United States International Trade Commission

Logistic Services:

An Overview of the Global Market and Potential Effects of Removing Trade Impediments

Investigation No. 332-463
USITC Publication 3770
May 2005

U.S. International Trade Commission

COMMISSIONERS

Stephen Koplan, Chairman
Deanna Tanner Okun, Vice Chairman
Marcia E. Miller
Jennifer A. Hillman
Charlotte R. Lane
Daniel R. Pearson

Robert A. Rogowsky
Director, Office of Operations

Karen Laney-Cummings
Director, Office of Industries

Robert Koopman
Director, Office of Economics

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

Logistic Services:
An Overview of the Global Market and Potential Effects of Removing Trade Impediments

Investigation No. 332-463

Publication 3770

May 2005

This report was prepared by the Office of Industries and the Office of Economics

Project Team

Michael Nunes, *Project Leader*
michael.nunes@usitc.gov
Amanda Horan, *Deputy Project Leader*
amanda.horan@usitc.gov

Michael Ferrantino, *Economist*

Staff assigned:
Laura Bloodgood, Ruben Mata, Joann Tortorice, and Falan Yinug

Office of Operations
Peg MacKnight

With special assistance from:
Lynette Gabourel and Cynthia Payne

Primary Reviewers
Robert Feinberg, Mark Paulson, and Jan Summers

under the direction of
Richard Brown, *Chief*
Services and Investment Division

ABSTRACT

This investigation provides an overview of the global logistic services industry, including major industry players, factors driving growth, and industry operations; examines trade and investment in selected logistic service markets; identifies existing impediments to the provision of international logistic services; and examines the potential effects of removing impediments on trade.

Demand for logistic services, which involve planning, managing, and executing the transport of goods within global supply chains, is largely driven by firms' increasing desire to outsource some or all logistics-related activities to specialists. Such specialists are better able to manage global supply chains that are increasing in complexity as a result of globalization, production techniques such as "just-in-time" (JIT) manufacturing, and electronic commerce. Trade liberalization contributes to the growth of logistic services by reducing tariffs and eliminating nontariff barriers, thereby increasing merchandise trade flows.

However, impediments remain, especially in customs clearance, where varying levels of inefficient procedures delay shipments and increase import costs. Other impediments include restrictions on investment, non-transparent or discriminatory licensing procedures, and labor restrictions. These impediments may be horizontal in nature, affecting all service suppliers equally, or they may be sector specific. Transportation services, a component of logistic services, may be further impeded by domestic regulations that prohibit competition or limit access to essential facilities, such as ports. Some of these impediments may be addressed unilaterally by, for example, transportation sector liberalization; or through multilateral, regional, or bilateral trade negotiations.

The Commission's econometric analysis demonstrates that both U.S. merchandise exports and foreign merchandise exports transshipped through the United States are sensitive to the availability and quality of logistic services in the importing country. Lower levels of logistics-related trade impediments - especially with respect to airport, seaport, and customs procedures - in the importing country are associated with higher U.S. merchandise exports. The effects on trade are most robust for U.S. airborne exports, which tend to be time-sensitive, higher-valued exports. For countries that have the weakest logistic services environments, as measured by responses to the supplier questionnaire developed for this report, analysis shows that the reduction or removal of impediments could lead to significant percentage increases in U.S. merchandise exports.

Table of Contents

Table of Contents–*Continued*

Table of Contents–*Continued*

Table of Contents–*Continued*

Page

Tables

ITC READER SATISFACTION SURVEY

Logistic Services: An Overview of the Global Market and Potential Effects of Removing Trade Impediments

The U.S. International Trade Commission (USITC) is interested in your voluntary comments (burden less than 10 minutes) to help assess the value and quality of our reports, and to assist in improving future products. Please **return survey by facsimile (202-205-2359) or by mail** to the USITC, or visit the USITC Internet home page (*http://reportweb.usitc.gov/reader_survey/readersurvey.html*) to electronically submit a Web version of the survey.

(Please print; r*esponses below not for attribution):*

Your name and title: _____

Organization (if applicable): _____

Which format is most useful to you? ❑ CD-ROM ❑ Hardcopy ❑ USITC Internet site

Circle your assessment of each factor below: **SA** = strongly agree, **A** = agree, **N** = no opinion, **D** = disagree, or **SD** = strongly disagree.

Value of this report:					
▶ Statistical data are useful	SA	A	N	D	SD
▶ Other non-numerical facts are useful	SA	A	N	D	SD
▶ Analysis augments statistical data/other facts	SA	A	N	D	SD
▶ Relevant topic(s)/subject matter	SA	A	N	D	SD
▶ Primary or leading source of information on this subject	SA	A	N	D	SD
Quality of this report:					
▶ Clearly written	SA	A	N	D	SD
▶ Key issues are addressed	SA	A	N	D	SD
▶ Charts and graphs aid understanding	SA	A	N	D	SD
▶ References cite pertinent sources	SA	A	N	D	SD

Other preferred source of information on this subject: _____

Specify chapters, sections, or topics in report that are most useful: _____

_____

_____

Identify any type of additional information that should have been included in report: _____

_____

_____

Suggestions for improving report: _____

_____

_____

Please update your mailing and electronic addresses below (voluntary)-

Mailing address: _____

City, state, and zip code: _____

E-mail address: _____

OMB No.: 3117-0188

FOLD

UNITED STATES
INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC 20436

OFFICIAL BUSINESS
PENALTY FOR PRIVATE, USE $300

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 12840 WASHINGTON, DC

POSTAGE WILL BE PAID BY ADDRESSEE

U.S INTERNATIONAL TRADE COMMISSION
500 E STREET, SW.
WASHINGTON, DC 20277-2840

ATTN:
OFFICE OF INDUSTRIES
Logistic Services: An Overview of the Global Market and Potential Effects of Removing Trade Impediments

EXECUTIVE SUMMARY

The United States International Trade Commission (USITC or Commission) instituted this investigation following receipt of a letter on August 6, 2004 from the United States Trade Representative (USTR) (see appendix A). The letter requested that the Commission conduct a factfinding investigation under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332 (g)) on the global market for logistic services. Specifically, the USTR requested that the Commission, in its report, (1) provide an overview of the global industry, including major industry players, factors driving growth, and industry operations; (2) examine trade and investment in selected regional logistic service markets, including impediments to the provision of international logistic services, if any; and (3) discuss and, to the extent feasible, analyze the potential effects of removing impediments to logistic services on trade and economic welfare. In his letter, the USTR defined logistic services to involve planning, implementing, managing and controlling the flow and storage of goods, services, and related information from the point of origin to the point of consumption. The USTR indicated that the investigation would build upon the Commission's April 2004 report on express delivery services, and would be useful in supporting the negotiation of bilateral free trade agreements and services commitments in the World Trade Organization (WTO). The Commission initiated the investigation on August 27, 2004 and held a public hearing on November 19, 2004.

Study Findings

Logistic services involve a range of related activities intended to ensure the efficient movement of production inputs and finished products. The global third-party logistic service market, which was valued at $130 billion in 2002, consists of asset- and non asset-based firms that manage these factor and product flows. Global third-party logistic service providers (3PLs) offer supply-chain consulting and transportation management services, including storage and warehousing, cargo handling, transport agency services, and customs brokerage, as core, or tier 1, services. In combination with supply-chain consulting and transportation management, 3PLs may provide multi-modal freight transportation, or tier 2, services. Additional service offerings include, but are not limited to, packing services, trade financing, equipment rental services, freight insurance services, data message transmission services, express delivery, courier services, and other related services, collectively referred to as tier 3 services.

Demand for logistic services is driven by shippers'[1] increasing tendency to outsource logistic-related activities to specialists that offer greater expertise in managing global supply chains, freeing shippers to focus on their core businesses. Logistic specialists have the resources to handle complexities that arise from factors such as globalization of commerce, "just-in-time" (JIT) manufacturing, and electronic commerce. Globalization has extended the geographic scope of factor and product markets, ultimately increasing transportation costs. Manufacturers have responded by reducing

[1] These are individuals or firms that initiate the shipment process, typically contracting with a transportation carrier or 3PL to execute or oversee the delivery of goods.

costs elsewhere by, for example, developing more efficient production techniques like JIT manufacturing, which reduces inventory costs by allowing firms to "produce-to-order." This in turn increases demand for 3PLs that are able to oversee the efficient movement of goods through the supply chain. Logistic service firms also play an important role in electronic commerce, where some large firms have become shippers of choice for many e-commerce Internet sites. In addition, logistic suppliers often provide value-added warehousing and distribution services, fulfilling orders for parts and other goods that are requested electronically.

The United States had a $13-billion deficit in logistic services-related trade in 2003, which is attributable to the large number of merchandise imports that are transported to the United States by foreign carriers. In 2003, the largest U.S. logistic service export markets were Japan, Canada, the United Kingdom, South Korea, and Germany, while the largest import suppliers were Japan, Canada, the United Kingdom, Taiwan and Germany.

Logistic service providers are subject to a broad range of impediments in foreign markets, some of which may be addressed through trade negotiations. Responses to the Commission's questionnaire suggest that border clearance procedures represent the greatest impediment to the supply of global logistic services. This is consistent with information gathered during industry interviews, the Commission's public hearing, and from secondary sources. In the questionnaire, customs procedures were the most frequently cited impediments to the provision of logistic services. For air- and maritime-shipped goods, border clearance procedures, including customs and inspection, are the most time-consuming of all cargo-related import procedures.

Questionnaire respondents consider regulatory impediments related to investment and licensing to be less burdensome than customs impediments. In the majority of countries where they operate, questionnaire respondents do not encounter trade impeding regulations. In countries where regulatory-related impediments exist, respondents are more concerned with limited transparency and discriminatory practices than establishment restrictions. For example, respondents indicate a slight to significant adverse impact on operations as a result of limited transparency and inequitable access to information. Comparatively, a large majority of respondents indicate little or no impact on operations or costs as a result of establishment restrictions, such as joint-venture requirements, ownership/equity restrictions, or investment limitations. Additionally, the requirement to hire local residents into certain positions appears to have a moderate to significant positive impact on costs, with little adverse impact on productivity.

In recent years, impediments have been reduced in a number of logistic-related sectors, improving market access for 3PLs and facilitating the movement of goods in the supply chain. Many countries unilaterally deregulated their transportation sectors during the 1980s and 1990s in an effort to reduce transportation costs and enhance economic growth. Further liberalization has been accomplished through trade agreements such as the General Agreement on Trade in Services (GATS), bilateral free trade agreements (FTAs), and other multilateral arrangements. Recently negotiated U.S. FTAs appear to provide the greatest benefit to 3PLs, largely as a result of the negative list approach used in the negotiations. With such an approach, logistics and related sectors are automatically covered by the agreement unless specifically exempted. The negative list approach is particularly important for evolving industries such as logistics, because

service offerings now under development will automatically be covered by an agreement. 3PLs may also benefit from General Agreement on Tariffs and Trade (GATT) negotiations on trade facilitation, which were incorporated into the WTO's Doha Development Agenda in July 2004. These WTO negotiations seek to clarify and improve GATT articles related to customs, with special attention on technical assistance and capacity building for developing countries.

The Commission performed an econometric analysis in an effort to understand the effects on trade and economic welfare of reducing trade impediments related to logistic services. In particular, the Commission sought to assess whether improvements in logistic service environments had an effect on merchandise trade flows analogous to the effect of lowering tariffs or eliminating non tariff measures (NTMs). Using available merchandise trade data and data collected from the Commission's supplier questionnaire, Commission analysis demonstrated that both U.S. merchandise exports and foreign merchandise exports transshipped through the United States are sensitive to the availability and quality of logistic services in the importing country. Lower levels of logistics-related trade impediments - especially with respect to airport, seaport, and customs procedures - in the importing country are associated with higher U.S. merchandise exports. The effects on trade are most robust for U.S. airborne exports, which tend to be time-sensitive, higher-valued exports. For countries that have the weakest logistic services environments, as measured by responses to the supplier questionnaire developed for this report, analysis shows that the reduction or removal of impediments could lead to significant percentage increases in U.S. merchandise exports. Increases in trade volume, in turn, may also promote demand for logistic services. Further, previous research suggests that increased trade could induce general increases in economic welfare and perhaps in the rate of economic growth.

CHAPTER 1
INTRODUCTION

Objective

On August 6, 2004, the United States International Trade Commission (USITC or Commission) received a letter from the United States Trade Representative (USTR) (see appendix A) requesting that the Commission conduct a factfinding investigation under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332 (g)) on the global market for logistic services. Specifically, the USTR requested that the Commission, in its report, (1) provide an overview of the global industry, including major industry players, factors driving growth, and industry operations; (2) examine trade and investment in selected regional logistic service markets, including impediments to the provision of international logistic services, if any; and (3) discuss and, to the extent feasible, analyze the potential effects of removing impediments to logistic services on trade and economic welfare. In his letter, the USTR defined logistic services to involve planning, implementing, managing and controlling the flow and storage of goods, services, and related information from the point of origin to the point of consumption. The USTR indicated that the investigation would build upon the Commission's April 2004 report on express delivery services, and would be useful in supporting the negotiation of bilateral free trade agreements and services commitments in the World Trade Organization (WTO). The Commission initiated the investigation on August 27, 2004 and held a public hearing on November 19, 2004 (see Appendix E for a full list of hearing participants).

Scope of industry

Although there are thousands of transportation companies that provide discrete services at various points in the supply chain, this study focuses on the relatively smaller number of firms that provide third-party logistic services.[1] These include asset- and non asset-based firms[2] that perform logistic service-related activities, as defined by USTR. Figure

[1] Armstrong & Associates, an industry consultancy, estimates that approximately 100 third-party logistic service providers account for a third of global logistic service expenditures, annually. Thomas A. Foster and Richard Armstrong, "Top 25 Third-Party Logistics Providers Extend Their Global Reach," *Global Logistics & Supply Chain Strategies*, May 2004, p. 3.

Although shippers may handle some logistic service activities "in-house," often within internal shipping departments, studies show that shippers are increasingly outsourcing at least some logistic service activities to specialized firms. This trend is discussed further in chapter 2.

[2] Asset-based firms use their own equipment and transportation fleets to provide truckload (TL), less-than-truckload (LTL), air, or sea freight along with value-added logistic services. Non asset-based logistic service firms typically arrange for the transportation and storage of freight, in effect acting as intermediaries between their clients and asset-based transportation firms.

1-1 depicts the full range of such activities.[3] Supply chain consulting services, depicted in tier 1 of the figure, involve global network design and distribution strategies, in which warehouse locations and transportation needs are determined. These are core services offered by the majority of logistic service firms and may be offered on a stand-alone basis or in conjunction with other logistic service activities.[4] Supply chain consulting may also include inventory forecasting and planning, product design strategies, information technology needs assessment, and vendor identification and management. These specialized services are not offered as stand-alone services, but rather are customized to meet the needs of the client.[5] Transportation management services, also depicted in tier 1, include storage and warehousing, cargo handling, transport agency services, and customs brokerage.[6]

In combination with supply chain consulting and transportation management, 3PLs may provide one or a combination of the services found in tier 2 and tier 3 of the figure. Tier 2 services are transportation services that are integral to the movement of goods throughout the supply chain. These services may be performed by asset-based logistic service firms, or outsourced by non asset-based logistic firms to transportation specialists. Tier 3 services are important input or value-added services that may or may not be revenue generating. For example, while maintenance and repair of transport equipment are important to ensure the integrity of vehicle fleets, they are not necessarily offered as third-party services to client firms.[7] Similarly, while data and message transmission services and other telecommunication services[8] are key value-added services necessary for tracking the movement of goods, they are often integrated with tier 1 and tier 2 services. In the case of telecommunications, 3PL providers may need to purchase access to networks or other facilities from domestic suppliers. In some cases WTO members and industry representatives identify other integral or facilitating services that are included in tier 3.[9] From the perspective of WTO negotiations, all activities identified in figure 1-1 constitute the logistic services "checklist," proposed

---

[3] The activities in figure 1-1 are based on USTR's broad definition of logistic services. To facilitate the trade discussion later in the report, where possible, the figure lists logistic service activities using the WTO's Services Sectoral Classification List (W/120) as a guide. This list identifies specific services over which WTO member countries schedule obligations to accord market access and national treatment to foreign firms under the General Agreement on Trade in Services (GATS). As discussed in chapter 4, the W/120 does include logistic services, specifically. Rather, it includes a number of related services. Commitments to the full range of related service could constitute a "full" commitment for logistic services.

[4] Industry representative, e-mail correspondence with USITC staff, Washington, DC, Jan. 3, 2005.

[5] Ibid.

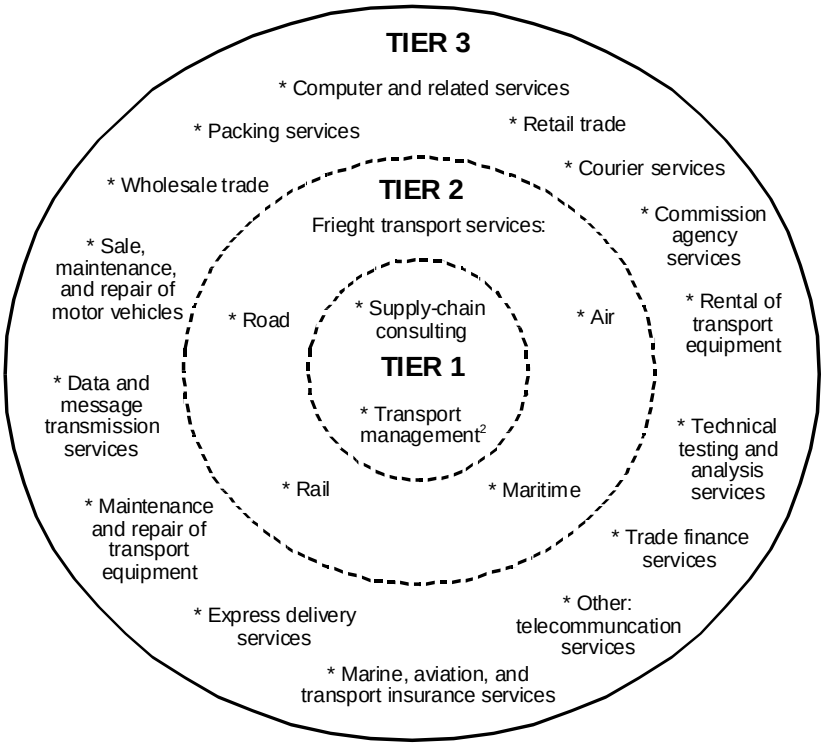
[6] These services are different from "transportation services," which involve the physical movement of goods via one or multiple transportation modes.

[7] However, large firms that maintain in-house maintenance and repair divisions may sell those services in countries where resources and service quality in the domestic market are constrained. Industry representative, interview with USITC staff, Washington DC, July 20, 2004.

[8] These services include mobile maritime and air-to-ground communication services.

[9] See, for example, WTO, "Logistic Services: Communication from Australia; Hong Kong, China; Liechtenstein; Mauritius; New Zealand; Nicaragua; Switzerland and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu," Council for Trade in Services, TN/S/W/20, June 25, 2004.

Figure 1-1
Logistic service activities[1]



[1] These activities are based on USTR's definition of logistic services. Where possible, the figure lists activities using the WTO's Services Sectoral Classification List as a guide.
[2] Transport management services include storage and warehousing, cargo handling, transport agency services, and customs brokerage).

Source: Compiled by Commission staff.

by some WTO members and U.S. industry representatives.[10] However, in an effort to focus on the most relevant aspects of logistic services, this report discusses primarily tier 1 and tier 2 logistic service activities.[11]

[10] The checklist approach to negotiations requires that countries make commitments to a broad range of related services, using the Services Sectoral Classification List (W/120) used by most GATS signatories as a basis for scheduling specific commitments. The checklist approach is explained in further detail in chapter 4.

[11] Industry observers report that these activities represent the most frequently outsourced logistic service activities and account for the largest share of logistic service expenditures. John Langley, "Third-party Logistics: Results and Findings of the 2003 Eighth Annual Study," Georgia Institute of Technology, Cap Gemini Ernst and Young U.S. LLC, and FedEx Corporate Services, 2003; and Dr. Donald J .Bowersox, the John H. McConnell University Professor and Dean Emeritus at Michigan State University, "Logistics: Yesterday, Today, and Tomorrow," PowerPoint presentation, 2004 CLM Annual Conference, Oct. 4, 2004, p. 12.

Methodology

To collect information pertinent to the request, Commission staff conducted interviews with domestic and foreign logistic service providers, government regulatory and trade agencies, and industry representatives; elicited the views of interested parties through a public hearing on November 19, 2004 (see appendices B and E);[12] and developed a questionnaire that was distributed to global suppliers of third-party logistic services. Fieldwork included industry interviews in China, Europe, Hong Kong,[13] Singapore, and the United States. In total, 55 field interviews were conducted, including interviews with 12 government agencies, 7 logistics-related trade associations, and 36 asset- and non asset-based logistic service companies, representing over 28 percent of the global industry (table 1-1). The discussions of cross-border trade and industry growth principally rely on information collected from secondary sources, including the U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA); the U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS); and industry consultant Armstrong & Associates, Inc.

A supplier questionnaire was distributed to 73 firms, representing the universe of 3PLs that maintain offices in the United States and provide global services. The Commission selected these firms based on information provided by trade associations in Washington, DC; telephone interviews with major firms in the industry; and the publication *Who's Who in Logistics? Armstrong's Guide to Global Supply Chain Management*.[14] The questionnaire was designed to collect information on the nature and severity of impediments, in terms of speed and cost, in 52 countries. These countries were chosen based on their importance to the United States as trading partners, in terms of both air- and waterborne-trade. The number of questionnaire responses, based on suppliers' activities in each of these countries is found in table 1-2. A total of 17 firms, representing 23 percent of total recipients, submitted usable questionnaire responses.[15] The views of large and small 3PLs are equally represented in the responses (table 1-3). Taken together, respondent firms generated 2003 revenues of $33 billion, representing 43 percent and 25 percent of U.S.- and worldwide-logistic service revenues, respectively.[16] Staff used data from the questionnaire in the discussion on industry impediments in chapter 3 and in an econometric model that investigates the effects of removing impediments to trade in logistic services on U.S. merchandise exports, which is summarized in chapter 5. In tandem, chapters 3 and 5 elucidate the integral

[12] Hearing participants included Matthew A. Vega, Federal Express Corporation; Brad Fitzgerald, United Parcel Service; Pat O'Connor, International Warehouse Logistics Association; and John Goyer, Coalition of Service Industries.

[13] Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China. Owing to the different regulatory treatment accorded foreign 3PLs in Hong Kong versus mainland China, Hong Kong is, for the most part, discussed separately in this report.

[14] Armstrong & Associates, Inc., "Who's Who in Logistics? Armstrong's Guide to Global Supply Chain Management," 12th edition, vols. 1 and 2, 2004.

[15] The Commission received responses from 33 firms, representing 45 percent of total questionnaire recipients. Of these, 15 firms declined to answer the questionnaire, indicating that they did not provide third-party logistic services as defined in the questionnaire, and 1 firm returned a competed questionnaire after the extended deadline.

[16] Chapter 2 reports that the U.S. and worldwide markets for third-party logistic services are valued at $77 billion and $130 billion, respectively.

Table 1-1
Number of interviews

Location	Total Interviews	Government	Industry Associations	Companies		
				Total	Asset-based	Non asset
Singapore	15	3	2	10	3	7
United States (Miami, FL)	3	([1])	([1])	3	2	1
China	20	3	4	13	12	1
Hong Kong	13	5	1	7	6	1
Europe	4	1	([1])	3	2	1
Total	55	12	7	36	25	11

[1] None.

Source: Compiled by Commission staff.

Table 1-2
Questionnaire responses by country

Country	Number of questionnaires received	Country	Number of questionnaires received
Argentina	3	Italy	5
Australia	8	Japan	10
Belgium	5	Malaysia	7
Bolivia	1	Mauritius	2
Brazil	6	Mexico	9
Bulgaria	1	Netherlands, The	6
Canada	8	New Zealand	4
Chile	4	Peru	4
China	10	Philippines	6
Colombia	2	Poland	2
Costa Rica	2	Portugal	4
Czech Republic	3	Russia	2
Denmark	3	Singapore	10
Ecuador	3	Slovakia	0
Egypt	3	South Africa	4
El Salvador	4	South Korea	9
Finland	2	Spain	5
France	3	Sweden	4
Germany	5	Taiwan	9
Greece	2	Thailand	6
Hong Kong	9	Turkey	4
Hungary	2	Ukraine	1
Iceland	1	United Kingdom	5
India	6	Venezuela	3
Indonesia	4	Vietnam	4
Ireland	4	Zimbabwe	1

Source: Compiled from Commission questionnaires.

Table 1-3
Respondent firm size (*by revenue*)

Firm size	Number of firms[1]
Millions of dollars	
3,001+	4
2,501-3,000	1
2,001-2,500	0
1,501-2,000	2
1,001-1,500	0
501-1,000	4
1-500	3

[1] Revenue information is not available for 3 firms that responded to the questionnaire.

Source: Compiled from Commission questionnaires.

relationship between trade in logistic services and trade in goods. Because the former facilitates the latter, measures that impede trade in logistic services may, by extension, impede trade in goods. Simultaneously, one of the principal inferences following from chapter 5 is that measures or conditions that promote merchandise trade may also promote greater demand for logistic services.

Organization

Chapter 2 provides an overview of the logistics industry, identifying industry operations, major industry participants, industry trends, and factors driving demand for logistic services. The chapter also examines available international trade data related to logistic services. Chapter 3 identifies impediments to trade in logistic services, using information gathered from foreign fieldwork, telephone interviews, the Commission's public hearing, the supplier questionnaire, and secondary sources. Chapter 4 discusses remedies to impediments, including unilateral liberalization of transportation sectors and trade agreements. The chapter examines the treatment of logistic services in the General Agreement on Trade in Services (GATS), a Uruguay Round Agreement and in U.S. bilateral free trade agreements (FTAs). The chapter also includes a discussion of customs facilitation efforts in the WTO and other fora. Chapter 5 summarizes the principal findings of an econometric examination of the effects of removing logistics-related trade impediments on merchandise trade and economic welfare.

CHAPTER 2
INDUSTRY OVERVIEW AND INTERNATIONAL TRADE FLOWS

Logistic services involve a complex web of activities designed to ensure the efficient movement of raw materials, intermediate inputs, and finished goods between suppliers, manufacturers, and consumers.[1] Logistic service professionals manage these factor and product flows by combining supply chain consulting, transportation management, freight transport, and other related services with the goal of assuring timely deliveries and reducing inventory costs.[2] Although some logistic activities may be handled "in-house," often by internal shipping departments, many companies outsource logistic activities to third party logistic service providers (3PLs).[3] Reportedly, logistic specialists offer customers greater expertise in managing supply chains, which are increasing in complexity due in part to the greater geographic scope of factor and product markets.[4] Firms that contract with 3PLs may outsource discrete logistic functions, or the entire logistics management process.

Industry overview

Armstrong & Associates, Inc., a consulting and market research firm, values the U.S. 3PL market at $77 billion.[5] Others estimate that the global market for third-party logistic services was valued at approximately $130 billion in 2002.[6] In terms of revenue, the top-five U.S.-based logistic service firms are UPS Supply Chain Solutions, C.H. Robinson

[1] The Council of Logistics Management (CLM), an industry association, defines logistics management as "that part of Supply Chain Management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements." CLM, *Definitions,* found at Internet address *http://www.cscmp.org/Website/AboutCSCMP/Definitions/Definitions.asp*, retrieved Jan. 30, 2005.

[2] UK Department of Trade and Industry, "Logistics and Supply Chain Management," found at *http://www.dti.gov.uk/mbp/bpgt/m9gb00001/m9gb000011.html*, retrieved Apr. 8, 2004.

[3] In a 2003 survey, 83 percent of respondents reported outsourcing at least some logistic activities to specialized firms. Robert Lieb and Brooks A. Bentz, "The Use of Third Party Logistics Services by Large American Manufacturers, the 2003 Survey," Northeastern University and Accenture Consulting, Oct. 1, 2003, p. 3.

[4] The Organization for Economic Cooperation and Development (OECD), *Transport Logistics, Shared Solutions to Common Challenges* (Paris: OECD, 2002), p. 15.

[5] Armstrong & Associates, Inc., "3PL/Contract Logistics Market," found at *http://www.3plogistics.com/*, retrieved Apr. 8, 2004.

[6] This amount is based on revenue information compiled from various sources, including Armstrong & Associates, TNT, and Dresdner Kleinwort Wassertein. DHL Group, *Post-hearing brief*, p. 7.

Worldwide, Menlo Worldwide,[7] Expeditors International of Washington Inc., and Penske Logistics.[8] Together these firms generated revenue of about $15.9 billion in 2003, representing approximately 21 percent and 12 percent of U.S. and global third-party logistic service revenues, respectively. Table 2-1 lists the top 25 global suppliers of logistic services.

As global supply chains become more complex, customers are increasingly relying on single firms that provide the full range of logistic service activities,[9] leading to consolidation in the industry as firms attempt to achieve economies of scale and scope.[10] Such suppliers are better able to integrate raw material supply with finished product delivery and provide cost-efficient, door-to-door logistics service on a worldwide basis. This level of integration reportedly improves service reliability and reduces costs for customers.[11] As a result of demand for integrated services, many firms that maintain core competencies in specific transport segments, such as truck-load (TL), less-than-truckload (LTL), air freight, or sea freight, increasingly provide logistics as a key value-added service.[12] For example, TL and LTL provider Penske Corporation uses a fleet of over 200,000 vehicles to offer logistic services, such as transportation and warehousing services.[13] Similarly, LTL company Yellow Roadway has expanded its product offerings to include logistic services, leveraging its vast transportation network and transportation expertise.[14] After a series of logistic-related acquisitions, in February 2002 United Parcel Service (UPS) announced the creation of its Supply Chain Solutions division; and in 2001 FedEx Corp. (FedEx) announced the realignment of its logistic service unit to provide transportation management and logistic services through the company's FedEx Services division.[15] Both UPS and FedEx consider logistics a key component of their respective growth strategies.[16]

---

[7] Menlo Worldwide is a division of CNF, Inc. In Dec. 2004, CNF sold Menlo's fright forwarding unit to United Parcel Service. Hoovers, "Menlo Worldwide," found at *http://www.hoovers.com/menlo-worldwide/–ID_107477–free-co-factsheet.xhtml/*, retrieved Apr. 28, 2005.

[8] Thomas A. Foster and Richard Armstrong, "Top 25 Third-party Logistics Providers Extend their Global Reach," *Global Logistics & Supply Chain Strategies*, May 2004, pp. 2-11.

[9] In a 2003 survey, 64 percent of North American respondents thought that the 3PLs they contract with presently provide integrated services, while 93 percent strongly agree with the assessment that 3PLs should provide such integrated services. John Langley, "Third-party Logistics: Results and Findings of the 2003 Eighth Annual Study," Georgia Institute of Technology, Cap Gemini Ernst and Young U.S. LLC, and FedEx Corporate Services, 2003. The study surveyed 2,164 logistics and supply chain executives across multiple industries.

[10] United Parcel Service, Supply Chain Solutions (UPS, SCS), *Post-hearing brief*, Dec. 14, 2004.

[11] UPS SCS, *Post-hearing brief*; and the DHL Group, *Post-hearing brief*, Dec. 14, 2004.

[12] TL services involve the carriage of goods from one customer on a single truck. LTL services involve consolidating shipments from various customers on a single truck or van.

[13] Hoovers Online, "Penske Truck Leasing,," found at *http://www.hoovers.com*, retrieved Feb. 22, 2005.

[14] William Cassidy, "Taking Control: Capacity Shortage, Surging Volumes Will Force Shippers to Take Greater Control of Transport, Logistics Functions in 2005," *Traffic World*, Dec. 2004, p. 11.

[15] UPS, "New UPS Supply Chain Solutions Links Logistics, Freight and Financial Services," *press release*, Feb. 20, 2002; and FedEx Corp., *2002 annual report*.

[16] FedEx and UPS, *2002 annual reports*.

Table 2-1
Top 25 global third-party logistics service providers (3PL), by revenue

3PL	2003 total revenue	Logistics services provided
	Million dollars	
Exel plc (UK)	8,900	Warehousing and distribution (contract logistics), air and ocean freight forwarding, supply-chain consulting, customs brokerage, transportation management, returns management, home delivery
Kuehne & Nagel International AG (Switzerland)	6,900	Ocean and air freight forwarding, value-added warehousing and distribution, transportation management, customs brokerage, supply-chain management
Schenker (Germany)	6,400	Air and ocean freight forwarding, customs brokerage, warehousing and distribution, transportation management
DHL Danzas Air & Ocean North America (Germany)	5,700	Air and ocean freight forwarding, customs brokerage, transportation management, warehousing and distribution, supply-chain consulting
P&O Nedlloyd (UK & Netherlands)	4,800	Warehousing and distribution, ocean shipping, supply-chain consulting, customs brokerage, port services
TPG/TNT (Netherlands)	4,700	Manufacturing support and subassembly, transportation management, supply-chain consulting, dedicated contract carriage, warehousing and distribution, returns management
Panalpina (Switzerland)	4,600	Air and ocean freight forwarding, transportation management, warehousing and distribution, oil and gas services
UPS Supply Chain Solutions (US)	4,100	Air and ocean freight forwarding, customs brokerage, transportation management, warehousing and distribution, supply-chain consulting, dedicated contract carriage, trade finance and insurance, equipment leasing, mail services
Nippon Express (UK)	4,000	Air and ocean freight forwarding, warehousing and distribution, transportation management, supply-chain consulting, customs brokerage
C.H. Robinson Worldwide (US)	3,600	Freight brokerage, air and ocean freight forwarding, transportation management, warehousing, print logistics

Table 2-1—*Continued*
Top 25 global third-party logistics service providers (3PL), by revenue

3PL	2003 total revenue	Logistics services provided
	Million dollars	
Menlo Worldwide (US)	3,100	Transportation management, warehousing and distribution, air freight forwarding, customs brokerage, supply-chain consulting, returns management and expedited
NYK Logistics (Japan)	3,000	Freight forwarding, customs brokerage, intermodal transportation, value-added warehousing
Expeditors International of Washington (US)	2,600	Air freight forwarding, customs brokerage, transportation management, warehousing and distribution, supply-chain consulting
Penske Logistics (US)	2,500	Dedicated contract carriage, transportation management, supply-chain consulting, warehousing and distribution, equipment leasing
Eagle Global Logistics (US)	2,200	Air and ocean freight forwarding, transportation management, warehousing and distribution, customs brokerage, expedited, project management
BAX Global (US)	2,000	Air freight forwarding, transportation management, warehousing and distribution, supply-chain consulting, freight payment and auditing, customs brokerage
Ryder (US)	1,900	Supply-chain consulting, transportation management, warehousing and distribution, dedicated contract carriage, air and ocean freight forwarding, equipment leasing, returns management, freight payment and auditing, insurance
Schneider Logistics (US)	1,900	Transportation management, supply-chain consulting, dedicated contract carriage, freight payment and auditing
UTi Worldwide (US)	1,200	Air and ocean freight forwarding, customs brokerage, warehousing and distribution
Caterpillar Logistics (US)	1,000	Warehousing and distribution, transportation management, logistics consulting
APL Logistics (Singapore)	990	Ocean and air freight forwarding, warehousing and distribution, transportation management, dedicated contract carriage, customs brokerage

Table 2-1—*Continued*
Top 25 global third-party logistics service providers (3PL), by revenue

3PL	2003 total revenue	Logistics services provided
	Million dollars	
Wilson Logistics Group (Sweden)	860	Warehousing and distribution, air and ocean freight forwarding, customs brokerage, transportation management, supply-chain consulting.
FedEx Supply Chain Services (US)	603	Domestic and international transportation management, customs brokerage and freight forwarding, supply-chain consulting, warehousing and distribution services
Maersk Logistics (Denmark)	350	Ocean and air freight forwarding, warehousing and distribution, customs brokerage, supply-chain consulting
SembCorp Logistics Ltd. (Singapore)	275	Warehousing and distribution, air and ocean shipping, supply-chain management, dangerous goods management, offshore logistics
Total	79,584	

Source: Thomas A. Foster and Richard Armstrong, “Top 25 Third-Party Logistics Providers Extend Their Global Reach,” *Global Logistics & Supply Chain Strategies*, May 2004, pp. 2-11.

3PLs often provide custom logistic services that are tailored to meet the needs of specific clients, be they donors to the tsunami relief effort (box 2-1) or firms in the semiconductor industry (figure 2-1). The use of 3PLs in the semiconductor industry is extensive, largely because manufacturers need logistics experts to manage global supply networks. Figure 2-1 demonstrates 3PL involvement in the semiconductor transportation process, from the point at which raw materials are transported to fabrication plants, to the point at which the good is retailed to the end user. In the figure, the pink-colored shapes represent the points at which 3PLs enter the process. As the figure shows, after unfinished silicon wafers have been fabricated (typically in a U.S. plant), the finished wafers are often shipped by air to other countries (such as those in East Asia), where testing, assembly, and packaging are cheaper. Once the semiconductors are completed they are shipped by air to the electronics customer, such as a PC assembly plant. Depending on the product weight and the length of time the company wants the shipment to be in transit, the assembled electronics good will either be shipped by air or sea to its final destination.

