on the volume of investments that companies make to establish and maintain such affiliates in various services industries. Worldwide, such foreign direct investment increased more rapidly than that in the goods-producing industries during the 1980s, and, by 1990, accounted for close to half of the world's accumulated stock of foreign direct investment. Financial services and trading have experienced more foreign direct investment than other services industries, with relatively vigorous activity also reported in data processing, advertising, air transportation, and accounting (United Nations 1993, p. 1).

What makes an area attractive to foreign investors? A recent study by the United Nations found that firms in services industries choose among foreign locations on basically the same grounds as firms in manufacturing industries. Specifically, they prefer to establish operations in areas where markets are sizable but the major suppliers are few, cultures are familiar, government restrictions are minimal, and where clients from their home countries, whose business they are pursuing, have already established their own operations (United Nations 1993, p. 47). As reported in Table 7, sales of services by U.S. affiliates abroad are greatest in the United Kingdom, Canada, Japan, Germany, and France.

IV. Competitiveness

Countries vary markedly in competitive prowess in the services trade. Because of data limitations, precise measures of relative competitiveness are not possible, but some idea of the variation can be gained from Table 8. For this table, each area's or country's percentage share of world exports in each category (such as "travel") has been divided by its percentage share of world exports of all categories combined, including merchandise. The higher the resulting ratio for a category, the greater the country's observed competitiveness, or "revealed comparative advantage," in that category, although any value greater than one indicates relative specialization, or competitiveness.

By this measure, industrial countries exhibit much greater competitiveness in services relative to merchandise than the oil-exporting developing countries, but little more than the other developing countries. Among the "Big Seven" industrial countries, Canada stands out for its low relative competitiveness in services, especially in the transportation

Table 6

Private Services Supplied to Foreign Residents by U.S. Affiliates Abroad and by U.S. Residents, and to U.S. Residents by Foreign Affiliates in the United States and by Foreign Residents

	Billions of Dollars		Percentage Change
	1987	1993	1987 to 1993
Services transactions between U.S. and foreign residents (balance of payments transactions):			
U.S. sales (exports)	86.9	174.2	100.5
U.S. purchases (imports)	74.8	115.4	54.3
Total	161.7	289.6	79.1
Sales of services by nonbank majority-owned affiliates:			
Sales to foreign residents by foreign affiliates of U.S. companies	72.4	143.1	97.7
Sales to U.S. residents by U.S. affiliates of foreign companies	62.6	140.5	124.4
Total	135.0	283.6	110.1

Source: *Survey of Current Business*, vol. 75 (September 1995), p. 69.

Table 7

Sales of Services to Foreign Residents by Nonbank Majority-Owned Foreign Affiliates of U.S. Companies, 1993

Billions of Dollars

Country	Sales
Europe	79.5
France	10.3
Germany	11.8
Italy	5.2
Netherlands	7.7
Spain	2.4
Switzerland	3.2
United Kingdom	29.0
Other	10.0
Canada	18.4
Latin America and Other Western Hemisphere	9.7
South and Central America	5.8
Brazil	1.9
Mexico	1.3
Other	2.5
Other Western Hemisphere	3.9
Asia and Pacific	30.2
Australia	4.0
Hong Kong	3.2
Japan	15.8
Singapore	1.8
Taiwan	1.9
Other	3.5
Middle East	1.9
Africa	.8
Other	2.6
All Countries	143.1

Source: *Survey of Current Business*, vol. 75 (September 1995), p. 103.

categories. France leads the pack (but lags in merchandise), while the United States ranks third, following Italy.

From the detailed data available for the United States, its competitiveness can be evaluated for many more types of services than the summary categories in Table 8. For a measure of revealed comparative advantage utilizing these more detailed data, U.S. net exports (exports minus imports) of each service has been divided by the sum of U.S. exports and imports of that service. The resulting ratios, in Table 9, can take any value between −1 and 1. The larger the algebraic value for a particular service *relative to the values for other services*, the greater the U.S. revealed comparative advantage (or the smaller its disadvantage) in that category. The magnitude of the ratio for a service has little significance in and of itself, apart from comparison with the ratio magnitudes for other services. Of course, protectionist barriers somewhat distort the ratios from the values they would assume under free trade.

As anecdotal evidence suggests, the United States is highly competitive in services such as education and data base and other information services. More at variance with conventional wisdom is the lack of relative competitiveness in insurance, financial services, and telecommunications.[5] Noteworthy gains in competitiveness were made between 1986–87 and 1993–94 by agricultural services; accounting, auditing, and bookkeeping; and by installation, maintenance, and repair of equipment. Notable competitive losses were made by mailing, reproduction, and commercial art; training services; financial services; advertising; and by sports and performing arts.

[5] This rather surprising finding may reflect the influence of foreign protectionist barriers rather than, or in addition to, a lack of U.S. competitiveness.