Demand and outsourcing trends

Reportedly, 3PLs experienced growth rates between 10 and 15 percent during 2002, although many providers reported a slowdown in 2003 as a result of poor economic conditions.[17] During 2002, the domestic transportation management and warehousing segments experienced the greatest revenue growth (21 percent and 23 percent, respectively) and logistic service firms with international operations experienced revenue growth of 15 percent.[18] Revenues are expected to increase by 15 to 20 percent, annually over the next few years, as manufacturers across multiple industries increasingly outsource logistics functions.[19] 3PLs that provide the full range of integrated logistic services will likely benefit the most from demand increases.[20]

Globalization, just in time (JIT) manufacturing, and e-commerce are the principal contributors to the increasing demand for third-party logistic services. Globalization has extended product distribution channels and increased the geographic scope of sourcing networks. At the same time, some manufacturers of final goods are making efforts to centralize production processes.[21] Although this enables companies to maximize production scale economies, it increases transportation costs and lengthens the time it takes for products to get to markets.[22] Global manufacturers are therefore increasingly looking for ways to reduce transportation-related costs and improve supply chain efficiencies.

[17] UPS SCS, *Post-hearing brief*, Dec. 14, 2004; and Benjamin Gordon, "Special Report: Top Logistics Providers. Riding the Third Wave," *Traffic World*, Jan. 19, 2004, p. 26.

[18] UPS SCS, *Post-hearing brief*.

[19] International Warehouse Logistics Association, *Post-hearing brief*, Dec. 14, 2004, p. 4.

[20] Ibid., and Rosalyn Wilson, *15th Annual State of Logistics Report*, PowerPoint presentation, National Press Club, June 7, 2004, Figure 25.

[21] OECD, *Transport Logistics*, p. 11.

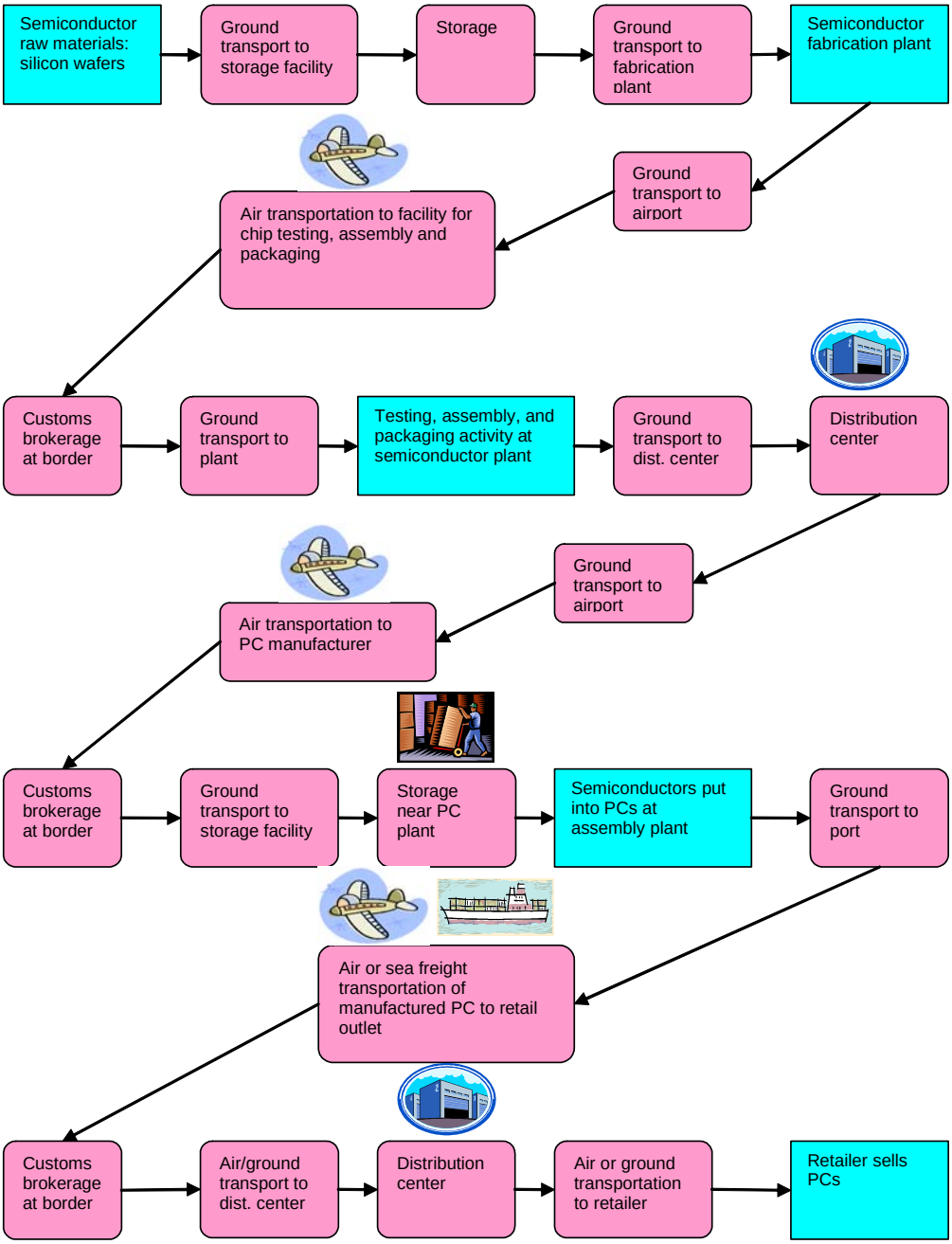
[22] Ibid.

Box 2-1
Logistics and Tsunami Relief

In response to the December 2004 tsunami in southeast Asia, several logistic service firms contributed to the relief effort by donating their transportation management expertise and equipment, including trucks, planes, ships, and warehouses, to help organize and expedite the delivery of supplies to victims of the disaster. A number of global 3PLs that Commission staff met with during the course of this investigation made vehicles available to move food, water, and other essential supplies quickly to affected areas. Once supplies arrived at their destinations, staff from local offices were on hand to coordinate ground transport to the affected areas. In Indonesia, one company used local staff to coordinate the warehousing of aid supplies and the logistics efforts of multiple donors in that country, along with delivering dry rations to the affected areas. Another global firm airlifted donations from North and South America to major hubs in Asia, and rerouted flights within the Asia-Pacific region to airlift 200 tons of supplies such as vaccines, body bags, telecommunications equipment, and food to Indonesia. The firm also partnered with the Singapore Government to provide another 200 tons of food and medical supplies to Sri Lanka and the Maldives, and offered free delivery of tons of in-kind donations in Indonesia and Thailand via their existing local trucking networks, in collaboration with the UN High Commission for Refugees. Other firms worked closely with relief organizations to ensure that medicine, first aid supplies, personal hygiene kits, and water purification systems were distributed throughout Sri Lanka, Indonesia, India, and Thailand; and to make sure storage space was available for supplies.

Source: Industry representatives.

Figure 2-1
Example of 3PL involvement in the manufacturing process for semiconductors



Source: Compiled by the Commission.

One such cost-saving mechanism is JIT manufacturing, which enables firms to "produce to order," thereby reducing the need to maintain costly inventories. An example can be found in the automotive industry, where TNT Logistics, a subsidiary of Netherlands-based TPG, manages the inbound supply of parts for a BMW manufacturing facility located in the United States. TNT monitors both the movement of physical goods into the facility as well as the flow of shipping information to plant managers, ensuring the timely delivery of parts and information.[23]

Logistic services also play an important role in e-commerce, where some firms function as the distribution arm of online companies.[24] For example, UPS manages a large warehouse for Nike in Europe, and both UPS and FedEx have become default shippers[25] for thousands of e-commerce sites. In addition to business-to-consumer (B2C) e-commerce, many logistic service providers manage electronic transactions between businesses (B2B). For instance, in addition to managing the distribution of automotive parts to dealers, TNT Logistics also manages the distribution of tires to Michelin retailers.[26] Its process is linked together by a proprietary software program called Matrix, which places the order and fulfilment processes online, thereby increasing visibility in the supply process.[27] Such transactions are facilitated by the Internet, which enables near real-time management of factor and product flows, thereby reducing the time necessary for products to get to market.[28] The market for B2B electronic commerce was expected to reach $2.4 trillion by the end of 2004,[29] up from $830 billion in 2002.[30]

International trade flows

Official trade and investment data specific to logistic services are not available. However, data on freight transportation and port services are reasonable proxies. Such

[23] Kristin S. Krause, "Whatever It Takes," *Traffic World*, June 17, 2002, p. 29.

[24] AOL Time Warner, *Statement to the USITC*, hearing transcript, pp. 51-52.

[25] The term "default shipper" refers to the organization that is preselected to deliver a product when an electronic commerce customer purchases a product on-line.

[26] TNT Logistics, "Michelin - Improved Efficiency in Distribution to Retail Outlet," case study, found at *http://www.tntlogistics.com/sectors/case_studies/na_michelin_distribution.asp*, retrieved Apr. 12, 2004.

[27] TNT Logistics, "Spare Parts Delivery for a North American Car Manufacturer," case study, found at *http://www.tntlogistics.com/sectors/case_studies/honda_shared_channel_solution.asp*, retrieved Apr. 12, 2004.

[28] OECD, *Transport Logistics*, p. 22.

[29] Standard & Poor's Industry Surveys, "Transportation: Commercial," p. 10.

[30] Ibid.

data indicate that in 2003, U.S. exports of freight transportation and port services[31] totaled $31.8 billion, while U.S. imports totaled $44.8 billion, resulting in a $13-billion deficit (figure 2-2). The deficit is attributable to the large number of U.S. imports that are transported by foreign carriers. Exports increased by 9 percent in 2003, significantly faster than the 3.3 percent average annual increase recorded during 1998-2002.[32] The increase in 2003 was largely due to increases in air and ocean freight services, which registered increases of 18.6 percent and 21.6 percent, respectively. Imports of U.S. freight transportation and port services increased by 16.6 percent in 2003, faster than the average annual increase of nearly 6 percent recorded during 1998-2002.[33] The larger-than-average increase in imports was attributable to an increase of nearly 30 percent for ocean services, reportedly the result of increased trade in petroleum products in anticipation of the Iraq war.[34]

The top five U.S. export markets for freight transportation and port services in 2003 were Japan, Canada, the United Kingdom, South Korea, and Germany (figure 2-3). U.S. exports to Japan totaled $3.1 billion, representing an increase of 10.7 percent over 2002.[35] In 2003, exports to Canada increased by approximately 3 percent to $2.6 billion. U.S. exports to the United Kingdom, South Korea, and Germany in 2003 totaled $2.4 billion, $2.2 billion, and $2.2 billion, respectively. The Asia-Pacific region was the top export region for U.S. freight transportation and port services in 2003. U.S. exports of freight transportation and port services to all regions experienced growth from the previous year, driven in part by economic growth in many countries, which fueled an increase in goods trade. Exports to Africa and the Middle East experienced the fastest growth, 34.7 percent and 23.1 percent, respectively.[36]

---

[31] These data include transactions related to maritime, air, truck, rail, pipeline, and inland waterway services to and from the United States and between foreign ports. In general, trade in freight transport and port services stems from merchandise trade. For example, exports of air and maritime freight transport services refer to the transport of U.S. merchandise on U.S. air or ocean carriers to foreign destinations or between two foreign ports. Imports of air and maritime freight transport services refer to the transport of merchandise to the United States by foreign air and ocean carriers. Separately, U.S. exports of port services reflect the value of goods and services procured by foreign carriers at U.S. ports, while imports of port services reflect the value of goods and services purchased by U.S. carriers in foreign ports. U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), "U.S. International Services: Cross-Border Trade in 2003 and Sales Through Affiliates in 2002," *Survey of Current Business*, p. 32, found at Internet address *http://www.bea.doc.gov/bea/ARTICLES/2004/10October/1004_IntlServ.pdf*, retrieved, Dec. 16, 2004. For further discussion of the nature of U.S. trade in freight transportation services, see also USITC Investigation No. 332-345, *Recent Trends in U.S. Services Trade: 2002 Annual Report*, Publication No. 3514, May 2002, p. 9.1, available at Internet address *http://www.usitc.gov/*.

[32] USDOC, BEA, "U.S. International Services: Cross-Border Trade in 2003 and Sales Through Affiliates in 2002;" and USDOC, BEA, "U.S. International Services: Cross-Border Trade in 2001 and Sales Through Affiliates in 2000," retrieved Jan. 5, 2005.

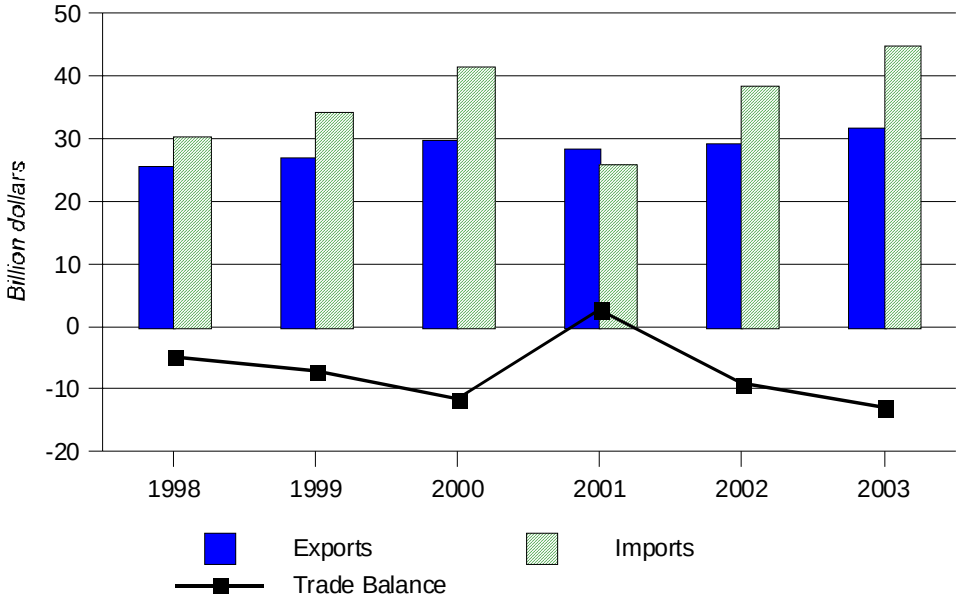
[33] Ibid.

[34] USDOC, BEA, "U.S. International Services: Cross-Border Trade in 2003 and Sales Through Affiliates in 2002," p. 31.

[35] USDOC, BEA, "U.S. International Services: Cross-Border Trade in 2003 and Sales Through Affiliates in 2002," pp. 49-50.

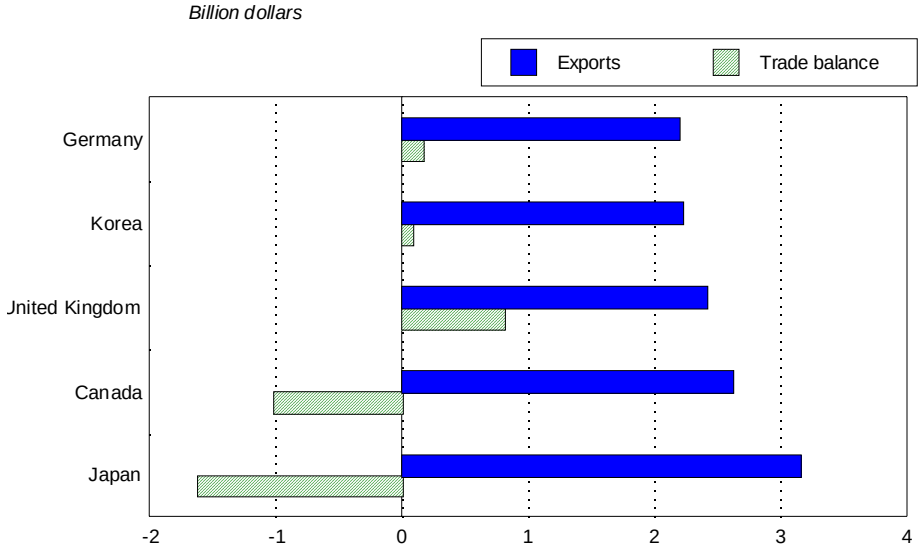
[36] Ibid.

Figure 2-2
Freight transport and port services: U.S. cross-border trade, 1998-2003



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2002, pp. 88-89; Oct. 2003, p. 83; and Oct. 2004, pp. 48-50.

Figure 2-3
Freight transport and port services: U.S. cross-border exports and trade balance, by major trading partners, 2003



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2004, p. 50.

Japan accounted for the largest share of U.S. imports of freight and port services in 2003. Imports from Japan reached $4.8 billion, an increase of 14.3 percent from the previous year. The increase in imports from Japan was largely attributable to the 26 percent increase in ocean freight services. Canada was the second-largest supplier of other transportation service imports at $3.6 billion, followed by the United Kingdom ($3.2 billion), Taiwan ($3.1 billion), and Germany ($3.0 billion). Of these four countries, imports from the United Kingdom experienced the most growth in 2003, increasing 18.5 percent over 2002 levels.[37]

Multimodal freight transportation is important to logistic service firms that may contract with transportation carriers in different industry segments to provide door-to-door services. For example, FedEx uses "various forms of air, ground, maritime, and rail transportation," frequently contracting other transportation carriers to provide end-to-end logistic services,[38] and UPS SCS often contracts with outside companies in different industry segments to provide end-to-end services.[39] Similarly, APL Logistics, a subsidiary of maritime company Neptune Orient Lines Limited (NOL), uses its parent company and air contract carriers to provide international air and maritime forwarding services.[40] By utilizing multiple transportation modes, logistic service providers are able to package transportation solutions that best match their clients' needs.[41] Nearly all U.S. merchandise exports and imports rely on multimodal transportation.[42] Although multimodal international trade data are not available owing to limitations on the way in which trade data are collected, an examination of U.S. commercial freight activity indicates that multimodal transportation represents the second largest share of the U.S. freight transportation market (figure 2-4).[43] For U.S. exports, more shipments travel by air in terms of value than by other modes (figure 2-5).[44] This is attributable to the large number of high value U.S. exports transported by air, such as exports of precious gems, electronics, and artwork (figure 2-6).

---

[37] Ibid.

[38] FedEx, *Post-hearing brief*, Dec. 15, 2004, p. 6.

[39] UPS SCS, *Post-hearing brief.*

[40] APL Logistics Ltd., *Post-hearing brief*, Dec. 14, 2004, p. 1; and industry representative, telephone interview with USITC staff, Washington, DC, Jan. 4, 2005.

[41] FedEx, *Post-hearing brief*, p. 6.

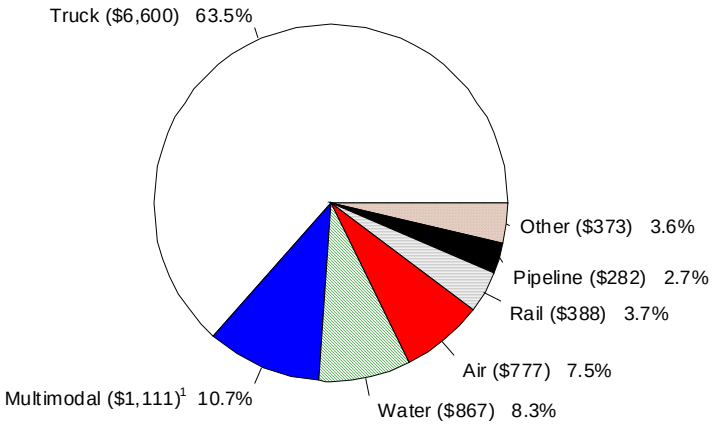
[42] U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), "U.S. International Trade and Freight Transportation Trends," 2003, p. 64, found at *http://www.bts.gov/publications/us_international_trade_and_freight_transportation_trends/2003/pdf/entire.pdf*, retrieved Jan. 4, 2005.

For the United States, exceptions include shipments bound for or coming from Canada and Mexico, where a large portion of cross-border merchandise trade takes place via ground transportation only.

[43] Trucking represents the largest share of U.S. commercial freight activity, by mode.

[44] USDOT, BTS "U.S. International Trade and Freight Transportation Trends," p. 25.

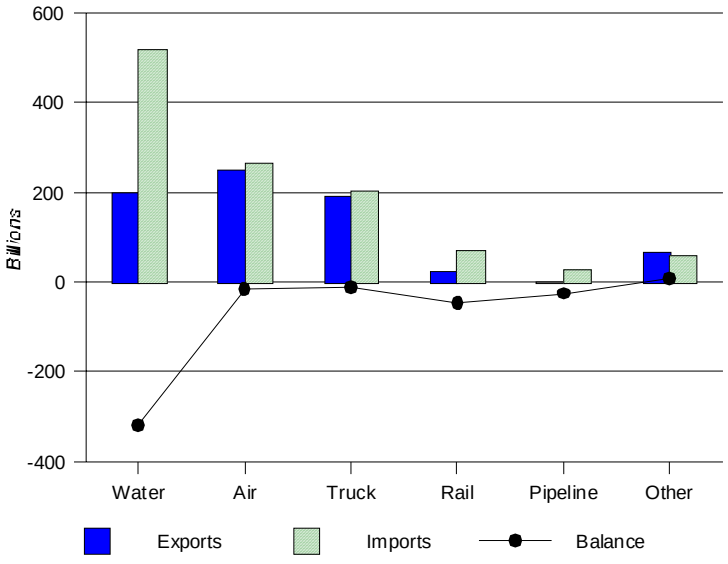
Figure 2-4
U.S. commercial freight activity, by mode, 2002



[1] Multimodal includes the traditional intermodal combination of truck and rail plus truck and water; rail and water; parcel, postal, and courier service; and other multiple modes for the same shipment.

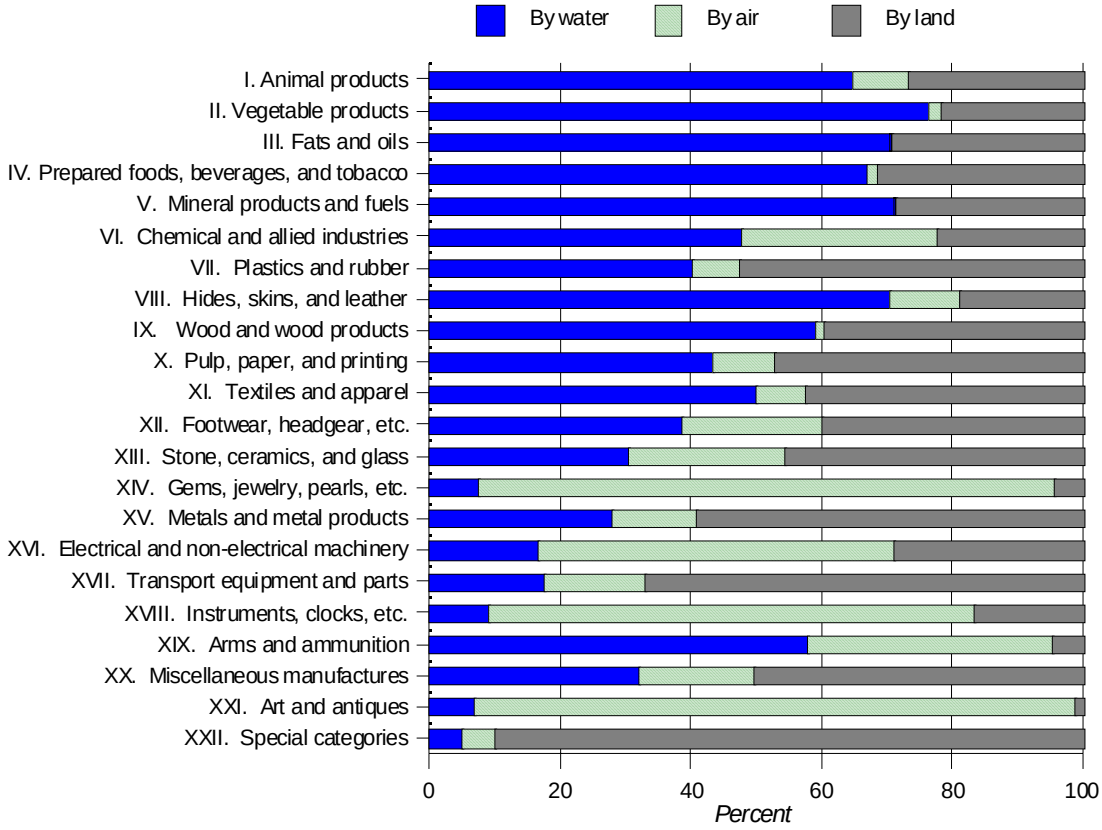
Source: U.S. Department of Transportation, Bureau of Transportation Statistics, based on 1993, 1997, and 2002 Commodity Flow Survey data plus additional estimates from Bureau of Transportation Statistics.

Figure 2-5
U.S. international freight activity, by mode, 2002



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, "U.S. International Trade and Freight Transportation Trends," 2003, p. 24.

Figure 2-6
Shares of U.S. domestic exports by transport mode, 2001



Source: U.S. Census Bureau and USITC staff calculations.

CHAPTER 3
FOREIGN IMPEDIMENTS TO LOGISTIC SERVICES

Introduction

Information gathered from industry interviews, the Commission's questionnaire, secondary research, and the Commission's public hearing suggests that customs procedures and inspections pose the most significant obstacles to the provision of tier 1 and tier 2 logistic services, the principal objectives of which are to move freight expeditiously, reliably, and at lowest cost. Additional factors that may impede market access and influence competitive conditions include cross-sectoral investment and licensing restrictions, as well as mode-specific restrictions, such as laws and regulations[1] that affect the provision of transportation services. Industry interviews and responses to the Commission's questionnaire suggest that investment and licensing restrictions are considered far more manageable than customs impediments, and are in fact the very types of restrictions that logistic service providers are contracted to confront and resolve, if possible. With regard to supply chain consulting, research yielded few direct barriers to these activities, although it is likely that this segment of the industry encounters barriers that are horizontal in nature, affecting all competitors equally.

Some of the impediments reported in this chapter are not presently covered by trade agreements. For example, the GATS Annex on Air Transport Services explicitly excludes traffic rights from the scope of the agreement, and post Uruguay Round GATS negotiations on maritime transport services concluded without agreement. Further, Article XIV of the GATS states that signatories remain free to adopt or enforce measures intended to promote health, safety and overall welfare, even though such procedures may impede trade. A discussion of trade impediments that may be addressed through bilateral, multilateral or regional trade agreements is found in chapter 4.

This chapter begins with an examination of customs clearance impediments. It then proceeds to examine investment regulations, licensing requirements, transparency, and labor restrictions. The chapter concludes with a discussion of modal-specific trade impediments.

[1] The term "laws and regulations" is used generally to describe the various laws, regulations, rules, directives, guidelines, interpretations, and written policy statements that countries, and political subdivisions, administrative bodies, and competent officials within, have promulgated and/or published that apply to logistic-related services.

Customs procedures

Customs procedures identified as impeding the efficient provision of logistic services include restrictions on the weight and value of shipments; time consuming documentation requirements, which may stem in part from the lack of electronic data interchange (EDI) systems;[2] burdensome inspection requirements; and regulations that limit foreign firms' ability to provide brokerage services. An examination of questionnaire responses gathered in connection with this investigation suggests that logistic service providers encounter the most significant impediments in the border clearance process.[3] In the questionnaire, border clearance procedures, including customs processing and inspection, are the most frequently reported impediments to the foreign provision of logistic services (table 3-1). Further, questionnaire respondents indicate that customs clearance and inspection are the most time-consuming procedures related to air and maritime cargo transportation (figures 3-1 and figure 3-2, respectively).

In countries where information technologies such as EDI have been implemented, industry representatives report that processing efficiency has reduced import costs.[4] However, many countries have not modernized their information systems, which may slow document processing and delay the customs clearance process. While Brazil, India, and Thailand use an EDI system, customs operations in those countries are not completely paperless. Brazil, in particular, maintains its rules on paper documentation in addition to having SISCOMEX, its electronic customs clearance system.[5] One industry representative reports that Brazil and China lack EDI in certain points of entry.[6] Others report that China maintains strict documentation requirements, levying large fines or rejecting goods if there are problems with customs paperwork.[7] India requires shippers to provide 13 paper copies of their manifests.[8] Industry representatives report that Indonesia requires excessive paper documentation that may not be submitted electronically.[9] Such documentation includes "special certificates" in addition to regular import documentation.[10]

---

[2] EDI helps firms to improve efficiency and reduce costs by enabling companies to submit documentation electronically, thereby reducing the number of steps necessary to exchange information.

[3] An overview of the Commission's questionnaire, including methodology, is presented in chapter 1. Questionnaire results are further detailed in chapter 5.

[4] Katelyne Ghemar and Tsonka Iotsova, Centre d-Etudes Economiques et Institutionnelles (CEEI), "Identification of Concrete Trade Obstacles to be Removed Through the Future WTO Negotiations on Trade Facilitation or Other Negotiations in the Framework of the Doha Development Agenda," June 23, 2004, pp. 8 and 17.

[5] Ibid, pp. 24-25.

[6] DHL Group, *Post-hearing brief*.

[7] Industry representatives, interviews with USITC staff, Hong Kong, China, Jan. 19, 2005; and Singapore, Jan. 20, 2005.

[8] Katelyne Ghemar and Tsonka Iotsova, "Identification of Concrete Trade Obstacles to be Removed Through the Future WTO Negotiations on Trade Facilitation or Other Negotiations in the Framework of the Doha Development Agenda," pp. 24-25.

[9] Industry representatives, interview with USITC staff, Singapore, Jan. 17, 2005.

[10] Industry representatives, interview with USITC staff, Singapore, Jan. 17, 2005; and United States Department of Commerce (USDOC), Country Commercial Guide for Indonesia, 2003, found at Internet *address http://www.stat-usa.gov/*, retrieved Mar. 6, 2005.

Table 3-1
Logistic services impediments, by segment[1]

Logistics segment affected	Country	Specific impediment(s)
Customs procedures	Australia	Inability to use certain packing materials
		100% screening of all freight, which reduces processing speed
		No coordination between Customs and Quarantine departments
		No automation procedures for Quarantine-cleared items
		No post-clearance process for Australian exports
		No central processing facility for government agencies
		Immediate reassessment of under-valued shipments not available
	Belgium	Limited electronic clearance capabilities
	Brazil	High fees associated with both airport and private bonded warehouses
	Canada	Integrators are required to have on-site facilities at the airport adding costs to customs processing
	China	Lack of flexible work hours for Customs Administration
		Inability to use certain packing materials
	Chile	Value-added tax of 19% of the CIF value of the shipment
	Ecuador	Separate declarations required for multiple packages in the same shipment
		Carrier responsible for inaccurate declarations
	Egypt	Import license required for multinational companies; imported consumer goods must be shipped from country of origin; quality control approval for imports required
	El Salvador	Transit requirements between airport customs and free trade zone customs make deliveries difficult

See footnote at end of table.

Table 3-1—*Continued*
Logistic services impediments, by segment[1]

Logistics segment affected	Country	Specific impediment(s)
Customs procedures—*Continued*	Indonesia	No pre-clearance process in place
		Complex customs rules
		Low de minimis value; ambiguous application of de minimis
		Original documentation required (photocopy not permitted)
		Surcharges for exports and imports
		Shipments with unclear description are subject to a fee and require 100% inspection
		Lack of EDI
	India	Burdensome clearance procedures
		Inability to use certain packing material
	Japan	Clearance subject to fees that can be unreasonably high and applied in a discriminatory and non-transparent manner
		Low de minimis
	Malaysia	Slow inspection processes as a result of limited hours of operation for inspection agencies and off-site location of inspection facilities
		No post clearance procedures in place for port of Johore
		EDI transaction fee applied to all electronically submitted customs forms
		Burdensome inspection requirement for goods entering free trade zone
		Additional forms required for imported goods valued higher than MYR 10,000 ($2,631)
		Lack of a fully automated system for imports and exports goods; expedited shipments require manual-submission of documents
		Original signed commercial invoice required (photocopy not permitted)

See footnote at end of table.

Table 3-1—*Continued*
Logistic services impediments, by segment[1]

Logistics segment affected	Country	Specific impediment(s)
Customs procedures—*Continued*	Philippines	Low de minimis value
		No post-clearance process in place for exports
		Additional paperwork required for goods entering free trade zone - no electronic submission process in place
		Value assessment process could take 3 days; $13 fee required for assessment
		No pre-clearance process in place
		No automation for formal entry and controlled shipments
		Re-imports are subject to duties
	Singapore	No central inspection/processing facility
	South Korea	Random selection process for suspicious shipments; storage fees are applied
		Lengthy release process for formal entry shipments - 100% inspection
		Ambiguous procedures for certain shipments
		Manual cash or check payment for applicable duties and taxes
		Manual cash or check payment for storage fees
		Post review process complicated by requirement for incorrectly declared shipments to go through litigation process
		Export formal entry shipments must be re-weighed
		Overtime fee applied if clearance is performed after regular work hours
	Thailand	Original documents required for some shipments (no photocopies permitted)
	Venezuela	Demanding procedures in place for price control and merchandise classification. Process is impeded by participation of Venezuelan National Guard in the clearance process

See footnote at end of table.

Table 3-1—*Continued*
Logistic services impediments, by segment[1]

Logistics segment affected	Country	Specific impediment(s)
Customs procedures—*Continued*	Vietnam	No de minimis
		No electronic payment system for duties and taxes
		No automation in place for clearing goods
		Lengthy process to review minimum duties and taxes for some goods
		No pre-clearance process in place in some districts
		Only partial pre-clearance permitted in Saigon
		Limited working hours for Customs Administration
		Net weight surcharge for imports
	Zimbabwe	All used merchandise need certificates of fumigation
	Russia	Complex legislation; time-consuming, costly procedures
Customs brokerage	Australia	Licensing requirement for brokers
	Bolivia	Logistics firms providing multiple services can not act as customs brokers
	France	Individuals can not perform services
	Indonesia	Foreign providers can not obtain brokerage licenses
	Mexico	Citizenship requirement for service providers
		Broker responsible for shipment contents
	Philippines	Citizenship requirement for service providers
		Brokerage companies may not finance services on behalf of customer
	Taiwan	Maritime and airports each require separate brokerage licenses

See footnote at end of table.

Table 3-1—*Continued*
Logistic services impediments, by segment[1]

Logistics segment affected	Country	Specific impediment(s)
Transportation - Road	Brazil	Remitting of funds for inland freight transport services is prohibited
	China	Insufficient road infrastructure; increased potential for damage/loss from overloaded trucks; inability to use roads in certain regions/provinces
		Arbitrary use of tolls and fines on trucks in some provinces
		Requirement to use local road transportation companies in some provinces
	Germany	Licensing regulations favor German road transporters
	Greece	High licensing fees for trucking
	Malaysia	Restricted movement of goods between Singapore and Malaysia - no de minimus for road shipments
	Mexico	Transportation of heavy loads by truck on federal highways by foreign firms is not permitted
	Singapore	Random inspection of trucks leaving ports
	Turkey	High licensing fees for road freight forwarders
	Vietnam	Foreign providers not permitted to own and operate ground transportation fleets and equipment
Transportation - Air	India	Cabotage restrictions limit gateway choices and add costs; must contract with local carrier for domestic routes
		Insufficient infrastructure for certain air shipments, such as climate-controlled storage
		Designated airports for transhipments increases costs
	Japan	Airport fees high compared with other nations, and are not uniform
	Russia	Foreign airlines not permitted for domestic services (cabotage)

See footnote at end of table.