Table 8
Relative Export Performance in Merchandise and Services, by Selected Areas, 1992–93[a]

Category	Industrial Countries	Oil-Exporting Developing Countries	Non-Oil Developing Countries	United States	Canada	Japan	France	Germany	Italy	United Kingdom
Merchandise	.99	1.17	1.01	.95	1.12	1.10	.86	1.09	.94	.98
Services[b]	1.06	.33	.95	1.19	.52	.60	1.55	.66	1.22	1.07
Shipment	1.06	.26	.94	.54	.18	1.13	1.59	.70	1.67	.75
Other transportation	1.08	.23	.90	1.73	.08	.84	1.54	.75	.37	1.37
Travel	1.04	.34	.99	1.51	.70	.15	1.27	.39	1.57	.94
Other private services	1.06	.37	.95	.94	.65	.69	1.73	.81	1.15	1.14

[a]Each area's or country's percentage share of world exports in each category has been divided by its percentage share of world exports in all categories combined to obtain the ratios in the table.
[b]Excluding "other official services."
Source: International Monetary Fund, *Balance of Payments Statistics Yearbook*, 1994, Part 2, Tables B and C.

V. Reducing the Barriers to Trade in Services

As trade in services has increased, so has interest in reducing the government barriers that obstruct it. These barriers take the form not of tariffs but of prohibitions, quantitative restrictions, and regulations, and are often justified on grounds of national welfare, security, health, or safety. Paralleling the ways in which the services trade occurs, such barriers obstruct the cross-border movement of suppliers to receivers, of receivers to suppliers, or of the services themselves. In addition to these barriers against trade, countries have also erected obstacles to the provision of services by the affiliates of foreign companies.

Examples of these barriers are rife. By way of illustration, suppliers are impeded from traveling to receivers by limits on the inflow of temporary workers for construction projects, or by limits on domestic practicing by foreign professionals, such as physicians. Receivers are hindered from going to suppliers by measures that obstruct their traveling abroad for purposes such as tourism or education. Cross-border movement of services themselves is restricted by limitations on foreign content in radio and television broadcasting and in the cinema. As for the provision of services through affiliates, many governments have strictly controlled direct investment by foreigners in sensitive domestic industries such as transportation, telecommunications, banking, and advertising.

Such barriers are less readily identified and evaluated than tariffs, and no satisfactory comprehensive measures of them are available. That fact, combined with the intense nationalist or protectionist sentiment supporting many of the barriers, has severely inhibited efforts to negotiate their reduction. Nonetheless, a recent sweeping attempt at liberalization—during the Uruguay Round—has yielded at least a modicum of progress.

Largely concluded by December 1993, among 117 nations, the Uruguay Round of multilateral trade negotiations not only produced still another agreement for further liberalization of trade in goods, but also generated the first comprehensive agreement on trade in services. The agreement covers all the forms in which cross-border services transactions can occur—and also the provision of services through foreign affiliates. Included are commitments on general principles as well as specific services sectors.

The general principles, or goals, that were agreed upon for trade in services resemble those long accepted for trade in goods, namely, national treatment, most-favored-nation treatment, transparency, and progressive liberalization. National treatment means that a country treats foreign services and services suppliers no less favorably than its national services and suppliers, while most-favored-nation treatment means that a country treats services and services suppliers of a foreign country no less favorably than it treats those of any other foreign country. Transparency requires that relevant government policies on services be published. Progressive liberalization involves binding commitments on agreed liberalization measures, rendering the process of liberalization irreversible and laying the basis for future rounds of negotiation.

Table 9
U.S. Revealed Comparative Advantage in Private Services Transactions, 1986–87 and 1993–94

Type of Service	Revealed Comparative Advantage Ratio[a] 1986–87 Ratio	1986–87 Rank	1993–94 Ratio	1993–94 Rank
Total private services	.078		.197	
Travel	−.114	21	.168	18
Passenger fares	−.046	19	.173	17
Other transportation	−.052	20	−.046	20
Freight	−.416		−.255	
Port services	.311		.148	
Royalties and license fees	.698	4	.607	6
Other private services	.285		.256	
Affiliated services	.291	15	.201	15
Unaffiliated services	.283		.280	
Education	.784	3	.800	1
Financial services	.293	14	.045	19
Insurance, net	−.182	23	−.366	23
Telecommunications	−.279	24	−.403	24
Business, professional, and technical services	.544		.545	
Advertising	−.005	16	−.304	21
Computer and data processing services	.878	1	.751	5
Data base and other information services	.685	6	.786	2
Research, development, and testing services	.414	11	.300	13
Management, consulting, and public relations services	.666	7	.530	9
Legal services	.435	9	.603	8
Construction, engineering, architectural, and mining services	.509	8	.778	4
Industrial engineering	.386	12	.360	12
Installation, maintenance, and repair of equipment	.375	13	.604	7
Other	.746		.301	
Accounting, auditing, and bookkeeping services	−.158	22	.188	16
Agricultural services	−.043	18	.403	11
Mailing, reproduction, and commercial art[b]	.419	10	−.464	25
Management of health care facilities[c]			.206	14
Medical services[d]				
Personnel supply services[b]	.689	5	.785	3
Sports and performing arts	−.034	17	−.318	22
Training services	.785	2	.489	10
Other unaffiliated services[e]	.582		.639	

[a] $(X_i - M_i)/(X_i + M_i)$, where X_i and M_i represent exports and imports of the ith service.
[b] Data used to compute revealed comparative advantage for 1986–87 were 1987 data, not the sum of 1986 and 1987, because 1986 data were not available.
[c] Import data for 1986 were not available; both imports and exports for 1987 were 0.
[d] Import data unavailable.
[e] Exports include mainly expenditures of foreign governments and international organizations in the United States. Imports include mainly wages of foreign residents temporarily employed in the United States and of Canadian and Mexican commuters in the U.S. border area.
Source: Underlying data from *Survey of Current Business*, vol. 75 (September 1995), p. 76.