Table 3-1—*Continued*
Logistic services impediments, by segment[1]

Logistics segment affected	Country	Specific impediment(s)
Transportation - Maritime	China	High licensing fees for non-vehicle owning common carriers (NVOCCs) ($97,000)
		NVOCC must provide cash bond to register bills of lading rather than providing evidence of insurance
	Greece	All ports are state owned
		Restrictions on bonded facilities
Transportation - All modes	China	Multiple registration requirements at federal and provincial level; must subcontract
	Japan	Multiple registration requirements at national and local level; must subcontract
	Malaysia	Licensing requirements for all freight forwarders
	Mexico	51% owned by Mexican citizen
		High gasoline prices as a result of monopoly supplier
		Investment limitations prevent foreign-owned transport companies from operating in the domestic market
Logistics: All segments	Australia	Lengthy/costly process for obtaining work visas
	Brazil	Complex regulatory environment due to large bureaucratic environment
	China	Overall logistics costs 20% higher than developed countries as a result of infrastructure constraints and adverse regulatory environment
		Lack of coordination among diverse regulatory bodies
		Corruption/regulatory abuse at the local level
		Difficulty operating due to cultural differences/in country relationships
		Majority foreign ownership not permitted
		Minimum investment requirement of $5 million for logistics firms
		Local hiring requirements

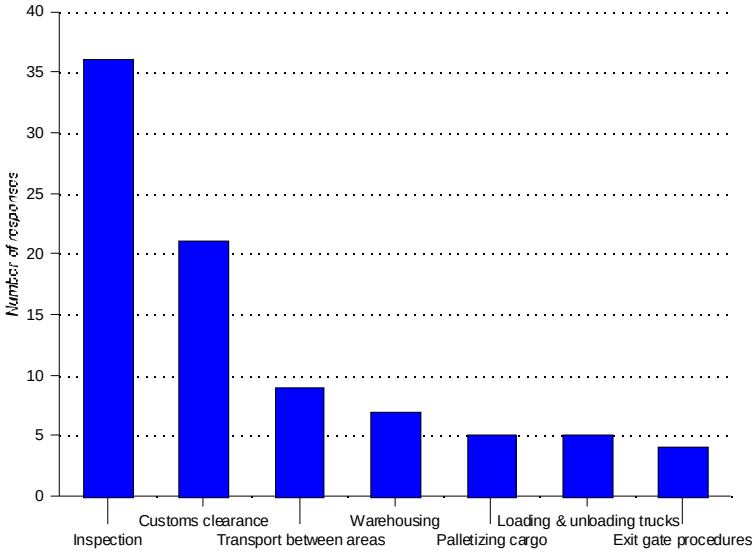
See footnote at end of table.

Table 3-1—*Continued*
Logistic services impediments, by segment[1]

Logistics segment affected	Country	Specific impediment(s)
Logistics: All segments—*Continued*	Malaysia	Nationality requirement for 51% of staff
	Philippines	Lack of regulatory transparency
	Russia	Lack of transparency; no prior notification of regulatory changes
	South Korea	Discriminatory treatment of foreign firms - tax break for domestic providers
	South Africa	Black Economic Empowerment regulations limit opportunities for some firms
	Thailand	Ownership/equity restrictions
	Taiwan	High capital investment requirements for international logistics center
	Turkey	Complex regulatory environment due to large bureaucratic environment
	Ukraine	Regulatory complexity due to large bureaucracy
	Vietnam	Lack of regulatory transparency
	Zimbabwe	All non governmental organizations must be accredited by the government
Other	Australia	Postal authority receives expedited treatment for goods valued up to $AUD 1000, while other firms have $AUD 250 threshold. Phase out expected in 2005
	China	Tight controls on foreign exchange
		Private and public financing are not easily available to foreign firms
	Mexico	High theft rate of transported goods
		Restrictions on real estate ownership
	Zimbabwe	End-to-end logistics can not be provided for food distribution from international aid organizations, as distribution must be coordinated between the government and the respective NGO

[1] The information in this table was collected from 2 separate questions in the Commission's questionnaire; specifically, recipients were asked to describe any regulations/policies that impede their operations in the country and to provide additional comments at the end of the questionnaire.

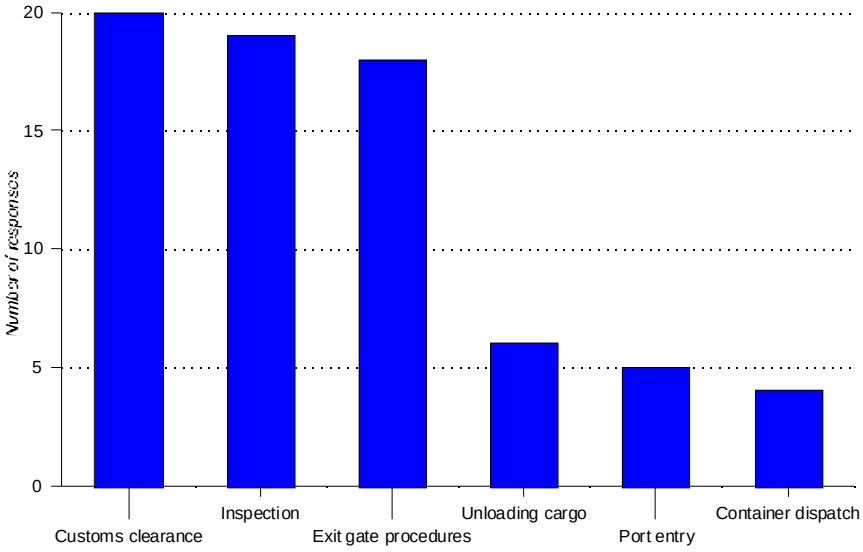
Figure 3-1
Airport cargo procedures: Number of responses characterizing procedure as "slow"[1]



[1] Questionnaire recipients were asked to rate on a scale of 1 to 5 the cargo procedures listed along the X axis in the figure, with "1" representing "very fast" and "5" representing "slow." Chapter 5 further discusses the results of this question.

Source: Compiled from responses to Commission questionnaires.

Figure 3-2
Seaport cargo procedures: Number of responses characterizing procedure as "slow"[1]



[1] Recipients were asked to rate on a scale of 1 to 5 the cargo procedures listed along the x axis, with "1" representing "very fast" and "5" representing "slow." Chapter 5 further discusses the results of this question.

Source: Compiled from responses to Commission questionnaires.

Limited hours of operation at customs facilities, preferred treatment for domestic carriers, and security-related delays were also cited as factors that make it more difficult for logistics suppliers to make timely deliveries. For example, one industry representative reports that customs facilities are closed on weekends in Brazil and Ecuador, and high value shipments can only be cleared during regular business hours in China and India.[11] The source also reports discriminatory inspection practices in certain markets, where foreign carriers are subject to nearly full inspections, while domestic carriers are not.[12] Increased security following the September 11, 2001 terrorist attacks also affects the time necessary to clear goods through customs in many countries.[13] Box 3-1 summarizes comments from service suppliers on the impact of border security initiatives on the provision of logistic services. Some industry representatives note that security related delays are particularly long in India, the Philippines, and Vietnam.[14] In addition to increased processing time, new security requirements also increase costs for logistic service providers that must invest in new screening equipment, information technology, and employee training.[15]

Customs laws and regulations may be applied inconsistently at different ports.[16] Despite an EU-wide Customs Directive, industry representatives report that lack of harmonization among EU customs administrations complicates the efforts of U.S. firms to export to Europe. They claim that the recent accession of 10 Central and Eastern European countries has compounded the problem.[17] Similarly, industry representatives operating in China report that the single largest obstacle with regard to customs is that rules differ from one customs station to another, despite the existence of national customs regulations.[18] At least one industry source states that lack of harmonization causes delays for logistics providers and makes it difficult to transport goods from one customs station to another.[19]

---

[11] UPS Supply Chain Solutions, Pre-hearing testimony provided to the USITC, Nov. 8, 2004.

[12] Ibid.

[13] Matthew Vega, FedEx, hearing transcript, Nov. 19, 2004, pp. 8-9; and industry representatives, interviews with USITC staff, Plantation, FL, Jan. 13, 2005, and Miami, FL, Jan. 14, 2005.

[14] Industry representatives, interview with USITC staff, Singapore, Jan. 19, 2005.

[15] Brad Fitzgerald, UPS SCS, hearing transcript, p. 17; and Timothy Aeppel, "Manufacturers Cope With Costs of Strained Global Supply Lines," *The Wall Street Journal*, Dec. 8, 2004, p. A1.

[16] Katelyne Ghemar and Tsonka Iotsova, "Identification of Concrete Trade Obstacles to be Removed Through the Future WTO Negotiations on Trade Facilitation or Other Negotiations in the Framework of the Doha Development Agenda," pp. 22-23.

[17] Industry representatives, interview with USITC staff, Brussels, Belgium, Oct. 18, 2004; and "The EU's Customs Cacophony," *The Washington Times*, Sept. 28, 2004, found at *http://www.washingtontimes.com/*, retrieved Nov. 22, 2004.

[18] Industry representatives, interviews with USITC staff, Beijing, China, Jan. 10, 2005; Shenzhen, China, Jan. 18, 2005; and Hong Kong, China, Jan. 19, 2005; and PBB Global Logistics, "Trade and Logistics in China," found at *http://www.pbb.com/*, retrieved Mar. 6, 2005.

[19] Industry representatives, interview with USITC staff, Beijing, China, Jan. 12, 2005.

Box 3-1
The Impact of Border Security Initiatives on Logistic Services

In written submissions filed with the Commission, industry representatives stated that increased U.S. border security measures implemented after September 11, 2001 (9/11) have reduced their efficiency and increased their operating costs.[1] Further, one industry representative notes that similar measures either planned or implemented by countries such as the European Union, Korea, and Japan may also adversely affect the ability of logistic services firms to operate in foreign markets.[2] However, other observers have expressed the view that some of the post 9/11 measures may have a trade-enhancing effect in some countries. For example, they state that the establishment of uniform, electronically-based cargo security systems, as recently recommended by the World Customs Organization (WCO), will make it easier for logistics services providers to meet necessary documentation requirements, and allow the goods that they ship to be processed more efficiently through customs. This new system, discussed below, would involve the development of a harmonized system to implement such measures vis-a-vis national customs authorities.

WCO Cargo Security Framework

In December 2004, the WCO introduced a new cargo security framework, the objective of which is to harmonize cargo security procedures across national borders. The framework is based on procedures developed by the United States following 9/11. The U.S. procedures, among other things, include the Container Security Initiative (CSI) and the Customs-Trade Partnership Against Terrorism (C-TPAT),[3] the objectives of which were to improve the "visibility" of cargo by requiring information on a foreign vessel and its goods well in advance of the vessel's entry into the U.S. domestic transportation system. The CSI program established screening standards at designated foreign ports for U.S.-bound shipments, and enabled U.S. authorities to gather more information on low-risk, pre-screened cargo. C-TPAT was designed to secure information from all segments of the supply chain, both foreign and domestic. Under C-TPAT, manufacturers, shippers, and carriers that implement secure practices may be certified by U.S. Customs for fast-track cargo processing. The WCO's framework would require participating countries to use procedures to identify high-risk cargo, to establish an automated system for capturing and analyzing data related to potential cargo threats, and to expedite the processing of goods through customs by providing preferential treatment to firms that meet supply chain security requirements. Under the WCO framework, national customs authorities would be expected to share data on exports and imports, and to develop common, "interoperable" IT infrastructure for the processing of customs data. This data would then be used collectively by customs officials from different countries to screen out dangerous cargo.

Industry representatives have commented that the deployment of a harmonized cargo security system could help expedite the processing of goods through customs.[4] Further, the development of advanced information technologies for customs processing could improve border security while facilitating trade at the same time. For example, with the necessary technologies in place, 3PLs could submit documentation to customs officials for pre-arrival processing. If such a process were in place, customs officials would be able to more easily identify high-risk shipments, thereby improving processing efficiency.[5]

[1] UPS SCS, Pre-hearing testimony provided to the USITC, Nov. 8, 2004; FedEx, Pre-hearing testimony provided to the USITC, Nov. 8, 2004; and DHL, *Post hearing brief*, Dec. 14, 2004, p. 7.

[2] FedEx, Pre-hearing testimony, Nov. 8, 2004.

[3] C-TPAT industry enrollment in early Nov. 2004 consisted of 4,183 importers; 1,291 brokers, forwarders, and consolidators; 1,491 carriers; 48 port authorities and terminal operators; and 299 foreign manufacturers located predominantly in Canada and Mexico. C-TPAT membership represents more than 40 percent of all imports into the United States by dollar value, and more than 96 percent of all maritime container carrier traffic bound for the United States.

[4] DHL, *Post hearing brief*.

[5] UPS SCS, Pre-hearing testimony.

With respect to customs brokerage services, countries maintain various requirements that may impede the ability of 3PLs to provide such services.[20] For example, in Vietnam foreign firms are permitted to provide such services within designated industrial parks, but only Vietnamese state-owned entities are allowed to act as customs brokers outside of those areas.[21] The Philippine Government recently passed the Customs Broker Act of 2004 (Republic Act 9280, March 2004) which reserves customs brokerage licenses to individual Philippine citizens.[22] One foreign firm was forced to give up its license as a result.[23] One industry representative also reported that in order to provide customs brokerage services in Indonesia and Malaysia, a firm must establish a separate corporate entity.[24] Another firm reported that wholly-owned foreign firms are not permitted to provide customs brokerage services in China; in order to provide these services, firms must develop a joint venture or use a local customs broker.[25]

Other customs impediments reported by industry representatives include different classifications of goods in different countries or within the same country, and difficulties in obtaining customs licenses. In China for example, customs officials reportedly have latitude to classify goods, resulting in exporters having to negotiate tariffs at each point of entry for items such as chemicals and digital goods.[26] Industry representatives also report that customs corruption is prevalent in certain countries, such as India, Thailand, and Vietnam.[27]

Investment Regulations

Although third-party logistic services may be provided across national borders,[28] suppliers typically establish a commercial presence in foreign markets to provide integrated, point-to-point logistic services. Commercial presence may be affected by government measures that limit foreign investment, regulate the form of establishment, impose non-transparent and duplicative licensing requirements, or limit the movement or hiring of key personnel. Such measures may be applied horizontally, affecting all service suppliers in a market, or on an industry-specific basis.

---

[20] Many of these requirements fall under the category of investment impediments, which are discussed at length in the following section.

[21] Hai Ha & Partners Law Office, Vietnamese Law Consultancy, "Law Regulation on Import Export (Foreign Investment) in Vietnam," found at Internet address *http://www.vietnamese-law-consultancy.com/*, retrieved Nov. 30, 2004.

[22] DHL Group, *Post-hearing brief*; Republic of the Philippines, Congress of the Philippines, 12th Congress, 3rd Regular Session, Republic Act No. 9280, Mar. 30, 2004; USTR, National Trade Estimate Report 2004, found at *http://www.ustr.gov/*, retrieved Mar. 6, 2005, p. 388; and Industry representatives, interview with USITC staff, Singapore, Jan. 19, 2005.

[23] Industry representatives, interview with USITC staff, Singapore, Jan. 19, 2005.

[24] Industry representatives, interview with USITC staff, Singapore, Jan. 17, 2005.

[25] Industry representatives, interview with USITC staff, Beijing, China, Jan. 10, 2005.

[26] Industry representatives, interview with USITC staff, Singapore, Jan. 19, 2005; and USTR, National Trade Estimate Report 2004, found at *http://www.ustr.gov/*, retrieved Mar. 6, 2004, p. 62; and USTR, 2004 Report to Congress on China's WTO Compliance, found at *http://www.ustr.gov/*, retrieved Mar. 6, 2005, p. 23.

[27] Industry representatives, interviews with USITC staff, Singapore, Jan. 19 and 20, 2005.

[28] Cross-border logistic services are related to management consulting services, where suppliers are able to provide services remotely, and include cross-border transportation between contiguous countries.

Most countries require government approval for foreign investment, which does not necessarily restrict trade. However, trade may be impeded when such approvals depend on quantitative measures, such as economic needs tests,[29] or are applied in a discriminatory or non-transparent manner. In the Philippines, the Land Transportation Franchising and Regulatory Board grants approval to road freight transport firms based on economic needs and capacity tests.[30] In Canada, certain provinces maintain limitations on establishment that affect the operations of all service suppliers, including economic needs tests for courier services and logistic services in Nova Scotia and Manitoba, and residency requirements for rail transport companies in Newfoundland and Manitoba.[31] In Australia, where approval is required for all foreign investment, commercial presence may be denied if it is deemed contrary to national interests, which are reportedly not clearly defined.[32] Such limited transparency makes it difficult for foreign firms to understand and interpret the criteria used to approve foreign investment.

In some cases, foreign investment may not be permitted at all. This may result from government-granted monopolies, which may prevent foreign ownership of critical infrastructure, and from capitalization requirements, which may exclude smaller firms with limited resources. In China, "international logistics businesses (ILBs)"[33] are subject to capital requirements of $5 million; freight forwarders are subject to capital requirements of $1 million, plus an additional $120,000 per branch; and Non-Vessel Owning Common Carriers (NVOCCs) must have $100,000 on deposit in a Chinese bank in order to participate in the Chinese market.[34] Industry representatives report that these fees are particularly costly for non-capital intensive or non-asset owning service firms.[35] In Mauritius, postal and some transport-related services are government monopolies, preventing competition; in particular, the Cargo Handling Corporation, a state-owned firm, provides all cargo handling services.[36]

Where foreign investment is permitted and approval has been granted, some countries may maintain regulations that require foreign firms to establish a separately-capitalized subsidiary, representative office, or joint venture. Where joint ventures are required, foreign logistics firms must pair with domestic partners that may not be as experienced or as efficient as the foreign firm. At least one source said that such partnerships may

---

[29] " [A]n economic needs test can generally be characterized as a provision in national regulations, legislation or administrative guidelines imposing a test which has the effect of restricting the entry of service suppliers, based on an assessment of "needs" in the domestic market." OECD, Working Party of the Trade Committee, "Assessing Barriers to Trade in Services, The Scheduling of Economic Needs Tests in the GATS: An Overview," Sept. 18-20, 2000, p.4, found at *http://www.olis.oecd.org/*, retrieved Feb. 22, 2005.

[30] WTO, GATS, Philippines, Schedule of Specific Commitments, GATS/SC/70, Apr. 15, 1994.

[31] WTO, GATS, Canada, Schedule of Specific Commitments, GATS/SC/16, Apr. 15, 1994

[32] USTR, NTE 2004, p. 15, found at *http://www.ustr.gov/*, retrieved Nov. 8, 2004.

[33] China requires an ILB license for all logistic service providers.

[34] USTR, NTE 2004, p. 80; John Goyer, Coalition of Service Industries (CSI), statement to the USITC, hearing transcript, Nov. 19, 2004, pp. 29-30; Industry representatives, interviews with USITC staff, Beijing, China, Jan. 12, 2005; Singapore, Jan. 18, 2005; and Hong Kong, China, Jan. 19, 2005; and USITC supplier questionnaire.

[35] Industry representatives, interviews with USITC staff, Guangzhou, China, Jan. 17, 2005; and Singapore, Jan. 18, 2005.

[36] European Commission (EC), Directorate General (DG) Trade, Market Access Database, Mauritius, found at *http://mkaccdb.eu.int/*, retrieved Nov. 4, 2004.

reduce service quality and increase costs, thereby reducing the foreign firm's revenue.[37] Another source said that joint-venture requirements that limit foreign firms to minority ownership reduce the ability of the firms to manage and control operations, potentially affecting service quality.[38] In China, joint venture requirements presently apply to logistics firms that provide rail freight transportation, maritime transportation, freight forwarding, and supply chain consulting.[39] China divides the logistics sector into two categories: international logistics businesses (ILBs) and third party logistics businesses (3PLs). ILBs provide international freight forwarding services while 3PLs perform domestic freight forwarding, trucking, warehousing, and logistics management. In order to provide both domestic and international logistic services, firms must establish as both an ILB and a 3PL. Foreign majority ownership in ILBs is not permitted, and foreign ownership of joint ventures that combine ILBs and 3PLs is limited to 50 percent.[40]

Similar requirements exist in other countries. In Indonesia, joint-venture requirements apply to discrete segments of the supply chain, the restrictiveness of which varies from segment to segment.[41] For example, foreign investment in trucking or other ground transportation joint ventures is limited to 49 percent, while 95-percent foreign ownership is permitted for freight forwarding and air cargo companies. In the Philippines, foreign air freight forwarders must hire wholly Filipino-owned firms or create joint ventures to provide delivery services, with foreign equity in the joint venture limited to 40 percent. This restriction is further complicated in the Philippines by the Civil Aeronautics Board's ability to unofficially grant full majority ownership on a case-by-case basis, thereby reducing transparency and limiting firms' ability to make informed decisions.[42]

Responses to the Commission's questionnaire indicate that firms are not permitted to own and operate ground transport equipment in at least 12 countries (table 3-2); with the exception of Canada, these are developing countries. As noted above, certain provinces in Canada maintain establishment limitations that affect the operations of logistic suppliers.[43] In cases where establishment restrictions exist, such as joint-venture requirements, ownership/equity restrictions, or investment limitations, the majority of respondents indicate that the measures have little or no impact on company operations (62.0 percent) or competition with domestic firms (60.6 percent) (figures 3-3 and 3-4, respectively). These results may reflect the fact that foreign affiliates are often able to

[37] John Goyer, CSI, hearing transcript, pp. 27-28.

[38] UPS SCS, Prehearing brief, Nov. 19, 2004.

[39] WTO, GATS, "The People's Republic of China: Schedule of Specific Commitments," GATS/SC/135, Feb. 15, 2002, p. 49; and Table 3-1.

[40] Industry representative, telephone interview with USITC staff, June 9, 2003; Statement by Federal Express Corporation Regarding Significant Barriers to U.S. Exports of Services For Inclusion in the National Trade Estimate Report, Dec. 13, 2002; Brad Fitzgerald, UPS Supply Chain Solutions, hearing testimony provided to the USITC on Nov. 8, 2004; and USITC, *Express Delivery Services: Competitive Conditions Facing U.S.-Based Firms in Foreign Markets*, (investigation No. 332-456), USITC Publication 3678, Apr. 2004, p. 3-17.

[41] WTO, GATS, Indonesia, Schedule of Specific Commitments, GATS/SC/43, Apr. 15, 1994.

[42] USTR, NTE 2004, p. 388; and Statement by Federal Express Corporation Regarding Significant Barriers to U.S. Exports of Services for Inclusion in the National Trade Estimate Report, Dec. 13, 2002.

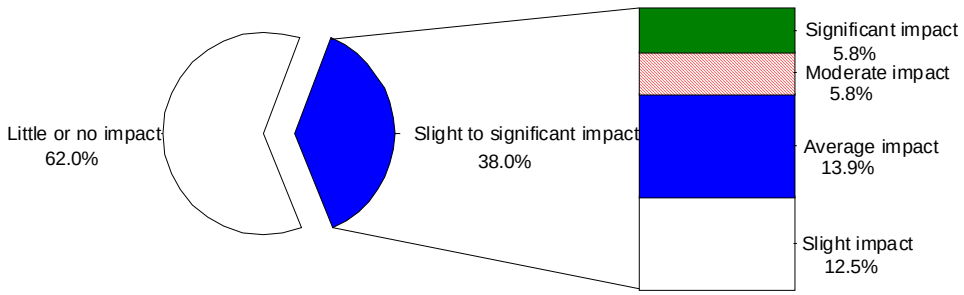
[43] WTO, GATS, Canada, Schedule of Specific Commitments, GATS/SC/16, Apr. 15, 1994.

Table 3-2
Countries that limit certain investment, based on responses to the Commission questionnaire

Question	Total number of responses	Share of "no" responses	Countries with impediments
Provider permitted to own and operate ground transportation fleets and equipment?	228	10.5%	**12 countries**: Canada, China, Egypt, El Salvador, Greece, Indonesia, Malaysia, Mexico, Philippines, Taiwan, Thailand, and Vietnam.

Source: Compiled from responses to Commission questionnaires; see also GATS, "Schedule of Commitments," various countries; USTR, "National Trade Estimate;" European Commission, Directorate General Trade, Market Access Database, found at *http://mkaccdb.eu.int/;* and FedEx, "Statement by Federal Express Corporation Regarding Significant Barriers to U.S. Exports of Services For Inclusion in the National Trade Estimate Report, Dec. 13, 2002."

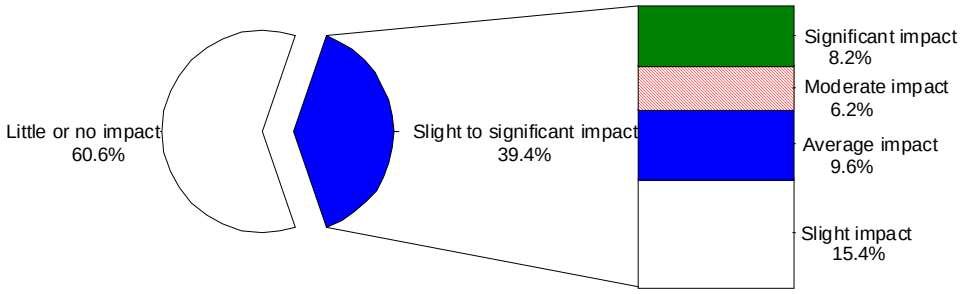
Figure 3-3
Regulatory and policy impediments: Impact of establishment restrictions on operations[1]



[1] Recipients were asked to rate, on a scale of 1 to 5, the impact of establishment restrictions, such as joint venture requirements, ownership/equity restrictions, or investment limitations, on operations; a rating of "1" indicates that the requirement "significantly impedes the ability to operate" and "5" indicates "little or no impact."

Source: Compiled from responses to Commission questionnaires.

Figure 3-4
Regulatory and policy impediments: Impact of establishment restrictions on competition with domestic firms[1]



[1] Recipients were asked to rate, on a scale of 1 to 5, the impact of establishment restrictions, such as joint venture requirements, ownership/equity restrictions, or investment limitations, on competition with domestic firms; a rating of "1" indicates that the requirement "gives the domestic firm a significant advantage" and "5" indicates "little or no impact."

Source: Compiled from responses to Commission questionnaires.

adapt to the environments in which they operate and may even benefit from relationships that domestic partners have established with local officials.[44]

Licensing Requirements

Licenses for the provision of transportation services are required in virtually every country. While most questionnaire responses indicate that licensing regimes are broadly fair and equitable, 27.3 percent of questionnaire responses indicate that competing domestic firms are able to obtain operating licenses more easily than foreign firms, suggesting that foreign firms do not receive national treatment in certain countries (table 3-3). For example, in Mexico, foreign 3PLs are not permitted to obtain tractor trailer operating licenses to make inter-city deliveries (see table 3-1). Rather, they must use multiple vans to complete a trip that could be handled by one tractor trailer or they must use a domestic supplier, both of which may result in a loss of control over deliveries and a reported increase in costs of 10 to 15 percent.[45] At least one industry representative reports that in Vietnam it takes several months to get an operating license for logistics-related services.[46] Malaysia maintains different licensing requirements for freight forwarders and shipping agents, in addition to joint venture requirements that

[44] It should be noted that the questionnaire collected information only for countries in which the responding company maintains operations.
[45] Brad Fitzgerald, UPS SCS, hearing transcript, pp. 19 and 50.
[46] Industry representatives, interview with USITC staff, Singapore, Jan. 18, 2005.

Table 3-3
Countries that maintain discriminatory licensing practices, based on responses to the Commission questionnaire

Question	Total number of responses	Share of "yes" responses	Countries with impediments
Do domestic firms have an easier time obtaining licenses than foreign-owned firms?	220	27.3%	**26 countries**: Australia, Brazil, Canada, Chile, China, Ecuador, El Salvador, France, Hong Kong, India, Indonesia, Italy, Japan, Korea, Malaysia, Mauritius, Mexico, Philippines, Russia, South Africa, Taiwan, Thailand, Ukraine, United Kingdom, Venezuela, and Vietnam

Source: Compiled from responses to Commission questionnaires; see also GATS, "Schedule of Commitments," various countries; USTR, "National Trade Estimate 2004;" European Commission, Directorate General Trade, Market Access Database, found at *http://mkaccdb.eu.int/;* and FedEx, "Statement by Federal Express Corporation Regarding Significant Barriers to U.S. Exports of Services For Inclusion in the National Trade Estimate Report, Dec. 13, 2002."

limit the foreign partner's equity share to 49 percent.[47] In order to provide freight forwarding services in China, firms must form a joint venture and obtain a Class A operating license.[48] One industry source indicates that foreign firms operating in China without a Class A license cannot book space on a commercial airline.[49]

In some countries, licensing requirements may vary by state or province, ultimately raising costs for 3PLs by requiring them to transfer goods to domestic suppliers at state or provincial lines, interrupting the provision of end-to-end logistic services and potentially diluting service quality. For example, in China, where 3PLs are subject to five different classes of licenses, some provinces prohibit foreign-controlled vehicles from transiting their territory, forcing foreign 3PLs to contract with local carriers.[50] (For a summary of logistics impediments in China, see text box 3-2.)

Transparency

Table 3-4 indicates that transparency of logistics-related regulations is limited in 15.5 percent of the countries surveyed. In these countries, 89.5 percent of questionnaire responses indicate a slight to significant adverse impact on operations, with a sizeable share, 18.4 percent, indicating a significant impact (figure 3-5). In some cases, a lack of regulatory transparency may discourage foreign firms from entering certain markets

[47] Industry representatives, interview with USITC staff, Singapore, Jan. 19, 2005; and Table 3-1.

[48] Industry representative, interview with USITC staff, Shenzhen, China, Jan. 18, 2005; and Table 3-1.

[49] Industry representative, interview with USITC staff, Shenzhen, China, Jan. 18, 2005.

[50] DHL Group, *Post-hearing brief*; and Table 3-1.

Box 3-2
Summary of China's logistics trade environment

Owing to the progressive implementation of its commitments under the GATS, China has phased out some joint venture requirements relating to logistics services and plans to phase out others by December 11, 2007. Three years after its WTO accession, China permitted majority foreign ownership in domestic road transport and freight forwarding firms. China offered majority foreign ownership of domestic storage and warehousing one year after its accession and of rail transport joint ventures three years after accession. Further phase-in of its GATS commitments resulted in 100-percent foreign ownership of domestic road transport and storage and warehousing as of December 11, 2004. On December 11, 2005, China will permit freight forwarders to establish as wholly-owned foreign enterprises, and will provide similar benefits to rail transport providers by January 1, 2007.[1]

According to industry and government representatives, despite these improvements, the logistics industry in China remains fragmented as a result of a regulatory system that is not harmonized across provinces. This results in different interpretations of national-level regulations in each province. Many provincial governments maintain regulations such as licensing, fees, and inspections designed to protect local logistic service suppliers from outside competition. Firms report that regulatory inconsistency is particularly problematic at customs, as each customs station adheres to different rules, causing delays for shippers. Additionally, in order to operate a logistics business and open an office, China requires different licenses from multiple government agencies at both the national and provincial level, resulting in a time-consuming permitting process that must be repeated for every office the firm wishes to open. A lack of transparency with regard to licensing requirements compounds this issue.[2] These regulations, together with infrastructure impediments discussed later in the chapter, result in a high-cost operating environment. In 2000, total logistics costs were estimated to be $200 billion and represented 16 percent of the purchase price of a particular good, four times that of developed countries.[3]

[1] WTO, GATS, "The People's Republic of China: Schedule of Specific Commitments," GATS/SC/135, Feb. 15, 2002.

[2] Industry and government representatives, interviews with USITC staff, Beijing, Guangzhou, and Hong Kong, China, Jan.10-21, 2005.

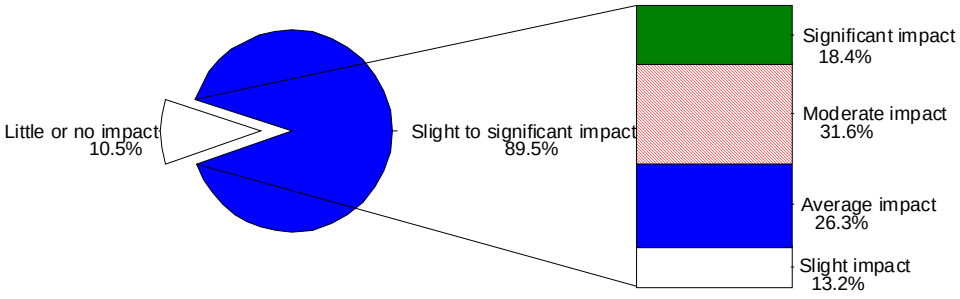
[3] United States Department of Agriculture (USDA), Foreign Agricultural Service (FAS), "China Logistics Profile 2003," found at *http://www.fas.usda.gov/gainfiles/200312/146085452.doc/*, retrieved Nov. 20, 2004.

Table 3-4
Countries where transparency of logistics regulations is limited, based on responses to the Commission questionnaire

Question	Total number of responses	Share of "no" responses	Countries with impediments
Are regulations that affect logistics services transparent?	226	15.5%	**20 countries**: Argentina, Bolivia, Brazil, China, Ecuador, Egypt, El Salvador, Greece, Hong Kong, India, Indonesia, Mexico, Peru, Philippines, Taiwan, Thailand, Turkey, Ukraine, Venezuela, and Vietnam

Source: Compiled from responses to Commission questionnaires; see also USTR, "National Trade Estimate 2004; European Commission, Directorate General Trade, Market Access Database, found at *http://mkaccdb.eu.int/;* and FedEx, "Statement by Federal Express Corporation Regarding Significant Barriers to U.S. Exports of Services For Inclusion in the National Trade Estimate Report, Dec. 13, 2002;" and ASEAN-Secretariat.

Figure 3-5
Regulatory and policy impediments: Impact of limited transparency in countries where respondents encounter this impediment[1]



[1] In the 20 countries where respondents encounter this impediment (see table 3-4), firms were asked to rate the effect on company operations; a rating of "1" indicates "significant adverse effect," while a "5" rating indicates "little or no effect."

Source: Compiled from responses to Commission questionnaires.

or place them at a disadvantage in competing against local firms.[51] Among the ten new EU members it is reported that uneven enforcement and limited regulatory transparency provides domestic suppliers an advantage over foreign suppliers.[52]

Further, questionnaire responses indicate that 13 countries provide domestic firms with access to information affecting regulations before foreign firms (table 3-5). For these countries, 76.8 percent of questionnaire responses indicate a slight to significant adverse impact on the competitive environment, with the largest share, 34.6 percent, indicating a moderate impact (figure 3-6). Industry representatives note that there are numerous restrictions and transparency issues in Vietnam and China.[53] While China has made

[51] Katelyne Ghemar and Tsonka Iotsova, "Identification of Concrete Trade Obstacles to be Removed Through the Future WTO Negotiations on Trade Facilitation or Other Negotiations in the Framework of the Doha Development Agenda," p. 28.

[52] Transport Intelligence, Ltd., "Central and Eastern Europe Logistics Report," Mar. 2004, pp. 14-17.

[53] Industry representatives, interview with USITC staff, Singapore, Jan. 19, 2005; and the Commission questionnaire.

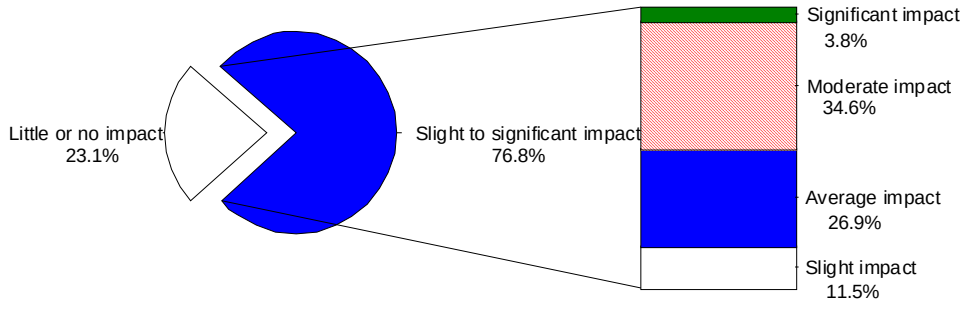
Table 3-5
Countries that limit transparency by maintaining discriminatory practices, based on responses to the Commission questionnaire

Question	Total number of responses	Share of "yes" responses	Countries with impediments
Do domestic competitors have access to information affecting regulations before you do?	228	11.0%	**13 countries**: Canada, China, Ecuador, Hong Kong, Italy, Japan, Korea, Mexico, Singapore, Taiwan, Thailand, Turkey and Vietnam.

Note.— The People's Republic of China and Hong Kong, China maintain separate GATS schedules, so they are listed separately in the table.

Source: Compiled from responses to Commission questionnaires; see also GATS, "Schedule of Commitments," various countries; USTR, "National Trade Estimate 2004;" European Commission, Directorate General Trade, Market Access Database, found at *http://mkaccdb.eu.int/;* and FedEx, "Statement by Federal Express Corporation Regarding Significant Barriers to U.S. Exports of Services For Inclusion in the National Trade Estimate Report, Dec. 13, 2002."

Figure 3-6
Regulatory and policy impediments: Impact of inequitable access to information in countries where this impediment exists[1]



[1] In the 13 countries where this impediment exists (see table 3-5) recipents were asked to rate the effect on competition; a "1" rating indicates "a significant adverse effect," while a "5" rating indicates "little or no effect."

Source: Compiled from responses to Commission questionnaires.

strides in improving regulatory transparency, firms note instances where they are not informed of regulatory changes in a timely manner.[54]

Labor Limitations

The majority of questionnaire responses do not identify labor restrictions as a significant problem. However, 27.2 percent of questionnaire responses indicate that foreign firms are required to hire local residents in countries where they operate, and 11.1 percent of responses indicate that such firms experience difficulty in obtaining entry visas and permits (table 3-6). In countries where foreign firms are required to hire local residents in certain positions, 57.9 percent of respondents report that the requirement has a moderate to significant positive impact on costs, i.e., costs decrease (figure 3-7). This may reflect that, relative to the United States, labor costs in the countries where this requirements exists tend to be low. About one-third of responses (35.7 percent) indicate that this requirement does not change productivity levels. Nonetheless, industry sources identify several countries as particularly problematic. For example, in China, where firms report difficulty operating due to cultural differences and local hiring requirements (table 3-1), there are few available English-speaking, management level employees.[55] Firms operating in China also report difficulties in moving key personnel around the country, particularly to the provinces.[56] Sources also indicate that local labor laws in many EU countries make it difficult for firms to lay off workers, requiring firms to offer costly severance packages.[57]

Transportation

In addition to the impediments described above that apply to all service sectors, transport services encounter regulatory and other impediments that may affect the operational efficiency and quality of services provided by logistic firms. In most cases, however, firms indicated that transport-related regulations have less of an adverse impact on their ability to operate in foreign markets than other impediments, especially customs. The effect of transportation impediments on firm operations are discussed below and in Chapter 5.

Air Transport[58]

Domestic-level regulations affecting airport usage

Airlines are subject to domestic-level laws and regulations that may impede their ability to operate at foreign airports. These laws and regulations pertain to the allocation of

[54] Industry representatives, interviews with USITC staff, Beijing, China, Jan. 12, 2005; and Shenzhen, China, Jan. 18, 2005.

[55] Industry representatives, interviews with USITC staff, Beijing, China, Jan. 12, 2005; and Shenzhen, China, Jan. 18, 2005.

[56] Ibid.

[57] Leslie Hansen Harps, *Logistics Management and Distribution Report*, Feb. 2000, Vol. 39, Issue 2.

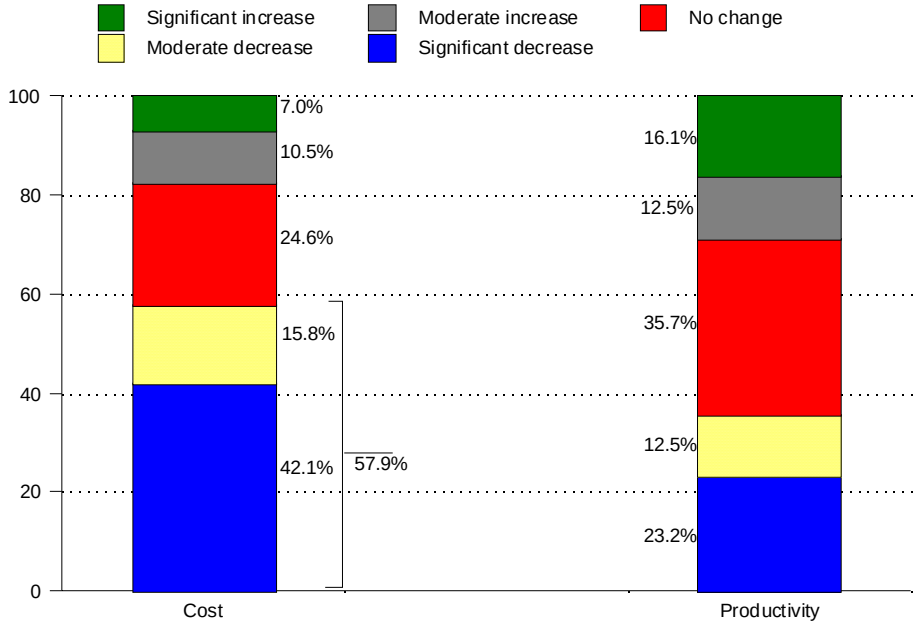
[58] As noted previously, rules on international aviation are based on bilateral aviation agreements and do not fall under the scope of the WTO.

Table 3-6
Countries that maintain labor limitations, based on responses to the Commission questionnaire

Question	Total number of responses	Share of "yes" responses	Countries with impediments
Is firm required to hire local residents in certain positions?	224	27.2%	**30 countries**: Argentina, Australia, Brazil, Canada, Chile, Colombia, Czech Republic, Denmark, Ecuador, Egypt, France, Hong Kong, Hungary, India, Indonesia, Italy, Japan, Korea, Malaysia, Mauritius, Mexico, Netherlands, Philippines, Poland, South Africa, Taiwan, Thailand, Venezuela, Vietnam, and Zimbabwe.
Does your firm have difficulty obtaining entry visas and work permits?	218	11.1%	**19 countries**: Australia, Brazil, Costa Rica, Denmark, France, Indonesia, Italy, Japan, Korea, Mexico, New Zealand, Peru, Philippines, Russia, South Africa, Spain, Taiwan, Ukraine, and United Kingdom.

Source: Compiled from responses to Commission questionnaires; see also GATS, "Schedule of Commitments," various countries; USTR, "National Trade Estimate 2004;" and European Commission, Directorate General Trade, Market Access Database, found at *http://mkaccdb.eu.int/.*

Figure 3-7
Regulatory and policy impediments: Impact of labor requirement on cost and productivity



[1] In the 30 countries where firms are required to hire local residents into certain positions (see table 3-5), questionnaire recipients were asked in 2 separate questions, to rate, on a scale of 1 to 5, the effect of this requirement on costs and productivity, respectively; a "1" rating indicates a "significant increase," while a "5" rating indicates a "significant decrease."

Source: Compiled from responses to Commission questionnaires.

take-off and landing slots,[59] the ability of airlines to provide their own or third-party ground-handling services,[60] access to cargo-handling and storage and warehousing facilities, and environmental restrictions that limit airlines' hours of operation. Although some bilateral air service agreements may specify the number of slots to be reserved for foreign airlines, the allocation of these slots is determined by a slot coordinator.[61] In areas with congested airports such as the EU and Japan, the inability of an airline to secure an adequate number of take-off and landing slots, or to secure slots that are scheduled at desirable times, may have an adverse impact on its competitiveness.[62] The operations of air cargo carriers transporting time-sensitive shipments are particularly vulnerable to rules affecting slot allocation.

Laws and regulations in some countries require airlines to use third-party providers for ground-handling services or prevent airlines from offering such services to other airlines.[63] For example, at Hong Kong International Airport, air cargo carriers are required to use one of three franchise companies for the loading and unloading of cargo from planes.[64] Other countries such as Australia, China, Indonesia, Japan, and Vietnam reportedly prohibit airlines from providing their own ground-handling services.[65] Difficulties also arise when cargo carriers are not granted adequate access to storage and warehousing facilities at airports or when airports lack adequate storage and warehousing infrastructure.[66] Disputes between the United States and foreign countries regarding ground-handling services and U.S. airlines' access to storage and warehousing facilities have, in some cases, been resolved through bilateral negotiations.[67] Recent regulations regarding airport noise pollution are discussed in text box 3-3.

---

[59] Authorities generally follow standards established by the International Air Transport Association (IATA) with respect to the scheduling of flights and slot allocation. Government representatives, interview with USITC staff, Hong Kong, China, Jan. 19, 2005.

[60] Ground-handling services include the loading and unloading of cargo from aircraft, tow-in and pushback, and refueling.

[61] The slot coordinator may be a representative of a national airline, a government agency, or an airport authority. In general, the slot coordinator attempts to balance the availability of commercially-viable slots (i.e., those that are scheduled during peak hours) with the demand for such slots from both domestic and foreign carriers. An airline that is granted a slot at a less desirable time of the day may be able to "exchange" that slot with another airline for one that is more desirable, but airlines are usually not required to relinquish slots unless they have failed to make effective use of them. Brian Hindley, *Trade Liberalization in Aviation Services: Can the Doha Round Free Flight?* American Enterprise Institute (AEI), 2004, p. 18; and GAO, "DOT Needs More Information to Address U.S. Airlines' Problems in Doing Business Abroad," Nov. 1994, p. 16.

[62] Industry representatives, interviews with USITC staff, Singapore, Jan. 17, 2005; Japan Economic Institute (JEI), "Japan's Aviation Industry: Deregulation Advances on Broad Front," May 26, 2000, found at Internet address *http://www.jei.org/*, retrieved Mar. 29, 2005; and International Airport Report, "European Controllers Protest Proposal to Revamp ATC," Vol. 10, Number 6, June 2002, found at *http://www.iaae.org/*, retrieved Mar. 29, 2005.

[63] Industry representatives, interviews with USITC staff, Hong Kong, China, Jan. 19, 2005; and industry representative, email correspondence with USITC staff, Jan. 26, 2005.

[64] Industry representatives, interviews with USITC staff, Hong Kong, China, Jan. 19, 2005

[65] Industry representatives, interviews with USITC staff, Beijing, China, Jan. 13, 2005; and industry representative, email correspondence with USITC staff, Jan. 26, 2005.

[66] GAO, "DOT Needs More Information to Address U.S. Airlines' Problems in Doing Business Abroad," Nov. 1994, p. 25; and statement to the USITC, Hearing transcript, Nov. 19, 2004, p. 16.

[67] GAO, "DOT Needs More Information," p. 4.

Box 3-3
Local Implementation of European Legislation

Industry representatives state that there are few traditional market access or national treatment barriers to trade in the European Union, particularly among the EU-15.[1] For example, U.S. service providers do not face joint venture requirements or foreign equity limitations. However, industry representatives report that some EU directives, meant to apply evenly throughout the EU, are implemented through separate regulations imposed by each member state. This may lead to markedly different outcomes in different countries, and U.S. firms note that these variations can impose significant costs on their business operations throughout the European Union.[2] EU-wide directives concerning noise pollution and customs administration are two examples of regulations that have direct bearing on the logistics industry.

Air cargo carriers, in particular, identified nighttime restrictions at some European airports as an impediment. In some instances, these restrictions prohibit large aircraft from taking off and landing during specified hours; in other instances, airlines are assessed additional landing fees for the nighttime operation of noisier aircraft.[3] Such limits directly impact air cargo carriers, which prefer night flights as a way to maximize delivery speed. General standards relating to aircraft noise are established by the International Civil Aviation Organization (ICAO). In 2001, ICAO introduced a new resolution which recommended four ways to reduce aircraft noise, including the adoption of new standards for aircraft engines, the use of noise abatement procedures, the implementation of land use policies that discourage residential development near airports, and the use of operational restrictions, such as night-flight bans.[3] In March 2002, the European Union established a new directive based on the ICAO standards to harmonize aircraft noise regulations across EU member-states.[4] However, industry representatives and other sources state that EU members have differed in their implementation of the directive, an issue that raises costs for airlines operating in the region, and changes competitive conditions for air cargo carriers with hubs in different EU member states.[5]

The variation in customs procedures between EU members also acts as a trade impediment to logistic services providers by increasing costs for firms transporting cargo.[6] Several EU member-states have developed their own rules for implementing EU-wide customs regulations, which has led to differences among members in the classification and valuation of goods; in procedures used for the entry and release of goods and for auditing entry statements after goods have been released into the stream of commerce; in penalties for violations of customs rules; and in record-keeping requirements. The issue has caused enough concern among U.S. firms that the United States has submitted a request under the WTO for consultations with the European Union.[7] One European industry group recommends several changes in EU customs policy to alleviate the problem, such as linking the computer systems of customs authorities across the EU, harmonizing inspection regulations, and approving a one-time recognition of shipping companies that would be valid across the European Union.[8]

---

[1] Industry representatives, interviews with USITC staff, Brussels, Belgium, Oct. 18, 2004.

[2] European Transport Forum, "UPS on Night Flight Restrictions," Oct. 22, 2003, found at *http://www.transport-forum.com/*, retrieved Nov. 5, 2004; and William Echikson and Victoria Knight, "Night-Cargo Roil Belgians," *The Wall Street Journal Europe*, p. A2, Oct. 20, 2004.

[3] ICAO, "Aviation and the Environment: Aircraft Noise," found at *http://www.icao.int/icao/en/env/noise.htm*, retrieved Oct. 27, 2004; and U.K. Civil Aviation Authority (CAA), Directorate of Airspace Policy, "Environmental Information Sheet–Number 12: Aircraft Noise," found at *http://www.caa.co.uk/*, retrieved Oct. 27, 2004.

[4] For the text of the directive, see *Official Journal of the European Communities*, "Directive 2002/30/EC of the European Parliament and the Council of 26 March 2002 on the Establishment of Rules and Procedures with Regard to the Introduction of Noise-Related Operating Restrictions at Community Airports," L 85/40, Mar. 28, 2002.

[5] "EU Censures Belgium Over Aircraft Noise," June 2, 2003, found at *http://www.rin.org.uk/*, retrieved Nov. 5, 2004; and industry representatives, interviews with USITC staff, Brussels, Belgium, Oct. 18, 2004.

[6] Industry representatives, interviews with USITC staff, Brussels, Belgium, Oct. 18, 2004.

[7] WTO, "European Communities – Selected Customs Matters: Request for Consultations by the United States," WT/DS315/1, G/L/694, Sept. 27, 2004.

[8] European Express Association, *Delivering a Competitive Europe: 2004 Policy Guide,* pp. 9-10.

Other domestic regulations: Foreign ownership and cabotage

Apart from regulations on airport usage, other domestic-level regulations pertain to the right of foreign entities to invest in domestic airlines, and of foreign carriers to provide cabotage, or domestic point-to-point service. With respect to foreign ownership, many countries have imposed limitations on the level of voting and non-voting stock that foreign entities can hold in domestic airlines.[68] These restrictions are set out in national laws and regulations and, among other things, are designed to ensure that a country maintains its own domestic air fleet for reasons of competition and national security.[69] Such restrictions are reinforced by provisions in bilateral air service agreements, which require that airlines designated in an agreement be "substantially owned" and "effectively controlled" by either the government of the signatory to the agreement or its citizens.[70]

Cabotage regulations restrict the supply of internal point-to-point transport service to domestic carriers. Like foreign ownership restrictions, cabotage restrictions are set out in national laws and regulations, and addressed in international air transport agreements. Currently, few bilateral air service agreements grant a right to an airline to provide cabotage services within a foreign country.[71]

As noted in the following chapters, some countries have lifted restrictions on foreign investment in domestic airlines. Australia now permits 49-percent foreign ownership of the country's international airlines, and allows non-Australian entities to establish 100-percent foreign-owned airlines that provide domestic air service.[72] India has raised the level of permissible foreign investment in its domestic airlines from 40 percent to 49 percent.[73] In an effort to raise capital for its aviation industry, China has recently listed its national airline, Air China, on the public stock exchange, though the airline remains under government control.[74]

---

[68] Australia, Canada, some EU members, and New Zealand are examples of countries that have foreign ownership restrictions on national airlines. Brian Hindley, *Trade Liberalization in Aviation Services: Can the Doha Round Free Flight?* p. 7.

[69] "Bilateral Agreements and the Seven Freedoms of International Air Service," found at *http://www.tech.purdue.edu/*, retrieved Oct. 28, 2004.

[70] OECD "Liberalization of Air Cargo Transport," paper presented at the Worldwide Air Transport Conference in Montreal, Canada, Mar. 24-29, 2003, found at *http://www.icao.org/*, retrieved Nov. 8, 2004.

[71] The ability of an airline to provide domestic point-to-point service in a foreign country without the flight originating from or terminating in its country of registration is sometimes referred to as "pure" cabotage. "Freedom Rights," found at *http://ostpxweb.dot.gov/aviation/Data/freedoms.htm/*, retrieved Dec. 7, 2004.

[72] Joan M. Feldman, "Drip, Drip, Drip," *Air Transport World*, Mar. 1, 2001, p. 42.

[73] IBA Newswatch, "India's Government May Review Bar on Foreign Airline Investment," Nov. 5, 2004, p. 2.

[74] Doron Levin, "China Acts to Ensure Budding Air China Stays Fit," Oct. 7, 2004, found at *http://www.bloomberg.com/*, retrieved Nov. 4, 2004.

Maritime

Cabotage and cargo reservation laws

Most countries impose cabotage restrictions which limit the provision of domestic point-to-point transport service[75] to ships registered under their respective national flags.[76] In many cases, a national-flag vessel must be staffed and owned primarily by citizens of the country in which it is registered. Cabotage restrictions, along with accompanying employment and ownership requirements, are often part of domestic shipping laws and regulations.[77] Some countries allow foreign carriers to provide point-to-point services, but impose various restrictions, including licensing requirements, on foreign-flag suppliers. Thus, such suppliers must meet two sets of requirements-- those of their country of registry and those in the countries in which they are providing services. For example, both Norway and Panama, which allow foreign ships providing intra-country point-to-point services, require such ships to be licensed by designated government agencies.[78]

Maritime firms operating in foreign markets may also be subject to cargo reservation laws, which require that a portion of a country's international cargo be transported on national-flag vessels.[79] In many cases, cargo reservation laws apply only to government-owned or military cargo, although some countries reserve a portion of other domestically-generated cargo for national carriers. For instance, Indonesia requires that all non-commercial cargo be carried by government-owned shipping lines.[80] Korea requires that cargoes exempt from customs duties and value-added taxes be transported on ships registered under the Korean flag.[81] Portuguese regulations limit shipments of liquid fuels to Portuguese-flag vessels or vessels registered with another member of the European Union or the OECD.[82] Cargo reservation laws that artificially limit shipping capacity in certain markets are believed to increase the costs of maritime transport to shippers.[83]

---

[75] In maritime transport, domestic point-to-point service generally refers to conveyance between two coastal ports.

[76] According to a survey conducted by the U.S. Maritime Administration, 40 countries maintain cabotage limitations that reserve domestic point-to-point service to national-flag vessels, while an additional seven countries restrict but do not prohibit the provision of cabotage services by foreign-flag vessels. USDOT, Maritime Administration, "By the Capes Around the World: A Summary of World Cabotage Practices," found at *http://www.marad.dot.gov/publications/PDF/By%20the%20Capes.pdf/*, retrieved Nov. 16, 2004.

[77] Ibid.

[78] USDOT, Maritime Administration, *Maritime Subsidies*, Sept. 1993, pp. 116 and 121.

[79] Carsten Fink, Aaditya Mattoo, and Ileana Cristina Neagu, "Trade in International Maritime Services: How Much Does Policy Matter?" *World Bank Economic Review*, Vol. 16 No. 1, 81-108, 2002, p. 7.

[80] Christopher Findlay and Tony Warren (eds.), *Impediments to Trade in Services: Measurement and Policy Implications* (London: Routledge Foundation), p. 183.

[81] Ibid, p. 96.

[82] Ibid, p. 132.

[83] Carsten Fink, Aaditya Mattoo, and Ileana Cristina Neagu, "Trade in International Maritime Services: How Much Does Policy Matter?," p. 7.

Port-related services

Governments typically regulate and may also stipulate who may provide maritime auxiliary services. The ability of foreign maritime firms to gain adequate access to government-owned port facilities, or to provide their own or third-party port-related services,[84] is also subject to domestic regulation. In many countries, ports are owned and operated by a government agency, such as a port authority.[85] In some cases, the agency will permit private-sector firms to provide maritime auxiliary services, such as cargo-handling, storage and warehousing, and container station and depot services. In other cases, the agency will provide all such services itself or designate one or more private-sector firms to provide all port-related services. For example, in Vietnam port services are provided exclusively by Vietnamese enterprises.[86] In Mexico and Panama, private-sector firms have been granted a monopoly on the supply of cargo-handling and storage and warehousing services in exchange for financial investment in port infrastructure.[87]

In other countries, foreign maritime firms are allowed to provide port-related services, but are subject to regulatory requirements that impose foreign equity, nationality, or licensing restrictions. For instance, Thailand requires foreign entities engaged in port operations to comply with foreign equity and nationality requirements included in the Foreign Business Act and the Thai Civil and Commercial Code, respectively.[88] Korea maintains licensing requirements with respect to the establishment of branch offices by foreign shipping firms, limiting their ability to sell and market port-related services to local customers, though recent changes in legislation have simplified relevant licensing procedures.[89] In Australia, suppliers of towage, pilotage and other auxiliary services are required to receive licenses from the government-owned port authority.[90]

Road Transportation

Road transport is a critical part of the supply chain, particularly in countries that cannot effectively be served by maritime or rail transport. Regulatory impediments, such as limitations on fleet size, equipment usage, and hours of operation, hinder road transport

---

[84] The discussion of port-related services in this section includes all services conducted by maritime transport firms in and around port facilities.

[85] The management of ports is structured in one of three ways. Under landlord ports, the physical infrastructure of a port is owned and managed by a government-controlled port authority, and private firms are permitted to supply port and maritime auxiliary services. Under a tool port, port infrastructure is also owned by a public-sector port authority, but private firms are permitted to lease and operate port assets. Finally, under service ports, the government authority both operates port infrastructure and provides maritime auxiliary services. Carsten Fink, Aaditya Mattoo, and Ileana Cristina Neagu, "Trade in International Maritime Services: How Much Does Policy Matter?," p. 11.

[86] See text of Decree No. 10/2001/ND-CP of March 19, 2001, found at *http://www.csg.com.vn/html/re_no_10_2001.htm/*, retrieved Nov. 18, 2004.

[87] WTO, "Maritime Transport Services: Background Note by the Secretariat," S/CSS/W/106, Oct. 4, 2001, found at *http://www.wto.org/*, retrieved Nov. 15, 2004.

[88] APEC Individual Action Plans (IAPs), "Thailand, 2002," found at *http://www.apec-iap.org/*, retrieved Oct. 28, 2004.

[89] Korean Ministry of Maritime Affairs and Fisheries, found at *http://www.momaf.go.kr/eng/ship/industr/d_indust.asp/*, retrieved Oct. 28, 2004.

[90] APEC IAPs, "Australia, 2000," found at *http://www.apec-iap.org/*, retrieved Oct. 28, 2004.

firms' ability to offer seamless, on-time service. For instance, in Japan, foreign and domestic trucking firms are prohibited from operating fleets comprising fewer than five vehicles per district.[91] In Mexico, foreign road transport firms are permitted to operate vans, but not tractor-trailers, for the carriage of freight in urban areas.[92] Finally, France and Germany prohibit large commercial trucks from operating on domestic highways during certain days of the week. The European Commission is considering extending such restrictions to other EU member-states.[93]

Though not addressable through trade negotiations, at least one 3PL expressed concern that antiquated road infrastructure in some countries may impede logistics operations.[94] For example, in Latin America, less than 20 percent of roads are paved, and this proportion is only 10 percent in Brazil, the largest market in the region.[95] In Poland, expressways span only 358 km, and in certain Central and Eastern European countries, roads are not designed to accommodate heavy trucks.[96] Inadequate road infrastructure has been identified as an impediment to continued economic growth in China. The Chinese Government plans to invest $120 billion to build 200,000 km of new highways in the near future.[97]

Rail Transportation

Rail transport is generally used to move large quantities of low cost bulk items either to complement or supplement another mode of transport. Railroad companies are often monopolies that service domestic markets, seldom operating internationally. Nevertheless, rail services are often utilized by 3PLs to move goods inexpensively within countries, and impediments to rail services may adversely impact their ability to do so.[98] For example, in the European Union, shippers are unable to provide uninterrupted cross-border rail transport services between some EU members, because passenger transport has priority over cargo transport, requiring that firms find alternative methods of conveying goods to customers.[99] In addition, rail track gauges in Spain and Portugal are not harmonized across national borders.[100] In China, few shippers use rail

---

[91] Ministry of Foreign Affairs (MOFA), "Revision of Japan's Deregulation Action Program," May 17, 2003, found at *http://www.mofa.go.jp/*, retrieved Oct. 18, 2004.

[92] UPS Supply Chain Solutions, statement to the USITC, hearing transcript, Nov. 19, 2004, p. 19.

[93] "Germany Opposes EU-Wide Rules for Heavy Trucks," *Deutsche Welle*, found at *http://www.deutsche-welle.de*/, retrieved Oct. 18, 2004.

[94] Brad Fitzgerald, UPS SCS, statement to the USITC, hearing transcript, Nov. 19, 2004, p. 19.

[95] Cesar Calderon and Luis Serven, "Trends in Infrastructure in Latin America, 1980-2001, p. 22.

[96] Transport Intelligence, Ltd., "Central and Eastern Europe Logistics Report," 2004, pp. 14-17.

[97] USDA, FAS, GAIN Report, "People's Republic of China, Market Development Reports, China Logistics Profile, 2003," Dec. 18, 2003, found at *http://www.fas.usda.gov/gainfiles*/, retrieved Dec. 1, 2004.

[98] Brad Fitzgerald, UPS SCS, statement to the USITC, hearing transcript, Nov. 19, 2004, pp. 16-17.

[99] Thomas James Cullen, "Europe's Special Logistics Barriers," *Automotive News Europe*, May 19, 2003, Vol. 8, Issue 10.

[100] Ibid.

transport, citing lack of capacity and high prices due to limited competition.[101] It is estimated that China cannot satisfy two-thirds of the demand for cargo capacity on its rail system. As a result, the Chinese Government plans to build an additional 30,000 km of rail lines by 2020, bringing the total length of rail lines in China to 100,000 km.[102] China has expressed interest in attracting foreign investment to help develop its rail sector, but foreign firms have not shown interest, likely due to the system's monopoly status.[103]

[101] The rail system in China is a government monopoly and priority is given to the transport of passengers, agricultural products, and coal. Industry representatives, interviews with USITC staff, Beijing, China, Jan. 10 and 12, 2005; and Hong Kong, China, Jan. 19, 2005.

[102] Government representative, interview with USITC staff, Beijing, China, Jan. 10, 2005.

[103] Government and industry representatives, interviews with USITC staff Beijing, China, Jan. 10, 2005.

CHAPTER 4
LIBERALIZATION INITIATIVES

Introduction

As discussed in previous chapters, logistic services firms are affected by a broad range of trade impediments of varying magnitudes. Some industry representatives have identified, in particular, the need to address customs facilitation, generally, and joint venture requirements in specific countries such as China and Thailand, through multilateral or bilateral trade negotiations.[1] Transportation-related impediments, which affect the end-to-end provision of logistic services, stem in part from safety and security concerns and the quasi-public nature of certain supporting infrastructure. For these and other reasons, transportation networks in many countries have traditionally been controlled by state- or privately-owned monopolies, limiting private logistic firms' abilities to operate transportation networks. For asset-based logistic firms, monopoly transportation networks clearly limit their ability to operate their own transport networks. For non-asset-based logistic firms, monopoly provision of transport services results in fewer service choices and the absence of competitive pressure on prices. By comparison, there has been greater competition in other logistic-related services, such as transportation management and supply chain consulting services, which are less strictly regulated and have commonly been provided by the private sector.

In recent years, logistic service firms have benefitted from liberalization of transportation markets on a unilateral basis, as many countries have liberalized and/or privatized their transport sectors in an effort to reduce transport costs and increase economic growth. Additional liberalization initiatives have taken place on a bilateral and multilateral basis through international trade agreements, including the General Agreement on Trade in Services (GATS), part of the 1995 WTO agreements; the General Agreement on Tariffs and Trade (GATT); bilateral free trade agreements (FTAs); and other bilateral and multilateral arrangements. This chapter examines various means by which logistic service impediments have been, or could potentially be, removed.

Unilateral Liberalization and Privatization Initiatives

Unilateral liberalization and/or privatization has taken place in virtually all segments of the transportation industry, driven by changes in regulatory philosophy; dissatisfaction with the level of service provided by government-owned and/or monopoly transport providers; and efforts by governments to reduce their budget expenditures or fund

[1] Industry representatives, interviews with USITC staff, Brussels, Belgium, Oct. 19, 2004; Singapore, Jan. 17-20, 2005; Beijing, China, Jan. 13, 2005; and Guangzhou, China, Jan. 14, 2005.

infrastructure improvements.[2] According to a database compiled by the World Bank,[3] private investors participated in 662 transport infrastructure projects in developing countries, which accounted for $135.3 billion in foreign and domestic investment during 1990-2001.[4] The annual investment level peaked at $22.4 billion in 1997, then steadily declined to $4.5 billion in 2003.[5] These transactions were most prevalent in Latin America, followed by East Asia. During the period, five countries received 68 percent of the total private investment in transport projects.[6] Financial arrangements for the transactions varied widely. In some cases, governments sold 100 percent of a firm's equity outright, directly to private investors. In some cases, a share of equity was sold to private investors, which generally included a transfer of management control to the new investors. In other cases, governments retained legal ownership of a company, but concluded a long-term concession agreement with private investors, under which the investors assumed operational control of the company for a specified period, generally 20-30 years, in return for the profits accruing during the contract period.

Among developed countries, New Zealand privatized several ports, beginning with Tauranga, New Zealand's largest, in 1990.[7] In Australia, at least 8 port companies have been privatized since 1996, including the ports of Portland in Victoria, and Adelaide in South Australia. Several of the resulting lease agreements involve non-Australian port companies.[8] Privatized ports in both countries have reduced user charges, and are expected to redefine some areas of operations by outsourcing more functions and developing value-added services to attract users.[9] Forty-one developing countries permitted some form of private participation in the port sector during 1990-2001.[10] In Argentina, ports underwent an extensive privatization process beginning in 1992, which involved liberalizing port services, permitting foreign ships access to the cabotage market, and permitting the private sector to operate port terminals and to build entirely

---

[2] Antonio Estache, "Privatization and Regulation of Transport Infrastructure in the 1990s: Successes ... and Bugs to Fix for the Next Millenium," World Bank Working Paper No. 2248, Nov. 1, 2004, found at *http://econ.worldbank.org/files/17916_Regulations.pdf*, retrieved Nov. 24, 2004.

[3] World Bank, Private Participation in Infrastructure Project Database, found at *http://ppi.worldbank.org/*, retrieved Mar. 7, 2005 (includes divestitures, concessions contracts, operation and maintenance contracts, and investment commitments in developing and transition economies; does not include information related to developed countries).

[4] World Bank, Public-Private Infrastructure Advisory Facility, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001*, p. 126, found at *http://ppi.worldbank.org/book*, retrieved Mar. 7, 2005.

[5] Ada Karine Izaguirre, "Private Infrastructure," World Bank Research Note No. 274, found at *http://rru.worldbank.org/Documents/274izaguirre.pdf*, retrieved Mar. 7, 2005.

[6] The countries are Argentina, Brazil, China, Malaysia, and Mexico. World Bank, Public-Private Infrastructure Advisory Facility, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001*, p. 126, found at *http://ppi.worldbank.org/book*, retrieved Mar. 7, 2005.

[7] USDOC, United States and Foreign Commercial Services (US&FCS), "Australia: Ports and Harbors," Sept. 8, 2003, found at *http://www.stat-usa.gov/*, retrieved Nov. 10, 2004.

[8] Ibid.

[9] Ibid.

[10] World Bank, Public-Private Infrastructure Advisory Facility, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001*, p. 129, found at *http://ppi.worldbank.org/book*, retrieved Mar. 7, 2005.

new ports.[11] In the port of Buenos Aires, foreign port operators were awarded 3 of the 6 terminals for which operational control was turned over to the private sector.[12] As a further example, privatization of port facilities is just beginning in China, but is expected to increase as the terms of China's WTO accession agreement are implemented.[13] The Port of Dalian has set up a joint venture with several foreign partners, which is actively working to upgrade container facilities, and to develop, manage and operate three new terminals in the port's container area. U.S.-based CSX World Terminals[14] (formerly Sealand Corp.) also has large joint ventures in ports in Shanghai, Tianjin, and Xiamen.[15]

Several state-owned shipping lines were privatized during the 1990s, including Australian National Lines, Compagnie Generale Maritime of France, and Czech Ocean Shipping Joint Stock Company. The World Bank has also encouraged several developing countries to privatize or close their state-owned shipping lines, as part of a general move away from state-owned enterprises (SOEs).[16] Several cross-border acquisitions of shipping lines illustrate countries' increased willingness to permit foreign shippers into their markets.[17] Countries have also begun to liberalize the maritime cargo reservation system, under which certain cargo is reserved for national flag carriers. New Zealand liberalized its cabotage trade in 1994.[18] Between 1979 and 1998, Chile, Cote d'Ivoire, Indonesia, Korea, Peru, Senegal, and Thailand all abolished or greatly limited their cargo reservation regulations.[19]

Road transport systems in several countries have also experienced various levels of deregulation and privatization. The United States represented the beginning of the trend, removing restrictions on licensing and freight rates following the Motor Carriers Act of 1980. In the European Union, price deregulation was implemented in 1990, and liberalization of cabotage was completed in 1998. The World Bank has also encouraged many developing countries to privatize their road transport systems.[20] During 1990-2001, 28 developing countries introduced some form of private investment in toll roads,

---

[11] Antonio Estache et. al., "Argentina's Transport Privatization and Re-Regulation: Ups and Downs of a Daring Decade-Long Experience," World Bank Working Paper No. 2249, Nov. 1, 1999, pp. 3-5, found at *http://econ.worldbank.org/working_papers/984/*, retrieved Nov. 24, 2004.

[12] Carsten Fink et. al., "Trade in International Maritime Services: How Much Does Policy Matter?" *The World Bank Economic Review*, Vol 16, No. 1 (2002), p. 90.

[13] USDOC, US&FCS, "China: Port Handling Equipment," Feb. 2, 2001, found at *http://www.stat-usa.gov/*, retrieved Nov. 10, 2004.

[14] DPI Terminals (Dubai) purchased CSX Terminals in February 2005. DPI Terminals, found at Internet address *http://dpiterminlas.com*/, retrieved Mar. 31, 2005.

[15] USDOC, US&FCS, "China: Port Handling Equipment," Feb. 2, 2001, found at *http://www.stat-usa.gov/*, retrieved Nov. 10, 2004.

[16] WTO, "Maritime Transport Services: Background Note by the Secretariat," S/C/W/62, Nov. 16, 1998.

[17] Neptune Orient Lines of Singapore acquired American President Lines (APL) of the United States, Han Jin of Korea acquired DSR-Senator Linie of Germany, and P&O of the United Kingdom merged with Nedlloyd of the Netherlands. WTO, "Maritime Transport Services: Background Note by the Secretariat," S/C/W/62, Nov. 16, 1998.

[18] WTO, "Maritime Transport Services: Background Note by the Secretariat," S/C/W/62, Nov. 16, 1998.

[19] Carsten Fink et. al., "Trade in International Maritime Services: How Much Does Policy Matter?," *The World Bank Economic Review*, Vol 16, No. 1 (2002), p. 85.

[20] WTO, "Land Transport Services: Part I - Generalities and Road Transport," S/C/W/60, Oct. 28, 1998.

for a total of 327 projects.[21] In Argentina, for instance, a comprehensive program of privatization through toll roads began in 1989,[22] China and Brazil attracted large investments in road transport during 1996-98, and South Korea followed the same path beginning in 2001.[23]

More than 30 percent of railway services worldwide were operated by private sector firms in 2001,[24] with 27 developing countries recording new private investment in the rail sector during 1990-2001.[25] The United Kingdom has gone farthest in privatizing its rail sector, by separating the infrastructure and the rolling stock into separate companies and privatizing both.[26] During 1989-92, Argentina unbundled its national railway services into separate companies for local commuter rail, freight services, and intercity passengers. The freight service was split into 6 sub-networks, each of which was transferred to private sector control through long-term concession contracts, while the state retained ownership of facilities and rolling stock.[27] Several developing countries, encouraged by the World Bank, have completely privatized their rail transport networks, or have partially privatized through the granting of long-term concessions.[28] Recently,

---

[21] World Bank, Public-Private Infrastructure Advisory Facility, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001,* p. 130, found at *http://ppi.worldbank.org/book,* retrieved Mar. 7, 2005.

[22] Antonio Estache et. al., "Argentina's Transport Privatization and Re-Regulation: Ups and Downs of a Daring Decade-Long Experience," World Bank Working Paper No. 2249, Nov. 1, 1999, p. 15, found at *http://econ.worldbank.org/working_papers/984/,* retrieved Nov. 24, 2004.

[23] World Bank, Public-Private Infrastructure Advisory Facility, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001,* p. 130, found at *http://ppi.worldbank.org/book,* retrieved Mar. 7, 2005.

[24] Includes both passenger and freight services, measured by total kilometers and by passengers per kilometer. Antonio Estache, "Privatization and Regulation of Transport Infrastructure in th 1990s," *The World Bank Research Observer,* vol. 16, No. 1 (Spring 2001), p. 89.

[25] World Bank, Public-Private Infrastructure Advisory Facility, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001,* p. 128, found at *http://ppi.worldbank.org/book,* retrieved Mar. 7, 2005.

[26] WTO, "Land Transport Services: Part II - Rail Transport Services," S/C/W/61, Oct. 28, 1998.

[27] Antonio Estache et. al., "Argentina's Transport Privatization and Re-Regulation: Ups and Downs of a Daring Decade-Long Experience," World Bank Working Paper No. 2249, Nov. 1, 1999, pp. 7-8, found at *http://econ.worldbank.org/working_papers/984/,* retrieved Nov. 24, 2004.