In addition to endorsing these general principles, each country participating in the Uruguay Round presented a schedule spelling out its specific commitments for the various services sectors and noting the extent to which it will apply the general principles to that sector. Among other things, a country's schedule establishes limits that the country pledges to observe on particular barriers to trade in services—barriers such as restrictions on the number of suppliers, on people employed, and on the total value or quantity of services transactions. But the schedules fall far short of inaugurating free trade. In most of the schedules, countries retain pervasive (across sectors) controls dealing with the affiliates of foreign companies and with temporary influxes of foreign personnel engaged in supplying services. Less pervasive are the restrictions relating to services consumed abroad or transferred across borders.

Barriers to trade in services take the form not of tariffs but of prohibitions, quantitative restrictions, and regulations, often justified on grounds of national welfare, security, health, or safety.

Because barriers to services trade are largely imponderable, and because definitive agreements have yet to be reached in some sectors, one cannot construct accurate summary measures of the degree of liberalization stemming from the Uruguay Round. However, some idea of what was accomplished can be gleaned from the number of countries making commitments in some important sectors. Most such commitments "bind," or guarantee, the current degree of access for foreign suppliers, while the others enlarge that access.

Thus, commitments were scheduled by 67 countries in the business services sector (embracing legal, accounting, medical, computer, management consulting, and many related business services), by more than 40 countries in the air transport sector, and by 52 countries in "value-added" (as distinguished from "basic") telecommunications. Much less impressive, only 13 countries, including just two advanced countries, made commitments in audiovisual services, and negotiations have yet to be concluded in basic telecommunications and maritime transport (GATT 1994, pp. 39–46).

What such admittedly selective indicators add up to must be a rather subjective judgment. Taking into account the wide variation in the number of commitments from sector to sector, and recognizing that most commitments bind rather than enlarge market access, our judgment is that the Uruguay Round made a very good start, but no more than that, at liberalizing the trade in services.

VI. *Summary and Conclusion*

Spurred by deregulation and by innovations in communications and transportation, world trade in services has increased more rapidly than that in merchandise in recent years and now amounts to one-fourth the size of merchandise trade. In addition to this cross-border trade, sales of services within countries by affiliates of foreign firms have been increasing and, if U.S. data are representative, may well equal the cross-border trade in magnitude. Among the various types of services traded, the most dynamic growth has occurred in private sector activities such as advertising, accounting and finance, legal services, computer and data processing services, and so forth.

As a rule, the volume of services trade between two countries probably depends largely on the same factors that determine the volume of their merchandise trade, that is, on the size of their economies, their per capita incomes, and their geographic proximity, but also on the volume of their merchandise trade itself. Statistical analysis lends support to this hypothesis.

The Uruguay Round made a very good start, but no more than that, at liberalizing the trade in services.

Industrial countries as a group exhibit only slightly more competitiveness in the services trade than the (non-oil) developing countries. Among the "Big Seven" industrial countries, France seems to rank first in relative competitiveness, the United States third. Among the types of services traded, U.S. competitiveness ranks high in data base and other information services and in education, but ranks low in insurance, financial services, and telecommunications.

The speedy growth in the services trade has occurred despite many government obstacles in the form of prohibitions, quantitative restrictions, and regulations that obstruct the cross-border movement of suppliers to receivers, of receivers to suppliers, or of the services themselves. Alongside these barriers against trade are similar barriers against the provision of services by the affiliates of foreign companies.

The first comprehensive agreement to limit and reduce these barriers was reached during the recently concluded Uruguay Round of multilateral trade negotiations. In a landmark achievement, the agreement extends to much of the services trade the basic principles of conduct long accepted for the trade in merchandise. Less impressive are the reductions negotiated in specific barriers.

Appendix

Following is the estimated regression equation discussed in the section entitled "The Pattern of U.S. Bilateral Trade Flows." T-statistics are in parentheses and, if starred, are significantly different from zero at the 0.05 level.

$$\log S_i = \underset{(-0.71)}{-0.47} + \underset{(4.84)^*}{0.75} \log M_i + \underset{(1.64)}{0.55}\, E_i; \quad \overline{R^2} = 0.65;$$

where

S_i = value of services trade (exports plus imports) between the United States and country i for the years 1992 and 1993 combined;

M_i = value of merchandise trade (exports plus imports) between the United States and country i for the years 1992 and 1993 combined;

E_i = a dummy variable that is assigned the value of 1 where the ith country's chief language is English and zero elsewhere, the hypothesis being that a common language is even more important for the trade in services than in merchandise.

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