[28] WTO, "Land Transport Services: Part II - Rail Transport Services," S/C/W/61, Oct. 28, 1998.

for example, Kenya,[29] Tanzania,[30] Uganda,[31] and Zambia[32] have all accepted bids for private investors to undertake long-term railway concessions, under which a private firm will retain management control of the system, generally for a 25-year contract term. Foreign investors may now hold up to 49 percent equity in China's railroads. China hopes to use foreign investment to cover some of the Ministry of Railroads' upcoming development needs.[33] In most countries, however, the rail network remains a monopoly.[34]

The air transport system has also seen extensive privatization and the introduction of greater competition during the last several decades, following deregulation of the U.S. air transport sector in 1978.[35] As of 1998, more than 70 percent of airlines worldwide were majority-owned by private investors, with at least 30 additional airlines scheduled to be privatized.[36] Tanzania, for example, sold a 49-percent equity stake in Air Tanzania to South African Airways in 2002.[37] More recently, China has begun to liberalize its air transport sector. The United States and China concluded a new bilateral air agreement in June 2004, under which each country will permit 5 new airlines to operate in its market over the next 6 years. The agreement will also permit U.S. cargo airlines to establish hubs in China for the first time. Industry representatives expect to see further reforms in the coming years.[38]

Privatization is less pronounced in the area of transportation management services, largely because these areas have not traditionally been controlled by government monopolies in most countries. However, there are some changes taking place in countries where restrictions have existed. For example, Swissport, a global ground-

---

[29] The concession contract had not been awarded as of October 2004. Republic of Kenya and Republic of Uganda, "Joint Concession of Kenya-Uganda Railways: Announcement of Prequalified Applicants," found at *http://www.perds.go.ug/pdfs/news_adverts/URC_KRC_prequalification_announcement.pdf*, retrieved Mar. 11, 2005.

[30] The concession contract is scheduled to be awarded in June 2005. Tanzania Railways Corporation, found at *http://www.psrctz.com/Utilities%20&20Major%20Transactions/trc.htm*, retrieved Mar. 11, 2005.

[31] Ibid.

[32] The concession contract was completed in 2001. Zambia Privatisation Agency, "Invitation for Bids: Concessioning of the Operations and Assets of Zambia Railways Limited," 2001, found at *http://www.apz.org.am/zrailway.htm*, retrieved Mar. 11, 2005.

[33] US&FCS, "Railroad Development," Nov. 17, 2001, found at *http://www.stat-usa.gov/mrd.nsf/*, retrieved Nov. 10, 2004; and industry representatives, interviews with USITC staff, Beijing, China, Jan. 10, 2005.

[34] WTO, "Land Transport Services: Part II - Rail Transport Services," S/C/W/61, Oct. 28, 1998.

[35] Antonio Estache, "Privatization and Regulation of Transport Infrastructure in the 1990s: Successes ... and Bugs to Fix for the Next Millenium," World Bank Working Paper No. 2248, Nov. 1, 1999, found at *http://econ.worldbank.org/files/17916_Regulations.pdf*, retrieved Nov. 24, 2004.

[36] WTO, "Air Transport Services," S/C/W/59, Nov. 5, 1998.

[37] International Finance Corporation, "IFC Helps to Privatize Tanzania's National Airline," Press Release, Oct. 16, 2002, found at *http://ifcln001.worldbank.org/ifcext/pressroom/ifcpressroom.nsf/PressRelease?openform&8321AA4CE29AECD785256C540048AA9C*, retrieved Mar. 11, 2005.

[38] Philip Damas, "Slow Deregulation For Air Cargo," *American Shipper*, Nov. 2004, p. 68-72.

handling company with operations in 34 countries, recently received a license to provide ground handling services in Singapore beginning in 2005.[39] Prior to this action, ground handling services have been exclusively provided by two companies: Singapore Airport Terminal Services (SATS), a subsidiary of Singapore Airlines, provided 85 percent of the ground handling services in 2004 and Changi International Airport Services (CIAS), a consortium of 6 international airlines, provided the remainder.[40] In addition, as of January 2005, the Singapore Government was considering a request from one cargo airline to perform its own ground handling services.[41] In direct response to the increased competition from Swissport, SATS announced a cost savings plan in 2004 under which more than 1,000 employees were laid off and replaced with an outside contractor.[42] Liberalization in transportation management services is also taking place in Russia. In 2003, four Russian companies that provide transportation management services were partially privatized: Sudokomplekt offers cargo handling, warehousing, and transportation services; Transcontainer is a cargo transportation firm; Sudoimport External Economic Company provides intermediary, marketing and sublease services; and Rosnefteproduct provides transport and storage services for the petroleum industry.[43]

Services Trade Negotiations Related to Logistics

Current GATS Negotiations

In addition to unilateral liberalization, logistic services firms may also benefit from liberalization through trade agreements. In the WTO, the current round of services negotiations began in early 2000, and was incorporated into the broader Doha Round of negotiations in November 2001. The negotiations are intended to elicit more meaningful commitments from WTO members, both in terms of the number and quality of

[39] As of February 2005, Swissport had not yet begun operations in Singapore. Singapore Government representatives, interview with USITC staff, Singapore, Jan. 20, 2005; "The Swissport Profile," found at *http://www.swissport.com/news/profile.shtml*, retrieved Jan. 26, 2005; and "Changi Airport Singapore," Promotional Brochure, produced by the Civil Aviation Authority of Singapore.

[40] USDOC, US&FCS, "Logistic Services: Singapore," found at *http://www.stat-usa.gov/*, retrieved Oct. 1, 2004.

[41] Singapore Government representative, interview with USITC staff, Singapore, Jan. 20, 2005.

[42] "SATS Restructures Workforce to Gear Up For Competition," Press Release, Sept. 22, 2004, found at *http://www.sats.com.sg/sats/newlook1/documents/MediaRElease22092004.htm*, retrieved Jan. 25, 2005.

[43] The equity stake offered in Sudokomplekt was 50.01 percent; in Transcontainer, 20.04 percent; in Sudoimport, 49.0 percent; in Rosnefteproduct, 14.45 percent. Multilateral Investment Guarantee Agency (MIGA), Investment Promotion Network, found at *www.ipanet.net/documents/WorldBank/databases/plink*, retrieved Nov. 8, 2004 and Mar. 11, 2005.

commitments.[44] Services negotiations take place through a "request-offer" process. Beginning in 2000, WTO members submitted negotiating proposals related to a wide variety of service sectors, including transport services[45] and two proposals specific to logistic services.[46] These were addressed to all WTO members, and were designed to encourage countries to consider new commitments for particular industries.[47]

How GATS Applies to Logistics Services

The GATS, which entered into force on January 1, 1995 as part of the Agreement Establishing the WTO,[48] is the first multilateral, legally enforceable agreement covering trade and investment in services. The GATS comprises a framework of general obligations, schedules of commitments, annexes, and ministerial decisions.

---

[44] See WTO, "An Introduction to the GATS," *WTO Secretariat,* Oct. 1999. The Uruguay Round of trade negotiations, which concluded in 1994 with the establishment of the WTO and the GATS, was generally seen as the first step toward services liberalization. Successive negotiating rounds, as prescribed by GATS Article XIX, are intended to further open services markets worldwide. Article XIX states that "Members shall enter into successive rounds of negotiations, beginning not later than five years from the date of entry into force of the WTO Agreement, and periodically thereafter, with a view to achieving a progressively higher level of liberalization."

[45] WTO, "Joint Statement From The European Communities and their Member States; Hong Kong, China; Japan; Republic of Korea; Norway and Singapore: The Negotiations on Maritime Transport Services," S/CSS/W/8, June 10, 2000; WTO, "Communication from the European Communities and their Member States - GATS 2000: Transport Services," S/CSS/W/41, Dec. 22, 2000; WTO, Communication from Switzerland - GATS 2000: Services Auxiliary to All Modes of Transport," S/CSS/W/78, Apr. 5, 2001; WTO, "Communication from the Republic of Korea - Negotiating Proposal for Maritime Transport Services," S/CSS/W/87, May 11, 2001; WTO, Communication from New Zealand - Negotiating Proposal for Maritime Transport Services," S/CSS/W/92, June 26, 2001; WTO, "Communication from Australia - Negotiating Proposal for Maritime Transport Services," S/CSS/W/111, Oct. 1, 2001; WTO, Maritime Transport Services - Background Note by the Secretariat," S/CSS/W/106, Oct. 4, 2001; "Communication from Colombia - Air Transport Services," S/CSS/W/124, Nov. 27, 2001; WTO, Communication from Colombia - Maritime Transport Services," S/CSS/W/123, Nov. 27, 2001; and WTO, "Communication from Australia; Canada; Chile; the People's Republic of China; Croatia; Cyprus; Czech Republic; Dominican Republic; Estonia; the European Communities and Their Member States; Gambia; Georgia; Guatemala; Hong Kong, China; Iceland; India; Japan; the Republic of Korea; Kyrgyz Republic; Latvia; Lithuania; Malaysia; Malta; Mexico; New Zealand; Nigeria; Norway; Pakistan; Panama; Papua New Guinea; Peru; Poland; Romania; Singapore; Slovenia; Switzerland; and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu: Joint Statement on the Negotiations on Maritime Transport Services," TN/S/W/11, Mar. 3, 2003.

[46] WTO, "Logistics and Related Services: Communication from Hong Kong, China," S/CSS/W/68, Mar. 28, 2001; and WTO, "Logistics Services: Communication from Australia; Hong Kong, China; Liechtenstein; Mauritius; New Zealand; Nicaragua; Switzerland; and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu," TN/S/W/20, June 25, 2004.

[47] Ibid.

[48] The Agreement provides for establishment of the WTO and sets forth the scope and functions of the WTO. The GATS and other agreements negotiated during the Uruguay Round of trade negotiations are set forth as annexes to the Agreement Establishing the WTO.

The framework includes rules that cover, in most cases, all service sectors,[49] while the schedules of commitments specify, for each country, whether and to what extent foreign firms will be accorded market access and national treatment in specific service sectors. Scheduled commitments provide useful benchmarks by which observers can gauge the degree of liberalization achieved through negotiation. They also discourage countries from imposing further trade restrictions or making existing restrictions more burdensome.[50]

The GATS schedules follow a "positive list" methodology, under which countries choose the service sectors for which they will make commitments. When scheduling GATS commitments, WTO members generally use as a guide the Services Sectoral Classification List (W/120),[51] a document based on the U.N. Provisional Central Product Classification (CPC) system that attempts to present the universe of service-sector industries.[52] Many countries include the CPC reference numbers in their GATS schedules as a way to define the sectoral coverage of the commitments. However, the Provisional CPC and the W/120 were created in 1989 and 1991, respectively, and do not reflect service industries, such as logistics, that have emerged or evolved since that time. For this reason, a number of countries, including the United States, have chosen to not directly reference the CPC or the W/120 in their GATS schedules, relying instead on other, often private sector, definitions of each service.

Existing GATS Commitments on Logistics

In part as a result of some countries' reliance on the CPC codes and in part as a result of the positive-list approach, logistics-related impediments have not been separately addressed in the GATS schedules. Tier 1 and tier 2 services, identified in chapter 1, garner relatively few GATS commitments from members. The greatest number of full and partial commitments[53] were scheduled for management consulting services, which

[49] Under the GATS, general obligations on domestic regulation and on monopolies and exclusive suppliers apply only when a country has made specific commitment in its national schedule.

[50] Countries that restrict market access or national treatment beyond the degree specified in their schedule of commitments are required to compensate aggrieved parties.

[51] WTO, MTN.GNS/W/120, July 10, 1991.

[52] The Provisional Central Product Classification System (CPC), produced by the United Nations Statistical Division in 1989, is a classification of goods and services that provides a framework for collection and international comparison of statistics. The classification has been revised several times, but the GATS schedules continue to use the provisional version of the CPC, rather than change the existing schedules. For additional information, see the website of the U.N. Statistical Division, found at *http://unstats.un.org/unsd/cr/family2.asp?Cl=9*, retrieved Jan. 10, 2005.

[53] If a WTO member schedules full commitments pertaining to an industry, it grants foreign firms full market access and national treatment, equivalent to the treatment of its domestic firms. Partial commitments accord market access and national treatment subject to conditions specified in the commitments.

is used here as a proxy for supply chain consulting services (figure 4-1). Of the 49 GATS signatories that are examined in this report,[54] 40 countries have made management consulting commitments. Sixty-nine percent of the possible schedule entries made by the 49 countries on management consulting services represent full or partial commitments, as detailed in figure 4-1. In the figure, the ratio of full commitments to potential commitments is expressed along the vertical axis, showing how liberal or illiberal markets are. The ratio of full and partial commitments to potential commitments is expressed along the horizontal axis, reflecting the extent to which countries have established benchmarks and enhanced regulatory transparency. In addition to management consulting, 31 countries scheduled commitments on three transportation management service segments. Full or partial commitments occupied 43 percent of potential schedule entries for freight transport agency services; 38 percent for other auxiliary transport services; and 29 percent for storage and warehousing services.

Most countries chose not to make extensive GATS commitments for freight transportation services. The largest share of commitments in the transport sector focuses on road freight transport (figure 4-1), primarily trucking services. Full and partial commitments accounted for 33 percent of all possible schedule entries pertaining to road freight transport services. Air transportation is not addressed by the GATS, except for three related subsectors,[55] which are not closely linked to the provision of logistic services. Multilateral negotiations on maritime transport services were suspended without agreement in 1996,[56] so few countries made commitments in this area. Of the 49 WTO members included in the sample, only New Zealand and Iceland made full logistic service-related commitments across the range of potential schedule entries, and only for rail and road transportation.[57]

---

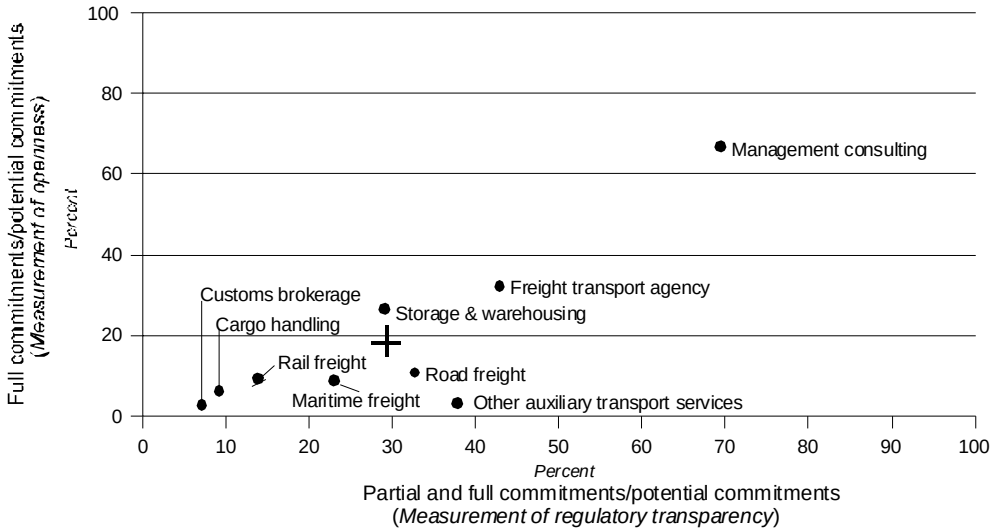
[54] As reported in chapter 1, the survey developed for this report examines gathered information on logistic services markets in 52 countries, which were chosen based on their importance to the United States as a trading partner. Of the 52 countries, 49 are current WTO members. As of February 2005, Russia, Ukraine, and Vietnam were all in the process of negotiating accession to the WTO.

[55] Maintenance and repair of aircraft, sales and marketing, and computer reservation services.

[56] WTO, "Uruguay Round and Post-Uruguay Round Negotiations in Maritime Transport Services," found at *http://www.wto.org/english/tratop_e/serv_e/transport_e/transport_maritime_urneg_e.htm*, retrieved Dec. 7, 2004.

[57] New Zealand made full commitments for road and rail transport, excluding transport of mail. Iceland made full commitments for road transport, but did not schedule commitments for rail transport. A few countries made full market access and national treatment commitments for specific aspects of maritime freight transport, rather than for the entire category, which are reflected in figure 4-1.

Figure 4-1
Shares of total possible schedule entries[1] under the General Agreement on Trade in Services (GATS), by industry



[1] Countries include the 49 WTO members that were the subject of the Commision survey.

Notes:–The average, indicated by criss-crossed lines, is 18 percent for full commitments and 29 percent for partial and full commitments. Air transportation is not addressed by the GATS, except for three related subsectors (maintenance and repair of aircraft, sales and marketing, and computer reservation services), which are not closely linked to the provision of logistic services.

Source: Compiled by Commission staff.

The average score for all logistic-related commitments is represented by the cross in figure 4-1. These coordinates reflect that, on average, these 49 countries scheduled full commitments about 18 percent of the time over the range of schedule entries pertaining to logistic services, and scheduled full or partial commitments about 29 percent of the time, indicating opportunities for further GATS negotiations related to these industries. Countries above and to the right of the cross exceeded the average in terms of binding unfettered market access and national treatment, establishing benchmarks, and enhancing regulatory transparency. Countries below and to the left of the cross trailed the average. Appendix D provides details of each country's logistics-related GATS commitments. In general, WTO member countries have been more willing to make commitments in non-transportation sectors related to logistics services, particularly management consulting services.

GATS Negotiating Proposals

As noted, the CPC does not contain a distinct listing for logistic services. Further, the CPC does not define supply chain management services, which is identified in tier 1 of figure 1-1. The closest service listed on the CPC is "production management consulting services," which falls under the broader category of management consulting services (CPC 865). Since neither logistics nor supply-chain management is identified as a distinct industry on the W/120, countries that rely on the CPC have advocated developing a "checklist" from closely related service sectors to develop meaningful market access and national treatment commitments for logistic services.

In 2001, Hong Kong proposed using the checklist approach to negotiate logistic and related services in the WTO.[58] In its communication, Hong Kong defines logistic services as "the procedure to optimize all activities to ensure the delivery of products through a transport chain from one end to the other."[59] Further, the Hong Kong proposal indicates that, although the W/120 does not identify logistic services as a distinct service, many sectors integral to logistic services are captured under the subheadings "transport services" and "business services."[60] Hong Kong requests that WTO members consider the development of a "checklist" for logistic services, which would consolidate the logistic-related W/120 categories and indicate the scope of logistic services.[61] The checklist approach is intended to facilitate the scheduling of commitments without requiring significant changes to the W/120, assist WTO members in developing a common agreement about the full range of applicable services, and serve as an effective mechanism by which to assess the value of market access and national treatment offers.[62]

A similar approach was used by Switzerland in its WTO negotiating proposal on services auxiliary to all modes of transport.[63] In its proposal, Switzerland summarizes the importance of these services to the effective provision of multimodal transport services, arguing that such auxiliary services are essential to increased transportation efficiency, such as those integral to the JIT inventory systems currently used in manufacturing.

A joint paper from 8 countries,[64] including Hong Kong and Switzerland, further developed the ideas of the earlier proposals by setting out a new checklist of services related to logistics. The checklist splits logistics-related services into three categories (core freight logistic services, related freight logistic services, and non-core freight logistic services), and outlines several additional commitments, not related to specific service industries, which are important to logistic service providers (see table 4-1).

Under the combined proposal, "core freight logistics services" consists of services that fall under the subsector of "Services auxiliary to all modes of transport" on the W/120 (identified as tier 1 services in this report). These services are identified as "core" services that are integral to the provision of logistics services, and therefore

---

[58] Communication from Hong Kong, China, "Logistics and Related Services," *WTO, Council for Trade in Services*, S/CSS/W/68, Mar. 28, 2001.

[59] Ibid.

[60] Ibid.

[61] Ibid.

[62] See OECD, "Assessing Barriers to Trade in Services, Using 'Cluster' Approaches to Specific Commitments for Interdependent Services," Working Party of the Trade Committee, Doc. No. TD/TC/WP(2000)9/FINAL, Nov. 7, 2000.

[63] Switzerland identifies logistic services as cargo handling, storage and warehousing, freight transport agency, and other services such as bill auditing and freight rate information, packing and unpacking, freight inspection, and transportation document preparation services. WTO, *GATS 2000: Services Auxiliary to All Modes of Transport: Communication from Switzerland*, Council for Trade in Services, Special Session, S/CSS/W/78, May 4, 2001.

[64] WTO, *Logistics Services: Communication from Australia; Hong Kong, China; Liechtenstein; Mauritius; New Zealand; Nicaragua; Switzerland; and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu*, Council for Trade in Services, Special Session, TN/S/W/20, June 25, 2004.

Table 4-1
Multi-member GATS negotiating proposal for logistic services checklist in the GATS

Place in checklist	Industries, with CPC codes where applicable
Core freight logistic services	• Cargo handling services, including container handling services (CPC 7411) and other cargo handling (CPC 7419) • Storage and warehousing services (CPC 742) • Transport agency services (CPC 748) • Other auxiliary services, including customs brokerage services (CPC 749)
Related freight logistic services	• Maritime transport services[1] • Internal waterways transport services[1] • Air transport services, including air freight transport (CPC 732) and rental of aircraft with crew (CPC 734)[2] • Rail transport services - freight transport (CPC 7112) • Road transport services, including freight transport (CPC 7123), rental of commercial vehicles with operator (CPC 7124), and rental of commercial vehicles without operator (CPC 83102) • Technical testing and analysis services (CPC 8676) • Courier services (CPC 7512) • Commission agents' services (CPC 621) • Wholesale trade services (CPC 622) • Retailing services (CPC 631, 632, 6111, 6113, 6121)
Non-core freight logistic services	• Computer and related services • Packaging services • Management consulting and related services
Additional commitments[3]	• The WTO member country should accept electronic versions of trade administration documents. • Services suppliers are entitled to supply named logistics services in combination, subject to measures related to anti-competition behavior. • Members will ensure that procedures related to customs and documentation are not unnecessarily burdensome.

[1] Services identified under maritime transport negotiations.
[2] Currently excluded from the GATS, subject to Annex on air transport services.
[3] Commitments that cannot be categorized as market access or national treatment commitments related to a specific industry.

Source: WTO, Logistics Services: Communication from Australia; Hong Kong, China; Liechtenstein; Mauritius; New Zealand; Nicaragua; Switzerland; and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu, Council for Trade in Services, Special Session, TN/S/W/20, June 25, 2004.

commitments in these areas would be necessary to effectively liberalize logistics markets. "Related freight logistics services" includes transport services for each mode (maritime, internal waterways, air, rail, and road transport services), specifically the subsectors related to freight transport and rental of transport equipment with and without operators (many of which are identified as tier 2 services in this report). Also included here are technical testing and analysis; and courier, commission agents', wholesale trade, and retail trade services (tier 3). The third category, "non-core services," are identified as important for effective liberalization of logistics markets, meaning that such liberalization will not be commercially meaningful without commitments in all or most of these service industries. In this category, the proposal lists computer and related services, and packaging, management consulting, and related services (tier 3).

Finally, the proposal outlines several areas where additional (Article XVIII) commitments would facilitate trade.[65] In particular, the paper proposes that countries commit to accept electronic versions of trade documents; to permit logistics service suppliers to provide the listed services in combination, subject only to measures related to anti-competitive behavior; and to ensure that customs procedures not be unnecessarily burdensome.

U.S. industry representatives have recommended several additions to the checklist outlined in the Hong Kong et. al. paper, particularly the inclusion of financial services. In particular, they suggested the inclusion of banking services specifically related to trade, such as letters of credit, short term lending services, and insurance services, particularly insurance of goods in transit.[66] UPS, in particular, noted that its subsidiary, UPS Capital, offers a variety of financial services products tailored to its logistics customers.[67] Other industry suggestions of services to be included on the checklist include real estate services, leasing and rental services of equipment, and data and message transmission services, a subsector of telecommunication services.[68]

Doha Round GATS Requests and Offers

Beginning in June 2002, WTO members submitted specific bilateral requests to other members, asking each country to consider specific new commitments to their GATS schedules. Following these requests, and beginning in March 2003, members began to submit initial negotiating offers, in the form of proposed changes to their existing GATS schedules. The publicly available offers are summarized below, as they relate to logistic services. Negotiations regarding these offers are ongoing.[69]

Between March 31, 2003 and July 9, 2004, 44 WTO member countries submitted initial offers of new commitments, of which 13 have been made public.[70] These are initial negotiating offers, which are not binding until finalized and accepted at the end of the Doha Round. Many of them likely will be modified during the course of the negotiations. Eight of the 13 offers[71] include either completely new or more liberal draft commitments in maritime freight services. Five of these[72] include a draft commitment on market access to multimodal transport[73] for continued transport of shipments that

---

[65] Individual countries may schedule commitments for each industry in the areas of market access, national treatment, and "additional commitments." The latter includes commitments that do not fit the definitions of either market access or national treatment liberalization, but may increase the commercial value of a country's market access and national treatment commitments for a given industry.

[66] Industry representatives, interviews with USITC staff, Brussels, Belgium, Oct. 18, 2004.

[67] UPS, *Post-hearing brief*, Dec. 14, 2004.

[68] Coalition of Service Industries, Logistics Working Group, letter to the Office of the U.S. Trade Representative, July 7, 2003.

[69] For additional detail on the progress of the WTO services negotiations, see the WTO website, "Development in the Services negotiations," found at *http://www.wto.org/english/tratop_e/serv_e/s_negs_e.htm*, retrieved Nov. 17, 2004.

[70] The 13 countries include the United States, which is not a subject of this report.

[71] These countries are Australia, Canada, Chile, the European Union, New Zealand, Norway, Panama, and Turkey.

[72] These countries are Australia, Canada, the European Union, Japan, and New Zealand.

[73] Multimodal transport refers to transport that covers a combination of two or more modes (air, maritime, rail, road, or inland waterways).

enter the country as part of an international maritime freight shipment, even where the country does not maintain specific commitments on land or internal waterways transport. As noted in chapter 2, multimodal transportation is important to 3PLs that handle international shipments.

With respect to services auxiliary to maritime transport, which include cargo handling, customs brokerage, storage and warehousing, maritime agency, maritime freight forwarding, and container station and depot services, Australia, Canada, the European Union, Japan, and New Zealand all have offered new or more liberal draft commitments in a number of these areas, in addition to their offers on maritime freight transport.[74]

Logistics in the U.S. Bilateral FTAs

In addition to unilateral liberalization and market access and national treatment commitments under the GATS, 3PLs may also benefit from bilateral Free Trade Agreements (FTAs). The cross-border services chapters of U.S. FTAs are organized under a "negative list" system, as opposed to the "positive list" system used by the GATS. Under a negative list system, all service industries and broader industry sectors are subject to the provisions of the individual FTA, unless they are specifically excluded via an annex on non-conforming measures.[75] These annexes articulate specific cases for which the treaty provisions of unfettered market access and national treatment do not apply. The FTAs broadly provide a liberal environment for trade in logistic services, although several countries exempt specific aspects of tier 1 and tier 2 logistic services.

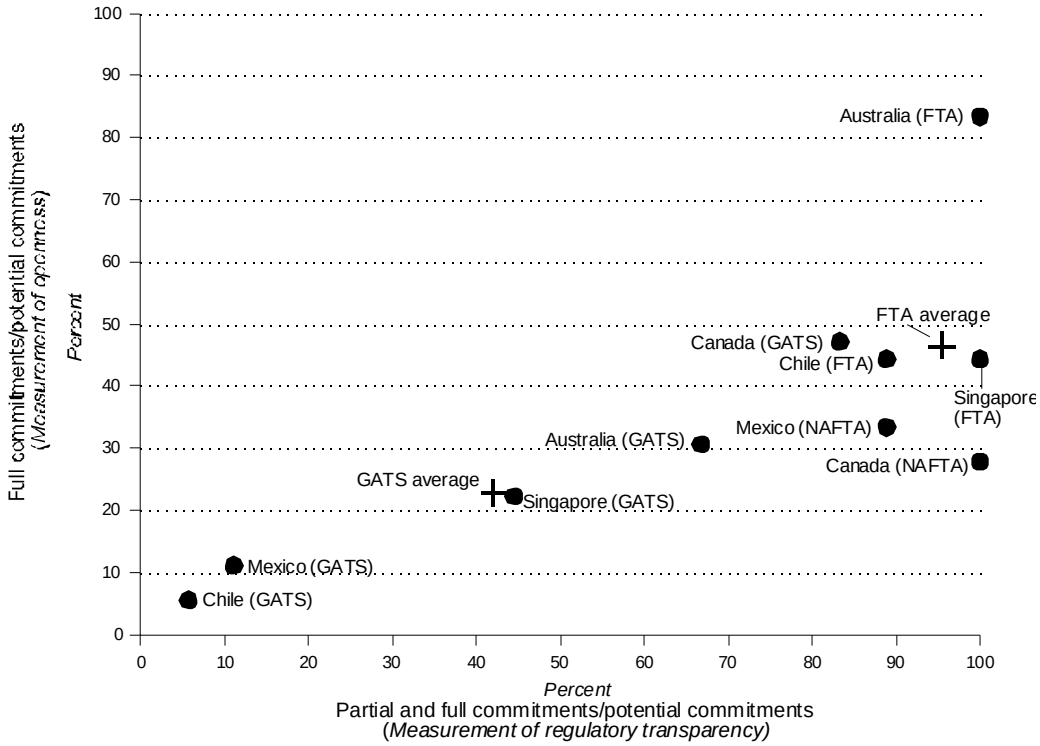
Figure 4-2 compares logistic-related commitments for 5 countries,[76] under the GATS and under their respective FTAs with the United States. As indicated by the crosses in the figure, the FTAs examined as case studies for this report, on average, provide full commitments on tier 1 and tier 2 logistic services in 47 percent of possible cases, and full or partial commitments in 96 percent of possible cases. In contrast, under the GATS, these same 5 countries scheduled full commitments on tier 1 and tier 2 services in 23 percent of instances, and partial or full commitments in 42 percent of such instances.

[74] As noted above, WTO members can schedule commitments to these services as auxiliary to all modes of transport. Instead, these countries have scheduled such commitments only as they apply to maritime transport.

[75] For most FTAs, Annex I lists existing measures that are exempt from the agreement, Annex II lists industries for which countries reserve the right to impose non-conforming measures in the future, and Annex III lists both current and future measures that apply specifically to financial services. In the Singapore FTA, Annexes 8A and 8B apply to cross-border services generally, and Annex 10B applies specifically to financial services.

[76] The study examines the commitments of Canada and Mexico under the North American Free Trade Agreement (NAFTA), and of Chile, Singapore, and Australia under those countries' respective bilateral FTAs with the United States.

Figure 4-2
Shares of total possible schedule entries[1] under the General Agreement on Trade in Services (GATS); the U.S-Free Trade Agreements (FTA) with Australia, Canada, Chile, Mexico, and Singapore, by country



[1] Service industries included are: Management consulting, maritime freight, road freight, rail freight, cargo handling, storage and warehousing, freight transport agency, customs brokerage, and other auxiliary transport services.

Note.-- An average (indicated by criss-crossed lines) is calculated by GATS and FTA data, resulting in an average of 47 percent for full commitments and 96 percent for partial and full commitments for FTAs and an average of 23 percent for full commitments and 42 percent for partial and full commitments for the GATS.

Source: Compiled by Commission staff.

More specifically, Singapore excludes U.S. firms from providing cargo handling services, and Australia also has a partial exclusion for cargo handling services, while Mexico has a partial exclusion for storage and warehousing services. Chile has excluded customs brokerage services, and Australia has partially excluded such services. Otherwise, all of the transportation management services are open to U.S. firms under the bilateral FTAs. In tier 2 transportation areas of air, maritime, and road freight transport services, most countries maintain significant reservations to foreign service providers, as they do under the GATS. At a minimum, however, the format of the FTAs provides increased transparency compared to the GATS, as countries are required to schedule each nonconforming measure in the FTA annexes.

Customs Facilitation

In addition to GATS and FTA trade negotiations, logistic service providers may benefit from several initiatives to simplify customs procedures that are presently underway. The World Customs Organization (WCO) regularly issues nonbinding recommendations on customs facilitation to its members and sponsors training for customs officials in developing countries. In the Asia-Pacific Economic Cooperation (APEC) forum, trade

facilitation, including customs facilitation, has been on the agenda since the organization's establishment in 1989.[77] Recently signed U.S. FTAs contain binding customs provisions, and WTO negotiations on trade facilitation, launched in August 2004, are intended to improve customs-related articles in the General Agreement on Tarriffs and Trade (GATT). This section provides an overview of customs facilitation and examines current customs facilitation initiatives.

Overview and Benefits of Customs Facilitation

Although customs administrations around the world have a common objective, namely goods clearance, customs policies vary widely depending on government priorities. Governments in many developing countries, for example, may view customs administrations as revenue collectors, placing priority on duty collection processes. Other countries may view customs as a defense against drugs or terrorism, placing procedural emphasis on security measures.[78] The result is a complex web of nonuniform regulations that may require 25 to 30 different steps in some countries.[79]

Customs facilitation, a component of trade facilitation,[80] involves simplifying and standardizing the procedures involved in clearing goods at the border.[81] Government support for customs facilitation has increased as shippers' complaints about slow processing times and burdensome requirements have risen. Such complaints have grown in concert with globalization, which increases both the volume of trade and destinations of traded goods, and have been heard in developed and developing countries alike.[82] Reportedly, shippers in developed countries tend to complain about outdated processing systems that cannot accommodate large trade volumes, while shippers in developing countries tend to cite complex technical requirements as "beyond their technical competence" and financially burdensome.[83]

As identified in the USITC's investigation on express delivery services, customs facilitation likely would reduce shipment costs, improve delivery times, and increase

---

[77] APEC, "Toward the Shanghai Goal: Implementing the APEC Trade Facilitation Action Plan," *Asia Pacific Foundation of Canada*, 2002, p. 3.

[78] United Nations (UN), "Draft Guidelines on Key Sectors for Trade Efficiency: Customs," *Trade and Development Board, Ad Hoc Working Group on Trade Efficiency*, May 2, 1994.

[79] Patrick Messerlin and Jamel Zarrouk, "Trade Facilitation: Technical Regulations and Customs Procedures," *Prepared for the WTO/World Bank Conference on Developing Countries in a Millenium Round, WTO Secretariat*, Sept. 20 and 21, 1999, p. 13.

[80] The OECD describes trade facilitation as "the steps that can be taken to smooth and facilitate the flow of goods," including facilitation of customs procedures, transportation requirements, and payment procedures. OECD, "Trade Facilitation: The Benefits of Simpler, more Transparent Border Procedures," *Policy Brief*, Aug. 2003, p. 2.

[81] Such procedures include, for example, document submission, including cargo declarations, signed invoices, packing lists, sea or airway bills of lading, certificates of origin, licensing documentation, letters of credit, insurance documents, various testing reports, and other required certifications; assessment for duty application; health and environmental inspection or verification; and amendment and reprocessing, where necessary.

[82] Patrick Messerlin and Jamel Zarrouk, "Trade Facilitation: Technical Regulations and Customs Procedures," p. 1.

[83] Patrick Messerlin and Jamel Zarrouk, "Trade Facilitation: Technical Regulations and Customs Procedures," p. 1.

trade flows.[84] That report suggests that poor customs environments inhibit trade and that modest improvements in customs environments would likely result in increased U.S. exports to some countries.[85] Other literature suggests similar benefits. For example, a 2004 World Bank research paper found that improved customs procedures would result in increased exports globally.[86] A 2002 APEC-commissioned study found that trade facilitation would increase exports among member economies by $280 billion.[87] The Swedish Trade Procedures Council (SWEPRO) in 2002 estimated that complex international trade procedures result in a cost of approximately $325 billion, or 2.5 percent of the value of traded goods,[88] suggesting a considerable gain from facilitation. Table 4-2 summarizes the major findings in some of the economic literature on trade and customs facilitation.[89]

Examples of Global Facilitation Initiatives

World Customs Organization

The Brussels-based WCO recognizes customs facilitation as important to trade and economic development.[90] The organization notes that custom administrations must balance government goals, such as security, revenue collection, and regulatory compliance, with business interests, such as processing efficiency.[91] The WCO has drafted a number of binding international Conventions designed to help members balance these competing interests. However, recently drafted Conventions that would facilitate the customs process have not yet entered into force. If ratified, the revised

[84] USITC, *Express Delivery Services: Competitive Conditions Facing U.S.-based Firms in Foreign Markets*, investigation No. 332-456, USITC Publication 3678, Apr. 2004, p. 4-29. For a full discussion of the impact of customs improvements on trade flows, see Appendix C of that report.

[85] USITC, *Express Delivery Services*, pp. 4-32 and 4-33. The results are more significant for time-sensitive goods, which are usually shipped by air.

[86] John Wilson, Catherine Mann, and Tsunehiro Otsuki, "Assessing the Potential Benefit of Trade Facilitation: A Global Perspective," *World Bank Policy Research Working Paper*, No. 3224, Feb. 2004, p. 18.

[87] Estimates are for improvements in the range of trade facilitation areas, including ports, regulatory systems, standards, and electronic commerce. John Wilson, Catherine Mann, Yuen Pau Woo, Nizar Assanie, Inbom Choi, "The Economic Impact of Trade Facilitation Measures: A Development Perspective in the Asia-Pacific," *Asia Pacific Economic Cooperation*, Oct. 2002, p. 6.

[88] Swedish Trade Procedures Council (SWEPRO), "Trade Facilitation: Impact and Potential Gains," *Swedish National Board of Trade*, Aug. 2002, p. 2.

[89] This list is not exhaustive.

[90] WCO, *Trade Facilitation Initiatives and Simplification of Customs Procedures*, found at *http://www.wcoomd.org/ie/En/Topics_Issues/topics_issues.html*, retrieved Dec. 22, 2004.

[91] Ibid.

Table 4-2
Summary of findings on the benefits of trade facilitation

Author(s)	Study title	Benefits from facilitation
USITC (2004)	Express Delivery Services: Competitive Conditions Facing U.S.-based Firms in Foreign Markets	As much as an estimated 20 percent increase in U.S. exports to some countries
Wilson, Mann, et al. (APEC: 2002)	Trade Facilitation: A Development Perspective in the Asia-Pacific Region	$280 billion in increased exports among APEC members
Wilson, Mann, and Otsuki (World Bank: 2004)	Assessing the Potential Benefit of Trade Facilitation: A Global Perspective	Increase in trade flows to all regions; $377 billion gain in trade flows of manufactured goods, worldwide
APEC (2002)	Toward the Shanghai Goal: Implementing the APEC Trade Facilitation Action Plan	Potential income gains of $64 billion within APEC from "full" compliance with trade facilitation guidelines, with greatest gain to developing countries
Hummels (Purdue University: 2001)	Time as a Trade Barrier	Each day saved in shipping, in part as a result of faster customs clearance, equals 0.8 percent ad valorem cost reduction for manufactured goods

Source: Compiled by the Commission.

Kyoto Convention[92] would, among other things, simplify and harmonize customs procedures by endorsing the use of information technology, requiring new control techniques, and using risk analysis for targeting high-risk shipments;[93] and the Johannesburg Convention, adopted by the WCO in June 2003, would promote assistance among customs administrations and call for pre-shipment inspection.

[92] In April 2004, the European Community and 12 of its member states acceded to the revised Kyoto Convention, signed on June 26, 1999, bringing the total number of Contracting Parties to 31. The Convention needs 9 more countries to accede for it to enter into force. The United States is not a member of the Convention. WCO, "The European Community (EC) and 12 of its Member States accede to the revised Kyoto Convention," *Press release,* Apr. 30, 2004, found at Internet address *http://www.wcoomd.org/ie/En/Press/press.html,* retrieved Dec. 22, 2004.

[93] "World Customs Organization Adopts Revised Kyoto Convention," U.S. Customs Today, Mar. 2000, found at *http://www.cbp.gov/custoday/mar2000/world.htm,* retrieved Dec. 23, 2004.

In addition to its Conventions, the WCO regularly issues nonbinding recommendations. Countries or economic unions that adopt WCO recommendations are expected to be committed to their implementation.[94] WCO recommendations are intended to promote cooperation among customs administrations, harmonize practices, facilitate trade, promote information technology use, simplify documentation requirements, and expedite the implementation of Conventions.[95]

Asia-Pacific Economic Cooperation

As noted above, APEC has recognized the need to facilitate the movement of goods since its founding in 1989.[96] In 1994, APEC endorsed an action plan that broadly called for trade and investment liberalization within the region by 2020 (the Bogor Declaration).[97] The Bogor Declaration recognized facilitation as necessary to realizing the full benefits of trade liberalization.[98] Accordingly, APEC's 2001 meeting in Shanghai, China set a goal of reducing trade transaction costs within the region by 5 percent within 5 years.[99] This goal was incorporated into the Trade Facilitation Action Plan (TFAP), which also addressed technical standards, business mobility, and electronic commerce.[100] With respect to customs procedures, APEC's subcommittee on customs is working to achieve the 5-percent reduction goal through a series of Collective Action Plans (CAP), which are summarized in table 4-3.[101]

---

[94] WCO, The Nature of WCO Recommendations and the Procedure for Their Acceptance, found at Internet address *http://www.wcoomd.org/ie/En/Recommendations/recommendations.html,* retrieved Dec. 22, 2004.

[95] WCO, "Recommendations," found at *http://www.wcoomd.org/ie/En/Topics_Issues/topics_issues.html,* retrieved Dec. 23, 2004.

[96] APEC, "Toward the Shanghai Goal," p. 3.

[97] Hadi Soesastro, Marcus Noland, Donald K. Emmerson, "The Jakarta-Bogor APEC Summit: A Vision for 2020," *Shorenstein Reports on Contemporary East Asia*, No. 3, Jan. 1995, found at *http://ieas.berkeley.edu/shorenstein/1995.01.html,* retrieved Feb. 18, 2005.

[98] APEC, "Toward the Shanghai Goal," p. 3.

[99] APEC, "APEC's Trade Facilitation Action Plan: A Midterm Assessment," *A Report Prepared for the APEC Committee on Trade and Investment*, Oct. 18, 2004, p. 3.

[100] Ibid.

[101] APEC, *Sub-committee on Customs Procedures,* found at *http://www.apecsec.org.sg/apec/apec_groups/committees/committee_on_trade/sub-committee_on_customs.html,* retrieved Dec. 23, 2004.

Table 4-3
Summary and status of APEC's Collective Action Plans (CAP) on Customs, 2004

CAP	Summary of plan	Implementation status
Harmonization of Tariff Structure with HS Convention	Ensure all APEC members apply the HS Convention in an accurate, consistent and uniform manner	Completed
Advanced Classification Ruling System	Establish simplified procedures for pre-arrival classification of information prior to importation, thereby enhancing predictability	Completed by 16 APEC members
Adoption of UN/EDIFACT-Paperless Trading	Encourage paperless submission of documents through the adoption of appropriate electronic technologies and procedures	([1])
Customs-Business Partnership	Enhance cooperation and communication between Customs and the business sector	([1])
Express Consignment Clearance	Implement the WCO's Guidelines on Express Consignment and International Standards of Customs Clearance of Express Goods	Implemented by 18 APEC members
Risk Management Techniques	Support the implementation of risk management practices to facilitate legitimate trade and travel, while maintaining effective Customs control	Completed by 18 APEC members

[1] Not available.

Source: Asia-Pacific Economic Cooperation, Sub-Committee on Customs Procedures, Collective Action Plans, found at *http://www.apec.org/apec/apec_groups/committees/committee_on_trade/sub-committee_on_customs.html*, retrieved Mar. 15, 2005.

U.S. Free Trade Agreements

U.S. FTAs contain provisions that may facilitate the movement of goods through customs. All of the FTAs signed to date[102] contain provisions on customs administration, which seek to ensure the timely release of goods and enhance transparency by requiring prompt publication of customs rules.[103] In addition, FTA provisions seek to facilitate the clearance process through greater use of information technology, improve risk management and cooperation among parties, and establish procedures for resolving disputes. Additional measures for express shipments are to be adopted by each party. These measures facilitate express shipment processing by allowing electronic submission of documents; pre-arrival processing of information; submission of a single

[102] U.S.-Singapore FTA, Jan. 15, 2003; U.S.-Chile FTA, June 6, 2003; U.S.-Australia FTA, May 18, 2004; U.S.-Central America FTA, May 28, 2004; U.S.-Morocco FTA, June 14, 2004; Dominican Republic accession to the U.S.-Central America FTA, Aug. 5, 2004; and U.S.-Bahrain FTA, Sept. 14, 2004.

[103] Industry representative, telephone interview with USITC staff, Washington, DC, Aug. 6, 2004.

manifest covering all goods in an express shipment; and minimizing release documentation, where possible.[104]

World Trade Organization

In July 2004, trade facilitation was incorporated into the WTO's Doha Development Agenda. In November 2004, WTO delegates reached agreement on the negotiating modalities and established a work plan.[105] The negotiations seek to clarify and improve various aspects of customs-related GATT articles,[106] with special consideration for technical assistance; cooperation between relevant authorities; special and differential treatment for developing and least-developed countries; the needs of least-developed countries; negotiating priorities and the financial costs associated with implementation; and working with international organizations that have experience with trade facilitation.[107]

In February 2005, the United States and several other WTO member countries submitted initial trade facilitation negotiating proposals. The United States submitted four proposals, covering 1) advanced rulings,[108] 2) Internet publication, 3) fees, and 4) express shipments. Each U.S. proposal provides anecdotes on country experience, estimates the costs involved with implementation, contains language on special and differential treatment and technical assistance for countries in need, and provides guidance on "next steps" in the negotiating process.[109] Proposals from other countries touched on many of the elements outlined by the United States. Specifically, Canada's proposal addressed advanced rulings;[110] Japan[111] and Korea[112] addressed advanced rulings and publication in their respective proposals; and the European Union[113] addressed publication. Chinese Taipei, the European Union, Japan, and Korea also addressed judicial rulings and appeals procedures; trader notification and consultation; and establishment of inquiry points, issues which the United States has indicated will be the subject of forthcoming proposals.

---

[104] "Customs Administration," chapters in various FTAs, found at Internet address *http://www.ustr.gov/*, retrieved Aug. 6, 2004.

[105] WTO, "WTO launches negotiations on trade facilitation, WTO News, Nov. 15, 2004, found at *http://www.wto.org/*, retrieved Dec. 10, 2004.

[106] These provisions are found in Articles V (freedom of transit), VIII (fees and formalities), and X (publication and administration of trade regulations). WTO, The General Agreement on Tariffs and Trade (GATT 1994), found at *http://www.wto.org*, retrieved Dec. 10, 2004.

[107] WTO, "WTO launches negotiations on trade facilitation."

[108] Advanced rulings are binding decisions made by customs authorities related to classification, procedures, or other customs matters in advance of an item being shipped to a country.

[109] See WTO, Communications from the United States, *Negotiating Group on Trade Facilitation*, TN/TF/W/11, 12, 13, 14, and 15, Feb. 4, 2005.

[110] WTO, Communication from Canada, *Negotiating Group on Trade Facilitation*, TN/TF/W/9, Jan. 31, 2005.

[111] Japan, Mongolia, and Chinese Taipei submitted a joint proposal. WTO, Communication from Japan, Mongolia, and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu, *Negotiating Group on Trade Facilitation*, TN/TF/W/8, Jan. 28, 2005.

[112] WTO, Communication from Korea, *Negotiating Group on Trade Facilitation*, TN/TF/W/7, Jan. 27, 2005.

[113] WTO, Communication from the European Communities and its Member States, *Negotiating Group on Trade Facilitation*, TN/TF/W/6, Jan. 28, 2005.

CHAPTER 5
THE ECONOMIC EFFECT OF REDUCING OR REMOVING LOGISTICS IMPEDIMENTS

Introduction

This chapter describes available evidence on the extent to which the reduction or removal of logistics impediments enhance international trade or economic welfare. The impediments identified in this report are related to the movement of goods - e.g., customs restrictions and inefficiencies in airports and seaports. Econometric analysis by the Commission shows that improved logistic environments in importing countries are associated with increased U.S. merchandise exports. Increased U.S. exports, in turn, likely result in increased demand for logistic services.

The chapter begins with a literature review of studies that have looked at the economic effects of variation in logistics availability, cost, or quality. It continues with an assessment of the degree to which logistic services may be impeded in different countries, based on indicators generated using the supplier questionnaire. Finally, the questionnaire-based indicators are used in an econometric analysis that examines the effects on U.S. exports of improved logistics quality in importing countries, accounting for other important determinants of U.S. exports. In this analysis, U.S. exports are differentiated by U.S. customs district, by mode of transport (airborne, waterborne, or other transport), and by whether they are domestic exports (of U.S. merchandise) or foreign merchandise being transshipped through U.S. ports.

The results of the econometric analysis demonstrate that U.S. exports, both of domestic and foreign transshipped merchandise, are sensitive to logistic service quality in the importing country, and that improved logistic services are associated with higher U.S. merchandise exports. While it is not possible to statistically identify the effects of each of the individual aspects of improved logistics with precision, certain patterns stand out. First, improvement of logistics quality at foreign airports is associated with higher levels of U.S. merchandise exports, by all modes of departure. Second, improvements of logistics quality at seaports and of customs quality[1] are also associated with increased U.S. merchandise exports. Third, airborne merchandise exports are more sensitive than other exports to the level of logistics quality, generally. The fact that a large share of

[1] This finding supports results from the Commission's earlier work on express delivery services, which found that US. exports to countries with good customs environments - an important component of an efficient logistics environment - are more likely handled by air. See USITC, *Express Delivery Services*, USITC publication 3678, p. C-3.

airborne exports tend to be high-value and time-sensitive[2] in nature suggests that such exports are particularly sensitive to efficiency considerations. Both U.S. domestic exports and foreign exports transshipped through U.S. ports are sensitive to the degree of logistics quality in the final importing country. For the countries that have the weakest logistic service environments as measured by the questionnaire, the estimates indicate that in many cases a reduction of impediments could lead to significant percentage increases in U.S. merchandise exports, all other factors held equal.

Literature Review[3]

The ability to provide efficient transportation, trade support, and logistic services has increasingly become an important factor in maintaining export competitiveness in many countries. According to a study by CARANA Corporation (2003)[4], trade competitiveness is highly related to how cost-effectively (and how timely) export goods can be shipped from a factory, warehouse or port in the country of origin to destination markets throughout the world. Reducing the logistical services cost of transporting goods internationally raises the price received by the producers, and reduces the price paid by the consumers.

To put the Commission's quantitative analysis into the proper context, and to motivate the econometrics work conducted in the next section, this section reviews the literature related to the different characteristics of the transportation and logistic service industries that seem to be key determinants of the cost of shipping goods internationally. The indicators in the Commission's quantitative analysis correspond broadly to those considered in the literature, with some differences. In particular, while other analyses have developed useful indicators of foreign logistic service quality and government policy, the Commission's analysis relies on indicators developed in the supplier questionnaire.

Distance

Distance between trade partners is the most obvious factor affecting the costs of moving goods. Clark, Dollar, and Micco (2004) estimate that a doubling in distance

[2] According to the questionnaire, the median time for cargo processing in airports, from the time of aircraft landing to the time nationalized cargo passes through the gate and can be claimed by a consignee, is 8 hours, with 25 percent of respondents reporting cargo processing times of 24 hours or more and 10 percent reporting times of 60 hours or more. The median time for cargo processing in seaports, from the time of harbor entry to the time nationalized cargo passes through the gate and can be claimed by a consignee, is 48 hours, with 25 percent of respondents reporting cargo processing times of 72 hours or more and 10 percent reporting times of 144 hours or more.

[3] A list of references is included in Appendix C of this report.

[4] CARANA Corporation, *The Role of Transportation and Logistics in International Trade: The Developing Country Context: Phase I Report,* 2003, found at *http://www.tessproject.com/products/special_studies/trans&log_phase_1_report.pdf*, retrieved Nov. 19, 2004.

roughly generates an 18-percent increase in maritime transport costs.[5] Limao and Venables (2001) find that an extra 1000 kilometers can raise transport costs by $380 (or 8 percent for a median shipment) in shipping a standard container from the port of Baltimore to a number of destinations. They also find that raising transport costs by 10 percent reduces trade volumes by more than 20 percent.[6]

Trade Volume

Most modes of transport face increasing returns to scale (or *economies of scale*). Given the different types of fixed costs, economies of scale can occur offshore (at vessel level) and onshore (at seaport level).[7] Thus, the volume of trade flows can significantly affect transport costs. This can be magnified by the fact that maritime routes with low trade volumes are serviced by small vessels and that more transited routes are covered by the largest (most technologically advanced) ships.[8] Clark, Dollar, and Micco, *Port Efficiency*, report that "an increase in export volume from the level of Cyprus to the one of Indonesia reduces transport costs by around 20 percent."[9]

Technology

Clark, Dollar, and Micco, *Port Efficiency,* suggest that *technological improvements*, such as the development of containerized transport, has led to large reductions in cargo handling and as a result in total maritime charges. They estimate that containers reduce transport cost by around 4 percent. They also argue that containerization and intermodal usage has encouraged cargo transshipment, which can also be a cost saving mechanism by taking advantage of efficiencies associated with major transport hubs.

Transshipment

Transshipment has become an integral part of the logistic strategy of many shipping companies (box 5-1). From its origin to its final destination, any given cargo might have been transshipped three or four times. The practice of transshipment has

[5] Clark, Ximena, David Dollar, and Alexandro Micco, "Port Efficiency, Maritime Transport Costs and Bilateral Trade," *NBER Working Paper* No. 10353, Mar. 2004. The authors investigate the determinants of shipping costs to the United States with a large database of more than 300,000 observations per year on shipments of products at the six-digit HS level from different ports around the world.

[6] Limão, Nuno and Anthony J. Venables, "Infrastructure, Geographical Disadvantage, Transport Costs, and Trade," *The World Bank Economic Review*, Vol. 15, No. 3, 2001, pp. 451-479. The authors use two transport cost measures: bilateral CIF/FOB ratios and actual price quotes from a shipping company.

[7] See Clark, Dollar, and Micco, *Port Efficiency*, CARANA, *The Role of Transportation and Logistics*, or Cazzaniga Francesetti, Dionisia and Foschi, Alga D., "The Impact of Hub and Spokes Networks in the Mediterranean Peculiarity," 2002, *IAME Annual Conference*, Panama, found at *http://ssrn.com/abstract=385166*, retrieved Nov. 19, 2004. Some economies of scale are also achieved by virtue of the fact that the use of large vessels along heavily-traveled routes allows a shipping company to limit the number of ships in use at any given time.

[8] More transited routes also are more likely to have more competition.

[9] In 2002, the value (not volume) of exports from Indonesia was about 70 times that of exports from Cyprus.

Box 5-1
Rationales and determinants of transshipment

With the development of large oceangoing container ships, competitive efforts to decrease container unit costs have led to the emergence of a worldwide hub-and-spoke system of shipping routes. Cargo to a region is delivered first to a primary hub port using large ships and then transported or transshipped to its final destination (spokes) using smaller ships. Conversely, the hub can also serve as a transshipment point for cargo originating from its regional spokes and destined to other regions of the world.

Cazzaniga, Francesetti, and Foschi (2002) use simulations to show that maritime transport organized according to a hub-and-spoke system dominates point-to-point service. They find that this is particularly the case if vertical integration between services at sea and handling services on yard is achieved within the same company.

In the transshipment configuration, major routes (between regional hubs) are serviced by large ocean-going container liners allowing them to achieve considerable scale economies. Smaller ships then provide faster feeder services on inter-regional short routes or other low traffic routes. It has been contended that transshipments offer an efficient way of serving smaller ports/countries and provide many more port-to-port connections to shippers than direct services (Damas, 2001). In fact, with the hub and spokes system, carriers can provide shipping service virtually between any two ports not connected by a direct service.

The level of transshipment through a given port or a country is in general the result of strategic decisions made by the shipping companies themselves. In order to satisfy the demands of carriers, transshipment ports need to satisfy a number of attributes:

- Availability of an array of high-frequency feeder services, connecting the hub with its network of feeder ports;
- Convenient geographical location with access to major trade routes and other transshipment centers;
- Efficient, highly productive and competitively priced port and terminal services; and
- Availability of modern high-tech infrastructure (e.g., berths, gantry cranes, container storage space)as well as equipments that allow for a quick turnaround time of large vessels.

Admittedly, those attributes also apply to direct shipping. However, since the main purpose of transshipment is to decrease overall as well as per unit shipping costs, transshipment will tend to be more sensitive to them.

Source: Andriamananjara, Arce, and Ferrantino (2004).

increased markedly in recent years.[10] Transshipment can be viewed as routing goods in such a way that decreases shipping costs, takes advantage of economies of scale, and improves the range of services or routes offered to customers.[11] In particular, transshipment services provide shippers with additional routing options (especially towards final destinations at smaller ports) and reduced transit times. However, factors that increase the cost of exporting, such as distance and restrictive

[10] The share of U.S. total exports which represent re-exports has increased from around 1.5 percent in the late 1970s to 10 percent in 2003. During the same time period, the share of Hong Kong's exports which represent re-exports has increased from 20-25 percent to over 90 percent. See Andriamananjara, Soamiely, Hugh Arce, and Michael Ferrantino, "Transshipment in the United States," *USITC Office of Economics Working Paper* 2004-04-B, April, 2004.

[11] The freight rates on the transshipment route would tend to be lower than those on the direct service route given that the latter is in general faster. Direct service on low traffic routes also tends to be less frequent than transshipment connections.

government policies or private practices, have a greater effect in restricting re-exports than U.S. domestic exports (Andriamananjara, Arce, and Ferrantino, *Transshipment in the United States).*

Directional Imbalance

Directional imbalance is a divergence between inbound and outbound traffic, which usually results in different freight rates. CARANA, *The Role of Transportation and Logistics,* cites a study indicating that 72 percent of containers sent from the Caribbean to the United States were empty, which resulted in "U.S. exporters paying 93 percent more than a U.S. importer for the same type of merchandise." Similarly, Clark, Dollar, and Micco, *Port Efficiency*, argue that *directional imbalance* in trade between countries implies that many carriers are forced to haul empty containers back, which will make the costs of shipping in one direction higher. In their econometric exercise, they find that a move from a favorable imbalance of 50 percent to a negative one of the same amount can increase maritime transport costs by approximately 6 percent.

Port Efficiency

Londoño-Kent and Kent (2003)[12] estimate that port costs, such as navigation charges, tug assist, berthage, crane use, and warehousing of offloaded goods, represent about 8–12 percent of total transport costs from product origin to destination. They argue that *port inefficiency* causes not only higher carrier costs, but also higher shipper costs (e.g., delays in customs processing increase the risk of theft, and raise insurance and inventory costs). Clark, Dollar, and Micco, *Port Efficiency*, find that improving port efficiency from the 25th (e.g., the efficiency level in China, Indonesia or Mexico) to the 75th percentile (e.g., France or Sweden) reduces shipping costs by 10 percent. Alternatively, inefficient ports are equivalent to being 60 percent farther away from markets for the average country. Investigating the determinants of port efficiency itself, they find that variations in port efficiency are linked to excessive regulation, the prevalence of organized crime, and the general condition of the country's infrastructure.[13] They also argue that private involvement in port management leads to greater efficiency and lower costs whenever it is accompanied by labor reform, and when monopoly power is reduced through either regulation or competition.

In a similar type of exercise, but focusing on air transport, Micco and Servisky (2004)[14] quantify the effects of infrastructure, regulatory quality, and liberalization of air cargo markets on transport costs. They find that an improvement in airport

[12] Londoño-Kent, María del Pilar and Paul E. Kent, "A Tale of Two Ports: The Cost of Inefficiency," *Research Report submitted to the Office of the Chief Economist for Latin America and the Caribbean, The World Bank,* Dec. 2003.

[13] The authors use different measures of port efficiency. One measure is a subjective index based on surveys reported in the 1999 Global Competitiveness Report of the World Economic Forum. Another is an indicator of the time to clear customs, based on business surveys conducted by the World Bank and the Inter-American Development Bank. Finally, they construct some estimates of the cost of handling containers inside ports (in U.S.$/TEU).

[14] Micco, Alejandro and Tomas Servrisky, "Infrastructure, Competition Regimes and Air Transport Costs: Cross-Country Evidence," *World Bank Research Working Paper* 3355, July 2004.

infrastructure from the 25th to 75th percentiles is estimated to reduce air transport costs by 15 percent.

In a study of APEC countries, Wilson, Mann, and Otsuki (2003)[15] investigate the importance of port efficiency relative to other factors (customs environment, regulatory environment, and e-business usage). Their econometrics exercise reveals that improvement in port efficiencies yields the largest increases in intra-APEC trade flows. Specifically, an improvement of 0.55 percent in the port efficiency indicator has the same impact as 5.5 percent improvement in customs performance.[16] They find also that bringing the efficiency of port operations of the "below average" APEC members half-way to the APEC efficiency average would result in a $117 billion (or almost 10 percent) increase in intra-APEC trade.[17]

Restrictive Government Policies

Monopoly and/or oligopoly are often sustained or encouraged by restrictive government policies that include a variety of cargo reservation schemes, as well as the granting of monopoly rights to providers of ports and auxiliary logistics services, such as cargo handling (Fink, Mattoo, and Neagu, 2002).[18] These schemes essentially represent systems by which non-participating countries are prevented from providing transportation and logistics services (CARANA, *The Role of Transportation and Logistics*). In many cases, quantitative restrictions and regulations (such as standards, government procurement, or licensing) have been used to severely restrict market access by foreigners. These policies, justified by either political, security, or economic rationales, tend to limit the extent of competition in the transport and logistics services and keep rates high. They also lead to higher transaction costs by weakening transport intermediary development and the efficiency of logistics services in general (CARANA, *The Role of Transportation and Logistics*).

Fink, Mattoo, and Neagu, *Trade in International Maritime Services*, use a detailed database containing information on both policy and private rate-fixing arrangements affecting maritime trade with the United States. Their econometric analysis reveals that the restrictions on the provision of port services significantly raise transport prices. They estimate that the liberalization of port services would cause a 35 percent

[15] Wilson, John, Catherine Mann, and Tsunehiro Otsuki, "Trade Facilitation and Economic Development: Measuring the Impact," *World Bank Policy Research Working Paper* 2988, Mar. 2003.

[16] The authors design the 'port efficiency' indicator to broadly measure the quality of infrastructure of air and maritime ports. Customs performance measures direct customs costs as well as administrative transparency of customs and border crossings (e.g., irregular payments, hidden import barriers, bribery, and corruption). The indicators are constructed in such a way that they are comparable with each other.

[17] They also find that improving an improvement in the quality of customs environment in "below average" APEC members half-way to the APEC efficiency average would increase trade flows by $21 billion, or 2 percent.

[18] See Fink, Carsten, Aaditya Mattoo, and Ileana Cristina Neagu, "Trade in International Maritime Services: How Much Does Policy Matter?" *The World Bank Economic Review*, Vol. 16, No. 1, 2002. Cargo reservation schemes require that part of the cargo carried in trade with other states must be transported only by ships carrying the national-flag or interpreted as national by other criteria. The UNCTAD Liner Code of Conduct (which was enacted to counter anti-competitive practices of maritime liner conferences dominated by industrialized shipping lines with a lot of market power) is an example of a cargo reservation schemes.

decline in the price of liner services. Micco and Servisky, *Infrastructure, Competition Regimes and Air Transport Costs*, find that increased competition (such as that seen after the U.S. Open Skies Agreements were implemented by the United States in the 1990s) can reduce air transport costs by 8 percent.

Private anticompetitive behavior

Another way monopoly powers can be sustained is through private anticompetitive practices such as cartels, price fixing, or cooperative working agreements. In general, transportation sectors are dominated by a few large cartels and competition plays a very small role in determining shipping rates. For instance, global shipping alliances (or conferences) now dominate containership service, utilizing vessel-sharing agreements that offer shippers integrated services, and fixed schedules. The U.S. liner shipping sector has gradually moved toward consolidation and concentration, often involving mergers (or other types of joint ventures), to meet demand and improve efficiency.[19] In many cases, shipping conferences are given exemptions from national antitrust laws. Clark, Dollar, and Micco, *Port Efficiency,* find that maritime conferences have been exerting only a 'mild' monopoly power, adding at most 5 percent to transport costs. In their econometric study, Fink, Mattoo, and Neagu, *Trade in International Maritme Services,* show that private anti-competitive practices are an important factor in keeping prices high. According to their estimates, the breakup of cooperative working agreements on U.S. routes would decrease transport prices by more than 7 percent (a global cost saving of up to $575 million) and the breakup of price fixing agreements would cause prices to decline further by 19 percent (an additional cost savings of up to $1.5 billion) across exporting countries and all sectors.

Clyde and Reitzes (1995)[20] study maritime shipping rates and find that several characteristics of ocean shipping (particularly the conference system) suggest that rival carriers might be able to collude successfully as a cartel and raise shipping rates, especially if the conference has a large market share. Hummels (2001)[21] argues that, instead of lowering shipping costs, major technological advances like containerization could have caused shipping rates to increase if they resulted in greater market concentration and monopoly power of shipping cartels. In a theoretical paper, illustrated with empirical data, Francois and Wooton (2001)[22] examine the important relationship between trade and competition in the transportation sector itself and the gains from trade in other sectors. They study the importance of market structure in the transport sector for the distribution of gains from trade and the benefits of trade liberalization. They show that in the absence of some form of deregulation of the shipping industry, trade liberalization would be

[19] Fink, Mattoo, and Neagu, *Trade in International Maritime Services*, argue that, due to some reforms in the regulation affecting international shipping, maritime conferences have lost power in recent years, which has forced shipping companies to merge as a way to hold their monopoly power.

[20] Clyde, P.S. and J.D. Reitzes, "The Effectiveness of Collusion Under Antitrust Immunity: The Case of Liner Shipping Conferences," *Federal Trade Commission, Bureau of Economics Staff Report*, Dec. 1995, found at *http://www.ftc.gov/reports/shipping.pdf*, retrieved Dec. 7, 2004.

[21] Hummels, David, "Have International Transportation Costs Declined?," 1999.

[22] Francois, Joseph F., and Ian Wooton, "Trade in International Transport Services: The Role of Competition," *Review of International Economics*, 9(2), 2001, pp. 249-261.

limited, as the shipping firms would grab a significant proportion of the gains from trade.

Questionnaire Results

Much of the information obtained from the supplier questionnaire can be expressed in numerical form, though not all. Such information includes “Yes”/”No” questions, questions asking the respondent to rate the effect of logistics-related procedures on a Likkert scale (from 1 to 5), and questions asking the respondent to provide a specific number (e.g. hours of time spent in port, cost increases due to customs or regulatory procedures). In order to obtain a clearer picture of the information obtained from the questionnaire, available responses were averaged for each country and then aggregated into a series of various logistic quality indicators for the importing country. This procedure takes advantage of the presence of multiple responses - multiple respondents answering the same question as well as multiple questions on the same topic answered by a single respondent - in order to obtain more focused information on various logistics-related procedures, and mitigates the possibility that anomalous responses may affect the results. The procedure by which the questionnaire responses are aggregated to construct the various logistics indicators is described in Appendix C.

The six indicators generated from the questionnaire are reported below (table 5-1). Some items on the questionnaire are used to construct more than one indicator. The indicators are designed to summarize all of the usable information from the questionnaire that can be expressed in numerical form. The scores take on values from zero to 10, with zero indicating an ideal or best-quality logistic service environment and 10 indicating a worst-case or lowest-quality logistic service environment. The cost increase score is expressed in terms of a percentage of overall import costs.

- The *regulatory score* captures the presence or absence of certain restrictions, their impact on costs and productivity, the degree of transparency of regulation, and the degree to which foreign firms receive the same treatment as domestic firms.
- The *airport score* summarizes the speed and cost of processing cargo through airports, both overall and for individual cargo procedures.
- The *seaport score* summarizes the speed and cost of processing cargo through seaports, both overall and for individual cargo procedures, including the cost of repositioning equipment.
- The *complementary resources score* captures the presence of complementary resources such as labor, financing, and inland transport.
- The *security burden score* captures the effect of security procedures on efficiency.
- The *customs score* includes all information on the quality, efficiency, and cost of customs procedures, whether specific to airports and seaports or not specific to any mode.

The indicators of logistics quality show some systematic patterns. One would expect higher-income countries to score better on the questionnaire-based indicators, as well as countries with more liberal economic institutions. Visual inspection of the scores

Table 5-1
Indicators of logistics quality

	Regulatory score		Airport score		Seaport score		Availability of complementary resources		Burden of security procedures		Customs score
	0 to 10		0 to 10		0 to 10		2 to 10		2 to 10	Best-worst	
Sweden	0.53	Malaysia	3.82	Denmark	3.60	Mauritius	2.00	Mauritius	2.00	Canada	4.12
Finland	0.65	Iceland	3.83	Finland	4.12	Ukraine	2.40	Denmark	3.00	Mauritius	4.14
Ireland	0.67	Mauritius	3.90	Iceland	4.25	Iceland	2.50	Finland	3.00	Hong Kong	4.31
Germany	0.71	Singapore	3.98	Singapore	4.36	Denmark	2.67	Iceland	3.00	Denmark	4.38
Singapore	0.87	Finland	4.00	New Zealand	4.49	Sweden	2.70	Zimbabwe	3.00	France	4.48
Belgium	0.93	Taiwan	4.08	Taiwan	4.50	Finland	3.00	Singapore	3.67	Sweden	4.57
Portugal	1.02	Hong Kong	4.14	Hong Kong	4.64	Germany	3.28	Hong Kong	3.89	Germany	4.63
Iceland	1.09	Denmark	4.18	Sweden	4.73	Hong Kong	3.56	Canada	3.98	Belgium	4.76
Turkey	1.31	New Zealand	4.24	Poland	4.76	Belgium	3.68	Hungary	4.00	Finland	4.86
Hong Kong	1.31	Belgium	4.29	South Korea	4.83	Czech Republic	4.00	Sweden	4.00	Ireland	5.00
Chile	1.35	Zimbabwe	4.34	Philippines	4.85	Canada	4.05	Australia	4.13	Spain	5.00
Netherlands, The	1.36	Bulgaria	4.37	Malaysia	4.98	Singapore	4.09	New Zealand	4.25	United Kingdom	5.04
Spain	1.45	Mexico	4.37	Germany	5.03	France	4.13	Japan	4.40	Netherlands, The	5.05
United Kingdom	1.57	South Africa	4.40	Vietnam	5.09	Netherlands, The	4.13	Poland	4.50	Japan	5.18
Hungary	1.59	South Korea	4.49	Canada	5.13	Australia	4.15	Vietnam	4.50	Australia	5.19
Poland	1.59	Czech Republic	4.50	Ireland	5.16	Taiwan	4.39	Taiwan	4.56	Taiwan	5.20
Czech Republic	1.61	Indonesia	4.51	Turkey	5.20	New Zealand	4.50	Belgium	4.60	Singapore	5.21
New Zealand	1.63	Chile	4.51	China	5.25	Portugal	4.70	Germany	4.60	Italy	5.33
Canada	1.68	Philippines	4.59	Netherlands, The	5.28	Turkey	4.80	United Kingdom	4.80	New Zealand	5.36
France	1.73	Poland	4.62	Ecuador	5.32	United Kingdom	4.84	Bolivia	5.00	Malaysia	5.39
Costa Rica	1.90	Turkey	4.67	Venezuela	5.32	Spain	4.96	Costa Rica	5.00	Portugal	5.43
Peru	2.00	United Kingdom	4.70	Australia	5.36	Japan	4.99	France	5.00	Zimbabwe	5.43
Bulgaria	2.00	Canada	4.80	South Africa	5.42	Malaysia	5.10	Ireland	5.00	South Korea	5.50
Colombia	2.03	Ireland	4.80	United Kingdom	5.43	South Korea	5.11	South Korea	5.00	Hungary	5.50
Egypt	2.04	Netherlands, The	4.82	Chile	5.45	Chile	5.20	Netherlands, The	5.17	South Africa	5.76
Japan	2.09	Thailand	4.88	Thailand	5.50	Ireland	5.20	Malaysia	5.19	Egypt	5.76
India	2.14	Sweden	4.90	Japan	5.71	Argentina	5.33	Czech Republic	5.33	Turkey	5.79
Argentina	2.20	Egypt	4.92	Spain	5.77	Poland	5.40	Peru	5.50	India	5.86
Zimbabwe	2.20	India	4.93	Belgium	5.79	Italy	5.52	El Salvador	5.75	Chile	5.86
El Salvador	2.23	China	4.95	Portugal	5.83	South Africa	5.70	Spain	5.80	El Salvador	5.86

Table 5-1—*Continued*
Indicators of logistics quality

	Regulatory score		Airport score		Seaport score		Availability of complementary resources		Burden of security procedures		Customs score
	0 to 10		0 to 10		0 to 10		2 to 10		2 to 10	Best-worst	
Australia	2.37	Germany	4.96	Indonesia	5.91	Costa Rica	5.80	Thailand	5.83	Poland	6.00
Denmark	2.40	El Salvador	5.04	France	5.95	Russia	5.80	Chile	5.83	Argentina	6.10
Mauritius	2.43	Costa Rica	5.07	Mexico	6.03	Colombia	6.00	Bulgaria	6.00	Mexico	6.13
Taiwan	2.46	Spain	5.08	Egypt	6.04	Hungary	6.00	Egypt	6.00	Greece	6.14
Venezuela	2.64	Japan	5.13	El Salvador	6.27	Thailand	6.07	Indonesia	6.00	Czech Republic	6.19
Malaysia	2.65	Vietnam	5.13	Italy	6.28	Philippines	6.10	Portugal	6.00	China	6.19
Italy	2.67	Italy	5.21	India	6.33	El Salvador	6.17	Turkey	6.00	Costa Rica	6.29
Russia	2.77	Ukraine	5.31	Peru	6.42	Egypt	6.20	South Africa	6.25	Philippines	6.33
South Korea	2.94	Portugal	5.32	Costa Rica	6.55	Bolivia	6.40	Philippines	6.33	Thailand	6.43
Greece	3.00	France	5.37	Argentina	6.58	India	6.40	Italy	6.40	Brazil	6.52
South Africa	3.13	Hungary	5.53	Russia	6.61	Mexico	6.53	China	6.44	Ukraine	6.57
Thailand	3.43	Bolivia	5.61	Ukraine	6.79	China	6.67	Greece	6.50	Venezuela	6.81
Mexico	3.66	Brazil	5.61	Greece	7.10	Peru	6.80	India	6.50	Bolivia	6.86
Ecuador	3.67	Greece	5.64	Brazil	7.40	Zimbabwe	6.80	Russia	6.50	Iceland	6.86
Brazil	3.78	Argentina	5.84	Colombia	7.44	Vietnam	7.13	Argentina	6.67	Colombia	7.00
China	4.00	Australia	5.91	Bolivia	7.82	Brazil	7.47	Mexico	6.78	Vietnam	7.07
Philippines	4.06	Colombia	6.11	Bulgaria	([1])	Bulgaria	7.50	Brazil	7.43	Peru	7.14
Bolivia	4.13	Venezuela	6.43	Czech Republic	([1])	Ecuador	7.60	Ecuador	7.50	Indonesia	7.71
Indonesia	4.82	Russia	7.12	Hungary	([1])	Indonesia	8.00	Colombia	8.50	Russia	7.71
Ukraine	4.96	Peru	7.12	Mauritius	([1])	Greece	8.40	Venezuela	8.83	Bulgaria	8.00
Vietnam	5.15	Ecuador	7.24	Zimbabwe	([1])	Venezuela	8.80	Ukraine	9.00	Ecuador	8.00

[1] Score not available.
Source: Compiled by the Commission staff.

in table 5-1 indicates such patterns. If the questionnaire-based scores are simply proxies for other easily observable features of national economies, they may not reveal much specific information about logistic services quality *per se*, and thus using them as indicators of logistic services quality in an econometric exercise would be problematic. Table C-1 in Appendix C illustrates that while the questionnaire-based scores are somewhat correlated with each other and with variables such as per capita income and economic freedom, as measured by the Heritage Foundation index, they also contain a significant amount of independent information.

While high-income countries and countries with more liberal policies receive better scores on the questionnaire, there are some exceptions to the rule. For example, the survey picks up some difficulties with both airports and seaports in France, Italy, and Japan. Among middle- and low-income countries, the questionnaire reports that the Philippines has relatively efficient seaports and airports, while Mexico has relatively efficient airports. The possibility cannot be excluded that in some cases, the reported scores may reflect either anomalous experiences of particular respondents or errors in filling out the questionnaire. For each of the countries named above, other parts of the questionnaire responses provide results more in line with prior expectations. The analysis of the questionnaire-based indicators as described below takes the responses provided as given.

Major Findings And Interpretation[23]

In the econometric analysis, U.S. merchandise exports to each of the 52 countries in the survey were analyzed in order to determine whether logistic services impediments in the importing country are associated with lower U.S. merchandise exports. U.S. exports were differentiated by U.S. customs district, mode of transport (airborne, waterborne, or other) and origin (domestic or foreign). Other variables considered as possible influences on U.S. exports are the size of the importing country (measured by GDP), the size of the U.S. customs district (measured by total exports to the world by transport mode), distance, per capita GDP measured on a purchasing-power-parity basis, and economic freedom.

The questionnaire-based indicators were considered both one at a time and jointly as a group. When considered individually, logistics impediments are negatively associated with trade flows for almost all measures of trade flows and indicators of impediments. However, this is largely because countries which score high or low on one indicator tend to score high or low on the others. Considering the indicators as a group leads to a situation in which only the indicators with the greatest amount of independent information produce a statistically significant effect. The discussion that follows refers to specifications run with a sample selection procedure which chooses those indicators most highly associated with a particular trade flow.

- Improved quality of airport logistics is associated with higher U.S. exports. This effect is observed for all modes of departure from the United States. Improved quality of seaport logistics and of customs logistics is also frequently associated with higher U.S. exports.

[23] See Appendix C for further details on econometric techniques and methodology.

- No evidence was found that the *relative* quality of airports vs. seaports in a given country was associated with the propensity of U.S. exports to that country to leave the United States by either air or water, possibly because of the high degree of correlation between the airborne and waterborne logistics indicators.

- The estimated trade-reducing effects of logistics impediments are of approximately equal magnitude for foreign (transshipped) exports and domestic exports.

Further insights into the types of logistics improvements most likely to enhance trade can be obtained by examining the questionnaire results for the different components of airborne and seaborne logistics. As already discussed in Chapter 3, the most frequent complaints about time-consuming procedures in airports pertain to inspection and customs clearance activities (Figure 3-1) while the most frequent complaints about time-consuming procedures in seaports pertain to customs clearance, inspection, and exit gate procedures (Figure 3-2). Analysis of the cost components of the questionnaire indicates that the most costly procedures in airports involve warehousing,[24] while the most costly procedures in seaports involve charges upon entry into port and storage fees.[25]

The efficiency of the most time-consuming procedures just discussed may in many cases be influenced by government policy. Inspection and customs clearing are activities of government. Charges upon entry into seaports may be influenced by policies of the importing country mandating payment for certain services, as discussed earlier in this chapter. The cost of warehousing and storage may be influenced by the degree to which the ownership or leasing of warehouse and storage facilities within airports and seaports is subject to competition.

To approximate potential gains resulting from reductions in logistics impediments, an experiment was conducted to simulate the effect on trade of improving the airport and customs scores described in table 5-1. The exercise simulated moving a country's score halfway to the level of the median country in the survey.[26] The median country was Sweden for airborne logistics, and Turkey for customs quality. The results are reported in tables 5-2, 5-3 and 5-4.

These estimates are intended solely to illustrate the implications of the econometric analysis, by simulating the effect of an improvement in the airport (customs) score halfway to the median score, for countries with scores below the median. They are not meant to estimate the effects of any specific or proposed reform in the countries

[24] The mean survey score for the cost of warehousing is 2.67, while the other seven components of airport cost receive mean scores ranging from 3.05 to 3.58. A low score indicates higher costs.

[25] The mean survey score for the cost of charges upon entry into port (e.g. navigation or port dues, pilotage, tug assist, and line handling) is 2.57. The mean score for storage fees is also 2.67. The other five components of seaport cost receive mean scores ranging from 2.87 to 2.99. A low score indicates higher costs.

[26] This is similar to the procedure used in Wilson, Mann, and Otsuki (2003) to estimate the effects of improved trade facilitation within APEC.

Table 5-2
Simulated effect of improvement in airport quality on total U.S. airborne exports[1]

Increase of less than 10 percent	10 to 20 percent increase	21 percent or greater increase
China	Bolivia	Argentina
Costa Rica	Brazil	Australia
Egypt	Greece	Colombia
El Salvador	Hungary	Ecuador
France		Peru
Germany		Russia
India		Venezuela
Italy		
Japan		
Portugal		
Spain		
Ukraine		
Vietnam		

[1] These estimates are intended solely to illustrate the implications of the econometric analysis, by simulating the effect of an improvement in the airport (customs) score halfway to the median score, for countries with scores below the median. They are not meant to estimate the effects of any specific or proposed reform in the countries in question. The simulations are performed by changing the scores for one country at a time, holding all other attributes of that country, as well as other countries, constant. Thus, they do not capture any interaction effects that might arise from simultaneously improving the logistics environment in several countries.

Source: Compiled by Commission staff.

Table 5-3
Simulated effect of improvement in customs quality on total U.S. exports[1]

Increase of less than 10 percent	10 to 20 percent increase	21 percent or greater increase
Argentina	China	Brazil
Chile	Costa Rica	Bolivia
El Salvador	Czech Republic	Bulgaria
India	Greece	Colombia
Mexico	Philippines	Ecuador
Poland	Thailand	Iceland
		Indonesia
		Peru
		Russia
		Ukraine
		Venezuela
		Vietnam

[1] These estimates are intended solely to illustrate the implications of the econometric analysis, by simulating the effect of an improvement in the airport (customs) score halfway to the median score, for countries with scores below the median. They are not meant to estimate the effects of any specific or proposed reform in the countries in question. The simulations are performed by changing the scores for one country at a time, holding all other attributes of that country, as well as other countries, constant. Thus, they do not capture any interaction effects that might arise from simultaneously improving the logistics environment in several countries.

Source: Compiled by Commission staff.

Table 5-4
Simulated effect of improvement in customs quality on total U.S. airborne exports[1]

Increase of less than 10 percent	10 to 20 percent increase	21 percent or greater increase
Argentina	Brazil	Bolivia
Chile	China	Bulgaria
El Salvador	Costa Rica	Colombia
Greece	Czech Republic	Ecuador
India	Philippines	Iceland
Mexico	Thailand	Indonesia
Poland		Peru
		Russia
		Ukraine
		Venezuela
		Vietnam

[1] These estimates are intended solely to illustrate the implications of the econometric analysis, by simulating the effect of an improvement in the airport (customs) score halfway to the median score, for countries with scores below the median. They are not meant to estimate the effects of any specific or proposed reform in the countries in question. The simulations are performed by changing the scores for one country at a time, holding all other attributes of that country, as well as other countries, constant. Thus, they do not capture any interaction effects that might arise from simultaneously improving the logistics environment in several countries.

Source: Compiled by Commission staff.

in question. The simulations were performed by changing the scores for one country at a time, holding all other attributes of that country, as well as other countries, constant. Thus, they do not capture any interaction effects that might arise from simultaneously improving the logistics environment in several countries. The effects should be interpreted as long-run adjustments of trade to changes in logistics quality, rather than as occurring in any specific time frame.

For the countries with higher scores, as measured by the questionnaire, the econometric simulation indicates that, in a number of cases, improvement in logistics could lead to double-digit increases in U.S. exports. These results are not summed, for several reasons. First, simultaneous improvement in all of the countries in the table (not simulated here) could induce substitution among transportation routes. Second, the effects of improving airport quality and customs quality may interact with each other, either as substitutes or complements, and thus may not be additive.

Increases in trade volume, in turn, can induce general increases in economic welfare[27] and perhaps in the rate of economic growth as well. Trade can enhance welfare by providing consumers with a wider variety of products at lower cost. In addition, increases in trade may accelerate the rate of economic growth, by providing incentives for productivity increases and for the accumulation of productive resources, especially, incentives for foreign direct investment (USITC (1997)).[28]

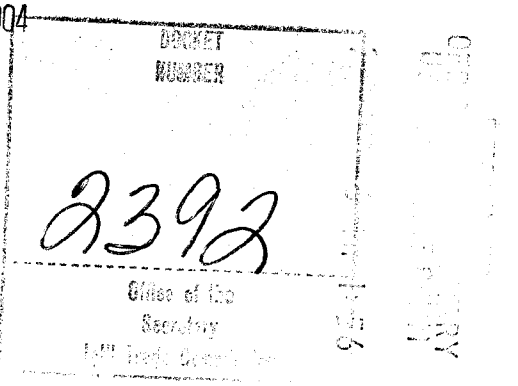
[27] The Commission did not generate a quantitative estimate of gains in economic welfare associated with the removal of logistics impediments for this study. Such estimates in Commission studies are generally produced by means of computable general equilibrium modeling. On examination, it was found that the representation of global transport activities in existing models available for welfare analysis, specifically in the GTAP model, is at present relatively crude in comparison to the actual operation of logistics activities as discussed in this investigation. On this basis, it was decided not to generate a model-based quantitative estimate of welfare effects.

[28] USITC, *The Dynamic Effects of Trade Liberalization: An Empirical Analysis*, Investigation No. 332-375, Publication 3069, Oct. 1997.

APPENDIX A
REQUEST LETTER

EXECUTIVE OFFICE OF THE PRESIDENT
THE UNITED STATES TRADE REPRESENTATIVE
WASHINGTON, D.C. 20508

AUG - 6 2004



The Honorable Stephen Koplan
Chairman
U.S. International Trade Commission
500 E Street, SW
Washington DC 20436

Dear Chairman ~~Koplan~~ Stephen:

As you know, members of the World Trade Organization (WTO) have been engaged in negotiations under the General Agreement on Trade in Services (GATS) since January 2000. Bilateral and regional negotiations on services are also underway as part of an effort to establish free trade agreements between the United States and a number of its trading partners. The central focus of these negotiations is to liberalize services trade by reducing or eliminating measures that limit effective market access.

With these negotiations in mind, a report on international logistic services, focusing on foreign logistic markets, would be of interest to my office. Such a study would build upon the Commission's recent work on express delivery services and serve as a useful tool in supporting our negotiations in bilateral free trade agreements and in the WTO. Logistic services, which involve planning, implementing, managing and controlling the flow and storage of goods, services and related information from the point of origin to the point of consumption, are increasingly important to world trade. The globalization of manufacturing has increased demand for logistic services, as has electronic commerce. Some sources value the U.S. third-party logistic market at approximately $77 billion, and estimate that the global market for logistic services is worth approximately $3 trillion. However, trade impediments remain in foreign markets for U.S. logistic services providers that may hinder market access and create inefficient reliance on domestic suppliers, which has the effect of increasing costs and reducing service quality.

Therefore, I request, pursuant to authority delegated by the President under section 332(g) of the Tariff Act of 1930, that the U.S. International Trade Commission conduct an investigation on international logistic services, focusing on foreign logistics markets, and their relationship to trade. In its investigation, the Commission should, to the extent possible, (1) provide an overview of the global logistic services markets, including major industry players, factors driving growth, and industry operations; (2) examine trade and investment in selected regional logistic service markets, including impediments to the provision of international logistic services, if any; and (3) discuss and, to the extent feasible, analyze the potential effects of removing impediments to logistic services on trade and economic welfare. The Commission is encouraged to include information gathered through public hearings and other consultations with interested parties.

In light of the fact that WTO members will be submitting revised offers by May 2005, the Commission is requested to deliver this report no later than nine months from receipt of this letter. My office intends to make the Commission's report available to the general public in its entirety. Therefore, the report should not contain any confidential business or national security classified information.

The Commission's assistance in this matter is greatly appreciated.

Thanks!

Sincerely,

Robert B. Zoellick

APPENDIX B
FEDERAL REGISTER NOTICE

investigation was not published at the time. The Commission, however, issued a final phase notice of scheduling, which was published in the **Federal Register** (69 FR 33401, June 15, 2004) as provided in section 207.21 of the Commission's rules. Parties that filed entries of appearance in the preliminary phase of the investigation need not enter a separate appearance for the final phase of the investigation. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigation.

Background

On October 16, 2003, a petition was filed with the Commission and Commerce by Alcoa, Inc., Pittsburgh, PA, alleging that an industry in the United States is materially injured or threatened with material injury by reason of LTFV imports of certain aluminum plate from South Africa. Accordingly, effective October 16, 2003, the Commission instituted antidumping duty investigation No. 731–TA–1056 (Preliminary).

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the **Federal Register** of October 24, 2003 (68 FR 61012). The conference was held in Washington, DC, on November 6, 2003, and all persons who requested the opportunity were permitted to appear in person or by counsel.

The Commission transmitted its determination in this investigation to the Secretary of Commerce on December 1, 2003. The views of the Commission are contained in USITC Publication 3654 (December 2003), entitled **Certain Aluminum Plate from South Africa: Investigation No. 731–TA–1056 (Preliminary)**.

By order of the Commission.

Issued: August 27, 2004.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. 04–19997 Filed 9–1–04; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 332–463]

Logistic Services: An Overview of the Global Market and Potential Effects of Removing Trade Impediments

AGENCY: International Trade Commission.

ACTION: Institution of investigation and scheduling of public hearing.

EFFECTIVE DATE: August 27, 2004.

SUMMARY: Following receipt of a request on August 6, 2004 from the United States Trade Representative (USTR), the Commission instituted investigation No. 332–463, *Logistic Services: An Overview of the Global Market and Potential Effects of Removing Trade Impediments*, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)).

FOR FURTHER INFORMATION CONTACT: Information specific to this investigation may be obtained from Michael Nunes, Project Leader (202–205–3462; *michael.nunes@usitc.gov*), Amanda Horan, Deputy Project Leader, (202–205–3459; *amanda.horan@usitc.gov*), or Richard Brown, Chief, Services and Investment Division (202–205–3438; *richard.brown@usitc.gov*), Office of Industries, U.S. International Trade Commission, Washington, DC 20436. Media should contact Peg O'Laughlin, Public Affairs Officer (202–205–1819; *margaret.olaughlin@usitc.gov*). For information on the legal aspects of this investigation, contact William Gearhart of the Office of the General Counsel (202–205–3091; *willam.gearhart@usitc.gov*). Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal on (202)–205–1810.

SUPPLEMENTARY INFORMATION:

Background: In his request letter, the USTR noted that the globalization of manufacturing and electronic commerce have increased demand for logistic services, which involve planning, implementing, managing, and controlling the flow and storage of goods, services, and related services from the point of origin to the point of consumption. As requested by USTR, the Commission's report will focus on foreign logistic services markets and their relationship to trade. The report will, to the extent possible: (1) Provide an overview of the global logistic services market, including major industry players, factors driving growth, and industry operations; (2) examine trade and investment in selected regional logistic service markets, including impediments to the provision of international logistic services, if any; and (3) discuss and, to the extent possible, analyze the potential effects of removing impediments to logistic services on trade and economic welfare.

The USTR asked that the Commission furnish its report by May 6, 2005, and that the Commission make the report available to the public in its entirety.

Public Hearing: A public hearing in connection with the investigation will be held at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC, beginning at 9:30 a.m. on November 18, 2004. All persons shall have the right to appear, by counsel or in person, to present information and to be heard. Requests to appear at the public hearing should be filed with the Secretary, United States International Trade Commission, 500 E Street SW., Washington, DC 20436, no later than 5:15 p.m., November 4, 2004. Any prehearing briefs (original and 14 copies) should be filed not later than 5:15 p.m., November 8, 2004; the deadline for filing post-hearing briefs or statements is 5:15 p.m., December 14, 2004. In the event that, as of the close of business on November 4, 2004, no witnesses are scheduled to appear at the hearing, the hearing will be canceled. Any persons interested in attending the hearing as an observer or non-participant may call the Secretary to the Commission (202–205–1806) after November 4, 2004, for information concerning whether the hearing will be held.

Written Submissions: In lieu of or in addition to participating in the hearing, interested parties are invited to submit written statements (original and 14 copies) concerning the matters to be addressed by the Commission in its report on this investigation. Commercial or financial information that a submitter desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business information, will be made available in the Office of the Secretary to the Commission for inspection by interested parties. The Commission will not include any confidential business information in the report it sends to the USTR. To be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted to the Commission at the

earliest practical date and should be received no later than the close of business on December 14, 2004. All submissions should be addressed to the Secretary, United States International Trade Commission, 500 E Street SW., Washington, DC 20436. The Commission's rules do not authorize filing submissions with the Secretary by facsimile or electronic means, except to the extent permitted by section 201.8 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.8) (see Handbook for Electronic Filing Procedures, *ftp://ftp.usitc.gov/pub/reports/electronic_filing_handbook.pdf*). Persons with questions regarding electronic filing should contact the Secretary (202–205–2000; *edis@usitc.gov*).

Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000. General information concerning the Commission may also be obtained by accessing its Internet server (*http://www.usitc.gov*).

List of Subjects

WTO, GATS, Logistic services, Transportation services, Maritime services, Air transport services, Courier services, Express delivery services.

By order of the Commission.

Issued: August 27, 2004.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. 04–19998 Filed 9–1–04; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Under the Comprehensive Environmental Response Compensation and Liability Act, the Clean Water Act, and the Oil Pollution Act

In accordance with 28 CFR 50.7 and section 122 of the Comprehensive Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9622, notice is hereby given that on August 20, 2004, a proposed consent decree in *United States and State of Indiana* v. *Atlantic Richfield Company; ARCO Environmental Remediation, L.L.C.; BP Products North America Inc.; E.I. du Pont De Nemours and Company; Exxon Mobil Corporation; GATX Corporation; Georgia-Pacific Corporation; Ispat Inland Inc.; and United States Steel Corporation*, No. 2:04CV348 (N.D. Ind.), was lodged with the United States District Court for the Northern District of Indiana.

In the complaint, the United States and the State of Indiana, pursuant to the Comprehensive Environmental Response, Compensation, land Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9601, *et seq.*, the Federal Water Pollution Control Act, 33 U.S.C. § 1251 *et seq.*, commonly known as the Clean Water Act ("CWA"), and the Oil Pollution Act ("OPA"), 33 U.S.C. § 2701 *et seq.*, seek declaratory relief, response costs and damages for injury to, destruction of, or loss of natural resources belonging to, managed by, held in trust by, controlled by or appertaining to the United States and the State of Indiana, as trustees for those resources, including the costs of assessing such injury, resulting from releases and/or threat of releases of hazardous substances, and discharges and/or substantial threats of discharges of oil, into or within the Grand Calumet River and/or the Indiana Harbor Canal, comprising a portion of the Grand Calumet River/Indiana Harbor Canal Site in northwest Indiana.

Under the proposed consent decree, the Defendants will pay $53,653,000 toward restoration of the natural resources, and a total of $2.7 million to the United States Department of the Interior and the Indiana Department of Environmental Management to reimburse them for their costs of conducting natural resource damage assessments, and convey to the State 233 acres of habitat that will be protected.

The Department of Justice will receive for a period of thirty (30) days from the date of this publication comments relating to the proposed consent decree. Comments should be addressed to the Assistant Attorney General, Environment and Natural Resources Division, P.O. Box 7611, U.S. Department of Justice, Washington, DC 20044–7611, and should refer to *United States, et al.* v. *Atlantic Richfield, et al.*, No. 2:04CV348 (N.D. Ind.), and D.J. Ref. 90–11–3–1683. Commenters may request an opportunity for a public meeting in the affected area, in accordance with Section 7003(d) of Resource Conservation Recovery Act, 42 U.S.C. § 6973(d).

The proposed consent decree may be examined at: (1) The Office of the United States Attorney for the Northern District of Indiana, 5400 Federal Plaza, Suite 1500, Hammond, Indiana 46320 (contact Asst. U.S. Attorney Wayne Ault (219–937–5500)); (2) the offices of the U.S. Fish and Wildlife Service, 620 S. Walker St., Bloomington, Indiana 47403 (contact Daniel Sparks (812–334–4261)); (3) Indiana Department of Environmental Management Northwest Regional Office, 8315 Virginia Street, Suite 1, Merrillville, Indiana 46410 (Office Hours: 8:15–4:45) (contact Malani Goel, Director (219–757–0265 or 888–209–8892 toll free in Indiana)); and (4) U.S. EPA Region 5, 7th Floor Records Center, 77 West Jackson Blvd., Chicago, Illinois 60604 (contact Assoc. Regional Counsel Richard Nagle (312–353–8222)).

During the public comment period, the proposed consent decree may also be examined on the following Department of Justice Web site, *http://www.usdoj.gov/enrd/open.html*. A copy of the proposed consent decree may also be obtained by mail from the Consent Decree Library, P.O. Box 7611, U.S. Department of Justice, Washington, DC 20044–7611 or by faxing or e-mailing a request to Tonia Fleetwood (*tonia.fleetwood@usdoj.gov*), fax no. (202) 514–0097, phone confirmation number (202) 514–1547. In requesting a copy from the Consent Decree Library, please enclose a check in the amount of $17.25 (25 cents per page reproduction cost) payable to the U.S. Treasury.

William Brighton,

Assistant Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 04–19979 Filed 9–1–04; 8:45 am]

BILLING CODE 4410–15–M

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Under Section 122(d)(2) of CERCLA, 42 U.S.C. 9622(d)(2), and 28 CFR 50.7, notice is hereby given that on August 24, 2004, a proposed Consent Decree in *United States* v. *Ralph Bello, et al.*, Civil Action No. 3:01 CV 1568 (SRU), was lodged with the United States District Court for the District of Connecticut.

In this action, the United States sought recovery of response costs incurred by the United States Environmental Protection Agency in conducting a soil cleanup removal action at the National Oil Service Superfund Site in West Haven, Connecticut. The United States filed its complaint pursuant to Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. 9607(a), seeking recovery of response costs incurred at the Site. Defendant, The Torrington Company, named several

[

APPENDIX C
DETAILS OF THE ECONOMETRIC ANALYSIS

Generating Indicators of Logistics Quality From the Questionnaire

The following discussion documents the procedures used to generate indicators of logistics quality from the questionnaire, including the method of aggregation and the procedures for handling missing data. The six indicators generated from the questionnaire are as follows:

- Regulatory score
- Airport score
- Seaport score
- Complementary resources score
- Security burden score
- Customs score

The indicators are designed to summarize all of the usable information from the questionnaire that can be expressed in numerical form. The first five scores take on values from zero to 10, with zero indicating an ideal or best-quality logistics environment and 10 indicating a worst-case or lowest-quality logistics environment. The cost increase score is expressed in terms of a percentage of overall import costs.

The first step in processing the numerical portion of the questionnaire was to obtain average responses for each of the 52 countries for which data were collected, taking the mean response for all respondents answering a particular question for a particular country.

The second step was to re-scale the responses so that high scores corresponded to inefficient, undesirable or un-liberalized logistics environments while low scores corresponded to efficient, desirable or liberalized environments. This was done as follows. The questions on the survey are formatted in different ways, of which the main three are the following:

- Yes-No questions. These were originally coded as “1" for Yes and “0" for no, and then re-scaled so that “1" corresponded to an inefficient, undesirable, or un-liberalized logistics environment from the standpoint of U.S. exporters, while “0" corresponded to an efficient, desirable, or liberalized one. For example, question I-1, “In this country, are foreign logistics providers permitted to own and operate ground transportation fleets and equipment?” was coded so that “1" corresponded to “No,” while question I-5, “For this country, does your firm have difficulty obtaining entry visas and work permits?” was re-coded so that “1" corresponded to “Yes.”

- Likkert-scaled questions, which permitted the respondent to choose an intensity of response ranging from 1 to 5. The extremes may indicate strong agreement or disagreement with a statement, whether a procedure is very fast or very slow, or very costly or not very costly, whether a policy has a substantial impact or no impact, etc. If the response “5" corresponded to an inefficient, undesirable, or un-

liberalized logistics environment from the standpoint of U.S. exporters in the original question, the question was coded as written (e.g. Question II-1A, "Please rate the following cargo procedures in terms of speed (1 = very fast; 5 = slow), while if the response "5" corresponded to an efficient, desirable, or liberalized logistics environment (e.g. Question II-2A, "Please rate the following auxiliary services in terms of cost (1 = very costly, 5 = not costly), the response was re-scaled by subtracting the original response from 6, so that a value of 5 was re-scaled as 1, 4 as 2, 3 as 3, and so on.

- Questions requiring a numerical response (i.e. scalar questions). These include Questions II-1 and III-1 (number of hours it takes to process cargo in airports and seaports, respectively) and Questions IV-17 and IV-18 (percent added to total import costs by regulatory and inspections procedures and by customs procedures, respectively). Questions II-1 and III-1 were re-scaled so that the country for which the largest number of hours was reported was re-scaled to a value of 10, while other countries were re-scaled in proportion to the reference country. For example, a country which reported half as many hours of cargo processing as the most time-consuming country would be re-scored as a 5.[1]

Questions on similar topics were averaged into sub-indicators. The sub-indicators were in turn re-scaled so that the highest score corresponded to 10, with other scores in proportion to the highest score, and then averaged into indicators above. For some cases, there were no responses available for some questions for some countries. In these cases the sub-indicators were constructed as the average of available indicators. In cases for which some sub-indicators were missing for some countries, the indicators were constructed as the average of available sub-indicators. This left some cases in which indicators were still missing for some countries due to lack of questionnaire responses.[2]

The indicators and sub-indicators were constructed as follows. In some cases, items on the questionnaire have been used in the construction of more than one indicator.

Regulatory Score

The regulatory score was constructed as the mean of the following seven sub-indicators, re-scaled as described above:

- Restrictions on ground fleet ownership (Question I-1)

- Effect of local-resident hiring requirements (Scored as 0 if the answer to Question I-2 was "No". If "Yes," scored as the re-scaled sum of the responses to Questions 1-2A and 1-2B).

- Impact of establishment restrictions (Scored as the re-scaled sum of responses to questions I-3 and I-3A).

---

[1] Question III-3, which was designed to obtain the percentage of seaports in each country by type of ownership and organization (landlord ports, tool ports, service ports, privately-owned ports), proved not to be usable. Though responses were received, there was substantial disagreement among firms operating in the same country, and percentages often did not add even approximately to 100.

[2] In the case of Zimbabwe, questionnaire data provided partial but incomplete responses on Section III of the questionnaire (modal-specific questions for seaports). Since Zimbabwe has no seaport, these responses were re-coded as "missing".

- Non-transparent or discriminatory licensing (average of I-4 and I-4B, re-scaled).
- Difficulty with entry visas or work permits (Scored as 0 of the answer to I-5 is "No." If "Yes," scored as the re-scaled response to I-5A).
- Non-transparent or discriminatory regulation (average of I-6 and I-7, re-scaled. Not enough responses were received on I-6A and I-7A to be useful).
- "Non-modal" questions on regulation from Part IV of the survey (average of IV-4, IV-5, IV-6 and IV-16, re-scaled).

Airport Score

The airport score was constructed as the mean of the following four sub-indicators:

- Cargo processing hours (Question II-1, re-scaled so that the highest number of hours receives a score of 10)
- Cargo processing delay factors (Mean of seven components of II-1A)
- Cost of auxiliary services (Question II-2, re-scaled)
- Components of auxiliary services costs (Mean of seven components of II-2A)

Seaport Score

The seaport score was constructed as the mean of the following four sub-indicators:

- Cargo processing hours (Question III-1, re-scaled so that the highest number of hours receives a score of 10. Responses of zero hours were treated as missing values)
- Cargo processing delay factors (Mean of six components of III-1A)
- Cost of auxiliary services (Question III-2, re-scaled)
- Components of auxiliary services costs (Mean of seven questions: the six components of III-2A, and III-4 (costs of re-positioning equipment within country)

Complementary Resources Score

This score was constructed as the mean of Questions IV-8 through IV-11, re-scaled. These questions capture the availability of complementary resources such as inland transport, finance, and labor.

Burden of Security Procedures

This score was constructed as the mean of Questions IV-12 and IV-13, re-scaled.

Customs Score

The customs score assigns equal weights to the responses to the following seven questions, after they have been re-scaled on the 0-10 scale: Questions II-1A part 6, II-2A part 6, III-1A part 5, IV-1, IV-2, IV-3 and IV-4.

Econometric Analysis

In order to identify the potential effect of international differences in logistics quality on international trade, the scores developed from the questionnaire were introduced into an econometric analysis in order to test the hypothesis that one or more of the indicators are associated with higher U.S. exports. The analysis uses a standard framework in international economics known as a "gravity model," in which exports from one country to another are systematically higher when either the exporting or importing country is larger, and systematically lower when the distance between the two countries increases.[3] In particular, bilateral U.S. exports for the year 2001 are modeled between pairs of U.S. customs districts and importing countries in the survey. Exports are estimated to be larger when either the customs district is larger (in terms of U.S. exports from that district, measured by the appropriate mode - total, airborne, waterborne, or other) or the importing country is larger (in terms of GDP) and smaller when the distance between the two countries is larger (measured as the great-circle distance, in kilometers, between the largest city in the U.S. customs district and the largest city in the importing country).

Separate analyses are performed for total U.S. exports, airborne U.S. exports, waterborne U.S. exports, and other U.S. exports (primarily those leaving by land). Separate analyses are also performed for U.S. domestic exports and for U.S. foreign (transshipped) exports, yielding a total of eight different definitions of exports analyzed (e.g. total domestic exports, airborne foreign exports, waterborne domestic exports), etc. The definition of the size of the U.S. customs district is modified to match the mode of transport; e.g. U.S. waterborne exports by customs district are used in the analysis of waterborne exports.[4] There are 42 geographical customs districts[5] in the United States and 52 countries in the survey, giving 2,226 potential trade pairs to be analyzed for each definition of trade.

Other variables included in the analysis as potential influences on U.S. exports include per capita GDP measured on a purchasing-power-parity (PPP) basis, and institutional quality as measured by the "economic freedom" index reported by the Heritage Foundation. Both of these variables refer to the year 2001, the same year as the trade data. These variables are included because they

[3] For a review of basic gravity techniques and their application to policy problems, see Jeffrey A. Frankel (1997), *Regional Trading Blocs in the World Economic System*, Washington: Institute for International Economics, particularly chapters 3-6.

[4] This can make a substantial difference in the analysis. For example, in 2001 83 percent of exports by value left the Houston/Galveston district by water, 71 percent of exports leaving the New York district traveled by air, and 94 percent of exports leaving the Detroit district traveled by other mode.

[5] Excluding such statistical categories as "low-valued shipments' and "shipments by mail".

may also be determinants of the level of logistics quality. Thus, a finding that logistics scores from the questionnaire are significant determinants of trade when these variables are present in the analysis indicates an increased likelihood that the questionnaire has captured economically significant measures of logistics quality per se. GDP, per capita GDP, the size of the U.S. customs district, and distance are expressed as natural logarithms in the analysis.

Table C-1 presents a correlation matrix for the six questionnaire indicators, economic freedom, and per capita GDP. There is a substantial degree of correlation among the candidate regressors, thus posing issues of robustness with respect to variable selection. A variety of specifications were examined in an attempt to establish a robust set of results. For each specification, the questionnaire scores were introduced one at a time (Table C-2), as a group of all six scores (also Table C-2), and using a variable selection procedure (Table C-3).[6] These options were tried in order to test the possibility that respondents to the questionnaire may have scored the same countries "high" or "low" on all aspects of logistics, without distinguishing carefully, e.g. between airborne and waterborne logistics, or between regulation and customs. All specifications in Table C-2 contain importing-country GDP, economic distance, size of the U.S. customs district by mode, economic freedom, and per capita GDP as control variables. The specifications in Table C-3 all contain importing-country GDP, economic distance and size of the U.S. customs district by mode, but allow the other variables to be freely selected.[7] In general, the control variables performed as expected, with exports increasing in the size of the U.S. customs district, the GDP of the importing country, and economic freedom, and decreasing in economic distance. The effect of per capita GDP on a PPP basis was generally small and not statistically significant.

For all of the questionnaire variables, a higher score means a lower degree of logistics quality. Thus, the negative effects shown in the table may be interpreted as evidence that impediments to logistics in the importing country lower the value of U.S. exports to that country. The estimated effects represent the effect on the natural logarithm of U.S. exports of a one-point increase in the questionnaire score. The tables are highlighted to show degrees of statistical significance.

In most of the specifications, improved quality of airport logistics is associated with higher U.S. exports. This effect is observed for all modes of departure from the United States. Improved quality of seaport logistics and of customs logistics is also frequently associated

[6] The procedure employed was a stepwise selection procedure in which all regressions included importers' GDP, the size of the U.S. customs district, and distance, while the questionnaire variables, economic freedom, and per capita GDP were introduced one at a time. Variables were introduced if they were marginally significant at the 0.15 level but retained only if they were significant at the 0.05 level.

[7] Both Tables C-2 and C-3 include specifications in which either the waterborne logistics score was used to explain airborne exports, or the airborne score was used to explain vessel exports. An alternative procedure would have been to constrain the results so that the mode-specific logistic scores were only used to explain U.S. exports leaving by the corresponding mode. There are two rationales for examining the specifications as presented. First, because of the high degree of correlation between the airborne and waterborne scores, they may not contain sufficient information to capture the *relative* level of logistics impediments by mode in a particular country. Second, because of transshipment, a particular shipment may leave the United States by one mode but arrive at its final destination by another mode, making the quality of both modes potentially important in practice.

Table C-1
Correlations among questionnaire indicators and related variables

Bold italics - significant at .01, one-tailed **Bold - significant at .05, one-tailed** *Italics - significant at .10, one-tailed*

	Regulatory score	Airborne score	Waterborne score	Complementary resources score	Security burden score	Customs score	Economic freedom	Per capita GDP, PPP
Regulatory score	1.000							
Airport score	***0.237***	1.000						
Seaport score	***0.358***	***0.588***	1.000					
Complementary resources score	***0.495***	***0.468***	***0.498***	1.000				
Security burden score	***0.457***	***0.557***	***0.643***	***0.556***	1.000			
Customs score	***0.557***	***0.495***	***0.460***	***0.671***	***0.590***	1.000		
Economic freedom	***0.638***	**0.292**	**0.365**	***0.553***	***0.474***	***0.598***	1.000	
Per capita GDP, PPP	***-0.569***	-0.134	**-0.331**	***-0.545***	***-0.370***	***-0.554***	***-0.702***	1.000

Source: USITC staff calculations. The matrix is symmetric - thus, only the lower-triangular portion is shown. All correlations use observations for 51 countries except those involving the waterborne score, which use 46 observations.

Table C-2
Effects of questionnaire variables on U.S. exports

	Total	Airborne	Vessel	Other		Total	Airborne	Vessel	Other
Bold italics - significant at .01, one-tailed				**Bold - significant at .05, one-tailed**				*Italics - significant at .10, one-tailed*	
Using questionnaire variables individually:					Using questionnaire variables together:				
Regulatory score					Regulatory score				
Domestic	0.06	0.06	0.14	0.09	Domestic	0.02	*0.21*	-0.02	*0.34*
Foreign	*0.24*	0.18	0.18	***0.27***	Foreign	***0.50***	***0.54***	0.08	***0.51***
Airport score					Airport score				
Domestic	***-0.49***	***-0.64***	-0.16	***-0.91***	Domestic	***-0.51***	**-0.43**	-0.34	*-0.44*
Foreign	***-0.94***	***-0.93***	-0.27	***-0.55***	Foreign	***-0.61***	*-0.37*	*-0.46*	-0.28
Seaport score					Seaport score				
Domestic	***-0.52***	***-0.56***	**-0.28**	***-0.69***	Domestic	***-0.49***	**-0.49**	**-0.45**	*-0.37*
Foreign	***-0.65***	***-0.68***	-0.18	***-0.29***	Foreign	*-0.35*	**-0.39**	-0.08	-0.09
Complementary resources score					Complementary resources score				
Domestic	0.07	-0.86	*0.17*	*-0.20*	Domestic	***0.39***	*0.18*	***0.37***	0.16
Foreign	*-0.17*	***-0.29***	0.08	**-0.16**	Foreign	0.12	-0.05	0.21	-0.02
Security burden score					Security burden score				
Domestic	-0.02	**-0.16**	**0.18**	***-0.45***	Domestic	0.18	*0.20*	**0.31**	-0.20
Foreign	***-0.34***	***-0.44***	-0.03	***-0.34***	Foreign	-0.06	-0.09	-0.06	*-0.19*
Customs score					Customs score				
Domestic	*-0.23*	***-0.49***	0.03	***-0.63***	Domestic	**-0.48**	**-0.57**	-0.30	-0.47
Foreign	***-0.58***	***-0.70***	0.03	***-0.45***	Foreign	*-0.55*	**-0.53**	0.11	-0.22

Source: USITC staff calculations

Table C-3
Effects of questionnaire and related variables on U.S. exports - using stepwise selection procedure

	Total	Airborne	Vessel	Other
		Bold italics - significant at .01, one-tailed **Bold - significant at .05, one-tailed**		
Regulatory score				
Foreign	***0.42***	***0.50***		***0.47***
Airport score				
Domestic	***-0.47***	**-0.39**	***-0.54***	***-0.87***
Foreign	***-0.74***	**-0.38**	**-0.36**	***-0.36***
Seaport score				
Domestic	***-0.41***	**-0.30**		
Foreign	**-0.43**	***-0.45***		
Complementary resources score				
Domestic	***0.38***		***0.34***	
Security burden score				
Foreign				**-0.23**
Customs score				
Domestic	***-0.55***	***-0.49***		
Foreign		***-0.60***		
Economic freedom				
Domestic			***-0.50***	***-0.71***
Foreign	***-1.24***	***-1.07***	***-0.52***	**-0.46**

Source: Commission calculations. All models include GDP of importer, total U.S. exports from customs district, and distance from customs district to importer, expressed in natural logarithms. Variables are entered into the model at a significance level of 0.15, but retained only at a significance level of 0.05. Blank cells indicate variables not selected. Per capita income (measured on a PPP basis) was included as a candidate regressor but not selected in any of the specifications.

with higher U.S. exports. The statistical analysis in this form does not provide strong evidence of a particular association of the airport and seaport indicators with airborne and waterborne exports, respectively. Indicators of regulatory impediments are weakly associated with higher exports. As table C-1 indicates, this may be in part because of the degree of multi-collinearity among the regressors. The estimated trade-reducing effects of logistics impediments are of approximately equal magnitude for foreign (transshipped) exports and domestic exports.

Finally, Table C-4 illustrates two specifications of the dependent variable (U.S. total domestic exports and U.S. airborne domestic exports), comparing the results of the variable selection procedure and the "kitchen sink" procedure of using all available regressors. This table illustrates that the results obtained for the variables included in both procedures are robust to the exclusion of marginal regressors.

Variable Definitions and Sources

U.S. exports for 2001 by mode of transport (total, airborne, waterborne, other) and by origin (domestic or foreign) were taken from *U.S. Exports of Merchandise*, U.S. Department of Commerce, Economics and Statistics Information, U.S. Census Bureau, Washington, DC, on CD-ROM, and are measured in U.S. dollars.

Total GDP and per capita GDP on a purchasing-power parity basis were taken from *World Development Indicators*, World Bank (downloaded from *http://devdata.worldbank.org/dataonline/*) or, for Taiwan, from the CIA World Factbook, and are measured in U.S. dollars.

The economic freedom index is originally derived from *2001 Index of Economic Freedom* Heritage Foundation, Washington, DC, and downloaded from *http://www.heritage.org/research/features/index/search.cfm* . This variable takes values ranging from 1 (most free) to 5 (most repressed). Thus, the expected sign of this variable in the regressions below is negative.

Economic distance between the largest city in each U.S. customs district and each importing country is calculated by USITC staff using latitude and longitude data for each city pair and a standard formula from spherical trigonometry, and is measured in kilometers.

Table C-4
Representative specifications of the regression

Independent variables	Dependent variables			
	log (U.S. total domestic exports)		log (U.S. airborne domestic exports)	
	Variable	All variables	Variable	All variables
Constant	-38.52***	-37.93***	-43.80***	-42.60***
	(12.73)	(10.82)	(16.00)	(12.68)
Importers' GDP.	1.29***	1.31***	1.24***	1.21***
	(15.30)	(14.90)	(15.16)	(12.90)
log(U.S. exports of district)[2]	1.49***	1.49***	1.76***	1.76***
	(26.21)	(26.22)	(52.45)	(52.58)
Distance	-0.93***	-0.91***	-0.69***	-0.68***
	(5.74)	(5.57)	(4.26)	(4.10)
Economic freedom	([1])	-0.45*	([1])	-0.68***
		(1.89)		(2.78)
Per capita GDP.	([1])	-0.09	([1])	0.04
		(0.50)		(0.22)
Regulation score	([1])	0.03	([1])	0.20*
		(0.27)		(1.66)
Airport score	-0.47***	-0.50***	-0.39**	-0.41**
	(2.88)	(2.81)	(2.36)	(2.28)
Seaport score	-0.41***	-0.53***	-0.30**	-0.50***
	(3.04)	(3.56)	(2.31)	(3.32)
Complementary resources score	0.38***	0.36***	([1])	0.16*
	(4.32)	(3.85)		(1.73)
Security burden score	([1])	0.20*	([1])	0.21*
		(1.80)		(1.86)
Customs score	-0.55***	-0.46**	-0.49***	-0.56**
	(3.05)	(2.08)	(3.18)	(2.49)
Number of observations	1,932	1,932	1,932	1,932
R^2	0.3934	0.3950	0.6306	0.6373

[1] Variable excluded from specification
[2] Refers to total exports in first two columns, and airborne exports in second two columns.

Note.–Absolute values of T-statistics are in parentheses. The note *** indicates significant at .01, ** indicates significant at .05, * indicates significant at .10 (one-tailed test).

Source: USITC staff calculations.

References to Chapter 5

Andriamananjara, Soamiely, Hugh Arce, and Michael Ferrantino (2004), "Transshipment in the United States," *USITC Office of Economics Working Paper* 2004-04-B, April.

CARANA Corporation (2003) *The Role of Transportation & Logistics in International Trade: The Developing Country Context: Phase I Report* (downloaded from *http://www.tessproject.com/products/special_studies/trans&log_phase_1_report.pdf*, November 19, 2004).

Cazzaniga Francesetti, Dionisia and Foschi, Alga D., "The Impact of Hub and Spokes Networks in the Mediterranean Peculiarity". 2002 IAME Annual Conference, Panama (downloaded from *http://ssrn.com/abstract=385166*, November 19, 2004)

Clark, Ximena, David Dollar, and Alexandro Micco (2004) "Port Efficiency, Maritime Transport Costs and Bilateral Trade," *NBER Working Paper* No. 10353, March 2004.

Clyde, P.S. and J.D. Reitzes, 1995, "The Effectiveness of Collusion Under Antitrust Immunity: The Case of Liner Shipping Conferences," Federal Trade Commission, Bureau of Economics Staff Report, December. (downloaded from *http://www.ftc.gov/reports/shipping.pdf*, December 7, 2004)

Damas, Philip (2001) "Transship or direct: a real choice?" *Americana Shipper*, Vol 43, No. 6, June 2001.

Fink, Carsten, Aaditya Mattoo, and Ileana Cristina Neagu (2002) "Trade in International Maritime Services: How Much Does Policy Matter?" *The World Bank Economic Review*, Vol. 16, No. 1.

Francois, Joseph F., and Ian Wooton (2001) "Trade in International Transport Services: The Role of Competition," *Review of International Economics*, 9(2), 249-261.

Hoffmann, Jan (1998) "Concentration in Liner Shipping: Causes and Impacts," *World Sea Trade Service Review*, Volume 1, Third Quarter 1998.

Hummels, David (1999) "Have International Transportation Costs Declined?", mimeo.

Limão, Nuno and Anthony J. Venables (2001) "Infrastructure, Geographical Disadvantage, Transport Costs, and Trade," *The World Bank Economic Review*, Vol. 15, No. 3, 451-479.

Londoño-Kent, María del Pilar and Paul E. Kent, (2003) "A Tale of Two Ports: The Cost of Inefficiency," Research Report submitted to the Office of the Chief Economist for Latin America and the Caribbean, The World Bank, December 2003.

Micco, Alejandro and Natalia Pérez (2002) "Determinants of maritime transport costs," Inter-American Development Bank, Research department, Working Paper #441.

Micco, Alejandro and Tomas Servrisky (2004) "Infrastructure, Competition Regimes and Air Transport Costs: Cross-Country Evidence," *World Bank Research Working Paper* 3355, July 2004.

U.S. International Trade Commission (1997), *The Dynamic Effects of Trade Liberalization: An Empirical Analysis*, Investigation No. 332-375, Publication 3069, October 1997. Washington, DC: USITC.

Wilson, John, Catherine Mann, and Tsunehiro Otsuki (2003) "Trade Facilitation and Economic Development: Measuring the Impact," *World Bank Policy Research Working Paper* 2988, March 2003.

APPENDIX D
GATS COMMITMENTS RELATED TO TIER 1 AND TIER 2 LOGISTIC SERVICES BY COUNTRY

Country	Service Sector	GATS Commitments[1]	Comments
Argentina	• Management consulting	• Full	
Australia	• Management consulting	• Full	
	• Maritime freight transport	• Partial	• Limits on certain types of shipping in mode 1, establishment limits in mode 3
	• Maritime auxiliary services	• Partial	• Partial commitments for storage and warehousing, full commitments for freight forwarding and pre-shipment inspection services
	• Road freight transport	• Partial	• Mode 1 unbound
	• Storage and warehouse	• Partial	• Excludes services related to maritime transport
	• Freight transport agency	• Full	• Excludes services related to maritime transport
	• Other auxiliary transport services: pre-shipment inspection	• Full	
Belgium	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled
Bolivia	• Management consulting	• Full	
Brazil	• Management consulting	• Partial	• Modes 1 and 2 unbound
	• Rail freight transport	• Partial	• Modes 1 and 2 unbound. Foreign equity limited to 20 percent for mode 3.
	• Cargo handling	• Partial	• Unbound modes 1 and 2
	• Storage and warehouse	• Partial	• Unbound modes 1 and 2
Bulgaria	• Management consulting	• Full	
	• Storage and warehouse	• Partial	• Commitments apply to road transport only. Mode 1 unbound due to lack of feasibility.
	• Freight transport agency	• Partial	• Excludes local pickup and delivery. Commercial presence required, foreign equity limited to 49 percent.
	• Other auxiliary transport services	• Partial	• Excludes local pickup and delivery. Commercial presence required, foreign equity limited to 49 percent.

See footnote at end of table.

Country	Service Sector	GATS Commit-ments[1]	Comments
Canada	• Management consulting	• Partial	• For Quebec and Newfoundland, citizenship requirements for specific subsectors in modes 1 and 2
	• Maritime freight transport	• Partial	• Unbound modes 1, 2, and 3, excludes cabotage
	• Maritime auxiliary services	• Full	• Full commitments for maritime agency and maritime freight forwarding services
	• Rail freight transport	• Partial	• Mode 1 excludes cabotage, residency requirements for Board of Directors in Manitoba and Newfoundland
	• Road freight transport	• Partial	• Excludes cabotage. In Quebec, commitments apply to highway transport only. In British Columbia, Saskatchewan, Manitoba, Ontario, Québec, Prince Edward Island, Nova Scotia and Newfoundland, economic needs tests apply.
	• Cargo handling	• Full	• Does not apply to maritime transport
	• Storage and warehouse	• Full	• Does not apply to maritime transport
	• Freight transport agency	• Full	• Does not apply to maritime transport
	• Other auxiliary transport services	• Full	• Does not apply to maritime transport or customs brokerage
	• Customs brokerage	• Partial	• Residency requirements for individuals and corporate Boards of Directors
Chile	• Management consulting	• Full	
China	• Management consulting	• Partial	• Joint venture requirement for mode 3
	• Maritime freight transport	• Partial	• Joint venture requirement for mode 3
	• Maritime auxiliary services	• Partial	• Applies to cargo handling, customs clearance, container station and depot, and maritime agency services, as they relate to maritime transport only
			• Limits cross-border shipping to ports open to foreign vessels. Unbound for mode 3
	• Internal waterways freight transport	• Partial	• Joint venture requirement for mode 3
			• Joint venture requirement for mode 3
	• Rail freight transport		• Joint venture requirement for mode 3
	• Road freight transport	• Partial	• Joint venture requirement for mode 3, excludes freight inspection services
	• Storage and warehouse	• Partial	
	• Freight forwarding agency services	• Partial	
		• Partial	
Colombia	• Management consulting	• Full	
Costa Rica	No commitments related to Tier 1 or Tier 2 logistic services		
Czech Republic	• Management consulting	• Full	
	• Internal waterways freight transport	• Partial	• Unbound for modes 1 and 3
Denmark	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled

Country	Service Sector	GATS Commitments[1]	Comments
See footnote at end of table.			
Ecuador	• Management consulting	• Full	
	• Road freight transport	• Partial	• Mode 1 unbound
	• Cargo handling	• Partial	• Mode 1 unbound, applies to maritime transport only
	• Storage and warehouse	• Partial	• Mode 1 unbound, applies to maritime transport only
	• Freight transport agency	• Partial	• Mode 1 unbound, applies to maritime transport only
	• Other auxiliary transport services	• Partial	• Mode 1 unbound, applies to maritime transport only
El Salvador	No commitments related to Tier 1 or Tier 2 logistic services		
Egypt	• Maritime freight transport	• Partial	• In mode 3, foreign equity limits and ship registration requirements apply
	• Maritime auxiliary services	• Partial	• Commitments apply to port dredging services only
Finland	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for mode 1, authorization required for mode 3, foreign vehicles ineligible
	• Storage and warehouse	• Partial	• Excludes services related to maritime transport
	• Freight transport agency	• Full	• Excludes services related to maritime transport
	• Other auxiliary transport services	• Full	• Excludes services related to maritime transport
	• Other transport services: provision of combined transport services	• Full	
France	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled
Germany	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled

See footnote at end of table.

Country	Service Sector	GATS Commit-ments[1]	Comments
Greece	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled
Hong Kong	• Management consulting	• Partial	• Mode 1 unbound
	• Maritime freight transport	• Partial	• Applies to “international transport” only, ships registered in Hong Kong are exempt from Hong Kong's profits tax
	• Maritime auxiliary services	• Partial	• Applies to maritime agency, container station and depot, customs clearance, storage and warehousing, cargo handling, and rental services of vessel with crew, related to maritime transport only
Hungary	• Management consulting	• Full	
	• Rail freight transport	• Partial	• Government concession contract required
	• Storage and warehouse	• Full	
Iceland	• Management consulting	• Full	
	• Maritime freight transport	• Partial	• Commitments apply to international transport only, including cabotage. Restrictions regarding establishment and commercial presence.
	• Road freight transport	• Full	
	• Cargo handling	• Full	• Applies to maritime transport only
	• Storage and warehouse	• Partial	• Applies to maritime transport only. Mode 1 unbound due to lack of feasibility.
	• Freight transport agency	• Full	• Applies to maritime transport only.
	• Other auxiliary transport services	• Full	• Applies to maritime transport only.
	• Other transport services	• Full	
India	No commitments related to Tier 1 or Tier 2 logistic services		
Indonesia	• Maritime freight transport	• Partial	• Applies to international transport only, excludes cabotage and auxiliary services. Joint venture and other restrictions.
Ireland	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled

See footnote at end of table.

Country	Service Sector	GATS Commit-ments[1]	Comments
Italy	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage. Mode 3 market access subject to economic needs test
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled
Japan	• Management consulting	• Full	
	• Maritime freight transport	• Partial	• Unbound, modes 1, 2, and 3
	• Maritime auxiliary services	• Partial	• Commitments apply to pushing and towing; maritime agency, and salvaging and refloating services. Commitments do not cover cabotage, watering, fueling, or garbage collecting services.
	• Supporting services for internal waterways transport	• Partial	• Commitments apply to pushing and towing; maritime agency, and salvaging and refloating services. Commitments do not cover cabotage, watering, fueling, or garbage collecting services.
	• Road freight transport	• Partial	• Commitments include emergency safeguard measures limiting service supply through commercial presence.
	• Storage and warehouse	• Partial	• Mode 1 unbound due to lack of technical feasibility. Excludes services related to petroleum and petroleum products.
	• Customs clearance agent services	• Partial	• No restrictions on mode 3
Malaysia	• Management consulting	• Partial	• Limitations imposed on the establishment of commercial presence
	• Maritime freight transport	• Partial	• Commitments apply to international maritime transport services only, with restrictions on the establishment of commercial presence and vessel registration
	• Other auxiliary transport services: maritime agency services and vessel salvage and refloating services	• Partial	• Limitations imposed on the establishment of commercial presence
Mauritius	No commitments related to Tier 1 or Tier 2 logistic services		
Mexico	• Management consulting	• Full	
Netherlands	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for cabotage
	• Storage and warehouse	• Partial	• Excludes port services
	• Freight transport agency	• Full	
	• Other auxiliary transport services: pre-shipment inspection	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled

Country	Service Sector	GATS Commitments[1]	Comments
See footnote at end of table.			
New Zealand	• Maritime freight transport	• Partial	• Commitments apply to international freight transport. Unbound for the purpose of operating a fleet under the New Zealand flag and for ships crews. Excludes cabotage.
	• Rail freight transport	• Full	• Excludes transport of mail
	• Road freight transport	• Full	• Applies to maritime only
	• Storage and warehouse	• Partial	• Applies to maritime only
	• Freight transport agency	• Full	
Peru	• Management consulting	• Partial	• Applies only to advice, guidance, and operational assistance related to development of tourism. Unbound for national treatment modes 1 and 2.
Philippines	• Maritime freight transport	• Full	• Commitments apply to international freight transport, excluding cabotage and government-owned cargoes
	• Rail freight transport	• Partial	• Mode 1 unbound due to lack of technical feasibility
	• Road freight transport	• Partial	• Mode 1 unbound due to lack of technical feasibility. For mode 3, economic needs test and other restrictions apply.
	• Cargo handling	• Partial	• Mode 1 unbound due to lack of technical feasibility
	• Storage and warehouse	• Partial	• Mode 1 unbound due to lack of technical feasibility
	• Freight transport agency	• Full	• Commitments apply to freight forwarding services
	• Container yard and depot services	• Partial	• Mode 1 unbound due to lack of technical feasibility
Poland	• Management consulting	• Full	
Portugal	• Management consulting	• Full	
	• Road freight transport	• Partial	• Mode 1 unbound, mode 3 unbound for cabotage
	• Storage and warehouse	• Partial	• Commitments do not apply to services provided in ports, mode 1 unbound due to lack of feasibility
	• Freight transport agency	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled
Russia	Not a WTO member		
Singapore	• Management consulting	• Full	
	• Maritime freight transport	• Full	• Excludes cabotage
	• Maritime auxiliary services	• Full	• Applies to shipping agency services only
	• Other auxiliary transport services	• Full	• Applies to shipping brokerage services only
Slovak Republic	• Management consulting	• Full	
	• Internal waterways freight transport	• Partial	• Full commitments for mode 3
South Africa	• Management consulting	• Full	
	• Road freight transport	• Partial	• Modes 1 and 2 unbound
See footnote at end of table.			

Country	Service Sector	GATS Commitments[1]	Comments
South Korea	• Management consulting	• Full	
	• Maritime freight transport	• Partial	• Commitments apply to international transport only, excludes cabotage. Additional restrictions related to cargo preference system and company registration.
	• Maritime auxiliary services	• Partial	• Commitments apply to cargo handling, storage and warehousing, customs clearance, maritime agency, container station, freight forwarding, and shipping brokerage services. Mode 3 requirement as to form of establishment, Mode 1 unbound due to lack of feasibility.
	• Road freight transport	• Partial	• Commitments apply to containerized freight only. Mode 1 unbound, restrictions related to commercial presence.
	• Other transport services	• Partial	• Commitments apply to auxiliary services related to rail transport only. Mode 1 unbound, restrictions related to commercial presence.
Spain	• Management consulting	• Full	
	• Road freight transport	• Partial	• Unbound for mode 1, and for cabotage under mode 3
	• Storage and warehouse	• Partial	• Mode 1 unbound due to feasibility
	• Freight transport agency	• Full	
	• Other transport services: provision of combined transport services	• Partial	• Mode 3 commitments only, made without prejudice to those limitations already scheduled
Sweden	• Management consulting	• Full	
	• Road freight transport	• Partial	• Excludes cabotage, mode 1 unbound, restrictions on commercial presence
Taiwan	• Management consulting	• Full	
	• Rail freight transport	• Partial	• Mode 1 unbound due to lack of feasibility
	• Road freight transport	• Partial	• Mode 1 unbound due to lack of feasibility
	• Cargo handling	• Partial	• Mode 1 unbound due to lack of feasibility
	• Storage and warehouse	• Partial	• Mode 1 unbound due to lack of feasibility
	• Freight transport agency	• Full	
	• Other auxiliary transport services	• Full	• CPC 749, excludes local pick-up and delivery
Thailand	• Management consulting	• Partial	• Foreign equity limited to 49 percent
	• Maritime freight transport	• Partial	• Excludes cabotage, restrictions on modes 1 and 3
	• Road freight transport	• Partial	• Commitments apply to specialized cargoes only, with extensive restrictions
	• Storage and warehouse	• Partial	• Mode 1 unbound, foreign equity limited to 49 percent
	• Freight transport agency	• Partial	• Commitments apply to freight forwarding services. Mode 1 unbound, foreign equity limited to 49 percent
Turkey	• Management consulting	• Full	
	• Maritime freight transport	• Partial	• Mode 1 commitments exclude cabotage and reserve preferences for Turkish-flag vessels, Foreign equity limited to 49 percent for mode 3
	• Rail freight transport	• Partial	• Internal rail transport is a public monopoly
	• Road freight transport	• Partial	• Mode 1 unbound, establishment limits for mode 3
Ukraine	Not a WTO member		

See footnote at end of table.

Country	Service Sector	GATS Commit-ments[1]	Comments
United Kingdom	• Management consulting • Road freight transport • Other transport services: provision of combined transport services	• Full • Partial • Partial	• Unbound for mode 1, and for cabotage under mode 3 • Mode 3 commitments only, made without prejudice to those limitations already scheduled
Venezuela	• Management consulting • Maritime freight transport • Cargo handling • Storage and warehouse	• Partial • Partial • Partial • Partial	• Modes 1 and 3 unbound • Mode 1 unbound • Mode 1 unbound due to lack of technical feasibility, applies to maritime transport only • Mode 1 unbound due to lack of technical feasibility, applies to maritime transport only
Vietnam	Not a WTO member		
Zimbabwe	No commitments related to Tier 1 or Tier 2 logistic services		

[1] GATS commitments cover market access and national treatment for cross-border supply (mode 1), consumption abroad (mode 2), and commercial presence (mode 3). “Full” commitments indicate that there are no limitations for market access and national treatment across these modes.

APPENDIX E
CALENDAR OF PUBLIC HEARING

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject:	Logistic Services: An Overview of the Global Market and Potential Effects of Removing Trade Impediments
Inv. No.:	332-463
Date and Time:	November 19, 2004 - 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room (room 101), 500 E Street, S.W., Washington, D.C.

ORGANIZATION AND WITNESS:

Federal Express Corporation ("FedEx")
Memphis, TN

Matthew A. Vega, Senior Attorney, FedEx

United Parcel Service ("UPS")
Washington, D.C.

Brad Fitzgerald, Global Strategy Manager, UPS

International Warehouse Logistics Association ("IWLA")
Washington, D.C.

Pat O'Connor, Washington Representative, IWLA

Coalition of Service Industries ("CSI")
Washington, D.C.

John Goyer, Vice President, International Trade
Negotiations & Investment, CSI

APPENDIX F
POSITION OF INTERESTED PARTIES

APL Logistics

APL Logistics[1] was founded in 2000 to house the logistics units of its sister company, American President Lines (APL). APL Logistics provides integrated supply chain management services for its customers. APL has over 250 offices worldwide, and employs over 5,000 staff.

APL Logistics believes that the logistics services market is growing, and that opportunities exist at each point in the supply chain. The ability to operate freely in foreign markets is critical to its operations. Multinational trade commitments on logistics services would improve its ability to bring supply chain solutions to its global customers. APL Logistics believes that an efficient logistics sector, which includes well-developed infrastructure, streamlined customs procedures, and integrated multimodal transportation networks, provides benefits to countries interested in developing their export markets and bringing their goods to the global market. Additionally, in markets that are major exporters to the United States, an efficient logistics sector helps reduce costs for end users.

APL Logistics recognizes the gains achieved under various trade fora, but asserts that further work is needed. The firm continues to face national treatment barriers, ownership restrictions, onerous licensing requirements, unnecessarily high capitalization requirements, limitations on the scope of activities, and lack of investment protections. In its submission, APL Logistics highlights impediments that are not easily remedied through trade negotiations, including security requirements and infrastructure. Although APL Logistics recognizes the need for improved border security in the wake of the September 11, 2001 terrorist attacks, consumers of logistics services are concerned that security measures may act as a trade barrier. The firm notes that there are infrastructure constraints both in foreign market and in the United States, resulting in slower cargo transport and increased costs that negate supply chain efficiencies developed by individual logistics firms.

[1] John DeCrosta, Director, Legislative Affairs, APL Logistics, post hearing submission.

Coalition of Service Industries

The Coalition of Service Industries (CSI)[2] is an industry association committed to reducing impediments to U.S. service exports and investment; and to generating support for U.S. policies that improve the competitive position of U.S. firms in foreign markets. CSI's members include logistic service firms, as well as companies that provide financial services, audiovisual services, computer and information technology services, energy services, professional services, and telecommunication services.

CSI reports that the U.S. service sector presently represents approximately 76 percent of the U.S. gross domestic product (GDP), and accounts for a large share - approximately 80 percent - of U.S. private sector employment. CSI therefore believes that liberalization of foreign service markets is important to the success of U.S. service industries, to the facilitation of merchandise trade, and to the U.S. economy.

CSI reports that third-party logistic (3PL) service revenues totaled $77 billion in 2003, representing an increase of 18 percent over 2002. Revenues for transportation management services, a component of logistic services, increased by 42 percent to $23.5 billion, and other logistic service segments experienced strong growth as well. CSI believes that although U.S. logistic service firms are globally competitive, some foreign regulations may impede trade by limiting market access and national treatment for U.S. firms. Such limitations may affect the commercial presence of U.S. providers, especially in countries such as Indonesia, Mexico, Malaysia, Thailand, China, and others that may restrict the form of establishment and maintain burdensome equity requirements. CSI states that U.S. logistic service firms are also adversely affected by burdensome customs regulations, certain licensing practices, and monopoly abuse. CSI believes that, although some WTO member countries have already made logistics-related commitments under the GATS, there is room for improvement. CSI is encouraged by the July 2004 inclusion of trade facilitation in the WTO's negotiating agenda, and believes that logistic services trade will benefit from more open and transparent customs procedures.

[2] John Goyer, Vice President, International Trade Negotiations and Investment, CSI, hearing testimony.

DHL

DHL[3] is an international logistics and express delivery services company. Its logistics division provides contract logistics and forwarding services and is operated by the two primary business units of DHL Danzas Air & Ocean and DHL Solutions (DHL). It has 570 forwarding services facilities and over 300 logistics centers, warehouses, and terminals. Its logistics service employees number 3,500, and it is present in over 160 countries.

According to DHL, logistics services firms face many impediments worldwide, the most significant of which are related to customs procedures and requirements. DHL's suggested remedies to customs impediments include the separation of physical and fiscal control, the adoption of reasonable de minimis provisions, and expanded hours of operation. DHL also states that reporting requirements for customs procedures could be reduced through investments in document processing technology. In addition to customs impediments, DHL is concerned with regulatory impediments such as establishment and equity restrictions, licensing, and security requirements.

DHL singles out a number of countries where it faces significant obstacles. It cites customs, equity and licensing restrictions in China; customs and equity impediments in Brazil, Indonesia, the Philippines, and Vietnam; customs and licensing barriers in Mexico; and customs barriers in the European Union (EU). It also notes that many impediments exist in the United States, including establishment restrictions, cabotage restrictions, and other maritime regulations. Finally, DHL believes that the U.S. Government and the private sector can play a role, through trade negotiations and capacity building, in improving competitive conditions for logistic services providers.

[3] Wolfgang Pordzik, Executive Vice President, Corporate Government Affairs, DHL Americas, post hearing submission.

Federal Express Corporation

The Federal Express Corporation (FedEx)[4] was incorporated in 1971 and began operations in 1973, with headquarters in Memphis, Tennessee. FedEx identifies itself as the world's largest express delivery company, serving 215 countries and handling over 3 million packages daily. Through its 7 sister companies, FedEx provides distinct and integrated logistics-related services, including customs brokerage, supply chain management, and express delivery.

FedEx highlights a number of trade impediments pertaining to the logistics industry. It claims that the lack of regulatory coordination across transport modes represents an impediment, as do national treatment barriers related to establishment of a commercial presence, particularly equity limits imposed on foreign investors. According to FedEx, customs and border security barriers also pose a significant obstacle to cross-border trade, which would be mitigated by a WTO agreement on trade facilitation. FedEx claims that postal regulations in foreign markets result in an unfair trade environment for private logistic services providers. FedEx asserts that the reduction or removal of impediments to the provision of logistic services will result in economic benefits in both highly industrialized and developing countries, by increasing the speed of goods to market and allowing manufacturers to take advantage of more efficient inventory control systems. The company points out that logistics costs account for a large share of the value of exports in developing countries, so that increasing the efficiency of logistic services would permit the diversion of significant resources into more productive economic sectors. Fedex urges the U.S. Government to make the liberalization of logistic services a high priority in its trade negotiations.

[4] Matthew A. Vega, Senior Attorney, FedEx Corp., hearing testimony.

International Warehouse Logistics Association (IWLA)

IWLA[5] is an industry association that represents the warehousing and logistics industry. It has over 500 members, including large multi-national logistics companies and small family-owned logistic service providers. IWLA states in its prehearing submissions that it "promotes the growth and success of third party logistics providers by providing its more than 500 member companies with resources, information, education and professional programs designed to advance their businesses and provide greater value to their customers."

According to IWLA, the logistics industry faces significant barriers that could limit industry expansion. It states that tariffs, trade regulations, and governmental restrictions on foreign ownership have an adverse impact on the growth of the industry. It also lists inconsistent application and enforcement of laws and regulations, a lack of uniform standards (such as IPO), a general lack of training and education for the available labor force, and language barriers as other significant barriers. IWLA states that ownership restrictions in China adversely affect many of its members. It disagrees with such restrictions and would like U.S. companies to have the ability to be majority operators of distribution facilities in China, as well as in other parts of the world.

IWLA supports potential World Trade Organization (WTO) negotiations in logistics and related services. By removing global barriers, IWLA states that worldwide logistics efficiencies would be improved, thereby benefitting consumers and producers worldwide. Further, IWLA believes that logistics can have a significant positive impact on the basic standard of living for many living in the developing world.

[5] Patrick C. O'Connor, Washington representative, International Warehouse Logistics Association, hearing testimony.

Maritime Cabotage Task Force

The Maritime Cabotage Task Force (MCTF)[6] represents more than 400 private-sector firms and organizations that support cabotage laws in the U.S. domestic maritime market. The membership of MCTF includes parties engaged in ship building and the supply of maritime transport and related services in the U.S. domestic market. In its post-hearing brief, MCTF states that the U.S. domestic maritime fleet is among the most competitive in the world, partly due to the continued existence of U.S. cabotage laws. More specifically, MCTF reasons that U.S. cabotage laws are an important element in sustaining the efficiency of the U.S. domestic maritime fleet by protecting U.S.-flag vessels operating in the domestic market from competition with foreign-flag vessels that may receive government subsidies. In addition, MCTF emphasizes that the U.S. domestic maritime fleet plays an important role in the country's national defense, and that this benefit would not be possible were it not for the existence of U.S. cabotage laws. In sum, MCTF states that U.S. cabotage laws serve important public policy, economic, and security interests for the United States.[7]

[6] MCTF, post hearing submission.

[7] MCTF has previously submitted written comments to the Commission with respect to its views on U.S. cabotage laws in connection with the Commission's report entitled *The Economic Effects of Significant U.S. Import Restraints*, last updated in June 2004.

Transportation Institute

The Transportation Institute[8] represents U.S.-flag vessel operators engaged in U.S. domestic maritime transport and maritime transport between the United States and foreign countries. According to the Transportation Institute, the U.S. maritime industry plays an important role in the economic security and national defense of the United States through U.S.-flag vessels' participation in the Department of Defense's military sealift program. The Transportation Institute states that the opening of the U.S. domestic maritime market to foreign competition vis-a-vis trade liberalization under the WTO, and other trade fora, would likely compromise the strength of the military sealift program. The Transportation Institute also maintains that the negotiation of maritime services in trade agreements would have an adverse impact on the ability of the United States to conclude bilateral maritime agreements with foreign countries or to pursue unilateral trade measures under the auspices of the U.S. Federal Maritime Commission (FMC). Finally, the Transportation Institute maintains that the U.S. maritime services market is already open to foreign service providers as evidenced by the fact that, according the Institute, 97 percent of maritime transport between the United States and foreign countries currently takes place on foreign-flag vessels.

[8] Transportation Institute, post hearing submission.

U.S. Postal Service

The United States Postal Service (USPS)[9] provides universal postal services, including document and letter delivery, in the United States. The USPS is the world's largest postal operation, handling about 40 percent of global mail volume. USPS has not formed an opinion on the effect of foreign trade impediments on U.S.-based logistic services firms. However, USPS asserts that the U.S. trade position cannot be considered without examining the dynamics of the U.S. postal market. Given the ongoing legislative debate in the United States regarding Postal Service reform, the USPS suggests that any trade agreement which requires changes to domestic law related to the Postal Service might come into conflict with the potential reforms in the United States.

For the purposes of trade negotiations, USPS suggests a definition of logistic services that explicitly excludes universal postal services. Further, the USPS notes that foreign regulatory environments that are perceived as impediments by U.S.-based logistic service firms, such as the lack of an independent regulator, and discriminatory tax and customs treatment, are present in the U.S. market as well. The USPS does not believe that private delivery firms should receive the same regulatory or customs treatment as national postal providers that are required to observe costly universal services obligations. The USPS also asserts that the definition of cross-subsidy is unclear, and certain definitions of that term may also apply to the USPS, making it possible for international trade tribunals to call into question U.S. postal ratemaking and competition law practice. In conclusion, USPS notes that if trade negotiations promote a definition of postal services that differs from the existing state of the U.S. market, a resulting trade agreement could result in conflict between the agreement and U.S. statutory postal law and regulation.

[9] Grayson Poats, Managing Counsel, Corporate Law Section, and Anthony Alverno, Chief Counsel, Law Department, Corporate Law, United States Postal Service, Washington, DC, written submission to the Commission, Dec. 14, 2004.

UPS Supply Chain Solutions

UPS Supply Chain Solutions (UPS SCS)[10], a division of United Parcel Service (UPS), was founded in 1995 to provide logistics management and distribution, multimodal freight transport, freight forwarding, trade management, customs brokerage, service parts logistics, and supply chain design and planning. UPS SCS has 750 offices in over 120 countries. The firm is the largest customs broker in the United States and maintains customs brokerage offices in more than 60 countries.

According to UPS SCS, logistics involves the entire product life cycle, from the supply of raw materials to distribution of final products. Both UPS SCS and its customers recognize that the efficient management of goods throughout the supply chain provides competitive advantages, enabling customers to get their products to final consumers in the fastest, least expensive way possible.

UPS SCS outlines several impediments to the provision of logistics services in foreign markets. These include monopoly abuse; infrastructure constraints such as inadequate port infrastructure, cargo security, and cargo theft; regulations such as ownership restrictions, discriminatory licensing, limited hours of operation at customs, and discriminatory inspection practices; and a lack of trained personnel. UPS SCS notes that a clear understanding of these issues is necessary to effect their removal under trade negotiations.

[10] Brad Fitzgerald, Global Strategy Manager, UPS Supply Chain Solutions, hearing testimony.